

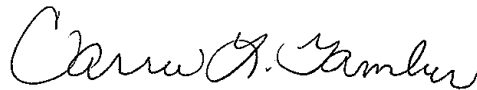
## ANALYTICAL REPORT

Job Number: 180-43791-1

Job Description: Sparrows Point Trust Offshore Investigat

For:

EA Engineering, Science, and Technology  
225 Schilling Circle  
Hunt Valley, MD 21031  
Attention: Sanita Corum



Approved for release.  
Carrie L. Gamber  
Senior Project Manager  
5/28/2015 8:30 AM

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05/28/2015

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# Definitions/Glossary

Client: EA Engineering, Science, and Technology  
Project/Site: Sparrows Point Trust Offshore Investigat

TestAmerica Job ID: 180-43791-1

## Qualifiers

### GC/MS VOA

| 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. |

### GC/MS Semi VOA

| Qualifier | Qualifier Description  |
|-----------|--|
| J         | Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value. |

### Metals

| Qualifier | Qualifier Description  |
|-----------|--|
| J         | Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value. |

### General Chemistry

| Qualifier | Qualifier Description  |
|-----------|--|
| J         | Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value. |

## 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: EA Engineering, Science, and Technology**

**Project: Sparrows Point Trust Offshore Investigation**

**Report Number: 180-43791-1**

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 05/06/2015; the samples arrived in good condition, properly preserved and on ice. The temperatures of the 2 coolers at receipt time were 1.4° C and 3.1° C.

MS/MSD volume was sent with this shipment; however, the parent sample was received prior to this shipment. This MS/MSD pair were not logged in.

Trip Blank vials were received but not listed on the chain-of-custody. The sample was logged in and analyzed. The date sampled of the samples was used for the date sampled for the Trip Blank.

### **VOLATILES**

Methylene Chloride was detected in method blank MB 180-141065/5 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.

### **SEMIVOLATILES**

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

### **PCB**

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

### **METALS**

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

### **GENERAL CHEMSITRY**

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

# Detection Summary

Client: EA Engineering, Science, and Technology  
 Project/Site: Sparrows Point Trust Offshore Investigat

TestAmerica Job ID: 180-43791-1

## Client Sample ID: RB-CORE

## Lab Sample ID: 180-43791-1

| Analyte                     | Result | Qualifier | RL  | MDL   | Unit | Dil Fac | D | Method   | Prep Type            |
|-----------------------------|--------|-----------|-----|-------|------|---------|---|----------|----------------------|
| Methylene Chloride          | 3.6    | J B       | 5.0 | 1.1   | ug/L | 1       |   | 8260C    | Total/NA             |
| Bis(2-ethylhexyl) phthalate | 0.89   | J         | 2.1 | 0.46  | ug/L | 1       |   | 8270D LL | Total/NA             |
| Chromium                    | 1.3    | J         | 2.0 | 0.54  | ug/L | 1       |   | 6020A    | Total<br>Recoverable |
| Lead                        | 0.39   | J         | 1.0 | 0.019 | ug/L | 1       |   | 6020A    | Total<br>Recoverable |
| Thallium                    | 0.067  | J         | 1.0 | 0.015 | ug/L | 1       |   | 6020A    | Total<br>Recoverable |
| Antimony                    | 2.2    |           | 2.0 | 0.019 | ug/L | 1       |   | 6020A    | Total<br>Recoverable |
| Nickel                      | 1.9    |           | 1.0 | 0.17  | ug/L | 1       |   | 6020A    | Total<br>Recoverable |
| Zinc                        | 8.7    |           | 5.0 | 0.96  | ug/L | 1       |   | 6020A    | Total<br>Recoverable |
| Copper                      | 0.78   | J         | 2.0 | 0.24  | ug/L | 1       |   | 6020A    | Total<br>Recoverable |

## Client Sample ID: FB-CORE

## Lab Sample ID: 180-43791-2

| Analyte                     | Result | Qualifier | RL  | MDL   | Unit | Dil Fac | D | Method   | Prep Type            |
|-----------------------------|--------|-----------|-----|-------|------|---------|---|----------|----------------------|
| Methylene Chloride          | 3.5    | J B       | 5.0 | 1.1   | ug/L | 1       |   | 8260C    | Total/NA             |
| Bis(2-ethylhexyl) phthalate | 0.68   | J         | 2.0 | 0.44  | ug/L | 1       |   | 8270D LL | Total/NA             |
| Chromium                    | 1.4    | J         | 2.0 | 0.54  | ug/L | 1       |   | 6020A    | Total<br>Recoverable |
| Lead                        | 0.32   | J         | 1.0 | 0.019 | ug/L | 1       |   | 6020A    | Total<br>Recoverable |
| Thallium                    | 0.034  | J         | 1.0 | 0.015 | ug/L | 1       |   | 6020A    | Total<br>Recoverable |
| Antimony                    | 0.70   | J         | 2.0 | 0.019 | ug/L | 1       |   | 6020A    | Total<br>Recoverable |
| Nickel                      | 2.0    |           | 1.0 | 0.17  | ug/L | 1       |   | 6020A    | Total<br>Recoverable |
| Zinc                        | 7.7    |           | 5.0 | 0.96  | ug/L | 1       |   | 6020A    | Total<br>Recoverable |
| Copper                      | 0.65   | J         | 2.0 | 0.24  | ug/L | 1       |   | 6020A    | Total<br>Recoverable |

## Client Sample ID: RB-PW

## Lab Sample ID: 180-43791-3

| Analyte                              | Result | Qualifier | RL  | MDL   | Unit | Dil Fac | D | Method   | Prep Type            |
|--------------------------------------|--------|-----------|-----|-------|------|---------|---|----------|----------------------|
| Bis(2-ethylhexyl) phthalate          | 2.4    |           | 1.9 | 0.42  | ug/L | 1       |   | 8270D LL | Total/NA             |
| Chromium                             | 1.1    | J         | 2.0 | 0.54  | ug/L | 1       |   | 6020A    | Total<br>Recoverable |
| Lead                                 | 0.39   | J         | 1.0 | 0.019 | ug/L | 1       |   | 6020A    | Total<br>Recoverable |
| Thallium                             | 0.024  | J         | 1.0 | 0.015 | ug/L | 1       |   | 6020A    | Total<br>Recoverable |
| Antimony                             | 0.42   | J         | 2.0 | 0.019 | ug/L | 1       |   | 6020A    | Total<br>Recoverable |
| Nickel                               | 2.2    |           | 1.0 | 0.17  | ug/L | 1       |   | 6020A    | Total<br>Recoverable |
| Zinc                                 | 29     |           | 5.0 | 0.96  | ug/L | 1       |   | 6020A    | Total<br>Recoverable |
| Copper                               | 2.2    |           | 2.0 | 0.24  | ug/L | 1       |   | 6020A    | Total<br>Recoverable |
| Dissolved Organic Carbon - Duplicate | 0.49   | J         | 1.0 | 0.14  | mg/L | 1       |   | SM 5310C | Dissolved            |

This Detection Summary does not include radiochemical test results.

# Detection Summary

Client: EA Engineering, Science, and Technology  
Project/Site: Sparrows Point Trust Offshore Investigat

TestAmerica Job ID: 180-43791-1

## Client Sample ID: FB-PW

## Lab Sample ID: 180-43791-4

| Analyte                              | Result | Qualifier | RL  | MDL   | Unit | Dil Fac | D | Method   | Prep Type                |
|--------------------------------------|--------|-----------|-----|-------|------|---------|---|----------|--------------------------|
| Bis(2-ethylhexyl) phthalate          | 2.6    |           | 2.0 | 0.44  | ug/L | 1       |   | 8270D LL | Total/NA                 |
| Chromium                             | 1.0    | J         | 2.0 | 0.54  | ug/L | 1       |   | 6020A    | Total<br>Recoverable     |
| Lead                                 | 0.39   | J         | 1.0 | 0.019 | ug/L | 1       |   | 6020A    | Total<br>Recoverable     |
| Thallium                             | 0.023  | J         | 1.0 | 0.015 | ug/L | 1       |   | 6020A    | Total<br>Recoverable     |
| Antimony                             | 0.27   | J         | 2.0 | 0.019 | ug/L | 1       |   | 6020A    | Total<br>Recoverable     |
| Nickel                               | 0.35   | J         | 1.0 | 0.17  | ug/L | 1       |   | 6020A    | Total<br>Recoverable     |
| Zinc                                 | 29     |           | 5.0 | 0.96  | ug/L | 1       |   | 6020A    | Total<br>Recoverable     |
| Copper                               | 3.2    |           | 2.0 | 0.24  | ug/L | 1       |   | 6020A    | Total<br>Recoverable     |
| Dissolved Organic Carbon - Duplicate | 0.80   | J         | 1.0 | 0.14  | mg/L | 1       |   | SM 5310C | Recoverable<br>Dissolved |

## Client Sample ID: TRIP BLANK

## Lab Sample ID: 180-43791-7

| Analyte            | Result | Qualifier | RL  | MDL | Unit | Dil Fac | D | Method | Prep Type |
|--------------------|--------|-----------|-----|-----|------|---------|---|--------|-----------|
| Methylene Chloride | 3.6    | J B       | 5.0 | 1.1 | ug/L | 1       |   | 8260C  | Total/NA  |

This Detection Summary does not include radiochemical test results.

TestAmerica Pittsburgh

# Client Sample Results

Client: EA Engineering, Science, and Technology  
 Project/Site: Sparrows Point Trust Offshore Investigat

TestAmerica Job ID: 180-43791-1

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

**Client Sample ID: RB-CORE**  
**Date Collected: 05/05/15 15:30**  
**Date Received: 05/06/15 09:40**

**Lab Sample ID: 180-43791-1**  
**Matrix: Water**

| Analyte                      | Result     | Qualifier  | RL       | MDL  | Unit | D | Prepared | Analyzed       | Dil Fac |
|------------------------------|------------|------------|----------|------|------|---|----------|----------------|---------|
| 1,1,1-Trichloroethane        | ND         |            | 5.0      | 1.0  | ug/L |   |          | 05/09/15 19:00 | 1       |
| 1,1,2,2-Tetrachloroethane    | ND         |            | 5.0      | 0.93 | ug/L |   |          | 05/09/15 19:00 | 1       |
| 1,1,2-Trichloroethane        | ND         |            | 5.0      | 1.2  | ug/L |   |          | 05/09/15 19:00 | 1       |
| 1,1-Dichloroethane           | ND         |            | 5.0      | 1.0  | ug/L |   |          | 05/09/15 19:00 | 1       |
| 1,1-Dichloroethene           | ND         |            | 5.0      | 1.1  | ug/L |   |          | 05/09/15 19:00 | 1       |
| 1,2-Dichlorobenzene          | ND         |            | 5.0      | 0.68 | ug/L |   |          | 05/09/15 19:00 | 1       |
| 1,2-Dichloroethane           | ND         |            | 5.0      | 0.96 | ug/L |   |          | 05/09/15 19:00 | 1       |
| 1,2-Dichloropropane          | ND         |            | 5.0      | 1.3  | ug/L |   |          | 05/09/15 19:00 | 1       |
| 1,3-Dichlorobenzene          | ND         |            | 5.0      | 0.51 | ug/L |   |          | 05/09/15 19:00 | 1       |
| 1,4-Dichlorobenzene          | ND         |            | 5.0      | 0.53 | ug/L |   |          | 05/09/15 19:00 | 1       |
| 2-Chloroethyl vinyl ether    | ND         |            | 10       | 1.9  | ug/L |   |          | 05/09/15 19:00 | 1       |
| Acrolein                     | ND         |            | 100      | 5.7  | ug/L |   |          | 05/09/15 19:00 | 1       |
| Acrylonitrile                | ND         |            | 50       | 9.0  | ug/L |   |          | 05/09/15 19:00 | 1       |
| Benzene                      | ND         |            | 5.0      | 0.99 | ug/L |   |          | 05/09/15 19:00 | 1       |
| Bromoform                    | ND         |            | 5.0      | 1.1  | ug/L |   |          | 05/09/15 19:00 | 1       |
| Bromomethane                 | ND         |            | 5.0      | 1.6  | ug/L |   |          | 05/09/15 19:00 | 1       |
| Carbon tetrachloride         | ND         |            | 5.0      | 1.1  | ug/L |   |          | 05/09/15 19:00 | 1       |
| Chlorobenzene                | ND         |            | 5.0      | 0.53 | ug/L |   |          | 05/09/15 19:00 | 1       |
| Chloroform                   | ND         |            | 5.0      | 1.0  | ug/L |   |          | 05/09/15 19:00 | 1       |
| Chloromethane                | ND         |            | 5.0      | 1.4  | ug/L |   |          | 05/09/15 19:00 | 1       |
| Chlorodibromomethane         | ND         |            | 5.0      | 0.65 | ug/L |   |          | 05/09/15 19:00 | 1       |
| cis-1,3-Dichloropropene      | ND         |            | 5.0      | 0.73 | ug/L |   |          | 05/09/15 19:00 | 1       |
| Dichlorobromomethane         | ND         |            | 5.0      | 0.93 | ug/L |   |          | 05/09/15 19:00 | 1       |
| Ethylbenzene                 | ND         |            | 5.0      | 0.62 | ug/L |   |          | 05/09/15 19:00 | 1       |
| <b>Methylene Chloride</b>    | <b>3.6</b> | <b>J B</b> | 5.0      | 1.1  | ug/L |   |          | 05/09/15 19:00 | 1       |
| Tetrachloroethene            | ND         |            | 5.0      | 0.82 | ug/L |   |          | 05/09/15 19:00 | 1       |
| Toluene                      | ND         |            | 5.0      | 0.85 | ug/L |   |          | 05/09/15 19:00 | 1       |
| trans-1,2-Dichloroethene     | ND         |            | 5.0      | 0.75 | ug/L |   |          | 05/09/15 19:00 | 1       |
| trans-1,3-Dichloropropene    | ND         |            | 5.0      | 0.58 | ug/L |   |          | 05/09/15 19:00 | 1       |
| Trichloroethene              | ND         |            | 5.0      | 0.80 | ug/L |   |          | 05/09/15 19:00 | 1       |
| Vinyl chloride               | ND         |            | 5.0      | 1.3  | ug/L |   |          | 05/09/15 19:00 | 1       |
| Chloroethane                 | ND         |            | 5.0      | 0.75 | ug/L |   |          | 05/09/15 19:00 | 1       |
| Surrogate                    | %Recovery  | Qualifier  | Limits   |      |      |   | Prepared | Analyzed       | Dil Fac |
| 1,2-Dichloroethane-d4 (Surr) | 91         |            | 62 - 123 |      |      |   |          | 05/09/15 19:00 | 1       |
| 4-Bromofluorobenzene (Surr)  | 91         |            | 75 - 120 |      |      |   |          | 05/09/15 19:00 | 1       |
| Dibromofluoromethane (Surr)  | 108        |            | 80 - 120 |      |      |   |          | 05/09/15 19:00 | 1       |
| Toluene-d8 (Surr)            | 116        |            | 80 - 120 |      |      |   |          | 05/09/15 19:00 | 1       |



# Client Sample Results

Client: EA Engineering, Science, and Technology  
 Project/Site: Sparrows Point Trust Offshore Investigat

TestAmerica Job ID: 180-43791-1

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

**Client Sample ID: FB-CORE**  
**Date Collected: 05/05/15 15:40**  
**Date Received: 05/06/15 09:40**

**Lab Sample ID: 180-43791-2**  
**Matrix: Water**

| Analyte                   | Result     | Qualifier  | RL  | MDL  | Unit | D | Prepared | Analyzed       | Dil Fac |
|---------------------------|------------|------------|-----|------|------|---|----------|----------------|---------|
| 1,1,1-Trichloroethane     | ND         |            | 5.0 | 1.0  | ug/L |   |          | 05/09/15 18:04 | 1       |
| 1,1,2,2-Tetrachloroethane | ND         |            | 5.0 | 0.93 | ug/L |   |          | 05/09/15 18:04 | 1       |
| 1,1,2-Trichloroethane     | ND         |            | 5.0 | 1.2  | ug/L |   |          | 05/09/15 18:04 | 1       |
| 1,1-Dichloroethane        | ND         |            | 5.0 | 1.0  | ug/L |   |          | 05/09/15 18:04 | 1       |
| 1,1-Dichloroethene        | ND         |            | 5.0 | 1.1  | ug/L |   |          | 05/09/15 18:04 | 1       |
| 1,2-Dichlorobenzene       | ND         |            | 5.0 | 0.68 | ug/L |   |          | 05/09/15 18:04 | 1       |
| 1,2-Dichloroethane        | ND         |            | 5.0 | 0.96 | ug/L |   |          | 05/09/15 18:04 | 1       |
| 1,2-Dichloropropane       | ND         |            | 5.0 | 1.3  | ug/L |   |          | 05/09/15 18:04 | 1       |
| 1,3-Dichlorobenzene       | ND         |            | 5.0 | 0.51 | ug/L |   |          | 05/09/15 18:04 | 1       |
| 1,4-Dichlorobenzene       | ND         |            | 5.0 | 0.53 | ug/L |   |          | 05/09/15 18:04 | 1       |
| 2-Chloroethyl vinyl ether | ND         |            | 10  | 1.9  | ug/L |   |          | 05/09/15 18:04 | 1       |
| Acrolein                  | ND         |            | 100 | 5.7  | ug/L |   |          | 05/09/15 18:04 | 1       |
| Acrylonitrile             | ND         |            | 50  | 9.0  | ug/L |   |          | 05/09/15 18:04 | 1       |
| Benzene                   | ND         |            | 5.0 | 0.99 | ug/L |   |          | 05/09/15 18:04 | 1       |
| Bromoform                 | ND         |            | 5.0 | 1.1  | ug/L |   |          | 05/09/15 18:04 | 1       |
| Bromomethane              | ND         |            | 5.0 | 1.6  | ug/L |   |          | 05/09/15 18:04 | 1       |
| Carbon tetrachloride      | ND         |            | 5.0 | 1.1  | ug/L |   |          | 05/09/15 18:04 | 1       |
| Chlorobenzene             | ND         |            | 5.0 | 0.53 | ug/L |   |          | 05/09/15 18:04 | 1       |
| Chloroform                | ND         |            | 5.0 | 1.0  | ug/L |   |          | 05/09/15 18:04 | 1       |
| Chloromethane             | ND         |            | 5.0 | 1.4  | ug/L |   |          | 05/09/15 18:04 | 1       |
| Chlorodibromomethane      | ND         |            | 5.0 | 0.65 | ug/L |   |          | 05/09/15 18:04 | 1       |
| cis-1,3-Dichloropropene   | ND         |            | 5.0 | 0.73 | ug/L |   |          | 05/09/15 18:04 | 1       |
| Dichlorobromomethane      | ND         |            | 5.0 | 0.93 | ug/L |   |          | 05/09/15 18:04 | 1       |
| Ethylbenzene              | ND         |            | 5.0 | 0.62 | ug/L |   |          | 05/09/15 18:04 | 1       |
| <b>Methylene Chloride</b> | <b>3.5</b> | <b>J B</b> | 5.0 | 1.1  | ug/L |   |          | 05/09/15 18:04 | 1       |
| Tetrachloroethene         | ND         |            | 5.0 | 0.82 | ug/L |   |          | 05/09/15 18:04 | 1       |
| Toluene                   | ND         |            | 5.0 | 0.85 | ug/L |   |          | 05/09/15 18:04 | 1       |
| trans-1,2-Dichloroethene  | ND         |            | 5.0 | 0.75 | ug/L |   |          | 05/09/15 18:04 | 1       |
| trans-1,3-Dichloropropene | ND         |            | 5.0 | 0.58 | ug/L |   |          | 05/09/15 18:04 | 1       |
| Trichloroethene           | ND         |            | 5.0 | 0.80 | ug/L |   |          | 05/09/15 18:04 | 1       |
| Vinyl chloride            | ND         |            | 5.0 | 1.3  | ug/L |   |          | 05/09/15 18:04 | 1       |
| Chloroethane              | ND         |            | 5.0 | 0.75 | ug/L |   |          | 05/09/15 18:04 | 1       |

| Surrogate                    | %Recovery | Qualifier | Limits   | Prepared | Analyzed       | Dil Fac |
|------------------------------|-----------|-----------|----------|----------|----------------|---------|
| 1,2-Dichloroethane-d4 (Surr) | 87        |           | 62 - 123 |          | 05/09/15 18:04 | 1       |
| 4-Bromofluorobenzene (Surr)  | 92        |           | 75 - 120 |          | 05/09/15 18:04 | 1       |
| Dibromofluoromethane (Surr)  | 98        |           | 80 - 120 |          | 05/09/15 18:04 | 1       |
| Toluene-d8 (Surr)            | 117       |           | 80 - 120 |          | 05/09/15 18:04 | 1       |

# Client Sample Results

Client: EA Engineering, Science, and Technology  
 Project/Site: Sparrows Point Trust Offshore Investigat

TestAmerica Job ID: 180-43791-1

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

**Client Sample ID: TRIP BLANK**  
**Date Collected: 05/05/15 15:30**  
**Date Received: 05/06/15 09:40**

**Lab Sample ID: 180-43791-7**  
**Matrix: Water**

| Analyte                   | Result     | Qualifier  | RL  | MDL  | Unit | D | Prepared | Analyzed       | Dil Fac |
|---------------------------|------------|------------|-----|------|------|---|----------|----------------|---------|
| 1,1,1-Trichloroethane     | ND         |            | 5.0 | 1.0  | ug/L |   |          | 05/09/15 18:33 | 1       |
| 1,1,2,2-Tetrachloroethane | ND         |            | 5.0 | 0.93 | ug/L |   |          | 05/09/15 18:33 | 1       |
| 1,1,2-Trichloroethane     | ND         |            | 5.0 | 1.2  | ug/L |   |          | 05/09/15 18:33 | 1       |
| 1,1-Dichloroethane        | ND         |            | 5.0 | 1.0  | ug/L |   |          | 05/09/15 18:33 | 1       |
| 1,1-Dichloroethene        | ND         |            | 5.0 | 1.1  | ug/L |   |          | 05/09/15 18:33 | 1       |
| 1,2-Dichlorobenzene       | ND         |            | 5.0 | 0.68 | ug/L |   |          | 05/09/15 18:33 | 1       |
| 1,2-Dichloroethane        | ND         |            | 5.0 | 0.96 | ug/L |   |          | 05/09/15 18:33 | 1       |
| 1,2-Dichloropropane       | ND         |            | 5.0 | 1.3  | ug/L |   |          | 05/09/15 18:33 | 1       |
| 1,3-Dichlorobenzene       | ND         |            | 5.0 | 0.51 | ug/L |   |          | 05/09/15 18:33 | 1       |
| 1,4-Dichlorobenzene       | ND         |            | 5.0 | 0.53 | ug/L |   |          | 05/09/15 18:33 | 1       |
| 2-Chloroethyl vinyl ether | ND         |            | 10  | 1.9  | ug/L |   |          | 05/09/15 18:33 | 1       |
| Acrolein                  | ND         |            | 100 | 5.7  | ug/L |   |          | 05/09/15 18:33 | 1       |
| Acrylonitrile             | ND         |            | 50  | 9.0  | ug/L |   |          | 05/09/15 18:33 | 1       |
| Benzene                   | ND         |            | 5.0 | 0.99 | ug/L |   |          | 05/09/15 18:33 | 1       |
| Bromoform                 | ND         |            | 5.0 | 1.1  | ug/L |   |          | 05/09/15 18:33 | 1       |
| Bromomethane              | ND         |            | 5.0 | 1.6  | ug/L |   |          | 05/09/15 18:33 | 1       |
| Carbon tetrachloride      | ND         |            | 5.0 | 1.1  | ug/L |   |          | 05/09/15 18:33 | 1       |
| Chlorobenzene             | ND         |            | 5.0 | 0.53 | ug/L |   |          | 05/09/15 18:33 | 1       |
| Chloroform                | ND         |            | 5.0 | 1.0  | ug/L |   |          | 05/09/15 18:33 | 1       |
| Chloromethane             | ND         |            | 5.0 | 1.4  | ug/L |   |          | 05/09/15 18:33 | 1       |
| Chlorodibromomethane      | ND         |            | 5.0 | 0.65 | ug/L |   |          | 05/09/15 18:33 | 1       |
| cis-1,3-Dichloropropene   | ND         |            | 5.0 | 0.73 | ug/L |   |          | 05/09/15 18:33 | 1       |
| Dichlorobromomethane      | ND         |            | 5.0 | 0.93 | ug/L |   |          | 05/09/15 18:33 | 1       |
| Ethylbenzene              | ND         |            | 5.0 | 0.62 | ug/L |   |          | 05/09/15 18:33 | 1       |
| <b>Methylene Chloride</b> | <b>3.6</b> | <b>J B</b> | 5.0 | 1.1  | ug/L |   |          | 05/09/15 18:33 | 1       |
| Tetrachloroethene         | ND         |            | 5.0 | 0.82 | ug/L |   |          | 05/09/15 18:33 | 1       |
| Toluene                   | ND         |            | 5.0 | 0.85 | ug/L |   |          | 05/09/15 18:33 | 1       |
| trans-1,2-Dichloroethene  | ND         |            | 5.0 | 0.75 | ug/L |   |          | 05/09/15 18:33 | 1       |
| trans-1,3-Dichloropropene | ND         |            | 5.0 | 0.58 | ug/L |   |          | 05/09/15 18:33 | 1       |
| Trichloroethene           | ND         |            | 5.0 | 0.80 | ug/L |   |          | 05/09/15 18:33 | 1       |
| Vinyl chloride            | ND         |            | 5.0 | 1.3  | ug/L |   |          | 05/09/15 18:33 | 1       |
| Chloroethane              | ND         |            | 5.0 | 0.75 | ug/L |   |          | 05/09/15 18:33 | 1       |

| Surrogate                    | %Recovery | Qualifier | Limits   | Prepared | Analyzed       | Dil Fac |
|------------------------------|-----------|-----------|----------|----------|----------------|---------|
| 1,2-Dichloroethane-d4 (Surr) | 91        |           | 62 - 123 |          | 05/09/15 18:33 | 1       |
| 4-Bromofluorobenzene (Surr)  | 95        |           | 75 - 120 |          | 05/09/15 18:33 | 1       |
| Dibromofluoromethane (Surr)  | 103       |           | 80 - 120 |          | 05/09/15 18:33 | 1       |
| Toluene-d8 (Surr)            | 116       |           | 80 - 120 |          | 05/09/15 18:33 | 1       |

# Client Sample Results

Client: EA Engineering, Science, and Technology  
 Project/Site: Sparrows Point Trust Offshore Investigat

TestAmerica Job ID: 180-43791-1

## Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level

**Client Sample ID: RB-CORE**  
**Date Collected: 05/05/15 15:30**  
**Date Received: 05/06/15 09:40**

**Lab Sample ID: 180-43791-1**  
**Matrix: Water**

| Analyte                            | Result      | Qualifier | RL       | MDL   | Unit | D | Prepared       | Analyzed       | Dil Fac |
|------------------------------------|-------------|-----------|----------|-------|------|---|----------------|----------------|---------|
| Anthracene                         | ND          |           | 0.21     | 0.020 | ug/L |   | 05/11/15 10:21 | 05/21/15 00:31 | 1       |
| Benzo[a]anthracene                 | ND          |           | 0.21     | 0.038 | ug/L |   | 05/11/15 10:21 | 05/21/15 00:31 | 1       |
| Benzo[b]fluoranthene               | ND          |           | 0.21     | 0.051 | ug/L |   | 05/11/15 10:21 | 05/21/15 00:31 | 1       |
| Benzo[k]fluoranthene               | ND          |           | 0.21     | 0.031 | ug/L |   | 05/11/15 10:21 | 05/21/15 00:31 | 1       |
| Benzo[g,h,i]perylene               | ND          |           | 0.21     | 0.030 | ug/L |   | 05/11/15 10:21 | 05/21/15 00:31 | 1       |
| Benzo[a]pyrene                     | ND          |           | 0.21     | 0.029 | ug/L |   | 05/11/15 10:21 | 05/21/15 00:31 | 1       |
| Chrysene                           | ND          |           | 0.21     | 0.032 | ug/L |   | 05/11/15 10:21 | 05/21/15 00:31 | 1       |
| Dibenz(a,h)anthracene              | ND          |           | 0.21     | 0.028 | ug/L |   | 05/11/15 10:21 | 05/21/15 00:31 | 1       |
| Fluoranthene                       | ND          |           | 0.21     | 0.022 | ug/L |   | 05/11/15 10:21 | 05/21/15 00:31 | 1       |
| Fluorene                           | ND          |           | 0.21     | 0.025 | ug/L |   | 05/11/15 10:21 | 05/21/15 00:31 | 1       |
| Indeno[1,2,3-cd]pyrene             | ND          |           | 0.21     | 0.045 | ug/L |   | 05/11/15 10:21 | 05/21/15 00:31 | 1       |
| Phenanthrene                       | ND          |           | 0.21     | 0.043 | ug/L |   | 05/11/15 10:21 | 05/21/15 00:31 | 1       |
| Pyrene                             | ND          |           | 0.21     | 0.024 | ug/L |   | 05/11/15 10:21 | 05/21/15 00:31 | 1       |
| Acenaphthene                       | ND          |           | 0.21     | 0.030 | ug/L |   | 05/11/15 10:21 | 05/21/15 00:31 | 1       |
| Acenaphthylene                     | ND          |           | 0.21     | 0.022 | ug/L |   | 05/11/15 10:21 | 05/21/15 00:31 | 1       |
| Naphthalene                        | ND          |           | 0.21     | 0.024 | ug/L |   | 05/11/15 10:21 | 05/21/15 00:31 | 1       |
| <b>Bis(2-ethylhexyl) phthalate</b> | <b>0.89</b> | <b>J</b>  | 2.1      | 0.46  | ug/L |   | 05/11/15 10:21 | 05/21/15 00:31 | 1       |
| Surrogate                          | %Recovery   | Qualifier | Limits   |       |      |   | Prepared       | Analyzed       | Dil Fac |
| Nitrobenzene-d5 (Surr)             | 81          |           | 27 - 114 |       |      |   | 05/11/15 10:21 | 05/21/15 00:31 | 1       |
| 2-Fluorobiphenyl                   | 71          |           | 28 - 109 |       |      |   | 05/11/15 10:21 | 05/21/15 00:31 | 1       |
| Terphenyl-d14 (Surr)               | 66          |           | 20 - 118 |       |      |   | 05/11/15 10:21 | 05/21/15 00:31 | 1       |
| 2-Fluorophenol (Surr)              | 74          |           | 20 - 105 |       |      |   | 05/11/15 10:21 | 05/21/15 00:31 | 1       |
| 2,4,6-Tribromophenol (Surr)        | 76          |           | 30 - 118 |       |      |   | 05/11/15 10:21 | 05/21/15 00:31 | 1       |
| Phenol-d5 (Surr)                   | 80          |           | 25 - 105 |       |      |   | 05/11/15 10:21 | 05/21/15 00:31 | 1       |

# Client Sample Results

Client: EA Engineering, Science, and Technology  
 Project/Site: Sparrows Point Trust Offshore Investigat

TestAmerica Job ID: 180-43791-1

## Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level

**Client Sample ID: FB-CORE**  
**Date Collected: 05/05/15 15:40**  
**Date Received: 05/06/15 09:40**

**Lab Sample ID: 180-43791-2**  
**Matrix: Water**

| Analyte                            | Result      | Qualifier | RL   | MDL   | Unit | D | Prepared       | Analyzed       | Dil Fac |
|------------------------------------|-------------|-----------|------|-------|------|---|----------------|----------------|---------|
| Anthracene                         | ND          |           | 0.20 | 0.019 | ug/L |   | 05/11/15 10:21 | 05/21/15 00:57 | 1       |
| Benzo[a]anthracene                 | ND          |           | 0.20 | 0.037 | ug/L |   | 05/11/15 10:21 | 05/21/15 00:57 | 1       |
| Benzo[b]fluoranthene               | ND          |           | 0.20 | 0.049 | ug/L |   | 05/11/15 10:21 | 05/21/15 00:57 | 1       |
| Benzo[k]fluoranthene               | ND          |           | 0.20 | 0.030 | ug/L |   | 05/11/15 10:21 | 05/21/15 00:57 | 1       |
| Benzo[g,h,i]perylene               | ND          |           | 0.20 | 0.029 | ug/L |   | 05/11/15 10:21 | 05/21/15 00:57 | 1       |
| Benzo[a]pyrene                     | ND          |           | 0.20 | 0.028 | ug/L |   | 05/11/15 10:21 | 05/21/15 00:57 | 1       |
| Chrysene                           | ND          |           | 0.20 | 0.031 | ug/L |   | 05/11/15 10:21 | 05/21/15 00:57 | 1       |
| Dibenz(a,h)anthracene              | ND          |           | 0.20 | 0.027 | ug/L |   | 05/11/15 10:21 | 05/21/15 00:57 | 1       |
| Fluoranthene                       | ND          |           | 0.20 | 0.021 | ug/L |   | 05/11/15 10:21 | 05/21/15 00:57 | 1       |
| Fluorene                           | ND          |           | 0.20 | 0.024 | ug/L |   | 05/11/15 10:21 | 05/21/15 00:57 | 1       |
| Indeno[1,2,3-cd]pyrene             | ND          |           | 0.20 | 0.043 | ug/L |   | 05/11/15 10:21 | 05/21/15 00:57 | 1       |
| Phenanthrene                       | ND          |           | 0.20 | 0.042 | ug/L |   | 05/11/15 10:21 | 05/21/15 00:57 | 1       |
| Pyrene                             | ND          |           | 0.20 | 0.023 | ug/L |   | 05/11/15 10:21 | 05/21/15 00:57 | 1       |
| Acenaphthene                       | ND          |           | 0.20 | 0.029 | ug/L |   | 05/11/15 10:21 | 05/21/15 00:57 | 1       |
| Acenaphthylene                     | ND          |           | 0.20 | 0.022 | ug/L |   | 05/11/15 10:21 | 05/21/15 00:57 | 1       |
| Naphthalene                        | ND          |           | 0.20 | 0.023 | ug/L |   | 05/11/15 10:21 | 05/21/15 00:57 | 1       |
| <b>Bis(2-ethylhexyl) phthalate</b> | <b>0.68</b> | <b>J</b>  | 2.0  | 0.44  | ug/L |   | 05/11/15 10:21 | 05/21/15 00:57 | 1       |

| Surrogate                   | %Recovery | Qualifier | Limits   | Prepared       | Analyzed       | Dil Fac |
|-----------------------------|-----------|-----------|----------|----------------|----------------|---------|
| Nitrobenzene-d5 (Surr)      | 62        |           | 27 - 114 | 05/11/15 10:21 | 05/21/15 00:57 | 1       |
| 2-Fluorobiphenyl            | 56        |           | 28 - 109 | 05/11/15 10:21 | 05/21/15 00:57 | 1       |
| Terphenyl-d14 (Surr)        | 60        |           | 20 - 118 | 05/11/15 10:21 | 05/21/15 00:57 | 1       |
| 2-Fluorophenol (Surr)       | 57        |           | 20 - 105 | 05/11/15 10:21 | 05/21/15 00:57 | 1       |
| 2,4,6-Tribromophenol (Surr) | 62        |           | 30 - 118 | 05/11/15 10:21 | 05/21/15 00:57 | 1       |
| Phenol-d5 (Surr)            | 62        |           | 25 - 105 | 05/11/15 10:21 | 05/21/15 00:57 | 1       |

# Client Sample Results

Client: EA Engineering, Science, and Technology  
 Project/Site: Sparrows Point Trust Offshore Investigat

TestAmerica Job ID: 180-43791-1

## Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level

**Client Sample ID: RB-PW**  
**Date Collected: 05/05/15 16:00**  
**Date Received: 05/06/15 09:40**

**Lab Sample ID: 180-43791-3**  
**Matrix: Water**

| Analyte                            | Result     | Qualifier | RL   | MDL   | Unit | D | Prepared       | Analyzed       | Dil Fac |
|------------------------------------|------------|-----------|------|-------|------|---|----------------|----------------|---------|
| Anthracene                         | ND         |           | 0.19 | 0.018 | ug/L |   | 05/11/15 10:21 | 05/21/15 01:24 | 1       |
| Benzo[a]anthracene                 | ND         |           | 0.19 | 0.035 | ug/L |   | 05/11/15 10:21 | 05/21/15 01:24 | 1       |
| Benzo[b]fluoranthene               | ND         |           | 0.19 | 0.047 | ug/L |   | 05/11/15 10:21 | 05/21/15 01:24 | 1       |
| Benzo[k]fluoranthene               | ND         |           | 0.19 | 0.029 | ug/L |   | 05/11/15 10:21 | 05/21/15 01:24 | 1       |
| Benzo[g,h,i]perylene               | ND         |           | 0.19 | 0.028 | ug/L |   | 05/11/15 10:21 | 05/21/15 01:24 | 1       |
| Benzo[a]pyrene                     | ND         |           | 0.19 | 0.027 | ug/L |   | 05/11/15 10:21 | 05/21/15 01:24 | 1       |
| Chrysene                           | ND         |           | 0.19 | 0.030 | ug/L |   | 05/11/15 10:21 | 05/21/15 01:24 | 1       |
| Dibenz(a,h)anthracene              | ND         |           | 0.19 | 0.026 | ug/L |   | 05/11/15 10:21 | 05/21/15 01:24 | 1       |
| Fluoranthene                       | ND         |           | 0.19 | 0.020 | ug/L |   | 05/11/15 10:21 | 05/21/15 01:24 | 1       |
| Fluorene                           | ND         |           | 0.19 | 0.023 | ug/L |   | 05/11/15 10:21 | 05/21/15 01:24 | 1       |
| Indeno[1,2,3-cd]pyrene             | ND         |           | 0.19 | 0.042 | ug/L |   | 05/11/15 10:21 | 05/21/15 01:24 | 1       |
| Phenanthrene                       | ND         |           | 0.19 | 0.040 | ug/L |   | 05/11/15 10:21 | 05/21/15 01:24 | 1       |
| Pyrene                             | ND         |           | 0.19 | 0.022 | ug/L |   | 05/11/15 10:21 | 05/21/15 01:24 | 1       |
| Acenaphthene                       | ND         |           | 0.19 | 0.028 | ug/L |   | 05/11/15 10:21 | 05/21/15 01:24 | 1       |
| Acenaphthylene                     | ND         |           | 0.19 | 0.021 | ug/L |   | 05/11/15 10:21 | 05/21/15 01:24 | 1       |
| Naphthalene                        | ND         |           | 0.19 | 0.022 | ug/L |   | 05/11/15 10:21 | 05/21/15 01:24 | 1       |
| <b>Bis(2-ethylhexyl) phthalate</b> | <b>2.4</b> |           | 1.9  | 0.42  | ug/L |   | 05/11/15 10:21 | 05/21/15 01:24 | 1       |

| Surrogate                   | %Recovery | Qualifier | Limits   | Prepared       | Analyzed       | Dil Fac |
|-----------------------------|-----------|-----------|----------|----------------|----------------|---------|
| Nitrobenzene-d5 (Surr)      | 64        |           | 27 - 114 | 05/11/15 10:21 | 05/21/15 01:24 | 1       |
| 2-Fluorobiphenyl            | 57        |           | 28 - 109 | 05/11/15 10:21 | 05/21/15 01:24 | 1       |
| Terphenyl-d14 (Surr)        | 62        |           | 20 - 118 | 05/11/15 10:21 | 05/21/15 01:24 | 1       |
| 2-Fluorophenol (Surr)       | 58        |           | 20 - 105 | 05/11/15 10:21 | 05/21/15 01:24 | 1       |
| 2,4,6-Tribromophenol (Surr) | 58        |           | 30 - 118 | 05/11/15 10:21 | 05/21/15 01:24 | 1       |
| Phenol-d5 (Surr)            | 64        |           | 25 - 105 | 05/11/15 10:21 | 05/21/15 01:24 | 1       |

# Client Sample Results

Client: EA Engineering, Science, and Technology  
 Project/Site: Sparrows Point Trust Offshore Investigat

TestAmerica Job ID: 180-43791-1

## Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level

**Client Sample ID: FB-PW**  
**Date Collected: 05/05/15 16:10**  
**Date Received: 05/06/15 09:40**

**Lab Sample ID: 180-43791-4**  
**Matrix: Water**

| Analyte                            | Result     | Qualifier | RL   | MDL   | Unit | D | Prepared       | Analyzed       | Dil Fac |
|------------------------------------|------------|-----------|------|-------|------|---|----------------|----------------|---------|
| Anthracene                         | ND         |           | 0.20 | 0.019 | ug/L |   | 05/11/15 10:21 | 05/21/15 01:50 | 1       |
| Benzo[a]anthracene                 | ND         |           | 0.20 | 0.037 | ug/L |   | 05/11/15 10:21 | 05/21/15 01:50 | 1       |
| Benzo[b]fluoranthene               | ND         |           | 0.20 | 0.049 | ug/L |   | 05/11/15 10:21 | 05/21/15 01:50 | 1       |
| Benzo[k]fluoranthene               | ND         |           | 0.20 | 0.030 | ug/L |   | 05/11/15 10:21 | 05/21/15 01:50 | 1       |
| Benzo[g,h,i]perylene               | ND         |           | 0.20 | 0.029 | ug/L |   | 05/11/15 10:21 | 05/21/15 01:50 | 1       |
| Benzo[a]pyrene                     | ND         |           | 0.20 | 0.028 | ug/L |   | 05/11/15 10:21 | 05/21/15 01:50 | 1       |
| Chrysene                           | ND         |           | 0.20 | 0.031 | ug/L |   | 05/11/15 10:21 | 05/21/15 01:50 | 1       |
| Dibenz(a,h)anthracene              | ND         |           | 0.20 | 0.027 | ug/L |   | 05/11/15 10:21 | 05/21/15 01:50 | 1       |
| Fluoranthene                       | ND         |           | 0.20 | 0.021 | ug/L |   | 05/11/15 10:21 | 05/21/15 01:50 | 1       |
| Fluorene                           | ND         |           | 0.20 | 0.024 | ug/L |   | 05/11/15 10:21 | 05/21/15 01:50 | 1       |
| Indeno[1,2,3-cd]pyrene             | ND         |           | 0.20 | 0.043 | ug/L |   | 05/11/15 10:21 | 05/21/15 01:50 | 1       |
| Phenanthrene                       | ND         |           | 0.20 | 0.042 | ug/L |   | 05/11/15 10:21 | 05/21/15 01:50 | 1       |
| Pyrene                             | ND         |           | 0.20 | 0.023 | ug/L |   | 05/11/15 10:21 | 05/21/15 01:50 | 1       |
| Acenaphthene                       | ND         |           | 0.20 | 0.029 | ug/L |   | 05/11/15 10:21 | 05/21/15 01:50 | 1       |
| Acenaphthylene                     | ND         |           | 0.20 | 0.022 | ug/L |   | 05/11/15 10:21 | 05/21/15 01:50 | 1       |
| Naphthalene                        | ND         |           | 0.20 | 0.023 | ug/L |   | 05/11/15 10:21 | 05/21/15 01:50 | 1       |
| <b>Bis(2-ethylhexyl) phthalate</b> | <b>2.6</b> |           | 2.0  | 0.44  | ug/L |   | 05/11/15 10:21 | 05/21/15 01:50 | 1       |

| Surrogate                   | %Recovery | Qualifier | Limits   | Prepared       | Analyzed       | Dil Fac |
|-----------------------------|-----------|-----------|----------|----------------|----------------|---------|
| Nitrobenzene-d5 (Surr)      | 62        |           | 27 - 114 | 05/11/15 10:21 | 05/21/15 01:50 | 1       |
| 2-Fluorobiphenyl            | 56        |           | 28 - 109 | 05/11/15 10:21 | 05/21/15 01:50 | 1       |
| Terphenyl-d14 (Surr)        | 59        |           | 20 - 118 | 05/11/15 10:21 | 05/21/15 01:50 | 1       |
| 2-Fluorophenol (Surr)       | 53        |           | 20 - 105 | 05/11/15 10:21 | 05/21/15 01:50 | 1       |
| 2,4,6-Tribromophenol (Surr) | 65        |           | 30 - 118 | 05/11/15 10:21 | 05/21/15 01:50 | 1       |
| Phenol-d5 (Surr)            | 58        |           | 25 - 105 | 05/11/15 10:21 | 05/21/15 01:50 | 1       |

# Client Sample Results

Client: EA Engineering, Science, and Technology  
 Project/Site: Sparrows Point Trust Offshore Investigat

TestAmerica Job ID: 180-43791-1

## Method: 8082A - Polychlorinated Biphenyls (PCBs) (GC)

**Client Sample ID: RB-CORE**  
**Date Collected: 05/05/15 15:30**  
**Date Received: 05/06/15 09:40**

**Lab Sample ID: 180-43791-1**  
**Matrix: Water**

| Analyte                       | Result    | Qualifier | RL       | MDL    | Unit | D | Prepared       | Analyzed       | Dil Fac |
|-------------------------------|-----------|-----------|----------|--------|------|---|----------------|----------------|---------|
| PCB-1016                      | ND        |           | 0.0095   | 0.0024 | ug/L |   | 05/07/15 13:45 | 05/12/15 03:46 | 1       |
| PCB-1221                      | ND        |           | 0.0095   | 0.0039 | ug/L |   | 05/07/15 13:45 | 05/12/15 03:46 | 1       |
| PCB-1232                      | ND        |           | 0.0095   | 0.0037 | ug/L |   | 05/07/15 13:45 | 05/12/15 03:46 | 1       |
| PCB-1242                      | ND        |           | 0.0095   | 0.0018 | ug/L |   | 05/07/15 13:45 | 05/12/15 03:46 | 1       |
| PCB-1248                      | ND        |           | 0.0095   | 0.0026 | ug/L |   | 05/07/15 13:45 | 05/12/15 03:46 | 1       |
| PCB-1254                      | ND        |           | 0.0095   | 0.0029 | ug/L |   | 05/07/15 13:45 | 05/12/15 03:46 | 1       |
| PCB-1260                      | ND        |           | 0.0095   | 0.0016 | ug/L |   | 05/07/15 13:45 | 05/12/15 03:46 | 1       |
| Surrogate                     | %Recovery | Qualifier | Limits   |        |      |   | Prepared       | Analyzed       | Dil Fac |
| DCB Decachlorobiphenyl (Surr) | 98        |           | 43 - 138 |        |      |   | 05/07/15 13:45 | 05/12/15 03:46 | 1       |
| DCB Decachlorobiphenyl (Surr) | 92        |           | 43 - 138 |        |      |   | 05/07/15 13:45 | 05/12/15 03:46 | 1       |
| Tetrachloro-m-xylene (Surr)   | 102       |           | 34 - 137 |        |      |   | 05/07/15 13:45 | 05/12/15 03:46 | 1       |
| Tetrachloro-m-xylene (Surr)   | 101       |           | 34 - 137 |        |      |   | 05/07/15 13:45 | 05/12/15 03:46 | 1       |

# Client Sample Results

Client: EA Engineering, Science, and Technology  
 Project/Site: Sparrows Point Trust Offshore Investigat

TestAmerica Job ID: 180-43791-1

## Method: 8082A - Polychlorinated Biphenyls (PCBs) (GC)

**Client Sample ID: FB-CORE**  
**Date Collected: 05/05/15 15:40**  
**Date Received: 05/06/15 09:40**

**Lab Sample ID: 180-43791-2**  
**Matrix: Water**

| Analyte  | Result | Qualifier | RL     | MDL    | Unit | D | Prepared       | Analyzed       | Dil Fac |
|----------|--------|-----------|--------|--------|------|---|----------------|----------------|---------|
| PCB-1016 | ND     |           | 0.0095 | 0.0024 | ug/L |   | 05/07/15 13:45 | 05/12/15 04:06 | 1       |
| PCB-1221 | ND     |           | 0.0095 | 0.0039 | ug/L |   | 05/07/15 13:45 | 05/12/15 04:06 | 1       |
| PCB-1232 | ND     |           | 0.0095 | 0.0037 | ug/L |   | 05/07/15 13:45 | 05/12/15 04:06 | 1       |
| PCB-1242 | ND     |           | 0.0095 | 0.0018 | ug/L |   | 05/07/15 13:45 | 05/12/15 04:06 | 1       |
| PCB-1248 | ND     |           | 0.0095 | 0.0026 | ug/L |   | 05/07/15 13:45 | 05/12/15 04:06 | 1       |
| PCB-1254 | ND     |           | 0.0095 | 0.0029 | ug/L |   | 05/07/15 13:45 | 05/12/15 04:06 | 1       |
| PCB-1260 | ND     |           | 0.0095 | 0.0016 | ug/L |   | 05/07/15 13:45 | 05/12/15 04:06 | 1       |

| Surrogate                     | %Recovery | Qualifier | Limits   | Prepared       | Analyzed       | Dil Fac |
|-------------------------------|-----------|-----------|----------|----------------|----------------|---------|
| DCB Decachlorobiphenyl (Surr) | 103       |           | 43 - 138 | 05/07/15 13:45 | 05/12/15 04:06 | 1       |
| DCB Decachlorobiphenyl (Surr) | 95        |           | 43 - 138 | 05/07/15 13:45 | 05/12/15 04:06 | 1       |
| Tetrachloro-m-xylene (Surr)   | 112       |           | 34 - 137 | 05/07/15 13:45 | 05/12/15 04:06 | 1       |
| Tetrachloro-m-xylene (Surr)   | 111       |           | 34 - 137 | 05/07/15 13:45 | 05/12/15 04:06 | 1       |



# Client Sample Results

Client: EA Engineering, Science, and Technology  
 Project/Site: Sparrows Point Trust Offshore Investigat

TestAmerica Job ID: 180-43791-1

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

**Client Sample ID: RB-CORE**  
**Date Collected: 05/05/15 15:30**  
**Date Received: 05/06/15 09:40**

**Lab Sample ID: 180-43791-1**  
**Matrix: Water**

| Analyte         | Result       | Qualifier | RL  | MDL   | Unit | D | Prepared       | Analyzed       | Dil Fac |
|-----------------|--------------|-----------|-----|-------|------|---|----------------|----------------|---------|
| Arsenic         | ND           |           | 1.0 | 0.29  | ug/L |   | 05/07/15 10:58 | 05/20/15 00:24 | 1       |
| Cadmium         | ND           |           | 1.0 | 0.11  | ug/L |   | 05/07/15 10:58 | 05/20/15 00:24 | 1       |
| <b>Chromium</b> | <b>1.3</b>   | <b>J</b>  | 2.0 | 0.54  | ug/L |   | 05/07/15 10:58 | 05/20/15 00:24 | 1       |
| <b>Lead</b>     | <b>0.39</b>  | <b>J</b>  | 1.0 | 0.019 | ug/L |   | 05/07/15 10:58 | 05/20/15 00:24 | 1       |
| Selenium        | ND           |           | 5.0 | 0.42  | ug/L |   | 05/07/15 10:58 | 05/20/15 00:24 | 1       |
| Silver          | ND           |           | 1.0 | 0.036 | ug/L |   | 05/07/15 10:58 | 05/20/15 00:24 | 1       |
| Beryllium       | ND           |           | 1.0 | 0.037 | ug/L |   | 05/07/15 10:58 | 05/20/15 00:24 | 1       |
| <b>Thallium</b> | <b>0.067</b> | <b>J</b>  | 1.0 | 0.015 | ug/L |   | 05/07/15 10:58 | 05/20/15 00:24 | 1       |
| <b>Antimony</b> | <b>2.2</b>   |           | 2.0 | 0.019 | ug/L |   | 05/07/15 10:58 | 05/20/15 00:24 | 1       |
| <b>Nickel</b>   | <b>1.9</b>   |           | 1.0 | 0.17  | ug/L |   | 05/07/15 10:58 | 05/20/15 00:24 | 1       |
| <b>Zinc</b>     | <b>8.7</b>   |           | 5.0 | 0.96  | ug/L |   | 05/07/15 10:58 | 05/20/15 00:24 | 1       |
| <b>Copper</b>   | <b>0.78</b>  | <b>J</b>  | 2.0 | 0.24  | ug/L |   | 05/07/15 10:58 | 05/20/15 00:24 | 1       |

# Client Sample Results

Client: EA Engineering, Science, and Technology  
 Project/Site: Sparrows Point Trust Offshore Investigat

TestAmerica Job ID: 180-43791-1

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

**Client Sample ID: FB-CORE**  
**Date Collected: 05/05/15 15:40**  
**Date Received: 05/06/15 09:40**

**Lab Sample ID: 180-43791-2**  
**Matrix: Water**

| Analyte         | Result       | Qualifier | RL  | MDL   | Unit | D | Prepared       | Analyzed       | Dil Fac |
|-----------------|--------------|-----------|-----|-------|------|---|----------------|----------------|---------|
| Arsenic         | ND           |           | 1.0 | 0.29  | ug/L |   | 05/07/15 10:58 | 05/20/15 00:27 | 1       |
| Cadmium         | ND           |           | 1.0 | 0.11  | ug/L |   | 05/07/15 10:58 | 05/20/15 00:27 | 1       |
| <b>Chromium</b> | <b>1.4</b>   | <b>J</b>  | 2.0 | 0.54  | ug/L |   | 05/07/15 10:58 | 05/20/15 00:27 | 1       |
| <b>Lead</b>     | <b>0.32</b>  | <b>J</b>  | 1.0 | 0.019 | ug/L |   | 05/07/15 10:58 | 05/20/15 00:27 | 1       |
| Selenium        | ND           |           | 5.0 | 0.42  | ug/L |   | 05/07/15 10:58 | 05/20/15 00:27 | 1       |
| Silver          | ND           |           | 1.0 | 0.036 | ug/L |   | 05/07/15 10:58 | 05/20/15 00:27 | 1       |
| Beryllium       | ND           |           | 1.0 | 0.037 | ug/L |   | 05/07/15 10:58 | 05/20/15 00:27 | 1       |
| <b>Thallium</b> | <b>0.034</b> | <b>J</b>  | 1.0 | 0.015 | ug/L |   | 05/07/15 10:58 | 05/20/15 00:27 | 1       |
| <b>Antimony</b> | <b>0.70</b>  | <b>J</b>  | 2.0 | 0.019 | ug/L |   | 05/07/15 10:58 | 05/20/15 00:27 | 1       |
| <b>Nickel</b>   | <b>2.0</b>   |           | 1.0 | 0.17  | ug/L |   | 05/07/15 10:58 | 05/20/15 00:27 | 1       |
| <b>Zinc</b>     | <b>7.7</b>   |           | 5.0 | 0.96  | ug/L |   | 05/07/15 10:58 | 05/20/15 00:27 | 1       |
| <b>Copper</b>   | <b>0.65</b>  | <b>J</b>  | 2.0 | 0.24  | ug/L |   | 05/07/15 10:58 | 05/20/15 00:27 | 1       |

# Client Sample Results

Client: EA Engineering, Science, and Technology  
 Project/Site: Sparrows Point Trust Offshore Investigat

TestAmerica Job ID: 180-43791-1

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

**Client Sample ID: RB-PW**  
**Date Collected: 05/05/15 16:00**  
**Date Received: 05/06/15 09:40**

**Lab Sample ID: 180-43791-3**  
**Matrix: Water**

| Analyte         | Result       | Qualifier | RL  | MDL   | Unit | D | Prepared       | Analyzed       | Dil Fac |
|-----------------|--------------|-----------|-----|-------|------|---|----------------|----------------|---------|
| Arsenic         | ND           |           | 1.0 | 0.29  | ug/L |   | 05/07/15 10:58 | 05/20/15 00:31 | 1       |
| Cadmium         | ND           |           | 1.0 | 0.11  | ug/L |   | 05/07/15 10:58 | 05/20/15 00:31 | 1       |
| <b>Chromium</b> | <b>1.1</b>   | <b>J</b>  | 2.0 | 0.54  | ug/L |   | 05/07/15 10:58 | 05/20/15 00:31 | 1       |
| <b>Lead</b>     | <b>0.39</b>  | <b>J</b>  | 1.0 | 0.019 | ug/L |   | 05/07/15 10:58 | 05/20/15 00:31 | 1       |
| Selenium        | ND           |           | 5.0 | 0.42  | ug/L |   | 05/07/15 10:58 | 05/20/15 00:31 | 1       |
| Silver          | ND           |           | 1.0 | 0.036 | ug/L |   | 05/07/15 10:58 | 05/20/15 00:31 | 1       |
| Beryllium       | ND           |           | 1.0 | 0.037 | ug/L |   | 05/07/15 10:58 | 05/20/15 00:31 | 1       |
| <b>Thallium</b> | <b>0.024</b> | <b>J</b>  | 1.0 | 0.015 | ug/L |   | 05/07/15 10:58 | 05/20/15 00:31 | 1       |
| <b>Antimony</b> | <b>0.42</b>  | <b>J</b>  | 2.0 | 0.019 | ug/L |   | 05/07/15 10:58 | 05/20/15 00:31 | 1       |
| <b>Nickel</b>   | <b>2.2</b>   |           | 1.0 | 0.17  | ug/L |   | 05/07/15 10:58 | 05/20/15 00:31 | 1       |
| <b>Zinc</b>     | <b>29</b>    |           | 5.0 | 0.96  | ug/L |   | 05/07/15 10:58 | 05/20/15 00:31 | 1       |
| <b>Copper</b>   | <b>2.2</b>   |           | 2.0 | 0.24  | ug/L |   | 05/07/15 10:58 | 05/20/15 00:31 | 1       |

# Client Sample Results

Client: EA Engineering, Science, and Technology  
 Project/Site: Sparrows Point Trust Offshore Investigat

TestAmerica Job ID: 180-43791-1

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

**Client Sample ID: FB-PW**  
**Date Collected: 05/05/15 16:10**  
**Date Received: 05/06/15 09:40**

**Lab Sample ID: 180-43791-4**  
**Matrix: Water**

| Analyte         | Result       | Qualifier | RL  | MDL   | Unit | D | Prepared       | Analyzed       | Dil Fac |
|-----------------|--------------|-----------|-----|-------|------|---|----------------|----------------|---------|
| Arsenic         | ND           |           | 1.0 | 0.29  | ug/L |   | 05/07/15 10:58 | 05/20/15 00:35 | 1       |
| Cadmium         | ND           |           | 1.0 | 0.11  | ug/L |   | 05/07/15 10:58 | 05/20/15 00:35 | 1       |
| <b>Chromium</b> | <b>1.0</b>   | <b>J</b>  | 2.0 | 0.54  | ug/L |   | 05/07/15 10:58 | 05/20/15 00:35 | 1       |
| <b>Lead</b>     | <b>0.39</b>  | <b>J</b>  | 1.0 | 0.019 | ug/L |   | 05/07/15 10:58 | 05/20/15 00:35 | 1       |
| Selenium        | ND           |           | 5.0 | 0.42  | ug/L |   | 05/07/15 10:58 | 05/20/15 00:35 | 1       |
| Silver          | ND           |           | 1.0 | 0.036 | ug/L |   | 05/07/15 10:58 | 05/20/15 00:35 | 1       |
| Beryllium       | ND           |           | 1.0 | 0.037 | ug/L |   | 05/07/15 10:58 | 05/20/15 00:35 | 1       |
| <b>Thallium</b> | <b>0.023</b> | <b>J</b>  | 1.0 | 0.015 | ug/L |   | 05/07/15 10:58 | 05/20/15 00:35 | 1       |
| <b>Antimony</b> | <b>0.27</b>  | <b>J</b>  | 2.0 | 0.019 | ug/L |   | 05/07/15 10:58 | 05/20/15 00:35 | 1       |
| <b>Nickel</b>   | <b>0.35</b>  | <b>J</b>  | 1.0 | 0.17  | ug/L |   | 05/07/15 10:58 | 05/20/15 00:35 | 1       |
| <b>Zinc</b>     | <b>29</b>    |           | 5.0 | 0.96  | ug/L |   | 05/07/15 10:58 | 05/20/15 00:35 | 1       |
| <b>Copper</b>   | <b>3.2</b>   |           | 2.0 | 0.24  | ug/L |   | 05/07/15 10:58 | 05/20/15 00:35 | 1       |

# Client Sample Results

Client: EA Engineering, Science, and Technology  
Project/Site: Sparrows Point Trust Offshore Investigat

TestAmerica Job ID: 180-43791-1

## Method: 7470A - Mercury (CVAA)

Client Sample ID: RB-CORE  
Date Collected: 05/05/15 15:30  
Date Received: 05/06/15 09:40

Lab Sample ID: 180-43791-1  
Matrix: Water

| Analyte | Result | Qualifier | RL   | MDL   | Unit | D | Prepared       | Analyzed       | Dil Fac |
|---------|--------|-----------|------|-------|------|---|----------------|----------------|---------|
| Mercury | ND     |           | 0.20 | 0.078 | ug/L |   | 05/18/15 06:25 | 05/18/15 18:17 | 1       |

# Client Sample Results

Client: EA Engineering, Science, and Technology  
Project/Site: Sparrows Point Trust Offshore Investigat

TestAmerica Job ID: 180-43791-1

## Method: 7470A - Mercury (CVAA)

Client Sample ID: FB-CORE  
Date Collected: 05/05/15 15:40  
Date Received: 05/06/15 09:40

Lab Sample ID: 180-43791-2  
Matrix: Water

| Analyte | Result | Qualifier | RL   | MDL   | Unit | D | Prepared       | Analyzed       | Dil Fac |
|---------|--------|-----------|------|-------|------|---|----------------|----------------|---------|
| Mercury | ND     |           | 0.20 | 0.078 | ug/L |   | 05/18/15 06:25 | 05/18/15 18:19 | 1       |

# Client Sample Results

Client: EA Engineering, Science, and Technology  
Project/Site: Sparrows Point Trust Offshore Investigat

TestAmerica Job ID: 180-43791-1

## Method: 7470A - Mercury (CVAA)

Client Sample ID: RB-PW  
Date Collected: 05/05/15 16:00  
Date Received: 05/06/15 09:40

Lab Sample ID: 180-43791-3  
Matrix: Water

| Analyte | Result | Qualifier | RL   | MDL   | Unit | D | Prepared       | Analyzed       | Dil Fac |
|---------|--------|-----------|------|-------|------|---|----------------|----------------|---------|
| Mercury | ND     |           | 0.20 | 0.078 | ug/L |   | 05/18/15 06:25 | 05/18/15 18:25 | 1       |

# Client Sample Results

Client: EA Engineering, Science, and Technology  
Project/Site: Sparrows Point Trust Offshore Investigat

TestAmerica Job ID: 180-43791-1

## Method: 7470A - Mercury (CVAA)

Client Sample ID: FB-PW  
Date Collected: 05/05/15 16:10  
Date Received: 05/06/15 09:40

Lab Sample ID: 180-43791-4  
Matrix: Water

| Analyte | Result | Qualifier | RL   | MDL   | Unit | D | Prepared       | Analyzed       | Dil Fac |
|---------|--------|-----------|------|-------|------|---|----------------|----------------|---------|
| Mercury | ND     |           | 0.20 | 0.078 | ug/L |   | 05/18/15 06:25 | 05/18/15 18:27 | 1       |



# Client Sample Results

Client: EA Engineering, Science, and Technology  
Project/Site: Sparrows Point Trust Offshore Investigat

TestAmerica Job ID: 180-43791-1

## General Chemistry

**Client Sample ID: RB-CORE**  
**Date Collected: 05/05/15 15:30**  
**Date Received: 05/06/15 09:40**

**Lab Sample ID: 180-43791-1**  
**Matrix: Water**

| Analyte        | Result | Qualifier | RL  | MDL | Unit | D | Prepared       | Analyzed       | Dil Fac |
|----------------|--------|-----------|-----|-----|------|---|----------------|----------------|---------|
| HEM            | ND     |           | 4.6 | 1.6 | mg/L |   | 05/15/15 10:40 | 05/15/15 10:40 | 1       |
| Cyanide, Total | ND     |           | 10  | 2.5 | ug/L |   | 05/15/15 08:15 | 05/15/15 12:00 | 1       |

# Client Sample Results

Client: EA Engineering, Science, and Technology  
Project/Site: Sparrows Point Trust Offshore Investigat

TestAmerica Job ID: 180-43791-1

## General Chemistry

**Client Sample ID: FB-CORE**  
**Date Collected: 05/05/15 15:40**  
**Date Received: 05/06/15 09:40**

**Lab Sample ID: 180-43791-2**  
**Matrix: Water**

| Analyte        | Result | Qualifier | RL  | MDL | Unit | D | Prepared       | Analyzed       | Dil Fac |
|----------------|--------|-----------|-----|-----|------|---|----------------|----------------|---------|
| HEM            | ND     |           | 4.7 | 1.7 | mg/L |   | 05/15/15 10:40 | 05/15/15 10:40 | 1       |
| Cyanide, Total | ND     |           | 10  | 2.5 | ug/L |   | 05/15/15 08:15 | 05/15/15 12:02 | 1       |

# Client Sample Results

Client: EA Engineering, Science, and Technology  
Project/Site: Sparrows Point Trust Offshore Investigat

TestAmerica Job ID: 180-43791-1

## General Chemistry

**Client Sample ID: RB-PW**  
**Date Collected: 05/05/15 16:00**  
**Date Received: 05/06/15 09:40**

**Lab Sample ID: 180-43791-3**  
**Matrix: Water**

| Analyte        | Result | Qualifier | RL | MDL | Unit | D | Prepared       | Analyzed       | Dil Fac |
|----------------|--------|-----------|----|-----|------|---|----------------|----------------|---------|
| Cyanide, Total | ND     |           | 10 | 2.5 | ug/L |   | 05/15/15 08:15 | 05/15/15 12:04 | 1       |

# Client Sample Results

Client: EA Engineering, Science, and Technology  
Project/Site: Sparrows Point Trust Offshore Investigat

TestAmerica Job ID: 180-43791-1

## General Chemistry

**Client Sample ID: FB-PW**  
**Date Collected: 05/05/15 16:10**  
**Date Received: 05/06/15 09:40**

**Lab Sample ID: 180-43791-4**  
**Matrix: Water**

| Analyte        | Result | Qualifier | RL | MDL | Unit | D | Prepared       | Analyzed       | Dil Fac |
|----------------|--------|-----------|----|-----|------|---|----------------|----------------|---------|
| Cyanide, Total | ND     |           | 10 | 2.5 | ug/L |   | 05/15/15 08:15 | 05/15/15 12:06 | 1       |

# Client Sample Results

Client: EA Engineering, Science, and Technology  
Project/Site: Sparrows Point Trust Offshore Investigat

TestAmerica Job ID: 180-43791-1

## General Chemistry - Dissolved

Client Sample ID: RB-PW  
Date Collected: 05/05/15 16:00  
Date Received: 05/06/15 09:40

Lab Sample ID: 180-43791-3  
Matrix: Water

| Analyte                              | Result | Qualifier | RL  | MDL  | Unit | D | Prepared | Analyzed       | Dil Fac |
|--------------------------------------|--------|-----------|-----|------|------|---|----------|----------------|---------|
| Dissolved Organic Carbon - Duplicate | 0.49   | J         | 1.0 | 0.14 | mg/L |   |          | 05/11/15 08:29 | 1       |

# Client Sample Results

Client: EA Engineering, Science, and Technology  
Project/Site: Sparrows Point Trust Offshore Investigat

TestAmerica Job ID: 180-43791-1

## General Chemistry - Dissolved

Client Sample ID: FB-PW  
Date Collected: 05/05/15 16:10  
Date Received: 05/06/15 09:40

Lab Sample ID: 180-43791-4  
Matrix: Water

| Analyte                              | Result | Qualifier | RL  | MDL  | Unit | D | Prepared | Analyzed       | Dil Fac |
|--------------------------------------|--------|-----------|-----|------|------|---|----------|----------------|---------|
| Dissolved Organic Carbon - Duplicate | 0.80   | J         | 1.0 | 0.14 | mg/L |   |          | 05/11/15 08:48 | 1       |

## Default Detection Limits

Client: EA Engineering, Science, and Technology  
 Project/Site: Sparrows Point Trust Offshore Investigat

TestAmerica Job ID: 180-43791-1

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

| Analyte                   | RL  | MDL  | Units | Method |
|---------------------------|-----|------|-------|--------|
| 1,1,1-Trichloroethane     | 5.0 | 1.0  | ug/L  | 8260C  |
| 1,1,2,2-Tetrachloroethane | 5.0 | 0.93 | ug/L  | 8260C  |
| 1,1,2-Trichloroethane     | 5.0 | 1.2  | ug/L  | 8260C  |
| 1,1-Dichloroethane        | 5.0 | 1.0  | ug/L  | 8260C  |
| 1,1-Dichloroethene        | 5.0 | 1.1  | ug/L  | 8260C  |
| 1,2-Dichlorobenzene       | 5.0 | 0.68 | ug/L  | 8260C  |
| 1,2-Dichloroethane        | 5.0 | 0.96 | ug/L  | 8260C  |
| 1,2-Dichloropropane       | 5.0 | 1.3  | ug/L  | 8260C  |
| 1,3-Dichlorobenzene       | 5.0 | 0.51 | ug/L  | 8260C  |
| 1,4-Dichlorobenzene       | 5.0 | 0.53 | ug/L  | 8260C  |
| 2-Chloroethyl vinyl ether | 10  | 1.9  | ug/L  | 8260C  |
| Acrolein                  | 100 | 5.7  | ug/L  | 8260C  |
| Acrylonitrile             | 50  | 9.0  | ug/L  | 8260C  |
| Benzene                   | 5.0 | 0.99 | ug/L  | 8260C  |
| Bromoform                 | 5.0 | 1.1  | ug/L  | 8260C  |
| Bromomethane              | 5.0 | 1.6  | ug/L  | 8260C  |
| Carbon tetrachloride      | 5.0 | 1.1  | ug/L  | 8260C  |
| Chlorobenzene             | 5.0 | 0.53 | ug/L  | 8260C  |
| Chlorodibromomethane      | 5.0 | 0.65 | ug/L  | 8260C  |
| Chloroethane              | 5.0 | 0.75 | ug/L  | 8260C  |
| Chloroform                | 5.0 | 1.0  | ug/L  | 8260C  |
| Chloromethane             | 5.0 | 1.4  | ug/L  | 8260C  |
| cis-1,3-Dichloropropene   | 5.0 | 0.73 | ug/L  | 8260C  |
| Dichlorobromomethane      | 5.0 | 0.93 | ug/L  | 8260C  |
| Ethylbenzene              | 5.0 | 0.62 | ug/L  | 8260C  |
| Methylene Chloride        | 5.0 | 1.1  | ug/L  | 8260C  |
| Tetrachloroethene         | 5.0 | 0.82 | ug/L  | 8260C  |
| Toluene                   | 5.0 | 0.85 | ug/L  | 8260C  |
| trans-1,2-Dichloroethene  | 5.0 | 0.75 | ug/L  | 8260C  |
| trans-1,3-Dichloropropene | 5.0 | 0.58 | ug/L  | 8260C  |
| Trichloroethene           | 5.0 | 0.80 | ug/L  | 8260C  |
| Vinyl chloride            | 5.0 | 1.3  | ug/L  | 8260C  |

### Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level

| Analyte                     | RL   | MDL   | Units | Method   |
|-----------------------------|------|-------|-------|----------|
| Acenaphthene                | 0.20 | 0.029 | ug/L  | 8270D LL |
| Acenaphthylene              | 0.20 | 0.022 | ug/L  | 8270D LL |
| Anthracene                  | 0.20 | 0.019 | ug/L  | 8270D LL |
| Benzo[a]anthracene          | 0.20 | 0.037 | ug/L  | 8270D LL |
| Benzo[a]pyrene              | 0.20 | 0.028 | ug/L  | 8270D LL |
| Benzo[b]fluoranthene        | 0.20 | 0.049 | ug/L  | 8270D LL |
| Benzo[g,h,i]perylene        | 0.20 | 0.029 | ug/L  | 8270D LL |
| Benzo[k]fluoranthene        | 0.20 | 0.030 | ug/L  | 8270D LL |
| Bis(2-ethylhexyl) phthalate | 2.0  | 0.44  | ug/L  | 8270D LL |
| Chrysene                    | 0.20 | 0.031 | ug/L  | 8270D LL |
| Dibenz(a,h)anthracene       | 0.20 | 0.027 | ug/L  | 8270D LL |
| Fluoranthene                | 0.20 | 0.021 | ug/L  | 8270D LL |
| Fluorene                    | 0.20 | 0.024 | ug/L  | 8270D LL |
| Indeno[1,2,3-cd]pyrene      | 0.20 | 0.043 | ug/L  | 8270D LL |
| Naphthalene                 | 0.20 | 0.023 | ug/L  | 8270D LL |
| Phenanthrene                | 0.20 | 0.042 | ug/L  | 8270D LL |

## Default Detection Limits

Client: EA Engineering, Science, and Technology  
Project/Site: Sparrows Point Trust Offshore Investigat

TestAmerica Job ID: 180-43791-1

### Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level (Continued)

| Analyte | RL   | MDL   | Units | Method   |
|---------|------|-------|-------|----------|
| Pyrene  | 0.20 | 0.023 | ug/L  | 8270D LL |

### Method: 8082A - Polychlorinated Biphenyls (PCBs) (GC)

| Analyte  | RL    | MDL    | Units | Method |
|----------|-------|--------|-------|--------|
| PCB-1016 | 0.010 | 0.0025 | ug/L  | 8082A  |
| PCB-1221 | 0.010 | 0.0041 | ug/L  | 8082A  |
| PCB-1232 | 0.010 | 0.0039 | ug/L  | 8082A  |
| PCB-1242 | 0.010 | 0.0019 | ug/L  | 8082A  |
| PCB-1248 | 0.010 | 0.0027 | ug/L  | 8082A  |
| PCB-1254 | 0.010 | 0.0030 | ug/L  | 8082A  |
| PCB-1260 | 0.010 | 0.0017 | ug/L  | 8082A  |

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

| Analyte   | RL  | MDL   | Units | Method |
|-----------|-----|-------|-------|--------|
| Antimony  | 2.0 | 0.019 | ug/L  | 6020A  |
| Arsenic   | 1.0 | 0.29  | ug/L  | 6020A  |
| Beryllium | 1.0 | 0.037 | ug/L  | 6020A  |
| Cadmium   | 1.0 | 0.11  | ug/L  | 6020A  |
| Chromium  | 2.0 | 0.54  | ug/L  | 6020A  |
| Copper    | 2.0 | 0.24  | ug/L  | 6020A  |
| Lead      | 1.0 | 0.019 | ug/L  | 6020A  |
| Nickel    | 1.0 | 0.17  | ug/L  | 6020A  |
| Selenium  | 5.0 | 0.42  | ug/L  | 6020A  |
| Silver    | 1.0 | 0.036 | ug/L  | 6020A  |
| Thallium  | 1.0 | 0.015 | ug/L  | 6020A  |
| Zinc      | 5.0 | 0.96  | ug/L  | 6020A  |

### Method: 7470A - Mercury (CVAA)

| Analyte | RL   | MDL   | Units | Method |
|---------|------|-------|-------|--------|
| Mercury | 0.20 | 0.078 | ug/L  | 7470A  |

### General Chemistry

| Analyte        | RL  | MDL | Units | Method |
|----------------|-----|-----|-------|--------|
| HEM            | 4.0 | 1.4 | mg/L  | 1664B  |
| Cyanide, Total | 10  | 2.5 | ug/L  | 9014   |

### General Chemistry - Dissolved

| Analyte                              | RL  | MDL  | Units | Method   |
|--------------------------------------|-----|------|-------|----------|
| Dissolved Organic Carbon - Duplicate | 1.0 | 0.14 | mg/L  | SM 5310C |



# Surrogate Summary

Client: EA Engineering, Science, and Technology  
 Project/Site: Sparrows Point Trust Offshore Investigat

TestAmerica Job ID: 180-43791-1

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

Matrix: Water

Prep Type: Total/NA

| Lab Sample ID    | Client Sample ID   | Percent Surrogate Recovery (Acceptance Limits) |                 |                  |                 |
|------------------|--------------------|--|-----------------|------------------|-----------------|
|                  |                    | 12DCE<br>(62-123)                              | BFB<br>(75-120) | DBFM<br>(80-120) | TOL<br>(80-120) |
| 180-43791-1      | RB-CORE            | 91   | 91              | 108              | 116             |
| 180-43791-2      | FB-CORE            | 87   | 92              | 98               | 117             |
| 180-43791-7      | TRIP BLANK         | 91   | 95              | 103              | 116             |
| LCS 180-141065/9 | Lab Control Sample | 94   | 97              | 102              | 100             |
| MB 180-141065/5  | Method Blank       | 87   | 93              | 103              | 120             |

### Surrogate Legend

12DCE = 1,2-Dichloroethane-d4 (Surr)  
 BFB = 4-Bromofluorobenzene (Surr)  
 DBFM = Dibromofluoromethane (Surr)  
 TOL = Toluene-d8 (Surr)

## Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level

Matrix: Water

Prep Type: Total/NA

| Lab Sample ID      | Client Sample ID   | Percent Surrogate Recovery (Acceptance Limits) |                 |                 |                 |                 |                 |
|--------------------|--------------------|--|-----------------|-----------------|-----------------|-----------------|-----------------|
|                    |                    | NBZ<br>(27-114)                                | FBP<br>(28-109) | TPH<br>(20-118) | 2FP<br>(20-105) | TBP<br>(30-118) | PHL<br>(25-105) |
| 180-43791-1        | RB-CORE            | 81   | 71              | 66              | 74              | 76              | 80              |
| 180-43791-2        | FB-CORE            | 62   | 56              | 60              | 57              | 62              | 62              |
| 180-43791-3        | RB-PW              | 64   | 57              | 62              | 58              | 58              | 64              |
| 180-43791-4        | FB-PW              | 62   | 56              | 59              | 53              | 65              | 58              |
| LCS 180-141152/2-A | Lab Control Sample | 70   | 65              | 70              | 66              | 70              | 69              |
| MB 180-141152/1-A  | Method Blank       | 61   | 54              | 69              | 65              | 60              | 66              |

### Surrogate Legend

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

## Method: 8082A - Polychlorinated Biphenyls (PCBs) (GC)

Matrix: Water

Prep Type: Total/NA

| Lab Sample ID       | Client Sample ID       | Percent Surrogate Recovery (Acceptance Limits) |                  |                  |                  |
|---------------------|------------------------|--|------------------|------------------|------------------|
|                     |                        | DCB1<br>(43-138)                               | DCB2<br>(43-138) | TCX1<br>(34-137) | TCX2<br>(34-137) |
| 180-43791-1         | RB-CORE                | 98   | 92               | 102              | 101              |
| 180-43791-2         | FB-CORE                | 103  | 95               | 112              | 111              |
| LCS 180-140927/2-A  | Lab Control Sample     | 99   | 91               | 106              | 94               |
| LCSD 180-140927/3-A | Lab Control Sample Dup | 102  | 92               | 96               | 95               |
| MB 180-140927/1-A   | Method Blank           | 85   | 79               | 93               | 92               |

### Surrogate Legend

DCB = DCB Decachlorobiphenyl (Surr)  
 TCX = Tetrachloro-m-xylene (Surr)

# QC Sample Results

Client: EA Engineering, Science, and Technology  
 Project/Site: Sparrows Point Trust Offshore Investigat

TestAmerica Job ID: 180-43791-1

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

**Lab Sample ID: MB 180-141065/5**  
**Matrix: Water**  
**Analysis Batch: 141065**

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

| Analyte                   | MB     | MB        | RL  | MDL  | Unit | D | Prepared | Analyzed       | Dil Fac |
|---------------------------|--------|-----------|-----|------|------|---|----------|----------------|---------|
|                           | Result | Qualifier |     |      |      |   |          |                |         |
| 1,1,1-Trichloroethane     | ND     |           | 5.0 | 1.0  | ug/L |   |          | 05/09/15 14:00 | 1       |
| 1,1,2,2-Tetrachloroethane | ND     |           | 5.0 | 0.93 | ug/L |   |          | 05/09/15 14:00 | 1       |
| 1,1,2-Trichloroethane     | ND     |           | 5.0 | 1.2  | ug/L |   |          | 05/09/15 14:00 | 1       |
| 1,1-Dichloroethane        | ND     |           | 5.0 | 1.0  | ug/L |   |          | 05/09/15 14:00 | 1       |
| 1,1-Dichloroethene        | ND     |           | 5.0 | 1.1  | ug/L |   |          | 05/09/15 14:00 | 1       |
| 1,2-Dichlorobenzene       | ND     |           | 5.0 | 0.68 | ug/L |   |          | 05/09/15 14:00 | 1       |
| 1,2-Dichloroethane        | ND     |           | 5.0 | 0.96 | ug/L |   |          | 05/09/15 14:00 | 1       |
| 1,2-Dichloropropane       | ND     |           | 5.0 | 1.3  | ug/L |   |          | 05/09/15 14:00 | 1       |
| 1,3-Dichlorobenzene       | ND     |           | 5.0 | 0.51 | ug/L |   |          | 05/09/15 14:00 | 1       |
| 1,4-Dichlorobenzene       | ND     |           | 5.0 | 0.53 | ug/L |   |          | 05/09/15 14:00 | 1       |
| 2-Chloroethyl vinyl ether | ND     |           | 10  | 1.9  | ug/L |   |          | 05/09/15 14:00 | 1       |
| Acrolein                  | ND     |           | 100 | 5.7  | ug/L |   |          | 05/09/15 14:00 | 1       |
| Acrylonitrile             | ND     |           | 50  | 9.0  | ug/L |   |          | 05/09/15 14:00 | 1       |
| Benzene                   | ND     |           | 5.0 | 0.99 | ug/L |   |          | 05/09/15 14:00 | 1       |
| Bromoform                 | ND     |           | 5.0 | 1.1  | ug/L |   |          | 05/09/15 14:00 | 1       |
| Bromomethane              | ND     |           | 5.0 | 1.6  | ug/L |   |          | 05/09/15 14:00 | 1       |
| Carbon tetrachloride      | ND     |           | 5.0 | 1.1  | ug/L |   |          | 05/09/15 14:00 | 1       |
| Chlorobenzene             | ND     |           | 5.0 | 0.53 | ug/L |   |          | 05/09/15 14:00 | 1       |
| Chloroform                | ND     |           | 5.0 | 1.0  | ug/L |   |          | 05/09/15 14:00 | 1       |
| Chloromethane             | ND     |           | 5.0 | 1.4  | ug/L |   |          | 05/09/15 14:00 | 1       |
| Chlorodibromomethane      | ND     |           | 5.0 | 0.65 | ug/L |   |          | 05/09/15 14:00 | 1       |
| cis-1,3-Dichloropropene   | ND     |           | 5.0 | 0.73 | ug/L |   |          | 05/09/15 14:00 | 1       |
| Dichlorobromomethane      | ND     |           | 5.0 | 0.93 | ug/L |   |          | 05/09/15 14:00 | 1       |
| Ethylbenzene              | ND     |           | 5.0 | 0.62 | ug/L |   |          | 05/09/15 14:00 | 1       |
| Methylene Chloride        | 1.10   | J         | 5.0 | 1.1  | ug/L |   |          | 05/09/15 14:00 | 1       |
| Tetrachloroethene         | ND     |           | 5.0 | 0.82 | ug/L |   |          | 05/09/15 14:00 | 1       |
| Toluene                   | ND     |           | 5.0 | 0.85 | ug/L |   |          | 05/09/15 14:00 | 1       |
| trans-1,2-Dichloroethene  | ND     |           | 5.0 | 0.75 | ug/L |   |          | 05/09/15 14:00 | 1       |
| trans-1,3-Dichloropropene | ND     |           | 5.0 | 0.58 | ug/L |   |          | 05/09/15 14:00 | 1       |
| Trichloroethene           | ND     |           | 5.0 | 0.80 | ug/L |   |          | 05/09/15 14:00 | 1       |
| Vinyl chloride            | ND     |           | 5.0 | 1.3  | ug/L |   |          | 05/09/15 14:00 | 1       |
| Chloroethane              | ND     |           | 5.0 | 0.75 | ug/L |   |          | 05/09/15 14:00 | 1       |

| Surrogate                    | MB        | MB        | Limits   | Prepared | Analyzed       | Dil Fac |
|------------------------------|-----------|-----------|----------|----------|----------------|---------|
|                              | %Recovery | Qualifier |          |          |                |         |
| 1,2-Dichloroethane-d4 (Surr) | 87        |           | 62 - 123 |          | 05/09/15 14:00 | 1       |
| 4-Bromofluorobenzene (Surr)  | 93        |           | 75 - 120 |          | 05/09/15 14:00 | 1       |
| Dibromofluoromethane (Surr)  | 103       |           | 80 - 120 |          | 05/09/15 14:00 | 1       |
| Toluene-d8 (Surr)            | 120       |           | 80 - 120 |          | 05/09/15 14:00 | 1       |

**Lab Sample ID: LCS 180-141065/9**  
**Matrix: Water**  
**Analysis Batch: 141065**

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

| Analyte                   | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---------------------------|-------------|------------|---------------|------|---|------|--------------|
|                           |             |            |               |      |   |      |              |
| 1,1,2,2-Tetrachloroethane | 40.0        | 29.9       |               | ug/L |   | 75   | 59 - 136     |
| 1,1,2-Trichloroethane     | 40.0        | 31.5       |               | ug/L |   | 79   | 75 - 126     |
| 1,1-Dichloroethane        | 40.0        | 38.3       |               | ug/L |   | 96   | 77 - 122     |

TestAmerica Pittsburgh

# QC Sample Results

Client: EA Engineering, Science, and Technology  
 Project/Site: Sparrows Point Trust Offshore Investigat

TestAmerica Job ID: 180-43791-1

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

**Lab Sample ID: LCS 180-141065/9**  
**Matrix: Water**  
**Analysis Batch: 141065**

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

| Analyte                   | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---------------------------|-------------|------------|---------------|------|---|------|--------------|
| 1,1-Dichloroethene        | 40.0        | 38.2       |               | ug/L |   | 95   | 69 - 127     |
| 1,2-Dichlorobenzene       | 40.0        | 36.8       |               | ug/L |   | 92   | 75 - 125     |
| 1,2-Dichloroethane        | 40.0        | 35.8       |               | ug/L |   | 90   | 63 - 140     |
| 1,2-Dichloropropane       | 40.0        | 36.6       |               | ug/L |   | 91   | 75 - 114     |
| 1,3-Dichlorobenzene       | 40.0        | 40.9       |               | ug/L |   | 102  | 76 - 125     |
| 1,4-Dichlorobenzene       | 40.0        | 38.1       |               | ug/L |   | 95   | 76 - 123     |
| Benzene                   | 40.0        | 38.7       |               | ug/L |   | 97   | 80 - 120     |
| Bromoform                 | 40.0        | 30.8       |               | ug/L |   | 77   | 49 - 137     |
| Bromomethane              | 40.0        | 45.0       |               | ug/L |   | 112  | 45 - 150     |
| Carbon tetrachloride      | 40.0        | 42.5       |               | ug/L |   | 106  | 63 - 139     |
| Chlorobenzene             | 40.0        | 39.7       |               | ug/L |   | 99   | 83 - 120     |
| Chloroform                | 40.0        | 38.1       |               | ug/L |   | 95   | 77 - 119     |
| Chloromethane             | 40.0        | 40.5       |               | ug/L |   | 101  | 49 - 133     |
| Chlorodibromomethane      | 40.0        | 35.9       |               | ug/L |   | 90   | 64 - 124     |
| cis-1,3-Dichloropropene   | 40.0        | 34.7       |               | ug/L |   | 87   | 74 - 123     |
| Dichlorobromomethane      | 40.0        | 39.3       |               | ug/L |   | 98   | 71 - 119     |
| Ethylbenzene              | 40.0        | 41.8       |               | ug/L |   | 104  | 79 - 124     |
| Methylene Chloride        | 40.0        | 35.9       |               | ug/L |   | 90   | 75 - 120     |
| Tetrachloroethene         | 40.0        | 40.6       |               | ug/L |   | 101  | 78 - 126     |
| Toluene                   | 40.0        | 39.4       |               | ug/L |   | 98   | 80 - 124     |
| trans-1,2-Dichloroethene  | 40.0        | 37.5       |               | ug/L |   | 94   | 78 - 120     |
| trans-1,3-Dichloropropene | 40.0        | 37.0       |               | ug/L |   | 93   | 63 - 122     |
| Trichloroethene           | 40.0        | 39.6       |               | ug/L |   | 99   | 80 - 120     |
| Vinyl chloride            | 40.0        | 38.6       |               | ug/L |   | 96   | 57 - 128     |
| Chloroethane              | 40.0        | 44.2       |               | ug/L |   | 110  | 33 - 150     |

| Surrogate                    | LCS %Recovery | LCS Qualifier | Limits   |
|------------------------------|---------------|---------------|----------|
| 1,2-Dichloroethane-d4 (Surr) | 94            |               | 62 - 123 |
| 4-Bromofluorobenzene (Surr)  | 97            |               | 75 - 120 |
| Dibromofluoromethane (Surr)  | 102           |               | 80 - 120 |
| Toluene-d8 (Surr)            | 100           |               | 80 - 120 |

## Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level

**Lab Sample ID: MB 180-141152/1-A**  
**Matrix: Water**  
**Analysis Batch: 142205**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 141152**

| Analyte               | MB Result | MB Qualifier | RL   | MDL   | Unit | D | Prepared       | Analyzed       | Dil Fac |
|-----------------------|-----------|--------------|------|-------|------|---|----------------|----------------|---------|
| Anthracene            | ND        |              | 0.20 | 0.019 | ug/L |   | 05/11/15 10:21 | 05/20/15 14:54 | 1       |
| Benzo[a]anthracene    | ND        |              | 0.20 | 0.037 | ug/L |   | 05/11/15 10:21 | 05/20/15 14:54 | 1       |
| Benzo[b]fluoranthene  | ND        |              | 0.20 | 0.049 | ug/L |   | 05/11/15 10:21 | 05/20/15 14:54 | 1       |
| Benzo[k]fluoranthene  | ND        |              | 0.20 | 0.030 | ug/L |   | 05/11/15 10:21 | 05/20/15 14:54 | 1       |
| Benzo[g,h,i]perylene  | ND        |              | 0.20 | 0.029 | ug/L |   | 05/11/15 10:21 | 05/20/15 14:54 | 1       |
| Benzo[a]pyrene        | ND        |              | 0.20 | 0.028 | ug/L |   | 05/11/15 10:21 | 05/20/15 14:54 | 1       |
| Chrysene              | ND        |              | 0.20 | 0.031 | ug/L |   | 05/11/15 10:21 | 05/20/15 14:54 | 1       |
| Dibenz(a,h)anthracene | ND        |              | 0.20 | 0.027 | ug/L |   | 05/11/15 10:21 | 05/20/15 14:54 | 1       |
| Fluoranthene          | ND        |              | 0.20 | 0.021 | ug/L |   | 05/11/15 10:21 | 05/20/15 14:54 | 1       |

TestAmerica Pittsburgh

# QC Sample Results

Client: EA Engineering, Science, and Technology  
 Project/Site: Sparrows Point Trust Offshore Investigat

TestAmerica Job ID: 180-43791-1

## Method: 8270D LL - Semivolatle Organic Compounds by GC/MS - Low Level (Continued)

**Lab Sample ID: MB 180-141152/1-A**  
**Matrix: Water**  
**Analysis Batch: 142205**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 141152**

| Analyte                     | MB MB  |           | RL   | MDL   | Unit | D | Prepared       | Analyzed       | Dil Fac |
|-----------------------------|--------|-----------|------|-------|------|---|----------------|----------------|---------|
|                             | Result | Qualifier |      |       |      |   |                |                |         |
| Fluorene                    | ND     |           | 0.20 | 0.024 | ug/L |   | 05/11/15 10:21 | 05/20/15 14:54 | 1       |
| Indeno[1,2,3-cd]pyrene      | ND     |           | 0.20 | 0.043 | ug/L |   | 05/11/15 10:21 | 05/20/15 14:54 | 1       |
| Phenanthrene                | ND     |           | 0.20 | 0.042 | ug/L |   | 05/11/15 10:21 | 05/20/15 14:54 | 1       |
| Pyrene                      | ND     |           | 0.20 | 0.023 | ug/L |   | 05/11/15 10:21 | 05/20/15 14:54 | 1       |
| Acenaphthene                | ND     |           | 0.20 | 0.029 | ug/L |   | 05/11/15 10:21 | 05/20/15 14:54 | 1       |
| Acenaphthylene              | ND     |           | 0.20 | 0.022 | ug/L |   | 05/11/15 10:21 | 05/20/15 14:54 | 1       |
| Naphthalene                 | ND     |           | 0.20 | 0.023 | ug/L |   | 05/11/15 10:21 | 05/20/15 14:54 | 1       |
| Bis(2-ethylhexyl) phthalate | ND     |           | 2.0  | 0.44  | ug/L |   | 05/11/15 10:21 | 05/20/15 14:54 | 1       |

| Surrogate                   | MB MB     |           | Limits   | Prepared       | Analyzed       | Dil Fac |
|-----------------------------|-----------|-----------|----------|----------------|----------------|---------|
|                             | %Recovery | Qualifier |          |                |                |         |
| Nitrobenzene-d5 (Surr)      | 61        |           | 27 - 114 | 05/11/15 10:21 | 05/20/15 14:54 | 1       |
| 2-Fluorobiphenyl            | 54        |           | 28 - 109 | 05/11/15 10:21 | 05/20/15 14:54 | 1       |
| Terphenyl-d14 (Surr)        | 69        |           | 20 - 118 | 05/11/15 10:21 | 05/20/15 14:54 | 1       |
| 2-Fluorophenol (Surr)       | 65        |           | 20 - 105 | 05/11/15 10:21 | 05/20/15 14:54 | 1       |
| 2,4,6-Tribromophenol (Surr) | 60        |           | 30 - 118 | 05/11/15 10:21 | 05/20/15 14:54 | 1       |
| Phenol-d5 (Surr)            | 66        |           | 25 - 105 | 05/11/15 10:21 | 05/20/15 14:54 | 1       |

**Lab Sample ID: LCS 180-141152/2-A**  
**Matrix: Water**  
**Analysis Batch: 142205**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 141152**

| Analyte                     | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | Limits   |
|-----------------------------|-------------|------------|---------------|------|---|------|----------|
|                             |             |            |               |      |   |      |          |
| Anthracene                  | 20.0        | 15.2       |               | ug/L |   | 76   | 49 - 100 |
| Benzo[a]anthracene          | 20.0        | 16.5       |               | ug/L |   | 82   | 50 - 100 |
| Benzo[b]fluoranthene        | 20.0        | 16.2       |               | ug/L |   | 81   | 43 - 100 |
| Benzo[k]fluoranthene        | 20.0        | 16.5       |               | ug/L |   | 82   | 47 - 100 |
| Benzo[g,h,i]perylene        | 20.0        | 17.5       |               | ug/L |   | 87   | 48 - 100 |
| Benzo[a]pyrene              | 20.0        | 17.3       |               | ug/L |   | 86   | 47 - 100 |
| Chrysene                    | 20.0        | 16.4       |               | ug/L |   | 82   | 49 - 100 |
| Dibenz(a,h)anthracene       | 20.0        | 17.4       |               | ug/L |   | 87   | 48 - 100 |
| Fluoranthene                | 20.0        | 15.9       |               | ug/L |   | 80   | 48 - 100 |
| Fluorene                    | 20.0        | 15.1       |               | ug/L |   | 76   | 48 - 100 |
| Indeno[1,2,3-cd]pyrene      | 20.0        | 17.2       |               | ug/L |   | 86   | 47 - 100 |
| Phenanthrene                | 20.0        | 15.3       |               | ug/L |   | 77   | 48 - 100 |
| Pyrene                      | 20.0        | 16.1       |               | ug/L |   | 81   | 44 - 100 |
| Acenaphthene                | 20.0        | 13.3       |               | ug/L |   | 66   | 47 - 100 |
| Acenaphthylene              | 20.0        | 14.5       |               | ug/L |   | 73   | 47 - 100 |
| Naphthalene                 | 20.0        | 13.6       |               | ug/L |   | 68   | 44 - 100 |
| Bis(2-ethylhexyl) phthalate | 20.0        | 17.5       |               | ug/L |   | 87   | 35 - 118 |

| Surrogate                   | LCS LCS   |           | Limits   |
|-----------------------------|-----------|-----------|----------|
|                             | %Recovery | Qualifier |          |
| Nitrobenzene-d5 (Surr)      | 70        |           | 27 - 114 |
| 2-Fluorobiphenyl            | 65        |           | 28 - 109 |
| Terphenyl-d14 (Surr)        | 70        |           | 20 - 118 |
| 2-Fluorophenol (Surr)       | 66        |           | 20 - 105 |
| 2,4,6-Tribromophenol (Surr) | 70        |           | 30 - 118 |
| Phenol-d5 (Surr)            | 69        |           | 25 - 105 |

# QC Sample Results

Client: EA Engineering, Science, and Technology  
 Project/Site: Sparrows Point Trust Offshore Investigat

TestAmerica Job ID: 180-43791-1

## Method: 8082A - Polychlorinated Biphenyls (PCBs) (GC)

**Lab Sample ID: MB 180-140927/1-A**  
**Matrix: Water**  
**Analysis Batch: 141160**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 140927**

| Analyte  | MB     | MB        | RL    | MDL    | Unit | D | Prepared       | Analyzed       | Dil Fac |
|----------|--------|-----------|-------|--------|------|---|----------------|----------------|---------|
|          | Result | Qualifier |       |        |      |   |                |                |         |
| PCB-1016 | ND     |           | 0.010 | 0.0025 | ug/L |   | 05/07/15 13:45 | 05/12/15 03:26 | 1       |
| PCB-1221 | ND     |           | 0.010 | 0.0041 | ug/L |   | 05/07/15 13:45 | 05/12/15 03:26 | 1       |
| PCB-1232 | ND     |           | 0.010 | 0.0039 | ug/L |   | 05/07/15 13:45 | 05/12/15 03:26 | 1       |
| PCB-1242 | ND     |           | 0.010 | 0.0019 | ug/L |   | 05/07/15 13:45 | 05/12/15 03:26 | 1       |
| PCB-1248 | ND     |           | 0.010 | 0.0027 | ug/L |   | 05/07/15 13:45 | 05/12/15 03:26 | 1       |
| PCB-1254 | ND     |           | 0.010 | 0.0030 | ug/L |   | 05/07/15 13:45 | 05/12/15 03:26 | 1       |
| PCB-1260 | ND     |           | 0.010 | 0.0017 | ug/L |   | 05/07/15 13:45 | 05/12/15 03:26 | 1       |

| Surrogate                     | MB        | MB        | Limits   | Prepared       | Analyzed       | Dil Fac |
|-------------------------------|-----------|-----------|----------|----------------|----------------|---------|
|                               | %Recovery | Qualifier |          |                |                |         |
| DCB Decachlorobiphenyl (Surr) | 85        |           | 43 - 138 | 05/07/15 13:45 | 05/12/15 03:26 | 1       |
| DCB Decachlorobiphenyl (Surr) | 79        |           | 43 - 138 | 05/07/15 13:45 | 05/12/15 03:26 | 1       |
| Tetrachloro-m-xylene (Surr)   | 93        |           | 34 - 137 | 05/07/15 13:45 | 05/12/15 03:26 | 1       |
| Tetrachloro-m-xylene (Surr)   | 92        |           | 34 - 137 | 05/07/15 13:45 | 05/12/15 03:26 | 1       |

**Lab Sample ID: LCS 180-140927/2-A**  
**Matrix: Water**  
**Analysis Batch: 141160**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 140927**

| Analyte  | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | Limits   |
|----------|-------------|------------|---------------|------|---|------|----------|
|          |             |            |               |      |   |      |          |
| PCB-1260 | 1.00        | 0.877      |               | ug/L |   | 88   | 55 - 120 |

| Surrogate                     | LCS       | LCS       | Limits   |
|-------------------------------|-----------|-----------|----------|
|                               | %Recovery | Qualifier |          |
| DCB Decachlorobiphenyl (Surr) | 99        |           | 43 - 138 |
| DCB Decachlorobiphenyl (Surr) | 91        |           | 43 - 138 |
| Tetrachloro-m-xylene (Surr)   | 106       |           | 34 - 137 |
| Tetrachloro-m-xylene (Surr)   | 94        |           | 34 - 137 |

**Lab Sample ID: LCSD 180-140927/3-A**  
**Matrix: Water**  
**Analysis Batch: 141160**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**  
**Prep Batch: 140927**

| Analyte  | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | Limits   | RPD | Limit |
|----------|-------------|-------------|----------------|------|---|------|----------|-----|-------|
|          |             |             |                |      |   |      |          |     |       |
| PCB-1260 | 1.00        | 0.962       |                | ug/L |   | 96   | 55 - 120 | 9   | 25    |

| Surrogate                     | LCSD      | LCSD      | Limits   |
|-------------------------------|-----------|-----------|----------|
|                               | %Recovery | Qualifier |          |
| DCB Decachlorobiphenyl (Surr) | 102       |           | 43 - 138 |
| DCB Decachlorobiphenyl (Surr) | 92        |           | 43 - 138 |
| Tetrachloro-m-xylene (Surr)   | 96        |           | 34 - 137 |
| Tetrachloro-m-xylene (Surr)   | 95        |           | 34 - 137 |

# QC Sample Results

Client: EA Engineering, Science, and Technology  
 Project/Site: Sparrows Point Trust Offshore Investigat

TestAmerica Job ID: 180-43791-1

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

**Lab Sample ID: MB 180-140872/1-A**  
**Matrix: Water**  
**Analysis Batch: 142313**

**Client Sample ID: Method Blank**  
**Prep Type: Total Recoverable**  
**Prep Batch: 140872**

| Analyte   | MB     | MB        | RL  | MDL   | Unit | D | Prepared       | Analyzed       | Dil Fac |
|-----------|--------|-----------|-----|-------|------|---|----------------|----------------|---------|
|           | Result | Qualifier |     |       |      |   |                |                |         |
| Arsenic   | ND     |           | 1.0 | 0.29  | ug/L |   | 05/07/15 10:58 | 05/19/15 23:58 | 1       |
| Cadmium   | ND     |           | 1.0 | 0.11  | ug/L |   | 05/07/15 10:58 | 05/19/15 23:58 | 1       |
| Chromium  | ND     |           | 2.0 | 0.54  | ug/L |   | 05/07/15 10:58 | 05/19/15 23:58 | 1       |
| Lead      | ND     |           | 1.0 | 0.019 | ug/L |   | 05/07/15 10:58 | 05/19/15 23:58 | 1       |
| Selenium  | ND     |           | 5.0 | 0.42  | ug/L |   | 05/07/15 10:58 | 05/19/15 23:58 | 1       |
| Silver    | ND     |           | 1.0 | 0.036 | ug/L |   | 05/07/15 10:58 | 05/19/15 23:58 | 1       |
| Beryllium | ND     |           | 1.0 | 0.037 | ug/L |   | 05/07/15 10:58 | 05/19/15 23:58 | 1       |
| Thallium  | ND     |           | 1.0 | 0.015 | ug/L |   | 05/07/15 10:58 | 05/19/15 23:58 | 1       |
| Antimony  | ND     |           | 2.0 | 0.019 | ug/L |   | 05/07/15 10:58 | 05/19/15 23:58 | 1       |
| Nickel    | ND     |           | 1.0 | 0.17  | ug/L |   | 05/07/15 10:58 | 05/19/15 23:58 | 1       |
| Zinc      | ND     |           | 5.0 | 0.96  | ug/L |   | 05/07/15 10:58 | 05/19/15 23:58 | 1       |
| Copper    | ND     |           | 2.0 | 0.24  | ug/L |   | 05/07/15 10:58 | 05/19/15 23:58 | 1       |

**Lab Sample ID: LCS 180-140872/2-A**  
**Matrix: Water**  
**Analysis Batch: 142313**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total Recoverable**  
**Prep Batch: 140872**

| Analyte   | Spike Added | LCS    | LCS       | Unit | D | %Rec | %Rec.    | Limits |
|-----------|-------------|--------|-----------|------|---|------|----------|--------|
|           |             | Result | Qualifier |      |   |      |          |        |
| Arsenic   | 40.0        | 36.5   |           | ug/L |   | 91   | 80 - 120 |        |
| Cadmium   | 50.0        | 44.4   |           | ug/L |   | 89   | 80 - 120 |        |
| Chromium  | 200         | 189    |           | ug/L |   | 95   | 80 - 120 |        |
| Lead      | 20.0        | 19.1   |           | ug/L |   | 96   | 80 - 120 |        |
| Selenium  | 10.0        | 9.73   |           | ug/L |   | 97   | 80 - 120 |        |
| Silver    | 50.0        | 43.7   |           | ug/L |   | 87   | 80 - 120 |        |
| Beryllium | 50.0        | 45.6   |           | ug/L |   | 91   | 80 - 120 |        |
| Thallium  | 50.0        | 47.0   |           | ug/L |   | 94   | 80 - 120 |        |
| Antimony  | 500         | 445    |           | ug/L |   | 89   | 80 - 120 |        |
| Nickel    | 500         | 471    |           | ug/L |   | 94   | 80 - 120 |        |
| Zinc      | 500         | 445    |           | ug/L |   | 89   | 80 - 120 |        |
| Copper    | 250         | 235    |           | ug/L |   | 94   | 80 - 120 |        |

**Lab Sample ID: LCSD 180-140872/3-A**  
**Matrix: Water**  
**Analysis Batch: 142313**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total Recoverable**  
**Prep Batch: 140872**

| Analyte   | Spike Added | LCSD   | LCSD      | Unit | D | %Rec | %Rec.    | Limits | RPD | RPD Limit |
|-----------|-------------|--------|-----------|------|---|------|----------|--------|-----|-----------|
|           |             | Result | Qualifier |      |   |      |          |        |     |           |
| Arsenic   | 40.0        | 36.0   |           | ug/L |   | 90   | 80 - 120 | 1      | 20  |           |
| Cadmium   | 50.0        | 44.7   |           | ug/L |   | 89   | 80 - 120 | 1      | 20  |           |
| Chromium  | 200         | 188    |           | ug/L |   | 94   | 80 - 120 | 1      | 20  |           |
| Lead      | 20.0        | 19.2   |           | ug/L |   | 96   | 80 - 120 | 0      | 20  |           |
| Selenium  | 10.0        | 9.35   |           | ug/L |   | 94   | 80 - 120 | 4      | 20  |           |
| Silver    | 50.0        | 43.3   |           | ug/L |   | 87   | 80 - 120 | 1      | 20  |           |
| Beryllium | 50.0        | 45.7   |           | ug/L |   | 91   | 80 - 120 | 0      | 20  |           |
| Thallium  | 50.0        | 47.5   |           | ug/L |   | 95   | 80 - 120 | 1      | 20  |           |
| Antimony  | 500         | 441    |           | ug/L |   | 88   | 80 - 120 | 1      | 20  |           |
| Nickel    | 500         | 463    |           | ug/L |   | 93   | 80 - 120 | 2      | 20  |           |
| Zinc      | 500         | 451    |           | ug/L |   | 90   | 80 - 120 | 1      | 20  |           |
| Copper    | 250         | 234    |           | ug/L |   | 94   | 80 - 120 | 0      | 20  |           |

# QC Sample Results

Client: EA Engineering, Science, and Technology  
 Project/Site: Sparrows Point Trust Offshore Investigat

TestAmerica Job ID: 180-43791-1

## Method: 7470A - Mercury (CVAA)

**Lab Sample ID: MB 180-141919/1-A**  
**Matrix: Water**  
**Analysis Batch: 142020**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 141919**

| Analyte | MB Result | MB Qualifier | RL   | MDL   | Unit | D | Prepared       | Analyzed       | Dil Fac |
|---------|-----------|--------------|------|-------|------|---|----------------|----------------|---------|
| Mercury | ND        |              | 0.20 | 0.078 | ug/L |   | 05/18/15 06:25 | 05/18/15 14:56 | 1       |

**Lab Sample ID: LCS 180-141919/2-A**  
**Matrix: Water**  
**Analysis Batch: 142020**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 141919**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | Limits   |
|---------|-------------|------------|---------------|------|---|------|----------|
| Mercury | 2.50        | 2.66       |               | ug/L |   | 107  | 80 - 120 |

## Method: 1664B - HEM and SGT-HEM

**Lab Sample ID: LB 490-248553/2-A**  
**Matrix: Water**  
**Analysis Batch: 248554**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 248553**

| Analyte | LB Result | LB Qualifier | RL  | MDL | Unit | D | Prepared       | Analyzed       | Dil Fac |
|---------|-----------|--------------|-----|-----|------|---|----------------|----------------|---------|
| HEM     | ND        |              | 4.0 | 1.4 | mg/L |   | 05/15/15 10:40 | 05/15/15 10:40 | 1       |

**Lab Sample ID: MB 490-248553/1-A**  
**Matrix: Water**  
**Analysis Batch: 248554**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 248553**

| Analyte | MB Result | MB Qualifier | RL  | MDL | Unit | D | Prepared       | Analyzed       | Dil Fac |
|---------|-----------|--------------|-----|-----|------|---|----------------|----------------|---------|
| HEM     | ND        |              | 4.0 | 1.4 | mg/L |   | 05/15/15 10:40 | 05/15/15 10:40 | 1       |

**Lab Sample ID: LCS 490-248553/3-A**  
**Matrix: Water**  
**Analysis Batch: 248554**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 248553**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | Limits   |
|---------|-------------|------------|---------------|------|---|------|----------|
| HEM     | 41.7        | 37.1       |               | mg/L |   | 89   | 78 - 114 |

## Method: 9014 - Cyanide

**Lab Sample ID: MB 180-141677/4-A**  
**Matrix: Water**  
**Analysis Batch: 141746**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 141677**

| Analyte        | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared       | Analyzed       | Dil Fac |
|----------------|-----------|--------------|----|-----|------|---|----------------|----------------|---------|
| Cyanide, Total | ND        |              | 10 | 2.5 | ug/L |   | 05/15/15 08:15 | 05/15/15 11:28 | 1       |

**Lab Sample ID: HLCS 180-141677/2-A**  
**Matrix: Water**  
**Analysis Batch: 141746**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 141677**

| Analyte        | Spike Added | HLCS Result | HLCS Qualifier | Unit | D | %Rec | Limits   |
|----------------|-------------|-------------|----------------|------|---|------|----------|
| Cyanide, Total | 250         | 255         |                | ug/L |   | 102  | 90 - 110 |

# QC Sample Results

Client: EA Engineering, Science, and Technology  
 Project/Site: Sparrows Point Trust Offshore Investigat

TestAmerica Job ID: 180-43791-1

## Method: 9014 - Cyanide (Continued)

**Lab Sample ID: LCS 180-141677/3-A**  
**Matrix: Water**  
**Analysis Batch: 141746**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 141677**  
**%Rec.**

| Analyte        | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | Limits   |
|----------------|-------------|------------|---------------|------|---|------|----------|
| Cyanide, Total | 200         | 210        |               | ug/L |   | 105  | 85 - 115 |

**Lab Sample ID: LLCS 180-141677/1-A**  
**Matrix: Water**  
**Analysis Batch: 141746**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 141677**  
**%Rec.**

| Analyte        | Spike Added | LLCS Result | LLCS Qualifier | Unit | D | %Rec | Limits   |
|----------------|-------------|-------------|----------------|------|---|------|----------|
| Cyanide, Total | 50.0        | 48.0        |                | ug/L |   | 96   | 90 - 110 |

## Method: SM 5310C - Organic Carbon, Dissolved (DOC)

**Lab Sample ID: MB 180-141151/6**  
**Matrix: Water**  
**Analysis Batch: 141151**

**Client Sample ID: Method Blank**  
**Prep Type: Dissolved**

| Analyte                              | MB Result | MB Qualifier | RL  | MDL  | Unit | D | Prepared | Analyzed       | Dil Fac |
|--------------------------------------|-----------|--------------|-----|------|------|---|----------|----------------|---------|
| Dissolved Organic Carbon - Duplicate | ND        |              | 1.0 | 0.14 | mg/L |   |          | 05/11/15 07:32 | 1       |

**Lab Sample ID: LCS 180-141151/4**  
**Matrix: Water**  
**Analysis Batch: 141151**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Dissolved**

| Analyte                              | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|--------------------------------------|-------------|------------|---------------|------|---|------|--------------|
| Dissolved Organic Carbon - Duplicate | 20.0        | 19.1       |               | mg/L |   | 96   | 80 - 120     |

**Lab Sample ID: LCSD 180-141151/5**  
**Matrix: Water**  
**Analysis Batch: 141151**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Dissolved**

| Analyte                              | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|--------------------------------------|-------------|-------------|----------------|------|---|------|--------------|-----|-----------|
| Dissolved Organic Carbon - Duplicate | 20.0        | 20.0        |                | mg/L |   | 100  | 80 - 120     | 4   | 20        |



# QC Association Summary

Client: EA Engineering, Science, and Technology  
Project/Site: Sparrows Point Trust Offshore Investigat

TestAmerica Job ID: 180-43791-1

## GC/MS VOA

### Analysis Batch: 141065

| Lab Sample ID    | Client Sample ID   | Prep Type | Matrix | Method | Prep Batch |
|------------------|--------------------|-----------|--------|--------|------------|
| 180-43791-1      | RB-CORE            | Total/NA  | Water  | 8260C  |            |
| 180-43791-2      | FB-CORE            | Total/NA  | Water  | 8260C  |            |
| 180-43791-7      | TRIP BLANK         | Total/NA  | Water  | 8260C  |            |
| LCS 180-141065/9 | Lab Control Sample | Total/NA  | Water  | 8260C  |            |
| MB 180-141065/5  | Method Blank       | Total/NA  | Water  | 8260C  |            |

## GC/MS Semi VOA

### Prep Batch: 141152

| Lab Sample ID      | Client Sample ID   | Prep Type | Matrix | Method | Prep Batch |
|--------------------|--------------------|-----------|--------|--------|------------|
| 180-43791-1        | RB-CORE            | Total/NA  | Water  | 3520C  |            |
| 180-43791-2        | FB-CORE            | Total/NA  | Water  | 3520C  |            |
| 180-43791-3        | RB-PW              | Total/NA  | Water  | 3520C  |            |
| 180-43791-4        | FB-PW              | Total/NA  | Water  | 3520C  |            |
| LCS 180-141152/2-A | Lab Control Sample | Total/NA  | Water  | 3520C  |            |
| MB 180-141152/1-A  | Method Blank       | Total/NA  | Water  | 3520C  |            |

### Analysis Batch: 142205

| Lab Sample ID      | Client Sample ID   | Prep Type | Matrix | Method   | Prep Batch |
|--------------------|--------------------|-----------|--------|----------|------------|
| 180-43791-1        | RB-CORE            | Total/NA  | Water  | 8270D LL | 141152     |
| 180-43791-2        | FB-CORE            | Total/NA  | Water  | 8270D LL | 141152     |
| 180-43791-3        | RB-PW              | Total/NA  | Water  | 8270D LL | 141152     |
| 180-43791-4        | FB-PW              | Total/NA  | Water  | 8270D LL | 141152     |
| LCS 180-141152/2-A | Lab Control Sample | Total/NA  | Water  | 8270D LL | 141152     |
| MB 180-141152/1-A  | Method Blank       | Total/NA  | Water  | 8270D LL | 141152     |

## GC Semi VOA

### Prep Batch: 140927

| Lab Sample ID       | Client Sample ID       | Prep Type | Matrix | Method | Prep Batch |
|---------------------|------------------------|-----------|--------|--------|------------|
| 180-43791-1         | RB-CORE                | Total/NA  | Water  | 3510C  |            |
| 180-43791-2         | FB-CORE                | Total/NA  | Water  | 3510C  |            |
| LCS 180-140927/2-A  | Lab Control Sample     | Total/NA  | Water  | 3510C  |            |
| LCSD 180-140927/3-A | Lab Control Sample Dup | Total/NA  | Water  | 3510C  |            |
| MB 180-140927/1-A   | Method Blank           | Total/NA  | Water  | 3510C  |            |

### Analysis Batch: 141160

| Lab Sample ID       | Client Sample ID       | Prep Type | Matrix | Method | Prep Batch |
|---------------------|------------------------|-----------|--------|--------|------------|
| 180-43791-1         | RB-CORE                | Total/NA  | Water  | 8082A  | 140927     |
| 180-43791-2         | FB-CORE                | Total/NA  | Water  | 8082A  | 140927     |
| LCS 180-140927/2-A  | Lab Control Sample     | Total/NA  | Water  | 8082A  | 140927     |
| LCSD 180-140927/3-A | Lab Control Sample Dup | Total/NA  | Water  | 8082A  | 140927     |
| MB 180-140927/1-A   | Method Blank           | Total/NA  | Water  | 8082A  | 140927     |

## Metals

### Prep Batch: 140872

| Lab Sample ID | Client Sample ID | Prep Type         | Matrix | Method | Prep Batch |
|---------------|------------------|-------------------|--------|--------|------------|
| 180-43791-1   | RB-CORE          | Total Recoverable | Water  | 3005A  |            |
| 180-43791-2   | FB-CORE          | Total Recoverable | Water  | 3005A  |            |

TestAmerica Pittsburgh

# QC Association Summary

Client: EA Engineering, Science, and Technology  
Project/Site: Sparrows Point Trust Offshore Investigat

TestAmerica Job ID: 180-43791-1

## Metals (Continued)

### Prep Batch: 140872 (Continued)

| Lab Sample ID       | Client Sample ID       | Prep Type         | Matrix | Method | Prep Batch |
|---------------------|------------------------|-------------------|--------|--------|------------|
| 180-43791-3         | RB-PW                  | Total Recoverable | Water  | 3005A  |            |
| 180-43791-4         | FB-PW                  | Total Recoverable | Water  | 3005A  |            |
| LCS 180-140872/2-A  | Lab Control Sample     | Total Recoverable | Water  | 3005A  |            |
| LCSD 180-140872/3-A | Lab Control Sample Dup | Total Recoverable | Water  | 3005A  |            |
| MB 180-140872/1-A   | Method Blank           | Total Recoverable | Water  | 3005A  |            |

### Prep Batch: 141919

| Lab Sample ID      | Client Sample ID   | Prep Type | Matrix | Method | Prep Batch |
|--------------------|--------------------|-----------|--------|--------|------------|
| 180-43791-1        | RB-CORE            | Total/NA  | Water  | 7470A  |            |
| 180-43791-2        | FB-CORE            | Total/NA  | Water  | 7470A  |            |
| 180-43791-3        | RB-PW              | Total/NA  | Water  | 7470A  |            |
| 180-43791-4        | FB-PW              | Total/NA  | Water  | 7470A  |            |
| LCS 180-141919/2-A | Lab Control Sample | Total/NA  | Water  | 7470A  |            |
| MB 180-141919/1-A  | Method Blank       | Total/NA  | Water  | 7470A  |            |

### Prep Batch: 141946

| Lab Sample ID      | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|--------------------|------------------|-----------|--------|--------|------------|
| CRA 180-141946/9-A | DL               |           | Water  | 7470A  |            |

### Analysis Batch: 142020

| Lab Sample ID      | Client Sample ID   | Prep Type | Matrix | Method | Prep Batch |
|--------------------|--------------------|-----------|--------|--------|------------|
| 180-43791-1        | RB-CORE            | Total/NA  | Water  | 7470A  | 141919     |
| 180-43791-2        | FB-CORE            | Total/NA  | Water  | 7470A  | 141919     |
| 180-43791-3        | RB-PW              | Total/NA  | Water  | 7470A  | 141919     |
| 180-43791-4        | FB-PW              | Total/NA  | Water  | 7470A  | 141919     |
| CRA 180-141946/9-A | DL                 |           | Water  | 7470A  | 141946     |
| LCS 180-141919/2-A | Lab Control Sample | Total/NA  | Water  | 7470A  | 141919     |
| MB 180-141919/1-A  | Method Blank       | Total/NA  | Water  | 7470A  | 141919     |

### Analysis Batch: 142313

| Lab Sample ID       | Client Sample ID       | Prep Type         | Matrix | Method | Prep Batch |
|---------------------|------------------------|-------------------|--------|--------|------------|
| 180-43791-1         | RB-CORE                | Total Recoverable | Water  | 6020A  | 140872     |
| 180-43791-2         | FB-CORE                | Total Recoverable | Water  | 6020A  | 140872     |
| 180-43791-3         | RB-PW                  | Total Recoverable | Water  | 6020A  | 140872     |
| 180-43791-4         | FB-PW                  | Total Recoverable | Water  | 6020A  | 140872     |
| CRI 180-142313/7    | DL                     |                   | Water  | 6020A  |            |
| CRI 180-142313/99   | DL                     |                   | Water  | 6020A  |            |
| ICSA 180-142313/8   | ICS                    |                   | Water  | 6020A  |            |
| ICSAB 180-142313/9  | ICS                    |                   | Water  | 6020A  |            |
| LCS 180-140872/2-A  | Lab Control Sample     | Total Recoverable | Water  | 6020A  | 140872     |
| LCSD 180-140872/3-A | Lab Control Sample Dup | Total Recoverable | Water  | 6020A  | 140872     |
| MB 180-140872/1-A   | Method Blank           | Total Recoverable | Water  | 6020A  | 140872     |

## General Chemistry

### Filtration Batch: 140828

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method     | Prep Batch |
|---------------|------------------|-----------|--------|------------|------------|
| 180-43791-3   | RB-PW            | Dissolved | Water  | FILTRATION |            |
| 180-43791-4   | FB-PW            | Dissolved | Water  | FILTRATION |            |

# QC Association Summary

Client: EA Engineering, Science, and Technology  
Project/Site: Sparrows Point Trust Offshore Investigat

TestAmerica Job ID: 180-43791-1

## General Chemistry (Continued)

### Analysis Batch: 141151

| Lab Sample ID     | Client Sample ID       | Prep Type | Matrix | Method   | Prep Batch |
|-------------------|------------------------|-----------|--------|----------|------------|
| 180-43791-3       | RB-PW                  | Dissolved | Water  | SM 5310C | 140828     |
| 180-43791-4       | FB-PW                  | Dissolved | Water  | SM 5310C | 140828     |
| LCS 180-141151/4  | Lab Control Sample     | Dissolved | Water  | SM 5310C |            |
| LCSD 180-141151/5 | Lab Control Sample Dup | Dissolved | Water  | SM 5310C |            |
| MB 180-141151/6   | Method Blank           | Dissolved | Water  | SM 5310C |            |

### Prep Batch: 141677

| Lab Sample ID       | Client Sample ID   | Prep Type | Matrix | Method | Prep Batch |
|---------------------|--------------------|-----------|--------|--------|------------|
| 180-43791-1         | RB-CORE            | Total/NA  | Water  | 9010C  |            |
| 180-43791-2         | FB-CORE            | Total/NA  | Water  | 9010C  |            |
| 180-43791-3         | RB-PW              | Total/NA  | Water  | 9010C  |            |
| 180-43791-4         | FB-PW              | Total/NA  | Water  | 9010C  |            |
| HLCS 180-141677/2-A | Lab Control Sample | Total/NA  | Water  | 9010C  |            |
| LCS 180-141677/3-A  | Lab Control Sample | Total/NA  | Water  | 9010C  |            |
| LLCS 180-141677/1-A | Lab Control Sample | Total/NA  | Water  | 9010C  |            |
| MB 180-141677/4-A   | Method Blank       | Total/NA  | Water  | 9010C  |            |

### Analysis Batch: 141746

| Lab Sample ID       | Client Sample ID   | Prep Type | Matrix | Method | Prep Batch |
|---------------------|--------------------|-----------|--------|--------|------------|
| 180-43791-1         | RB-CORE            | Total/NA  | Water  | 9014   | 141677     |
| 180-43791-2         | FB-CORE            | Total/NA  | Water  | 9014   | 141677     |
| 180-43791-3         | RB-PW              | Total/NA  | Water  | 9014   | 141677     |
| 180-43791-4         | FB-PW              | Total/NA  | Water  | 9014   | 141677     |
| HLCS 180-141677/2-A | Lab Control Sample | Total/NA  | Water  | 9014   | 141677     |
| LCS 180-141677/3-A  | Lab Control Sample | Total/NA  | Water  | 9014   | 141677     |
| LLCS 180-141677/1-A | Lab Control Sample | Total/NA  | Water  | 9014   | 141677     |
| MB 180-141677/4-A   | Method Blank       | Total/NA  | Water  | 9014   | 141677     |

### Prep Batch: 248553

| Lab Sample ID      | Client Sample ID   | Prep Type | Matrix | Method | Prep Batch |
|--------------------|--------------------|-----------|--------|--------|------------|
| 180-43791-1        | RB-CORE            | Total/NA  | Water  | 1664B  |            |
| 180-43791-2        | FB-CORE            | Total/NA  | Water  | 1664B  |            |
| LB 490-248553/2-A  | Method Blank       | Total/NA  | Water  | 1664B  |            |
| LCS 490-248553/3-A | Lab Control Sample | Total/NA  | Water  | 1664B  |            |
| MB 490-248553/1-A  | Method Blank       | Total/NA  | Water  | 1664B  |            |

### Analysis Batch: 248554

| Lab Sample ID      | Client Sample ID   | Prep Type | Matrix | Method | Prep Batch |
|--------------------|--------------------|-----------|--------|--------|------------|
| 180-43791-1        | RB-CORE            | Total/NA  | Water  | 1664B  | 248553     |
| 180-43791-2        | FB-CORE            | Total/NA  | Water  | 1664B  | 248553     |
| LB 490-248553/2-A  | Method Blank       | Total/NA  | Water  | 1664B  | 248553     |
| LCS 490-248553/3-A | Lab Control Sample | Total/NA  | Water  | 1664B  | 248553     |
| MB 490-248553/1-A  | Method Blank       | Total/NA  | Water  | 1664B  | 248553     |

# Lab Chronicle

Client: EA Engineering, Science, and Technology  
 Project/Site: Sparrows Point Trust Offshore Investigat

TestAmerica Job ID: 180-43791-1

## Client Sample ID: RB-CORE

Date Collected: 05/05/15 15:30

Date Received: 05/06/15 09:40

## Lab Sample ID: 180-43791-1

Matrix: Water

| Prep Type         | Batch Type | Batch Method                     | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab     |
|-------------------|------------|----------------------------------|-----|------------|----------------|--------------|--------------|----------------------|---------|---------|
| Total/NA          | Analysis   | 8260C<br>Instrument ID: CHHP4    |     | 1          | 5 mL           | 5 mL         | 141065       | 05/09/15 19:00       | PJJ     | TAL PIT |
| Total/NA          | Prep       | 3520C                            |     |            | 240 mL         | 0.25 mL      | 141152       | 05/11/15 10:21       | BJT     | TAL PIT |
| Total/NA          | Analysis   | 8270D LL<br>Instrument ID: CH732 |     | 1          | 240 mL         | 0.25 mL      | 142205       | 05/21/15 00:31       | VVP     | TAL PIT |
| Total/NA          | Prep       | 3510C                            |     |            | 1050 mL        | 1.0 mL       | 140927       | 05/07/15 13:45       | CBY     | TAL PIT |
| Total/NA          | Analysis   | 8082A<br>Instrument ID: CHGC8    |     | 1          | 1050 mL        | 1.0 mL       | 141160       | 05/12/15 03:46       | AKG     | TAL PIT |
| Total Recoverable | Prep       | 3005A                            |     |            | 50 mL          | 50 mL        | 140872       | 05/07/15 10:58       | AB1     | TAL PIT |
| Total Recoverable | Analysis   | 6020A<br>Instrument ID: M        |     | 1          | 50 mL          | 50 mL        | 142313       | 05/20/15 00:24       | WTR     | TAL PIT |
| Total/NA          | Prep       | 7470A                            |     |            | 50 mL          | 50 mL        | 141919       | 05/18/15 06:25       | RJR     | TAL PIT |
| Total/NA          | Analysis   | 7470A<br>Instrument ID: K        |     | 1          | 50 mL          | 50 mL        | 142020       | 05/18/15 18:17       | EVR     | TAL PIT |
| Total/NA          | Analysis   | 1664B<br>Instrument ID: NOEQUIP  |     | 1          | 840 mL         | 960 mL       | 248554       | 05/15/15 10:40       | BAD     | TAL NSH |
| Total/NA          | Prep       | 1664B                            |     |            | 840 mL         | 960 mL       | 248553       | 05/15/15 10:40       | BAD     | TAL NSH |
| Total/NA          | Prep       | 9010C                            |     |            | 50 mL          | 50 mL        | 141677       | 05/15/15 08:15       | PGJ     | TAL PIT |
| Total/NA          | Analysis   | 9014<br>Instrument ID: SEAL2     |     | 1          | 50 mL          | 50 mL        | 141746       | 05/15/15 12:00       | PGJ     | TAL PIT |

## Client Sample ID: FB-CORE

Date Collected: 05/05/15 15:40

Date Received: 05/06/15 09:40

## Lab Sample ID: 180-43791-2

Matrix: Water

| Prep Type         | Batch Type | Batch Method                     | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab     |
|-------------------|------------|----------------------------------|-----|------------|----------------|--------------|--------------|----------------------|---------|---------|
| Total/NA          | Analysis   | 8260C<br>Instrument ID: CHHP4    |     | 1          | 5 mL           | 5 mL         | 141065       | 05/09/15 18:04       | PJJ     | TAL PIT |
| Total/NA          | Prep       | 3520C                            |     |            | 250 mL         | 0.25 mL      | 141152       | 05/11/15 10:21       | BJT     | TAL PIT |
| Total/NA          | Analysis   | 8270D LL<br>Instrument ID: CH732 |     | 1          | 250 mL         | 0.25 mL      | 142205       | 05/21/15 00:57       | VVP     | TAL PIT |
| Total/NA          | Prep       | 3510C                            |     |            | 1050 mL        | 1.0 mL       | 140927       | 05/07/15 13:45       | CBY     | TAL PIT |
| Total/NA          | Analysis   | 8082A<br>Instrument ID: CHGC8    |     | 1          | 1050 mL        | 1.0 mL       | 141160       | 05/12/15 04:06       | AKG     | TAL PIT |
| Total Recoverable | Prep       | 3005A                            |     |            | 50 mL          | 50 mL        | 140872       | 05/07/15 10:58       | AB1     | TAL PIT |
| Total Recoverable | Analysis   | 6020A<br>Instrument ID: M        |     | 1          | 50 mL          | 50 mL        | 142313       | 05/20/15 00:27       | WTR     | TAL PIT |
| Total/NA          | Prep       | 7470A                            |     |            | 50 mL          | 50 mL        | 141919       | 05/18/15 06:25       | RJR     | TAL PIT |
| Total/NA          | Analysis   | 7470A<br>Instrument ID: K        |     | 1          | 50 mL          | 50 mL        | 142020       | 05/18/15 18:19       | EVR     | TAL PIT |
| Total/NA          | Analysis   | 1664B<br>Instrument ID: NOEQUIP  |     | 1          | 810 mL         | 960 mL       | 248554       | 05/15/15 10:40       | BAD     | TAL NSH |
| Total/NA          | Prep       | 1664B                            |     |            | 810 mL         | 960 mL       | 248553       | 05/15/15 10:40       | BAD     | TAL NSH |
| Total/NA          | Prep       | 9010C                            |     |            | 50 mL          | 50 mL        | 141677       | 05/15/15 08:15       | PGJ     | TAL PIT |

TestAmerica Pittsburgh

# Lab Chronicle

Client: EA Engineering, Science, and Technology  
 Project/Site: Sparrows Point Trust Offshore Investigat

TestAmerica Job ID: 180-43791-1

## Client Sample ID: FB-CORE

Date Collected: 05/05/15 15:40

Date Received: 05/06/15 09:40

## Lab Sample ID: 180-43791-2

Matrix: Water

| Prep Type            | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab     |
|----------------------|------------|--------------|-----|------------|----------------|--------------|--------------|----------------------|---------|---------|
| Total/NA             | Analysis   | 9014         |     | 1          | 50 mL          | 50 mL        | 141746       | 05/15/15 12:02       | PGJ     | TAL PIT |
| Instrument ID: SEAL2 |            |              |     |            |                |              |              |                      |         |         |

## Client Sample ID: RB-PW

Date Collected: 05/05/15 16:00

Date Received: 05/06/15 09:40

## Lab Sample ID: 180-43791-3

Matrix: Water

| Prep Type              | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab     |
|------------------------|------------|--------------|-----|------------|----------------|--------------|--------------|----------------------|---------|---------|
| Total/NA               | Prep       | 3520C        |     |            | 260 mL         | 0.25 mL      | 141152       | 05/11/15 10:21       | BJT     | TAL PIT |
| Total/NA               | Analysis   | 8270D LL     |     | 1          | 260 mL         | 0.25 mL      | 142205       | 05/21/15 01:24       | VVP     | TAL PIT |
| Instrument ID: CH732   |            |              |     |            |                |              |              |                      |         |         |
| Total Recoverable      | Prep       | 3005A        |     |            | 50 mL          | 50 mL        | 140872       | 05/07/15 10:58       | AB1     | TAL PIT |
| Total Recoverable      | Analysis   | 6020A        |     | 1          | 50 mL          | 50 mL        | 142313       | 05/20/15 00:31       | WTR     | TAL PIT |
| Instrument ID: M       |            |              |     |            |                |              |              |                      |         |         |
| Total/NA               | Prep       | 7470A        |     |            | 50 mL          | 50 mL        | 141919       | 05/18/15 06:25       | RJR     | TAL PIT |
| Total/NA               | Analysis   | 7470A        |     | 1          | 50 mL          | 50 mL        | 142020       | 05/18/15 18:25       | EVR     | TAL PIT |
| Instrument ID: K       |            |              |     |            |                |              |              |                      |         |         |
| Total/NA               | Prep       | 9010C        |     |            | 50 mL          | 50 mL        | 141677       | 05/15/15 08:15       | PGJ     | TAL PIT |
| Total/NA               | Analysis   | 9014         |     | 1          | 50 mL          | 50 mL        | 141746       | 05/15/15 12:04       | PGJ     | TAL PIT |
| Instrument ID: SEAL2   |            |              |     |            |                |              |              |                      |         |         |
| Dissolved              | Filtration | FILTRATION   |     |            | 1.0 mL         | 1.0 mL       | 140828       | 05/07/15 07:55       | SLM     | TAL PIT |
| Dissolved              | Analysis   | SM 5310C     |     | 1          |                |              | 141151       | 05/11/15 08:29       | CLL     | TAL PIT |
| Instrument ID: TOC1030 |            |              |     |            |                |              |              |                      |         |         |

## Client Sample ID: FB-PW

Date Collected: 05/05/15 16:10

Date Received: 05/06/15 09:40

## Lab Sample ID: 180-43791-4

Matrix: Water

| Prep Type              | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab     |
|------------------------|------------|--------------|-----|------------|----------------|--------------|--------------|----------------------|---------|---------|
| Total/NA               | Prep       | 3520C        |     |            | 250 mL         | 0.25 mL      | 141152       | 05/11/15 10:21       | BJT     | TAL PIT |
| Total/NA               | Analysis   | 8270D LL     |     | 1          | 250 mL         | 0.25 mL      | 142205       | 05/21/15 01:50       | VVP     | TAL PIT |
| Instrument ID: CH732   |            |              |     |            |                |              |              |                      |         |         |
| Total Recoverable      | Prep       | 3005A        |     |            | 50 mL          | 50 mL        | 140872       | 05/07/15 10:58       | AB1     | TAL PIT |
| Total Recoverable      | Analysis   | 6020A        |     | 1          | 50 mL          | 50 mL        | 142313       | 05/20/15 00:35       | WTR     | TAL PIT |
| Instrument ID: M       |            |              |     |            |                |              |              |                      |         |         |
| Total/NA               | Prep       | 7470A        |     |            | 50 mL          | 50 mL        | 141919       | 05/18/15 06:25       | RJR     | TAL PIT |
| Total/NA               | Analysis   | 7470A        |     | 1          | 50 mL          | 50 mL        | 142020       | 05/18/15 18:27       | EVR     | TAL PIT |
| Instrument ID: K       |            |              |     |            |                |              |              |                      |         |         |
| Total/NA               | Prep       | 9010C        |     |            | 50 mL          | 50 mL        | 141677       | 05/15/15 08:15       | PGJ     | TAL PIT |
| Total/NA               | Analysis   | 9014         |     | 1          | 50 mL          | 50 mL        | 141746       | 05/15/15 12:06       | PGJ     | TAL PIT |
| Instrument ID: SEAL2   |            |              |     |            |                |              |              |                      |         |         |
| Dissolved              | Filtration | FILTRATION   |     |            | 1.0 mL         | 1.0 mL       | 140828       | 05/07/15 07:55       | SLM     | TAL PIT |
| Dissolved              | Analysis   | SM 5310C     |     | 1          |                |              | 141151       | 05/11/15 08:48       | CLL     | TAL PIT |
| Instrument ID: TOC1030 |            |              |     |            |                |              |              |                      |         |         |

# Lab Chronicle

Client: EA Engineering, Science, and Technology  
Project/Site: Sparrows Point Trust Offshore Investigat

TestAmerica Job ID: 180-43791-1

**Client Sample ID: TRIP BLANK**

**Lab Sample ID: 180-43791-7**

**Date Collected: 05/05/15 15:30**

**Matrix: Water**

**Date Received: 05/06/15 09:40**

| Prep Type            | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab     |
|----------------------|------------|--------------|-----|------------|----------------|--------------|--------------|----------------------|---------|---------|
| Total/NA             | Analysis   | 8260C        |     | 1          | 5 mL           | 5 mL         | 141065       | 05/09/15 18:33       | PJJ     | TAL PIT |
| Instrument ID: CHHP4 |            |              |     |            |                |              |              |                      |         |         |

## Laboratory References:

TAL NSH = TestAmerica Nashville, 2960 Foster Creighton Drive, Nashville, TN 37204, TEL (615)726-0177

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

## Analyst References:

Lab: TAL NSH

Batch Type: Prep

BAD = Bradley Dunn

Batch Type: Analysis

BAD = Bradley Dunn

Lab: TAL PIT

Batch Type: Filtration

SLM = Sarah McCann

Batch Type: Prep

AB1 = Ashwin Baikadi

BJT = Bill Trout

CBY = Charles Yushinski

PGJ = Paul Johnson

RJR = Ron Rosenbaum

Batch Type: Analysis

AKG = Ashok Gupta

CLL = Cheryl Loheyde

EVR = Emilie Reichenbach

PGJ = Paul Johnson

PJJ = Patrick Journet

VVP = Vincent Piccolino

WTR = Bill Reinheimer

# Certification Summary

Client: EA Engineering, Science, and Technology  
 Project/Site: Sparrows Point Trust Offshore Investigat

TestAmerica Job ID: 180-43791-1

## Laboratory: TestAmerica Pittsburgh

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

| Authority              | Program       | EPA Region | Certification ID | Expiration Date |
|------------------------|---------------|------------|------------------|-----------------|
| Arkansas DEQ           | State Program | 6          | 88-0690          | 06-27-15        |
| California             | State Program | 9          | 2891             | 03-31-16        |
| Connecticut            | State Program | 1          | PH-0688          | 09-30-16        |
| Florida                | NELAP         | 4          | E871008          | 06-30-15        |
| Illinois               | NELAP         | 5          | 002602           | 06-30-15        |
| Kansas                 | NELAP         | 7          | E-10350          | 05-31-15 *      |
| Louisiana              | NELAP         | 6          | 04041            | 06-30-15        |
| New Hampshire          | NELAP         | 1          | 203011           | 04-04-16        |
| New Jersey             | NELAP         | 2          | PA005            | 06-30-15        |
| New York               | NELAP         | 2          | 11182            | 03-31-16        |
| North Carolina (WW/SW) | State Program | 4          | 434              | 12-31-15        |
| Pennsylvania           | NELAP         | 3          | 02-00416         | 04-30-16        |
| South Carolina         | State Program | 4          | 89014            | 06-30-15        |
| Texas                  | NELAP         | 6          | T104704528       | 03-31-16        |
| US Fish & Wildlife     | Federal       |            | LE94312A-1       | 11-30-15        |
| USDA                   | Federal       |            | P-Soil-01        | 05-23-16        |
| Utah                   | NELAP         | 8          | STLP             | 05-31-15        |
| Virginia               | NELAP         | 3          | 460189           | 09-14-15        |
| West Virginia DEP      | State Program | 3          | 142              | 01-31-16        |
| Wisconsin              | State Program | 5          | 998027800        | 08-31-15        |

## Laboratory: TestAmerica Nashville

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

| Authority              | Program       | EPA Region | Certification ID | Expiration Date |
|------------------------|---------------|------------|------------------|-----------------|
| A2LA                   | A2LA          |            | NA: NELAP & A2LA | 12-31-15        |
| A2LA                   | ISO/IEC 17025 |            | 0453.07          | 12-31-15        |
| Alaska (UST)           | State Program | 10         | UST-087          | 10-31-15        |
| Arizona                | State Program | 9          | AZ0473           | 05-05-16        |
| Arkansas DEQ           | State Program | 6          | 88-0737          | 04-25-16        |
| California             | State Program | 9          | 2938             | 10-31-16        |
| Connecticut            | State Program | 1          | PH-0220          | 12-31-15        |
| Florida                | NELAP         | 4          | E87358           | 06-30-15        |
| Illinois               | NELAP         | 5          | 200010           | 12-09-15        |
| Iowa                   | State Program | 7          | 131              | 04-01-16        |
| Kansas                 | NELAP         | 7          | E-10229          | 05-31-15        |
| Kentucky (UST)         | State Program | 4          | 19               | 06-30-15        |
| Kentucky (WW)          | State Program | 4          | 90038            | 12-31-15        |
| Louisiana              | NELAP         | 6          | 30613            | 06-30-15        |
| Maryland               | State Program | 3          | 316              | 03-31-16        |
| Massachusetts          | State Program | 1          | M-TN032          | 06-30-15        |
| Minnesota              | NELAP         | 5          | 047-999-345      | 12-31-15        |
| Mississippi            | State Program | 4          | N/A              | 06-30-15        |
| Montana (UST)          | State Program | 8          | NA               | 02-24-20        |
| Nevada                 | State Program | 9          | TN00032          | 07-31-15        |
| New Hampshire          | NELAP         | 1          | 2963             | 10-09-15        |
| New Jersey             | NELAP         | 2          | TN965            | 06-30-15        |
| New York               | NELAP         | 2          | 11342            | 03-31-16        |
| North Carolina (WW/SW) | State Program | 4          | 387              | 12-31-15        |
| North Dakota           | State Program | 8          | R-146            | 06-30-15        |

\* Certification renewal pending - certification considered valid.

# Certification Summary

Client: EA Engineering, Science, and Technology  
Project/Site: Sparrows Point Trust Offshore Investigat

TestAmerica Job ID: 180-43791-1

## Laboratory: TestAmerica Nashville (Continued)

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

| Authority           | Program       | EPA Region | Certification ID | Expiration Date |
|---------------------|---------------|------------|------------------|-----------------|
| Ohio VAP            | State Program | 5          | CL0033           | 10-16-15        |
| Oklahoma            | State Program | 6          | 9412             | 08-31-15        |
| Oregon              | NELAP         | 10         | TN200001         | 04-27-16        |
| Pennsylvania        | NELAP         | 3          | 68-00585         | 06-30-15        |
| Rhode Island        | State Program | 1          | LAO00268         | 12-30-15        |
| South Carolina      | State Program | 4          | 84009 (001)      | 02-28-16        |
| South Carolina (DW) | State Program | 4          | 84009 (002)      | 12-16-17        |
| Tennessee           | State Program | 4          | 2008             | 02-23-17        |
| Texas               | NELAP         | 6          | T104704077       | 08-31-15        |
| USDA                | Federal       |            | S-48469          | 10-30-16        |
| Utah                | NELAP         | 8          | TN00032          | 07-31-15        |
| Virginia            | NELAP         | 3          | 460152           | 06-14-15        |
| Washington          | State Program | 10         | C789             | 07-19-15        |
| West Virginia DEP   | State Program | 3          | 219              | 02-28-16        |
| Wisconsin           | State Program | 5          | 998020430        | 08-31-15        |
| Wyoming (UST)       | A2LA          | 8          | 453.07           | 12-31-15        |



# Method Summary

Client: EA Engineering, Science, and Technology  
Project/Site: Sparrows Point Trust Offshore Investigat

TestAmerica Job ID: 180-43791-1

| Method   | Method Description                                  | Protocol | Laboratory |
|----------|---|----------|------------|
| 8260C    | Volatile Organic Compounds by GC/MS                 | SW846    | TAL PIT    |
| 8270D LL | Semivolatile Organic Compounds by GC/MS - Low Level | SW846    | TAL PIT    |
| 8082A    | Polychlorinated Biphenyls (PCBs) (GC)               | SW846    | TAL PIT    |
| 6020A    | Metals (ICP/MS)                                     | SW846    | TAL PIT    |
| 7470A    | Mercury (CVAA)                                      | SW846    | TAL PIT    |
| 1664B    | HEM and SGT-HEM                                     | 1664B    | TAL NSH    |
| 9014     | Cyanide   | SW846    | TAL PIT    |
| SM 5310C | Organic Carbon, Dissolved (DOC)                     | SM       | TAL PIT    |

#### Protocol References:

1664B = 1664B

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 NSH = TestAmerica Nashville, 2960 Foster Creighton Drive, Nashville, TN 37204, TEL (615)726-0177

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

# Sample Summary

Client: EA Engineering, Science, and Technology  
Project/Site: Sparrows Point Trust Offshore Investigat

TestAmerica Job ID: 180-43791-1

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| <b>Lab Sample ID</b> | <b>Client Sample ID</b> | <b>Matrix</b> | <b>Collected</b> | <b>Received</b> |
|----------------------|-------------------------|---------------|------------------|-----------------|
| 180-43791-1          | RB-CORE                 | Water         | 05/05/15 15:30   | 05/06/15 09:40  |
| 180-43791-2          | FB-CORE                 | Water         | 05/05/15 15:40   | 05/06/15 09:40  |
| 180-43791-3          | RB-PW                   | Water         | 05/05/15 16:00   | 05/06/15 09:40  |
| 180-43791-4          | FB-PW                   | Water         | 05/05/15 16:10   | 05/06/15 09:40  |
| 180-43791-7          | TRIP BLANK              | Water         | 05/05/15 15:30   | 05/06/15 09:40  |

## GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-43791-1

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

Instrument ID: CHHP4 Analysis Batch Number: 123648Lab Sample ID: IC 180-123648/4 Client Sample ID: \_\_\_\_\_Date Analyzed: 11/03/14 12:22 Lab File ID: 4110304.D GC Column: DB-624 ID: 0.18 (mm)

| COMPOUND NAME | RETENTION TIME | MANUAL INTEGRATION  |          |                |
|---------------|----------------|---------------------|----------|----------------|
|               |                | REASON              | ANALYST  | DATE           |
| Acrolein      | 2.37           | Poor chromatography | journetp | 11/03/14 12:19 |
| Acetone       | 2.53           | Poor chromatography | journetp | 11/03/14 15:52 |
| 1,4-Dioxane   | 7.07           | Poor chromatography | journetp | 11/03/14 12:19 |

Lab Sample ID: IC 180-123648/5 Client Sample ID: \_\_\_\_\_Date Analyzed: 11/03/14 12:49 Lab File ID: 4110305.D GC Column: DB-624 ID: 0.18 (mm)

| COMPOUND NAME  | RETENTION TIME | MANUAL INTEGRATION  |          |                |
|----------------|----------------|---------------------|----------|----------------|
|                |                | REASON              | ANALYST  | DATE           |
| Acrolein       | 2.36           | Poor chromatography | journetp | 11/03/14 15:54 |
| Allyl chloride | 2.83           | Poor chromatography | journetp | 11/03/14 12:19 |

Lab Sample ID: IC 180-123648/6 Client Sample ID: \_\_\_\_\_Date Analyzed: 11/03/14 13:15 Lab File ID: 4110306.D GC Column: DB-624 ID: 0.18 (mm)

| COMPOUND NAME         | RETENTION TIME | MANUAL INTEGRATION  |          |                |
|-----------------------|----------------|---------------------|----------|----------------|
|                       |                | REASON              | ANALYST  | DATE           |
| Dichlorofluoromethane | 1.96           | Poor chromatography | journetp | 11/03/14 14:13 |

Lab Sample ID: IC 180-123648/12 Client Sample ID: \_\_\_\_\_Date Analyzed: 11/03/14 16:24 Lab File ID: 4110312.D GC Column: DB-624 ID: 0.18 (mm)

| COMPOUND NAME | RETENTION TIME | MANUAL INTEGRATION  |          |                |
|---------------|----------------|---------------------|----------|----------------|
|               |                | REASON              | ANALYST  | DATE           |
| Acrolein      | 2.37           | Poor chromatography | journetp | 11/03/14 15:55 |

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-43791-1

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

Instrument ID: CHHP4 Analysis Batch Number: 141065

Lab Sample ID: CCV 180-141065/3 Client Sample ID: \_\_\_\_\_

Date Analyzed: 05/09/15 12:46 Lab File ID: 4050903.D GC Column: DB-624 ID: 0.18 (mm)

| COMPOUND NAME | RETENTION TIME | MANUAL INTEGRATION  |          |                |
|---------------|----------------|---------------------|----------|----------------|
|               |                | REASON              | ANALYST  | DATE           |
| Propionitrile | 4.93           | Poor chromatography | journetp | 05/09/15 12:08 |

Lab Sample ID: 180-43791-2 Client Sample ID: FB-CORE

Date Analyzed: 05/09/15 18:04 Lab File ID: 4050914.D GC Column: DB-624 ID: 0.18 (mm)

| COMPOUND NAME | RETENTION TIME | MANUAL INTEGRATION  |          |                |
|---------------|----------------|---------------------|----------|----------------|
|               |                | REASON              | ANALYST  | DATE           |
| Chloroform    | 5.31           | Poor chromatography | journetp | 05/10/15 10:55 |

## GC/MS SEMI VOA MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-43791-1

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

Instrument ID: CH732 Analysis Batch Number: 132436Lab Sample ID: IC 180-132436/3 Client Sample ID: \_\_\_\_\_Date Analyzed: 02/03/15 05:53 Lab File ID: D0203003.D GC Column: Rxi-5SilMS ID: 0.32 (mm)

| COMPOUND NAME          | RETENTION TIME | MANUAL INTEGRATION  |                |                |
|------------------------|----------------|---------------------|----------------|----------------|
|                        |                | REASON              | ANALYST        | DATE           |
| 1,4-Dioxane            | 1.55           | Poor chromatography | piccolino<br>v | 02/03/15 08:47 |
| N-Nitrosodimethylamine | 2.14           | Poor chromatography | piccolino<br>v | 02/03/15 08:47 |
| Pyridine               | 2.24           | Poor chromatography | piccolino<br>v | 02/03/15 08:47 |
| Benzoic acid           | 7.15           | Poor chromatography | piccolino<br>v | 02/03/15 08:47 |
| Indeno[1,2,3-cd]pyrene | 19.79          | Poor chromatography | piccolino<br>v | 02/03/15 08:47 |
| Dibenz(a,h)anthracene  | 19.85          | Poor chromatography | piccolino<br>v | 02/03/15 08:47 |
| Benzo[g,h,i]perylene   | 20.50          | Poor chromatography | piccolino<br>v | 02/03/15 08:47 |

Lab Sample ID: IC 180-132436/4 Client Sample ID: \_\_\_\_\_Date Analyzed: 02/03/15 06:20 Lab File ID: D0203004.D GC Column: Rxi-5SilMS ID: 0.32 (mm)

| COMPOUND NAME          | RETENTION TIME | MANUAL INTEGRATION  |                |                |
|------------------------|----------------|---------------------|----------------|----------------|
|                        |                | REASON              | ANALYST        | DATE           |
| Pyridine               | 2.22           | Poor chromatography | piccolino<br>v | 02/03/15 08:48 |
| Benzoic acid           | 7.16           | Poor chromatography | piccolino<br>v | 02/03/15 08:48 |
| Indeno[1,2,3-cd]pyrene | 19.79          | Poor chromatography | piccolino<br>v | 02/03/15 08:48 |
| Dibenz(a,h)anthracene  | 19.84          | Poor chromatography | piccolino<br>v | 02/03/15 08:48 |
| Benzo[g,h,i]perylene   | 20.50          | Poor chromatography | piccolino<br>v | 02/03/15 08:48 |

## GC/MS SEMI VOA MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-43791-1

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

Instrument ID: CH732 Analysis Batch Number: 132436Lab Sample ID: IC 180-132436/5 Client Sample ID: \_\_\_\_\_Date Analyzed: 02/03/15 06:46 Lab File ID: D0203005.D GC Column: Rxi-5SilMS ID: 0.32 (mm)

| COMPOUND NAME         | RETENTION TIME | MANUAL INTEGRATION  |                |                |
|-----------------------|----------------|---------------------|----------------|----------------|
|                       |                | REASON              | ANALYST        | DATE           |
| Benzoic acid          | 7.16           | Poor chromatography | piccolino<br>v | 02/03/15 08:50 |
| Dibenz(a,h)anthracene | 19.84          | Poor chromatography | piccolino<br>v | 02/03/15 08:50 |

Lab Sample ID: ICIS 180-132436/6 Client Sample ID: \_\_\_\_\_Date Analyzed: 02/03/15 07:13 Lab File ID: D0203006.D GC Column: Rxi-5SilMS ID: 0.32 (mm)

| COMPOUND NAME         | RETENTION TIME | MANUAL INTEGRATION  |                |                |
|-----------------------|----------------|---------------------|----------------|----------------|
|                       |                | REASON              | ANALYST        | DATE           |
| Dibenz(a,h)anthracene | 19.82          | Poor chromatography | piccolino<br>v | 02/03/15 08:51 |

Lab Sample ID: IC 180-132436/8 Client Sample ID: \_\_\_\_\_Date Analyzed: 02/03/15 08:07 Lab File ID: D0203008.D GC Column: Rxi-5SilMS ID: 0.32 (mm)

| COMPOUND NAME          | RETENTION TIME | MANUAL INTEGRATION  |                |                |
|------------------------|----------------|---------------------|----------------|----------------|
|                        |                | REASON              | ANALYST        | DATE           |
| Indeno[1,2,3-cd]pyrene | 19.82          | Poor chromatography | piccolino<br>v | 02/03/15 08:58 |

Lab Sample ID: IC 180-132436/9 Client Sample ID: \_\_\_\_\_Date Analyzed: 02/03/15 08:33 Lab File ID: D0203009.D GC Column: Rxi-5SilMS ID: 0.32 (mm)

| COMPOUND NAME          | RETENTION TIME | MANUAL INTEGRATION  |                |                |
|------------------------|----------------|---------------------|----------------|----------------|
|                        |                | REASON              | ANALYST        | DATE           |
| Indeno[1,2,3-cd]pyrene | 19.81          | Poor chromatography | piccolino<br>v | 02/03/15 08:59 |

GC/MS SEMI VOA MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-43791-1

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

Instrument ID: CH732 Analysis Batch Number: 142205

Lab Sample ID: CCVIS 180-142205/3 Client Sample ID: \_\_\_\_\_

Date Analyzed: 05/20/15 14:05 Lab File ID: D052N003.D GC Column: Rxi-5SilMS ID: 0.32 (mm)

| COMPOUND NAME  | RETENTION TIME | MANUAL INTEGRATION  |                |                |
|----------------|----------------|---------------------|----------------|----------------|
|                |                | REASON              | ANALYST        | DATE           |
| Benzyl alcohol | 6.34           | Poor chromatography | piccolino<br>v | 05/20/15 14:31 |

## GC SEMI VOA MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-43791-1

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

Instrument ID: CHGC8 Analysis Batch Number: 141160Lab Sample ID: IC 180-141160/3 Client Sample ID: \_\_\_\_\_Date Analyzed: 05/11/15 12:33 Lab File ID: O0510002.D GC Column: RTX-CLP2 ID: 0.53 (mm)

| COMPOUND NAME   | RETENTION TIME | MANUAL INTEGRATION |         |                |
|-----------------|----------------|--------------------|---------|----------------|
|                 |                | REASON             | ANALYST | DATE           |
| PCB-1221 Peak 1 | 3.85           | Instrument noise   | guptaa  | 05/11/15 15:53 |
| PCB-1221 Peak 2 | 4.01           | Instrument noise   | guptaa  | 05/11/15 15:53 |
| PCB-1221 Peak 3 | 4.09           | Instrument noise   | guptaa  | 05/11/15 15:53 |

Lab Sample ID: IC 180-141160/4 Client Sample ID: \_\_\_\_\_Date Analyzed: 05/11/15 12:53 Lab File ID: O0510003.D GC Column: RTX-CLP2 ID: 0.53 (mm)

| COMPOUND NAME   | RETENTION TIME | MANUAL INTEGRATION |         |                |
|-----------------|----------------|--------------------|---------|----------------|
|                 |                | REASON             | ANALYST | DATE           |
| PCB-1221 Peak 1 | 3.87           | Split Peak         | guptaa  | 05/11/15 15:40 |
| PCB-1221 Peak 2 | 4.02           | Split Peak         | guptaa  | 05/11/15 15:40 |
| PCB-1221 Peak 3 | 4.09           | Split Peak         | guptaa  | 05/11/15 15:40 |

Lab Sample ID: IC 180-141160/5 Client Sample ID: \_\_\_\_\_Date Analyzed: 05/11/15 13:13 Lab File ID: O0510004.D GC Column: RTX-CLP2 ID: 0.53 (mm)

| COMPOUND NAME   | RETENTION TIME | MANUAL INTEGRATION |         |                |
|-----------------|----------------|--------------------|---------|----------------|
|                 |                | REASON             | ANALYST | DATE           |
| PCB-1221 Peak 1 | 3.87           | Instrument noise   | guptaa  | 05/11/15 15:46 |
| PCB-1221 Peak 2 | 4.02           | Instrument noise   | guptaa  | 05/11/15 15:46 |
| PCB-1221 Peak 3 | 4.10           | Instrument noise   | guptaa  | 05/11/15 15:46 |

Lab Sample ID: IC 180-141160/6 Client Sample ID: \_\_\_\_\_Date Analyzed: 05/11/15 13:33 Lab File ID: O0510005.D GC Column: RTX-CLP2 ID: 0.53 (mm)

| COMPOUND NAME   | RETENTION TIME | MANUAL INTEGRATION |         |                |
|-----------------|----------------|--------------------|---------|----------------|
|                 |                | REASON             | ANALYST | DATE           |
| PCB-1221 Peak 1 | 3.87           | Instrument noise   | guptaa  | 05/11/15 15:47 |
| PCB-1221 Peak 2 | 4.02           | Instrument noise   | guptaa  | 05/11/15 15:47 |
| PCB-1221 Peak 3 | 4.10           | Instrument noise   | guptaa  | 05/11/15 15:47 |



## GC SEMI VOA MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-43791-1

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

Instrument ID: CHGC8 Analysis Batch Number: 141160Lab Sample ID: IC 180-141160/7 Client Sample ID: \_\_\_\_\_Date Analyzed: 05/11/15 13:53 Lab File ID: O0510006.D GC Column: RTX-CLP2 ID: 0.53 (mm)

| COMPOUND NAME   | RETENTION TIME | MANUAL INTEGRATION |         |                |
|-----------------|----------------|--------------------|---------|----------------|
|                 |                | REASON             | ANALYST | DATE           |
| PCB-1221 Peak 1 | 3.87           | Instrument noise   | guptaa  | 05/11/15 15:38 |
| PCB-1221 Peak 2 | 4.03           | Instrument noise   | guptaa  | 05/11/15 15:38 |
| PCB-1221 Peak 3 | 4.10           | Instrument noise   | guptaa  | 05/11/15 15:38 |

Lab Sample ID: IC 180-141160/11 Client Sample ID: \_\_\_\_\_Date Analyzed: 05/11/15 15:12 Lab File ID: O0510010.D GC Column: RTX-CLP1 ID: 0.53 (mm)

| COMPOUND NAME   | RETENTION TIME | MANUAL INTEGRATION |         |                |
|-----------------|----------------|--------------------|---------|----------------|
|                 |                | REASON             | ANALYST | DATE           |
| PCB-1242 Peak 1 | 4.37           | Instrument noise   | guptaa  | 05/11/15 16:08 |
| PCB-1242 Peak 2 | 4.44           | Instrument noise   | guptaa  | 05/11/15 16:08 |
| PCB-1242 Peak 3 | 4.86           | Instrument noise   | guptaa  | 05/11/15 16:08 |
| PCB-1242 Peak 4 | 4.97           | Instrument noise   | guptaa  | 05/11/15 16:08 |
| PCB-1242 Peak 5 | 5.43           | Instrument noise   | guptaa  | 05/11/15 16:08 |

Lab Sample ID: IC 180-141160/12 Client Sample ID: \_\_\_\_\_Date Analyzed: 05/11/15 15:32 Lab File ID: O0510011.D GC Column: RTX-CLP1 ID: 0.53 (mm)

| COMPOUND NAME   | RETENTION TIME | MANUAL INTEGRATION |         |                |
|-----------------|----------------|--------------------|---------|----------------|
|                 |                | REASON             | ANALYST | DATE           |
| PCB-1242 Peak 1 | 4.37           | Instrument noise   | guptaa  | 05/11/15 16:07 |
| PCB-1242 Peak 2 | 4.44           | Instrument noise   | guptaa  | 05/11/15 16:07 |
| PCB-1242 Peak 3 | 4.86           | Instrument noise   | guptaa  | 05/11/15 16:07 |
| PCB-1242 Peak 4 | 4.97           | Instrument noise   | guptaa  | 05/11/15 16:07 |
| PCB-1242 Peak 5 | 5.43           | Instrument noise   | guptaa  | 05/11/15 16:07 |

## GC SEMI VOA MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-43791-1

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

Instrument ID: CHGC8 Analysis Batch Number: 141160Lab Sample ID: IC 180-141160/14 Client Sample ID: \_\_\_\_\_Date Analyzed: 05/11/15 16:12 Lab File ID: O0510013.D GC Column: RTX-CLP1 ID: 0.53 (mm)

| COMPOUND NAME   | RETENTION TIME | MANUAL INTEGRATION |         |                |
|-----------------|----------------|--------------------|---------|----------------|
|                 |                | REASON             | ANALYST | DATE           |
| PCB-1248 Peak 1 | 4.20           | Instrument noise   | guptaa  | 05/12/15 09:45 |
| PCB-1248 Peak 2 | 4.44           | Instrument noise   | guptaa  | 05/12/15 09:45 |
| PCB-1248 Peak 3 | 5.31           | Instrument noise   | guptaa  | 05/12/15 09:45 |
| PCB-1248 Peak 4 | 5.43           | Instrument noise   | guptaa  | 05/12/15 09:45 |
| PCB-1248 Peak 5 | 6.38           | Instrument noise   | guptaa  | 05/12/15 09:45 |

Lab Sample ID: ICV 180-141160/26 Client Sample ID: \_\_\_\_\_Date Analyzed: 05/11/15 20:10 Lab File ID: O0510025.D GC Column: RTX-CLP1 ID: 0.53 (mm)

| COMPOUND NAME   | RETENTION TIME | MANUAL INTEGRATION |         |                |
|-----------------|----------------|--------------------|---------|----------------|
|                 |                | REASON             | ANALYST | DATE           |
| PCB-1016 Peak 1 | 3.41           | Instrument noise   | guptaa  | 05/12/15 17:07 |
| PCB-1016 Peak 2 | 3.74           | Instrument noise   | guptaa  | 05/12/15 17:07 |
| PCB-1016 Peak 3 | 4.37           | Instrument noise   | guptaa  | 05/12/15 17:07 |
| PCB-1016 Peak 4 | 4.44           | Instrument noise   | guptaa  | 05/12/15 17:07 |
| PCB-1016 Peak 5 | 4.86           | Instrument noise   | guptaa  | 05/12/15 17:07 |

Lab Sample ID: ICV 180-141160/26 Client Sample ID: \_\_\_\_\_Date Analyzed: 05/11/15 20:10 Lab File ID: O0510025.D GC Column: RTX-CLP2 ID: 0.53 (mm)

| COMPOUND NAME   | RETENTION TIME | MANUAL INTEGRATION |         |                |
|-----------------|----------------|--------------------|---------|----------------|
|                 |                | REASON             | ANALYST | DATE           |
| PCB-1016 Peak 1 | 5.42           | Instrument noise   | guptaa  | 05/12/15 17:09 |
| PCB-1016 Peak 2 | 5.57           | Instrument noise   | guptaa  | 05/12/15 17:09 |
| PCB-1016 Peak 3 | 6.15           | Instrument noise   | guptaa  | 05/12/15 17:09 |
| PCB-1016 Peak 4 | 6.89           | Instrument noise   | guptaa  | 05/12/15 17:09 |
| PCB-1016 Peak 5 | 7.25           | Instrument noise   | guptaa  | 05/12/15 17:09 |

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh

Job No.: 180-43791-1

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

| Reagent ID                 | Exp Date | Prep Date | Dilutant Used                  | Reagent Final Volume | Parent Reagent      |              | Analyte                              | Concentration |
|----------------------------|----------|-----------|--------------------------------|----------------------|---------------------|--------------|--------------------------------------|---------------|
|                            |          |           |                                |                      | Reagent ID          | Volume Added |                                      |               |
| <b>10 PPM TOC/CC_00493</b> | 05/12/15 | 05/11/15  | DI Water, Lot DI WATER         | 200 mg/L             | WTOC1000SP_00011    | 2 mL         | Dissolved Organic Carbon - Duplicate | 10 mg/L       |
| .WTOC1000SP_00011          | 12/31/15 |           | Ricca Chemical Co, Lot 2412908 |                      | (Purchased Reagent) |              | Dissolved Organic Carbon - Duplicate | 1000 mg/L     |
| <b>GCAR 1660ICV_00003</b>  | 08/30/15 | 02/09/15  | HEXANE, Lot 1448530            | 100 mL               | GCPCBI1660STD_00002 | 0.05 mL      | PCB-1016                             | 0.5 ug/mL     |
| .GCPCBI1660STD_00002       | 06/30/19 |           | RESTEK, Lot A072217            |                      | (Purchased Reagent) |              | PCB-1260                             | 0.5 ug/mL     |
|                            |          |           |                                |                      |                     |              | PCB-1016                             | 1000 ug/mL    |
|                            |          |           |                                |                      |                     |              | PCB-1260                             | 1000 ug/mL    |
| <b>GCAR1248CALL4_00010</b> | 08/15/15 | 02/05/15  | Hexane, Lot 1448530            | 100 mL               | GCPCBI1248STD_00003 | 0.05 mL      | PCB-1248 Peak 1                      | 0.5 ug/mL     |
|                            |          |           |                                |                      |                     |              | PCB-1248 Peak 2                      | 0.5 ug/mL     |
|                            |          |           |                                |                      |                     |              | PCB-1248 Peak 3                      | 0.5 ug/mL     |
|                            |          |           |                                |                      |                     |              | PCB-1248 Peak 4                      | 0.5 ug/mL     |
|                            |          |           |                                |                      |                     |              | PCB-1248 Peak 5                      | 0.5 ug/mL     |
| .GCPCBI1248STD_00003       | 04/30/19 |           | RESTEK, Lot A092864            |                      | (Purchased Reagent) |              | PCB-1248 Peak 1                      | 1000 ug/mL    |
|                            |          |           |                                |                      |                     |              | PCB-1248 Peak 2                      | 1000 ug/mL    |
|                            |          |           |                                |                      |                     |              | PCB-1248 Peak 3                      | 1000 ug/mL    |
|                            |          |           |                                |                      |                     |              | PCB-1248 Peak 4                      | 1000 ug/mL    |
|                            |          |           |                                |                      |                     |              | PCB-1248 Peak 5                      | 1000 ug/mL    |
| <b>GCAR1248ICV_00010</b>   | 08/15/15 | 02/09/15  | HEXANE, Lot 1448530            | 100 mL               | GCPCBI1248STD_00002 | 0.05 mL      | PCB-1248                             | 0.5 ug/mL     |
| .GCPCBI1248STD_00002       | 06/30/19 |           | RESTEK, Lot A094339            |                      | (Purchased Reagent) |              | PCB-1248                             | 1000 ug/mL    |
| <b>GCAR1660CALL1_00015</b> | 08/31/15 | 02/25/15  | HEXANE, Lot 1448530            | 200 mL               | GC1660WORKS_00012   | 0.02 mL      | PCB-1016 Peak 1                      | 0.01 ug/mL    |
|                            |          |           |                                |                      |                     |              | PCB-1016 Peak 2                      | 0.01 ug/mL    |
|                            |          |           |                                |                      |                     |              | PCB-1016 Peak 3                      | 0.01 ug/mL    |
|                            |          |           |                                |                      |                     |              | PCB-1016 Peak 4                      | 0.01 ug/mL    |
|                            |          |           |                                |                      |                     |              | PCB-1016 Peak 5                      | 0.01 ug/mL    |
|                            |          |           |                                |                      |                     |              | PCB-1260 Peak 1                      | 0.01 ug/mL    |
|                            |          |           |                                |                      |                     |              | PCB-1260 Peak 2                      | 0.01 ug/mL    |
|                            |          |           |                                |                      |                     |              | PCB-1260 Peak 3                      | 0.01 ug/mL    |
|                            |          |           |                                |                      |                     |              | PCB-1260 Peak 4                      | 0.01 ug/mL    |
|                            |          |           |                                |                      |                     |              | PCB-1260 Peak 5                      | 0.01 ug/mL    |
|                            |          |           |                                |                      |                     |              | DCB Decachlorobiphenyl (Surr)        | 0.0005 ug/mL  |
|                            |          |           |                                |                      |                     |              | Tetrachloro-m-xylene (Surr)          | 0.0005 ug/mL  |
| .GC1660WORKS_00012         | 08/31/15 | 02/25/15  | HEXANE, Lot 1448530            | 20 mL                | GCPCBICAL STD_00001 | 2 mL         | PCB-1016 Peak 1                      | 100 ug/mL     |
|                            |          |           |                                |                      |                     |              | PCB-1016 Peak 2                      | 100 ug/mL     |
|                            |          |           |                                |                      |                     |              | PCB-1016 Peak 3                      | 100 ug/mL     |
|                            |          |           |                                |                      |                     |              | PCB-1016 Peak 4                      | 100 ug/mL     |
|                            |          |           |                                |                      |                     |              | PCB-1016 Peak 5                      | 100 ug/mL     |
|                            |          |           |                                |                      |                     |              | PCB-1260 Peak 1                      | 100 ug/mL     |
|                            |          |           |                                |                      |                     |              | PCB-1260 Peak 2                      | 100 ug/mL     |
|                            |          |           |                                |                      |                     |              | PCB-1260 Peak 3                      | 100 ug/mL     |
|                            |          |           |                                |                      |                     |              | PCB-1260 Peak 4                      | 100 ug/mL     |
|                            |          |           |                                |                      |                     |              | PCB-1260 Peak 5                      | 100 ug/mL     |
|                            |          |           |                                |                      |                     |              | DCB Decachlorobiphenyl (Surr)        | 5 ug/mL       |
|                            |          |           |                                |                      |                     |              | Tetrachloro-m-xylene (Surr)          | 5 ug/mL       |
| ..GCPCBICAL STD_00001      | 04/30/19 |           | RESTEK, Lot A092844            |                      | (Purchased Reagent) |              | PCB-1016 Peak 1                      | 1000 ug/mL    |
|                            |          |           |                                |                      |                     |              | PCB-1016 Peak 2                      | 1000 ug/mL    |

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh

Job No.: 180-43791-1

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

| Reagent ID            | Exp Date   | Prep Date | Dilutant Used       | Reagent Final Volume | Parent Reagent      |                     | Analyte                       | Concentration |
|-----------------------|------------|-----------|---------------------|----------------------|---------------------|---------------------|-------------------------------|---------------|
|                       |            |           |                     |                      | Reagent ID          | Volume Added        |                               |               |
|                       |            |           |                     |                      |                     |                     | PCB-1016 Peak 3               | 1000 ug/mL    |
|                       |            |           |                     |                      |                     |                     | PCB-1016 Peak 4               | 1000 ug/mL    |
|                       |            |           |                     |                      |                     |                     | PCB-1016 Peak 5               | 1000 ug/mL    |
|                       |            |           |                     |                      |                     |                     | PCB-1260 Peak 1               | 1000 ug/mL    |
|                       |            |           |                     |                      |                     |                     | PCB-1260 Peak 2               | 1000 ug/mL    |
|                       |            |           |                     |                      |                     |                     | PCB-1260 Peak 3               | 1000 ug/mL    |
|                       |            |           |                     |                      |                     |                     | PCB-1260 Peak 4               | 1000 ug/mL    |
| PCB-1260 Peak 5       | 1000 ug/mL |           |                     |                      |                     |                     |                               |               |
| ..GCPEST(SURR)S_00005 | 03/20/19   |           | RESTEK, Lot a092633 |                      |                     | (Purchased Reagent) | DCB Decachlorobiphenyl (Surr) | 200 ug/mL     |
|                       |            |           |                     |                      |                     |                     | Tetrachloro-m-xylene (Surr)   | 200 ug/mL     |
| GCAR1660CALL2_00010   | 08/31/15   | 02/25/15  | HEXANE, Lot 1448530 | 200 mL               | GC1660WORKS_00012   | 0.1 mL              | PCB-1016 Peak 1               | 0.05 ug/mL    |
|                       |            |           |                     |                      |                     |                     | PCB-1016 Peak 2               | 0.05 ug/mL    |
|                       |            |           |                     |                      |                     |                     | PCB-1016 Peak 3               | 0.05 ug/mL    |
|                       |            |           |                     |                      |                     |                     | PCB-1016 Peak 4               | 0.05 ug/mL    |
|                       |            |           |                     |                      |                     |                     | PCB-1016 Peak 5               | 0.05 ug/mL    |
|                       |            |           |                     |                      |                     |                     | PCB-1260 Peak 1               | 0.05 ug/mL    |
|                       |            |           |                     |                      |                     |                     | PCB-1260 Peak 2               | 0.05 ug/mL    |
|                       |            |           |                     |                      |                     |                     | PCB-1260 Peak 3               | 0.05 ug/mL    |
|                       |            |           |                     |                      |                     |                     | PCB-1260 Peak 4               | 0.05 ug/mL    |
|                       |            |           |                     |                      |                     |                     | PCB-1260 Peak 5               | 0.05 ug/mL    |
|                       |            |           |                     |                      |                     |                     | DCB Decachlorobiphenyl (Surr) | 0.0025 ug/mL  |
|                       |            |           |                     |                      |                     |                     | Tetrachloro-m-xylene (Surr)   | 0.0025 ug/mL  |
|                       |            |           |                     |                      |                     |                     | ..GC1660WORKS_00012           | 08/31/15      |
|                       |            |           |                     |                      |                     |                     | PCB-1016 Peak 2               | 100 ug/mL     |
|                       |            |           |                     |                      |                     |                     | PCB-1016 Peak 3               | 100 ug/mL     |
|                       |            |           |                     |                      |                     |                     | PCB-1016 Peak 4               | 100 ug/mL     |
|                       |            |           |                     |                      |                     |                     | PCB-1016 Peak 5               | 100 ug/mL     |
|                       |            |           |                     |                      |                     |                     | PCB-1260 Peak 1               | 100 ug/mL     |
|                       |            |           |                     |                      |                     |                     | PCB-1260 Peak 2               | 100 ug/mL     |
|                       |            |           |                     |                      |                     |                     | PCB-1260 Peak 3               | 100 ug/mL     |
|                       |            |           |                     |                      |                     |                     | PCB-1260 Peak 4               | 100 ug/mL     |
|                       |            |           |                     |                      |                     |                     | PCB-1260 Peak 5               | 100 ug/mL     |
|                       |            |           |                     |                      | GCPEST(SURR)S_00005 | 0.5 mL              | DCB Decachlorobiphenyl (Surr) | 5 ug/mL       |
|                       |            |           |                     |                      |                     |                     | Tetrachloro-m-xylene (Surr)   | 5 ug/mL       |
| ..GCPCBICAL STD_00001 | 04/30/19   |           | RESTEK, Lot A092844 |                      |                     | (Purchased Reagent) | PCB-1016 Peak 1               | 1000 ug/mL    |
|                       |            |           |                     |                      |                     |                     | PCB-1016 Peak 2               | 1000 ug/mL    |
|                       |            |           |                     |                      |                     |                     | PCB-1016 Peak 3               | 1000 ug/mL    |
|                       |            |           |                     |                      |                     |                     | PCB-1016 Peak 4               | 1000 ug/mL    |
|                       |            |           |                     |                      |                     |                     | PCB-1016 Peak 5               | 1000 ug/mL    |
|                       |            |           |                     |                      |                     |                     | PCB-1260 Peak 1               | 1000 ug/mL    |
|                       |            |           |                     |                      |                     |                     | PCB-1260 Peak 2               | 1000 ug/mL    |
|                       |            |           |                     |                      |                     |                     | PCB-1260 Peak 3               | 1000 ug/mL    |
|                       |            |           |                     |                      |                     |                     | PCB-1260 Peak 4               | 1000 ug/mL    |
|                       |            |           |                     |                      |                     |                     | PCB-1260 Peak 5               | 1000 ug/mL    |
| ..GCPEST(SURR)S_00005 | 03/20/19   |           | RESTEK, Lot a092633 |                      |                     | (Purchased Reagent) | DCB Decachlorobiphenyl (Surr) | 200 ug/mL     |
|                       |            |           |                     |                      |                     |                     | Tetrachloro-m-xylene (Surr)   | 200 ug/mL     |
| GCAR1660CALL3_00009   | 08/31/15   | 02/25/15  | HEXANE, Lot 1448530 | 200 mL               | GC1660WORKS_00012   | 0.4 mL              | PCB-1016 Peak 1               | 0.2 ug/mL     |

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh

Job No.: 180-43791-1

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

| Reagent ID            | Exp Date | Prep Date | Dilutant Used        | Reagent Final Volume | Parent Reagent      |                     | Analyte                       | Concentration |
|-----------------------|----------|-----------|----------------------|----------------------|---------------------|---------------------|-------------------------------|---------------|
|                       |          |           |                      |                      | Reagent ID          | Volume Added        |                               |               |
|                       |          |           |                      |                      |                     |                     | PCB-1016 Peak 2               | 0.2 ug/mL     |
|                       |          |           |                      |                      |                     |                     | PCB-1016 Peak 3               | 0.2 ug/mL     |
|                       |          |           |                      |                      |                     |                     | PCB-1016 Peak 4               | 0.2 ug/mL     |
|                       |          |           |                      |                      |                     |                     | PCB-1016 Peak 5               | 0.2 ug/mL     |
|                       |          |           |                      |                      |                     |                     | PCB-1260 Peak 1               | 0.2 ug/mL     |
|                       |          |           |                      |                      |                     |                     | PCB-1260 Peak 2               | 0.2 ug/mL     |
|                       |          |           |                      |                      |                     |                     | PCB-1260 Peak 3               | 0.2 ug/mL     |
|                       |          |           |                      |                      |                     |                     | PCB-1260 Peak 4               | 0.2 ug/mL     |
|                       |          |           |                      |                      |                     |                     | PCB-1260 Peak 5               | 0.2 ug/mL     |
|                       |          |           |                      |                      |                     |                     | DCB Decachlorobiphenyl (Surr) | 0.01 ug/mL    |
|                       |          |           |                      |                      |                     |                     | Tetrachloro-m-xylene (Surr)   | 0.01 ug/mL    |
| .GC1660WORKS_00012    | 08/31/15 | 02/25/15  | HEXANE, Lot 1448530  | 20 mL                | GCPCBICAL STD_00001 | 2 mL                | PCB-1016 Peak 1               | 100 ug/mL     |
|                       |          |           |                      |                      |                     |                     | PCB-1016 Peak 2               | 100 ug/mL     |
|                       |          |           |                      |                      |                     |                     | PCB-1016 Peak 3               | 100 ug/mL     |
|                       |          |           |                      |                      |                     |                     | PCB-1016 Peak 4               | 100 ug/mL     |
|                       |          |           |                      |                      |                     |                     | PCB-1016 Peak 5               | 100 ug/mL     |
|                       |          |           |                      |                      |                     |                     | PCB-1260 Peak 1               | 100 ug/mL     |
|                       |          |           |                      |                      |                     |                     | PCB-1260 Peak 2               | 100 ug/mL     |
|                       |          |           |                      |                      |                     |                     | PCB-1260 Peak 3               | 100 ug/mL     |
|                       |          |           |                      |                      |                     |                     | PCB-1260 Peak 4               | 100 ug/mL     |
|                       |          |           |                      |                      |                     |                     | PCB-1260 Peak 5               | 100 ug/mL     |
|                       |          |           |                      |                      | GCPEST(SURR)S_00005 | 0.5 mL              | DCB Decachlorobiphenyl (Surr) | 5 ug/mL       |
|                       |          |           |                      |                      |                     |                     | Tetrachloro-m-xylene (Surr)   | 5 ug/mL       |
| ..GCPCBICAL STD_00001 | 04/30/19 |           | RESTEK, Lot A092844  |                      |                     | (Purchased Reagent) | PCB-1016 Peak 1               | 1000 ug/mL    |
|                       |          |           |                      |                      |                     |                     | PCB-1016 Peak 2               | 1000 ug/mL    |
|                       |          |           |                      |                      |                     |                     | PCB-1016 Peak 3               | 1000 ug/mL    |
|                       |          |           |                      |                      |                     |                     | PCB-1016 Peak 4               | 1000 ug/mL    |
|                       |          |           |                      |                      |                     |                     | PCB-1016 Peak 5               | 1000 ug/mL    |
|                       |          |           |                      |                      |                     |                     | PCB-1260 Peak 1               | 1000 ug/mL    |
|                       |          |           |                      |                      |                     |                     | PCB-1260 Peak 2               | 1000 ug/mL    |
|                       |          |           |                      |                      |                     |                     | PCB-1260 Peak 3               | 1000 ug/mL    |
|                       |          |           |                      |                      |                     |                     | PCB-1260 Peak 4               | 1000 ug/mL    |
|                       |          |           |                      |                      |                     |                     | PCB-1260 Peak 5               | 1000 ug/mL    |
| ..GCPEST(SURR)S_00005 | 03/20/19 |           | RESTEK, Lot a092633  |                      |                     | (Purchased Reagent) | DCB Decachlorobiphenyl (Surr) | 200 ug/mL     |
|                       |          |           |                      |                      |                     |                     | Tetrachloro-m-xylene (Surr)   | 200 ug/mL     |
| GCAR1660CALL4_00009   | 08/31/15 | 02/25/15  | HEAXANE, Lot 1448530 | 400 mL               | GC1660WORKS_00012   | 2 mL                | PCB-1016 Peak 1               | 0.5 ug/mL     |
|                       |          |           |                      |                      |                     |                     | PCB-1016 Peak 2               | 0.5 ug/mL     |
|                       |          |           |                      |                      |                     |                     | PCB-1016 Peak 3               | 0.5 ug/mL     |
|                       |          |           |                      |                      |                     |                     | PCB-1016 Peak 4               | 0.5 ug/mL     |
|                       |          |           |                      |                      |                     |                     | PCB-1016 Peak 5               | 0.5 ug/mL     |
|                       |          |           |                      |                      |                     |                     | PCB-1260 Peak 1               | 0.5 ug/mL     |
|                       |          |           |                      |                      |                     |                     | PCB-1260 Peak 2               | 0.5 ug/mL     |
|                       |          |           |                      |                      |                     |                     | PCB-1260 Peak 3               | 0.5 ug/mL     |
|                       |          |           |                      |                      |                     |                     | PCB-1260 Peak 4               | 0.5 ug/mL     |
|                       |          |           |                      |                      |                     |                     | PCB-1260 Peak 5               | 0.5 ug/mL     |
|                       |          |           |                      |                      |                     |                     | DCB Decachlorobiphenyl (Surr) | 0.025 ug/mL   |
|                       |          |           |                      |                      |                     |                     | Tetrachloro-m-xylene (Surr)   | 0.025 ug/mL   |

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh

Job No.: 180-43791-1

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

| Reagent ID            | Exp Date | Prep Date | Dilutant Used        | Reagent Final Volume | Parent Reagent      |              | Analyte                       | Concentration |
|-----------------------|----------|-----------|----------------------|----------------------|---------------------|--------------|-------------------------------|---------------|
|                       |          |           |                      |                      | Reagent ID          | Volume Added |                               |               |
| .GC1660WORKS_00012    | 08/31/15 | 02/25/15  | HEXANE, Lot 1448530  | 20 mL                | GCPCBICAL STD_00001 | 2 mL         | PCB-1016 Peak 1               | 100 ug/mL     |
|                       |          |           |                      |                      |                     |              | PCB-1016 Peak 2               | 100 ug/mL     |
|                       |          |           |                      |                      |                     |              | PCB-1016 Peak 3               | 100 ug/mL     |
|                       |          |           |                      |                      |                     |              | PCB-1016 Peak 4               | 100 ug/mL     |
|                       |          |           |                      |                      |                     |              | PCB-1016 Peak 5               | 100 ug/mL     |
|                       |          |           |                      |                      |                     |              | PCB-1260 Peak 1               | 100 ug/mL     |
|                       |          |           |                      |                      |                     |              | PCB-1260 Peak 2               | 100 ug/mL     |
|                       |          |           |                      |                      |                     |              | PCB-1260 Peak 3               | 100 ug/mL     |
|                       |          |           |                      |                      |                     |              | PCB-1260 Peak 4               | 100 ug/mL     |
|                       |          |           |                      |                      |                     |              | PCB-1260 Peak 5               | 100 ug/mL     |
| ..GCPCBICAL STD_00001 | 04/30/19 |           | RESTEK, Lot A092844  |                      |                     |              | DCB Decachlorobiphenyl (Surr) | 5 ug/mL       |
|                       |          |           |                      |                      |                     |              | Tetrachloro-m-xylene (Surr)   | 5 ug/mL       |
| ..GCPCBICAL STD_00001 | 04/30/19 |           | RESTEK, Lot A092844  |                      | (Purchased Reagent) |              | PCB-1016 Peak 1               | 1000 ug/mL    |
|                       |          |           |                      |                      |                     |              | PCB-1016 Peak 2               | 1000 ug/mL    |
|                       |          |           |                      |                      |                     |              | PCB-1016 Peak 3               | 1000 ug/mL    |
|                       |          |           |                      |                      |                     |              | PCB-1016 Peak 4               | 1000 ug/mL    |
|                       |          |           |                      |                      |                     |              | PCB-1016 Peak 5               | 1000 ug/mL    |
|                       |          |           |                      |                      |                     |              | PCB-1260 Peak 1               | 1000 ug/mL    |
|                       |          |           |                      |                      |                     |              | PCB-1260 Peak 2               | 1000 ug/mL    |
|                       |          |           |                      |                      |                     |              | PCB-1260 Peak 3               | 1000 ug/mL    |
|                       |          |           |                      |                      |                     |              | PCB-1260 Peak 4               | 1000 ug/mL    |
|                       |          |           |                      |                      |                     |              | PCB-1260 Peak 5               | 1000 ug/mL    |
| ..GCPEST(SURR)S_00005 | 03/20/19 |           | RESTEK, Lot a092633  |                      | (Purchased Reagent) |              | DCB Decachlorobiphenyl (Surr) | 200 ug/mL     |
|                       |          |           |                      |                      |                     |              | Tetrachloro-m-xylene (Surr)   | 200 ug/mL     |
| GCAR1660CALL4_00009   | 08/31/15 | 02/25/15  | HEAXANE, Lot 1448530 | 400 mL               | GC1660WORKS_00012   | 2 mL         | PCB-1016                      | 0.5 ug/mL     |
| .GC1660WORKS_00012    | 08/31/15 | 02/25/15  | HEXANE, Lot 1448530  | 20 mL                | GCPCBICAL STD_00001 | 2 mL         | PCB-1260                      | 0.5 ug/mL     |
|                       |          |           |                      |                      |                     |              | PCB-1016                      | 100 ug/mL     |
| ..GCPCBICAL STD_00001 | 04/30/19 |           | RESTEK, Lot A092844  |                      | (Purchased Reagent) |              | PCB-1260                      | 100 ug/mL     |
|                       |          |           |                      |                      |                     |              | PCB-1016                      | 1000 ug/mL    |
| GCAR1660CALL5_00010   | 08/31/15 | 02/25/15  | HEAXNE, Lot 1305300  | 400 mL               | GC1660WORKS_00012   | 4 mL         | PCB-1016                      | 1000 ug/mL    |
|                       |          |           |                      |                      |                     |              | PCB-1016 Peak 1               | 1 ug/mL       |
|                       |          |           |                      |                      |                     |              | PCB-1016 Peak 2               | 1 ug/mL       |
|                       |          |           |                      |                      |                     |              | PCB-1016 Peak 3               | 1 ug/mL       |
|                       |          |           |                      |                      |                     |              | PCB-1016 Peak 4               | 1 ug/mL       |
|                       |          |           |                      |                      |                     |              | PCB-1016 Peak 5               | 1 ug/mL       |
|                       |          |           |                      |                      |                     |              | PCB-1260 Peak 1               | 1 ug/mL       |
|                       |          |           |                      |                      |                     |              | PCB-1260 Peak 2               | 1 ug/mL       |
|                       |          |           |                      |                      |                     |              | PCB-1260 Peak 3               | 1 ug/mL       |
|                       |          |           |                      |                      |                     |              | PCB-1260 Peak 4               | 1 ug/mL       |
| PCB-1260 Peak 5       | 1 ug/mL  |           |                      |                      |                     |              |                               |               |
| .GC1660WORKS_00012    | 08/31/15 | 02/25/15  | HEXANE, Lot 1448530  | 20 mL                | GCPCBICAL STD_00001 | 2 mL         | DCB Decachlorobiphenyl (Surr) | 0.05 ug/mL    |
|                       |          |           |                      |                      |                     |              | Tetrachloro-m-xylene (Surr)   | 0.05 ug/mL    |
| .GC1660WORKS_00012    | 08/31/15 | 02/25/15  | HEXANE, Lot 1448530  | 20 mL                | GCPCBICAL STD_00001 | 2 mL         | PCB-1016 Peak 1               | 100 ug/mL     |
|                       |          |           |                      |                      |                     |              | PCB-1016 Peak 2               | 100 ug/mL     |
|                       |          |           |                      |                      |                     |              | PCB-1016 Peak 3               | 100 ug/mL     |
|                       |          |           |                      |                      |                     |              | PCB-1016 Peak 4               | 100 ug/mL     |
|                       |          |           |                      |                      |                     |              | PCB-1016 Peak 5               | 100 ug/mL     |

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh

Job No.: 180-43791-1

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

| Reagent ID            | Exp Date | Prep Date | Dilutant Used       | Reagent Final Volume | Parent Reagent      |              | Analyte                       | Concentration |
|-----------------------|----------|-----------|---------------------|----------------------|---------------------|--------------|-------------------------------|---------------|
|                       |          |           |                     |                      | Reagent ID          | Volume Added |                               |               |
|                       |          |           |                     |                      |                     |              | PCB-1260 Peak 1               | 100 ug/mL     |
|                       |          |           |                     |                      |                     |              | PCB-1260 Peak 2               | 100 ug/mL     |
|                       |          |           |                     |                      |                     |              | PCB-1260 Peak 3               | 100 ug/mL     |
|                       |          |           |                     |                      |                     |              | PCB-1260 Peak 4               | 100 ug/mL     |
|                       |          |           |                     |                      |                     |              | PCB-1260 Peak 5               | 100 ug/mL     |
|                       |          |           |                     |                      | GCPEST(SURR)S_00005 | 0.5 mL       | DCB Decachlorobiphenyl (Surr) | 5 ug/mL       |
|                       |          |           |                     |                      |                     |              | Tetrachloro-m-xylene (Surr)   | 5 ug/mL       |
| ..GCPCBICAL STD_00001 | 04/30/19 |           | RESTEK, Lot A092844 |                      | (Purchased Reagent) |              | PCB-1016 Peak 1               | 1000 ug/mL    |
|                       |          |           |                     |                      |                     |              | PCB-1016 Peak 2               | 1000 ug/mL    |
|                       |          |           |                     |                      |                     |              | PCB-1016 Peak 3               | 1000 ug/mL    |
|                       |          |           |                     |                      |                     |              | PCB-1016 Peak 4               | 1000 ug/mL    |
|                       |          |           |                     |                      |                     |              | PCB-1016 Peak 5               | 1000 ug/mL    |
|                       |          |           |                     |                      |                     |              | PCB-1260 Peak 1               | 1000 ug/mL    |
|                       |          |           |                     |                      |                     |              | PCB-1260 Peak 2               | 1000 ug/mL    |
|                       |          |           |                     |                      |                     |              | PCB-1260 Peak 3               | 1000 ug/mL    |
|                       |          |           |                     |                      |                     |              | PCB-1260 Peak 4               | 1000 ug/mL    |
|                       |          |           |                     |                      |                     |              | PCB-1260 Peak 5               | 1000 ug/mL    |
| ..GCPEST(SURR)S_00005 | 03/20/19 |           | RESTEK, Lot a092633 |                      | (Purchased Reagent) |              | DCB Decachlorobiphenyl (Surr) | 200 ug/mL     |
|                       |          |           |                     |                      |                     |              | Tetrachloro-m-xylene (Surr)   | 200 ug/mL     |
| GCAR1660CALL5_00010   | 08/31/15 | 02/25/15  | HEAXNE, Lot 1305300 | 400 mL               | GC1660WORKS_00012   | 4 mL         | PCB-1016                      | 1 ug/mL       |
|                       |          |           |                     |                      |                     |              | PCB-1260                      | 1 ug/mL       |
| .GC1660WORKS_00012    | 08/31/15 | 02/25/15  | HEXANE, Lot 1448530 | 20 mL                | GCPCBICAL STD_00001 | 2 mL         | PCB-1016                      | 100 ug/mL     |
|                       |          |           |                     |                      |                     |              | PCB-1260                      | 100 ug/mL     |
| ..GCPCBICAL STD_00001 | 04/30/19 |           | RESTEK, Lot A092844 |                      | (Purchased Reagent) |              | PCB-1016                      | 1000 ug/mL    |
|                       |          |           |                     |                      |                     |              | PCB-1260                      | 1000 ug/mL    |
| GCAR1660CALL6_00008   | 08/31/15 | 02/25/15  | Hexane, Lot 1448530 | 200 mL               | GC1660WORKS_00012   | 4 mL         | PCB-1016 Peak 1               | 2 ug/mL       |
|                       |          |           |                     |                      |                     |              | PCB-1016 Peak 2               | 2 ug/mL       |
|                       |          |           |                     |                      |                     |              | PCB-1016 Peak 3               | 2 ug/mL       |
|                       |          |           |                     |                      |                     |              | PCB-1016 Peak 4               | 2 ug/mL       |
|                       |          |           |                     |                      |                     |              | PCB-1016 Peak 5               | 2 ug/mL       |
|                       |          |           |                     |                      |                     |              | PCB-1260 Peak 1               | 2 ug/mL       |
|                       |          |           |                     |                      |                     |              | PCB-1260 Peak 2               | 2 ug/mL       |
|                       |          |           |                     |                      |                     |              | PCB-1260 Peak 3               | 2 ug/mL       |
|                       |          |           |                     |                      |                     |              | PCB-1260 Peak 4               | 2 ug/mL       |
|                       |          |           |                     |                      |                     |              | PCB-1260 Peak 5               | 2 ug/mL       |
|                       |          |           |                     |                      |                     |              | DCB Decachlorobiphenyl (Surr) | 0.1 ug/mL     |
|                       |          |           |                     |                      |                     |              | Tetrachloro-m-xylene (Surr)   | 0.1 ug/mL     |
| .GC1660WORKS_00012    | 08/31/15 | 02/25/15  | HEXANE, Lot 1448530 | 20 mL                | GCPCBICAL STD_00001 | 2 mL         | PCB-1016 Peak 1               | 100 ug/mL     |
|                       |          |           |                     |                      |                     |              | PCB-1016 Peak 2               | 100 ug/mL     |
|                       |          |           |                     |                      |                     |              | PCB-1016 Peak 3               | 100 ug/mL     |
|                       |          |           |                     |                      |                     |              | PCB-1016 Peak 4               | 100 ug/mL     |
|                       |          |           |                     |                      |                     |              | PCB-1016 Peak 5               | 100 ug/mL     |
|                       |          |           |                     |                      |                     |              | PCB-1260 Peak 1               | 100 ug/mL     |
|                       |          |           |                     |                      |                     |              | PCB-1260 Peak 2               | 100 ug/mL     |
|                       |          |           |                     |                      |                     |              | PCB-1260 Peak 3               | 100 ug/mL     |
|                       |          |           |                     |                      |                     |              | PCB-1260 Peak 4               | 100 ug/mL     |
|                       |          |           |                     |                      |                     |              | PCB-1260 Peak 5               | 100 ug/mL     |

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh

Job No.: 180-43791-1

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

| Reagent ID            | Exp Date | Prep Date | Dilutant Used       | Reagent Final Volume | Parent Reagent      |              | Analyte                       | Concentration |
|-----------------------|----------|-----------|---------------------|----------------------|---------------------|--------------|-------------------------------|---------------|
|                       |          |           |                     |                      | Reagent ID          | Volume Added |                               |               |
|                       |          |           |                     |                      | GCPEST(SURR)S_00005 | 0.5 mL       | DCB Decachlorobiphenyl (Surr) | 5 ug/mL       |
|                       |          |           |                     |                      |                     |              | Tetrachloro-m-xylene (Surr)   | 5 ug/mL       |
| ..GCPCBICAL STD_00001 | 04/30/19 |           | RESTEK, Lot A092844 |                      | (Purchased Reagent) |              | PCB-1016 Peak 1               | 1000 ug/mL    |
|                       |          |           |                     |                      |                     |              | PCB-1016 Peak 2               | 1000 ug/mL    |
|                       |          |           |                     |                      |                     |              | PCB-1016 Peak 3               | 1000 ug/mL    |
|                       |          |           |                     |                      |                     |              | PCB-1016 Peak 4               | 1000 ug/mL    |
|                       |          |           |                     |                      |                     |              | PCB-1016 Peak 5               | 1000 ug/mL    |
|                       |          |           |                     |                      |                     |              | PCB-1260 Peak 1               | 1000 ug/mL    |
|                       |          |           |                     |                      |                     |              | PCB-1260 Peak 2               | 1000 ug/mL    |
|                       |          |           |                     |                      |                     |              | PCB-1260 Peak 3               | 1000 ug/mL    |
|                       |          |           |                     |                      |                     |              | PCB-1260 Peak 4               | 1000 ug/mL    |
|                       |          |           |                     |                      |                     |              | PCB-1260 Peak 5               | 1000 ug/mL    |
| ..GCPEST(SURR)S_00005 | 03/20/19 |           | RESTEK, Lot a092633 |                      | (Purchased Reagent) |              | DCB Decachlorobiphenyl (Surr) | 200 ug/mL     |
|                       |          |           |                     |                      |                     |              | Tetrachloro-m-xylene (Surr)   | 200 ug/mL     |
| GCAR1660CALL7_00009   | 08/31/15 | 02/25/15  | HEXANE, Lot 1448530 | 200 mL               | GC1660WORKS_00012   | 8 mL         | PCB-1016 Peak 1               | 4 ug/mL       |
|                       |          |           |                     |                      |                     |              | PCB-1016 Peak 2               | 4 ug/mL       |
|                       |          |           |                     |                      |                     |              | PCB-1016 Peak 3               | 4 ug/mL       |
|                       |          |           |                     |                      |                     |              | PCB-1016 Peak 4               | 4 ug/mL       |
|                       |          |           |                     |                      |                     |              | PCB-1016 Peak 5               | 4 ug/mL       |
|                       |          |           |                     |                      |                     |              | PCB-1260 Peak 1               | 4 ug/mL       |
|                       |          |           |                     |                      |                     |              | PCB-1260 Peak 2               | 4 ug/mL       |
|                       |          |           |                     |                      |                     |              | PCB-1260 Peak 3               | 4 ug/mL       |
|                       |          |           |                     |                      |                     |              | PCB-1260 Peak 4               | 4 ug/mL       |
|                       |          |           |                     |                      |                     |              | PCB-1260 Peak 5               | 4 ug/mL       |
|                       |          |           |                     |                      |                     |              | DCB Decachlorobiphenyl (Surr) | 0.2 ug/mL     |
|                       |          |           |                     |                      |                     |              | Tetrachloro-m-xylene (Surr)   | 0.2 ug/mL     |
| ..GC1660WORKS_00012   | 08/31/15 | 02/25/15  | HEXANE, Lot 1448530 | 20 mL                | GCPCBICAL STD_00001 | 2 mL         | PCB-1016 Peak 1               | 100 ug/mL     |
|                       |          |           |                     |                      |                     |              | PCB-1016 Peak 2               | 100 ug/mL     |
|                       |          |           |                     |                      |                     |              | PCB-1016 Peak 3               | 100 ug/mL     |
|                       |          |           |                     |                      |                     |              | PCB-1016 Peak 4               | 100 ug/mL     |
|                       |          |           |                     |                      |                     |              | PCB-1016 Peak 5               | 100 ug/mL     |
|                       |          |           |                     |                      |                     |              | PCB-1260 Peak 1               | 100 ug/mL     |
|                       |          |           |                     |                      |                     |              | PCB-1260 Peak 2               | 100 ug/mL     |
|                       |          |           |                     |                      |                     |              | PCB-1260 Peak 3               | 100 ug/mL     |
|                       |          |           |                     |                      |                     |              | PCB-1260 Peak 4               | 100 ug/mL     |
|                       |          |           |                     |                      |                     |              | PCB-1260 Peak 5               | 100 ug/mL     |
|                       |          |           |                     |                      | GCPEST(SURR)S_00005 | 0.5 mL       | DCB Decachlorobiphenyl (Surr) | 5 ug/mL       |
|                       |          |           |                     |                      |                     |              | Tetrachloro-m-xylene (Surr)   | 5 ug/mL       |
| ..GCPCBICAL STD_00001 | 04/30/19 |           | RESTEK, Lot A092844 |                      | (Purchased Reagent) |              | PCB-1016 Peak 1               | 1000 ug/mL    |
|                       |          |           |                     |                      |                     |              | PCB-1016 Peak 2               | 1000 ug/mL    |
|                       |          |           |                     |                      |                     |              | PCB-1016 Peak 3               | 1000 ug/mL    |
|                       |          |           |                     |                      |                     |              | PCB-1016 Peak 4               | 1000 ug/mL    |
|                       |          |           |                     |                      |                     |              | PCB-1016 Peak 5               | 1000 ug/mL    |
|                       |          |           |                     |                      |                     |              | PCB-1260 Peak 1               | 1000 ug/mL    |
|                       |          |           |                     |                      |                     |              | PCB-1260 Peak 2               | 1000 ug/mL    |
|                       |          |           |                     |                      |                     |              | PCB-1260 Peak 3               | 1000 ug/mL    |
|                       |          |           |                     |                      |                     |              | PCB-1260 Peak 4               | 1000 ug/mL    |



REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh

Job No.: 180-43791-1

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

| Reagent ID            | Exp Date | Prep Date | Dilutant Used       | Reagent Final Volume | Parent Reagent      |              | Analyte                       | Concentration |
|-----------------------|----------|-----------|---------------------|----------------------|---------------------|--------------|-------------------------------|---------------|
|                       |          |           |                     |                      | Reagent ID          | Volume Added |                               |               |
| ..GCPEST(SURR)S_00005 | 03/20/19 |           | RESTEK, Lot a092633 |                      | (Purchased Reagent) |              | PCB-1260 Peak 5               | 1000 ug/mL    |
|                       |          |           |                     |                      |                     |              | DCB Decachlorobiphenyl (Surr) | 200 ug/mL     |
|                       |          |           |                     |                      |                     |              | Tetrachloro-m-xylene (Surr)   | 200 ug/mL     |
| GCAR2154CALL1_00011   | 08/15/15 | 02/05/15  | Hexane, Lot 1448530 | 100 mL               | GCPCBI1221STD_00002 | 0.001 mL     | PCB-1221 Peak 1               | 0.01 ug/mL    |
|                       |          |           |                     |                      |                     |              | PCB-1221 Peak 2               | 0.01 ug/mL    |
|                       |          |           |                     |                      |                     |              | PCB-1221 Peak 3               | 0.01 ug/mL    |
|                       |          |           |                     |                      | GCPCBI1254STD_00003 | 0.001 mL     | PCB-1254 Peak 1               | 0.01 ug/mL    |
|                       |          |           |                     |                      |                     |              | PCB-1254 Peak 2               | 0.01 ug/mL    |
|                       |          |           |                     |                      |                     |              | PCB-1254 Peak 3               | 0.01 ug/mL    |
|                       |          |           |                     |                      |                     |              | PCB-1254 Peak 4               | 0.01 ug/mL    |
|                       |          |           |                     |                      |                     |              | PCB-1254 Peak 5               | 0.01 ug/mL    |
| .GCPCBI1221STD_00002  | 12/30/18 |           | RESTEK, Lot a090667 |                      | (Purchased Reagent) |              | PCB-1221 Peak 1               | 1000 ug/mL    |
|                       |          |           |                     |                      |                     |              | PCB-1221 Peak 2               | 1000 ug/mL    |
|                       |          |           |                     |                      |                     |              | PCB-1221 Peak 3               | 1000 ug/mL    |
| .GCPCBI1254STD_00003  | 02/28/19 |           | RESTEK, Lot A092005 |                      | (Purchased Reagent) |              | PCB-1254 Peak 1               | 1000 ug/mL    |
|                       |          |           |                     |                      |                     |              | PCB-1254 Peak 2               | 1000 ug/mL    |
|                       |          |           |                     |                      |                     |              | PCB-1254 Peak 3               | 1000 ug/mL    |
|                       |          |           |                     |                      |                     |              | PCB-1254 Peak 4               | 1000 ug/mL    |
|                       |          |           |                     |                      |                     |              | PCB-1254 Peak 5               | 1000 ug/mL    |
| GCAR2154CALL2_00008   | 08/15/15 | 02/05/15  | Hexane, Lot 1448530 | 100 mL               | GCPCBI1221STD_00002 | 0.01 mL      | PCB-1221 Peak 1               | 0.1 ug/mL     |
|                       |          |           |                     |                      |                     |              | PCB-1221 Peak 2               | 0.1 ug/mL     |
|                       |          |           |                     |                      |                     |              | PCB-1221 Peak 3               | 0.1 ug/mL     |
|                       |          |           |                     |                      | GCPCBI1254STD_00003 | 0.01 mL      | PCB-1254 Peak 1               | 0.1 ug/mL     |
|                       |          |           |                     |                      |                     |              | PCB-1254 Peak 2               | 0.1 ug/mL     |
|                       |          |           |                     |                      |                     |              | PCB-1254 Peak 3               | 0.1 ug/mL     |
|                       |          |           |                     |                      |                     |              | PCB-1254 Peak 4               | 0.1 ug/mL     |
|                       |          |           |                     |                      |                     |              | PCB-1254 Peak 5               | 0.1 ug/mL     |
| .GCPCBI1221STD_00002  | 12/30/18 |           | RESTEK, Lot a090667 |                      | (Purchased Reagent) |              | PCB-1221 Peak 1               | 1000 ug/mL    |
|                       |          |           |                     |                      |                     |              | PCB-1221 Peak 2               | 1000 ug/mL    |
|                       |          |           |                     |                      |                     |              | PCB-1221 Peak 3               | 1000 ug/mL    |
| .GCPCBI1254STD_00003  | 02/28/19 |           | RESTEK, Lot A092005 |                      | (Purchased Reagent) |              | PCB-1254 Peak 1               | 1000 ug/mL    |
|                       |          |           |                     |                      |                     |              | PCB-1254 Peak 2               | 1000 ug/mL    |
|                       |          |           |                     |                      |                     |              | PCB-1254 Peak 3               | 1000 ug/mL    |
|                       |          |           |                     |                      |                     |              | PCB-1254 Peak 4               | 1000 ug/mL    |
|                       |          |           |                     |                      |                     |              | PCB-1254 Peak 5               | 1000 ug/mL    |
| GCAR2154CALL3_00008   | 08/15/15 | 02/05/15  | Hexane, Lot 1448530 | 100 mL               | GCPCBI1221STD_00002 | 0.025 mL     | PCB-1221 Peak 1               | 0.25 ug/mL    |
|                       |          |           |                     |                      |                     |              | PCB-1221 Peak 2               | 0.25 ug/mL    |
|                       |          |           |                     |                      |                     |              | PCB-1221 Peak 3               | 0.25 ug/mL    |
|                       |          |           |                     |                      | GCPCBI1254STD_00003 | 0.025 mL     | PCB-1254 Peak 1               | 0.25 ug/mL    |
|                       |          |           |                     |                      |                     |              | PCB-1254 Peak 2               | 0.25 ug/mL    |
|                       |          |           |                     |                      |                     |              | PCB-1254 Peak 3               | 0.25 ug/mL    |
|                       |          |           |                     |                      |                     |              | PCB-1254 Peak 4               | 0.25 ug/mL    |
|                       |          |           |                     |                      |                     |              | PCB-1254 Peak 5               | 0.25 ug/mL    |
| .GCPCBI1221STD_00002  | 12/30/18 |           | RESTEK, Lot a090667 |                      | (Purchased Reagent) |              | PCB-1221 Peak 1               | 1000 ug/mL    |
|                       |          |           |                     |                      |                     |              | PCB-1221 Peak 2               | 1000 ug/mL    |
|                       |          |           |                     |                      |                     |              | PCB-1221 Peak 3               | 1000 ug/mL    |
| .GCPCBI1254STD_00003  | 02/28/19 |           | RESTEK, Lot A092005 |                      | (Purchased Reagent) |              | PCB-1254 Peak 1               | 1000 ug/mL    |

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh

Job No.: 180-43791-1

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

| Reagent ID                 | Exp Date | Prep Date | Dilutant Used       | Reagent Final Volume | Parent Reagent      |                     | Analyte         | Concentration |
|----------------------------|----------|-----------|---------------------|----------------------|---------------------|---------------------|-----------------|---------------|
|                            |          |           |                     |                      | Reagent ID          | Volume Added        |                 |               |
|                            |          |           |                     |                      |                     |                     | PCB-1254 Peak 2 | 1000 ug/mL    |
|                            |          |           |                     |                      |                     |                     | PCB-1254 Peak 3 | 1000 ug/mL    |
|                            |          |           |                     |                      |                     |                     | PCB-1254 Peak 4 | 1000 ug/mL    |
|                            |          |           |                     |                      |                     |                     | PCB-1254 Peak 5 | 1000 ug/mL    |
| <b>GCAR2154CALL4_00008</b> | 08/15/15 | 02/05/15  | Hexane, Lot 1448530 | 100 mL               | GCPCBI1221STD_00002 | 0.05 mL             | PCB-1221 Peak 1 | 0.5 ug/mL     |
|                            |          |           |                     |                      |                     |                     | PCB-1221 Peak 2 | 0.5 ug/mL     |
|                            |          |           |                     |                      |                     |                     | PCB-1221 Peak 3 | 0.5 ug/mL     |
|                            |          |           |                     |                      | GCPCBI1254STD_00003 | 0.05 mL             | PCB-1254 Peak 1 | 0.5 ug/mL     |
|                            |          |           |                     |                      |                     |                     | PCB-1254 Peak 2 | 0.5 ug/mL     |
|                            |          |           |                     |                      |                     |                     | PCB-1254 Peak 3 | 0.5 ug/mL     |
|                            |          |           |                     |                      |                     |                     | PCB-1254 Peak 4 | 0.5 ug/mL     |
|                            |          |           |                     |                      |                     |                     | PCB-1254 Peak 5 | 0.5 ug/mL     |
| .GCPCBI1221STD_00002       | 12/30/18 |           | RESTEK, Lot a090667 |                      |                     | (Purchased Reagent) | PCB-1221 Peak 1 | 1000 ug/mL    |
|                            |          |           |                     |                      |                     |                     | PCB-1221 Peak 2 | 1000 ug/mL    |
|                            |          |           |                     |                      |                     |                     | PCB-1221 Peak 3 | 1000 ug/mL    |
| .GCPCBI1254STD_00003       | 02/28/19 |           | RESTEK, Lot A092005 |                      |                     | (Purchased Reagent) | PCB-1254 Peak 1 | 1000 ug/mL    |
|                            |          |           |                     |                      |                     |                     | PCB-1254 Peak 2 | 1000 ug/mL    |
|                            |          |           |                     |                      |                     |                     | PCB-1254 Peak 3 | 1000 ug/mL    |
|                            |          |           |                     |                      |                     |                     | PCB-1254 Peak 4 | 1000 ug/mL    |
|                            |          |           |                     |                      |                     |                     | PCB-1254 Peak 5 | 1000 ug/mL    |
| <b>GCAR2154CALL5_00008</b> | 08/15/15 | 02/05/15  | Hexane, Lot 1448530 | 250 mL               | GCPCBI1221STD_00002 | 0.25 mL             | PCB-1221 Peak 1 | 1 ug/mL       |
|                            |          |           |                     |                      |                     |                     | PCB-1221 Peak 2 | 1 ug/mL       |
|                            |          |           |                     |                      |                     |                     | PCB-1221 Peak 3 | 1 ug/mL       |
|                            |          |           |                     |                      | GCPCBI1254STD_00003 | 0.25 mL             | PCB-1254 Peak 1 | 1 ug/mL       |
|                            |          |           |                     |                      |                     |                     | PCB-1254 Peak 2 | 1 ug/mL       |
|                            |          |           |                     |                      |                     |                     | PCB-1254 Peak 3 | 1 ug/mL       |
|                            |          |           |                     |                      |                     |                     | PCB-1254 Peak 4 | 1 ug/mL       |
|                            |          |           |                     |                      |                     |                     | PCB-1254 Peak 5 | 1 ug/mL       |
| .GCPCBI1221STD_00002       | 12/30/18 |           | RESTEK, Lot a090667 |                      |                     | (Purchased Reagent) | PCB-1221 Peak 1 | 1000 ug/mL    |
|                            |          |           |                     |                      |                     |                     | PCB-1221 Peak 2 | 1000 ug/mL    |
|                            |          |           |                     |                      |                     |                     | PCB-1221 Peak 3 | 1000 ug/mL    |
| .GCPCBI1254STD_00003       | 02/28/19 |           | RESTEK, Lot A092005 |                      |                     | (Purchased Reagent) | PCB-1254 Peak 1 | 1000 ug/mL    |
|                            |          |           |                     |                      |                     |                     | PCB-1254 Peak 2 | 1000 ug/mL    |
|                            |          |           |                     |                      |                     |                     | PCB-1254 Peak 3 | 1000 ug/mL    |
|                            |          |           |                     |                      |                     |                     | PCB-1254 Peak 4 | 1000 ug/mL    |
|                            |          |           |                     |                      |                     |                     | PCB-1254 Peak 5 | 1000 ug/mL    |
| <b>GCAR2154ICV_00012</b>   | 08/15/15 | 02/09/15  | HEXANE, Lot 1448530 | 100 mL               | GCPCBI1221STD_00002 | 0.05 mL             | PCB-1221        | 0.5 ug/mL     |
|                            |          |           |                     |                      | GCPCBI1254STD_00002 | 0.05 mL             | PCB-1254        | 0.5 ug/mL     |
| .GCPCBI1221STD_00002       | 12/30/18 |           | RESTEK, Lot a090667 |                      |                     | (Purchased Reagent) | PCB-1221        | 1000 ug/mL    |
| .GCPCBI1254STD_00002       | 09/30/19 |           | RESTEK, Lot A095778 |                      |                     | (Purchased Reagent) | PCB-1254        | 1000 ug/mL    |
| <b>GCAR3262CALL4_00001</b> | 08/15/15 | 02/05/15  | Hexane, Lot 1448530 | 250 mL               | GCPCBI1232STD_00003 | 0.125 mL            | PCB-1232 Peak 1 | 0.5 ug/mL     |
|                            |          |           |                     |                      |                     |                     | PCB-1232 Peak 2 | 0.5 ug/mL     |
|                            |          |           |                     |                      |                     |                     | PCB-1232 Peak 3 | 0.5 ug/mL     |
|                            |          |           |                     |                      |                     |                     | PCB-1232 Peak 4 | 0.5 ug/mL     |
|                            |          |           |                     |                      |                     |                     | PCB-1232 Peak 5 | 0.5 ug/mL     |
|                            |          |           |                     |                      | GCPCBI1262STD_00003 | 0.125 mL            | PCB-1262 Peak 1 | 0.5 ug/mL     |

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh

Job No.: 180-43791-1

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

| Reagent ID                 | Exp Date | Prep Date | Dilutant Used        | Reagent Final Volume | Parent Reagent      |              | Analyte         | Concentration |
|----------------------------|----------|-----------|----------------------|----------------------|---------------------|--------------|-----------------|---------------|
|                            |          |           |                      |                      | Reagent ID          | Volume Added |                 |               |
|                            |          |           |                      |                      |                     |              | PCB-1262 Peak 2 | 0.5 ug/mL     |
|                            |          |           |                      |                      |                     |              | PCB-1262 Peak 3 | 0.5 ug/mL     |
|                            |          |           |                      |                      |                     |              | PCB-1262 Peak 4 | 0.5 ug/mL     |
|                            |          |           |                      |                      |                     |              | PCB-1262 Peak 5 | 0.5 ug/mL     |
| .GCPCBI1232STD_00003       | 11/30/18 |           | RESTEK, Lot A090290  |                      | (Purchased Reagent) |              | PCB-1232 Peak 1 | 1000 ug/mL    |
|                            |          |           |                      |                      |                     |              | PCB-1232 Peak 2 | 1000 ug/mL    |
|                            |          |           |                      |                      |                     |              | PCB-1232 Peak 3 | 1000 ug/mL    |
|                            |          |           |                      |                      |                     |              | PCB-1232 Peak 4 | 1000 ug/mL    |
|                            |          |           |                      |                      |                     |              | PCB-1232 Peak 5 | 1000 ug/mL    |
| .GCPCBI1262STD_00003       | 08/30/19 |           | RESTEK, Lot A094073  |                      | (Purchased Reagent) |              | PCB-1262 Peak 1 | 1000 ug/mL    |
|                            |          |           |                      |                      |                     |              | PCB-1262 Peak 2 | 1000 ug/mL    |
|                            |          |           |                      |                      |                     |              | PCB-1262 Peak 3 | 1000 ug/mL    |
|                            |          |           |                      |                      |                     |              | PCB-1262 Peak 4 | 1000 ug/mL    |
|                            |          |           |                      |                      |                     |              | PCB-1262 Peak 5 | 1000 ug/mL    |
| <b>GCAR3262ICV_00001</b>   | 06/30/15 | 02/09/15  | HEAXANE, Lot 1448530 | 100 mL               | GCPCBI1232STD_00002 | 0.05 mL      | PCB-1232        | 0.5 ug/mL     |
| .GCPCBI1232STD_00002       | 09/30/19 |           | RESTEK, Lot A095877  |                      | (Purchased Reagent) |              | PCB-1232        | 1000 ug/mL    |
| <b>GCAR4268CALL1_00001</b> | 08/15/15 | 02/12/15  | Hexane, Lot 1448530  | 100 mL               | GCPCBI1242STD_00003 | 0.001 mL     | PCB-1242 Peak 1 | 0.01 ug/mL    |
|                            |          |           |                      |                      |                     |              | PCB-1242 Peak 2 | 0.01 ug/mL    |
|                            |          |           |                      |                      |                     |              | PCB-1242 Peak 3 | 0.01 ug/mL    |
|                            |          |           |                      |                      |                     |              | PCB-1242 Peak 4 | 0.01 ug/mL    |
|                            |          |           |                      |                      |                     |              | PCB-1242 Peak 5 | 0.01 ug/mL    |
|                            |          |           |                      |                      | GCPCBI1268STD_00003 | 0.001 mL     | PCB-1268 Peak 1 | 0.01 ug/mL    |
|                            |          |           |                      |                      |                     |              | PCB-1268 Peak 2 | 0.01 ug/mL    |
|                            |          |           |                      |                      |                     |              | PCB-1268 Peak 3 | 0.01 ug/mL    |
|                            |          |           |                      |                      |                     |              | PCB-1268 Peak 4 | 0.01 ug/mL    |
| .GCPCBI1242STD_00003       | 11/30/18 |           | RESTEK, Lot A090182  |                      | (Purchased Reagent) |              | PCB-1242 Peak 1 | 1000 ug/mL    |
|                            |          |           |                      |                      |                     |              | PCB-1242 Peak 2 | 1000 ug/mL    |
|                            |          |           |                      |                      |                     |              | PCB-1242 Peak 3 | 1000 ug/mL    |
|                            |          |           |                      |                      |                     |              | PCB-1242 Peak 4 | 1000 ug/mL    |
|                            |          |           |                      |                      |                     |              | PCB-1242 Peak 5 | 1000 ug/mL    |
| .GCPCBI1268STD_00003       | 01/30/19 |           | RESTEK, Lot A091468  |                      | (Purchased Reagent) |              | PCB-1268 Peak 1 | 1000 ug/mL    |
|                            |          |           |                      |                      |                     |              | PCB-1268 Peak 2 | 1000 ug/mL    |
|                            |          |           |                      |                      |                     |              | PCB-1268 Peak 3 | 1000 ug/mL    |
|                            |          |           |                      |                      |                     |              | PCB-1268 Peak 4 | 1000 ug/mL    |
| <b>GCAR4268CALL2_00001</b> | 08/15/15 | 02/12/15  | Hexane, Lot 1448530  | 100 mL               | GCPCBI1242STD_00003 | 0.01 mL      | PCB-1242 Peak 1 | 0.1 ug/mL     |
|                            |          |           |                      |                      |                     |              | PCB-1242 Peak 2 | 0.1 ug/mL     |
|                            |          |           |                      |                      |                     |              | PCB-1242 Peak 3 | 0.1 ug/mL     |
|                            |          |           |                      |                      |                     |              | PCB-1242 Peak 4 | 0.1 ug/mL     |
|                            |          |           |                      |                      |                     |              | PCB-1242 Peak 5 | 0.1 ug/mL     |
|                            |          |           |                      |                      | GCPCBI1268STD_00003 | 0.01 mL      | PCB-1268 Peak 1 | 0.1 ug/mL     |
|                            |          |           |                      |                      |                     |              | PCB-1268 Peak 2 | 0.1 ug/mL     |
|                            |          |           |                      |                      |                     |              | PCB-1268 Peak 3 | 0.1 ug/mL     |
|                            |          |           |                      |                      |                     |              | PCB-1268 Peak 4 | 0.1 ug/mL     |
| .GCPCBI1242STD_00003       | 11/30/18 |           | RESTEK, Lot A090182  |                      | (Purchased Reagent) |              | PCB-1242 Peak 1 | 1000 ug/mL    |
|                            |          |           |                      |                      |                     |              | PCB-1242 Peak 2 | 1000 ug/mL    |
|                            |          |           |                      |                      |                     |              | PCB-1242 Peak 3 | 1000 ug/mL    |
|                            |          |           |                      |                      |                     |              | PCB-1242 Peak 4 | 1000 ug/mL    |

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh

Job No.: 180-43791-1

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

| Reagent ID           | Exp Date | Prep Date | Dilutant Used       | Reagent Final Volume | Parent Reagent      |                     | Analyte         | Concentration |
|----------------------|----------|-----------|---------------------|----------------------|---------------------|---------------------|-----------------|---------------|
|                      |          |           |                     |                      | Reagent ID          | Volume Added        |                 |               |
| .GCPCBI1268STD_00003 | 01/30/19 |           | RESTEK, Lot A091468 |                      |                     | (Purchased Reagent) | PCB-1242 Peak 5 | 1000 ug/mL    |
|                      |          |           |                     |                      |                     |                     | PCB-1268 Peak 1 | 1000 ug/mL    |
|                      |          |           |                     |                      |                     |                     | PCB-1268 Peak 2 | 1000 ug/mL    |
|                      |          |           |                     |                      |                     |                     | PCB-1268 Peak 3 | 1000 ug/mL    |
| GCAR4268CALL3_00001  | 08/15/15 | 02/12/15  | Hexane, Lot 1448530 | 100 mL               | GCPCBI1242STD_00003 | 0.025 mL            | PCB-1242 Peak 1 | 0.25 ug/mL    |
|                      |          |           |                     |                      |                     |                     | PCB-1242 Peak 2 | 0.25 ug/mL    |
|                      |          |           |                     |                      |                     |                     | PCB-1242 Peak 3 | 0.25 ug/mL    |
|                      |          |           |                     |                      |                     |                     | PCB-1242 Peak 4 | 0.25 ug/mL    |
|                      |          |           |                     |                      |                     |                     | PCB-1242 Peak 5 | 0.25 ug/mL    |
|                      |          |           |                     |                      | GCPCBI1268STD_00003 | 0.025 mL            | PCB-1268 Peak 1 | 0.25 ug/mL    |
|                      |          |           |                     |                      |                     |                     | PCB-1268 Peak 2 | 0.25 ug/mL    |
|                      |          |           |                     |                      |                     |                     | PCB-1268 Peak 3 | 0.25 ug/mL    |
|                      |          |           |                     |                      |                     |                     | PCB-1268 Peak 4 | 0.25 ug/mL    |
|                      |          |           |                     |                      |                     |                     | PCB-1268 Peak 5 | 0.25 ug/mL    |
| .GCPCBI1242STD_00003 | 11/30/18 |           | RESTEK, Lot A090182 |                      |                     | (Purchased Reagent) | PCB-1242 Peak 1 | 1000 ug/mL    |
|                      |          |           |                     |                      |                     |                     | PCB-1242 Peak 2 | 1000 ug/mL    |
|                      |          |           |                     |                      |                     |                     | PCB-1242 Peak 3 | 1000 ug/mL    |
|                      |          |           |                     |                      |                     |                     | PCB-1242 Peak 4 | 1000 ug/mL    |
|                      |          |           |                     |                      |                     |                     | PCB-1242 Peak 5 | 1000 ug/mL    |
| .GCPCBI1268STD_00003 | 01/30/19 |           | RESTEK, Lot A091468 |                      |                     | (Purchased Reagent) | PCB-1268 Peak 1 | 1000 ug/mL    |
|                      |          |           |                     |                      |                     |                     | PCB-1268 Peak 2 | 1000 ug/mL    |
|                      |          |           |                     |                      |                     |                     | PCB-1268 Peak 3 | 1000 ug/mL    |
|                      |          |           |                     |                      |                     |                     | PCB-1268 Peak 4 | 1000 ug/mL    |
| GCAR4268CALL4_00001  | 08/15/15 | 02/05/15  | Hexane, Lot 1448530 | 100 mL               | GCPCBI1242STD_00003 | 0.05 mL             | PCB-1242 Peak 1 | 0.5 ug/mL     |
|                      |          |           |                     |                      |                     |                     | PCB-1242 Peak 2 | 0.5 ug/mL     |
|                      |          |           |                     |                      |                     |                     | PCB-1242 Peak 3 | 0.5 ug/mL     |
|                      |          |           |                     |                      |                     |                     | PCB-1242 Peak 4 | 0.5 ug/mL     |
|                      |          |           |                     |                      |                     |                     | PCB-1242 Peak 5 | 0.5 ug/mL     |
|                      |          |           |                     |                      | GCPCBI1268STD_00003 | 0.05 mL             | PCB-1268 Peak 1 | 0.5 ug/mL     |
|                      |          |           |                     |                      |                     |                     | PCB-1268 Peak 2 | 0.5 ug/mL     |
|                      |          |           |                     |                      |                     |                     | PCB-1268 Peak 3 | 0.5 ug/mL     |
|                      |          |           |                     |                      |                     |                     | PCB-1268 Peak 4 | 0.5 ug/mL     |
|                      |          |           |                     |                      |                     |                     | PCB-1268 Peak 5 | 0.5 ug/mL     |
| .GCPCBI1242STD_00003 | 11/30/18 |           | RESTEK, Lot A090182 |                      |                     | (Purchased Reagent) | PCB-1242 Peak 1 | 1000 ug/mL    |
|                      |          |           |                     |                      |                     |                     | PCB-1242 Peak 2 | 1000 ug/mL    |
|                      |          |           |                     |                      |                     |                     | PCB-1242 Peak 3 | 1000 ug/mL    |
|                      |          |           |                     |                      |                     |                     | PCB-1242 Peak 4 | 1000 ug/mL    |
|                      |          |           |                     |                      |                     |                     | PCB-1242 Peak 5 | 1000 ug/mL    |
| .GCPCBI1268STD_00003 | 01/30/19 |           | RESTEK, Lot A091468 |                      |                     | (Purchased Reagent) | PCB-1268 Peak 1 | 1000 ug/mL    |
|                      |          |           |                     |                      |                     |                     | PCB-1268 Peak 2 | 1000 ug/mL    |
|                      |          |           |                     |                      |                     |                     | PCB-1268 Peak 3 | 1000 ug/mL    |
|                      |          |           |                     |                      |                     |                     | PCB-1268 Peak 4 | 1000 ug/mL    |
| GCAR4268CALL5_00001  | 08/15/15 | 02/12/15  | Hexane, Lot 1448530 | 50 mL                | GCPCBI1242STD_00003 | 0.05 mL             | PCB-1242 Peak 1 | 1 ug/mL       |
|                      |          |           |                     |                      |                     |                     | PCB-1242 Peak 2 | 1 ug/mL       |
|                      |          |           |                     |                      |                     |                     | PCB-1242 Peak 3 | 1 ug/mL       |
|                      |          |           |                     |                      |                     |                     | PCB-1242 Peak 4 | 1 ug/mL       |
|                      |          |           |                     |                      |                     |                     | PCB-1242 Peak 5 | 1 ug/mL       |
|                      |          |           |                     |                      | GCPCBI1268STD_00003 | 0.05 mL             | PCB-1268 Peak 1 | 1 ug/mL       |

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh

Job No.: 180-43791-1

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

| Reagent ID                 | Exp Date | Prep Date | Dilutant Used                        | Reagent Final Volume | Parent Reagent      |              | Analyte                              | Concentration |
|----------------------------|----------|-----------|--------------------------------------|----------------------|---------------------|--------------|--------------------------------------|---------------|
|                            |          |           |                                      |                      | Reagent ID          | Volume Added |                                      |               |
|                            |          |           |                                      |                      |                     |              | PCB-1268 Peak 2                      | 1 ug/mL       |
|                            |          |           |                                      |                      |                     |              | PCB-1268 Peak 3                      | 1 ug/mL       |
|                            |          |           |                                      |                      |                     |              | PCB-1268 Peak 4                      | 1 ug/mL       |
| .GCPCBI1242STD_00003       | 11/30/18 |           | RESTEK, Lot A090182                  |                      | (Purchased Reagent) |              | PCB-1242 Peak 1                      | 1000 ug/mL    |
|                            |          |           |                                      |                      |                     |              | PCB-1242 Peak 2                      | 1000 ug/mL    |
|                            |          |           |                                      |                      |                     |              | PCB-1242 Peak 3                      | 1000 ug/mL    |
|                            |          |           |                                      |                      |                     |              | PCB-1242 Peak 4                      | 1000 ug/mL    |
|                            |          |           |                                      |                      |                     |              | PCB-1242 Peak 5                      | 1000 ug/mL    |
| .GCPCBI1268STD_00003       | 01/30/19 |           | RESTEK, Lot A091468                  |                      | (Purchased Reagent) |              | PCB-1268 Peak 1                      | 1000 ug/mL    |
|                            |          |           |                                      |                      |                     |              | PCB-1268 Peak 2                      | 1000 ug/mL    |
|                            |          |           |                                      |                      |                     |              | PCB-1268 Peak 3                      | 1000 ug/mL    |
|                            |          |           |                                      |                      |                     |              | PCB-1268 Peak 4                      | 1000 ug/mL    |
| <b>GCAR4268ICV 00001</b>   | 08/15/15 | 02/09/15  | HEXANE, Lot 1448530                  | 100 mL               | GCPCBI1242STD_00002 | 0.05 mL      | PCB-1242                             | 0.5 ug/mL     |
| .GCPCBI1242STD_00002       | 09/30/19 |           | RESTEK, Lot A095785                  |                      | (Purchased Reagent) |              | PCB-1242                             | 1000 ug/mL    |
| <b>GCMATRIXWORKS_00012</b> | 08/31/15 | 02/17/15  | ACETONE, Lot 1078945/JT BAKER        | 250 mL               | GCMATRIXSPK_00001   | 1 mL         | PCB-1016                             | 40 ug/mL      |
|                            |          |           |                                      |                      |                     |              | PCB-1260                             | 40 ug/mL      |
| .GCMATRIXSPK_00001         | 09/30/17 |           | RESTEK, Lot A076606                  |                      | (Purchased Reagent) |              | PCB-1016                             | 10000 ug/mL   |
|                            |          |           |                                      |                      |                     |              | PCB-1260                             | 10000 ug/mL   |
| <b>ICV 40 PPM_00626</b>    | 05/12/15 | 05/11/15  | DI Water, Lot DIWATER                | 100 mg/L             | WTOC1000SP_00011    | 4 mL         | Dissolved Organic Carbon - Duplicate | 40 mg/L       |
| .WTOC1000SP_00011          | 12/31/15 |           | Ricca Chemical Co, Lot 2412908       |                      | (Purchased Reagent) |              | Dissolved Organic Carbon - Duplicate | 1000 mg/L     |
| <b>LCS 20 PPM_00622</b>    | 05/12/15 | 05/11/15  | DI Water, Lot DIWATER                | 200 mg/L             | WTOC1000P_00022     | 4 mL         | Dissolved Organic Carbon - Duplicate | 20 mg/L       |
| .WTOC1000P_00022           | 02/26/17 |           | Lab Chem, Lot E054-11                |                      | (Purchased Reagent) |              | Dissolved Organic Carbon - Duplicate | 1000 mg/L     |
| <b>MCCV1X_00075</b>        | 06/01/15 | 05/01/15  | 2% Nitric Acid, Lot 1241747          | 500 mL               | MCALSPECAREV_00006  | 10 mL        | Arsenic                              | 0.1 ppm       |
|                            |          |           |                                      |                      |                     |              | Beryllium                            | 0.1 ppm       |
|                            |          |           |                                      |                      |                     |              | Cadmium                              | 0.1 ppm       |
|                            |          |           |                                      |                      |                     |              | Chromium                             | 0.1 ppm       |
|                            |          |           |                                      |                      |                     |              | Copper                               | 0.1 ppm       |
|                            |          |           |                                      |                      |                     |              | Lead                                 | 0.1 ppm       |
|                            |          |           |                                      |                      |                     |              | Nickel                               | 0.1 ppm       |
|                            |          |           |                                      |                      |                     |              | Selenium                             | 0.1 ppm       |
|                            |          |           |                                      |                      |                     |              | Silver                               | 0.1 ppm       |
|                            |          |           |                                      |                      |                     |              | Thallium                             | 0.1 ppm       |
|                            |          |           |                                      |                      |                     |              | Zinc                                 | 0.1 ppm       |
|                            |          |           |                                      |                      | MCALSPECB 00008     | 10 mL        | Antimony                             | 0.1 ppm       |
| .MCALSPECAREV_00006        | 06/01/16 |           | Inorganic Ventures, Lot J2-MEB575123 |                      | (Purchased Reagent) |              | Arsenic                              | 5 ppm         |
|                            |          |           |                                      |                      |                     |              | Beryllium                            | 5 ppm         |
|                            |          |           |                                      |                      |                     |              | Cadmium                              | 5 ppm         |
|                            |          |           |                                      |                      |                     |              | Chromium                             | 5 ppm         |
|                            |          |           |                                      |                      |                     |              | Copper                               | 5 ppm         |
|                            |          |           |                                      |                      |                     |              | Lead                                 | 5 ppm         |
|                            |          |           |                                      |                      |                     |              | Nickel                               | 5 ppm         |

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh

Job No.: 180-43791-1

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

| Reagent ID                 | Exp Date | Prep Date | Dilutant Used                        | Reagent Final Volume | Parent Reagent    |                     | Analyte   | Concentration |
|----------------------------|----------|-----------|--------------------------------------|----------------------|-------------------|---------------------|-----------|---------------|
|                            |          |           |                                      |                      | Reagent ID        | Volume Added        |           |               |
|                            |          |           |                                      |                      |                   |                     | Selenium  | 5 ppm         |
|                            |          |           |                                      |                      |                   |                     | Silver    | 5 ppm         |
|                            |          |           |                                      |                      |                   |                     | Thallium  | 5 ppm         |
|                            |          |           |                                      |                      |                   |                     | Zinc      | 5 ppm         |
| .MCALSPECB_00008           | 06/01/16 |           | Inorganic Ventures, Lot J2-MEB575124 |                      |                   | (Purchased Reagent) | Antimony  | 5 ppm         |
| <b>MCRIX_00066</b>         | 05/29/15 | 04/29/15  | HNO3, Lot 1191081                    | 250 mL               | MMSCRI-1B_00005   | 1 mL                | Arsenic   | 0.001 ppm     |
|                            |          |           |                                      |                      |                   |                     | Beryllium | 0.001 ppm     |
|                            |          |           |                                      |                      |                   |                     | Cadmium   | 0.001 ppm     |
|                            |          |           |                                      |                      |                   |                     | Chromium  | 0.002 ppm     |
|                            |          |           |                                      |                      |                   |                     | Copper    | 0.002 ppm     |
|                            |          |           |                                      |                      |                   |                     | Lead      | 0.001 ppm     |
|                            |          |           |                                      |                      |                   |                     | Nickel    | 0.001 ppm     |
|                            |          |           |                                      |                      |                   |                     | Selenium  | 0.005 ppm     |
|                            |          |           |                                      |                      |                   |                     | Silver    | 0.001 ppm     |
|                            |          |           |                                      |                      |                   |                     | Thallium  | 0.001 ppm     |
|                            |          |           |                                      |                      |                   |                     | Zinc      | 0.005 ppm     |
|                            |          |           |                                      |                      | MMSCRI-2_00007    | 1 mL                | Antimony  | 0.002 ppm     |
| .MMSCRI-1B_00005           | 04/01/16 |           | Inorganic Ventures, Lot J2-MEB572092 |                      |                   | (Purchased Reagent) | Arsenic   | 0.25 ppm      |
|                            |          |           |                                      |                      |                   |                     | Beryllium | 0.25 ppm      |
|                            |          |           |                                      |                      |                   |                     | Cadmium   | 0.25 ppm      |
|                            |          |           |                                      |                      |                   |                     | Chromium  | 0.5 ppm       |
|                            |          |           |                                      |                      |                   |                     | Copper    | 0.5 ppm       |
|                            |          |           |                                      |                      |                   |                     | Lead      | 0.25 ppm      |
|                            |          |           |                                      |                      |                   |                     | Nickel    | 0.25 ppm      |
|                            |          |           |                                      |                      |                   |                     | Selenium  | 1.25 ppm      |
|                            |          |           |                                      |                      |                   |                     | Silver    | 0.25 ppm      |
|                            |          |           |                                      |                      |                   |                     | Thallium  | 0.25 ppm      |
|                            |          |           |                                      |                      |                   |                     | Zinc      | 1.25 ppm      |
| .MMSCRI-2_00007            | 04/01/16 |           | Inorganic Ventures, Lot J2-MEB572093 |                      |                   | (Purchased Reagent) | Antimony  | 0.5 ppm       |
| <b>MHgworkingCal_01049</b> | 05/19/15 | 05/18/15  | 2% Nitric Acid, Lot 0000102057       | 100 mL               | MHgIntcal_00126   | 1 mL                | Mercury   | 100 ppb       |
| .MHgIntcal_00126           | 05/19/15 | 05/18/15  | 2% Nitric Acid, Lot 0000102057       | 100 mL               | MCGHG1-1_00009    | 1 mL                | Mercury   | 10 ppm        |
| ..MCGHG1-1_00009           | 02/01/16 |           | inorganic ventures, Lot H2-HG02128   |                      |                   | (Purchased Reagent) | Mercury   | 1000 ppm      |
| <b>MHgWorkingicv_01017</b> | 05/19/15 | 05/18/15  | 2% Nitric Acid, Lot 0000102057       | 100 mL               | MHgIntICV_00105   | 1 mL                | Mercury   | 100 ppb       |
| .MHgIntICV_00105           | 05/19/15 | 05/18/15  | 2% Nitric Acid, Lot 0000102057       | 100 mL               | MHGICV-1_00005    | 1 mL                | Mercury   | 10 ppm        |
| ..MHGICV-1_00005           | 07/31/15 |           | ULTRA SCIENTIFIC, Lot T00602         |                      |                   | (Purchased Reagent) | Mercury   | 1000 ppm      |
| <b>MICSABX_00071</b>       | 06/19/15 | 05/19/15  | 2% Nitric Acid, Lot J38N82           | 100 mL               | M6020ICS-0A_00005 | 10 mL               | Al        | 100 ppm       |
|                            |          |           |                                      |                      |                   |                     | Ca        | 100 ppm       |
|                            |          |           |                                      |                      |                   |                     | Fe        | 100 ppm       |
|                            |          |           |                                      |                      |                   |                     | K         | 100 ppm       |
|                            |          |           |                                      |                      |                   |                     | Mg        | 100 ppm       |
|                            |          |           |                                      |                      |                   |                     | Mo        | 2 ppm         |
|                            |          |           |                                      |                      |                   |                     | Na        | 100 ppm       |

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh

Job No.: 180-43791-1

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

| Reagent ID         | Exp Date | Prep Date                               | Dilutant Used       | Reagent Final Volume | Parent Reagent    |              | Analyte   | Concentration |
|--------------------|----------|---|---------------------|----------------------|-------------------|--------------|-----------|---------------|
|                    |          |   |                     |                      | Reagent ID        | Volume Added |           |               |
|                    |          |   |                     |                      | M6020ICS-0B_00006 | 1 mL         | Ti        | 2 ppm         |
|                    |          |   |                     |                      |                   |              | Arsenic   | 0.02 ppm      |
|                    |          |   |                     |                      |                   |              | Cadmium   | 0.02 ppm      |
|                    |          |   |                     |                      |                   |              | Chromium  | 0.02 ppm      |
|                    |          |   |                     |                      |                   |              | Co        | 0.02 ppm      |
|                    |          |   |                     |                      |                   |              | Copper    | 0.02 ppm      |
|                    |          |   |                     |                      |                   |              | Mn        | 0.0225 ppm    |
|                    |          |   |                     |                      |                   |              | Nickel    | 0.02 ppm      |
|                    |          |   |                     |                      |                   |              | Silver    | 0.02 ppm      |
|                    |          |   |                     |                      | Zinc              | 0.025 ppm    |           |               |
|                    |          |   |                     |                      | MMSICSAB-1_00008  | 0.2 mL       | Ba        | 0.02 ppm      |
|                    |          |   |                     |                      |                   |              | Beryllium | 0.02 ppm      |
|                    |          |   |                     |                      |                   |              | Lead      | 0.02 ppm      |
|                    |          |   |                     |                      |                   |              | Sr        | 0.025 ppm     |
|                    |          |   |                     |                      |                   |              | Thallium  | 0.02 ppm      |
| MMSICSAB-2_00007   | 0.2 mL   | V                                       | 0.02 ppm            |                      |                   |              |           |               |
|                    |          | Antimony                                | 0.02 ppm            |                      |                   |              |           |               |
|                    |          | B                                       | 0.05 ppm            |                      |                   |              |           |               |
|                    |          | Selenium                                | 0.05 ppm            |                      |                   |              |           |               |
|                    |          | Si                                      | 0.5 ppm             |                      |                   |              |           |               |
| .M6020ICS-0A_00005 | 09/01/15 | Inorganic Ventures, Lot G2-MEB476152MCA | (Purchased Reagent) |                      | Sn                | 0.1 ppm      |           |               |
|                    |          |   | Al                  | 1000 ppm             |                   |              |           |               |
|                    |          |   | Ca                  | 1000 ppm             |                   |              |           |               |
|                    |          |   | Fe                  | 1000 ppm             |                   |              |           |               |
|                    |          |   | K                   | 1000 ppm             |                   |              |           |               |
|                    |          |   | Mg                  | 1000 ppm             |                   |              |           |               |
|                    |          |   | Mo                  | 20 ppm               |                   |              |           |               |
|                    |          |   | Na                  | 1000 ppm             |                   |              |           |               |
| Ti                 | 20 ppm   |   |                     |                      |                   |              |           |               |
| .M6020ICS-0B_00006 | 09/01/15 | Inorganic Ventures, Lot G2-MEB463151    | (Purchased Reagent) |                      | Arsenic           | 2 ppm        |           |               |
|                    |          |   | Cadmium             | 2 ppm                |                   |              |           |               |
|                    |          |   | Chromium            | 2 ppm                |                   |              |           |               |
|                    |          |   | Co                  | 2 ppm                |                   |              |           |               |
|                    |          |   | Copper              | 2 ppm                |                   |              |           |               |
|                    |          |   | Mn                  | 2.25 ppm             |                   |              |           |               |
|                    |          |   | Nickel              | 2 ppm                |                   |              |           |               |
|                    |          |   | Silver              | 2 ppm                |                   |              |           |               |
| Zinc               | 2.5 ppm  |   |                     |                      |                   |              |           |               |
| .MMSICSAB-1_00008  | 06/01/16 | Inorganic Ventures, Lot J2-MEB575125    | (Purchased Reagent) |                      | Ba                | 10 ppm       |           |               |
|                    |          |   | Beryllium           | 10 ppm               |                   |              |           |               |
|                    |          |   | Lead                | 10 ppm               |                   |              |           |               |
|                    |          |   | Sr                  | 12.5 ppm             |                   |              |           |               |
|                    |          |   | Thallium            | 10 ppm               |                   |              |           |               |
| .MMSICSAB-2_00007  | 06/01/16 | Inorganic Ventures, Lot J2-MEB575126    | (Purchased Reagent) |                      | V                 | 10 ppm       |           |               |
|                    |          |   | Antimony            | 10 ppm               |                   |              |           |               |
|                    |          |   | B                   | 25 ppm               |                   |              |           |               |
|                    |          |   | Selenium            | 25 ppm               |                   |              |           |               |
|                    |          |   |                     |                      |                   | Si           | 250 ppm   |               |

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-43791-1

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

| Reagent ID               | Exp Date | Prep Date | Dilutant Used                           | Reagent Final Volume | Parent Reagent      |              | Analyte   | Concentration |
|--------------------------|----------|-----------|---|----------------------|---------------------|--------------|-----------|---------------|
|                          |          |           |   |                      | Reagent ID          | Volume Added |           |               |
|                          |          |           |   |                      |                     |              | Sn        | 50 ppm        |
| <b>MICSAX_00067</b>      | 06/19/15 | 05/19/15  | DI Water, Lot J38N82                    | 100 mL               | M6020ICS-0A_00005   | 10 mL        | Al        | 100 ppm       |
|                          |          |           |   |                      |                     |              | Ca        | 100 ppm       |
|                          |          |           |   |                      |                     |              | Fe        | 100 ppm       |
|                          |          |           |   |                      |                     |              | K         | 100 ppm       |
|                          |          |           |   |                      |                     |              | Mg        | 100 ppm       |
|                          |          |           |   |                      |                     |              | Mo        | 2 ppm         |
|                          |          |           |   |                      |                     |              | Na        | 100 ppm       |
|                          |          |           |   |                      |                     |              | Ti        | 2 ppm         |
| .M6020ICS-0A_00005       | 09/01/15 |           | Inorganic Ventures, Lot G2-MEB476152MCA |                      | (Purchased Reagent) |              | Al        | 1000 ppm      |
|                          |          |           |   |                      |                     |              | Ca        | 1000 ppm      |
|                          |          |           |   |                      |                     |              | Fe        | 1000 ppm      |
|                          |          |           |   |                      |                     |              | K         | 1000 ppm      |
|                          |          |           |   |                      |                     |              | Mg        | 1000 ppm      |
|                          |          |           |   |                      |                     |              | Mo        | 20 ppm        |
|                          |          |           |   |                      |                     |              | Na        | 1000 ppm      |
|                          |          |           |   |                      |                     |              | Ti        | 20 ppm        |
| <b>MICVX_00032</b>       | 06/19/15 | 05/19/15  | 2% Nitric Acid, Lot 25106               | 250 mg/L             | MICPMSICV_00018     | 10 mg/L      | Antimony  | 0.08 mg/L     |
|                          |          |           |   |                      |                     |              | Arsenic   | 0.08 mg/L     |
|                          |          |           |   |                      |                     |              | Beryllium | 0.08 mg/L     |
|                          |          |           |   |                      |                     |              | Cadmium   | 0.08 mg/L     |
|                          |          |           |   |                      |                     |              | Chromium  | 0.08 mg/L     |
|                          |          |           |   |                      |                     |              | Copper    | 0.08 mg/L     |
|                          |          |           |   |                      |                     |              | Lead      | 0.08 mg/L     |
|                          |          |           |   |                      |                     |              | Nickel    | 0.08 mg/L     |
|                          |          |           |   |                      |                     |              | Selenium  | 0.08 mg/L     |
|                          |          |           |   |                      |                     |              | Silver    | 0.08 mg/L     |
|                          |          |           |   |                      |                     |              | Thallium  | 0.08 mg/L     |
|                          |          |           |   |                      |                     |              | Zinc      | 0.08 mg/L     |
| .MICPMSICV_00018         | 11/30/15 |           | SPEX CertiPrep, Lot 7-230WL             |                      | (Purchased Reagent) |              | Antimony  | 2 ppm         |
|                          |          |           |   |                      |                     |              | Arsenic   | 2 ppm         |
|                          |          |           |   |                      |                     |              | Beryllium | 2 ppm         |
|                          |          |           |   |                      |                     |              | Cadmium   | 2 ppm         |
|                          |          |           |   |                      |                     |              | Chromium  | 2 ppm         |
|                          |          |           |   |                      |                     |              | Copper    | 2 ppm         |
|                          |          |           |   |                      |                     |              | Lead      | 2 ppm         |
|                          |          |           |   |                      |                     |              | Nickel    | 2 ppm         |
|                          |          |           |   |                      |                     |              | Selenium  | 2 ppm         |
|                          |          |           |   |                      |                     |              | Silver    | 2 ppm         |
|                          |          |           |   |                      |                     |              | Thallium  | 2 ppm         |
|                          |          |           |   |                      |                     |              | Zinc      | 2 ppm         |
| <b>MSTD3X_00045</b>      | 06/01/15 | 05/01/15  | 2% Nitric Acid, Lot 1241747             | 250 mL               | MCALSPECB_00008     | 10 mg/L      | Antimony  | 0.2 ppm       |
| .MCALSPECB_00008         | 06/01/16 |           | Inorganic Ventures, Lot J2-MEB575124    |                      | (Purchased Reagent) |              | Antimony  | 5 ppm         |
| <b>MTAPITTCPMS_00020</b> | 07/01/15 |           | INORGANIC VENTURES, Lot H2-MEB532047    |                      | (Purchased Reagent) |              | Al        | 200 ug/mL     |
|                          |          |           |   |                      |                     |              | Arsenic   | 4 ug/mL       |



REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh

Job No.: 180-43791-1

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

| Reagent ID                 | Exp Date | Prep Date | Dilutant Used                        | Reagent Final Volume | Parent Reagent      |              | Analyte                       | Concentration |
|----------------------------|----------|-----------|--------------------------------------|----------------------|---------------------|--------------|-------------------------------|---------------|
|                            |          |           |                                      |                      | Reagent ID          | Volume Added |                               |               |
|                            |          |           |                                      |                      |                     |              | B                             | 100 ug/mL     |
|                            |          |           |                                      |                      |                     |              | Ba                            | 200 ug/mL     |
|                            |          |           |                                      |                      |                     |              | Beryllium                     | 5 ug/mL       |
|                            |          |           |                                      |                      |                     |              | Cadmium                       | 5 ug/mL       |
|                            |          |           |                                      |                      |                     |              | Chromium                      | 20 ug/mL      |
|                            |          |           |                                      |                      |                     |              | Co                            | 50 ug/mL      |
|                            |          |           |                                      |                      |                     |              | Copper                        | 25 ug/mL      |
|                            |          |           |                                      |                      |                     |              | Fe                            | 100 ug/mL     |
|                            |          |           |                                      |                      |                     |              | Lead                          | 2 ug/mL       |
|                            |          |           |                                      |                      |                     |              | Mn                            | 50 ug/mL      |
|                            |          |           |                                      |                      |                     |              | Nickel                        | 50 ug/mL      |
|                            |          |           |                                      |                      |                     |              | Selenium                      | 1 ug/mL       |
|                            |          |           |                                      |                      |                     |              | Silver                        | 5 ug/mL       |
|                            |          |           |                                      |                      |                     |              | Sr                            | 100 ug/mL     |
|                            |          |           |                                      |                      |                     |              | Thallium                      | 5 ug/mL       |
|                            |          |           |                                      |                      |                     |              | V                             | 50 ug/mL      |
|                            |          |           |                                      |                      |                     |              | Zinc                          | 50 ug/mL      |
| <b>MTAPITMSA_00023</b>     | 12/01/15 |           | INORGANIC VENTURES, Lot H2-MEB532044 |                      | (Purchased Reagent) |              | Ca                            | 5000 ug/mL    |
|                            |          |           |                                      |                      |                     |              | K                             | 5000 ug/mL    |
|                            |          |           |                                      |                      |                     |              | Mg                            | 5000 ug/mL    |
|                            |          |           |                                      |                      |                     |              | Na                            | 5000 ug/mL    |
| <b>MTAPITMSC_00029</b>     | 12/01/15 |           | Inorganic Ventures, Lot H2-MEB532046 |                      | (Purchased Reagent) |              | Antimony                      | 50 ug/mL      |
|                            |          |           |                                      |                      |                     |              | Mo                            | 100 ug/mL     |
|                            |          |           |                                      |                      |                     |              | Si                            | 1000 ug/mL    |
|                            |          |           |                                      |                      |                     |              | SiO2                          | 2140 ug/mL    |
|                            |          |           |                                      |                      |                     |              | Sn                            | 200 ug/mL     |
|                            |          |           |                                      |                      |                     |              | Ti                            | 100 ug/mL     |
| <b>OP/PESTPCBRIS_00002</b> | 12/31/16 |           | RESTEK, Lot A0100240                 |                      | (Purchased Reagent) |              | DCB Decachlorobiphenyl        | 0.2 ug/mL     |
|                            |          |           |                                      |                      |                     |              | DCB Decachlorobiphenyl (Surr) | 0.2 ug/mL     |
|                            |          |           |                                      |                      |                     |              | Tetrachloro-m-xylene (Surr)   | 0.2 ug/mL     |
| <b>OPLVISPKMIX1i_00038</b> | 10/16/15 | 04/16/15  | Methanol, Lot 0000082533             | 100 mL               | SVLVstd1_00030      | 20 mL        | 1,1'-Biphenyl                 | 200 ug/mL     |
|                            |          |           |                                      |                      |                     |              | 1,2,4,5-Tetrachlorobenzene    | 200 ug/mL     |
|                            |          |           |                                      |                      |                     |              | 1,2,4-Trichlorobenzene        | 200 ug/mL     |
|                            |          |           |                                      |                      |                     |              | 1,2-Dichlorobenzene           | 200 ug/mL     |
|                            |          |           |                                      |                      |                     |              | 1,2-Diphenylhydrazine         | 200 ug/mL     |
|                            |          |           |                                      |                      |                     |              | 1,3-Dichlorobenzene           | 200 ug/mL     |
|                            |          |           |                                      |                      |                     |              | 1,3-Dinitrobenzene            | 200 ug/mL     |
|                            |          |           |                                      |                      |                     |              | 1,4-Dichlorobenzene           | 200 ug/mL     |
|                            |          |           |                                      |                      |                     |              | 1,4-Dioxane                   | 200 ug/mL     |
|                            |          |           |                                      |                      |                     |              | 1-Methylnaphthalene           | 200 ug/mL     |
|                            |          |           |                                      |                      |                     |              | 2,2'-oxybis[1-chloropropane]  | 200 ug/mL     |
|                            |          |           |                                      |                      |                     |              | 2,3,4,6-Tetrachlorophenol     | 200 ug/mL     |
|                            |          |           |                                      |                      |                     |              | 2,4,5-Trichlorophenol         | 200 ug/mL     |
|                            |          |           |                                      |                      |                     |              | 2,4,6-Trichlorophenol         | 200 ug/mL     |
|                            |          |           |                                      |                      |                     |              | 2,4-Dichlorophenol            | 200 ug/mL     |
|                            |          |           |                                      |                      |                     |              | 2,4-Dimethylphenol            | 200 ug/mL     |

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh

Job No.: 180-43791-1

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

| Reagent ID | Exp Date | Prep Date | Dilutant Used | Reagent Final Volume | Parent Reagent |              | Analyte                      | Concentration |
|------------|----------|-----------|---------------|----------------------|----------------|--------------|------------------------------|---------------|
|            |          |           |               |                      | Reagent ID     | Volume Added |                              |               |
|            |          |           |               |                      |                |              | 2,4-Dinitrophenol            | 400 ug/mL     |
|            |          |           |               |                      |                |              | 2,4-Dinitrotoluene           | 200 ug/mL     |
|            |          |           |               |                      |                |              | 2,6-Dichlorophenol           | 200 ug/mL     |
|            |          |           |               |                      |                |              | 2,6-Dinitrotoluene           | 200 ug/mL     |
|            |          |           |               |                      |                |              | 2-Chloronaphthalene          | 200 ug/mL     |
|            |          |           |               |                      |                |              | 2-Chlorophenol               | 200 ug/mL     |
|            |          |           |               |                      |                |              | 2-Methylnaphthalene          | 200 ug/mL     |
|            |          |           |               |                      |                |              | 2-Methylphenol               | 200 ug/mL     |
|            |          |           |               |                      |                |              | 2-Nitroaniline               | 200 ug/mL     |
|            |          |           |               |                      |                |              | 2-Nitrophenol                | 200 ug/mL     |
|            |          |           |               |                      |                |              | 3 & 4 Methylphenol           | 200 ug/mL     |
|            |          |           |               |                      |                |              | 3-Nitroaniline               | 200 ug/mL     |
|            |          |           |               |                      |                |              | 4,6-Dinitro-2-methylphenol   | 400 ug/mL     |
|            |          |           |               |                      |                |              | 4-Bromophenyl phenyl ether   | 200 ug/mL     |
|            |          |           |               |                      |                |              | 4-Chloro-3-methylphenol      | 200 ug/mL     |
|            |          |           |               |                      |                |              | 4-Chloroaniline              | 200 ug/mL     |
|            |          |           |               |                      |                |              | 4-Chlorophenyl phenyl ether  | 200 ug/mL     |
|            |          |           |               |                      |                |              | 4-Methylphenol               | 200 ug/mL     |
|            |          |           |               |                      |                |              | 4-Nitroaniline               | 200 ug/mL     |
|            |          |           |               |                      |                |              | 4-Nitrophenol                | 400 ug/mL     |
|            |          |           |               |                      |                |              | Acenaphthene                 | 200 ug/mL     |
|            |          |           |               |                      |                |              | Acenaphthylene               | 200 ug/mL     |
|            |          |           |               |                      |                |              | Acetophenone                 | 200 ug/mL     |
|            |          |           |               |                      |                |              | Aniline                      | 200 ug/mL     |
|            |          |           |               |                      |                |              | Anthracene                   | 200 ug/mL     |
|            |          |           |               |                      |                |              | Azobenzene                   | 200 ug/mL     |
|            |          |           |               |                      |                |              | Benzo[a]anthracene           | 200 ug/mL     |
|            |          |           |               |                      |                |              | Benzo[a]pyrene               | 200 ug/mL     |
|            |          |           |               |                      |                |              | Benzo[b]fluoranthene         | 200 ug/mL     |
|            |          |           |               |                      |                |              | Benzo[g,h,i]perylene         | 200 ug/mL     |
|            |          |           |               |                      |                |              | Benzo[k]fluoranthene         | 200 ug/mL     |
|            |          |           |               |                      |                |              | Benzyl alcohol               | 200 ug/mL     |
|            |          |           |               |                      |                |              | Bis (2-chloroethoxy)methane  | 200 ug/mL     |
|            |          |           |               |                      |                |              | Bis (2-chloroethyl) ether    | 200 ug/mL     |
|            |          |           |               |                      |                |              | Bis (2-ethylhexyl) phthalate | 200 ug/mL     |
|            |          |           |               |                      |                |              | Butyl benzyl phthalate       | 200 ug/mL     |
|            |          |           |               |                      |                |              | Carbazole                    | 200 ug/mL     |
|            |          |           |               |                      |                |              | Chrysene                     | 200 ug/mL     |
|            |          |           |               |                      |                |              | Di-n-butyl phthalate         | 200 ug/mL     |
|            |          |           |               |                      |                |              | Di-n-octyl phthalate         | 200 ug/mL     |
|            |          |           |               |                      |                |              | Dibenz (a,h) anthracene      | 200 ug/mL     |
|            |          |           |               |                      |                |              | Dibenzofuran                 | 200 ug/mL     |
|            |          |           |               |                      |                |              | Diethyl phthalate            | 200 ug/mL     |
|            |          |           |               |                      |                |              | Dimethyl phthalate           | 200 ug/mL     |
|            |          |           |               |                      |                |              | Fluoranthene                 | 200 ug/mL     |
|            |          |           |               |                      |                |              | Fluorene                     | 200 ug/mL     |
|            |          |           |               |                      |                |              | Hexachlorobenzene            | 200 ug/mL     |
|            |          |           |               |                      |                |              | Hexachlorobutadiene          | 200 ug/mL     |

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh

Job No.: 180-43791-1

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

| Reagent ID      | Exp Date  | Prep Date | Dilutant Used        | Reagent Final Volume | Parent Reagent |                     | Analyte                   | Concentration                |            |                        |           |
|-----------------|-----------|-----------|----------------------|----------------------|----------------|---------------------|---------------------------|------------------------------|------------|------------------------|-----------|
|                 |           |           |                      |                      | Reagent ID     | Volume Added        |                           |                              |            |                        |           |
|                 |           |           |                      |                      |                |                     | Hexachlorocyclopentadiene | 200 ug/mL                    |            |                        |           |
|                 |           |           |                      |                      |                |                     | Hexachloroethane          | 200 ug/mL                    |            |                        |           |
|                 |           |           |                      |                      |                |                     | Hexadecane                | 200 ug/mL                    |            |                        |           |
|                 |           |           |                      |                      |                |                     | Indeno[1,2,3-cd]pyrene    | 200 ug/mL                    |            |                        |           |
|                 |           |           |                      |                      |                |                     | Isophorone                | 200 ug/mL                    |            |                        |           |
|                 |           |           |                      |                      |                |                     | Methyl Phenols, Total     | 400 ug/mL                    |            |                        |           |
|                 |           |           |                      |                      |                |                     | n-Decane                  | 200 ug/mL                    |            |                        |           |
|                 |           |           |                      |                      |                |                     | N-Nitrosodi-n-propylamine | 200 ug/mL                    |            |                        |           |
|                 |           |           |                      |                      |                |                     | N-Nitrosodimethylamine    | 200 ug/mL                    |            |                        |           |
|                 |           |           |                      |                      |                |                     | N-Nitrosodiphenylamine    | 400 ug/mL                    |            |                        |           |
|                 |           |           |                      |                      |                |                     | n-Octadecane              | 200 ug/mL                    |            |                        |           |
|                 |           |           |                      |                      |                |                     | Naphthalene               | 200 ug/mL                    |            |                        |           |
|                 |           |           |                      |                      |                |                     | Nitrobenzene              | 200 ug/mL                    |            |                        |           |
|                 |           |           |                      |                      |                |                     | Pentachlorophenol         | 400 ug/mL                    |            |                        |           |
|                 |           |           |                      |                      |                |                     | Phenanthrene              | 200 ug/mL                    |            |                        |           |
|                 |           |           |                      |                      |                |                     | Phenol                    | 200 ug/mL                    |            |                        |           |
|                 |           |           |                      |                      |                |                     | Pyrene                    | 200 ug/mL                    |            |                        |           |
|                 |           |           |                      |                      |                |                     | Pyridine                  | 200 ug/mL                    |            |                        |           |
|                 |           |           |                      |                      |                |                     | Total Cresols             | 400 ug/mL                    |            |                        |           |
|                 |           |           |                      |                      |                |                     |                           |                              |            |                        |           |
| Indene          | 200 ug/mL |           |                      |                      |                |                     |                           |                              |            |                        |           |
|                 |           |           |                      |                      |                |                     |                           | SVLVstd11_00001              | 10 mL      | Atrazine               | 200 ug/mL |
|                 |           |           |                      |                      |                |                     |                           | Benzaldehyde                 | 200 ug/mL  |                        |           |
|                 |           |           |                      |                      |                |                     |                           | Caprolactam                  | 200 ug/mL  |                        |           |
|                 |           |           |                      |                      |                |                     |                           | SVLVstd9_00001               | 10 mL      | 3,3'-Dichlorobenzidine | 200 ug/mL |
|                 |           |           |                      |                      |                |                     |                           | Benzidine                    | 200 ug/mL  |                        |           |
| .SVLVstd1_00030 | 05/31/16  |           | Restek, Lot A0107399 |                      |                | (Purchased Reagent) |                           | 1,1'-Biphenyl                | 1000 ug/mL |                        |           |
|                 |           |           |                      |                      |                |                     |                           | 1,2,4,5-Tetrachlorobenzene   | 1000 ug/mL |                        |           |
|                 |           |           |                      |                      |                |                     |                           | 1,2,4-Trichlorobenzene       | 1000 ug/mL |                        |           |
|                 |           |           |                      |                      |                |                     |                           | 1,2-Dichlorobenzene          | 1000 ug/mL |                        |           |
|                 |           |           |                      |                      |                |                     |                           | 1,2-Diphenylhydrazine        | 1000 ug/mL |                        |           |
|                 |           |           |                      |                      |                |                     |                           | 1,3-Dichlorobenzene          | 1000 ug/mL |                        |           |
|                 |           |           |                      |                      |                |                     |                           | 1,3-Dinitrobenzene           | 1000 ug/mL |                        |           |
|                 |           |           |                      |                      |                |                     |                           | 1,4-Dichlorobenzene          | 1000 ug/mL |                        |           |
|                 |           |           |                      |                      |                |                     |                           | 1,4-Dioxane                  | 1000 ug/mL |                        |           |
|                 |           |           |                      |                      |                |                     |                           | 1-Methylnaphthalene          | 1000 ug/mL |                        |           |
|                 |           |           |                      |                      |                |                     |                           | 2,2'-oxybis[1-chloropropane] | 1000 ug/mL |                        |           |
|                 |           |           |                      |                      |                |                     |                           | 2,3,4,6-Tetrachlorophenol    | 1000 ug/mL |                        |           |
|                 |           |           |                      |                      |                |                     |                           | 2,4,5-Trichlorophenol        | 1000 ug/mL |                        |           |
|                 |           |           |                      |                      |                |                     |                           | 2,4,6-Trichlorophenol        | 1000 ug/mL |                        |           |
|                 |           |           |                      |                      |                |                     |                           | 2,4-Dichlorophenol           | 1000 ug/mL |                        |           |
|                 |           |           |                      |                      |                |                     |                           | 2,4-Dimethylphenol           | 1000 ug/mL |                        |           |
|                 |           |           |                      |                      |                |                     |                           | 2,4-Dinitrophenol            | 2000 ug/mL |                        |           |
|                 |           |           |                      |                      |                |                     |                           | 2,4-Dinitrotoluene           | 1000 ug/mL |                        |           |
|                 |           |           |                      |                      |                |                     |                           | 2,6-Dichlorophenol           | 1000 ug/mL |                        |           |
|                 |           |           |                      |                      |                |                     |                           | 2,6-Dinitrotoluene           | 1000 ug/mL |                        |           |
|                 |           |           |                      |                      |                |                     |                           | 2-Chloronaphthalene          | 1000 ug/mL |                        |           |
|                 |           |           |                      |                      |                |                     |                           | 2-Chlorophenol               | 1000 ug/mL |                        |           |

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh

Job No.: 180-43791-1

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

| Reagent ID | Exp Date | Prep Date | Dilutant Used | Reagent Final Volume | Parent Reagent |              | Analyte                     | Concentration |
|------------|----------|-----------|---------------|----------------------|----------------|--------------|-----------------------------|---------------|
|            |          |           |               |                      | Reagent ID     | Volume Added |                             |               |
|            |          |           |               |                      |                |              | 2-Methylnaphthalene         | 1000 ug/mL    |
|            |          |           |               |                      |                |              | 2-Methylphenol              | 1000 ug/mL    |
|            |          |           |               |                      |                |              | 2-Nitroaniline              | 1000 ug/mL    |
|            |          |           |               |                      |                |              | 2-Nitrophenol               | 1000 ug/mL    |
|            |          |           |               |                      |                |              | 3 & 4 Methylphenol          | 1000 ug/mL    |
|            |          |           |               |                      |                |              | 3-Nitroaniline              | 1000 ug/mL    |
|            |          |           |               |                      |                |              | 4,6-Dinitro-2-methylphenol  | 2000 ug/mL    |
|            |          |           |               |                      |                |              | 4-Bromophenyl phenyl ether  | 1000 ug/mL    |
|            |          |           |               |                      |                |              | 4-Chloro-3-methylphenol     | 1000 ug/mL    |
|            |          |           |               |                      |                |              | 4-Chloroaniline             | 1000 ug/mL    |
|            |          |           |               |                      |                |              | 4-Chlorophenyl phenyl ether | 1000 ug/mL    |
|            |          |           |               |                      |                |              | 4-Methylphenol              | 1000 ug/mL    |
|            |          |           |               |                      |                |              | 4-Nitroaniline              | 1000 ug/mL    |
|            |          |           |               |                      |                |              | 4-Nitrophenol               | 2000 ug/mL    |
|            |          |           |               |                      |                |              | Acenaphthene                | 1000 ug/mL    |
|            |          |           |               |                      |                |              | Acenaphthylene              | 1000 ug/mL    |
|            |          |           |               |                      |                |              | Acetophenone                | 1000 ug/mL    |
|            |          |           |               |                      |                |              | Aniline                     | 1000 ug/mL    |
|            |          |           |               |                      |                |              | Anthracene                  | 1000 ug/mL    |
|            |          |           |               |                      |                |              | Azobenzene                  | 1000 ug/mL    |
|            |          |           |               |                      |                |              | Benzo[a]anthracene          | 1000 ug/mL    |
|            |          |           |               |                      |                |              | Benzo[a]pyrene              | 1000 ug/mL    |
|            |          |           |               |                      |                |              | Benzo[b]fluoranthene        | 1000 ug/mL    |
|            |          |           |               |                      |                |              | Benzo[g,h,i]perylene        | 1000 ug/mL    |
|            |          |           |               |                      |                |              | Benzo[k]fluoranthene        | 1000 ug/mL    |
|            |          |           |               |                      |                |              | Benzyl alcohol              | 1000 ug/mL    |
|            |          |           |               |                      |                |              | Bis(2-chloroethoxy)methane  | 1000 ug/mL    |
|            |          |           |               |                      |                |              | Bis(2-chloroethyl)ether     | 1000 ug/mL    |
|            |          |           |               |                      |                |              | Bis(2-ethylhexyl) phthalate | 1000 ug/mL    |
|            |          |           |               |                      |                |              | Butyl benzyl phthalate      | 1000 ug/mL    |
|            |          |           |               |                      |                |              | Carbazole                   | 1000 ug/mL    |
|            |          |           |               |                      |                |              | Chrysene                    | 1000 ug/mL    |
|            |          |           |               |                      |                |              | Di-n-butyl phthalate        | 1000 ug/mL    |
|            |          |           |               |                      |                |              | Di-n-octyl phthalate        | 1000 ug/mL    |
|            |          |           |               |                      |                |              | Dibenz(a,h)anthracene       | 1000 ug/mL    |
|            |          |           |               |                      |                |              | Dibenzofuran                | 1000 ug/mL    |
|            |          |           |               |                      |                |              | Diethyl phthalate           | 1000 ug/mL    |
|            |          |           |               |                      |                |              | Dimethyl phthalate          | 1000 ug/mL    |
|            |          |           |               |                      |                |              | Fluoranthene                | 1000 ug/mL    |
|            |          |           |               |                      |                |              | Fluorene                    | 1000 ug/mL    |
|            |          |           |               |                      |                |              | Hexachlorobenzene           | 1000 ug/mL    |
|            |          |           |               |                      |                |              | Hexachlorobutadiene         | 1000 ug/mL    |
|            |          |           |               |                      |                |              | Hexachlorocyclopentadiene   | 1000 ug/mL    |
|            |          |           |               |                      |                |              | Hexachloroethane            | 1000 ug/mL    |
|            |          |           |               |                      |                |              | Hexadecane                  | 1000 ug/mL    |
|            |          |           |               |                      |                |              | Indeno[1,2,3-cd]pyrene      | 1000 ug/mL    |
|            |          |           |               |                      |                |              | Isophorone                  | 1000 ug/mL    |
|            |          |           |               |                      |                |              | Methyl Phenols, Total       | 2000 ug/mL    |

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh

Job No.: 180-43791-1

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

| Reagent ID                | Exp Date | Prep Date | Dilutant Used              | Reagent Final Volume | Parent Reagent      |              | Analyte                        | Concentration |
|---------------------------|----------|-----------|----------------------------|----------------------|---------------------|--------------|--------------------------------|---------------|
|                           |          |           |                            |                      | Reagent ID          | Volume Added |                                |               |
|                           |          |           |                            |                      |                     |              | n-Decane                       | 1000 ug/mL    |
|                           |          |           |                            |                      |                     |              | N-Nitrosodi-n-propylamine      | 1000 ug/mL    |
|                           |          |           |                            |                      |                     |              | N-Nitrosodimethylamine         | 1000 ug/mL    |
|                           |          |           |                            |                      |                     |              | N-Nitrosodiphenylamine         | 2000 ug/mL    |
|                           |          |           |                            |                      |                     |              | n-Octadecane                   | 1000 ug/mL    |
|                           |          |           |                            |                      |                     |              | Naphthalene                    | 1000 ug/mL    |
|                           |          |           |                            |                      |                     |              | Nitrobenzene                   | 1000 ug/mL    |
|                           |          |           |                            |                      |                     |              | Pentachlorophenol              | 2000 ug/mL    |
|                           |          |           |                            |                      |                     |              | Phenanthrene                   | 1000 ug/mL    |
|                           |          |           |                            |                      |                     |              | Phenol                         | 1000 ug/mL    |
|                           |          |           |                            |                      |                     |              | Pyrene                         | 1000 ug/mL    |
|                           |          |           |                            |                      |                     |              | Pyridine                       | 1000 ug/mL    |
|                           |          |           |                            |                      |                     |              | Total Cresols                  | 2000 ug/mL    |
| .SVLVstd10_00001          | 06/30/16 |           | Restek, Lot A0107943       |                      | (Purchased Reagent) |              | Benzoic acid                   | 2000 ug/mL    |
|                           |          |           |                            |                      |                     |              | Indene                         | 2000 ug/mL    |
| .SVLVstd11_00001          | 06/30/16 |           | Restek, Lot A0108035       |                      | (Purchased Reagent) |              | Atrazine                       | 2000 ug/mL    |
|                           |          |           |                            |                      |                     |              | Benzaldehyde                   | 2000 ug/mL    |
|                           |          |           |                            |                      |                     |              | Caprolactam                    | 2000 ug/mL    |
| .SVLVstd9_00001           | 07/31/16 |           | Restek, Lot A0108709       |                      | (Purchased Reagent) |              | 3,3'-Dichlorobenzidine         | 2000 ug/mL    |
|                           |          |           |                            |                      |                     |              | Benzidine                      | 2000 ug/mL    |
| <b>OPQL8270SURI_00030</b> | 11/04/15 | 05/04/15  | Methanol, Lot b#0000049909 | 500 mL               | SVLVSURRSPK_00014   | 20 mL        | 2,4,6-Tribromophenol (Surr)    | 200 ug/mL     |
|                           |          |           |                            |                      |                     |              | 2-Fluorobiphenyl               | 200 ug/mL     |
|                           |          |           |                            |                      |                     |              | 2-Fluorophenol (Surr)          | 200 ug/mL     |
|                           |          |           |                            |                      |                     |              | Nitrobenzene-d5 (Surr)         | 200 ug/mL     |
|                           |          |           |                            |                      |                     |              | Phenol-d5 (Surr)               | 200 ug/mL     |
|                           |          |           |                            |                      |                     |              | Terphenyl-d14 (Surr)           | 200 ug/mL     |
| .SVLVSURRSPK_00014        | 05/31/19 |           | Restek, Lot A0103615       |                      | (Purchased Reagent) |              | 2,4,6-Tribromophenol (Surr)    | 5000 ug/mL    |
|                           |          |           |                            |                      |                     |              | 2-Fluorobiphenyl               | 5000 ug/mL    |
|                           |          |           |                            |                      |                     |              | 2-Fluorophenol (Surr)          | 5000 ug/mL    |
|                           |          |           |                            |                      |                     |              | Nitrobenzene-d5 (Surr)         | 5000 ug/mL    |
|                           |          |           |                            |                      |                     |              | Phenol-d5 (Surr)               | 5000 ug/mL    |
|                           |          |           |                            |                      |                     |              | Terphenyl-d14 (Surr)           | 5000 ug/mL    |
| <b>SVTAPSTD0.4i_00007</b> | 02/21/15 | 07/21/14  | MeCl2, Lot 1053215         | 1 mL                 | SVTAPITINTRNi_00005 | 10 uL        | 1,4-Dichlorobenzene-d4         | 4 ug/mL       |
|                           |          |           |                            |                      |                     |              | Acenaphthene-d10               | 4 ug/mL       |
|                           |          |           |                            |                      |                     |              | Chrysene-d12                   | 4 ug/mL       |
|                           |          |           |                            |                      |                     |              | Naphthalene-d8                 | 4 ug/mL       |
|                           |          |           |                            |                      |                     |              | Perylene-d12                   | 4 ug/mL       |
|                           |          |           |                            |                      |                     |              | Phenanthrene-d10               | 4 ug/mL       |
|                           |          |           |                            |                      | SVTAPITSTCKi_00004  | 5 uL         | Benzo[e]pyrene                 | 0.2 ug/mL     |
|                           |          |           |                            |                      |                     |              | 2-Naphthylamine                | 0.2 ug/mL     |
|                           |          |           |                            |                      |                     |              | 2,3,5,6-Tetrachlorophenol      | 0.2 ug/mL     |
|                           |          |           |                            |                      |                     |              | 2,6-Dichlorophenol             | 0.2 ug/mL     |
|                           |          |           |                            |                      |                     |              | 7,12-Dimethylbenz(a)anthracene | 0.2 ug/mL     |
|                           |          |           |                            |                      |                     |              | Methyl methanesulfonate        | 0.2 ug/mL     |
|                           |          |           |                            |                      |                     |              | 1,1'-Biphenyl                  | 0.2 ug/mL     |
|                           |          |           |                            |                      |                     |              | 1,2,4,5-Tetrachlorobenzene     | 0.2 ug/mL     |

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh

Job No.: 180-43791-1

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

| Reagent ID | Exp Date | Prep Date | Dilutant Used | Reagent Final Volume | Parent Reagent |              | Analyte                      | Concentration |
|------------|----------|-----------|---------------|----------------------|----------------|--------------|------------------------------|---------------|
|            |          |           |               |                      | Reagent ID     | Volume Added |                              |               |
|            |          |           |               |                      |                |              | 1,2,4-Trichlorobenzene       | 0.2 ug/mL     |
|            |          |           |               |                      |                |              | 1,2-Dichlorobenzene          | 0.2 ug/mL     |
|            |          |           |               |                      |                |              | 1,2-Diphenylhydrazine        | 0.2 ug/mL     |
|            |          |           |               |                      |                |              | 1,3-Dichlorobenzene          | 0.2 ug/mL     |
|            |          |           |               |                      |                |              | 1,3-Dinitrobenzene           | 0.2 ug/mL     |
|            |          |           |               |                      |                |              | 1,4-Dichlorobenzene          | 0.2 ug/mL     |
|            |          |           |               |                      |                |              | 1,4-Dioxane                  | 0.2 ug/mL     |
|            |          |           |               |                      |                |              | 1-Methylnaphthalene          | 0.2 ug/mL     |
|            |          |           |               |                      |                |              | 2,2'-oxybis[1-chloropropane] | 0.2 ug/mL     |
|            |          |           |               |                      |                |              | 2,3,4,6-Tetrachlorophenol    | 0.2 ug/mL     |
|            |          |           |               |                      |                |              | 2,4,5-Trichlorophenol        | 0.2 ug/mL     |
|            |          |           |               |                      |                |              | 2,4,6-Trichlorophenol        | 0.2 ug/mL     |
|            |          |           |               |                      |                |              | 2,4-Dichlorophenol           | 0.2 ug/mL     |
|            |          |           |               |                      |                |              | 2,4-Dimethylphenol           | 0.2 ug/mL     |
|            |          |           |               |                      |                |              | 2,4-Dinitrophenol            | 0.4 ug/mL     |
|            |          |           |               |                      |                |              | 2,4-Dinitrotoluene           | 0.2 ug/mL     |
|            |          |           |               |                      |                |              | 2,6-Dinitrotoluene           | 0.2 ug/mL     |
|            |          |           |               |                      |                |              | 2-Chloronaphthalene          | 0.2 ug/mL     |
|            |          |           |               |                      |                |              | 2-Chlorophenol               | 0.2 ug/mL     |
|            |          |           |               |                      |                |              | 2-Methylnaphthalene          | 0.2 ug/mL     |
|            |          |           |               |                      |                |              | 2-Methylphenol               | 0.2 ug/mL     |
|            |          |           |               |                      |                |              | 2-Nitroaniline               | 0.2 ug/mL     |
|            |          |           |               |                      |                |              | 2-Nitrophenol                | 0.2 ug/mL     |
|            |          |           |               |                      |                |              | 3-Nitroaniline               | 0.2 ug/mL     |
|            |          |           |               |                      |                |              | 4,6-Dinitro-2-methylphenol   | 0.4 ug/mL     |
|            |          |           |               |                      |                |              | 4-Bromophenyl phenyl ether   | 0.2 ug/mL     |
|            |          |           |               |                      |                |              | 4-Chloro-3-methylphenol      | 0.2 ug/mL     |
|            |          |           |               |                      |                |              | 4-Chloroaniline              | 0.2 ug/mL     |
|            |          |           |               |                      |                |              | 4-Chlorophenyl phenyl ether  | 0.2 ug/mL     |
|            |          |           |               |                      |                |              | 4-Methylphenol               | 0.2 ug/mL     |
|            |          |           |               |                      |                |              | 4-Nitroaniline               | 0.2 ug/mL     |
|            |          |           |               |                      |                |              | 4-Nitrophenol                | 0.4 ug/mL     |
|            |          |           |               |                      |                |              | Acenaphthene                 | 0.2 ug/mL     |
|            |          |           |               |                      |                |              | Acenaphthylene               | 0.2 ug/mL     |
|            |          |           |               |                      |                |              | Acetophenone                 | 0.2 ug/mL     |
|            |          |           |               |                      |                |              | Aniline                      | 0.2 ug/mL     |
|            |          |           |               |                      |                |              | Anthracene                   | 0.2 ug/mL     |
|            |          |           |               |                      |                |              | Benzo[a]anthracene           | 0.2 ug/mL     |
|            |          |           |               |                      |                |              | Benzo[a]pyrene               | 0.2 ug/mL     |
|            |          |           |               |                      |                |              | Benzo[b]fluoranthene         | 0.2 ug/mL     |
|            |          |           |               |                      |                |              | Benzo[g,h,i]perylene         | 0.2 ug/mL     |
|            |          |           |               |                      |                |              | Benzo[k]fluoranthene         | 0.2 ug/mL     |
|            |          |           |               |                      |                |              | Benzyl alcohol               | 0.2 ug/mL     |
|            |          |           |               |                      |                |              | Bis(2-chloroethoxy)methane   | 0.2 ug/mL     |
|            |          |           |               |                      |                |              | Bis(2-chloroethyl) ether     | 0.2 ug/mL     |
|            |          |           |               |                      |                |              | Bis(2-ethylhexyl) phthalate  | 0.2 ug/mL     |
|            |          |           |               |                      |                |              | Butyl benzyl phthalate       | 0.2 ug/mL     |
|            |          |           |               |                      |                |              | Carbazole                    | 0.2 ug/mL     |

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh

Job No.: 180-43791-1

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

| Reagent ID           | Exp Date | Prep Date | Dilutant Used      | Reagent Final Volume | Parent Reagent   |              | Analyte                     | Concentration |
|----------------------|----------|-----------|--------------------|----------------------|------------------|--------------|-----------------------------|---------------|
|                      |          |           |                    |                      | Reagent ID       | Volume Added |                             |               |
|                      |          |           |                    |                      |                  |              | Chrysene                    | 0.2 ug/mL     |
|                      |          |           |                    |                      |                  |              | Di-n-butyl phthalate        | 0.2 ug/mL     |
|                      |          |           |                    |                      |                  |              | Di-n-octyl phthalate        | 0.2 ug/mL     |
|                      |          |           |                    |                      |                  |              | Dibenz (a,h) anthracene     | 0.2 ug/mL     |
|                      |          |           |                    |                      |                  |              | Dibenzofuran                | 0.2 ug/mL     |
|                      |          |           |                    |                      |                  |              | Diethyl phthalate           | 0.2 ug/mL     |
|                      |          |           |                    |                      |                  |              | Dimethyl phthalate          | 0.2 ug/mL     |
|                      |          |           |                    |                      |                  |              | Fluoranthene                | 0.2 ug/mL     |
|                      |          |           |                    |                      |                  |              | Fluorene                    | 0.2 ug/mL     |
|                      |          |           |                    |                      |                  |              | Hexachlorobenzene           | 0.2 ug/mL     |
|                      |          |           |                    |                      |                  |              | Hexachlorobutadiene         | 0.2 ug/mL     |
|                      |          |           |                    |                      |                  |              | Hexachlorocyclopentadiene   | 0.2 ug/mL     |
|                      |          |           |                    |                      |                  |              | Hexachloroethane            | 0.2 ug/mL     |
|                      |          |           |                    |                      |                  |              | Hexadecane                  | 0.2 ug/mL     |
|                      |          |           |                    |                      |                  |              | Indeno[1,2,3-cd]pyrene      | 0.2 ug/mL     |
|                      |          |           |                    |                      |                  |              | Isophorone                  | 0.2 ug/mL     |
|                      |          |           |                    |                      |                  |              | n-Decane                    | 0.2 ug/mL     |
|                      |          |           |                    |                      |                  |              | N-Nitrosodi-n-propylamine   | 0.2 ug/mL     |
|                      |          |           |                    |                      |                  |              | N-Nitrosodimethylamine      | 0.2 ug/mL     |
|                      |          |           |                    |                      |                  |              | n-Octadecane                | 0.2 ug/mL     |
|                      |          |           |                    |                      |                  |              | Naphthalene                 | 0.2 ug/mL     |
|                      |          |           |                    |                      |                  |              | Nitrobenzene                | 0.2 ug/mL     |
|                      |          |           |                    |                      |                  |              | Pentachlorophenol           | 0.4 ug/mL     |
|                      |          |           |                    |                      |                  |              | Phenanthrene                | 0.2 ug/mL     |
|                      |          |           |                    |                      |                  |              | Phenol                      | 0.2 ug/mL     |
|                      |          |           |                    |                      |                  |              | Pyrene                      | 0.2 ug/mL     |
|                      |          |           |                    |                      |                  |              | Pyridine                    | 0.2 ug/mL     |
|                      |          |           |                    |                      |                  |              | 3,3'-Dichlorobenzidine      | 0.2 ug/mL     |
|                      |          |           |                    |                      |                  |              | Atrazine                    | 0.2 ug/mL     |
|                      |          |           |                    |                      |                  |              | Benzidine                   | 0.2 ug/mL     |
|                      |          |           |                    |                      |                  |              | Caprolactam                 | 0.2 ug/mL     |
|                      |          |           |                    |                      |                  |              | N-Nitrosodiphenylamine      | 0.2 ug/mL     |
|                      |          |           |                    |                      |                  |              | Benzaldehyde                | 0.2 ug/mL     |
|                      |          |           |                    |                      |                  |              | Benzoic acid                | 0.2 ug/mL     |
|                      |          |           |                    |                      |                  |              | Indene                      | 0.2 ug/mL     |
|                      |          |           |                    |                      |                  |              | 2,4,6-Tribromophenol (Surr) | 0.2 ug/mL     |
|                      |          |           |                    |                      |                  |              | 2-Fluorobiphenyl            | 0.2 ug/mL     |
|                      |          |           |                    |                      |                  |              | 2-Fluorophenol (Surr)       | 0.2 ug/mL     |
|                      |          |           |                    |                      |                  |              | Nitrobenzene-d5 (Surr)      | 0.2 ug/mL     |
|                      |          |           |                    |                      |                  |              | Phenol-d5 (Surr)            | 0.2 ug/mL     |
|                      |          |           |                    |                      |                  |              | Terphenyl-d14 (Surr)        | 0.2 ug/mL     |
|                      |          |           |                    |                      |                  |              | N-Nitrosopyrrolidine        | 0.2 ug/mL     |
| .SVTAPITINTRNi_00005 | 05/07/15 | 05/07/14  | MeCl2, Lot 1000447 | 25 mL                | SVLVIntstd_00007 | 5000 uL      | 1,4-Dichlorobenzene-d4      | 400 ug/mL     |
|                      |          |           |                    |                      |                  |              | Acenaphthene-d10            | 400 ug/mL     |
|                      |          |           |                    |                      |                  |              | Chrysene-d12                | 400 ug/mL     |
|                      |          |           |                    |                      |                  |              | Naphthalene-d8              | 400 ug/mL     |
|                      |          |           |                    |                      |                  |              | Perylene-d12                | 400 ug/mL     |
|                      |          |           |                    |                      |                  |              | Phenanthrene-d10            | 400 ug/mL     |

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh

Job No.: 180-43791-1

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

| Reagent ID                  | Exp Date | Prep Date | Dilutant Used       | Reagent Final Volume | Parent Reagent               |              | Analyte                        | Concentration |
|-----------------------------|----------|-----------|---------------------|----------------------|------------------------------|--------------|--------------------------------|---------------|
|                             |          |           |                     |                      | Reagent ID                   | Volume Added |                                |               |
| ..SVLVIntstd_00007          | 02/28/18 |           | Restek, Lot A093676 |                      | (Purchased Reagent)          |              | 1,4-Dichlorobenzene-d4         | 2000 ug/mL    |
|                             |          |           |                     |                      |                              |              | Acenaphthene-d10               | 2000 ug/mL    |
|                             |          |           |                     |                      |                              |              | Chrysene-d12                   | 2000 ug/mL    |
|                             |          |           |                     |                      |                              |              | Naphthalene-d8                 | 2000 ug/mL    |
|                             |          |           |                     |                      |                              |              | Perylene-d12                   | 2000 ug/mL    |
|                             |          |           |                     |                      |                              |              | Phenanthrene-d10               | 2000 ug/mL    |
| .SVTAPITSTCKi_00004         | 02/21/15 | 07/21/14  | MeCl2, Lot 1053215  | 20 mL                | sv benzoepyre 00001          | 800 uL       | Benzo[e]pyrene                 | 40 ug/mL      |
|                             |          |           |                     |                      | SV2NAPAMINEs_00002           | 800 uL       | 2-Naphthylamine                | 40 ug/mL      |
|                             |          |           |                     |                      | SVLVlist12_00002             | 800 uL       | 2,3,5,6-Tetrachlorophenol      | 40 ug/mL      |
|                             |          |           |                     |                      |                              |              | 2,6-Dichlorophenol             | 40 ug/mL      |
|                             |          |           |                     |                      |                              |              | 7,12-Dimethylbenz(a)anthracene | 40 ug/mL      |
|                             |          |           |                     |                      |                              |              | Methyl methanesulfonate        | 40 ug/mL      |
|                             |          |           |                     |                      |                              |              | SVLVstd1_00026                 | 800 uL        |
|                             |          |           |                     |                      | 1,2,4,5-Tetrachlorobenzene   | 40 ug/mL     |                                |               |
|                             |          |           |                     |                      | 1,2,4-Trichlorobenzene       | 40 ug/mL     |                                |               |
|                             |          |           |                     |                      | 1,2-Dichlorobenzene          | 40 ug/mL     |                                |               |
|                             |          |           |                     |                      | 1,2-Diphenylhydrazine        | 40 ug/mL     |                                |               |
|                             |          |           |                     |                      | 1,3-Dichlorobenzene          | 40 ug/mL     |                                |               |
|                             |          |           |                     |                      | 1,3-Dinitrobenzene           | 40 ug/mL     |                                |               |
|                             |          |           |                     |                      | 1,4-Dichlorobenzene          | 40 ug/mL     |                                |               |
|                             |          |           |                     |                      | 1,4-Dioxane                  | 40 ug/mL     |                                |               |
|                             |          |           |                     |                      | 1-Methylnaphthalene          | 40 ug/mL     |                                |               |
|                             |          |           |                     |                      | 2,2'-oxybis[1-chloropropane] | 40 ug/mL     |                                |               |
|                             |          |           |                     |                      | 2,3,4,6-Tetrachlorophenol    | 40 ug/mL     |                                |               |
|                             |          |           |                     |                      | 2,4,5-Trichlorophenol        | 40 ug/mL     |                                |               |
|                             |          |           |                     |                      | 2,4,6-Trichlorophenol        | 40 ug/mL     |                                |               |
|                             |          |           |                     |                      | 2,4-Dichlorophenol           | 40 ug/mL     |                                |               |
|                             |          |           |                     |                      | 2,4-Dimethylphenol           | 40 ug/mL     |                                |               |
|                             |          |           |                     |                      | 2,4-Dinitrophenol            | 80 ug/mL     |                                |               |
|                             |          |           |                     |                      | 2,4-Dinitrotoluene           | 40 ug/mL     |                                |               |
|                             |          |           |                     |                      | 2,6-Dinitrotoluene           | 40 ug/mL     |                                |               |
|                             |          |           |                     |                      | 2-Chloronaphthalene          | 40 ug/mL     |                                |               |
|                             |          |           |                     |                      | 2-Chlorophenol               | 40 ug/mL     |                                |               |
|                             |          |           |                     |                      | 2-Methylnaphthalene          | 40 ug/mL     |                                |               |
|                             |          |           |                     |                      | 2-Methylphenol               | 40 ug/mL     |                                |               |
|                             |          |           |                     |                      | 2-Nitroaniline               | 40 ug/mL     |                                |               |
|                             |          |           |                     |                      | 2-Nitrophenol                | 40 ug/mL     |                                |               |
|                             |          |           |                     |                      | 3-Nitroaniline               | 40 ug/mL     |                                |               |
|                             |          |           |                     |                      | 4,6-Dinitro-2-methylphenol   | 80 ug/mL     |                                |               |
| 4-Bromophenyl phenyl ether  | 40 ug/mL |           |                     |                      |                              |              |                                |               |
| 4-Chloro-3-methylphenol     | 40 ug/mL |           |                     |                      |                              |              |                                |               |
| 4-Chloroaniline             | 40 ug/mL |           |                     |                      |                              |              |                                |               |
| 4-Chlorophenyl phenyl ether | 40 ug/mL |           |                     |                      |                              |              |                                |               |
| 4-Methylphenol              | 40 ug/mL |           |                     |                      |                              |              |                                |               |
| 4-Nitroaniline              | 40 ug/mL |           |                     |                      |                              |              |                                |               |
| 4-Nitrophenol               | 80 ug/mL |           |                     |                      |                              |              |                                |               |
| Acenaphthene                | 40 ug/mL |           |                     |                      |                              |              |                                |               |
| Acenaphthylene              | 40 ug/mL |           |                     |                      |                              |              |                                |               |



REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh

Job No.: 180-43791-1

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

| Reagent ID | Exp Date | Prep Date | Dilutant Used | Reagent Final Volume | Parent Reagent    |              | Analyte                      | Concentration |
|------------|----------|-----------|---------------|----------------------|-------------------|--------------|------------------------------|---------------|
|            |          |           |               |                      | Reagent ID        | Volume Added |                              |               |
|            |          |           |               |                      |                   |              | Acetophenone                 | 40 ug/mL      |
|            |          |           |               |                      |                   |              | Aniline                      | 40 ug/mL      |
|            |          |           |               |                      |                   |              | Anthracene                   | 40 ug/mL      |
|            |          |           |               |                      |                   |              | Benzo[a]anthracene           | 40 ug/mL      |
|            |          |           |               |                      |                   |              | Benzo[a]pyrene               | 40 ug/mL      |
|            |          |           |               |                      |                   |              | Benzo[b]fluoranthene         | 40 ug/mL      |
|            |          |           |               |                      |                   |              | Benzo[g,h,i]perylene         | 40 ug/mL      |
|            |          |           |               |                      |                   |              | Benzo[k]fluoranthene         | 40 ug/mL      |
|            |          |           |               |                      |                   |              | Benzyl alcohol               | 40 ug/mL      |
|            |          |           |               |                      |                   |              | Bis (2-chloroethoxy)methane  | 40 ug/mL      |
|            |          |           |               |                      |                   |              | Bis (2-chloroethyl) ether    | 40 ug/mL      |
|            |          |           |               |                      |                   |              | Bis (2-ethylhexyl) phthalate | 40 ug/mL      |
|            |          |           |               |                      |                   |              | Butyl benzyl phthalate       | 40 ug/mL      |
|            |          |           |               |                      |                   |              | Carbazole                    | 40 ug/mL      |
|            |          |           |               |                      |                   |              | Chrysene                     | 40 ug/mL      |
|            |          |           |               |                      |                   |              | Di-n-butyl phthalate         | 40 ug/mL      |
|            |          |           |               |                      |                   |              | Di-n-octyl phthalate         | 40 ug/mL      |
|            |          |           |               |                      |                   |              | Dibenz (a,h) anthracene      | 40 ug/mL      |
|            |          |           |               |                      |                   |              | Dibenzofuran                 | 40 ug/mL      |
|            |          |           |               |                      |                   |              | Diethyl phthalate            | 40 ug/mL      |
|            |          |           |               |                      |                   |              | Dimethyl phthalate           | 40 ug/mL      |
|            |          |           |               |                      |                   |              | Fluoranthene                 | 40 ug/mL      |
|            |          |           |               |                      |                   |              | Fluorene                     | 40 ug/mL      |
|            |          |           |               |                      |                   |              | Hexachlorobenzene            | 40 ug/mL      |
|            |          |           |               |                      |                   |              | Hexachlorobutadiene          | 40 ug/mL      |
|            |          |           |               |                      |                   |              | Hexachlorocyclopentadiene    | 40 ug/mL      |
|            |          |           |               |                      |                   |              | Hexachloroethane             | 40 ug/mL      |
|            |          |           |               |                      |                   |              | Hexadecane                   | 40 ug/mL      |
|            |          |           |               |                      |                   |              | Indeno[1,2,3-cd]pyrene       | 40 ug/mL      |
|            |          |           |               |                      |                   |              | Isophorone                   | 40 ug/mL      |
|            |          |           |               |                      |                   |              | n-Decane                     | 40 ug/mL      |
|            |          |           |               |                      |                   |              | N-Nitrosodi-n-propylamine    | 40 ug/mL      |
|            |          |           |               |                      |                   |              | N-Nitrosodimethylamine       | 40 ug/mL      |
|            |          |           |               |                      |                   |              | n-Octadecane                 | 40 ug/mL      |
|            |          |           |               |                      |                   |              | Naphthalene                  | 40 ug/mL      |
|            |          |           |               |                      |                   |              | Nitrobenzene                 | 40 ug/mL      |
|            |          |           |               |                      |                   |              | Pentachlorophenol            | 80 ug/mL      |
|            |          |           |               |                      |                   |              | Phenanthrene                 | 40 ug/mL      |
|            |          |           |               |                      |                   |              | Phenol                       | 40 ug/mL      |
|            |          |           |               |                      |                   |              | Pyrene                       | 40 ug/mL      |
|            |          |           |               |                      |                   |              | Pyridine                     | 40 ug/mL      |
|            |          |           |               |                      | SVLVstd2_00012    | 400 uL       | 3,3'-Dichlorobenzidine       | 40 ug/mL      |
|            |          |           |               |                      |                   |              | Atrazine                     | 40 ug/mL      |
|            |          |           |               |                      |                   |              | Benzidine                    | 40 ug/mL      |
|            |          |           |               |                      |                   |              | Caprolactam                  | 40 ug/mL      |
|            |          |           |               |                      | SVLVstd5(7)_00001 | 400 uL       | N-Nitrosodiphenylamine       | 40 ug/mL      |
|            |          |           |               |                      | SVLVstd8_00003    | 400 uL       | Benzaldehyde                 | 40 ug/mL      |
|            |          |           |               |                      |                   |              | Benzoic acid                 | 40 ug/mL      |

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh

Job No.: 180-43791-1

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

| Reagent ID            | Exp Date | Prep Date | Dilutant Used                 | Reagent Final Volume | Parent Reagent      |              | Analyte                        | Concentration |
|-----------------------|----------|-----------|-------------------------------|----------------------|---------------------|--------------|--------------------------------|---------------|
|                       |          |           |                               |                      | Reagent ID          | Volume Added |                                |               |
|                       |          |           |                               |                      | SVLVSURRSPK_00003   | 160 uL       | Indene                         | 40 ug/mL      |
|                       |          |           |                               |                      |                     |              | 2,4,6-Tribromophenol (Surr)    | 40 ug/mL      |
|                       |          |           |                               |                      |                     |              | 2-Fluorobiphenyl               | 40 ug/mL      |
|                       |          |           |                               |                      |                     |              | 2-Fluorophenol (Surr)          | 40 ug/mL      |
|                       |          |           |                               |                      |                     |              | Nitrobenzene-d5 (Surr)         | 40 ug/mL      |
|                       |          |           |                               |                      |                     |              | Phenol-d5 (Surr)               | 40 ug/mL      |
|                       |          |           |                               |                      |                     |              | Terphenyl-d14 (Surr)           | 40 ug/mL      |
|                       |          |           |                               |                      | SVNNITROPYROS_00015 | 800 uL       | N-Nitrosopyrrolidine           | 40 ug/mL      |
| ..sv benzoepyre_00001 | 10/03/18 |           | Absolute, Lot 100313          |                      | (Purchased Reagent) |              | Benzo[e]pyrene                 | 1000 ug/mL    |
| ..SV2NAPAMINES_00002  | 06/30/17 |           | Ultra Scientific, Lot Ck-1617 |                      | (Purchased Reagent) |              | 2-Naphthylamine                | 1000 ug/mL    |
| ..SVLVlist12_00002    | 04/30/15 |           | Restek, Lot A0102912          |                      | (Purchased Reagent) |              | 2,3,5,6-Tetrachlorophenol      | 1000 ug/mL    |
|                       |          |           |                               |                      |                     |              | 2,6-Dichlorophenol             | 1000 ug/mL    |
|                       |          |           |                               |                      |                     |              | 7,12-Dimethylbenz(a)anthracene | 1000 ug/mL    |
|                       |          |           |                               |                      |                     |              | Methyl methanesulfonate        | 1000 ug/mL    |
| ..SVLVstd1_00026      | 08/31/15 |           | Restek, Lot A0101615          |                      | (Purchased Reagent) |              | 1,1'-Biphenyl                  | 1000 ug/mL    |
|                       |          |           |                               |                      |                     |              | 1,2,4,5-Tetrachlorobenzene     | 1000 ug/mL    |
|                       |          |           |                               |                      |                     |              | 1,2,4-Trichlorobenzene         | 1000 ug/mL    |
|                       |          |           |                               |                      |                     |              | 1,2-Dichlorobenzene            | 1000 ug/mL    |
|                       |          |           |                               |                      |                     |              | 1,2-Diphenylhydrazine          | 1000 ug/mL    |
|                       |          |           |                               |                      |                     |              | 1,3-Dichlorobenzene            | 1000 ug/mL    |
|                       |          |           |                               |                      |                     |              | 1,3-Dinitrobenzene             | 1000 ug/mL    |
|                       |          |           |                               |                      |                     |              | 1,4-Dichlorobenzene            | 1000 ug/mL    |
|                       |          |           |                               |                      |                     |              | 1,4-Dioxane                    | 1000 ug/mL    |
|                       |          |           |                               |                      |                     |              | 1-Methylnaphthalene            | 1000 ug/mL    |
|                       |          |           |                               |                      |                     |              | 2,2'-oxybis[1-chloropropane]   | 1000 ug/mL    |
|                       |          |           |                               |                      |                     |              | 2,3,4,6-Tetrachlorophenol      | 1000 ug/mL    |
|                       |          |           |                               |                      |                     |              | 2,4,5-Trichlorophenol          | 1000 ug/mL    |
|                       |          |           |                               |                      |                     |              | 2,4,6-Trichlorophenol          | 1000 ug/mL    |
|                       |          |           |                               |                      |                     |              | 2,4-Dichlorophenol             | 1000 ug/mL    |
|                       |          |           |                               |                      |                     |              | 2,4-Dimethylphenol             | 1000 ug/mL    |
|                       |          |           |                               |                      |                     |              | 2,4-Dinitrophenol              | 2000 ug/mL    |
|                       |          |           |                               |                      |                     |              | 2,4-Dinitrotoluene             | 1000 ug/mL    |
|                       |          |           |                               |                      |                     |              | 2,6-Dinitrotoluene             | 1000 ug/mL    |
|                       |          |           |                               |                      |                     |              | 2-Chloronaphthalene            | 1000 ug/mL    |
|                       |          |           |                               |                      |                     |              | 2-Chlorophenol                 | 1000 ug/mL    |
|                       |          |           |                               |                      |                     |              | 2-Methylnaphthalene            | 1000 ug/mL    |
|                       |          |           |                               |                      |                     |              | 2-Methylphenol                 | 1000 ug/mL    |
|                       |          |           |                               |                      |                     |              | 2-Nitroaniline                 | 1000 ug/mL    |
|                       |          |           |                               |                      |                     |              | 2-Nitrophenol                  | 1000 ug/mL    |
|                       |          |           |                               |                      |                     |              | 3-Nitroaniline                 | 1000 ug/mL    |
|                       |          |           |                               |                      |                     |              | 4,6-Dinitro-2-methylphenol     | 2000 ug/mL    |
|                       |          |           |                               |                      |                     |              | 4-Bromophenyl phenyl ether     | 1000 ug/mL    |
|                       |          |           |                               |                      |                     |              | 4-Chloro-3-methylphenol        | 1000 ug/mL    |
|                       |          |           |                               |                      |                     |              | 4-Chloroaniline                | 1000 ug/mL    |
|                       |          |           |                               |                      |                     |              | 4-Chlorophenyl phenyl ether    | 1000 ug/mL    |
|                       |          |           |                               |                      |                     |              | 4-Methylphenol                 | 1000 ug/mL    |
|                       |          |           |                               |                      |                     |              | 4-Nitroaniline                 | 1000 ug/mL    |
|                       |          |           |                               |                      |                     |              | 4-Nitrophenol                  | 2000 ug/mL    |

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh

Job No.: 180-43791-1

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

| Reagent ID          | Exp Date | Prep Date | Dilutant Used        | Reagent Final Volume | Parent Reagent      |              | Analyte                      | Concentration |
|---------------------|----------|-----------|----------------------|----------------------|---------------------|--------------|------------------------------|---------------|
|                     |          |           |                      |                      | Reagent ID          | Volume Added |                              |               |
|                     |          |           |                      |                      |                     |              | Acenaphthene                 | 1000 ug/mL    |
|                     |          |           |                      |                      |                     |              | Acenaphthylene               | 1000 ug/mL    |
|                     |          |           |                      |                      |                     |              | Acetophenone                 | 1000 ug/mL    |
|                     |          |           |                      |                      |                     |              | Aniline                      | 1000 ug/mL    |
|                     |          |           |                      |                      |                     |              | Anthracene                   | 1000 ug/mL    |
|                     |          |           |                      |                      |                     |              | Benzo[a]anthracene           | 1000 ug/mL    |
|                     |          |           |                      |                      |                     |              | Benzo[a]pyrene               | 1000 ug/mL    |
|                     |          |           |                      |                      |                     |              | Benzo[b]fluoranthene         | 1000 ug/mL    |
|                     |          |           |                      |                      |                     |              | Benzo[g,h,i]perylene         | 1000 ug/mL    |
|                     |          |           |                      |                      |                     |              | Benzo[k]fluoranthene         | 1000 ug/mL    |
|                     |          |           |                      |                      |                     |              | Benzyl alcohol               | 1000 ug/mL    |
|                     |          |           |                      |                      |                     |              | Bis (2-chloroethoxy)methane  | 1000 ug/mL    |
|                     |          |           |                      |                      |                     |              | Bis (2-chloroethyl) ether    | 1000 ug/mL    |
|                     |          |           |                      |                      |                     |              | Bis (2-ethylhexyl) phthalate | 1000 ug/mL    |
|                     |          |           |                      |                      |                     |              | Butyl benzyl phthalate       | 1000 ug/mL    |
|                     |          |           |                      |                      |                     |              | Carbazole                    | 1000 ug/mL    |
|                     |          |           |                      |                      |                     |              | Chrysene                     | 1000 ug/mL    |
|                     |          |           |                      |                      |                     |              | Di-n-butyl phthalate         | 1000 ug/mL    |
|                     |          |           |                      |                      |                     |              | Di-n-octyl phthalate         | 1000 ug/mL    |
|                     |          |           |                      |                      |                     |              | Dibenz (a,h) anthracene      | 1000 ug/mL    |
|                     |          |           |                      |                      |                     |              | Dibenzofuran                 | 1000 ug/mL    |
|                     |          |           |                      |                      |                     |              | Diethyl phthalate            | 1000 ug/mL    |
|                     |          |           |                      |                      |                     |              | Dimethyl phthalate           | 1000 ug/mL    |
|                     |          |           |                      |                      |                     |              | Fluoranthene                 | 1000 ug/mL    |
|                     |          |           |                      |                      |                     |              | Fluorene                     | 1000 ug/mL    |
|                     |          |           |                      |                      |                     |              | Hexachlorobenzene            | 1000 ug/mL    |
|                     |          |           |                      |                      |                     |              | Hexachlorobutadiene          | 1000 ug/mL    |
|                     |          |           |                      |                      |                     |              | Hexachlorocyclopentadiene    | 1000 ug/mL    |
|                     |          |           |                      |                      |                     |              | Hexachloroethane             | 1000 ug/mL    |
|                     |          |           |                      |                      |                     |              | Hexadecane                   | 1000 ug/mL    |
|                     |          |           |                      |                      |                     |              | Indeno[1,2,3-cd]pyrene       | 1000 ug/mL    |
|                     |          |           |                      |                      |                     |              | Isophorone                   | 1000 ug/mL    |
|                     |          |           |                      |                      |                     |              | n-Decane                     | 1000 ug/mL    |
|                     |          |           |                      |                      |                     |              | N-Nitrosodi-n-propylamine    | 1000 ug/mL    |
|                     |          |           |                      |                      |                     |              | N-Nitrosodimethylamine       | 1000 ug/mL    |
|                     |          |           |                      |                      |                     |              | n-Octadecane                 | 1000 ug/mL    |
|                     |          |           |                      |                      |                     |              | Naphthalene                  | 1000 ug/mL    |
|                     |          |           |                      |                      |                     |              | Nitrobenzene                 | 1000 ug/mL    |
|                     |          |           |                      |                      |                     |              | Pentachlorophenol            | 2000 ug/mL    |
|                     |          |           |                      |                      |                     |              | Phenanthrene                 | 1000 ug/mL    |
|                     |          |           |                      |                      |                     |              | Phenol                       | 1000 ug/mL    |
|                     |          |           |                      |                      |                     |              | Pyrene                       | 1000 ug/mL    |
|                     |          |           |                      |                      |                     |              | Pyridine                     | 1000 ug/mL    |
| ..SVLVstd2_00012    | 07/31/15 |           | Restek, Lot A0100824 |                      | (Purchased Reagent) |              | 3,3'-Dichlorobenzidine       | 2000 ug/mL    |
|                     |          |           |                      |                      |                     |              | Atrazine                     | 2000 ug/mL    |
|                     |          |           |                      |                      |                     |              | Benzidine                    | 2000 ug/mL    |
|                     |          |           |                      |                      |                     |              | Caprolactam                  | 2000 ug/mL    |
| ..SVLVstd5(7)_00001 | 02/28/17 |           | Restek, Lot A0101573 |                      | (Purchased Reagent) |              | N-Nitrosodiphenylamine       | 2000 ug/mL    |

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh

Job No.: 180-43791-1

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

| Reagent ID               | Exp Date | Prep Date | Dilutant Used        | Reagent Final Volume | Parent Reagent      |              | Analyte                        | Concentration |
|--------------------------|----------|-----------|----------------------|----------------------|---------------------|--------------|--------------------------------|---------------|
|                          |          |           |                      |                      | Reagent ID          | Volume Added |                                |               |
| ..SVLVstd8_00003         | 05/31/15 |           | Restek, Lot A0103145 |                      | (Purchased Reagent) |              | Benzaldehyde                   | 2000 ug/mL    |
|                          |          |           |                      |                      |                     |              | Benzoic acid                   | 2000 ug/mL    |
|                          |          |           |                      |                      |                     |              | Indene                         | 2000 ug/mL    |
| ..SVLVSURRSPK_00003      | 02/28/18 |           | Restek, Lot A093638  |                      | (Purchased Reagent) |              | 2,4,6-Tribromophenol (Surr)    | 5000 ug/mL    |
|                          |          |           |                      |                      |                     |              | 2-Fluorobiphenyl               | 5000 ug/mL    |
|                          |          |           |                      |                      |                     |              | 2-Fluorophenol (Surr)          | 5000 ug/mL    |
|                          |          |           |                      |                      |                     |              | Nitrobenzene-d5 (Surr)         | 5000 ug/mL    |
|                          |          |           |                      |                      |                     |              | Phenol-d5 (Surr)               | 5000 ug/mL    |
|                          |          |           |                      |                      |                     |              | Terphenyl-d14 (Surr)           | 5000 ug/mL    |
| ..SVNNITROPYROS_00015    | 06/05/17 |           | absolute, Lot 060514 |                      | (Purchased Reagent) |              | N-Nitrosopyrrolidine           | 1000 ug/mL    |
| <b>SVTAPSTD10i_00088</b> | 02/06/15 | 01/31/15  | MeCl2, Lot 1417620   | 1 mL                 | SVTAPITINTRNi_00005 | 10 uL        | 1,4-Dichlorobenzene-d4         | 4 ug/mL       |
|                          |          |           |                      |                      |                     |              | Acenaphthene-d10               | 4 ug/mL       |
|                          |          |           |                      |                      |                     |              | Chrysene-d12                   | 4 ug/mL       |
|                          |          |           |                      |                      |                     |              | Naphthalene-d8                 | 4 ug/mL       |
|                          |          |           |                      |                      |                     |              | Perylene-d12                   | 4 ug/mL       |
|                          |          |           |                      |                      |                     |              | Phenanthrene-d10               | 4 ug/mL       |
|                          |          |           |                      |                      | SVTAPITSTCKi_00004  | 125 uL       | Benzo[e]pyrene                 | 5 ug/mL       |
|                          |          |           |                      |                      |                     |              | 2-Naphthylamine                | 5 ug/mL       |
|                          |          |           |                      |                      |                     |              | 2,3,5,6-Tetrachlorophenol      | 5 ug/mL       |
|                          |          |           |                      |                      |                     |              | 2,6-Dichlorophenol             | 5 ug/mL       |
|                          |          |           |                      |                      |                     |              | 7,12-Dimethylbenz(a)anthracene | 5 ug/mL       |
|                          |          |           |                      |                      |                     |              | Methyl methanesulfonate        | 5 ug/mL       |
|                          |          |           |                      |                      |                     |              | 1,1'-Biphenyl                  | 5 ug/mL       |
|                          |          |           |                      |                      |                     |              | 1,2,4,5-Tetrachlorobenzene     | 5 ug/mL       |
|                          |          |           |                      |                      |                     |              | 1,2,4-Trichlorobenzene         | 5 ug/mL       |
|                          |          |           |                      |                      |                     |              | 1,2-Dichlorobenzene            | 5 ug/mL       |
|                          |          |           |                      |                      |                     |              | 1,2-Diphenylhydrazine          | 5 ug/mL       |
|                          |          |           |                      |                      |                     |              | 1,3-Dichlorobenzene            | 5 ug/mL       |
|                          |          |           |                      |                      |                     |              | 1,3-Dinitrobenzene             | 5 ug/mL       |
|                          |          |           |                      |                      |                     |              | 1,4-Dichlorobenzene            | 5 ug/mL       |
|                          |          |           |                      |                      |                     |              | 1,4-Dioxane                    | 5 ug/mL       |
|                          |          |           |                      |                      |                     |              | 1-Methylnaphthalene            | 5 ug/mL       |
|                          |          |           |                      |                      |                     |              | 2,2'-oxybis[1-chloropropane]   | 5 ug/mL       |
|                          |          |           |                      |                      |                     |              | 2,3,4,6-Tetrachlorophenol      | 5 ug/mL       |
|                          |          |           |                      |                      |                     |              | 2,4,5-Trichlorophenol          | 5 ug/mL       |
|                          |          |           |                      |                      |                     |              | 2,4,6-Trichlorophenol          | 5 ug/mL       |
|                          |          |           |                      |                      |                     |              | 2,4-Dichlorophenol             | 5 ug/mL       |
|                          |          |           |                      |                      |                     |              | 2,4-Dimethylphenol             | 5 ug/mL       |
|                          |          |           |                      |                      |                     |              | 2,4-Dinitrophenol              | 10 ug/mL      |
|                          |          |           |                      |                      |                     |              | 2,4-Dinitrotoluene             | 5 ug/mL       |
|                          |          |           |                      |                      |                     |              | 2,6-Dinitrotoluene             | 5 ug/mL       |
|                          |          |           |                      |                      |                     |              | 2-Chloronaphthalene            | 5 ug/mL       |
|                          |          |           |                      |                      |                     |              | 2-Chlorophenol                 | 5 ug/mL       |
|                          |          |           |                      |                      |                     |              | 2-Methylnaphthalene            | 5 ug/mL       |
|                          |          |           |                      |                      |                     |              | 2-Methylphenol                 | 5 ug/mL       |
|                          |          |           |                      |                      |                     |              | 2-Nitroaniline                 | 5 ug/mL       |
|                          |          |           |                      |                      |                     |              | 2-Nitrophenol                  | 5 ug/mL       |

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh

Job No.: 180-43791-1

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

| Reagent ID | Exp Date | Prep Date | Dilutant Used | Reagent Final Volume | Parent Reagent |              | Analyte                      | Concentration |
|------------|----------|-----------|---------------|----------------------|----------------|--------------|------------------------------|---------------|
|            |          |           |               |                      | Reagent ID     | Volume Added |                              |               |
|            |          |           |               |                      |                |              | 3-Nitroaniline               | 5 ug/mL       |
|            |          |           |               |                      |                |              | 4,6-Dinitro-2-methylphenol   | 10 ug/mL      |
|            |          |           |               |                      |                |              | 4-Bromophenyl phenyl ether   | 5 ug/mL       |
|            |          |           |               |                      |                |              | 4-Chloro-3-methylphenol      | 5 ug/mL       |
|            |          |           |               |                      |                |              | 4-Chloroaniline              | 5 ug/mL       |
|            |          |           |               |                      |                |              | 4-Chlorophenyl phenyl ether  | 5 ug/mL       |
|            |          |           |               |                      |                |              | 4-Methylphenol               | 5 ug/mL       |
|            |          |           |               |                      |                |              | 4-Nitroaniline               | 5 ug/mL       |
|            |          |           |               |                      |                |              | 4-Nitrophenol                | 10 ug/mL      |
|            |          |           |               |                      |                |              | Acenaphthene                 | 5 ug/mL       |
|            |          |           |               |                      |                |              | Acenaphthylene               | 5 ug/mL       |
|            |          |           |               |                      |                |              | Acetophenone                 | 5 ug/mL       |
|            |          |           |               |                      |                |              | Aniline                      | 5 ug/mL       |
|            |          |           |               |                      |                |              | Anthracene                   | 5 ug/mL       |
|            |          |           |               |                      |                |              | Benzo[a]anthracene           | 5 ug/mL       |
|            |          |           |               |                      |                |              | Benzo[a]pyrene               | 5 ug/mL       |
|            |          |           |               |                      |                |              | Benzo[b]fluoranthene         | 5 ug/mL       |
|            |          |           |               |                      |                |              | Benzo[g,h,i]perylene         | 5 ug/mL       |
|            |          |           |               |                      |                |              | Benzo[k]fluoranthene         | 5 ug/mL       |
|            |          |           |               |                      |                |              | Benzyl alcohol               | 5 ug/mL       |
|            |          |           |               |                      |                |              | Bis (2-chloroethoxy)methane  | 5 ug/mL       |
|            |          |           |               |                      |                |              | Bis (2-chloroethyl) ether    | 5 ug/mL       |
|            |          |           |               |                      |                |              | Bis (2-ethylhexyl) phthalate | 5 ug/mL       |
|            |          |           |               |                      |                |              | Butyl benzyl phthalate       | 5 ug/mL       |
|            |          |           |               |                      |                |              | Carbazole                    | 5 ug/mL       |
|            |          |           |               |                      |                |              | Chrysene                     | 5 ug/mL       |
|            |          |           |               |                      |                |              | Di-n-butyl phthalate         | 5 ug/mL       |
|            |          |           |               |                      |                |              | Di-n-octyl phthalate         | 5 ug/mL       |
|            |          |           |               |                      |                |              | Dibenz (a,h) anthracene      | 5 ug/mL       |
|            |          |           |               |                      |                |              | Dibenzofuran                 | 5 ug/mL       |
|            |          |           |               |                      |                |              | Diethyl phthalate            | 5 ug/mL       |
|            |          |           |               |                      |                |              | Dimethyl phthalate           | 5 ug/mL       |
|            |          |           |               |                      |                |              | Fluoranthene                 | 5 ug/mL       |
|            |          |           |               |                      |                |              | Fluorene                     | 5 ug/mL       |
|            |          |           |               |                      |                |              | Hexachlorobenzene            | 5 ug/mL       |
|            |          |           |               |                      |                |              | Hexachlorobutadiene          | 5 ug/mL       |
|            |          |           |               |                      |                |              | Hexachlorocyclopentadiene    | 5 ug/mL       |
|            |          |           |               |                      |                |              | Hexachloroethane             | 5 ug/mL       |
|            |          |           |               |                      |                |              | Hexadecane                   | 5 ug/mL       |
|            |          |           |               |                      |                |              | Indeno[1,2,3-cd]pyrene       | 5 ug/mL       |
|            |          |           |               |                      |                |              | Isophorone                   | 5 ug/mL       |
|            |          |           |               |                      |                |              | n-Decane                     | 5 ug/mL       |
|            |          |           |               |                      |                |              | N-Nitrosodi-n-propylamine    | 5 ug/mL       |
|            |          |           |               |                      |                |              | N-Nitrosodimethylamine       | 5 ug/mL       |
|            |          |           |               |                      |                |              | n-Octadecane                 | 5 ug/mL       |
|            |          |           |               |                      |                |              | Naphthalene                  | 5 ug/mL       |
|            |          |           |               |                      |                |              | Nitrobenzene                 | 5 ug/mL       |
|            |          |           |               |                      |                |              | Pentachlorophenol            | 10 ug/mL      |

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh

Job No.: 180-43791-1

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

| Reagent ID           | Exp Date | Prep Date | Dilutant Used       | Reagent Final Volume | Parent Reagent      |                     | Analyte                        | Concentration |
|----------------------|----------|-----------|---------------------|----------------------|---------------------|---------------------|--------------------------------|---------------|
|                      |          |           |                     |                      | Reagent ID          | Volume Added        |                                |               |
|                      |          |           |                     |                      |                     |                     | Phenanthrene                   | 5 ug/mL       |
|                      |          |           |                     |                      |                     |                     | Phenol                         | 5 ug/mL       |
|                      |          |           |                     |                      |                     |                     | Pyrene                         | 5 ug/mL       |
|                      |          |           |                     |                      |                     |                     | Pyridine                       | 5 ug/mL       |
|                      |          |           |                     |                      |                     |                     | 3,3'-Dichlorobenzidine         | 5 ug/mL       |
|                      |          |           |                     |                      |                     |                     | Atrazine                       | 5 ug/mL       |
|                      |          |           |                     |                      |                     |                     | Benzidine                      | 5 ug/mL       |
|                      |          |           |                     |                      |                     |                     | Caprolactam                    | 5 ug/mL       |
|                      |          |           |                     |                      |                     |                     | N-Nitrosodiphenylamine         | 5 ug/mL       |
|                      |          |           |                     |                      |                     |                     | Benzaldehyde                   | 5 ug/mL       |
|                      |          |           |                     |                      |                     |                     | Benzoic acid                   | 5 ug/mL       |
|                      |          |           |                     |                      |                     |                     | Indene                         | 5 ug/mL       |
|                      |          |           |                     |                      |                     |                     | 2,4,6-Tribromophenol (Surr)    | 5 ug/mL       |
|                      |          |           |                     |                      |                     |                     | 2-Fluorobiphenyl               | 5 ug/mL       |
|                      |          |           |                     |                      |                     |                     | 2-Fluorophenol (Surr)          | 5 ug/mL       |
|                      |          |           |                     |                      |                     |                     | Nitrobenzene-d5 (Surr)         | 5 ug/mL       |
|                      |          |           |                     |                      |                     |                     | Phenol-d5 (Surr)               | 5 ug/mL       |
|                      |          |           |                     |                      |                     |                     | Terphenyl-d14 (Surr)           | 5 ug/mL       |
|                      |          |           |                     |                      |                     |                     | N-Nitrosopyrrolidine           | 5 ug/mL       |
| .SVTAPITINTRNi_00005 | 05/07/15 | 05/07/14  | MeCl2, Lot 1000447  | 25 mL                | SVLVIntstd_00007    | 5000 uL             | 1,4-Dichlorobenzene-d4         | 400 ug/mL     |
|                      |          |           |                     |                      |                     |                     | Acenaphthene-d10               | 400 ug/mL     |
|                      |          |           |                     |                      |                     |                     | Chrysene-d12                   | 400 ug/mL     |
|                      |          |           |                     |                      |                     |                     | Naphthalene-d8                 | 400 ug/mL     |
|                      |          |           |                     |                      |                     |                     | Perylene-d12                   | 400 ug/mL     |
|                      |          |           |                     |                      |                     |                     | Phenanthrene-d10               | 400 ug/mL     |
| ..SVLVIntstd_00007   | 02/28/18 |           | Restek, Lot A093676 |                      |                     | (Purchased Reagent) | 1,4-Dichlorobenzene-d4         | 2000 ug/mL    |
|                      |          |           |                     |                      |                     |                     | Acenaphthene-d10               | 2000 ug/mL    |
|                      |          |           |                     |                      |                     |                     | Chrysene-d12                   | 2000 ug/mL    |
|                      |          |           |                     |                      |                     |                     | Naphthalene-d8                 | 2000 ug/mL    |
|                      |          |           |                     |                      |                     |                     | Perylene-d12                   | 2000 ug/mL    |
|                      |          |           |                     |                      |                     |                     | Phenanthrene-d10               | 2000 ug/mL    |
| .SVTAPITSTCKi_00004  | 02/21/15 | 07/21/14  | MeCl2, Lot 1053215  | 20 mL                | sv benzoepyre 00001 | 800 uL              | Benzo[e]pyrene                 | 40 ug/mL      |
|                      |          |           |                     |                      | SV2NAPAMINEs 00002  | 800 uL              | 2-Naphthylamine                | 40 ug/mL      |
|                      |          |           |                     |                      | SVLVlist12_00002    | 800 uL              | 2,3,5,6-Tetrachlorophenol      | 40 ug/mL      |
|                      |          |           |                     |                      |                     |                     | 2,6-Dichlorophenol             | 40 ug/mL      |
|                      |          |           |                     |                      |                     |                     | 7,12-Dimethylbenz(a)anthracene | 40 ug/mL      |
|                      |          |           |                     |                      |                     |                     | Methyl methanesulfonate        | 40 ug/mL      |
|                      |          |           |                     |                      | SVLVstd1_00026      | 800 uL              | 1,1'-Biphenyl                  | 40 ug/mL      |
|                      |          |           |                     |                      |                     |                     | 1,2,4,5-Tetrachlorobenzene     | 40 ug/mL      |
|                      |          |           |                     |                      |                     |                     | 1,2,4-Trichlorobenzene         | 40 ug/mL      |
|                      |          |           |                     |                      |                     |                     | 1,2-Dichlorobenzene            | 40 ug/mL      |
|                      |          |           |                     |                      |                     |                     | 1,2-Diphenylhydrazine          | 40 ug/mL      |
|                      |          |           |                     |                      |                     |                     | 1,3-Dichlorobenzene            | 40 ug/mL      |
|                      |          |           |                     |                      |                     |                     | 1,3-Dinitrobenzene             | 40 ug/mL      |
|                      |          |           |                     |                      |                     |                     | 1,4-Dichlorobenzene            | 40 ug/mL      |
|                      |          |           |                     |                      |                     |                     | 1,4-Dioxane                    | 40 ug/mL      |
|                      |          |           |                     |                      |                     |                     | 1-Methylnaphthalene            | 40 ug/mL      |
|                      |          |           |                     |                      |                     |                     | 2,2'-oxybis[1-chloropropane]   | 40 ug/mL      |

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh

Job No.: 180-43791-1

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

| Reagent ID | Exp Date | Prep Date | Dilutant Used | Reagent Final Volume | Parent Reagent |              | Analyte                     | Concentration |
|------------|----------|-----------|---------------|----------------------|----------------|--------------|-----------------------------|---------------|
|            |          |           |               |                      | Reagent ID     | Volume Added |                             |               |
|            |          |           |               |                      |                |              | 2,3,4,6-Tetrachlorophenol   | 40 ug/mL      |
|            |          |           |               |                      |                |              | 2,4,5-Trichlorophenol       | 40 ug/mL      |
|            |          |           |               |                      |                |              | 2,4,6-Trichlorophenol       | 40 ug/mL      |
|            |          |           |               |                      |                |              | 2,4-Dichlorophenol          | 40 ug/mL      |
|            |          |           |               |                      |                |              | 2,4-Dimethylphenol          | 40 ug/mL      |
|            |          |           |               |                      |                |              | 2,4-Dinitrophenol           | 80 ug/mL      |
|            |          |           |               |                      |                |              | 2,4-Dinitrotoluene          | 40 ug/mL      |
|            |          |           |               |                      |                |              | 2,6-Dinitrotoluene          | 40 ug/mL      |
|            |          |           |               |                      |                |              | 2-Chloronaphthalene         | 40 ug/mL      |
|            |          |           |               |                      |                |              | 2-Chlorophenol              | 40 ug/mL      |
|            |          |           |               |                      |                |              | 2-Methylnaphthalene         | 40 ug/mL      |
|            |          |           |               |                      |                |              | 2-Methylphenol              | 40 ug/mL      |
|            |          |           |               |                      |                |              | 2-Nitroaniline              | 40 ug/mL      |
|            |          |           |               |                      |                |              | 2-Nitrophenol               | 40 ug/mL      |
|            |          |           |               |                      |                |              | 3-Nitroaniline              | 40 ug/mL      |
|            |          |           |               |                      |                |              | 4,6-Dinitro-2-methylphenol  | 80 ug/mL      |
|            |          |           |               |                      |                |              | 4-Bromophenyl phenyl ether  | 40 ug/mL      |
|            |          |           |               |                      |                |              | 4-Chloro-3-methylphenol     | 40 ug/mL      |
|            |          |           |               |                      |                |              | 4-Chloroaniline             | 40 ug/mL      |
|            |          |           |               |                      |                |              | 4-Chlorophenyl phenyl ether | 40 ug/mL      |
|            |          |           |               |                      |                |              | 4-Methylphenol              | 40 ug/mL      |
|            |          |           |               |                      |                |              | 4-Nitroaniline              | 40 ug/mL      |
|            |          |           |               |                      |                |              | 4-Nitrophenol               | 80 ug/mL      |
|            |          |           |               |                      |                |              | Acenaphthene                | 40 ug/mL      |
|            |          |           |               |                      |                |              | Acenaphthylene              | 40 ug/mL      |
|            |          |           |               |                      |                |              | Acetophenone                | 40 ug/mL      |
|            |          |           |               |                      |                |              | Aniline                     | 40 ug/mL      |
|            |          |           |               |                      |                |              | Anthracene                  | 40 ug/mL      |
|            |          |           |               |                      |                |              | Benzo[a]anthracene          | 40 ug/mL      |
|            |          |           |               |                      |                |              | Benzo[a]pyrene              | 40 ug/mL      |
|            |          |           |               |                      |                |              | Benzo[b]fluoranthene        | 40 ug/mL      |
|            |          |           |               |                      |                |              | Benzo[g,h,i]perylene        | 40 ug/mL      |
|            |          |           |               |                      |                |              | Benzo[k]fluoranthene        | 40 ug/mL      |
|            |          |           |               |                      |                |              | Benzyl alcohol              | 40 ug/mL      |
|            |          |           |               |                      |                |              | Bis(2-chloroethoxy)methane  | 40 ug/mL      |
|            |          |           |               |                      |                |              | Bis(2-chloroethyl)ether     | 40 ug/mL      |
|            |          |           |               |                      |                |              | Bis(2-ethylhexyl) phthalate | 40 ug/mL      |
|            |          |           |               |                      |                |              | Butyl benzyl phthalate      | 40 ug/mL      |
|            |          |           |               |                      |                |              | Carbazole                   | 40 ug/mL      |
|            |          |           |               |                      |                |              | Chrysene                    | 40 ug/mL      |
|            |          |           |               |                      |                |              | Di-n-butyl phthalate        | 40 ug/mL      |
|            |          |           |               |                      |                |              | Di-n-octyl phthalate        | 40 ug/mL      |
|            |          |           |               |                      |                |              | Dibenz(a,h)anthracene       | 40 ug/mL      |
|            |          |           |               |                      |                |              | Dibenzofuran                | 40 ug/mL      |
|            |          |           |               |                      |                |              | Diethyl phthalate           | 40 ug/mL      |
|            |          |           |               |                      |                |              | Dimethyl phthalate          | 40 ug/mL      |
|            |          |           |               |                      |                |              | Fluoranthene                | 40 ug/mL      |
|            |          |           |               |                      |                |              | Fluorene                    | 40 ug/mL      |

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh

Job No.: 180-43791-1

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

| Reagent ID            | Exp Date | Prep Date | Dilutant Used                 | Reagent Final Volume | Parent Reagent                 |              | Analyte                   | Concentration |        |                        |          |
|-----------------------|----------|-----------|-------------------------------|----------------------|--------------------------------|--------------|---------------------------|---------------|--------|------------------------|----------|
|                       |          |           |                               |                      | Reagent ID                     | Volume Added |                           |               |        |                        |          |
|                       |          |           |                               |                      |                                |              | Hexachlorobenzene         | 40 ug/mL      |        |                        |          |
|                       |          |           |                               |                      |                                |              | Hexachlorobutadiene       | 40 ug/mL      |        |                        |          |
|                       |          |           |                               |                      |                                |              | Hexachlorocyclopentadiene | 40 ug/mL      |        |                        |          |
|                       |          |           |                               |                      |                                |              | Hexachloroethane          | 40 ug/mL      |        |                        |          |
|                       |          |           |                               |                      |                                |              | Hexadecane                | 40 ug/mL      |        |                        |          |
|                       |          |           |                               |                      |                                |              | Indeno[1,2,3-cd]pyrene    | 40 ug/mL      |        |                        |          |
|                       |          |           |                               |                      |                                |              | Isophorone                | 40 ug/mL      |        |                        |          |
|                       |          |           |                               |                      |                                |              | n-Decane                  | 40 ug/mL      |        |                        |          |
|                       |          |           |                               |                      |                                |              | N-Nitrosodi-n-propylamine | 40 ug/mL      |        |                        |          |
|                       |          |           |                               |                      |                                |              | N-Nitrosodimethylamine    | 40 ug/mL      |        |                        |          |
|                       |          |           |                               |                      |                                |              | n-Octadecane              | 40 ug/mL      |        |                        |          |
|                       |          |           |                               |                      |                                |              | Naphthalene               | 40 ug/mL      |        |                        |          |
|                       |          |           |                               |                      |                                |              | Nitrobenzene              | 40 ug/mL      |        |                        |          |
|                       |          |           |                               |                      |                                |              | Pentachlorophenol         | 80 ug/mL      |        |                        |          |
|                       |          |           |                               |                      |                                |              | Phenanthrene              | 40 ug/mL      |        |                        |          |
|                       |          |           |                               |                      |                                |              | Phenol                    | 40 ug/mL      |        |                        |          |
|                       |          |           |                               |                      |                                |              | Pyrene                    | 40 ug/mL      |        |                        |          |
|                       |          |           |                               |                      |                                |              | Pyridine                  | 40 ug/mL      |        |                        |          |
|                       |          |           |                               |                      |                                |              | SVLVstd2_00012            |               | 400 uL | 3,3'-Dichlorobenzidine | 40 ug/mL |
|                       |          |           |                               |                      |                                |              |                           |               |        | Atrazine               | 40 ug/mL |
|                       |          |           |                               |                      |                                |              |                           |               |        | Benzydine              | 40 ug/mL |
|                       |          |           |                               |                      |                                |              |                           |               |        | Caprolactam            | 40 ug/mL |
|                       |          |           |                               |                      |                                |              | SVLVstd5(7)_00001         |               | 400 uL | N-Nitrosodiphenylamine | 40 ug/mL |
| SVLVstd8_00003        |          | 400 uL    | Benzaldehyde                  | 40 ug/mL             |                                |              |                           |               |        |                        |          |
|                       |          |           | Benzoic acid                  | 40 ug/mL             |                                |              |                           |               |        |                        |          |
|                       |          |           | Indene                        | 40 ug/mL             |                                |              |                           |               |        |                        |          |
| SVLVSURRSPK_00003     |          | 160 uL    | 2,4,6-Tribromophenol (Surr)   | 40 ug/mL             |                                |              |                           |               |        |                        |          |
|                       |          |           | 2-Fluorobiphenyl              | 40 ug/mL             |                                |              |                           |               |        |                        |          |
|                       |          |           | 2-Fluorophenol (Surr)         | 40 ug/mL             |                                |              |                           |               |        |                        |          |
|                       |          |           | Nitrobenzene-d5 (Surr)        | 40 ug/mL             |                                |              |                           |               |        |                        |          |
|                       |          |           | Phenol-d5 (Surr)              | 40 ug/mL             |                                |              |                           |               |        |                        |          |
|                       |          |           | Terphenyl-d14 (Surr)          | 40 ug/mL             |                                |              |                           |               |        |                        |          |
| SVNNITROPYROS_00015   |          | 800 uL    | N-Nitrosopyrrolidine          | 40 ug/mL             |                                |              |                           |               |        |                        |          |
| ..sv benzoepyre_00001 | 10/03/18 |           | Absolute, Lot 100313          | (Purchased Reagent)  | Benzo[e]pyrene                 | 1000 ug/mL   |                           |               |        |                        |          |
| ..SV2NAPAMINES_00002  | 06/30/17 |           | Ultra Scientific, Lot CK-1617 | (Purchased Reagent)  | 2-Naphthylamine                | 1000 ug/mL   |                           |               |        |                        |          |
| ..SVLVlist12_00002    | 04/30/15 |           | Restek, Lot A0102912          | (Purchased Reagent)  | 2,3,5,6-Tetrachlorophenol      | 1000 ug/mL   |                           |               |        |                        |          |
|                       |          |           |                               |                      | 2,6-Dichlorophenol             | 1000 ug/mL   |                           |               |        |                        |          |
|                       |          |           |                               |                      | 7,12-Dimethylbenz(a)anthracene | 1000 ug/mL   |                           |               |        |                        |          |
|                       |          |           |                               |                      | Methyl methanesulfonate        | 1000 ug/mL   |                           |               |        |                        |          |
| ..SVLVstd1_00026      | 08/31/15 |           | Restek, Lot A0101615          | (Purchased Reagent)  | 1,1'-Biphenyl                  | 1000 ug/mL   |                           |               |        |                        |          |
|                       |          |           |                               |                      | 1,2,4,5-Tetrachlorobenzene     | 1000 ug/mL   |                           |               |        |                        |          |
|                       |          |           |                               |                      | 1,2,4-Trichlorobenzene         | 1000 ug/mL   |                           |               |        |                        |          |
|                       |          |           |                               |                      | 1,2-Dichlorobenzene            | 1000 ug/mL   |                           |               |        |                        |          |
|                       |          |           |                               |                      | 1,2-Diphenylhydrazine          | 1000 ug/mL   |                           |               |        |                        |          |
|                       |          |           |                               |                      | 1,3-Dichlorobenzene            | 1000 ug/mL   |                           |               |        |                        |          |
|                       |          |           |                               |                      | 1,3-Dinitrobenzene             | 1000 ug/mL   |                           |               |        |                        |          |
|                       |          |           |                               |                      | 1,4-Dichlorobenzene            | 1000 ug/mL   |                           |               |        |                        |          |
|                       |          |           |                               |                      | 1,4-Dioxane                    | 1000 ug/mL   |                           |               |        |                        |          |



REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh

Job No.: 180-43791-1

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

| Reagent ID | Exp Date | Prep Date | Dilutant Used | Reagent Final Volume | Parent Reagent |              | Analyte                      | Concentration |
|------------|----------|-----------|---------------|----------------------|----------------|--------------|------------------------------|---------------|
|            |          |           |               |                      | Reagent ID     | Volume Added |                              |               |
|            |          |           |               |                      |                |              | 1-Methylnaphthalene          | 1000 ug/mL    |
|            |          |           |               |                      |                |              | 2,2'-oxybis[1-chloropropane] | 1000 ug/mL    |
|            |          |           |               |                      |                |              | 2,3,4,6-Tetrachlorophenol    | 1000 ug/mL    |
|            |          |           |               |                      |                |              | 2,4,5-Trichlorophenol        | 1000 ug/mL    |
|            |          |           |               |                      |                |              | 2,4,6-Trichlorophenol        | 1000 ug/mL    |
|            |          |           |               |                      |                |              | 2,4-Dichlorophenol           | 1000 ug/mL    |
|            |          |           |               |                      |                |              | 2,4-Dimethylphenol           | 1000 ug/mL    |
|            |          |           |               |                      |                |              | 2,4-Dinitrophenol            | 2000 ug/mL    |
|            |          |           |               |                      |                |              | 2,4-Dinitrotoluene           | 1000 ug/mL    |
|            |          |           |               |                      |                |              | 2,6-Dinitrotoluene           | 1000 ug/mL    |
|            |          |           |               |                      |                |              | 2-Chloronaphthalene          | 1000 ug/mL    |
|            |          |           |               |                      |                |              | 2-Chlorophenol               | 1000 ug/mL    |
|            |          |           |               |                      |                |              | 2-Methylnaphthalene          | 1000 ug/mL    |
|            |          |           |               |                      |                |              | 2-Methylphenol               | 1000 ug/mL    |
|            |          |           |               |                      |                |              | 2-Nitroaniline               | 1000 ug/mL    |
|            |          |           |               |                      |                |              | 2-Nitrophenol                | 1000 ug/mL    |
|            |          |           |               |                      |                |              | 3-Nitroaniline               | 1000 ug/mL    |
|            |          |           |               |                      |                |              | 4,6-Dinitro-2-methylphenol   | 2000 ug/mL    |
|            |          |           |               |                      |                |              | 4-Bromophenyl phenyl ether   | 1000 ug/mL    |
|            |          |           |               |                      |                |              | 4-Chloro-3-methylphenol      | 1000 ug/mL    |
|            |          |           |               |                      |                |              | 4-Chloroaniline              | 1000 ug/mL    |
|            |          |           |               |                      |                |              | 4-Chlorophenyl phenyl ether  | 1000 ug/mL    |
|            |          |           |               |                      |                |              | 4-Methylphenol               | 1000 ug/mL    |
|            |          |           |               |                      |                |              | 4-Nitroaniline               | 1000 ug/mL    |
|            |          |           |               |                      |                |              | 4-Nitrophenol                | 2000 ug/mL    |
|            |          |           |               |                      |                |              | Acenaphthene                 | 1000 ug/mL    |
|            |          |           |               |                      |                |              | Acenaphthylene               | 1000 ug/mL    |
|            |          |           |               |                      |                |              | Acetophenone                 | 1000 ug/mL    |
|            |          |           |               |                      |                |              | Aniline                      | 1000 ug/mL    |
|            |          |           |               |                      |                |              | Anthracene                   | 1000 ug/mL    |
|            |          |           |               |                      |                |              | Benzo[a]anthracene           | 1000 ug/mL    |
|            |          |           |               |                      |                |              | Benzo[a]pyrene               | 1000 ug/mL    |
|            |          |           |               |                      |                |              | Benzo[b]fluoranthene         | 1000 ug/mL    |
|            |          |           |               |                      |                |              | Benzo[g,h,i]perylene         | 1000 ug/mL    |
|            |          |           |               |                      |                |              | Benzo[k]fluoranthene         | 1000 ug/mL    |
|            |          |           |               |                      |                |              | Benzyl alcohol               | 1000 ug/mL    |
|            |          |           |               |                      |                |              | Bis(2-chloroethoxy)methane   | 1000 ug/mL    |
|            |          |           |               |                      |                |              | Bis(2-chloroethyl)ether      | 1000 ug/mL    |
|            |          |           |               |                      |                |              | Bis(2-ethylhexyl) phthalate  | 1000 ug/mL    |
|            |          |           |               |                      |                |              | Butyl benzyl phthalate       | 1000 ug/mL    |
|            |          |           |               |                      |                |              | Carbazole                    | 1000 ug/mL    |
|            |          |           |               |                      |                |              | Chrysene                     | 1000 ug/mL    |
|            |          |           |               |                      |                |              | Di-n-butyl phthalate         | 1000 ug/mL    |
|            |          |           |               |                      |                |              | Di-n-octyl phthalate         | 1000 ug/mL    |
|            |          |           |               |                      |                |              | Dibenz(a,h)anthracene        | 1000 ug/mL    |
|            |          |           |               |                      |                |              | Dibenzofuran                 | 1000 ug/mL    |
|            |          |           |               |                      |                |              | Diethyl phthalate            | 1000 ug/mL    |
|            |          |           |               |                      |                |              | Dimethyl phthalate           | 1000 ug/mL    |

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh

Job No.: 180-43791-1

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

| Reagent ID               | Exp Date | Prep Date | Dilutant Used        | Reagent Final Volume | Parent Reagent      |              | Analyte                     | Concentration |
|--------------------------|----------|-----------|----------------------|----------------------|---------------------|--------------|-----------------------------|---------------|
|                          |          |           |                      |                      | Reagent ID          | Volume Added |                             |               |
|                          |          |           |                      |                      |                     |              | Fluoranthene                | 1000 ug/mL    |
|                          |          |           |                      |                      |                     |              | Fluorene                    | 1000 ug/mL    |
|                          |          |           |                      |                      |                     |              | Hexachlorobenzene           | 1000 ug/mL    |
|                          |          |           |                      |                      |                     |              | Hexachlorobutadiene         | 1000 ug/mL    |
|                          |          |           |                      |                      |                     |              | Hexachlorocyclopentadiene   | 1000 ug/mL    |
|                          |          |           |                      |                      |                     |              | Hexachloroethane            | 1000 ug/mL    |
|                          |          |           |                      |                      |                     |              | Hexadecane                  | 1000 ug/mL    |
|                          |          |           |                      |                      |                     |              | Indeno[1,2,3-cd]pyrene      | 1000 ug/mL    |
|                          |          |           |                      |                      |                     |              | Isophorone                  | 1000 ug/mL    |
|                          |          |           |                      |                      |                     |              | n-Decane                    | 1000 ug/mL    |
|                          |          |           |                      |                      |                     |              | N-Nitrosodi-n-propylamine   | 1000 ug/mL    |
|                          |          |           |                      |                      |                     |              | N-Nitrosodimethylamine      | 1000 ug/mL    |
|                          |          |           |                      |                      |                     |              | n-Octadecane                | 1000 ug/mL    |
|                          |          |           |                      |                      |                     |              | Naphthalene                 | 1000 ug/mL    |
|                          |          |           |                      |                      |                     |              | Nitrobenzene                | 1000 ug/mL    |
|                          |          |           |                      |                      |                     |              | Pentachlorophenol           | 2000 ug/mL    |
|                          |          |           |                      |                      |                     |              | Phenanthrene                | 1000 ug/mL    |
|                          |          |           |                      |                      |                     |              | Phenol                      | 1000 ug/mL    |
|                          |          |           |                      |                      |                     |              | Pyrene                      | 1000 ug/mL    |
|                          |          |           |                      |                      |                     |              | Pyridine                    | 1000 ug/mL    |
| ..SVLVstd2_00012         | 07/31/15 |           | Restek, Lot A0100824 |                      | (Purchased Reagent) |              | 3,3'-Dichlorobenzidine      | 2000 ug/mL    |
|                          |          |           |                      |                      |                     |              | Atrazine                    | 2000 ug/mL    |
|                          |          |           |                      |                      |                     |              | Benzidine                   | 2000 ug/mL    |
|                          |          |           |                      |                      |                     |              | Caprolactam                 | 2000 ug/mL    |
| ..SVLVstd5(7)_00001      | 02/28/17 |           | Restek, Lot A0101573 |                      | (Purchased Reagent) |              | N-Nitrosodiphenylamine      | 2000 ug/mL    |
| ..SVLVstd8_00003         | 05/31/15 |           | Restek, Lot A0103145 |                      | (Purchased Reagent) |              | Benzaldehyde                | 2000 ug/mL    |
|                          |          |           |                      |                      |                     |              | Benzoic acid                | 2000 ug/mL    |
|                          |          |           |                      |                      |                     |              | Indene                      | 2000 ug/mL    |
| ..SVLVSURRSPK_00003      | 02/28/18 |           | Restek, Lot A093638  |                      | (Purchased Reagent) |              | 2,4,6-Tribromophenol (Surr) | 5000 ug/mL    |
|                          |          |           |                      |                      |                     |              | 2-Fluorobiphenyl            | 5000 ug/mL    |
|                          |          |           |                      |                      |                     |              | 2-Fluorophenol (Surr)       | 5000 ug/mL    |
|                          |          |           |                      |                      |                     |              | Nitrobenzene-d5 (Surr)      | 5000 ug/mL    |
|                          |          |           |                      |                      |                     |              | Phenol-d5 (Surr)            | 5000 ug/mL    |
|                          |          |           |                      |                      |                     |              | Terphenyl-d14 (Surr)        | 5000 ug/mL    |
| ..SVNNITROPYROs_00015    | 06/05/17 |           | absolute, Lot 060514 |                      | (Purchased Reagent) |              | N-Nitrosopyrrolidine        | 1000 ug/mL    |
| <b>SVTAPSTD10i_00105</b> | 05/25/15 | 05/18/15  | MeCl2, Lot 1417620   | 1 mL                 | SVTAPITSTCKi_00008  | 125 uL       | Acenaphthene                | 5 ug/mL       |
|                          |          |           |                      |                      |                     |              | Acenaphthylene              | 5 ug/mL       |
|                          |          |           |                      |                      |                     |              | Anthracene                  | 5 ug/mL       |
|                          |          |           |                      |                      |                     |              | Benzo[a]anthracene          | 5 ug/mL       |
|                          |          |           |                      |                      |                     |              | Benzo[a]pyrene              | 5 ug/mL       |
|                          |          |           |                      |                      |                     |              | Benzo[b]fluoranthene        | 5 ug/mL       |
|                          |          |           |                      |                      |                     |              | Benzo[g,h,i]perylene        | 5 ug/mL       |
|                          |          |           |                      |                      |                     |              | Benzo[k]fluoranthene        | 5 ug/mL       |
|                          |          |           |                      |                      |                     |              | Bis(2-ethylhexyl) phthalate | 5 ug/mL       |
|                          |          |           |                      |                      |                     |              | Chrysene                    | 5 ug/mL       |
|                          |          |           |                      |                      |                     |              | Dibenz(a,h)anthracene       | 5 ug/mL       |
|                          |          |           |                      |                      |                     |              | Fluoranthene                | 5 ug/mL       |

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh

Job No.: 180-43791-1

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

| Reagent ID          | Exp Date | Prep Date | Dilutant Used        | Reagent Final Volume | Parent Reagent    |                     | Analyte                     | Concentration |
|---------------------|----------|-----------|----------------------|----------------------|-------------------|---------------------|-----------------------------|---------------|
|                     |          |           |                      |                      | Reagent ID        | Volume Added        |                             |               |
|                     |          |           |                      |                      |                   |                     | Fluorene                    | 5 ug/mL       |
|                     |          |           |                      |                      |                   |                     | Indeno[1,2,3-cd]pyrene      | 5 ug/mL       |
|                     |          |           |                      |                      |                   |                     | Naphthalene                 | 5 ug/mL       |
|                     |          |           |                      |                      |                   |                     | Phenanthrene                | 5 ug/mL       |
|                     |          |           |                      |                      |                   |                     | Pyrene                      | 5 ug/mL       |
|                     |          |           |                      |                      |                   |                     | 2,4,6-Tribromophenol (Surr) | 5 ug/mL       |
|                     |          |           |                      |                      |                   |                     | 2-Fluorobiphenyl            | 5 ug/mL       |
|                     |          |           |                      |                      |                   |                     | 2-Fluorophenol (Surr)       | 5 ug/mL       |
|                     |          |           |                      |                      |                   |                     | Nitrobenzene-d5 (Surr)      | 5 ug/mL       |
|                     |          |           |                      |                      |                   |                     | Phenol-d5 (Surr)            | 5 ug/mL       |
|                     |          |           |                      |                      |                   |                     | Terphenyl-d14 (Surr)        | 5 ug/mL       |
| .SVTAPITSTCKi_00008 | 05/31/15 | 05/01/15  | MeCl2, Lot 1417620   | 20 mL                | SVLVstd1_00026    | 800 uL              | Acenaphthene                | 40 ug/mL      |
|                     |          |           |                      |                      |                   |                     | Acenaphthylene              | 40 ug/mL      |
|                     |          |           |                      |                      |                   |                     | Anthracene                  | 40 ug/mL      |
|                     |          |           |                      |                      |                   |                     | Benzo[a]anthracene          | 40 ug/mL      |
|                     |          |           |                      |                      |                   |                     | Benzo[a]pyrene              | 40 ug/mL      |
|                     |          |           |                      |                      |                   |                     | Benzo[b]fluoranthene        | 40 ug/mL      |
|                     |          |           |                      |                      |                   |                     | Benzo[g,h,i]perylene        | 40 ug/mL      |
|                     |          |           |                      |                      |                   |                     | Benzo[k]fluoranthene        | 40 ug/mL      |
|                     |          |           |                      |                      |                   |                     | Bis(2-ethylhexyl) phthalate | 40 ug/mL      |
|                     |          |           |                      |                      |                   |                     | Chrysene                    | 40 ug/mL      |
|                     |          |           |                      |                      |                   |                     | Dibenz(a,h)anthracene       | 40 ug/mL      |
|                     |          |           |                      |                      |                   |                     | Fluoranthene                | 40 ug/mL      |
|                     |          |           |                      |                      |                   |                     | Fluorene                    | 40 ug/mL      |
|                     |          |           |                      |                      |                   |                     | Indeno[1,2,3-cd]pyrene      | 40 ug/mL      |
|                     |          |           |                      |                      |                   |                     | Naphthalene                 | 40 ug/mL      |
|                     |          |           |                      |                      |                   |                     | Phenanthrene                | 40 ug/mL      |
|                     |          |           |                      |                      |                   |                     | Pyrene                      | 40 ug/mL      |
|                     |          |           |                      |                      | SVLVSURRSPK_00003 | 160 uL              | 2,4,6-Tribromophenol (Surr) | 40 ug/mL      |
|                     |          |           |                      |                      |                   |                     | 2-Fluorobiphenyl            | 40 ug/mL      |
|                     |          |           |                      |                      |                   |                     | 2-Fluorophenol (Surr)       | 40 ug/mL      |
|                     |          |           |                      |                      |                   |                     | Nitrobenzene-d5 (Surr)      | 40 ug/mL      |
|                     |          |           |                      |                      |                   |                     | Phenol-d5 (Surr)            | 40 ug/mL      |
|                     |          |           |                      |                      |                   |                     | Terphenyl-d14 (Surr)        | 40 ug/mL      |
| ..SVLVstd1_00026    | 08/31/15 |           | Restek, Lot A0101615 |                      |                   | (Purchased Reagent) | Acenaphthene                | 1000 ug/mL    |
|                     |          |           |                      |                      |                   |                     | Acenaphthylene              | 1000 ug/mL    |
|                     |          |           |                      |                      |                   |                     | Anthracene                  | 1000 ug/mL    |
|                     |          |           |                      |                      |                   |                     | Benzo[a]anthracene          | 1000 ug/mL    |
|                     |          |           |                      |                      |                   |                     | Benzo[a]pyrene              | 1000 ug/mL    |
|                     |          |           |                      |                      |                   |                     | Benzo[b]fluoranthene        | 1000 ug/mL    |
|                     |          |           |                      |                      |                   |                     | Benzo[g,h,i]perylene        | 1000 ug/mL    |
|                     |          |           |                      |                      |                   |                     | Benzo[k]fluoranthene        | 1000 ug/mL    |
|                     |          |           |                      |                      |                   |                     | Bis(2-ethylhexyl) phthalate | 1000 ug/mL    |
|                     |          |           |                      |                      |                   |                     | Chrysene                    | 1000 ug/mL    |
|                     |          |           |                      |                      |                   |                     | Dibenz(a,h)anthracene       | 1000 ug/mL    |
|                     |          |           |                      |                      |                   |                     | Fluoranthene                | 1000 ug/mL    |
|                     |          |           |                      |                      |                   |                     | Fluorene                    | 1000 ug/mL    |
|                     |          |           |                      |                      |                   |                     | Indeno[1,2,3-cd]pyrene      | 1000 ug/mL    |

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh

Job No.: 180-43791-1

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

| Reagent ID          | Exp Date | Prep Date | Dilutant Used       | Reagent Final Volume | Parent Reagent                 |              | Analyte                     | Concentration |                           |         |
|---------------------|----------|-----------|---------------------|----------------------|--------------------------------|--------------|-----------------------------|---------------|---------------------------|---------|
|                     |          |           |                     |                      | Reagent ID                     | Volume Added |                             |               |                           |         |
| ..SVLVSURRSPK_00003 | 02/28/18 |           | Restek, Lot A093638 |                      | (Purchased Reagent)            |              | Naphthalene                 | 1000 ug/mL    |                           |         |
|                     |          |           |                     |                      |                                |              | Phenanthrene                | 1000 ug/mL    |                           |         |
|                     |          |           |                     |                      |                                |              | Pyrene                      | 1000 ug/mL    |                           |         |
|                     |          |           |                     |                      |                                |              | 2,4,6-Tribromophenol (Surr) | 5000 ug/mL    |                           |         |
|                     |          |           |                     |                      |                                |              | 2-Fluorobiphenyl            | 5000 ug/mL    |                           |         |
|                     |          |           |                     |                      |                                |              | 2-Fluorophenol (Surr)       | 5000 ug/mL    |                           |         |
|                     |          |           |                     |                      |                                |              | Nitrobenzene-d5 (Surr)      | 5000 ug/mL    |                           |         |
|                     |          |           |                     |                      |                                |              | Phenol-d5 (Surr)            | 5000 ug/mL    |                           |         |
| SVTAPSTD2.0i_00005  | 02/21/15 | 07/21/14  | MeCl2, Lot 1053215  | 1 mL                 | SVTAPITINTRNi_00005            | 10 uL        | 1,4-Dichlorobenzene-d4      | 4 ug/mL       |                           |         |
|                     |          |           |                     |                      |                                |              | Acenaphthene-d10            | 4 ug/mL       |                           |         |
|                     |          |           |                     |                      |                                |              | Chrysene-d12                | 4 ug/mL       |                           |         |
|                     |          |           |                     |                      |                                |              | Naphthalene-d8              | 4 ug/mL       |                           |         |
|                     |          |           |                     |                      |                                |              | Perylene-d12                | 4 ug/mL       |                           |         |
|                     |          |           |                     |                      |                                |              | Phenanthrene-d10            | 4 ug/mL       |                           |         |
|                     |          |           |                     |                      |                                |              | SVTAPITSTCKi_00004          | 25 uL         | Benzo[e]pyrene            | 1 ug/mL |
|                     |          |           |                     |                      |                                |              |                             |               | 2-Naphthylamine           | 1 ug/mL |
|                     |          |           |                     |                      |                                |              |                             |               | 2,3,5,6-Tetrachlorophenol | 1 ug/mL |
|                     |          |           |                     |                      |                                |              |                             |               | 2,6-Dichlorophenol        | 1 ug/mL |
|                     |          |           |                     |                      | 7,12-Dimethylbenz(a)anthracene | 1 ug/mL      |                             |               |                           |         |
|                     |          |           |                     |                      | Methyl methanesulfonate        | 1 ug/mL      |                             |               |                           |         |
|                     |          |           |                     |                      | 1,1'-Biphenyl                  | 1 ug/mL      |                             |               |                           |         |
|                     |          |           |                     |                      | 1,2,4,5-Tetrachlorobenzene     | 1 ug/mL      |                             |               |                           |         |
|                     |          |           |                     |                      | 1,2,4-Trichlorobenzene         | 1 ug/mL      |                             |               |                           |         |
|                     |          |           |                     |                      | 1,2-Dichlorobenzene            | 1 ug/mL      |                             |               |                           |         |
|                     |          |           |                     |                      | 1,2-Diphenylhydrazine          | 1 ug/mL      |                             |               |                           |         |
|                     |          |           |                     |                      | 1,3-Dichlorobenzene            | 1 ug/mL      |                             |               |                           |         |
|                     |          |           |                     |                      | 1,3-Dinitrobenzene             | 1 ug/mL      |                             |               |                           |         |
|                     |          |           |                     |                      | 1,4-Dichlorobenzene            | 1 ug/mL      |                             |               |                           |         |
|                     |          |           |                     |                      | 1,4-Dioxane                    | 1 ug/mL      |                             |               |                           |         |
|                     |          |           |                     |                      | 1-Methylnaphthalene            | 1 ug/mL      |                             |               |                           |         |
|                     |          |           |                     |                      | 2,2'-oxybis[1-chloropropane]   | 1 ug/mL      |                             |               |                           |         |
|                     |          |           |                     |                      | 2,3,4,6-Tetrachlorophenol      | 1 ug/mL      |                             |               |                           |         |
|                     |          |           |                     |                      | 2,4,5-Trichlorophenol          | 1 ug/mL      |                             |               |                           |         |
|                     |          |           |                     |                      | 2,4,6-Trichlorophenol          | 1 ug/mL      |                             |               |                           |         |
|                     |          |           |                     |                      | 2,4-Dichlorophenol             | 1 ug/mL      |                             |               |                           |         |
|                     |          |           |                     |                      | 2,4-Dimethylphenol             | 1 ug/mL      |                             |               |                           |         |
|                     |          |           |                     |                      | 2,4-Dinitrophenol              | 2 ug/mL      |                             |               |                           |         |
|                     |          |           |                     |                      | 2,4-Dinitrotoluene             | 1 ug/mL      |                             |               |                           |         |
|                     |          |           |                     |                      | 2,6-Dinitrotoluene             | 1 ug/mL      |                             |               |                           |         |
|                     |          |           |                     |                      | 2-Chloronaphthalene            | 1 ug/mL      |                             |               |                           |         |
|                     |          |           |                     |                      | 2-Chlorophenol                 | 1 ug/mL      |                             |               |                           |         |
| 2-Methylnaphthalene | 1 ug/mL  |           |                     |                      |                                |              |                             |               |                           |         |
| 2-Methylphenol      | 1 ug/mL  |           |                     |                      |                                |              |                             |               |                           |         |
| 2-Nitroaniline      | 1 ug/mL  |           |                     |                      |                                |              |                             |               |                           |         |
| 2-Nitrophenol       | 1 ug/mL  |           |                     |                      |                                |              |                             |               |                           |         |
| 3-Nitroaniline      | 1 ug/mL  |           |                     |                      |                                |              |                             |               |                           |         |

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh

Job No.: 180-43791-1

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

| Reagent ID | Exp Date | Prep Date | Dilutant Used | Reagent Final Volume | Parent Reagent |              | Analyte                      | Concentration |
|------------|----------|-----------|---------------|----------------------|----------------|--------------|------------------------------|---------------|
|            |          |           |               |                      | Reagent ID     | Volume Added |                              |               |
|            |          |           |               |                      |                |              | 4,6-Dinitro-2-methylphenol   | 2 ug/mL       |
|            |          |           |               |                      |                |              | 4-Bromophenyl phenyl ether   | 1 ug/mL       |
|            |          |           |               |                      |                |              | 4-Chloro-3-methylphenol      | 1 ug/mL       |
|            |          |           |               |                      |                |              | 4-Chloroaniline              | 1 ug/mL       |
|            |          |           |               |                      |                |              | 4-Chlorophenyl phenyl ether  | 1 ug/mL       |
|            |          |           |               |                      |                |              | 4-Methylphenol               | 1 ug/mL       |
|            |          |           |               |                      |                |              | 4-Nitroaniline               | 1 ug/mL       |
|            |          |           |               |                      |                |              | 4-Nitrophenol                | 2 ug/mL       |
|            |          |           |               |                      |                |              | Acenaphthene                 | 1 ug/mL       |
|            |          |           |               |                      |                |              | Acenaphthylene               | 1 ug/mL       |
|            |          |           |               |                      |                |              | Acetophenone                 | 1 ug/mL       |
|            |          |           |               |                      |                |              | Aniline                      | 1 ug/mL       |
|            |          |           |               |                      |                |              | Anthracene                   | 1 ug/mL       |
|            |          |           |               |                      |                |              | Benzo[a]anthracene           | 1 ug/mL       |
|            |          |           |               |                      |                |              | Benzo[a]pyrene               | 1 ug/mL       |
|            |          |           |               |                      |                |              | Benzo[b]fluoranthene         | 1 ug/mL       |
|            |          |           |               |                      |                |              | Benzo[g,h,i]perylene         | 1 ug/mL       |
|            |          |           |               |                      |                |              | Benzo[k]fluoranthene         | 1 ug/mL       |
|            |          |           |               |                      |                |              | Benzyl alcohol               | 1 ug/mL       |
|            |          |           |               |                      |                |              | Bis (2-chloroethoxy)methane  | 1 ug/mL       |
|            |          |           |               |                      |                |              | Bis (2-chloroethyl) ether    | 1 ug/mL       |
|            |          |           |               |                      |                |              | Bis (2-ethylhexyl) phthalate | 1 ug/mL       |
|            |          |           |               |                      |                |              | Butyl benzyl phthalate       | 1 ug/mL       |
|            |          |           |               |                      |                |              | Carbazole                    | 1 ug/mL       |
|            |          |           |               |                      |                |              | Chrysene                     | 1 ug/mL       |
|            |          |           |               |                      |                |              | Di-n-butyl phthalate         | 1 ug/mL       |
|            |          |           |               |                      |                |              | Di-n-octyl phthalate         | 1 ug/mL       |
|            |          |           |               |                      |                |              | Dibenz (a,h) anthracene      | 1 ug/mL       |
|            |          |           |               |                      |                |              | Dibenzofuran                 | 1 ug/mL       |
|            |          |           |               |                      |                |              | Diethyl phthalate            | 1 ug/mL       |
|            |          |           |               |                      |                |              | Dimethyl phthalate           | 1 ug/mL       |
|            |          |           |               |                      |                |              | Fluoranthene                 | 1 ug/mL       |
|            |          |           |               |                      |                |              | Fluorene                     | 1 ug/mL       |
|            |          |           |               |                      |                |              | Hexachlorobenzene            | 1 ug/mL       |
|            |          |           |               |                      |                |              | Hexachlorobutadiene          | 1 ug/mL       |
|            |          |           |               |                      |                |              | Hexachlorocyclopentadiene    | 1 ug/mL       |
|            |          |           |               |                      |                |              | Hexachloroethane             | 1 ug/mL       |
|            |          |           |               |                      |                |              | Hexadecane                   | 1 ug/mL       |
|            |          |           |               |                      |                |              | Indeno[1,2,3-cd]pyrene       | 1 ug/mL       |
|            |          |           |               |                      |                |              | Isophorone                   | 1 ug/mL       |
|            |          |           |               |                      |                |              | n-Decane                     | 1 ug/mL       |
|            |          |           |               |                      |                |              | N-Nitrosodi-n-propylamine    | 1 ug/mL       |
|            |          |           |               |                      |                |              | N-Nitrosodimethylamine       | 1 ug/mL       |
|            |          |           |               |                      |                |              | n-Octadecane                 | 1 ug/mL       |
|            |          |           |               |                      |                |              | Naphthalene                  | 1 ug/mL       |
|            |          |           |               |                      |                |              | Nitrobenzene                 | 1 ug/mL       |
|            |          |           |               |                      |                |              | Pentachlorophenol            | 2 ug/mL       |
|            |          |           |               |                      |                |              | Phenanthrene                 | 1 ug/mL       |

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh

Job No.: 180-43791-1

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

| Reagent ID           | Exp Date | Prep Date | Dilutant Used       | Reagent Final Volume | Parent Reagent      |                     | Analyte                        | Concentration |
|----------------------|----------|-----------|---------------------|----------------------|---------------------|---------------------|--------------------------------|---------------|
|                      |          |           |                     |                      | Reagent ID          | Volume Added        |                                |               |
|                      |          |           |                     |                      |                     |                     | Phenol                         | 1 ug/mL       |
|                      |          |           |                     |                      |                     |                     | Pyrene                         | 1 ug/mL       |
|                      |          |           |                     |                      |                     |                     | Pyridine                       | 1 ug/mL       |
|                      |          |           |                     |                      |                     |                     | 3,3'-Dichlorobenzidine         | 1 ug/mL       |
|                      |          |           |                     |                      |                     |                     | Atrazine                       | 1 ug/mL       |
|                      |          |           |                     |                      |                     |                     | Benzidine                      | 1 ug/mL       |
|                      |          |           |                     |                      |                     |                     | Caprolactam                    | 1 ug/mL       |
|                      |          |           |                     |                      |                     |                     | N-Nitrosodiphenylamine         | 1 ug/mL       |
|                      |          |           |                     |                      |                     |                     | Benzaldehyde                   | 1 ug/mL       |
|                      |          |           |                     |                      |                     |                     | Benzoic acid                   | 1 ug/mL       |
|                      |          |           |                     |                      |                     |                     | Indene                         | 1 ug/mL       |
|                      |          |           |                     |                      |                     |                     | 2,4,6-Tribromophenol (Surr)    | 1 ug/mL       |
|                      |          |           |                     |                      |                     |                     | 2-Fluorobiphenyl               | 1 ug/mL       |
|                      |          |           |                     |                      |                     |                     | 2-Fluorophenol (Surr)          | 1 ug/mL       |
|                      |          |           |                     |                      |                     |                     | Nitrobenzene-d5 (Surr)         | 1 ug/mL       |
|                      |          |           |                     |                      |                     |                     | Phenol-d5 (Surr)               | 1 ug/mL       |
|                      |          |           |                     |                      |                     |                     | Terphenyl-d14 (Surr)           | 1 ug/mL       |
|                      |          |           |                     |                      |                     |                     | N-Nitrosopyrrolidine           | 1 ug/mL       |
| .SVTAPITINTRNi_00005 | 05/07/15 | 05/07/14  | MeCl2, Lot 1000447  | 25 mL                | SVLVIntstd_00007    | 5000 uL             | 1,4-Dichlorobenzene-d4         | 400 ug/mL     |
|                      |          |           |                     |                      |                     |                     | Acenaphthene-d10               | 400 ug/mL     |
|                      |          |           |                     |                      |                     |                     | Chrysene-d12                   | 400 ug/mL     |
|                      |          |           |                     |                      |                     |                     | Naphthalene-d8                 | 400 ug/mL     |
|                      |          |           |                     |                      |                     |                     | Perylene-d12                   | 400 ug/mL     |
|                      |          |           |                     |                      |                     |                     | Phenanthrene-d10               | 400 ug/mL     |
| ..SVLVIntstd_00007   | 02/28/18 |           | Restek, Lot A093676 |                      |                     | (Purchased Reagent) | 1,4-Dichlorobenzene-d4         | 2000 ug/mL    |
|                      |          |           |                     |                      |                     |                     | Acenaphthene-d10               | 2000 ug/mL    |
|                      |          |           |                     |                      |                     |                     | Chrysene-d12                   | 2000 ug/mL    |
|                      |          |           |                     |                      |                     |                     | Naphthalene-d8                 | 2000 ug/mL    |
|                      |          |           |                     |                      |                     |                     | Perylene-d12                   | 2000 ug/mL    |
|                      |          |           |                     |                      |                     |                     | Phenanthrene-d10               | 2000 ug/mL    |
| .SVTAPITSTCKi_00004  | 02/21/15 | 07/21/14  | MeCl2, Lot 1053215  | 20 mL                | sv benzoepyre 00001 | 800 uL              | Benzo[e]pyrene                 | 40 ug/mL      |
|                      |          |           |                     |                      | SV2NAPAMINEs_00002  | 800 uL              | 2-Naphthylamine                | 40 ug/mL      |
|                      |          |           |                     |                      | SVLVlist12_00002    | 800 uL              | 2,3,5,6-Tetrachlorophenol      | 40 ug/mL      |
|                      |          |           |                     |                      |                     |                     | 2,6-Dichlorophenol             | 40 ug/mL      |
|                      |          |           |                     |                      |                     |                     | 7,12-Dimethylbenz(a)anthracene | 40 ug/mL      |
|                      |          |           |                     |                      |                     |                     | Methyl methanesulfonate        | 40 ug/mL      |
|                      |          |           |                     |                      | SVLVstd1_00026      | 800 uL              | 1,1'-Biphenyl                  | 40 ug/mL      |
|                      |          |           |                     |                      |                     |                     | 1,2,4,5-Tetrachlorobenzene     | 40 ug/mL      |
|                      |          |           |                     |                      |                     |                     | 1,2,4-Trichlorobenzene         | 40 ug/mL      |
|                      |          |           |                     |                      |                     |                     | 1,2-Dichlorobenzene            | 40 ug/mL      |
|                      |          |           |                     |                      |                     |                     | 1,2-Diphenylhydrazine          | 40 ug/mL      |
|                      |          |           |                     |                      |                     |                     | 1,3-Dichlorobenzene            | 40 ug/mL      |
|                      |          |           |                     |                      |                     |                     | 1,3-Dinitrobenzene             | 40 ug/mL      |
|                      |          |           |                     |                      |                     |                     | 1,4-Dichlorobenzene            | 40 ug/mL      |
|                      |          |           |                     |                      |                     |                     | 1,4-Dioxane                    | 40 ug/mL      |
|                      |          |           |                     |                      |                     |                     | 1-Methylnaphthalene            | 40 ug/mL      |
|                      |          |           |                     |                      |                     |                     | 2,2'-oxybis[1-chloropropane]   | 40 ug/mL      |
|                      |          |           |                     |                      |                     |                     | 2,3,4,6-Tetrachlorophenol      | 40 ug/mL      |

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh

Job No.: 180-43791-1

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

| Reagent ID | Exp Date | Prep Date | Dilutant Used | Reagent Final Volume | Parent Reagent |              | Analyte                      | Concentration |
|------------|----------|-----------|---------------|----------------------|----------------|--------------|------------------------------|---------------|
|            |          |           |               |                      | Reagent ID     | Volume Added |                              |               |
|            |          |           |               |                      |                |              | 2,4,5-Trichlorophenol        | 40 ug/mL      |
|            |          |           |               |                      |                |              | 2,4,6-Trichlorophenol        | 40 ug/mL      |
|            |          |           |               |                      |                |              | 2,4-Dichlorophenol           | 40 ug/mL      |
|            |          |           |               |                      |                |              | 2,4-Dimethylphenol           | 40 ug/mL      |
|            |          |           |               |                      |                |              | 2,4-Dinitrophenol            | 80 ug/mL      |
|            |          |           |               |                      |                |              | 2,4-Dinitrotoluene           | 40 ug/mL      |
|            |          |           |               |                      |                |              | 2,6-Dinitrotoluene           | 40 ug/mL      |
|            |          |           |               |                      |                |              | 2-Chloronaphthalene          | 40 ug/mL      |
|            |          |           |               |                      |                |              | 2-Chlorophenol               | 40 ug/mL      |
|            |          |           |               |                      |                |              | 2-Methylnaphthalene          | 40 ug/mL      |
|            |          |           |               |                      |                |              | 2-Methylphenol               | 40 ug/mL      |
|            |          |           |               |                      |                |              | 2-Nitroaniline               | 40 ug/mL      |
|            |          |           |               |                      |                |              | 2-Nitrophenol                | 40 ug/mL      |
|            |          |           |               |                      |                |              | 3-Nitroaniline               | 40 ug/mL      |
|            |          |           |               |                      |                |              | 4,6-Dinitro-2-methylphenol   | 80 ug/mL      |
|            |          |           |               |                      |                |              | 4-Bromophenyl phenyl ether   | 40 ug/mL      |
|            |          |           |               |                      |                |              | 4-Chloro-3-methylphenol      | 40 ug/mL      |
|            |          |           |               |                      |                |              | 4-Chloroaniline              | 40 ug/mL      |
|            |          |           |               |                      |                |              | 4-Chlorophenyl phenyl ether  | 40 ug/mL      |
|            |          |           |               |                      |                |              | 4-Methylphenol               | 40 ug/mL      |
|            |          |           |               |                      |                |              | 4-Nitroaniline               | 40 ug/mL      |
|            |          |           |               |                      |                |              | 4-Nitrophenol                | 80 ug/mL      |
|            |          |           |               |                      |                |              | Acenaphthene                 | 40 ug/mL      |
|            |          |           |               |                      |                |              | Acenaphthylene               | 40 ug/mL      |
|            |          |           |               |                      |                |              | Acetophenone                 | 40 ug/mL      |
|            |          |           |               |                      |                |              | Aniline                      | 40 ug/mL      |
|            |          |           |               |                      |                |              | Anthracene                   | 40 ug/mL      |
|            |          |           |               |                      |                |              | Benzo[a]anthracene           | 40 ug/mL      |
|            |          |           |               |                      |                |              | Benzo[a]pyrene               | 40 ug/mL      |
|            |          |           |               |                      |                |              | Benzo[b]fluoranthene         | 40 ug/mL      |
|            |          |           |               |                      |                |              | Benzo[g,h,i]perylene         | 40 ug/mL      |
|            |          |           |               |                      |                |              | Benzo[k]fluoranthene         | 40 ug/mL      |
|            |          |           |               |                      |                |              | Benzyl alcohol               | 40 ug/mL      |
|            |          |           |               |                      |                |              | Bis (2-chloroethoxy)methane  | 40 ug/mL      |
|            |          |           |               |                      |                |              | Bis (2-chloroethyl) ether    | 40 ug/mL      |
|            |          |           |               |                      |                |              | Bis (2-ethylhexyl) phthalate | 40 ug/mL      |
|            |          |           |               |                      |                |              | Butyl benzyl phthalate       | 40 ug/mL      |
|            |          |           |               |                      |                |              | Carbazole                    | 40 ug/mL      |
|            |          |           |               |                      |                |              | Chrysene                     | 40 ug/mL      |
|            |          |           |               |                      |                |              | Di-n-butyl phthalate         | 40 ug/mL      |
|            |          |           |               |                      |                |              | Di-n-octyl phthalate         | 40 ug/mL      |
|            |          |           |               |                      |                |              | Dibenz (a,h) anthracene      | 40 ug/mL      |
|            |          |           |               |                      |                |              | Dibenzofuran                 | 40 ug/mL      |
|            |          |           |               |                      |                |              | Diethyl phthalate            | 40 ug/mL      |
|            |          |           |               |                      |                |              | Dimethyl phthalate           | 40 ug/mL      |
|            |          |           |               |                      |                |              | Fluoranthene                 | 40 ug/mL      |
|            |          |           |               |                      |                |              | Fluorene                     | 40 ug/mL      |
|            |          |           |               |                      |                |              | Hexachlorobenzene            | 40 ug/mL      |

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh

Job No.: 180-43791-1

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

| Reagent ID            | Exp Date | Prep Date | Dilutant Used                 | Reagent Final Volume | Parent Reagent      |                     | Analyte                        | Concentration |
|-----------------------|----------|-----------|-------------------------------|----------------------|---------------------|---------------------|--------------------------------|---------------|
|                       |          |           |                               |                      | Reagent ID          | Volume Added        |                                |               |
|                       |          |           |                               |                      |                     |                     | Hexachlorobutadiene            | 40 ug/mL      |
|                       |          |           |                               |                      |                     |                     | Hexachlorocyclopentadiene      | 40 ug/mL      |
|                       |          |           |                               |                      |                     |                     | Hexachloroethane               | 40 ug/mL      |
|                       |          |           |                               |                      |                     |                     | Hexadecane                     | 40 ug/mL      |
|                       |          |           |                               |                      |                     |                     | Indeno[1,2,3-cd]pyrene         | 40 ug/mL      |
|                       |          |           |                               |                      |                     |                     | Isophorone                     | 40 ug/mL      |
|                       |          |           |                               |                      |                     |                     | n-Decane                       | 40 ug/mL      |
|                       |          |           |                               |                      |                     |                     | N-Nitrosodi-n-propylamine      | 40 ug/mL      |
|                       |          |           |                               |                      |                     |                     | N-Nitrosodimethylamine         | 40 ug/mL      |
|                       |          |           |                               |                      |                     |                     | n-Octadecane                   | 40 ug/mL      |
|                       |          |           |                               |                      |                     |                     | Naphthalene                    | 40 ug/mL      |
|                       |          |           |                               |                      |                     |                     | Nitrobenzene                   | 40 ug/mL      |
|                       |          |           |                               |                      |                     |                     | Pentachlorophenol              | 80 ug/mL      |
|                       |          |           |                               |                      |                     |                     | Phenanthrene                   | 40 ug/mL      |
|                       |          |           |                               |                      |                     |                     | Phenol                         | 40 ug/mL      |
|                       |          |           |                               |                      |                     |                     | Pyrene                         | 40 ug/mL      |
|                       |          |           |                               |                      |                     |                     | Pyridine                       | 40 ug/mL      |
|                       |          |           |                               |                      | SVLVstd2_00012      | 400 uL              | 3,3'-Dichlorobenzidine         | 40 ug/mL      |
|                       |          |           |                               |                      |                     |                     | Atrazine                       | 40 ug/mL      |
|                       |          |           |                               |                      |                     |                     | Benzidine                      | 40 ug/mL      |
|                       |          |           |                               |                      |                     |                     | Caprolactam                    | 40 ug/mL      |
|                       |          |           |                               |                      | SVLVstd5(7)_00001   | 400 uL              | N-Nitrosodiphenylamine         | 40 ug/mL      |
|                       |          |           |                               |                      | SVLVstd8_00003      | 400 uL              | Benzaldehyde                   | 40 ug/mL      |
|                       |          |           |                               |                      |                     |                     | Benzoic acid                   | 40 ug/mL      |
|                       |          |           |                               |                      |                     |                     | Indene                         | 40 ug/mL      |
|                       |          |           |                               |                      | SVLVSURRSPK_00003   | 160 uL              | 2,4,6-Tribromophenol (Surr)    | 40 ug/mL      |
|                       |          |           |                               |                      |                     |                     | 2-Fluorobiphenyl               | 40 ug/mL      |
|                       |          |           |                               |                      |                     |                     | 2-Fluorophenol (Surr)          | 40 ug/mL      |
|                       |          |           |                               |                      |                     |                     | Nitrobenzene-d5 (Surr)         | 40 ug/mL      |
|                       |          |           |                               |                      |                     |                     | Phenol-d5 (Surr)               | 40 ug/mL      |
|                       |          |           |                               |                      |                     |                     | Terphenyl-d14 (Surr)           | 40 ug/mL      |
|                       |          |           |                               |                      | SVNNITROPYROs_00015 | 800 uL              | N-Nitrosopyrrolidine           | 40 ug/mL      |
| ..sv benzoepyre 00001 | 10/03/18 |           | Absolute, Lot 100313          |                      |                     |                     | Benzo[e]pyrene                 | 1000 ug/mL    |
| ..SV2NAPAMINES 00002  | 06/30/17 |           | Ultra Scientific, Lot Ck-1617 |                      |                     | (Purchased Reagent) | 2-Naphthylamine                | 1000 ug/mL    |
| ..SVLVlist12_00002    | 04/30/15 |           | Restek, Lot A0102912          |                      |                     | (Purchased Reagent) | 2,3,5,6-Tetrachlorophenol      | 1000 ug/mL    |
|                       |          |           |                               |                      |                     |                     | 2,6-Dichlorophenol             | 1000 ug/mL    |
|                       |          |           |                               |                      |                     |                     | 7,12-Dimethylbenz(a)anthracene | 1000 ug/mL    |
|                       |          |           |                               |                      |                     |                     | Methyl methanesulfonate        | 1000 ug/mL    |
| ..SVLVstd1_00026      | 08/31/15 |           | Restek, Lot A0101615          |                      |                     | (Purchased Reagent) | 1,1'-Biphenyl                  | 1000 ug/mL    |
|                       |          |           |                               |                      |                     |                     | 1,2,4,5-Tetrachlorobenzene     | 1000 ug/mL    |
|                       |          |           |                               |                      |                     |                     | 1,2,4-Trichlorobenzene         | 1000 ug/mL    |
|                       |          |           |                               |                      |                     |                     | 1,2-Dichlorobenzene            | 1000 ug/mL    |
|                       |          |           |                               |                      |                     |                     | 1,2-Diphenylhydrazine          | 1000 ug/mL    |
|                       |          |           |                               |                      |                     |                     | 1,3-Dichlorobenzene            | 1000 ug/mL    |
|                       |          |           |                               |                      |                     |                     | 1,3-Dinitrobenzene             | 1000 ug/mL    |
|                       |          |           |                               |                      |                     |                     | 1,4-Dichlorobenzene            | 1000 ug/mL    |
|                       |          |           |                               |                      |                     |                     | 1,4-Dioxane                    | 1000 ug/mL    |
|                       |          |           |                               |                      |                     |                     | 1-Methylnaphthalene            | 1000 ug/mL    |



REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh

Job No.: 180-43791-1

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

| Reagent ID | Exp Date | Prep Date | Dilutant Used | Reagent Final Volume | Parent Reagent |              | Analyte                      | Concentration |
|------------|----------|-----------|---------------|----------------------|----------------|--------------|------------------------------|---------------|
|            |          |           |               |                      | Reagent ID     | Volume Added |                              |               |
|            |          |           |               |                      |                |              | 2,2'-oxybis[1-chloropropane] | 1000 ug/mL    |
|            |          |           |               |                      |                |              | 2,3,4,6-Tetrachlorophenol    | 1000 ug/mL    |
|            |          |           |               |                      |                |              | 2,4,5-Trichlorophenol        | 1000 ug/mL    |
|            |          |           |               |                      |                |              | 2,4,6-Trichlorophenol        | 1000 ug/mL    |
|            |          |           |               |                      |                |              | 2,4-Dichlorophenol           | 1000 ug/mL    |
|            |          |           |               |                      |                |              | 2,4-Dimethylphenol           | 1000 ug/mL    |
|            |          |           |               |                      |                |              | 2,4-Dinitrophenol            | 2000 ug/mL    |
|            |          |           |               |                      |                |              | 2,4-Dinitrotoluene           | 1000 ug/mL    |
|            |          |           |               |                      |                |              | 2,6-Dinitrotoluene           | 1000 ug/mL    |
|            |          |           |               |                      |                |              | 2-Chloronaphthalene          | 1000 ug/mL    |
|            |          |           |               |                      |                |              | 2-Chlorophenol               | 1000 ug/mL    |
|            |          |           |               |                      |                |              | 2-Methylnaphthalene          | 1000 ug/mL    |
|            |          |           |               |                      |                |              | 2-Methylphenol               | 1000 ug/mL    |
|            |          |           |               |                      |                |              | 2-Nitroaniline               | 1000 ug/mL    |
|            |          |           |               |                      |                |              | 2-Nitrophenol                | 1000 ug/mL    |
|            |          |           |               |                      |                |              | 3-Nitroaniline               | 1000 ug/mL    |
|            |          |           |               |                      |                |              | 4,6-Dinitro-2-methylphenol   | 2000 ug/mL    |
|            |          |           |               |                      |                |              | 4-Bromophenyl phenyl ether   | 1000 ug/mL    |
|            |          |           |               |                      |                |              | 4-Chloro-3-methylphenol      | 1000 ug/mL    |
|            |          |           |               |                      |                |              | 4-Chloroaniline              | 1000 ug/mL    |
|            |          |           |               |                      |                |              | 4-Chlorophenyl phenyl ether  | 1000 ug/mL    |
|            |          |           |               |                      |                |              | 4-Methylphenol               | 1000 ug/mL    |
|            |          |           |               |                      |                |              | 4-Nitroaniline               | 1000 ug/mL    |
|            |          |           |               |                      |                |              | 4-Nitrophenol                | 2000 ug/mL    |
|            |          |           |               |                      |                |              | Acenaphthene                 | 1000 ug/mL    |
|            |          |           |               |                      |                |              | Acenaphthylene               | 1000 ug/mL    |
|            |          |           |               |                      |                |              | Acetophenone                 | 1000 ug/mL    |
|            |          |           |               |                      |                |              | Aniline                      | 1000 ug/mL    |
|            |          |           |               |                      |                |              | Anthracene                   | 1000 ug/mL    |
|            |          |           |               |                      |                |              | Benzo[a]anthracene           | 1000 ug/mL    |
|            |          |           |               |                      |                |              | Benzo[a]pyrene               | 1000 ug/mL    |
|            |          |           |               |                      |                |              | Benzo[b]fluoranthene         | 1000 ug/mL    |
|            |          |           |               |                      |                |              | Benzo[g,h,i]perylene         | 1000 ug/mL    |
|            |          |           |               |                      |                |              | Benzo[k]fluoranthene         | 1000 ug/mL    |
|            |          |           |               |                      |                |              | Benzyl alcohol               | 1000 ug/mL    |
|            |          |           |               |                      |                |              | Bis(2-chloroethoxy)methane   | 1000 ug/mL    |
|            |          |           |               |                      |                |              | Bis(2-chloroethyl) ether     | 1000 ug/mL    |
|            |          |           |               |                      |                |              | Bis(2-ethylhexyl) phthalate  | 1000 ug/mL    |
|            |          |           |               |                      |                |              | Butyl benzyl phthalate       | 1000 ug/mL    |
|            |          |           |               |                      |                |              | Carbazole                    | 1000 ug/mL    |
|            |          |           |               |                      |                |              | Chrysene                     | 1000 ug/mL    |
|            |          |           |               |                      |                |              | Di-n-butyl phthalate         | 1000 ug/mL    |
|            |          |           |               |                      |                |              | Di-n-octyl phthalate         | 1000 ug/mL    |
|            |          |           |               |                      |                |              | Dibenz(a,h)anthracene        | 1000 ug/mL    |
|            |          |           |               |                      |                |              | Dibenzofuran                 | 1000 ug/mL    |
|            |          |           |               |                      |                |              | Diethyl phthalate            | 1000 ug/mL    |
|            |          |           |               |                      |                |              | Dimethyl phthalate           | 1000 ug/mL    |
|            |          |           |               |                      |                |              | Fluoranthene                 | 1000 ug/mL    |

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh

Job No.: 180-43791-1

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

| Reagent ID               | Exp Date | Prep Date | Dilutant Used        | Reagent Final Volume | Parent Reagent      |              | Analyte                        | Concentration |
|--------------------------|----------|-----------|----------------------|----------------------|---------------------|--------------|--------------------------------|---------------|
|                          |          |           |                      |                      | Reagent ID          | Volume Added |                                |               |
|                          |          |           |                      |                      |                     |              | Fluorene                       | 1000 ug/mL    |
|                          |          |           |                      |                      |                     |              | Hexachlorobenzene              | 1000 ug/mL    |
|                          |          |           |                      |                      |                     |              | Hexachlorobutadiene            | 1000 ug/mL    |
|                          |          |           |                      |                      |                     |              | Hexachlorocyclopentadiene      | 1000 ug/mL    |
|                          |          |           |                      |                      |                     |              | Hexachloroethane               | 1000 ug/mL    |
|                          |          |           |                      |                      |                     |              | Hexadecane                     | 1000 ug/mL    |
|                          |          |           |                      |                      |                     |              | Indeno[1,2,3-cd]pyrene         | 1000 ug/mL    |
|                          |          |           |                      |                      |                     |              | Isophorone                     | 1000 ug/mL    |
|                          |          |           |                      |                      |                     |              | n-Decane                       | 1000 ug/mL    |
|                          |          |           |                      |                      |                     |              | N-Nitrosodi-n-propylamine      | 1000 ug/mL    |
|                          |          |           |                      |                      |                     |              | N-Nitrosodimethylamine         | 1000 ug/mL    |
|                          |          |           |                      |                      |                     |              | n-Octadecane                   | 1000 ug/mL    |
|                          |          |           |                      |                      |                     |              | Naphthalene                    | 1000 ug/mL    |
|                          |          |           |                      |                      |                     |              | Nitrobenzene                   | 1000 ug/mL    |
|                          |          |           |                      |                      |                     |              | Pentachlorophenol              | 2000 ug/mL    |
|                          |          |           |                      |                      |                     |              | Phenanthrene                   | 1000 ug/mL    |
|                          |          |           |                      |                      |                     |              | Phenol                         | 1000 ug/mL    |
|                          |          |           |                      |                      |                     |              | Pyrene                         | 1000 ug/mL    |
|                          |          |           |                      |                      |                     |              | Pyridine                       | 1000 ug/mL    |
| ..SVLVstd2_00012         | 07/31/15 |           | Restek, Lot A0100824 |                      | (Purchased Reagent) |              | 3,3'-Dichlorobenzidine         | 2000 ug/mL    |
|                          |          |           |                      |                      |                     |              | Atrazine                       | 2000 ug/mL    |
|                          |          |           |                      |                      |                     |              | Benzidine                      | 2000 ug/mL    |
|                          |          |           |                      |                      |                     |              | Caprolactam                    | 2000 ug/mL    |
| ..SVLVstd5(7)_00001      | 02/28/17 |           | Restek, Lot A0101573 |                      | (Purchased Reagent) |              | N-Nitrosodiphenylamine         | 2000 ug/mL    |
| ..SVLVstd8_00003         | 05/31/15 |           | Restek, Lot A0103145 |                      | (Purchased Reagent) |              | Benzaldehyde                   | 2000 ug/mL    |
|                          |          |           |                      |                      |                     |              | Benzoic acid                   | 2000 ug/mL    |
|                          |          |           |                      |                      |                     |              | Indene                         | 2000 ug/mL    |
| ..SVLVSURRSPK_00003      | 02/28/18 |           | Restek, Lot A093638  |                      | (Purchased Reagent) |              | 2,4,6-Tribromophenol (Surr)    | 5000 ug/mL    |
|                          |          |           |                      |                      |                     |              | 2-Fluorobiphenyl               | 5000 ug/mL    |
|                          |          |           |                      |                      |                     |              | 2-Fluorophenol (Surr)          | 5000 ug/mL    |
|                          |          |           |                      |                      |                     |              | Nitrobenzene-d5 (Surr)         | 5000 ug/mL    |
|                          |          |           |                      |                      |                     |              | Phenol-d5 (Surr)               | 5000 ug/mL    |
|                          |          |           |                      |                      |                     |              | Terphenyl-d14 (Surr)           | 5000 ug/mL    |
| ..SVNNITROPYROS_00015    | 06/05/17 |           | absolute, Lot 060514 |                      | (Purchased Reagent) |              | N-Nitrosopyrrolidine           | 1000 ug/mL    |
| <b>SVTAPSTD20i_00005</b> | 02/21/15 | 07/21/14  | MeCl2, Lot 1053215   | 1 mL                 | SVTAPITINTRNi_00005 | 10 uL        | 1,4-Dichlorobenzene-d4         | 4 ug/mL       |
|                          |          |           |                      |                      |                     |              | Acenaphthene-d10               | 4 ug/mL       |
|                          |          |           |                      |                      |                     |              | Chrysene-d12                   | 4 ug/mL       |
|                          |          |           |                      |                      |                     |              | Naphthalene-d8                 | 4 ug/mL       |
|                          |          |           |                      |                      |                     |              | Perylene-d12                   | 4 ug/mL       |
|                          |          |           |                      |                      |                     |              | Phenanthrene-d10               | 4 ug/mL       |
|                          |          |           |                      |                      | SVTAPITSTCKi_00004  | 250 uL       | Benzo[e]pyrene                 | 10 ug/mL      |
|                          |          |           |                      |                      |                     |              | 2-Naphthylamine                | 10 ug/mL      |
|                          |          |           |                      |                      |                     |              | 2,3,5,6-Tetrachlorophenol      | 10 ug/mL      |
|                          |          |           |                      |                      |                     |              | 2,6-Dichlorophenol             | 10 ug/mL      |
|                          |          |           |                      |                      |                     |              | 7,12-Dimethylbenz(a)anthracene | 10 ug/mL      |
|                          |          |           |                      |                      |                     |              | Methyl methanesulfonate        | 10 ug/mL      |
|                          |          |           |                      |                      |                     |              | 1,1'-Biphenyl                  | 10 ug/mL      |

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh

Job No.: 180-43791-1

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

| Reagent ID | Exp Date | Prep Date | Dilutant Used | Reagent Final Volume | Parent Reagent |              | Analyte                      | Concentration |
|------------|----------|-----------|---------------|----------------------|----------------|--------------|------------------------------|---------------|
|            |          |           |               |                      | Reagent ID     | Volume Added |                              |               |
|            |          |           |               |                      |                |              | 1,2,4,5-Tetrachlorobenzene   | 10 ug/mL      |
|            |          |           |               |                      |                |              | 1,2,4-Trichlorobenzene       | 10 ug/mL      |
|            |          |           |               |                      |                |              | 1,2-Dichlorobenzene          | 10 ug/mL      |
|            |          |           |               |                      |                |              | 1,2-Diphenylhydrazine        | 10 ug/mL      |
|            |          |           |               |                      |                |              | 1,3-Dichlorobenzene          | 10 ug/mL      |
|            |          |           |               |                      |                |              | 1,3-Dinitrobenzene           | 10 ug/mL      |
|            |          |           |               |                      |                |              | 1,4-Dichlorobenzene          | 10 ug/mL      |
|            |          |           |               |                      |                |              | 1,4-Dioxane                  | 10 ug/mL      |
|            |          |           |               |                      |                |              | 1-Methylnaphthalene          | 10 ug/mL      |
|            |          |           |               |                      |                |              | 2,2'-oxybis[1-chloropropane] | 10 ug/mL      |
|            |          |           |               |                      |                |              | 2,3,4,6-Tetrachlorophenol    | 10 ug/mL      |
|            |          |           |               |                      |                |              | 2,4,5-Trichlorophenol        | 10 ug/mL      |
|            |          |           |               |                      |                |              | 2,4,6-Trichlorophenol        | 10 ug/mL      |
|            |          |           |               |                      |                |              | 2,4-Dichlorophenol           | 10 ug/mL      |
|            |          |           |               |                      |                |              | 2,4-Dimethylphenol           | 10 ug/mL      |
|            |          |           |               |                      |                |              | 2,4-Dinitrophenol            | 20 ug/mL      |
|            |          |           |               |                      |                |              | 2,4-Dinitrotoluene           | 10 ug/mL      |
|            |          |           |               |                      |                |              | 2,6-Dinitrotoluene           | 10 ug/mL      |
|            |          |           |               |                      |                |              | 2-Chloronaphthalene          | 10 ug/mL      |
|            |          |           |               |                      |                |              | 2-Chlorophenol               | 10 ug/mL      |
|            |          |           |               |                      |                |              | 2-Methylnaphthalene          | 10 ug/mL      |
|            |          |           |               |                      |                |              | 2-Methylphenol               | 10 ug/mL      |
|            |          |           |               |                      |                |              | 2-Nitroaniline               | 10 ug/mL      |
|            |          |           |               |                      |                |              | 2-Nitrophenol                | 10 ug/mL      |
|            |          |           |               |                      |                |              | 3-Nitroaniline               | 10 ug/mL      |
|            |          |           |               |                      |                |              | 4,6-Dinitro-2-methylphenol   | 20 ug/mL      |
|            |          |           |               |                      |                |              | 4-Bromophenyl phenyl ether   | 10 ug/mL      |
|            |          |           |               |                      |                |              | 4-Chloro-3-methylphenol      | 10 ug/mL      |
|            |          |           |               |                      |                |              | 4-Chloroaniline              | 10 ug/mL      |
|            |          |           |               |                      |                |              | 4-Chlorophenyl phenyl ether  | 10 ug/mL      |
|            |          |           |               |                      |                |              | 4-Methylphenol               | 10 ug/mL      |
|            |          |           |               |                      |                |              | 4-Nitroaniline               | 10 ug/mL      |
|            |          |           |               |                      |                |              | 4-Nitrophenol                | 20 ug/mL      |
|            |          |           |               |                      |                |              | Acenaphthene                 | 10 ug/mL      |
|            |          |           |               |                      |                |              | Acenaphthylene               | 10 ug/mL      |
|            |          |           |               |                      |                |              | Acetophenone                 | 10 ug/mL      |
|            |          |           |               |                      |                |              | Aniline                      | 10 ug/mL      |
|            |          |           |               |                      |                |              | Anthracene                   | 10 ug/mL      |
|            |          |           |               |                      |                |              | Benzo[a]anthracene           | 10 ug/mL      |
|            |          |           |               |                      |                |              | Benzo[a]pyrene               | 10 ug/mL      |
|            |          |           |               |                      |                |              | Benzo[b]fluoranthene         | 10 ug/mL      |
|            |          |           |               |                      |                |              | Benzo[g,h,i]perylene         | 10 ug/mL      |
|            |          |           |               |                      |                |              | Benzo[k]fluoranthene         | 10 ug/mL      |
|            |          |           |               |                      |                |              | Benzyl alcohol               | 10 ug/mL      |
|            |          |           |               |                      |                |              | Bis(2-chloroethoxy)methane   | 10 ug/mL      |
|            |          |           |               |                      |                |              | Bis(2-chloroethyl) ether     | 10 ug/mL      |
|            |          |           |               |                      |                |              | Bis(2-ethylhexyl) phthalate  | 10 ug/mL      |
|            |          |           |               |                      |                |              | Butyl benzyl phthalate       | 10 ug/mL      |

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh

Job No.: 180-43791-1

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

| Reagent ID           | Exp Date | Prep Date | Dilutant Used      | Reagent Final Volume | Parent Reagent   |              | Analyte                     | Concentration |
|----------------------|----------|-----------|--------------------|----------------------|------------------|--------------|-----------------------------|---------------|
|                      |          |           |                    |                      | Reagent ID       | Volume Added |                             |               |
|                      |          |           |                    |                      |                  |              | Carbazole                   | 10 ug/mL      |
|                      |          |           |                    |                      |                  |              | Chrysene                    | 10 ug/mL      |
|                      |          |           |                    |                      |                  |              | Di-n-butyl phthalate        | 10 ug/mL      |
|                      |          |           |                    |                      |                  |              | Di-n-octyl phthalate        | 10 ug/mL      |
|                      |          |           |                    |                      |                  |              | Dibenz(a,h)anthracene       | 10 ug/mL      |
|                      |          |           |                    |                      |                  |              | Dibenzofuran                | 10 ug/mL      |
|                      |          |           |                    |                      |                  |              | Diethyl phthalate           | 10 ug/mL      |
|                      |          |           |                    |                      |                  |              | Dimethyl phthalate          | 10 ug/mL      |
|                      |          |           |                    |                      |                  |              | Fluoranthene                | 10 ug/mL      |
|                      |          |           |                    |                      |                  |              | Fluorene                    | 10 ug/mL      |
|                      |          |           |                    |                      |                  |              | Hexachlorobenzene           | 10 ug/mL      |
|                      |          |           |                    |                      |                  |              | Hexachlorobutadiene         | 10 ug/mL      |
|                      |          |           |                    |                      |                  |              | Hexachlorocyclopentadiene   | 10 ug/mL      |
|                      |          |           |                    |                      |                  |              | Hexachloroethane            | 10 ug/mL      |
|                      |          |           |                    |                      |                  |              | Hexadecane                  | 10 ug/mL      |
|                      |          |           |                    |                      |                  |              | Indeno[1,2,3-cd]pyrene      | 10 ug/mL      |
|                      |          |           |                    |                      |                  |              | Isophorone                  | 10 ug/mL      |
|                      |          |           |                    |                      |                  |              | n-Decane                    | 10 ug/mL      |
|                      |          |           |                    |                      |                  |              | N-Nitrosodi-n-propylamine   | 10 ug/mL      |
|                      |          |           |                    |                      |                  |              | N-Nitrosodimethylamine      | 10 ug/mL      |
|                      |          |           |                    |                      |                  |              | n-Octadecane                | 10 ug/mL      |
|                      |          |           |                    |                      |                  |              | Naphthalene                 | 10 ug/mL      |
|                      |          |           |                    |                      |                  |              | Nitrobenzene                | 10 ug/mL      |
|                      |          |           |                    |                      |                  |              | Pentachlorophenol           | 20 ug/mL      |
|                      |          |           |                    |                      |                  |              | Phenanthrene                | 10 ug/mL      |
|                      |          |           |                    |                      |                  |              | Phenol                      | 10 ug/mL      |
|                      |          |           |                    |                      |                  |              | Pyrene                      | 10 ug/mL      |
|                      |          |           |                    |                      |                  |              | Pyridine                    | 10 ug/mL      |
|                      |          |           |                    |                      |                  |              | 3,3'-Dichlorobenzidine      | 10 ug/mL      |
|                      |          |           |                    |                      |                  |              | Atrazine                    | 10 ug/mL      |
|                      |          |           |                    |                      |                  |              | Benzidine                   | 10 ug/mL      |
|                      |          |           |                    |                      |                  |              | Caprolactam                 | 10 ug/mL      |
|                      |          |           |                    |                      |                  |              | N-Nitrosodiphenylamine      | 10 ug/mL      |
|                      |          |           |                    |                      |                  |              | Benzaldehyde                | 10 ug/mL      |
|                      |          |           |                    |                      |                  |              | Benzoic acid                | 10 ug/mL      |
|                      |          |           |                    |                      |                  |              | Indene                      | 10 ug/mL      |
|                      |          |           |                    |                      |                  |              | 2,4,6-Tribromophenol (Surr) | 10 ug/mL      |
|                      |          |           |                    |                      |                  |              | 2-Fluorobiphenyl            | 10 ug/mL      |
|                      |          |           |                    |                      |                  |              | 2-Fluorophenol (Surr)       | 10 ug/mL      |
|                      |          |           |                    |                      |                  |              | Nitrobenzene-d5 (Surr)      | 10 ug/mL      |
|                      |          |           |                    |                      |                  |              | Phenol-d5 (Surr)            | 10 ug/mL      |
|                      |          |           |                    |                      |                  |              | Terphenyl-d14 (Surr)        | 10 ug/mL      |
|                      |          |           |                    |                      |                  |              | N-Nitrosopyrrolidine        | 10 ug/mL      |
| .SVTAPITINTRNi_00005 | 05/07/15 | 05/07/14  | MeCl2, Lot 1000447 | 25 mL                | SVLVIntstd_00007 | 5000 uL      | 1,4-Dichlorobenzene-d4      | 400 ug/mL     |
|                      |          |           |                    |                      |                  |              | Acenaphthene-d10            | 400 ug/mL     |
|                      |          |           |                    |                      |                  |              | Chrysene-d12                | 400 ug/mL     |
|                      |          |           |                    |                      |                  |              | Naphthalene-d8              | 400 ug/mL     |
|                      |          |           |                    |                      |                  |              | Perylene-d12                | 400 ug/mL     |

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh

Job No.: 180-43791-1

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

| Reagent ID          | Exp Date | Prep Date | Dilutant Used       | Reagent Final Volume | Parent Reagent      |              | Analyte                        | Concentration |
|---------------------|----------|-----------|---------------------|----------------------|---------------------|--------------|--------------------------------|---------------|
|                     |          |           |                     |                      | Reagent ID          | Volume Added |                                |               |
| ..SVLVIntstd_00007  | 02/28/18 |           | Restek, Lot A093676 |                      | (Purchased Reagent) |              | Phenanthrene-d10               | 400 ug/mL     |
|                     |          |           |                     |                      |                     |              | 1,4-Dichlorobenzene-d4         | 2000 ug/mL    |
|                     |          |           |                     |                      |                     |              | Acenaphthene-d10               | 2000 ug/mL    |
|                     |          |           |                     |                      |                     |              | Chrysene-d12                   | 2000 ug/mL    |
|                     |          |           |                     |                      |                     |              | Naphthalene-d8                 | 2000 ug/mL    |
|                     |          |           |                     |                      |                     |              | Perylene-d12                   | 2000 ug/mL    |
| .SVTAPITSTCKi_00004 | 02/21/15 | 07/21/14  | MeCl2, Lot 1053215  | 20 mL                | sv benzoepyre 00001 | 800 uL       | Benzo[e]pyrene                 | 40 ug/mL      |
|                     |          |           |                     |                      | SV2NAPAMINEs 00002  | 800 uL       | 2-Naphthylamine                | 40 ug/mL      |
|                     |          |           |                     |                      | SVLVlist12_00002    | 800 uL       | 2,3,5,6-Tetrachlorophenol      | 40 ug/mL      |
|                     |          |           |                     |                      |                     |              | 2,6-Dichlorophenol             | 40 ug/mL      |
|                     |          |           |                     |                      |                     |              | 7,12-Dimethylbenz(a)anthracene | 40 ug/mL      |
|                     |          |           |                     |                      |                     |              | Methyl methanesulfonate        | 40 ug/mL      |
|                     |          |           |                     |                      |                     |              | 1,1'-Biphenyl                  | 40 ug/mL      |
|                     |          |           |                     |                      | SVLVstd1_00026      | 800 uL       | 1,2,4,5-Tetrachlorobenzene     | 40 ug/mL      |
|                     |          |           |                     |                      |                     |              | 1,2,4-Trichlorobenzene         | 40 ug/mL      |
|                     |          |           |                     |                      |                     |              | 1,2-Dichlorobenzene            | 40 ug/mL      |
|                     |          |           |                     |                      |                     |              | 1,2-Diphenylhydrazine          | 40 ug/mL      |
|                     |          |           |                     |                      |                     |              | 1,3-Dichlorobenzene            | 40 ug/mL      |
|                     |          |           |                     |                      |                     |              | 1,3-Dinitrobenzene             | 40 ug/mL      |
|                     |          |           |                     |                      |                     |              | 1,4-Dichlorobenzene            | 40 ug/mL      |
|                     |          |           |                     |                      |                     |              | 1,4-Dioxane                    | 40 ug/mL      |
|                     |          |           |                     |                      |                     |              | 1-Methylnaphthalene            | 40 ug/mL      |
|                     |          |           |                     |                      |                     |              | 2,2'-oxybis[1-chloropropane]   | 40 ug/mL      |
|                     |          |           |                     |                      |                     |              | 2,3,4,6-Tetrachlorophenol      | 40 ug/mL      |
|                     |          |           |                     |                      |                     |              | 2,4,5-Trichlorophenol          | 40 ug/mL      |
|                     |          |           |                     |                      |                     |              | 2,4,6-Trichlorophenol          | 40 ug/mL      |
|                     |          |           |                     |                      |                     |              | 2,4-Dichlorophenol             | 40 ug/mL      |
|                     |          |           |                     |                      |                     |              | 2,4-Dimethylphenol             | 40 ug/mL      |
|                     |          |           |                     |                      |                     |              | 2,4-Dinitrophenol              | 80 ug/mL      |
|                     |          |           |                     |                      |                     |              | 2,4-Dinitrotoluene             | 40 ug/mL      |
|                     |          |           |                     |                      |                     |              | 2,6-Dinitrotoluene             | 40 ug/mL      |
|                     |          |           |                     |                      |                     |              | 2-Chloronaphthalene            | 40 ug/mL      |
|                     |          |           |                     |                      |                     |              | 2-Chlorophenol                 | 40 ug/mL      |
|                     |          |           |                     |                      |                     |              | 2-Methylnaphthalene            | 40 ug/mL      |
|                     |          |           |                     |                      |                     |              | 2-Methylphenol                 | 40 ug/mL      |
|                     |          |           |                     |                      |                     |              | 2-Nitroaniline                 | 40 ug/mL      |
|                     |          |           |                     |                      |                     |              | 2-Nitrophenol                  | 40 ug/mL      |
|                     |          |           |                     |                      |                     |              | 3-Nitroaniline                 | 40 ug/mL      |
|                     |          |           |                     |                      |                     |              | 4,6-Dinitro-2-methylphenol     | 80 ug/mL      |
|                     |          |           |                     |                      |                     |              | 4-Bromophenyl phenyl ether     | 40 ug/mL      |
|                     |          |           |                     |                      |                     |              | 4-Chloro-3-methylphenol        | 40 ug/mL      |
|                     |          |           |                     |                      |                     |              | 4-Chloroaniline                | 40 ug/mL      |
|                     |          |           |                     |                      |                     |              | 4-Chlorophenyl phenyl ether    | 40 ug/mL      |
|                     |          |           |                     |                      |                     |              | 4-Methylphenol                 | 40 ug/mL      |
|                     |          |           |                     |                      |                     |              | 4-Nitroaniline                 | 40 ug/mL      |
|                     |          |           |                     |                      |                     |              | 4-Nitrophenol                  | 80 ug/mL      |
|                     |          |           |                     |                      |                     |              | Acenaphthene                   | 40 ug/mL      |

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh

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

| Reagent ID | Exp Date | Prep Date | Dilutant Used | Reagent Final Volume | Parent Reagent    |              | Analyte                      | Concentration |
|------------|----------|-----------|---------------|----------------------|-------------------|--------------|------------------------------|---------------|
|            |          |           |               |                      | Reagent ID        | Volume Added |                              |               |
|            |          |           |               |                      |                   |              | Acenaphthylene               | 40 ug/mL      |
|            |          |           |               |                      |                   |              | Acetophenone                 | 40 ug/mL      |
|            |          |           |               |                      |                   |              | Aniline                      | 40 ug/mL      |
|            |          |           |               |                      |                   |              | Anthracene                   | 40 ug/mL      |
|            |          |           |               |                      |                   |              | Benzo[a]anthracene           | 40 ug/mL      |
|            |          |           |               |                      |                   |              | Benzo[a]pyrene               | 40 ug/mL      |
|            |          |           |               |                      |                   |              | Benzo[b]fluoranthene         | 40 ug/mL      |
|            |          |           |               |                      |                   |              | Benzo[g,h,i]perylene         | 40 ug/mL      |
|            |          |           |               |                      |                   |              | Benzo[k]fluoranthene         | 40 ug/mL      |
|            |          |           |               |                      |                   |              | Benzyl alcohol               | 40 ug/mL      |
|            |          |           |               |                      |                   |              | Bis (2-chloroethoxy)methane  | 40 ug/mL      |
|            |          |           |               |                      |                   |              | Bis (2-chloroethyl) ether    | 40 ug/mL      |
|            |          |           |               |                      |                   |              | Bis (2-ethylhexyl) phthalate | 40 ug/mL      |
|            |          |           |               |                      |                   |              | Butyl benzyl phthalate       | 40 ug/mL      |
|            |          |           |               |                      |                   |              | Carbazole                    | 40 ug/mL      |
|            |          |           |               |                      |                   |              | Chrysene                     | 40 ug/mL      |
|            |          |           |               |                      |                   |              | Di-n-butyl phthalate         | 40 ug/mL      |
|            |          |           |               |                      |                   |              | Di-n-octyl phthalate         | 40 ug/mL      |
|            |          |           |               |                      |                   |              | Dibenz (a,h) anthracene      | 40 ug/mL      |
|            |          |           |               |                      |                   |              | Dibenzofuran                 | 40 ug/mL      |
|            |          |           |               |                      |                   |              | Diethyl phthalate            | 40 ug/mL      |
|            |          |           |               |                      |                   |              | Dimethyl phthalate           | 40 ug/mL      |
|            |          |           |               |                      |                   |              | Fluoranthene                 | 40 ug/mL      |
|            |          |           |               |                      |                   |              | Fluorene                     | 40 ug/mL      |
|            |          |           |               |                      |                   |              | Hexachlorobenzene            | 40 ug/mL      |
|            |          |           |               |                      |                   |              | Hexachlorobutadiene          | 40 ug/mL      |
|            |          |           |               |                      |                   |              | Hexachlorocyclopentadiene    | 40 ug/mL      |
|            |          |           |               |                      |                   |              | Hexachloroethane             | 40 ug/mL      |
|            |          |           |               |                      |                   |              | Hexadecane                   | 40 ug/mL      |
|            |          |           |               |                      |                   |              | Indeno[1,2,3-cd]pyrene       | 40 ug/mL      |
|            |          |           |               |                      |                   |              | Isophorone                   | 40 ug/mL      |
|            |          |           |               |                      |                   |              | n-Decane                     | 40 ug/mL      |
|            |          |           |               |                      |                   |              | N-Nitrosodi-n-propylamine    | 40 ug/mL      |
|            |          |           |               |                      |                   |              | N-Nitrosodimethylamine       | 40 ug/mL      |
|            |          |           |               |                      |                   |              | n-Octadecane                 | 40 ug/mL      |
|            |          |           |               |                      |                   |              | Naphthalene                  | 40 ug/mL      |
|            |          |           |               |                      |                   |              | Nitrobenzene                 | 40 ug/mL      |
|            |          |           |               |                      |                   |              | Pentachlorophenol            | 80 ug/mL      |
|            |          |           |               |                      |                   |              | Phenanthrene                 | 40 ug/mL      |
|            |          |           |               |                      |                   |              | Phenol                       | 40 ug/mL      |
|            |          |           |               |                      |                   |              | Pyrene                       | 40 ug/mL      |
|            |          |           |               |                      |                   |              | Pyridine                     | 40 ug/mL      |
|            |          |           |               |                      | SVLVstd2_00012    | 400 uL       | 3,3'-Dichlorobenzidine       | 40 ug/mL      |
|            |          |           |               |                      |                   |              | Atrazine                     | 40 ug/mL      |
|            |          |           |               |                      |                   |              | Benzidine                    | 40 ug/mL      |
|            |          |           |               |                      |                   |              | Caprolactam                  | 40 ug/mL      |
|            |          |           |               |                      | SVLVstd5(7)_00001 | 400 uL       | N-Nitrosodiphenylamine       | 40 ug/mL      |
|            |          |           |               |                      | SVLVstd8_00003    | 400 uL       | Benzaldehyde                 | 40 ug/mL      |

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Job No.: 180-43791-1

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

| Reagent ID            | Exp Date | Prep Date | Dilutant Used                 | Reagent Final Volume | Parent Reagent |                     | Analyte                        | Concentration |                             |          |
|-----------------------|----------|-----------|-------------------------------|----------------------|----------------|---------------------|--------------------------------|---------------|-----------------------------|----------|
|                       |          |           |                               |                      | Reagent ID     | Volume Added        |                                |               |                             |          |
|                       |          |           |                               |                      |                |                     | Benzoic acid                   | 40 ug/mL      |                             |          |
|                       |          |           |                               |                      |                |                     | Indene                         | 40 ug/mL      |                             |          |
|                       |          |           |                               |                      |                |                     | SVLVSURRSPK_00003              | 160 uL        | 2,4,6-Tribromophenol (Surr) | 40 ug/mL |
|                       |          |           |                               |                      |                |                     |                                |               | 2-Fluorobiphenyl            | 40 ug/mL |
|                       |          |           |                               |                      |                |                     |                                |               | 2-Fluorophenol (Surr)       | 40 ug/mL |
|                       |          |           |                               |                      |                |                     |                                |               | Nitrobenzene-d5 (Surr)      | 40 ug/mL |
|                       |          |           |                               |                      |                |                     |                                |               | Phenol-d5 (Surr)            | 40 ug/mL |
|                       |          |           |                               | Terphenyl-d14 (Surr) | 40 ug/mL       |                     |                                |               |                             |          |
|                       |          |           |                               | SVNNITROPYROS_00015  | 800 uL         |                     | N-Nitrosopyrrolidine           | 40 ug/mL      |                             |          |
| ..sv benzoepyre_00001 | 10/03/18 |           | Absolute, Lot 100313          |                      |                | (Purchased Reagent) | Benzo[e]pyrene                 | 1000 ug/mL    |                             |          |
| ..SV2NAPAMINES_00002  | 06/30/17 |           | Ultra Scientific, Lot CK-1617 |                      |                | (Purchased Reagent) | 2-Naphthylamine                | 1000 ug/mL    |                             |          |
| ..SVLVlist12_00002    | 04/30/15 |           | Restek, Lot A0102912          |                      |                | (Purchased Reagent) | 2,3,5,6-Tetrachlorophenol      | 1000 ug/mL    |                             |          |
|                       |          |           |                               |                      |                |                     | 2,6-Dichlorophenol             | 1000 ug/mL    |                             |          |
|                       |          |           |                               |                      |                |                     | 7,12-Dimethylbenz(a)anthracene | 1000 ug/mL    |                             |          |
|                       |          |           |                               |                      |                |                     | Methyl methanesulfonate        | 1000 ug/mL    |                             |          |
| ..SVLVstdl_00026      | 08/31/15 |           | Restek, Lot A0101615          |                      |                | (Purchased Reagent) | 1,1'-Biphenyl                  | 1000 ug/mL    |                             |          |
|                       |          |           |                               |                      |                |                     | 1,2,4,5-Tetrachlorobenzene     | 1000 ug/mL    |                             |          |
|                       |          |           |                               |                      |                |                     | 1,2,4-Trichlorobenzene         | 1000 ug/mL    |                             |          |
|                       |          |           |                               |                      |                |                     | 1,2-Dichlorobenzene            | 1000 ug/mL    |                             |          |
|                       |          |           |                               |                      |                |                     | 1,2-Diphenylhydrazine          | 1000 ug/mL    |                             |          |
|                       |          |           |                               |                      |                |                     | 1,3-Dichlorobenzene            | 1000 ug/mL    |                             |          |
|                       |          |           |                               |                      |                |                     | 1,3-Dinitrobenzene             | 1000 ug/mL    |                             |          |
|                       |          |           |                               |                      |                |                     | 1,4-Dichlorobenzene            | 1000 ug/mL    |                             |          |
|                       |          |           |                               |                      |                |                     | 1,4-Dioxane                    | 1000 ug/mL    |                             |          |
|                       |          |           |                               |                      |                |                     | 1-Methylnaphthalene            | 1000 ug/mL    |                             |          |
|                       |          |           |                               |                      |                |                     | 2,2'-oxybis[1-chloropropane]   | 1000 ug/mL    |                             |          |
|                       |          |           |                               |                      |                |                     | 2,3,4,6-Tetrachlorophenol      | 1000 ug/mL    |                             |          |
|                       |          |           |                               |                      |                |                     | 2,4,5-Trichlorophenol          | 1000 ug/mL    |                             |          |
|                       |          |           |                               |                      |                |                     | 2,4,6-Trichlorophenol          | 1000 ug/mL    |                             |          |
|                       |          |           |                               |                      |                |                     | 2,4-Dichlorophenol             | 1000 ug/mL    |                             |          |
|                       |          |           |                               |                      |                |                     | 2,4-Dimethylphenol             | 1000 ug/mL    |                             |          |
|                       |          |           |                               |                      |                |                     | 2,4-Dinitrophenol              | 2000 ug/mL    |                             |          |
|                       |          |           |                               |                      |                |                     | 2,4-Dinitrotoluene             | 1000 ug/mL    |                             |          |
|                       |          |           |                               |                      |                |                     | 2,6-Dinitrotoluene             | 1000 ug/mL    |                             |          |
|                       |          |           |                               |                      |                |                     | 2-Chloronaphthalene            | 1000 ug/mL    |                             |          |
|                       |          |           |                               |                      |                |                     | 2-Chlorophenol                 | 1000 ug/mL    |                             |          |
|                       |          |           |                               |                      |                |                     | 2-Methylnaphthalene            | 1000 ug/mL    |                             |          |
|                       |          |           |                               |                      |                |                     | 2-Methylphenol                 | 1000 ug/mL    |                             |          |
|                       |          |           |                               |                      |                |                     | 2-Nitroaniline                 | 1000 ug/mL    |                             |          |
|                       |          |           |                               |                      |                |                     | 2-Nitrophenol                  | 1000 ug/mL    |                             |          |
|                       |          |           |                               |                      |                |                     | 3-Nitroaniline                 | 1000 ug/mL    |                             |          |
|                       |          |           |                               |                      |                |                     | 4,6-Dinitro-2-methylphenol     | 2000 ug/mL    |                             |          |
|                       |          |           |                               |                      |                |                     | 4-Bromophenyl phenyl ether     | 1000 ug/mL    |                             |          |
|                       |          |           |                               |                      |                |                     | 4-Chloro-3-methylphenol        | 1000 ug/mL    |                             |          |
|                       |          |           |                               |                      |                |                     | 4-Chloroaniline                | 1000 ug/mL    |                             |          |
|                       |          |           |                               |                      |                |                     | 4-Chlorophenyl phenyl ether    | 1000 ug/mL    |                             |          |
|                       |          |           |                               |                      |                |                     | 4-Methylphenol                 | 1000 ug/mL    |                             |          |
|                       |          |           |                               |                      |                |                     | 4-Nitroaniline                 | 1000 ug/mL    |                             |          |

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh

Job No.: 180-43791-1

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

| Reagent ID       | Exp Date   | Prep Date | Dilutant Used        | Reagent Final Volume | Parent Reagent      |                        | Analyte                     | Concentration |
|------------------|------------|-----------|----------------------|----------------------|---------------------|------------------------|-----------------------------|---------------|
|                  |            |           |                      |                      | Reagent ID          | Volume Added           |                             |               |
|                  |            |           |                      |                      |                     |                        | 4-Nitrophenol               | 2000 ug/mL    |
|                  |            |           |                      |                      |                     |                        | Acenaphthene                | 1000 ug/mL    |
|                  |            |           |                      |                      |                     |                        | Acenaphthylene              | 1000 ug/mL    |
|                  |            |           |                      |                      |                     |                        | Acetophenone                | 1000 ug/mL    |
|                  |            |           |                      |                      |                     |                        | Aniline                     | 1000 ug/mL    |
|                  |            |           |                      |                      |                     |                        | Anthracene                  | 1000 ug/mL    |
|                  |            |           |                      |                      |                     |                        | Benzo[a]anthracene          | 1000 ug/mL    |
|                  |            |           |                      |                      |                     |                        | Benzo[a]pyrene              | 1000 ug/mL    |
|                  |            |           |                      |                      |                     |                        | Benzo[b]fluoranthene        | 1000 ug/mL    |
|                  |            |           |                      |                      |                     |                        | Benzo[g,h,i]perylene        | 1000 ug/mL    |
|                  |            |           |                      |                      |                     |                        | Benzo[k]fluoranthene        | 1000 ug/mL    |
|                  |            |           |                      |                      |                     |                        | Benzyl alcohol              | 1000 ug/mL    |
|                  |            |           |                      |                      |                     |                        | Bis(2-chloroethoxy)methane  | 1000 ug/mL    |
|                  |            |           |                      |                      |                     |                        | Bis(2-chloroethyl)ether     | 1000 ug/mL    |
|                  |            |           |                      |                      |                     |                        | Bis(2-ethylhexyl) phthalate | 1000 ug/mL    |
|                  |            |           |                      |                      |                     |                        | Butyl benzyl phthalate      | 1000 ug/mL    |
|                  |            |           |                      |                      |                     |                        | Carbazole                   | 1000 ug/mL    |
|                  |            |           |                      |                      |                     |                        | Chrysene                    | 1000 ug/mL    |
|                  |            |           |                      |                      |                     |                        | Di-n-butyl phthalate        | 1000 ug/mL    |
|                  |            |           |                      |                      |                     |                        | Di-n-octyl phthalate        | 1000 ug/mL    |
|                  |            |           |                      |                      |                     |                        | Dibenz(a,h)anthracene       | 1000 ug/mL    |
|                  |            |           |                      |                      |                     |                        | Dibenzofuran                | 1000 ug/mL    |
|                  |            |           |                      |                      |                     |                        | Diethyl phthalate           | 1000 ug/mL    |
|                  |            |           |                      |                      |                     |                        | Dimethyl phthalate          | 1000 ug/mL    |
|                  |            |           |                      |                      |                     |                        | Fluoranthene                | 1000 ug/mL    |
|                  |            |           |                      |                      |                     |                        | Fluorene                    | 1000 ug/mL    |
|                  |            |           |                      |                      |                     |                        | Hexachlorobenzene           | 1000 ug/mL    |
|                  |            |           |                      |                      |                     |                        | Hexachlorobutadiene         | 1000 ug/mL    |
|                  |            |           |                      |                      |                     |                        | Hexachlorocyclopentadiene   | 1000 ug/mL    |
|                  |            |           |                      |                      |                     |                        | Hexachloroethane            | 1000 ug/mL    |
|                  |            |           |                      |                      |                     |                        | Hexadecane                  | 1000 ug/mL    |
|                  |            |           |                      |                      |                     |                        | Indeno[1,2,3-cd]pyrene      | 1000 ug/mL    |
|                  |            |           |                      |                      |                     |                        | Isophorone                  | 1000 ug/mL    |
|                  |            |           |                      |                      |                     |                        | n-Decane                    | 1000 ug/mL    |
|                  |            |           |                      |                      |                     |                        | N-Nitrosodi-n-propylamine   | 1000 ug/mL    |
|                  |            |           |                      |                      |                     |                        | N-Nitrosodimethylamine      | 1000 ug/mL    |
|                  |            |           |                      |                      |                     |                        | n-Octadecane                | 1000 ug/mL    |
|                  |            |           |                      |                      |                     |                        | Naphthalene                 | 1000 ug/mL    |
|                  |            |           |                      |                      |                     |                        | Nitrobenzene                | 1000 ug/mL    |
|                  |            |           |                      |                      |                     |                        | Pentachlorophenol           | 2000 ug/mL    |
| Phenanthrene     | 1000 ug/mL |           |                      |                      |                     |                        |                             |               |
| Phenol           | 1000 ug/mL |           |                      |                      |                     |                        |                             |               |
| Pyrene           | 1000 ug/mL |           |                      |                      |                     |                        |                             |               |
| Pyridine         | 1000 ug/mL |           |                      |                      |                     |                        |                             |               |
| ..SVLVstd2_00012 | 07/31/15   |           | Restek, Lot A0100824 |                      | (Purchased Reagent) | 3,3'-Dichlorobenzidine | 2000 ug/mL                  |               |
|                  |            |           |                      |                      |                     | Atrazine               | 2000 ug/mL                  |               |
|                  |            |           |                      |                      |                     | Benzidine              | 2000 ug/mL                  |               |
|                  |            |           |                      |                      |                     | Caprolactam            | 2000 ug/mL                  |               |



REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh

Job No.: 180-43791-1

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

| Reagent ID            | Exp Date | Prep Date | Dilutant Used        | Reagent Final Volume | Parent Reagent                 |              | Analyte                     | Concentration |                 |         |
|-----------------------|----------|-----------|----------------------|----------------------|--------------------------------|--------------|-----------------------------|---------------|-----------------|---------|
|                       |          |           |                      |                      | Reagent ID                     | Volume Added |                             |               |                 |         |
| ..SVLVstd5(7) 00001   | 02/28/17 |           | Restek, Lot A0101573 |                      | (Purchased Reagent)            |              | N-Nitrosodiphenylamine      | 2000 ug/mL    |                 |         |
| ..SVLVstd8_00003      | 05/31/15 |           | Restek, Lot A0103145 |                      | (Purchased Reagent)            |              | Benzaldehyde                | 2000 ug/mL    |                 |         |
|                       |          |           |                      |                      |                                |              | Benzoic acid                | 2000 ug/mL    |                 |         |
|                       |          |           |                      |                      |                                |              | Indene                      | 2000 ug/mL    |                 |         |
| ..SVLVSURRSPK_00003   | 02/28/18 |           | Restek, Lot A093638  |                      | (Purchased Reagent)            |              | 2,4,6-Tribromophenol (Surr) | 5000 ug/mL    |                 |         |
|                       |          |           |                      |                      |                                |              | 2-Fluorobiphenyl            | 5000 ug/mL    |                 |         |
|                       |          |           |                      |                      |                                |              | 2-Fluorophenol (Surr)       | 5000 ug/mL    |                 |         |
|                       |          |           |                      |                      |                                |              | Nitrobenzene-d5 (Surr)      | 5000 ug/mL    |                 |         |
|                       |          |           |                      |                      |                                |              | Phenol-d5 (Surr)            | 5000 ug/mL    |                 |         |
|                       |          |           |                      |                      |                                |              | Terphenyl-d14 (Surr)        | 5000 ug/mL    |                 |         |
| ..SVNNITROPYROs_00015 | 06/05/17 |           | absolute, Lot 060514 |                      | (Purchased Reagent)            |              | N-Nitrosopyrrolidine        | 1000 ug/mL    |                 |         |
| SVTAPSTD4.0i_00006    | 02/21/15 | 07/21/14  | MeCl2, Lot 1053215   | 1 mL                 | SVTAPITINTRNi_00005            | 10 uL        | 1,4-Dichlorobenzene-d4      | 4 ug/mL       |                 |         |
|                       |          |           |                      |                      |                                |              | Acenaphthene-d10            | 4 ug/mL       |                 |         |
|                       |          |           |                      |                      |                                |              | Chrysene-d12                | 4 ug/mL       |                 |         |
|                       |          |           |                      |                      |                                |              | Naphthalene-d8              | 4 ug/mL       |                 |         |
|                       |          |           |                      |                      |                                |              | Perylene-d12                | 4 ug/mL       |                 |         |
|                       |          |           |                      |                      |                                |              | Phenanthrene-d10            | 4 ug/mL       |                 |         |
|                       |          |           |                      |                      |                                |              | SVTAPITSTCKi_00004          | 50 uL         | Benzo[e]pyrene  | 2 ug/mL |
|                       |          |           |                      |                      |                                |              |                             |               | 2-Naphthylamine | 2 ug/mL |
|                       |          |           |                      |                      | 2,3,5,6-Tetrachlorophenol      | 2 ug/mL      |                             |               |                 |         |
|                       |          |           |                      |                      | 2,6-Dichlorophenol             | 2 ug/mL      |                             |               |                 |         |
|                       |          |           |                      |                      | 7,12-Dimethylbenz(a)anthracene | 2 ug/mL      |                             |               |                 |         |
|                       |          |           |                      |                      | Methyl methanesulfonate        | 2 ug/mL      |                             |               |                 |         |
|                       |          |           |                      |                      | 1,1'-Biphenyl                  | 2 ug/mL      |                             |               |                 |         |
|                       |          |           |                      |                      | 1,2,4,5-Tetrachlorobenzene     | 2 ug/mL      |                             |               |                 |         |
|                       |          |           |                      |                      | 1,2,4-Trichlorobenzene         | 2 ug/mL      |                             |               |                 |         |
|                       |          |           |                      |                      | 1,2-Dichlorobenzene            | 2 ug/mL      |                             |               |                 |         |
|                       |          |           |                      |                      | 1,2-Diphenylhydrazine          | 2 ug/mL      |                             |               |                 |         |
|                       |          |           |                      |                      | 1,3-Dichlorobenzene            | 2 ug/mL      |                             |               |                 |         |
|                       |          |           |                      |                      | 1,3-Dinitrobenzene             | 2 ug/mL      |                             |               |                 |         |
|                       |          |           |                      |                      | 1,4-Dichlorobenzene            | 2 ug/mL      |                             |               |                 |         |
|                       |          |           |                      |                      | 1,4-Dioxane                    | 2 ug/mL      |                             |               |                 |         |
|                       |          |           |                      |                      | 1-Methylnaphthalene            | 2 ug/mL      |                             |               |                 |         |
|                       |          |           |                      |                      | 2,2'-oxybis[1-chloropropane]   | 2 ug/mL      |                             |               |                 |         |
|                       |          |           |                      |                      | 2,3,4,6-Tetrachlorophenol      | 2 ug/mL      |                             |               |                 |         |
|                       |          |           |                      |                      | 2,4,5-Trichlorophenol          | 2 ug/mL      |                             |               |                 |         |
|                       |          |           |                      |                      | 2,4,6-Trichlorophenol          | 2 ug/mL      |                             |               |                 |         |
|                       |          |           |                      |                      | 2,4-Dichlorophenol             | 2 ug/mL      |                             |               |                 |         |
|                       |          |           |                      |                      | 2,4-Dimethylphenol             | 2 ug/mL      |                             |               |                 |         |
|                       |          |           |                      |                      | 2,4-Dinitrophenol              | 4 ug/mL      |                             |               |                 |         |
|                       |          |           |                      |                      | 2,4-Dinitrotoluene             | 2 ug/mL      |                             |               |                 |         |
|                       |          |           |                      |                      | 2,6-Dinitrotoluene             | 2 ug/mL      |                             |               |                 |         |
|                       |          |           |                      |                      | 2-Chloronaphthalene            | 2 ug/mL      |                             |               |                 |         |
| 2-Chlorophenol        | 2 ug/mL  |           |                      |                      |                                |              |                             |               |                 |         |
| 2-Methylnaphthalene   | 2 ug/mL  |           |                      |                      |                                |              |                             |               |                 |         |
| 2-Methylphenol        | 2 ug/mL  |           |                      |                      |                                |              |                             |               |                 |         |
| 2-Nitroaniline        | 2 ug/mL  |           |                      |                      |                                |              |                             |               |                 |         |

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh

Job No.: 180-43791-1

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

| Reagent ID | Exp Date | Prep Date | Dilutant Used | Reagent Final Volume | Parent Reagent |              | Analyte                      | Concentration |
|------------|----------|-----------|---------------|----------------------|----------------|--------------|------------------------------|---------------|
|            |          |           |               |                      | Reagent ID     | Volume Added |                              |               |
|            |          |           |               |                      |                |              | 2-Nitrophenol                | 2 ug/mL       |
|            |          |           |               |                      |                |              | 3-Nitroaniline               | 2 ug/mL       |
|            |          |           |               |                      |                |              | 4,6-Dinitro-2-methylphenol   | 4 ug/mL       |
|            |          |           |               |                      |                |              | 4-Bromophenyl phenyl ether   | 2 ug/mL       |
|            |          |           |               |                      |                |              | 4-Chloro-3-methylphenol      | 2 ug/mL       |
|            |          |           |               |                      |                |              | 4-Chloroaniline              | 2 ug/mL       |
|            |          |           |               |                      |                |              | 4-Chlorophenyl phenyl ether  | 2 ug/mL       |
|            |          |           |               |                      |                |              | 4-Methylphenol               | 2 ug/mL       |
|            |          |           |               |                      |                |              | 4-Nitroaniline               | 2 ug/mL       |
|            |          |           |               |                      |                |              | 4-Nitrophenol                | 4 ug/mL       |
|            |          |           |               |                      |                |              | Acenaphthene                 | 2 ug/mL       |
|            |          |           |               |                      |                |              | Acenaphthylene               | 2 ug/mL       |
|            |          |           |               |                      |                |              | Acetophenone                 | 2 ug/mL       |
|            |          |           |               |                      |                |              | Aniline                      | 2 ug/mL       |
|            |          |           |               |                      |                |              | Anthracene                   | 2 ug/mL       |
|            |          |           |               |                      |                |              | Benzo[a]anthracene           | 2 ug/mL       |
|            |          |           |               |                      |                |              | Benzo[a]pyrene               | 2 ug/mL       |
|            |          |           |               |                      |                |              | Benzo[b]fluoranthene         | 2 ug/mL       |
|            |          |           |               |                      |                |              | Benzo[g,h,i]perylene         | 2 ug/mL       |
|            |          |           |               |                      |                |              | Benzo[k]fluoranthene         | 2 ug/mL       |
|            |          |           |               |                      |                |              | Benzyl alcohol               | 2 ug/mL       |
|            |          |           |               |                      |                |              | Bis (2-chloroethoxy)methane  | 2 ug/mL       |
|            |          |           |               |                      |                |              | Bis (2-chloroethyl) ether    | 2 ug/mL       |
|            |          |           |               |                      |                |              | Bis (2-ethylhexyl) phthalate | 2 ug/mL       |
|            |          |           |               |                      |                |              | Butyl benzyl phthalate       | 2 ug/mL       |
|            |          |           |               |                      |                |              | Carbazole                    | 2 ug/mL       |
|            |          |           |               |                      |                |              | Chrysene                     | 2 ug/mL       |
|            |          |           |               |                      |                |              | Di-n-butyl phthalate         | 2 ug/mL       |
|            |          |           |               |                      |                |              | Di-n-octyl phthalate         | 2 ug/mL       |
|            |          |           |               |                      |                |              | Dibenz (a,h) anthracene      | 2 ug/mL       |
|            |          |           |               |                      |                |              | Dibenzofuran                 | 2 ug/mL       |
|            |          |           |               |                      |                |              | Diethyl phthalate            | 2 ug/mL       |
|            |          |           |               |                      |                |              | Dimethyl phthalate           | 2 ug/mL       |
|            |          |           |               |                      |                |              | Fluoranthene                 | 2 ug/mL       |
|            |          |           |               |                      |                |              | Fluorene                     | 2 ug/mL       |
|            |          |           |               |                      |                |              | Hexachlorobenzene            | 2 ug/mL       |
|            |          |           |               |                      |                |              | Hexachlorobutadiene          | 2 ug/mL       |
|            |          |           |               |                      |                |              | Hexachlorocyclopentadiene    | 2 ug/mL       |
|            |          |           |               |                      |                |              | Hexachloroethane             | 2 ug/mL       |
|            |          |           |               |                      |                |              | Hexadecane                   | 2 ug/mL       |
|            |          |           |               |                      |                |              | Indeno[1,2,3-cd]pyrene       | 2 ug/mL       |
|            |          |           |               |                      |                |              | Isophorone                   | 2 ug/mL       |
|            |          |           |               |                      |                |              | n-Decane                     | 2 ug/mL       |
|            |          |           |               |                      |                |              | N-Nitrosodi-n-propylamine    | 2 ug/mL       |
|            |          |           |               |                      |                |              | N-Nitrosodimethylamine       | 2 ug/mL       |
|            |          |           |               |                      |                |              | n-Octadecane                 | 2 ug/mL       |
|            |          |           |               |                      |                |              | Naphthalene                  | 2 ug/mL       |
|            |          |           |               |                      |                |              | Nitrobenzene                 | 2 ug/mL       |

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh

Job No.: 180-43791-1

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

| Reagent ID           | Exp Date | Prep Date | Dilutant Used       | Reagent Final Volume | Parent Reagent      |                     | Analyte                        | Concentration |
|----------------------|----------|-----------|---------------------|----------------------|---------------------|---------------------|--------------------------------|---------------|
|                      |          |           |                     |                      | Reagent ID          | Volume Added        |                                |               |
|                      |          |           |                     |                      |                     |                     | Pentachlorophenol              | 4 ug/mL       |
|                      |          |           |                     |                      |                     |                     | Phenanthrene                   | 2 ug/mL       |
|                      |          |           |                     |                      |                     |                     | Phenol                         | 2 ug/mL       |
|                      |          |           |                     |                      |                     |                     | Pyrene                         | 2 ug/mL       |
|                      |          |           |                     |                      |                     |                     | Pyridine                       | 2 ug/mL       |
|                      |          |           |                     |                      |                     |                     | 3,3'-Dichlorobenzidine         | 2 ug/mL       |
|                      |          |           |                     |                      |                     |                     | Atrazine                       | 2 ug/mL       |
|                      |          |           |                     |                      |                     |                     | Benzidine                      | 2 ug/mL       |
|                      |          |           |                     |                      |                     |                     | Caprolactam                    | 2 ug/mL       |
|                      |          |           |                     |                      |                     |                     | N-Nitrosodiphenylamine         | 2 ug/mL       |
|                      |          |           |                     |                      |                     |                     | Benzaldehyde                   | 2 ug/mL       |
|                      |          |           |                     |                      |                     |                     | Benzoic acid                   | 2 ug/mL       |
|                      |          |           |                     |                      |                     |                     | Indene                         | 2 ug/mL       |
|                      |          |           |                     |                      |                     |                     | 2,4,6-Tribromophenol (Surr)    | 2 ug/mL       |
|                      |          |           |                     |                      |                     |                     | 2-Fluorobiphenyl               | 2 ug/mL       |
|                      |          |           |                     |                      |                     |                     | 2-Fluorophenol (Surr)          | 2 ug/mL       |
|                      |          |           |                     |                      |                     |                     | Nitrobenzene-d5 (Surr)         | 2 ug/mL       |
|                      |          |           |                     |                      |                     |                     | Phenol-d5 (Surr)               | 2 ug/mL       |
|                      |          |           |                     |                      |                     |                     | Terphenyl-d14 (Surr)           | 2 ug/mL       |
|                      |          |           |                     |                      |                     |                     | N-Nitrosopyrrolidine           | 2 ug/mL       |
| .SVTAPITINTRNi_00005 | 05/07/15 | 05/07/14  | MeCl2, Lot 1000447  | 25 mL                | SVLVIntstd_00007    | 5000 uL             | 1,4-Dichlorobenzene-d4         | 400 ug/mL     |
|                      |          |           |                     |                      |                     |                     | Acenaphthene-d10               | 400 ug/mL     |
|                      |          |           |                     |                      |                     |                     | Chrysene-d12                   | 400 ug/mL     |
|                      |          |           |                     |                      |                     |                     | Naphthalene-d8                 | 400 ug/mL     |
|                      |          |           |                     |                      |                     |                     | Perylene-d12                   | 400 ug/mL     |
|                      |          |           |                     |                      |                     |                     | Phenanthrene-d10               | 400 ug/mL     |
| ..SVLVIntstd_00007   | 02/28/18 |           | Restek, Lot A093676 |                      |                     | (Purchased Reagent) | 1,4-Dichlorobenzene-d4         | 2000 ug/mL    |
|                      |          |           |                     |                      |                     |                     | Acenaphthene-d10               | 2000 ug/mL    |
|                      |          |           |                     |                      |                     |                     | Chrysene-d12                   | 2000 ug/mL    |
|                      |          |           |                     |                      |                     |                     | Naphthalene-d8                 | 2000 ug/mL    |
|                      |          |           |                     |                      |                     |                     | Perylene-d12                   | 2000 ug/mL    |
|                      |          |           |                     |                      |                     |                     | Phenanthrene-d10               | 2000 ug/mL    |
| .SVTAPITSTCKi_00004  | 02/21/15 | 07/21/14  | MeCl2, Lot 1053215  | 20 mL                | sv benzoepyre 00001 | 800 uL              | Benzo[e]pyrene                 | 40 ug/mL      |
|                      |          |           |                     |                      | SV2NAPAMINEs_00002  | 800 uL              | 2-Naphthylamine                | 40 ug/mL      |
|                      |          |           |                     |                      | SVLVlist12_00002    | 800 uL              | 2,3,5,6-Tetrachlorophenol      | 40 ug/mL      |
|                      |          |           |                     |                      |                     |                     | 2,6-Dichlorophenol             | 40 ug/mL      |
|                      |          |           |                     |                      |                     |                     | 7,12-Dimethylbenz(a)anthracene | 40 ug/mL      |
|                      |          |           |                     |                      |                     |                     | Methyl methanesulfonate        | 40 ug/mL      |
|                      |          |           |                     |                      | SVLVstd1_00026      | 800 uL              | 1,1'-Biphenyl                  | 40 ug/mL      |
|                      |          |           |                     |                      |                     |                     | 1,2,4,5-Tetrachlorobenzene     | 40 ug/mL      |
|                      |          |           |                     |                      |                     |                     | 1,2,4-Trichlorobenzene         | 40 ug/mL      |
|                      |          |           |                     |                      |                     |                     | 1,2-Dichlorobenzene            | 40 ug/mL      |
|                      |          |           |                     |                      |                     |                     | 1,2-Diphenylhydrazine          | 40 ug/mL      |
|                      |          |           |                     |                      |                     |                     | 1,3-Dichlorobenzene            | 40 ug/mL      |
|                      |          |           |                     |                      |                     |                     | 1,3-Dinitrobenzene             | 40 ug/mL      |
|                      |          |           |                     |                      |                     |                     | 1,4-Dichlorobenzene            | 40 ug/mL      |
|                      |          |           |                     |                      |                     |                     | 1,4-Dioxane                    | 40 ug/mL      |
|                      |          |           |                     |                      |                     |                     | 1-Methylnaphthalene            | 40 ug/mL      |

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Lab Name: TestAmerica Pittsburgh

Job No.: 180-43791-1

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

| Reagent ID | Exp Date | Prep Date | Dilutant Used | Reagent Final Volume | Parent Reagent |              | Analyte                      | Concentration |
|------------|----------|-----------|---------------|----------------------|----------------|--------------|------------------------------|---------------|
|            |          |           |               |                      | Reagent ID     | Volume Added |                              |               |
|            |          |           |               |                      |                |              | 2,2'-oxybis[1-chloropropane] | 40 ug/mL      |
|            |          |           |               |                      |                |              | 2,3,4,6-Tetrachlorophenol    | 40 ug/mL      |
|            |          |           |               |                      |                |              | 2,4,5-Trichlorophenol        | 40 ug/mL      |
|            |          |           |               |                      |                |              | 2,4,6-Trichlorophenol        | 40 ug/mL      |
|            |          |           |               |                      |                |              | 2,4-Dichlorophenol           | 40 ug/mL      |
|            |          |           |               |                      |                |              | 2,4-Dimethylphenol           | 40 ug/mL      |
|            |          |           |               |                      |                |              | 2,4-Dinitrophenol            | 80 ug/mL      |
|            |          |           |               |                      |                |              | 2,4-Dinitrotoluene           | 40 ug/mL      |
|            |          |           |               |                      |                |              | 2,6-Dinitrotoluene           | 40 ug/mL      |
|            |          |           |               |                      |                |              | 2-Chloronaphthalene          | 40 ug/mL      |
|            |          |           |               |                      |                |              | 2-Chlorophenol               | 40 ug/mL      |
|            |          |           |               |                      |                |              | 2-Methylnaphthalene          | 40 ug/mL      |
|            |          |           |               |                      |                |              | 2-Methylphenol               | 40 ug/mL      |
|            |          |           |               |                      |                |              | 2-Nitroaniline               | 40 ug/mL      |
|            |          |           |               |                      |                |              | 2-Nitrophenol                | 40 ug/mL      |
|            |          |           |               |                      |                |              | 3-Nitroaniline               | 40 ug/mL      |
|            |          |           |               |                      |                |              | 4,6-Dinitro-2-methylphenol   | 80 ug/mL      |
|            |          |           |               |                      |                |              | 4-Bromophenyl phenyl ether   | 40 ug/mL      |
|            |          |           |               |                      |                |              | 4-Chloro-3-methylphenol      | 40 ug/mL      |
|            |          |           |               |                      |                |              | 4-Chloroaniline              | 40 ug/mL      |
|            |          |           |               |                      |                |              | 4-Chlorophenyl phenyl ether  | 40 ug/mL      |
|            |          |           |               |                      |                |              | 4-Methylphenol               | 40 ug/mL      |
|            |          |           |               |                      |                |              | 4-Nitroaniline               | 40 ug/mL      |
|            |          |           |               |                      |                |              | 4-Nitrophenol                | 80 ug/mL      |
|            |          |           |               |                      |                |              | Acenaphthene                 | 40 ug/mL      |
|            |          |           |               |                      |                |              | Acenaphthylene               | 40 ug/mL      |
|            |          |           |               |                      |                |              | Acetophenone                 | 40 ug/mL      |
|            |          |           |               |                      |                |              | Aniline                      | 40 ug/mL      |
|            |          |           |               |                      |                |              | Anthracene                   | 40 ug/mL      |
|            |          |           |               |                      |                |              | Benzo[a]anthracene           | 40 ug/mL      |
|            |          |           |               |                      |                |              | Benzo[a]pyrene               | 40 ug/mL      |
|            |          |           |               |                      |                |              | Benzo[b]fluoranthene         | 40 ug/mL      |
|            |          |           |               |                      |                |              | Benzo[g,h,i]perylene         | 40 ug/mL      |
|            |          |           |               |                      |                |              | Benzo[k]fluoranthene         | 40 ug/mL      |
|            |          |           |               |                      |                |              | Benzyl alcohol               | 40 ug/mL      |
|            |          |           |               |                      |                |              | Bis (2-chloroethoxy)methane  | 40 ug/mL      |
|            |          |           |               |                      |                |              | Bis (2-chloroethyl) ether    | 40 ug/mL      |
|            |          |           |               |                      |                |              | Bis (2-ethylhexyl) phthalate | 40 ug/mL      |
|            |          |           |               |                      |                |              | Butyl benzyl phthalate       | 40 ug/mL      |
|            |          |           |               |                      |                |              | Carbazole                    | 40 ug/mL      |
|            |          |           |               |                      |                |              | Chrysene                     | 40 ug/mL      |
|            |          |           |               |                      |                |              | Di-n-butyl phthalate         | 40 ug/mL      |
|            |          |           |               |                      |                |              | Di-n-octyl phthalate         | 40 ug/mL      |
|            |          |           |               |                      |                |              | Dibenz (a,h) anthracene      | 40 ug/mL      |
|            |          |           |               |                      |                |              | Dibenzofuran                 | 40 ug/mL      |
|            |          |           |               |                      |                |              | Diethyl phthalate            | 40 ug/mL      |
|            |          |           |               |                      |                |              | Dimethyl phthalate           | 40 ug/mL      |
|            |          |           |               |                      |                |              | Fluoranthene                 | 40 ug/mL      |

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Lab Name: TestAmerica Pittsburgh

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

| Reagent ID            | Exp Date | Prep Date | Dilutant Used                 | Reagent Final Volume | Parent Reagent      |              | Analyte                        | Concentration |
|-----------------------|----------|-----------|-------------------------------|----------------------|---------------------|--------------|--------------------------------|---------------|
|                       |          |           |                               |                      | Reagent ID          | Volume Added |                                |               |
|                       |          |           |                               |                      |                     |              | Fluorene                       | 40 ug/mL      |
|                       |          |           |                               |                      |                     |              | Hexachlorobenzene              | 40 ug/mL      |
|                       |          |           |                               |                      |                     |              | Hexachlorobutadiene            | 40 ug/mL      |
|                       |          |           |                               |                      |                     |              | Hexachlorocyclopentadiene      | 40 ug/mL      |
|                       |          |           |                               |                      |                     |              | Hexachloroethane               | 40 ug/mL      |
|                       |          |           |                               |                      |                     |              | Hexadecane                     | 40 ug/mL      |
|                       |          |           |                               |                      |                     |              | Indeno[1,2,3-cd]pyrene         | 40 ug/mL      |
|                       |          |           |                               |                      |                     |              | Isophorone                     | 40 ug/mL      |
|                       |          |           |                               |                      |                     |              | n-Decane                       | 40 ug/mL      |
|                       |          |           |                               |                      |                     |              | N-Nitrosodi-n-propylamine      | 40 ug/mL      |
|                       |          |           |                               |                      |                     |              | N-Nitrosodimethylamine         | 40 ug/mL      |
|                       |          |           |                               |                      |                     |              | n-Octadecane                   | 40 ug/mL      |
|                       |          |           |                               |                      |                     |              | Naphthalene                    | 40 ug/mL      |
|                       |          |           |                               |                      |                     |              | Nitrobenzene                   | 40 ug/mL      |
|                       |          |           |                               |                      |                     |              | Pentachlorophenol              | 80 ug/mL      |
|                       |          |           |                               |                      |                     |              | Phenanthrene                   | 40 ug/mL      |
|                       |          |           |                               |                      |                     |              | Phenol                         | 40 ug/mL      |
|                       |          |           |                               |                      |                     |              | Pyrene                         | 40 ug/mL      |
|                       |          |           |                               |                      |                     |              | Pyridine                       | 40 ug/mL      |
|                       |          |           |                               |                      |                     |              | SVLVstd2_00012                 | 400 uL        |
| Atrazine              | 40 ug/mL |           |                               |                      |                     |              |                                |               |
| Benzidine             | 40 ug/mL |           |                               |                      |                     |              |                                |               |
| Caprolactam           | 40 ug/mL |           |                               |                      |                     |              |                                |               |
| SVLVstd5(7)_00001     | 400 uL   |           |                               |                      |                     |              | N-Nitrosodiphenylamine         | 40 ug/mL      |
| SVLVstd8_00003        | 400 uL   |           |                               |                      |                     |              | Benzaldehyde                   | 40 ug/mL      |
|                       |          |           |                               |                      |                     |              | Benzoic acid                   | 40 ug/mL      |
|                       |          |           |                               |                      |                     |              | Indene                         | 40 ug/mL      |
| SVLVSURRSPK_00003     | 160 uL   |           |                               |                      |                     |              | 2,4,6-Tribromophenol (Surr)    | 40 ug/mL      |
|                       |          |           |                               |                      |                     |              | 2-Fluorobiphenyl               | 40 ug/mL      |
|                       |          |           |                               |                      |                     |              | 2-Fluorophenol (Surr)          | 40 ug/mL      |
|                       |          |           |                               |                      |                     |              | Nitrobenzene-d5 (Surr)         | 40 ug/mL      |
|                       |          |           |                               |                      |                     |              | Phenol-d5 (Surr)               | 40 ug/mL      |
| Terphenyl-d14 (Surr)  | 40 ug/mL |           |                               |                      |                     |              |                                |               |
| SVNNITROPYROs_00015   | 800 uL   |           |                               |                      |                     |              | N-Nitrosopyrrolidine           | 40 ug/mL      |
| ..sv benzoepyre 00001 | 10/03/18 |           | Absolute, Lot 100313          |                      | (Purchased Reagent) |              | Benzo[e]pyrene                 | 1000 ug/mL    |
| ..SV2NAPAMINES 00002  | 06/30/17 |           | Ultra Scientific, Lot Ck-1617 |                      | (Purchased Reagent) |              | 2-Naphthylamine                | 1000 ug/mL    |
| ..SVLVlist12_00002    | 04/30/15 |           | Restek, Lot A0102912          |                      | (Purchased Reagent) |              | 2,3,5,6-Tetrachlorophenol      | 1000 ug/mL    |
|                       |          |           |                               |                      |                     |              | 2,6-Dichlorophenol             | 1000 ug/mL    |
|                       |          |           |                               |                      |                     |              | 7,12-Dimethylbenz(a)anthracene | 1000 ug/mL    |
|                       |          |           |                               |                      |                     |              | Methyl methanesulfonate        | 1000 ug/mL    |
| ..SVLVstd1_00026      | 08/31/15 |           | Restek, Lot A0101615          |                      | (Purchased Reagent) |              | 1,1'-Biphenyl                  | 1000 ug/mL    |
|                       |          |           |                               |                      |                     |              | 1,2,4,5-Tetrachlorobenzene     | 1000 ug/mL    |
|                       |          |           |                               |                      |                     |              | 1,2,4-Trichlorobenzene         | 1000 ug/mL    |
|                       |          |           |                               |                      |                     |              | 1,2-Dichlorobenzene            | 1000 ug/mL    |
|                       |          |           |                               |                      |                     |              | 1,2-Diphenylhydrazine          | 1000 ug/mL    |
|                       |          |           |                               |                      |                     |              | 1,3-Dichlorobenzene            | 1000 ug/mL    |
|                       |          |           |                               |                      |                     |              | 1,3-Dinitrobenzene             | 1000 ug/mL    |
|                       |          |           |                               |                      |                     |              | 1,4-Dichlorobenzene            | 1000 ug/mL    |

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh

Job No.: 180-43791-1

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

| Reagent ID | Exp Date | Prep Date | Dilutant Used | Reagent Final Volume | Parent Reagent |              | Analyte                      | Concentration |
|------------|----------|-----------|---------------|----------------------|----------------|--------------|------------------------------|---------------|
|            |          |           |               |                      | Reagent ID     | Volume Added |                              |               |
|            |          |           |               |                      |                |              | 1,4-Dioxane                  | 1000 ug/mL    |
|            |          |           |               |                      |                |              | 1-Methylnaphthalene          | 1000 ug/mL    |
|            |          |           |               |                      |                |              | 2,2'-oxybis[1-chloropropane] | 1000 ug/mL    |
|            |          |           |               |                      |                |              | 2,3,4,6-Tetrachlorophenol    | 1000 ug/mL    |
|            |          |           |               |                      |                |              | 2,4,5-Trichlorophenol        | 1000 ug/mL    |
|            |          |           |               |                      |                |              | 2,4,6-Trichlorophenol        | 1000 ug/mL    |
|            |          |           |               |                      |                |              | 2,4-Dichlorophenol           | 1000 ug/mL    |
|            |          |           |               |                      |                |              | 2,4-Dimethylphenol           | 1000 ug/mL    |
|            |          |           |               |                      |                |              | 2,4-Dinitrophenol            | 2000 ug/mL    |
|            |          |           |               |                      |                |              | 2,4-Dinitrotoluene           | 1000 ug/mL    |
|            |          |           |               |                      |                |              | 2,6-Dinitrotoluene           | 1000 ug/mL    |
|            |          |           |               |                      |                |              | 2-Chloronaphthalene          | 1000 ug/mL    |
|            |          |           |               |                      |                |              | 2-Chlorophenol               | 1000 ug/mL    |
|            |          |           |               |                      |                |              | 2-Methylnaphthalene          | 1000 ug/mL    |
|            |          |           |               |                      |                |              | 2-Methylphenol               | 1000 ug/mL    |
|            |          |           |               |                      |                |              | 2-Nitroaniline               | 1000 ug/mL    |
|            |          |           |               |                      |                |              | 2-Nitrophenol                | 1000 ug/mL    |
|            |          |           |               |                      |                |              | 3-Nitroaniline               | 1000 ug/mL    |
|            |          |           |               |                      |                |              | 4,6-Dinitro-2-methylphenol   | 2000 ug/mL    |
|            |          |           |               |                      |                |              | 4-Bromophenyl phenyl ether   | 1000 ug/mL    |
|            |          |           |               |                      |                |              | 4-Chloro-3-methylphenol      | 1000 ug/mL    |
|            |          |           |               |                      |                |              | 4-Chloroaniline              | 1000 ug/mL    |
|            |          |           |               |                      |                |              | 4-Chlorophenyl phenyl ether  | 1000 ug/mL    |
|            |          |           |               |                      |                |              | 4-Methylphenol               | 1000 ug/mL    |
|            |          |           |               |                      |                |              | 4-Nitroaniline               | 1000 ug/mL    |
|            |          |           |               |                      |                |              | 4-Nitrophenol                | 2000 ug/mL    |
|            |          |           |               |                      |                |              | Acenaphthene                 | 1000 ug/mL    |
|            |          |           |               |                      |                |              | Acenaphthylene               | 1000 ug/mL    |
|            |          |           |               |                      |                |              | Acetophenone                 | 1000 ug/mL    |
|            |          |           |               |                      |                |              | Aniline                      | 1000 ug/mL    |
|            |          |           |               |                      |                |              | Anthracene                   | 1000 ug/mL    |
|            |          |           |               |                      |                |              | Benzo[a]anthracene           | 1000 ug/mL    |
|            |          |           |               |                      |                |              | Benzo[a]pyrene               | 1000 ug/mL    |
|            |          |           |               |                      |                |              | Benzo[b]fluoranthene         | 1000 ug/mL    |
|            |          |           |               |                      |                |              | Benzo[g,h,i]perylene         | 1000 ug/mL    |
|            |          |           |               |                      |                |              | Benzo[k]fluoranthene         | 1000 ug/mL    |
|            |          |           |               |                      |                |              | Benzyl alcohol               | 1000 ug/mL    |
|            |          |           |               |                      |                |              | Bis(2-chloroethoxy)methane   | 1000 ug/mL    |
|            |          |           |               |                      |                |              | Bis(2-chloroethyl)ether      | 1000 ug/mL    |
|            |          |           |               |                      |                |              | Bis(2-ethylhexyl) phthalate  | 1000 ug/mL    |
|            |          |           |               |                      |                |              | Butyl benzyl phthalate       | 1000 ug/mL    |
|            |          |           |               |                      |                |              | Carbazole                    | 1000 ug/mL    |
|            |          |           |               |                      |                |              | Chrysene                     | 1000 ug/mL    |
|            |          |           |               |                      |                |              | Di-n-butyl phthalate         | 1000 ug/mL    |
|            |          |           |               |                      |                |              | Di-n-octyl phthalate         | 1000 ug/mL    |
|            |          |           |               |                      |                |              | Dibenz(a,h)anthracene        | 1000 ug/mL    |
|            |          |           |               |                      |                |              | Dibenzofuran                 | 1000 ug/mL    |
|            |          |           |               |                      |                |              | Diethyl phthalate            | 1000 ug/mL    |

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh

Job No.: 180-43791-1

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

| Reagent ID               | Exp Date | Prep Date | Dilutant Used        | Reagent Final Volume | Parent Reagent      |              | Analyte                        | Concentration |
|--------------------------|----------|-----------|----------------------|----------------------|---------------------|--------------|--------------------------------|---------------|
|                          |          |           |                      |                      | Reagent ID          | Volume Added |                                |               |
|                          |          |           |                      |                      |                     |              | Dimethyl phthalate             | 1000 ug/mL    |
|                          |          |           |                      |                      |                     |              | Fluoranthene                   | 1000 ug/mL    |
|                          |          |           |                      |                      |                     |              | Fluorene                       | 1000 ug/mL    |
|                          |          |           |                      |                      |                     |              | Hexachlorobenzene              | 1000 ug/mL    |
|                          |          |           |                      |                      |                     |              | Hexachlorobutadiene            | 1000 ug/mL    |
|                          |          |           |                      |                      |                     |              | Hexachlorocyclopentadiene      | 1000 ug/mL    |
|                          |          |           |                      |                      |                     |              | Hexachloroethane               | 1000 ug/mL    |
|                          |          |           |                      |                      |                     |              | Hexadecane                     | 1000 ug/mL    |
|                          |          |           |                      |                      |                     |              | Indeno[1,2,3-cd]pyrene         | 1000 ug/mL    |
|                          |          |           |                      |                      |                     |              | Isophorone                     | 1000 ug/mL    |
|                          |          |           |                      |                      |                     |              | n-Decane                       | 1000 ug/mL    |
|                          |          |           |                      |                      |                     |              | N-Nitrosodi-n-propylamine      | 1000 ug/mL    |
|                          |          |           |                      |                      |                     |              | N-Nitrosodimethylamine         | 1000 ug/mL    |
|                          |          |           |                      |                      |                     |              | n-Octadecane                   | 1000 ug/mL    |
|                          |          |           |                      |                      |                     |              | Naphthalene                    | 1000 ug/mL    |
|                          |          |           |                      |                      |                     |              | Nitrobenzene                   | 1000 ug/mL    |
|                          |          |           |                      |                      |                     |              | Pentachlorophenol              | 2000 ug/mL    |
|                          |          |           |                      |                      |                     |              | Phenanthrene                   | 1000 ug/mL    |
|                          |          |           |                      |                      |                     |              | Phenol                         | 1000 ug/mL    |
|                          |          |           |                      |                      |                     |              | Pyrene                         | 1000 ug/mL    |
|                          |          |           |                      |                      |                     |              | Pyridine                       | 1000 ug/mL    |
| ..SVLVstd2_00012         | 07/31/15 |           | Restek, Lot A0100824 |                      | (Purchased Reagent) |              | 3,3'-Dichlorobenzidine         | 2000 ug/mL    |
|                          |          |           |                      |                      |                     |              | Atrazine                       | 2000 ug/mL    |
|                          |          |           |                      |                      |                     |              | Benzidine                      | 2000 ug/mL    |
|                          |          |           |                      |                      |                     |              | Caprolactam                    | 2000 ug/mL    |
| ..SVLVstd5(7)_00001      | 02/28/17 |           | Restek, Lot A0101573 |                      | (Purchased Reagent) |              | N-Nitrosodiphenylamine         | 2000 ug/mL    |
| ..SVLVstd8_00003         | 05/31/15 |           | Restek, Lot A0103145 |                      | (Purchased Reagent) |              | Benzaldehyde                   | 2000 ug/mL    |
|                          |          |           |                      |                      |                     |              | Benzoic acid                   | 2000 ug/mL    |
|                          |          |           |                      |                      |                     |              | Indene                         | 2000 ug/mL    |
| ..SVLVSURRSPK_00003      | 02/28/18 |           | Restek, Lot A093638  |                      | (Purchased Reagent) |              | 2,4,6-Tribromophenol (Surr)    | 5000 ug/mL    |
|                          |          |           |                      |                      |                     |              | 2-Fluorobiphenyl               | 5000 ug/mL    |
|                          |          |           |                      |                      |                     |              | 2-Fluorophenol (Surr)          | 5000 ug/mL    |
|                          |          |           |                      |                      |                     |              | Nitrobenzene-d5 (Surr)         | 5000 ug/mL    |
|                          |          |           |                      |                      |                     |              | Phenol-d5 (Surr)               | 5000 ug/mL    |
|                          |          |           |                      |                      |                     |              | Terphenyl-d14 (Surr)           | 5000 ug/mL    |
| ..SVNNITROPYROS_00015    | 06/05/17 |           | absolute, Lot 060514 |                      | (Purchased Reagent) |              | N-Nitrosopyrrolidine           | 1000 ug/mL    |
| <b>SVTAPSTD40i_00005</b> | 02/21/15 | 07/21/14  | MeCl2, Lot 1053215   | 1 mL                 | SVTAPITINTRNi_00005 | 10 uL        | 1,4-Dichlorobenzene-d4         | 4 ug/mL       |
|                          |          |           |                      |                      |                     |              | Acenaphthene-d10               | 4 ug/mL       |
|                          |          |           |                      |                      |                     |              | Chrysene-d12                   | 4 ug/mL       |
|                          |          |           |                      |                      |                     |              | Naphthalene-d8                 | 4 ug/mL       |
|                          |          |           |                      |                      |                     |              | Perylene-d12                   | 4 ug/mL       |
|                          |          |           |                      |                      |                     |              | Phenanthrene-d10               | 4 ug/mL       |
|                          |          |           |                      |                      | SVTAPITSTCKi_00004  | 500 uL       | Benzo[e]pyrene                 | 20 ug/mL      |
|                          |          |           |                      |                      |                     |              | 2-Naphthylamine                | 20 ug/mL      |
|                          |          |           |                      |                      |                     |              | 2,3,5,6-Tetrachlorophenol      | 20 ug/mL      |
|                          |          |           |                      |                      |                     |              | 2,6-Dichlorophenol             | 20 ug/mL      |
|                          |          |           |                      |                      |                     |              | 7,12-Dimethylbenz(a)anthracene | 20 ug/mL      |

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh

Job No.: 180-43791-1

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

| Reagent ID | Exp Date | Prep Date | Dilutant Used | Reagent Final Volume | Parent Reagent |              | Analyte                      | Concentration |
|------------|----------|-----------|---------------|----------------------|----------------|--------------|------------------------------|---------------|
|            |          |           |               |                      | Reagent ID     | Volume Added |                              |               |
|            |          |           |               |                      |                |              | Methyl methanesulfonate      | 20 ug/mL      |
|            |          |           |               |                      |                |              | 1,1'-Biphenyl                | 20 ug/mL      |
|            |          |           |               |                      |                |              | 1,2,4,5-Tetrachlorobenzene   | 20 ug/mL      |
|            |          |           |               |                      |                |              | 1,2,4-Trichlorobenzene       | 20 ug/mL      |
|            |          |           |               |                      |                |              | 1,2-Dichlorobenzene          | 20 ug/mL      |
|            |          |           |               |                      |                |              | 1,2-Diphenylhydrazine        | 20 ug/mL      |
|            |          |           |               |                      |                |              | 1,3-Dichlorobenzene          | 20 ug/mL      |
|            |          |           |               |                      |                |              | 1,3-Dinitrobenzene           | 20 ug/mL      |
|            |          |           |               |                      |                |              | 1,4-Dichlorobenzene          | 20 ug/mL      |
|            |          |           |               |                      |                |              | 1,4-Dioxane                  | 20 ug/mL      |
|            |          |           |               |                      |                |              | 1-Methylnaphthalene          | 20 ug/mL      |
|            |          |           |               |                      |                |              | 2,2'-oxybis[1-chloropropane] | 20 ug/mL      |
|            |          |           |               |                      |                |              | 2,3,4,6-Tetrachlorophenol    | 20 ug/mL      |
|            |          |           |               |                      |                |              | 2,4,5-Trichlorophenol        | 20 ug/mL      |
|            |          |           |               |                      |                |              | 2,4,6-Trichlorophenol        | 20 ug/mL      |
|            |          |           |               |                      |                |              | 2,4-Dichlorophenol           | 20 ug/mL      |
|            |          |           |               |                      |                |              | 2,4-Dimethylphenol           | 20 ug/mL      |
|            |          |           |               |                      |                |              | 2,4-Dinitrophenol            | 40 ug/mL      |
|            |          |           |               |                      |                |              | 2,4-Dinitrotoluene           | 20 ug/mL      |
|            |          |           |               |                      |                |              | 2,6-Dinitrotoluene           | 20 ug/mL      |
|            |          |           |               |                      |                |              | 2-Chloronaphthalene          | 20 ug/mL      |
|            |          |           |               |                      |                |              | 2-Chlorophenol               | 20 ug/mL      |
|            |          |           |               |                      |                |              | 2-Methylnaphthalene          | 20 ug/mL      |
|            |          |           |               |                      |                |              | 2-Methylphenol               | 20 ug/mL      |
|            |          |           |               |                      |                |              | 2-Nitroaniline               | 20 ug/mL      |
|            |          |           |               |                      |                |              | 2-Nitrophenol                | 20 ug/mL      |
|            |          |           |               |                      |                |              | 3-Nitroaniline               | 20 ug/mL      |
|            |          |           |               |                      |                |              | 4,6-Dinitro-2-methylphenol   | 40 ug/mL      |
|            |          |           |               |                      |                |              | 4-Bromophenyl phenyl ether   | 20 ug/mL      |
|            |          |           |               |                      |                |              | 4-Chloro-3-methylphenol      | 20 ug/mL      |
|            |          |           |               |                      |                |              | 4-Chloroaniline              | 20 ug/mL      |
|            |          |           |               |                      |                |              | 4-Chlorophenyl phenyl ether  | 20 ug/mL      |
|            |          |           |               |                      |                |              | 4-Methylphenol               | 20 ug/mL      |
|            |          |           |               |                      |                |              | 4-Nitroaniline               | 20 ug/mL      |
|            |          |           |               |                      |                |              | 4-Nitrophenol                | 40 ug/mL      |
|            |          |           |               |                      |                |              | Acenaphthene                 | 20 ug/mL      |
|            |          |           |               |                      |                |              | Acenaphthylene               | 20 ug/mL      |
|            |          |           |               |                      |                |              | Acetophenone                 | 20 ug/mL      |
|            |          |           |               |                      |                |              | Aniline                      | 20 ug/mL      |
|            |          |           |               |                      |                |              | Anthracene                   | 20 ug/mL      |
|            |          |           |               |                      |                |              | Benzo[a]anthracene           | 20 ug/mL      |
|            |          |           |               |                      |                |              | Benzo[a]pyrene               | 20 ug/mL      |
|            |          |           |               |                      |                |              | Benzo[b]fluoranthene         | 20 ug/mL      |
|            |          |           |               |                      |                |              | Benzo[g,h,i]perylene         | 20 ug/mL      |
|            |          |           |               |                      |                |              | Benzo[k]fluoranthene         | 20 ug/mL      |
|            |          |           |               |                      |                |              | Benzyl alcohol               | 20 ug/mL      |
|            |          |           |               |                      |                |              | Bis(2-chloroethoxy)methane   | 20 ug/mL      |
|            |          |           |               |                      |                |              | Bis(2-chloroethyl)ether      | 20 ug/mL      |



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

| Reagent ID           | Exp Date | Prep Date | Dilutant Used      | Reagent Final Volume | Parent Reagent   |              | Analyte                     | Concentration |
|----------------------|----------|-----------|--------------------|----------------------|------------------|--------------|-----------------------------|---------------|
|                      |          |           |                    |                      | Reagent ID       | Volume Added |                             |               |
|                      |          |           |                    |                      |                  |              | Bis(2-ethylhexyl) phthalate | 20 ug/mL      |
|                      |          |           |                    |                      |                  |              | Butyl benzyl phthalate      | 20 ug/mL      |
|                      |          |           |                    |                      |                  |              | Carbazole                   | 20 ug/mL      |
|                      |          |           |                    |                      |                  |              | Chrysene                    | 20 ug/mL      |
|                      |          |           |                    |                      |                  |              | Di-n-butyl phthalate        | 20 ug/mL      |
|                      |          |           |                    |                      |                  |              | Di-n-octyl phthalate        | 20 ug/mL      |
|                      |          |           |                    |                      |                  |              | Dibenz(a,h)anthracene       | 20 ug/mL      |
|                      |          |           |                    |                      |                  |              | Dibenzofuran                | 20 ug/mL      |
|                      |          |           |                    |                      |                  |              | Diethyl phthalate           | 20 ug/mL      |
|                      |          |           |                    |                      |                  |              | Dimethyl phthalate          | 20 ug/mL      |
|                      |          |           |                    |                      |                  |              | Fluoranthene                | 20 ug/mL      |
|                      |          |           |                    |                      |                  |              | Fluorene                    | 20 ug/mL      |
|                      |          |           |                    |                      |                  |              | Hexachlorobenzene           | 20 ug/mL      |
|                      |          |           |                    |                      |                  |              | Hexachlorobutadiene         | 20 ug/mL      |
|                      |          |           |                    |                      |                  |              | Hexachlorocyclopentadiene   | 20 ug/mL      |
|                      |          |           |                    |                      |                  |              | Hexachloroethane            | 20 ug/mL      |
|                      |          |           |                    |                      |                  |              | Hexadecane                  | 20 ug/mL      |
|                      |          |           |                    |                      |                  |              | Indeno[1,2,3-cd]pyrene      | 20 ug/mL      |
|                      |          |           |                    |                      |                  |              | Isophorone                  | 20 ug/mL      |
|                      |          |           |                    |                      |                  |              | n-Decane                    | 20 ug/mL      |
|                      |          |           |                    |                      |                  |              | N-Nitrosodi-n-propylamine   | 20 ug/mL      |
|                      |          |           |                    |                      |                  |              | N-Nitrosodimethylamine      | 20 ug/mL      |
|                      |          |           |                    |                      |                  |              | n-Octadecane                | 20 ug/mL      |
|                      |          |           |                    |                      |                  |              | Naphthalene                 | 20 ug/mL      |
|                      |          |           |                    |                      |                  |              | Nitrobenzene                | 20 ug/mL      |
|                      |          |           |                    |                      |                  |              | Pentachlorophenol           | 40 ug/mL      |
|                      |          |           |                    |                      |                  |              | Phenanthrene                | 20 ug/mL      |
|                      |          |           |                    |                      |                  |              | Phenol                      | 20 ug/mL      |
|                      |          |           |                    |                      |                  |              | Pyrene                      | 20 ug/mL      |
|                      |          |           |                    |                      |                  |              | Pyridine                    | 20 ug/mL      |
|                      |          |           |                    |                      |                  |              | 3,3'-Dichlorobenzidine      | 20 ug/mL      |
|                      |          |           |                    |                      |                  |              | Atrazine                    | 20 ug/mL      |
|                      |          |           |                    |                      |                  |              | Benzidine                   | 20 ug/mL      |
|                      |          |           |                    |                      |                  |              | Caprolactam                 | 20 ug/mL      |
|                      |          |           |                    |                      |                  |              | N-Nitrosodiphenylamine      | 20 ug/mL      |
|                      |          |           |                    |                      |                  |              | Benzaldehyde                | 20 ug/mL      |
|                      |          |           |                    |                      |                  |              | Benzoic acid                | 20 ug/mL      |
|                      |          |           |                    |                      |                  |              | Indene                      | 20 ug/mL      |
|                      |          |           |                    |                      |                  |              | 2,4,6-Tribromophenol (Surr) | 20 ug/mL      |
|                      |          |           |                    |                      |                  |              | 2-Fluorobiphenyl            | 20 ug/mL      |
|                      |          |           |                    |                      |                  |              | 2-Fluorophenol (Surr)       | 20 ug/mL      |
|                      |          |           |                    |                      |                  |              | Nitrobenzene-d5 (Surr)      | 20 ug/mL      |
|                      |          |           |                    |                      |                  |              | Phenol-d5 (Surr)            | 20 ug/mL      |
|                      |          |           |                    |                      |                  |              | Terphenyl-d14 (Surr)        | 20 ug/mL      |
|                      |          |           |                    |                      |                  |              | N-Nitrosopyrrolidine        | 20 ug/mL      |
| .SVTAPITINTRNi_00005 | 05/07/15 | 05/07/14  | MeCl2, Lot 1000447 | 25 mL                | SVLVIntstd_00007 | 5000 uL      | 1,4-Dichlorobenzene-d4      | 400 ug/mL     |
|                      |          |           |                    |                      |                  |              | Acenaphthene-d10            | 400 ug/mL     |
|                      |          |           |                    |                      |                  |              | Chrysene-d12                | 400 ug/mL     |

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh

Job No.: 180-43791-1

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

| Reagent ID          | Exp Date | Prep Date | Dilutant Used       | Reagent Final Volume | Parent Reagent      |                     | Analyte                        | Concentration |
|---------------------|----------|-----------|---------------------|----------------------|---------------------|---------------------|--------------------------------|---------------|
|                     |          |           |                     |                      | Reagent ID          | Volume Added        |                                |               |
|                     |          |           |                     |                      |                     |                     | Naphthalene-d8                 | 400 ug/mL     |
|                     |          |           |                     |                      |                     |                     | Perylene-d12                   | 400 ug/mL     |
|                     |          |           |                     |                      |                     |                     | Phenanthrene-d10               | 400 ug/mL     |
| ..SVLVIntstd_00007  | 02/28/18 |           | Restek, Lot A093676 |                      |                     | (Purchased Reagent) | 1,4-Dichlorobenzene-d4         | 2000 ug/mL    |
|                     |          |           |                     |                      |                     |                     | Acenaphthene-d10               | 2000 ug/mL    |
|                     |          |           |                     |                      |                     |                     | Chrysene-d12                   | 2000 ug/mL    |
|                     |          |           |                     |                      |                     |                     | Naphthalene-d8                 | 2000 ug/mL    |
|                     |          |           |                     |                      |                     |                     | Perylene-d12                   | 2000 ug/mL    |
|                     |          |           |                     |                      |                     |                     | Phenanthrene-d10               | 2000 ug/mL    |
| .SVTAPITSTCKi_00004 | 02/21/15 | 07/21/14  | MeCl2, Lot 1053215  | 20 mL                | sv benzoepyre_00001 | 800 uL              | Benzo[e]pyrene                 | 40 ug/mL      |
|                     |          |           |                     |                      | SV2NAPAMINEs_00002  | 800 uL              | 2-Naphthylamine                | 40 ug/mL      |
|                     |          |           |                     |                      | SVLVlist12_00002    | 800 uL              | 2,3,5,6-Tetrachlorophenol      | 40 ug/mL      |
|                     |          |           |                     |                      |                     |                     | 2,6-Dichlorophenol             | 40 ug/mL      |
|                     |          |           |                     |                      |                     |                     | 7,12-Dimethylbenz(a)anthracene | 40 ug/mL      |
|                     |          |           |                     |                      |                     |                     | Methyl methanesulfonate        | 40 ug/mL      |
|                     |          |           |                     |                      | SVLVstd1_00026      | 800 uL              | 1,1'-Biphenyl                  | 40 ug/mL      |
|                     |          |           |                     |                      |                     |                     | 1,2,4,5-Tetrachlorobenzene     | 40 ug/mL      |
|                     |          |           |                     |                      |                     |                     | 1,2,4-Trichlorobenzene         | 40 ug/mL      |
|                     |          |           |                     |                      |                     |                     | 1,2-Dichlorobenzene            | 40 ug/mL      |
|                     |          |           |                     |                      |                     |                     | 1,2-Diphenylhydrazine          | 40 ug/mL      |
|                     |          |           |                     |                      |                     |                     | 1,3-Dichlorobenzene            | 40 ug/mL      |
|                     |          |           |                     |                      |                     |                     | 1,3-Dinitrobenzene             | 40 ug/mL      |
|                     |          |           |                     |                      |                     |                     | 1,4-Dichlorobenzene            | 40 ug/mL      |
|                     |          |           |                     |                      |                     |                     | 1,4-Dioxane                    | 40 ug/mL      |
|                     |          |           |                     |                      |                     |                     | 1-Methylnaphthalene            | 40 ug/mL      |
|                     |          |           |                     |                      |                     |                     | 2,2'-oxybis[1-chloropropane]   | 40 ug/mL      |
|                     |          |           |                     |                      |                     |                     | 2,3,4,6-Tetrachlorophenol      | 40 ug/mL      |
|                     |          |           |                     |                      |                     |                     | 2,4,5-Trichlorophenol          | 40 ug/mL      |
|                     |          |           |                     |                      |                     |                     | 2,4,6-Trichlorophenol          | 40 ug/mL      |
|                     |          |           |                     |                      |                     |                     | 2,4-Dichlorophenol             | 40 ug/mL      |
|                     |          |           |                     |                      |                     |                     | 2,4-Dimethylphenol             | 40 ug/mL      |
|                     |          |           |                     |                      |                     |                     | 2,4-Dinitrophenol              | 80 ug/mL      |
|                     |          |           |                     |                      |                     |                     | 2,4-Dinitrotoluene             | 40 ug/mL      |
|                     |          |           |                     |                      |                     |                     | 2,6-Dinitrotoluene             | 40 ug/mL      |
|                     |          |           |                     |                      |                     |                     | 2-Chloronaphthalene            | 40 ug/mL      |
|                     |          |           |                     |                      |                     |                     | 2-Chlorophenol                 | 40 ug/mL      |
|                     |          |           |                     |                      |                     |                     | 2-Methylnaphthalene            | 40 ug/mL      |
|                     |          |           |                     |                      |                     |                     | 2-Methylphenol                 | 40 ug/mL      |
|                     |          |           |                     |                      |                     |                     | 2-Nitroaniline                 | 40 ug/mL      |
|                     |          |           |                     |                      |                     |                     | 2-Nitrophenol                  | 40 ug/mL      |
|                     |          |           |                     |                      |                     |                     | 3-Nitroaniline                 | 40 ug/mL      |
|                     |          |           |                     |                      |                     |                     | 4,6-Dinitro-2-methylphenol     | 80 ug/mL      |
|                     |          |           |                     |                      |                     |                     | 4-Bromophenyl phenyl ether     | 40 ug/mL      |
|                     |          |           |                     |                      |                     |                     | 4-Chloro-3-methylphenol        | 40 ug/mL      |
|                     |          |           |                     |                      |                     |                     | 4-Chloroaniline                | 40 ug/mL      |
|                     |          |           |                     |                      |                     |                     | 4-Chlorophenyl phenyl ether    | 40 ug/mL      |
|                     |          |           |                     |                      |                     |                     | 4-Methylphenol                 | 40 ug/mL      |
|                     |          |           |                     |                      |                     |                     | 4-Nitroaniline                 | 40 ug/mL      |

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh

Job No.: 180-43791-1

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

| Reagent ID | Exp Date | Prep Date | Dilutant Used | Reagent Final Volume | Parent Reagent |              | Analyte                     | Concentration |
|------------|----------|-----------|---------------|----------------------|----------------|--------------|-----------------------------|---------------|
|            |          |           |               |                      | Reagent ID     | Volume Added |                             |               |
|            |          |           |               |                      |                |              | 4-Nitrophenol               | 80 ug/mL      |
|            |          |           |               |                      |                |              | Acenaphthene                | 40 ug/mL      |
|            |          |           |               |                      |                |              | Acenaphthylene              | 40 ug/mL      |
|            |          |           |               |                      |                |              | Acetophenone                | 40 ug/mL      |
|            |          |           |               |                      |                |              | Aniline                     | 40 ug/mL      |
|            |          |           |               |                      |                |              | Anthracene                  | 40 ug/mL      |
|            |          |           |               |                      |                |              | Benzo[a]anthracene          | 40 ug/mL      |
|            |          |           |               |                      |                |              | Benzo[a]pyrene              | 40 ug/mL      |
|            |          |           |               |                      |                |              | Benzo[b]fluoranthene        | 40 ug/mL      |
|            |          |           |               |                      |                |              | Benzo[g,h,i]perylene        | 40 ug/mL      |
|            |          |           |               |                      |                |              | Benzo[k]fluoranthene        | 40 ug/mL      |
|            |          |           |               |                      |                |              | Benzyl alcohol              | 40 ug/mL      |
|            |          |           |               |                      |                |              | Bis(2-chloroethoxy)methane  | 40 ug/mL      |
|            |          |           |               |                      |                |              | Bis(2-chloroethyl) ether    | 40 ug/mL      |
|            |          |           |               |                      |                |              | Bis(2-ethylhexyl) phthalate | 40 ug/mL      |
|            |          |           |               |                      |                |              | Butyl benzyl phthalate      | 40 ug/mL      |
|            |          |           |               |                      |                |              | Carbazole                   | 40 ug/mL      |
|            |          |           |               |                      |                |              | Chrysene                    | 40 ug/mL      |
|            |          |           |               |                      |                |              | Di-n-butyl phthalate        | 40 ug/mL      |
|            |          |           |               |                      |                |              | Di-n-octyl phthalate        | 40 ug/mL      |
|            |          |           |               |                      |                |              | Dibenz(a,h)anthracene       | 40 ug/mL      |
|            |          |           |               |                      |                |              | Dibenzofuran                | 40 ug/mL      |
|            |          |           |               |                      |                |              | Diethyl phthalate           | 40 ug/mL      |
|            |          |           |               |                      |                |              | Dimethyl phthalate          | 40 ug/mL      |
|            |          |           |               |                      |                |              | Fluoranthene                | 40 ug/mL      |
|            |          |           |               |                      |                |              | Fluorene                    | 40 ug/mL      |
|            |          |           |               |                      |                |              | Hexachlorobenzene           | 40 ug/mL      |
|            |          |           |               |                      |                |              | Hexachlorobutadiene         | 40 ug/mL      |
|            |          |           |               |                      |                |              | Hexachlorocyclopentadiene   | 40 ug/mL      |
|            |          |           |               |                      |                |              | Hexachloroethane            | 40 ug/mL      |
|            |          |           |               |                      |                |              | Hexadecane                  | 40 ug/mL      |
|            |          |           |               |                      |                |              | Indeno[1,2,3-cd]pyrene      | 40 ug/mL      |
|            |          |           |               |                      |                |              | Isophorone                  | 40 ug/mL      |
|            |          |           |               |                      |                |              | n-Decane                    | 40 ug/mL      |
|            |          |           |               |                      |                |              | N-Nitrosodi-n-propylamine   | 40 ug/mL      |
|            |          |           |               |                      |                |              | N-Nitrosodimethylamine      | 40 ug/mL      |
|            |          |           |               |                      |                |              | n-Octadecane                | 40 ug/mL      |
|            |          |           |               |                      |                |              | Naphthalene                 | 40 ug/mL      |
|            |          |           |               |                      |                |              | Nitrobenzene                | 40 ug/mL      |
|            |          |           |               |                      |                |              | Pentachlorophenol           | 80 ug/mL      |
|            |          |           |               |                      |                |              | Phenanthrene                | 40 ug/mL      |
|            |          |           |               |                      |                |              | Phenol                      | 40 ug/mL      |
|            |          |           |               |                      |                |              | Pyrene                      | 40 ug/mL      |
|            |          |           |               |                      |                |              | Pyridine                    | 40 ug/mL      |
|            |          |           |               |                      | SVLVstd2_00012 | 400 uL       | 3,3'-Dichlorobenzidine      | 40 ug/mL      |
|            |          |           |               |                      |                |              | Atrazine                    | 40 ug/mL      |
|            |          |           |               |                      |                |              | Benzidine                   | 40 ug/mL      |
|            |          |           |               |                      |                |              | Caprolactam                 | 40 ug/mL      |

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh

Job No.: 180-43791-1

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

| Reagent ID            | Exp Date | Prep Date | Dilutant Used                 | Reagent Final Volume | Parent Reagent      |              | Analyte                        | Concentration |
|-----------------------|----------|-----------|-------------------------------|----------------------|---------------------|--------------|--------------------------------|---------------|
|                       |          |           |                               |                      | Reagent ID          | Volume Added |                                |               |
|                       |          |           |                               |                      | SVLVstd5(7)_00001   | 400 uL       | N-Nitrosodiphenylamine         | 40 ug/mL      |
|                       |          |           |                               |                      | SVLVstd8_00003      | 400 uL       | Benzaldehyde                   | 40 ug/mL      |
|                       |          |           |                               |                      |                     |              | Benzoic acid                   | 40 ug/mL      |
|                       |          |           |                               |                      |                     |              | Indene                         | 40 ug/mL      |
|                       |          |           |                               |                      | SVLVSURRSPK_00003   | 160 uL       | 2,4,6-Tribromophenol (Surr)    | 40 ug/mL      |
|                       |          |           |                               |                      |                     |              | 2-Fluorobiphenyl               | 40 ug/mL      |
|                       |          |           |                               |                      |                     |              | 2-Fluorophenol (Surr)          | 40 ug/mL      |
|                       |          |           |                               |                      |                     |              | Nitrobenzene-d5 (Surr)         | 40 ug/mL      |
|                       |          |           |                               |                      |                     |              | Phenol-d5 (Surr)               | 40 ug/mL      |
|                       |          |           |                               |                      |                     |              | Terphenyl-d14 (Surr)           | 40 ug/mL      |
|                       |          |           |                               |                      | SVNNITROPYROS_00015 | 800 uL       | N-Nitrosopyrrolidine           | 40 ug/mL      |
| ..sv benzoepyre_00001 | 10/03/18 |           | Absolute, Lot 100313          |                      | (Purchased Reagent) |              | Benzo[e]pyrene                 | 1000 ug/mL    |
| ..SV2NAPAMINEs_00002  | 06/30/17 |           | Ultra Scientific, Lot CK-1617 |                      | (Purchased Reagent) |              | 2-Naphthylamine                | 1000 ug/mL    |
| ..SVLVlist12_00002    | 04/30/15 |           | Restek, Lot A0102912          |                      | (Purchased Reagent) |              | 2,3,5,6-Tetrachlorophenol      | 1000 ug/mL    |
|                       |          |           |                               |                      |                     |              | 2,6-Dichlorophenol             | 1000 ug/mL    |
|                       |          |           |                               |                      |                     |              | 7,12-Dimethylbenz(a)anthracene | 1000 ug/mL    |
|                       |          |           |                               |                      |                     |              | Methyl methanesulfonate        | 1000 ug/mL    |
| ..SVLVstd1_00026      | 08/31/15 |           | Restek, Lot A0101615          |                      | (Purchased Reagent) |              | 1,1'-Biphenyl                  | 1000 ug/mL    |
|                       |          |           |                               |                      |                     |              | 1,2,4,5-Tetrachlorobenzene     | 1000 ug/mL    |
|                       |          |           |                               |                      |                     |              | 1,2,4-Trichlorobenzene         | 1000 ug/mL    |
|                       |          |           |                               |                      |                     |              | 1,2-Dichlorobenzene            | 1000 ug/mL    |
|                       |          |           |                               |                      |                     |              | 1,2-Diphenylhydrazine          | 1000 ug/mL    |
|                       |          |           |                               |                      |                     |              | 1,3-Dichlorobenzene            | 1000 ug/mL    |
|                       |          |           |                               |                      |                     |              | 1,3-Dinitrobenzene             | 1000 ug/mL    |
|                       |          |           |                               |                      |                     |              | 1,4-Dichlorobenzene            | 1000 ug/mL    |
|                       |          |           |                               |                      |                     |              | 1,4-Dioxane                    | 1000 ug/mL    |
|                       |          |           |                               |                      |                     |              | 1-Methylnaphthalene            | 1000 ug/mL    |
|                       |          |           |                               |                      |                     |              | 2,2'-oxybis[1-chloropropane]   | 1000 ug/mL    |
|                       |          |           |                               |                      |                     |              | 2,3,4,6-Tetrachlorophenol      | 1000 ug/mL    |
|                       |          |           |                               |                      |                     |              | 2,4,5-Trichlorophenol          | 1000 ug/mL    |
|                       |          |           |                               |                      |                     |              | 2,4,6-Trichlorophenol          | 1000 ug/mL    |
|                       |          |           |                               |                      |                     |              | 2,4-Dichlorophenol             | 1000 ug/mL    |
|                       |          |           |                               |                      |                     |              | 2,4-Dimethylphenol             | 1000 ug/mL    |
|                       |          |           |                               |                      |                     |              | 2,4-Dinitrophenol              | 2000 ug/mL    |
|                       |          |           |                               |                      |                     |              | 2,4-Dinitrotoluene             | 1000 ug/mL    |
|                       |          |           |                               |                      |                     |              | 2,6-Dinitrotoluene             | 1000 ug/mL    |
|                       |          |           |                               |                      |                     |              | 2-Chloronaphthalene            | 1000 ug/mL    |
|                       |          |           |                               |                      |                     |              | 2-Chlorophenol                 | 1000 ug/mL    |
|                       |          |           |                               |                      |                     |              | 2-Methylnaphthalene            | 1000 ug/mL    |
|                       |          |           |                               |                      |                     |              | 2-Methylphenol                 | 1000 ug/mL    |
|                       |          |           |                               |                      |                     |              | 2-Nitroaniline                 | 1000 ug/mL    |
|                       |          |           |                               |                      |                     |              | 2-Nitrophenol                  | 1000 ug/mL    |
|                       |          |           |                               |                      |                     |              | 3-Nitroaniline                 | 1000 ug/mL    |
|                       |          |           |                               |                      |                     |              | 4,6-Dinitro-2-methylphenol     | 2000 ug/mL    |
|                       |          |           |                               |                      |                     |              | 4-Bromophenyl phenyl ether     | 1000 ug/mL    |
|                       |          |           |                               |                      |                     |              | 4-Chloro-3-methylphenol        | 1000 ug/mL    |
|                       |          |           |                               |                      |                     |              | 4-Chloroaniline                | 1000 ug/mL    |
|                       |          |           |                               |                      |                     |              | 4-Chlorophenyl phenyl ether    | 1000 ug/mL    |

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh

Job No.: 180-43791-1

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

| Reagent ID        | Exp Date   | Prep Date | Dilutant Used        | Reagent Final Volume | Parent Reagent      |                        | Analyte                     | Concentration |
|-------------------|------------|-----------|----------------------|----------------------|---------------------|------------------------|-----------------------------|---------------|
|                   |            |           |                      |                      | Reagent ID          | Volume Added           |                             |               |
|                   |            |           |                      |                      |                     |                        | 4-Methylphenol              | 1000 ug/mL    |
|                   |            |           |                      |                      |                     |                        | 4-Nitroaniline              | 1000 ug/mL    |
|                   |            |           |                      |                      |                     |                        | 4-Nitrophenol               | 2000 ug/mL    |
|                   |            |           |                      |                      |                     |                        | Acenaphthene                | 1000 ug/mL    |
|                   |            |           |                      |                      |                     |                        | Acenaphthylene              | 1000 ug/mL    |
|                   |            |           |                      |                      |                     |                        | Acetophenone                | 1000 ug/mL    |
|                   |            |           |                      |                      |                     |                        | Aniline                     | 1000 ug/mL    |
|                   |            |           |                      |                      |                     |                        | Anthracene                  | 1000 ug/mL    |
|                   |            |           |                      |                      |                     |                        | Benzo[a]anthracene          | 1000 ug/mL    |
|                   |            |           |                      |                      |                     |                        | Benzo[a]pyrene              | 1000 ug/mL    |
|                   |            |           |                      |                      |                     |                        | Benzo[b]fluoranthene        | 1000 ug/mL    |
|                   |            |           |                      |                      |                     |                        | Benzo[g,h,i]perylene        | 1000 ug/mL    |
|                   |            |           |                      |                      |                     |                        | Benzo[k]fluoranthene        | 1000 ug/mL    |
|                   |            |           |                      |                      |                     |                        | Benzyl alcohol              | 1000 ug/mL    |
|                   |            |           |                      |                      |                     |                        | Bis(2-chloroethoxy)methane  | 1000 ug/mL    |
|                   |            |           |                      |                      |                     |                        | Bis(2-chloroethyl) ether    | 1000 ug/mL    |
|                   |            |           |                      |                      |                     |                        | Bis(2-ethylhexyl) phthalate | 1000 ug/mL    |
|                   |            |           |                      |                      |                     |                        | Butyl benzyl phthalate      | 1000 ug/mL    |
|                   |            |           |                      |                      |                     |                        | Carbazole                   | 1000 ug/mL    |
|                   |            |           |                      |                      |                     |                        | Chrysene                    | 1000 ug/mL    |
|                   |            |           |                      |                      |                     |                        | Di-n-butyl phthalate        | 1000 ug/mL    |
|                   |            |           |                      |                      |                     |                        | Di-n-octyl phthalate        | 1000 ug/mL    |
|                   |            |           |                      |                      |                     |                        | Dibenz(a,h)anthracene       | 1000 ug/mL    |
|                   |            |           |                      |                      |                     |                        | Dibenzofuran                | 1000 ug/mL    |
|                   |            |           |                      |                      |                     |                        | Diethyl phthalate           | 1000 ug/mL    |
|                   |            |           |                      |                      |                     |                        | Dimethyl phthalate          | 1000 ug/mL    |
|                   |            |           |                      |                      |                     |                        | Fluoranthene                | 1000 ug/mL    |
|                   |            |           |                      |                      |                     |                        | Fluorene                    | 1000 ug/mL    |
|                   |            |           |                      |                      |                     |                        | Hexachlorobenzene           | 1000 ug/mL    |
|                   |            |           |                      |                      |                     |                        | Hexachlorobutadiene         | 1000 ug/mL    |
|                   |            |           |                      |                      |                     |                        | Hexachlorocyclopentadiene   | 1000 ug/mL    |
|                   |            |           |                      |                      |                     |                        | Hexachloroethane            | 1000 ug/mL    |
|                   |            |           |                      |                      |                     |                        | Hexadecane                  | 1000 ug/mL    |
|                   |            |           |                      |                      |                     |                        | Indeno[1,2,3-cd]pyrene      | 1000 ug/mL    |
|                   |            |           |                      |                      |                     |                        | Isophorone                  | 1000 ug/mL    |
|                   |            |           |                      |                      |                     |                        | n-Decane                    | 1000 ug/mL    |
|                   |            |           |                      |                      |                     |                        | N-Nitrosodi-n-propylamine   | 1000 ug/mL    |
|                   |            |           |                      |                      |                     |                        | N-Nitrosodimethylamine      | 1000 ug/mL    |
|                   |            |           |                      |                      |                     |                        | n-Octadecane                | 1000 ug/mL    |
|                   |            |           |                      |                      |                     |                        | Naphthalene                 | 1000 ug/mL    |
|                   |            |           |                      |                      |                     |                        | Nitrobenzene                | 1000 ug/mL    |
| Pentachlorophenol | 2000 ug/mL |           |                      |                      |                     |                        |                             |               |
| Phenanthrene      | 1000 ug/mL |           |                      |                      |                     |                        |                             |               |
| Phenol            | 1000 ug/mL |           |                      |                      |                     |                        |                             |               |
| Pyrene            | 1000 ug/mL |           |                      |                      |                     |                        |                             |               |
| Pyridine          | 1000 ug/mL |           |                      |                      |                     |                        |                             |               |
| ..SVLVstd2_00012  | 07/31/15   |           | Restek, Lot A0100824 |                      | (Purchased Reagent) | 3,3'-Dichlorobenzidine | 2000 ug/mL                  |               |
|                   |            |           |                      |                      |                     | Atrazine               | 2000 ug/mL                  |               |

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh

Job No.: 180-43791-1

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

| Reagent ID               | Exp Date | Prep Date | Dilutant Used        | Reagent Final Volume | Parent Reagent      |              | Analyte                        | Concentration |
|--------------------------|----------|-----------|----------------------|----------------------|---------------------|--------------|--------------------------------|---------------|
|                          |          |           |                      |                      | Reagent ID          | Volume Added |                                |               |
|                          |          |           |                      |                      |                     |              | Benzidine                      | 2000 ug/mL    |
|                          |          |           |                      |                      |                     |              | Caprolactam                    | 2000 ug/mL    |
| ..SVLVstd5(7) 00001      | 02/28/17 |           | Restek, Lot A0101573 |                      | (Purchased Reagent) |              | N-Nitrosodiphenylamine         | 2000 ug/mL    |
| ..SVLVstd8_00003         | 05/31/15 |           | Restek, Lot A0103145 |                      | (Purchased Reagent) |              | Benzaldehyde                   | 2000 ug/mL    |
|                          |          |           |                      |                      |                     |              | Benzoic acid                   | 2000 ug/mL    |
|                          |          |           |                      |                      |                     |              | Indene                         | 2000 ug/mL    |
| ..SVLVSURRSPK_00003      | 02/28/18 |           | Restek, Lot A093638  |                      | (Purchased Reagent) |              | 2,4,6-Tribromophenol (Surr)    | 5000 ug/mL    |
|                          |          |           |                      |                      |                     |              | 2-Fluorobiphenyl               | 5000 ug/mL    |
|                          |          |           |                      |                      |                     |              | 2-Fluorophenol (Surr)          | 5000 ug/mL    |
|                          |          |           |                      |                      |                     |              | Nitrobenzene-d5 (Surr)         | 5000 ug/mL    |
|                          |          |           |                      |                      |                     |              | Phenol-d5 (Surr)               | 5000 ug/mL    |
|                          |          |           |                      |                      |                     |              | Terphenyl-d14 (Surr)           | 5000 ug/mL    |
| ..SVNNITROPYROs_00015    | 06/05/17 |           | absolute, Lot 060514 |                      | (Purchased Reagent) |              | N-Nitrosopyrrolidine           | 1000 ug/mL    |
| <b>SVTAPSTD60i_00005</b> | 02/21/15 | 07/21/14  | MeCl2, Lot 1053215   | 1 mL                 | SVTAPITINTRNi_00005 | 10 uL        | 1,4-Dichlorobenzene-d4         | 4 ug/mL       |
|                          |          |           |                      |                      |                     |              | Acenaphthene-d10               | 4 ug/mL       |
|                          |          |           |                      |                      |                     |              | Chrysene-d12                   | 4 ug/mL       |
|                          |          |           |                      |                      |                     |              | Naphthalene-d8                 | 4 ug/mL       |
|                          |          |           |                      |                      |                     |              | Perylene-d12                   | 4 ug/mL       |
|                          |          |           |                      |                      |                     |              | Phenanthrene-d10               | 4 ug/mL       |
|                          |          |           |                      |                      | SVTAPITSTCKi_00004  | 750 uL       | Benzo[e]pyrene                 | 30 ug/mL      |
|                          |          |           |                      |                      |                     |              | 2-Naphthylamine                | 30 ug/mL      |
|                          |          |           |                      |                      |                     |              | 2,3,5,6-Tetrachlorophenol      | 30 ug/mL      |
|                          |          |           |                      |                      |                     |              | 2,6-Dichlorophenol             | 30 ug/mL      |
|                          |          |           |                      |                      |                     |              | 7,12-Dimethylbenz(a)anthracene | 30 ug/mL      |
|                          |          |           |                      |                      |                     |              | Methyl methanesulfonate        | 30 ug/mL      |
|                          |          |           |                      |                      |                     |              | 1,1'-Biphenyl                  | 30 ug/mL      |
|                          |          |           |                      |                      |                     |              | 1,2,4,5-Tetrachlorobenzene     | 30 ug/mL      |
|                          |          |           |                      |                      |                     |              | 1,2,4-Trichlorobenzene         | 30 ug/mL      |
|                          |          |           |                      |                      |                     |              | 1,2-Dichlorobenzene            | 30 ug/mL      |
|                          |          |           |                      |                      |                     |              | 1,2-Diphenylhydrazine          | 30 ug/mL      |
|                          |          |           |                      |                      |                     |              | 1,3-Dichlorobenzene            | 30 ug/mL      |
|                          |          |           |                      |                      |                     |              | 1,3-Dinitrobenzene             | 30 ug/mL      |
|                          |          |           |                      |                      |                     |              | 1,4-Dichlorobenzene            | 30 ug/mL      |
|                          |          |           |                      |                      |                     |              | 1,4-Dioxane                    | 30 ug/mL      |
|                          |          |           |                      |                      |                     |              | 1-Methylnaphthalene            | 30 ug/mL      |
|                          |          |           |                      |                      |                     |              | 2,2'-oxybis[1-chloropropane]   | 30 ug/mL      |
|                          |          |           |                      |                      |                     |              | 2,3,4,6-Tetrachlorophenol      | 30 ug/mL      |
|                          |          |           |                      |                      |                     |              | 2,4,5-Trichlorophenol          | 30 ug/mL      |
|                          |          |           |                      |                      |                     |              | 2,4,6-Trichlorophenol          | 30 ug/mL      |
|                          |          |           |                      |                      |                     |              | 2,4-Dichlorophenol             | 30 ug/mL      |
|                          |          |           |                      |                      |                     |              | 2,4-Dimethylphenol             | 30 ug/mL      |
|                          |          |           |                      |                      |                     |              | 2,4-Dinitrophenol              | 60 ug/mL      |
|                          |          |           |                      |                      |                     |              | 2,4-Dinitrotoluene             | 30 ug/mL      |
|                          |          |           |                      |                      |                     |              | 2,6-Dinitrotoluene             | 30 ug/mL      |
|                          |          |           |                      |                      |                     |              | 2-Chloronaphthalene            | 30 ug/mL      |
|                          |          |           |                      |                      |                     |              | 2-Chlorophenol                 | 30 ug/mL      |
|                          |          |           |                      |                      |                     |              | 2-Methylnaphthalene            | 30 ug/mL      |

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh

Job No.: 180-43791-1

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

| Reagent ID | Exp Date | Prep Date | Dilutant Used | Reagent Final Volume | Parent Reagent |              | Analyte                      | Concentration |
|------------|----------|-----------|---------------|----------------------|----------------|--------------|------------------------------|---------------|
|            |          |           |               |                      | Reagent ID     | Volume Added |                              |               |
|            |          |           |               |                      |                |              | 2-Methylphenol               | 30 ug/mL      |
|            |          |           |               |                      |                |              | 2-Nitroaniline               | 30 ug/mL      |
|            |          |           |               |                      |                |              | 2-Nitrophenol                | 30 ug/mL      |
|            |          |           |               |                      |                |              | 3-Nitroaniline               | 30 ug/mL      |
|            |          |           |               |                      |                |              | 4,6-Dinitro-2-methylphenol   | 60 ug/mL      |
|            |          |           |               |                      |                |              | 4-Bromophenyl phenyl ether   | 30 ug/mL      |
|            |          |           |               |                      |                |              | 4-Chloro-3-methylphenol      | 30 ug/mL      |
|            |          |           |               |                      |                |              | 4-Chloroaniline              | 30 ug/mL      |
|            |          |           |               |                      |                |              | 4-Chlorophenyl phenyl ether  | 30 ug/mL      |
|            |          |           |               |                      |                |              | 4-Methylphenol               | 30 ug/mL      |
|            |          |           |               |                      |                |              | 4-Nitroaniline               | 30 ug/mL      |
|            |          |           |               |                      |                |              | 4-Nitrophenol                | 60 ug/mL      |
|            |          |           |               |                      |                |              | Acenaphthene                 | 30 ug/mL      |
|            |          |           |               |                      |                |              | Acenaphthylene               | 30 ug/mL      |
|            |          |           |               |                      |                |              | Acetophenone                 | 30 ug/mL      |
|            |          |           |               |                      |                |              | Aniline                      | 30 ug/mL      |
|            |          |           |               |                      |                |              | Anthracene                   | 30 ug/mL      |
|            |          |           |               |                      |                |              | Benzo[a]anthracene           | 30 ug/mL      |
|            |          |           |               |                      |                |              | Benzo[a]pyrene               | 30 ug/mL      |
|            |          |           |               |                      |                |              | Benzo[b]fluoranthene         | 30 ug/mL      |
|            |          |           |               |                      |                |              | Benzo[g,h,i]perylene         | 30 ug/mL      |
|            |          |           |               |                      |                |              | Benzo[k]fluoranthene         | 30 ug/mL      |
|            |          |           |               |                      |                |              | Benzyl alcohol               | 30 ug/mL      |
|            |          |           |               |                      |                |              | Bis (2-chloroethoxy)methane  | 30 ug/mL      |
|            |          |           |               |                      |                |              | Bis (2-chloroethyl) ether    | 30 ug/mL      |
|            |          |           |               |                      |                |              | Bis (2-ethylhexyl) phthalate | 30 ug/mL      |
|            |          |           |               |                      |                |              | Butyl benzyl phthalate       | 30 ug/mL      |
|            |          |           |               |                      |                |              | Carbazole                    | 30 ug/mL      |
|            |          |           |               |                      |                |              | Chrysene                     | 30 ug/mL      |
|            |          |           |               |                      |                |              | Di-n-butyl phthalate         | 30 ug/mL      |
|            |          |           |               |                      |                |              | Di-n-octyl phthalate         | 30 ug/mL      |
|            |          |           |               |                      |                |              | Dibenz (a,h) anthracene      | 30 ug/mL      |
|            |          |           |               |                      |                |              | Dibenzofuran                 | 30 ug/mL      |
|            |          |           |               |                      |                |              | Diethyl phthalate            | 30 ug/mL      |
|            |          |           |               |                      |                |              | Dimethyl phthalate           | 30 ug/mL      |
|            |          |           |               |                      |                |              | Fluoranthene                 | 30 ug/mL      |
|            |          |           |               |                      |                |              | Fluorene                     | 30 ug/mL      |
|            |          |           |               |                      |                |              | Hexachlorobenzene            | 30 ug/mL      |
|            |          |           |               |                      |                |              | Hexachlorobutadiene          | 30 ug/mL      |
|            |          |           |               |                      |                |              | Hexachlorocyclopentadiene    | 30 ug/mL      |
|            |          |           |               |                      |                |              | Hexachloroethane             | 30 ug/mL      |
|            |          |           |               |                      |                |              | Hexadecane                   | 30 ug/mL      |
|            |          |           |               |                      |                |              | Indeno[1,2,3-cd]pyrene       | 30 ug/mL      |
|            |          |           |               |                      |                |              | Isophorone                   | 30 ug/mL      |
|            |          |           |               |                      |                |              | n-Decane                     | 30 ug/mL      |
|            |          |           |               |                      |                |              | N-Nitrosodi-n-propylamine    | 30 ug/mL      |
|            |          |           |               |                      |                |              | N-Nitrosodimethylamine       | 30 ug/mL      |
|            |          |           |               |                      |                |              | n-Octadecane                 | 30 ug/mL      |

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh

Job No.: 180-43791-1

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

| Reagent ID           | Exp Date | Prep Date | Dilutant Used       | Reagent Final Volume | Parent Reagent      |                     | Analyte                        | Concentration |
|----------------------|----------|-----------|---------------------|----------------------|---------------------|---------------------|--------------------------------|---------------|
|                      |          |           |                     |                      | Reagent ID          | Volume Added        |                                |               |
|                      |          |           |                     |                      |                     |                     | Naphthalene                    | 30 ug/mL      |
|                      |          |           |                     |                      |                     |                     | Nitrobenzene                   | 30 ug/mL      |
|                      |          |           |                     |                      |                     |                     | Pentachlorophenol              | 60 ug/mL      |
|                      |          |           |                     |                      |                     |                     | Phenanthrene                   | 30 ug/mL      |
|                      |          |           |                     |                      |                     |                     | Phenol                         | 30 ug/mL      |
|                      |          |           |                     |                      |                     |                     | Pyrene                         | 30 ug/mL      |
|                      |          |           |                     |                      |                     |                     | Pyridine                       | 30 ug/mL      |
|                      |          |           |                     |                      |                     |                     | 3,3'-Dichlorobenzidine         | 30 ug/mL      |
|                      |          |           |                     |                      |                     |                     | Atrazine                       | 30 ug/mL      |
|                      |          |           |                     |                      |                     |                     | Benzidine                      | 30 ug/mL      |
|                      |          |           |                     |                      |                     |                     | Caprolactam                    | 30 ug/mL      |
|                      |          |           |                     |                      |                     |                     | N-Nitrosodiphenylamine         | 30 ug/mL      |
|                      |          |           |                     |                      |                     |                     | Benzaldehyde                   | 30 ug/mL      |
|                      |          |           |                     |                      |                     |                     | Benzoic acid                   | 30 ug/mL      |
|                      |          |           |                     |                      |                     |                     | Indene                         | 30 ug/mL      |
|                      |          |           |                     |                      |                     |                     | 2,4,6-Tribromophenol (Surr)    | 30 ug/mL      |
|                      |          |           |                     |                      |                     |                     | 2-Fluorobiphenyl               | 30 ug/mL      |
|                      |          |           |                     |                      |                     |                     | 2-Fluorophenol (Surr)          | 30 ug/mL      |
|                      |          |           |                     |                      |                     |                     | Nitrobenzene-d5 (Surr)         | 30 ug/mL      |
|                      |          |           |                     |                      |                     |                     | Phenol-d5 (Surr)               | 30 ug/mL      |
|                      |          |           |                     |                      |                     |                     | Terphenyl-d14 (Surr)           | 30 ug/mL      |
|                      |          |           |                     |                      |                     |                     | N-Nitrosopyrrolidine           | 30 ug/mL      |
| .SVTAPITINTRNi_00005 | 05/07/15 | 05/07/14  | MeCl2, Lot 1000447  | 25 mL                | SVLVIntstd_00007    | 5000 uL             | 1,4-Dichlorobenzene-d4         | 400 ug/mL     |
|                      |          |           |                     |                      |                     |                     | Acenaphthene-d10               | 400 ug/mL     |
|                      |          |           |                     |                      |                     |                     | Chrysene-d12                   | 400 ug/mL     |
|                      |          |           |                     |                      |                     |                     | Naphthalene-d8                 | 400 ug/mL     |
|                      |          |           |                     |                      |                     |                     | Perylene-d12                   | 400 ug/mL     |
|                      |          |           |                     |                      |                     |                     | Phenanthrene-d10               | 400 ug/mL     |
| ..SVLVIntstd_00007   | 02/28/18 |           | Restek, Lot A093676 |                      |                     | (Purchased Reagent) | 1,4-Dichlorobenzene-d4         | 2000 ug/mL    |
|                      |          |           |                     |                      |                     |                     | Acenaphthene-d10               | 2000 ug/mL    |
|                      |          |           |                     |                      |                     |                     | Chrysene-d12                   | 2000 ug/mL    |
|                      |          |           |                     |                      |                     |                     | Naphthalene-d8                 | 2000 ug/mL    |
|                      |          |           |                     |                      |                     |                     | Perylene-d12                   | 2000 ug/mL    |
|                      |          |           |                     |                      |                     |                     | Phenanthrene-d10               | 2000 ug/mL    |
| .SVTAPITSTCKi_00004  | 02/21/15 | 07/21/14  | MeCl2, Lot 1053215  | 20 mL                | sv benzoepyre 00001 | 800 uL              | Benzo[e]pyrene                 | 40 ug/mL      |
|                      |          |           |                     |                      | SV2NAPAMINEs_00002  | 800 uL              | 2-Naphthylamine                | 40 ug/mL      |
|                      |          |           |                     |                      | SVLVlist12_00002    | 800 uL              | 2,3,5,6-Tetrachlorophenol      | 40 ug/mL      |
|                      |          |           |                     |                      |                     |                     | 2,6-Dichlorophenol             | 40 ug/mL      |
|                      |          |           |                     |                      |                     |                     | 7,12-Dimethylbenz(a)anthracene | 40 ug/mL      |
|                      |          |           |                     |                      |                     |                     | Methyl methanesulfonate        | 40 ug/mL      |
|                      |          |           |                     |                      | SVLVstd1_00026      | 800 uL              | 1,1'-Biphenyl                  | 40 ug/mL      |
|                      |          |           |                     |                      |                     |                     | 1,2,4,5-Tetrachlorobenzene     | 40 ug/mL      |
|                      |          |           |                     |                      |                     |                     | 1,2,4-Trichlorobenzene         | 40 ug/mL      |
|                      |          |           |                     |                      |                     |                     | 1,2-Dichlorobenzene            | 40 ug/mL      |
|                      |          |           |                     |                      |                     |                     | 1,2-Diphenylhydrazine          | 40 ug/mL      |
|                      |          |           |                     |                      |                     |                     | 1,3-Dichlorobenzene            | 40 ug/mL      |
|                      |          |           |                     |                      |                     |                     | 1,3-Dinitrobenzene             | 40 ug/mL      |
|                      |          |           |                     |                      |                     |                     | 1,4-Dichlorobenzene            | 40 ug/mL      |



REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh

Job No.: 180-43791-1

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

| Reagent ID | Exp Date | Prep Date | Dilutant Used | Reagent Final Volume | Parent Reagent |              | Analyte                      | Concentration |
|------------|----------|-----------|---------------|----------------------|----------------|--------------|------------------------------|---------------|
|            |          |           |               |                      | Reagent ID     | Volume Added |                              |               |
|            |          |           |               |                      |                |              | 1,4-Dioxane                  | 40 ug/mL      |
|            |          |           |               |                      |                |              | 1-Methylnaphthalene          | 40 ug/mL      |
|            |          |           |               |                      |                |              | 2,2'-oxybis[1-chloropropane] | 40 ug/mL      |
|            |          |           |               |                      |                |              | 2,3,4,6-Tetrachlorophenol    | 40 ug/mL      |
|            |          |           |               |                      |                |              | 2,4,5-Trichlorophenol        | 40 ug/mL      |
|            |          |           |               |                      |                |              | 2,4,6-Trichlorophenol        | 40 ug/mL      |
|            |          |           |               |                      |                |              | 2,4-Dichlorophenol           | 40 ug/mL      |
|            |          |           |               |                      |                |              | 2,4-Dimethylphenol           | 40 ug/mL      |
|            |          |           |               |                      |                |              | 2,4-Dinitrophenol            | 80 ug/mL      |
|            |          |           |               |                      |                |              | 2,4-Dinitrotoluene           | 40 ug/mL      |
|            |          |           |               |                      |                |              | 2,6-Dinitrotoluene           | 40 ug/mL      |
|            |          |           |               |                      |                |              | 2-Chloronaphthalene          | 40 ug/mL      |
|            |          |           |               |                      |                |              | 2-Chlorophenol               | 40 ug/mL      |
|            |          |           |               |                      |                |              | 2-Methylnaphthalene          | 40 ug/mL      |
|            |          |           |               |                      |                |              | 2-Methylphenol               | 40 ug/mL      |
|            |          |           |               |                      |                |              | 2-Nitroaniline               | 40 ug/mL      |
|            |          |           |               |                      |                |              | 2-Nitrophenol                | 40 ug/mL      |
|            |          |           |               |                      |                |              | 3-Nitroaniline               | 40 ug/mL      |
|            |          |           |               |                      |                |              | 4,6-Dinitro-2-methylphenol   | 80 ug/mL      |
|            |          |           |               |                      |                |              | 4-Bromophenyl phenyl ether   | 40 ug/mL      |
|            |          |           |               |                      |                |              | 4-Chloro-3-methylphenol      | 40 ug/mL      |
|            |          |           |               |                      |                |              | 4-Chloroaniline              | 40 ug/mL      |
|            |          |           |               |                      |                |              | 4-Chlorophenyl phenyl ether  | 40 ug/mL      |
|            |          |           |               |                      |                |              | 4-Methylphenol               | 40 ug/mL      |
|            |          |           |               |                      |                |              | 4-Nitroaniline               | 40 ug/mL      |
|            |          |           |               |                      |                |              | 4-Nitrophenol                | 80 ug/mL      |
|            |          |           |               |                      |                |              | Acenaphthene                 | 40 ug/mL      |
|            |          |           |               |                      |                |              | Acenaphthylene               | 40 ug/mL      |
|            |          |           |               |                      |                |              | Acetophenone                 | 40 ug/mL      |
|            |          |           |               |                      |                |              | Aniline                      | 40 ug/mL      |
|            |          |           |               |                      |                |              | Anthracene                   | 40 ug/mL      |
|            |          |           |               |                      |                |              | Benzo[a]anthracene           | 40 ug/mL      |
|            |          |           |               |                      |                |              | Benzo[a]pyrene               | 40 ug/mL      |
|            |          |           |               |                      |                |              | Benzo[b]fluoranthene         | 40 ug/mL      |
|            |          |           |               |                      |                |              | Benzo[g,h,i]perylene         | 40 ug/mL      |
|            |          |           |               |                      |                |              | Benzo[k]fluoranthene         | 40 ug/mL      |
|            |          |           |               |                      |                |              | Benzyl alcohol               | 40 ug/mL      |
|            |          |           |               |                      |                |              | Bis(2-chloroethoxy)methane   | 40 ug/mL      |
|            |          |           |               |                      |                |              | Bis(2-chloroethyl)ether      | 40 ug/mL      |
|            |          |           |               |                      |                |              | Bis(2-ethylhexyl) phthalate  | 40 ug/mL      |
|            |          |           |               |                      |                |              | Butyl benzyl phthalate       | 40 ug/mL      |
|            |          |           |               |                      |                |              | Carbazole                    | 40 ug/mL      |
|            |          |           |               |                      |                |              | Chrysene                     | 40 ug/mL      |
|            |          |           |               |                      |                |              | Di-n-butyl phthalate         | 40 ug/mL      |
|            |          |           |               |                      |                |              | Di-n-octyl phthalate         | 40 ug/mL      |
|            |          |           |               |                      |                |              | Dibenz(a,h)anthracene        | 40 ug/mL      |
|            |          |           |               |                      |                |              | Dibenzofuran                 | 40 ug/mL      |
|            |          |           |               |                      |                |              | Diethyl phthalate            | 40 ug/mL      |

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh

Job No.: 180-43791-1

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

| Reagent ID            | Exp Date | Prep Date | Dilutant Used                 | Reagent Final Volume | Parent Reagent      |              | Analyte                        | Concentration |
|-----------------------|----------|-----------|-------------------------------|----------------------|---------------------|--------------|--------------------------------|---------------|
|                       |          |           |                               |                      | Reagent ID          | Volume Added |                                |               |
|                       |          |           |                               |                      |                     |              | Dimethyl phthalate             | 40 ug/mL      |
|                       |          |           |                               |                      |                     |              | Fluoranthene                   | 40 ug/mL      |
|                       |          |           |                               |                      |                     |              | Fluorene                       | 40 ug/mL      |
|                       |          |           |                               |                      |                     |              | Hexachlorobenzene              | 40 ug/mL      |
|                       |          |           |                               |                      |                     |              | Hexachlorobutadiene            | 40 ug/mL      |
|                       |          |           |                               |                      |                     |              | Hexachlorocyclopentadiene      | 40 ug/mL      |
|                       |          |           |                               |                      |                     |              | Hexachloroethane               | 40 ug/mL      |
|                       |          |           |                               |                      |                     |              | Hexadecane                     | 40 ug/mL      |
|                       |          |           |                               |                      |                     |              | Indeno[1,2,3-cd]pyrene         | 40 ug/mL      |
|                       |          |           |                               |                      |                     |              | Isophorone                     | 40 ug/mL      |
|                       |          |           |                               |                      |                     |              | n-Decane                       | 40 ug/mL      |
|                       |          |           |                               |                      |                     |              | N-Nitrosodi-n-propylamine      | 40 ug/mL      |
|                       |          |           |                               |                      |                     |              | N-Nitrosodimethylamine         | 40 ug/mL      |
|                       |          |           |                               |                      |                     |              | n-Octadecane                   | 40 ug/mL      |
|                       |          |           |                               |                      |                     |              | Naphthalene                    | 40 ug/mL      |
|                       |          |           |                               |                      |                     |              | Nitrobenzene                   | 40 ug/mL      |
|                       |          |           |                               |                      |                     |              | Pentachlorophenol              | 80 ug/mL      |
|                       |          |           |                               |                      |                     |              | Phenanthrene                   | 40 ug/mL      |
|                       |          |           |                               |                      |                     |              | Phenol                         | 40 ug/mL      |
|                       |          |           |                               |                      |                     |              | Pyrene                         | 40 ug/mL      |
|                       |          |           |                               |                      |                     |              | Pyridine                       | 40 ug/mL      |
|                       |          |           |                               |                      | SVLVstd2_00012      | 400 uL       | 3,3'-Dichlorobenzidine         | 40 ug/mL      |
|                       |          |           |                               |                      |                     |              | Atrazine                       | 40 ug/mL      |
|                       |          |           |                               |                      |                     |              | Benzydine                      | 40 ug/mL      |
|                       |          |           |                               |                      |                     |              | Caprolactam                    | 40 ug/mL      |
|                       |          |           |                               |                      | SVLVstd5(7)_00001   | 400 uL       | N-Nitrosodiphenylamine         | 40 ug/mL      |
|                       |          |           |                               |                      | SVLVstd8_00003      | 400 uL       | Benzaldehyde                   | 40 ug/mL      |
|                       |          |           |                               |                      |                     |              | Benzoic acid                   | 40 ug/mL      |
|                       |          |           |                               |                      |                     |              | Indene                         | 40 ug/mL      |
|                       |          |           |                               |                      | SVLVSURRSPK_00003   | 160 uL       | 2,4,6-Tribromophenol (Surr)    | 40 ug/mL      |
|                       |          |           |                               |                      |                     |              | 2-Fluorobiphenyl               | 40 ug/mL      |
|                       |          |           |                               |                      |                     |              | 2-Fluorophenol (Surr)          | 40 ug/mL      |
|                       |          |           |                               |                      |                     |              | Nitrobenzene-d5 (Surr)         | 40 ug/mL      |
|                       |          |           |                               |                      |                     |              | Phenol-d5 (Surr)               | 40 ug/mL      |
|                       |          |           |                               |                      |                     |              | Terphenyl-d14 (Surr)           | 40 ug/mL      |
|                       |          |           |                               |                      | SVNNITROPYROs_00015 | 800 uL       | N-Nitrosopyrrolidine           | 40 ug/mL      |
| ..sv benzoepyre 00001 | 10/03/18 |           | Absolute, Lot 100313          |                      |                     |              | Benzo[e]pyrene                 | 1000 ug/mL    |
| ..SV2NAPAMINES 00002  | 06/30/17 |           | Ultra Scientific, Lot Ck-1617 |                      |                     |              | 2-Naphthylamine                | 1000 ug/mL    |
| ..SVLVlist12_00002    | 04/30/15 |           | Restek, Lot A0102912          |                      |                     |              | 2,3,5,6-Tetrachlorophenol      | 1000 ug/mL    |
|                       |          |           |                               |                      |                     |              | 2,6-Dichlorophenol             | 1000 ug/mL    |
|                       |          |           |                               |                      |                     |              | 7,12-Dimethylbenz(a)anthracene | 1000 ug/mL    |
|                       |          |           |                               |                      |                     |              | Methyl methanesulfonate        | 1000 ug/mL    |
| ..SVLVstd1_00026      | 08/31/15 |           | Restek, Lot A0101615          |                      |                     |              | 1,1'-Biphenyl                  | 1000 ug/mL    |
|                       |          |           |                               |                      |                     |              | 1,2,4,5-Tetrachlorobenzene     | 1000 ug/mL    |
|                       |          |           |                               |                      |                     |              | 1,2,4-Trichlorobenzene         | 1000 ug/mL    |
|                       |          |           |                               |                      |                     |              | 1,2-Dichlorobenzene            | 1000 ug/mL    |
|                       |          |           |                               |                      |                     |              | 1,2-Diphenylhydrazine          | 1000 ug/mL    |
|                       |          |           |                               |                      |                     |              | 1,3-Dichlorobenzene            | 1000 ug/mL    |

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh

Job No.: 180-43791-1

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

| Reagent ID | Exp Date | Prep Date | Dilutant Used | Reagent Final Volume | Parent Reagent |              | Analyte                      | Concentration |
|------------|----------|-----------|---------------|----------------------|----------------|--------------|------------------------------|---------------|
|            |          |           |               |                      | Reagent ID     | Volume Added |                              |               |
|            |          |           |               |                      |                |              | 1,3-Dinitrobenzene           | 1000 ug/mL    |
|            |          |           |               |                      |                |              | 1,4-Dichlorobenzene          | 1000 ug/mL    |
|            |          |           |               |                      |                |              | 1,4-Dioxane                  | 1000 ug/mL    |
|            |          |           |               |                      |                |              | 1-Methylnaphthalene          | 1000 ug/mL    |
|            |          |           |               |                      |                |              | 2,2'-oxybis[1-chloropropane] | 1000 ug/mL    |
|            |          |           |               |                      |                |              | 2,3,4,6-Tetrachlorophenol    | 1000 ug/mL    |
|            |          |           |               |                      |                |              | 2,4,5-Trichlorophenol        | 1000 ug/mL    |
|            |          |           |               |                      |                |              | 2,4,6-Trichlorophenol        | 1000 ug/mL    |
|            |          |           |               |                      |                |              | 2,4-Dichlorophenol           | 1000 ug/mL    |
|            |          |           |               |                      |                |              | 2,4-Dimethylphenol           | 1000 ug/mL    |
|            |          |           |               |                      |                |              | 2,4-Dinitrophenol            | 2000 ug/mL    |
|            |          |           |               |                      |                |              | 2,4-Dinitrotoluene           | 1000 ug/mL    |
|            |          |           |               |                      |                |              | 2,6-Dinitrotoluene           | 1000 ug/mL    |
|            |          |           |               |                      |                |              | 2-Chloronaphthalene          | 1000 ug/mL    |
|            |          |           |               |                      |                |              | 2-Chlorophenol               | 1000 ug/mL    |
|            |          |           |               |                      |                |              | 2-Methylnaphthalene          | 1000 ug/mL    |
|            |          |           |               |                      |                |              | 2-Methylphenol               | 1000 ug/mL    |
|            |          |           |               |                      |                |              | 2-Nitroaniline               | 1000 ug/mL    |
|            |          |           |               |                      |                |              | 2-Nitrophenol                | 1000 ug/mL    |
|            |          |           |               |                      |                |              | 3-Nitroaniline               | 1000 ug/mL    |
|            |          |           |               |                      |                |              | 4,6-Dinitro-2-methylphenol   | 2000 ug/mL    |
|            |          |           |               |                      |                |              | 4-Bromophenyl phenyl ether   | 1000 ug/mL    |
|            |          |           |               |                      |                |              | 4-Chloro-3-methylphenol      | 1000 ug/mL    |
|            |          |           |               |                      |                |              | 4-Chloroaniline              | 1000 ug/mL    |
|            |          |           |               |                      |                |              | 4-Chlorophenyl phenyl ether  | 1000 ug/mL    |
|            |          |           |               |                      |                |              | 4-Methylphenol               | 1000 ug/mL    |
|            |          |           |               |                      |                |              | 4-Nitroaniline               | 1000 ug/mL    |
|            |          |           |               |                      |                |              | 4-Nitrophenol                | 2000 ug/mL    |
|            |          |           |               |                      |                |              | Acenaphthene                 | 1000 ug/mL    |
|            |          |           |               |                      |                |              | Acenaphthylene               | 1000 ug/mL    |
|            |          |           |               |                      |                |              | Acetophenone                 | 1000 ug/mL    |
|            |          |           |               |                      |                |              | Aniline                      | 1000 ug/mL    |
|            |          |           |               |                      |                |              | Anthracene                   | 1000 ug/mL    |
|            |          |           |               |                      |                |              | Benzo[a]anthracene           | 1000 ug/mL    |
|            |          |           |               |                      |                |              | Benzo[a]pyrene               | 1000 ug/mL    |
|            |          |           |               |                      |                |              | Benzo[b]fluoranthene         | 1000 ug/mL    |
|            |          |           |               |                      |                |              | Benzo[g,h,i]perylene         | 1000 ug/mL    |
|            |          |           |               |                      |                |              | Benzo[k]fluoranthene         | 1000 ug/mL    |
|            |          |           |               |                      |                |              | Benzyl alcohol               | 1000 ug/mL    |
|            |          |           |               |                      |                |              | Bis(2-chloroethoxy)methane   | 1000 ug/mL    |
|            |          |           |               |                      |                |              | Bis(2-chloroethyl) ether     | 1000 ug/mL    |
|            |          |           |               |                      |                |              | Bis(2-ethylhexyl) phthalate  | 1000 ug/mL    |
|            |          |           |               |                      |                |              | Butyl benzyl phthalate       | 1000 ug/mL    |
|            |          |           |               |                      |                |              | Carbazole                    | 1000 ug/mL    |
|            |          |           |               |                      |                |              | Chrysene                     | 1000 ug/mL    |
|            |          |           |               |                      |                |              | Di-n-butyl phthalate         | 1000 ug/mL    |
|            |          |           |               |                      |                |              | Di-n-octyl phthalate         | 1000 ug/mL    |
|            |          |           |               |                      |                |              | Dibenz(a,h)anthracene        | 1000 ug/mL    |

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh

Job No.: 180-43791-1

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

| Reagent ID               | Exp Date | Prep Date | Dilutant Used        | Reagent Final Volume | Parent Reagent      |              | Analyte                     | Concentration |
|--------------------------|----------|-----------|----------------------|----------------------|---------------------|--------------|-----------------------------|---------------|
|                          |          |           |                      |                      | Reagent ID          | Volume Added |                             |               |
|                          |          |           |                      |                      |                     |              | Dibenzofuran                | 1000 ug/mL    |
|                          |          |           |                      |                      |                     |              | Diethyl phthalate           | 1000 ug/mL    |
|                          |          |           |                      |                      |                     |              | Dimethyl phthalate          | 1000 ug/mL    |
|                          |          |           |                      |                      |                     |              | Fluoranthene                | 1000 ug/mL    |
|                          |          |           |                      |                      |                     |              | Fluorene                    | 1000 ug/mL    |
|                          |          |           |                      |                      |                     |              | Hexachlorobenzene           | 1000 ug/mL    |
|                          |          |           |                      |                      |                     |              | Hexachlorobutadiene         | 1000 ug/mL    |
|                          |          |           |                      |                      |                     |              | Hexachlorocyclopentadiene   | 1000 ug/mL    |
|                          |          |           |                      |                      |                     |              | Hexachloroethane            | 1000 ug/mL    |
|                          |          |           |                      |                      |                     |              | Hexadecane                  | 1000 ug/mL    |
|                          |          |           |                      |                      |                     |              | Indeno[1,2,3-cd]pyrene      | 1000 ug/mL    |
|                          |          |           |                      |                      |                     |              | Isophorone                  | 1000 ug/mL    |
|                          |          |           |                      |                      |                     |              | n-Decane                    | 1000 ug/mL    |
|                          |          |           |                      |                      |                     |              | N-Nitrosodi-n-propylamine   | 1000 ug/mL    |
|                          |          |           |                      |                      |                     |              | N-Nitrosodimethylamine      | 1000 ug/mL    |
|                          |          |           |                      |                      |                     |              | n-Octadecane                | 1000 ug/mL    |
|                          |          |           |                      |                      |                     |              | Naphthalene                 | 1000 ug/mL    |
|                          |          |           |                      |                      |                     |              | Nitrobenzene                | 1000 ug/mL    |
|                          |          |           |                      |                      |                     |              | Pentachlorophenol           | 2000 ug/mL    |
|                          |          |           |                      |                      |                     |              | Phenanthrene                | 1000 ug/mL    |
|                          |          |           |                      |                      |                     |              | Phenol                      | 1000 ug/mL    |
|                          |          |           |                      |                      |                     |              | Pyrene                      | 1000 ug/mL    |
|                          |          |           |                      |                      |                     |              | Pyridine                    | 1000 ug/mL    |
| ..SVLVstd2_00012         | 07/31/15 |           | Restek, Lot A0100824 |                      | (Purchased Reagent) |              | 3,3'-Dichlorobenzidine      | 2000 ug/mL    |
|                          |          |           |                      |                      |                     |              | Atrazine                    | 2000 ug/mL    |
|                          |          |           |                      |                      |                     |              | Benzidine                   | 2000 ug/mL    |
|                          |          |           |                      |                      |                     |              | Caprolactam                 | 2000 ug/mL    |
| ..SVLVstd5(7)_00001      | 02/28/17 |           | Restek, Lot A0101573 |                      | (Purchased Reagent) |              | N-Nitrosodiphenylamine      | 2000 ug/mL    |
| ..SVLVstd8_00003         | 05/31/15 |           | Restek, Lot A0103145 |                      | (Purchased Reagent) |              | Benzaldehyde                | 2000 ug/mL    |
|                          |          |           |                      |                      |                     |              | Benzoic acid                | 2000 ug/mL    |
|                          |          |           |                      |                      |                     |              | Indene                      | 2000 ug/mL    |
| ..SVLVSURRSPK_00003      | 02/28/18 |           | Restek, Lot A093638  |                      | (Purchased Reagent) |              | 2,4,6-Tribromophenol (Surr) | 5000 ug/mL    |
|                          |          |           |                      |                      |                     |              | 2-Fluorobiphenyl            | 5000 ug/mL    |
|                          |          |           |                      |                      |                     |              | 2-Fluorophenol (Surr)       | 5000 ug/mL    |
|                          |          |           |                      |                      |                     |              | Nitrobenzene-d5 (Surr)      | 5000 ug/mL    |
|                          |          |           |                      |                      |                     |              | Phenol-d5 (Surr)            | 5000 ug/mL    |
|                          |          |           |                      |                      |                     |              | Terphenyl-d14 (Surr)        | 5000 ug/mL    |
| ..SVNNITROPYROS_00015    | 06/05/17 |           | absolute, Lot 060514 |                      | (Purchased Reagent) |              | N-Nitrosopyrrolidine        | 1000 ug/mL    |
| <b>SVTAPSTD80i_00005</b> | 02/21/15 | 07/21/14  | MeCl2, Lot 1053215   | 1 mL                 | SVTAPITINTRNi_00005 | 10 uL        | 1,4-Dichlorobenzene-d4      | 4 ug/mL       |
|                          |          |           |                      |                      |                     |              | Acenaphthene-d10            | 4 ug/mL       |
|                          |          |           |                      |                      |                     |              | Chrysene-d12                | 4 ug/mL       |
|                          |          |           |                      |                      |                     |              | Naphthalene-d8              | 4 ug/mL       |
|                          |          |           |                      |                      |                     |              | Perylene-d12                | 4 ug/mL       |
|                          |          |           |                      |                      |                     |              | Phenanthrene-d10            | 4 ug/mL       |
|                          |          |           |                      |                      | SVTAPITSTCKi_00004  | 1000 uL      | Benzo[e]pyrene              | 40 ug/mL      |
|                          |          |           |                      |                      |                     |              | 2-Naphthylamine             | 40 ug/mL      |
|                          |          |           |                      |                      |                     |              | 2,3,5,6-Tetrachlorophenol   | 40 ug/mL      |

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh

Job No.: 180-43791-1

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

| Reagent ID | Exp Date | Prep Date | Dilutant Used | Reagent Final Volume | Parent Reagent |              | Analyte                        | Concentration |
|------------|----------|-----------|---------------|----------------------|----------------|--------------|--------------------------------|---------------|
|            |          |           |               |                      | Reagent ID     | Volume Added |                                |               |
|            |          |           |               |                      |                |              | 2,6-Dichlorophenol             | 40 ug/mL      |
|            |          |           |               |                      |                |              | 7,12-Dimethylbenz(a)anthracene | 40 ug/mL      |
|            |          |           |               |                      |                |              | Methyl methanesulfonate        | 40 ug/mL      |
|            |          |           |               |                      |                |              | 1,1'-Biphenyl                  | 40 ug/mL      |
|            |          |           |               |                      |                |              | 1,2,4,5-Tetrachlorobenzene     | 40 ug/mL      |
|            |          |           |               |                      |                |              | 1,2,4-Trichlorobenzene         | 40 ug/mL      |
|            |          |           |               |                      |                |              | 1,2-Dichlorobenzene            | 40 ug/mL      |
|            |          |           |               |                      |                |              | 1,2-Diphenylhydrazine          | 40 ug/mL      |
|            |          |           |               |                      |                |              | 1,3-Dichlorobenzene            | 40 ug/mL      |
|            |          |           |               |                      |                |              | 1,3-Dinitrobenzene             | 40 ug/mL      |
|            |          |           |               |                      |                |              | 1,4-Dichlorobenzene            | 40 ug/mL      |
|            |          |           |               |                      |                |              | 1,4-Dioxane                    | 40 ug/mL      |
|            |          |           |               |                      |                |              | 1-Methylnaphthalene            | 40 ug/mL      |
|            |          |           |               |                      |                |              | 2,2'-oxybis[1-chloropropane]   | 40 ug/mL      |
|            |          |           |               |                      |                |              | 2,3,4,6-Tetrachlorophenol      | 40 ug/mL      |
|            |          |           |               |                      |                |              | 2,4,5-Trichlorophenol          | 40 ug/mL      |
|            |          |           |               |                      |                |              | 2,4,6-Trichlorophenol          | 40 ug/mL      |
|            |          |           |               |                      |                |              | 2,4-Dichlorophenol             | 40 ug/mL      |
|            |          |           |               |                      |                |              | 2,4-Dimethylphenol             | 40 ug/mL      |
|            |          |           |               |                      |                |              | 2,4-Dinitrophenol              | 80 ug/mL      |
|            |          |           |               |                      |                |              | 2,4-Dinitrotoluene             | 40 ug/mL      |
|            |          |           |               |                      |                |              | 2,6-Dinitrotoluene             | 40 ug/mL      |
|            |          |           |               |                      |                |              | 2-Chloronaphthalene            | 40 ug/mL      |
|            |          |           |               |                      |                |              | 2-Chlorophenol                 | 40 ug/mL      |
|            |          |           |               |                      |                |              | 2-Methylnaphthalene            | 40 ug/mL      |
|            |          |           |               |                      |                |              | 2-Methylphenol                 | 40 ug/mL      |
|            |          |           |               |                      |                |              | 2-Nitroaniline                 | 40 ug/mL      |
|            |          |           |               |                      |                |              | 2-Nitrophenol                  | 40 ug/mL      |
|            |          |           |               |                      |                |              | 3-Nitroaniline                 | 40 ug/mL      |
|            |          |           |               |                      |                |              | 4,6-Dinitro-2-methylphenol     | 80 ug/mL      |
|            |          |           |               |                      |                |              | 4-Bromophenyl phenyl ether     | 40 ug/mL      |
|            |          |           |               |                      |                |              | 4-Chloro-3-methylphenol        | 40 ug/mL      |
|            |          |           |               |                      |                |              | 4-Chloroaniline                | 40 ug/mL      |
|            |          |           |               |                      |                |              | 4-Chlorophenyl phenyl ether    | 40 ug/mL      |
|            |          |           |               |                      |                |              | 4-Methylphenol                 | 40 ug/mL      |
|            |          |           |               |                      |                |              | 4-Nitroaniline                 | 40 ug/mL      |
|            |          |           |               |                      |                |              | 4-Nitrophenol                  | 80 ug/mL      |
|            |          |           |               |                      |                |              | Acenaphthene                   | 40 ug/mL      |
|            |          |           |               |                      |                |              | Acenaphthylene                 | 40 ug/mL      |
|            |          |           |               |                      |                |              | Acetophenone                   | 40 ug/mL      |
|            |          |           |               |                      |                |              | Aniline                        | 40 ug/mL      |
|            |          |           |               |                      |                |              | Anthracene                     | 40 ug/mL      |
|            |          |           |               |                      |                |              | Benzo[a]anthracene             | 40 ug/mL      |
|            |          |           |               |                      |                |              | Benzo[a]pyrene                 | 40 ug/mL      |
|            |          |           |               |                      |                |              | Benzo[b]fluoranthene           | 40 ug/mL      |
|            |          |           |               |                      |                |              | Benzo[g,h,i]perylene           | 40 ug/mL      |
|            |          |           |               |                      |                |              | Benzo[k]fluoranthene           | 40 ug/mL      |
|            |          |           |               |                      |                |              | Benzyl alcohol                 | 40 ug/mL      |

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh

Job No.: 180-43791-1

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

| Reagent ID             | Exp Date | Prep Date | Dilutant Used      | Reagent Final Volume | Parent Reagent   |              | Analyte                      | Concentration |
|------------------------|----------|-----------|--------------------|----------------------|------------------|--------------|------------------------------|---------------|
|                        |          |           |                    |                      | Reagent ID       | Volume Added |                              |               |
|                        |          |           |                    |                      |                  |              | Bis (2-chloroethoxy)methane  | 40 ug/mL      |
|                        |          |           |                    |                      |                  |              | Bis (2-chloroethyl) ether    | 40 ug/mL      |
|                        |          |           |                    |                      |                  |              | Bis (2-ethylhexyl) phthalate | 40 ug/mL      |
|                        |          |           |                    |                      |                  |              | Butyl benzyl phthalate       | 40 ug/mL      |
|                        |          |           |                    |                      |                  |              | Carbazole                    | 40 ug/mL      |
|                        |          |           |                    |                      |                  |              | Chrysene                     | 40 ug/mL      |
|                        |          |           |                    |                      |                  |              | Di-n-butyl phthalate         | 40 ug/mL      |
|                        |          |           |                    |                      |                  |              | Di-n-octyl phthalate         | 40 ug/mL      |
|                        |          |           |                    |                      |                  |              | Dibenz (a,h) anthracene      | 40 ug/mL      |
|                        |          |           |                    |                      |                  |              | Dibenzofuran                 | 40 ug/mL      |
|                        |          |           |                    |                      |                  |              | Diethyl phthalate            | 40 ug/mL      |
|                        |          |           |                    |                      |                  |              | Dimethyl phthalate           | 40 ug/mL      |
|                        |          |           |                    |                      |                  |              | Fluoranthene                 | 40 ug/mL      |
|                        |          |           |                    |                      |                  |              | Fluorene                     | 40 ug/mL      |
|                        |          |           |                    |                      |                  |              | Hexachlorobenzene            | 40 ug/mL      |
|                        |          |           |                    |                      |                  |              | Hexachlorobutadiene          | 40 ug/mL      |
|                        |          |           |                    |                      |                  |              | Hexachlorocyclopentadiene    | 40 ug/mL      |
|                        |          |           |                    |                      |                  |              | Hexachloroethane             | 40 ug/mL      |
|                        |          |           |                    |                      |                  |              | Hexadecane                   | 40 ug/mL      |
|                        |          |           |                    |                      |                  |              | Indeno[1,2,3-cd]pyrene       | 40 ug/mL      |
|                        |          |           |                    |                      |                  |              | Isophorone                   | 40 ug/mL      |
|                        |          |           |                    |                      |                  |              | n-Decane                     | 40 ug/mL      |
|                        |          |           |                    |                      |                  |              | N-Nitrosodi-n-propylamine    | 40 ug/mL      |
|                        |          |           |                    |                      |                  |              | N-Nitrosodimethylamine       | 40 ug/mL      |
|                        |          |           |                    |                      |                  |              | n-Octadecane                 | 40 ug/mL      |
|                        |          |           |                    |                      |                  |              | Naphthalene                  | 40 ug/mL      |
|                        |          |           |                    |                      |                  |              | Nitrobenzene                 | 40 ug/mL      |
|                        |          |           |                    |                      |                  |              | Pentachlorophenol            | 80 ug/mL      |
|                        |          |           |                    |                      |                  |              | Phenanthrene                 | 40 ug/mL      |
|                        |          |           |                    |                      |                  |              | Phenol                       | 40 ug/mL      |
|                        |          |           |                    |                      |                  |              | Pyrene                       | 40 ug/mL      |
|                        |          |           |                    |                      |                  |              | Pyridine                     | 40 ug/mL      |
|                        |          |           |                    |                      |                  |              | 3,3'-Dichlorobenzidine       | 40 ug/mL      |
|                        |          |           |                    |                      |                  |              | Atrazine                     | 40 ug/mL      |
|                        |          |           |                    |                      |                  |              | Benzidine                    | 40 ug/mL      |
|                        |          |           |                    |                      |                  |              | Caprolactam                  | 40 ug/mL      |
|                        |          |           |                    |                      |                  |              | N-Nitrosodiphenylamine       | 40 ug/mL      |
|                        |          |           |                    |                      |                  |              | Benzaldehyde                 | 40 ug/mL      |
|                        |          |           |                    |                      |                  |              | Benzoic acid                 | 40 ug/mL      |
|                        |          |           |                    |                      |                  |              | Indene                       | 40 ug/mL      |
|                        |          |           |                    |                      |                  |              | 2,4,6-Tribromophenol (Surr)  | 40 ug/mL      |
| 2-Fluorobiphenyl       | 40 ug/mL |           |                    |                      |                  |              |                              |               |
| 2-Fluorophenol (Surr)  | 40 ug/mL |           |                    |                      |                  |              |                              |               |
| Nitrobenzene-d5 (Surr) | 40 ug/mL |           |                    |                      |                  |              |                              |               |
| Phenol-d5 (Surr)       | 40 ug/mL |           |                    |                      |                  |              |                              |               |
| Terphenyl-d14 (Surr)   | 40 ug/mL |           |                    |                      |                  |              |                              |               |
| N-Nitrosopyrrolidine   | 40 ug/mL |           |                    |                      |                  |              |                              |               |
| .SVTAPITINTRNi_00005   | 05/07/15 | 05/07/14  | MeCl2, Lot 1000447 | 25 mL                | SVLVIntstd_00007 | 5000 uL      | 1,4-Dichlorobenzene-d4       | 400 ug/mL     |

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh

Job No.: 180-43791-1

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

| Reagent ID          | Exp Date | Prep Date | Dilutant Used       | Reagent Final Volume | Parent Reagent      |                     | Analyte                        | Concentration |
|---------------------|----------|-----------|---------------------|----------------------|---------------------|---------------------|--------------------------------|---------------|
|                     |          |           |                     |                      | Reagent ID          | Volume Added        |                                |               |
|                     |          |           |                     |                      |                     |                     | Acenaphthene-d10               | 400 ug/mL     |
|                     |          |           |                     |                      |                     |                     | Chrysene-d12                   | 400 ug/mL     |
|                     |          |           |                     |                      |                     |                     | Naphthalene-d8                 | 400 ug/mL     |
|                     |          |           |                     |                      |                     |                     | Perylene-d12                   | 400 ug/mL     |
|                     |          |           |                     |                      |                     |                     | Phenanthrene-d10               | 400 ug/mL     |
| ..SVLVIntstd_00007  | 02/28/18 |           | Restek, Lot A093676 |                      |                     | (Purchased Reagent) | 1,4-Dichlorobenzene-d4         | 2000 ug/mL    |
|                     |          |           |                     |                      |                     |                     | Acenaphthene-d10               | 2000 ug/mL    |
|                     |          |           |                     |                      |                     |                     | Chrysene-d12                   | 2000 ug/mL    |
|                     |          |           |                     |                      |                     |                     | Naphthalene-d8                 | 2000 ug/mL    |
|                     |          |           |                     |                      |                     |                     | Perylene-d12                   | 2000 ug/mL    |
|                     |          |           |                     |                      |                     |                     | Phenanthrene-d10               | 2000 ug/mL    |
| .SVTAPITSTCKi_00004 | 02/21/15 | 07/21/14  | MeCl2, Lot 1053215  | 20 mL                | sv benzoepyre_00001 | 800 uL              | Benzo[e]pyrene                 | 40 ug/mL      |
|                     |          |           |                     |                      | SV2NAPAMINEs_00002  | 800 uL              | 2-Naphthylamine                | 40 ug/mL      |
|                     |          |           |                     |                      | SVLVlist12_00002    | 800 uL              | 2,3,5,6-Tetrachlorophenol      | 40 ug/mL      |
|                     |          |           |                     |                      |                     |                     | 2,6-Dichlorophenol             | 40 ug/mL      |
|                     |          |           |                     |                      |                     |                     | 7,12-Dimethylbenz(a)anthracene | 40 ug/mL      |
|                     |          |           |                     |                      |                     |                     | Methyl methanesulfonate        | 40 ug/mL      |
|                     |          |           |                     |                      | SVLVstd1_00026      | 800 uL              | 1,1'-Biphenyl                  | 40 ug/mL      |
|                     |          |           |                     |                      |                     |                     | 1,2,4,5-Tetrachlorobenzene     | 40 ug/mL      |
|                     |          |           |                     |                      |                     |                     | 1,2,4-Trichlorobenzene         | 40 ug/mL      |
|                     |          |           |                     |                      |                     |                     | 1,2-Dichlorobenzene            | 40 ug/mL      |
|                     |          |           |                     |                      |                     |                     | 1,2-Diphenylhydrazine          | 40 ug/mL      |
|                     |          |           |                     |                      |                     |                     | 1,3-Dichlorobenzene            | 40 ug/mL      |
|                     |          |           |                     |                      |                     |                     | 1,3-Dinitrobenzene             | 40 ug/mL      |
|                     |          |           |                     |                      |                     |                     | 1,4-Dichlorobenzene            | 40 ug/mL      |
|                     |          |           |                     |                      |                     |                     | 1,4-Dioxane                    | 40 ug/mL      |
|                     |          |           |                     |                      |                     |                     | 1-Methylnaphthalene            | 40 ug/mL      |
|                     |          |           |                     |                      |                     |                     | 2,2'-oxybis[1-chloropropane]   | 40 ug/mL      |
|                     |          |           |                     |                      |                     |                     | 2,3,4,6-Tetrachlorophenol      | 40 ug/mL      |
|                     |          |           |                     |                      |                     |                     | 2,4,5-Trichlorophenol          | 40 ug/mL      |
|                     |          |           |                     |                      |                     |                     | 2,4,6-Trichlorophenol          | 40 ug/mL      |
|                     |          |           |                     |                      |                     |                     | 2,4-Dichlorophenol             | 40 ug/mL      |
|                     |          |           |                     |                      |                     |                     | 2,4-Dimethylphenol             | 40 ug/mL      |
|                     |          |           |                     |                      |                     |                     | 2,4-Dinitrophenol              | 80 ug/mL      |
|                     |          |           |                     |                      |                     |                     | 2,4-Dinitrotoluene             | 40 ug/mL      |
|                     |          |           |                     |                      |                     |                     | 2,6-Dinitrotoluene             | 40 ug/mL      |
|                     |          |           |                     |                      |                     |                     | 2-Chloronaphthalene            | 40 ug/mL      |
|                     |          |           |                     |                      |                     |                     | 2-Chlorophenol                 | 40 ug/mL      |
|                     |          |           |                     |                      |                     |                     | 2-Methylnaphthalene            | 40 ug/mL      |
|                     |          |           |                     |                      |                     |                     | 2-Methylphenol                 | 40 ug/mL      |
|                     |          |           |                     |                      |                     |                     | 2-Nitroaniline                 | 40 ug/mL      |
|                     |          |           |                     |                      |                     |                     | 2-Nitrophenol                  | 40 ug/mL      |
|                     |          |           |                     |                      |                     |                     | 3-Nitroaniline                 | 40 ug/mL      |
|                     |          |           |                     |                      |                     |                     | 4,6-Dinitro-2-methylphenol     | 80 ug/mL      |
|                     |          |           |                     |                      |                     |                     | 4-Bromophenyl phenyl ether     | 40 ug/mL      |
|                     |          |           |                     |                      |                     |                     | 4-Chloro-3-methylphenol        | 40 ug/mL      |
|                     |          |           |                     |                      |                     |                     | 4-Chloroaniline                | 40 ug/mL      |
|                     |          |           |                     |                      |                     |                     | 4-Chlorophenyl phenyl ether    | 40 ug/mL      |

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh

Job No.: 180-43791-1

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

| Reagent ID | Exp Date | Prep Date | Dilutant Used | Reagent Final Volume | Parent Reagent |              | Analyte                      | Concentration |
|------------|----------|-----------|---------------|----------------------|----------------|--------------|------------------------------|---------------|
|            |          |           |               |                      | Reagent ID     | Volume Added |                              |               |
|            |          |           |               |                      |                |              | 4-Methylphenol               | 40 ug/mL      |
|            |          |           |               |                      |                |              | 4-Nitroaniline               | 40 ug/mL      |
|            |          |           |               |                      |                |              | 4-Nitrophenol                | 80 ug/mL      |
|            |          |           |               |                      |                |              | Acenaphthene                 | 40 ug/mL      |
|            |          |           |               |                      |                |              | Acenaphthylene               | 40 ug/mL      |
|            |          |           |               |                      |                |              | Acetophenone                 | 40 ug/mL      |
|            |          |           |               |                      |                |              | Aniline                      | 40 ug/mL      |
|            |          |           |               |                      |                |              | Anthracene                   | 40 ug/mL      |
|            |          |           |               |                      |                |              | Benzo[a]anthracene           | 40 ug/mL      |
|            |          |           |               |                      |                |              | Benzo[a]pyrene               | 40 ug/mL      |
|            |          |           |               |                      |                |              | Benzo[b]fluoranthene         | 40 ug/mL      |
|            |          |           |               |                      |                |              | Benzo[g,h,i]perylene         | 40 ug/mL      |
|            |          |           |               |                      |                |              | Benzo[k]fluoranthene         | 40 ug/mL      |
|            |          |           |               |                      |                |              | Benzyl alcohol               | 40 ug/mL      |
|            |          |           |               |                      |                |              | Bis (2-chloroethoxy)methane  | 40 ug/mL      |
|            |          |           |               |                      |                |              | Bis (2-chloroethyl) ether    | 40 ug/mL      |
|            |          |           |               |                      |                |              | Bis (2-ethylhexyl) phthalate | 40 ug/mL      |
|            |          |           |               |                      |                |              | Butyl benzyl phthalate       | 40 ug/mL      |
|            |          |           |               |                      |                |              | Carbazole                    | 40 ug/mL      |
|            |          |           |               |                      |                |              | Chrysene                     | 40 ug/mL      |
|            |          |           |               |                      |                |              | Di-n-butyl phthalate         | 40 ug/mL      |
|            |          |           |               |                      |                |              | Di-n-octyl phthalate         | 40 ug/mL      |
|            |          |           |               |                      |                |              | Dibenz (a,h) anthracene      | 40 ug/mL      |
|            |          |           |               |                      |                |              | Dibenzofuran                 | 40 ug/mL      |
|            |          |           |               |                      |                |              | Diethyl phthalate            | 40 ug/mL      |
|            |          |           |               |                      |                |              | Dimethyl phthalate           | 40 ug/mL      |
|            |          |           |               |                      |                |              | Fluoranthene                 | 40 ug/mL      |
|            |          |           |               |                      |                |              | Fluorene                     | 40 ug/mL      |
|            |          |           |               |                      |                |              | Hexachlorobenzene            | 40 ug/mL      |
|            |          |           |               |                      |                |              | Hexachlorobutadiene          | 40 ug/mL      |
|            |          |           |               |                      |                |              | Hexachlorocyclopentadiene    | 40 ug/mL      |
|            |          |           |               |                      |                |              | Hexachloroethane             | 40 ug/mL      |
|            |          |           |               |                      |                |              | Hexadecane                   | 40 ug/mL      |
|            |          |           |               |                      |                |              | Indeno[1,2,3-cd]pyrene       | 40 ug/mL      |
|            |          |           |               |                      |                |              | Isophorone                   | 40 ug/mL      |
|            |          |           |               |                      |                |              | n-Decane                     | 40 ug/mL      |
|            |          |           |               |                      |                |              | N-Nitrosodi-n-propylamine    | 40 ug/mL      |
|            |          |           |               |                      |                |              | N-Nitrosodimethylamine       | 40 ug/mL      |
|            |          |           |               |                      |                |              | n-Octadecane                 | 40 ug/mL      |
|            |          |           |               |                      |                |              | Naphthalene                  | 40 ug/mL      |
|            |          |           |               |                      |                |              | Nitrobenzene                 | 40 ug/mL      |
|            |          |           |               |                      |                |              | Pentachlorophenol            | 80 ug/mL      |
|            |          |           |               |                      |                |              | Phenanthrene                 | 40 ug/mL      |
|            |          |           |               |                      |                |              | Phenol                       | 40 ug/mL      |
|            |          |           |               |                      |                |              | Pyrene                       | 40 ug/mL      |
|            |          |           |               |                      |                |              | Pyridine                     | 40 ug/mL      |
|            |          |           |               |                      | SVLVstd2_00012 | 400 uL       | 3,3'-Dichlorobenzidine       | 40 ug/mL      |
|            |          |           |               |                      |                |              | Atrazine                     | 40 ug/mL      |



REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh

Job No.: 180-43791-1

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

| Reagent ID            | Exp Date | Prep Date | Dilutant Used                 | Reagent Final Volume | Parent Reagent      |              | Analyte                        | Concentration |
|-----------------------|----------|-----------|-------------------------------|----------------------|---------------------|--------------|--------------------------------|---------------|
|                       |          |           |                               |                      | Reagent ID          | Volume Added |                                |               |
|                       |          |           |                               |                      |                     |              | Benzidine                      | 40 ug/mL      |
|                       |          |           |                               |                      |                     |              | Caprolactam                    | 40 ug/mL      |
|                       |          |           |                               |                      | SVLVstd5(7)_00001   | 400 uL       | N-Nitrosodiphenylamine         | 40 ug/mL      |
|                       |          |           |                               |                      | SVLVstd8_00003      | 400 uL       | Benzaldehyde                   | 40 ug/mL      |
|                       |          |           |                               |                      |                     |              | Benzoic acid                   | 40 ug/mL      |
|                       |          |           |                               |                      |                     |              | Indene                         | 40 ug/mL      |
|                       |          |           |                               |                      | SVLVSURRSPK_00003   | 160 uL       | 2,4,6-Tribromophenol (Surr)    | 40 ug/mL      |
|                       |          |           |                               |                      |                     |              | 2-Fluorobiphenyl               | 40 ug/mL      |
|                       |          |           |                               |                      |                     |              | 2-Fluorophenol (Surr)          | 40 ug/mL      |
|                       |          |           |                               |                      |                     |              | Nitrobenzene-d5 (Surr)         | 40 ug/mL      |
|                       |          |           |                               |                      |                     |              | Phenol-d5 (Surr)               | 40 ug/mL      |
|                       |          |           |                               |                      |                     |              | Terphenyl-d14 (Surr)           | 40 ug/mL      |
|                       |          |           |                               |                      | SVNNITROPYROs_00015 | 800 uL       | N-Nitrosopyrrolidine           | 40 ug/mL      |
| ..sv benzoepyre_00001 | 10/03/18 |           | Absolute, Lot 100313          |                      | (Purchased Reagent) |              | Benzo[e]pyrene                 | 1000 ug/mL    |
| ..SV2NAPAMINes_00002  | 06/30/17 |           | Ultra Scientific, Lot Ck-1617 |                      | (Purchased Reagent) |              | 2-Naphthylamine                | 1000 ug/mL    |
| ..SVLVlist12_00002    | 04/30/15 |           | Restek, Lot A0102912          |                      | (Purchased Reagent) |              | 2,3,5,6-Tetrachlorophenol      | 1000 ug/mL    |
|                       |          |           |                               |                      |                     |              | 2,6-Dichlorophenol             | 1000 ug/mL    |
|                       |          |           |                               |                      |                     |              | 7,12-Dimethylbenz(a)anthracene | 1000 ug/mL    |
|                       |          |           |                               |                      |                     |              | Methyl methanesulfonate        | 1000 ug/mL    |
| ..SVLVstd1_00026      | 08/31/15 |           | Restek, Lot A0101615          |                      | (Purchased Reagent) |              | 1,1'-Biphenyl                  | 1000 ug/mL    |
|                       |          |           |                               |                      |                     |              | 1,2,4,5-Tetrachlorobenzene     | 1000 ug/mL    |
|                       |          |           |                               |                      |                     |              | 1,2,4-Trichlorobenzene         | 1000 ug/mL    |
|                       |          |           |                               |                      |                     |              | 1,2-Dichlorobenzene            | 1000 ug/mL    |
|                       |          |           |                               |                      |                     |              | 1,2-Diphenylhydrazine          | 1000 ug/mL    |
|                       |          |           |                               |                      |                     |              | 1,3-Dichlorobenzene            | 1000 ug/mL    |
|                       |          |           |                               |                      |                     |              | 1,3-Dinitrobenzene             | 1000 ug/mL    |
|                       |          |           |                               |                      |                     |              | 1,4-Dichlorobenzene            | 1000 ug/mL    |
|                       |          |           |                               |                      |                     |              | 1,4-Dioxane                    | 1000 ug/mL    |
|                       |          |           |                               |                      |                     |              | 1-Methylnaphthalene            | 1000 ug/mL    |
|                       |          |           |                               |                      |                     |              | 2,2'-oxybis[1-chloropropane]   | 1000 ug/mL    |
|                       |          |           |                               |                      |                     |              | 2,3,4,6-Tetrachlorophenol      | 1000 ug/mL    |
|                       |          |           |                               |                      |                     |              | 2,4,5-Trichlorophenol          | 1000 ug/mL    |
|                       |          |           |                               |                      |                     |              | 2,4,6-Trichlorophenol          | 1000 ug/mL    |
|                       |          |           |                               |                      |                     |              | 2,4-Dichlorophenol             | 1000 ug/mL    |
|                       |          |           |                               |                      |                     |              | 2,4-Dimethylphenol             | 1000 ug/mL    |
|                       |          |           |                               |                      |                     |              | 2,4-Dinitrophenol              | 2000 ug/mL    |
|                       |          |           |                               |                      |                     |              | 2,4-Dinitrotoluene             | 1000 ug/mL    |
|                       |          |           |                               |                      |                     |              | 2,6-Dinitrotoluene             | 1000 ug/mL    |
|                       |          |           |                               |                      |                     |              | 2-Chloronaphthalene            | 1000 ug/mL    |
|                       |          |           |                               |                      |                     |              | 2-Chlorophenol                 | 1000 ug/mL    |
|                       |          |           |                               |                      |                     |              | 2-Methylnaphthalene            | 1000 ug/mL    |
|                       |          |           |                               |                      |                     |              | 2-Methylphenol                 | 1000 ug/mL    |
|                       |          |           |                               |                      |                     |              | 2-Nitroaniline                 | 1000 ug/mL    |
|                       |          |           |                               |                      |                     |              | 2-Nitrophenol                  | 1000 ug/mL    |
|                       |          |           |                               |                      |                     |              | 3-Nitroaniline                 | 1000 ug/mL    |
|                       |          |           |                               |                      |                     |              | 4,6-Dinitro-2-methylphenol     | 2000 ug/mL    |
|                       |          |           |                               |                      |                     |              | 4-Bromophenyl phenyl ether     | 1000 ug/mL    |
|                       |          |           |                               |                      |                     |              | 4-Chloro-3-methylphenol        | 1000 ug/mL    |

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh

Job No.: 180-43791-1

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

| Reagent ID | Exp Date | Prep Date | Dilutant Used | Reagent Final Volume | Parent Reagent |              | Analyte                      | Concentration |
|------------|----------|-----------|---------------|----------------------|----------------|--------------|------------------------------|---------------|
|            |          |           |               |                      | Reagent ID     | Volume Added |                              |               |
|            |          |           |               |                      |                |              | 4-Chloroaniline              | 1000 ug/mL    |
|            |          |           |               |                      |                |              | 4-Chlorophenyl phenyl ether  | 1000 ug/mL    |
|            |          |           |               |                      |                |              | 4-Methylphenol               | 1000 ug/mL    |
|            |          |           |               |                      |                |              | 4-Nitroaniline               | 1000 ug/mL    |
|            |          |           |               |                      |                |              | 4-Nitrophenol                | 2000 ug/mL    |
|            |          |           |               |                      |                |              | Acenaphthene                 | 1000 ug/mL    |
|            |          |           |               |                      |                |              | Acenaphthylene               | 1000 ug/mL    |
|            |          |           |               |                      |                |              | Acetophenone                 | 1000 ug/mL    |
|            |          |           |               |                      |                |              | Aniline                      | 1000 ug/mL    |
|            |          |           |               |                      |                |              | Anthracene                   | 1000 ug/mL    |
|            |          |           |               |                      |                |              | Benzo[a]anthracene           | 1000 ug/mL    |
|            |          |           |               |                      |                |              | Benzo[a]pyrene               | 1000 ug/mL    |
|            |          |           |               |                      |                |              | Benzo[b]fluoranthene         | 1000 ug/mL    |
|            |          |           |               |                      |                |              | Benzo[g,h,i]perylene         | 1000 ug/mL    |
|            |          |           |               |                      |                |              | Benzo[k]fluoranthene         | 1000 ug/mL    |
|            |          |           |               |                      |                |              | Benzyl alcohol               | 1000 ug/mL    |
|            |          |           |               |                      |                |              | Bis (2-chloroethoxy)methane  | 1000 ug/mL    |
|            |          |           |               |                      |                |              | Bis (2-chloroethyl) ether    | 1000 ug/mL    |
|            |          |           |               |                      |                |              | Bis (2-ethylhexyl) phthalate | 1000 ug/mL    |
|            |          |           |               |                      |                |              | Butyl benzyl phthalate       | 1000 ug/mL    |
|            |          |           |               |                      |                |              | Carbazole                    | 1000 ug/mL    |
|            |          |           |               |                      |                |              | Chrysene                     | 1000 ug/mL    |
|            |          |           |               |                      |                |              | Di-n-butyl phthalate         | 1000 ug/mL    |
|            |          |           |               |                      |                |              | Di-n-octyl phthalate         | 1000 ug/mL    |
|            |          |           |               |                      |                |              | Dibenz (a,h) anthracene      | 1000 ug/mL    |
|            |          |           |               |                      |                |              | Dibenzofuran                 | 1000 ug/mL    |
|            |          |           |               |                      |                |              | Diethyl phthalate            | 1000 ug/mL    |
|            |          |           |               |                      |                |              | Dimethyl phthalate           | 1000 ug/mL    |
|            |          |           |               |                      |                |              | Fluoranthene                 | 1000 ug/mL    |
|            |          |           |               |                      |                |              | Fluorene                     | 1000 ug/mL    |
|            |          |           |               |                      |                |              | Hexachlorobenzene            | 1000 ug/mL    |
|            |          |           |               |                      |                |              | Hexachlorobutadiene          | 1000 ug/mL    |
|            |          |           |               |                      |                |              | Hexachlorocyclopentadiene    | 1000 ug/mL    |
|            |          |           |               |                      |                |              | Hexachloroethane             | 1000 ug/mL    |
|            |          |           |               |                      |                |              | Hexadecane                   | 1000 ug/mL    |
|            |          |           |               |                      |                |              | Indeno[1,2,3-cd]pyrene       | 1000 ug/mL    |
|            |          |           |               |                      |                |              | Isophorone                   | 1000 ug/mL    |
|            |          |           |               |                      |                |              | n-Decane                     | 1000 ug/mL    |
|            |          |           |               |                      |                |              | N-Nitrosodi-n-propylamine    | 1000 ug/mL    |
|            |          |           |               |                      |                |              | N-Nitrosodimethylamine       | 1000 ug/mL    |
|            |          |           |               |                      |                |              | n-Octadecane                 | 1000 ug/mL    |
|            |          |           |               |                      |                |              | Naphthalene                  | 1000 ug/mL    |
|            |          |           |               |                      |                |              | Nitrobenzene                 | 1000 ug/mL    |
|            |          |           |               |                      |                |              | Pentachlorophenol            | 2000 ug/mL    |
|            |          |           |               |                      |                |              | Phenanthrene                 | 1000 ug/mL    |
|            |          |           |               |                      |                |              | Phenol                       | 1000 ug/mL    |
|            |          |           |               |                      |                |              | Pyrene                       | 1000 ug/mL    |
|            |          |           |               |                      |                |              | Pyridine                     | 1000 ug/mL    |

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Lab Name: TestAmerica Pittsburgh

Job No.: 180-43791-1

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

| Reagent ID            | Exp Date | Prep Date | Dilutant Used        | Reagent Final Volume | Parent Reagent      |              | Analyte                      | Concentration |
|-----------------------|----------|-----------|----------------------|----------------------|---------------------|--------------|------------------------------|---------------|
|                       |          |           |                      |                      | Reagent ID          | Volume Added |                              |               |
| ..SVLVstd2_00012      | 07/31/15 |           | Restek, Lot A0100824 |                      | (Purchased Reagent) |              | 3,3'-Dichlorobenzidine       | 2000 ug/mL    |
|                       |          |           |                      |                      |                     |              | Atrazine                     | 2000 ug/mL    |
|                       |          |           |                      |                      |                     |              | Benzidine                    | 2000 ug/mL    |
|                       |          |           |                      |                      |                     |              | Caprolactam                  | 2000 ug/mL    |
| ..SVLVstd5(7)_00001   | 02/28/17 |           | Restek, Lot A0101573 |                      | (Purchased Reagent) |              | N-Nitrosodiphenylamine       | 2000 ug/mL    |
| ..SVLVstd8_00003      | 05/31/15 |           | Restek, Lot A0103145 |                      | (Purchased Reagent) |              | Benzaldehyde                 | 2000 ug/mL    |
| ..SVLVSURRSPK_00003   | 02/28/18 |           | Restek, Lot A093638  |                      | (Purchased Reagent) |              | Benzoic acid                 | 2000 ug/mL    |
|                       |          |           |                      |                      |                     |              | Indene                       | 2000 ug/mL    |
|                       |          |           |                      |                      |                     |              | 2,4,6-Tribromophenol (Surr)  | 5000 ug/mL    |
|                       |          |           |                      |                      |                     |              | 2-Fluorobiphenyl             | 5000 ug/mL    |
| ..SVNNITROPYROS_00015 | 06/05/17 |           | absolute, Lot 060514 |                      | (Purchased Reagent) |              | 2-Fluorophenol (Surr)        | 5000 ug/mL    |
|                       |          |           |                      |                      |                     |              | Nitrobenzene-d5 (Surr)       | 5000 ug/mL    |
|                       |          |           |                      |                      |                     |              | Phenol-d5 (Surr)             | 5000 ug/mL    |
|                       |          |           |                      |                      |                     |              | Terphenyl-d14 (Surr)         | 5000 ug/mL    |
| VOA8260INT_00022      | 11/13/14 | 10/13/14  | Methanol, Lot 62345  | 10 mL                | VOA8260INTRES_00092 | 1 mL         | 1,4-Dichlorobenzene-d4       | 25 ug/mL      |
| .VOA8260INTRES_00092  | 07/31/19 |           | Restek, Lot A0104742 |                      | (Purchased Reagent) |              | Chlorobenzene-d5             | 25 ug/mL      |
|                       |          |           |                      |                      |                     |              | Fluorobenzene (IS)           | 25 ug/mL      |
|                       |          |           |                      |                      |                     |              | TBA-d9 (IS)                  | 500 ug/mL     |
|                       |          |           |                      |                      |                     |              | 1,4-Dichlorobenzene-d4       | 250 ug/mL     |
| VOA8260SURR_00017     | 06/27/15 | 06/27/14  | Methanol, Lot 62345  | 100 mL               | VOA8260SURRES_00046 | 1 mL         | Chlorobenzene-d5             | 250 ug/mL     |
|                       |          |           |                      |                      |                     |              | Fluorobenzene (IS)           | 250 ug/mL     |
|                       |          |           |                      |                      |                     |              | TBA-d9 (IS)                  | 500 ug/mL     |
|                       |          |           |                      |                      |                     |              | 1,4-Dichlorobenzene-d4       | 250 ug/mL     |
| .VOA8260SURRES_00046  | 02/01/18 |           | Restek, Lot A093505  |                      | (Purchased Reagent) |              | 1,2-Dichloroethane-d4 (Surr) | 2500 ug/mL    |
|                       |          |           |                      |                      |                     |              | 4-Bromofluorobenzene (Surr)  | 2500 ug/mL    |
|                       |          |           |                      |                      |                     |              | Dibromofluoromethane (Surr)  | 2500 ug/mL    |
|                       |          |           |                      |                      |                     |              | Toluene-d8 (Surr)            | 2500 ug/mL    |
| VOA8260SURR_00035     | 06/01/15 | 05/01/15  | Methanol, Lot 85233  | 100 mL               | VOA8260SURRES_00089 | 1 mL         | 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    |
| .VOA8260SURRES_00089  | 04/30/19 |           | Restek, Lot A0102817 |                      | (Purchased Reagent) |              | 1,2-Dichloroethane-d4 (Surr) | 2500 ug/mL    |
|                       |          |           |                      |                      |                     |              | 4-Bromofluorobenzene (Surr)  | 2500 ug/mL    |
|                       |          |           |                      |                      |                     |              | Dibromofluoromethane (Surr)  | 2500 ug/mL    |
|                       |          |           |                      |                      |                     |              | Toluene-d8 (Surr)            | 2500 ug/mL    |
| VOA8260VOA2ND_00115   | 05/16/15 | 05/09/15  | Methanol, Lot 85233  | 10 mL                | VOA8260GAS2ND_00095 | 0.1 mL       | Bromomethane                 | 25 ug/mL      |
|                       |          |           |                      |                      |                     |              | Chloroethane                 | 25 ug/mL      |
|                       |          |           |                      |                      |                     |              | Chloromethane                | 25 ug/mL      |
|                       |          |           |                      |                      | VOA8260VOA2ND_00112 | 1.25 mL      | Vinyl chloride               | 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 |           |                      |                      |                     |              |                              |               |

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh

Job No.: 180-43791-1

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

| Reagent ID           | Exp Date | Prep Date | Dilutant Used        | Reagent Final Volume | Parent Reagent     |                     | Analyte                   | Concentration |
|----------------------|----------|-----------|----------------------|----------------------|--------------------|---------------------|---------------------------|---------------|
|                      |          |           |                      |                      | Reagent ID         | Volume Added        |                           |               |
|                      |          |           |                      |                      |                    |                     | 1,1-Dichloroethane        | 25 ug/mL      |
|                      |          |           |                      |                      |                    |                     | 1,1-Dichloroethene        | 25 ug/mL      |
|                      |          |           |                      |                      |                    |                     | 1,2-Dichlorobenzene       | 25 ug/mL      |
|                      |          |           |                      |                      |                    |                     | 1,2-Dichloroethane        | 25 ug/mL      |
|                      |          |           |                      |                      |                    |                     | 1,2-Dichloropropane       | 25 ug/mL      |
|                      |          |           |                      |                      |                    |                     | 1,3-Dichlorobenzene       | 25 ug/mL      |
|                      |          |           |                      |                      |                    |                     | 1,4-Dichlorobenzene       | 25 ug/mL      |
|                      |          |           |                      |                      |                    |                     | Acrylonitrile             | 250 ug/mL     |
|                      |          |           |                      |                      |                    |                     | Benzene                   | 25 ug/mL      |
|                      |          |           |                      |                      |                    |                     | Bromoform                 | 25 ug/mL      |
|                      |          |           |                      |                      |                    |                     | Carbon tetrachloride      | 25 ug/mL      |
|                      |          |           |                      |                      |                    |                     | Chlorobenzene             | 25 ug/mL      |
|                      |          |           |                      |                      |                    |                     | Chlorodibromomethane      | 25 ug/mL      |
|                      |          |           |                      |                      |                    |                     | Chloroform                | 25 ug/mL      |
|                      |          |           |                      |                      |                    |                     | cis-1,3-Dichloropropene   | 25 ug/mL      |
|                      |          |           |                      |                      |                    |                     | Dichlorobromomethane      | 25 ug/mL      |
|                      |          |           |                      |                      |                    |                     | Ethylbenzene              | 25 ug/mL      |
|                      |          |           |                      |                      |                    |                     | Methylene Chloride        | 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      |
| .VOA8260GAS2ND_00095 | 01/31/18 |           | Restek, Lot A0108226 |                      |                    | (Purchased Reagent) | Bromomethane              | 2500 ug/mL    |
|                      |          |           |                      |                      |                    |                     | Chloroethane              | 2500 ug/mL    |
|                      |          |           |                      |                      |                    |                     | Chloromethane             | 2500 ug/mL    |
|                      |          |           |                      |                      |                    |                     | Vinyl chloride            | 2500 ug/mL    |
| .VOA8260VOA2ND_00112 | 05/17/15 | 04/17/15  | Methanol, Lot 85233  | 10 mL                | VOA8260MEGA2_00034 | 1 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-Dichlorobenzene       | 200 ug/mL     |
|                      |          |           |                      |                      |                    |                     | 1,2-Dichloroethane        | 200 ug/mL     |
|                      |          |           |                      |                      |                    |                     | 1,2-Dichloropropane       | 200 ug/mL     |
|                      |          |           |                      |                      |                    |                     | 1,3-Dichlorobenzene       | 200 ug/mL     |
|                      |          |           |                      |                      |                    |                     | 1,4-Dichlorobenzene       | 200 ug/mL     |
|                      |          |           |                      |                      |                    |                     | Acrylonitrile             | 2000 ug/mL    |
|                      |          |           |                      |                      |                    |                     | Benzene                   | 200 ug/mL     |
|                      |          |           |                      |                      |                    |                     | Bromoform                 | 200 ug/mL     |
|                      |          |           |                      |                      |                    |                     | Carbon tetrachloride      | 200 ug/mL     |
|                      |          |           |                      |                      |                    |                     | Chlorobenzene             | 200 ug/mL     |
|                      |          |           |                      |                      |                    |                     | Chlorodibromomethane      | 200 ug/mL     |
|                      |          |           |                      |                      |                    |                     | Chloroform                | 200 ug/mL     |
|                      |          |           |                      |                      |                    |                     | cis-1,3-Dichloropropene   | 200 ug/mL     |
|                      |          |           |                      |                      |                    |                     | Dichlorobromomethane      | 200 ug/mL     |
|                      |          |           |                      |                      |                    |                     | Ethylbenzene              | 200 ug/mL     |
|                      |          |           |                      |                      |                    |                     | Methylene Chloride        | 200 ug/mL     |

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh

Job No.: 180-43791-1

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

| Reagent ID           | Exp Date | Prep Date | Dilutant Used       | Reagent Final Volume | Parent Reagent      |              | Analyte                   | Concentration |
|----------------------|----------|-----------|---------------------|----------------------|---------------------|--------------|---------------------------|---------------|
|                      |          |           |                     |                      | Reagent ID          | Volume Added |                           |               |
|                      |          |           |                     |                      |                     |              | 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     |
| ..VOA8260MEGA2_00034 | 02/01/16 |           | Restek, Lot A093733 |                      | (Purchased Reagent) |              | 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-Dichlorobenzene       | 2000 ug/mL    |
|                      |          |           |                     |                      |                     |              | 1,2-Dichloroethane        | 2000 ug/mL    |
|                      |          |           |                     |                      |                     |              | 1,2-Dichloropropane       | 2000 ug/mL    |
|                      |          |           |                     |                      |                     |              | 1,3-Dichlorobenzene       | 2000 ug/mL    |
|                      |          |           |                     |                      |                     |              | 1,4-Dichlorobenzene       | 2000 ug/mL    |
|                      |          |           |                     |                      |                     |              | Acrylonitrile             | 20000 ug/mL   |
|                      |          |           |                     |                      |                     |              | Benzene                   | 2000 ug/mL    |
|                      |          |           |                     |                      |                     |              | Bromoform                 | 2000 ug/mL    |
|                      |          |           |                     |                      |                     |              | Carbon tetrachloride      | 2000 ug/mL    |
|                      |          |           |                     |                      |                     |              | Chlorobenzene             | 2000 ug/mL    |
|                      |          |           |                     |                      |                     |              | Chlorodibromomethane      | 2000 ug/mL    |
|                      |          |           |                     |                      |                     |              | Chloroform                | 2000 ug/mL    |
|                      |          |           |                     |                      |                     |              | cis-1,3-Dichloropropene   | 2000 ug/mL    |
|                      |          |           |                     |                      |                     |              | Dichlorobromomethane      | 2000 ug/mL    |
|                      |          |           |                     |                      |                     |              | Ethylbenzene              | 2000 ug/mL    |
|                      |          |           |                     |                      |                     |              | Methylene Chloride        | 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    |
| VOA8260VOAPRI_00115  | 05/16/15 | 05/09/15  | Methanol, Lot 85233 | 10 mL                | VOA8260GAS1ST_00098 | 0.1 mL       | Bromomethane              | 25 ug/mL      |
|                      |          |           |                     |                      |                     |              | Chloroethane              | 25 ug/mL      |
|                      |          |           |                     |                      |                     |              | Chloromethane             | 25 ug/mL      |
|                      |          |           |                     |                      |                     |              | Vinyl chloride            | 25 ug/mL      |
|                      |          |           |                     |                      | VOA8260VOAPRI_00111 | 1.25 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-Dichlorobenzene       | 25 ug/mL      |
|                      |          |           |                     |                      |                     |              | 1,2-Dichloroethane        | 25 ug/mL      |
|                      |          |           |                     |                      |                     |              | 1,2-Dichloropropane       | 25 ug/mL      |
|                      |          |           |                     |                      |                     |              | 1,3-Dichlorobenzene       | 25 ug/mL      |
|                      |          |           |                     |                      |                     |              | 1,4-Dichlorobenzene       | 25 ug/mL      |
|                      |          |           |                     |                      |                     |              | Acrylonitrile             | 250 ug/mL     |
|                      |          |           |                     |                      |                     |              | Benzene                   | 25 ug/mL      |

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh

Job No.: 180-43791-1

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

| Reagent ID           | Exp Date | Prep Date | Dilutant Used       | Reagent Final Volume | Parent Reagent     |                     | Analyte                   | Concentration |
|----------------------|----------|-----------|---------------------|----------------------|--------------------|---------------------|---------------------------|---------------|
|                      |          |           |                     |                      | Reagent ID         | Volume Added        |                           |               |
|                      |          |           |                     |                      |                    |                     | Bromoform                 | 25 ug/mL      |
|                      |          |           |                     |                      |                    |                     | Carbon tetrachloride      | 25 ug/mL      |
|                      |          |           |                     |                      |                    |                     | Chlorobenzene             | 25 ug/mL      |
|                      |          |           |                     |                      |                    |                     | Chlorodibromomethane      | 25 ug/mL      |
|                      |          |           |                     |                      |                    |                     | Chloroform                | 25 ug/mL      |
|                      |          |           |                     |                      |                    |                     | cis-1,3-Dichloropropene   | 25 ug/mL      |
|                      |          |           |                     |                      |                    |                     | Dichlorobromomethane      | 25 ug/mL      |
|                      |          |           |                     |                      |                    |                     | Ethylbenzene              | 25 ug/mL      |
|                      |          |           |                     |                      |                    |                     | Methylene Chloride        | 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      |
| .VOA8260GAS1ST_00098 | 04/30/18 |           | Restek, Lot A011070 |                      |                    | (Purchased Reagent) | Bromomethane              | 2500 ug/mL    |
|                      |          |           |                     |                      |                    |                     | Chloroethane              | 2500 ug/mL    |
|                      |          |           |                     |                      |                    |                     | Chloromethane             | 2500 ug/mL    |
|                      |          |           |                     |                      |                    |                     | Vinyl chloride            | 2500 ug/mL    |
| .VOA8260VOAPRI_00111 | 05/17/15 | 04/17/15  | Methanol, Lot 85233 | 10 mL                | VOA8260MEGA1_00031 | 1 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-Dichlorobenzene       | 200 ug/mL     |
|                      |          |           |                     |                      |                    |                     | 1,2-Dichloroethane        | 200 ug/mL     |
|                      |          |           |                     |                      |                    |                     | 1,2-Dichloropropane       | 200 ug/mL     |
|                      |          |           |                     |                      |                    |                     | 1,3-Dichlorobenzene       | 200 ug/mL     |
|                      |          |           |                     |                      |                    |                     | 1,4-Dichlorobenzene       | 200 ug/mL     |
|                      |          |           |                     |                      |                    |                     | Acrylonitrile             | 2000 ug/mL    |
|                      |          |           |                     |                      |                    |                     | Benzene                   | 200 ug/mL     |
|                      |          |           |                     |                      |                    |                     | Bromoform                 | 200 ug/mL     |
|                      |          |           |                     |                      |                    |                     | Carbon tetrachloride      | 200 ug/mL     |
|                      |          |           |                     |                      |                    |                     | Chlorobenzene             | 200 ug/mL     |
|                      |          |           |                     |                      |                    |                     | Chlorodibromomethane      | 200 ug/mL     |
|                      |          |           |                     |                      |                    |                     | Chloroform                | 200 ug/mL     |
|                      |          |           |                     |                      |                    |                     | cis-1,3-Dichloropropene   | 200 ug/mL     |
|                      |          |           |                     |                      |                    |                     | Dichlorobromomethane      | 200 ug/mL     |
|                      |          |           |                     |                      |                    |                     | Ethylbenzene              | 200 ug/mL     |
|                      |          |           |                     |                      |                    |                     | Methylene Chloride        | 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     |
| ..VOA8260MEGA1_00031 | 02/28/16 |           | Restek, Lot A093581 |                      |                    | (Purchased Reagent) | 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    |

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh

Job No.: 180-43791-1

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

| Reagent ID                 | Exp Date | Prep Date | Dilutant Used        | Reagent Final Volume | Parent Reagent      |              | Analyte                   | Concentration |
|----------------------------|----------|-----------|----------------------|----------------------|---------------------|--------------|---------------------------|---------------|
|                            |          |           |                      |                      | Reagent ID          | Volume Added |                           |               |
|                            |          |           |                      |                      |                     |              | 1,1-Dichloroethene        | 2000 ug/mL    |
|                            |          |           |                      |                      |                     |              | 1,2-Dichlorobenzene       | 2000 ug/mL    |
|                            |          |           |                      |                      |                     |              | 1,2-Dichloroethane        | 2000 ug/mL    |
|                            |          |           |                      |                      |                     |              | 1,2-Dichloropropane       | 2000 ug/mL    |
|                            |          |           |                      |                      |                     |              | 1,3-Dichlorobenzene       | 2000 ug/mL    |
|                            |          |           |                      |                      |                     |              | 1,4-Dichlorobenzene       | 2000 ug/mL    |
|                            |          |           |                      |                      |                     |              | Acrylonitrile             | 20000 ug/mL   |
|                            |          |           |                      |                      |                     |              | Benzene                   | 2000 ug/mL    |
|                            |          |           |                      |                      |                     |              | Bromoform                 | 2000 ug/mL    |
|                            |          |           |                      |                      |                     |              | Carbon tetrachloride      | 2000 ug/mL    |
|                            |          |           |                      |                      |                     |              | Chlorobenzene             | 2000 ug/mL    |
|                            |          |           |                      |                      |                     |              | Chlorodibromomethane      | 2000 ug/mL    |
|                            |          |           |                      |                      |                     |              | Chloroform                | 2000 ug/mL    |
|                            |          |           |                      |                      |                     |              | cis-1,3-Dichloropropene   | 2000 ug/mL    |
|                            |          |           |                      |                      |                     |              | Dichlorobromomethane      | 2000 ug/mL    |
|                            |          |           |                      |                      |                     |              | Ethylbenzene              | 2000 ug/mL    |
|                            |          |           |                      |                      |                     |              | Methylene Chloride        | 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    |
| <b>VOAACROPRI_00002</b>    | 11/03/14 | 10/03/14  | Methanol, Lot 34562  | 50 mL                | VOAACRORES_00054    | 0.0625 mL    | Acrolein                  | 25 ug/mL      |
| .VOAACRORES_00054          | 11/30/14 |           | Restek, Lot A0104886 |                      | (Purchased Reagent) |              | Acrolein                  | 20000 ug/mL   |
| <b>VOAACROPRI_00005</b>    | 05/31/15 | 05/01/15  | Methanol, Lot 85233  | 100 mL               | VOAACRORES_00067    | 0.125 mL     | Acrolein                  | 25 ug/mL      |
| .VOAACRORES_00067          | 05/31/15 |           | Restek, Lot A0108734 |                      | (Purchased Reagent) |              | Acrolein                  | 20000 ug/mL   |
| <b>VOACEVEPRI_00006</b>    | 05/12/15 | 05/05/15  | Methanol, Lot 85233  | 10 mL                | VOACEVERES_00068    | 0.2 mL       | 2-Chloroethyl vinyl ether | 50 ug/mL      |
| .VOACEVERES_00068          | 03/31/18 |           | Restek, Lot A0109994 |                      | (Purchased Reagent) |              | 2-Chloroethyl vinyl ether | 2500 ug/mL    |
| <b>voaW2-cle Pri_00002</b> | 11/08/14 | 11/01/14  | Methanol, Lot 62345  | 10 mL                | VOACEVERES_00046    | 0.25 mL      | 2-Chloroethyl vinyl ether | 50 ug/mL      |
| .VOACEVERES_00046          | 02/28/16 |           | Restek, Lot A093368  |                      | (Purchased Reagent) |              | 2-Chloroethyl vinyl ether | 2000 ug/mL    |
| <b>voaWacro2 Res_00003</b> | 06/01/15 | 05/01/15  | Methanol, Lot 85233  | 50 mL                | VOAACRRES2ND_00058  | 0.0625 mL    | Acrolein                  | 25 ug/mL      |
| .VOAACRRES2ND_00058        | 07/31/15 |           | Restek, Lot A0109953 |                      | (Purchased Reagent) |              | Acrolein                  | 20000 ug/mL   |
| <b>voaWVA pri Re_00004</b> | 11/30/14 | 10/30/14  | Methanol, Lot 62345  | 20 mL                | VOA8260VARES_00042  | 0.125 mL     | Vinyl acetate             | 25 ug/mL      |
| .VOA8260VARES_00042        | 02/28/15 |           | Restek, Lot A0105145 |                      | (Purchased Reagent) |              | Vinyl acetate             | 4000 ug/mL    |
| <b>voaWVOA Pri R_00001</b> | 11/08/14 | 11/01/14  | Methanol, Lot 85233  | 8 mL                 | VOA8260GAS1ST_00070 | 0.1 mL       | Bromomethane              | 25 ug/mL      |
|                            |          |           |                      |                      |                     |              | Butadiene                 | 25 ug/mL      |
|                            |          |           |                      |                      |                     |              | Chloroethane              | 25 ug/mL      |
|                            |          |           |                      |                      |                     |              | Chloromethane             | 25 ug/mL      |
|                            |          |           |                      |                      |                     |              | Dichlorodifluoromethane   | 25 ug/mL      |
|                            |          |           |                      |                      |                     |              | Dichlorofluoromethane     | 25 ug/mL      |
|                            |          |           |                      |                      |                     |              | Trichlorofluoromethane    | 25 ug/mL      |
|                            |          |           |                      |                      |                     |              | Vinyl chloride            | 25 ug/mL      |
|                            |          |           |                      |                      | VOA8260VOAPRI_00083 | 1 mL         | 2-Butanone (MEK)          | 25 ug/mL      |
|                            |          |           |                      |                      |                     |              | 2-Hexanone                | 25 ug/mL      |

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh

Job No.: 180-43791-1

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)           | 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-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      |
|            |          |           |               |                      |                |              | Bromoform                             | 25 ug/mL      |
|            |          |           |               |                      |                |              | Carbon disulfide                      | 25 ug/mL      |
|            |          |           |               |                      |                |              | Carbon tetrachloride                  | 25 ug/mL      |
|            |          |           |               |                      |                |              | Chlorobenzene                         | 25 ug/mL      |
|            |          |           |               |                      |                |              | Chlorobromomethane                    | 25 ug/mL      |
|            |          |           |               |                      |                |              | Chlorodibromomethane                  | 25 ug/mL      |
|            |          |           |               |                      |                |              | Chloroform                            | 25 ug/mL      |
|            |          |           |               |                      |                |              | cis-1,2-Dichloroethene                | 25 ug/mL      |
|            |          |           |               |                      |                |              | cis-1,3-Dichloropropene               | 25 ug/mL      |
|            |          |           |               |                      |                |              | Cyclohexane                           | 25 ug/mL      |
|            |          |           |               |                      |                |              | Dibromomethane                        | 25 ug/mL      |
|            |          |           |               |                      |                |              | Dichlorobromomethane                  | 25 ug/mL      |
|            |          |           |               |                      |                |              | Ethyl ether                           | 25 ug/mL      |
|            |          |           |               |                      |                |              | Ethyl methacrylate                    | 25 ug/mL      |
|            |          |           |               |                      |                |              | Ethylbenzene                          | 25 ug/mL      |



REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh

Job No.: 180-43791-1

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

| Reagent ID           | Exp Date | Prep Date | Dilutant Used       | Reagent Final Volume | Parent Reagent      |                     | Analyte                               | Concentration |
|----------------------|----------|-----------|---------------------|----------------------|---------------------|---------------------|---------------------------------------|---------------|
|                      |          |           |                     |                      | Reagent ID          | Volume Added        |                                       |               |
|                      |          |           |                     |                      |                     |                     | Ethylene Dibromide                    | 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_00070 | 02/28/15 |           | Restek, Lot A093341 |                      |                     | (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_00083 | 11/13/14 | 10/13/14  | Methanol, Lot 62345 | 10 mL                | VOA8260KET1ST_00026 | 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_00021  | 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     |
|                      |          |           |                     |                      |                     |                     | 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     |

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh

Job No.: 180-43791-1

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

| Reagent ID | Exp Date | Prep Date | Dilutant Used | Reagent Final Volume | Parent Reagent |              | Analyte                     | Concentration |
|------------|----------|-----------|---------------|----------------------|----------------|--------------|-----------------------------|---------------|
|            |          |           |               |                      | Reagent ID     | Volume Added |                             |               |
|            |          |           |               |                      |                |              | 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-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     |
|            |          |           |               |                      |                |              | Bromoform                   | 200 ug/mL     |
|            |          |           |               |                      |                |              | Carbon disulfide            | 200 ug/mL     |
|            |          |           |               |                      |                |              | Carbon tetrachloride        | 200 ug/mL     |
|            |          |           |               |                      |                |              | Chlorobenzene               | 200 ug/mL     |
|            |          |           |               |                      |                |              | Chlorobromomethane          | 200 ug/mL     |
|            |          |           |               |                      |                |              | Chlorodibromomethane        | 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     |
|            |          |           |               |                      |                |              | Dibromomethane              | 200 ug/mL     |
|            |          |           |               |                      |                |              | Dichlorobromomethane        | 200 ug/mL     |
|            |          |           |               |                      |                |              | Ethyl ether                 | 200 ug/mL     |
|            |          |           |               |                      |                |              | Ethyl methacrylate          | 200 ug/mL     |
|            |          |           |               |                      |                |              | Ethylbenzene                | 200 ug/mL     |
|            |          |           |               |                      |                |              | Ethylene Dibromide          | 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     |
|            |          |           |               |                      |                |              | 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     |

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh

Job No.: 180-43791-1

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

| Reagent ID            | Exp Date | Prep Date | Dilutant Used       | Reagent Final Volume | Parent Reagent |                     | Analyte                               | Concentration |
|-----------------------|----------|-----------|---------------------|----------------------|----------------|---------------------|---------------------------------------|---------------|
|                       |          |           |                     |                      | Reagent ID     | Volume Added        |                                       |               |
|                       |          |           |                     |                      |                |                     | 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_00026 | 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_00021  | 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                    | 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-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    |
|                       |          |           |                     |                      |                |                     | 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    |

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh

Job No.: 180-43791-1

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

| Reagent ID            | Exp Date | Prep Date | Dilutant Used                | Reagent Final Volume | Parent Reagent      |              | Analyte                     | Concentration |
|-----------------------|----------|-----------|------------------------------|----------------------|---------------------|--------------|-----------------------------|---------------|
|                       |          |           |                              |                      | Reagent ID          | Volume Added |                             |               |
|                       |          |           |                              |                      |                     |              | Bromobenzene                | 2000 ug/mL    |
|                       |          |           |                              |                      |                     |              | Bromoform                   | 2000 ug/mL    |
|                       |          |           |                              |                      |                     |              | Carbon disulfide            | 2000 ug/mL    |
|                       |          |           |                              |                      |                     |              | Carbon tetrachloride        | 2000 ug/mL    |
|                       |          |           |                              |                      |                     |              | Chlorobenzene               | 2000 ug/mL    |
|                       |          |           |                              |                      |                     |              | Chlorobromomethane          | 2000 ug/mL    |
|                       |          |           |                              |                      |                     |              | Chlorodibromomethane        | 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    |
|                       |          |           |                              |                      |                     |              | Dibromomethane              | 2000 ug/mL    |
|                       |          |           |                              |                      |                     |              | Dichlorobromomethane        | 2000 ug/mL    |
|                       |          |           |                              |                      |                     |              | Ethyl ether                 | 2000 ug/mL    |
|                       |          |           |                              |                      |                     |              | Ethyl methacrylate          | 2000 ug/mL    |
|                       |          |           |                              |                      |                     |              | Ethylbenzene                | 2000 ug/mL    |
|                       |          |           |                              |                      |                     |              | Ethylene Dibromide          | 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    |
| <b>WCN0.1L3_00052</b> | 05/15/15 | 05/15/15  | Sodium Hyroxide, Lot 2410822 | 100 mL               | WCN10Pi_00487       | 1 mL         | Cyanide, Total              | 0.1 mg/L      |
| .WCN10Pi_00487        | 05/17/15 | 05/11/15  | Sodium Hyroxide, Lot 2410822 | 100 mL               | WCN1000P_00024      | 1 mL         | Cyanide, Total              | 10 mg/L       |
| ..WCN1000P_00024      | 05/20/15 |           | LabChem Inc., Lot D322-27    |                      | (Purchased Reagent) |              | Cyanide, Total              | 1000 mg/L     |

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh

Job No.: 180-43791-1

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

| Reagent ID             | Exp Date | Prep Date                       | Dilutant Used                 | Reagent Final Volume | Parent Reagent      |              | Analyte        | Concentration |
|------------------------|----------|---------------------------------|-------------------------------|----------------------|---------------------|--------------|----------------|---------------|
|                        |          |                                 |                               |                      | Reagent ID          | Volume Added |                |               |
| <b>WCNO.2ICV_00340</b> | 05/15/15 | 05/15/15                        | Sodium Hydroxide, Lot 2410822 | 100 mL               | WCN10Si_00489       | 2 mL         | Cyanide, Total | 0.2 mg/L      |
| .WCN10Si_00489         | 05/17/15 | 05/11/15                        | Sodium Hydroxide, Lot 2410822 | 100 mL               | WCN1000S_00017      | 1 mL         | Cyanide, Total | 10 mg/L       |
| ..WCN1000S_00017       | 08/31/15 | Ricca Chemical Co., Lot 4502438 |                               |                      | (Purchased Reagent) |              | Cyanide, Total | 1000 mg/L     |
| <b>WCNO.5L1_00501</b>  | 05/15/15 | 05/15/15                        | Sodium Hydroxide, Lot 2410822 | 100 mL               | WCN10Pi_00487       | 5 mL         | Cyanide, Total | 0.5 mg/L      |
| .WCN10Pi_00487         | 05/17/15 | 05/11/15                        | Sodium Hydroxide, Lot 2410822 | 100 mL               | WCN1000P_00024      | 1 mL         | Cyanide, Total | 10 mg/L       |
| ..WCN1000P_00024       | 05/20/15 | LabChem Inc., Lot D322-27       |                               |                      | (Purchased Reagent) |              | Cyanide, Total | 1000 mg/L     |
| <b>WCN10Pi_00487</b>   | 05/17/15 | 05/11/15                        | Sodium Hydroxide, Lot 2410822 | 100 mL               | WCN1000P_00024      | 1 mL         | Cyanide, Total | 10 mg/L       |
| .WCN1000P_00024        | 05/20/15 | LabChem Inc., Lot D322-27       |                               |                      | (Purchased Reagent) |              | Cyanide, Total | 1000 mg/L     |
| <b>WCNLCS_00019</b>    | 05/17/15 | 05/11/15                        | Sodium Hydroxide, Lot 2410822 | 100 mL               | WCNWSTOCK_00001     | 1 mL         | Cyanide, Total | 10 mg/L       |
| .WCNWSTOCK_00001       | 11/30/15 | ERA, Lot 200213                 |                               |                      | (Purchased Reagent) |              | Cyanide, Total | 1000 mg/L     |

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Nashville Job No.: 180-43791-1

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

| Reagent ID           | Exp Date | Prep Date | Dilutant Used              | Reagent Final Volume | Parent Reagent      |                     | Analyte        | Concentration |
|----------------------|----------|-----------|----------------------------|----------------------|---------------------|---------------------|----------------|---------------|
|                      |          |           |                            |                      | Reagent ID          | Volume Added        |                |               |
| OP_HCL_00013         | 09/09/15 |           | MACRON, Lot 0000086340     |                      |                     | (Purchased Reagent) | Stock Chemical | 100 %         |
| OP_HEM_Disks_00001   | 05/11/20 |           | Horizon, Lot 262940        |                      |                     | (Purchased Reagent) | Stock Chemical | 0 Filter      |
| OP_HEMspike__00022   | 11/01/15 | 05/01/15  | ACETONE, Lot 0000083802    | 1000 mL              | OP_Acetone_cy_00010 | 990 mL              | Acetone        | 0 ug/mL       |
|                      |          |           |                            |                      | OP_Hexadecane_00002 | 5 g                 | HEM            | 10000 ug/mL   |
|                      |          |           |                            |                      |                     |                     | Hexadecane     | 0 ug/mL       |
|                      |          |           |                            |                      |                     |                     | SGT-HEM        | 5000 ug/mL    |
|                      |          |           |                            | OP_Stearic A__00001  | 5 g                 | HEM                 | 10000 ug/mL    |               |
|                      |          |           |                            |                      |                     | SGT-HEM             | 5000 ug/mL     |               |
|                      |          |           |                            |                      |                     | Stearic Acid        | 0 ug/mL        |               |
| .OP_Acetone_cy_00010 | 12/29/19 |           | J.T. Baker, Lot 0000102171 |                      |                     | (Purchased Reagent) | Acetone        | 0 ug/mL       |
| .OP_Hexadecane_00002 | 01/31/19 |           | EMD, Lot 51126121          |                      |                     | (Purchased Reagent) | HEM            | 1000000 ug/mL |
|                      |          |           |                            |                      |                     |                     | Hexadecane     | 0 ug/mL       |
|                      |          |           |                            |                      |                     |                     | SGT-HEM        | 500000 ug/mL  |
| .OP_Stearic A__00001 | 04/25/17 |           | Fisher, Lot 111176         |                      |                     | (Purchased Reagent) | HEM            | 1000000 ug/mL |
|                      |          |           |                            |                      |                     |                     | SGT-HEM        | 500000 ug/mL  |
|                      |          |           |                            |                      |                     |                     | Stearic Acid   | 0 ug/mL       |
| OP_Hexane_00061      | 01/30/16 |           | JT Baker, Lot 0000096800   |                      |                     | (Purchased Reagent) | Hexane         | 0 mg/mL       |
| OP_Methanol_00031    | 03/12/20 |           | Fisher, Lot 150478         |                      |                     | (Purchased Reagent) | Methanol       | 0 %           |

Reagent

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**GCMATRIXSPK\_00001**

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

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

Catalog No. : 561323 Lot No.: A076606  
 Description : Custom Aroclor 1016/1260 Standard  
 Expiration Date<sup>1</sup>: September 2017 Storage: Refrigerate  
 Handling: This product contains PCB's

| Elution Order   | Compound     | CAS #      | Percent Purity <sup>2</sup> | Concentration (weight/volume) <sup>3</sup> | % Uncertainty (95% C.L.; K=2) <sup>4</sup> |
|-----------------|--------------|------------|-----------------------------|--|--|
| 1               | Aroclor 1016 | 12674-11-2 | ----%                       | 10,000.000 ug/ml                           | +/-0.59 %                                  |
| 2               | Aroclor 1260 | 11096-82-5 | ----%                       | 10,000.000 ug/ml                           | +/-0.59 %                                  |
| <b>Solvent:</b> | Isooctane    | 540-84-1   | 99%                         |  |  |

**Column:**  
 30m x .25mm x .2um  
 Rtx-CLP II (cat.# 11323)

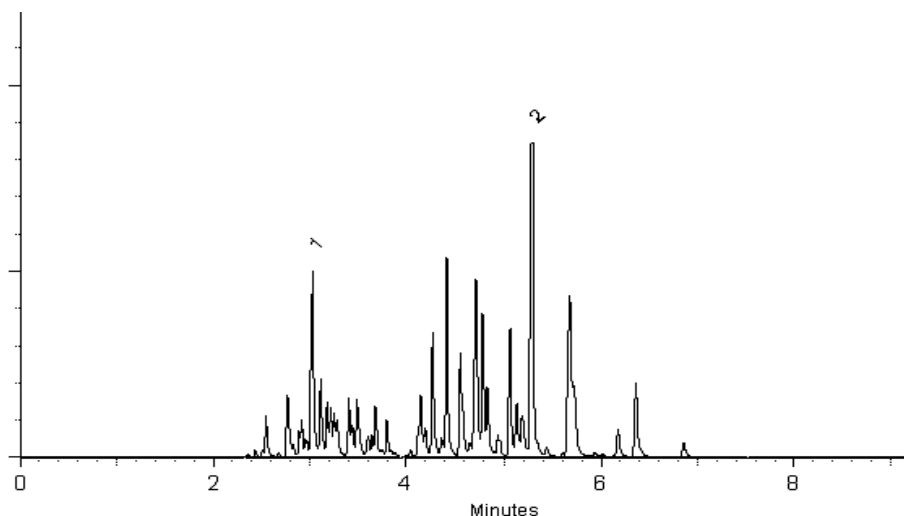
**Carrier Gas:**  
 helium-constant pressure 20 psi.

**Temp. Program:**  
 200°C to 300°C  
 @ 25°C/min. ( hold 10 min.)

**Inj. Temp:**  
 250°C

**Det. Temp:**  
 300°C

**Det. Type:**  
 ECD



*Diane Shaffer*  
 Diane Shaffer - QA Analyst

Date Passed: 01-Sep-2010 Balance: 1128342313

APPROVED  
 On: 09/01/2010 by: [Signature]

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

- 1 Expiration date of the unopened ampule stored at the recommended storage condition.
- 2A Purity is determined by one or more of the following techniques: GC/FID, HPLC, GC/ECD, GC/MS. Value is rounded to the nearest whole number. Chemical identity is confirmed using GC/MS. See data pack or contact provider for further details.
- 2B Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities.
- 2C The following types of compounds will have a listed purity of less than 99%: Aldehyde/Ketone-DNPH compounds, Bromides, Chlorides, HCL salts, HBR salts, sulfates, hydrates, and other compounds as necessary. The listed purity is a correction factor that is equivalent to the percentage of parent compound in the molecule. This correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution. The concentration listed on the certificate is the concentration of the parent compound in the solution.
- 2D Purity of isomeric compounds is reported as the sum of the isomers. Value is rounded to the nearest whole number after summation.
- 3 Based upon gravimetric preparation with balance calibration verified using NIST traceable weights (seven mass levels) and/or class A glassware used for dilutions.
- 4 Uncertainties determined using data for balances and glassware from measurement systems analysis methodology, raw material purity, and, when significant, equipment tolerances or calibration results.



Reagent

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**GCPCBI1221STD\_00002**



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. :** 32007 **Lot No.:** A090667  
**Description :** Aroclor® 1221 Standard  
Aroclor 1221 1000µg/mL, Hexane, 1mL/ampul  
**Container Size :** 2 mL **Pkg Amt:** > 1 mL  
**Expiration Date :** December 2018 **Storage:** 25°C nominal  
**Handling:** Contains PCBs - sonicate prior to use.

### C E R T I F I E D   V A L U E S

| Elution Order   | Compound                | Grav. Conc. (weight/volume) | Expanded Uncertainty (95% C.L.; K=2) |       |             |
|-----------------|-------------------------|-----------------------------|--------------------------------------|-------|-------------|
| 1               | Aroclor 1221            | 1,000.0 µg/mL               | +/- 5.8686                           | µg/mL | Gravimetric |
|                 | <b>CAS #</b> 11104-28-2 |                             | +/- 20.8758                          | µg/mL | Unstressed  |
|                 | <b>Purity</b> ----%     |                             | +/- 34.3670                          | µg/mL | Stressed    |
| <b>Solvent:</b> | Hexane                  |                             |                                      |       |             |
|                 | <b>CAS #</b> 110-54-3   |                             |                                      |       |             |
|                 | <b>Purity</b> 99%       |                             |                                      |       |             |

**Column:**  
30m x .25mm x .2um  
Rtx-CLP II (cat.# 11323)

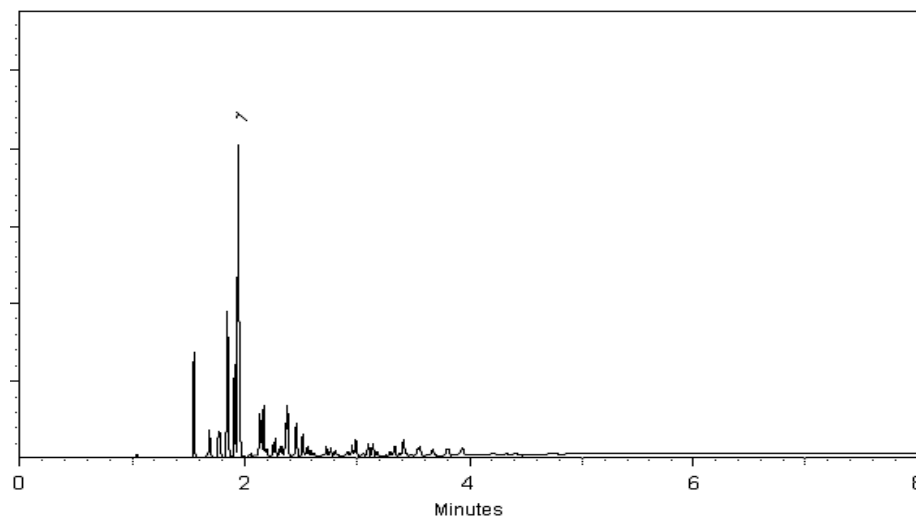
**Carrier Gas:**  
helium-constant pressure 20 psi.

**Temp. Program:**  
200°C to 300°C  
@ 25°C/min. ( hold 10 min.)

**Inj. Temp:**  
250°C

**Det. Temp:**  
300°C

**Det. Type:**  
ECD



*Jodi E. Breon*  
Jodi E. Breon - QA Analyst

Date Passed: 13-Sep-2012      Balance: 1125113331

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

## General Certified Reference Material Notes

### Expiration Notes:

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

### Purity Notes:

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

### Certified Uncertainty Value Notes:

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

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

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

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

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

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

### Manufacturing Notes:

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

### Handling Notes:

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

Reagent

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**GCPCBI1232STD\_00002**

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. :** 32008.sec **Lot No.:** A095877  
**Description :** Aroclor® 1232 Standard  
Aroclor® 1232 Standard 1,000 µg/mL, Hexane, 1mL/ampul  
**Container Size :** 2 mL **Pkg Amt:** > 1 mL  
**Expiration Date :** September 30, 2019 **Storage:** 25°C nominal  
**Handling:** This product contains PCBs.

### CERTIFIED VALUES

| Elution Order | Compound   | Grav. Conc. (weight/volume) | Expanded Uncertainty (95% C.L.; K=2) |       |             |
|---------------|--|-----------------------------|--------------------------------------|-------|-------------|
| 1             | Aroclor 1232<br>CAS # 11141-16-5.SEC (Lot 130604JLM)<br>Purity ----% | 1,000.0 µg/mL               | +/- 5.9397                           | µg/mL | Gravimetric |
|               |  |                             | +/- 20.8959                          | µg/mL | Unstressed  |
|               |  |                             | +/- 34.3792                          | µg/mL | Stressed    |

**Solvent:** Hexane  
 CAS # 110-54-3  
 Purity 99%

**Column:**  
30m x .25mm x .2um  
Rtx-CLP II (cat.# 11323)

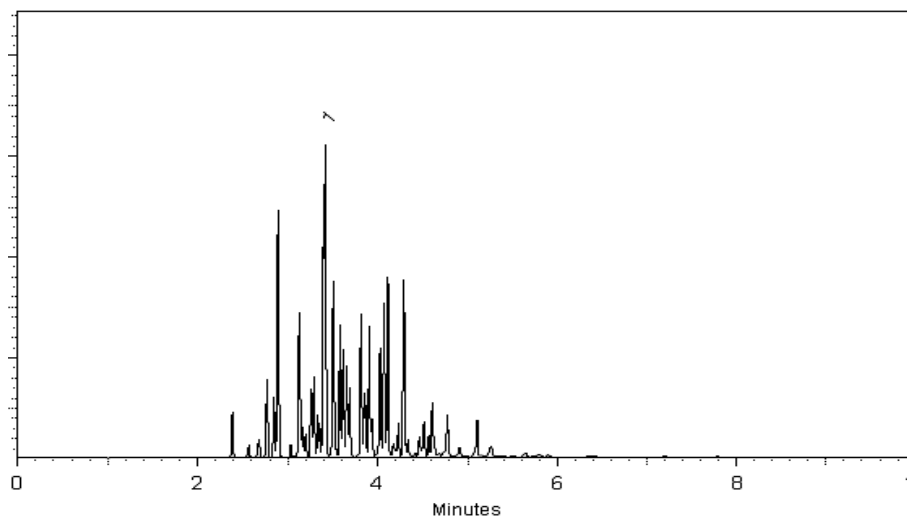
**Carrier Gas:**  
helium-constant pressure 20 psi.

**Temp. Program:**  
200°C to 300°C  
@ 25°C/min. ( hold 10 min.)

**Inj. Temp:**  
250°C

**Det. Temp:**  
300°C

**Det. Type:**  
ECD



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

*Michael Maje*

**Date Mixed:** 07-Jun-2013      **Balance:** 1128353505

*Jennifer L. Pollino*

Jennifer L. Pollino - QC Analyst

**Date Passed:** 11-Jun-2013

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

## General Certified Reference Material Notes

### Expiration Notes:

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

### Purity Notes:

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

### Certified Uncertainty Value Notes:

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

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

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

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

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

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

### Manufacturing Notes:

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

### Handling Notes:

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



Reagent

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**GCPCBI1232STD\_00003**



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 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. :** 32008 **Lot No.:** A090290  
**Description :** Aroclor® 1232 Standard  
Aroclor 1232 1000ug/mL, Hexane, 1mL/ampul  
**Container Size :** 2 mL **Pkg Amt:** > 1 mL  
**Expiration Date :** November 2018 **Storage:** 25°C nominal  
**Handling:** Contains PCBs - sonicate prior to use.

### CERTIFIED VALUES

| Elution Order   | Compound                | Grav. Conc. (weight/volume) | Expanded Uncertainty (95% C.L.; K=2) |       |             |
|-----------------|-------------------------|-----------------------------|--------------------------------------|-------|-------------|
| 1               | Aroclor 1232            | 1,000.0 µg/mL               | +/- 5.8686                           | µg/mL | Gravimetric |
|                 | <b>CAS #</b> 11141-16-5 |                             | +/- 20.8758                          | µg/mL | Unstressed  |
|                 | <b>Purity</b> 99%       |                             | +/- 34.3670                          | µg/mL | Stressed    |
| <b>Solvent:</b> | Hexane                  |                             |                                      |       |             |
|                 | <b>CAS #</b> 110-54-3   |                             |                                      |       |             |
|                 | <b>Purity</b> 99%       |                             |                                      |       |             |

**Column:**  
30m x .25mm x .2um  
Rtx-CLP II (cat.# 11323)

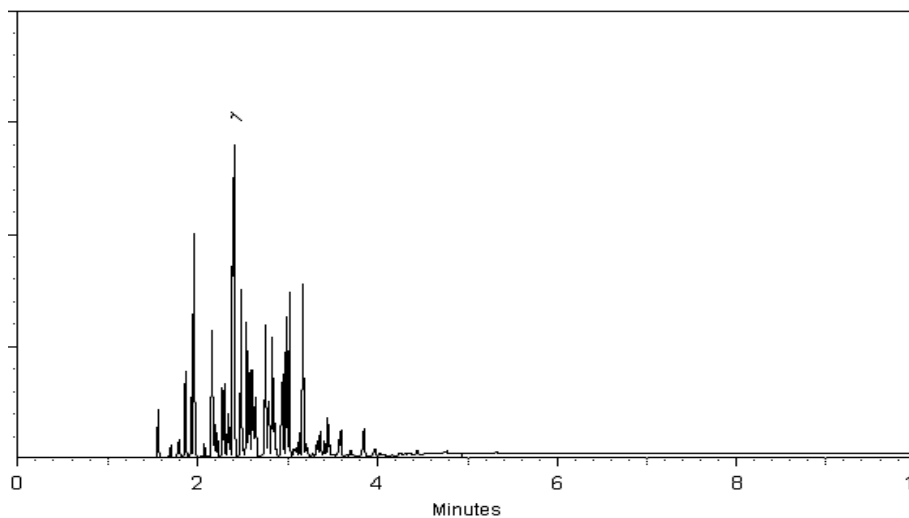
**Carrier Gas:**  
helium-constant pressure 20 psi.

**Temp. Program:**  
200°C to 300°C  
@ 25°C/min. ( hold 10 min.)

**Inj. Temp:**  
250°C

**Det. Temp:**  
300°C

**Det. Type:**  
ECD



*Jodi E. Breon*  
Jodi E. Breon - QA Analyst

Date Passed: 27-Aug-2012      Balance: 1128342314

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

## General Certified Reference Material Notes

### Expiration Notes:

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

### Purity Notes:

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

### Certified Uncertainty Value Notes:

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

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

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

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

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

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

### Manufacturing Notes:

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

### Handling Notes:

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

Reagent

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**GCPCBI1242STD\_00003**

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. :** 32009 **Lot No.:** A090182  
**Description :** Aroclor® 1242 Standard  
Aroclor® 1242 Standard 1,000 µg/mL, Hexane, 1mL/ampul  
**Container Size :** 2 mL **Pkg Amt:** > 1 mL  
**Expiration Date :** November 30, 2018 **Storage:** 25°C nominal  
**Handling:** This product contains PCB's

### CERTIFIED VALUES

| Elution Order | Compound   | Grav. Conc. (weight/volume)    | Expanded Uncertainty (95% C.L.; K=2) |       |             |
|---------------|--|--------------------------------|--------------------------------------|-------|-------------|
| 1             | Aroclor 1242<br>CAS # 53469-21-9<br>Purity ----% | 1,000.0 µg/mL<br>(Lot 01141-A) | +/- 5.8275                           | µg/mL | Gravimetric |
|               |  |                                | +/- 20.8643                          | µg/mL | Unstressed  |
|               |  |                                | +/- 34.3600                          | µg/mL | Stressed    |

**Solvent:** Hexane  
 CAS # 110-54-3  
 Purity 99%

**Column:**  
30m x .25mm x .2um  
Rtx-CLP II (cat.# 11323)

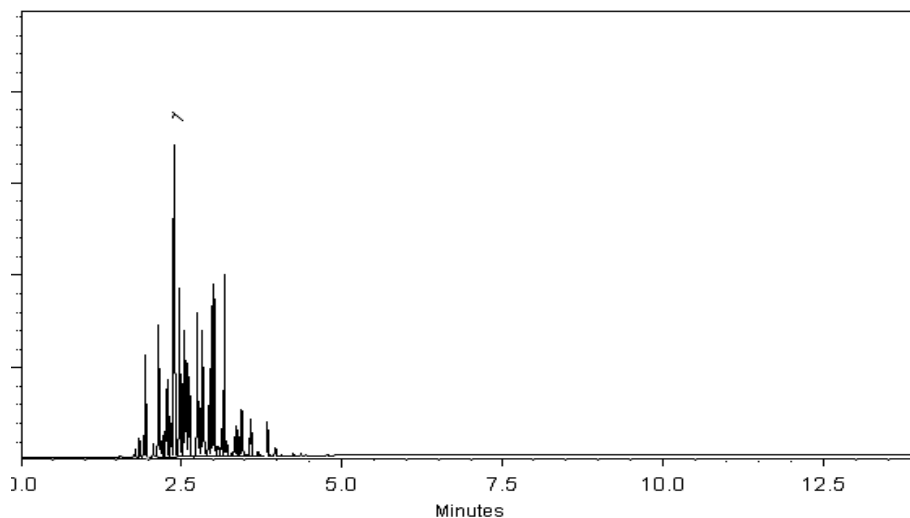
**Carrier Gas:**  
helium-constant pressure 20 psi.

**Temp. Program:**  
200°C to 300°C  
@ 25°C/min. ( hold 10 min.)

**Inj. Temp:**  
250°C

**Det. Temp:**  
300°C

**Det. Type:**  
ECD



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

*Rebecca Sawyer*

**Date Mixed:** 10-Aug-2012      **Balance:** 1128360905

*Jennifer L. Pollino*

Jennifer L. Pollino - QC Analyst

**Date Passed:** 15-Aug-2012

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

## General Certified Reference Material Notes

### Expiration Notes:

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

### Purity Notes:

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

### Certified Uncertainty Value Notes:

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

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

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

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

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

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

### Manufacturing Notes:

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

### Handling Notes:

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



Reagent

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**GCPCBI1248STD\_00003**



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. :** 32010 **Lot No.:** A092864  
**Description :** Aroclor® 1248 Standard  
Aroclor 1248 1000µg/mL, Hexane, 1mL/ampul  
**Container Size :** 2 mL **Pkg Amt:** > 1 mL  
**Expiration Date :** April 2019 **Storage:** 25°C nominal  
**Handling:** This product contains PCB's

### C E R T I F I E D   V A L U E S

| Elution Order   | Compound                | Grav. Conc. (weight/volume) | Expanded Uncertainty (95% C.L.; K=2) |       |             |
|-----------------|-------------------------|-----------------------------|--------------------------------------|-------|-------------|
| 1               | Aroclor 1248            | 1,000.0 µg/mL               | +/- 5.8686                           | µg/mL | Gravimetric |
|                 | <b>CAS #</b> 12672-29-6 |                             | +/- 20.8758                          | µg/mL | Unstressed  |
|                 | <b>Purity</b> ----%     |                             | +/- 34.3670                          | µg/mL | Stressed    |
| <b>Solvent:</b> | Hexane                  |                             |                                      |       |             |
|                 | <b>CAS #</b> 110-54-3   |                             |                                      |       |             |
|                 | <b>Purity</b> 99%       |                             |                                      |       |             |

**Column:**  
30m x .25mm x .2um  
Rtx-CLP II (cat.# 11323)

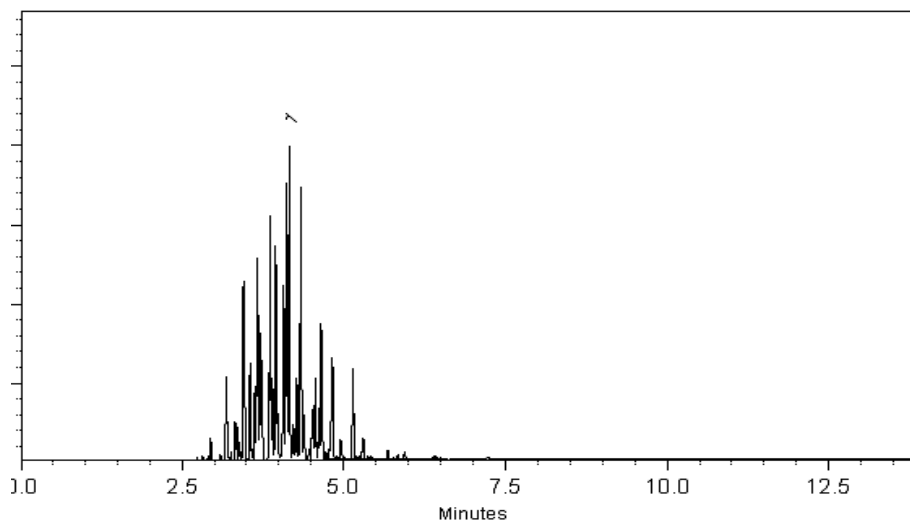
**Carrier Gas:**  
helium-constant pressure 20 psi.

**Temp. Program:**  
200°C to 300°C  
@ 25°C/min. ( hold 10 min.)

**Inj. Temp:**  
250°C

**Det. Temp:**  
300°C

**Det. Type:**  
ECD



*Diane Shaffer*  
Diane Shaffer - QA Analyst

Date Passed: 14-Jan-2013

Balance: 1125113331

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

## General Certified Reference Material Notes

### Expiration Notes:

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

### Purity Notes:

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

### Certified Uncertainty Value Notes:

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

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

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

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

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

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

### Manufacturing Notes:

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

### Handling Notes:

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

Reagent

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**GCPCBI1254STD\_00002**

# 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. :** 32011.sec **Lot No.:** A095778  
**Description :** Aroclor® 1254 Standard  
Aroclor® 1254 Standard 1,000 µg/mL, Hexane, 1mL/ampul  
**Container Size :** 2 mL **Pkg Amt:** > 1 mL  
**Expiration Date :** September 30, 2019 **Storage:** 25°C nominal  
**Handling:** This product contains PCB's

### CERTIFIED VALUES

| Elution Order | Compound   | Grav. Conc. (weight/volume) | Expanded Uncertainty (95% C.L.; K=2) |       |             |
|---------------|--|-----------------------------|--------------------------------------|-------|-------------|
| 1             | Aroclor 1254<br>CAS # 11097-69-1.SEC (Lot RM00922)<br>Purity ----% | 1,002.0 µg/mL               | +/- 5.9516                           | µg/mL | Gravimetric |
|               |  |                             | +/- 20.9377                          | µg/mL | Unstressed  |
|               |  |                             | +/- 34.4480                          | µg/mL | Stressed    |

**Solvent:** Hexane  
 CAS # 110-54-3  
 Purity 99%

**Column:**  
30m x .25mm x .2um  
Rtx-CLP II (cat.# 11323)

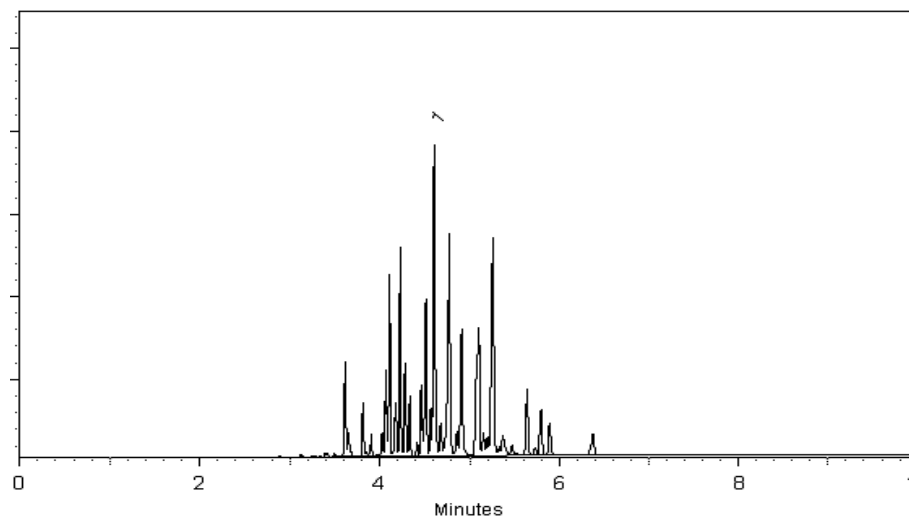
**Carrier Gas:**  
helium-constant pressure 20 psi.

**Temp. Program:**  
200°C to 300°C  
@ 25°C/min. ( hold 10 min.)

**Inj. Temp:**  
250°C

**Det. Temp:**  
300°C

**Det. Type:**  
ECD



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

*Michael Maje*

**Date Mixed:** 03-Jun-2013      **Balance:** 1128353505

*Jennifer L. Pollino*

Jennifer L. Pollino - QC Analyst

**Date Passed:** 05-Jun-2013

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

## General Certified Reference Material Notes

### Expiration Notes:

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

### Purity Notes:

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

### Certified Uncertainty Value Notes:

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

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

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

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

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

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

### Manufacturing Notes:

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

### Handling Notes:

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



Reagent

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**GCPCBI1254STD\_00003**



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. :** 32011 **Lot No.:** A092005  
**Description :** Aroclor® 1254 Standard  
Aroclor 1254 1000µg/mL, Hexane, 1mL/ampul  
**Container Size :** 2 mL **Pkg Amt:** > 1 mL  
**Expiration Date :** February 2019 **Storage:** 25°C nominal  
**Handling:** This product contains PCB's

### CERTIFIED VALUES

| Elution Order   | Compound                | Grav. Conc. (weight/volume) | Expanded Uncertainty (95% C.L.; K=2) |       |             |
|-----------------|-------------------------|-----------------------------|--------------------------------------|-------|-------------|
| 1               | Aroclor 1254            | 1,000.0 µg/mL               | +/- 5.8686                           | µg/mL | Gravimetric |
|                 | <b>CAS #</b> 11097-69-1 |                             | +/- 20.8758                          | µg/mL | Unstressed  |
|                 | <b>Purity</b> 99%       |                             | +/- 34.3670                          | µg/mL | Stressed    |
| <b>Solvent:</b> | Hexane                  |                             |                                      |       |             |
|                 | <b>CAS #</b> 110-54-3   |                             |                                      |       |             |
|                 | <b>Purity</b> 99%       |                             |                                      |       |             |

**Column:**  
30m x .25mm x .2um  
Rtx-CLP II (cat.# 11323)

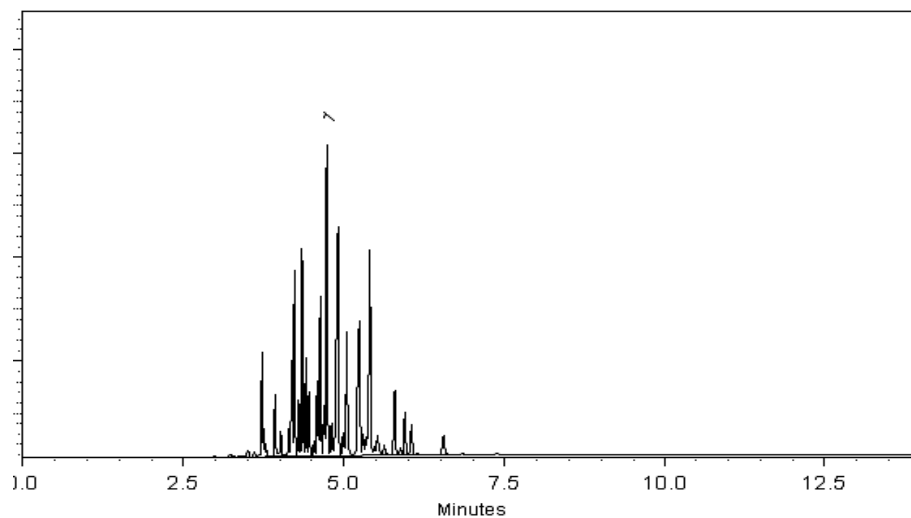
**Carrier Gas:**  
helium-constant pressure 20 psi.

**Temp. Program:**  
200°C to 300°C  
@ 25°C/min. ( hold 10 min.)

**Inj. Temp:**  
250°C

**Det. Temp:**  
300°C

**Det. Type:**  
ECD



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

Date Passed: 21-Nov-2012      Balance: 1128342313

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

## General Certified Reference Material Notes

### Expiration Notes:

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

### Purity Notes:

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

### Certified Uncertainty Value Notes:

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

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

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

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

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

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

### Manufacturing Notes:

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

### Handling Notes:

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

Reagent

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**GCPCBI1262STD\_00003**



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 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. :** 32409 **Lot No.:** A094073  
**Description :** Aroclor® 1262 Standard  
Aroclor® 1262 Standard 1,000 µg/mL, 1mL/ampul, Hexane  
**Container Size :** 2 mL **Pkg Amt:** > 1 mL  
**Expiration Date :** June 2019 **Storage:** 25°C nominal  
**Handling:** This product contains PCB's

### C E R T I F I E D   V A L U E S

| Elution Order   | Compound                | Grav. Conc. (weight/volume) | Expanded Uncertainty (95% C.L.; K=2) |       |             |  |
|-----------------|-------------------------|-----------------------------|--------------------------------------|-------|-------------|--|
| 1               | Aroclor 1262            | 1,000.0 µg/mL               | +/- 5.9397                           | µg/mL | Gravimetric |  |
|                 | <b>CAS #</b> 37324-23-5 |                             | +/- 20.8959                          | µg/mL | Unstressed  |  |
|                 | <b>Purity</b> ----%     |                             | +/- 34.3792                          | µg/mL | Stressed    |  |
| <b>Solvent:</b> | Hexane                  |                             |                                      |       |             |  |
|                 | <b>CAS #</b> 110-54-3   |                             |                                      |       |             |  |
|                 | <b>Purity</b> 99%       |                             |                                      |       |             |  |

**Column:**  
30m x .25mm x .2um  
Rtx-CLP II (cat.# 11323)

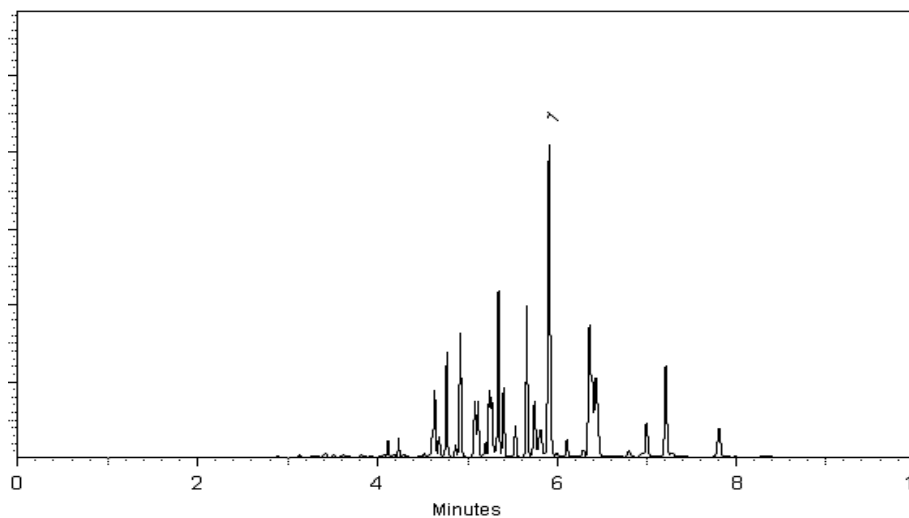
**Carrier Gas:**  
helium-constant pressure 20 psi.

**Temp. Program:**  
200°C to 300°C  
@ 25°C/min. ( hold 10 min.)

**Inj. Temp:**  
250°C

**Det. Temp:**  
300°C

**Det. Type:**  
ECD



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

Date Passed: 15-Mar-2013      Balance: B251644995

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

## General Certified Reference Material Notes

### Expiration Notes:

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

### Purity Notes:

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

### Certified Uncertainty Value Notes:

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

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

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

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

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

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

### Manufacturing Notes:

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

### Handling Notes:

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



Reagent

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**GCPCBI1268STD\_00003**



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 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. :** 32410 **Lot No.:** A091468  
**Description :** Aroclor® 1268 Standard  
Aroclor 1268 Std 1000µg/mL, 1mL/ampul, Hexane  
**Container Size :** 2 mL **Pkg Amt:** > 1 mL  
**Expiration Date :** January 2019 **Storage:** 25°C nominal  
**Handling:** This product contains PCB's

### C E R T I F I E D   V A L U E S

| Elution Order   | Compound                | Grav. Conc. (weight/volume) | Expanded Uncertainty (95% C.L.; K=2) |         |       |             |
|-----------------|-------------------------|-----------------------------|--------------------------------------|---------|-------|-------------|
| 1               | Aroclor 1268            | 1,000.0 µg/mL               | +/-                                  | 5.9397  | µg/mL | Gravimetric |
|                 | <b>CAS #</b> 11100-14-4 |                             | +/-                                  | 20.8959 | µg/mL | Unstressed  |
|                 | <b>Purity</b> ----%     |                             | +/-                                  | 34.3792 | µg/mL | Stressed    |
| <b>Solvent:</b> | Hexane                  |                             |                                      |         |       |             |
|                 | <b>CAS #</b> 110-54-3   |                             |                                      |         |       |             |
|                 | <b>Purity</b> 99%       |                             |                                      |         |       |             |

**Column:**  
30m x .25mm x .2um  
Rtx-CLP II (cat.# 11323)

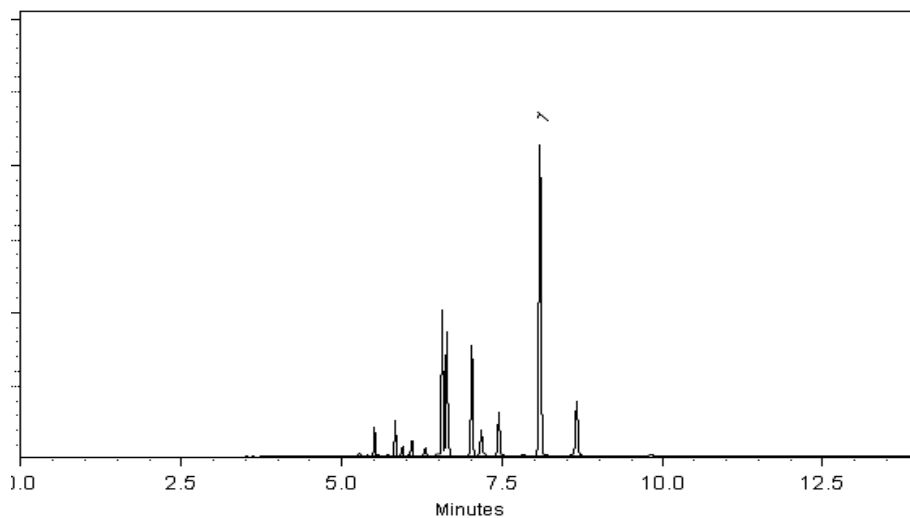
**Carrier Gas:**  
helium-constant pressure 20 psi.

**Temp. Program:**  
200°C to 300°C  
@ 25°C/min. ( hold 10 min.)

**Inj. Temp:**  
250°C

**Det. Temp:**  
300°C

**Det. Type:**  
ECD



*Jodi E. Breon*  
Jodi E. Breon - QA Analyst

Date Passed: 01-Nov-2012      Balance: 1128353505

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

## General Certified Reference Material Notes

### Expiration Notes:

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

### Purity Notes:

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

### Certified Uncertainty Value Notes:

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

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

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

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

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

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

### Manufacturing Notes:

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

### Handling Notes:

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

Reagent

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**GCPCBICAL STD\_00001**



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

www.restek.com



## Certificate of Analysis

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

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

**Catalog No. :** 32039 **Lot No.:** A092844  
**Description :** Aroclor® 1016/1260 Mix  
Aroclor 1016/1260 1000µg/mL, Hexane, 1mL/ampul  
**Container Size :** 2 mL **Pkg Amt:** > 1 mL  
**Expiration Date :** April 2019 **Storage:** 25°C nominal  
**Handling:** This product contains PCB's

### CERTIFIED VALUES

| Elution Order | Compound                | Grav. Conc. (weight/volume) | Expanded Uncertainty (95% C.L.; K=2) |         |       |             |
|---------------|-------------------------|-----------------------------|--------------------------------------|---------|-------|-------------|
| 1             | Aroclor 1016            | 1,000.0 µg/mL               | +/-                                  | 5.8275  | µg/mL | Gravimetric |
|               | <b>CAS #</b> 12674-11-2 |                             | +/-                                  | 20.8643 | µg/mL | Unstressed  |
|               | <b>Purity</b> 99%       |                             | +/-                                  | 34.3600 | µg/mL | Stressed    |
| 2             | Aroclor 1260            | 1,000.0 µg/mL               | +/-                                  | 5.8275  | µg/mL | Gravimetric |
|               | <b>CAS #</b> 11096-82-5 |                             | +/-                                  | 20.8643 | µg/mL | Unstressed  |
|               | <b>Purity</b> ----%     |                             | +/-                                  | 34.3600 | µg/mL | Stressed    |

**Solvent:** Hexane  
**CAS #** 110-54-3  
**Purity** 99%

**Column:**  
30m x .25mm x .2um  
Rtx-CLP II (cat.# 11323)

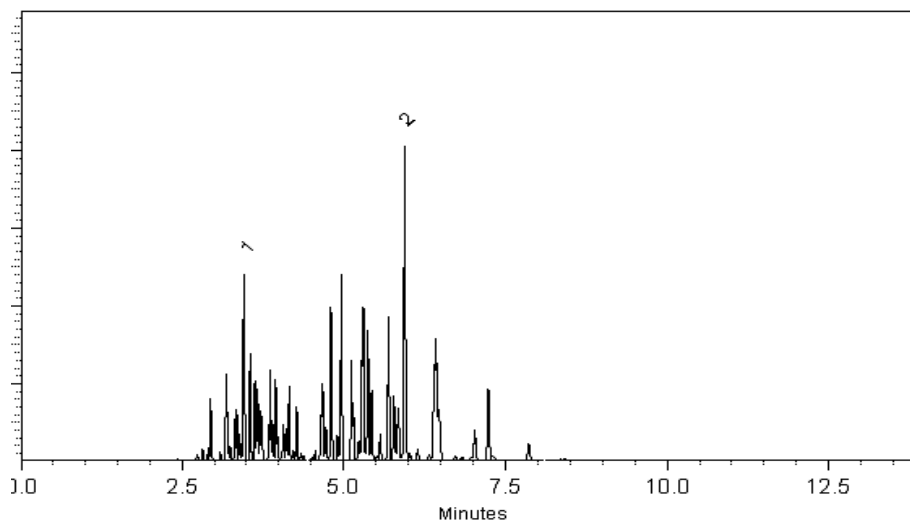
**Carrier Gas:**  
helium-constant pressure 20 psi.

**Temp. Program:**  
200°C to 300°C  
@ 25°C/min. ( hold 10 min.)

**Inj. Temp:**  
250°C

**Det. Temp:**  
300°C

**Det. Type:**  
ECD



*Diane Shaffer*  
Diane Shaffer - QA Analyst

Date Passed: 14-Jan-2013

Balance: 1125113331

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

## General Certified Reference Material Notes

### Expiration Notes:

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

### Purity Notes:

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

### Certified Uncertainty Value Notes:

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

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

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

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

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

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

### Manufacturing Notes:

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

### Handling Notes:

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



Reagent

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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.

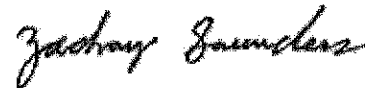
**11.3 Chemical Stability** - Studies have been conducted on this or similar CRMs and it has been demonstrated that this CRM is chemically stable for a period of not less than two years provided the "Storage & Handling" conditions are followed that are described in section 7.0.

**Certification Date:** March 25, 2013

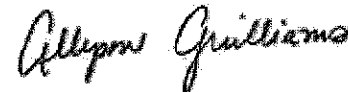
**Expiration Date:** **EXPIRES**  
01<sup>st</sup> 2015

**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

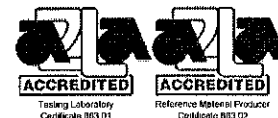
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**MCALSPECAREV\_00006**

**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-CAL-SPECA-REV

Lot Number: J2-MEB575123

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

Value / Analyte(s): 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**

| ANALYTE                     | CERTIFIED VALUE     | ANALYTE       | CERTIFIED VALUE     |
|-----------------------------|---------------------|---------------|---------------------|
| Aluminum, Al                | 25.01 ± 0.13 µg/mL  | Arsenic, As   | 5.000 ± 0.032 µg/mL |
| Barium, Ba                  | 4.997 ± 0.028 µg/mL | Beryllium, Be | 5.003 ± 0.032 µg/mL |
| Cadmium, Cd                 | 4.998 ± 0.032 µg/mL | Calcium, Ca   | 2 500 ± 11 µg/mL    |
| Chromium+3, Cr <sub>3</sub> | 4.999 ± 0.028 µg/mL | Cobalt, Co    | 4.999 ± 0.025 µg/mL |
| Copper, Cu                  | 4.998 ± 0.032 µg/mL | Iron, Fe      | 1 250 ± 6 µg/mL     |
| Lead, Pb                    | 4.999 ± 0.025 µg/mL | Magnesium, Mg | 2 500 ± 12 µg/mL    |
| Manganese, Mn               | 24.99 ± 0.12 µg/mL  | Nickel, Ni    | 4.998 ± 0.028 µg/mL |
| Potassium, K                | 2 500 ± 11 µg/mL    | Selenium, Se  | 4.998 ± 0.028 µg/mL |
| Silver, Ag                  | 4.998 ± 0.036 µg/mL | Sodium, Na    | 2 500 ± 11 µg/mL    |
| Strontium, Sr               | 5.002 ± 0.032 µg/mL | Thallium, Tl  | 4.999 ± 0.040 µg/mL |
| Vanadium, V                 | 5.002 ± 0.032 µg/mL | Zinc, Zn      | 5.001 ± 0.028 µg/mL |

Certified Density: 1.048 g/mL (measured at 20 ± 1 °C)

**Assay Information:**

| ANALYTE | METHOD      | NIST SRM# | SRM LOT#     |
|---------|-------------|-----------|--------------|
| Ag      | ICP Assay   | 3151      | 992212       |
| Ag      | Volhard     | 999b      | 999b         |
| Al      | Calculated  |           | See Sec. 4.2 |
| Al      | ICP Assay   | 3101a     | 060502       |
| As      | EDTA        |           | See Sec. 4.2 |
| As      | ICP Assay   | 3103a     | 100818       |
| Ba      | Gravimetric |           | See Sec. 4.2 |
| Ba      | ICP Assay   | 3104a     | 070222       |
| 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      | 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          |
| 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      | ICP Assay   | 3158      | 993012       |
| V       | ICP Assay   | 3165      | 992706       |
| V       | EDTA        | 928       | 928          |
| Zn      | ICP Assay   | 3168a     | 120629       |
| 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

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

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**

- 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 (µg/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 cap 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.

**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 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

April 27, 2015

11.2 Expiration Date

**EXPIRES**  
1 #2016

11.3 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 11.2. This certification is nullified if the CRM/RM is damaged, contaminated, or otherwise modified.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

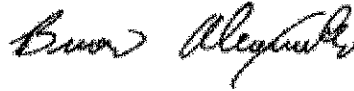
Certificate Prepared By:

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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**MCALSPECB\_00008**

**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-CAL-SPECB  
 Lot Number: J2-MEB575124  
 Matrix: 3% (v/v) HNO3  
           tr. HF  
 Value / Analyte(s): 250 µg/mL ea:  
                           Si,  
                           5 µg/mL ea:  
                           B,                               Mo,                               Sb,  
                           Sn,                               Ti

**3.0 CERTIFIED VALUES AND UNCERTAINTIES**

| ANALYTE        | CERTIFIED VALUE     | ANALYTE      | CERTIFIED VALUE     |
|----------------|---------------------|--------------|---------------------|
| Antimony, Sb   | 4.998 ± 0.043 µg/mL | Boron, B     | 5.002 ± 0.032 µg/mL |
| Molybdenum, Mo | 4.998 ± 0.034 µg/mL | Silicon, Si  | 249.9 ± 1.9 µg/mL   |
| Tin, Sn        | 4.998 ± 0.030 µg/mL | Titanium, Ti | 4.998 ± 0.039 µg/mL |

Certified Density: 1.013 g/mL (measured at 20 ± 1 °C)

**Assay Information:**

| ANALYTE | METHOD     | NIST SRM# | SRM LOT#     |
|---------|------------|-----------|--------------|
| B       | Calculated |           | See Sec. 4.2 |
| B       | ICP Assay  | 3107      | 070514       |
| 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 cap 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

April 27, 2015

11.2 Expiration Date

EXPIRES  
1 # 2016

11.3 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 11.2. This certification is nullified if the CRM/RM is damaged, contaminated, or otherwise modified.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

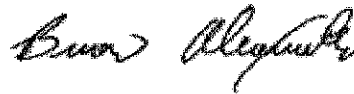
Certificate Prepared By:

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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**MCGHG1-1\_00009**

**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: Single Analyte Custom Grade Solution  
 Catalog Number: CGHG1  
 Lot Number: H2-HG02128  
 Matrix: 5% (v/v) HNO<sub>3</sub>  
 Value / Analyte(s): 1 000 µg/mL ea:  
 Hg  
 Starting Material: Hg Metal  
 Starting Material Lot#: 1780  
 Starting Material Purity: 99.9997%

*Rec'd 1/8/15  
 RLR*

**3.0 CERTIFIED VALUES AND UNCERTAINTIES**

Certified Value: 1 007 ± 3 µg/mL - weighted mean  
 Certified Density: 1.026 g/mL (measured at 20 ± 1 °C)

**Assay Information:**

|                        |  |
|------------------------|--|
| <b>Assay Method #1</b> | <b>1 004 ± 5 µg/mL</b><br>ICP Assay NIST SRM 3133 Lot Number: 061204 |
| <b>Assay Method #2</b> | <b>1 009 ± 3 µg/mL</b><br>EDTA NIST SRM 928 Lot Number: 928          |

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

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.

### Characterization of CRM/RM by Two Methods

Certified Value,  $X_{CRM/RM}$ , where two methods of characterization are used is the weighted mean of the two results:

$$X_{CRM/RM} = [(w_a)(X_a) + (w_b)(X_b)]$$

$X_a$  = mean of Assay Method A with standard uncertainty  $u_{char a}$

$X_b$  = mean of Assay Method B with standard uncertainty  $u_{char b}$

$w_a$  and  $w_b$  = the weighting factors for each method calculated using the inverse square of the variance:

$$w_a = (1/u_{char a})^2 / ((1/u_{char a})^2 + (1/u_{char b})^2)$$

$$w_b = (1/u_{char b})^2 / ((1/u_{char a})^2 + (1/u_{char b})^2)$$

$$CRM/RM \text{ Expanded Uncertainty } (t) = U_{CRM/RM} = k (u_{char a \& b}^2 + u_{bb}^2 + u_{lts}^2 + u_{sts}^2)^{1/2}$$

$k$  = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char a \& b} = [(w_a)^2 (u_{char a})^2 + (w_b)^2 (u_{char b})^2]^{1/2}$  where  $u_{char a}$  and  $u_{char b}$  are the square root of the sum of the squares of errors from characterization which include instrument measurement, density, NIST SRM uncertainty, weighing, and volume

$u_{bb}$  = bottle to bottle homogeneity standard uncertainty

$u_{lts}$  = long term stability standard uncertainty (storage)

$u_{sts}$  = short term stability standard uncertainty (transportation)

No correction has been applied for transpiration that will occur after the CRM/RM bottle has been removed from the sealed aluminized bag. See Sec. 7.0 (Instructions for the Correct Use of this Reference Material) for more information.

### Characterization of CRM/RM by One Method

Certified Value,  $X_{CRM/RM}$ , where one method of characterization is used is the mean of individual results:

$$X_{CRM/RM} = \text{mean of Assay Method A with standard uncertainty } u_{char a}$$

$$CRM/RM \text{ Expanded Uncertainty } (t) = U_{CRM/RM} = k (u_{char a}^2 + u_{bb}^2 + u_{lts}^2 + u_{sts}^2)^{1/2}$$

$k$  = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char a}$  = square root of the sum of the squares of the errors from characterization which include instrumental measurement, density, NIST SRM uncertainty, weighing, and volume

$u_{bb}$  = bottle to bottle homogeneity standard uncertainty

$u_{lts}$  = long term stability standard uncertainty (storage)

$u_{sts}$  = short term stability standard uncertainty (transportation)

## 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 (µg/mL)

CRM/RMs 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.

|                 |                 |                 |                 |                 |
|-----------------|-----------------|-----------------|-----------------|-----------------|
| M Ag < 0.003050 | M Er < 0.000203 | O Mn < 0.000161 | O S < 0.005380  | O V < 0.000538  |
| O Al < 0.000753 | M Eu < 0.000203 | M Mo < 0.002033 | M Sb < 0.002033 | M W < 0.001017  |
| M As < 0.001017 | O Fe < 0.001614 | O Na 0.000787   | O Sc < 0.000430 | M Y < 0.000203  |
| M Au < 0.002033 | M Ga < 0.000203 | M Nb < 0.000610 | M Se < 0.014233 | M Yb < 0.000203 |
| M B < 0.004067  | M Gd < 0.000203 | M Nd < 0.000203 | O Si 0.000899   | O Zn 0.000146   |
| M Ba < 0.000610 | M Ge < 0.001627 | O Ni < 0.001614 | M Sm < 0.000203 | O Zr < 0.001614 |
| O Be < 0.000108 | M Hf < 0.000610 | n Os <          | M Sn < 0.000203 |                 |
| M Bi < 0.002033 | s Hg <          | O P < 0.010760  | O Sr < 0.000215 |                 |
| O Ca 0.001068   | M Ho < 0.000203 | M Pb < 0.000610 | M Ta < 0.000610 |                 |
| M Cd < 0.000203 | M In < 0.000407 | M Pd < 0.003050 | M Tb < 0.000203 |                 |
| M Ce < 0.000203 | M Ir < 0.000203 | M Pr < 0.000203 | M Te < 0.004067 |                 |
| M Co < 0.000407 | O K 0.000562    | M Pt < 0.000203 | M Th < 0.000407 |                 |
| O Cr < 0.000538 | M La < 0.000203 | M Rb < 0.000203 | O Ti < 0.000646 |                 |
| M Cs < 0.004067 | O Li < 0.000215 | M Re < 0.000203 | O Tl < 0.005380 |                 |
| O Cu < 0.002152 | M Lu < 0.000203 | M Rh < 0.000203 | M Tm < 0.000203 |                 |
| M Dy < 0.000203 | O Mg 0.000169   | M Ru < 0.000203 | M U < 0.004067  |                 |

## 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

- Store between approximately 4° - 30°C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag keep cap tightly sealed when not in use. Store and use at 20° ± 4°C. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit [www.inorganicventures.com/TCT](http://www.inorganicventures.com/TCT).

**Atomic Weight; Valence; Coordination Number; Chemical Form in Solution** - 200.59 +2 4

Hg(OH)(aq) 1+

**Chemical Compatibility** - Stable in HNO<sub>3</sub>. Avoid basic media forming insoluble carbonate. The sulfide, basic carbonate, oxalate, phosphate, arsenite, arsenate and iodide are insoluble in water.

**Stability** - 2-100 ppb levels not stable in 1% HNO<sub>3</sub> / LDPE container, stable in 10% HNO<sub>3</sub> packaged in borosilicate glass. 1-100 ppm levels stable in 7% HNO<sub>3</sub> packaged in borosilicate glass. 1000-10,000 ppm solutions are chemically stable for years in 5-10% HNO<sub>3</sub> / LDPE container.

**Hg Containing Samples (Preparation and Solution)** - Metal (soluble in HNO<sub>3</sub>); Oxide (Soluble in HNO<sub>3</sub>); Ores and Organic based (The literature has more references to the preparation of Hg containing samples than any other element. Please consult the literature for your specific sample type, since such preparations are prone to error. Or e-mail our technical staff and we will contact you to discuss your particular sample preparation questions in further detail.).

**Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):**

| Technique/Line     | Estimated D.L.     | Order | Interferences (underlined indicates severe) |
|--------------------|--------------------|-------|---|
| ICP-MS 202 amu     | 9 ppt              | n/a   | 186W16O                                     |
| ICP-OES 184.950 nm | 0.03 / 0.005 µg/mL | 1     |   |
| ICP-OES 194.227 nm | 0.03 / 0.005 µg/mL | 1     | V   |
| ICP-OES 253.652 nm | 0.1 / 0.03 µg/mL   | 1     | Ta, Co, Th, Rh, Fe, U                       |

## 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, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

- August 28, 2014

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec. 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Period of Validity

- Sealed TCT Bag Open Date: 2/2/2015

- This CRM/RM should not be used longer than one year from the date of opening the sealed TCT bag or after the date given in Sec. 11.3, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

11.3 Lot Expiration Date

- August 28, 2017

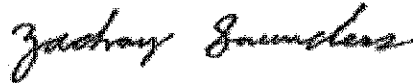
- The date after which this CRM/RM should not be used (See Sec. 11.2).

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

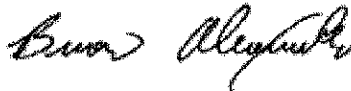
Certificate Prepared By:

Zach Saunders  
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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**MHGICV-1\_00005**



**Material Safety Data Sheet**

ULTRA Scientific · 250 Smith Street · North Kingstown, RI, USA 02852 · 401-294-9400

Product #: ICP-080

Last Update: 4/7/2014

**Section I Product Identification**

Name: Mercury Standard

Matrix : water with dilute nitric acid

**Section II Composition / Information on Ingredients**

| Component                          | CAS#        | % by Wt. | LD50               | OSHA PEL  | ACGIH TLV  | RTECS #   | Codes |
|------------------------------------|-------------|----------|--------------------|-----------|------------|-----------|-------|
| water                              | 007732-18-5 | 97.9     | >90 mL/kg oral rat | N/A       | N/A        | ZC0110000 |       |
| nitric acid                        | 007697-37-2 | 2        | N/A                | 5 mg/m3   | 5.2 mg/m3  | QU5775000 | G     |
| mercury, inorganic compounds as Hg | 007439-97-6 | 0.1      | 26 mg/kg oral rat  | 0.1 mg/m3 | .025 mg/m3 | OV4550000 |       |

Codes: A-OSHA regulated carcinogen; B-IARC Group 1 carcinogen; C-IARC Group 2A carcinogen; D-IARC Group 2B carcinogen; E-NTP Group 1 carcinogen; F-NTP Group 2 carcinogen; G-SARA Title III compound; H-California Proposition 65 compound.

**Section III Hazards Identification**

Irritant

All chemicals should be considered hazardous - direct physical contact should be avoided.

**Section IV First Aid Measures**

Inhalation: If inhaled, remove to fresh air. Give oxygen, if necessary. Contact a physician.

Skin: In case of skin contact, flush with copious amounts of water. Remove contaminated clothing.

Contact: Contact a physician.

Eye Contact: In case of eye contact, flush with copious amounts of water, lifting eyelids occasionally. Contact a physician.

Ingestion: If ingested, contact poison center immediately for recommended procedure. Contact a physician.

**Section V Fire Fighting Measures**

Fire and Explosion Hazard Data for Matrix

Fire Hazard: non-combustible

Extinguishing Media: Carbon dioxide, dry chemical powder, or water spray.

**Section VI Accidental Release Measures**

Ventilate area of the leak or spill. Wear appropriate personal protective equipment as specified in Section VIII. A leaking bottle, vial, or ampule may be placed in a plastic bag, and normal disposal procedures followed. Take up spilled material with sand or other non-combustible absorbant material, and place in an appropriate container for later disposal. Flush spill area with water.

**Section VII Handling and Storage**

Store at Room Temperature (18-25°C)

Keep in a tightly closed container, and store in a corrosion proof area.

This product should only be used by persons trained in the safe handling of hazardous chemicals.

**Section VIII Exposure Controls / Personal Protection**

Ensure that there is adequate ventilation to prevent airborne levels from exceeding recommended exposure limits (see Section II). Use appropriate MSHA/NIOSH approved safety equipment. Wear chemical goggles, face shield, gloves, and chemical resistant clothing, such as a laboratory coat and/or a rubber apron, to prevent contact with eyes, skin, and clothing.

**Section IX Physical and Chemical Properties**

Physical Data for Matrix

Melting Pt.: 0°C

Boiling Pt.: 100°C

Density: 1

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Vapor Pressure: N/A

Vapor Density: N/A

Water Solubility: soluble

Appearance: colorless liquid

Odor: none

Flash Point: none

Auto-Ignition Temperature: N/A

LEL: N/A

UEL: N/A

**Section X Stability and Reactivity**

Reactivity Data for Matrix

Stability: stable

Incompatibilities:

organic materials

str. reducing agents

alkalies

antimony salts

Hazardous Decomposition Products: NO<sub>2</sub>, NO<sub>3</sub>

Hazardous Effects of Polymerization: none

**Section XI Toxicological Information**

See Section II for specific toxicological information for the ingredients of this product.

**Section XII Ecological Information**

No information is available.

**Section XIII Disposal Considerations**

Recycle, if possible. Any material which cannot be saved for recovery or recycling should be disposed of at an appropriate and approved waste disposal facility. Processing, use, and/or contamination of this product may change waste management requirements. Observe all applicable federal, state, and local environmental regulations concerning disposal.

**Section XIV Transport Information**

Shipment Type: Corrosive liquid, acidic, inorganic, n.o.s. (nitric acid)

UN Number: UN3264

Shipping Class: 8

Packing Group: III

**Section XV Regulatory Information**

EU Directives Classification

R: 34

Risk Statements: Causes burns.

S: 23-26-36-45

Safety Statements: Do not breathe gas/fumes/vapour/spray. In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Wear suitable protective clothing. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

**Section XVI Other Information**

The above information is believed to be correct, but does not purport to be all-inclusive. This data should be used only as a guide in handling this material. ULTRA Scientific, Inc., shall not be held liable for any damage resulting from handling or from contact with the above product.

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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:

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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](mailto: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](mailto: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** 

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Reagent

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**MMSCRI-1B\_00005**

**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-MSCRI-1B-REV1                |     |     |     |
| Lot Number:         | J2-MEB572092                        |     |     |     |
| Matrix:             | 3% (v/v) HNO <sub>3</sub>           |     |     |     |
| Value / Analyte(s): | 125 µg/mL ea:                       |     |     |     |
|                     | Ca,                                 | K,  | Mg, | Na, |
|                     | 12.5 µg/mL ea:                      |     |     |     |
|                     | Fe,                                 |     |     |     |
|                     | 7.5 µg/mL ea:                       |     |     |     |
|                     | Al,                                 |     |     |     |
|                     | 2.5 µg/mL ea:                       |     |     |     |
|                     | Ba,                                 |     |     |     |
|                     | 1.25 µg/mL ea:                      |     |     |     |
|                     | Mn,                                 | Se, | Sr, | Zn, |
|                     | 0.5 µg/mL ea:                       |     |     |     |
|                     | Cr <sub>3</sub> ,                   | Cu, |     |     |
|                     | 0.25 µg/mL ea:                      |     |     |     |
|                     | Ag,                                 | As, | Be, | Cd, |
|                     | Ni,                                 | Pb, | Tl, | V,  |
|                     | 0.125 µg/mL ea:                     |     |     |     |
|                     | Co                                  |     |     |     |

**3.0 CERTIFIED VALUES AND UNCERTAINTIES**

| ANALYTE         | CERTIFIED VALUE       | ANALYTE       | CERTIFIED VALUE       |
|-----------------|-----------------------|---------------|-----------------------|
| Aluminum, Al    | 7.49 ± 0.05 µg/mL     | Arsenic, As   | 0.2501 ± 0.0021 µg/mL |
| Barium, Ba      | 2.500 ± 0.019 µg/mL   | Beryllium, Be | 0.2500 ± 0.0021 µg/mL |
| Cadmium, Cd     | 0.2501 ± 0.0019 µg/mL | Calcium, Ca   | 125.0 ± 0.6 µg/mL     |
| Chromium+3, Cr3 | 0.5000 ± 0.0041 µg/mL | Cobalt, Co    | 0.1250 ± 0.0011 µg/mL |
| Copper, Cu      | 0.5003 ± 0.0035 µg/mL | Iron, Fe      | 12.50 ± 0.07 µg/mL    |
| Lead, Pb        | 0.2501 ± 0.0017 µg/mL | Magnesium, Mg | 125.0 ± 0.6 µg/mL     |
| Manganese, Mn   | 1.250 ± 0.010 µg/mL   | Nickel, Ni    | 0.2500 ± 0.0020 µg/mL |
| Potassium, K    | 125.0 ± 0.6 µg/mL     | Selenium, Se  | 1.250 ± 0.010 µg/mL   |
| Silver, Ag      | 0.2500 ± 0.0023 µg/mL | Sodium, Na    | 125.0 ± 0.6 µg/mL     |
| Strontium, Sr   | 1.250 ± 0.008 µg/mL   | Thallium, Tl  | 0.2501 ± 0.0021 µg/mL |
| Vanadium, V     | 0.2499 ± 0.0018 µg/mL | Zinc, Zn      | 1.250 ± 0.010 µg/mL   |

Certified Density: 1.019 g/mL (measured at 20 ± 1 °C)

**Assay Information:**



| ANALYTE | 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     | 892707       |
| 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      | Calculated  |           | 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

- 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 (µg/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 cap 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.

**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 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**

March 20, 2015

**11.2 Expiration Date**

EXPIRES

01<sup>st</sup> 2016

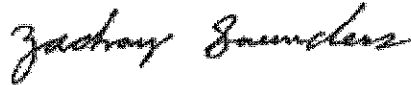
**11.3 Period of Validity**

- 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 11.2. This certification is nullified if the CRM/RM is damaged, contaminated, or otherwise modified.

**12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS**

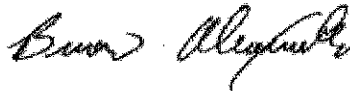
**Certificate Prepared By:**

Zach Saunders  
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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**MMSCRI-2\_00007**

**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-MSCRI-2-REV1

Lot Number: J2-MEB572093

Matrix: 5% (v/v) HNO<sub>3</sub>  
tr. HF

Value / Analyte(s): 125 µg/mL ea:  
Si,  
5 µg/mL ea:  
B,  
1.25 µg/mL ea:  
Mo, Sn, Ti,  
0.5 µg/mL ea:  
Sb

**3.0 CERTIFIED VALUES AND UNCERTAINTIES**

| ANALYTE        | CERTIFIED VALUE       | ANALYTE      | CERTIFIED VALUE     |
|----------------|-----------------------|--------------|---------------------|
| Antimony, Sb   | 0.5004 ± 0.0037 µg/mL | Boron, B     | 4.998 ± 0.032 µg/mL |
| Molybdenum, Mo | 1.250 ± 0.011 µg/mL   | Silicon, Si  | 125.0 ± 1.0 µg/mL   |
| Tin, Sn        | 1.250 ± 0.010 µg/mL   | Titanium, Ti | 1.250 ± 0.010 µg/mL |

Certified Density: 1.023 g/mL (measured at 20 ± 1 °C)

**Assay Information:**

| ANALYTE | METHOD     | NIST SRM# | SRM LOT#     |
|---------|------------|-----------|--------------|
| B       | Calculated |           | See Sec. 4.2 |
| B       | ICP Assay  | 3107      | 070514       |
| 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      | Calculated |           | See Sec. 4.2 |
| 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 cap 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

March 20, 2015

11.2 Expiration Date

EXPIRES  
01/2016

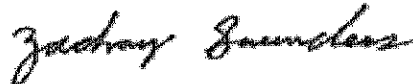
11.3 Period of Validity

- 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 11.2. This certification is nullified if the CRM/RM is damaged, contaminated, or otherwise modified.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

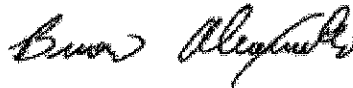
Certificate Prepared By:

Zach Saunders  
Product Documentation Technician



Certificate Approved By:

Brian Alexander  
PHD., Technical Process Director



Certifying Officer:

Paul Gaines  
PHD., Senior Technical Director



Reagent

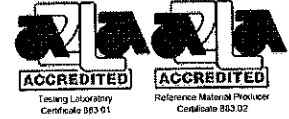
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**MMSICSAB-1\_00008**



## 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-MSICSAB-1  
Lot Number: J2-MEB575125  
Matrix: 3% (v/v) HNO<sub>3</sub>  
Value / Analyte(s): 10 µg/mL ea:  
Ba, Be, Pb,  
Sr, Tl, V

## 3.0 CERTIFIED VALUES AND UNCERTAINTIES

| ANALYTE      | CERTIFIED VALUE    | ANALYTE       | CERTIFIED VALUE    |
|--------------|--------------------|---------------|--------------------|
| Barium, Ba   | 10.00 ± 0.06 µg/mL | Beryllium, Be | 10.00 ± 0.06 µg/mL |
| Lead, Pb     | 10.00 ± 0.05 µg/mL | Strontium, Sr | 10.00 ± 0.06 µg/mL |
| Thallium, Tl | 10.00 ± 0.08 µg/mL | Vanadium, V   | 10.00 ± 0.06 µg/mL |

Certified Density: 1.013 g/mL (measured at 20 ± 1 °C)

### Assay Information:

| ANALYTE | METHOD      | NIST SRM# | SRM LOT#     |
|---------|-------------|-----------|--------------|
| Ba      | Gravimetric |           | See Sec. 4.2 |
| Ba      | ICP Assay   | 3104a     | 070222       |
| Be      | ICP Assay   | 3105a     | 090514       |
| Pb      | ICP Assay   | 3128      | 101026       |
| Pb      | EDTA        | 928       | 928          |
| Sr      | ICP Assay   | 3153a     | 990906       |
| Sr      | EDTA        | 928       | 928          |
| Tl      | ICP Assay   | 3158      | 993012       |
| V       | ICP Assay   | 3165      | 992706       |
| V       | 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.  
[  $\sum (s_i)^2$  ]<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 (µg/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 cap 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

April 27, 2015

11.2 Expiration Date

**EXPIRES**  
1 #2016

11.3 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 11.2. This certification is nullified if the CRM/RM is damaged, contaminated, or otherwise modified.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

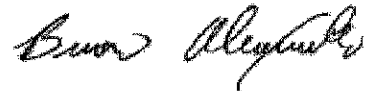
Certificate Prepared By:

Donna Senn  
Product Documentation Technician



Certificate Approved By:

Brian Alexander  
PhD., Technical Process Director



Certifying Officer:

Paul Gaines  
PhD., Senior Technical Director



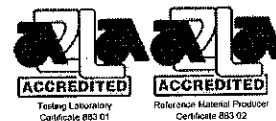
Reagent

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**MMSICSAB-2\_00007**

## 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-MSICSAB-2  
 Lot Number: J2-MEB575126  
 Matrix: 3% (v/v) HNO3  
 tr. HF  
 Value / Analyte(s): 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

| ANALYTE      | CERTIFIED VALUE    | ANALYTE     | CERTIFIED VALUE    |
|--------------|--------------------|-------------|--------------------|
| Antimony, Sb | 10.00 ± 0.07 µg/mL | Boron, B    | 25.01 ± 0.17 µg/mL |
| Selenium, Se | 25.00 ± 0.17 µg/mL | Silicon, Si | 250.0 ± 1.9 µg/mL  |
| Tin, Sn      | 50.01 ± 0.23 µg/mL |             |                    |

Certified Density: 1.016 g/mL (measured at 20 ± 1 °C)

### Assay Information:

| ANALYTE | 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      | 100901       |
| Si      | Calculated |           | See Sec. 4.2 |
| Si      | ICP Assay  | 3150      | 071204       |
| Sn      | Calculated |           | See Sec. 4.2 |
| Sn      | ICP Assay  | 3161a     | 070330       |

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 cap 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

April 27, 2015

11.2 Expiration Date

EXPIRES  
1 #2016

11.3 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 11.2. This certification is nullified if the CRM/RM is damaged, contaminated, or otherwise modified.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

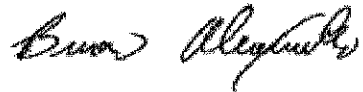
Certificate Prepared By:

Donna Senn  
Product Documentation Technician



Certificate Approved By:

Brian Alexander  
PhD., Technical Process Director



Certifying Officer:

Paul Gaines  
PhD., Senior Technical Director



Reagent

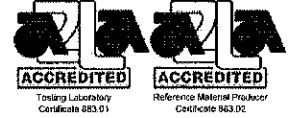
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**MTAPITTTICPMS\_00020**



**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-ICPMS

Lot Number: H2-MEB532047

Matrix: 0.7% (v/v) HNO<sub>3</sub>

Value / Analyte(s):

- 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, Tl,
- 4 µg/mL ea: As,
- 2 µg/mL ea: Pb,
- 1 µg/mL ea: Se

*Rec'd  
6/17/19  
EJR*

**3.0 CERTIFIED VALUES AND UNCERTAINTIES**

| ELEMENT                     | CERTIFIED VALUE     | ELEMENT      | CERTIFIED VALUE     | ELEMENT       | CERTIFIED VALUE     |
|-----------------------------|---------------------|--------------|---------------------|---------------|---------------------|
| Aluminum, Al                | 200.0 ± 1.0 µg/mL   | Arsenic, As  | 4.002 ± 0.028 µg/mL | Barium, Ba    | 200.0 ± 1.0 µg/mL   |
| Beryllium, Be               | 5.000 ± 0.029 µg/mL | Boron, B     | 100.0 ± 0.7 µg/mL   | Cadmium, Cd   | 5.000 ± 0.024 µg/mL |
| Chromium+3, Cr <sub>3</sub> | 20.00 ± 0.10 µg/mL  | Cobalt, Co   | 50.02 ± 0.25 µg/mL  | Copper, Cu    | 25.00 ± 0.17 µg/mL  |
| Iron, Fe                    | 100.0 ± 0.5 µg/mL   | Lead, Pb     | 2.000 ± 0.010 µg/mL | Manganese, Mn | 49.99 ± 0.22 µg/mL  |
| Nickel, Ni                  | 50.02 ± 0.24 µg/mL  | Selenium, Se | 1.001 ± 0.006 µg/mL | Silver, Ag    | 5.002 ± 0.032 µg/mL |
| Strontium, Sr               | 100.0 ± 0.6 µg/mL   | Thallium, Tl | 5.002 ± 0.033 µg/mL | Vanadium, V   | 50.00 ± 0.24 µg/mL  |
| Zinc, Zn                    | 50.02 ± 0.28 µg/mL  |              |                     |               |                     |

Certified Density: 1.003 g/mL (measured at 20 ± 1 °C)

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       | 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      | 120619       |
| 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   | 3168      | 993012       |
| V       | ICP Assay   | 3165      | 992706       |
| V       | EDTA        | 928       | 928          |
| Zn      | ICP Assay   | 3168a     | 120629       |
| 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

- 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.

**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 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 06, 2014

### 11.2 Expiration Date

**EXPIRES**  
01/2015

### 11.3 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 11.2. This certification is nullified if the CRM/RM is damaged, contaminated, or otherwise modified.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

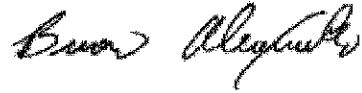
Certificate Prepared By:

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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**MTAPIT'TMSA\_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) HNO3  
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

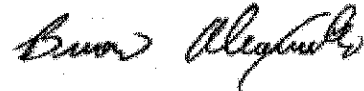
Certificate Prepared By:

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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**MTAPITTMSC\_00029**



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 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.

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##### 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

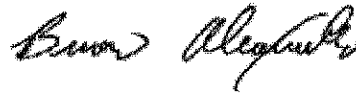
Certificate Prepared By:

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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**OP/PESTPCBRTS\_00002**

**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. :** 568719 **Lot No.:** A0100240  
**Description :** OCP/PCB Surrogate Mix RTS  
OCP/PCB Surrogate Mix RTS 0.2 µg/ml, Methanol, 100 ml/bottle  
**Container Size :** 100 mL **Pkg Amt:** > 100 mL  
**Expiration Date :** December 31, 2016 **Storage:** 10°C or colder

**CERTIFIED VALUES**

| Elution Order   | Compound                          | Grav. Conc. (weight/volume) | Expanded Uncertainty (95% C.L.; K=2) |        |       |             |
|-----------------|-----------------------------------|-----------------------------|--------------------------------------|--------|-------|-------------|
| 1.              | 2,4,5,6-Tetrachloro-m-xylene      | 0.2 µg/mL                   | ±                                    | 0.0025 | µg/mL | Gravimetric |
|                 | CAS # 877-09-8 (Lot 0052481)      |                             | ±                                    | 0.0066 | µg/mL | Unstressed  |
|                 | Purity 98%                        |                             | ±                                    | 0.0086 | µg/mL | Stressed    |
| 2.              | Decachlorobiphenyl (BZ# 209)      | 0.2 µg/mL                   | ±                                    | 0.0025 | µg/mL | Gravimetric |
|                 | CAS # 2051-24-3 (Lot ER071509-01) |                             | ±                                    | 0.0067 | µg/mL | Unstressed  |
|                 | Purity 99%                        |                             | ±                                    | 0.0086 | µg/mL | Stressed    |
| <b>Solvent:</b> | Methanol                          |                             |                                      |        |       |             |
|                 | CAS # 67-56-1                     |                             |                                      |        |       |             |
|                 | Purity 99%                        |                             |                                      |        |       |             |

Reagent

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**sv benzoepyre\_00001**



**Certified Reference Material CRM**

*51 Benzofluorene primary*  
 100313

ISO 9001 QS Registered  
 ISO 17025-34-35-43 Accredited  
 Scopes: http://AbsoluteStandards.com

**CERTIFIED WEIGHT REPORT**

**Part Number:** Z1016  
**Lot Number:** 100313  
**Description:** Benzofluorene  
**Expiration Date:** 100318  
**Recommended Storage:** Refrigerate (4 °C)  
**Nominal Concentration (µg/mL):** 1000

**Lot #** 44325  
**Solvent(s):** Methylene chloride

|                |                 |        |      |
|----------------|-----------------|--------|------|
| Formulated By: | Paul Barron     | 100313 | DATE |
| Reviewed By:   | Pedro L. Rentas | 100313 | DATE |

Weight(s) shown below were combined and diluted to:

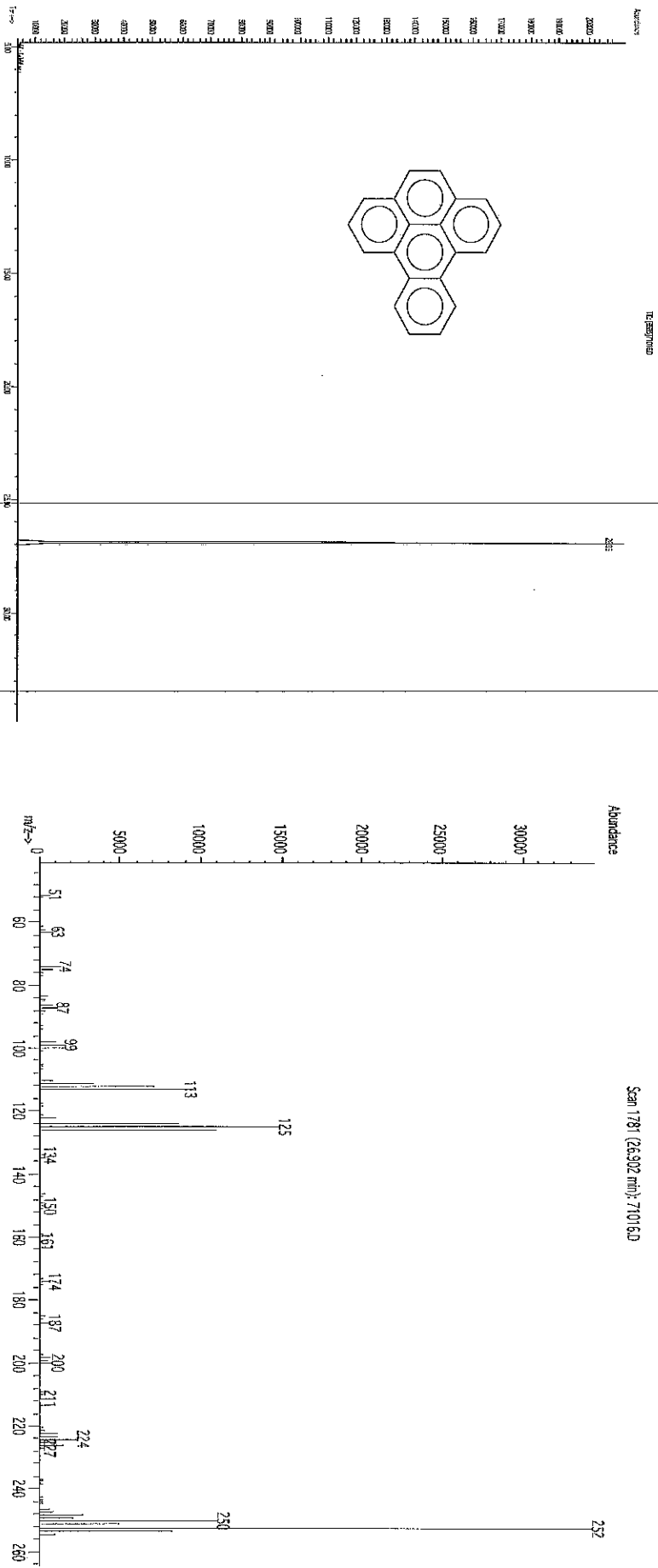
100.0 0.003 SE-05 Balance Uncertainty  
 1000 Fask Uncertainty

**MSDS Information**

(Solvent Safety Info. On Attached pg.)

| Compound         | RM#  | Lot Number | Nominal Conc (µg/mL) | Purity (%) | Uncertainty | Target Weight(g) | Actual Weight(g) | Actual Conc (µg/mL) | Expanded Uncertainty | CAS#       | OSHA PEL (TWA) | LD50 |
|------------------|------|------------|----------------------|------------|-------------|------------------|------------------|---------------------|----------------------|------------|----------------|------|
| 1. Benzofluorene | 1016 | 012011     | 1000                 | 99         | 0.2         | 0.10100          | 0.10125          | 1002.5              | 0.0042               | 00192-97-2 | N/A            | N/A  |

**Method GCMSD-3.M:** Column:SPB-5 (30m X 0.25mm ID X 0.25µm film thickness) Temp 1 = 50°C (1min.), Temp 2 = 300°C (9min.), Rate = 10°C/min., Injector B = 250°C, Detector B = 275°C, Split Ratio = 100:1, Scan Rate = 2. Analysis performed by: Candice Warren.





Reagent

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**SV2NAPAMINEs\_00002**

# Certificate of Analysis

## 2-Naphthylamine Solution

**Product Number:** EPA-1135

**Page:** 1 of 1

**Lot Number:** CK-1617

**Lot Issue Date:** 20-May-2013

**Expiration Date:** 30-Jun-2017

This certified Reference Material (RM) was manufactured and verified in accordance with ULTRA's ISO 9001 registered quality system, and the analyte concentrations were verified by our ISO 17025 accredited laboratory. The true value and uncertainty value at the 95% confidence level for each analyte, determined gravimetrically, is listed below.

| Analyte         | CAS#        | Analyte Lot | True Value     |
|-----------------|-------------|-------------|----------------|
| 2-naphthylamine | 000091-59-8 | RM06488     | 1001 ± 5 µg/mL |

**Matrix:** methanol (methyl alcohol)

**Storage:** Store at Room Temperature (15-30°C)

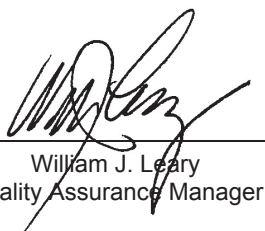
ULTRA uses balances calibrated with weights traceable to NIST in compliance with ANSI/NCSL Z-540-1 and ISO 9001, and calibrated Class A glassware in the manufacturing of these standards.



ISO 17025:2005  
Accredited  
A2LA  
Cert. No. 0851-01

ISO 9001:2008  
Registered  
TUV USA, Inc.  
Cert. No. 09-1009

250 Smith Street, North Kingstown, RI 02852 USA  
401-294-9400 Fax: 295-2330  
www.ultrasci.com



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William J. Leary  
Quality Assurance Manager

Reagent

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**SVLVIntstd\_00007**

SV/VintStd/A A093676



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. :** 567684 **Lot No.:** A093676  
**Description :** 8270 Internal Standard  
8270 Internal Standard 2,000µg/mL, Methylene Chloride, 5mL/ampul  
**Container Size :** 5 mL **Pkg Amt:** > 5 mL  
**Expiration Date :** February 2018 **Storage:** 10°C or colder  
**Handling:** Sonication required. Mix is photosensitive.

### CERTIFIED VALUES

| Elution Order | Compound               | Grav. Conc. (weight/volume) | Expanded Uncertainty (95% C.L., K=2) |          |                   |
|---------------|------------------------|-----------------------------|--------------------------------------|----------|-------------------|
| 1             | 1,4-Dichlorobenzene-d4 | 2,000.0 µg/mL               | +/-                                  | 11.6282  | µg/mL Gravimetric |
|               | CAS # 3855-82-1        |                             | +/-                                  | 92.7158  | µg/mL Unstressed  |
|               | Purity 99%             |                             | +/-                                  | 101.3766 | µg/mL Stressed    |
| 2             | Naphthalene-d8         | 2,000.0 µg/mL               | +/-                                  | 11.6282  | µg/mL Gravimetric |
|               | CAS # 1146-65-2        |                             | +/-                                  | 92.7158  | µg/mL Unstressed  |
|               | Purity 99%             |                             | +/-                                  | 101.3766 | µg/mL Stressed    |
| 3             | Acenaphthene-d10       | 2,000.0 µg/mL               | +/-                                  | 11.6282  | µg/mL Gravimetric |
|               | CAS # 15067-26-2       |                             | +/-                                  | 92.7163  | µg/mL Unstressed  |
|               | Purity 97%             |                             | +/-                                  | 101.3771 | µg/mL Stressed    |
| 4             | Phenanthrene-d10       | 2,000.0 µg/mL               | +/-                                  | 11.6282  | µg/mL Gravimetric |
|               | CAS # 1517-22-2        |                             | +/-                                  | 92.7158  | µg/mL Unstressed  |
|               | Purity 99%             |                             | +/-                                  | 101.3766 | µg/mL Stressed    |
| 5             | Chrysene-d12           | 2,000.0 µg/mL               | +/-                                  | 11.6281  | µg/mL Gravimetric |
|               | CAS # 1719-03-5        |                             | +/-                                  | 92.7150  | µg/mL Unstressed  |
|               | Purity 98%             |                             | +/-                                  | 101.3758 | µg/mL Stressed    |
| 6             | Perylene-d12           | 2,000.0 µg/mL               | +/-                                  | 11.6282  | µg/mL Gravimetric |
|               | CAS # 1520-96-3        |                             | +/-                                  | 92.7158  | µg/mL Unstressed  |
|               | Purity 99%             |                             | +/-                                  | 101.3766 | µg/mL Stressed    |

**Solvent:** Methylene Chloride  
**CAS #** 75-09-2  
**Purity** 99%

Column:  
30m x .25mm x .25um  
Stx-5 (cat.#10223)

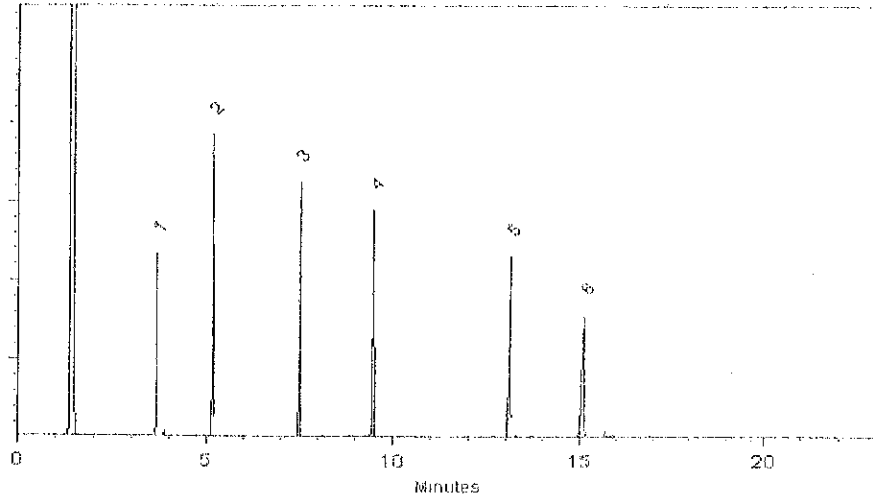
Carrier Gas:  
Hydrogen-constant pressure 10 psi.

Temp. Program:  
75°C (hold 1 min.) to 330°C  
@ 20°C/min. (hold 10 min.)

Inj. Temp:  
250°C

Det. Temp:  
330°C

Det. Type:  
FID



*Jodi E. Breon*  
Jodi E. Breon - QA Analyst

Date Passed: 27-Feb-2013

Balance: 1128342315

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

Reagent

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**SVLVlist12\_00002**



# 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. :** 567679 **Lot No.:** A0102912

**Description :** 8270 List 2 / Std #2

8270 List 2 / Std #2 1,000 ug/ml, Methylene Chloride, 1 ml/ampul

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

**Expiration Date :** April 30, 2015 **Storage:** 10°C or colder

**Handling:** Sonication required. Mix is photosensitive.

### CERTIFIED VALUES

| Elution Order | Compound                 | Grav. Conc. (weight/volume)                          | Expanded Uncertainty (95% C.L.; K=2) |         |       |             |
|---------------|--------------------------|--|--------------------------------------|---------|-------|-------------|
| 1             | Methyl methanesulfonate  | 1,004.0 µg/mL<br>(Lot MKBJ8702V)                     | +/-                                  | 5.9635  | µg/mL | Gravimetric |
|               | CAS # 66-27-3            |  | +/-                                  | 31.2232 | µg/mL | Unstressed  |
|               | Purity 99%               |  | +/-                                  | 32.8038 | µg/mL | Stressed    |
| 2             | Ethyl methanesulfonate   | 1,007.0 µg/mL<br>(Lot FIN01-LVQL)                    | +/-                                  | 5.9813  | µg/mL | Gravimetric |
|               | CAS # 62-50-0            |  | +/-                                  | 31.3165 | µg/mL | Unstressed  |
|               | Purity 99%               |  | +/-                                  | 32.9019 | µg/mL | Stressed    |
| 3             | Pentachloroethane        | 1,000.0 µg/mL<br>(Lot 7GHYB)                         | +/-                                  | 5.9397  | µg/mL | Gravimetric |
|               | CAS # 76-01-7            |  | +/-                                  | 31.0988 | µg/mL | Unstressed  |
|               | Purity 99%               |  | +/-                                  | 32.6732 | µg/mL | Stressed    |
| 4             | 2,6-Dichlorophenol       | 1,000.0 µg/mL<br>(Lot 03518LN)                       | +/-                                  | 5.9397  | µg/mL | Gravimetric |
|               | CAS # 87-65-0            |  | +/-                                  | 31.0988 | µg/mL | Unstressed  |
|               | Purity 99%               |  | +/-                                  | 32.6732 | µg/mL | Stressed    |
| 5             | Hexachloropropene        | 1,000.0 µg/mL<br>(Lot 44391/3)                       | +/-                                  | 5.9397  | µg/mL | Gravimetric |
|               | CAS # 1888-71-7          |  | +/-                                  | 31.0988 | µg/mL | Unstressed  |
|               | Purity 99%               |  | +/-                                  | 32.6732 | µg/mL | Stressed    |
| 6             | Isosafrole (cis & trans) | 999.6 µg/mL<br>(Lot MKBK3786V)<br>83% trans; 17% cis | +/-                                  | 5.9373  | µg/mL | Gravimetric |
|               | CAS # 120-58-1           |  | +/-                                  | 31.0863 | µg/mL | Unstressed  |
|               | Purity 98%               |  | +/-                                  | 32.6601 | µg/mL | Stressed    |
| 7             | 1-Chloronaphthalene      | 1,001.0 µg/mL<br>(Lot MYWUK)                         | +/-                                  | 5.9456  | µg/mL | Gravimetric |
|               | CAS # 90-13-1            |  | +/-                                  | 31.1299 | µg/mL | Unstressed  |
|               | Purity 99%               |  | +/-                                  | 32.7058 | µg/mL | Stressed    |
| 8             | 1,4-Naphthoquinone       | 999.0 µg/mL<br>(Lot 3232134094)                      | +/-                                  | 5.9338  | µg/mL | Gravimetric |
|               | CAS # 130-15-4           |  | +/-                                  | 31.0677 | µg/mL | Unstressed  |
|               | Purity 99%               |  | +/-                                  | 32.6405 | µg/mL | Stressed    |

**Column:**  
30m x 0.25mm x 0.25µm  
Rtx-5 (cat.#10223)

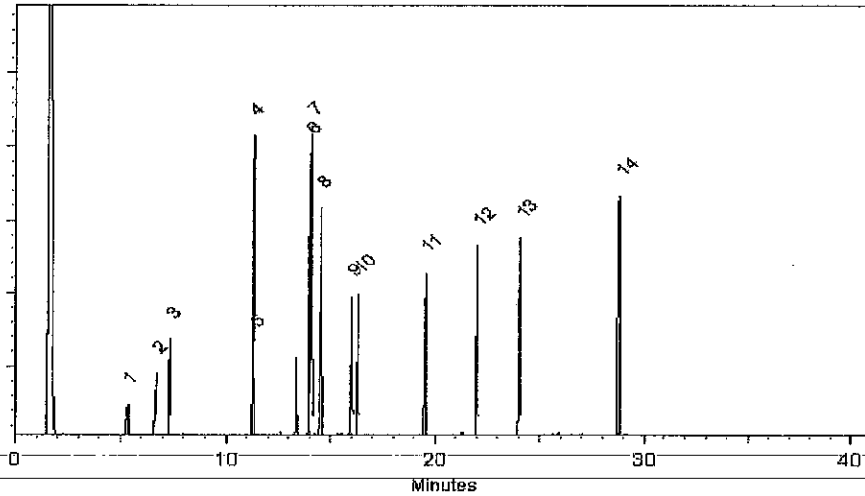
**Carrier Gas:**  
hydrogen-constant pressure 10 psi.

**Temp. Program:**  
40°C (hold 2 min.) to 330°C  
@ 10°C/min. (hold 10 min.)

**Inj. Temp:**  
250°C

**Det. Temp:**  
330°C

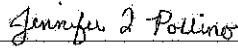
**Det. Type:**  
FID



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

  
F. Joseph Tallon - Mix Technician

Date Mixed: 23-Apr-2014      Balance: 1128360905

  
Jennifer L. Pollino - QC Analyst

Date Passed: 29-Apr-2014

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



Reagent

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**SVLVstd1\_00026**



# 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. : 567672 Lot No.: A0101615

Description : 8270 List 1 / Std #1 MegaMix

8270 List 1 / Std #1 MegaMix 500-2000 ug/ml, Methylene Chloride, 5 ml/ampul

Container Size : 5 mL Pkg Amt: > 5 mL

Expiration Date : August 31, 2015 Storage: 10°C or colder

Handling: Sonication required. Mix is photosensitive.

### CERTIFIED VALUES

| Elution Order | Compound                       | Grav. Conc. (weight/volume) | Expanded Uncertainty (95% C.L.; K=2) |         |       |             |
|---------------|--------------------------------|-----------------------------|--------------------------------------|---------|-------|-------------|
| 1             | 1,4-Dioxane                    | 1,006.4 µg/mL               | +/-                                  | 5.8510  | µg/mL | Gravimetric |
|               | CAS # 123-91-1 (Lot SHBD4119V) |                             | +/-                                  | 11.0182 | µg/mL | Unstressed  |
|               | Purity 99%                     |                             | +/-                                  | 18.6887 | µg/mL | Stressed    |
| 2             | Pyridine                       | 1,001.7 µg/mL               | +/-                                  | 5.8237  | µg/mL | Gravimetric |
|               | CAS # 110-86-1 (Lot 02718MW)   |                             | +/-                                  | 10.9668 | µg/mL | Unstressed  |
|               | Purity 99%                     |                             | +/-                                  | 18.6014 | µg/mL | Stressed    |
| 3             | N-Nitrosodimethylamine         | 1,001.4 µg/mL               | +/-                                  | 5.8222  | µg/mL | Gravimetric |
|               | CAS # 62-75-9 (Lot 2179300)    |                             | +/-                                  | 10.9640 | µg/mL | Unstressed  |
|               | Purity 99%                     |                             | +/-                                  | 18.5968 | µg/mL | Stressed    |
| 4             | Aniline                        | 1,009.3 µg/mL               | +/-                                  | 5.8682  | µg/mL | Gravimetric |
|               | CAS # 62-53-3 (Lot 68396APV)   |                             | +/-                                  | 11.0505 | µg/mL | Unstressed  |
|               | Purity 99%                     |                             | +/-                                  | 18.7435 | µg/mL | Stressed    |
| 5             | Phenol                         | 1,009.5 µg/mL               | +/-                                  | 5.8690  | µg/mL | Gravimetric |
|               | CAS # 108-95-2 (Lot SHBC6998V) |                             | +/-                                  | 11.0522 | µg/mL | Unstressed  |
|               | Purity 99%                     |                             | +/-                                  | 18.7463 | µg/mL | Stressed    |
| 6             | Bis(2-chloroethyl)ether        | 1,005.2 µg/mL               | +/-                                  | 5.8440  | µg/mL | Gravimetric |
|               | CAS # 111-44-4 (Lot 45296HKV)  |                             | +/-                                  | 11.0051 | µg/mL | Unstressed  |
|               | Purity 99%                     |                             | +/-                                  | 18.6664 | µg/mL | Stressed    |
| 7             | 2-Chlorophenol                 | 1,006.4 µg/mL               | +/-                                  | 5.8510  | µg/mL | Gravimetric |
|               | CAS # 95-57-8 (Lot MKBD3900V)  |                             | +/-                                  | 11.0182 | µg/mL | Unstressed  |
|               | Purity 99%                     |                             | +/-                                  | 18.6887 | µg/mL | Stressed    |
| 8             | 1,3-Dichlorobenzene            | 1,009.2 µg/mL               | +/-                                  | 5.8673  | µg/mL | Gravimetric |
|               | CAS # 541-73-1 (Lot BCBC1891V) |                             | +/-                                  | 11.0489 | µg/mL | Unstressed  |
|               | Purity 99%                     |                             | +/-                                  | 18.7407 | µg/mL | Stressed    |

|    |  |                  |               |     |                              |                         |                                       |
|----|--|------------------|---------------|-----|------------------------------|-------------------------|---------------------------------------|
| 25 | Bis(2-chloroethoxy)methane<br>CAS # 111-91-1<br>Purity 99% | (Lot 2238100)    | 1,006.3 µg/mL | +/- | 5.8507<br>11.0177<br>18.6878 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 26 | 2,4-Dichlorophenol<br>CAS # 120-83-2<br>Purity 99%         | (Lot BCBH1617V)  | 1,009.7 µg/mL | +/- | 5.8705<br>11.0549<br>18.7509 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 27 | 1,2,4-Trichlorobenzene<br>CAS # 120-82-1<br>Purity 99%     | (Lot 26896BM)    | 1,000.7 µg/mL | +/- | 5.8179<br>10.9558<br>18.5829 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 28 | Naphthalene<br>CAS # 91-20-3<br>Purity 99%                 | (Lot MKBH4351V)  | 1,001.0 µg/mL | +/- | 5.8196<br>10.9591<br>18.5884 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 29 | 4-Chloroaniline<br>CAS # 106-47-8<br>Purity 98%            | (Lot 12528PH)    | 999.5 µg/mL   | +/- | 5.8112<br>10.9432<br>18.5615 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 30 | Hexachlorobutadiene<br>CAS # 87-68-3<br>Purity 98%         | (Lot K22W009)    | 1,001.9 µg/mL | +/- | 5.8249<br>10.9690<br>18.6052 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 31 | 2-Methylnaphthalene<br>CAS # 91-57-6<br>Purity 96%         | (Lot 19399MJV)   | 1,006.1 µg/mL | +/- | 5.8497<br>11.0158<br>18.6846 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 32 | 4-Chloro-3-methylphenol<br>CAS # 59-50-7<br>Purity 99%     | (Lot STBC0769V)  | 1,004.2 µg/mL | +/- | 5.8382<br>10.9941<br>18.6479 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 33 | 1-Methylnaphthalene<br>CAS # 90-12-0<br>Purity 99%         | (Lot 5250.00-10) | 1,000.6 µg/mL | +/- | 5.8173<br>10.9547<br>18.5810 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 34 | 1,2,4,5-Tetrachlorobenzene<br>CAS # 95-94-3<br>Purity 99%  | (Lot 06024AIV)   | 1,002.1 µg/mL | +/- | 5.8263<br>10.9717<br>18.6098 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 35 | Hexachlorocyclopentadiene<br>CAS # 77-47-4<br>Purity 99%   | (Lot 2220500)    | 1,009.5 µg/mL | +/- | 5.8690<br>11.0522<br>18.7463 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 36 | 2,4,6-Trichlorophenol<br>CAS # 88-06-2<br>Purity 99%       | (Lot MKBH7393V)  | 1,003.6 µg/mL | +/- | 5.8350<br>10.9881<br>18.6376 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 37 | 2,4,5-Trichlorophenol<br>CAS # 95-95-4<br>Purity 99%       | (Lot FHM01)      | 1,008.9 µg/mL | +/- | 5.8658<br>11.0461<br>18.7361 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 38 | 2-Chloronaphthalene<br>CAS # 91-58-7<br>Purity 99%         | (Lot FIJ01)      | 1,004.8 µg/mL | +/- | 5.8417<br>11.0007<br>18.6590 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 39 | Biphenyl<br>CAS # 92-52-4<br>Purity 99%                    | (Lot 1277976)    | 1,005.6 µg/mL | +/- | 5.8464<br>11.0095<br>18.6739 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 40 | 2-Nitroaniline<br>CAS # 88-74-4<br>Purity 99%              | (Lot MKBF9132V)  | 1,007.1 µg/mL | +/- | 5.8551<br>11.0259<br>18.7017 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |

|    |  |                   |               |     |                               |                         |                                       |
|----|--|-------------------|---------------|-----|-------------------------------|-------------------------|---------------------------------------|
| 57 | Azobenzene<br>CAS # 103-33-3<br>Purity 99%                 | (Lot 130305JLM)   | 1,006.5 µg/mL | +/- | 5.8516<br>11.0193<br>18.6906  | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 58 | 4-Bromophenyl phenyl ether<br>CAS # 101-55-3<br>Purity 99% | (Lot STBB9729V)   | 1,003.7 µg/mL | +/- | 5.8353<br>10.9887<br>18.6386  | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 59 | Hexachlorobenzene<br>CAS # 118-74-1<br>Purity 99%          | (Lot LB93343V)    | 1,008.0 µg/mL | +/- | 5.8606<br>11.0363<br>18.7193  | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 60 | Pentachlorophenol<br>CAS # 87-86-5<br>Purity 99%           | (Lot 130826JLM)   | 2,006.3 µg/mL | +/- | 11.6648<br>21.9664<br>37.2586 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 61 | Phenanthrene<br>CAS # 85-01-8<br>Purity 99%                | (Lot MKBJ4205V)   | 1,004.4 µg/mL | +/- | 5.8394<br>10.9963<br>18.6516  | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 62 | Anthracene<br>CAS # 120-12-7<br>Purity 99%                 | (Lot MKBK5208V)   | 1,007.3 µg/mL | +/- | 5.8565<br>11.0286<br>18.7064  | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 63 | n-Hexadecane (C16)<br>CAS # 544-76-3<br>Purity 99%         | (Lot SHBC3991V)   | 1,001.9 µg/mL | +/- | 5.8248<br>10.9690<br>18.6051  | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 64 | Carbazole<br>CAS # 86-74-8<br>Purity 98%                   | (Lot S42950-417)  | 1,001.8 µg/mL | +/- | 5.8246<br>10.9685<br>18.6043  | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 65 | Di-n-butylphthalate<br>CAS # 84-74-2<br>Purity 99%         | (Lot MKBG1851V)   | 1,002.5 µg/mL | +/- | 5.8286<br>10.9761<br>18.6172  | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 66 | Fluoranthene<br>CAS # 206-44-0<br>Purity 98%               | (Lot 00828AJ)     | 1,009.4 µg/mL | +/- | 5.8685<br>11.0511<br>18.7444  | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 67 | Pyrene<br>CAS # 129-00-0<br>Purity 98%                     | (Lot BCBJ0984V)   | 1,004.0 µg/mL | +/- | 5.8371<br>10.9921<br>18.6443  | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 68 | Benzyl butyl phthalate<br>CAS # 85-68-7<br>Purity 99%      | (Lot 03027HV)     | 1,005.4 µg/mL | +/- | 5.8452<br>11.0073<br>18.6701  | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 69 | Benz(a)anthracene<br>CAS # 56-55-3<br>Purity 99%           | (Lot ER031412-01) | 1,006.4 µg/mL | +/- | 5.8513<br>11.0188<br>18.6896  | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 70 | Chrysene<br>CAS # 218-01-9<br>Purity 99%                   | (Lot PR121912-01) | 1,003.2 µg/mL | +/- | 5.8327<br>10.9837<br>18.6302  | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 71 | Bis(2-ethylhexyl)phthalate<br>CAS # 117-81-7<br>Purity 99% | (Lot MKBH9511V)   | 1,000.9 µg/mL | +/- | 5.8190<br>10.9580<br>18.5866  | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 72 | Di-n-octyl phthalate<br>CAS # 117-84-0<br>Purity 99%       | (Lot 1674300)     | 1,002.3 µg/mL | +/- | 5.8272<br>10.9733<br>18.6126  | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |

**Column:**  
30m x 0.25mm x 0.25µm  
Rtx-5 (cat.#10223)

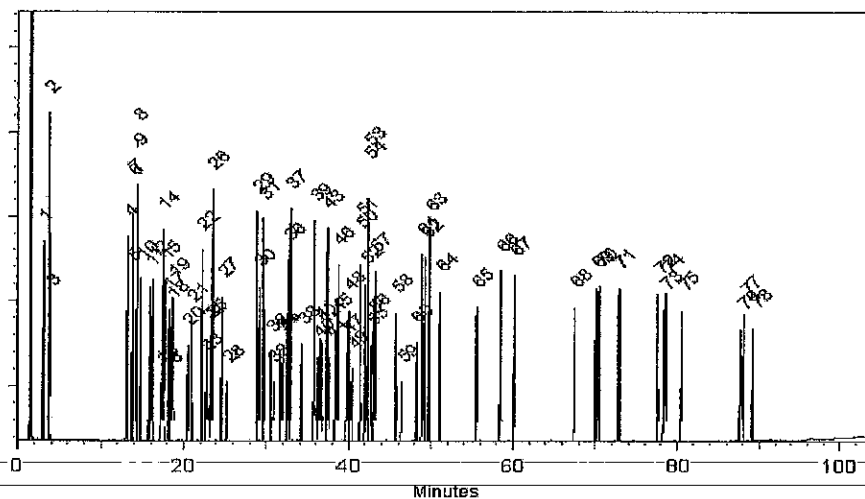
**Carrier Gas:**  
hydrogen-constant pressure 10 psi

**Temp. Program:**  
35°C (hold 3 min.) to 330°C  
@ 3°C/min. (hold 3 min.)

**Inj. Temp:**  
250°C

**Det. Temp:**  
300°C

**Det. Type:**  
FID



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

*Rebecca Sawyer*

Date Mixed: 26-Feb-2014      Balance: 1128360905

*Jodi E. Breon*  
Jodi E. Breon - QA Analyst

Date Passed: 04-Mar-2014

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

Reagent

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**SVLVstd1\_00030**

SVW 8070 New ASTM #1 Mega Mix 0010399



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.*

1446137  
 CT#  
 1449141  
 1449142  
 1449140  
 1449136  
 1449138

**Catalog No. :** 569729 **Lot No.:** A0107399  
**Description :** 8270 List 1 / Std #1 MegaMix (2015)  
8270 List 1 / Std #1 MegaMix (2015) 500-2000 ug/ml, Methylene Chloride, 5 ml/ampul  
**Container Size :** 10 mL **Pkg Amt:** > 5 mL  
**Expiration Date :** May 31, 2016 **Storage:** 10°C or colder  
**Handling:** Carcinogen/reproductive toxin. Photosensitive. Sonicate.

## CERTIFIED VALUES

| Elution Order | Compound                | Grav. Conc. (weight/volume)      | Expanded Uncertainty (95% C.L.; K=2) |         |       |             |
|---------------|-------------------------|----------------------------------|--------------------------------------|---------|-------|-------------|
| 1             | 1,4-Dioxane             | 1,004.4 µg/mL<br>(Lot SHBD8744V) | +/-                                  | 5.8397  | µg/mL | Gravimetric |
|               | CAS # 123-91-1          |                                  | +/-                                  | 10.9969 | µg/mL | Unstressed  |
|               | Purity 99%              |                                  | +/-                                  | 18.6525 | µg/mL | Stressed    |
| 2             | Pyridine                | 1,001.0 µg/mL<br>(Lot SHBC7174V) | +/-                                  | 5.8199  | µg/mL | Gravimetric |
|               | CAS # 110-86-1          |                                  | +/-                                  | 10.9596 | µg/mL | Unstressed  |
|               | Purity 99%              |                                  | +/-                                  | 18.5894 | µg/mL | Stressed    |
| 3             | N-Nitrosodimethylamine  | 1,000.2 µg/mL<br>(Lot 3213100)   | +/-                                  | 5.8152  | µg/mL | Gravimetric |
|               | CAS # 62-75-9           |                                  | +/-                                  | 10.9509 | µg/mL | Unstressed  |
|               | Purity 99%              |                                  | +/-                                  | 18.5745 | µg/mL | Stressed    |
| 4             | Aniline                 | 1,002.3 µg/mL<br>(Lot K22Z462)   | +/-                                  | 5.8275  | µg/mL | Gravimetric |
|               | CAS # 62-53-3           |                                  | +/-                                  | 10.9739 | µg/mL | Unstressed  |
|               | Purity 99%              |                                  | +/-                                  | 18.6135 | µg/mL | Stressed    |
| 5             | Bis(2-chloroethyl)ether | 1,001.4 µg/mL<br>(Lot 45296HKV)  | +/-                                  | 5.8222  | µg/mL | Gravimetric |
|               | CAS # 111-44-4          |                                  | +/-                                  | 10.9640 | µg/mL | Unstressed  |
|               | Purity 99%              |                                  | +/-                                  | 18.5968 | µg/mL | Stressed    |
| 6             | 2-Chlorophenol          | 1,000.8 µg/mL<br>(Lot MKBD3900V) | +/-                                  | 5.8187  | µg/mL | Gravimetric |
|               | CAS # 95-57-8           |                                  | +/-                                  | 10.9575 | µg/mL | Unstressed  |
|               | Purity 99%              |                                  | +/-                                  | 18.5856 | µg/mL | Stressed    |
| 7             | Phenol                  | 1,006.9 µg/mL<br>(Lot SHBC6998V) | +/-                                  | 5.8542  | µg/mL | Gravimetric |
|               | CAS # 108-95-2          |                                  | +/-                                  | 11.0242 | µg/mL | Unstressed  |
|               | Purity 99%              |                                  | +/-                                  | 18.6989 | µg/mL | Stressed    |

|    |  |                  |               |  |                         |                                       |
|----|--|------------------|---------------|--|-------------------------|---------------------------------------|
| 8  | <del>n-DCB (methyl)</del><br>CAS # 18-5<br>Purity %        | (Lot SHBF1587V)  | 1,000.5 µg/mL | +/- 5.8170<br>+/- 10.9542<br>+/- 18.5801 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 9  | 1,4-Dichlorobenzene<br>CAS # 106-46-7<br>Purity %          | (Lot MKBL3891V)  | 1,005.3 µg/mL | +/- 5.8449<br>+/- 11.0067<br>+/- 18.6692 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 10 | 1,3-Dichlorobenzene<br>CAS # 106-73-1<br>Purity %          | (Lot BCBC1891V)  | 1,002.0 µg/mL | +/- 5.8257<br>+/- 10.9706<br>+/- 18.6079 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 11 | 1,2-Dichlorobenzene<br>CAS # 95-1<br>Purity %              | (Lot 68996CMV)   | 1,006.5 µg/mL | +/- 5.8519<br>+/- 11.0199<br>+/- 18.6915 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 12 | Benzylalcohol<br>CAS # 100-1-6<br>Purity %                 | (Lot SHBC1850V)  | 1,000.4 µg/mL | +/- 5.8164<br>+/- 10.9531<br>+/- 18.5782 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 13 | 2,2'-oxybis(1-chloropropane)<br>CAS # 1080-1<br>Purity 99% | (Lot 2-EAW-18-3) | 1,000.0 µg/mL | +/- 5.8141<br>+/- 10.9487<br>+/- 18.5708 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 14 | 2-Methylphenol (o-cresol)<br>CAS # 95-47<br>Purity 99%     | (Lot SHBC1479V)  | 1,003.6 µg/mL | +/- 5.8350<br>+/- 10.9881<br>+/- 18.6376 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 15 | Hexachloroethane<br>CAS # 67-73<br>Purity 99%              | (Lot 4H3SF)      | 1,005.9 µg/mL | +/- 5.8484<br>+/- 11.0133<br>+/- 18.6804 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 16 | Acetophenone<br>CAS # 98-86<br>Purity 99%                  | (Lot MKBR7156V)  | 1,002.7 µg/mL | +/- 5.8298<br>+/- 10.9783<br>+/- 18.6209 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 17 | N-Nitroso-di-n-propylamine<br>CAS # 621-647<br>Purity 99%  | (Lot OPAGF)      | 1,003.9 µg/mL | +/- 5.8368<br>+/- 10.9914<br>+/- 18.6432 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 18 | 4-Methylphenol (p-cresol)<br>CAS # 106-443<br>Purity 99%   | (Lot 49396APV)   | 500.4 µg/mL   | +/- 2.9161<br>+/- 5.4823<br>+/- 9.2949   | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 19 | 3-Methylphenol (m-cresol)<br>CAS # 108-394<br>Purity 99%   | (Lot SHBD0627V)  | 500.2 µg/mL   | +/- 2.9149<br>+/- 5.4801<br>+/- 9.2912   | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 20 | Nitrobenzene<br>CAS # 98-95-3<br>Purity 99%                | (Lot 65096APV)   | 1,001.1 µg/mL | +/- 5.8205<br>+/- 10.9607<br>+/- 18.5912 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 21 | Isophorone<br>CAS # 78-59-1<br>Purity 97%                  | (Lot 06705DE)    | 999.3 µg/mL   | +/- 5.8100<br>+/- 10.9410<br>+/- 18.5577 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 22 | 2-Nitrophenol<br>CAS # 88-75-5<br>Purity 99%               | (Lot BCBI17602V) | 1,000.0 µg/mL | +/- 5.8141<br>+/- 10.9487<br>+/- 18.5708 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 23 | 2,4-Dimethylphenol<br>CAS # 105-67-9<br>Purity 99%         | (Lot 10165155)   | 1,003.2 µg/mL | +/- 5.8327<br>+/- 10.9837<br>+/- 18.6302 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |



|    |  |                 |               |  |                         |                                       |
|----|--|-----------------|---------------|--|-------------------------|---------------------------------------|
| 24 | Bis(2-chloroethoxy)methane<br>CAS # 111-91-1<br>Purity 99% | (Lot 317200)    | 1,004.5 µg/mL | +/- 5.8402<br>+/- 10.9980<br>+/- 18.6544 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 25 | 2,4-Dichlorophenol<br>CAS # 120-83-2<br>Purity 99%         | (Lot BCBH1617V) | 1,000.0 µg/mL | +/- 5.8141<br>+/- 10.9487<br>+/- 18.5708 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 26 | 1,2,4-Trichlorobenzene<br>CAS # 120-82-1<br>Purity 99%     | (Lot 26896BM)   | 1,000.6 µg/mL | +/- 5.8176<br>+/- 10.9553<br>+/- 18.5819 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 27 | Naphthalene<br>CAS # 91-20-3<br>Purity 99%                 | (Lot MKBH4351V) | 1,002.3 µg/mL | +/- 5.8275<br>+/- 10.9739<br>+/- 18.6135 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 28 | 2,6-Dichlorophenol<br>CAS # 87-65-0<br>Purity 99%          | (Lot MKBN2776V) | 1,000.1 µg/mL | +/- 5.8147<br>+/- 10.9498<br>+/- 18.5726 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 29 | 4-Chloroaniline<br>CAS # 106-47-8<br>Purity 98%            | (Lot 12528PH)   | 1,000.3 µg/mL | +/- 5.8157<br>+/- 10.9518<br>+/- 18.5761 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 30 | Hexachlorobutadiene<br>CAS # 87-68-3<br>Purity 98%         | (Lot K22W009)   | 999.9 µg/mL   | +/- 5.8135<br>+/- 10.9475<br>+/- 18.5688 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 31 | 2-Methylnaphthalene<br>CAS # 91-57-6<br>Purity 96%         | (Lot 19399MJV)  | 998.6 µg/mL   | +/- 5.8059<br>+/- 10.9333<br>+/- 18.5446 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 32 | 4-Chloro-3-methylphenol<br>CAS # 59-50-7<br>Purity 99%     | (Lot STBC0769V) | 1,001.3 µg/mL | +/- 5.8216<br>+/- 10.9629<br>+/- 18.5949 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 33 | 1-Methylnaphthalene<br>CAS # 90-12-0<br>Purity 99%         | (Lot 525000-10) | 1,000.0 µg/mL | +/- 5.8141<br>+/- 10.9487<br>+/- 18.5708 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 34 | 1,2,4,5-Tetrachlorobenzene<br>CAS # 95-94-3<br>Purity 99%  | (Lot 06024AIV)  | 1,000.2 µg/mL | +/- 5.8152<br>+/- 10.9509<br>+/- 18.5745 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 35 | Hexachlorocyclopentadiene<br>CAS # 77-47-4<br>Purity 99%   | (Lot 3140300)   | 1,002.4 µg/mL | +/- 5.8280<br>+/- 10.9750<br>+/- 18.6154 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 36 | 2,4,6-Trichlorophenol<br>CAS # 88-06-2<br>Purity 99%       | (Lot MKBH7393V) | 1,001.4 µg/mL | +/- 5.8222<br>+/- 10.9640<br>+/- 18.5968 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 37 | 2,4,5-Trichlorophenol<br>CAS # 95-95-4<br>Purity 99%       | (Lot FHM01)     | 1,000.0 µg/mL | +/- 5.8141<br>+/- 10.9487<br>+/- 18.5708 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 38 | 2-Chloronaphthalene<br>CAS # 91-58-7<br>Purity 99%         | (Lot FIJ01)     | 1,000.0 µg/mL | +/- 5.8141<br>+/- 10.9487<br>+/- 18.5708 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 39 | Biphenyl<br>CAS # 92-52-4<br>Purity 99%                    | (Lot 1277976)   | 1,006.1 µg/mL | +/- 5.8496<br>+/- 11.0155<br>+/- 18.6841 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |

|    |  |                   |               |   |                         |                                       |
|----|--|-------------------|---------------|---|-------------------------|---------------------------------------|
| 40 | 2-Nitroaniline<br>CAS # 88-74-4<br>Purity 99%                | (Lot MKBK7597V)   | 1,004.6 µg/mL | +/- 5.8408<br>+/- 10.9991<br>+/- 18.6562  | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 41 | Acenaphthylene<br>CAS # 208-96-8<br>Purity 99%               | (Lot ER030707-01) | 1,000.0 µg/mL | +/- 5.8141<br>+/- 10.9487<br>+/- 18.5708  | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 42 | 1,3-Dinitrobenzene<br>CAS # 99-65-0<br>Purity 99%            | (Lot BCBB1436V)   | 1,006.4 µg/mL | +/- 5.8513<br>+/- 11.0188<br>+/- 18.6896  | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 43 | Dimethylphthalate<br>CAS # 131-11-3<br>Purity 99%            | (Lot 10117699)    | 1,001.0 µg/mL | +/- 5.8199<br>+/- 10.9596<br>+/- 18.5894  | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 44 | 2,6-Dinitrotoluene<br>CAS # 606-20-2<br>Purity 99%           | (Lot 1437483V)    | 1,001.6 µg/mL | +/- 5.8234<br>+/- 10.9662<br>+/- 18.6005  | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 45 | Acenaphthene<br>CAS # 83-32-9<br>Purity 99%                  | (Lot MKBP0384V)   | 1,001.8 µg/mL | +/- 5.8246<br>+/- 10.9684<br>+/- 18.6042  | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 46 | 2,4-Dinitrophenol<br>CAS # 51-28-5<br>Purity 99%             | (Lot MKBP5833V)   | 2,008.7 µg/mL | +/- 11.6788<br>+/- 21.9927<br>+/- 37.3031 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 47 | Dibenzofuran<br>CAS # 132-64-9<br>Purity 99%                 | (Lot MKBK2375V)   | 1,001.8 µg/mL | +/- 5.8246<br>+/- 10.9684<br>+/- 18.6042  | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 48 | 3-Nitroaniline<br>CAS # 99-09-2<br>Purity 99%                | (Lot MKBH5131V)   | 1,001.3 µg/mL | +/- 5.8216<br>+/- 10.9629<br>+/- 18.5949  | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 49 | 2,4-Dinitrotoluene<br>CAS # 121-14-2<br>Purity 99%           | (Lot MKAA0690V)   | 1,001.7 µg/mL | +/- 5.8240<br>+/- 10.9673<br>+/- 18.6024  | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 50 | 4-Nitrophenol<br>CAS # 100-02-7<br>Purity 99%                | (Lot MKBK1842V)   | 2,001.0 µg/mL | +/- 11.6340<br>+/- 21.9083<br>+/- 37.1601 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 51 | 2,3,4,6-Tetrachlorophenol<br>CAS # 58-90-2<br>Purity 99%     | (Lot FN10221307)  | 1,002.1 µg/mL | +/- 5.8263<br>+/- 10.9717<br>+/- 18.6098  | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 52 | Fluorene<br>CAS # 86-73-7<br>Purity 98%                      | (Lot 10174662)    | 1,000.5 µg/mL | +/- 5.8169<br>+/- 10.9540<br>+/- 18.5797  | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 53 | 4-Chlorophenyl phenyl ether<br>CAS # 7005-72-3<br>Purity 99% | (Lot MKBL1347V)   | 1,000.4 µg/mL | +/- 5.8164<br>+/- 10.9531<br>+/- 18.5782  | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 54 | n-Hexadecane (C16)<br>CAS # 544-76-3<br>Purity 99%           | (Lot SHBD4570V)   | 1,002.2 µg/mL | +/- 5.8269<br>+/- 10.9728<br>+/- 18.6116  | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 55 | Diethylphthalate<br>CAS # 84-66-2<br>Purity 99%              | (Lot MKBJ3578V)   | 1,001.1 µg/mL | +/- 5.8205<br>+/- 10.9607<br>+/- 18.5912  | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |

|    |   |   |               |   |                         |                                       |
|----|---|---|---------------|---|-------------------------|---------------------------------------|
| 56 | Azobenzene<br>CAS # 103-33-3<br>Purity 99%                                    | (Lot MKBS2559V)                                       | 1,002.3 µg/mL | +/- 5.8275<br>+/- 10.9739<br>+/- 18.6135  | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 57 | Diphenylamine<br>CAS # 122-39-4<br>Purity 99%                                 | (Lot 07525MF)<br><i>86-30-6 nitroso diphenylamine</i> | 1,713.4 µg/mL | +/- 9.9619<br>+/- 18.7595<br>+/- 31.8192  | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 58 | 4-Nitroaniline<br>CAS # 100-01-6<br>Purity 99%                                | (Lot BCBG4702V)                                       | 1,002.8 µg/mL | +/- 5.8304<br>+/- 10.9794<br>+/- 18.6228  | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 59 | 4,6-Dinitro-2-methylphenol (Dinitro-o-cresol)<br>CAS # 534-52-1<br>Purity 99% | (Lot LC06195V)  | 2,002.0 µg/mL | +/- 11.6398<br>+/- 21.9193<br>+/- 37.1787 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 60 | 4-Bromophenyl phenyl ether<br>CAS # 101-55-3<br>Purity 99%                    | (Lot STBB9729V)                                       | 1,000.5 µg/mL | +/- 5.8170<br>+/- 10.9542<br>+/- 18.5801  | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 61 | Hexachlorobenzene<br>CAS # 118-74-1<br>Purity 98%                             | (Lot LC04221V)  | 1,002.1 µg/mL | +/- 5.8260<br>+/- 10.9711<br>+/- 18.6089  | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 62 | Pentachlorophenol<br>CAS # 87-86-5<br>Purity 99%                              | (Lot 140626JLM)                                       | 2,000.3 µg/mL | +/- 11.6299<br>+/- 21.9007<br>+/- 37.1471 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 63 | Phenanthrene<br>CAS # 85-01-8<br>Purity 98%                                   | (Lot MKBL6906V)                                       | 999.0 µg/mL   | +/- 5.8083<br>+/- 10.9379<br>+/- 18.5524  | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 64 | n-Octadecane (C18)<br>CAS # 593-45-3<br>Purity 99%                            | (Lot OGCDK)   | 1,006.5 µg/mL | +/- 5.8519<br>+/- 11.0199<br>+/- 18.6915  | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 65 | Anthracene<br>CAS # 120-12-7<br>Purity 99%                                    | (Lot MKBK5208V)                                       | 1,000.0 µg/mL | +/- 5.8141<br>+/- 10.9487<br>+/- 18.5708  | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 66 | Carbazole<br>CAS # 86-74-8<br>Purity 98%                                      | (Lot S42950-417)                                      | 1,000.1 µg/mL | +/- 5.8146<br>+/- 10.9497<br>+/- 18.5725  | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 67 | Di-n-butylphthalate<br>CAS # 84-74-2<br>Purity 99%                            | (Lot MKBL8501V)                                       | 1,000.0 µg/mL | +/- 5.8141<br>+/- 10.9487<br>+/- 18.5708  | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 68 | Fluoranthene<br>CAS # 206-44-0<br>Purity 98%                                  | (Lot MKBQ6360V)                                       | 999.7 µg/mL   | +/- 5.8123<br>+/- 10.9454<br>+/- 18.5652  | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 69 | Pyrene<br>CAS # 129-00-0<br>Purity 98%  | (Lot BCBJ0984V)                                       | 999.1 µg/mL   | +/- 5.8089<br>+/- 10.9390<br>+/- 18.5543  | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 70 | Benzyl butyl phthalate<br>CAS # 85-68-7<br>Purity 99%                         | (Lot 03027HV)   | 1,001.2 µg/mL | +/- 5.8211<br>+/- 10.9618<br>+/- 18.5931  | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 71 | Benz(a)anthracene<br>CAS # 56-55-3<br>Purity 99%                              | (Lot ER031412-01)                                     | 1,001.4 µg/mL | +/- 5.8222<br>+/- 10.9640<br>+/- 18.5968  | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |

*86-30-6*

|                 |                            |          |                   |       |     |         |       |             |
|-----------------|----------------------------|----------|-------------------|-------|-----|---------|-------|-------------|
| 72              | Chrysene                   |          | 1,006.5           | µg/mL | +/- | 5.8519  | µg/mL | Gravimetric |
|                 | CAS #                      | 218-01-9 | (Lot ER120810-02) |       | +/- | 11.0199 | µg/mL | Unstressed  |
|                 | Purity                     | 99%      |                   |       | +/- | 18.6915 | µg/mL | Stressed    |
| 73              | Bis(2-ethylhexyl)phthalate |          | 1,000.5           | µg/mL | +/- | 5.8170  | µg/mL | Gravimetric |
|                 | CAS #                      | 117-81-7 | (Lot MKBK2695V)   |       | +/- | 10.9542 | µg/mL | Unstressed  |
|                 | Purity                     | 99%      |                   |       | +/- | 18.5801 | µg/mL | Stressed    |
| 74              | Di-n-octyl phthalate       |          | 1,002.1           | µg/mL | +/- | 5.8263  | µg/mL | Gravimetric |
|                 | CAS #                      | 117-84-0 | (Lot 3128600)     |       | +/- | 10.9717 | µg/mL | Unstressed  |
|                 | Purity                     | 99%      |                   |       | +/- | 18.6098 | µg/mL | Stressed    |
| 75              | Benzo(b)fluoranthene       |          | 1,000.1           | µg/mL | +/- | 5.8147  | µg/mL | Gravimetric |
|                 | CAS #                      | 205-99-2 | (Lot ER03101401)  |       | +/- | 10.9498 | µg/mL | Unstressed  |
|                 | Purity                     | 99%      |                   |       | +/- | 18.5726 | µg/mL | Stressed    |
| 76              | Benzo(k)fluoranthene       |          | 1,003.3           | µg/mL | +/- | 5.8333  | µg/mL | Gravimetric |
|                 | CAS #                      | 207-08-9 | (Lot ER041513-01) |       | +/- | 10.9848 | µg/mL | Unstressed  |
|                 | Purity                     | 99%      |                   |       | +/- | 18.6321 | µg/mL | Stressed    |
| 77              | Benzo(a)pyrene             |          | 1,001.3           | µg/mL | +/- | 5.8216  | µg/mL | Gravimetric |
|                 | CAS #                      | 50-32-8  | (Lot ER071309-02) |       | +/- | 10.9629 | µg/mL | Unstressed  |
|                 | Purity                     | 99%      |                   |       | +/- | 18.5949 | µg/mL | Stressed    |
| 78              | Indeno(1,2,3-cd)pyrene     |          | 1,000.6           | µg/mL | +/- | 5.8176  | µg/mL | Gravimetric |
|                 | CAS #                      | 193-39-5 | (Lot ER082107-02) |       | +/- | 10.9553 | µg/mL | Unstressed  |
|                 | Purity                     | 99%      |                   |       | +/- | 18.5819 | µg/mL | Stressed    |
| 79              | Dibenz(a,h)anthracene      |          | 1,004.4           | µg/mL | +/- | 5.8397  | µg/mL | Gravimetric |
|                 | CAS #                      | 53-70-3  | (Lot ER032211-01) |       | +/- | 10.9969 | µg/mL | Unstressed  |
|                 | Purity                     | 99%      |                   |       | +/- | 18.6525 | µg/mL | Stressed    |
| 80              | Benzo(g,h,i)perylene       |          | 1,000.0           | µg/mL | +/- | 5.8141  | µg/mL | Gravimetric |
|                 | CAS #                      | 191-24-2 | (Lot ER020708-08) |       | +/- | 10.9487 | µg/mL | Unstressed  |
|                 | Purity                     | 99%      |                   |       | +/- | 18.5708 | µg/mL | Stressed    |
| <b>Solvent:</b> | Methylene Chloride         |          |                   |       |     |         |       |             |
|                 | CAS #                      | 75-09-2  |                   |       |     |         |       |             |
|                 | Purity                     | 99%      |                   |       |     |         |       |             |

**Column:**  
30m x 0.25mm x 0.25µm  
Rtx-5 (cat.#10223)

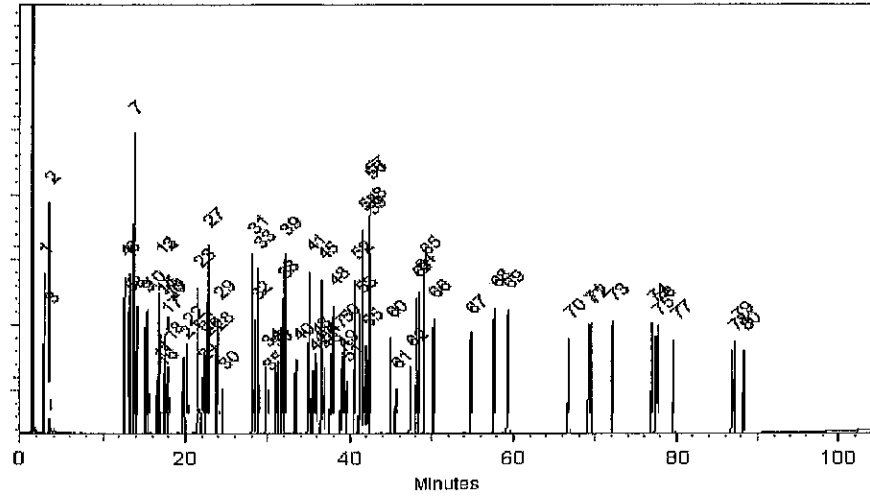
**Carrier Gas:**  
hydrogen-constant pressure 10 psi

**Temp. Program:**  
35°C (hold 3 min.) to 330°C  
@ 3°C/min. (hold 3 min.)

**Inj. Temp:**  
250°C

**Det. Temp:**  
300°C

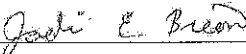
**Det. Type:**  
FID



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

  
F. Joseph Tallon - Mix Technician

Date Mixed: 24-Nov-2014 Balance: 1128360905

  
Jodi E. Breon - QA Analyst

Date Passed: 05-Dec-2014

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

Reagent

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**SVLVstd10\_00001**



# 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. :** 569731 **Lot No.:** A0107943

**Description :** 8270 List 1 / Std #10  
8270 List 1 / Std #10 2,000 ug/ml, Methylene Chloride, 5 ml/ampul

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

**Expiration Date :** June 30, 2016 **Storage:** 10°C or colder

### CERTIFIED VALUES

| Elution Order | Compound      | Grav. Conc. (weight/volume)      | Expanded Uncertainty (95% C.L.; K=2) |         |             |
|---------------|---------------|----------------------------------|--------------------------------------|---------|-------------|
|               |               |                                  | +/-                                  | µg/mL   | Method      |
| 1             | Indene        | 2,001.4 µg/mL<br>(Lot MKBP3098V) | +/-                                  | 11.6363 | Gravimetric |
|               | CAS # 95-13-6 |                                  | +/-                                  | 22.5687 | Unstressed  |
|               | Purity 99%    |                                  | +/-                                  | 25.9700 | Stressed    |
| 2             | Benzoic acid  | 2,005.8 µg/mL<br>(Lot MKBL6689V) | +/-                                  | 11.6619 | Gravimetric |
|               | CAS # 65-85-0 |                                  | +/-                                  | 22.6183 | Unstressed  |
|               | Purity 99%    |                                  | +/-                                  | 26.0271 | Stressed    |

**Solvent:** Methylene Chloride  
CAS # 75-09-2  
Purity 99%

Reagent

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**SVLVstd11\_00001**





# CERTIFIED REFERENCE MATERIAL

110 Benner Circle  
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Tel: (800)356-1688  
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## Certificate of Analysis



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

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**Catalog No. :** 569732 **Lot No.:** A0108035

**Description :** 8270 List 1 / Std #11  
8270 List 1 / Std #11 2,000 ug/ml, Methylene Chloride, 5 ml/ampul

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

**Expiration Date :** June 30, 2016 **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             | Benzaldehyde        | 2,000.6 µg/mL<br>(Lot SHBD3510V) | +/-                                  | 11.6317 | µg/mL | Gravimetric |
|               | CAS # 100-52-7      |                                  | +/-                                  | 64.1305 | µg/mL | Unstressed  |
|               | Purity 99%          |                                  | +/-                                  | 74.5493 | µg/mL | Stressed    |
| 2             | epsilon-Caprolactam | 2,001.2 µg/mL<br>(Lot H16X016)   | +/-                                  | 11.6351 | µg/mL | Gravimetric |
|               | CAS # 105-60-2      |                                  | +/-                                  | 64.1498 | µg/mL | Unstressed  |
|               | Purity 99%          |                                  | +/-                                  | 74.5716 | µg/mL | Stressed    |
| 3             | Atrazine            | 2,004.3 µg/mL<br>(Lot TZ8ED)     | +/-                                  | 11.6532 | µg/mL | Gravimetric |
|               | CAS # 1912-24-9     |                                  | +/-                                  | 64.2490 | µg/mL | Unstressed  |
|               | Purity 98%          |                                  | +/-                                  | 74.6870 | µg/mL | Stressed    |

**Solvent:** Methylene Chloride  
CAS # 75-09-2  
Purity 99%

Reagent

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**SVLVstd2\_00012**



# CERTIFIED REFERENCE MATERIAL

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## Certificate of Analysis



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

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**Catalog No. :** 567673 **Lot No.:** A0100824

**Description :** 8270 List 1 / Std #2 Amines

8270 List 1 / Std #2 Amines 2,000 ug/ml, Methylene Chloride, 5 ml/ampul

**Container Size :** 10 mL **Pkg Amt:** > 5 mL

**Expiration Date :** July 31, 2015 **Storage:** 10°C or colder

**Handling:** Contains carcinogen

### CERTIFIED VALUES

| Elution Order | Compound               | Grav. Conc. (weight/volume)      | Expanded Uncertainty (95% C.L.; K=2) |         |                   |
|---------------|------------------------|----------------------------------|--------------------------------------|---------|-------------------|
| 1             | epsilon-Caprolactam    | 2,004.8 µg/mL<br>(Lot 10000218)  | +/-                                  | 11.7653 | µg/mL Gravimetric |
|               | CAS # 105-60-2         |                                  | +/-                                  | 22.0081 | µg/mL Unstressed  |
|               | Purity 99%             |                                  | +/-                                  | 37.2650 | µg/mL Stressed    |
| 2             | Atrazine               | 2,000.4 µg/mL<br>(Lot TZ8ED)     | +/-                                  | 11.7393 | µg/mL Gravimetric |
|               | CAS # 1912-24-9        |                                  | +/-                                  | 21.9596 | µg/mL Unstressed  |
|               | Purity 98%             |                                  | +/-                                  | 37.1828 | µg/mL Stressed    |
| 3             | Benzidine              | 2,010.4 µg/mL<br>(Lot 140107JLM) | +/-                                  | 11.7982 | µg/mL Gravimetric |
|               | CAS # 92-87-5          |                                  | +/-                                  | 22.0696 | µg/mL Unstressed  |
|               | Purity 99%             |                                  | +/-                                  | 37.3691 | µg/mL Stressed    |
| 4             | 3,3'-Dichlorobenzidine | 2,000.0 µg/mL<br>(Lot 140109JLM) | +/-                                  | 11.7371 | µg/mL Gravimetric |
|               | CAS # 91-94-1          |                                  | +/-                                  | 21.9554 | µg/mL Unstressed  |
|               | Purity 99%             |                                  | +/-                                  | 37.1758 | µg/mL Stressed    |

**Solvent:** Methylene Chloride  
CAS # 75-09-2  
Purity 99%

Reagent

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**SVLVstd5 (7) \_00001**



# 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. : 568725 Lot No.: A0101573

Description : 8270 List 1/ Std #7 Diphenylamine

8270 List 1/ Std #7 Diphenylamine 1,710 µg/ml, Methylene Chloride, 5 ml/ampul

Container Size : 5 mL Pkg Amt: > 5 mL

Expiration Date : February 28, 2017 Storage: 10°C or colder

### CERTIFIED VALUES

| Elution Order | Compound   | Grav. Conc. (weight/volume) | Expanded Uncertainty (95% C.L.; K=2) |       |             |
|---------------|--|-----------------------------|--------------------------------------|-------|-------------|
| 1             | Diphenylamine<br>CAS # 122-39-4<br>Purity 99%<br>(Lot 07525MF) | 1,706.8 µg/mL               | +/- 10.0165                          | µg/mL | Gravimetric |
|               |  |                             | +/- 18.7368                          | µg/mL | Unstressed  |
|               |  |                             | +/- 31.7258                          | µg/mL | Stressed    |

Solvent: Methylene Chloride  
CAS # 75-09-2  
Purity 99%

#### Specific Reference Material Notes:

N-nitrosodiphenylamine 2000 ug/mL equivalent when used for GC analysis. Actual formulation is diphenylamine 1710 ug/mL.

#### Tech Tips:

N-Nitrosodiphenylamine is prone to breakdown in the injection port and will be converted to diphenylamine. N-Nitrosodiphenylamine is also a reactive species that can initiate premature decomposition of other compounds in the mix. For these reasons diphenylamine is used in the preparation of this mixture. When comparing the response of this compound to mixtures manufactured using N-nitrosodiphenylamine, a difference in response will be observed.

Reagent

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**SVLVstd8\_00003**



# CERTIFIED REFERENCE MATERIAL

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## Certificate of Analysis



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

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Catalog No. : 568724 Lot No.: A0103145

Description : 8270 List 1/ Std #8

8270 List 1/ Std #8 2,000 µg/ml, Methylene Chloride, 5 ml/ampul

Container Size : 5 mL Pkg Amt: > 5 mL

Expiration Date : May 31, 2015 Storage: 10°C or colder

### CERTIFIED VALUES

| Elution Order | Compound       | Grav. Conc. (weight/volume)      | Expanded Uncertainty (95% C.L.; K=2) |         |       |             |
|---------------|----------------|----------------------------------|--------------------------------------|---------|-------|-------------|
| 1             | Benzaldehyde   | 2,000.0 µg/mL<br>(Lot SHBC6366V) | +/-                                  | 11.7371 | µg/mL | Gravimetric |
|               | CAS # 100-52-7 |                                  | +/-                                  | 64.1312 | µg/mL | Unstressed  |
|               | Purity 99%     |                                  | +/-                                  | 74.5440 | µg/mL | Stressed    |
| 2             | Indene         | 2,012.0 µg/mL<br>(Lot MKBH4027V) | +/-                                  | 11.8075 | µg/mL | Gravimetric |
|               | CAS # 95-13-6  |                                  | +/-                                  | 64.5160 | µg/mL | Unstressed  |
|               | Purity 99%     |                                  | +/-                                  | 74.9913 | µg/mL | Stressed    |
| 3             | Benzoic acid   | 2,003.0 µg/mL<br>(Lot MKBG9391V) | +/-                                  | 11.7547 | µg/mL | Gravimetric |
|               | CAS # 65-85-0  |                                  | +/-                                  | 64.2274 | µg/mL | Unstressed  |
|               | Purity 99%     |                                  | +/-                                  | 74.6558 | µg/mL | Stressed    |

Solvent: Methylene Chloride  
CAS # 75-09-2  
Purity 99%

Reagent

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**SVLVstd9\_00001**





# CERTIFIED REFERENCE MATERIAL

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## Certificate of Analysis



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

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**Catalog No. :** 569730 **Lot No.:** A0108709

**Description :** 8270 List 1 / Std #9  
8270 List 1 / Std #9 2,000 ug/ml, Methylene Chloride, 5 ml/ampul

**Container Size :** 10 mL **Pkg Amt:** > 5 mL

**Expiration Date :** July 31, 2016 **Storage:** 10°C or colder

**Handling:** Contains carcinogen/reproductive toxin.

### CERTIFIED VALUES

| Elution Order | Compound               | Grav. Conc. (weight/volume)      | Expanded Uncertainty (95% C.L.; K=2) |         |                   |
|---------------|------------------------|----------------------------------|--------------------------------------|---------|-------------------|
| 1             | Benzidine              | 2,006.6 µg/mL<br>(Lot 141208JLM) | +/-                                  | 11.6665 | µg/mL Gravimetric |
|               | CAS # 92-87-5          |                                  | +/-                                  | 21.9697 | µg/mL Unstressed  |
|               | Purity 99%             |                                  | +/-                                  | 37.2641 | µg/mL Stressed    |
| 2             | 3,3'-Dichlorobenzidine | 2,001.0 µg/mL<br>(Lot 141205JLM) | +/-                                  | 11.6340 | µg/mL Gravimetric |
|               | CAS # 91-94-1          |                                  | +/-                                  | 21.9083 | µg/mL Unstressed  |
|               | Purity 99%             |                                  | +/-                                  | 37.1601 | µg/mL Stressed    |

**Solvent:** Methylene Chloride  
CAS # 75-09-2  
Purity 99%

Reagent

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**SVLVSURRSPK\_00003**



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708036  
708035



## 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.*

S VLV SURR SPK

Catalog No.: 567685 Lot No.: A093638  
 Description: 8270 Surrogate Standard  
8270 Surrogate Standard 5,000 ug/ml, Methylene Chloride, 5 ml/ampul  
 Container Size: 5 mL Pkg Amt: > 5 mL  
 Expiration Date: February 2018 Storage: 10°C or colder  
 Handling: Sonicate prior to use.

### CERTIFIED VALUES

| Elution Order | Compound             | Grav. Conc. (weight/volume) | Expanded Uncertainty (95% C.L., K=2) |          |                   |
|---------------|----------------------|-----------------------------|--------------------------------------|----------|-------------------|
| 1             | 2-Fluorophenol       | 5,000.0 µg/mL               | +/-                                  | 29.0689  | µg/mL Gravimetric |
|               | CAS # 367-12-4       |                             | +/-                                  | 132.9492 | µg/mL Unstressed  |
|               | Purity 99%           |                             | +/-                                  | 163.4029 | µg/mL Stressed    |
| 2             | Phenol-d5            | 5,000.0 µg/mL               | +/-                                  | 29.0689  | µg/mL Gravimetric |
|               | CAS # 4165-62-2      |                             | +/-                                  | 132.9492 | µg/mL Unstressed  |
|               | Purity 99%           |                             | +/-                                  | 163.4029 | µg/mL Stressed    |
| 3             | Nitrobenzene-d5      | 5,000.0 µg/mL               | +/-                                  | 29.0689  | µg/mL Gravimetric |
|               | CAS # 4165-60-0      |                             | +/-                                  | 132.9492 | µg/mL Unstressed  |
|               | Purity 99%           |                             | +/-                                  | 163.4029 | µg/mL Stressed    |
| 4             | 2-Fluorobiphenyl     | 5,000.0 µg/mL               | +/-                                  | 29.0689  | µg/mL Gravimetric |
|               | CAS # 321-60-8       |                             | +/-                                  | 132.9492 | µg/mL Unstressed  |
|               | Purity 99%           |                             | +/-                                  | 163.4029 | µg/mL Stressed    |
| 5             | 2,4,6-Tribromophenol | 5,000.0 µg/mL               | +/-                                  | 29.0689  | µg/mL Gravimetric |
|               | CAS # 118-79-6       |                             | +/-                                  | 132.9492 | µg/mL Unstressed  |
|               | Purity 99%           |                             | +/-                                  | 163.4029 | µg/mL Stressed    |
| 6             | p-Terphenyl-d14      | 5,000.0 µg/mL               | +/-                                  | 29.0689  | µg/mL Gravimetric |
|               | CAS # 1718-51-0      |                             | +/-                                  | 132.9492 | µg/mL Unstressed  |
|               | Purity 99%           |                             | +/-                                  | 163.4029 | µg/mL Stressed    |

Solvent: Methylene Chloride  
 CAS # 75-09-2  
 Purity 99%

**Tech Tips:**

Due to the limited solubility of p-terphenyl-d14 in methanol, we do not recommend that this mixture be diluted in methanol.

**Column:**

30m x .25mm x .25um  
Rtx-5 (cat.#110223)

**Carrier Gas:**

hydrogen-constant pressure 10 psi.

**Temp. Program:**

40°C (hold 2 min.) to 330°C  
@ 10°C/min. (hold 10 min.)

**Inj. Temp:**

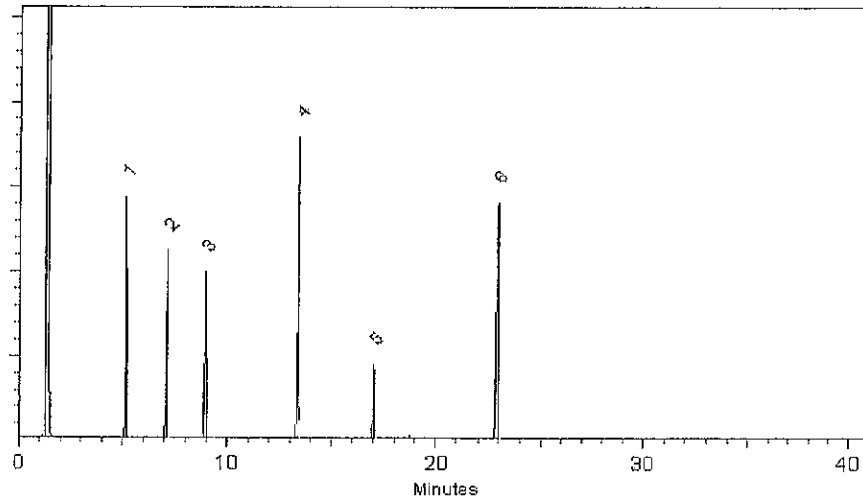
250°C

**Det. Temp:**

330°C

**Det. Type:**

FID



*Diane Shaffer*  
Diane Shaffer - QA Analyst

Date Passed: 22-Feb-2013

Balance: 1128342313

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

Reagent

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**SVLVSURRSPK\_00014**



# 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. :** 567685 **Lot No.:** A0103615  
**Description :** 8270 Surrogate Standard  
8270 Surrogate Standard 5,000 ug/ml, Methylene Chloride, 5 ml/ampul  
**Container Size :** 5 mL **Pkg Amt:** > 5 mL  
**Expiration Date :** May 31, 2019 **Storage:** 10°C or colder  
**Handling:** Sonicate prior to use.

### CERTIFIED VALUES

| Elution Order | Compound   | Grav. Conc. (weight/volume) | Expanded Uncertainty (95% C.L.; K=2) |          |       |             |
|---------------|--|-----------------------------|--------------------------------------|----------|-------|-------------|
|               |  |                             |                                      |          |       |             |
| 1             | 2-Fluorophenol<br>CAS # 367-12-4<br>Purity 99%<br>(Lot STBC5591V)      | 5,003.5 µg/mL               | +/-                                  | 29.0892  | µg/mL | Gravimetric |
|               |  |                             | +/-                                  | 124.6713 | µg/mL | Unstressed  |
|               |  |                             | +/-                                  | 156.7818 | µg/mL | Stressed    |
| 2             | Phenol-d5<br>CAS # 4165-62-2<br>Purity 99%<br>(Lot M387P4)             | 5,002.9 µg/mL               | +/-                                  | 29.0860  | µg/mL | Gravimetric |
|               |  |                             | +/-                                  | 124.6575 | µg/mL | Unstressed  |
|               |  |                             | +/-                                  | 156.7644 | µg/mL | Stressed    |
| 3             | Nitrobenzene-d5<br>CAS # 4165-60-0<br>Purity 99%<br>(Lot PR-20474)     | 5,001.4 µg/mL               | +/-                                  | 29.0773  | µg/mL | Gravimetric |
|               |  |                             | +/-                                  | 124.6201 | µg/mL | Unstressed  |
|               |  |                             | +/-                                  | 156.7174 | µg/mL | Stressed    |
| 4             | 2-Fluorobiphenyl<br>CAS # 321-60-8<br>Purity 99%<br>(Lot E11Y047)      | 5,004.4 µg/mL               | +/-                                  | 29.0947  | µg/mL | Gravimetric |
|               |  |                             | +/-                                  | 124.6949 | µg/mL | Unstressed  |
|               |  |                             | +/-                                  | 156.8114 | µg/mL | Stressed    |
| 5             | 2,4,6-Tribromophenol<br>CAS # 118-79-6<br>Purity 99%<br>(Lot 29699MJV) | 5,003.9 µg/mL               | +/-                                  | 29.0914  | µg/mL | Gravimetric |
|               |  |                             | +/-                                  | 124.6805 | µg/mL | Unstressed  |
|               |  |                             | +/-                                  | 156.7934 | µg/mL | Stressed    |
| 6             | p-Terphenyl-d14<br>CAS # 1718-51-0<br>Purity 99%<br>(Lot PR-20577)     | 5,007.1 µg/mL               | +/-                                  | 29.1100  | µg/mL | Gravimetric |
|               |  |                             | +/-                                  | 124.7604 | µg/mL | Unstressed  |
|               |  |                             | +/-                                  | 156.8938 | µg/mL | Stressed    |

Reagent

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**SVNNITROPYROs\_00015**



**CERTIFIED WEIGHT REPORT**

**Part Number:** 70451  
**Lot Number:** 060514  
**Description:** N-Nitrosopyrrolidine  
**Expiration Date:** 060517  
**Recommended Storage:** Freezer (0 °C)  
**Nominal Concentration (µg/mL):** 1000

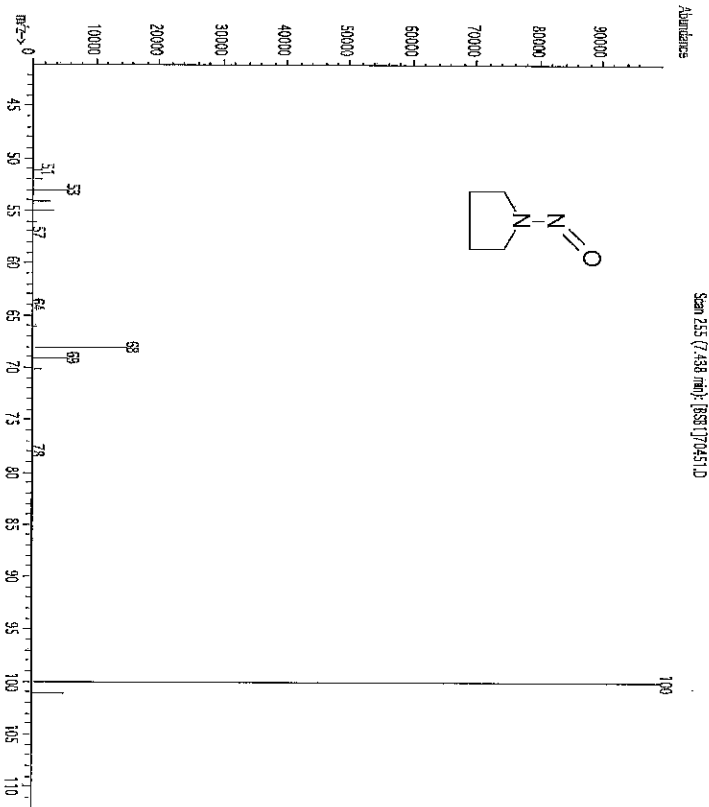
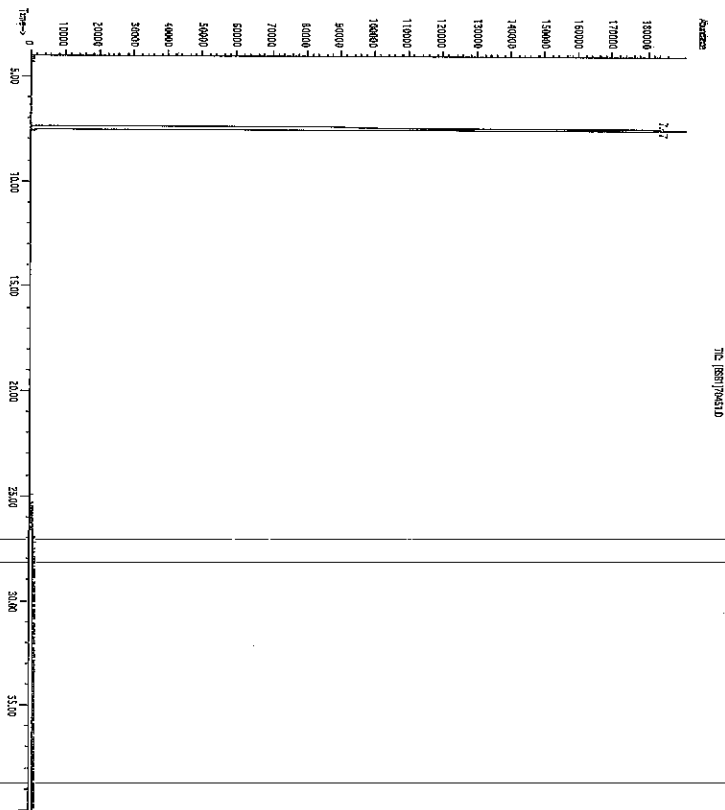
**Solvent(s):** Methylene chloride  
**Lot #:** 62418

**Weight(s) shown below were combined and diluted to:** 25.0  
**SE-05 Balance Uncertainty:** 0.001  
**Flask Uncertainty:**

|                                     |                 |        |      |
|-------------------------------------|-----------------|--------|------|
| Formulated By: <i>Paul Barron</i>   | Paul Barron     | 060514 | DATE |
| Reviewed By: <i>Pedro L. Rentas</i> | Pedro L. Rentas | 060514 | DATE |

| Compound                | Lot Number | Nominal Conc (µg/mL) | Purity (%) | Uncertainty (%) | Target Weight (g) | Actual Weight (g) | Actual Conc (µg/mL) | Expanded Uncertainty | (Solvent Safety Info. On Attached pg.) | CAS#       | OSHA PEL (TWA) | LD50            |
|-------------------------|------------|----------------------|------------|-----------------|-------------------|-------------------|---------------------|----------------------|--|------------|----------------|-----------------|
| 1. N-Nitrosopyrrolidine | 451        | 04025BM              | 1000       | 99              | 0.2               | 0.02524           | 0.02530             | 1002.2               | 0.00565                                | 00990-55-2 | N/A            | or-cat 900mg/kg |

**Method GC8MSD-3.M:** Column:SPB-5 (30m X 0.25mm ID X 0.25µm film thickness) Temp 1 = 50°C (1min.), Temp 2 = 300°C (9min.), Rate = 10°C/min., Injector B = 200°C, Detector B = 275°C, Split Ratio = 100:1, Scan Rate = 2. Analysis performed by: Candice Warren.





Reagent

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**VOA8260GAS1ST\_00070**



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## Certificate of Analysis

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**Catalog No. :** 567645 **Lot No.:** A093341  
**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 :** February 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)<br>CAS # 75-71-8<br>Purity 99% | 2,000.0 µg/mL               | +/-                                  | 13.8716 | µg/mL Gravimetric |
|               |   |                             | +/-                                  | 25.2661 | µg/mL Unstressed  |
|               |   |                             | +/-                                  | 28.2336 | µg/mL Stressed    |
| 2             | Chloromethane (methyl chloride)<br>CAS # 74-87-3<br>Purity 99%  | 1,999.8 µg/mL               | +/-                                  | 13.9993 | µg/mL Gravimetric |
|               |   |                             | +/-                                  | 25.3348 | µg/mL Unstressed  |
|               |   |                             | +/-                                  | 28.2945 | µg/mL Stressed    |
| 3             | Vinyl chloride<br>CAS # 75-01-4<br>Purity 99%                   | 2,000.1 µg/mL               | +/-                                  | 13.9625 | µg/mL Gravimetric |
|               |   |                             | +/-                                  | 25.3168 | µg/mL Unstressed  |
|               |   |                             | +/-                                  | 28.2792 | µg/mL Stressed    |
| 4             | 1,3-Butadiene<br>CAS # 106-99-0<br>Purity 99%                   | 2,000.0 µg/mL               | +/-                                  | 13.3773 | µg/mL Gravimetric |
|               |   |                             | +/-                                  | 24.9981 | µg/mL Unstressed  |
|               |   |                             | +/-                                  | 27.9940 | µg/mL Stressed    |
| 5             | Bromomethane (methyl bromide)<br>CAS # 74-83-9<br>Purity 99%    | 2,000.1 µg/mL               | +/-                                  | 14.2856 | µg/mL Gravimetric |
|               |   |                             | +/-                                  | 25.4963 | µg/mL Unstressed  |
|               |   |                             | +/-                                  | 28.4399 | µg/mL Stressed    |
| 6             | Chloroethane (ethyl chloride)<br>CAS # 75-00-3<br>Purity 99%    | 2,000.0 µg/mL               | +/-                                  | 13.2200 | µg/mL Gravimetric |
|               |   |                             | +/-                                  | 24.9143 | µg/mL Unstressed  |
|               |   |                             | +/-                                  | 27.9191 | µg/mL Stressed    |
| 7             | Dichlorofluoromethane (CFC-21)<br>CAS # 75-43-4<br>Purity 99%   | 2,000.0 µg/mL               | +/-                                  | 13.5174 | µg/mL Gravimetric |
|               |   |                             | +/-                                  | 25.0735 | µg/mL Unstressed  |
|               |   |                             | +/-                                  | 28.0614 | µg/mL Stressed    |
| 8             | Trichlorofluoromethane (CFC-11)<br>CAS # 75-69-4<br>Purity 99%  | 1,999.9 µg/mL               | +/-                                  | 13.1170 | µg/mL Gravimetric |
|               |   |                             | +/-                                  | 24.8590 | µg/mL Unstressed  |
|               |   |                             | +/-                                  | 27.8696 | µg/mL Stressed    |

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

Reagent

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**VOA8260GAS1ST\_00098**



# CERTIFIED REFERENCE MATERIAL

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

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## Certificate of Analysis



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

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

**Catalog No. :** 569722 **Lot No.:** A0110070

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

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

**Expiration Date :** April 30, 2018 **Storage:** 0°C or colder

### CERTIFIED VALUES

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

|   |                                 |                          |             |                  |             |
|---|---------------------------------|--------------------------|-------------|------------------|-------------|
| 8 | Trichlorofluoromethane (CFC-11) | 2,500.3 $\mu\text{g/mL}$ | +/- 16.5866 | $\mu\text{g/mL}$ | Gravimetric |
|   | CAS # 75-69-4 (Lot SHBD5121V)   |                          | +/- 29.3037 | $\mu\text{g/mL}$ | Unstressed  |
|   | Purity 99%                      |                          | +/- 33.4120 | $\mu\text{g/mL}$ | Stressed    |

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

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

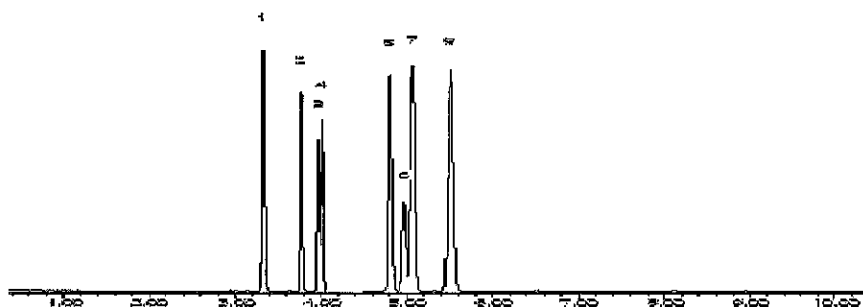
**Carrier Gas:**  
helium-constant flow 2.0 mL/min.

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

**Inj. Temp:**  
200°C

**Det. Temp:**  
250°C

**Det. Type:**  
MSD



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

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

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

*[Signature]*  
Tyler Brown - QA Analyst

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

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

Reagent

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**VOA8260GAS2ND\_00095**

# 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. :** 569722.sec **Lot No.:** A0108226  
**Description :** 8260 List 1 / Std #3 Gases (2015)  
8260 List 1 / Std #3 Gases (2015) 2,000 ug/ml, P&T Methanol, 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             | Dichlorodifluoromethane (CFC-12)<br>CAS # 75-71-8.SEC (Lot 19630)<br>Purity 99%   | 2,494.8 µg/mL               | +/- 23.5521 µg/mL<br>+/- 33.7009 µg/mL<br>+/- 37.3133 µg/mL | Gravimetric<br>Unstressed<br>Stressed |  |
| 2             | Chloromethane (methyl chloride)<br>CAS # 74-87-3.SEC (Lot 18343)<br>Purity 99%    | 2,505.6 µg/mL               | +/- 26.4745 µg/mL<br>+/- 35.8743 µg/mL<br>+/- 39.3156 µg/mL | Gravimetric<br>Unstressed<br>Stressed |  |
| 3             | Vinyl chloride<br>CAS # 75-01-4.SEC (Lot MKBK6872V)<br>Purity 99%                 | 2,499.8 µg/mL               | +/- 25.3054 µg/mL<br>+/- 34.9816 µg/mL<br>+/- 38.4872 µg/mL | Gravimetric<br>Unstressed<br>Stressed |  |
| 4             | 1,3-Butadiene<br>CAS # 106-99-0.SEC (Lot 18349)<br>Purity 99%                     | 2,505.4 µg/mL               | +/- 23.1450 µg/mL<br>+/- 33.4914 µg/mL<br>+/- 37.1536 µg/mL | Gravimetric<br>Unstressed<br>Stressed |  |
| 5             | Bromomethane (methyl bromide)<br>CAS # 74-83-9.SEC (Lot Q119-46)<br>Purity 99%    | 2,495.4 µg/mL               | +/- 25.3762 µg/mL<br>+/- 35.0038 µg/mL<br>+/- 38.4957 µg/mL | Gravimetric<br>Unstressed<br>Stressed |  |
| 6             | Chloroethane (ethyl chloride)<br>CAS # 75-00-3.SEC (Lot Q18B-13)<br>Purity 99%    | 2,499.5 µg/mL               | +/- 21.8687 µg/mL<br>+/- 32.5806 µg/mL<br>+/- 36.3180 µg/mL | Gravimetric<br>Unstressed<br>Stressed |  |
| 7             | Dichlorofluoromethane (CFC-21)<br>CAS # 75-43-4.SEC (Lot SHBC0858V)<br>Purity 99% | 2,511.0 µg/mL               | +/- 21.9690 µg/mL<br>+/- 32.7299 µg/mL<br>+/- 36.4846 µg/mL | Gravimetric<br>Unstressed<br>Stressed |  |

|   |                                  |         |       |     |         |       |             |
|---|----------------------------------|---------|-------|-----|---------|-------|-------------|
| 8 | Trichlorofluoromethane (CFC-11)  | 2,504.4 | µg/mL | +/- | 25.2390 | µg/mL | Gravimetric |
|   | CAS # 75-69-4,SEC (Lot Q158-102) |         |       | +/- | 34.9647 | µg/mL | Unstressed  |
|   | Purity 99%                       |         |       | +/- | 38.4843 | µg/mL | Stressed    |

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

**Column:**

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

**Carrier Gas:**

helium-constant flow 2.0 ml/min.

**Temp. Program:**

40°C (hold 6 min.) to 100°C  
 @ 6°C/min.

**Inj. Temp:**

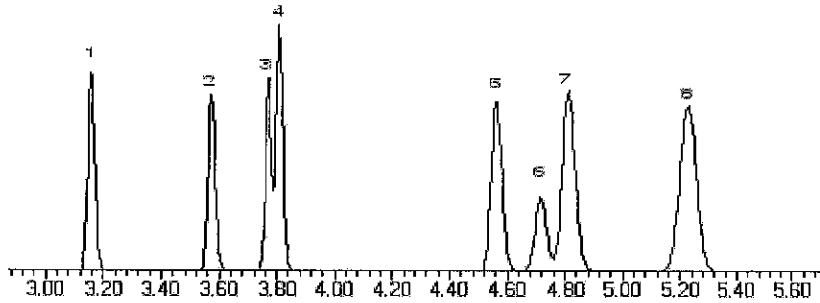
200°C

**Det. Temp:**

250°C

**Det. Type:**

MSD



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

*Michael Maje*

**Date Mixed:** 12-Jan-2015      **Balance:** 1127510105

*Jennifer L. Pollino*

Jennifer L. Pollino - QC Analyst

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

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



Reagent

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**VOA8260INTRES\_00092**



# 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. :** 567649 **Lot No.:** A0104742  
**Description :** 8260 Internal Standard  
8260 Internal Standard 250-5,000 ug/ml, P&T Methanol, 5 ml/ampul  
**Container Size :** 5 mL **Pkg Amt:** > 5 mL  
**Expiration Date :** July 31, 2019 **Storage:** 0°C or colder

### CERTIFIED VALUES

| Elution Order | Compound  | Grav. Conc. (weight/volume) | Expanded Uncertainty (95% C.L.; K=2) |                    |                    |                                       |
|---------------|---|-----------------------------|--------------------------------------|--------------------|--------------------|---------------------------------------|
| 1             | tert-Butyl-d9-alcohol<br>CAS # 25725-11-5<br>Purity 99%<br>(Lot I201P5)   | 5,003.0 µg/mL               | +/- 29.0879 µg/mL                    | +/- 106.1005 µg/mL | +/- 106.5713 µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 2             | Fluorobenzene<br>CAS # 462-06-6<br>Purity 99%<br>(Lot 1380033)            | 250.8 µg/mL                 | +/- 1.4795 µg/mL                     | +/- 5.3247 µg/mL   | +/- 5.3483 µg/mL   | Gravimetric<br>Unstressed<br>Stressed |
| 3             | 1,4-Dioxane-d8<br>CAS # 17647-74-4<br>Purity 99%<br>(Lot 11C-596)         | 5,009.6 µg/mL               | +/- 29.1262 µg/mL                    | +/- 106.2405 µg/mL | +/- 106.7119 µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 4             | Chlorobenzene-d5<br>CAS # 3114-55-4<br>Purity 99%<br>(Lot PR-22736)       | 250.8 µg/mL                 | +/- 1.4795 µg/mL                     | +/- 5.3247 µg/mL   | +/- 5.3483 µg/mL   | Gravimetric<br>Unstressed<br>Stressed |
| 5             | 1,4-Dichlorobenzene-d4<br>CAS # 3855-82-1<br>Purity 99%<br>(Lot PR-18488) | 250.8 µg/mL                 | +/- 1.4795 µg/mL                     | +/- 5.3247 µg/mL   | +/- 5.3483 µg/mL   | Gravimetric<br>Unstressed<br>Stressed |

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

Reagent

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**VOA8260KET1ST\_00026**



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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. : 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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**VOA8260MEGA1\_00021**



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

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

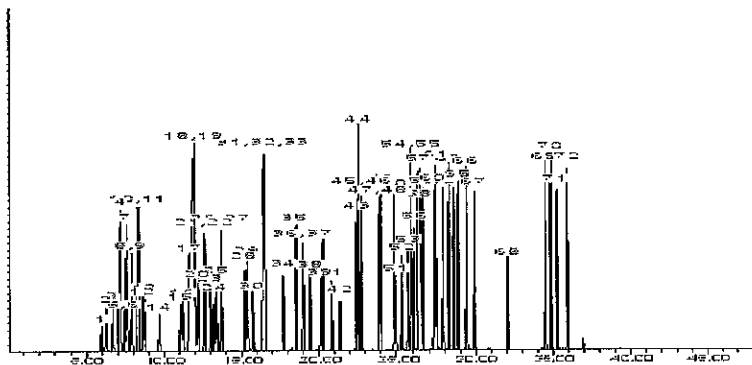
**Carrier Gas:**  
helium-constant pressure 30 psi

**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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**VOA8260SURRES\_00046**



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 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. :** 567650 **Lot No.:** A093505  
**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 :** February 2018 **Storage:** 0°C or colder

### CERTIFIED VALUES

| Elution Order | Compound                      | Grav. Conc. (weight/volume) | Expanded Uncertainty (95% C.L.; K=2) |         |       |             |
|---------------|-------------------------------|-----------------------------|--------------------------------------|---------|-------|-------------|
| 1             | Dibromofluoromethane          | 2,500.0 µg/mL               | +/-                                  | 14.5352 | µg/mL | Gravimetric |
|               | CAS # 1868-53-7               |                             | +/-                                  | 30.1344 | µg/mL | Unstressed  |
|               | Purity 99%                    |                             | +/-                                  | 34.0022 | µg/mL | Stressed    |
| 2             | 1,2-Dichloroethane-d4         | 2,500.0 µg/mL               | +/-                                  | 14.5352 | µg/mL | Gravimetric |
|               | CAS # 17060-07-0              |                             | +/-                                  | 30.1344 | µg/mL | Unstressed  |
|               | Purity 99%                    |                             | +/-                                  | 34.0022 | µg/mL | Stressed    |
| 3             | Toluene-d8                    | 2,500.0 µg/mL               | +/-                                  | 14.5352 | µg/mL | Gravimetric |
|               | CAS # 2037-26-5               |                             | +/-                                  | 30.1344 | µg/mL | Unstressed  |
|               | Purity 99%                    |                             | +/-                                  | 34.0022 | µg/mL | Stressed    |
| 4             | 1-Bromo-4-fluorobenzene (BFB) | 2,500.0 µg/mL               | +/-                                  | 14.5352 | µg/mL | Gravimetric |
|               | CAS # 460-00-4                |                             | +/-                                  | 30.1344 | µg/mL | Unstressed  |
|               | Purity 99%                    |                             | +/-                                  | 34.0022 | µg/mL | Stressed    |

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

Reagent

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**VOA8260SURRES\_00089**

# RESTEK® CERTIFIED REFERENCE MATERIAL

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

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## Certificate of Analysis



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

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

**Catalog No. :** 567650 **Lot No.:** A0102817  
**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 :** April 30, 2019 **Storage:** 0°C or colder

### CERTIFIED VALUES

| Elution Order | Compound                       | Grav. Conc. (weight/volume) | Expanded Uncertainty (95% C.L.; K=2) |         |       |             |
|---------------|--------------------------------|-----------------------------|--------------------------------------|---------|-------|-------------|
| 1             | Dibromofluoromethane           | 2,503.8 µg/mL               | +/-                                  | 14.5573 | µg/mL | Gravimetric |
|               | CAS # 1868-53-7 (Lot 022012)   |                             | +/-                                  | 28.2339 | µg/mL | Unstressed  |
|               | Purity 99%                     |                             | +/-                                  | 32.4891 | µg/mL | Stressed    |
| 2             | 1,2-Dichloroethane-d4          | 2,502.4 µg/mL               | +/-                                  | 14.5492 | µg/mL | Gravimetric |
|               | CAS # 17060-07-0 (Lot 13J-483) |                             | +/-                                  | 28.2182 | µg/mL | Unstressed  |
|               | Purity 99%                     |                             | +/-                                  | 32.4709 | µg/mL | Stressed    |
| 3             | Toluene-d8                     | 2,500.0 µg/mL               | +/-                                  | 14.5352 | µg/mL | Gravimetric |
|               | CAS # 2037-26-5 (Lot 13I-050)  |                             | +/-                                  | 28.1911 | µg/mL | Unstressed  |
|               | Purity 99%                     |                             | +/-                                  | 32.4398 | µg/mL | Stressed    |
| 4             | 1-Bromo-4-fluorobenzene (BFB)  | 2,503.6 µg/mL               | +/-                                  | 14.5561 | µg/mL | Gravimetric |
|               | CAS # 460-00-4 (Lot 01127COV)  |                             | +/-                                  | 28.2317 | µg/mL | Unstressed  |
|               | Purity 99%                     |                             | +/-                                  | 32.4865 | µg/mL | Stressed    |

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

Reagent

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**VOA8260VARES\_00042**

# RESTEK® CERTIFIED REFERENCE MATERIAL

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

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## Certificate of Analysis



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

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

Catalog No. : 567646 Lot No.: A0105145  
 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 : 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             | Vinyl acetate<br>CAS # 108-05-4<br>Purity 99%<br>(Lot 131011JLM) | 4,010.0 µg/mL               | +/- 23.5329                          | µg/mL | Gravimetric |
|               |  |                             | +/- 213.4273                         | µg/mL | Unstressed  |
|               |  |                             | +/- 213.6626                         | 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\_00054**



# 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. : 568720 Lot No.: A0104886

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 : November 30, 2014 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)   |
|---------------|--|-----------------------------------|--|
| I             | Acrolein<br>CAS # 107-02-8<br>Purity 99% | 19,780.0 µg/mL<br>(Lot 140429JLM) | +/- 115.8162 µg/mL Gravimetric<br>+/- 634.2090 µg/mL Unstressed<br>+/- 737.1986 µg/mL Stressed |

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

Reagent

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**VOAACRORES\_00067**



# CERTIFIED REFERENCE MATERIAL

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

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## Certificate of Analysis



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

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

**Catalog No. :** 568720 **Lot No.:** A0108734

**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 :** May 31, 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<br>CAS # 107-02-8<br>Purity 99%<br>(Lot 150115JLM) | 19,890.0 µg/mL              | +/- 116.4603 µg/mL Gravimetric<br>+/- 637.7359 µg/mL Unstressed<br>+/- 741.2982 µg/mL Stressed |

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

Reagent

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**VOAACRRES2ND\_00058**



# CERTIFIED REFERENCE MATERIAL

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

## Certificate of Analysis

www.restek.com



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

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

**Catalog No. :** 568720.sec **Lot No.:** A0109953

**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 :** July 31, 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<br>CAS # 107-02-8.SEC<br>Purity 95% | 19,750.5 µg/mL<br>(Lot 3384500) | +/- 115.6435                         | µg/mL | Gravimetric |
|               |  |                                 | +/- 633.2631                         | µg/mL | Unstressed  |
|               |  |                                 | +/- 736.0991                         | µg/mL | Stressed    |

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

Reagent

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**VOACEVERES\_00046**



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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. :** 567643 **Lot No.:** A093368  
**Description :** 8260 List 1 / Std #4 2-Chloroethylvinyl Ether  
8260 List 1 / Std #4 2-Chloroethylvinyl Ether 2,000 ug/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               | 2-Chloroethyl vinyl ether | 2,000.0 µg/mL               | +/-                                  | 11.6282 | µg/mL | Gravimetric |
|                 | CAS # 110-75-8            |                             | +/-                                  | 44.2531 | µg/mL | Unstressed  |
|                 | Purity 99%                |                             | +/-                                  | 44.4335 | µg/mL | Stressed    |
| <b>Solvent:</b> | P&T Methanol              |                             |                                      |         |       |             |
|                 | CAS # 67-56-1             |                             |                                      |         |       |             |
|                 | Purity 99%                |                             |                                      |         |       |             |

**Tech Tips:**

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

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



Reagent

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**VOACEVERES\_00068**



# CERTIFIED REFERENCE MATERIAL

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www.restek.com



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

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

**Catalog No. :** 569723 **Lot No.:** A0109994

**Description :** 8260 List 1 / Std #4 2-CEVE (2015)  
8260 List 1 / Std #4 2-CEVE (2015) 2,500 ug/ml, P&T Methanol, 1 ml/ampul

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

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

### CERTIFIED VALUES

| Elution Order | Compound   | Grav. Conc. (weight/volume) | Expanded Uncertainty (95% C.L.; K=2) |       |             |
|---------------|--|-----------------------------|--------------------------------------|-------|-------------|
| 1             | 2-Chloroethyl vinyl ether<br>CAS # 110-75-8<br>Purity 99%<br>(Lot MKBK2735V) | 2,506.0 µg/mL               | +/- 14.7066                          | µg/mL | Gravimetric |
|               |  |                             | +/- 53.1833                          | µg/mL | Unstressed  |
|               |  |                             | +/- 53.4189                          | µg/mL | Stressed    |

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

#### Tech Tips:

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

Reagent

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**WCN1000P\_00024**



1515323  
 ID: WCN1000P\_00024  
 Exp: 05/20/15 Ppd: PGJ Qpn: 12/19/14  
 Cyanide 1000 ppm Primary



1515324  
 ID: WAvCN1000P\_00017  
 Exp: 05/20/15 Ppd: PGJ Qpn: 12/19/14  
 Available Cyanide 1000 pp



Jackson's Pointe Commerce Park - Building 1000  
 1010 Jackson's Pointe Court, Zelienople, PA 16063  
 Ph: 412-826-5230 | Fax: 724-473-0647 | www.labchem.com

**CERTIFICATE OF ANALYSIS**

Description: CYANIDE STANDARD, 1000ppm (1ml = 1mg CN)

Mfg. Date: 11/20/2014

Catalog Number: LC13545

Exp. Date: 05/20/2015

Lot Number: D322-27

**ANALYTICAL SECTION**

| Test                   | Specification                 | Test Result    |
|------------------------|-------------------------------|----------------|
| Appearance             | clear, colorless solution     | Pass Test      |
| Concentration ppm CN   | 1000ppm +/- 10ppm             | 1010ppm        |
| Concentration mg CN/mL | 1.000mg/mL +/- 0.010 mg CN/mL | 1.010 mg CN/mL |
| Traceable to NIST      | Potassium Chloride            | 999b           |

Submitted by: Greg Albright, Chemist Supervisor

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

03/26/2015 2:29 PM

Reagent

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**WCN1000S\_00017**



RICC

1508131  
ID: WCN1000S\_00017  
Exp:08/31/16 Ppd:PGJ Opm:03/19/15  
Cyanide 1000 ppm Secondar

ICAL

1508132  
ID: WAvCN1000S\_00018  
Exp:08/31/15 Ppd:PGJ Opm:03/19/15  
Available Cyanide 1000 Se

JY

Arlington, TX 76012  
Pocomoke City, MD 21851  
Batesville, IN 47006

http://www.riccachemical.com

1-888-GO-RICCA

customerservice@riccachemical.com

# Certificate of Analysis

## Cyanide Standard, 1000 ppm CN

Manufacture Date: FEB 13, 2015

Lot Number: 4502438

Product Number: 2543

Expiration Date: AUG 2015

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

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

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

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

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

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

| Part Number | Size / Package Type | Shelf Life (Unopened Container) |
|-------------|---------------------|---------------------------------|
| 2543-4      | 120 mL amber poly   | 6 months                        |
| 2543-32     | 1 L amber poly      | 6 months                        |
| 2543-16     | 500 mL amber poly   | 6 months                        |

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

*Katie Schnur*

Katie Schnur  
Quality Control Manager

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

Reagent

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**WCNWSTOCK\_00001**





A Waters Company

Distributed by  
SPEX CertiPrep  
1-800-LAB-SPEX  
www.spexcsp.com

1466021  
ID: WCNWSTOCK\_00001  
Exp: 11/01/15 Prip: Opn: 01/06/15  
Total Cyanide Water LCS 1

*Found  
10-21-14  
PSC*

# Certificate of Analysis

|   |  |
|---|--|
| <b>PRODUCT:</b>                             | 1000 mg/L Complex Cyanide  |
| <b>CATALOG NUMBER:</b>                      | 049 – 125 mL; 998 – 500 mL   |
| <b>LOT NUMBER:</b>                          | 200213   |
| <b>ISSUE DATE:</b>                          | March 29, 2013   |
| <b>REVISION DATE:</b>                       | May 8, 2014  |
| <b>STARTING MATERIAL:</b>                   | Potassium Ferrocyanide 3-Hydrate (K <sub>4</sub> Fe(CN) <sub>6</sub> ·3H <sub>2</sub> O) |
| <b>CERTIFIED CONCENTRATION<sup>1</sup>:</b> | 1000 mg/L  |
| <b>UNCERTAINTY<sup>2</sup>:</b>             | 1.0%   |
| <b>MATRIX:</b>                              | 18 megohm deionized water and 0.5% (v/v) NaOH  |
| <b>DENSITY:</b>                             | 1.0083 ± 0.0008 g/mL at 20.5°C and 767 mm Hg   |
| <b>TRACEABILITY<sup>3</sup>:</b>            | NA   |
| <b>NIST/SRM:</b>                            | NA   |
| <b>VERIFICATION METHOD:</b>                 | Spectrophotometry  |
| <b>STORAGE:</b>                             | Store at 20-25°C   |

1. The **Certified Concentration** is the actual made-to concentration confirmed by ERA analytical verification.
2. The stated **Uncertainty** is the total propagated uncertainty at the 95% confidence interval. The uncertainty is based on the preparation of the product and includes uncertainty related to the starting material used and the volumetric and gravimetric measurements made. The method of calculating uncertainty is taken from the ISO Guide to the Expression of Uncertainty in Measurement (current version). The uncertainty applies to the product as supplied and does not take into account any required or optional dilutions and/or preparations the laboratory may perform while using this product.
3. Traceability Recovery = ((% Recovery certified standard)/(% Recovery NIST SRM))\*100.

The traceability data shown were compiled by analyzing the ERA standards or their associated stock solutions against the applicable NIST SRMs.

This standard **expires 11/2015**. The certified values are monitored and purchasers will be notified of any significant changes resulting in recertification or withdrawal of this certified reference material during the period of validity of this certificate.

This product is intended to be used as either a calibration standard or a quality control check of the entire analytical process for the analytes/matrix included in the standard.

If you have any questions or need technical assistance, please call ERA technical assistance at 1-800-372-0122 or email to [info@eraqc.com](mailto:info@eraqc.com)

Certifying Officer: Tom Widera

ISO/IEC GUIDE 34:2009



REFERENCE MATERIAL PRODUCER  
CERTIFICATE NO. 1539.02

ISO/IEC 17025:2005



CHEMICAL TESTING LABORATORY  
CERTIFICATE NO. 1539.02

Reagent

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**WTOC1000SP\_00011**



1457491  
 ID: WTOC1000SP\_00011  
 Exp: 12/31/15 Ppdt: CLL  
 1000 ppm TOC standard

## Certificate of Analysis

### Organic Carbon Standard, 1000 ppm C

Lot Number: 2412908

Product Number: 1847

Manufacture Date: DEC 24, 2014

Expiration Date: DEC 2015

The certified value reported is the prepared value based upon the method of preparation of the material. The uncertainty in the prepared value is based upon the volumetric method of preparation.

| Name                     | CAS#      | Grade           |
|--------------------------|-----------|-----------------|
| Phosphoric Acid          | 7664-38-2 | ACS             |
| Water                    | 7732-18-6 | ACS/ASTM/USP/EP |
| Potassium Acid Phthalate | 877-24-7  | ACS Acidimetric |

| Test       | Specification    | Result   |
|------------|------------------|----------|
| Appearance | Colorless liquid | Passed   |
| Carbon (C) | 995-1005 ppm     | 1000 ppm |

| Specification  | Reference           |
|--|---------------------|
| Organic Carbon Stock Solution                                      | APHA (5310 B)       |
| Potassium Hydrogen Phthalate, Stock Solution                       | EPA (SW-846) (9060) |
| Potassium Hydrogen Phthalate, Stock Solution, 1000 mg Carbon/liter | EPA (415.1)         |
| Organic Carbon Solution, Standard (1 mL = 1 mg C)                  | ASTM (D 2579)       |

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

| Part Number | Size / Package Type | Shelf Life (Unopened Container) |
|-------------|---------------------|---------------------------------|
| 1847-2.5    | 10 L Cubitainer®    | 12 months                       |
| 1847-4      | 120 mL amber glass  | 12 months                       |
| 1847-82     | 1 L amber glass     | 12 months                       |
| 1847-5      | 20 L Cubitainer®    | 12 months                       |
| 1847-8      | 250 mL amber glass  | 12 months                       |
| 1847-1      | 4 L amber glass     | 12 months                       |
| 1847-16     | 500 mL amber glass  | 12 months                       |

Recommended Storage: 15°C - 30°C (59°F - 86°F)

*LaNelle Ohlhausen*

LaNelle Ohlhausen  
 Quality Assurance

*MLD 1-8-15  
 CU*

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

# Method 8260C

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

FORM II  
GC/MS VOA SURROGATE RECOVERY

Lab Name: TestAmerica Pittsburgh Job No.: 180-43791-1

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 # |
|------------------|------------------|--------|-------|-------|-------|
| RB-CORE          | 180-43791-1      | 108    | 91    | 116   | 91    |
| FB-CORE          | 180-43791-2      | 98     | 87    | 117   | 92    |
| TRIP BLANK       | 180-43791-7      | 103    | 91    | 116   | 95    |
|                  | MB 180-141065/5  | 103    | 87    | 120   | 93    |
|                  | LCS 180-141065/9 | 102    | 94    | 100   | 97    |

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

QC LIMITS  
80-120  
62-123  
80-120  
75-120

# Column to be used to flag recovery values

FORM III  
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Pittsburgh

Job No.: 180-43791-1

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

Matrix: Water Level: Low

Lab File ID: 4050909.D

Lab ID: LCS 180-141065/9

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

| COMPOUND                  | SPIKE<br>ADDED<br>(ug/L) | LCS<br>CONCENTRATION<br>(ug/L) | LCS<br>%<br>REC | QC<br>LIMITS<br>REC | # |
|---------------------------|--------------------------|--------------------------------|-----------------|---------------------|---|
| 1,1,1-Trichloroethane     | 40.0                     | 40.4                           | 101             | 69-134              |   |
| 1,1,2,2-Tetrachloroethane | 40.0                     | 29.9                           | 75              | 59-136              |   |
| 1,1,2-Trichloroethane     | 40.0                     | 31.5                           | 79              | 75-126              |   |
| 1,1-Dichloroethane        | 40.0                     | 38.3                           | 96              | 77-122              |   |
| 1,1-Dichloroethene        | 40.0                     | 38.2                           | 95              | 69-127              |   |
| 1,2-Dichlorobenzene       | 40.0                     | 36.8                           | 92              | 75-125              |   |
| 1,2-Dichloroethane        | 40.0                     | 35.8                           | 90              | 63-140              |   |
| 1,2-Dichloropropane       | 40.0                     | 36.6                           | 91              | 75-114              |   |
| 1,3-Dichlorobenzene       | 40.0                     | 40.9                           | 102             | 76-125              |   |
| 1,4-Dichlorobenzene       | 40.0                     | 38.1                           | 95              | 76-123              |   |
| Benzene                   | 40.0                     | 38.7                           | 97              | 80-120              |   |
| Bromoform                 | 40.0                     | 30.8                           | 77              | 49-137              |   |
| Bromomethane              | 40.0                     | 45.0                           | 112             | 45-150              |   |
| Carbon tetrachloride      | 40.0                     | 42.5                           | 106             | 63-139              |   |
| Chlorobenzene             | 40.0                     | 39.7                           | 99              | 83-120              |   |
| Chloroform                | 40.0                     | 38.1                           | 95              | 77-119              |   |
| Chloromethane             | 40.0                     | 40.5                           | 101             | 49-133              |   |
| Chlorodibromomethane      | 40.0                     | 35.9                           | 90              | 64-124              |   |
| cis-1,3-Dichloropropene   | 40.0                     | 34.7                           | 87              | 74-123              |   |
| Dichlorobromomethane      | 40.0                     | 39.3                           | 98              | 71-119              |   |
| Ethylbenzene              | 40.0                     | 41.8                           | 104             | 79-124              |   |
| Methylene Chloride        | 40.0                     | 35.9                           | 90              | 75-120              |   |
| Tetrachloroethene         | 40.0                     | 40.6                           | 101             | 78-126              |   |
| Toluene                   | 40.0                     | 39.4                           | 98              | 80-124              |   |
| trans-1,2-Dichloroethene  | 40.0                     | 37.5                           | 94              | 78-120              |   |
| trans-1,3-Dichloropropene | 40.0                     | 37.0                           | 93              | 63-122              |   |
| Trichloroethene           | 40.0                     | 39.6                           | 99              | 80-120              |   |
| Vinyl chloride            | 40.0                     | 38.6                           | 96              | 57-128              |   |
| Chloroethane              | 40.0                     | 44.2                           | 110             | 33-150              |   |

# Column to be used to flag recovery and RPD values

FORM IV  
GC/MS VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-43791-1  
 SDG No.: \_\_\_\_\_  
 Lab File ID: 4050905.D Lab Sample ID: MB 180-141065/5  
 Matrix: Water Heated Purge: (Y/N) N  
 Instrument ID: CHHP4 Date Analyzed: 05/09/2015 14:00  
 GC Column: DB-624 ID: 0.18 (mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

| CLIENT SAMPLE ID | LAB SAMPLE ID    | LAB<br>FILE ID | DATE ANALYZED    |
|------------------|------------------|----------------|------------------|
|                  | LCS 180-141065/9 | 4050909.D      | 05/09/2015 15:48 |
| FB-CORE          | 180-43791-2      | 4050914.D      | 05/09/2015 18:04 |
| TRIP BLANK       | 180-43791-7      | 4050915.D      | 05/09/2015 18:33 |
| RB-CORE          | 180-43791-1      | 4050916.D      | 05/09/2015 19:00 |

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

Lab Name: TestAmerica Pittsburgh Job No.: 180-43791-1  
 SDG No.: \_\_\_\_\_  
 Lab File ID: 4110301.D BFB Injection Date: 11/03/2014  
 Instrument ID: CHHP4 BFB Injection Time: 09:04  
 Analysis Batch No.: 123648

| M/E | ION ABUNDANCE CRITERIA             | % RELATIVE ABUNDANCE |
|-----|------------------------------------|----------------------|
| 50  | 15.0 - 40.0 % of mass 95           | 19.7                 |
| 75  | 30.0 - 60.0 % of mass 95           | 42.8                 |
| 95  | Base Peak, 100% relative abundance | 100.0                |
| 96  | 5.0 - 9.0 % of mass 95             | 7.2                  |
| 173 | Less than 2.0 % of mass 174        | 0.6 (0.6)1           |
| 174 | 50.0 - 120.00 % of mass 95         | 100.6                |
| 175 | 5.0 - 9.0 % of mass 174            | 7.0 (6.9)1           |
| 176 | 95.0 - 101.0 % of mass 174         | 96.2 (95.6)1         |
| 177 | 5.0 - 9.0 % of mass 176            | 6.4 (6.6)2           |

1-Value is % mass 174

2-Value is % mass 176

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

| CLIENT SAMPLE ID | LAB SAMPLE ID     | LAB FILE ID | DATE ANALYZED | TIME ANALYZED |
|------------------|-------------------|-------------|---------------|---------------|
|                  | IC 180-123648/4   | 4110304.D   | 11/03/2014    | 12:22         |
|                  | IC 180-123648/5   | 4110305.D   | 11/03/2014    | 12:49         |
|                  | IC 180-123648/6   | 4110306.D   | 11/03/2014    | 13:15         |
|                  | ICIS 180-123648/7 | 4110307.D   | 11/03/2014    | 13:42         |
|                  | IC 180-123648/9   | 4110309.D   | 11/03/2014    | 14:35         |
|                  | IC 180-123648/10  | 4110310.D   | 11/03/2014    | 15:02         |
|                  | IC 180-123648/12  | 4110312.D   | 11/03/2014    | 16:24         |



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

Lab Name: TestAmerica Pittsburgh Job No.: 180-43791-1  
 SDG No.: \_\_\_\_\_  
 Lab File ID: 4050901.D BFB Injection Date: 05/09/2015  
 Instrument ID: CHHP4 BFB Injection Time: 11:24  
 Analysis Batch No.: 141065

| M/E | ION ABUNDANCE CRITERIA             | % RELATIVE ABUNDANCE |
|-----|------------------------------------|----------------------|
| 50  | 15.0 - 40.0 % of mass 95           | 25.0                 |
| 75  | 30.0 - 60.0 % of mass 95           | 52.6                 |
| 95  | Base Peak, 100% relative abundance | 100.0                |
| 96  | 5.0 - 9.0 % of mass 95             | 6.4                  |
| 173 | Less than 2.0 % of mass 174        | 0.8 (1.1)1           |
| 174 | 50.0 - 120.00 % of mass 95         | 76.4                 |
| 175 | 5.0 - 9.0 % of mass 174            | 5.7 (7.5)1           |
| 176 | 95.0 - 101.0 % of mass 174         | 73.3 (96.0)1         |
| 177 | 5.0 - 9.0 % of mass 176            | 5.0 (6.9)2           |

1-Value is % mass 174

2-Value is % mass 176

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

| CLIENT SAMPLE ID | LAB SAMPLE ID      | LAB FILE ID | DATE ANALYZED | TIME ANALYZED |
|------------------|--------------------|-------------|---------------|---------------|
|                  | CCVIS 180-141065/2 | 4050902.D   | 05/09/2015    | 12:04         |
|                  | CCV 180-141065/3   | 4050903.D   | 05/09/2015    | 12:46         |
|                  | MB 180-141065/5    | 4050905.D   | 05/09/2015    | 14:00         |
|                  | LCS 180-141065/9   | 4050909.D   | 05/09/2015    | 15:48         |
| FB-CORE          | 180-43791-2        | 4050914.D   | 05/09/2015    | 18:04         |
| TRIP BLANK       | 180-43791-7        | 4050915.D   | 05/09/2015    | 18:33         |
| RB-CORE          | 180-43791-1        | 4050916.D   | 05/09/2015    | 19:00         |

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

Lab Name: TestAmerica Pittsburgh Job No.: 180-43791-1  
 SDG No.: \_\_\_\_\_  
 Sample No.: CCVIS 180-141065/2 Date Analyzed: 05/09/2015 12:04  
 Instrument ID: CHHP4 GC Column: DB-624 ID: 0.18 (mm)  
 Lab File ID (Standard): 4050902.D Heated Purge: (Y/N) N  
 Calibration ID: 23592

|                  | TBA              |        | FB     |        | CBZ    |        |      |
|------------------|------------------|--------|--------|--------|--------|--------|------|
|                  | AREA #           | RT #   | AREA # | RT #   | AREA # | RT #   |      |
| 12/24 HOUR STD   | 219461           | 3.20   | 742593 | 6.25   | 179904 | 9.45   |      |
| UPPER LIMIT      |                  |        |        |        |        |        |      |
| LOWER LIMIT      |                  |        |        |        |        |        |      |
| LAB SAMPLE ID    | CLIENT SAMPLE ID |        |        |        |        |        |      |
| CCV 180-141065/3 |                  | 131512 | 3.13   | 846197 | 6.25   | 182246 | 9.45 |
| MB 180-141065/5  |                  | 147639 | 3.09   | 979359 | 6.26   | 200301 | 9.45 |
| LCS 180-141065/9 |                  | 162242 | 3.16   | 923359 | 6.25   | 215803 | 9.45 |
| 180-43791-2      | FB-CORE          | 155347 | 3.10   | 948796 | 6.26   | 188020 | 9.45 |
| 180-43791-7      | TRIP BLANK       | 164078 | 3.10   | 874982 | 6.26   | 180940 | 9.45 |
| 180-43791-1      | RB-CORE          | 143979 | 3.10   | 859351 | 6.26   | 180218 | 9.45 |

# 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.: 180-43791-1  
 SDG No.: \_\_\_\_\_  
 Sample No.: CCVIS 180-141065/2 Date Analyzed: 05/09/2015 12:04  
 Instrument ID: CHHP4 GC Column: DB-624 ID: 0.18 (mm)  
 Lab File ID (Standard): 4050902.D Heated Purge: (Y/N) N  
 Calibration ID: 23592

|                  |                  | DCB    |       |        |      |        |      |
|------------------|------------------|--------|-------|--------|------|--------|------|
|                  |                  | AREA # | RT #  | AREA # | RT # | AREA # | RT # |
| 12/24 HOUR STD   |                  | 237433 | 11.80 |        |      |        |      |
| UPPER LIMIT      |                  |        |       |        |      |        |      |
| LOWER LIMIT      |                  |        |       |        |      |        |      |
| LAB SAMPLE ID    | CLIENT SAMPLE ID |        |       |        |      |        |      |
| CCV 180-141065/3 |                  | 206771 | 11.80 |        |      |        |      |
| MB 180-141065/5  |                  | 202493 | 11.80 |        |      |        |      |
| LCS 180-141065/9 |                  | 283557 | 11.80 |        |      |        |      |
| 180-43791-2      | FB-CORE          | 193087 | 11.80 |        |      |        |      |
| 180-43791-7      | TRIP BLANK       | 188451 | 11.80 |        |      |        |      |
| 180-43791-1      | RB-CORE          | 178097 | 11.80 |        |      |        |      |

# Column used to flag values outside QC limits

FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-43791-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: RB-CORE Lab Sample ID: 180-43791-1  
 Matrix: Water Lab File ID: 4050916.D  
 Analysis Method: 8260C Date Collected: 05/05/2015 15:30  
 Sample wt/vol: 5 (mL) Date Analyzed: 05/09/2015 19:00  
 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.: 141065 Units: ug/L

| CAS NO.    | COMPOUND NAME             | RESULT | Q   | RL  | MDL  |
|------------|---------------------------|--------|-----|-----|------|
| 71-55-6    | 1,1,1-Trichloroethane     | ND     |     | 5.0 | 1.0  |
| 79-34-5    | 1,1,2,2-Tetrachloroethane | ND     |     | 5.0 | 0.93 |
| 79-00-5    | 1,1,2-Trichloroethane     | ND     |     | 5.0 | 1.2  |
| 75-34-3    | 1,1-Dichloroethane        | ND     |     | 5.0 | 1.0  |
| 75-35-4    | 1,1-Dichloroethene        | ND     |     | 5.0 | 1.1  |
| 95-50-1    | 1,2-Dichlorobenzene       | ND     |     | 5.0 | 0.68 |
| 107-06-2   | 1,2-Dichloroethane        | ND     |     | 5.0 | 0.96 |
| 78-87-5    | 1,2-Dichloropropane       | ND     |     | 5.0 | 1.3  |
| 541-73-1   | 1,3-Dichlorobenzene       | ND     |     | 5.0 | 0.51 |
| 106-46-7   | 1,4-Dichlorobenzene       | ND     |     | 5.0 | 0.53 |
| 110-75-8   | 2-Chloroethyl vinyl ether | ND     |     | 10  | 1.9  |
| 107-02-8   | Acrolein                  | ND     |     | 100 | 5.7  |
| 107-13-1   | Acrylonitrile             | ND     |     | 50  | 9.0  |
| 71-43-2    | Benzene                   | ND     |     | 5.0 | 0.99 |
| 75-25-2    | Bromoform                 | ND     |     | 5.0 | 1.1  |
| 74-83-9    | Bromomethane              | ND     |     | 5.0 | 1.6  |
| 56-23-5    | Carbon tetrachloride      | ND     |     | 5.0 | 1.1  |
| 108-90-7   | Chlorobenzene             | ND     |     | 5.0 | 0.53 |
| 67-66-3    | Chloroform                | ND     |     | 5.0 | 1.0  |
| 74-87-3    | Chloromethane             | ND     |     | 5.0 | 1.4  |
| 124-48-1   | Chlorodibromomethane      | ND     |     | 5.0 | 0.65 |
| 10061-01-5 | cis-1,3-Dichloropropene   | ND     |     | 5.0 | 0.73 |
| 75-27-4    | Dichlorobromomethane      | ND     |     | 5.0 | 0.93 |
| 100-41-4   | Ethylbenzene              | ND     |     | 5.0 | 0.62 |
| 75-09-2    | Methylene Chloride        | 3.6    | J B | 5.0 | 1.1  |
| 127-18-4   | Tetrachloroethene         | ND     |     | 5.0 | 0.82 |
| 108-88-3   | Toluene                   | ND     |     | 5.0 | 0.85 |
| 156-60-5   | trans-1,2-Dichloroethene  | ND     |     | 5.0 | 0.75 |
| 10061-02-6 | trans-1,3-Dichloropropene | ND     |     | 5.0 | 0.58 |
| 79-01-6    | Trichloroethene           | ND     |     | 5.0 | 0.80 |
| 75-01-4    | Vinyl chloride            | ND     |     | 5.0 | 1.3  |
| 75-00-3    | Chloroethane              | ND     |     | 5.0 | 0.75 |

FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-43791-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: RB-CORE Lab Sample ID: 180-43791-1  
 Matrix: Water Lab File ID: 4050916.D  
 Analysis Method: 8260C Date Collected: 05/05/2015 15:30  
 Sample wt/vol: 5 (mL) Date Analyzed: 05/09/2015 19:00  
 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.: 141065 Units: ug/L

| CAS NO.    | SURROGATE                    | %REC | Q | LIMITS |
|------------|------------------------------|------|---|--------|
| 17060-07-0 | 1,2-Dichloroethane-d4 (Surr) | 91   |   | 62-123 |
| 460-00-4   | 4-Bromofluorobenzene (Surr)  | 91   |   | 75-120 |
| 1868-53-7  | Dibromofluoromethane (Surr)  | 108  |   | 80-120 |
| 2037-26-5  | Toluene-d8 (Surr)            | 116  |   | 80-120 |

TestAmerica Pittsburgh  
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHHP4\20150509-6844.b\4050916.D  
 Lims ID: 180-43791-I-1 Lab Sample ID: 180-43791-1  
 Client ID: RB-CORE  
 Sample Type: Client  
 Inject. Date: 09-May-2015 19:00:30 ALS Bottle#: 23 Worklist Smp#: 16  
 Purge Vol: 5.000 mL Dil. Factor: 1.0000  
 Sample Info: 180-43791-I-1  
 Misc. Info.: 180-0006844-016  
 Operator ID: 034635 Instrument ID: CHHP4  
 Method: \\PITCHROM\ChromData\CHHP4\20150509-6844.b\MSVOA\_CHHP4.m  
 Limit Group: VOA 8260C ICAL  
 Last Update: 10-May-2015 11:35:24 Calib Date: 27-Apr-2015 13:50:30  
 Integrator: RTE ID Type: Deconvolution ID  
 Quant Method: Internal Standard Quant By: Initial Calibration  
 Last ICal File: \\PITCHROM\ChromData\CHHP4\20150427-6642.b\4042710.D  
 Column 1 : DB-624 ( 0.18 mm) Det: MS SCAN  
 Process Host: XAWRK017

First Level Reviewer: journeytp

Date: 10-May-2015 10:57:58

| Compound                        | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q  | Response | OnCol Amt ng | Flags |
|---------------------------------|-----|-----------|---------------|---------------|----|----------|--------------|-------|
| * 1 TBA-d9 (IS)                 | 65  | 3.101     | 3.144         | -0.043        | 95 | 143979   | 5000.0       |       |
| * 2 Fluorobenzene (IS)          | 96  | 6.259     | 6.259         | -0.001        | 97 | 859351   | 250.0        |       |
| * 3 Chlorobenzene-d5            | 119 | 9.446     | 9.446         | 0.000         | 90 | 180218   | 250.0        |       |
| * 4 1,4-Dichlorobenzene-d4      | 152 | 11.801    | 11.801        | 0.000         | 97 | 178097   | 250.0        |       |
| \$ 5 Dibromofluoromethane (Surr | 113 | 5.492     | 5.492         | 0.000         | 94 | 192203   | 271.2        |       |
| \$ 6 1,2-Dichloroethane-d4 (Sur | 65  | 5.887     | 5.882         | 0.005         | 95 | 179543   | 227.6        |       |
| \$ 7 Toluene-d8 (Surr)          | 98  | 7.980     | 7.980         | 0.000         | 95 | 832675   | 290.4        |       |
| \$ 8 4-Bromofluorobenzene (Surr | 95  | 10.651    | 10.651        | 0.000         | 90 | 224274   | 228.0        |       |
| 11 Chloromethane                | 50  |           | 1.319         |               |    |          | ND           |       |
| 12 Vinyl chloride               | 62  |           | 1.410         |               |    |          | ND           |       |
| 14 Bromomethane                 | 94  |           | 1.660         |               |    |          | ND           |       |
| 15 Chloroethane                 | 64  |           | 1.739         |               |    |          | ND           |       |
| 20 Acrolein                     | 56  |           | 2.359         |               |    |          | ND           |       |
| 21 1,1-Dichloroethene           | 96  |           | 2.414         |               |    |          | ND           |       |
| 30 Methylene Chloride           | 84  | 2.986     | 2.992         | -0.006        | 95 | 32386    | 17.8         |       |
| 33 trans-1,2-Dichloroethene     | 96  |           | 3.339         |               |    |          | ND           |       |
| 32 Acrylonitrile                | 53  |           | 3.314         |               |    |          | ND           |       |
| 36 1,1-Dichloroethane           | 63  |           | 3.965         |               |    |          | ND           |       |
| 49 Chloroform                   | 83  |           | 5.291         |               |    |          | ND           |       |
| 50 1,1,1-Trichloroethane        | 97  |           | 5.437         |               |    |          | ND           |       |
| 53 Carbon tetrachloride         | 117 |           | 5.620         |               |    |          | ND           |       |
| 54 Benzene                      | 78  |           | 5.875         |               |    |          | ND           |       |
| 55 1,2-Dichloroethane           | 62  |           | 5.985         |               |    |          | ND           |       |
| 61 Trichloroethene              | 130 |           | 6.666         |               |    |          | ND           |       |
| 64 1,2-Dichloropropane          | 63  |           | 6.952         |               |    |          | ND           |       |
| 68 Dichlorobromomethane         | 83  |           | 7.262         |               |    |          | ND           |       |
| 70 2-Chloroethyl vinyl ether    | 63  |           | 7.597         |               |    |          | ND           |       |
| 74 trans-1,3-Dichloropropene    | 75  |           | 7.725         |               |    |          | ND           |       |
| 73 Toluene                      | 91  |           | 8.047         |               |    |          | ND           |       |
| 71 cis-1,3-Dichloropropene      | 75  |           | 8.327         |               |    |          | ND           |       |
| 76 1,1,2-Trichloroethane        | 97  |           | 8.516         |               |    |          | ND           |       |

| Compound                     | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | OnCol Amt ng | Flags |
|------------------------------|-----|-----------|---------------|---------------|---|----------|--------------|-------|
| 77 Tetrachloroethene         | 164 |           | 8.558         |               |   |          |              | ND    |
| 81 Chlorodibromomethane      | 129 |           | 8.881         |               |   |          |              | ND    |
| 84 Chlorobenzene             | 112 |           | 9.477         |               |   |          |              | ND    |
| 86 Ethylbenzene              | 106 |           | 9.592         |               |   |          |              | ND    |
| 90 Bromoform                 | 173 |           | 10.298        |               |   |          |              | ND    |
| 93 1,1,2,2-Tetrachloroethane | 83  |           | 10.803        |               |   |          |              | ND    |
| 105 1,3-Dichlorobenzene      | 146 |           | 11.716        |               |   |          |              | ND    |
| 107 1,4-Dichlorobenzene      | 146 |           | 11.825        |               |   |          |              | ND    |
| 111 1,2-Dichlorobenzene      | 146 |           | 12.172        |               |   |          |              | ND    |

**Reagents:**

VOA8260INT\_00032

Amount Added: 10.00

Units: uL

Run Reagent

VOA8260SURR\_00035

Amount Added: 10.00

Units: uL

Run Reagent

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP4\20150509-6844.b\4050916.D

Injection Date: 09-May-2015 19:00:30

Instrument ID: CHHP4

Operator ID: 034635

Lims ID: 180-43791-I-1

Lab Sample ID: 180-43791-1

Worklist Smp#: 16

Client ID: RB-CORE

Purge Vol: 5.000 mL

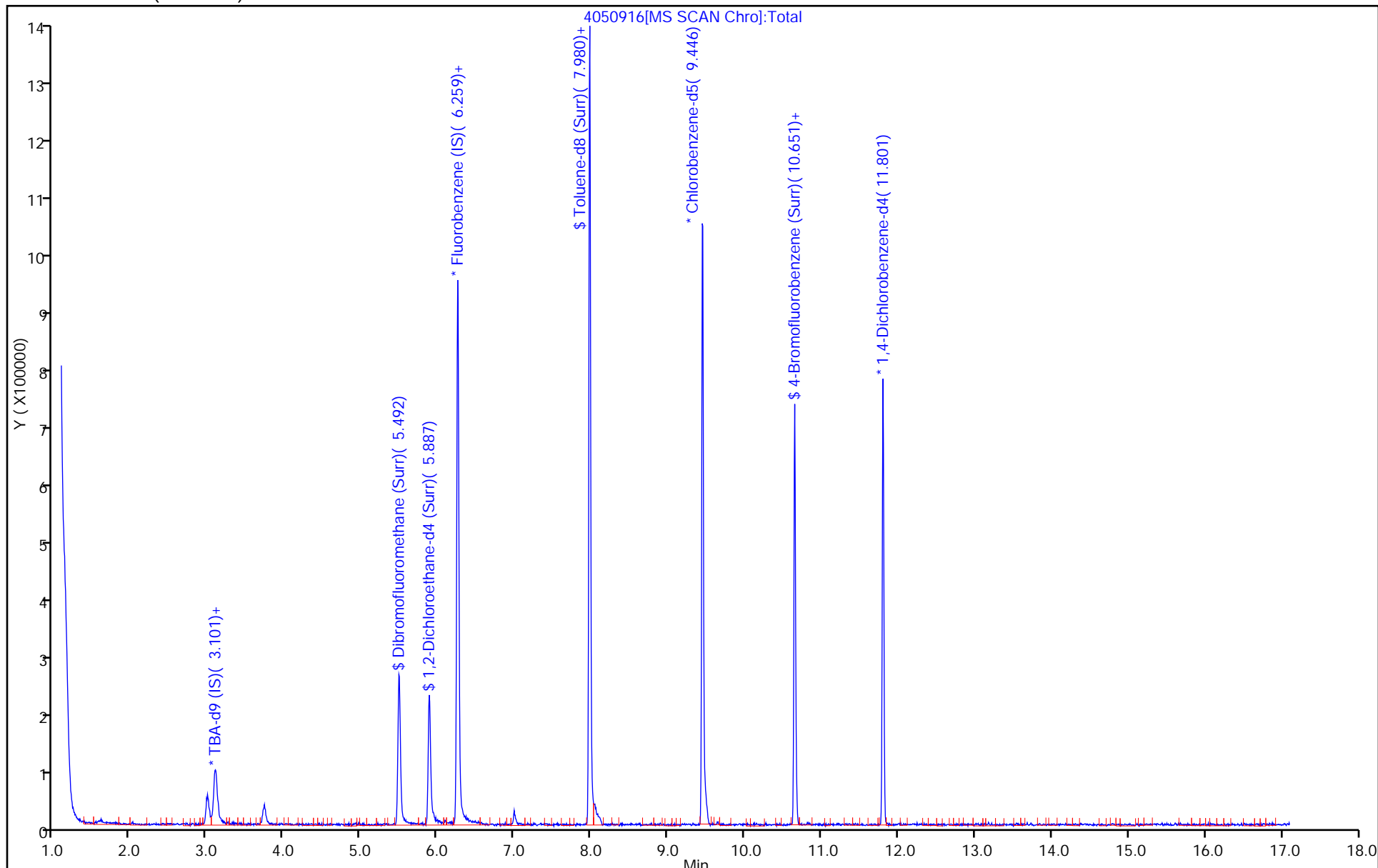
Dil. Factor: 1.0000

ALS Bottle#: 23

Method: MSVOA\_CHHP4

Limit Group: VOA 8260C ICAL

Column: DB-624 (0.18 mm)





TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP4\20150509-6844.b\4050916.D

Injection Date: 09-May-2015 19:00:30

Instrument ID: CHHP4

Lims ID: 180-43791-I-1

Lab Sample ID: 180-43791-1

Client ID: RB-CORE

Operator ID: 034635

ALS Bottle#: 23

Worklist Smp#: 16

Purge Vol: 5.000 mL

Dil. Factor: 1.0000

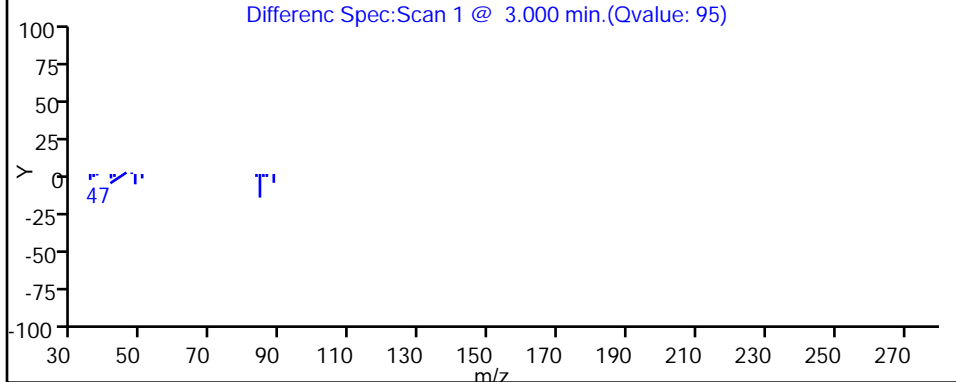
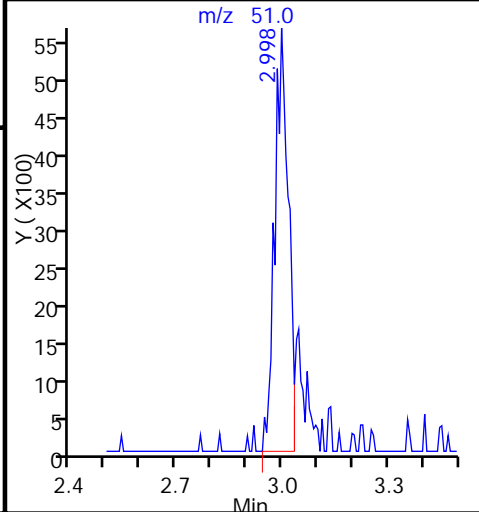
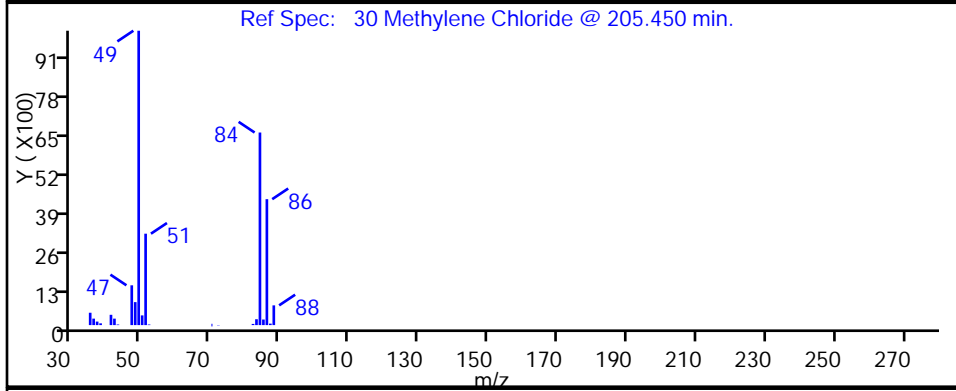
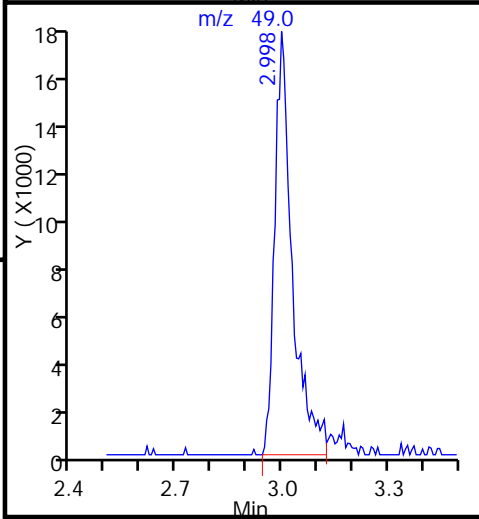
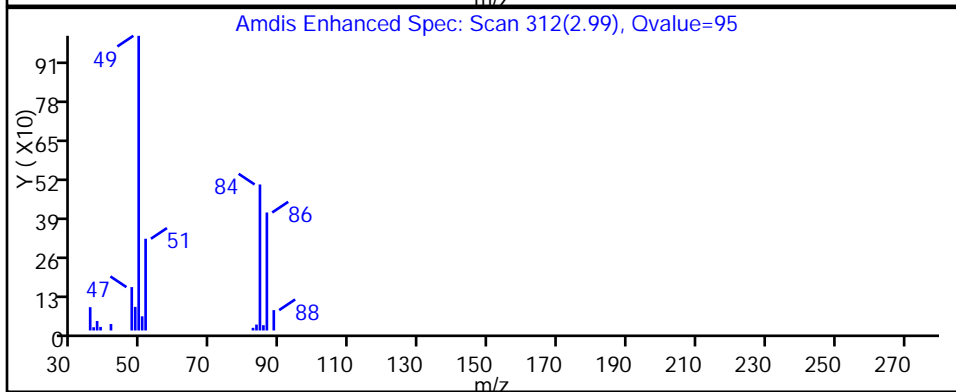
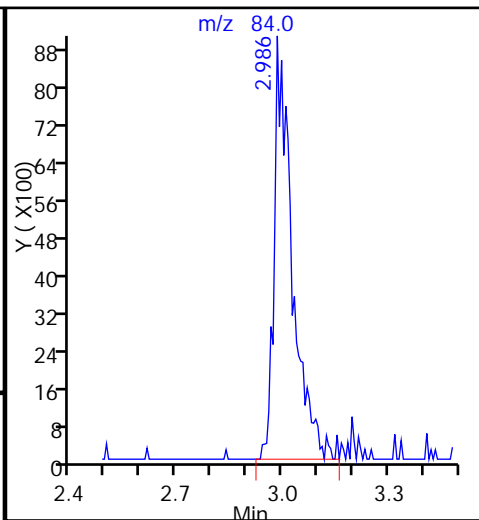
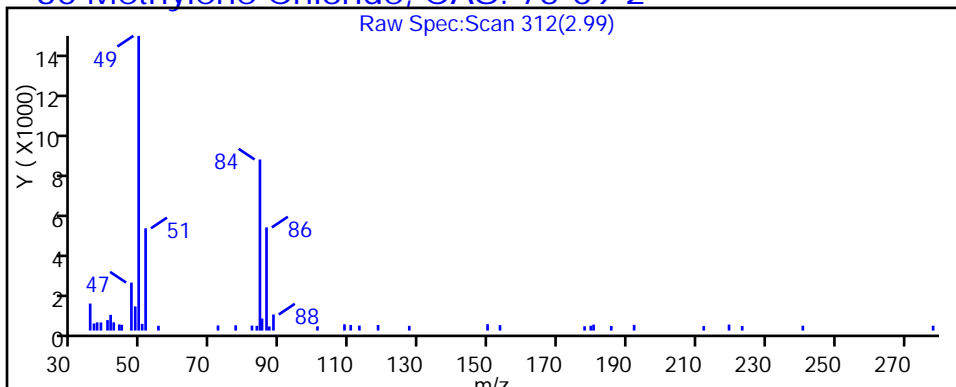
Method: MSVOA\_CHHP4

Limit Group: VOA 8260C ICAL

Column: DB-624 (0.18 mm)

Detector: MS SCAN

30 Methylene Chloride, CAS: 75-09-2



FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-43791-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: FB-CORE Lab Sample ID: 180-43791-2  
 Matrix: Water Lab File ID: 4050914.D  
 Analysis Method: 8260C Date Collected: 05/05/2015 15:40  
 Sample wt/vol: 5(mL) Date Analyzed: 05/09/2015 18:04  
 Soil Aliquot Vol: \_\_\_\_\_ Dilution Factor: 1  
 Soil Extract Vol.: \_\_\_\_\_ GC Column: DB-624 ID: 0.18(mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Low  
 Analysis Batch No.: 141065 Units: ug/L

| CAS NO.    | COMPOUND NAME             | RESULT | Q   | RL  | MDL  |
|------------|---------------------------|--------|-----|-----|------|
| 71-55-6    | 1,1,1-Trichloroethane     | ND     |     | 5.0 | 1.0  |
| 79-34-5    | 1,1,2,2-Tetrachloroethane | ND     |     | 5.0 | 0.93 |
| 79-00-5    | 1,1,2-Trichloroethane     | ND     |     | 5.0 | 1.2  |
| 75-34-3    | 1,1-Dichloroethane        | ND     |     | 5.0 | 1.0  |
| 75-35-4    | 1,1-Dichloroethene        | ND     |     | 5.0 | 1.1  |
| 95-50-1    | 1,2-Dichlorobenzene       | ND     |     | 5.0 | 0.68 |
| 107-06-2   | 1,2-Dichloroethane        | ND     |     | 5.0 | 0.96 |
| 78-87-5    | 1,2-Dichloropropane       | ND     |     | 5.0 | 1.3  |
| 541-73-1   | 1,3-Dichlorobenzene       | ND     |     | 5.0 | 0.51 |
| 106-46-7   | 1,4-Dichlorobenzene       | ND     |     | 5.0 | 0.53 |
| 110-75-8   | 2-Chloroethyl vinyl ether | ND     |     | 10  | 1.9  |
| 107-02-8   | Acrolein                  | ND     |     | 100 | 5.7  |
| 107-13-1   | Acrylonitrile             | ND     |     | 50  | 9.0  |
| 71-43-2    | Benzene                   | ND     |     | 5.0 | 0.99 |
| 75-25-2    | Bromoform                 | ND     |     | 5.0 | 1.1  |
| 74-83-9    | Bromomethane              | ND     |     | 5.0 | 1.6  |
| 56-23-5    | Carbon tetrachloride      | ND     |     | 5.0 | 1.1  |
| 108-90-7   | Chlorobenzene             | ND     |     | 5.0 | 0.53 |
| 67-66-3    | Chloroform                | ND     |     | 5.0 | 1.0  |
| 74-87-3    | Chloromethane             | ND     |     | 5.0 | 1.4  |
| 124-48-1   | Chlorodibromomethane      | ND     |     | 5.0 | 0.65 |
| 10061-01-5 | cis-1,3-Dichloropropene   | ND     |     | 5.0 | 0.73 |
| 75-27-4    | Dichlorobromomethane      | ND     |     | 5.0 | 0.93 |
| 100-41-4   | Ethylbenzene              | ND     |     | 5.0 | 0.62 |
| 75-09-2    | Methylene Chloride        | 3.5    | J B | 5.0 | 1.1  |
| 127-18-4   | Tetrachloroethene         | ND     |     | 5.0 | 0.82 |
| 108-88-3   | Toluene                   | ND     |     | 5.0 | 0.85 |
| 156-60-5   | trans-1,2-Dichloroethene  | ND     |     | 5.0 | 0.75 |
| 10061-02-6 | trans-1,3-Dichloropropene | ND     |     | 5.0 | 0.58 |
| 79-01-6    | Trichloroethene           | ND     |     | 5.0 | 0.80 |
| 75-01-4    | Vinyl chloride            | ND     |     | 5.0 | 1.3  |
| 75-00-3    | Chloroethane              | ND     |     | 5.0 | 0.75 |

FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-43791-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: FB-CORE Lab Sample ID: 180-43791-2  
 Matrix: Water Lab File ID: 4050914.D  
 Analysis Method: 8260C Date Collected: 05/05/2015 15:40  
 Sample wt/vol: 5 (mL) Date Analyzed: 05/09/2015 18:04  
 Soil Aliquot Vol: \_\_\_\_\_ Dilution Factor: 1  
 Soil Extract Vol.: \_\_\_\_\_ GC Column: DB-624 ID: 0.18 (mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Low  
 Analysis Batch No.: 141065 Units: ug/L

| CAS NO.    | SURROGATE                    | %REC | Q | LIMITS |
|------------|------------------------------|------|---|--------|
| 17060-07-0 | 1,2-Dichloroethane-d4 (Surr) | 87   |   | 62-123 |
| 460-00-4   | 4-Bromofluorobenzene (Surr)  | 92   |   | 75-120 |
| 1868-53-7  | Dibromofluoromethane (Surr)  | 98   |   | 80-120 |
| 2037-26-5  | Toluene-d8 (Surr)            | 117  |   | 80-120 |

TestAmerica Pittsburgh  
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHHP4\20150509-6844.b\4050914.D  
 Lims ID: 180-43791-I-2 Lab Sample ID: 180-43791-2  
 Client ID: FB-CORE  
 Sample Type: Client  
 Inject. Date: 09-May-2015 18:04:30 ALS Bottle#: 21 Worklist Smp#: 14  
 Purge Vol: 5.000 mL Dil. Factor: 1.0000  
 Sample Info: 180-43791-I-1  
 Misc. Info.: 180-0006844-014  
 Operator ID: 034635 Instrument ID: CHHP4  
 Method: \\PITCHROM\ChromData\CHHP4\20150509-6844.b\MSVOA\_CHHP4.m  
 Limit Group: VOA 8260C ICAL  
 Last Update: 10-May-2015 11:35:24 Calib Date: 27-Apr-2015 13:50:30  
 Integrator: RTE ID Type: Deconvolution ID  
 Quant Method: Internal Standard Quant By: Initial Calibration  
 Last ICal File: \\PITCHROM\ChromData\CHHP4\20150427-6642.b\4042710.D  
 Column 1 : DB-624 ( 0.18 mm) Det: MS SCAN  
 Process Host: XAWRK017

First Level Reviewer: journey Date: 10-May-2015 10:55:31

| Compound                        | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q  | Response | OnCol Amt ng | Flags |
|---------------------------------|-----|-----------|---------------|---------------|----|----------|--------------|-------|
| * 1 TBA-d9 (IS)                 | 65  | 3.101     | 3.144         | -0.043        | 97 | 155347   | 5000.0       |       |
| * 2 Fluorobenzene (IS)          | 96  | 6.258     | 6.259         | -0.001        | 97 | 948796   | 250.0        |       |
| * 3 Chlorobenzene-d5            | 119 | 9.452     | 9.446         | 0.006         | 88 | 188020   | 250.0        |       |
| * 4 1,4-Dichlorobenzene-d4      | 152 | 11.800    | 11.801        | -0.001        | 97 | 193087   | 250.0        |       |
| \$ 5 Dibromofluoromethane (Surr | 113 | 5.492     | 5.492         | 0.000         | 93 | 191168   | 244.3        |       |
| \$ 6 1,2-Dichloroethane-d4 (Sur | 65  | 5.887     | 5.882         | 0.005         | 94 | 189075   | 217.0        |       |
| \$ 7 Toluene-d8 (Surr)          | 98  | 7.980     | 7.980         | 0.000         | 94 | 874685   | 292.4        |       |
| \$ 8 4-Bromofluorobenzene (Surr | 95  | 10.650    | 10.651        | -0.001        | 90 | 236769   | 230.7        |       |
| 11 Chloromethane                | 50  |           | 1.319         |               |    |          | ND           |       |
| 12 Vinyl chloride               | 62  |           | 1.410         |               |    |          | ND           |       |
| 14 Bromomethane                 | 94  |           | 1.660         |               |    |          | ND           |       |
| 15 Chloroethane                 | 64  |           | 1.739         |               |    |          | ND           |       |
| 20 Acrolein                     | 56  |           | 2.359         |               |    |          | ND           |       |
| 21 1,1-Dichloroethene           | 96  |           | 2.414         |               |    |          | ND           |       |
| 30 Methylene Chloride           | 84  | 3.010     | 2.992         | 0.018         | 94 | 35490    | 17.6         |       |
| 33 trans-1,2-Dichloroethene     | 96  |           | 3.339         |               |    |          | ND           |       |
| 32 Acrylonitrile                | 53  |           | 3.314         |               |    |          | ND           |       |
| 36 1,1-Dichloroethane           | 63  |           | 3.965         |               |    |          | ND           |       |
| 49 Chloroform                   | 83  | 5.309     | 5.291         | 0.018         | 1  | 2151     | 1.29         | M     |
| 50 1,1,1-Trichloroethane        | 97  |           | 5.437         |               |    |          | ND           |       |
| 53 Carbon tetrachloride         | 117 |           | 5.620         |               |    |          | ND           |       |
| 54 Benzene                      | 78  |           | 5.875         |               |    |          | ND           |       |
| 55 1,2-Dichloroethane           | 62  |           | 5.985         |               |    |          | ND           |       |
| 61 Trichloroethene              | 130 |           | 6.666         |               |    |          | ND           |       |
| 64 1,2-Dichloropropane          | 63  |           | 6.952         |               |    |          | ND           |       |
| 68 Dichlorobromomethane         | 83  |           | 7.262         |               |    |          | ND           |       |
| 70 2-Chloroethyl vinyl ether    | 63  |           | 7.597         |               |    |          | ND           |       |
| 74 trans-1,3-Dichloropropene    | 75  |           | 7.725         |               |    |          | ND           |       |
| 73 Toluene                      | 91  |           | 8.047         |               |    |          | ND           |       |
| 71 cis-1,3-Dichloropropene      | 75  |           | 8.327         |               |    |          | ND           |       |
| 76 1,1,2-Trichloroethane        | 97  |           | 8.516         |               |    |          | ND           |       |

Data File: \\PITCHROM\ChromData\CHHP4\20150509-6844.b\4050914.D

| Compound                     | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | OnCol Amt ng | Flags |
|------------------------------|-----|-----------|---------------|---------------|---|----------|--------------|-------|
| 77 Tetrachloroethene         | 164 |           | 8.558         |               |   |          |              | ND    |
| 81 Chlorodibromomethane      | 129 |           | 8.881         |               |   |          |              | ND    |
| 84 Chlorobenzene             | 112 |           | 9.477         |               |   |          |              | ND    |
| 86 Ethylbenzene              | 106 |           | 9.592         |               |   |          |              | ND    |
| 90 Bromoform                 | 173 |           | 10.298        |               |   |          |              | ND    |
| 93 1,1,2,2-Tetrachloroethane | 83  |           | 10.803        |               |   |          |              | ND    |
| 105 1,3-Dichlorobenzene      | 146 |           | 11.716        |               |   |          |              | ND    |
| 107 1,4-Dichlorobenzene      | 146 |           | 11.825        |               |   |          |              | ND    |
| 111 1,2-Dichlorobenzene      | 146 |           | 12.172        |               |   |          |              | ND    |

### QC Flag Legend

Review Flags

M - Manually Integrated

### Reagents:

VOA8260INT\_00032

Amount Added: 10.00

Units: uL

Run Reagent

VOA8260SURR\_00035

Amount Added: 10.00

Units: uL

Run Reagent

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP4\20150509-6844.b\4050914.D

Injection Date: 09-May-2015 18:04:30

Instrument ID: CHHP4

Operator ID: 034635

Lims ID: 180-43791-I-2

Lab Sample ID: 180-43791-2

Worklist Smp#: 14

Client ID: FB-CORE

Purge Vol: 5.000 mL

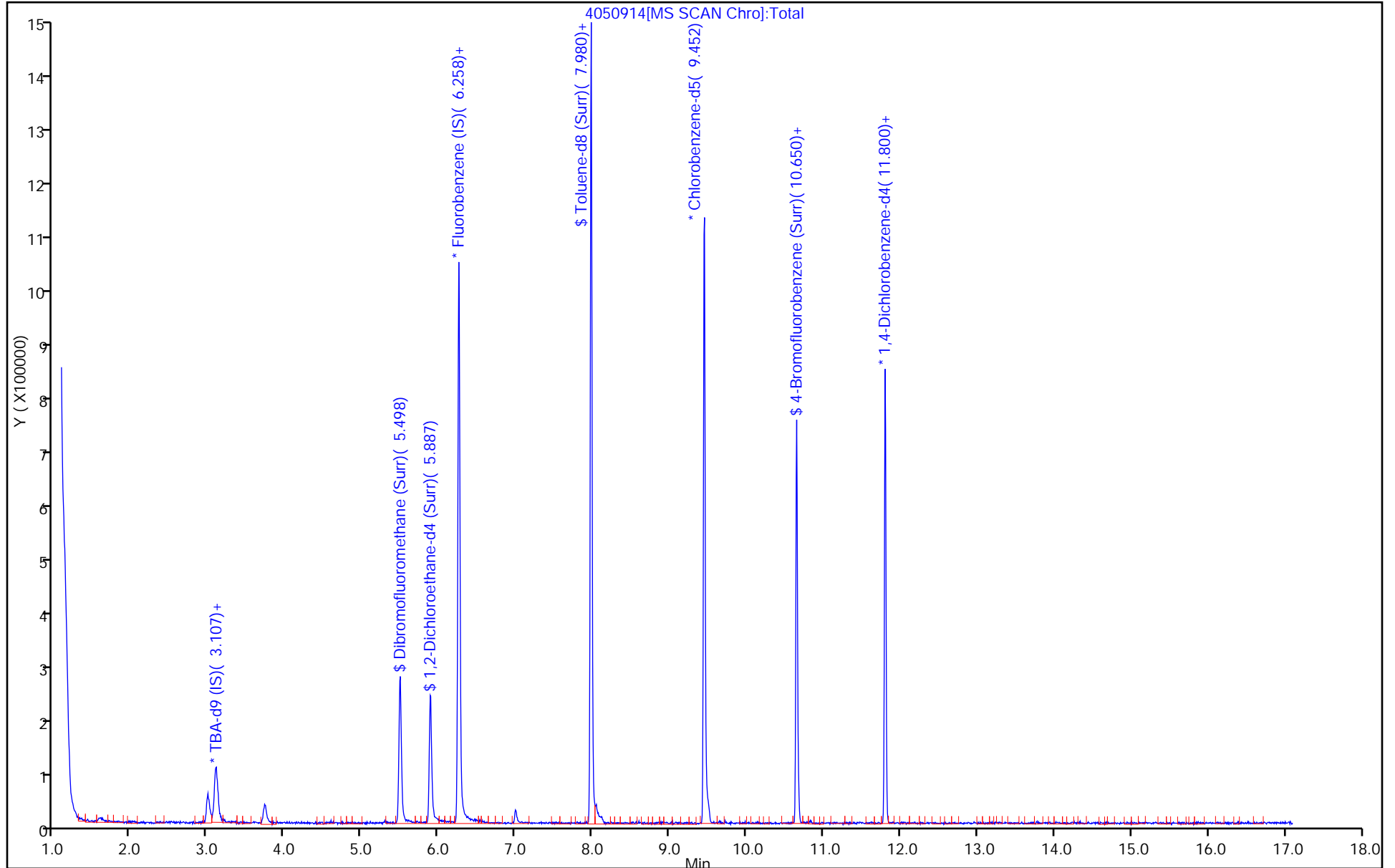
Dil. Factor: 1.0000

ALS Bottle#: 21

Method: MSVOA\_CHHP4

Limit Group: VOA 8260C ICAL

Column: DB-624 (0.18 mm)



TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP4\20150509-6844.b\4050914.D

Injection Date: 09-May-2015 18:04:30

Instrument ID: CHHP4

Lims ID: 180-43791-I-2

Lab Sample ID: 180-43791-2

Client ID: FB-CORE

Operator ID: 034635

ALS Bottle#: 21

Worklist Smp#: 14

Purge Vol: 5.000 mL

Dil. Factor: 1.0000

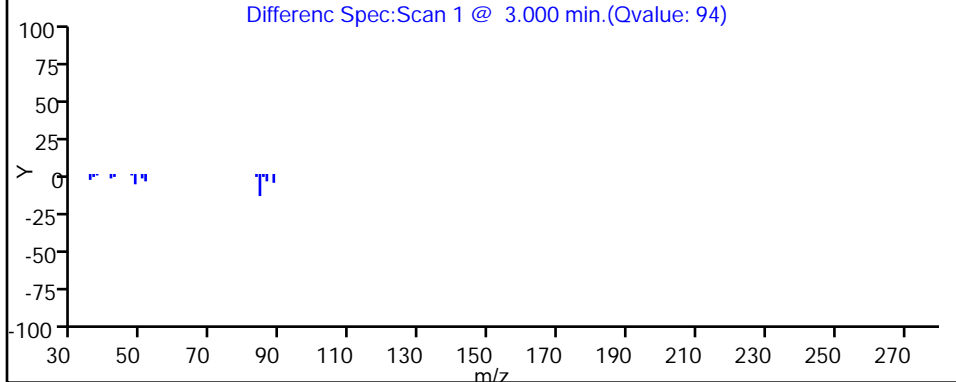
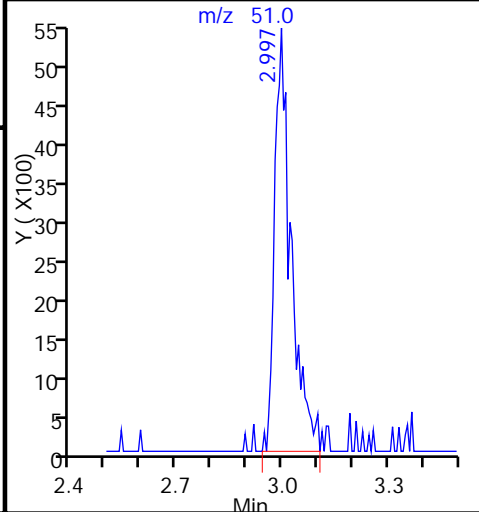
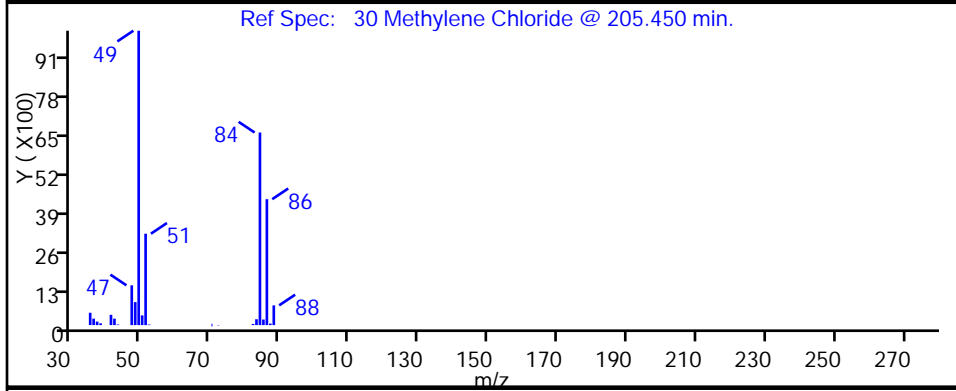
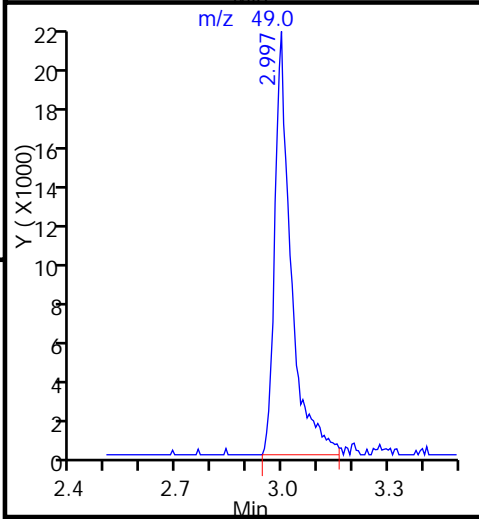
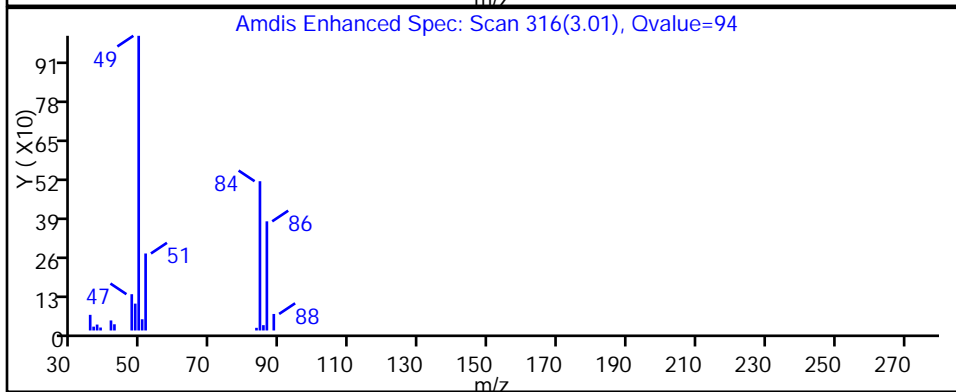
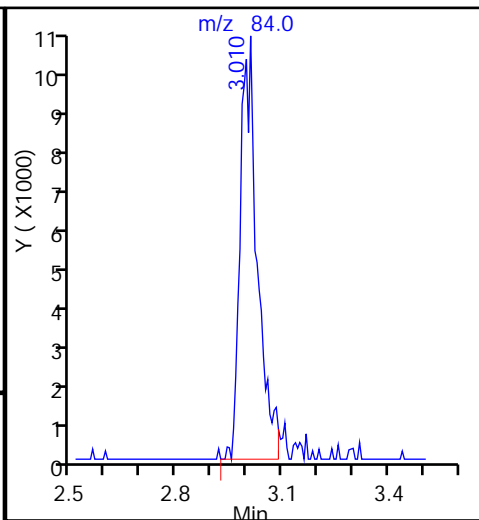
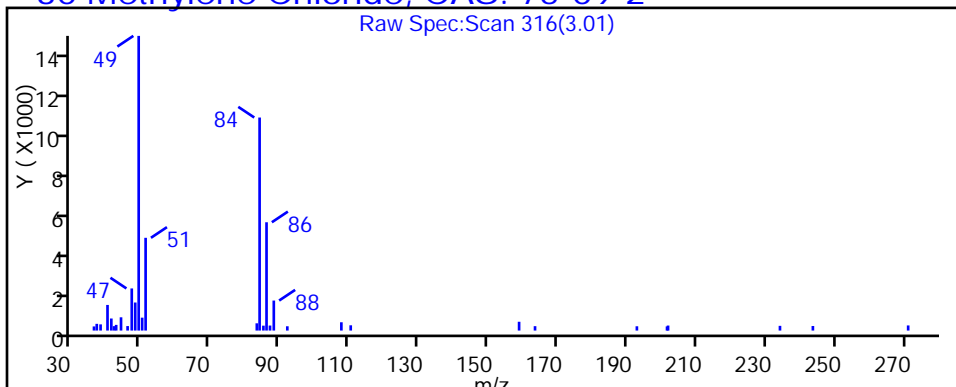
Method: MSVOA\_CHHP4

Limit Group: VOA 8260C ICAL

Column: DB-624 (0.18 mm)

Detector: MS SCAN

30 Methylene Chloride, CAS: 75-09-2



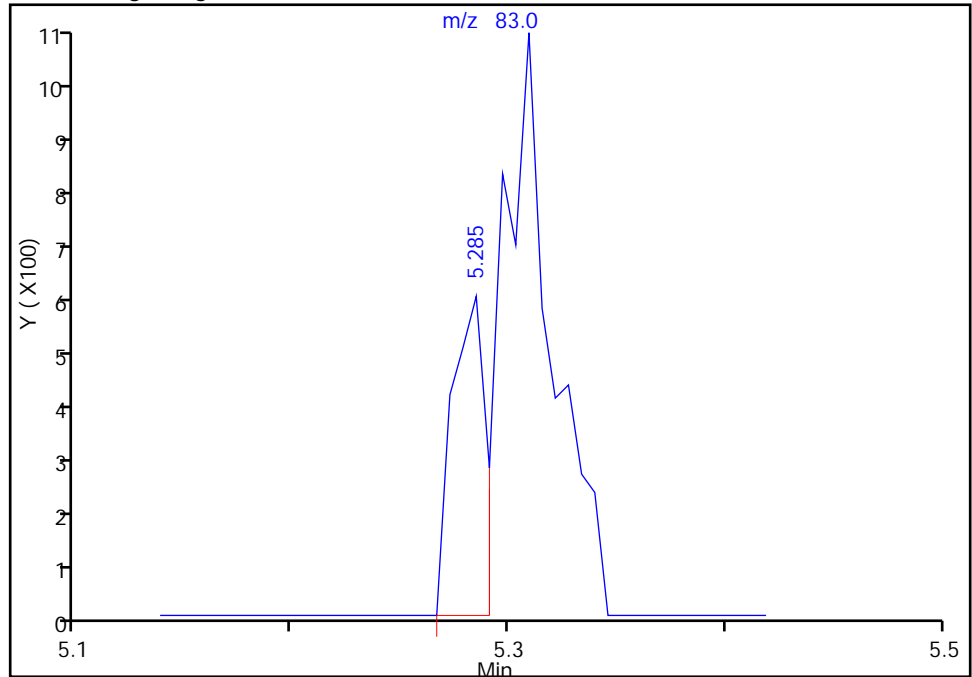
TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP4\20150509-6844.b\4050914.D  
Injection Date: 09-May-2015 18:04:30 Instrument ID: CHHP4  
Lims ID: 180-43791-I-2 Lab Sample ID: 180-43791-2  
Client ID: FB-CORE  
Operator ID: 034635 ALS Bottle#: 21 Worklist Smp#: 14  
Purge Vol: 5.000 mL Dil. Factor: 1.0000  
Method: MSVOA\_CHHP4 Limit Group: VOA 8260C ICAL  
Column: DB-624 (0.18 mm) Detector: MS SCAN

49 Chloroform, CAS: 67-66-3

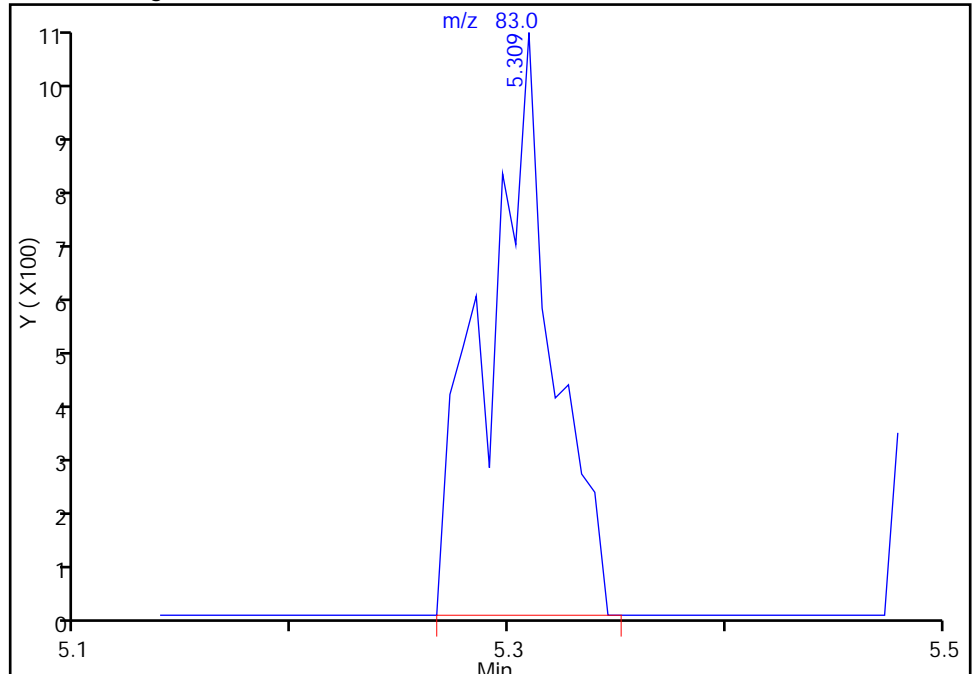
RT: 5.28  
Area: 610  
Amount: 0.366288  
Amount Units: ng

Processing Integration Results



RT: 5.31  
Area: 2151  
Amount: 1.291614  
Amount Units: ng

Manual Integration Results



Reviewer: journetp, 10-May-2015 10:55:31  
Audit Action: Manually Integrated  
Audit Reason: Poor chromatography



FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-43791-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: TRIP BLANK Lab Sample ID: 180-43791-7  
 Matrix: Water Lab File ID: 4050915.D  
 Analysis Method: 8260C Date Collected: 05/05/2015 15:30  
 Sample wt/vol: 5 (mL) Date Analyzed: 05/09/2015 18:33  
 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.: 141065 Units: ug/L

| CAS NO.    | COMPOUND NAME             | RESULT | Q   | RL  | MDL  |
|------------|---------------------------|--------|-----|-----|------|
| 71-55-6    | 1,1,1-Trichloroethane     | ND     |     | 5.0 | 1.0  |
| 79-34-5    | 1,1,2,2-Tetrachloroethane | ND     |     | 5.0 | 0.93 |
| 79-00-5    | 1,1,2-Trichloroethane     | ND     |     | 5.0 | 1.2  |
| 75-34-3    | 1,1-Dichloroethane        | ND     |     | 5.0 | 1.0  |
| 75-35-4    | 1,1-Dichloroethene        | ND     |     | 5.0 | 1.1  |
| 95-50-1    | 1,2-Dichlorobenzene       | ND     |     | 5.0 | 0.68 |
| 107-06-2   | 1,2-Dichloroethane        | ND     |     | 5.0 | 0.96 |
| 78-87-5    | 1,2-Dichloropropane       | ND     |     | 5.0 | 1.3  |
| 541-73-1   | 1,3-Dichlorobenzene       | ND     |     | 5.0 | 0.51 |
| 106-46-7   | 1,4-Dichlorobenzene       | ND     |     | 5.0 | 0.53 |
| 110-75-8   | 2-Chloroethyl vinyl ether | ND     |     | 10  | 1.9  |
| 107-02-8   | Acrolein                  | ND     |     | 100 | 5.7  |
| 107-13-1   | Acrylonitrile             | ND     |     | 50  | 9.0  |
| 71-43-2    | Benzene                   | ND     |     | 5.0 | 0.99 |
| 75-25-2    | Bromoform                 | ND     |     | 5.0 | 1.1  |
| 74-83-9    | Bromomethane              | ND     |     | 5.0 | 1.6  |
| 56-23-5    | Carbon tetrachloride      | ND     |     | 5.0 | 1.1  |
| 108-90-7   | Chlorobenzene             | ND     |     | 5.0 | 0.53 |
| 67-66-3    | Chloroform                | ND     |     | 5.0 | 1.0  |
| 74-87-3    | Chloromethane             | ND     |     | 5.0 | 1.4  |
| 124-48-1   | Chlorodibromomethane      | ND     |     | 5.0 | 0.65 |
| 10061-01-5 | cis-1,3-Dichloropropene   | ND     |     | 5.0 | 0.73 |
| 75-27-4    | Dichlorobromomethane      | ND     |     | 5.0 | 0.93 |
| 100-41-4   | Ethylbenzene              | ND     |     | 5.0 | 0.62 |
| 75-09-2    | Methylene Chloride        | 3.6    | J B | 5.0 | 1.1  |
| 127-18-4   | Tetrachloroethene         | ND     |     | 5.0 | 0.82 |
| 108-88-3   | Toluene                   | ND     |     | 5.0 | 0.85 |
| 156-60-5   | trans-1,2-Dichloroethene  | ND     |     | 5.0 | 0.75 |
| 10061-02-6 | trans-1,3-Dichloropropene | ND     |     | 5.0 | 0.58 |
| 79-01-6    | Trichloroethene           | ND     |     | 5.0 | 0.80 |
| 75-01-4    | Vinyl chloride            | ND     |     | 5.0 | 1.3  |
| 75-00-3    | Chloroethane              | ND     |     | 5.0 | 0.75 |

FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-43791-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: TRIP BLANK Lab Sample ID: 180-43791-7  
 Matrix: Water Lab File ID: 4050915.D  
 Analysis Method: 8260C Date Collected: 05/05/2015 15:30  
 Sample wt/vol: 5 (mL) Date Analyzed: 05/09/2015 18:33  
 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.: 141065 Units: ug/L

| CAS NO.    | SURROGATE                    | %REC | Q | LIMITS |
|------------|------------------------------|------|---|--------|
| 17060-07-0 | 1,2-Dichloroethane-d4 (Surr) | 91   |   | 62-123 |
| 460-00-4   | 4-Bromofluorobenzene (Surr)  | 95   |   | 75-120 |
| 1868-53-7  | Dibromofluoromethane (Surr)  | 103  |   | 80-120 |
| 2037-26-5  | Toluene-d8 (Surr)            | 116  |   | 80-120 |

TestAmerica Pittsburgh  
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHHP4\20150509-6844.b\4050915.D  
 Lims ID: 180-43791-C-7 Lab Sample ID: 180-43791-7  
 Client ID: TRIP BLANK  
 Sample Type: Client  
 Inject. Date: 09-May-2015 18:33:30 ALS Bottle#: 22 Worklist Smp#: 15  
 Purge Vol: 5.000 mL Dil. Factor: 1.0000  
 Sample Info: 180-43791-I-2  
 Misc. Info.: 180-0006844-015  
 Operator ID: 034635 Instrument ID: CHHP4  
 Method: \\PITCHROM\ChromData\CHHP4\20150509-6844.b\MSVOA\_CHHP4.m  
 Limit Group: VOA 8260C ICAL  
 Last Update: 10-May-2015 11:35:24 Calib Date: 27-Apr-2015 13:50:30  
 Integrator: RTE ID Type: Deconvolution ID  
 Quant Method: Internal Standard Quant By: Initial Calibration  
 Last ICal File: \\PITCHROM\ChromData\CHHP4\20150427-6642.b\4042710.D  
 Column 1 : DB-624 ( 0.18 mm) Det: MS SCAN  
 Process Host: XAWRK017

First Level Reviewer: journey Date: 10-May-2015 10:57:25

| Compound                        | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q  | Response | OnCol Amt ng | Flags |
|---------------------------------|-----|-----------|---------------|---------------|----|----------|--------------|-------|
| * 1 TBA-d9 (IS)                 | 65  | 3.104     | 3.144         | -0.040        | 97 | 164078   | 5000.0       |       |
| * 2 Fluorobenzene (IS)          | 96  | 6.261     | 6.259         | 0.002         | 97 | 874982   | 250.0        |       |
| * 3 Chlorobenzene-d5            | 119 | 9.449     | 9.446         | 0.003         | 88 | 180940   | 250.0        |       |
| * 4 1,4-Dichlorobenzene-d4      | 152 | 11.803    | 11.801        | 0.002         | 96 | 188451   | 250.0        |       |
| \$ 5 Dibromofluoromethane (Surr | 113 | 5.495     | 5.492         | 0.003         | 93 | 185831   | 257.5        |       |
| \$ 6 1,2-Dichloroethane-d4 (Sur | 65  | 5.890     | 5.882         | 0.008         | 95 | 182054   | 226.6        |       |
| \$ 7 Toluene-d8 (Surr)          | 98  | 7.977     | 7.980         | -0.003        | 94 | 838259   | 291.2        |       |
| \$ 8 4-Bromofluorobenzene (Surr | 95  | 10.653    | 10.651        | 0.002         | 88 | 233989   | 236.9        |       |
| 11 Chloromethane                | 50  |           | 1.319         |               |    |          | ND           |       |
| 12 Vinyl chloride               | 62  |           | 1.410         |               |    |          | ND           |       |
| 14 Bromomethane                 | 94  |           | 1.660         |               |    |          | ND           |       |
| 15 Chloroethane                 | 64  |           | 1.739         |               |    |          | ND           |       |
| 20 Acrolein                     | 56  |           | 2.359         |               |    |          | ND           |       |
| 21 1,1-Dichloroethene           | 96  |           | 2.414         |               |    |          | ND           |       |
| 30 Methylene Chloride           | 84  | 2.994     | 2.992         | 0.002         | 97 | 33077    | 17.9         |       |
| 33 trans-1,2-Dichloroethene     | 96  |           | 3.339         |               |    |          | ND           |       |
| 32 Acrylonitrile                | 53  |           | 3.314         |               |    |          | ND           |       |
| 36 1,1-Dichloroethane           | 63  |           | 3.965         |               |    |          | ND           |       |
| 49 Chloroform                   | 83  |           | 5.291         |               |    |          | ND           |       |
| 50 1,1,1-Trichloroethane        | 97  |           | 5.437         |               |    |          | ND           |       |
| 53 Carbon tetrachloride         | 117 |           | 5.620         |               |    |          | ND           |       |
| 54 Benzene                      | 78  |           | 5.875         |               |    |          | ND           |       |
| 55 1,2-Dichloroethane           | 62  |           | 5.985         |               |    |          | ND           |       |
| 61 Trichloroethene              | 130 |           | 6.666         |               |    |          | ND           |       |
| 64 1,2-Dichloropropane          | 63  |           | 6.952         |               |    |          | ND           |       |
| 68 Dichlorobromomethane         | 83  |           | 7.262         |               |    |          | ND           |       |
| 70 2-Chloroethyl vinyl ether    | 63  |           | 7.597         |               |    |          | ND           |       |
| 74 trans-1,3-Dichloropropene    | 75  |           | 7.725         |               |    |          | ND           |       |
| 73 Toluene                      | 91  |           | 8.047         |               |    |          | ND           |       |
| 71 cis-1,3-Dichloropropene      | 75  |           | 8.327         |               |    |          | ND           |       |
| 76 1,1,2-Trichloroethane        | 97  |           | 8.516         |               |    |          | ND           |       |

| Compound                     | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | OnCol Amt ng | Flags |
|------------------------------|-----|-----------|---------------|---------------|---|----------|--------------|-------|
| 77 Tetrachloroethene         | 164 |           | 8.558         |               |   |          | ND           |       |
| 81 Chlorodibromomethane      | 129 |           | 8.881         |               |   |          | ND           |       |
| 84 Chlorobenzene             | 112 |           | 9.477         |               |   |          | ND           |       |
| 86 Ethylbenzene              | 106 |           | 9.592         |               |   |          | ND           |       |
| 90 Bromoform                 | 173 |           | 10.298        |               |   |          | ND           |       |
| 93 1,1,2,2-Tetrachloroethane | 83  |           | 10.803        |               |   |          | ND           |       |
| 105 1,3-Dichlorobenzene      | 146 |           | 11.716        |               |   |          | ND           |       |
| 107 1,4-Dichlorobenzene      | 146 |           | 11.825        |               |   |          | ND           |       |
| 111 1,2-Dichlorobenzene      | 146 |           | 12.172        |               |   |          | ND           |       |

**Reagents:**

VOA8260INT\_00032

Amount Added: 10.00

Units: uL

Run Reagent

VOA8260SURRE\_00035

Amount Added: 10.00

Units: uL

Run Reagent

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP4\20150509-6844.b\4050915.D

Injection Date: 09-May-2015 18:33:30

Instrument ID: CHHP4

Operator ID: 034635

Lims ID: 180-43791-C-7

Lab Sample ID: 180-43791-7

Worklist Smp#: 15

Client ID: TRIP BLANK

Purge Vol: 5.000 mL

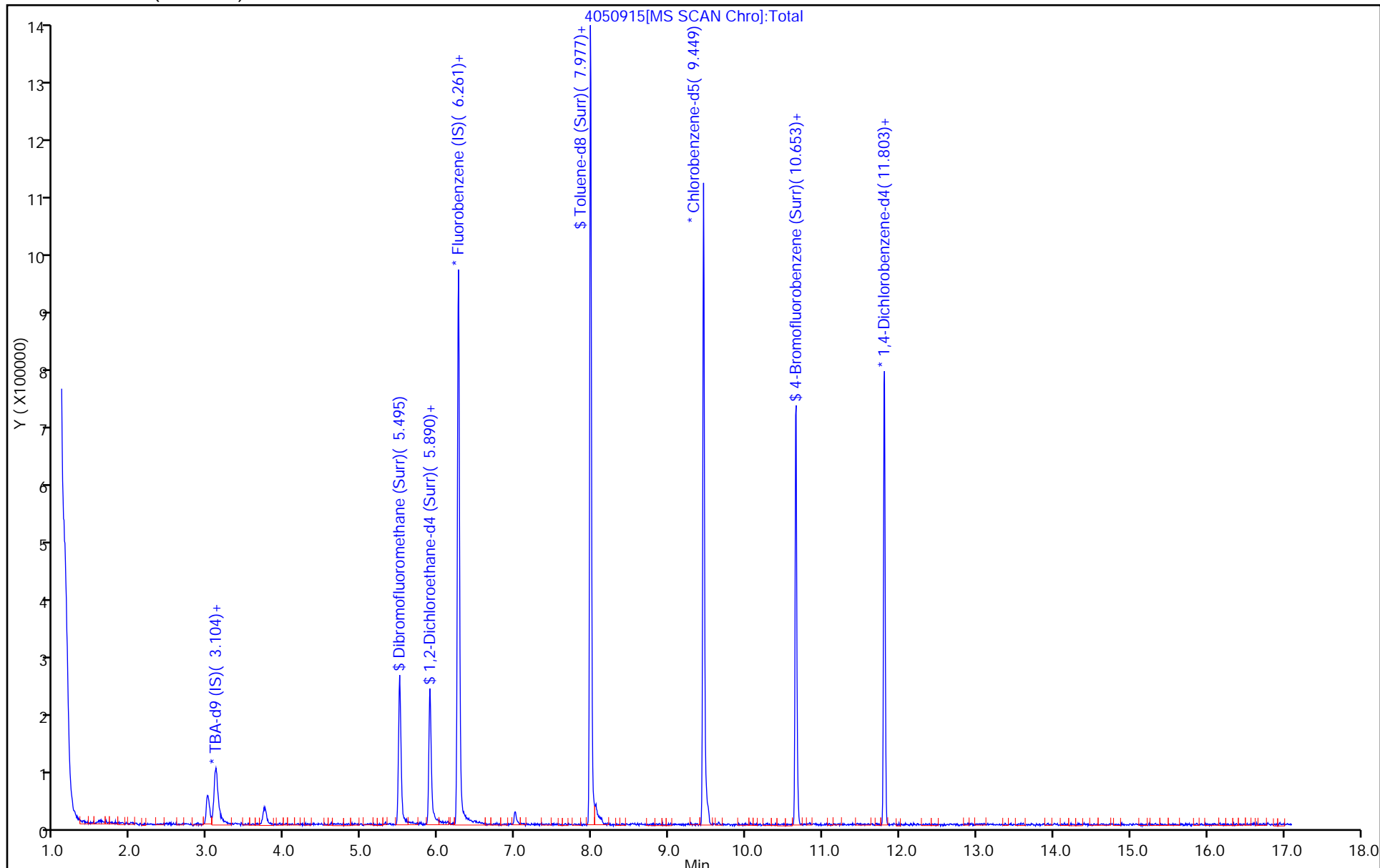
Dil. Factor: 1.0000

ALS Bottle#: 22

Method: MSVOA\_CHHP4

Limit Group: VOA 8260C ICAL

Column: DB-624 (0.18 mm)



TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP4\20150509-6844.b\4050915.D

Injection Date: 09-May-2015 18:33:30

Instrument ID: CHHP4

Lims ID: 180-43791-C-7

Lab Sample ID: 180-43791-7

Client ID: TRIP BLANK

Operator ID: 034635

ALS Bottle#: 22

Worklist Smp#: 15

Purge Vol: 5.000 mL

Dil. Factor: 1.0000

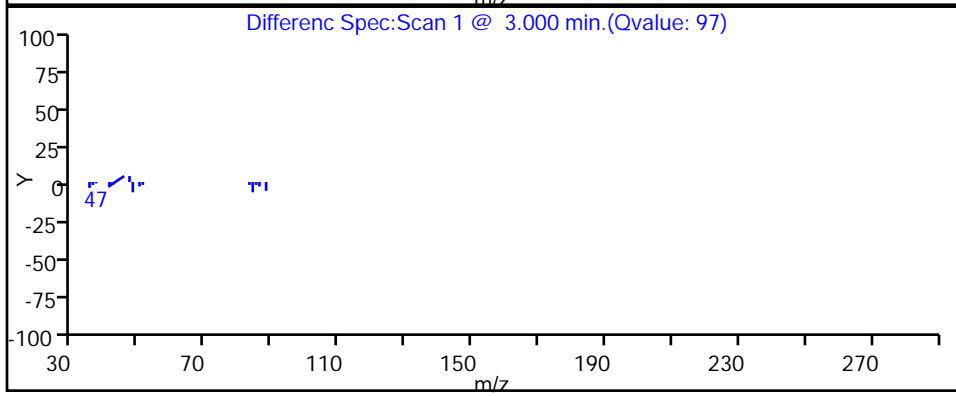
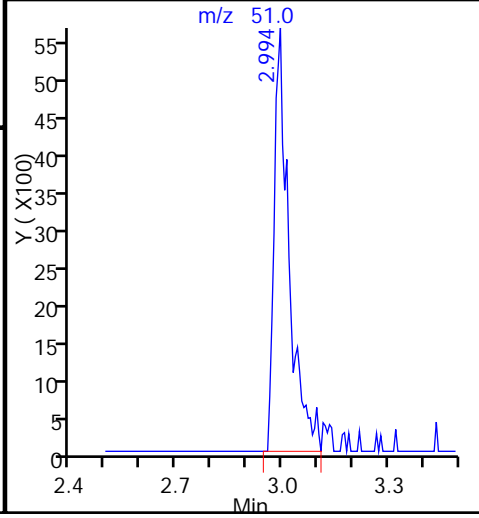
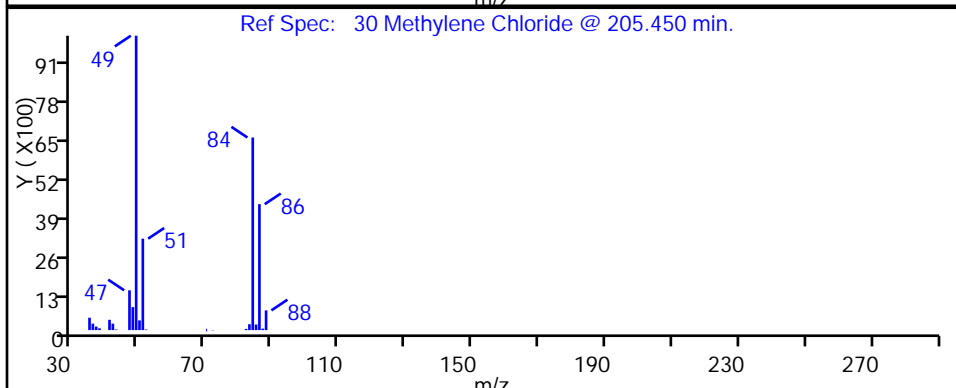
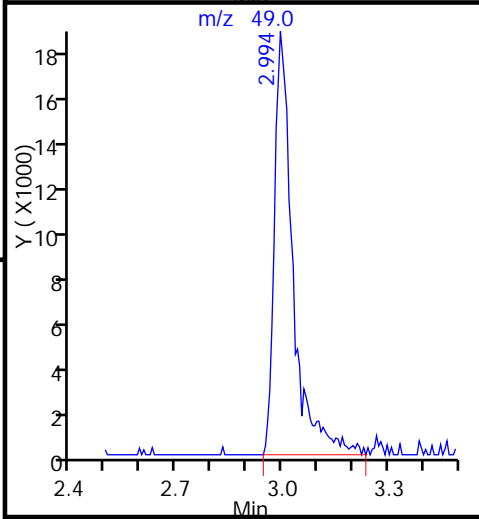
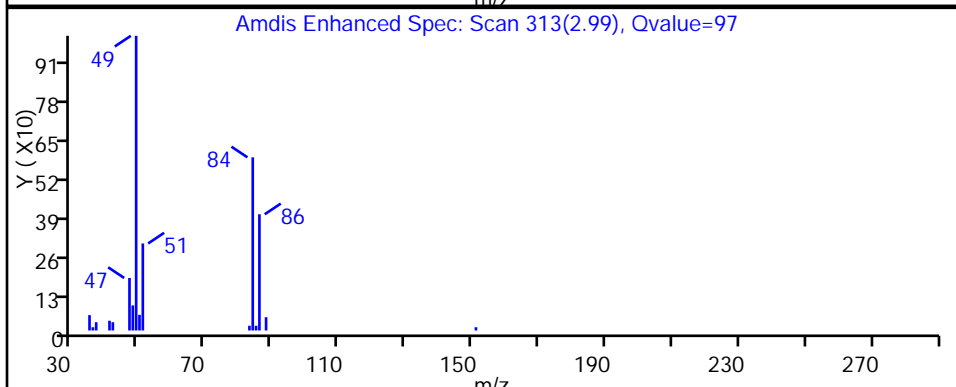
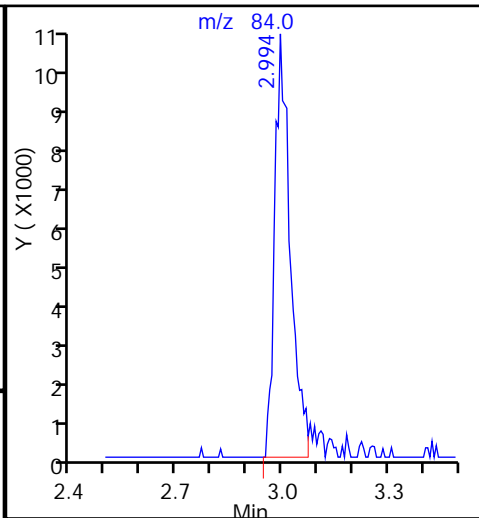
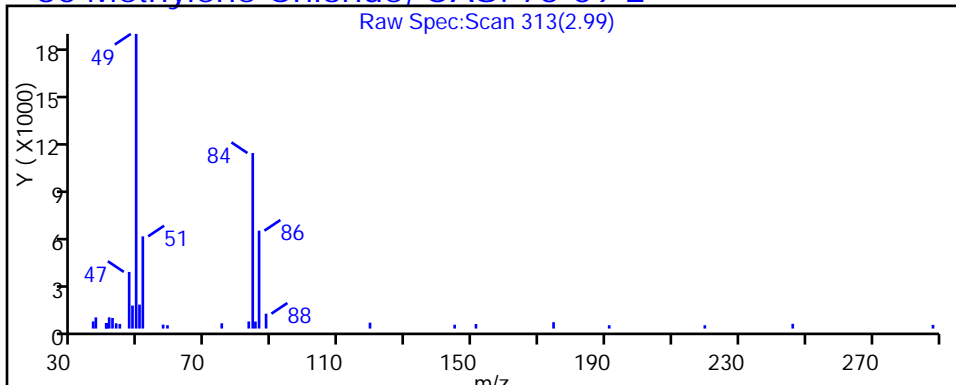
Method: MSVOA\_CHHP4

Limit Group: VOA 8260C ICAL

Column: DB-624 (0.18 mm)

Detector: MS SCAN

### 30 Methylene Chloride, CAS: 75-09-2



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

Lab Name: TestAmerica Pittsburgh

Job No.: 180-43791-1

Analy Batch No.: 123648

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

Instrument ID: CHHP4

GC Column: DB-624

ID: 0.18 (mm)

Heated Purge: (Y/N) N

Calibration Start Date: 11/03/2014 12:22

Calibration End Date: 11/03/2014 16:24

Calibration ID: 19030

Calibration Files:

| LEVEL:  | LAB SAMPLE ID:    | LAB FILE ID: |
|---------|-------------------|--------------|
| Level 1 | IC 180-123648/4   | 4110304.D    |
| Level 2 | IC 180-123648/5   | 4110305.D    |
| Level 3 | IC 180-123648/6   | 4110306.D    |
| Level 4 | ICIS 180-123648/7 | 4110307.D    |
| Level 5 | IC 180-123648/12  | 4110312.D    |
| Level 6 | IC 180-123648/9   | 4110309.D    |
| Level 7 | IC 180-123648/10  | 4110310.D    |

| ANALYTE                               | RRF              |                  |        |        |        | CURVE TYPE | COEFFICIENT |        |             | #      | MIN RRF | %RSD | #    | MAX %RSD | R^2 OR COD | #      | MIN R^2 OR COD |
|---------------------------------------|------------------|------------------|--------|--------|--------|------------|-------------|--------|-------------|--------|---------|------|------|----------|------------|--------|----------------|
|                                       | LVL 1            | LVL 2            | LVL 3  | LVL 4  | LVL 5  |            | B           | M1     | M2          |        |         |      |      |          |            |        |                |
|                                       | LVL 6            | LVL 7            |        |        |        |            |             |        |             |        |         |      |      |          |            |        |                |
| Dichlorodifluoromethane               | 0.3916<br>0.3730 | 0.3342<br>0.3902 | 0.3594 | 0.4125 | 0.3744 | Ave        | 0.3765      |        |             | 0.1000 | 6.7     |      | 20.0 |          |            |        |                |
| Chloromethane                         | 0.6315<br>0.5016 | 0.5483<br>0.4960 | 0.5372 | 0.6040 | 0.5270 | Ave        | 0.5494      |        |             | 0.1000 | 9.3     |      | 20.0 |          |            |        |                |
| Vinyl chloride                        | 0.4917<br>0.3415 | 0.3981<br>0.3554 | 0.3731 | 0.4266 | 0.3434 | Ave        | 0.3900      |        |             | 0.1000 | 14.0    |      | 20.0 |          |            |        |                |
| 1,3-Butadiene                         | 0.4856<br>0.3565 | 0.3770<br>0.3608 | 0.3825 | 0.4310 | 0.3522 | Ave        | 0.3922      |        |             | 0.0100 | 13.0    |      | 20.0 |          |            |        |                |
| Bromomethane                          | 0.0655<br>+++++  | 0.0533<br>+++++  | 0.0507 | 0.0542 | 0.0531 | Ave        | 0.0553      |        |             | 0.0500 | 11.0    |      | 20.0 |          |            |        |                |
| Chloroethane                          | 0.0708<br>0.0551 | 0.0604<br>0.0552 | 0.0574 | 0.0660 | 0.0755 | Qua        | 0.8453      | 0.0596 | -0.000004   | 0.0500 |         |      |      | 0.9950   |            | 0.9900 |                |
| Trichlorofluoromethane                | 0.1601<br>0.2229 | 0.1588<br>0.1936 | 0.1779 | 0.2140 | 0.2392 | Ave        | 0.1952      |        |             | 0.1000 | 16.0    |      | 20.0 |          |            |        |                |
| Dichlorofluoromethane                 | 0.2197<br>0.2275 | 0.1992<br>+++++  | 0.2285 | 0.2381 | 0.2692 | Ave        | 0.2304      |        |             | 0.0100 | 10.0    |      | 20.0 |          |            |        |                |
| Ethyl ether                           | 0.0981<br>0.0965 | 0.1041<br>0.0925 | 0.1048 | 0.1053 | 0.1038 | Ave        | 0.1007      |        |             | 0.0100 | 5.0     |      | 20.0 |          |            |        |                |
| Acrolein                              | 0.0108<br>0.0132 | 0.0150<br>+++++  | 0.0123 | 0.0144 | 0.0102 | Ave        | 0.0127      |        |             | 0.0100 | 15.0    |      | 20.0 |          |            |        |                |
| 1,1-Dichloroethene                    | 0.2214<br>0.2443 | 0.2064<br>0.2233 | 0.2352 | 0.2617 | 0.2829 | Qua        | -1.941      | 0.2787 | -0.000043   | 0.1000 |         |      |      | 0.9990   |            | 0.9900 |                |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 0.2679<br>0.2753 | 0.2658<br>0.2862 | 0.2868 | 0.3280 | 0.3067 | Ave        | 0.2881      |        |             | 0.1000 | 7.8     |      | 20.0 |          |            |        |                |
| Acetone                               | 0.1871<br>0.0518 | 0.1059<br>0.0546 | 0.0768 | 0.0674 | 0.0805 | Qua        | 4.1365      | 0.0465 | 0.0000035 * | 0.0500 |         |      |      | 0.9920   |            | 0.9900 |                |
| Iodomethane                           | 0.4215<br>0.4526 | 0.4488<br>0.4727 | 0.4446 | 0.5011 | 0.4489 | Ave        | 0.4557      |        |             | 0.0100 | 5.5     |      | 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.: 180-43791-1

Analy Batch No.: 123648

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

Instrument ID: CHHP4

GC Column: DB-624

ID: 0.18 (mm)

Heated Purge: (Y/N) N

Calibration Start Date: 11/03/2014 12:22

Calibration End Date: 11/03/2014 16:24

Calibration ID: 19030

| 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            |        |        |        |            |             |        |           |   |         |      |   |          |            |   |                |
| Carbon disulfide         | 0.7866<br>1.0125 | 0.7343<br>1.0147 | 0.8459 | 1.0332 | 1.0007 | Ave        |             | 0.9183 |           |   | 0.1000  | 14.0 |   | 20.0     |            |   |                |
| Allyl chloride           | 0.1768<br>0.2211 | 0.1728<br>0.2493 | 0.2006 | 0.2271 | 0.2121 | Qua        | 0.1445      | 0.1992 | 0.0000398 |   | 0.0100  |      |   |          | 1.0000     |   | 0.9900         |
| Methyl acetate           | 0.1735<br>0.1383 | 0.1727<br>0.1308 | 0.1580 | 0.1651 | 0.1434 | Ave        |             | 0.1546 |           |   | 0.1000  | 11.0 |   | 20.0     |            |   |                |
| Methylene Chloride       | 0.9639<br>0.3241 | 0.5562<br>0.3265 | 0.4070 | 0.3979 | 0.3486 | Qua        | 15.957      | 0.2866 | 0.0000216 |   | 0.1000  |      |   |          | 1.0000     |   | 0.9900         |
| tert-Butyl alcohol       | 2.1242<br>1.3898 | 1.7331<br>1.3714 | 1.5128 | 1.4893 | 1.1437 | Ave        |             | 1.5378 |           |   | 0.0100  | 20.0 |   | 20.0     |            |   |                |
| Acrylonitrile            | 0.0813<br>0.0613 | 0.0770<br>0.0593 | 0.0685 | 0.0735 | 0.0620 | Qua        | 8.7898      | 0.0621 |           | 0 | 0.0100  |      |   |          | 0.9990     |   | 0.9900         |
| trans-1,2-Dichloroethene | 0.3550<br>0.3417 | 0.3143<br>0.3365 | 0.3275 | 0.3760 | 0.3452 | Ave        |             | 0.3423 |           |   | 0.1000  | 5.8  |   | 20.0     |            |   |                |
| Methyl tert-butyl ether  | 0.5882<br>0.5061 | 0.5709<br>0.5014 | 0.5428 | 0.5835 | 0.5089 | Ave        |             | 0.5431 |           |   | 0.1000  | 7.0  |   | 20.0     |            |   |                |
| Vinyl acetate            | 0.6128<br>0.4664 | 0.4936<br>0.4562 | 0.4657 | 0.5346 | 0.4840 | Lin2       | 3.2964      | 0.4645 |           |   | 0.0100  |      |   |          | 0.9940     |   | 0.9900         |
| Hexane                   | 0.9554<br>0.6825 | 0.7052<br>0.6542 | 0.6846 | 0.7945 | 0.7299 | Qua        | 4.5270      | 0.7167 | -0.000054 |   | 0.0100  |      |   |          | 0.9990     |   | 0.9900         |
| 1,1-Dichloroethane       | 0.6573<br>0.6096 | 0.6080<br>0.6014 | 0.6074 | 0.6821 | 0.6249 | Ave        |             | 0.6272 |           |   | 0.2000  | 4.9  |   | 20.0     |            |   |                |
| 2,2-Dichloropropane      | 0.2388<br>0.2548 | 0.2056<br>0.2447 | 0.2208 | 0.2551 | 0.2449 | Ave        |             | 0.2378 |           |   | 0.0100  | 7.7  |   | 20.0     |            |   |                |
| cis-1,2-Dichloroethene   | 0.3857<br>0.3258 | 0.3435<br>0.3253 | 0.3304 | 0.3641 | 0.3278 | Ave        |             | 0.3432 |           |   | 0.1000  | 6.8  |   | 20.0     |            |   |                |
| 2-Butanone (MEK)         | 0.1495<br>0.0765 | 0.1193<br>0.0757 | 0.0899 | 0.0832 | 0.0964 | Qua        | 2.3265      | 0.0758 | -0.000002 |   | 0.0500  |      |   |          | 0.9980     |   | 0.9900         |
| Chlorobromomethane       | 0.1238<br>0.1163 | 0.1225<br>0.1164 | 0.1154 | 0.1249 | 0.1085 | Ave        |             | 0.1183 |           |   | 0.0100  | 4.9  |   | 20.0     |            |   |                |
| Tetrahydrofuran          | 0.0654<br>0.0493 | 0.0586<br>0.0498 | 0.0534 | 0.0588 | 0.0500 | Ave        |             | 0.0550 |           |   | 0.0100  | 11.0 |   | 20.0     |            |   |                |
| Chloroform               | 0.5884<br>0.4413 | 0.4781<br>0.4325 | 0.4614 | 0.4949 | 0.4444 | Ave        |             | 0.4773 |           |   | 0.2000  | 11.0 |   | 20.0     |            |   |                |
| 1,1,1-Trichloroethane    | 0.3567<br>0.3711 | 0.3133<br>0.3804 | 0.3371 | 0.3917 | 0.3615 | Ave        |             | 0.3588 |           |   | 0.1000  | 7.4  |   | 20.0     |            |   |                |
| Cyclohexane              | 0.8893<br>0.7513 | 0.7786<br>0.7338 | 0.7809 | 0.8964 | 0.7795 | Ave        |             | 0.8014 |           |   | 0.1000  | 8.1  |   | 20.0     |            |   |                |
| Carbon tetrachloride     | 0.2969<br>0.3426 | 0.2702<br>0.3566 | 0.2968 | 0.3491 | 0.3334 | Ave        |             | 0.3208 |           |   | 0.1000  | 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 CURVE EVALUATION

Lab Name: TestAmerica Pittsburgh

Job No.: 180-43791-1

Analy Batch No.: 123648

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

Instrument ID: CHHP4

GC Column: DB-624

ID: 0.18 (mm)

Heated Purge: (Y/N) N

Calibration Start Date: 11/03/2014 12:22

Calibration End Date: 11/03/2014 16:24

Calibration ID: 19030

| 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            |        |        |        |            |             |        |           |   |         |      |      |          |                       |        |                           |
| 1,1-Dichloropropene         | 0.4646<br>0.4313 | 0.4039<br>0.4121 | 0.4176 | 0.4844 | 0.4373 | Ave        |             | 0.4359 |           |   | 0.0100  | 6.7  | 20.0 |          |                       |        |                           |
| Benzene                     | 1.5720<br>1.0847 | 1.3231<br>0.9019 | 1.3147 | 1.3998 | 1.2581 | Ave        |             | 1.2649 |           |   | 0.5000  | 17.0 | 20.0 |          |                       |        |                           |
| Isobutyl alcohol            | 0.0059<br>0.0045 | 0.0052<br>0.0046 | 0.0051 | 0.0048 | 0.0043 | Ave        |             | 0.0049 | *         |   | 0.0100  | 11.0 | 20.0 |          |                       |        |                           |
| 1,2-Dichloroethane          | 0.2904<br>0.2335 | 0.2699<br>0.2366 | 0.2414 | 0.2554 | 0.2328 | Ave        |             | 0.2514 |           |   | 0.1000  | 8.7  | 20.0 |          |                       |        |                           |
| n-Heptane                   | 0.8501<br>0.6567 | 0.7495<br>0.5746 | 0.7242 | 0.8034 | 0.7256 | Ave        |             | 0.7263 |           |   | 0.0100  | 13.0 | 20.0 |          |                       |        |                           |
| Trichloroethene             | 0.3570<br>0.2868 | 0.2712<br>0.2722 | 0.2797 | 0.3190 | 0.2996 | Ave        |             | 0.2979 |           |   | 0.2000  | 10.0 | 20.0 |          |                       |        |                           |
| Methylcyclohexane           | 0.7498<br>0.5821 | 0.6339<br>0.5388 | 0.6276 | 0.7088 | 0.6265 | Ave        |             | 0.6382 |           |   | 0.1000  | 11.0 | 20.0 |          |                       |        |                           |
| 1,2-Dichloropropane         | 0.4333<br>0.3107 | 0.3424<br>0.3001 | 0.3373 | 0.3562 | 0.3242 | Ave        |             | 0.3435 |           |   | 0.1000  | 13.0 | 20.0 |          |                       |        |                           |
| Dibromomethane              | 0.1240<br>0.1087 | 0.1157<br>0.1101 | 0.1118 | 0.1140 | 0.1001 | Ave        |             | 0.1121 |           |   | 0.0100  | 6.5  | 20.0 |          |                       |        |                           |
| 1,4-Dioxane                 | 0.0021<br>0.0015 | 0.0017<br>0.0016 | 0.0015 | 0.0017 | 0.0014 | Qua        | 0.4371      | 0.0014 | 0         | * | 0.0100  |      |      | 0.9990   |                       | 0.9900 |                           |
| Dichlorobromomethane        | 0.2708<br>0.2723 | 0.2532<br>0.2740 | 0.2510 | 0.2770 | 0.2689 | Ave        |             | 0.2667 |           |   | 0.2000  | 3.9  | 20.0 |          |                       |        |                           |
| 2-Chloroethyl vinyl ether   | 0.1118<br>0.1076 | 0.1099<br>0.1043 | 0.1007 | 0.1175 | 0.1078 | Ave        |             | 0.1085 |           |   | 0.0100  | 4.9  | 20.0 |          |                       |        |                           |
| trans-1,3-Dichloropropene   | 1.8709<br>1.6054 | 1.5679<br>1.5174 | 1.6422 | 1.6508 | 1.6046 | Qua        | -2.292      | 1.6817 | -0.000129 |   | 0.1000  |      |      | 1.0000   |                       | 0.9900 |                           |
| 4-Methyl-2-pentanone (MIBK) | 0.9389<br>0.6750 | 0.8698<br>0.6454 | 0.8053 | 0.7381 | 0.7327 | Ave        |             | 0.7722 |           |   | 0.1000  | 14.0 | 20.0 |          |                       |        |                           |
| Toluene                     | 8.2791<br>4.1901 | 6.3911<br>3.2696 | 6.0036 | 5.7427 | 5.3905 | Qua        | 122.09      | 5.0593 | -0.001519 |   | 0.4000  |      |      | 0.9980   |                       | 0.9900 |                           |
| cis-1,3-Dichloropropene     | 0.2524<br>0.2679 | 0.2401<br>0.2683 | 0.2390 | 0.2644 | 0.2533 | Ave        |             | 0.2551 |           |   | 0.2000  | 4.8  | 20.0 |          |                       |        |                           |
| Ethyl methacrylate          | 1.3684<br>0.9977 | 1.2268<br>0.9482 | 1.1506 | 1.0840 | 1.0633 | Qua        | 12.014      | 1.0282 | -0.000072 |   | 0.0100  |      |      | 1.0000   |                       | 0.9900 |                           |
| 1,1,2-Trichloroethane       | 1.0055<br>0.7202 | 0.9210<br>0.6875 | 0.8631 | 0.8026 | 0.7509 | Ave        |             | 0.8216 |           |   | 0.1000  | 14.0 | 20.0 |          |                       |        |                           |
| Tetrachloroethene           | 1.4698<br>0.9943 | 1.0610<br>0.9290 | 1.1117 | 1.1286 | 1.0536 | Ave        |             | 1.1069 |           |   | 0.2000  | 16.0 | 20.0 |          |                       |        |                           |
| 1,3-Dichloropropane         | 1.8637<br>1.2668 | 1.5512<br>1.2014 | 1.5262 | 1.4071 | 1.3593 | Ave        |             | 1.4536 |           |   | 0.0100  | 15.0 | 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.: 180-43791-1

Analy Batch No.: 123648

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

Instrument ID: CHHP4

GC Column: DB-624

ID: 0.18 (mm)

Heated Purge: (Y/N) N

Calibration Start Date: 11/03/2014 12:22

Calibration End Date: 11/03/2014 16:24

Calibration ID: 19030

| 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            |        |        |        |            |             |        |           |        |         |      |      |          |            |        |                |
| 2-Hexanone                  | 0.6323<br>0.4345 | 0.5103<br>0.4407 | 0.5184 | 0.4624 | 0.5205 | Qua        | 8.2266      | 0.4332 | 0         | 0.1000 |         |      |      | 0.9990   |            | 0.9900 |                |
| Chlorodibromomethane        | 0.6813<br>0.6841 | 0.5476<br>0.7057 | 0.6457 | 0.6498 | 0.6584 | Ave        |             | 0.6532 |           | 0.1000 | 7.8     |      | 20.0 |          |            |        |                |
| 1,2-Dibromoethane           | 0.9327<br>0.6476 | 0.7660<br>0.6574 | 0.7386 | 0.6675 | 0.6493 | Ave        |             | 0.7227 |           | 0.1000 | 14.0    |      | 20.0 |          |            |        |                |
| Chlorobenzene               | 4.6314<br>2.6001 | 3.7056<br>++++   | 3.4980 | 3.2485 | 3.0837 | Lin2       | 44.564      | 2.8774 |           | 0.5000 |         |      |      | 0.9910   |            | 0.9900 |                |
| 1,1,1,2-Tetrachloroethane   | 1.3008<br>0.9014 | 1.0783<br>0.8275 | 1.0665 | 1.0174 | 0.9948 | Ave        |             | 1.0267 |           | 0.0100 | 15.0    |      | 20.0 |          |            |        |                |
| Ethylbenzene                | 3.0695<br>1.7035 | 2.3054<br>1.4109 | 2.2621 | 2.1838 | 2.0340 | Qua        | 36.211      | 1.9715 | -0.000474 | 0.1000 |         |      |      | 0.9990   |            | 0.9900 |                |
| m-Xylene & p-Xylene         | 3.5800<br>2.2299 | 2.8763<br>1.9994 | 2.8001 | 2.6871 | 2.5084 | Ave        |             | 2.6687 |           | 0.1000 | 19.0    |      | 20.0 |          |            |        |                |
| o-Xylene                    | 3.5368<br>1.9949 | 2.7853<br>1.7043 | 2.6868 | 2.4792 | 2.3670 | Qua        | 46.399      | 2.2440 | -0.000464 | 0.3000 |         |      |      | 0.9990   |            | 0.9900 |                |
| Styrene                     | 5.2863<br>++++   | 4.1428<br>++++   | 4.0069 | 3.6445 | 3.4693 | Ave        |             | 4.1100 |           | 0.3000 | 17.0    |      | 20.0 |          |            |        |                |
| Bromoform                   | 0.2796<br>0.3578 | 0.2551<br>0.3989 | 0.2955 | 0.2970 | 0.3060 | Ave        |             | 0.3128 |           | 0.1000 | 16.0    |      | 20.0 |          |            |        |                |
| Isopropylbenzene            | 9.2420<br>4.2150 | 7.0308<br>++++   | 6.8078 | 6.1528 | 5.6428 | Qua        | 67.048      | 6.4596 | -0.003769 | 0.1000 |         |      |      | 0.9990   |            | 0.9900 |                |
| Bromobenzene                | 1.4477<br>0.8918 | 1.1741<br>0.8538 | 1.0510 | 1.0237 | 0.9458 | Ave        |             | 1.0554 |           | 0.0100 | 19.0    |      | 20.0 |          |            |        |                |
| 1,1,2,2-Tetrachloroethane   | 1.1091<br>0.7183 | 0.9710<br>0.7195 | 0.9132 | 0.8080 | 0.7840 | Ave        |             | 0.8604 |           | 0.3000 | 17.0    |      | 20.0 |          |            |        |                |
| trans-1,4-Dichloro-2-butene | 0.1744<br>0.1491 | 0.1358<br>0.1666 | 0.1364 | 0.1336 | 0.1289 | Ave        |             | 0.1464 |           | 0.0100 | 12.0    |      | 20.0 |          |            |        |                |
| 1,2,3-Trichloropropane      | 0.2739<br>0.1772 | 0.2266<br>0.1822 | 0.2033 | 0.1960 | 0.1785 | Qua        | 3.5867      | 0.1657 | 0.0000108 | 0.0100 |         |      |      | 1.0000   |            | 0.9900 |                |
| N-Propylbenzene             | 2.3248<br>1.3011 | 1.7275<br>++++   | 1.6675 | 1.5692 | 1.4702 | Lin2       | 23.101      | 1.3741 |           | 0.0100 |         |      |      | 0.9930   |            | 0.9900 |                |
| 2-Chlorotoluene             | 1.7651<br>1.0236 | 1.3908<br>++++   | 1.2745 | 1.2022 | 1.1161 | Ave        |             | 1.2954 |           | 0.0100 | 20.0    |      | 20.0 |          |            |        |                |
| 1,3,5-Trimethylbenzene      | 6.4607<br>2.8985 | 4.8291<br>2.1404 | 4.4244 | 4.1268 | 3.7713 | Qua        | 103.25      | 3.5652 | -0.001212 | 0.0100 |         |      |      | 0.9980   |            | 0.9900 |                |
| 4-Chlorotoluene             | 1.6663<br>0.9278 | 1.3197<br>0.8052 | 1.1813 | 1.1473 | 1.0393 | Qua        | 20.288      | 1.0179 | -0.000184 | 0.0100 |         |      |      | 1.0000   |            | 0.9900 |                |
| tert-Butylbenzene           | 5.9542<br>2.7858 | 4.3542<br>2.1982 | 4.0137 | 3.7445 | 3.4626 | Qua        | 87.271      | 3.2785 | -0.000924 | 0.0100 |         |      |      | 0.9990   |            | 0.9900 |                |

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.: 180-43791-1

Analy Batch No.: 123648

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

Instrument ID: CHHP4

GC Column: DB-624

ID: 0.18 (mm)

Heated Purge: (Y/N) N

Calibration Start Date: 11/03/2014 12:22

Calibration End Date: 11/03/2014 16:24

Calibration ID: 19030

| 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            |        |        |        |            |             |        |           |        |         |      |   |          |            |        |                |
| 1,2,4-Trimethylbenzene       | 6.1626<br>2.9597 | 4.7212<br>2.3074 | 4.3208 | 4.0118 | 3.6898 | Qua        | 93.299      | 3.5129 | -0.001029 | 0.0100 |         |      |   | 0.9990   |            | 0.9900 |                |
| sec-Butylbenzene             | 8.9904<br>3.7356 | 6.5084<br>2.7414 | 6.0968 | 5.5510 | 5.0451 | Qua        | 163.88      | 4.6067 | -0.001607 | 0.0100 |         |      |   | 0.9970   |            | 0.9900 |                |
| 1,3-Dichlorobenzene          | 2.9221<br>1.6957 | 2.2092<br>1.5156 | 2.1169 | 1.9447 | 1.8867 | Qua        | 30.182      | 1.8235 | -0.000266 | 0.6000 |         |      |   | 1.0000   |            | 0.9900 |                |
| 4-Isopropyltoluene           | 7.0624<br>3.1153 | 5.0159<br>2.3553 | 4.7406 | 4.4088 | 4.0458 | Qua        | 111.90      | 3.7834 | -0.001221 | 0.0100 |         |      |   | 0.9980   |            | 0.9900 |                |
| 1,4-Dichlorobenzene          | 2.8266<br>1.6335 | 2.1376<br>1.4846 | 2.0163 | 1.8501 | 1.7909 | Lin2       | 30.074      | 1.6217 |           | 0.5000 |         |      |   | 0.9940   |            | 0.9900 |                |
| 1,2-Dichlorobenzene          | 2.5618<br>1.4306 | 2.0231<br>1.2474 | 1.8268 | 1.7174 | 1.6239 | Qua        | 30.597      | 1.5652 | -0.000275 | 0.4000 |         |      |   | 1.0000   |            | 0.9900 |                |
| n-Butylbenzene               | 6.3276<br>2.9939 | 4.6796<br>2.2458 | 4.4579 | 4.1330 | 3.8445 | Qua        | 92.683      | 3.6676 | -0.001202 | 0.0100 |         |      |   | 0.9990   |            | 0.9900 |                |
| 1,2-Dibromo-3-Chloropropane  | 0.0652<br>0.0600 | 0.0607<br>0.0668 | 0.0596 | 0.0526 | 0.0547 | Qua        | 0.3221      | 0.0515 | 0.0000121 | 0.0500 |         |      |   | 1.0000   |            | 0.9900 |                |
| 1,2,4-Trichlorobenzene       | 0.8849<br>0.6920 | 0.7468<br>0.6939 | 0.7441 | 0.6990 | 0.6906 | Ave        |             | 0.7359 |           | 0.2000 | 9.5     | 20.0 |   |          |            |        |                |
| Hexachlorobutadiene          | 1.1598<br>0.6796 | 0.9121<br>0.6473 | 0.8304 | 0.7921 | 0.7368 | Lin2       | 11.988      | 0.6866 |           | 0.0100 |         |      |   | 0.9960   |            | 0.9900 |                |
| Naphthalene                  | 1.4545<br>1.0577 | 1.1383<br>1.0160 | 1.1397 | 1.0845 | 1.0188 | Qua        | 5.2781      | 1.0639 | -0.000041 | 0.0100 |         |      |   | 1.0000   |            | 0.9900 |                |
| 1,2,3-Trichlorobenzene       | 0.7009<br>0.5283 | 0.5389<br>0.5191 | 0.5576 | 0.5437 | 0.5162 | Qua        | 2.4492      | 0.5261 | -0.000007 | 0.0100 |         |      |   | 1.0000   |            | 0.9900 |                |
| Dibromofluoromethane (Surr)  | 0.2095<br>0.2048 | 0.1935<br>0.2027 | 0.2124 | 0.2277 | 0.2046 | Ave        |             | 0.2079 |           |        | 5.1     | 20.0 |   |          |            |        |                |
| 1,2-Dichloroethane-d4 (Surr) | 0.1897<br>0.1868 | 0.1988<br>0.1823 | 0.1954 | 0.2019 | 0.1798 | Ave        |             | 0.1907 |           |        | 4.4     | 20.0 |   |          |            |        |                |
| Toluene-d8 (Surr)            | 5.0797<br>3.3056 | 4.1320<br>2.6848 | 4.7054 | 4.3113 | 3.8441 | Ave        |             | 4.0090 |           |        | 20.0    | 20.0 |   |          |            |        |                |
| 4-Bromofluorobenzene (Surr)  | 1.5877<br>1.2807 | 1.3688<br>1.2538 | 1.5156 | 1.4330 | 1.3435 | Ave        |             | 1.3976 |           |        | 8.7     | 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.: 180-43791-1 Analy Batch No.: 123648

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

Instrument ID: CHHP4 GC Column: DB-624 ID: 0.18 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/03/2014 12:22 Calibration End Date: 11/03/2014 16:24 Calibration ID: 19030

Calibration Files:

| LEVEL:  | LAB SAMPLE ID:    | LAB FILE ID: |
|---------|-------------------|--------------|
| Level 1 | IC 180-123648/4   | 4110304.D    |
| Level 2 | IC 180-123648/5   | 4110305.D    |
| Level 3 | IC 180-123648/6   | 4110306.D    |
| Level 4 | ICIS 180-123648/7 | 4110307.D    |
| Level 5 | IC 180-123648/12  | 4110312.D    |
| Level 6 | IC 180-123648/9   | 4110309.D    |
| Level 7 | IC 180-123648/10  | 4110310.D    |

| ANALYTE                               | IS REF | CURVE TYPE | RESPONSE          |                   |        |         |         | CONCENTRATION (NG) |                |       |       |       |
|---------------------------------------|--------|------------|-------------------|-------------------|--------|---------|---------|--------------------|----------------|-------|-------|-------|
|                                       |        |            | LVL 1<br>LVL 6    | LVL 2<br>LVL 7    | LVL 3  | LVL 4   | LVL 5   | LVL 1<br>LVL 6     | LVL 2<br>LVL 7 | LVL 3 | LVL 4 | LVL 5 |
| Dichlorodifluoromethane               | FB     | Ave        | 77008<br>1733176  | 109931<br>3392540 | 316343 | 544615  | 689688  | 25.0<br>625        | 50.0<br>1250   | 125   | 200   | 250   |
| Chloromethane                         | FB     | Ave        | 124171<br>2330249 | 180374<br>4312184 | 472810 | 797392  | 970825  | 25.0<br>625        | 50.0<br>1250   | 125   | 200   | 250   |
| Vinyl chloride                        | FB     | Ave        | 96687<br>1586609  | 130970<br>3089600 | 328377 | 563241  | 632565  | 25.0<br>625        | 50.0<br>1250   | 125   | 200   | 250   |
| 1,3-Butadiene                         | FB     | Ave        | 95494<br>1656316  | 124022<br>3136694 | 336615 | 569038  | 648753  | 25.0<br>625        | 50.0<br>1250   | 125   | 200   | 250   |
| Bromomethane                          | FB     | Ave        | 12887<br>++++     | 17523<br>++++     | 44636  | 71494   | 97759   | 25.0<br>++++       | 50.0<br>++++   | 125   | 200   | 250   |
| Chloroethane                          | FB     | Qua        | 13928<br>255990   | 19867<br>479613   | 50534  | 87111   | 139075  | 25.0<br>625        | 50.0<br>1250   | 125   | 200   | 250   |
| Trichlorofluoromethane                | FB     | Ave        | 31482<br>1035575  | 52252<br>1683014  | 156608 | 282519  | 440612  | 25.0<br>625        | 50.0<br>1250   | 125   | 200   | 250   |
| Dichlorofluoromethane                 | FB     | Ave        | 43211<br>1057158  | 65518<br>++++     | 201068 | 314349  | 495933  | 25.0<br>625        | 50.0<br>++++   | 125   | 200   | 250   |
| Ethyl ether                           | FB     | Ave        | 19286<br>448564   | 34251<br>804307   | 92279  | 139022  | 191154  | 25.0<br>625        | 50.0<br>1250   | 125   | 200   | 250   |
| Acrolein                              | FB     | Ave        | 42659<br>110388   | 61831<br>++++     | 64925  | 83233   | 75280   | 500<br>1125        | 625<br>++++    | 750   | 875   | 1000  |
| 1,1-Dichloroethene                    | FB     | Qua        | 43538<br>1135190  | 67911<br>1941678  | 206982 | 345488  | 521168  | 25.0<br>625        | 50.0<br>1250   | 125   | 200   | 250   |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | FB     | Ave        | 52679<br>1279042  | 87444<br>2487932  | 252456 | 432989  | 564911  | 25.0<br>625        | 50.0<br>1250   | 125   | 200   | 250   |
| Acetone                               | FB     | Qua        | 36783<br>240731   | 34836<br>474414   | 67552  | 88962   | 148344  | 25.0<br>625        | 50.0<br>1250   | 125   | 200   | 250   |
| Iodomethane                           | FB     | Ave        | 82885<br>2102863  | 147656<br>4109897 | 391294 | 661539  | 826838  | 25.0<br>625        | 50.0<br>1250   | 125   | 200   | 250   |
| Carbon disulfide                      | FB     | Ave        | 154686<br>4703940 | 241578<br>8821688 | 744471 | 1364034 | 1843252 | 25.0<br>625        | 50.0<br>1250   | 125   | 200   | 250   |

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

Lab Name: TestAmerica Pittsburgh

Job No.: 180-43791-1

Analy Batch No.: 123648

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

Instrument ID: CHHP4

GC Column: DB-624

ID: 0.18 (mm)

Heated Purge: (Y/N) N

Calibration Start Date: 11/03/2014 12:22

Calibration End Date: 11/03/2014 16:24

Calibration ID: 19030

| ANALYTE                  | IS REF | CURVE TYPE | RESPONSE          |                   |         |         |         | CONCENTRATION (NG) |                |       |       |       |
|--------------------------|--------|------------|-------------------|-------------------|---------|---------|---------|--------------------|----------------|-------|-------|-------|
|                          |        |            | LVL 1<br>LVL 6    | LVL 2<br>LVL 7    | LVL 3   | LVL 4   | LVL 5   | LVL 1<br>LVL 6     | LVL 2<br>LVL 7 | LVL 3 | LVL 4 | LVL 5 |
| Allyl chloride           | FB     | Qua        | 34763<br>1027463  | 56847<br>2167520  | 176559  | 299800  | 390645  | 25.0<br>625        | 50.0<br>1250   | 125   | 200   | 250   |
| Methyl acetate           | FB     | Ave        | 170627<br>3212406 | 284082<br>5685537 | 695481  | 1090047 | 1320665 | 125<br>3125        | 250<br>6250    | 625   | 1000  | 1250  |
| Methylene Chloride       | FB     | Qua        | 189545<br>1505632 | 182980<br>2838966 | 358205  | 525297  | 642165  | 25.0<br>625        | 50.0<br>1250   | 125   | 200   | 250   |
| tert-Butyl alcohol       | TBA    | Ave        | 34778<br>603688   | 54665<br>1169407  | 122541  | 199618  | 203750  | 250<br>6250        | 500<br>12500   | 1250  | 2000  | 2500  |
| Acrylonitrile            | FB     | Qua        | 159916<br>2847212 | 253271<br>5156002 | 602591  | 970140  | 1141964 | 250<br>6250        | 500<br>12500   | 1250  | 2000  | 2500  |
| trans-1,2-Dichloroethene | FB     | Ave        | 69802<br>1587582  | 103396<br>2925765 | 288205  | 496423  | 635834  | 25.0<br>625        | 50.0<br>1250   | 125   | 200   | 250   |
| Methyl tert-butyl ether  | FB     | Ave        | 115666<br>2351395 | 187815<br>4359497 | 477712  | 770319  | 937481  | 25.0<br>625        | 50.0<br>1250   | 125   | 200   | 250   |
| Vinyl acetate            | FB     | Lin2       | 120511<br>2166786 | 162373<br>3966624 | 409835  | 705725  | 891442  | 25.0<br>625        | 50.0<br>1250   | 125   | 200   | 250   |
| Hexane                   | FB     | Qua        | 187879<br>3170746 | 231987<br>5687369 | 602524  | 1048917 | 1344500 | 25.0<br>625        | 50.0<br>1250   | 125   | 200   | 250   |
| 1,1-Dichloroethane       | FB     | Ave        | 129255<br>2832176 | 200004<br>5229058 | 534573  | 900495  | 1151152 | 25.0<br>625        | 50.0<br>1250   | 125   | 200   | 250   |
| 2,2-Dichloropropane      | FB     | Ave        | 46963<br>1184024  | 67651<br>2127222  | 194359  | 336789  | 451179  | 25.0<br>625        | 50.0<br>1250   | 125   | 200   | 250   |
| cis-1,2-Dichloroethene   | FB     | Ave        | 75839<br>1513530  | 113017<br>2828423 | 290755  | 480617  | 603817  | 25.0<br>625        | 50.0<br>1250   | 125   | 200   | 250   |
| 2-Butanone (MEK)         | FB     | Qua        | 29394<br>355386   | 39244<br>657940   | 79127   | 109787  | 177619  | 25.0<br>625        | 50.0<br>1250   | 125   | 200   | 250   |
| Chlorobromomethane       | FB     | Ave        | 24335<br>540361   | 40316<br>1011666  | 101583  | 164896  | 199944  | 25.0<br>625        | 50.0<br>1250   | 125   | 200   | 250   |
| Tetrahydrofuran          | FB     | Ave        | 25715<br>457987   | 38581<br>866670   | 93950   | 155132  | 184331  | 50.0<br>1250       | 100<br>2500    | 250   | 400   | 500   |
| Chloroform               | FB     | Ave        | 115713<br>2050276 | 157284<br>3760354 | 406135  | 653358  | 818661  | 25.0<br>625        | 50.0<br>1250   | 125   | 200   | 250   |
| 1,1,1-Trichloroethane    | FB     | Ave        | 70142<br>1724054  | 103073<br>3307587 | 296710  | 517077  | 665866  | 25.0<br>625        | 50.0<br>1250   | 125   | 200   | 250   |
| Cyclohexane              | FB     | Ave        | 174867<br>3490471 | 256129<br>6379678 | 687337  | 1183341 | 1435801 | 25.0<br>625        | 50.0<br>1250   | 125   | 200   | 250   |
| Carbon tetrachloride     | FB     | Ave        | 58390<br>1591703  | 88906<br>3099947  | 261206  | 460908  | 614115  | 25.0<br>625        | 50.0<br>1250   | 125   | 200   | 250   |
| 1,1-Dichloropropene      | FB     | Ave        | 91351<br>2003880  | 132891<br>3582918 | 367552  | 639484  | 805469  | 25.0<br>625        | 50.0<br>1250   | 125   | 200   | 250   |
| Benzene                  | FB     | Ave        | 309117<br>5039564 | 435268<br>7840886 | 1157091 | 1847904 | 2317492 | 25.0<br>625        | 50.0<br>1250   | 125   | 200   | 250   |

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

Lab Name: TestAmerica Pittsburgh

Job No.: 180-43791-1

Analy Batch No.: 123648

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

Instrument ID: CHHP4

GC Column: DB-624

ID: 0.18 (mm)

Heated Purge: (Y/N) N

Calibration Start Date: 11/03/2014 12:22

Calibration End Date: 11/03/2014 16:24

Calibration ID: 19030

| ANALYTE                     | IS REF | CURVE TYPE | RESPONSE          |                   |         |         |         | CONCENTRATION (NG) |                |       |       |       |
|-----------------------------|--------|------------|-------------------|-------------------|---------|---------|---------|--------------------|----------------|-------|-------|-------|
|                             |        |            | LVL 1<br>LVL 6    | LVL 2<br>LVL 7    | LVL 3   | LVL 4   | LVL 5   | LVL 1<br>LVL 6     | LVL 2<br>LVL 7 | LVL 3 | LVL 4 | LVL 5 |
| Isobutyl alcohol            | FB     | Ave        | 29128<br>519324   | 42376<br>1006186  | 112799  | 158464  | 199535  | 625<br>15625       | 1250<br>31250  | 3125  | 5000  | 6250  |
| 1,2-Dichloroethane          | FB     | Ave        | 57100<br>1085070  | 88793<br>2057245  | 212433  | 337212  | 428789  | 25.0<br>625        | 50.0<br>1250   | 125   | 200   | 250   |
| n-Heptane                   | FB     | Ave        | 167161<br>3050882 | 246581<br>4995867 | 637362  | 1060664 | 1336577 | 25.0<br>625        | 50.0<br>1250   | 125   | 200   | 250   |
| Trichloroethene             | FB     | Ave        | 70202<br>1332487  | 89235<br>2366628  | 246174  | 421095  | 551869  | 25.0<br>625        | 50.0<br>1250   | 125   | 200   | 250   |
| Methylcyclohexane           | FB     | Ave        | 147450<br>2704544 | 208546<br>4684311 | 552406  | 935722  | 1154026 | 25.0<br>625        | 50.0<br>1250   | 125   | 200   | 250   |
| 1,2-Dichloropropane         | FB     | Ave        | 85209<br>1443702  | 112656<br>2608895 | 296852  | 470284  | 597118  | 25.0<br>625        | 50.0<br>1250   | 125   | 200   | 250   |
| Dibromomethane              | FB     | Ave        | 24387<br>505201   | 38075<br>957656   | 98410   | 150562  | 184345  | 25.0<br>625        | 50.0<br>1250   | 125   | 200   | 250   |
| 1,4-Dioxane                 | FB     | Qua        | 8103<br>141379    | 11249<br>284445   | 27143   | 45936   | 50203   | 500<br>12500       | 1000<br>25000  | 2500  | 4000  | 5000  |
| Dichlorobromomethane        | FB     | Ave        | 53243<br>1265293  | 83306<br>2381841  | 220935  | 365633  | 495371  | 25.0<br>625        | 50.0<br>1250   | 125   | 200   | 250   |
| 2-Chloroethyl vinyl ether   | FB     | Ave        | 43960<br>999550   | 72298<br>1814167  | 177306  | 310229  | 396960  | 50.0<br>1250       | 100<br>2500    | 250   | 400   | 500   |
| trans-1,3-Dichloropropene   | CBZ    | Qua        | 80092<br>1715895  | 115869<br>3066001 | 309476  | 512949  | 667130  | 25.0<br>625        | 50.0<br>1250   | 125   | 200   | 250   |
| 4-Methyl-2-pentanone (MIBK) | CBZ    | Ave        | 40191<br>721478   | 64274<br>1304037  | 151766  | 229333  | 304640  | 25.0<br>625        | 50.0<br>1250   | 125   | 200   | 250   |
| Toluene                     | CBZ    | Qua        | 354416<br>4478637 | 472299<br>6606546 | 1131387 | 1784371 | 2241088 | 25.0<br>625        | 50.0<br>1250   | 125   | 200   | 250   |
| cis-1,3-Dichloropropene     | FB     | Ave        | 49626<br>1244582  | 78999<br>2332929  | 210351  | 349002  | 466600  | 25.0<br>625        | 50.0<br>1250   | 125   | 200   | 250   |
| Ethyl methacrylate          | CBZ    | Qua        | 58581<br>1066379  | 90656<br>1915843  | 216833  | 336808  | 442080  | 25.0<br>625        | 50.0<br>1250   | 125   | 200   | 250   |
| 1,1,2-Trichloroethane       | CBZ    | Ave        | 43046<br>769743   | 68064<br>1389170  | 162661  | 249383  | 312197  | 25.0<br>625        | 50.0<br>1250   | 125   | 200   | 250   |
| Tetrachloroethene           | CBZ    | Ave        | 62919<br>1062778  | 78409<br>1877219  | 209493  | 350679  | 438023  | 25.0<br>625        | 50.0<br>1250   | 125   | 200   | 250   |
| 1,3-Dichloropropane         | CBZ    | Ave        | 79781<br>1354026  | 114632<br>2427460 | 287607  | 437206  | 565116  | 25.0<br>625        | 50.0<br>1250   | 125   | 200   | 250   |
| 2-Hexanone                  | CBZ    | Qua        | 27068<br>464430   | 37708<br>890566   | 97701   | 143692  | 216393  | 25.0<br>625        | 50.0<br>1250   | 125   | 200   | 250   |
| Chlorodibromomethane        | CBZ    | Ave        | 29166<br>731242   | 40465<br>1425951  | 121676  | 201910  | 273736  | 25.0<br>625        | 50.0<br>1250   | 125   | 200   | 250   |
| 1,2-Dibromoethane           | CBZ    | Ave        | 39929<br>692151   | 56604<br>1328246  | 139182  | 207407  | 269950  | 25.0<br>625        | 50.0<br>1250   | 125   | 200   | 250   |

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

Lab Name: TestAmerica Pittsburgh

Job No.: 180-43791-1

Analy Batch No.: 123648

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

Instrument ID: CHHP4

GC Column: DB-624

ID: 0.18 (mm)

Heated Purge: (Y/N) N

Calibration Start Date: 11/03/2014 12:22

Calibration End Date: 11/03/2014 16:24

Calibration ID: 19030

| ANALYTE                     | IS REF | CURVE TYPE | RESPONSE          |                   |         |         |         | CONCENTRATION (NG) |                |       |       |       |
|-----------------------------|--------|------------|-------------------|-------------------|---------|---------|---------|--------------------|----------------|-------|-------|-------|
|                             |        |            | LVL 1<br>LVL 6    | LVL 2<br>LVL 7    | LVL 3   | LVL 4   | LVL 5   | LVL 1<br>LVL 6     | LVL 2<br>LVL 7 | LVL 3 | LVL 4 | LVL 5 |
| Chlorobenzene               | CBZ    | Lin2       | 198262<br>2779120 | 273838<br>++++    | 659208  | 1009382 | 1282060 | 25.0<br>625        | 50.0<br>++++   | 125   | 200   | 250   |
| 1,1,1,2-Tetrachloroethane   | CBZ    | Ave        | 55685<br>963508   | 79686<br>1672023  | 200974  | 316138  | 413573  | 25.0<br>625        | 50.0<br>1250   | 125   | 200   | 250   |
| Ethylbenzene                | CBZ    | Qua        | 131399<br>1820775 | 170367<br>2850802 | 426297  | 678539  | 845631  | 25.0<br>625        | 50.0<br>1250   | 125   | 200   | 250   |
| m-Xylene & p-Xylene         | CBZ    | Ave        | 153254<br>2383414 | 212553<br>4040005 | 527675  | 834919  | 1042884 | 25.0<br>625        | 50.0<br>1250   | 125   | 200   | 250   |
| o-Xylene                    | CBZ    | Qua        | 151405<br>2132292 | 205828<br>3443753 | 506325  | 770324  | 984099  | 25.0<br>625        | 50.0<br>1250   | 125   | 200   | 250   |
| Styrene                     | CBZ    | Ave        | 226297<br>++++    | 306152<br>++++    | 755106  | 1132409 | 1442360 | 25.0<br>++++       | 50.0<br>++++   | 125   | 200   | 250   |
| Bromoform                   | CBZ    | Ave        | 11971<br>382388   | 18849<br>806062   | 55692   | 92297   | 127202  | 25.0<br>625        | 50.0<br>1250   | 125   | 200   | 250   |
| Isopropylbenzene            | CBZ    | Qua        | 395637<br>4505204 | 519573<br>++++    | 1282942 | 1911788 | 2346017 | 25.0<br>625        | 50.0<br>++++   | 125   | 200   | 250   |
| Bromobenzene                | DCB    | Ave        | 69666<br>1127170  | 99350<br>2060126  | 239705  | 378393  | 471458  | 25.0<br>625        | 50.0<br>1250   | 125   | 200   | 250   |
| 1,1,2,2-Tetrachloroethane   | CBZ    | Ave        | 47477<br>767713   | 71759<br>1453855  | 172095  | 251065  | 325964  | 25.0<br>625        | 50.0<br>1250   | 125   | 200   | 250   |
| trans-1,4-Dichloro-2-butene | DCB    | Ave        | 8394<br>188479    | 11488<br>402007   | 31104   | 49372   | 64248   | 25.0<br>625        | 50.0<br>1250   | 125   | 200   | 250   |
| 1,2,3-Trichloropropane      | DCB    | Qua        | 13181<br>224027   | 19177<br>439678   | 46369   | 72436   | 88980   | 25.0<br>625        | 50.0<br>1250   | 125   | 200   | 250   |
| N-Propylbenzene             | DCB    | Lin2       | 111875<br>1644536 | 146176<br>++++    | 380320  | 579997  | 732865  | 25.0<br>625        | 50.0<br>++++   | 125   | 200   | 250   |
| 2-Chlorotoluene             | DCB    | Ave        | 84943<br>1293841  | 117690<br>++++    | 290688  | 444370  | 556330  | 25.0<br>625        | 50.0<br>++++   | 125   | 200   | 250   |
| 1,3,5-Trimethylbenzene      | DCB    | Qua        | 310903<br>3663629 | 408624<br>5164561 | 1009118 | 1525320 | 1879886 | 25.0<br>625        | 50.0<br>1250   | 125   | 200   | 250   |
| 4-Chlorotoluene             | DCB    | Qua        | 80187<br>1172679  | 111670<br>1942800 | 269426  | 424064  | 518059  | 25.0<br>625        | 50.0<br>1250   | 125   | 200   | 250   |
| tert-Butylbenzene           | DCB    | Qua        | 286531<br>3521083 | 368439<br>5304007 | 915451  | 1384037 | 1726019 | 25.0<br>625        | 50.0<br>1250   | 125   | 200   | 250   |
| 1,2,4-Trimethylbenzene      | DCB    | Qua        | 296561<br>3740947 | 399497<br>5567438 | 985498  | 1482846 | 1839274 | 25.0<br>625        | 50.0<br>1250   | 125   | 200   | 250   |
| sec-Butylbenzene            | DCB    | Qua        | 432642<br>4721692 | 550728<br>6614693 | 1390567 | 2051735 | 2514863 | 25.0<br>625        | 50.0<br>1250   | 125   | 200   | 250   |
| 1,3-Dichlorobenzene         | DCB    | Qua        | 140617<br>2143238 | 186936<br>3657059 | 482823  | 718776  | 940494  | 25.0<br>625        | 50.0<br>1250   | 125   | 200   | 250   |
| 4-Isopropyltoluene          | DCB    | Qua        | 339862<br>3937573 | 424431<br>5683062 | 1081239 | 1629566 | 2016739 | 25.0<br>625        | 50.0<br>1250   | 125   | 200   | 250   |

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

Lab Name: TestAmerica Pittsburgh Job No.: 180-43791-1 Analy Batch No.: 123648

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

Instrument ID: CHHP4 GC Column: DB-624 ID: 0.18 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/03/2014 12:22 Calibration End Date: 11/03/2014 16:24 Calibration ID: 19030

| ANALYTE                      | IS REF | CURVE TYPE | RESPONSE          |                   |         |         |         | CONCENTRATION (NG) |                |       |       |       |
|------------------------------|--------|------------|-------------------|-------------------|---------|---------|---------|--------------------|----------------|-------|-------|-------|
|                              |        |            | LVL 1<br>LVL 6    | LVL 2<br>LVL 7    | LVL 3   | LVL 4   | LVL 5   | LVL 1<br>LVL 6     | LVL 2<br>LVL 7 | LVL 3 | LVL 4 | LVL 5 |
| 1,4-Dichlorobenzene          | DCB    | Lin2       | 136025<br>2064671 | 180878<br>3582102 | 459873  | 683824  | 892716  | 25.0<br>625        | 50.0<br>1250   | 125   | 200   | 250   |
| 1,2-Dichlorobenzene          | DCB    | Qua        | 123281<br>1808226 | 171194<br>3009861 | 416666  | 634776  | 809456  | 25.0<br>625        | 50.0<br>1250   | 125   | 200   | 250   |
| n-Butylbenzene               | DCB    | Qua        | 304502<br>3784161 | 395979<br>5418916 | 1016771 | 1527628 | 1916377 | 25.0<br>625        | 50.0<br>1250   | 125   | 200   | 250   |
| 1,2-Dibromo-3-Chloropropane  | DCB    | Qua        | 3139<br>75884     | 5136<br>161249    | 13583   | 19434   | 27287   | 25.0<br>625        | 50.0<br>1250   | 125   | 200   | 250   |
| 1,2,4-Trichlorobenzene       | DCB    | Ave        | 42584<br>874689   | 63194<br>1674198  | 169713  | 258363  | 344249  | 25.0<br>625        | 50.0<br>1250   | 125   | 200   | 250   |
| Hexachlorobutadiene          | DCB    | Lin2       | 55812<br>859016   | 77177<br>1561854  | 189406  | 292767  | 367257  | 25.0<br>625        | 50.0<br>1250   | 125   | 200   | 250   |
| Naphthalene                  | DCB    | Qua        | 69995<br>1336874  | 96317<br>2451542  | 259950  | 400841  | 507856  | 25.0<br>625        | 50.0<br>1250   | 125   | 200   | 250   |
| 1,2,3-Trichlorobenzene       | DCB    | Qua        | 33729<br>667810   | 45602<br>1252459  | 127175  | 200974  | 257321  | 25.0<br>625        | 50.0<br>1250   | 125   | 200   | 250   |
| Dibromofluoromethane (Surr)  | FB     | Ave        | 41194<br>951487   | 63642<br>1762628  | 186929  | 300577  | 376917  | 25.0<br>625        | 50.0<br>1250   | 125   | 200   | 250   |
| 1,2-Dichloroethane-d4 (Surr) | FB     | Ave        | 37301<br>868109   | 65396<br>1584927  | 171974  | 266578  | 331198  | 25.0<br>625        | 50.0<br>1250   | 125   | 200   | 250   |
| Toluene-d8 (Surr)            | CBZ    | Ave        | 217455<br>3533198 | 305351<br>5424801 | 886737  | 1339596 | 1598196 | 25.0<br>625        | 50.0<br>1250   | 125   | 200   | 250   |
| 4-Bromofluorobenzene (Surr)  | CBZ    | Ave        | 67968<br>1368902  | 101150<br>2533468 | 285621  | 445255  | 558566  | 25.0<br>625        | 50.0<br>1250   | 125   | 200   | 250   |

Curve Type Legend:

|                             |
|-----------------------------|
| Ave = Average ISTD          |
| Lin2 = Linear 1/conc^2 ISTD |
| Qua = Quadratic ISTD        |



TestAmerica Pittsburgh  
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHHP4\20141103-4149.b\4110304.D  
 Lims ID: IC  
 Client ID:  
 Sample Type: IC Calib Level: 1  
 Inject. Date: 03-Nov-2014 12:22:30 ALS Bottle#: 4 Worklist Smp#: 4  
 Purge Vol: 5.000 mL Dil. Factor: 1.0000  
 Sample Info: IC  
 Misc. Info.: 180-0004149-004  
 Operator ID: 034635 Instrument ID: CHHP4  
 Sublist: chrom-MSVOA\_CHHP4\*sub33  
 Method: \\PITCHROM\ChromData\CHHP4\20141103-4149.b\MSVOA\_CHHP4.m  
 Limit Group: VOA 8260C ICAL  
 Last Update: 03-Nov-2014 16:25:13 Calib Date: 03-Nov-2014 16:24:30  
 Integrator: RTE ID Type: Deconvolution ID  
 Quant Method: Internal Standard Quant By: Initial Calibration  
 Last ICal File: \\PITCHROM\ChromData\CHHP4\20141103-4149.b\4110312.D  
 Column 1 : DB-624 ( 0.18 mm) Det: MS SCAN  
 Process Host: XAWRK026

First Level Reviewer: journeytj

Date: 03-Nov-2014 12:19:08

| Compound                        | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q   | Response | Cal Amt ng | OnCol Amt ng | Flags |
|---------------------------------|-----|-----------|---------------|---------------|-----|----------|------------|--------------|-------|
| * 1 TBA-d9 (IS)                 | 65  | 3.195     | 3.168         | 0.027         | 98  | 327451   | 5000.0     | 5000.0       |       |
| * 2 Fluorobenzene (IS)          | 96  | 6.255     | 6.258         | -0.003        | 98  | 1966404  | 250.0      | 250.0        |       |
| * 3 Chlorobenzene-d5            | 119 | 9.449     | 9.452         | -0.003        | 87  | 428086   | 250.0      | 250.0        |       |
| * 4 1,4-Dichlorobenzene-d4      | 152 | 11.803    | 11.806        | -0.003        | 95  | 481225   | 250.0      | 250.0        |       |
| \$ 5 Dibromofluoromethane (Surr | 113 | 5.494     | 5.492         | 0.002         | 93  | 41194    | 25.0       | 25.2         |       |
| \$ 6 1,2-Dichloroethane-d4 (Sur | 65  | 5.890     | 5.887         | 0.003         | 37  | 37301    | 25.0       | 24.9         |       |
| \$ 7 Toluene-d8 (Surr)          | 98  | 7.983     | 7.980         | 0.003         | 92  | 217455   | 25.0       | 31.7         |       |
| \$ 8 4-Bromofluorobenzene (Surr | 95  | 10.653    | 10.650        | 0.003         | 88  | 67968    | 25.0       | 28.4         |       |
| 10 Dichlorodifluoromethane      | 85  | 1.212     | 1.209         | 0.003         | 88  | 77008    | 25.0       | 26.0         |       |
| 11 Chloromethane                | 50  | 1.303     | 1.318         | -0.015        | 99  | 124171   | 25.0       | 28.7         |       |
| 12 Vinyl chloride               | 62  | 1.406     | 1.416         | -0.010        | 98  | 96687    | 25.0       | 31.5         |       |
| 13 Butadiene                    | 54  | 1.431     | 1.434         | -0.003        | 92  | 95494    | 25.0       | 31.0         |       |
| 14 Bromomethane                 | 94  | 1.650     | 1.659         | -0.009        | 84  | 12887    | 25.0       | 29.6         |       |
| 15 Chloroethane                 | 64  | 1.735     | 1.744         | -0.009        | 61  | 13928    | 25.0       | 15.6         |       |
| 17 Trichlorofluoromethane       | 101 | 1.917     | 1.921         | -0.004        | 95  | 31482    | 25.0       | 20.5         |       |
| 16 Dichlorofluoromethane        | 67  | 1.948     | 1.957         | -0.009        | 96  | 43211    | 25.0       | 23.8         |       |
| 19 Ethyl ether                  | 59  | 2.240     | 2.225         | 0.015         | 94  | 19286    | 25.0       | 24.3         |       |
| 20 Acrolein                     | 56  | 2.367     | 2.365         | 0.002         | 85  | 42659    | 500.0      | 428.1        | M     |
| 21 1,1-Dichloroethene           | 96  | 2.410     | 2.419         | -0.009        | 95  | 43538    | 25.0       | 26.9         |       |
| 22 1,1,2-Trichloro-1,2,2-trif   | 101 | 2.471     | 2.486         | -0.015        | 93  | 52679    | 25.0       | 23.2         |       |
| 23 Acetone                      | 43  | 2.526     | 2.529         | -0.003        | 96  | 36783    | 25.0       | 11.6         | M     |
| 24 Iodomethane                  | 142 | 2.556     | 2.559         | -0.003        | 95  | 82885    | 25.0       | 23.1         |       |
| 25 Carbon disulfide             | 76  | 2.611     | 2.620         | -0.009        | 100 | 154686   | 25.0       | 21.4         |       |
| 28 3-Chloro-1-propene           | 76  | 2.824     | 2.833         | -0.009        | 94  | 34763    | 25.0       | 21.4         |       |
| 29 Methyl acetate               | 43  | 2.872     | 2.870         | 0.002         | 99  | 170627   | 125.0      | 140.4        |       |
| 30 Methylene Chloride           | 84  | 2.988     | 2.991         | -0.003        | 99  | 189545   | 25.0       | 28.3         |       |
| 31 2-Methyl-2-propanol          | 59  | 3.286     | 3.265         | 0.021         | 95  | 34778    | 250.0      | 345.3        |       |
| 32 Acrylonitrile                | 53  | 3.323     | 3.326         | -0.003        | 98  | 159916   | 250.0      | 186.0        |       |
| 33 trans-1,2-Dichloroethene     | 96  | 3.335     | 3.332         | 0.003         | 90  | 69802    | 25.0       | 25.9         |       |
| 34 Methyl tert-butyl ether      | 73  | 3.371     | 3.368         | 0.003         | 96  | 115666   | 25.0       | 27.1         |       |

| Compound                       | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q   | Response | Cal Amt ng | OnCol Amt ng | Flags |
|--------------------------------|-----|-----------|---------------|---------------|-----|----------|------------|--------------|-------|
| 38 Vinyl acetate               | 43  | 3.712     | 3.727         | -0.015        | 94  | 120511   | 25.0       | 25.9         |       |
| 35 Hexane                      | 57  | 3.730     | 3.727         | 0.003         | 82  | 187879   | 25.0       | 27.1         |       |
| 36 1,1-Dichloroethane          | 63  | 3.974     | 3.971         | 0.003         | 95  | 129255   | 25.0       | 26.2         |       |
| 41 2,2-Dichloropropane         | 77  | 4.807     | 4.804         | 0.003         | 56  | 46963    | 25.0       | 25.1         |       |
| 42 cis-1,2-Dichloroethene      | 96  | 4.807     | 4.816         | -0.009        | 82  | 75839    | 25.0       | 28.1         |       |
| 43 2-Butanone (MEK)            | 43  | 4.874     | 4.859         | 0.015         | 88  | 29394    | 25.0       | 18.6         |       |
| 46 Chlorobromomethane          | 128 | 5.129     | 5.127         | 0.002         | 89  | 24335    | 25.0       | 26.2         |       |
| 48 Tetrahydrofuran             | 42  | 5.166     | 5.157         | 0.009         | 82  | 25715    | 50.0       | 59.4         |       |
| 49 Chloroform                  | 83  | 5.300     | 5.303         | -0.003        | 93  | 115713   | 25.0       | 30.8         |       |
| 50 1,1,1-Trichloroethane       | 97  | 5.440     | 5.449         | -0.009        | 97  | 70142    | 25.0       | 24.9         |       |
| 51 Cyclohexane                 | 56  | 5.513     | 5.516         | -0.003        | 92  | 174867   | 25.0       | 27.7         |       |
| 53 Carbon tetrachloride        | 117 | 5.628     | 5.625         | 0.003         | 97  | 58390    | 25.0       | 23.1         |       |
| 52 1,1-Dichloropropene         | 75  | 5.646     | 5.650         | -0.004        | 94  | 91351    | 25.0       | 26.6         |       |
| 54 Benzene                     | 78  | 5.878     | 5.881         | -0.003        | 98  | 309117   | 25.0       | 31.1         |       |
| 59 Isobutyl alcohol            | 41  | 5.951     | 5.942         | 0.009         | 96  | 29128    | 625.0      | 752.7        |       |
| 55 1,2-Dichloroethane          | 62  | 5.987     | 5.984         | 0.003         | 94  | 57100    | 25.0       | 28.9         |       |
| 58 n-Heptane                   | 43  | 6.291     | 6.295         | -0.004        | 91  | 167161   | 25.0       | 29.3         |       |
| 61 Trichloroethene             | 130 | 6.669     | 6.666         | 0.002         | 97  | 70202    | 25.0       | 30.0         |       |
| 63 Methylcyclohexane           | 83  | 6.900     | 6.903         | -0.003        | 95  | 147450   | 25.0       | 29.4         |       |
| 64 1,2-Dichloropropene         | 63  | 6.961     | 6.958         | 0.002         | 96  | 85209    | 25.0       | 31.5         |       |
| 65 Dibromomethane              | 93  | 7.046     | 7.043         | 0.003         | 92  | 24387    | 25.0       | 27.7         |       |
| 67 1,4-Dioxane                 | 88  | 7.070     | 7.067         | 0.003         | 37  | 8103     | 500.0      | 435.0        | M     |
| 68 Dichlorobromomethane        | 83  | 7.259     | 7.262         | -0.003        | 95  | 53243    | 25.0       | 25.4         |       |
| 70 2-Chloroethyl vinyl ether   | 63  | 7.599     | 7.596         | 0.003         | 91  | 43960    | 50.0       | 51.5         |       |
| 74 trans-1,3-Dichloropropene   | 75  | 7.727     | 7.724         | 0.003         | 93  | 80092    | 25.0       | 29.2         |       |
| 72 4-Methyl-2-pentanone (MIBK) | 43  | 7.903     | 7.901         | 0.002         | 96  | 40191    | 25.0       | 30.4         |       |
| 73 Toluene                     | 91  | 8.049     | 8.047         | 0.002         | 96  | 354416   | 25.0       | 16.9         |       |
| 71 cis-1,3-Dichloropropene     | 75  | 8.329     | 8.327         | 0.002         | 92  | 49626    | 25.0       | 24.7         |       |
| 75 Ethyl methacrylate          | 69  | 8.408     | 8.412         | -0.004        | 92  | 58581    | 25.0       | 21.6         |       |
| 76 1,1,2-Trichloroethane       | 97  | 8.518     | 8.521         | -0.003        | 89  | 43046    | 25.0       | 30.6         |       |
| 77 Tetrachloroethene           | 164 | 8.560     | 8.564         | -0.004        | 96  | 62919    | 25.0       | 33.2         |       |
| 78 1,3-Dichloropropene         | 76  | 8.670     | 8.673         | -0.003        | 94  | 79781    | 25.0       | 32.1         |       |
| 79 2-Hexanone                  | 43  | 8.755     | 8.752         | 0.003         | 96  | 27068    | 25.0       | 17.5         |       |
| 81 Chlorodibromomethane        | 129 | 8.883     | 8.880         | 0.003         | 93  | 29166    | 25.0       | 26.1         |       |
| 82 Ethylene Dibromide          | 107 | 8.986     | 8.984         | 0.002         | 95  | 39929    | 25.0       | 32.3         |       |
| 84 Chlorobenzene               | 112 | 9.479     | 9.482         | -0.003        | 95  | 198262   | 25.0       | 24.8         |       |
| 85 1,1,1,2-Tetrachloroethane   | 131 | 9.582     | 9.586         | -0.004        | 94  | 55685    | 25.0       | 31.7         |       |
| 86 Ethylbenzene                | 106 | 9.595     | 9.592         | 0.003         | 98  | 131399   | 25.0       | 20.7         |       |
| 87 m-Xylene & p-Xylene         | 106 | 9.728     | 9.732         | -0.004        | 100 | 153254   | 25.0       | 33.5         |       |
| 88 o-Xylene                    | 106 | 10.106    | 10.109        | -0.003        | 98  | 151405   | 25.0       | 18.8         |       |
| 89 Styrene                     | 104 | 10.130    | 10.133        | -0.003        | 95  | 226297   | 25.0       | 32.2         |       |
| 90 Bromoform                   | 173 | 10.300    | 10.304        | -0.004        | 97  | 11971    | 25.0       | 22.3         |       |
| 91 Isopropylbenzene            | 105 | 10.483    | 10.480        | 0.003         | 96  | 395637   | 25.0       | 25.8         |       |
| 94 Bromobenzene                | 156 | 10.775    | 10.772        | 0.003         | 95  | 69666    | 25.0       | 34.3         |       |
| 93 1,1,2,2-Tetrachloroethane   | 83  | 10.805    | 10.809        | -0.004        | 94  | 47477    | 25.0       | 32.2         |       |
| 96 trans-1,4-Dichloro-2-buten  | 53  | 10.848    | 10.845        | 0.003         | 67  | 8394     | 25.0       | 29.8         |       |
| 95 1,2,3-Trichloropropane      | 110 | 10.854    | 10.851        | 0.003         | 89  | 13181    | 25.0       | 19.7         |       |
| 97 N-Propylbenzene             | 120 | 10.897    | 10.900        | -0.003        | 99  | 111875   | 25.0       | 25.5         |       |
| 98 2-Chlorotoluene             | 126 | 10.970    | 10.973        | -0.003        | 96  | 84943    | 25.0       | 34.1         |       |
| 99 1,3,5-Trimethylbenzene      | 105 | 11.091    | 11.088        | 0.003         | 95  | 310903   | 25.0       | 16.4         |       |
| 100 4-Chlorotoluene            | 126 | 11.097    | 11.101        | -0.004        | 98  | 80187    | 25.0       | 21.1         |       |
| 101 tert-Butylbenzene          | 119 | 11.395    | 11.393        | 0.002         | 94  | 286531   | 25.0       | 18.9         |       |

| Compound                         | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q  | Response | Cal Amt ng | OnCol Amt ng | Flags |
|----------------------------------|-----|-----------|---------------|---------------|----|----------|------------|--------------|-------|
| 103 1,2,4-Trimethylbenzene       | 105 | 11.456    | 11.459        | -0.003        | 97 | 296561   | 25.0       | 17.4         |       |
| 104 sec-Butylbenzene             | 105 | 11.620    | 11.618        | 0.002         | 94 | 432642   | 25.0       | 13.3         |       |
| 105 1,3-Dichlorobenzene          | 146 | 11.718    | 11.721        | -0.003        | 99 | 140617   | 25.0       | 23.6         |       |
| 106 4-Isopropyltoluene           | 119 | 11.785    | 11.782        | 0.003         | 97 | 339862   | 25.0       | 17.2         |       |
| 107 1,4-Dichlorobenzene          | 146 | 11.827    | 11.831        | -0.004        | 96 | 136025   | 25.0       | 25.0         |       |
| 111 1,2-Dichlorobenzene          | 146 | 12.174    | 12.171        | 0.003         | 97 | 123281   | 25.0       | 21.5         |       |
| 110 n-Butylbenzene               | 91  | 12.186    | 12.190        | -0.004        | 98 | 304502   | 25.0       | 18.0         |       |
| 112 1,2-Dibromo-3-Chloropropan   | 75  | 12.965    | 12.968        | -0.003        | 68 | 3139     | 25.0       | 25.3         |       |
| 113 1,2,4-Trichlorobenzene       | 180 | 13.780    | 13.777        | 0.003         | 92 | 42584    | 25.0       | 30.1         |       |
| 115 Hexachlorobutadiene          | 225 | 13.932    | 13.929        | 0.003         | 96 | 55812    | 25.0       | 24.8         |       |
| 116 Naphthalene                  | 128 | 14.036    | 14.033        | 0.003         | 96 | 69995    | 25.0       | 29.3         |       |
| 117 1,2,3-Trichlorobenzene       | 180 | 14.249    | 14.252        | -0.004        | 95 | 33729    | 25.0       | 28.7         |       |
| S 129 1,2-Dichloroethene, Total  | 96  |           |               |               | 0  |          | 50.0       | 54.0         |       |
| S 130 Xylenes, Total             | 106 |           |               |               | 0  |          | 50.0       | 52.3         |       |
| S 131 1,3-Dichloropropene, Total | 1   |           |               |               | 0  |          | 50.0       | 54.0         |       |

### QC Flag Legend

Review Flags

M - Manually Integrated

### Reagents:

|                     |                     |           |
|---------------------|---------------------|-----------|
| VOA8260INT_00022    | Amount Added: 10.00 | Units: uL |
| VOA8260SURR_00017   | Amount Added: 1.00  | Units: uL |
| voaWVOA Pri R_00001 | Amount Added: 1.00  | Units: uL |
| VOAACROPRI_00002    | Amount Added: 20.00 | Units: uL |
| voaWVA pri Re_00004 | Amount Added: 1.00  | Units: uL |
| voaW2-cle PRi_00002 | Amount Added: 1.00  | Units: uL |

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP4\20141103-4149.b\4110304.D

Injection Date: 03-Nov-2014 12:22:30

Instrument ID: CHHP4

Operator ID: 034635

Lims ID: IC

Worklist Smp#: 4

Client ID:

Purge Vol: 5.000 mL

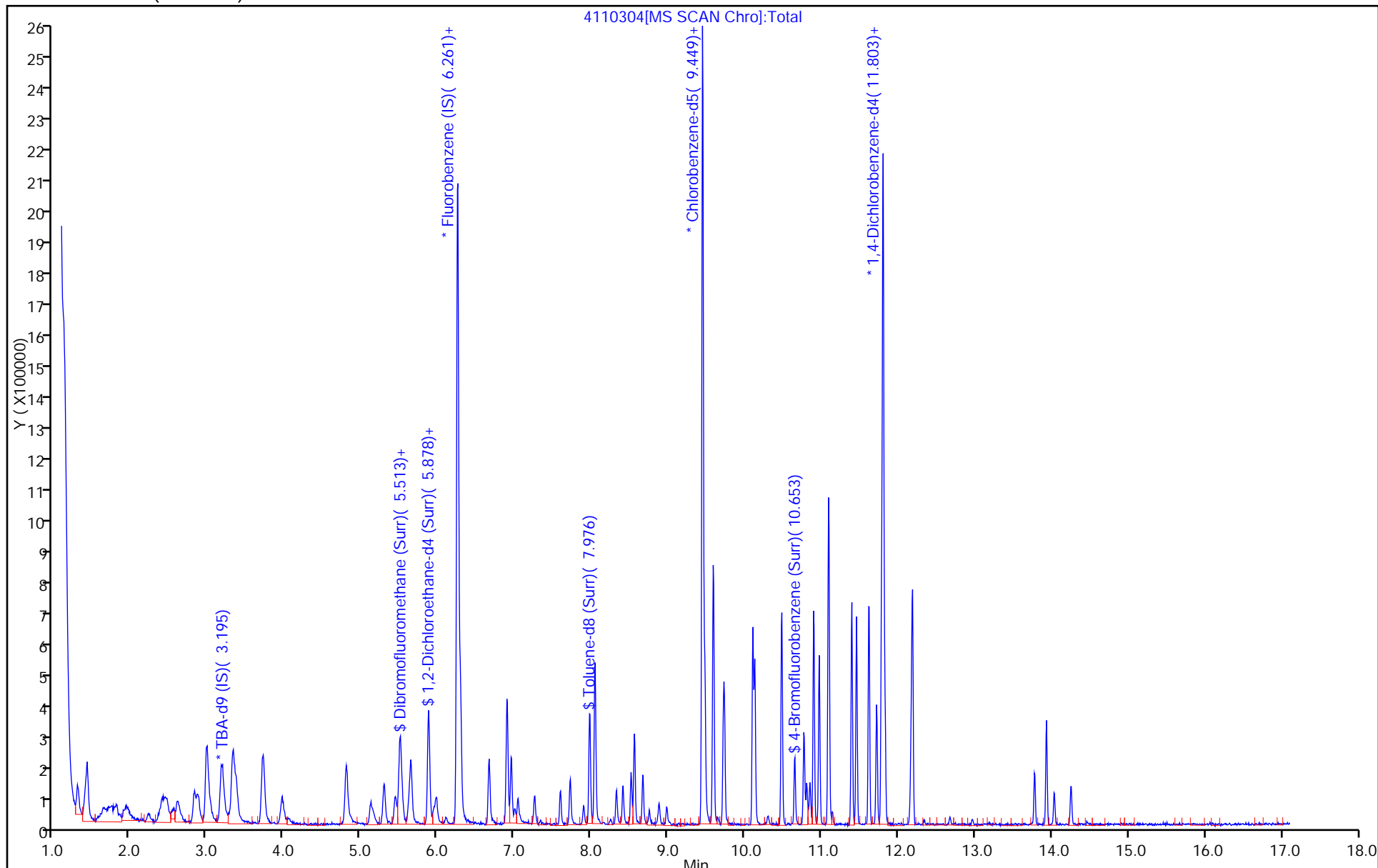
Dil. Factor: 1.0000

ALS Bottle#: 4

Method: MSVOA\_CHHP4

Limit Group: VOA 8260C ICAL

Column: DB-624 (0.18 mm)



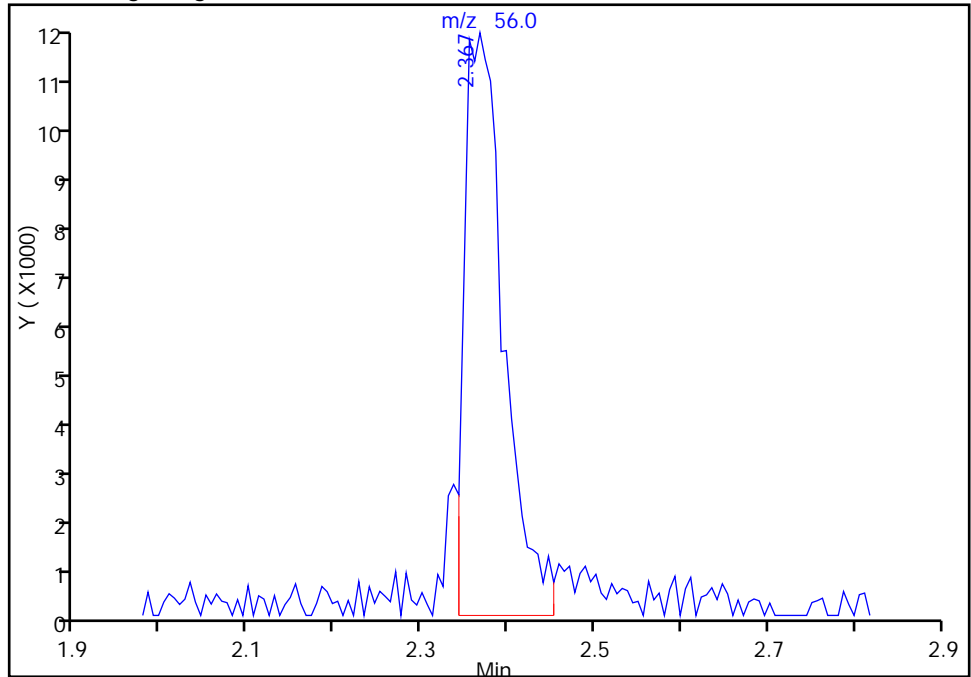
TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP4\20141103-4149.b\4110304.D  
Injection Date: 03-Nov-2014 12:22:30 Instrument ID: CHHP4  
Lims ID: IC  
Client ID:  
Operator ID: 034635 ALS Bottle#: 4 Worklist Smp#: 4  
Purge Vol: 5.000 mL Dil. Factor: 1.0000  
Method: MSVOA\_CHHP4 Limit Group: VOA 8260C ICAL  
Column: DB-624 (0.18 mm) Detector: MS SCAN

20 Acrolein, CAS: 107-02-8

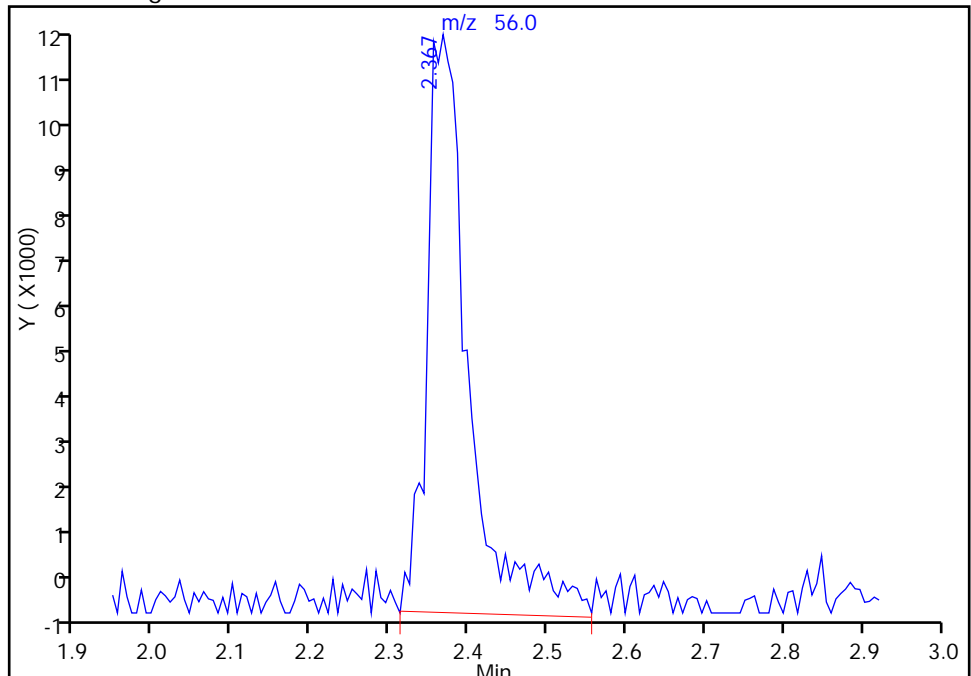
RT: 2.37  
Response: 36334  
Amount: 500.0000

Processing Integration Results



RT: 2.37  
Response: 42659  
Amount: 428.1414

Manual Integration Results



Reviewer: journeyp, 03-Nov-2014 12:19:08  
Audit Action: Manually Integrated  
Audit Reason: Poor chromatography

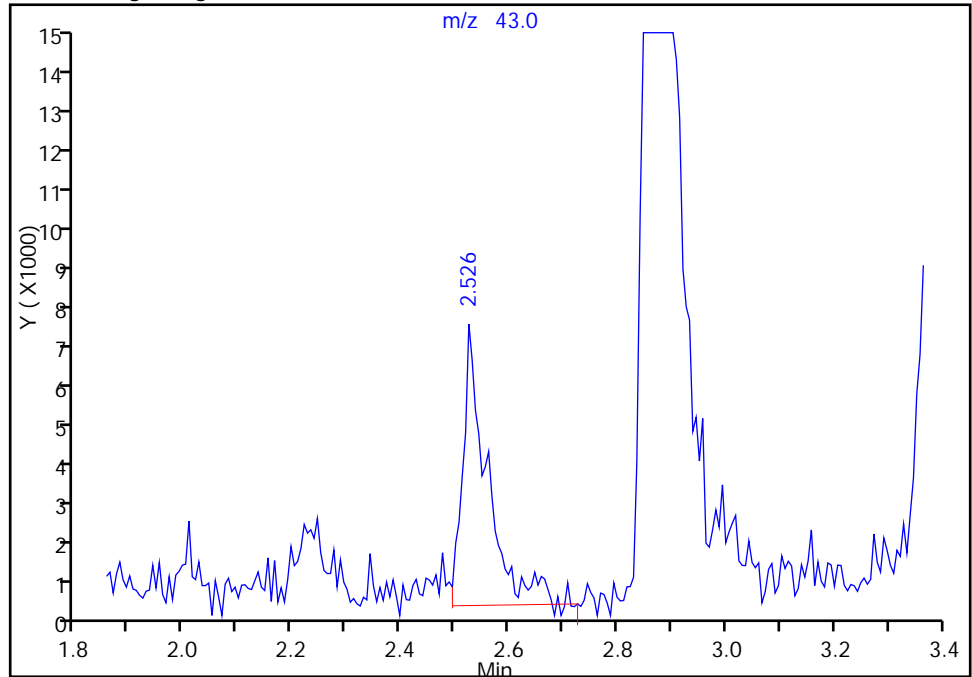
TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP4\20141103-4149.b\4110304.D  
Injection Date: 03-Nov-2014 12:22:30 Instrument ID: CHHP4  
Lims ID: IC  
Client ID:  
Operator ID: 034635 ALS Bottle#: 4 Worklist Smp#: 4  
Purge Vol: 5.000 mL Dil. Factor: 1.0000  
Method: MSVOA\_CHHP4 Limit Group: VOA 8260C ICAL  
Column: DB-624 (0.18 mm) Detector: MS SCAN

23 Acetone, CAS: 67-64-1

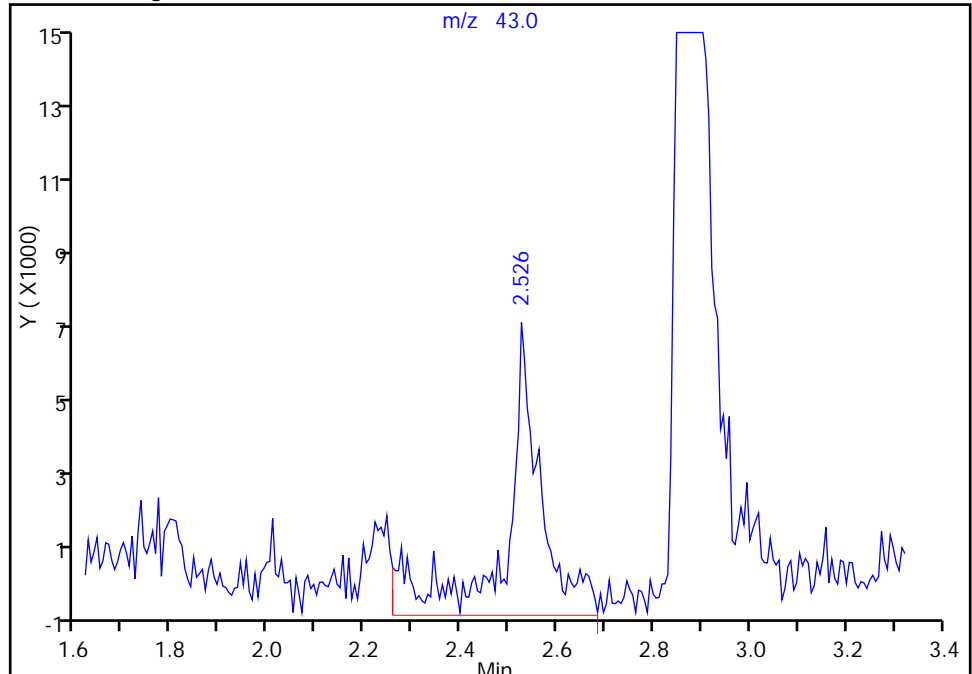
RT: 2.53  
Response: 21760  
Amount: -4.911854

Processing Integration Results



RT: 2.53  
Response: 36783  
Amount: 11.591898

Manual Integration Results



Reviewer: journetp, 03-Nov-2014 15:52:58  
Audit Action: Manually Integrated  
Audit Reason: Poor chromatography

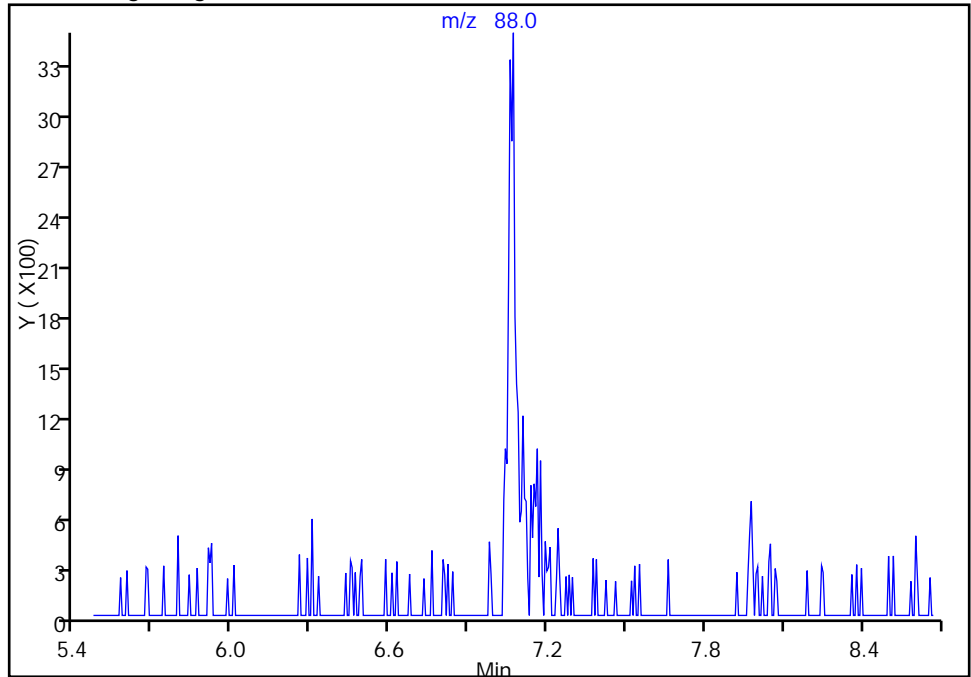
TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP4\20141103-4149.b\4110304.D  
Injection Date: 03-Nov-2014 12:22:30 Instrument ID: CHHP4  
Lims ID: IC  
Client ID:  
Operator ID: 034635 ALS Bottle#: 4 Worklist Smp#: 4  
Purge Vol: 5.000 mL Dil. Factor: 1.0000  
Method: MSVOA\_CHHP4 Limit Group: VOA 8260C ICAL  
Column: DB-624 (0.18 mm) Detector: MS SCAN

67 1,4-Dioxane, CAS: 123-91-1

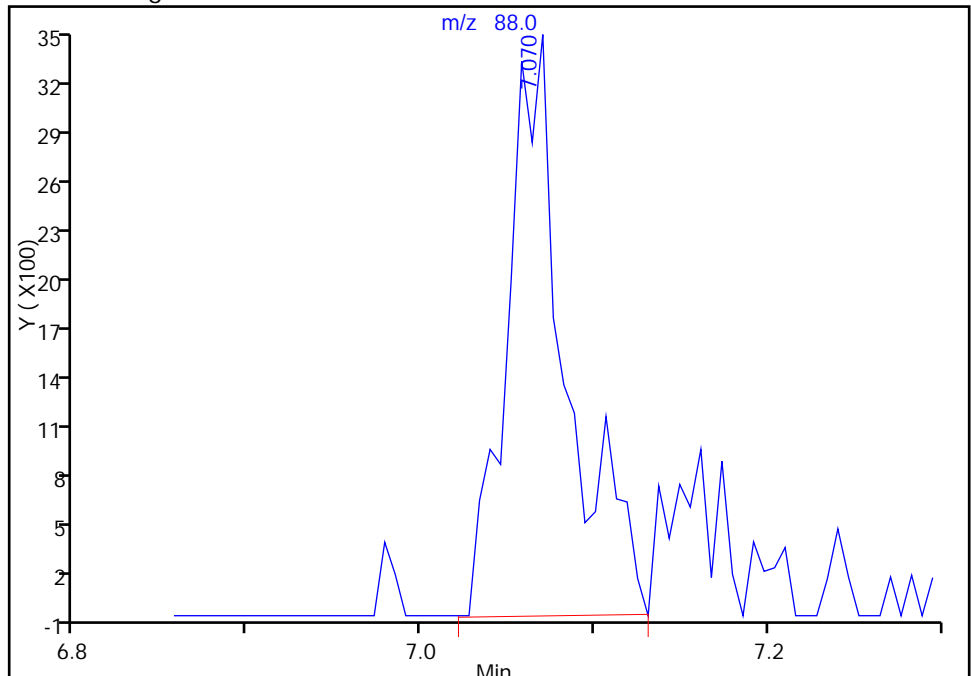
Not Detected  
Expected RT: 7.07

Processing Integration Results



RT: 7.07  
Response: 8103  
Amount: 434.9932

Manual Integration Results



Reviewer: journetp, 03-Nov-2014 12:19:08  
Audit Action: Manually Integrated  
Audit Reason: Poor chromatography

TestAmerica Pittsburgh  
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHHP4\20141103-4149.b\4110305.D  
 Lims ID: IC  
 Client ID:  
 Sample Type: IC Calib Level: 2  
 Inject. Date: 03-Nov-2014 12:49:30 ALS Bottle#: 5 Worklist Smp#: 5  
 Purge Vol: 5.000 mL Dil. Factor: 1.0000  
 Sample Info: IC  
 Misc. Info.: 180-0004149-005  
 Operator ID: 034635 Instrument ID: CHHP4  
 Sublist: chrom-MSVOA\_CHHP4\*sub33  
 Method: \\PITCHROM\ChromData\CHHP4\20141103-4149.b\MSVOA\_CHHP4.m  
 Limit Group: VOA 8260C ICAL  
 Last Update: 03-Nov-2014 16:25:14 Calib Date: 03-Nov-2014 16:24:30  
 Integrator: RTE ID Type: Deconvolution ID  
 Quant Method: Internal Standard Quant By: Initial Calibration  
 Last ICal File: \\PITCHROM\ChromData\CHHP4\20141103-4149.b\4110312.D  
 Column 1 : DB-624 ( 0.18 mm) Det: MS SCAN  
 Process Host: XAWRK026

First Level Reviewer: journetp

Date: 03-Nov-2014 12:19:41

| Compound                        | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q   | Response | Cal Amt ng | OnCol Amt ng | Flags |
|---------------------------------|-----|-----------|---------------|---------------|-----|----------|------------|--------------|-------|
| * 1 TBA-d9 (IS)                 | 65  | 3.168     | 3.168         | 0.000         | 96  | 315410   | 5000.0     | 5000.0       |       |
| * 2 Fluorobenzene (IS)          | 96  | 6.259     | 6.258         | 0.001         | 98  | 1644900  | 250.0      | 250.0        |       |
| * 3 Chlorobenzene-d5            | 119 | 9.453     | 9.452         | 0.001         | 86  | 369496   | 250.0      | 250.0        |       |
| * 4 1,4-Dichlorobenzene-d4      | 152 | 11.801    | 11.806        | -0.005        | 96  | 423089   | 250.0      | 250.0        |       |
| \$ 5 Dibromofluoromethane (Surr | 113 | 5.498     | 5.492         | 0.006         | 93  | 63642    | 50.0       | 46.5         |       |
| \$ 6 1,2-Dichloroethane-d4 (Sur | 65  | 5.894     | 5.887         | 0.007         | 39  | 65396    | 50.0       | 52.1         |       |
| \$ 7 Toluene-d8 (Surr)          | 98  | 7.980     | 7.980         | 0.000         | 93  | 305351   | 50.0       | 51.5         |       |
| \$ 8 4-Bromofluorobenzene (Surr | 95  | 10.651    | 10.650        | 0.001         | 89  | 101150   | 50.0       | 49.0         |       |
| 10 Dichlorodifluoromethane      | 85  | 1.203     | 1.209         | -0.006        | 98  | 109931   | 50.0       | 44.4         |       |
| 11 Chloromethane                | 50  | 1.307     | 1.318         | -0.011        | 99  | 180374   | 50.0       | 49.9         |       |
| 12 Vinyl chloride               | 62  | 1.410     | 1.416         | -0.006        | 98  | 130970   | 50.0       | 51.0         |       |
| 13 Butadiene                    | 54  | 1.435     | 1.434         | 0.001         | 96  | 124022   | 50.0       | 48.1         |       |
| 14 Bromomethane                 | 94  | 1.648     | 1.659         | -0.011        | 93  | 17523    | 50.0       | 48.1         |       |
| 15 Chloroethane                 | 64  | 1.733     | 1.744         | -0.011        | 91  | 19867    | 50.0       | 36.6         |       |
| 17 Trichlorofluoromethane       | 101 | 1.909     | 1.921         | -0.012        | 94  | 52252    | 50.0       | 40.7         |       |
| 16 Dichlorofluoromethane        | 67  | 1.946     | 1.957         | -0.011        | 98  | 65518    | 50.0       | 43.2         |       |
| 19 Ethyl ether                  | 59  | 2.225     | 2.225         | 0.000         | 92  | 34251    | 50.0       | 51.7         |       |
| 20 Acrolein                     | 56  | 2.359     | 2.365         | -0.006        | 99  | 61831    | 625.0      | 741.8        | M     |
| 21 1,1-Dichloroethene           | 96  | 2.402     | 2.419         | -0.017        | 95  | 67911    | 50.0       | 44.3         |       |
| 22 1,1,2-Trichloro-1,2,2-trif   | 101 | 2.481     | 2.486         | -0.005        | 94  | 87444    | 50.0       | 46.1         |       |
| 23 Acetone                      | 43  | 2.536     | 2.529         | 0.007         | 80  | 34836    | 50.0       | 24.8         |       |
| 24 Iodomethane                  | 142 | 2.548     | 2.559         | -0.011        | 95  | 147656   | 50.0       | 49.2         |       |
| 25 Carbon disulfide             | 76  | 2.615     | 2.620         | -0.005        | 99  | 241578   | 50.0       | 40.0         |       |
| 28 3-Chloro-1-propene           | 76  | 2.828     | 2.833         | -0.005        | 94  | 56847    | 50.0       | 42.3         | M     |
| 29 Methyl acetate               | 43  | 2.870     | 2.870         | 0.000         | 99  | 284082   | 250.0      | 279.4        |       |
| 30 Methylene Chloride           | 84  | 2.986     | 2.991         | -0.005        | 98  | 182980   | 50.0       | 41.2         |       |
| 31 2-Methyl-2-propanol          | 59  | 3.272     | 3.265         | 0.007         | 94  | 54665    | 500.0      | 563.5        |       |
| 32 Acrylonitrile                | 53  | 3.314     | 3.326         | -0.012        | 100 | 253271   | 500.0      | 479.4        |       |
| 33 trans-1,2-Dichloroethene     | 96  | 3.339     | 3.332         | 0.007         | 94  | 103396   | 50.0       | 45.9         |       |
| 34 Methyl tert-butyl ether      | 73  | 3.375     | 3.368         | 0.007         | 96  | 187815   | 50.0       | 52.6         |       |



| Compound                       | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q   | Response | Cal Amt ng | OnCol Amt ng | Flags |
|--------------------------------|-----|-----------|---------------|---------------|-----|----------|------------|--------------|-------|
| 38 Vinyl acetate               | 43  | 3.722     | 3.727         | -0.005        | 68  | 162373   | 50.0       | 46.0         |       |
| 35 Hexane                      | 57  | 3.728     | 3.727         | 0.001         | 93  | 231987   | 50.0       | 43.0         |       |
| 36 1,1-Dichloroethane          | 63  | 3.984     | 3.971         | 0.013         | 96  | 200004   | 50.0       | 48.5         |       |
| 41 2,2-Dichloropropane         | 77  | 4.793     | 4.804         | -0.011        | 77  | 67651    | 50.0       | 43.2         |       |
| 42 cis-1,2-Dichloroethene      | 96  | 4.811     | 4.816         | -0.005        | 84  | 113017   | 50.0       | 50.0         |       |
| 43 2-Butanone (MEK)            | 43  | 4.860     | 4.859         | 0.001         | 99  | 39244    | 50.0       | 48.1         |       |
| 46 Chlorobromomethane          | 128 | 5.121     | 5.127         | -0.006        | 90  | 40316    | 50.0       | 51.8         |       |
| 48 Tetrahydrofuran             | 42  | 5.158     | 5.157         | 0.001         | 95  | 38581    | 100.0      | 106.5        |       |
| 49 Chloroform                  | 83  | 5.298     | 5.303         | -0.005        | 93  | 157284   | 50.0       | 50.1         |       |
| 50 1,1,1-Trichloroethane       | 97  | 5.444     | 5.449         | -0.005        | 97  | 103073   | 50.0       | 43.7         |       |
| 51 Cyclohexane                 | 56  | 5.511     | 5.516         | -0.005        | 92  | 256129   | 50.0       | 48.6         |       |
| 53 Carbon tetrachloride        | 117 | 5.620     | 5.625         | -0.005        | 96  | 88906    | 50.0       | 42.1         |       |
| 52 1,1-Dichloropropene         | 75  | 5.650     | 5.650         | 0.000         | 95  | 132891   | 50.0       | 46.3         |       |
| 54 Benzene                     | 78  | 5.876     | 5.881         | -0.005        | 97  | 435268   | 50.0       | 52.3         |       |
| 59 Isobutyl alcohol            | 41  | 5.942     | 5.942         | 0.000         | 95  | 42376    | 1250.0     | 1309.1       |       |
| 55 1,2-Dichloroethane          | 62  | 5.985     | 5.984         | 0.001         | 94  | 88793    | 50.0       | 53.7         |       |
| 58 n-Heptane                   | 43  | 6.295     | 6.295         | 0.000         | 93  | 246581   | 50.0       | 51.6         |       |
| 61 Trichloroethene             | 130 | 6.666     | 6.666         | 0.000         | 97  | 89235    | 50.0       | 45.5         |       |
| 63 Methylcyclohexane           | 83  | 6.904     | 6.903         | 0.001         | 95  | 208546   | 50.0       | 49.7         |       |
| 64 1,2-Dichloropropane         | 63  | 6.952     | 6.958         | -0.006        | 98  | 112656   | 50.0       | 49.9         |       |
| 65 Dibromomethane              | 93  | 7.050     | 7.043         | 0.007         | 97  | 38075    | 50.0       | 51.6         |       |
| 67 1,4-Dioxane                 | 88  | 7.068     | 7.067         | 0.001         | 66  | 11249    | 1000.0     | 929.9        |       |
| 68 Dichlorobromomethane        | 83  | 7.263     | 7.262         | 0.001         | 97  | 83306    | 50.0       | 47.5         |       |
| 70 2-Chloroethyl vinyl ether   | 63  | 7.597     | 7.596         | 0.001         | 90  | 72298    | 100.0      | 101.3        |       |
| 74 trans-1,3-Dichloropropene   | 75  | 7.725     | 7.724         | 0.001         | 98  | 115869   | 50.0       | 48.2         |       |
| 72 4-Methyl-2-pentanone (MIBK) | 43  | 7.901     | 7.901         | 0.000         | 95  | 64274    | 50.0       | 56.3         |       |
| 73 Toluene                     | 91  | 8.047     | 8.047         | 0.000         | 98  | 472299   | 50.0       | 39.5         |       |
| 71 cis-1,3-Dichloropropene     | 75  | 8.327     | 8.327         | 0.001         | 93  | 78999    | 50.0       | 47.1         |       |
| 75 Ethyl methacrylate          | 69  | 8.412     | 8.412         | 0.000         | 93  | 90656    | 50.0       | 48.1         |       |
| 76 1,1,2-Trichloroethane       | 97  | 8.516     | 8.521         | -0.005        | 89  | 68064    | 50.0       | 56.1         |       |
| 77 Tetrachloroethene           | 164 | 8.564     | 8.564         | 0.000         | 98  | 78409    | 50.0       | 47.9         |       |
| 78 1,3-Dichloropropane         | 76  | 8.674     | 8.673         | 0.001         | 96  | 114632   | 50.0       | 53.4         |       |
| 79 2-Hexanone                  | 43  | 8.753     | 8.752         | 0.001         | 93  | 37708    | 50.0       | 39.9         |       |
| 81 Chlorodibromomethane        | 129 | 8.881     | 8.880         | 0.001         | 91  | 40465    | 50.0       | 41.9         |       |
| 82 Ethylene Dibromide          | 107 | 8.984     | 8.984         | 0.000         | 97  | 56604    | 50.0       | 53.0         |       |
| 84 Chlorobenzene               | 112 | 9.477     | 9.482         | -0.005        | 94  | 273838   | 50.0       | 48.9         |       |
| 85 1,1,1,2-Tetrachloroethane   | 131 | 9.586     | 9.586         | 0.000         | 95  | 79686    | 50.0       | 52.5         |       |
| 86 Ethylbenzene                | 106 | 9.593     | 9.592         | 0.001         | 98  | 170367   | 50.0       | 40.5         |       |
| 87 m-Xylene & p-Xylene         | 106 | 9.732     | 9.732         | 0.000         | 100 | 212553   | 50.0       | 53.9         |       |
| 88 o-Xylene                    | 106 | 10.104    | 10.109        | -0.005        | 97  | 205828   | 50.0       | 41.7         |       |
| 89 Styrene                     | 104 | 10.128    | 10.133        | -0.005        | 96  | 306152   | 50.0       | 50.4         |       |
| 90 Bromoform                   | 173 | 10.304    | 10.304        | 0.000         | 95  | 18849    | 50.0       | 40.8         |       |
| 91 Isopropylbenzene            | 105 | 10.481    | 10.480        | 0.001         | 95  | 519573   | 50.0       | 45.2         |       |
| 94 Bromobenzene                | 156 | 10.773    | 10.772        | 0.001         | 95  | 99350    | 50.0       | 55.6         |       |
| 93 1,1,2,2-Tetrachloroethane   | 83  | 10.809    | 10.809        | 0.000         | 93  | 71759    | 50.0       | 56.4         |       |
| 96 trans-1,4-Dichloro-2-buten  | 53  | 10.846    | 10.845        | 0.001         | 66  | 11488    | 50.0       | 46.4         |       |
| 95 1,2,3-Trichloropropane      | 110 | 10.852    | 10.851        | 0.001         | 89  | 19177    | 50.0       | 46.6         |       |
| 97 N-Propylbenzene             | 120 | 10.901    | 10.900        | 0.000         | 99  | 146176   | 50.0       | 46.0         |       |
| 98 2-Chlorotoluene             | 126 | 10.974    | 10.973        | 0.001         | 97  | 117690   | 50.0       | 53.7         |       |
| 99 1,3,5-Trimethylbenzene      | 105 | 11.089    | 11.088        | 0.001         | 95  | 408624   | 50.0       | 39.3         |       |
| 100 4-Chlorotoluene            | 126 | 11.095    | 11.101        | -0.006        | 98  | 111670   | 50.0       | 45.3         |       |
| 101 tert-Butylbenzene          | 119 | 11.393    | 11.393        | 0.000         | 94  | 368439   | 50.0       | 40.2         |       |

| Compound                         | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q  | Response | Cal Amt ng | OnCol Amt ng | Flags |
|----------------------------------|-----|-----------|---------------|---------------|----|----------|------------|--------------|-------|
| 103 1,2,4-Trimethylbenzene       | 105 | 11.454    | 11.459        | -0.005        | 97 | 399497   | 50.0       | 41.1         |       |
| 104 sec-Butylbenzene             | 105 | 11.618    | 11.618        | 0.000         | 94 | 550728   | 50.0       | 35.5         |       |
| 105 1,3-Dichlorobenzene          | 146 | 11.722    | 11.721        | 0.001         | 99 | 186936   | 50.0       | 44.3         |       |
| 106 4-Isopropyltoluene           | 119 | 11.783    | 11.782        | 0.001         | 97 | 424431   | 50.0       | 37.2         |       |
| 107 1,4-Dichlorobenzene          | 146 | 11.825    | 11.831        | -0.006        | 96 | 180878   | 50.0       | 47.4         |       |
| 111 1,2-Dichlorobenzene          | 146 | 12.172    | 12.171        | 0.001         | 97 | 171194   | 50.0       | 45.4         |       |
| 110 n-Butylbenzene               | 91  | 12.184    | 12.190        | -0.006        | 98 | 395979   | 50.0       | 39.0         |       |
| 112 1,2-Dibromo-3-Chloropropan   | 75  | 12.963    | 12.968        | -0.005        | 79 | 5136     | 50.0       | 52.0         |       |
| 113 1,2,4-Trichlorobenzene       | 180 | 13.778    | 13.777        | 0.001         | 93 | 63194    | 50.0       | 50.7         |       |
| 115 Hexachlorobutadiene          | 225 | 13.930    | 13.929        | 0.001         | 93 | 77177    | 50.0       | 49.0         |       |
| 116 Naphthalene                  | 128 | 14.033    | 14.033        | 0.000         | 96 | 96317    | 50.0       | 48.6         |       |
| 117 1,2,3-Trichlorobenzene       | 180 | 14.253    | 14.252        | 0.000         | 93 | 45602    | 50.0       | 46.6         |       |
| S 129 1,2-Dichloroethene, Total  | 96  |           |               |               | 0  |          | 100.0      | 96.0         |       |
| S 130 Xylenes, Total             | 106 |           |               |               | 0  |          | 100.0      | 95.6         |       |
| S 131 1,3-Dichloropropene, Total | 1   |           |               |               | 0  |          | 100.0      | 95.2         |       |

### QC Flag Legend

Review Flags

M - Manually Integrated

### Reagents:

|                     |                     |           |
|---------------------|---------------------|-----------|
| VOA8260INT_00022    | Amount Added: 10.00 | Units: uL |
| VOA8260SURR_00017   | Amount Added: 2.00  | Units: uL |
| voaWVOA Pri R_00001 | Amount Added: 2.00  | Units: uL |
| VOAACROPRI_00002    | Amount Added: 25.00 | Units: uL |
| voaWVA pri Re_00004 | Amount Added: 2.00  | Units: uL |
| voaW2-cle PRI_00002 | Amount Added: 2.00  | Units: uL |

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP4\20141103-4149.b\4110305.D

Injection Date: 03-Nov-2014 12:49:30

Instrument ID: CHHP4

Operator ID: 034635

Lims ID: IC

Worklist Smp#: 5

Client ID:

Purge Vol: 5.000 mL

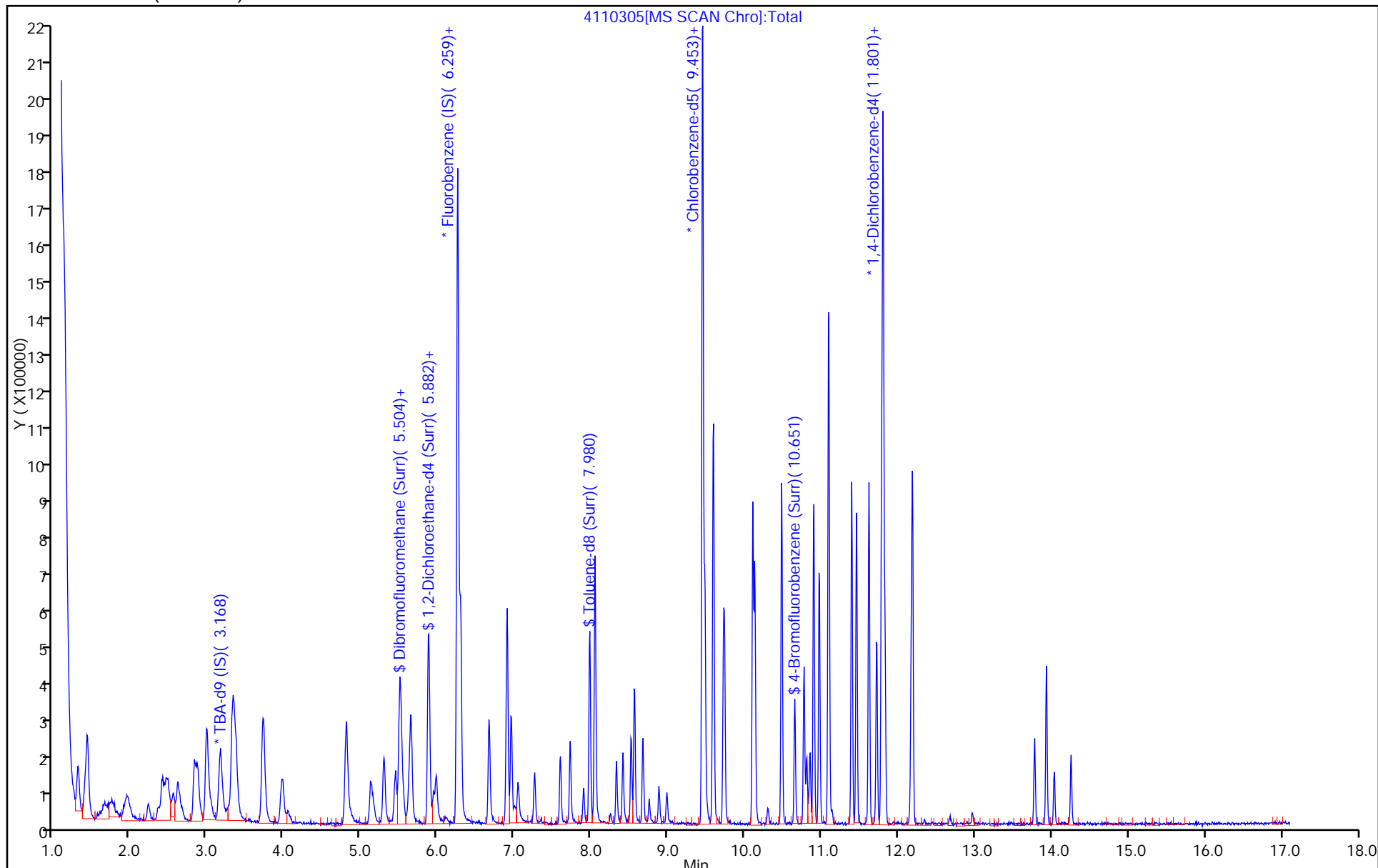
Dil. Factor: 1.0000

ALS Bottle#: 5

Method: MSVOA\_CHHP4

Limit Group: VOA 8260C ICAL

Column: DB-624 (0.18 mm)



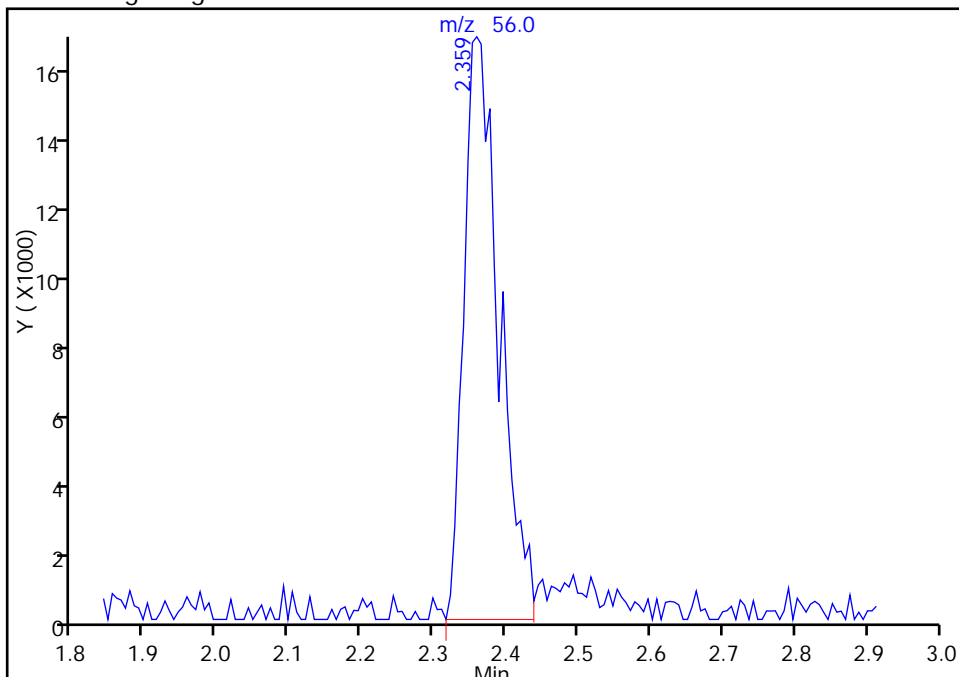
TestAmerica Pittsburgh

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Injection Date: 03-Nov-2014 12:49:30 Instrument ID: CHHP4  
Lims ID: IC  
Client ID:  
Operator ID: 034635 ALS Bottle#: 5 Worklist Smp#: 5  
Purge Vol: 5.000 mL Dil. Factor: 1.0000  
Method: MSVOA\_CHHP4 Limit Group: VOA 8260C ICAL  
Column: DB-624 (0.18 mm) Detector: MS SCAN

20 Acrolein, CAS: 107-02-8

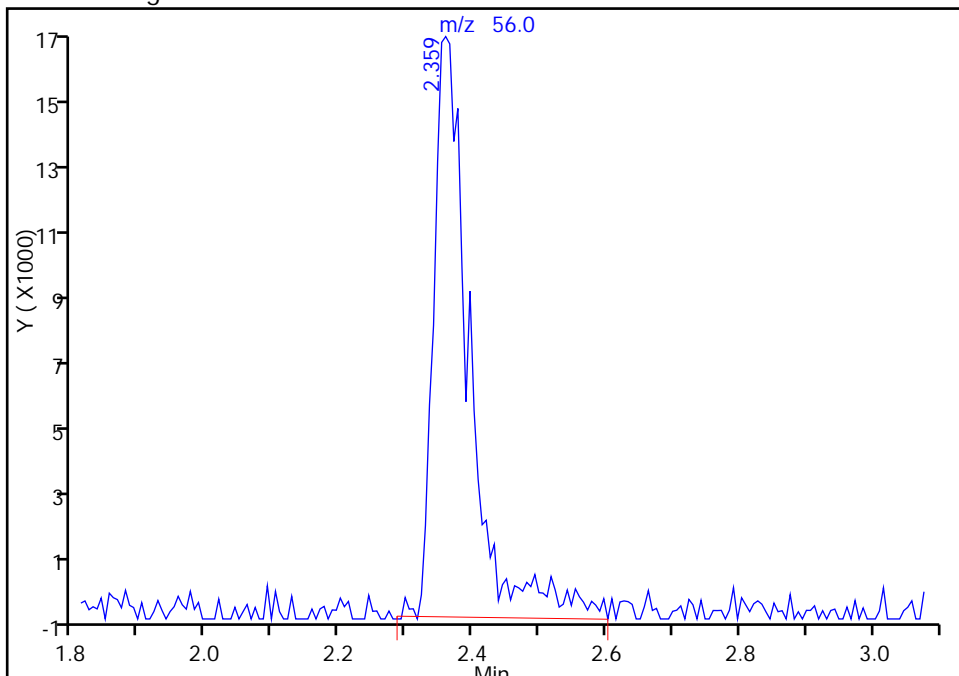
RT: 2.36  
Response: 55401  
Amount: 695.3284

Processing Integration Results



RT: 2.36  
Response: 61831  
Amount: 741.8499

Manual Integration Results



Reviewer: journetp, 03-Nov-2014 15:54:08  
Audit Action: Manually Integrated  
Audit Reason: Poor chromatography

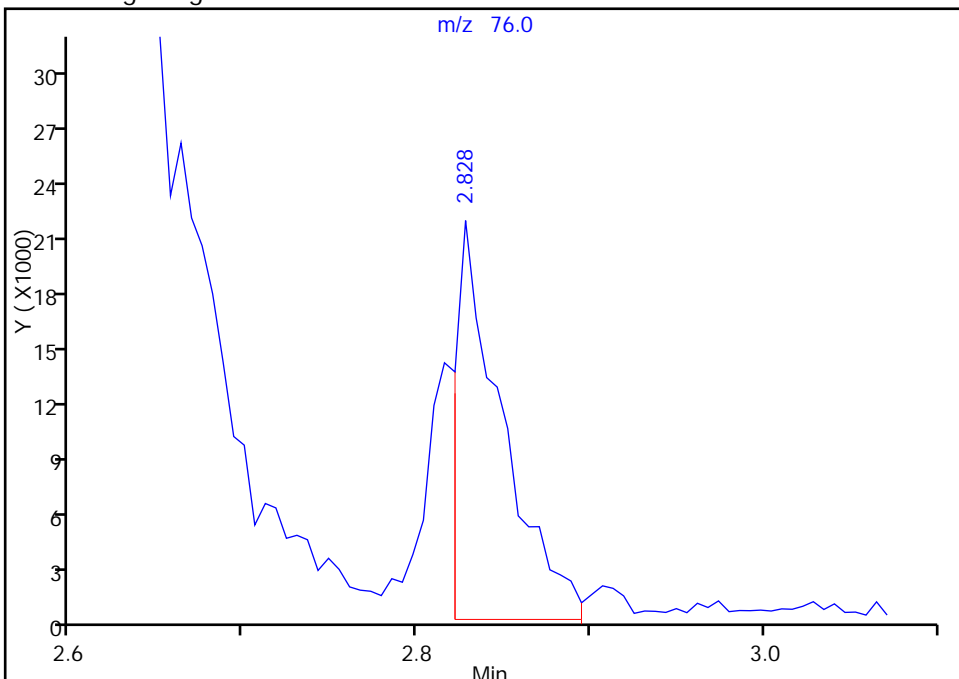
TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP4\20141103-4149.b\4110305.D  
Injection Date: 03-Nov-2014 12:49:30 Instrument ID: CHHP4  
Lims ID: IC  
Client ID:  
Operator ID: 034635 ALS Bottle#: 5 Worklist Smp#: 5  
Purge Vol: 5.000 mL Dil. Factor: 1.0000  
Method: MSVOA\_CHHP4 Limit Group: VOA 8260C ICAL  
Column: DB-624 (0.18 mm) Detector: MS SCAN

28 3-Chloro-1-propene, CAS: 107-05-1

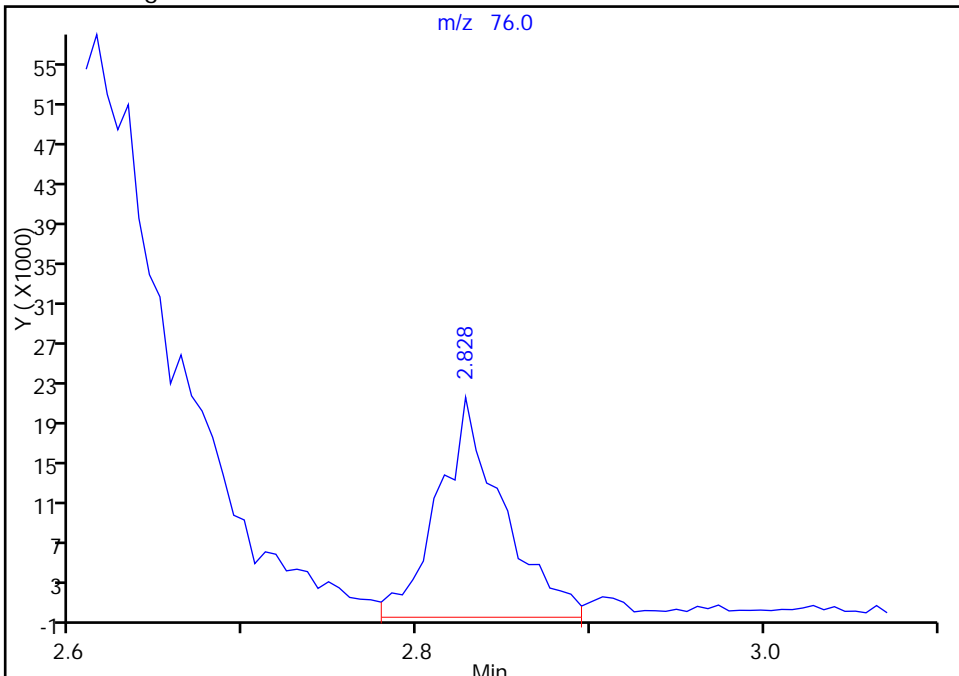
RT: 2.83  
Response: 40731  
Amount: 41.188353

Processing Integration Results



RT: 2.83  
Response: 56847  
Amount: 42.298901

Manual Integration Results



Reviewer: journetp, 03-Nov-2014 12:19:41  
Audit Action: Manually Integrated  
Audit Reason: Poor chromatography

TestAmerica Pittsburgh  
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHHP4\20141103-4149.b\4110306.D  
 Lims ID: ic  
 Client ID:  
 Sample Type: IC Calib Level: 3  
 Inject. Date: 03-Nov-2014 13:15:30 ALS Bottle#: 6 Worklist Smp#: 6  
 Purge Vol: 5.000 mL Dil. Factor: 1.0000  
 Sample Info: IC  
 Misc. Info.: 180-0004149-006  
 Operator ID: 034635 Instrument ID: CHHP4  
 Sublist: chrom-MSVOA\_CHHP4\*sub33  
 Method: \\PITCHROM\ChromData\CHHP4\20141103-4149.b\MSVOA\_CHHP4.m  
 Limit Group: VOA 8260C ICAL  
 Last Update: 03-Nov-2014 16:25:15 Calib Date: 03-Nov-2014 16:24:30  
 Integrator: RTE ID Type: Deconvolution ID  
 Quant Method: Internal Standard Quant By: Initial Calibration  
 Last ICAL File: \\PITCHROM\ChromData\CHHP4\20141103-4149.b\4110312.D  
 Column 1 : DB-624 ( 0.18 mm) Det: MS SCAN  
 Process Host: XAWRK026

First Level Reviewer: journey Date: 03-Nov-2014 14:13:30

| Compound                        | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q   | Response | Cal Amt ng | OnCol Amt ng | Flags |
|---------------------------------|-----|-----------|---------------|---------------|-----|----------|------------|--------------|-------|
| * 1 TBA-d9 (IS)                 | 65  | 3.162     | 3.168         | -0.006        | 98  | 324008   | 5000.0     | 5000.0       |       |
| * 2 Fluorobenzene (IS)          | 96  | 6.258     | 6.258         | 0.000         | 98  | 1760261  | 250.0      | 250.0        |       |
| * 3 Chlorobenzene-d5            | 119 | 9.452     | 9.452         | 0.000         | 86  | 376902   | 250.0      | 250.0        |       |
| * 4 1,4-Dichlorobenzene-d4      | 152 | 11.800    | 11.806        | -0.006        | 97  | 456162   | 250.0      | 250.0        |       |
| \$ 5 Dibromofluoromethane (Surr | 113 | 5.498     | 5.492         | 0.006         | 94  | 186929   | 125.0      | 127.7        |       |
| \$ 6 1,2-Dichloroethane-d4 (Sur | 65  | 5.887     | 5.887         | 0.000         | 95  | 171974   | 125.0      | 128.1        |       |
| \$ 7 Toluene-d8 (Surr)          | 98  | 7.980     | 7.980         | 0.000         | 93  | 886737   | 125.0      | 146.7        |       |
| \$ 8 4-Bromofluorobenzene (Surr | 95  | 10.651    | 10.650        | 0.000         | 87  | 285621   | 125.0      | 135.6        |       |
| 10 Dichlorodifluoromethane      | 85  | 1.203     | 1.209         | -0.006        | 100 | 316343   | 125.0      | 119.3        |       |
| 11 Chloromethane                | 50  | 1.312     | 1.318         | -0.006        | 99  | 472810   | 125.0      | 122.2        |       |
| 12 Vinyl chloride               | 62  | 1.410     | 1.416         | -0.006        | 98  | 328377   | 125.0      | 119.6        |       |
| 13 Butadiene                    | 54  | 1.434     | 1.434         | 0.000         | 95  | 336615   | 125.0      | 121.9        |       |
| 14 Bromomethane                 | 94  | 1.653     | 1.659         | -0.006        | 93  | 44636    | 125.0      | 114.5        |       |
| 15 Chloroethane                 | 64  | 1.738     | 1.744         | -0.006        | 97  | 50534    | 125.0      | 107.1        |       |
| 17 Trichlorofluoromethane       | 101 | 1.915     | 1.921         | -0.006        | 93  | 156608   | 125.0      | 113.9        |       |
| 16 Dichlorofluoromethane        | 67  | 1.957     | 1.957         | 0.000         | 99  | 201068   | 125.0      | 124.0        | M     |
| 19 Ethyl ether                  | 59  | 2.231     | 2.225         | 0.006         | 97  | 92279    | 125.0      | 130.1        |       |
| 20 Acrolein                     | 56  | 2.365     | 2.365         | 0.000         | 97  | 64925    | 750.0      | 727.9        |       |
| 21 1,1-Dichloroethene           | 96  | 2.407     | 2.419         | -0.012        | 94  | 206982   | 125.0      | 114.5        |       |
| 22 1,1,2-Trichloro-1,2,2-trif   | 101 | 2.480     | 2.486         | -0.006        | 94  | 252456   | 125.0      | 124.5        |       |
| 23 Acetone                      | 43  | 2.529     | 2.529         | 0.000         | 98  | 67552    | 125.0      | 116.3        |       |
| 24 Iodomethane                  | 142 | 2.559     | 2.559         | 0.000         | 95  | 391294   | 125.0      | 121.9        |       |
| 25 Carbon disulfide             | 76  | 2.614     | 2.620         | -0.006        | 99  | 744471   | 125.0      | 115.1        |       |
| 28 3-Chloro-1-propene           | 76  | 2.833     | 2.833         | 0.000         | 94  | 176559   | 125.0      | 122.2        |       |
| 29 Methyl acetate               | 43  | 2.870     | 2.870         | 0.000         | 99  | 695481   | 625.0      | 639.1        |       |
| 30 Methylene Chloride           | 84  | 2.991     | 2.991         | 0.000         | 99  | 358205   | 125.0      | 120.7        |       |
| 31 2-Methyl-2-propanol          | 59  | 3.271     | 3.265         | 0.006         | 97  | 122541   | 1250.0     | 1229.7       |       |
| 32 Acrylonitrile                | 53  | 3.320     | 3.326         | -0.006        | 99  | 602591   | 1250.0     | 1243.6       |       |
| 33 trans-1,2-Dichloroethene     | 96  | 3.332     | 3.332         | 0.000         | 98  | 288205   | 125.0      | 119.6        |       |
| 34 Methyl tert-butyl ether      | 73  | 3.369     | 3.368         | 0.001         | 97  | 477712   | 125.0      | 124.9        |       |

| Compound                       | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q  | Response | Cal Amt ng | OnCol Amt ng | Flags |
|--------------------------------|-----|-----------|---------------|---------------|----|----------|------------|--------------|-------|
| 38 Vinyl acetate               | 43  | 3.728     | 3.727         | 0.001         | 68 | 409835   | 125.0      | 118.2        |       |
| 35 Hexane                      | 57  | 3.728     | 3.727         | 0.001         | 93 | 602524   | 125.0      | 114.1        |       |
| 36 1,1-Dichloroethane          | 63  | 3.977     | 3.971         | 0.006         | 96 | 534573   | 125.0      | 121.0        |       |
| 41 2,2-Dichloropropane         | 77  | 4.804     | 4.804         | 0.000         | 81 | 194359   | 125.0      | 116.1        |       |
| 42 cis-1,2-Dichloroethene      | 96  | 4.810     | 4.816         | -0.006        | 82 | 290755   | 125.0      | 120.3        |       |
| 43 2-Butanone (MEK)            | 43  | 4.859     | 4.859         | 0.000         | 99 | 79127    | 125.0      | 117.9        |       |
| 46 Chlorobromomethane          | 128 | 5.127     | 5.127         | 0.000         | 92 | 101583   | 125.0      | 122.0        |       |
| 48 Tetrahydrofuran             | 42  | 5.157     | 5.157         | 0.000         | 93 | 93950    | 250.0      | 242.4        |       |
| 49 Chloroform                  | 83  | 5.297     | 5.303         | -0.006        | 94 | 406135   | 125.0      | 120.8        |       |
| 50 1,1,1-Trichloroethane       | 97  | 5.443     | 5.449         | -0.006        | 99 | 296710   | 125.0      | 117.4        |       |
| 51 Cyclohexane                 | 56  | 5.516     | 5.516         | 0.000         | 92 | 687337   | 125.0      | 121.8        |       |
| 53 Carbon tetrachloride        | 117 | 5.626     | 5.625         | 0.001         | 98 | 261206   | 125.0      | 115.6        |       |
| 52 1,1-Dichloropropene         | 75  | 5.650     | 5.650         | 0.000         | 94 | 367552   | 125.0      | 119.8        |       |
| 54 Benzene                     | 78  | 5.881     | 5.881         | 0.000         | 98 | 1157091  | 125.0      | 129.9        |       |
| 59 Isobutyl alcohol            | 41  | 5.942     | 5.942         | 0.000         | 97 | 112799   | 3125.0     | 3256.3       |       |
| 55 1,2-Dichloroethane          | 62  | 5.978     | 5.984         | -0.006        | 95 | 212433   | 125.0      | 120.0        |       |
| 58 n-Heptane                   | 43  | 6.295     | 6.295         | 0.000         | 95 | 637362   | 125.0      | 124.6        |       |
| 61 Trichloroethene             | 130 | 6.666     | 6.666         | 0.000         | 98 | 246174   | 125.0      | 117.4        |       |
| 63 Methylcyclohexane           | 83  | 6.903     | 6.903         | 0.000         | 94 | 552406   | 125.0      | 122.9        |       |
| 64 1,2-Dichloropropane         | 63  | 6.958     | 6.958         | 0.000         | 99 | 296852   | 125.0      | 122.7        |       |
| 65 Dibromomethane              | 93  | 7.043     | 7.043         | 0.000         | 97 | 98410    | 125.0      | 124.7        |       |
| 67 1,4-Dioxane                 | 88  | 7.055     | 7.067         | -0.012        | 96 | 27143    | 2500.0     | 2468.7       |       |
| 68 Dichlorobromomethane        | 83  | 7.262     | 7.262         | 0.000         | 97 | 220935   | 125.0      | 117.6        |       |
| 70 2-Chloroethyl vinyl ether   | 63  | 7.597     | 7.596         | 0.001         | 91 | 177306   | 250.0      | 232.1        |       |
| 74 trans-1,3-Dichloropropene   | 75  | 7.724     | 7.724         | 0.000         | 95 | 309476   | 125.0      | 124.6        |       |
| 72 4-Methyl-2-pentanone (MIBK) | 43  | 7.901     | 7.901         | 0.000         | 97 | 151766   | 125.0      | 130.4        |       |
| 73 Toluene                     | 91  | 8.047     | 8.047         | 0.000         | 99 | 1131387  | 125.0      | 129.2        |       |
| 71 cis-1,3-Dichloropropene     | 75  | 8.327     | 8.327         | 0.001         | 94 | 210351   | 125.0      | 117.1        |       |
| 75 Ethyl methacrylate          | 69  | 8.412     | 8.412         | 0.000         | 93 | 216833   | 125.0      | 129.4        |       |
| 76 1,1,2-Trichloroethane       | 97  | 8.521     | 8.521         | 0.000         | 89 | 162661   | 125.0      | 131.3        |       |
| 77 Tetrachloroethene           | 164 | 8.564     | 8.564         | 0.000         | 96 | 209493   | 125.0      | 125.5        |       |
| 78 1,3-Dichloropropane         | 76  | 8.673     | 8.673         | 0.000         | 94 | 287607   | 125.0      | 131.2        |       |
| 79 2-Hexanone                  | 43  | 8.752     | 8.752         | 0.000         | 97 | 97701    | 125.0      | 130.6        |       |
| 81 Chlorodibromomethane        | 129 | 8.886     | 8.880         | 0.006         | 91 | 121676   | 125.0      | 123.6        |       |
| 82 Ethylene Dibromide          | 107 | 8.984     | 8.984         | 0.000         | 96 | 139182   | 125.0      | 127.7        |       |
| 84 Chlorobenzene               | 112 | 9.482     | 9.482         | 0.000         | 93 | 659208   | 125.0      | 136.5        |       |
| 85 1,1,1,2-Tetrachloroethane   | 131 | 9.586     | 9.586         | 0.000         | 96 | 200974   | 125.0      | 129.8        |       |
| 86 Ethylbenzene                | 106 | 9.592     | 9.592         | 0.000         | 98 | 426297   | 125.0      | 129.1        |       |
| 87 m-Xylene & p-Xylene         | 106 | 9.732     | 9.732         | 0.000         | 98 | 527675   | 125.0      | 131.2        |       |
| 88 o-Xylene                    | 106 | 10.103    | 10.109        | -0.006        | 97 | 506325   | 125.0      | 132.6        |       |
| 89 Styrene                     | 104 | 10.133    | 10.133        | 0.000         | 96 | 755106   | 125.0      | 121.9        |       |
| 90 Bromoform                   | 173 | 10.304    | 10.304        | 0.000         | 97 | 55692    | 125.0      | 118.1        |       |
| 91 Isopropylbenzene            | 105 | 10.480    | 10.480        | 0.000         | 96 | 1282942  | 125.0      | 131.4        |       |
| 94 Bromobenzene                | 156 | 10.772    | 10.772        | 0.000         | 94 | 239705   | 125.0      | 124.5        |       |
| 93 1,1,2,2-Tetrachloroethane   | 83  | 10.803    | 10.809        | -0.006        | 93 | 172095   | 125.0      | 132.7        |       |
| 96 trans-1,4-Dichloro-2-buten  | 53  | 10.845    | 10.845        | 0.000         | 68 | 31104    | 125.0      | 116.4        |       |
| 95 1,2,3-Trichloropropane      | 110 | 10.851    | 10.851        | 0.000         | 88 | 46369    | 125.0      | 130.6        |       |
| 97 N-Propylbenzene             | 120 | 10.900    | 10.900        | 0.000         | 98 | 380320   | 125.0      | 134.9        |       |
| 98 2-Chlorotoluene             | 126 | 10.973    | 10.973        | 0.000         | 97 | 290688   | 125.0      | 123.0        |       |
| 99 1,3,5-Trimethylbenzene      | 105 | 11.089    | 11.088        | 0.001         | 96 | 1009118  | 125.0      | 132.1        |       |
| 100 4-Chlorotoluene            | 126 | 11.101    | 11.101        | 0.000         | 98 | 269426   | 125.0      | 128.1        |       |
| 101 tert-Butylbenzene          | 119 | 11.393    | 11.393        | 0.000         | 94 | 915451   | 125.0      | 131.3        |       |

| Compound                         | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q  | Response | Cal Amt ng | OnCol Amt ng | Flags |
|----------------------------------|-----|-----------|---------------|---------------|----|----------|------------|--------------|-------|
| 103 1,2,4-Trimethylbenzene       | 105 | 11.454    | 11.459        | -0.005        | 97 | 985498   | 125.0      | 132.3        |       |
| 104 sec-Butylbenzene             | 105 | 11.618    | 11.618        | 0.000         | 94 | 1390567  | 125.0      | 136.3        |       |
| 105 1,3-Dichlorobenzene          | 146 | 11.721    | 11.721        | 0.000         | 98 | 482823   | 125.0      | 131.1        |       |
| 106 4-Isopropyltoluene           | 119 | 11.782    | 11.782        | 0.000         | 96 | 1081239  | 125.0      | 132.7        |       |
| 107 1,4-Dichlorobenzene          | 146 | 11.825    | 11.831        | -0.006        | 96 | 459873   | 125.0      | 136.9        |       |
| 111 1,2-Dichlorobenzene          | 146 | 12.171    | 12.171        | 0.000         | 98 | 416666   | 125.0      | 129.3        |       |
| 110 n-Butylbenzene               | 91  | 12.184    | 12.190        | -0.006        | 97 | 1016771  | 125.0      | 132.4        |       |
| 112 1,2-Dibromo-3-Chloropropan   | 75  | 12.968    | 12.968        | 0.000         | 79 | 13583    | 125.0      | 134.1        |       |
| 113 1,2,4-Trichlorobenzene       | 180 | 13.777    | 13.777        | 0.000         | 94 | 169713   | 125.0      | 126.4        |       |
| 115 Hexachlorobutadiene          | 225 | 13.936    | 13.929        | 0.007         | 96 | 189406   | 125.0      | 133.7        |       |
| 116 Naphthalene                  | 128 | 14.033    | 14.033        | 0.000         | 97 | 259950   | 125.0      | 129.6        |       |
| 117 1,2,3-Trichlorobenzene       | 180 | 14.252    | 14.252        | 0.000         | 95 | 127175   | 125.0      | 128.0        |       |
| S 129 1,2-Dichloroethene, Total  | 96  |           |               |               | 0  |          | 250.0      | 239.9        |       |
| S 130 Xylenes, Total             | 106 |           |               |               | 0  |          | 250.0      | 263.8        |       |
| S 131 1,3-Dichloropropene, Total | 1   |           |               |               | 0  |          | 250.0      | 241.8        |       |

### QC Flag Legend

Review Flags

M - Manually Integrated

### Reagents:

|                     |                     |           |
|---------------------|---------------------|-----------|
| VOA8260INT_0002     | Amount Added: 10.00 | Units: uL |
| VOA8260SURR_00017   | Amount Added: 5.00  | Units: uL |
| voaWVOA Pri R_00001 | Amount Added: 5.00  | Units: uL |
| VOAACROPRI_00002    | Amount Added: 30.00 | Units: uL |
| voaWVA pri Re_00004 | Amount Added: 5.00  | Units: uL |
| voaW2-cle PRi_00002 | Amount Added: 5.00  | Units: uL |



TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP4\20141103-4149.b\4110306.D

Injection Date: 03-Nov-2014 13:15:30

Instrument ID: CHHP4

Operator ID: 034635

Lims ID: ic

Worklist Smp#: 6

Client ID:

Purge Vol: 5.000 mL

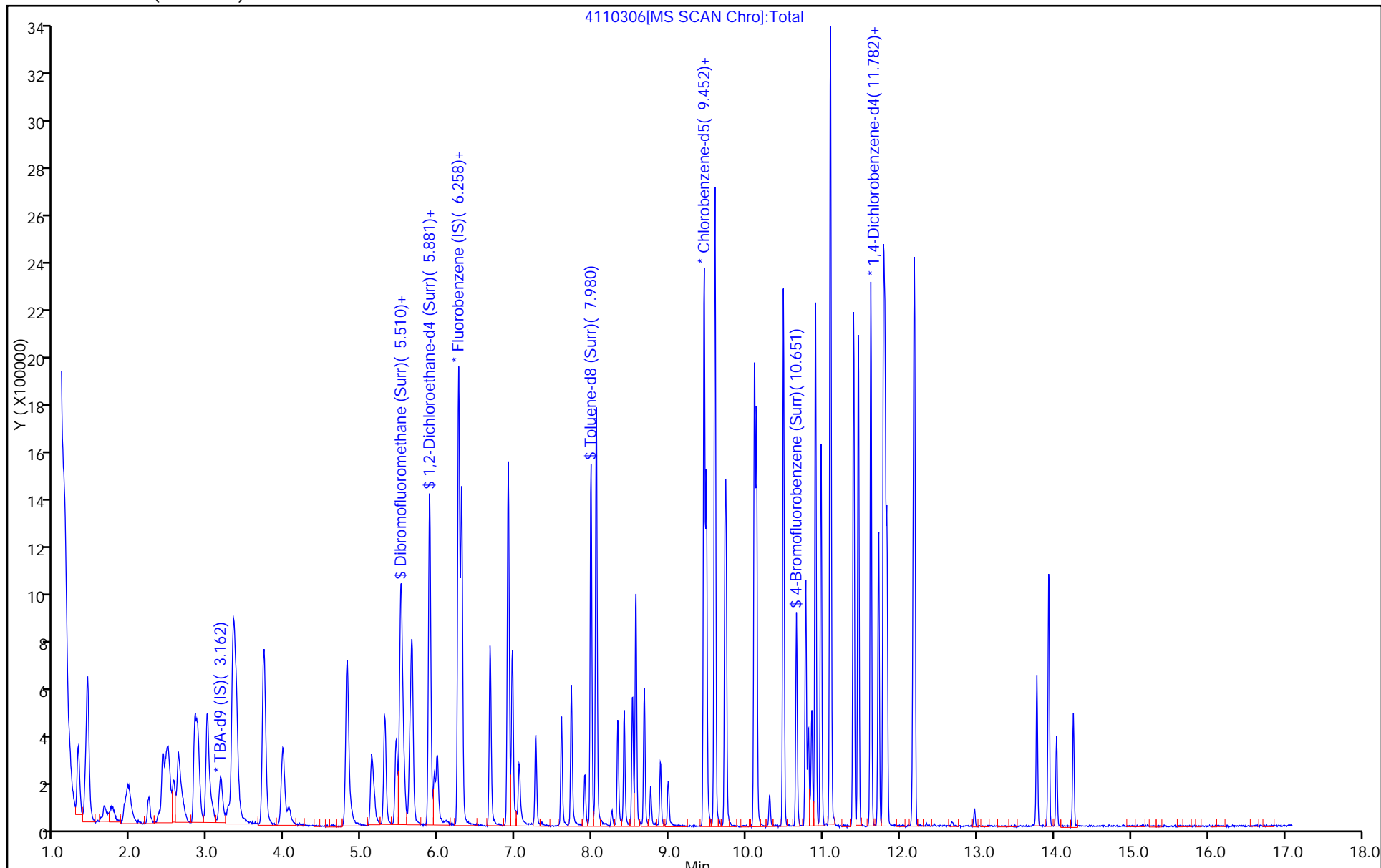
Dil. Factor: 1.0000

ALS Bottle#: 6

Method: MSVOA\_CHHP4

Limit Group: VOA 8260C ICAL

Column: DB-624 (0.18 mm)



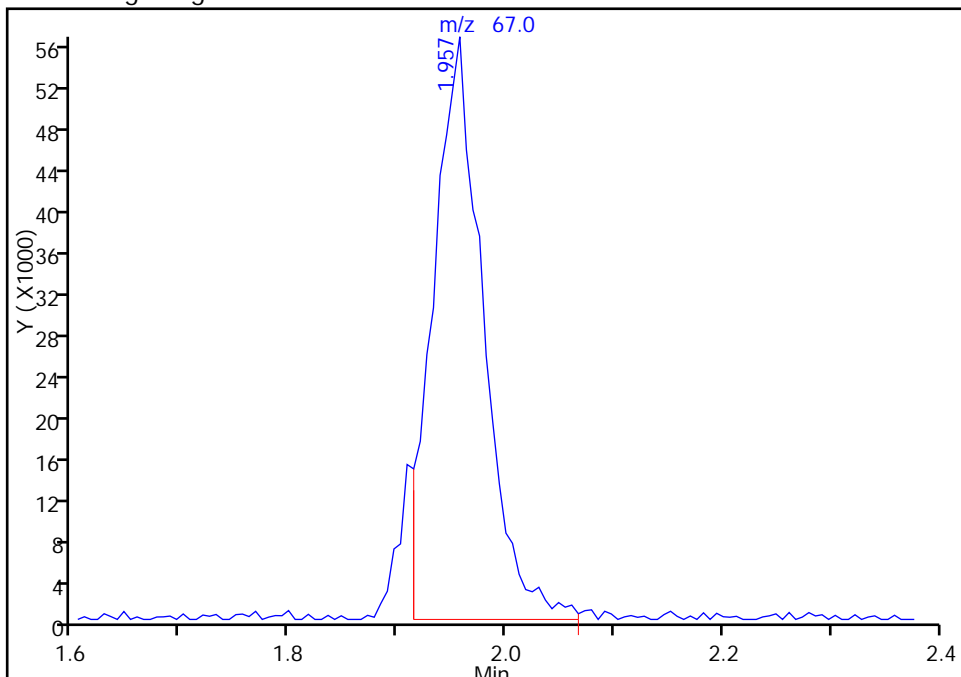
TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP4\20141103-4149.b\4110306.D  
Injection Date: 03-Nov-2014 13:15:30 Instrument ID: CHHP4  
Lims ID: ic  
Client ID:  
Operator ID: 034635 ALS Bottle#: 6 Worklist Smp#: 6  
Purge Vol: 5.000 mL Dil. Factor: 1.0000  
Method: MSVOA\_CHHP4 Limit Group: VOA 8260C ICAL  
Column: DB-624 (0.18 mm) Detector: MS SCAN

16 Dichlorofluoromethane, CAS: 75-43-4

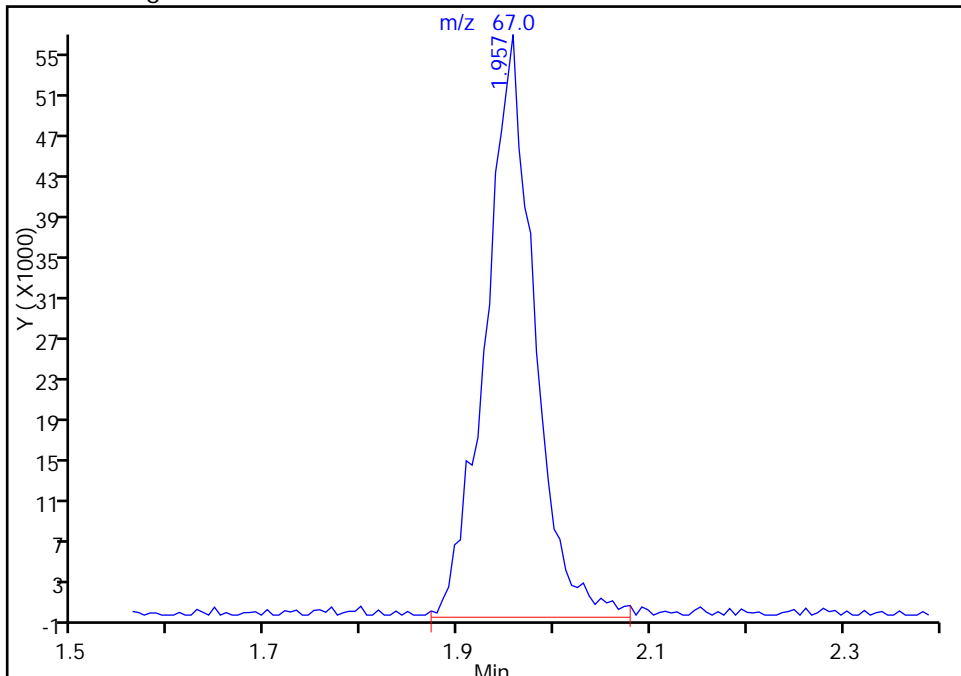
RT: 1.96  
Response: 185206  
Amount: 116.9280

Processing Integration Results



RT: 1.96  
Response: 201068  
Amount: 123.9577

Manual Integration Results



Reviewer: journetp, 03-Nov-2014 14:13:30  
Audit Action: Manually Integrated  
Audit Reason: Poor chromatography

TestAmerica Pittsburgh  
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHHP4\20141103-4149.b\4110307.D  
 Lims ID: icis  
 Client ID:  
 Sample Type: ICIS Calib Level: 4  
 Inject. Date: 03-Nov-2014 13:42:30 ALS Bottle#: 7 Worklist Smp#: 7  
 Purge Vol: 5.000 mL Dil. Factor: 1.0000  
 Sample Info: ICIS  
 Misc. Info.: 180-0004149-007  
 Operator ID: 034635 Instrument ID: CHHP4  
 Sublist: chrom-MSVOA\_CHHP4\*sub33  
 Method: \\PITCHROM\ChromData\CHHP4\20141103-4149.b\MSVOA\_CHHP4.m  
 Limit Group: VOA 8260C ICAL  
 Last Update: 03-Nov-2014 16:25:17 Calib Date: 03-Nov-2014 16:24:30  
 Integrator: RTE ID Type: Deconvolution ID  
 Quant Method: Internal Standard Quant By: Initial Calibration  
 Last ICAL File: \\PITCHROM\ChromData\CHHP4\20141103-4149.b\4110312.D  
 Column 1 : DB-624 ( 0.18 mm) Det: MS SCAN  
 Process Host: XAWRK026

First Level Reviewer: journetp

Date: 03-Nov-2014 14:12:35

| Compound                        | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q   | Response | Cal Amt ng | OnCol Amt ng | Flags |
|---------------------------------|-----|-----------|---------------|---------------|-----|----------|------------|--------------|-------|
| * 1 TBA-d9 (IS)                 | 65  | 3.168     | 3.168         | 0.000         | 96  | 335088   | 5000.0     | 5000.0       |       |
| * 2 Fluorobenzene (IS)          | 96  | 6.258     | 6.258         | 0.000         | 98  | 1650203  | 250.0      | 250.0        |       |
| * 3 Chlorobenzene-d5            | 119 | 9.452     | 9.452         | 0.000         | 86  | 388399   | 250.0      | 250.0        |       |
| * 4 1,4-Dichlorobenzene-d4      | 152 | 11.806    | 11.806        | 0.000         | 95  | 462021   | 250.0      | 250.0        |       |
| \$ 5 Dibromofluoromethane (Surr | 113 | 5.492     | 5.492         | 0.000         | 94  | 300577   | 200.0      | 219.1        |       |
| \$ 6 1,2-Dichloroethane-d4 (Sur | 65  | 5.887     | 5.887         | 0.000         | 96  | 266578   | 200.0      | 211.8        |       |
| \$ 7 Toluene-d8 (Surr)          | 98  | 7.980     | 7.980         | 0.000         | 93  | 1339596  | 200.0      | 215.1        |       |
| \$ 8 4-Bromofluorobenzene (Surr | 95  | 10.650    | 10.650        | 0.000         | 89  | 445255   | 200.0      | 205.1        |       |
| 10 Dichlorodifluoromethane      | 85  | 1.209     | 1.209         | 0.000         | 99  | 544615   | 200.0      | 219.2        |       |
| 11 Chloromethane                | 50  | 1.318     | 1.318         | 0.000         | 99  | 797392   | 200.0      | 219.9        |       |
| 12 Vinyl chloride               | 62  | 1.416     | 1.416         | 0.000         | 98  | 563241   | 200.0      | 218.8        |       |
| 13 Butadiene                    | 54  | 1.440     | 1.434         | 0.006         | 98  | 569038   | 200.0      | 219.8        |       |
| 14 Bromomethane                 | 94  | 1.659     | 1.659         | 0.000         | 93  | 71494    | 200.0      | 195.7        |       |
| 15 Chloroethane                 | 64  | 1.744     | 1.744         | 0.000         | 97  | 87111    | 200.0      | 210.5        |       |
| 17 Trichlorofluoromethane       | 101 | 1.921     | 1.921         | 0.000         | 98  | 282519   | 200.0      | 219.2        |       |
| 16 Dichlorofluoromethane        | 67  | 1.957     | 1.957         | 0.000         | 98  | 314349   | 200.0      | 206.7        |       |
| 19 Ethyl ether                  | 59  | 2.225     | 2.225         | 0.000         | 96  | 139022   | 200.0      | 209.1        |       |
| 20 Acrolein                     | 56  | 2.365     | 2.365         | 0.000         | 99  | 83233    | 875.0      | 995.4        |       |
| 21 1,1-Dichloroethene           | 96  | 2.419     | 2.419         | 0.000         | 96  | 345488   | 200.0      | 201.1        |       |
| 22 1,1,2-Trichloro-1,2,2-trif   | 101 | 2.486     | 2.486         | 0.000         | 95  | 432989   | 200.0      | 227.7        |       |
| 23 Acetone                      | 43  | 2.529     | 2.529         | 0.000         | 98  | 88962    | 200.0      | 197.8        |       |
| 24 Iodomethane                  | 142 | 2.559     | 2.559         | 0.000         | 96  | 661539   | 200.0      | 219.9        |       |
| 25 Carbon disulfide             | 76  | 2.620     | 2.620         | 0.000         | 99  | 1364034  | 200.0      | 225.0        |       |
| 28 3-Chloro-1-propene           | 76  | 2.833     | 2.833         | 0.000         | 94  | 299800   | 200.0      | 217.8        |       |
| 29 Methyl acetate               | 43  | 2.870     | 2.870         | 0.000         | 98  | 1090047  | 1000.0     | 1068.5       |       |
| 30 Methylene Chloride           | 84  | 2.991     | 2.991         | 0.000         | 99  | 525297   | 200.0      | 218.4        |       |
| 31 2-Methyl-2-propanol          | 59  | 3.265     | 3.265         | 0.000         | 94  | 199618   | 2000.0     | 1937.0       |       |
| 32 Acrylonitrile                | 53  | 3.326     | 3.326         | 0.000         | 100 | 970140   | 2000.0     | 2248.2       |       |
| 33 trans-1,2-Dichloroethene     | 96  | 3.332     | 3.332         | 0.000         | 97  | 496423   | 200.0      | 219.7        |       |
| 34 Methyl tert-butyl ether      | 73  | 3.368     | 3.368         | 0.000         | 97  | 770319   | 200.0      | 214.9        |       |

| Compound                       | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q   | Response | Cal Amt ng | OnCol Amt ng | Flags |
|--------------------------------|-----|-----------|---------------|---------------|-----|----------|------------|--------------|-------|
| 38 Vinyl acetate               | 43  | 3.727     | 3.727         | 0.000         | 69  | 705725   | 200.0      | 223.1        |       |
| 35 Hexane                      | 57  | 3.727     | 3.727         | 0.000         | 93  | 1048917  | 200.0      | 219.0        |       |
| 36 1,1-Dichloroethane          | 63  | 3.971     | 3.971         | 0.000         | 96  | 900495   | 200.0      | 217.5        |       |
| 41 2,2-Dichloropropane         | 77  | 4.804     | 4.804         | 0.000         | 89  | 336789   | 200.0      | 214.5        |       |
| 42 cis-1,2-Dichloroethene      | 96  | 4.816     | 4.816         | 0.000         | 82  | 480617   | 200.0      | 212.1        |       |
| 43 2-Butanone (MEK)            | 43  | 4.859     | 4.859         | 0.000         | 100 | 109787   | 200.0      | 189.6        |       |
| 46 Chlorobromomethane          | 128 | 5.127     | 5.127         | 0.000         | 91  | 164896   | 200.0      | 211.2        |       |
| 48 Tetrahydrofuran             | 42  | 5.157     | 5.157         | 0.000         | 97  | 155132   | 400.0      | 427.0        |       |
| 49 Chloroform                  | 83  | 5.303     | 5.303         | 0.000         | 93  | 653358   | 200.0      | 207.4        |       |
| 50 1,1,1-Trichloroethane       | 97  | 5.449     | 5.449         | 0.000         | 99  | 517077   | 200.0      | 218.3        |       |
| 51 Cyclohexane                 | 56  | 5.516     | 5.516         | 0.000         | 92  | 1183341  | 200.0      | 223.7        |       |
| 53 Carbon tetrachloride        | 117 | 5.625     | 5.625         | 0.000         | 99  | 460908   | 200.0      | 217.7        |       |
| 52 1,1-Dichloropropene         | 75  | 5.650     | 5.650         | 0.000         | 94  | 639484   | 200.0      | 222.3        |       |
| 54 Benzene                     | 78  | 5.881     | 5.881         | 0.000         | 98  | 1847904  | 200.0      | 221.3        |       |
| 59 Isobutyl alcohol            | 41  | 5.942     | 5.942         | 0.000         | 93  | 158464   | 5000.0     | 4879.6       |       |
| 55 1,2-Dichloroethane          | 62  | 5.984     | 5.984         | 0.000         | 94  | 337212   | 200.0      | 203.2        |       |
| 58 n-Heptane                   | 43  | 6.295     | 6.295         | 0.000         | 95  | 1060664  | 200.0      | 221.2        |       |
| 61 Trichloroethene             | 130 | 6.666     | 6.666         | 0.000         | 98  | 421095   | 200.0      | 214.1        |       |
| 63 Methylcyclohexane           | 83  | 6.903     | 6.903         | 0.000         | 94  | 935722   | 200.0      | 222.1        |       |
| 64 1,2-Dichloropropene         | 63  | 6.958     | 6.958         | 0.000         | 98  | 470284   | 200.0      | 207.4        |       |
| 65 Dibromomethane              | 93  | 7.043     | 7.043         | 0.000         | 94  | 150562   | 200.0      | 203.5        |       |
| 67 1,4-Dioxane                 | 88  | 7.067     | 7.067         | 0.000         | 95  | 45936    | 4000.0     | 4635.6       |       |
| 68 Dichlorobromomethane        | 83  | 7.262     | 7.262         | 0.000         | 97  | 365633   | 200.0      | 207.7        |       |
| 70 2-Chloroethyl vinyl ether   | 63  | 7.596     | 7.596         | 0.000         | 91  | 310229   | 400.0      | 433.1        |       |
| 74 trans-1,3-Dichloropropene   | 75  | 7.724     | 7.724         | 0.000         | 95  | 512949   | 200.0      | 200.8        |       |
| 72 4-Methyl-2-pentanone (MIBK) | 43  | 7.901     | 7.901         | 0.000         | 97  | 229333   | 200.0      | 191.2        |       |
| 73 Toluene                     | 91  | 8.047     | 8.047         | 0.000         | 98  | 1784371  | 200.0      | 217.0        |       |
| 71 cis-1,3-Dichloropropene     | 75  | 8.327     | 8.327         | 0.000         | 93  | 349002   | 200.0      | 207.3        |       |
| 75 Ethyl methacrylate          | 69  | 8.412     | 8.412         | 0.000         | 94  | 336808   | 200.0      | 202.0        |       |
| 76 1,1,2-Trichloroethane       | 97  | 8.521     | 8.521         | 0.000         | 89  | 249383   | 200.0      | 195.4        |       |
| 77 Tetrachloroethene           | 164 | 8.564     | 8.564         | 0.000         | 97  | 350679   | 200.0      | 203.9        |       |
| 78 1,3-Dichloropropene         | 76  | 8.673     | 8.673         | 0.000         | 95  | 437206   | 200.0      | 193.6        |       |
| 79 2-Hexanone                  | 43  | 8.752     | 8.752         | 0.000         | 96  | 143692   | 200.0      | 194.5        |       |
| 81 Chlorodibromomethane        | 129 | 8.880     | 8.880         | 0.000         | 92  | 201910   | 200.0      | 199.0        |       |
| 82 Ethylene Dibromide          | 107 | 8.984     | 8.984         | 0.000         | 93  | 207407   | 200.0      | 184.7        |       |
| 84 Chlorobenzene               | 112 | 9.482     | 9.482         | 0.000         | 92  | 1009382  | 200.0      | 210.3        |       |
| 85 1,1,1,2-Tetrachloroethane   | 131 | 9.586     | 9.586         | 0.000         | 97  | 316138   | 200.0      | 198.2        |       |
| 86 Ethylbenzene                | 106 | 9.592     | 9.592         | 0.000         | 98  | 678539   | 200.0      | 214.2        |       |
| 87 m-Xylene & p-Xylene         | 106 | 9.732     | 9.732         | 0.000         | 99  | 834919   | 200.0      | 201.4        |       |
| 88 o-Xylene                    | 106 | 10.109    | 10.109        | 0.000         | 96  | 770324   | 200.0      | 209.3        |       |
| 89 Styrene                     | 104 | 10.133    | 10.133        | 0.000         | 95  | 1132409  | 200.0      | 177.3        |       |
| 90 Bromoform                   | 173 | 10.304    | 10.304        | 0.000         | 96  | 92297    | 200.0      | 189.9        |       |
| 91 Isopropylbenzene            | 105 | 10.480    | 10.480        | 0.000         | 96  | 1911788  | 200.0      | 204.5        |       |
| 94 Bromobenzene                | 156 | 10.772    | 10.772        | 0.000         | 95  | 378393   | 200.0      | 194.0        |       |
| 93 1,1,2,2-Tetrachloroethane   | 83  | 10.809    | 10.809        | 0.000         | 93  | 251065   | 200.0      | 187.8        |       |
| 96 trans-1,4-Dichloro-2-buten  | 53  | 10.845    | 10.845        | 0.000         | 71  | 49372    | 200.0      | 182.5        |       |
| 95 1,2,3-Trichloropropane      | 110 | 10.851    | 10.851        | 0.000         | 89  | 72436    | 200.0      | 212.0        |       |
| 97 N-Propylbenzene             | 120 | 10.900    | 10.900        | 0.000         | 98  | 579997   | 200.0      | 211.6        |       |
| 98 2-Chlorotoluene             | 126 | 10.973    | 10.973        | 0.000         | 96  | 444370   | 200.0      | 185.6        |       |
| 99 1,3,5-Trimethylbenzene      | 105 | 11.088    | 11.088        | 0.000         | 96  | 1525320  | 200.0      | 218.8        |       |
| 100 4-Chlorotoluene            | 126 | 11.101    | 11.101        | 0.000         | 98  | 424064   | 200.0      | 213.8        |       |
| 101 tert-Butylbenzene          | 119 | 11.393    | 11.393        | 0.000         | 94  | 1384037  | 200.0      | 214.8        |       |

| Compound                         | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q  | Response | Cal Amt ng | OnCol Amt ng | Flags |
|----------------------------------|-----|-----------|---------------|---------------|----|----------|------------|--------------|-------|
| 103 1,2,4-Trimethylbenzene       | 105 | 11.459    | 11.459        | 0.000         | 97 | 1482846  | 200.0      | 215.4        |       |
| 104 sec-Butylbenzene             | 105 | 11.618    | 11.618        | 0.000         | 95 | 2051735  | 200.0      | 222.7        |       |
| 105 1,3-Dichlorobenzene          | 146 | 11.721    | 11.721        | 0.000         | 98 | 718776   | 200.0      | 202.7        |       |
| 106 4-Isopropyltoluene           | 119 | 11.782    | 11.782        | 0.000         | 96 | 1629566  | 200.0      | 219.0        |       |
| 107 1,4-Dichlorobenzene          | 146 | 11.831    | 11.831        | 0.000         | 95 | 683824   | 200.0      | 209.6        |       |
| 111 1,2-Dichlorobenzene          | 146 | 12.171    | 12.171        | 0.000         | 98 | 634776   | 200.0      | 207.4        |       |
| 110 n-Butylbenzene               | 91  | 12.190    | 12.190        | 0.000         | 97 | 1527628  | 200.0      | 215.3        |       |
| 112 1,2-Dibromo-3-Chloropropan   | 75  | 12.968    | 12.968        | 0.000         | 80 | 19434    | 200.0      | 189.5        |       |
| 113 1,2,4-Trichlorobenzene       | 180 | 13.777    | 13.777        | 0.000         | 94 | 258363   | 200.0      | 190.0        |       |
| 115 Hexachlorobutadiene          | 225 | 13.929    | 13.929        | 0.000         | 96 | 292767   | 200.0      | 213.3        |       |
| 116 Naphthalene                  | 128 | 14.033    | 14.033        | 0.000         | 98 | 400841   | 200.0      | 200.5        |       |
| 117 1,2,3-Trichlorobenzene       | 180 | 14.252    | 14.252        | 0.000         | 95 | 200974   | 200.0      | 202.6        |       |
| S 129 1,2-Dichloroethene, Total  | 96  |           |               |               | 0  |          | 400.0      | 431.8        |       |
| S 130 Xylenes, Total             | 106 |           |               |               | 0  |          | 400.0      | 410.7        |       |
| S 131 1,3-Dichloropropene, Total | 1   |           |               |               | 0  |          | 400.0      | 408.1        |       |

**Reagents:**

|                     |                     |           |
|---------------------|---------------------|-----------|
| VOA8260INT_00022    | Amount Added: 10.00 | Units: uL |
| VOA8260SURR_00017   | Amount Added: 8.00  | Units: uL |
| voaWVOA Pri R_00001 | Amount Added: 8.00  | Units: uL |
| VOAACROPRI_00002    | Amount Added: 35.00 | Units: uL |
| voaWVA pri Re_00004 | Amount Added: 8.00  | Units: uL |
| voaW2-cle PRI_00002 | Amount Added: 8.00  | Units: uL |

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP4\20141103-4149.b\4110307.D

Injection Date: 03-Nov-2014 13:42:30

Instrument ID: CHHP4

Operator ID: 034635

Lims ID: icis

Worklist Smp#: 7

Client ID:

Purge Vol: 5.000 mL

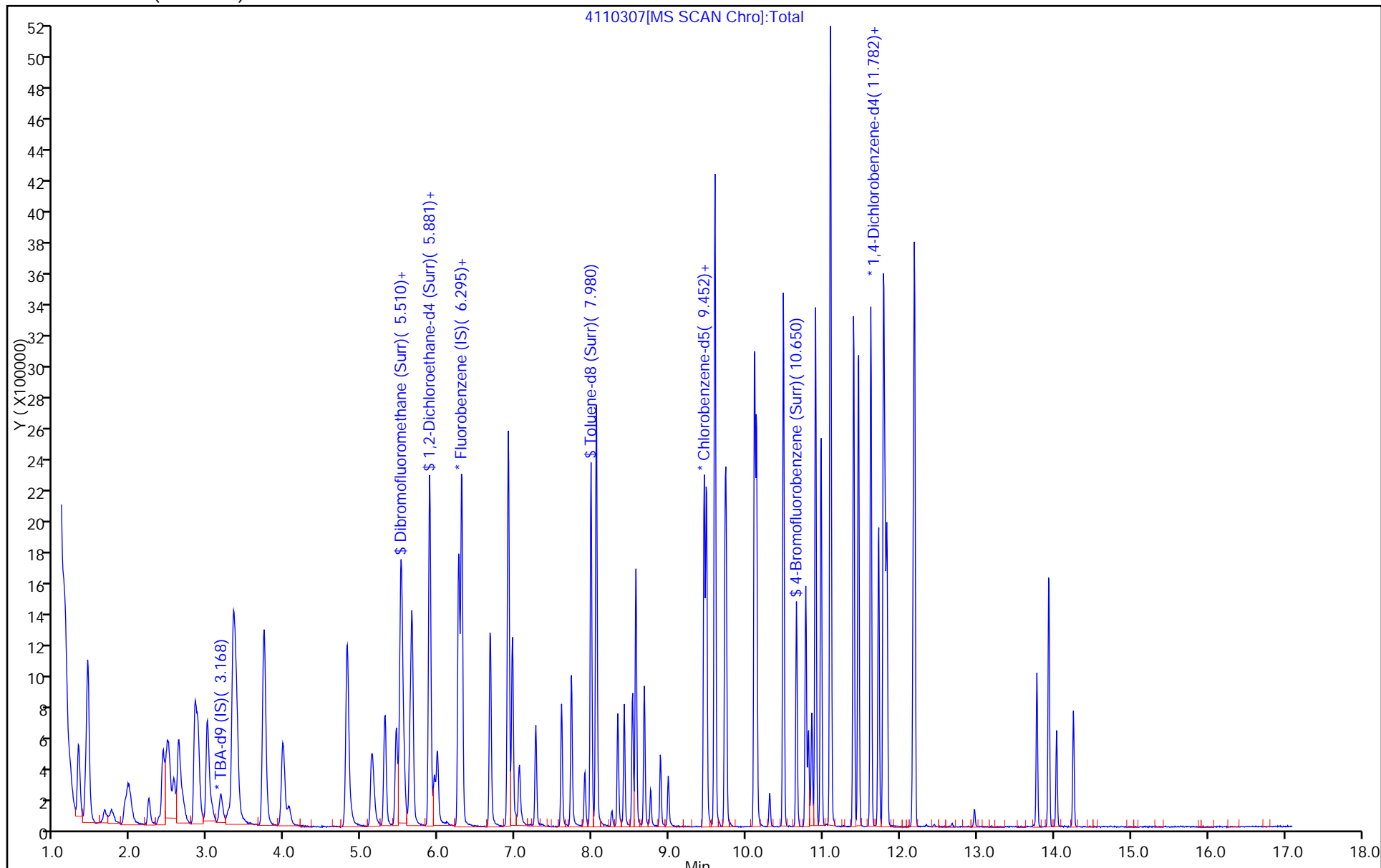
Dil. Factor: 1.0000

ALS Bottle#: 7

Method: MSVOA\_CHHP4

Limit Group: VOA 8260C ICAL

Column: DB-624 (0.18 mm)



TestAmerica Pittsburgh  
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHHP4\20141103-4149.b\4110309.D  
 Lims ID: ic  
 Client ID:  
 Sample Type: IC Calib Level: 6  
 Inject. Date: 03-Nov-2014 14:35:30 ALS Bottle#: 9 Worklist Smp#: 9  
 Purge Vol: 5.000 mL Dil. Factor: 1.0000  
 Sample Info: IC  
 Misc. Info.: 180-0004149-009  
 Operator ID: 034635 Instrument ID: CHHP4  
 Sublist: chrom-MSVOA\_CHHP4\*sub33  
 Method: \\PITCHROM\ChromData\CHHP4\20141103-4149.b\MSVOA\_CHHP4.m  
 Limit Group: VOA 8260C ICAL  
 Last Update: 03-Nov-2014 16:25:22 Calib Date: 03-Nov-2014 16:24:30  
 Integrator: RTE ID Type: Deconvolution ID  
 Quant Method: Internal Standard Quant By: Initial Calibration  
 Last ICal File: \\PITCHROM\ChromData\CHHP4\20141103-4149.b\4110312.D  
 Column 1 : DB-624 ( 0.18 mm) Det: MS SCAN  
 Process Host: XAWRK026

First Level Reviewer: journetp

Date: 03-Nov-2014 14:11:40

| Compound                        | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q   | Response | Cal Amt ng | OnCol Amt ng | Flags |
|---------------------------------|-----|-----------|---------------|---------------|-----|----------|------------|--------------|-------|
| * 1 TBA-d9 (IS)                 | 65  | 3.168     | 3.168         | 0.000         | 99  | 347497   | 5000.0     | 5000.0       |       |
| * 2 Fluorobenzene (IS)          | 96  | 6.258     | 6.258         | 0.000         | 98  | 1858435  | 250.0      | 250.0        |       |
| * 3 Chlorobenzene-d5            | 119 | 9.452     | 9.452         | 0.000         | 87  | 427541   | 250.0      | 250.0        |       |
| * 4 1,4-Dichlorobenzene-d4      | 152 | 11.806    | 11.806        | 0.000         | 95  | 505583   | 250.0      | 250.0        |       |
| \$ 5 Dibromofluoromethane (Surr | 113 | 5.498     | 5.492         | 0.006         | 94  | 951487   | 625.0      | 615.7        |       |
| \$ 6 1,2-Dichloroethane-d4 (Sur | 65  | 5.887     | 5.887         | 0.000         | 96  | 868109   | 625.0      | 612.4        |       |
| \$ 7 Toluene-d8 (Surr)          | 98  | 7.980     | 7.980         | 0.000         | 93  | 3533198  | 625.0      | 515.3        |       |
| \$ 8 4-Bromofluorobenzene (Surr | 95  | 10.650    | 10.650        | 0.000         | 88  | 1368902  | 625.0      | 572.7        |       |
| 10 Dichlorodifluoromethane      | 85  | 1.209     | 1.209         | 0.000         | 99  | 1733176  | 625.0      | 619.3        |       |
| 11 Chloromethane                | 50  | 1.318     | 1.318         | 0.000         | 98  | 2330249  | 625.0      | 570.6        |       |
| 12 Vinyl chloride               | 62  | 1.422     | 1.416         | 0.006         | 98  | 1586609  | 625.0      | 547.3        |       |
| 13 Butadiene                    | 54  | 1.434     | 1.434         | 0.000         | 96  | 1656316  | 625.0      | 568.1        |       |
| 14 Bromomethane                 | 94  | 1.653     | 1.659         | -0.006        | 92  | 233482   | 625.0      | 567.5        |       |
| 15 Chloroethane                 | 64  | 1.738     | 1.744         | -0.006        | 97  | 255990   | 625.0      | 588.9        |       |
| 17 Trichlorofluoromethane       | 101 | 1.927     | 1.921         | 0.006         | 95  | 1035575  | 625.0      | 713.6        |       |
| 16 Dichlorofluoromethane        | 67  | 1.957     | 1.957         | 0.000         | 97  | 1057158  | 625.0      | 617.3        |       |
| 19 Ethyl ether                  | 59  | 2.231     | 2.225         | 0.006         | 98  | 448564   | 625.0      | 599.0        |       |
| 20 Acrolein                     | 56  | 2.365     | 2.365         | 0.000         | 98  | 110388   | 1125.0     | 1172.3       |       |
| 21 1,1-Dichloroethene           | 96  | 2.419     | 2.419         | 0.000         | 97  | 1135190  | 625.0      | 613.5        |       |
| 22 1,1,2-Trichloro-1,2,2-trif   | 101 | 2.474     | 2.486         | -0.012        | 94  | 1279042  | 625.0      | 597.2        |       |
| 23 Acetone                      | 43  | 2.523     | 2.529         | -0.006        | 99  | 240731   | 625.0      | 581.4        |       |
| 24 Iodomethane                  | 142 | 2.559     | 2.559         | 0.000         | 96  | 2102863  | 625.0      | 620.7        |       |
| 25 Carbon disulfide             | 76  | 2.620     | 2.620         | 0.000         | 99  | 4703940  | 625.0      | 689.1        |       |
| 28 3-Chloro-1-propene           | 76  | 2.833     | 2.833         | 0.000         | 94  | 1027463  | 625.0      | 617.2        |       |
| 29 Methyl acetate               | 43  | 2.870     | 2.870         | 0.000         | 98  | 3212406  | 3125.0     | 2796.0       |       |
| 30 Methylene Chloride           | 84  | 2.991     | 2.991         | 0.000         | 99  | 1505632  | 625.0      | 621.8        |       |
| 31 2-Methyl-2-propanol          | 59  | 3.265     | 3.265         | 0.000         | 95  | 603688   | 6250.0     | 5648.6       |       |
| 32 Acrylonitrile                | 53  | 3.326     | 3.326         | 0.000         | 100 | 2847212  | 6250.0     | 6201.9       |       |
| 33 trans-1,2-Dichloroethene     | 96  | 3.332     | 3.332         | 0.000         | 98  | 1587582  | 625.0      | 623.9        |       |
| 34 Methyl tert-butyl ether      | 73  | 3.374     | 3.368         | 0.006         | 97  | 2351395  | 625.0      | 582.4        |       |

| Compound                       | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q  | Response | Cal Amt ng | OnCol Amt ng | Flags |
|--------------------------------|-----|-----------|---------------|---------------|----|----------|------------|--------------|-------|
| 38 Vinyl acetate               | 43  | 3.727     | 3.727         | 0.000         | 67 | 2166786  | 625.0      | 620.4        |       |
| 35 Hexane                      | 57  | 3.727     | 3.727         | 0.000         | 94 | 3170746  | 625.0      | 617.3        |       |
| 36 1,1-Dichloroethane          | 63  | 3.977     | 3.971         | 0.006         | 96 | 2832176  | 625.0      | 607.4        |       |
| 41 2,2-Dichloropropane         | 77  | 4.804     | 4.804         | 0.000         | 90 | 1184024  | 625.0      | 669.7        |       |
| 42 cis-1,2-Dichloroethene      | 96  | 4.816     | 4.816         | 0.000         | 83 | 1513530  | 625.0      | 593.2        |       |
| 43 2-Butanone (MEK)            | 43  | 4.859     | 4.859         | 0.000         | 99 | 355386   | 625.0      | 608.5        |       |
| 46 Chlorobromomethane          | 128 | 5.126     | 5.127         | -0.001        | 91 | 540361   | 625.0      | 614.7        |       |
| 48 Tetrahydrofuran             | 42  | 5.157     | 5.157         | 0.000         | 95 | 457987   | 1250.0     | 1119.2       |       |
| 49 Chloroform                  | 83  | 5.297     | 5.303         | -0.006        | 93 | 2050276  | 625.0      | 577.8        |       |
| 50 1,1,1-Trichloroethane       | 97  | 5.449     | 5.449         | 0.000         | 98 | 1724054  | 625.0      | 646.3        |       |
| 51 Cyclohexane                 | 56  | 5.516     | 5.516         | 0.000         | 94 | 3490471  | 625.0      | 585.9        |       |
| 53 Carbon tetrachloride        | 117 | 5.631     | 5.625         | 0.006         | 98 | 1591703  | 625.0      | 667.4        |       |
| 52 1,1-Dichloropropene         | 75  | 5.656     | 5.650         | 0.006         | 93 | 2003880  | 625.0      | 618.4        |       |
| 54 Benzene                     | 78  | 5.881     | 5.881         | 0.000         | 98 | 5039564  | 625.0      | 536.0        |       |
| 59 Isobutyl alcohol            | 41  | 5.942     | 5.942         | 0.000         | 96 | 519324   | 15625      | 14200        |       |
| 55 1,2-Dichloroethane          | 62  | 5.984     | 5.984         | 0.000         | 93 | 1085070  | 625.0      | 580.5        |       |
| 58 n-Heptane                   | 43  | 6.301     | 6.295         | 0.006         | 94 | 3050882  | 625.0      | 565.1        |       |
| 61 Trichloroethene             | 130 | 6.672     | 6.666         | 0.006         | 97 | 1332487  | 625.0      | 601.6        |       |
| 63 Methylcyclohexane           | 83  | 6.903     | 6.903         | 0.000         | 94 | 2704544  | 625.0      | 570.0        |       |
| 64 1,2-Dichloropropene         | 63  | 6.958     | 6.958         | 0.000         | 98 | 1443702  | 625.0      | 565.4        |       |
| 65 Dibromomethane              | 93  | 7.043     | 7.043         | 0.000         | 97 | 505201   | 625.0      | 606.3        |       |
| 67 1,4-Dioxane                 | 88  | 7.061     | 7.067         | -0.006        | 98 | 141379   | 12500      | 12485        |       |
| 68 Dichlorobromomethane        | 83  | 7.262     | 7.262         | 0.000         | 96 | 1265293  | 625.0      | 638.1        |       |
| 70 2-Chloroethyl vinyl ether   | 63  | 7.596     | 7.596         | 0.000         | 92 | 999550   | 1250.0     | 1239.2       |       |
| 74 trans-1,3-Dichloropropene   | 75  | 7.724     | 7.724         | 0.000         | 95 | 1715895  | 625.0      | 628.4        |       |
| 72 4-Methyl-2-pentanone (MIBK) | 43  | 7.901     | 7.901         | 0.000         | 96 | 721478   | 625.0      | 546.4        |       |
| 73 Toluene                     | 91  | 8.053     | 8.047         | 0.006         | 94 | 4478637  | 625.0      | 602.4        |       |
| 71 cis-1,3-Dichloropropene     | 75  | 8.326     | 8.327         | 0.000         | 93 | 1244582  | 625.0      | 656.4        |       |
| 75 Ethyl methacrylate          | 69  | 8.412     | 8.412         | 0.000         | 93 | 1066379  | 625.0      | 621.9        |       |
| 76 1,1,2-Trichloroethane       | 97  | 8.521     | 8.521         | 0.000         | 90 | 769743   | 625.0      | 547.9        |       |
| 77 Tetrachloroethene           | 164 | 8.564     | 8.564         | 0.000         | 97 | 1062778  | 625.0      | 561.5        |       |
| 78 1,3-Dichloropropene         | 76  | 8.673     | 8.673         | 0.000         | 96 | 1354026  | 625.0      | 544.7        |       |
| 79 2-Hexanone                  | 43  | 8.752     | 8.752         | 0.000         | 96 | 464430   | 625.0      | 608.0        |       |
| 81 Chlorodibromomethane        | 129 | 8.880     | 8.880         | 0.000         | 91 | 731242   | 625.0      | 654.6        |       |
| 82 Ethylene Dibromide          | 107 | 8.983     | 8.984         | -0.001        | 99 | 692151   | 625.0      | 560.0        |       |
| 84 Chlorobenzene               | 112 | 9.482     | 9.482         | 0.000         | 87 | 2779120  | 625.0      | 549.3        |       |
| 85 1,1,1,2-Tetrachloroethane   | 131 | 9.586     | 9.586         | 0.000         | 96 | 963508   | 625.0      | 548.8        |       |
| 86 Ethylbenzene                | 106 | 9.598     | 9.592         | 0.006         | 94 | 1820775  | 625.0      | 611.6        |       |
| 87 m-Xylene & p-Xylene         | 106 | 9.732     | 9.732         | 0.000         | 95 | 2383414  | 625.0      | 522.2        |       |
| 88 o-Xylene                    | 106 | 10.109    | 10.109        | 0.000         | 93 | 2132292  | 625.0      | 612.5        |       |
| 89 Styrene                     | 104 | 10.133    | 10.133        | 0.000         | 92 | 3109520  | 625.0      | 442.4        |       |
| 90 Bromoform                   | 173 | 10.304    | 10.304        | 0.000         | 98 | 382388   | 625.0      | 714.7        |       |
| 91 Isopropylbenzene            | 105 | 10.480    | 10.480        | 0.000         | 96 | 4505204  | 625.0      | 626.3        |       |
| 94 Bromobenzene                | 156 | 10.772    | 10.772        | 0.000         | 95 | 1127170  | 625.0      | 528.1        |       |
| 93 1,1,2,2-Tetrachloroethane   | 83  | 10.808    | 10.809        | -0.001        | 93 | 767713   | 625.0      | 521.7        |       |
| 96 trans-1,4-Dichloro-2-buten  | 53  | 10.845    | 10.845        | 0.000         | 78 | 188479   | 625.0      | 636.6        |       |
| 95 1,2,3-Trichloropropane      | 110 | 10.857    | 10.851        | 0.006         | 86 | 224027   | 625.0      | 621.6        |       |
| 97 N-Propylbenzene             | 120 | 10.900    | 10.900        | 0.000         | 93 | 1644536  | 625.0      | 575.0        |       |
| 98 2-Chlorotoluene             | 126 | 10.973    | 10.973        | 0.000         | 96 | 1293841  | 625.0      | 493.9        |       |
| 99 1,3,5-Trimethylbenzene      | 105 | 11.088    | 11.088        | 0.000         | 97 | 3663629  | 625.0      | 602.6        |       |
| 100 4-Chlorotoluene            | 126 | 11.100    | 11.101        | -0.001        | 97 | 1172679  | 625.0      | 618.9        |       |
| 101 tert-Butylbenzene          | 119 | 11.399    | 11.393        | 0.006         | 93 | 3521083  | 625.0      | 609.0        |       |



| Compound                         | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q  | Response | Cal Amt ng | OnCol Amt ng | Flags |
|----------------------------------|-----|-----------|---------------|---------------|----|----------|------------|--------------|-------|
| 103 1,2,4-Trimethylbenzene       | 105 | 11.459    | 11.459        | 0.000         | 96 | 3740947  | 625.0      | 608.4        |       |
| 104 sec-Butylbenzene             | 105 | 11.618    | 11.618        | 0.000         | 95 | 4721692  | 625.0      | 594.6        |       |
| 105 1,3-Dichlorobenzene          | 146 | 11.721    | 11.721        | 0.000         | 96 | 2143238  | 625.0      | 621.0        |       |
| 106 4-Isopropyltoluene           | 119 | 11.782    | 11.782        | 0.000         | 91 | 3937573  | 625.0      | 602.0        |       |
| 107 1,4-Dichlorobenzene          | 146 | 11.830    | 11.831        | -0.001        | 90 | 2064671  | 625.0      | 611.0        |       |
| 111 1,2-Dichlorobenzene          | 146 | 12.171    | 12.171        | 0.000         | 95 | 1808226  | 625.0      | 618.9        |       |
| 110 n-Butylbenzene               | 91  | 12.189    | 12.190        | -0.001        | 93 | 3784161  | 625.0      | 604.8        |       |
| 112 1,2-Dibromo-3-Chloropropan   | 75  | 12.962    | 12.968        | -0.006        | 86 | 75884    | 625.0      | 629.4        |       |
| 113 1,2,4-Trichlorobenzene       | 180 | 13.777    | 13.777        | 0.000         | 95 | 874689   | 625.0      | 587.7        |       |
| 115 Hexachlorobutadiene          | 225 | 13.935    | 13.929        | 0.006         | 97 | 859016   | 625.0      | 601.2        |       |
| 116 Naphthalene                  | 128 | 14.033    | 14.033        | 0.000         | 97 | 1336874  | 625.0      | 631.7        |       |
| 117 1,2,3-Trichlorobenzene       | 180 | 14.252    | 14.252        | 0.000         | 94 | 667810   | 625.0      | 628.3        |       |
| S 129 1,2-Dichloroethene, Total  | 96  |           |               |               | 0  |          | 1250.0     | 1217.1       |       |
| S 130 Xylenes, Total             | 106 |           |               |               | 0  |          | 1250.0     | 1134.8       |       |
| S 131 1,3-Dichloropropene, Total | 1   |           |               |               | 0  |          | 1250.0     | 1284.8       |       |

**Reagents:**

|                     |                     |           |
|---------------------|---------------------|-----------|
| VOA8260INT_00022    | Amount Added: 10.00 | Units: uL |
| VOA8260SURR_00017   | Amount Added: 25.00 | Units: uL |
| voaWVOA Pri R_00001 | Amount Added: 25.00 | Units: uL |
| VOAACROPRI_00002    | Amount Added: 45.00 | Units: uL |
| voaWVA pri Re_00004 | Amount Added: 25.00 | Units: uL |
| voaW2-cle PRI_00002 | Amount Added: 25.00 | Units: uL |

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP4\20141103-4149.b\4110309.D

Injection Date: 03-Nov-2014 14:35:30

Instrument ID: CHHP4

Operator ID: 034635

Lims ID: ic

Worklist Smp#: 9

Client ID:

Purge Vol: 5.000 mL

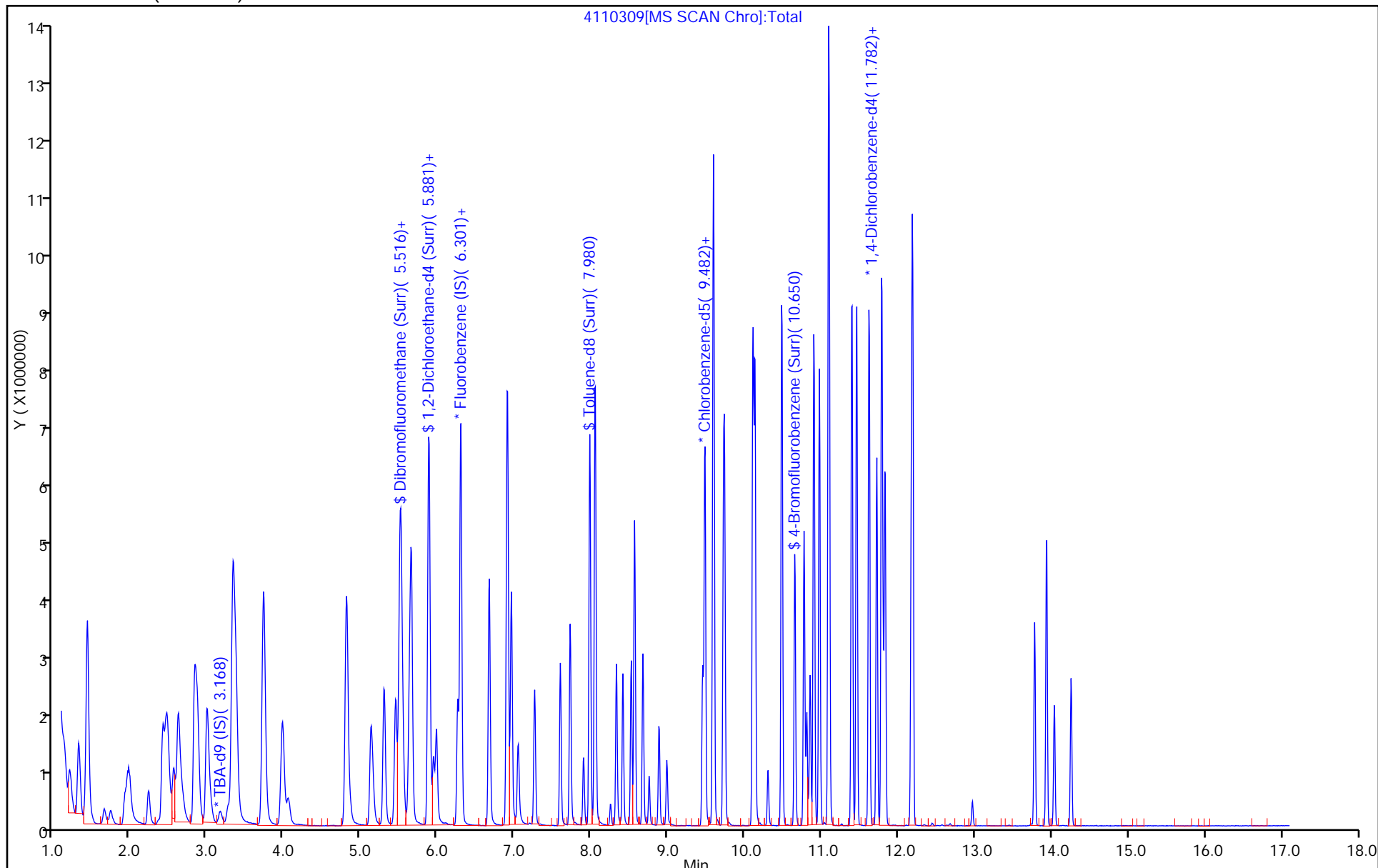
Dil. Factor: 1.0000

ALS Bottle#: 9

Method: MSVOA\_CHHP4

Limit Group: VOA 8260C ICAL

Column: DB-624 (0.18 mm)



TestAmerica Pittsburgh  
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHHP4\20141103-4149.b\4110310.D  
 Lims ID: ic  
 Client ID:  
 Sample Type: IC Calib Level: 7  
 Inject. Date: 03-Nov-2014 15:02:30 ALS Bottle#: 10 Worklist Smp#: 10  
 Purge Vol: 5.000 mL Dil. Factor: 1.0000  
 Sample Info: IC  
 Misc. Info.: 180-0004149-0110  
 Operator ID: 034635 Instrument ID: CHHP4  
 Sublist: chrom-MSVOA\_CHHP4\*sub33  
 Method: \\PITCHROM\ChromData\CHHP4\20141103-4149.b\MSVOA\_CHHP4.m  
 Limit Group: VOA 8260C ICAL  
 Last Update: 03-Nov-2014 16:25:24 Calib Date: 03-Nov-2014 16:24:30  
 Integrator: RTE ID Type: Deconvolution ID  
 Quant Method: Internal Standard Quant By: Initial Calibration  
 Last ICal File: \\PITCHROM\ChromData\CHHP4\20141103-4149.b\4110312.D  
 Column 1 : DB-624 ( 0.18 mm) Det: MS SCAN  
 Process Host: XAWRK026

First Level Reviewer: journetp

Date: 03-Nov-2014 14:24:22

| Compound                        | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q   | Response | Cal Amt ng | OnCol Amt ng | Flags |
|---------------------------------|-----|-----------|---------------|---------------|-----|----------|------------|--------------|-------|
| * 1 TBA-d9 (IS)                 | 65  | 3.192     | 3.168         | 0.024         | 100 | 341079   | 5000.0     | 5000.0       |       |
| * 2 Fluorobenzene (IS)          | 96  | 6.258     | 6.258         | 0.000         | 97  | 1738826  | 250.0      | 250.0        |       |
| * 3 Chlorobenzene-d5            | 119 | 9.452     | 9.452         | 0.000         | 87  | 404119   | 250.0      | 250.0        |       |
| * 4 1,4-Dichlorobenzene-d4      | 152 | 11.807    | 11.806        | 0.001         | 92  | 482582   | 250.0      | 250.0        |       |
| \$ 5 Dibromofluoromethane (Surr | 113 | 5.498     | 5.492         | 0.006         | 94  | 1762628  | 1250.0     | 1219.1       |       |
| \$ 6 1,2-Dichloroethane-d4 (Sur | 65  | 5.893     | 5.887         | 0.006         | 95  | 1584927  | 1250.0     | 1195.1       |       |
| \$ 7 Toluene-d8 (Surr)          | 98  | 7.980     | 7.980         | 0.000         | 92  | 5424801  | 1250.0     | 837.1        |       |
| \$ 8 4-Bromofluorobenzene (Surr | 95  | 10.651    | 10.650        | 0.001         | 90  | 2533468  | 1250.0     | 1121.4       |       |
| 10 Dichlorodifluoromethane      | 85  | 1.209     | 1.209         | 0.000         | 99  | 3392540  | 1250.0     | 1295.6       |       |
| 11 Chloromethane                | 50  | 1.325     | 1.318         | 0.007         | 98  | 4312184  | 1250.0     | 1128.6       |       |
| 12 Vinyl chloride               | 62  | 1.428     | 1.416         | 0.012         | 97  | 3089600  | 1250.0     | 1139.1       |       |
| 13 Butadiene                    | 54  | 1.440     | 1.434         | 0.006         | 95  | 3136694  | 1250.0     | 1149.8       |       |
| 14 Bromomethane                 | 94  | 1.653     | 1.659         | -0.006        | 93  | 464053   | 1250.0     | 1205.4       |       |
| 15 Chloroethane                 | 64  | 1.745     | 1.744         | 0.000         | 97  | 479613   | 1250.0     | 1257.2       |       |
| 17 Trichlorofluoromethane       | 101 | 1.909     | 1.921         | -0.012        | 86  | 1683014  | 1250.0     | 1239.5       |       |
| 16 Dichlorofluoromethane        | 67  | 1.957     | 1.957         | 0.000         | 99  | 1667239  | 1250.0     | 1040.5       |       |
| 19 Ethyl ether                  | 59  | 2.231     | 2.225         | 0.006         | 97  | 804307   | 1250.0     | 1147.9       |       |
| 20 Acrolein                     | 56  | 2.365     | 2.365         | 0.000         | 99  | 98947    | 1250.0     | 1123.0       |       |
| 21 1,1-Dichloroethene           | 96  | 2.408     | 2.419         | -0.011        | 96  | 1941678  | 1250.0     | 1252.6       |       |
| 22 1,1,2-Trichloro-1,2,2-trif   | 101 | 2.487     | 2.486         | 0.001         | 94  | 2487932  | 1250.0     | 1241.6       |       |
| 23 Acetone                      | 43  | 2.535     | 2.529         | 0.006         | 100 | 474414   | 1250.0     | 1257.2       |       |
| 24 Iodomethane                  | 142 | 2.554     | 2.559         | -0.005        | 98  | 4109897  | 1250.0     | 1296.6       |       |
| 25 Carbon disulfide             | 76  | 2.608     | 2.620         | -0.012        | 100 | 8821688  | 1250.0     | 1381.2       |       |
| 28 3-Chloro-1-propene           | 76  | 2.827     | 2.833         | -0.006        | 95  | 2167520  | 1250.0     | 1251.2       |       |
| 29 Methyl acetate               | 43  | 2.876     | 2.870         | 0.006         | 97  | 5685537  | 6250.0     | 5288.9       |       |
| 30 Methylene Chloride           | 84  | 2.992     | 2.991         | 0.001         | 97  | 2838966  | 1250.0     | 1250.6       |       |
| 31 2-Methyl-2-propanol          | 59  | 3.296     | 3.265         | 0.031         | 97  | 1169407  | 12500      | 11148        |       |
| 32 Acrylonitrile                | 53  | 3.332     | 3.326         | 0.006         | 97  | 5156002  | 12500      | 12511        |       |
| 33 trans-1,2-Dichloroethene     | 96  | 3.326     | 3.332         | -0.006        | 97  | 2925765  | 1250.0     | 1228.9       |       |
| 34 Methyl tert-butyl ether      | 73  | 3.375     | 3.368         | 0.007         | 97  | 4359497  | 1250.0     | 1154.0       |       |

| Compound                       | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q   | Response | Cal Amt ng | OnCol Amt ng | Flags |
|--------------------------------|-----|-----------|---------------|---------------|-----|----------|------------|--------------|-------|
| 38 Vinyl acetate               | 43  | 3.722     | 3.727         | -0.005        | 68  | 3966624  | 1250.0     | 1220.7       |       |
| 35 Hexane                      | 57  | 3.722     | 3.727         | -0.005        | 94  | 5687369  | 1250.0     | 1251.6       |       |
| 36 1,1-Dichloroethane          | 63  | 3.971     | 3.971         | 0.000         | 95  | 5229058  | 1250.0     | 1198.6       |       |
| 41 2,2-Dichloropropane         | 77  | 4.798     | 4.804         | -0.006        | 93  | 2127222  | 1250.0     | 1285.9       |       |
| 42 cis-1,2-Dichloroethene      | 96  | 4.817     | 4.816         | 0.001         | 81  | 2828423  | 1250.0     | 1184.8       |       |
| 43 2-Butanone (MEK)            | 43  | 4.859     | 4.859         | 0.000         | 100 | 657940   | 1250.0     | 1253.0       |       |
| 46 Chlorobromomethane          | 128 | 5.127     | 5.127         | 0.000         | 92  | 1011666  | 1250.0     | 1229.9       |       |
| 48 Tetrahydrofuran             | 42  | 5.157     | 5.157         | 0.000         | 93  | 866670   | 2500.0     | 2263.7       |       |
| 49 Chloroform                  | 83  | 5.297     | 5.303         | -0.006        | 94  | 3760354  | 1250.0     | 1132.7       |       |
| 50 1,1,1-Trichloroethane       | 97  | 5.449     | 5.449         | 0.000         | 97  | 3307587  | 1250.0     | 1325.3       |       |
| 51 Cyclohexane                 | 56  | 5.516     | 5.516         | 0.000         | 95  | 6379678  | 1250.0     | 1144.6       |       |
| 53 Carbon tetrachloride        | 117 | 5.632     | 5.625         | 0.007         | 97  | 3099947  | 1250.0     | 1389.3       |       |
| 52 1,1-Dichloropropene         | 75  | 5.656     | 5.650         | 0.006         | 91  | 3582918  | 1250.0     | 1181.8       |       |
| 54 Benzene                     | 78  | 5.881     | 5.881         | 0.000         | 92  | 7840886  | 1250.0     | 891.2        |       |
| 59 Isobutyl alcohol            | 41  | 5.954     | 5.942         | 0.012         | 95  | 1006186  | 31250      | 29404        |       |
| 55 1,2-Dichloroethane          | 62  | 5.985     | 5.984         | 0.001         | 92  | 2057245  | 1250.0     | 1176.4       |       |
| 58 n-Heptane                   | 43  | 6.301     | 6.295         | 0.006         | 89  | 4995867  | 1250.0     | 989.0        |       |
| 61 Trichloroethene             | 130 | 6.666     | 6.666         | 0.000         | 96  | 2366628  | 1250.0     | 1142.1       |       |
| 63 Methylcyclohexane           | 83  | 6.909     | 6.903         | 0.006         | 93  | 4684311  | 1250.0     | 1055.2       |       |
| 64 1,2-Dichloropropane         | 63  | 6.958     | 6.958         | 0.000         | 96  | 2608895  | 1250.0     | 1092.1       |       |
| 65 Dibromomethane              | 93  | 7.043     | 7.043         | 0.000         | 98  | 957656   | 1250.0     | 1228.4       |       |
| 67 1,4-Dioxane                 | 88  | 7.061     | 7.067         | -0.006        | 98  | 284445   | 25000      | 25005        |       |
| 68 Dichlorobromomethane        | 83  | 7.262     | 7.262         | 0.000         | 94  | 2381841  | 1250.0     | 1283.8       |       |
| 70 2-Chloroethyl vinyl ether   | 63  | 7.597     | 7.596         | 0.001         | 91  | 1814167  | 2500.0     | 2403.9       |       |
| 74 trans-1,3-Dichloropropene   | 75  | 7.725     | 7.724         | 0.001         | 96  | 3066001  | 1250.0     | 1249.3       |       |
| 72 4-Methyl-2-pentanone (MIBK) | 43  | 7.901     | 7.901         | 0.000         | 96  | 1304037  | 1250.0     | 1044.7       |       |
| 73 Toluene                     | 91  | 8.053     | 8.047         | 0.006         | 88  | 6606546  | 1250.0     | 1261.0       |       |
| 71 cis-1,3-Dichloropropene     | 75  | 8.327     | 8.327         | 0.001         | 90  | 2332929  | 1250.0     | 1315.1       |       |
| 75 Ethyl methacrylate          | 69  | 8.412     | 8.412         | 0.000         | 93  | 1915843  | 1250.0     | 1250.7       |       |
| 76 1,1,2-Trichloroethane       | 97  | 8.521     | 8.521         | 0.000         | 91  | 1389170  | 1250.0     | 1046.0       |       |
| 77 Tetrachloroethene           | 164 | 8.564     | 8.564         | 0.000         | 93  | 1877219  | 1250.0     | 1049.2       |       |
| 78 1,3-Dichloropropane         | 76  | 8.674     | 8.673         | 0.001         | 96  | 2427460  | 1250.0     | 1033.1       |       |
| 79 2-Hexanone                  | 43  | 8.753     | 8.752         | 0.001         | 96  | 890566   | 1250.0     | 1253.1       |       |
| 81 Chlorodibromomethane        | 129 | 8.887     | 8.880         | 0.006         | 91  | 1425951  | 1250.0     | 1350.4       |       |
| 82 Ethylene Dibromide          | 107 | 8.984     | 8.984         | 0.000         | 98  | 1328246  | 1250.0     | 1137.0       |       |
| 84 Chlorobenzene               | 112 | 9.483     | 9.482         | 0.001         | 81  | 4484487  | 1250.0     | 948.7        |       |
| 85 1,1,1,2-Tetrachloroethane   | 131 | 9.586     | 9.586         | 0.000         | 94  | 1672023  | 1250.0     | 1007.5       |       |
| 86 Ethylbenzene                | 106 | 9.598     | 9.592         | 0.006         | 89  | 2850802  | 1250.0     | 1254.6       |       |
| 87 m-Xylene & p-Xylene         | 106 | 9.732     | 9.732         | 0.000         | 88  | 4040005  | 1250.0     | 936.5        |       |
| 88 o-Xylene                    | 106 | 10.109    | 10.109        | 0.000         | 89  | 3443753  | 1250.0     | 1253.7       |       |
| 89 Styrene                     | 104 | 10.134    | 10.133        | 0.001         | 84  | 4814865  | 1250.0     | 724.7        |       |
| 90 Bromoform                   | 173 | 10.304    | 10.304        | 0.000         | 98  | 806062   | 1250.0     | 1593.9       |       |
| 91 Isopropylbenzene            | 105 | 10.486    | 10.480        | 0.006         | 90  | 6406312  | 1250.0     | NQ           |       |
| 94 Bromobenzene                | 156 | 10.772    | 10.772        | 0.000         | 95  | 2060126  | 1250.0     | 1011.2       |       |
| 93 1,1,2,2-Tetrachloroethane   | 83  | 10.809    | 10.809        | 0.000         | 93  | 1453855  | 1250.0     | 1045.3       |       |
| 96 trans-1,4-Dichloro-2-buten  | 53  | 10.845    | 10.845        | 0.000         | 81  | 402007   | 1250.0     | 1422.6       |       |
| 95 1,2,3-Trichloropropane      | 110 | 10.858    | 10.851        | 0.007         | 87  | 439678   | 1250.0     | 1250.7       |       |
| 97 N-Propylbenzene             | 120 | 10.906    | 10.900        | 0.006         | 86  | 2731707  | 1250.0     | 1013.1       |       |
| 98 2-Chlorotoluene             | 126 | 10.973    | 10.973        | 0.000         | 91  | 2285124  | 1250.0     | 913.8        |       |
| 99 1,3,5-Trimethylbenzene      | 105 | 11.095    | 11.088        | 0.007         | 93  | 5164561  | 1250.0     | 1267.6       |       |
| 100 4-Chlorotoluene            | 126 | 11.107    | 11.101        | 0.006         | 93  | 1942800  | 1250.0     | 1251.8       |       |
| 101 tert-Butylbenzene          | 119 | 11.399    | 11.393        | 0.006         | 90  | 5304007  | 1250.0     | 1256.9       |       |

| Compound                         | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q  | Response | Cal Amt ng | OnCol Amt ng | Flags |
|----------------------------------|-----|-----------|---------------|---------------|----|----------|------------|--------------|-------|
| 103 1,2,4-Trimethylbenzene       | 105 | 11.460    | 11.459        | 0.001         | 90 | 5567438  | 1250.0     | 1257.8       |       |
| 104 sec-Butylbenzene             | 105 | 11.624    | 11.618        | 0.006         | 93 | 6614693  | 1250.0     | 1278.8       |       |
| 105 1,3-Dichlorobenzene          | 146 | 11.721    | 11.721        | 0.000         | 91 | 3657059  | 1250.0     | 1251.0       |       |
| 106 4-Isopropyltoluene           | 119 | 11.788    | 11.782        | 0.006         | 87 | 5683062  | 1250.0     | 1264.3       |       |
| 107 1,4-Dichlorobenzene          | 146 | 11.831    | 11.831        | 0.000         | 86 | 3582102  | 1250.0     | 1125.8       |       |
| 111 1,2-Dichlorobenzene          | 146 | 12.172    | 12.171        | 0.001         | 91 | 3009861  | 1250.0     | 1251.7       |       |
| 110 n-Butylbenzene               | 91  | 12.190    | 12.190        | 0.000         | 87 | 5418916  | 1250.0     | 1263.2       |       |
| 112 1,2-Dibromo-3-Chloropropan   | 75  | 12.962    | 12.968        | -0.006        | 86 | 161249   | 1250.0     | 1249.4       |       |
| 113 1,2,4-Trichlorobenzene       | 180 | 13.778    | 13.777        | 0.001         | 95 | 1674198  | 1250.0     | 1178.6       |       |
| 115 Hexachlorobutadiene          | 225 | 13.936    | 13.929        | 0.007         | 98 | 1561854  | 1250.0     | 1161.0       |       |
| 116 Naphthalene                  | 128 | 14.033    | 14.033        | 0.000         | 98 | 2451542  | 1250.0     | 1248.7       |       |
| 117 1,2,3-Trichlorobenzene       | 180 | 14.252    | 14.252        | 0.000         | 94 | 1252459  | 1250.0     | 1249.4       |       |
| S 129 1,2-Dichloroethene, Total  | 96  |           |               |               | 0  |          | 2500.0     | 2413.7       |       |
| S 130 Xylenes, Total             | 106 |           |               |               | 0  |          | 2500.0     | 2190.2       |       |
| S 131 1,3-Dichloropropene, Total | 1   |           |               |               | 0  |          | 2500.0     | 2564.4       |       |

### QC Flag Legend

Processing Flags

NQ - Not Quantifiable

### Reagents:

|                     |                     |           |
|---------------------|---------------------|-----------|
| VOA8260INT_0002     | Amount Added: 10.00 | Units: uL |
| VOA8260SURR_00017   | Amount Added: 50.00 | Units: uL |
| voaWVOA Pri R_00001 | Amount Added: 50.00 | Units: uL |
| VOAACROPRI_00002    | Amount Added: 50.00 | Units: uL |
| voaWVA pri Re_00004 | Amount Added: 50.00 | Units: uL |
| voaW2-cle PRi_00002 | Amount Added: 50.00 | Units: uL |

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP4\20141103-4149.b\4110310.D

Injection Date: 03-Nov-2014 15:02:30

Instrument ID: CHHP4

Operator ID: 034635

Lims ID: ic

Worklist Smp#: 10

Client ID:

Purge Vol: 5.000 mL

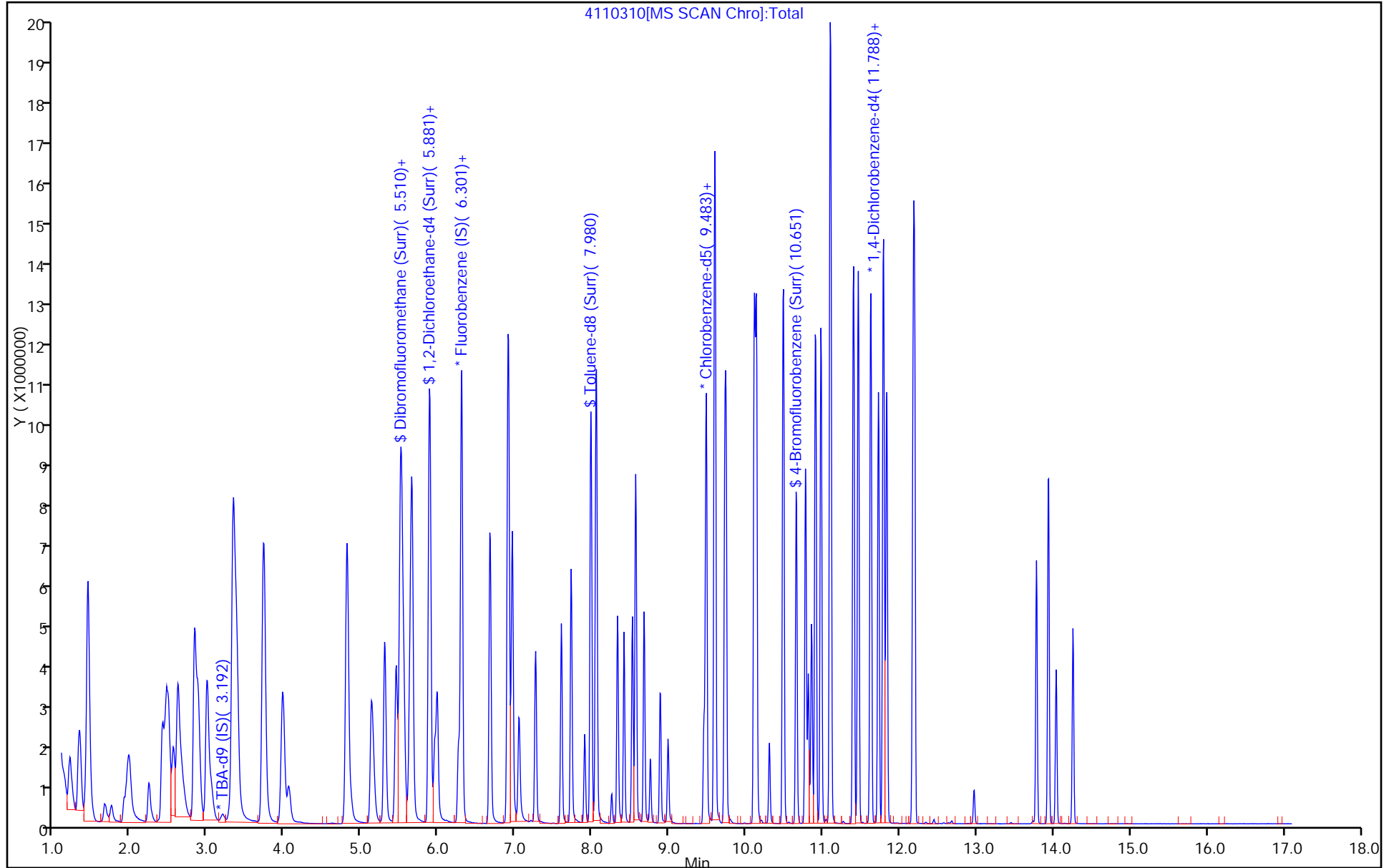
Dil. Factor: 1.0000

ALS Bottle#: 10

Method: MSVOA\_CHHP4

Limit Group: VOA 8260C ICAL

Column: DB-624 (0.18 mm)



TestAmerica Pittsburgh  
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHHP4\20141103-4149.b\4110312.D  
 Lims ID: IC  
 Client ID:  
 Sample Type: IC Calib Level: 5  
 Inject. Date: 03-Nov-2014 16:24:30 ALS Bottle#: 12 Worklist Smp#: 12  
 Purge Vol: 5.000 mL Dil. Factor: 1.0000  
 Sample Info: IC  
 Misc. Info.: 180-0004149-012  
 Operator ID: 034635 Instrument ID: CHHP4  
 Sublist: chrom-MSVOA\_CHHP4\*sub33  
 Method: \\PITCHROM\ChromData\CHHP4\20141103-4149.b\MSVOA\_CHHP4.m  
 Limit Group: VOA 8260C ICAL  
 Last Update: 03-Nov-2014 16:25:21 Calib Date: 03-Nov-2014 16:24:30  
 Integrator: RTE ID Type: Deconvolution ID  
 Quant Method: Internal Standard Quant By: Initial Calibration  
 Last ICal File: \\PITCHROM\ChromData\CHHP4\20141103-4149.b\4110312.D  
 Column 1 : DB-624 ( 0.18 mm) Det: MS SCAN  
 Process Host: XAWRK026

First Level Reviewer: journetp

Date: 03-Nov-2014 15:49:24

| Compound                        | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q   | Response | Cal Amt ng | OnCol Amt ng | Flags |
|---------------------------------|-----|-----------|---------------|---------------|-----|----------|------------|--------------|-------|
| * 1 TBA-d9 (IS)                 | 65  | 3.137     | 3.168         | -0.031        | 97  | 356286   | 5000.0     | 5000.0       |       |
| * 2 Fluorobenzene (IS)          | 96  | 6.258     | 6.258         | 0.000         | 98  | 1842006  | 250.0      | 250.0        |       |
| * 3 Chlorobenzene-d5            | 119 | 9.452     | 9.452         | 0.000         | 86  | 415751   | 250.0      | 250.0        |       |
| * 4 1,4-Dichlorobenzene-d4      | 152 | 11.806    | 11.806        | 0.000         | 95  | 498474   | 250.0      | 250.0        |       |
| \$ 5 Dibromofluoromethane (Surr | 113 | 5.498     | 5.492         | 0.006         | 96  | 376917   | 250.0      | 246.1        |       |
| \$ 6 1,2-Dichloroethane-d4 (Sur | 65  | 5.887     | 5.887         | 0.000         | 96  | 331198   | 250.0      | 235.7        |       |
| \$ 7 Toluene-d8 (Surr)          | 98  | 7.980     | 7.980         | 0.000         | 93  | 1598196  | 250.0      | 239.7        |       |
| \$ 8 4-Bromofluorobenzene (Surr | 95  | 10.651    | 10.650        | 0.001         | 88  | 558566   | 250.0      | 240.3        |       |
| 10 Dichlorodifluoromethane      | 85  | 1.209     | 1.209         | 0.000         | 100 | 689688   | 250.0      | 248.6        |       |
| 11 Chloromethane                | 50  | 1.312     | 1.318         | -0.006        | 99  | 970825   | 250.0      | 239.8        |       |
| 12 Vinyl chloride               | 62  | 1.422     | 1.416         | 0.006         | 98  | 632565   | 250.0      | 220.1        |       |
| 13 Butadiene                    | 54  | 1.434     | 1.434         | 0.000         | 97  | 648753   | 250.0      | 224.5        |       |
| 14 Bromomethane                 | 94  | 1.653     | 1.659         | -0.006        | 92  | 97759    | 250.0      | 239.7        |       |
| 15 Chloroethane                 | 64  | 1.750     | 1.744         | 0.006         | 96  | 139075   | 250.0      | 309.6        |       |
| 17 Trichlorofluoromethane       | 101 | 1.933     | 1.921         | 0.012         | 97  | 440612   | 250.0      | 306.3        |       |
| 16 Dichlorofluoromethane        | 67  | 1.957     | 1.957         | 0.000         | 99  | 495933   | 250.0      | 292.2        |       |
| 19 Ethyl ether                  | 59  | 2.225     | 2.225         | 0.000         | 97  | 191154   | 250.0      | 257.5        |       |
| 20 Acrolein                     | 56  | 2.371     | 2.365         | 0.006         | 95  | 75280    | 1000.0     | 806.6        | M     |
| 21 1,1-Dichloroethene           | 96  | 2.420     | 2.419         | 0.001         | 96  | 521168   | 250.0      | 272.3        |       |
| 22 1,1,2-Trichloro-1,2,2-trif   | 101 | 2.480     | 2.486         | -0.006        | 95  | 564911   | 250.0      | 266.1        |       |
| 23 Acetone                      | 43  | 2.523     | 2.529         | -0.006        | 100 | 148344   | 250.0      | 335.2        |       |
| 24 Iodomethane                  | 142 | 2.566     | 2.559         | 0.007         | 96  | 826838   | 250.0      | 246.2        |       |
| 25 Carbon disulfide             | 76  | 2.626     | 2.620         | 0.006         | 99  | 1843252  | 250.0      | 272.4        |       |
| 28 3-Chloro-1-propene           | 76  | 2.833     | 2.833         | 0.000         | 95  | 390645   | 250.0      | 252.7        |       |
| 29 Methyl acetate               | 43  | 2.864     | 2.870         | -0.006        | 99  | 1320665  | 1250.0     | 1159.7       |       |
| 30 Methylene Chloride           | 84  | 2.998     | 2.991         | 0.007         | 99  | 642165   | 250.0      | 243.9        |       |
| 31 2-Methyl-2-propanol          | 59  | 3.253     | 3.265         | -0.012        | 96  | 203750   | 2500.0     | 1859.4       |       |
| 32 Acrylonitrile                | 53  | 3.320     | 3.326         | -0.006        | 100 | 1141964  | 2500.0     | 2380.1       |       |
| 33 trans-1,2-Dichloroethene     | 96  | 3.338     | 3.332         | 0.006         | 98  | 635834   | 250.0      | 252.1        |       |
| 34 Methyl tert-butyl ether      | 73  | 3.363     | 3.368         | -0.005        | 96  | 937481   | 250.0      | 234.3        |       |



| Compound                       | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q  | Response | Cal Amt ng | OnCol Amt ng | Flags |
|--------------------------------|-----|-----------|---------------|---------------|----|----------|------------|--------------|-------|
| 38 Vinyl acetate               | 43  | 3.734     | 3.727         | 0.007         | 91 | 891442   | 250.0      | 253.4        |       |
| 35 Hexane                      | 57  | 3.734     | 3.727         | 0.007         | 93 | 1344500  | 250.0      | 253.1        |       |
| 36 1,1-Dichloroethane          | 63  | 3.977     | 3.971         | 0.006         | 96 | 1151152  | 250.0      | 249.1        |       |
| 41 2,2-Dichloropropane         | 77  | 4.804     | 4.804         | 0.000         | 86 | 451179   | 250.0      | 257.5        |       |
| 42 cis-1,2-Dichloroethene      | 96  | 4.816     | 4.816         | 0.000         | 83 | 603817   | 250.0      | 238.8        |       |
| 43 2-Butanone (MEK)            | 43  | 4.859     | 4.859         | 0.000         | 98 | 177619   | 250.0      | 289.3        |       |
| 46 Chlorobromomethane          | 128 | 5.133     | 5.127         | 0.006         | 91 | 199944   | 250.0      | 229.5        |       |
| 48 Tetrahydrofuran             | 42  | 5.151     | 5.157         | -0.006        | 94 | 184331   | 500.0      | 454.5        |       |
| 49 Chloroform                  | 83  | 5.297     | 5.303         | -0.006        | 94 | 818661   | 250.0      | 232.8        |       |
| 50 1,1,1-Trichloroethane       | 97  | 5.449     | 5.449         | 0.000         | 99 | 665866   | 250.0      | 251.9        |       |
| 51 Cyclohexane                 | 56  | 5.516     | 5.516         | 0.000         | 93 | 1435801  | 250.0      | 243.2        |       |
| 53 Carbon tetrachloride        | 117 | 5.632     | 5.625         | 0.007         | 96 | 614115   | 250.0      | 259.8        |       |
| 52 1,1-Dichloropropene         | 75  | 5.656     | 5.650         | 0.006         | 94 | 805469   | 250.0      | 250.8        |       |
| 54 Benzene                     | 78  | 5.881     | 5.881         | 0.000         | 98 | 2317492  | 250.0      | 248.7        |       |
| 59 Isobutyl alcohol            | 41  | 5.936     | 5.942         | -0.006        | 96 | 199535   | 6250.0     | 5504.5       |       |
| 55 1,2-Dichloroethane          | 62  | 5.985     | 5.984         | 0.000         | 94 | 428789   | 250.0      | 231.5        |       |
| 58 n-Heptane                   | 43  | 6.301     | 6.295         | 0.006         | 94 | 1336577  | 250.0      | 249.8        |       |
| 61 Trichloroethene             | 130 | 6.666     | 6.666         | 0.000         | 98 | 551869   | 250.0      | 251.4        |       |
| 63 Methylcyclohexane           | 83  | 6.903     | 6.903         | 0.000         | 94 | 1154026  | 250.0      | 245.4        |       |
| 64 1,2-Dichloropropene         | 63  | 6.958     | 6.958         | 0.000         | 98 | 597118   | 250.0      | 236.0        |       |
| 65 Dibromomethane              | 93  | 7.043     | 7.043         | 0.000         | 94 | 184345   | 250.0      | 223.2        |       |
| 67 1,4-Dioxane                 | 88  | 7.061     | 7.067         | -0.006        | 96 | 50203    | 5000.0     | 4535.5       |       |
| 68 Dichlorobromomethane        | 83  | 7.262     | 7.262         | 0.000         | 97 | 495371   | 250.0      | 252.1        |       |
| 70 2-Chloroethyl vinyl ether   | 63  | 7.597     | 7.596         | 0.001         | 91 | 396960   | 500.0      | 496.5        |       |
| 74 trans-1,3-Dichloropropene   | 75  | 7.724     | 7.724         | 0.000         | 96 | 667130   | 250.0      | 244.5        |       |
| 72 4-Methyl-2-pentanone (MIBK) | 43  | 7.901     | 7.901         | 0.000         | 97 | 304640   | 250.0      | 237.2        |       |
| 73 Toluene                     | 91  | 8.053     | 8.047         | 0.006         | 98 | 2241088  | 250.0      | 263.0        |       |
| 71 cis-1,3-Dichloropropene     | 75  | 8.327     | 8.327         | 0.001         | 94 | 466600   | 250.0      | 248.3        |       |
| 75 Ethyl methacrylate          | 69  | 8.412     | 8.412         | 0.000         | 92 | 442080   | 250.0      | 251.3        |       |
| 76 1,1,2-Trichloroethane       | 97  | 8.521     | 8.521         | 0.000         | 89 | 312197   | 250.0      | 228.5        |       |
| 77 Tetrachloroethene           | 164 | 8.564     | 8.564         | 0.000         | 96 | 438023   | 250.0      | 238.0        |       |
| 78 1,3-Dichloropropene         | 76  | 8.673     | 8.673         | 0.000         | 94 | 565116   | 250.0      | 233.8        |       |
| 79 2-Hexanone                  | 43  | 8.752     | 8.752         | 0.000         | 97 | 216393   | 250.0      | 281.4        |       |
| 81 Chlorodibromomethane        | 129 | 8.886     | 8.880         | 0.006         | 91 | 273736   | 250.0      | 252.0        |       |
| 82 Ethylene Dibromide          | 107 | 8.984     | 8.984         | 0.000         | 97 | 269950   | 250.0      | 224.6        |       |
| 84 Chlorobenzene               | 112 | 9.483     | 9.482         | 0.000         | 92 | 1282060  | 250.0      | 252.4        |       |
| 85 1,1,1,2-Tetrachloroethane   | 131 | 9.586     | 9.586         | 0.000         | 97 | 413573   | 250.0      | 242.2        |       |
| 86 Ethylbenzene                | 106 | 9.592     | 9.592         | 0.000         | 98 | 845631   | 250.0      | 255.2        |       |
| 87 m-Xylene & p-Xylene         | 106 | 9.732     | 9.732         | 0.000         | 98 | 1042884  | 250.0      | 235.0        |       |
| 88 o-Xylene                    | 106 | 10.109    | 10.109        | 0.000         | 96 | 984099   | 250.0      | 256.6        |       |
| 89 Styrene                     | 104 | 10.133    | 10.133        | 0.000         | 95 | 1442360  | 250.0      | 211.0        |       |
| 90 Bromoform                   | 173 | 10.304    | 10.304        | 0.000         | 98 | 127202   | 250.0      | 244.5        |       |
| 91 Isopropylbenzene            | 105 | 10.480    | 10.480        | 0.000         | 96 | 2346017  | 250.0      | 242.2        |       |
| 94 Bromobenzene                | 156 | 10.772    | 10.772        | 0.000         | 94 | 471458   | 250.0      | 224.0        |       |
| 93 1,1,2,2-Tetrachloroethane   | 83  | 10.809    | 10.809        | 0.000         | 92 | 325964   | 250.0      | 227.8        |       |
| 96 trans-1,4-Dichloro-2-buten  | 53  | 10.845    | 10.845        | 0.000         | 70 | 64248    | 250.0      | 220.1        |       |
| 95 1,2,3-Trichloropropane      | 110 | 10.851    | 10.851        | 0.000         | 87 | 88980    | 250.0      | 243.8        |       |
| 97 N-Propylbenzene             | 120 | 10.900    | 10.900        | 0.000         | 97 | 732865   | 250.0      | 250.7        |       |
| 98 2-Chlorotoluene             | 126 | 10.973    | 10.973        | 0.000         | 96 | 556330   | 250.0      | 215.4        |       |
| 99 1,3,5-Trimethylbenzene      | 105 | 11.089    | 11.088        | 0.001         | 97 | 1879886  | 250.0      | 258.1        |       |
| 100 4-Chlorotoluene            | 126 | 11.101    | 11.101        | 0.000         | 99 | 518059   | 250.0      | 246.3        |       |
| 101 tert-Butylbenzene          | 119 | 11.393    | 11.393        | 0.000         | 94 | 1726019  | 250.0      | 255.9        |       |



| Compound                         | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q  | Response | Cal Amt ng | OnCol Amt ng | Flags |
|----------------------------------|-----|-----------|---------------|---------------|----|----------|------------|--------------|-------|
| 103 1,2,4-Trimethylbenzene       | 105 | 11.460    | 11.459        | 0.001         | 97 | 1839274  | 250.0      | 255.1        |       |
| 104 sec-Butylbenzene             | 105 | 11.618    | 11.618        | 0.000         | 95 | 2514863  | 250.0      | 262.2        |       |
| 105 1,3-Dichlorobenzene          | 146 | 11.721    | 11.721        | 0.000         | 98 | 940494   | 250.0      | 251.3        |       |
| 106 4-Isopropyltoluene           | 119 | 11.782    | 11.782        | 0.000         | 95 | 2016739  | 250.0      | 259.5        |       |
| 107 1,4-Dichlorobenzene          | 146 | 11.831    | 11.831        | 0.000         | 95 | 892716   | 250.0      | 257.5        |       |
| 111 1,2-Dichlorobenzene          | 146 | 12.171    | 12.171        | 0.000         | 98 | 809456   | 250.0      | 250.9        |       |
| 110 n-Butylbenzene               | 91  | 12.190    | 12.190        | 0.000         | 97 | 1916377  | 250.0      | 258.7        |       |
| 112 1,2-Dibromo-3-Chloropropan   | 75  | 12.962    | 12.968        | -0.006        | 83 | 27287    | 250.0      | 245.4        |       |
| 113 1,2,4-Trichlorobenzene       | 180 | 13.777    | 13.777        | 0.000         | 95 | 344249   | 250.0      | 234.6        |       |
| 115 Hexachlorobutadiene          | 225 | 13.936    | 13.929        | 0.007         | 97 | 367257   | 250.0      | 250.8        |       |
| 116 Naphthalene                  | 128 | 14.033    | 14.033        | 0.000         | 97 | 507856   | 250.0      | 236.6        |       |
| 117 1,2,3-Trichlorobenzene       | 180 | 14.252    | 14.252        | 0.000         | 94 | 257321   | 250.0      | 241.4        |       |
| S 129 1,2-Dichloroethene, Total  | 96  |           |               |               | 0  |          | 500.0      | 490.9        |       |
| S 130 Xylenes, Total             | 106 |           |               |               | 0  |          | 500.0      | 491.6        |       |
| S 131 1,3-Dichloropropene, Total | 1   |           |               |               | 0  |          | 500.0      | 492.8        |       |

### QC Flag Legend

Review Flags

M - Manually Integrated

### Reagents:

|                     |                     |           |
|---------------------|---------------------|-----------|
| VOA8260INT_00022    | Amount Added: 10.00 | Units: uL |
| VOA8260SURR_00017   | Amount Added: 10.00 | Units: uL |
| voaWVOA Pri R_00001 | Amount Added: 10.00 | Units: uL |
| VOAACROPRI_00002    | Amount Added: 40.00 | Units: uL |
| voaWVA pri Re_00004 | Amount Added: 10.00 | Units: uL |
| voaW2-cle PRi_00002 | Amount Added: 10.00 | Units: uL |

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP4\20141103-4149.b\4110312.D

Injection Date: 03-Nov-2014 16:24:30

Instrument ID: CHHP4

Operator ID: 034635

Lims ID: IC

Worklist Smp#: 12

Client ID:

Purge Vol: 5.000 mL

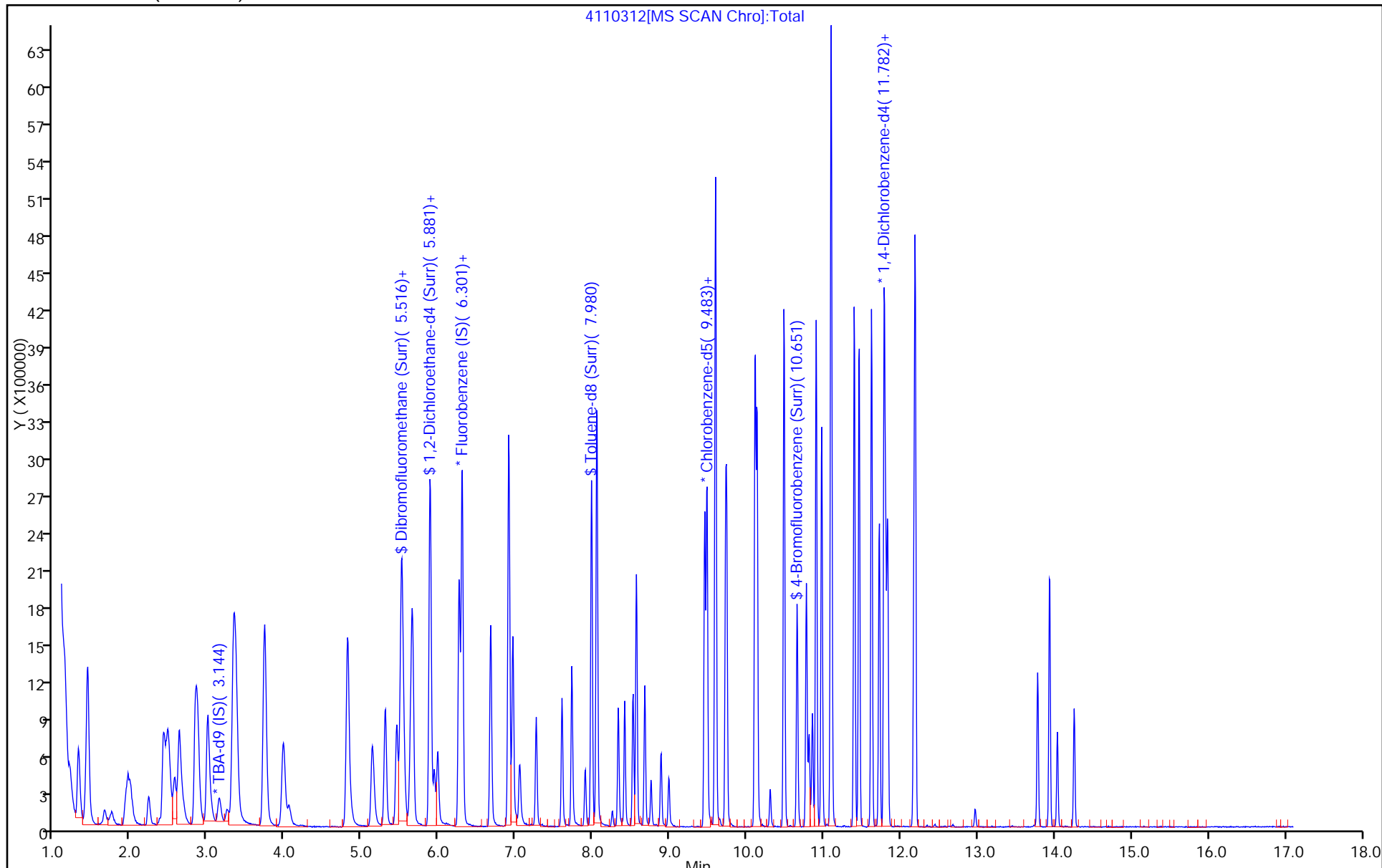
Dil. Factor: 1.0000

ALS Bottle#: 12

Method: MSVOA\_CHHP4

Limit Group: VOA 8260C ICAL

Column: DB-624 (0.18 mm)



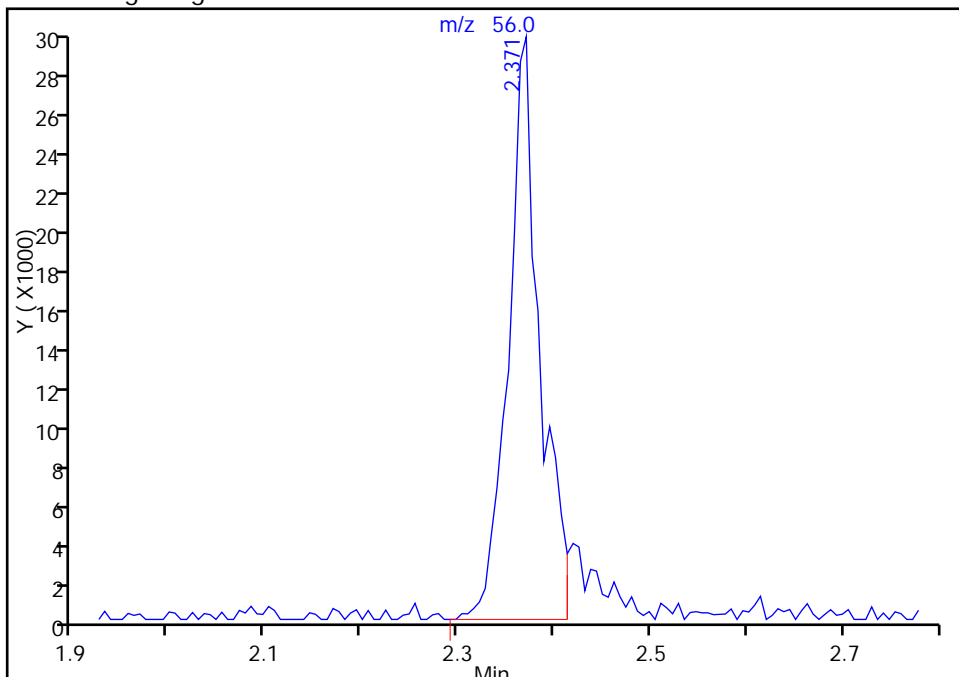
TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP4\20141103-4149.b\4110312.D  
Injection Date: 03-Nov-2014 16:24:30 Instrument ID: CHHP4  
Lims ID: IC  
Client ID:  
Operator ID: 034635 ALS Bottle#: 12 Worklist Smp#: 12  
Purge Vol: 5.000 mL Dil. Factor: 1.0000  
Method: MSVOA\_CHHP4 Limit Group: VOA 8260C ICAL  
Column: DB-624 (0.18 mm) Detector: MS SCAN

20 Acrolein, CAS: 107-02-8

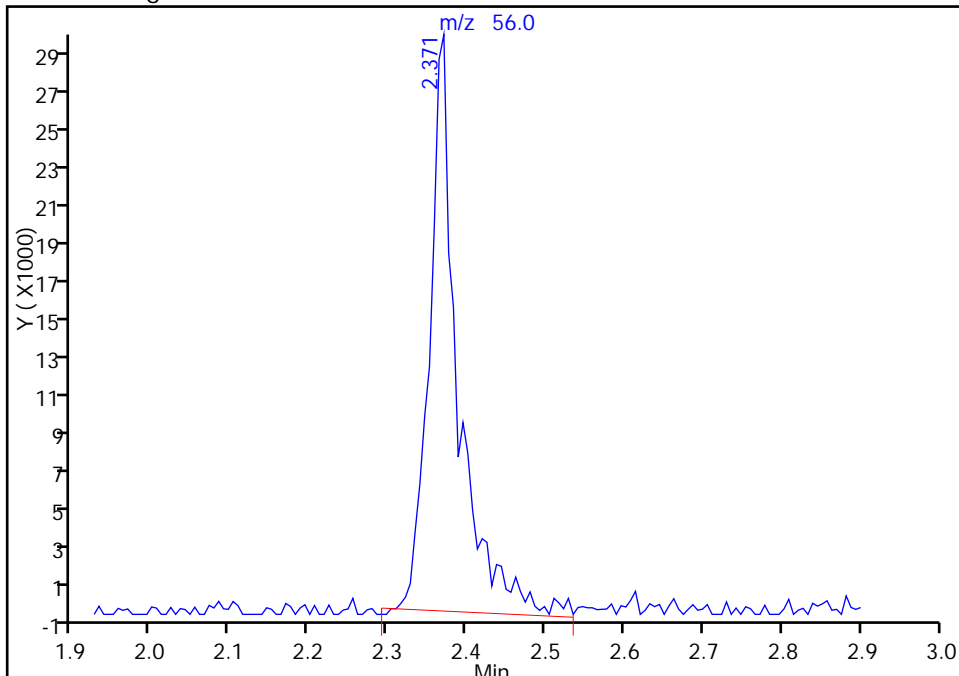
RT: 2.37  
Response: 67504  
Amount: 742.8691

Processing Integration Results



RT: 2.37  
Response: 75280  
Amount: 806.5622

Manual Integration Results



Reviewer: journetp, 03-Nov-2014 15:55:47  
Audit Action: Manually Integrated  
Audit Reason: Poor chromatography

FORM VII  
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Pittsburgh Job No.: 180-43791-1  
 SDG No.: \_\_\_\_\_  
 Lab Sample ID: CCVIS 180-141065/2 Calibration Date: 05/09/2015 12:04  
 Instrument ID: CHHP4 Calib Start Date: 04/27/2015 11:08  
 GC Column: DB-624 ID: 0.18 (mm) Calib End Date: 04/27/2015 13:50  
 Lab File ID: 4050902.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        | 0.3951  | 0.3809 |         | 38.6        | 40.0         | -3.6 |        |
| Chloromethane                         | Ave        | 0.5838  | 0.6235 |         | 42.7        | 40.0         | 6.8  |        |
| Vinyl chloride                        | Ave        | 0.4960  | 0.5163 |         | 41.6        | 40.0         | 4.1  |        |
| 1,3-Butadiene                         | Ave        | 0.4931  | 0.5136 |         | 41.7        | 40.0         | 4.2  |        |
| Bromomethane                          | Ave        | 0.0667  | 0.0785 |         | 47.1        | 40.0         | 17.7 |        |
| Chloroethane                          | Ave        | 0.0824  | 0.1008 |         | 48.9        | 40.0         | 22.3 |        |
| Dichlorofluoromethane                 | Qua        | 0.2784  | 0.3522 |         | 59.2        | 40.0         | 48.0 |        |
| Trichlorofluoromethane                | Ave        | 0.1943  | 0.2749 |         | 56.6        | 40.0         | 41.5 |        |
| Ethyl ether                           | Ave        | 0.1652  | 0.1750 |         | 42.4        | 40.0         | 5.9  |        |
| 1,1-Dichloroethene                    | Ave        | 0.2734  | 0.2891 |         | 42.3        | 40.0         | 5.7  |        |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | Ave        | 0.3274  | 0.3353 |         | 41.0        | 40.0         | 2.4  |        |
| Acetone                               | Qua        |         | 0.1065 |         | 55.8        | 40.0         | 39.4 |        |
| Iodomethane                           | Qua        |         | 0.4050 |         | 39.3        | 40.0         | -1.7 |        |
| Carbon disulfide                      | Ave        | 0.8298  | 0.8247 |         | 39.8        | 40.0         | -0.6 |        |
| Allyl chloride                        | Ave        | 0.1992  | 0.1930 |         | 38.8        | 40.0         | -3.1 |        |
| Methyl acetate                        | Ave        | 0.1784  | 0.2289 |         | 257         | 200          | 28.3 |        |
| Methylene Chloride                    | Lin2       |         | 0.3353 |         | 40.8        | 40.0         | 2.1  |        |
| tert-Butyl alcohol                    | Ave        | 1.353   | 1.396  |         | 413         | 400          | 3.2  |        |
| trans-1,2-Dichloroethene              | Ave        | 0.3047  | 0.3169 |         | 41.6        | 40.0         | 4.0  |        |
| Acrylonitrile                         | Ave        | 0.0825  | 0.0970 |         | 470         | 400          | 17.6 |        |
| Methyl tert-butyl ether               | Ave        | 0.6151  | 0.6255 |         | 40.7        | 40.0         | 1.7  |        |
| Vinyl acetate                         | Lin2       |         | 0.4569 |         | 40.1        | 40.0         | 0.2  |        |
| Hexane                                | Lin2       |         | 0.6470 |         | 39.1        | 40.0         | -2.2 |        |
| 1,1-Dichloroethane                    | Ave        | 0.5996  | 0.6171 |         | 41.2        | 40.0         | 2.9  |        |
| 2,2-Dichloropropane                   | Ave        | 0.2393  | 0.2774 |         | 46.4        | 40.0         | 15.9 |        |
| cis-1,2-Dichloroethene                | Ave        | 0.3043  | 0.3181 |         | 41.8        | 40.0         | 4.5  |        |
| 2-Butanone (MEK)                      | Ave        | 0.1061  | 0.1272 |         | 48.0        | 40.0         | 19.9 |        |
| Chlorobromomethane                    | Ave        | 0.1129  | 0.1176 |         | 41.7        | 40.0         | 4.2  |        |
| Tetrahydrofuran                       | Ave        | 0.0707  | 0.0764 |         | 86.5        | 80.0         | 8.1  |        |
| Chloroform                            | Ave        | 0.4388  | 0.4667 |         | 42.5        | 40.0         | 6.4  |        |
| 1,1,1-Trichloroethane                 | Ave        | 0.3438  | 0.3778 |         | 44.0        | 40.0         | 9.9  |        |
| Cyclohexane                           | Ave        | 0.7838  | 0.7486 |         | 38.2        | 40.0         | -4.5 |        |
| Carbon tetrachloride                  | Ave        | 0.3142  | 0.3556 |         | 45.3        | 40.0         | 13.2 |        |
| 1,1-Dichloropropene                   | Ave        | 0.4012  | 0.4147 |         | 41.4        | 40.0         | 3.4  |        |
| Benzene                               | Ave        | 1.123   | 1.175  |         | 41.9        | 40.0         | 4.6  |        |
| Isobutyl alcohol                      | Ave        | 0.0054  | 0.0061 |         | 1130        | 1000         | 12.6 |        |
| 1,2-Dichloroethane                    | Ave        | 0.2775  | 0.3120 |         | 45.0        | 40.0         | 12.4 |        |
| n-Heptane                             | Lin2       |         | 0.6956 |         | 42.4        | 40.0         | 5.9  |        |
| Trichloroethene                       | Ave        | 0.2578  | 0.2761 |         | 42.8        | 40.0         | 7.1  |        |
| Methylcyclohexane                     | Lin2       |         | 0.5884 |         | 40.7        | 40.0         | 1.7  |        |

FORM VII  
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Pittsburgh Job No.: 180-43791-1  
 SDG No.: \_\_\_\_\_  
 Lab Sample ID: CCVIS 180-141065/2 Calibration Date: 05/09/2015 12:04  
 Instrument ID: CHHP4 Calib Start Date: 04/27/2015 11:08  
 GC Column: DB-624 ID: 0.18 (mm) Calib End Date: 04/27/2015 13:50  
 Lab File ID: 4050902.D Conc. Units: ug/L Heated Purge: (Y/N) N

| ANALYTE                     | CURVE TYPE | AVE RRF | RRF    | MIN RRF | CALC AMOUNT | SPIKE AMOUNT | %D   | MAX %D |
|-----------------------------|------------|---------|--------|---------|-------------|--------------|------|--------|
| 1,2-Dichloropropane         | Ave        | 0.3040  | 0.3130 |         | 41.2        | 40.0         | 3.0  |        |
| Dibromomethane              | Ave        | 0.1139  | 0.1172 |         | 41.2        | 40.0         | 2.9  |        |
| 1,4-Dioxane                 | Ave        | 0.0020  | 0.0022 |         | 871         | 800          | 8.9  |        |
| Dichlorobromomethane        | Ave        | 0.2515  | 0.2822 |         | 44.9        | 40.0         | 12.2 |        |
| trans-1,3-Dichloropropene   | Ave        | 1.524   | 1.586  |         | 41.6        | 40.0         | 4.1  |        |
| 4-Methyl-2-pentanone (MIBK) | Ave        | 0.8735  | 1.022  |         | 46.8        | 40.0         | 17.0 |        |
| Toluene                     | Lin2       | 5.529   | 5.138  |         | 42.0        | 40.0         | 5.0  |        |
| cis-1,3-Dichloropropene     | Ave        | 0.2629  | 0.2901 |         | 44.1        | 40.0         | 10.4 |        |
| Ethyl methacrylate          | Qua        |         | 1.144  |         | 41.3        | 40.0         | 3.3  |        |
| 1,1,2-Trichloroethane       | Ave        | 0.7687  | 0.7616 |         | 39.6        | 40.0         | -0.9 |        |
| Tetrachloroethene           | Ave        | 0.9464  | 1.002  |         | 42.4        | 40.0         | 5.9  |        |
| 1,3-Dichloropropane         | Ave        | 1.409   | 1.511  |         | 42.9        | 40.0         | 7.3  |        |
| 2-Hexanone                  | Ave        | 0.5943  | 0.6657 |         | 44.8        | 40.0         | 12.0 |        |
| Chlorodibromomethane        | Ave        | 0.6315  | 0.6661 |         | 42.2        | 40.0         | 5.5  |        |
| 1,2-Dibromoethane           | Ave        | 0.7024  | 0.7004 |         | 39.9        | 40.0         | -0.3 |        |
| Chlorobenzene               | Ave        | 2.860   | 3.098  |         | 43.3        | 40.0         | 8.3  |        |
| 1,1,1,2-Tetrachloroethane   | Ave        | 0.9020  | 0.9730 |         | 43.1        | 40.0         | 7.9  |        |
| Ethylbenzene                | Ave        | 1.816   | 2.014  |         | 44.3        | 40.0         | 10.9 |        |
| m-Xylene & p-Xylene         | Ave        | 2.361   | 2.445  |         | 41.4        | 40.0         | 3.5  |        |
| o-Xylene                    | Ave        | 2.146   | 2.273  |         | 42.4        | 40.0         | 5.9  |        |
| Styrene                     | Ave        | 3.309   | 3.602  |         | 43.5        | 40.0         | 8.8  |        |
| Bromoform                   | Qua        |         | 0.3726 |         | 42.2        | 40.0         | 5.4  |        |
| Isopropylbenzene            | Qua        |         | 6.114  |         | 45.5        | 40.0         | 13.9 |        |
| Bromobenzene                | Ave        | 0.8238  | 0.8834 |         | 42.9        | 40.0         | 7.2  |        |
| 1,1,2,2-Tetrachloroethane   | Ave        | 0.8653  | 0.9186 |         | 42.5        | 40.0         | 6.2  |        |
| trans-1,4-Dichloro-2-butene | Ave        | 0.1679  | 0.1904 |         | 45.4        | 40.0         | 13.4 |        |
| 1,2,3-Trichloropropane      | Lin2       |         | 0.2044 |         | 43.9        | 40.0         | 9.8  |        |
| N-Propylbenzene             | Ave        | 1.207   | 1.359  |         | 45.0        | 40.0         | 12.6 |        |
| 2-Chlorotoluene             | Ave        | 0.9246  | 1.017  |         | 44.0        | 40.0         | 10.0 |        |
| 1,3,5-Trimethylbenzene      | Ave        | 3.519   | 3.741  |         | 42.5        | 40.0         | 6.3  |        |
| 4-Chlorotoluene             | Ave        | 0.8928  | 0.9752 |         | 43.7        | 40.0         | 9.2  |        |
| tert-Butylbenzene           | Ave        | 3.123   | 3.329  |         | 42.6        | 40.0         | 6.6  |        |
| 1,2,4-Trimethylbenzene      | Ave        | 3.508   | 3.742  |         | 42.7        | 40.0         | 6.7  |        |
| sec-Butylbenzene            | Ave        | 4.677   | 5.137  |         | 43.9        | 40.0         | 9.8  |        |
| 1,3-Dichlorobenzene         | Ave        | 1.658   | 1.791  |         | 43.2        | 40.0         | 8.0  |        |
| 4-Isopropyltoluene          | Ave        | 3.827   | 4.162  |         | 43.5        | 40.0         | 8.8  |        |
| 1,4-Dichlorobenzene         | Ave        | 1.611   | 1.772  |         | 44.0        | 40.0         | 10.0 |        |
| 1,2-Dichlorobenzene         | Ave        | 1.499   | 1.621  |         | 43.3        | 40.0         | 8.2  |        |
| n-Butylbenzene              | Ave        | 3.640   | 3.956  |         | 43.5        | 40.0         | 8.7  |        |
| 1,2-Dibromo-3-Chloropropane | Lin1       |         | 0.0754 |         | 40.4        | 40.0         | 0.9  |        |
| 1,2,4-Trichlorobenzene      | Ave        | 0.6820  | 0.6824 |         | 40.0        | 40.0         | 0.0  |        |

FORM VII  
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Pittsburgh Job No.: 180-43791-1  
 SDG No.: \_\_\_\_\_  
 Lab Sample ID: CCVIS 180-141065/2 Calibration Date: 05/09/2015 12:04  
 Instrument ID: CHHP4 Calib Start Date: 04/27/2015 11:08  
 GC Column: DB-624 ID: 0.18 (mm) Calib End Date: 04/27/2015 13:50  
 Lab File ID: 4050902.D Conc. Units: ug/L Heated Purge: (Y/N) N

| ANALYTE                      | CURVE TYPE | AVE RRF | RRF    | MIN RRF | CALC AMOUNT | SPIKE AMOUNT | %D   | MAX %D |
|------------------------------|------------|---------|--------|---------|-------------|--------------|------|--------|
| Hexachlorobutadiene          | Ave        | 0.6688  | 0.7494 |         | 44.8        | 40.0         | 12.1 |        |
| Naphthalene                  | Ave        | 1.187   | 1.155  |         | 38.9        | 40.0         | -2.7 |        |
| 1,2,3-Trichlorobenzene       | Ave        | 0.5486  | 0.5475 |         | 39.9        | 40.0         | -0.2 |        |
| Dibromofluoromethane (Surr)  | Ave        | 0.2062  | 0.2245 |         | 43.6        | 40.0         | 8.9  |        |
| 1,2-Dichloroethane-d4 (Surr) | Ave        | 0.2295  | 0.2459 |         | 42.8        | 40.0         | 7.1  |        |
| Toluene-d8 (Surr)            | Ave        | 3.977   | 4.014  |         | 40.4        | 40.0         | 0.9  |        |
| 4-Bromofluorobenzene (Surr)  | Ave        | 1.365   | 1.354  |         | 39.7        | 40.0         | -0.8 |        |

TestAmerica Pittsburgh  
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHHP4\20150509-6844.b\4050902.D  
 Lims ID: CCVIS  
 Client ID:  
 Sample Type: CCVIS  
 Inject. Date: 09-May-2015 12:04:30 ALS Bottle#: 10 Worklist Smp#: 2  
 Purge Vol: 5.000 mL Dil. Factor: 1.0000  
 Sample Info: CCVIS  
 Misc. Info.: 180-0006844-002  
 Operator ID: 034635 Instrument ID: CHHP4  
 Sublist: chrom-MSVOA\_CHHP4\*sub11  
 Method: \\PITCHROM\ChromData\CHHP4\20150509-6844.b\MSVOA\_CHHP4.m  
 Limit Group: VOA 8260C ICAL  
 Last Update: 10-May-2015 11:35:21 Calib Date: 27-Apr-2015 13:50:30  
 Integrator: RTE ID Type: Deconvolution ID  
 Quant Method: Internal Standard Quant By: Initial Calibration  
 Last Ical File: \\PITCHROM\ChromData\CHHP4\20150427-6642.b\4042710.D  
 Column 1 : DB-624 ( 0.18 mm) Det: MS SCAN  
 Process Host: XAWRK017

| Compound                        | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q   | Response | Cal Amt ng | OnCol Amt ng | Flags |
|---------------------------------|-----|-----------|---------------|---------------|-----|----------|------------|--------------|-------|
| * 1 TBA-d9 (IS)                 | 65  | 3.204     | 3.204         | 0.000         | 98  | 219461   | 5000.0     | 5000.0       |       |
| * 2 Fluorobenzene (IS)          | 96  | 6.252     | 6.252         | 0.000         | 98  | 742593   | 250.0      | 250.0        |       |
| * 3 Chlorobenzene-d5            | 119 | 9.446     | 9.446         | 0.000         | 87  | 179904   | 250.0      | 250.0        |       |
| * 4 1,4-Dichlorobenzene-d4      | 152 | 11.800    | 11.800        | 0.000         | 96  | 237433   | 250.0      | 250.0        |       |
| \$ 5 Dibromofluoromethane (Surr | 113 | 5.492     | 5.492         | 0.000         | 93  | 133373   | 200.0      | 217.8        |       |
| \$ 6 1,2-Dichloroethane-d4 (Sur | 65  | 5.881     | 5.881         | 0.000         | 96  | 146058   | 200.0      | 214.2        |       |
| \$ 7 Toluene-d8 (Surr)          | 98  | 7.974     | 7.974         | 0.000         | 94  | 577675   | 200.0      | 201.8        |       |
| \$ 8 4-Bromofluorobenzene (Surr | 95  | 10.650    | 10.650        | 0.000         | 90  | 194898   | 200.0      | 198.4        |       |
| 10 Dichlorodifluoromethane      | 85  | 1.197     | 1.197         | 0.000         | 99  | 226266   | 200.0      | 192.8        |       |
| 11 Chloromethane                | 50  | 1.306     | 1.306         | 0.000         | 99  | 370387   | 200.0      | 213.6        |       |
| 12 Vinyl chloride               | 62  | 1.410     | 1.410         | 0.000         | 98  | 306731   | 200.0      | 208.2        |       |
| 13 Butadiene                    | 54  | 1.428     | 1.428         | 0.000         | 94  | 305138   | 200.0      | 208.3        |       |
| 14 Bromomethane                 | 94  | 1.641     | 1.641         | 0.000         | 91  | 46617    | 200.0      | 235.3        |       |
| 15 Chloroethane                 | 64  | 1.726     | 1.726         | 0.000         | 95  | 59870    | 200.0      | 244.7        |       |
| 17 Trichlorofluoromethane       | 101 | 1.939     | 1.939         | 0.000         | 94  | 163335   | 200.0      | 283.1        |       |
| 16 Dichlorofluoromethane        | 67  | 1.933     | 1.933         | 0.000         | 96  | 209246   | 200.0      | 296.0        |       |
| 19 Ethyl ether                  | 59  | 2.237     | 2.237         | 0.000         | 97  | 103940   | 200.0      | 211.8        |       |
| 21 1,1-Dichloroethene           | 96  | 2.395     | 2.395         | 0.000         | 95  | 171730   | 200.0      | 211.5        |       |
| 22 1,1,2-Trichloro-1,2,2-trif   | 101 | 2.456     | 2.456         | 0.000         | 95  | 199192   | 200.0      | 204.8        |       |
| 23 Acetone                      | 43  | 2.541     | 2.541         | 0.000         | 44  | 63244    | 200.0      | 278.8        |       |
| 24 Iodomethane                  | 142 | 2.541     | 2.541         | 0.000         | 98  | 240591   | 200.0      | 196.6        |       |
| 25 Carbon disulfide             | 76  | 2.602     | 2.602         | 0.000         | 100 | 489937   | 200.0      | 198.8        |       |
| 28 3-Chloro-1-propene           | 76  | 2.821     | 2.821         | 0.000         | 92  | 114672   | 200.0      | 193.8        |       |
| 29 Methyl acetate               | 43  | 2.870     | 2.870         | 0.000         | 100 | 679905   | 1000.0     | 1282.9       |       |
| 30 Methylene Chloride           | 84  | 2.985     | 2.985         | 0.000         | 96  | 199211   | 200.0      | 204.2        |       |
| 31 2-Methyl-2-propanol          | 59  | 3.314     | 3.314         | 0.000         | 40  | 122545   | 2000.0     | 2063.1       |       |
| 32 Acrylonitrile                | 53  | 3.326     | 3.326         | 0.000         | 99  | 576429   | 2000.0     | 2351.9       |       |
| 33 trans-1,2-Dichloroethene     | 96  | 3.320     | 3.320         | 0.000         | 74  | 188253   | 200.0      | 208.0        |       |
| 34 Methyl tert-butyl ether      | 73  | 3.369     | 3.369         | 0.000         | 97  | 371566   | 200.0      | 203.4        |       |
| 35 Hexane                       | 57  | 3.715     | 3.715         | 0.000         | 95  | 384337   | 200.0      | 195.7        |       |
| 38 Vinyl acetate                | 43  | 3.703     | 3.703         | 0.000         | 72  | 271451   | 200.0      | 200.4        |       |

| Compound                       | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q  | Response | Cal Amt ng | OnCol Amt ng | Flags |
|--------------------------------|-----|-----------|---------------|---------------|----|----------|------------|--------------|-------|
| 36 1,1-Dichloroethane          | 63  | 3.959     | 3.959         | 0.000         | 96 | 366572   | 200.0      | 205.8        |       |
| 41 2,2-Dichloropropane         | 77  | 4.792     | 4.792         | 0.000         | 72 | 164818   | 200.0      | 231.9        |       |
| 42 cis-1,2-Dichloroethene      | 96  | 4.804     | 4.804         | 0.000         | 85 | 188991   | 200.0      | 209.1        |       |
| 43 2-Butanone (MEK)            | 43  | 4.859     | 4.859         | 0.000         | 99 | 75572    | 200.0      | 239.8        |       |
| 46 Chlorobromomethane          | 128 | 5.121     | 5.121         | 0.000         | 89 | 69883    | 200.0      | 208.4        |       |
| 48 Tetrahydrofuran             | 42  | 5.151     | 5.151         | 0.000         | 93 | 90800    | 400.0      | 432.4        |       |
| 49 Chloroform                  | 83  | 5.291     | 5.291         | 0.000         | 94 | 277271   | 200.0      | 212.7        |       |
| 50 1,1,1-Trichloroethane       | 97  | 5.443     | 5.443         | 0.000         | 97 | 224413   | 200.0      | 219.8        |       |
| 51 Cyclohexane                 | 56  | 5.504     | 5.504         | 0.000         | 95 | 444705   | 200.0      | 191.0        |       |
| 53 Carbon tetrachloride        | 117 | 5.619     | 5.619         | 0.000         | 95 | 211264   | 200.0      | 226.4        |       |
| 52 1,1-Dichloropropene         | 75  | 5.644     | 5.644         | 0.000         | 94 | 246389   | 200.0      | 206.8        |       |
| 54 Benzene                     | 78  | 5.875     | 5.875         | 0.000         | 98 | 697970   | 200.0      | 209.3        |       |
| 59 Isobutyl alcohol            | 41  | 5.948     | 5.948         | 0.000         | 94 | 91063    | 5000.0     | 5628.8       |       |
| 55 1,2-Dichloroethane          | 62  | 5.978     | 5.978         | 0.000         | 95 | 185323   | 200.0      | 224.8        |       |
| 58 n-Heptane                   | 43  | 6.289     | 6.289         | 0.000         | 97 | 413250   | 200.0      | 211.8        |       |
| 61 Trichloroethene             | 130 | 6.660     | 6.660         | 0.000         | 94 | 164039   | 200.0      | 214.2        |       |
| 63 Methylcyclohexane           | 83  | 6.897     | 6.897         | 0.000         | 96 | 349554   | 200.0      | 203.5        |       |
| 64 1,2-Dichloropropane         | 63  | 6.952     | 6.952         | 0.000         | 96 | 185968   | 200.0      | 206.0        |       |
| 65 Dibromomethane              | 93  | 7.037     | 7.037         | 0.000         | 95 | 69651    | 200.0      | 205.8        |       |
| 67 1,4-Dioxane                 | 88  | 7.055     | 7.055         | 0.000         | 99 | 25536    | 4000.0     | 4355.4       |       |
| 68 Dichlorobromomethane        | 83  | 7.256     | 7.256         | 0.000         | 97 | 167631   | 200.0      | 224.4        |       |
| 74 trans-1,3-Dichloropropene   | 75  | 7.724     | 7.724         | 0.000         | 97 | 228287   | 200.0      | 208.1        |       |
| 72 4-Methyl-2-pentanone (MIBK) | 43  | 7.895     | 7.895         | 0.000         | 97 | 147043   | 200.0      | 233.9        |       |
| 73 Toluene                     | 91  | 8.047     | 8.047         | 0.000         | 98 | 739466   | 200.0      | 210.0        |       |
| 71 cis-1,3-Dichloropropene     | 75  | 8.327     | 8.327         | 0.000         | 92 | 172362   | 200.0      | 220.7        |       |
| 75 Ethyl methacrylate          | 69  | 8.406     | 8.406         | 0.000         | 93 | 164636   | 200.0      | 206.7        |       |
| 76 1,1,2-Trichloroethane       | 97  | 8.515     | 8.515         | 0.000         | 90 | 109605   | 200.0      | 198.1        |       |
| 77 Tetrachloroethene           | 164 | 8.564     | 8.564         | 0.000         | 95 | 144275   | 200.0      | 211.8        |       |
| 78 1,3-Dichloropropane         | 76  | 8.667     | 8.667         | 0.000         | 96 | 217453   | 200.0      | 214.5        |       |
| 79 2-Hexanone                  | 43  | 8.752     | 8.752         | 0.000         | 97 | 95808    | 200.0      | 224.0        |       |
| 81 Chlorodibromomethane        | 129 | 8.880     | 8.880         | 0.000         | 91 | 95860    | 200.0      | 210.9        |       |
| 82 Ethylene Dibromide          | 107 | 8.984     | 8.984         | 0.000         | 99 | 100798   | 200.0      | 199.4        |       |
| 84 Chlorobenzene               | 112 | 9.476     | 9.476         | 0.000         | 92 | 445823   | 200.0      | 216.6        |       |
| 85 1,1,1,2-Tetrachloroethane   | 131 | 9.586     | 9.586         | 0.000         | 95 | 140034   | 200.0      | 215.7        |       |
| 86 Ethylbenzene                | 106 | 9.592     | 9.592         | 0.000         | 98 | 289795   | 200.0      | 221.7        |       |
| 87 m-Xylene & p-Xylene         | 106 | 9.726     | 9.726         | 0.000         | 99 | 351866   | 200.0      | 207.1        |       |
| 88 o-Xylene                    | 106 | 10.103    | 10.103        | 0.000         | 97 | 327132   | 200.0      | 211.8        |       |
| 89 Styrene                     | 104 | 10.127    | 10.127        | 0.000         | 96 | 518395   | 200.0      | 217.7        |       |
| 90 Bromoform                   | 173 | 10.298    | 10.298        | 0.000         | 96 | 53618    | 200.0      | 210.9        |       |
| 91 Isopropylbenzene            | 105 | 10.480    | 10.480        | 0.000         | 96 | 879950   | 200.0      | 227.7        |       |
| 94 Bromobenzene                | 156 | 10.772    | 10.772        | 0.000         | 97 | 167790   | 200.0      | 214.5        |       |
| 93 1,1,2,2-Tetrachloroethane   | 83  | 10.803    | 10.803        | 0.000         | 94 | 132214   | 200.0      | 212.3        |       |
| 96 trans-1,4-Dichloro-2-buten  | 53  | 10.839    | 10.839        | 0.000         | 74 | 36157    | 200.0      | 226.8        |       |
| 95 1,2,3-Trichloropropane      | 110 | 10.851    | 10.851        | 0.000         | 87 | 38824    | 200.0      | 219.5        |       |
| 97 N-Propylbenzene             | 120 | 10.894    | 10.894        | 0.000         | 98 | 258078   | 200.0      | 225.2        |       |
| 98 2-Chlorotoluene             | 126 | 10.967    | 10.967        | 0.000         | 96 | 193100   | 200.0      | 219.9        |       |
| 99 1,3,5-Trimethylbenzene      | 105 | 11.088    | 11.088        | 0.000         | 96 | 710624   | 200.0      | 212.6        |       |
| 100 4-Chlorotoluene            | 126 | 11.095    | 11.095        | 0.000         | 98 | 185234   | 200.0      | 218.5        |       |
| 101 tert-Butylbenzene          | 119 | 11.393    | 11.393        | 0.000         | 95 | 632331   | 200.0      | 213.2        |       |
| 103 1,2,4-Trimethylbenzene     | 105 | 11.453    | 11.453        | 0.000         | 98 | 710865   | 200.0      | 213.4        |       |
| 104 sec-Butylbenzene           | 105 | 11.618    | 11.618        | 0.000         | 94 | 975726   | 200.0      | 219.7        |       |
| 105 1,3-Dichlorobenzene        | 146 | 11.715    | 11.715        | 0.000         | 98 | 340129   | 200.0      | 216.1        |       |



| Compound                         | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q  | Response | Cal Amt ng | OnCol Amt ng | Flags |
|----------------------------------|-----|-----------|---------------|---------------|----|----------|------------|--------------|-------|
| 106 4-Isopropyltoluene           | 119 | 11.782    | 11.782        | 0.000         | 97 | 790616   | 200.0      | 217.5        |       |
| 107 1,4-Dichlorobenzene          | 146 | 11.825    | 11.825        | 0.000         | 94 | 336632   | 200.0      | 220.0        |       |
| 111 1,2-Dichlorobenzene          | 146 | 12.171    | 12.171        | 0.000         | 97 | 307992   | 200.0      | 216.4        |       |
| 110 n-Butylbenzene               | 91  | 12.184    | 12.184        | 0.000         | 98 | 751444   | 200.0      | 217.4        |       |
| 112 1,2-Dibromo-3-Chloropropan   | 75  | 12.962    | 12.962        | 0.000         | 79 | 14313    | 200.0      | 201.9        |       |
| 113 1,2,4-Trichlorobenzene       | 180 | 13.777    | 13.777        | 0.000         | 93 | 129610   | 200.0      | 200.1        |       |
| 115 Hexachlorobutadiene          | 225 | 13.929    | 13.929        | 0.000         | 97 | 142351   | 200.0      | 224.1        |       |
| 116 Naphthalene                  | 128 | 14.033    | 14.033        | 0.000         | 97 | 219459   | 200.0      | 194.6        |       |
| 117 1,2,3-Trichlorobenzene       | 180 | 14.252    | 14.252        | 0.000         | 94 | 103998   | 200.0      | 199.6        |       |
| S 129 1,2-Dichloroethene, Total  | 96  |           |               |               | 0  |          | 400.0      | 417.1        |       |
| S 130 Xylenes, Total             | 106 |           |               |               | 0  |          | 400.0      | 418.9        |       |
| S 131 1,3-Dichloropropene, Total | 1   |           |               |               | 0  |          | 400.0      | 428.9        |       |

**Reagents:**

|                     |                     |           |
|---------------------|---------------------|-----------|
| VOA8260INT_00032    | Amount Added: 10.00 | Units: uL |
| VOA8260VOAPRI_00115 | Amount Added: 8.00  | Units: uL |
| voaW VA pri R_00005 | Amount Added: 8.00  | Units: uL |
| VOA8260SURR_00035   | Amount Added: 8.00  | Units: uL |

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP4\20150509-6844.b\4050902.D

Injection Date: 09-May-2015 12:04:30

Instrument ID: CHHP4

Operator ID: 034635

Lims ID: CCVIS

Worklist Smp#: 2

Client ID:

Purge Vol: 5.000 mL

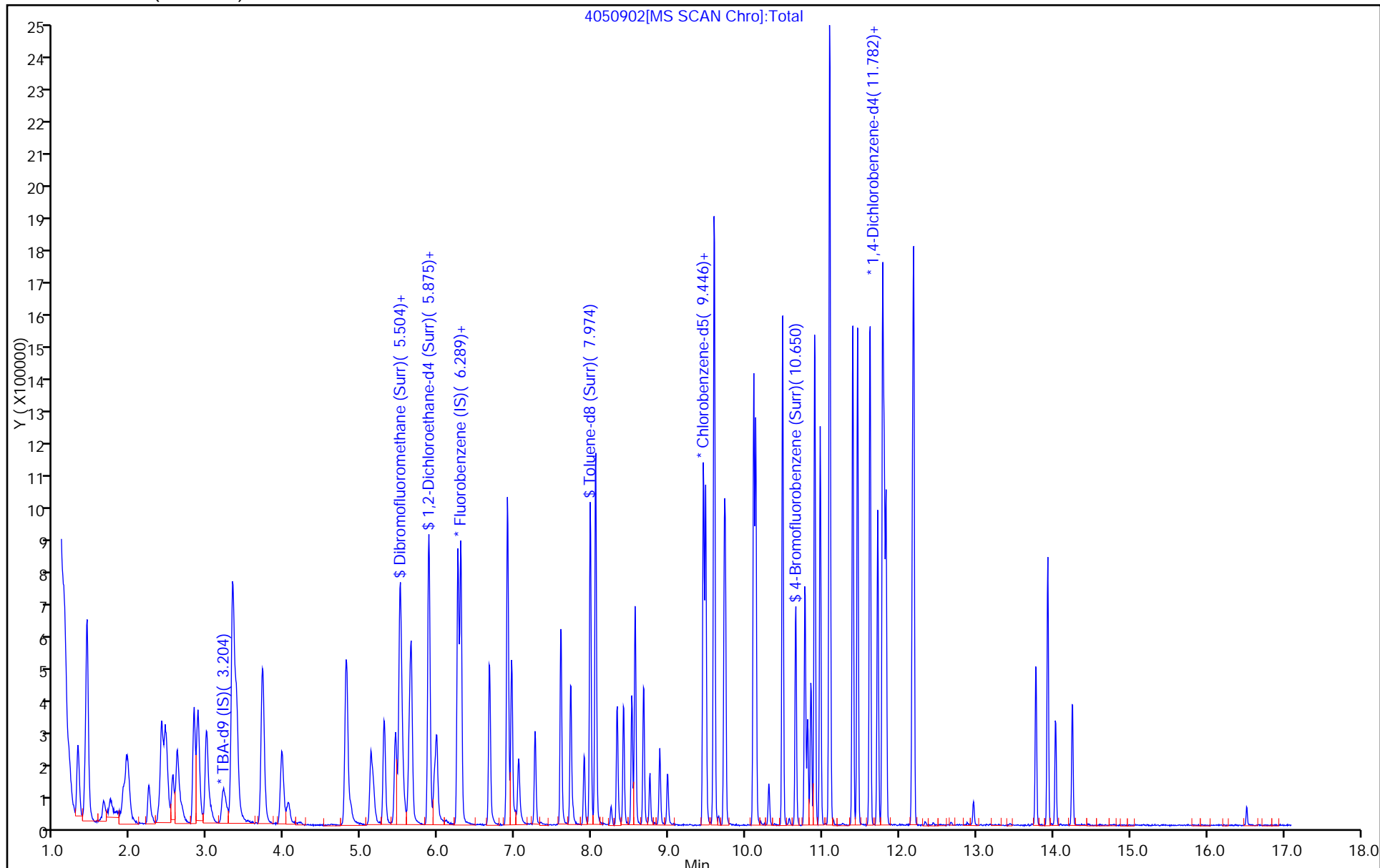
Dil. Factor: 1.0000

ALS Bottle#: 10

Method: MSVOA\_CHHP4

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.: 180-43791-1  
 SDG No.: \_\_\_\_\_  
 Lab Sample ID: CCV 180-141065/3 Calibration Date: 05/09/2015 12:46  
 Instrument ID: CHHP4 Calib Start Date: 11/03/2014 12:22  
 GC Column: DB-624 ID: 0.18 (mm) Calib End Date: 11/03/2014 16:24  
 Lab File ID: 4050903.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        | 0.1085  | 0.1315 |         | 96.9        | 80.0         | 21.1 |        |

TestAmerica Pittsburgh  
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHHP4\20150509-6844.b\4050903.D  
 Lims ID: CCV  
 Client ID:  
 Sample Type: CCV  
 Inject. Date: 09-May-2015 12:46:30 ALS Bottle#: 11 Worklist Smp#: 3  
 Purge Vol: 5.000 mL Dil. Factor: 1.0000  
 Sample Info: CCV  
 Misc. Info.: 180-0006844-003  
 Operator ID: 034635 Instrument ID: CHHP4  
 Sublist: chrom-MSVOA\_CHHP4\*sub40  
 Method: \\PITCHROM\ChromData\CHHP4\20150509-6844.b\MSVOA\_CHHP4.m  
 Limit Group: VOA 8260C ICAL  
 Last Update: 10-May-2015 11:35:23 Calib Date: 27-Apr-2015 13:50:30  
 Integrator: RTE ID Type: Deconvolution ID  
 Quant Method: Internal Standard Quant By: Initial Calibration  
 Last Ical File: \\PITCHROM\ChromData\CHHP4\20150427-6642.b\4042710.D  
 Column 1 : DB-624 ( 0.18 mm) Det: MS SCAN  
 Process Host: XAWRK017

First Level Reviewer: journetp

Date: 09-May-2015 12:08:32

| Compound                     | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q   | Response | Cal Amt ng | OnCol Amt ng | Flags |
|------------------------------|-----|-----------|---------------|---------------|-----|----------|------------|--------------|-------|
| * 1 TBA-d9 (IS)              | 65  | 3.126     | 3.126         | 0.000         | 97  | 131512   | 5000.0     | 5000.0       | s     |
| * 2 Fluorobenzene (IS)       | 96  | 6.253     | 6.253         | 0.000         | 97  | 846197   | 250.0      | 250.0        |       |
| * 3 Chlorobenzene-d5         | 119 | 9.447     | 9.447         | 0.000         | 88  | 182246   | 250.0      | 250.0        |       |
| * 4 1,4-Dichlorobenzene-d4   | 152 | 11.801    | 11.801        | 0.000         | 96  | 206771   | 250.0      | 250.0        |       |
| 20 Acrolein                  | 56  | 2.353     | 2.353         | 0.000         | 98  | 47387    | 875.0      | 1015.4       |       |
| 26 Isopropyl alcohol         | 45  | 2.730     | 2.730         | 0.000         | 98  | 77774    | 2000.0     | 1104.5       |       |
| 27 Acetonitrile              | 40  | 2.816     | 2.816         | 0.000         | 97  | 120423   | 2000.0     | 1532.5       |       |
| 18 Ethanol                   | 45  | 3.120     | 3.120         | 0.000         | 12  | 7406     | 10000      | 9519.7       |       |
| 37 2-Chloro-1,3-butadiene    | 53  | 4.069     | 4.069         | 0.000         | 93  | 602453   | 200.0      | 309.2        |       |
| 39 Isopropyl ether           | 45  | 4.099     | 4.099         | 0.000         | 96  | 1130733  | 200.0      | 270.8        |       |
| 40 Tert-butyl ethyl ether    | 59  | 4.635     | 4.635         | 0.000         | 98  | 737692   | 200.0      | 237.9        |       |
| 44 Propionitrile             | 54  | 4.927     | 4.927         | 0.000         | 100 | 173054   | 2000.0     | 1449.8       | M     |
| 45 Ethyl acetate             | 43  | 4.945     | 4.945         | 0.000         | 99  | 143458   | 400.0      | 223.6        |       |
| 47 Methacrylonitrile         | 41  | 5.115     | 5.115         | 0.000         | 95  | 882187   | 2000.0     | 1504.6       |       |
| 57 Isooctane                 | 57  | 6.058     | 6.058         | 0.000         | 96  | 1893245  | 200.0      | 301.8        |       |
| 56 Tert-amyl methyl ether    | 73  | 6.101     | 6.101         | 0.000         | 95  | 455427   | 200.0      | 200.9        |       |
| 62 Ethyl acrylate            | 55  | 6.837     | 6.837         | 0.000         | 98  | 144399   | 200.0      | 133.0        |       |
| 60 n-Butanol                 | 56  | 7.080     | 7.080         | 0.000         | 40  | 7802     | 5000.0     | 318.2        |       |
| 66 Methyl methacrylate       | 69  | 7.080     | 7.080         | 0.000         | 96  | 166193   | 400.0      | 315.8        |       |
| 69 2-Nitropropane            | 41  | 7.494     | 7.494         | 0.000         | 93  | 36643    | 400.0      | 276.1        |       |
| 70 2-Chloroethyl vinyl ether | 63  | 7.597     | 7.597         | 0.000         | 90  | 177977   | 400.0      | 484.6        |       |
| 80 n-Butyl acetate           | 43  | 8.893     | 8.893         | 0.000         | 98  | 126014   | 200.0      | 127.1        |       |
| 92 Cyclohexanone             | 55  | 10.554    | 10.554        | 0.000         | 96  | 60282    | 4000.0     | 1915.7       |       |
| 102 Pentachloroethane        | 167 | 11.412    | 11.412        | 0.000         | 90  | 115330   | 200.0      | 310.2        |       |
| 108 1,2,3-Trimethylbenzene   | 105 | 11.856    | 11.856        | 0.000         | 97  | 959986   | 200.0      | 266.4        |       |
| 109 Benzyl chloride          | 91  | 11.947    | 11.947        | 0.000         | 98  | 118165   | 200.0      | 234.2        |       |
| 114 1,3,5-Trichlorobenzene   | 180 | 13.151    | 13.151        | 0.000         | 96  | 289220   | 200.0      | 301.2        |       |
| 118 2-Methylnaphthalene      | 142 | 15.177    | 15.177        | 0.000         | 91  | 29756    | 200.0      | 155.0        |       |

**QC Flag Legend**

Processing Flags

s - Failed ISTD Recovery Test

Review Flags

M - Manually Integrated

**Reagents:**

|                   |                     |           |
|-------------------|---------------------|-----------|
| VOA8260INT_00032  | Amount Added: 10.00 | Units: uL |
| VOACEVEPRI_00006  | Amount Added: 8.00  | Units: uL |
| VOAAPPIXPRI_00009 | Amount Added: 8.00  | Units: uL |
| VOAACROPRI_00005  | Amount Added: 35.00 | Units: uL |

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP4\20150509-6844.b\4050903.D

Injection Date: 09-May-2015 12:46:30

Instrument ID: CHHP4

Operator ID: 034635

Lims ID: CCV

Worklist Smp#: 3

Client ID:

Purge Vol: 5.000 mL

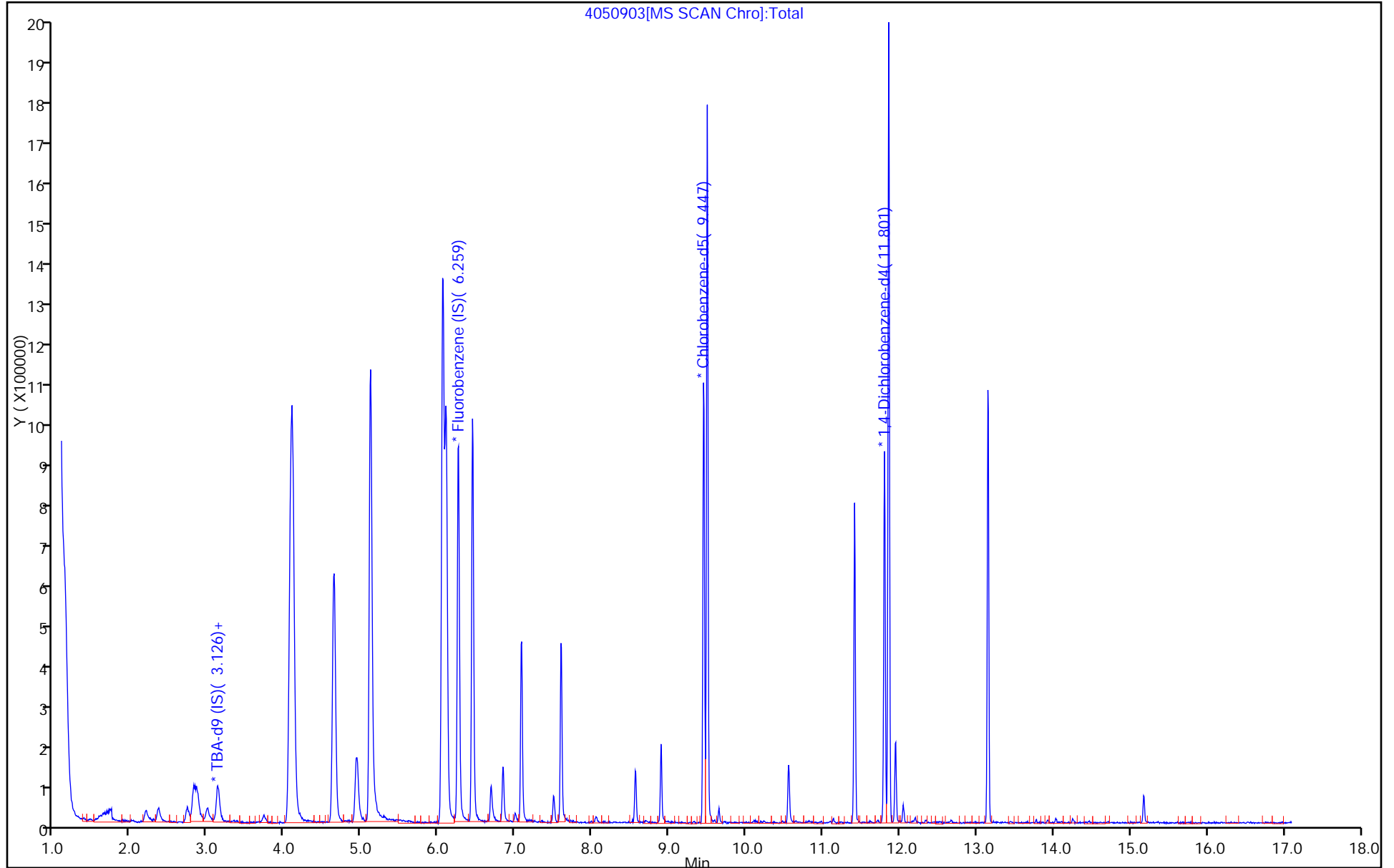
Dil. Factor: 1.0000

ALS Bottle#: 11

Method: MSVOA\_CHHP4

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.: 180-43791-1  
 SDG No.: \_\_\_\_\_  
 Lab Sample ID: CCV 180-141065/3 Calibration Date: 05/09/2015 12:46  
 Instrument ID: CHHP4 Calib Start Date: 11/11/2014 10:05  
 GC Column: DB-624 ID: 0.18 (mm) Calib End Date: 11/11/2014 13:13  
 Lab File ID: 4050903.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 |
|------------------------|------------|---------|--------|---------|-------------|--------------|-------|--------|
| Acetonitrile           | Ave        | 0.0232  | 0.0178 |         | 306         | 400          | -23.4 |        |
| Chloroprene            | Ave        | 0.5757  | 0.8899 |         | 61.8        | 40.0         | 54.6  |        |
| Isopropyl ether        | Ave        | 1.234   | 1.670  |         | 54.2        | 40.0         | 35.4  |        |
| Propionitrile          | Qua        |         | 0.0256 |         | 290         | 400          | -27.5 |        |
| Methacrylonitrile      | Qua        |         | 0.1303 |         | 301         | 400          | -24.8 |        |
| Isooctane              | Ave        | 1.854   | 2.797  |         | 60.4        | 40.0         | 50.9  |        |
| Ethyl acrylate         | Qua        |         | 0.9904 |         | 26.6        | 40.0         | -33.5 |        |
| Methyl methacrylate    | Ave        | 0.1621  | 0.1228 |         | 63.2        | 80.0         | -24.3 |        |
| n-Butanol              | Qua        |         | 0.0005 |         | 63.6        | 1000         | -93.6 |        |
| 2-Nitropropane         | Ave        | 0.1820  | 0.1257 |         | 55.2        | 80.0         | -31.0 |        |
| Cyclohexanone          | Qua        |         | 0.0207 |         | 383         | 800          | -52.1 |        |
| 1,2,3-Trimethylbenzene | Ave        | 4.357   | 5.803  |         | 53.3        | 40.0         | 33.2  |        |
| Benzyl chloride        | Qua        |         | 0.7144 |         | 46.8        | 40.0         | 17.1  |        |
| 1,3,5-Trichlorobenzene | Ave        | 1.161   | 1.748  |         | 60.2        | 40.0         | 50.6  |        |

TestAmerica Pittsburgh  
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHHP4\20150509-6844.b\4050903.D  
 Lims ID: CCV  
 Client ID:  
 Sample Type: CCV  
 Inject. Date: 09-May-2015 12:46:30 ALS Bottle#: 11 Worklist Smp#: 3  
 Purge Vol: 5.000 mL Dil. Factor: 1.0000  
 Sample Info: CCV  
 Misc. Info.: 180-0006844-003  
 Operator ID: 034635 Instrument ID: CHHP4  
 Sublist: chrom-MSVOA\_CHHP4\*sub40  
 Method: \\PITCHROM\ChromData\CHHP4\20150509-6844.b\MSVOA\_CHHP4.m  
 Limit Group: VOA 8260C ICAL  
 Last Update: 10-May-2015 11:35:23 Calib Date: 27-Apr-2015 13:50:30  
 Integrator: RTE ID Type: Deconvolution ID  
 Quant Method: Internal Standard Quant By: Initial Calibration  
 Last Ical File: \\PITCHROM\ChromData\CHHP4\20150427-6642.b\4042710.D  
 Column 1 : DB-624 ( 0.18 mm) Det: MS SCAN  
 Process Host: XAWRK017

First Level Reviewer: journetp

Date: 09-May-2015 12:08:32

| Compound                     | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q   | Response | Cal Amt ng | OnCol Amt ng | Flags |
|------------------------------|-----|-----------|---------------|---------------|-----|----------|------------|--------------|-------|
| * 1 TBA-d9 (IS)              | 65  | 3.126     | 3.126         | 0.000         | 97  | 131512   | 5000.0     | 5000.0       | s     |
| * 2 Fluorobenzene (IS)       | 96  | 6.253     | 6.253         | 0.000         | 97  | 846197   | 250.0      | 250.0        |       |
| * 3 Chlorobenzene-d5         | 119 | 9.447     | 9.447         | 0.000         | 88  | 182246   | 250.0      | 250.0        |       |
| * 4 1,4-Dichlorobenzene-d4   | 152 | 11.801    | 11.801        | 0.000         | 96  | 206771   | 250.0      | 250.0        |       |
| 20 Acrolein                  | 56  | 2.353     | 2.353         | 0.000         | 98  | 47387    | 875.0      | 1015.4       |       |
| 26 Isopropyl alcohol         | 45  | 2.730     | 2.730         | 0.000         | 98  | 77774    | 2000.0     | 1104.5       |       |
| 27 Acetonitrile              | 40  | 2.816     | 2.816         | 0.000         | 97  | 120423   | 2000.0     | 1532.5       |       |
| 18 Ethanol                   | 45  | 3.120     | 3.120         | 0.000         | 12  | 7406     | 10000      | 9519.7       |       |
| 37 2-Chloro-1,3-butadiene    | 53  | 4.069     | 4.069         | 0.000         | 93  | 602453   | 200.0      | 309.2        |       |
| 39 Isopropyl ether           | 45  | 4.099     | 4.099         | 0.000         | 96  | 1130733  | 200.0      | 270.8        |       |
| 40 Tert-butyl ethyl ether    | 59  | 4.635     | 4.635         | 0.000         | 98  | 737692   | 200.0      | 237.9        |       |
| 44 Propionitrile             | 54  | 4.927     | 4.927         | 0.000         | 100 | 173054   | 2000.0     | 1449.8       | M     |
| 45 Ethyl acetate             | 43  | 4.945     | 4.945         | 0.000         | 99  | 143458   | 400.0      | 223.6        |       |
| 47 Methacrylonitrile         | 41  | 5.115     | 5.115         | 0.000         | 95  | 882187   | 2000.0     | 1504.6       |       |
| 57 Isooctane                 | 57  | 6.058     | 6.058         | 0.000         | 96  | 1893245  | 200.0      | 301.8        |       |
| 56 Tert-amyl methyl ether    | 73  | 6.101     | 6.101         | 0.000         | 95  | 455427   | 200.0      | 200.9        |       |
| 62 Ethyl acrylate            | 55  | 6.837     | 6.837         | 0.000         | 98  | 144399   | 200.0      | 133.0        |       |
| 60 n-Butanol                 | 56  | 7.080     | 7.080         | 0.000         | 40  | 7802     | 5000.0     | 318.2        |       |
| 66 Methyl methacrylate       | 69  | 7.080     | 7.080         | 0.000         | 96  | 166193   | 400.0      | 315.8        |       |
| 69 2-Nitropropane            | 41  | 7.494     | 7.494         | 0.000         | 93  | 36643    | 400.0      | 276.1        |       |
| 70 2-Chloroethyl vinyl ether | 63  | 7.597     | 7.597         | 0.000         | 90  | 177977   | 400.0      | 484.6        |       |
| 80 n-Butyl acetate           | 43  | 8.893     | 8.893         | 0.000         | 98  | 126014   | 200.0      | 127.1        |       |
| 92 Cyclohexanone             | 55  | 10.554    | 10.554        | 0.000         | 96  | 60282    | 4000.0     | 1915.7       |       |
| 102 Pentachloroethane        | 167 | 11.412    | 11.412        | 0.000         | 90  | 115330   | 200.0      | 310.2        |       |
| 108 1,2,3-Trimethylbenzene   | 105 | 11.856    | 11.856        | 0.000         | 97  | 959986   | 200.0      | 266.4        |       |
| 109 Benzyl chloride          | 91  | 11.947    | 11.947        | 0.000         | 98  | 118165   | 200.0      | 234.2        |       |
| 114 1,3,5-Trichlorobenzene   | 180 | 13.151    | 13.151        | 0.000         | 96  | 289220   | 200.0      | 301.2        |       |
| 118 2-Methylnaphthalene      | 142 | 15.177    | 15.177        | 0.000         | 91  | 29756    | 200.0      | 155.0        |       |



**QC Flag Legend**

Processing Flags

s - Failed ISTD Recovery Test

Review Flags

M - Manually Integrated

**Reagents:**

|                   |                     |           |
|-------------------|---------------------|-----------|
| VOA8260INT_00032  | Amount Added: 10.00 | Units: uL |
| VOACEVEPRI_00006  | Amount Added: 8.00  | Units: uL |
| VOAAPPIXPRI_00009 | Amount Added: 8.00  | Units: uL |
| VOAACROPRI_00005  | Amount Added: 35.00 | Units: uL |

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP4\20150509-6844.b\4050903.D

Injection Date: 09-May-2015 12:46:30

Instrument ID: CHHP4

Operator ID: 034635

Lims ID: CCV

Worklist Smp#: 3

Client ID:

Purge Vol: 5.000 mL

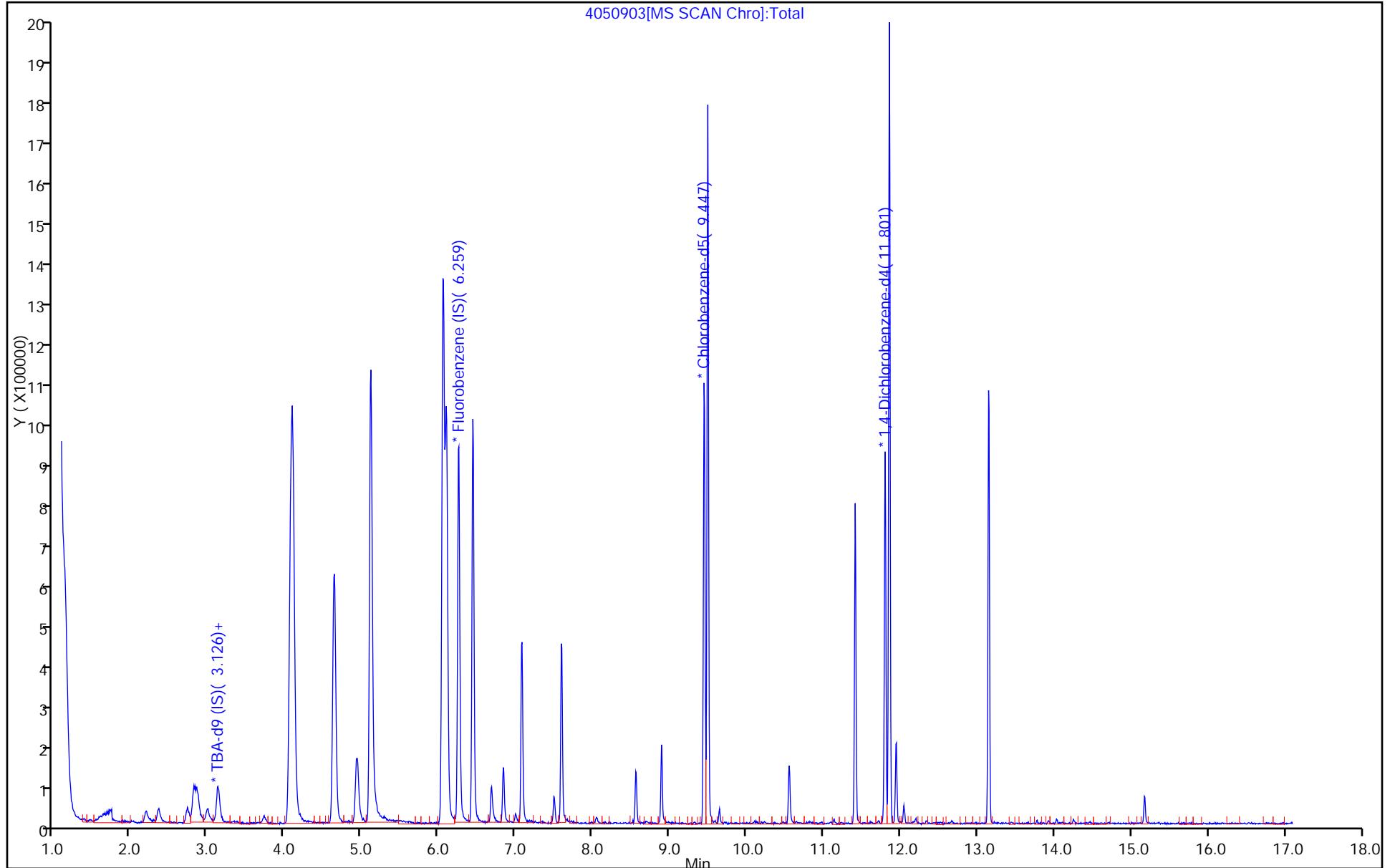
Dil. Factor: 1.0000

ALS Bottle#: 11

Method: MSVOA\_CHHP4

Limit Group: VOA 8260C ICAL

Column: DB-624 (0.18 mm)



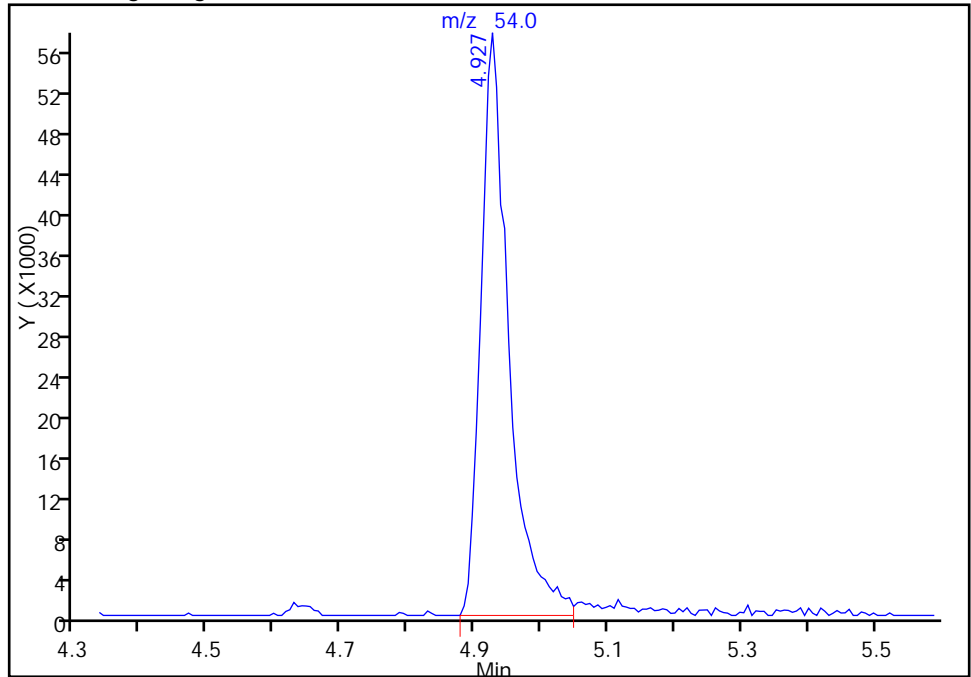
TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP4\20150509-6844.b\4050903.D  
Injection Date: 09-May-2015 12:46:30 Instrument ID: CHHP4  
Lims ID: CCV  
Client ID:  
Operator ID: 034635 ALS Bottle#: 11 Worklist Smp#: 3  
Purge Vol: 5.000 mL Dil. Factor: 1.0000  
Method: MSVOA\_CHHP4 Limit Group: VOA 8260C ICAL  
Column: DB-624 (0.18 mm) Detector: MS SCAN

44 Propionitrile, CAS: 107-12-0

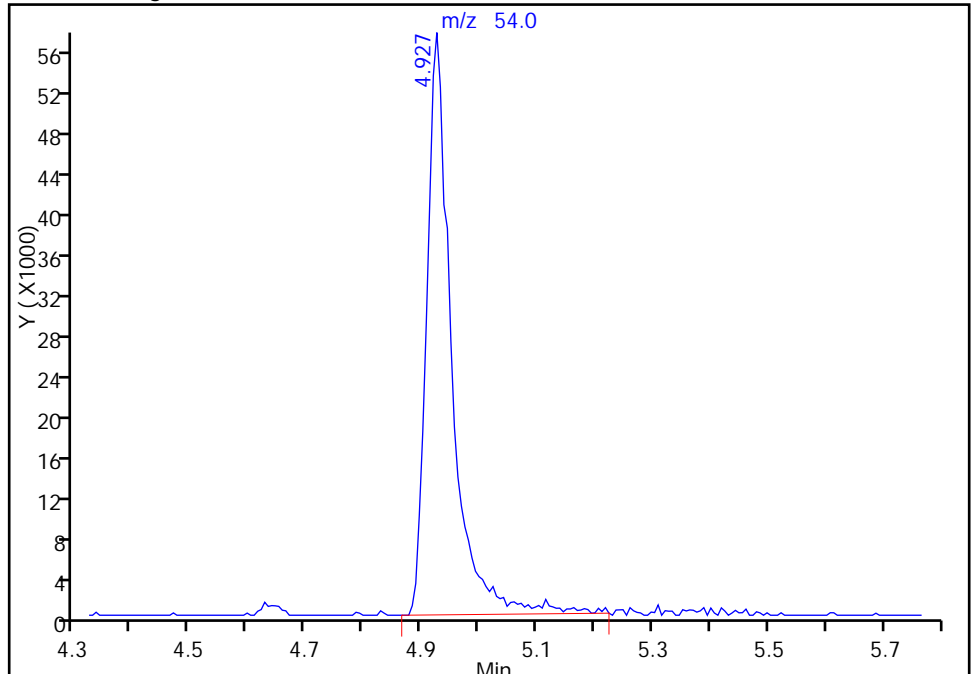
RT: 4.93  
Area: 167472  
Amount: 1405.5339  
Amount Units: ng

Processing Integration Results



RT: 4.93  
Area: 173054  
Amount: 1449.8120  
Amount Units: ng

Manual Integration Results



Reviewer: journetp, 09-May-2015 12:08:32  
Audit Action: Manually Integrated  
Audit Reason: Poor chromatography

FORM VII  
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Pittsburgh Job No.: 180-43791-1  
 SDG No.: \_\_\_\_\_  
 Lab Sample ID: CCV 180-141065/3 Calibration Date: 05/09/2015 12:46  
 Instrument ID: CHHP4 Calib Start Date: 04/27/2015 11:08  
 GC Column: DB-624 ID: 0.18 (mm) Calib End Date: 04/27/2015 13:50  
 Lab File ID: 4050903.D Conc. Units: ug/L Heated Purge: (Y/N) N

| ANALYTE  | CURVE TYPE | AVE RRF | RRF    | MIN RRF | CALC AMOUNT | SPIKE AMOUNT | %D   | MAX %D |
|----------|------------|---------|--------|---------|-------------|--------------|------|--------|
| Acrolein | Ave        | 0.0138  | 0.0160 |         | 203         | 175          | 16.0 |        |

TestAmerica Pittsburgh  
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHHP4\20150509-6844.b\4050903.D  
 Lims ID: CCV  
 Client ID:  
 Sample Type: CCV  
 Inject. Date: 09-May-2015 12:46:30 ALS Bottle#: 11 Worklist Smp#: 3  
 Purge Vol: 5.000 mL Dil. Factor: 1.0000  
 Sample Info: CCV  
 Misc. Info.: 180-0006844-003  
 Operator ID: 034635 Instrument ID: CHHP4  
 Sublist: chrom-MSVOA\_CHHP4\*sub40  
 Method: \\PITCHROM\ChromData\CHHP4\20150509-6844.b\MSVOA\_CHHP4.m  
 Limit Group: VOA 8260C ICAL  
 Last Update: 10-May-2015 11:35:23 Calib Date: 27-Apr-2015 13:50:30  
 Integrator: RTE ID Type: Deconvolution ID  
 Quant Method: Internal Standard Quant By: Initial Calibration  
 Last ICal File: \\PITCHROM\ChromData\CHHP4\20150427-6642.b\4042710.D  
 Column 1 : DB-624 ( 0.18 mm) Det: MS SCAN  
 Process Host: XAWRK017

First Level Reviewer: journetp

Date: 09-May-2015 12:08:32

| Compound                     | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q   | Response | Cal Amt ng | OnCol Amt ng | Flags |
|------------------------------|-----|-----------|---------------|---------------|-----|----------|------------|--------------|-------|
| * 1 TBA-d9 (IS)              | 65  | 3.126     | 3.126         | 0.000         | 97  | 131512   | 5000.0     | 5000.0       | s     |
| * 2 Fluorobenzene (IS)       | 96  | 6.253     | 6.253         | 0.000         | 97  | 846197   | 250.0      | 250.0        |       |
| * 3 Chlorobenzene-d5         | 119 | 9.447     | 9.447         | 0.000         | 88  | 182246   | 250.0      | 250.0        |       |
| * 4 1,4-Dichlorobenzene-d4   | 152 | 11.801    | 11.801        | 0.000         | 96  | 206771   | 250.0      | 250.0        |       |
| 20 Acrolein                  | 56  | 2.353     | 2.353         | 0.000         | 98  | 47387    | 875.0      | 1015.4       |       |
| 26 Isopropyl alcohol         | 45  | 2.730     | 2.730         | 0.000         | 98  | 77774    | 2000.0     | 1104.5       |       |
| 27 Acetonitrile              | 40  | 2.816     | 2.816         | 0.000         | 97  | 120423   | 2000.0     | 1532.5       |       |
| 18 Ethanol                   | 45  | 3.120     | 3.120         | 0.000         | 12  | 7406     | 10000      | 9519.7       |       |
| 37 2-Chloro-1,3-butadiene    | 53  | 4.069     | 4.069         | 0.000         | 93  | 602453   | 200.0      | 309.2        |       |
| 39 Isopropyl ether           | 45  | 4.099     | 4.099         | 0.000         | 96  | 1130733  | 200.0      | 270.8        |       |
| 40 Tert-butyl ethyl ether    | 59  | 4.635     | 4.635         | 0.000         | 98  | 737692   | 200.0      | 237.9        |       |
| 44 Propionitrile             | 54  | 4.927     | 4.927         | 0.000         | 100 | 173054   | 2000.0     | 1449.8       | M     |
| 45 Ethyl acetate             | 43  | 4.945     | 4.945         | 0.000         | 99  | 143458   | 400.0      | 223.6        |       |
| 47 Methacrylonitrile         | 41  | 5.115     | 5.115         | 0.000         | 95  | 882187   | 2000.0     | 1504.6       |       |
| 57 Isooctane                 | 57  | 6.058     | 6.058         | 0.000         | 96  | 1893245  | 200.0      | 301.8        |       |
| 56 Tert-amyl methyl ether    | 73  | 6.101     | 6.101         | 0.000         | 95  | 455427   | 200.0      | 200.9        |       |
| 62 Ethyl acrylate            | 55  | 6.837     | 6.837         | 0.000         | 98  | 144399   | 200.0      | 133.0        |       |
| 60 n-Butanol                 | 56  | 7.080     | 7.080         | 0.000         | 40  | 7802     | 5000.0     | 318.2        |       |
| 66 Methyl methacrylate       | 69  | 7.080     | 7.080         | 0.000         | 96  | 166193   | 400.0      | 315.8        |       |
| 69 2-Nitropropane            | 41  | 7.494     | 7.494         | 0.000         | 93  | 36643    | 400.0      | 276.1        |       |
| 70 2-Chloroethyl vinyl ether | 63  | 7.597     | 7.597         | 0.000         | 90  | 177977   | 400.0      | 484.6        |       |
| 80 n-Butyl acetate           | 43  | 8.893     | 8.893         | 0.000         | 98  | 126014   | 200.0      | 127.1        |       |
| 92 Cyclohexanone             | 55  | 10.554    | 10.554        | 0.000         | 96  | 60282    | 4000.0     | 1915.7       |       |
| 102 Pentachloroethane        | 167 | 11.412    | 11.412        | 0.000         | 90  | 115330   | 200.0      | 310.2        |       |
| 108 1,2,3-Trimethylbenzene   | 105 | 11.856    | 11.856        | 0.000         | 97  | 959986   | 200.0      | 266.4        |       |
| 109 Benzyl chloride          | 91  | 11.947    | 11.947        | 0.000         | 98  | 118165   | 200.0      | 234.2        |       |
| 114 1,3,5-Trichlorobenzene   | 180 | 13.151    | 13.151        | 0.000         | 96  | 289220   | 200.0      | 301.2        |       |
| 118 2-Methylnaphthalene      | 142 | 15.177    | 15.177        | 0.000         | 91  | 29756    | 200.0      | 155.0        |       |

**QC Flag Legend**

Processing Flags

s - Failed ISTD Recovery Test

Review Flags

M - Manually Integrated

**Reagents:**

|                   |                     |           |
|-------------------|---------------------|-----------|
| VOA8260INT_00032  | Amount Added: 10.00 | Units: uL |
| VOACEVEPRI_00006  | Amount Added: 8.00  | Units: uL |
| VOAAPPIXPRI_00009 | Amount Added: 8.00  | Units: uL |
| VOAACROPRI_00005  | Amount Added: 35.00 | Units: uL |

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP4\20150509-6844.b\4050903.D

Injection Date: 09-May-2015 12:46:30

Instrument ID: CHHP4

Operator ID: 034635

Lims ID: CCV

Worklist Smp#: 3

Client ID:

Purge Vol: 5.000 mL

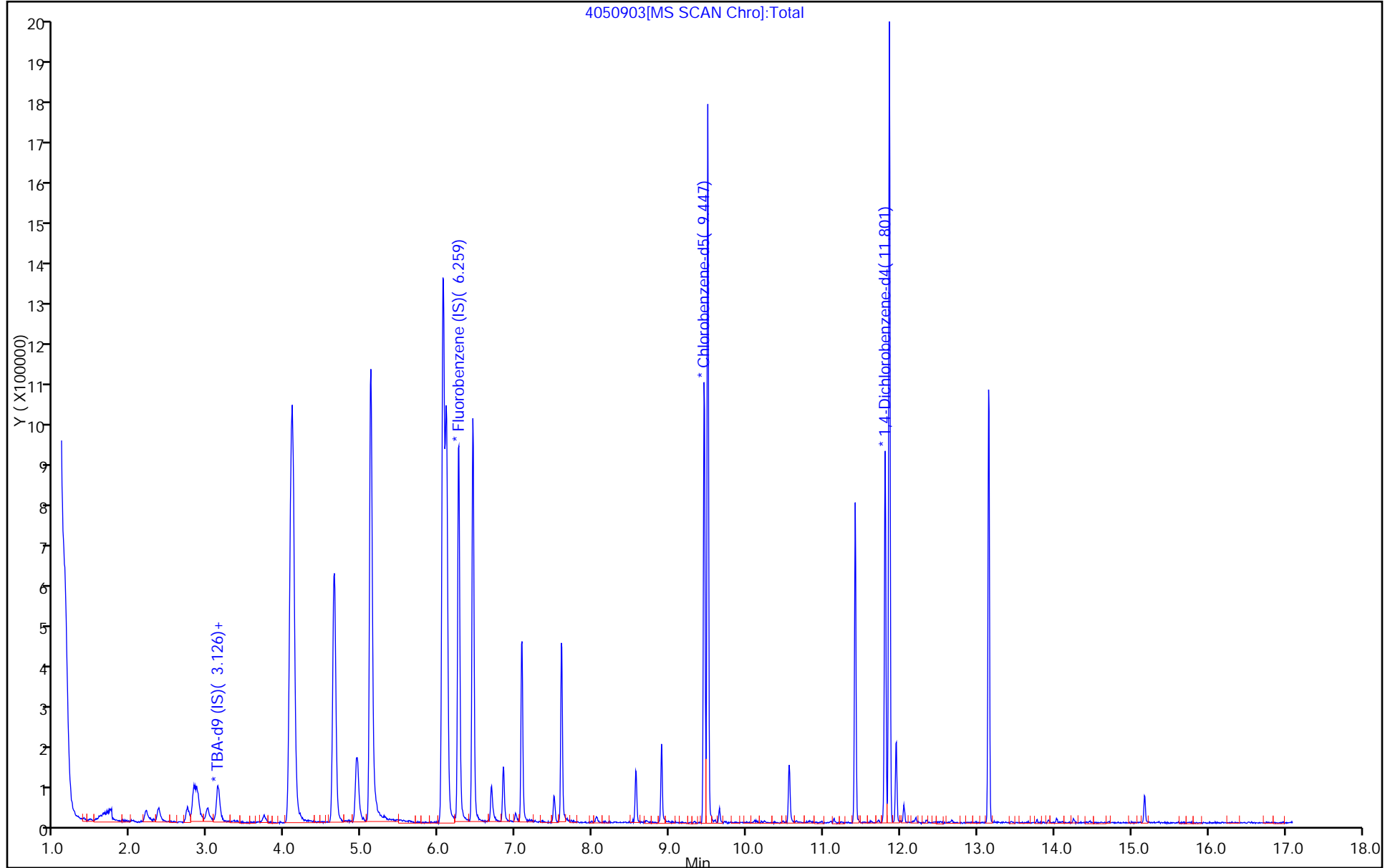
Dil. Factor: 1.0000

ALS Bottle#: 11

Method: MSVOA\_CHHP4

Limit Group: VOA 8260C ICAL

Column: DB-624 (0.18 mm)



TestAmerica Pittsburgh  
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHHP4\20141103-4149.b\4110301.D  
 Lims ID: BFB  
 Client ID:  
 Sample Type: BFB  
 Inject. Date: 03-Nov-2014 09:04:30 ALS Bottle#: 1 Worklist Smp#: 1  
 Injection Vol: 5.0 mL Dil. Factor: 1.0000  
 Sample Info: BFB  
 Misc. Info.: 180-0004149-001  
 Operator ID: 034635 Instrument ID: CHHP4  
 Method: \\PITCHROM\ChromData\CHHP4\20141103-4149.b\MMSVOA\_CHHP4.m  
 Limit Group: VOA 8260C ICAL  
 Last Update: 03-Nov-2014 16:25:10 Calib Date: 03-Nov-2014 16:24:30  
 Integrator: RTE ID Type: Deconvolution ID  
 Quant Method: Internal Standard Quant By: Initial Calibration  
 Last ICal File: \\PITCHROM\ChromData\CHHP4\20141103-4149.b\4110312.D  
 Column 1 : DB-624 ( 0.18 mm) Det: MS SCAN  
 Process Host: XAWRK026

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ng | OnCol Amt ng | Flags |
|----------|-----|-----------|---------------|---------------|---|----------|------------|--------------|-------|
| \$ 9 BFB | 95  | 8.391     | 8.391         | 0.000         | 0 | 602192   | NR         | NR           |       |

**QC Flag Legend**

Processing Flags  
 NR - Missing Quant Standard

**Reagents:**

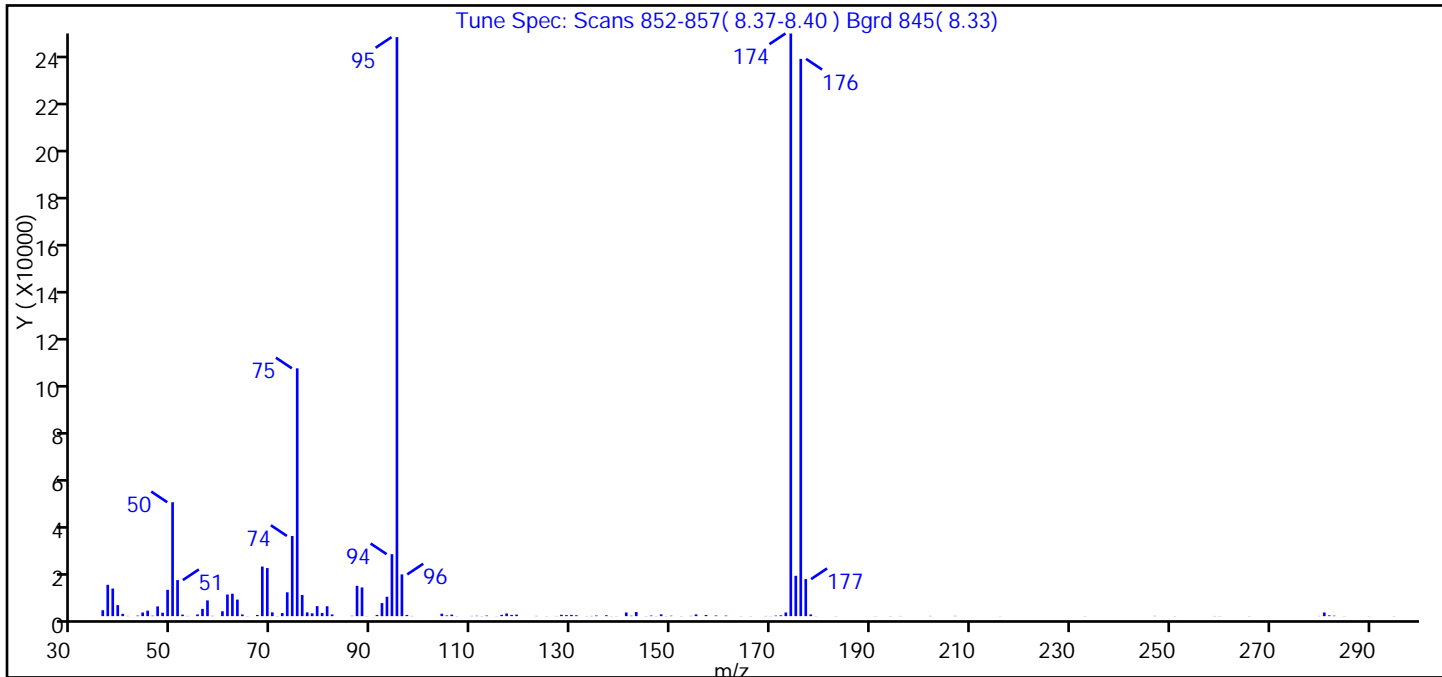
VOABFB50\_00056 Amount Added: 1.00 Units: uL



TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP4\20141103-4149.b\4110301.D  
 Injection Date: 03-Nov-2014 09:04:30 Instrument ID: CHHP4  
 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\_CHHP4 Limit Group: VOA 8260C ICAL  
 Tune Method: BFB Method 8260

\$ 9 BFB



| m/z | Ion Abundance Criteria             | % Relative Abundance |
|-----|------------------------------------|----------------------|
| 95  | Base Peak, 100% relative abundance | 100.00               |
| 50  | 15.00 - 40.00% of mass 95          | 19.70                |
| 75  | 30.00 - 60.00% of mass 95          | 42.80                |
| 96  | 5.00 - 9.00% of mass 95            | 7.20                 |
| 173 | Less than 2.00% of mass 174        | 0.60 ( 0.60)         |
| 174 | 50.00 - 120.00% of mass 95         | 100.60               |
| 175 | 5.00 - 9.00% of mass 174           | 7.00 ( 6.90)         |
| 176 | 95.00 - 101.00% of mass 174        | 96.20 ( 95.60)       |
| 177 | 5.00 - 9.00% of mass 176           | 6.40 ( 6.60)         |

Data File: \\PITCHROM\ChromData\CHHP4\20141103-4149.b\4110301.D\MSVOA\_CHHP4.rsl\spectra.d  
Injection Date: 03-Nov-2014 09:04:30  
Spectrum: Tune Spec: Scans 852-857( 8.37-8.40 ) Bgrd 845( 8.33)  
Base Peak: 174.00  
Minimum % Base Peak: 0  
Number of Points: 129

| m/z   | Y     | m/z    | Y      | m/z    | Y    | m/z    | Y      |
|-------|-------|--------|--------|--------|------|--------|--------|
| 36.00 | 2514  | 73.00  | 10086  | 118.00 | 524  | 170.00 | 66     |
| 37.00 | 13249 | 74.00  | 33904  | 119.00 | 658  | 171.00 | 231    |
| 38.00 | 11670 | 75.00  | 104792 | 123.00 | 102  | 172.00 | 352    |
| 39.00 | 4655  | 76.00  | 8941   | 125.00 | 58   | 173.00 | 1548   |
| 40.00 | 976   | 77.00  | 1587   | 127.00 | 80   | 174.00 | 246400 |
| 41.00 | 107   | 78.00  | 1187   | 128.00 | 592  | 175.00 | 17064  |
| 43.00 | 231   | 79.00  | 4241   | 129.00 | 443  | 176.00 | 235648 |
| 44.00 | 1541  | 80.00  | 1340   | 130.00 | 526  | 177.00 | 15664  |
| 45.00 | 2336  | 81.00  | 4181   | 131.00 | 359  | 178.00 | 721    |
| 46.00 | 186   | 82.00  | 720    | 133.00 | 67   | 179.00 | 59     |
| 47.00 | 4132  | 86.00  | 153    | 134.00 | 88   | 183.00 | 50     |
| 48.00 | 1457  | 87.00  | 12818  | 135.00 | 263  | 191.00 | 59     |
| 49.00 | 11130 | 88.00  | 12138  | 137.00 | 376  | 194.00 | 59     |
| 50.00 | 48176 | 89.00  | 70     | 138.00 | 53   | 196.00 | 78     |
| 51.00 | 15251 | 91.00  | 501    | 139.00 | 50   | 202.00 | 97     |
| 52.00 | 649   | 92.00  | 5525   | 141.00 | 1554 | 207.00 | 112    |
| 53.00 | 94    | 93.00  | 8201   | 142.00 | 191  | 216.00 | 50     |
| 55.00 | 729   | 94.00  | 26208  | 143.00 | 1741 | 233.00 | 60     |
| 56.00 | 3079  | 95.00  | 244864 | 145.00 | 66   | 247.00 | 116    |
| 57.00 | 6660  | 96.00  | 17656  | 146.00 | 250  | 251.00 | 59     |
| 58.00 | 119   | 97.00  | 509    | 147.00 | 66   | 259.00 | 72     |
| 60.00 | 2066  | 98.00  | 78     | 148.00 | 758  | 260.00 | 65     |
| 61.00 | 9147  | 104.00 | 1039   | 149.00 | 79   | 266.00 | 56     |
| 62.00 | 9483  | 105.00 | 301    | 150.00 | 183  | 280.00 | 80     |
| 63.00 | 6997  | 106.00 | 657    | 152.00 | 62   | 281.00 | 1531   |
| 64.00 | 713   | 107.00 | 63     | 154.00 | 114  | 282.00 | 324    |
| 65.00 | 65    | 110.00 | 96     | 155.00 | 729  | 283.00 | 190    |
| 67.00 | 498   | 111.00 | 154    | 157.00 | 476  | 285.00 | 56     |
| 68.00 | 20976 | 112.00 | 66     | 159.00 | 276  | 290.00 | 51     |
| 69.00 | 20328 | 113.00 | 240    | 161.00 | 233  | 295.00 | 61     |
| 70.00 | 1602  | 115.00 | 54     | 164.00 | 54   |        |        |
| 71.00 | 57    | 116.00 | 553    | 166.00 | 59   |        |        |
| 72.00 | 1312  | 117.00 | 1131   | 169.00 | 81   |        |        |

| m/z   | Y     | m/z    | Y      | m/z    | Y    | m/z    | Y      |
|-------|-------|--------|--------|--------|------|--------|--------|
| 36.00 | 2514  | 73.00  | 10086  | 118.00 | 524  | 170.00 | 66     |
| 37.00 | 13249 | 74.00  | 33904  | 119.00 | 658  | 171.00 | 231    |
| 38.00 | 11670 | 75.00  | 104792 | 123.00 | 102  | 172.00 | 352    |
| 39.00 | 4655  | 76.00  | 8941   | 125.00 | 58   | 173.00 | 1548   |
| 40.00 | 976   | 77.00  | 1587   | 127.00 | 80   | 174.00 | 246400 |
| 41.00 | 107   | 78.00  | 1187   | 128.00 | 592  | 175.00 | 17064  |
| 43.00 | 231   | 79.00  | 4241   | 129.00 | 443  | 176.00 | 235648 |
| 44.00 | 1541  | 80.00  | 1340   | 130.00 | 526  | 177.00 | 15664  |
| 45.00 | 2336  | 81.00  | 4181   | 131.00 | 359  | 178.00 | 721    |
| 46.00 | 186   | 82.00  | 720    | 133.00 | 67   | 179.00 | 59     |
| 47.00 | 4132  | 86.00  | 153    | 134.00 | 88   | 183.00 | 50     |
| 48.00 | 1457  | 87.00  | 12818  | 135.00 | 263  | 191.00 | 59     |
| 49.00 | 11130 | 88.00  | 12138  | 137.00 | 376  | 194.00 | 59     |
| 50.00 | 48176 | 89.00  | 70     | 138.00 | 53   | 196.00 | 78     |
| 51.00 | 15251 | 91.00  | 501    | 139.00 | 50   | 202.00 | 97     |
| 52.00 | 649   | 92.00  | 5525   | 141.00 | 1554 | 207.00 | 112    |
| 53.00 | 94    | 93.00  | 8201   | 142.00 | 191  | 216.00 | 50     |
| 55.00 | 729   | 94.00  | 26208  | 143.00 | 1741 | 233.00 | 60     |
| 56.00 | 3079  | 95.00  | 244864 | 145.00 | 66   | 247.00 | 116    |
| 57.00 | 6660  | 96.00  | 17656  | 146.00 | 250  | 251.00 | 59     |
| 58.00 | 119   | 97.00  | 509    | 147.00 | 66   | 259.00 | 72     |
| 60.00 | 2066  | 98.00  | 78     | 148.00 | 758  | 260.00 | 65     |
| 61.00 | 9147  | 104.00 | 1039   | 149.00 | 79   | 266.00 | 56     |
| 62.00 | 9483  | 105.00 | 301    | 150.00 | 183  | 280.00 | 80     |
| 63.00 | 6997  | 106.00 | 657    | 152.00 | 62   | 281.00 | 1531   |
| 64.00 | 713   | 107.00 | 63     | 154.00 | 114  | 282.00 | 324    |
| 65.00 | 65    | 110.00 | 96     | 155.00 | 729  | 283.00 | 190    |
| 67.00 | 498   | 111.00 | 154    | 157.00 | 476  | 285.00 | 56     |
| 68.00 | 20976 | 112.00 | 66     | 159.00 | 276  | 290.00 | 51     |
| 69.00 | 20328 | 113.00 | 240    | 161.00 | 233  | 295.00 | 61     |
| 70.00 | 1602  | 115.00 | 54     | 164.00 | 54   |        |        |
| 71.00 | 57    | 116.00 | 553    | 166.00 | 59   |        |        |
| 72.00 | 1312  | 117.00 | 1131   | 169.00 | 81   |        |        |

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP4\20141103-4149.b\4110301.D

Injection Date: 03-Nov-2014 09:04:30

Instrument ID: CHHP4

Operator ID: 034635

Lims ID: BFB

Worklist Smp#: 1

Client ID:

Injection Vol: 5.0 mL

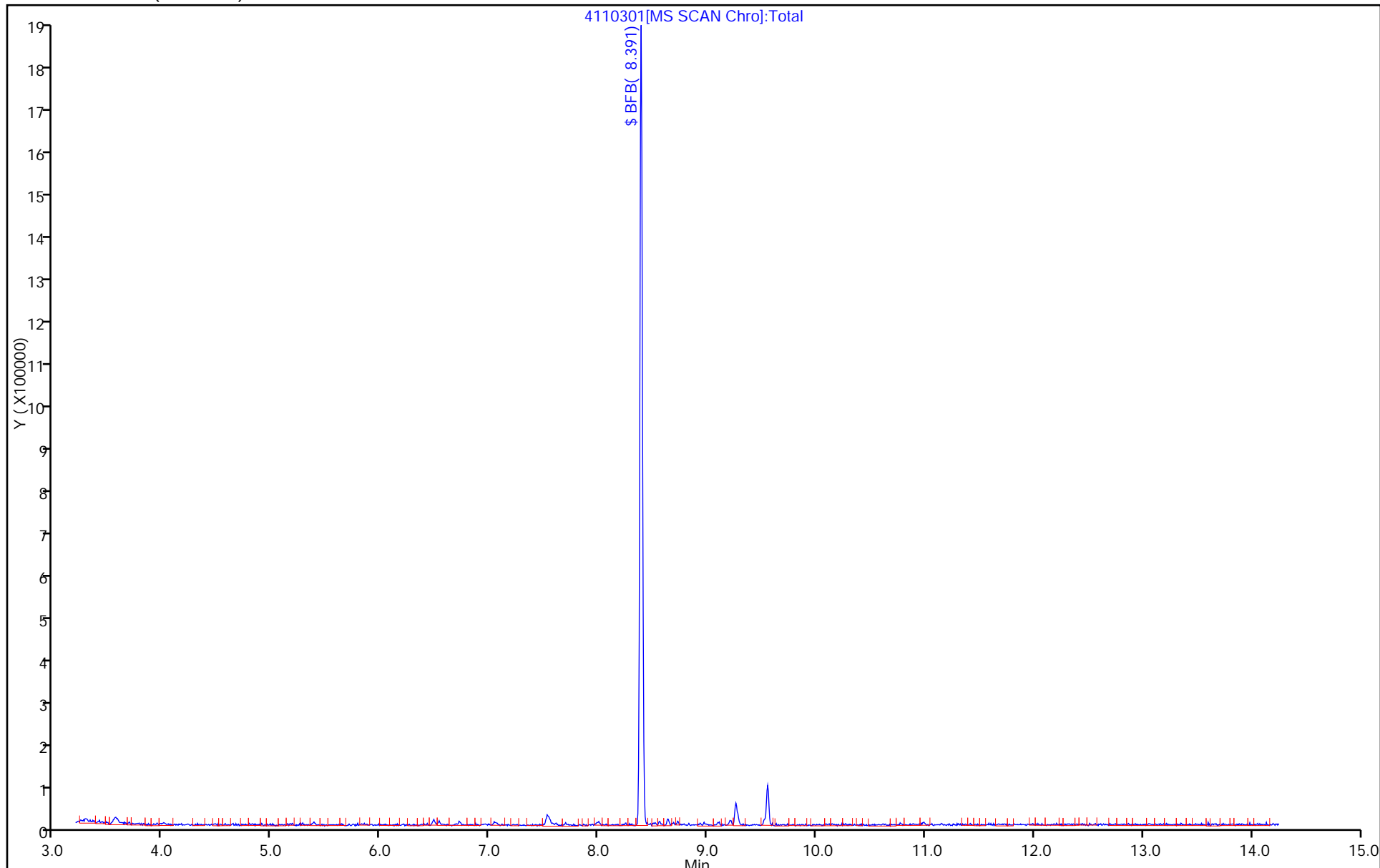
Dil. Factor: 1.0000

ALS Bottle#: 1

Method: MSVOA\_CHHP4

Limit Group: VOA 8260C ICAL

Column: DB-624 (0.18 mm)



TestAmerica Pittsburgh  
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHHP4\20150509-6844.b\4050901.D  
 Lims ID: BFB  
 Client ID:  
 Sample Type: BFB  
 Inject. Date: 09-May-2015 11:24:30 ALS Bottle#: 1 Worklist Smp#: 1  
 Injection Vol: 5.0 mL Dil. Factor: 1.0000  
 Sample Info: BFB  
 Misc. Info.: 180-0006844-001  
 Operator ID: 034635 Instrument ID: CHHP4  
 Method: \\PITCHROM\ChromData\CHHP4\20150509-6844.b\MMSVOA\_CHHP4.m  
 Limit Group: VOA 8260C ICAL  
 Last Update: 10-May-2015 11:35:20 Calib Date: 27-Apr-2015 13:50:30  
 Integrator: RTE ID Type: Deconvolution ID  
 Quant Method: Internal Standard Quant By: Initial Calibration  
 Last ICal File: \\PITCHROM\ChromData\CHHP4\20150427-6642.b\4042710.D  
 Column 1 : DB-624 ( 0.18 mm) Det: MS SCAN  
 Process Host: XAWRK017

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ng | OnCol Amt ng | Flags |
|----------|-----|-----------|---------------|---------------|---|----------|------------|--------------|-------|
|----------|-----|-----------|---------------|---------------|---|----------|------------|--------------|-------|

|          |    |        |        |       |   |        |    |    |  |
|----------|----|--------|--------|-------|---|--------|----|----|--|
| \$ 9 BFB | 95 | 10.648 | 10.648 | 0.000 | 0 | 329298 | NR | NR |  |
|----------|----|--------|--------|-------|---|--------|----|----|--|

**QC Flag Legend**

Processing Flags  
 NR - Missing Quant Standard

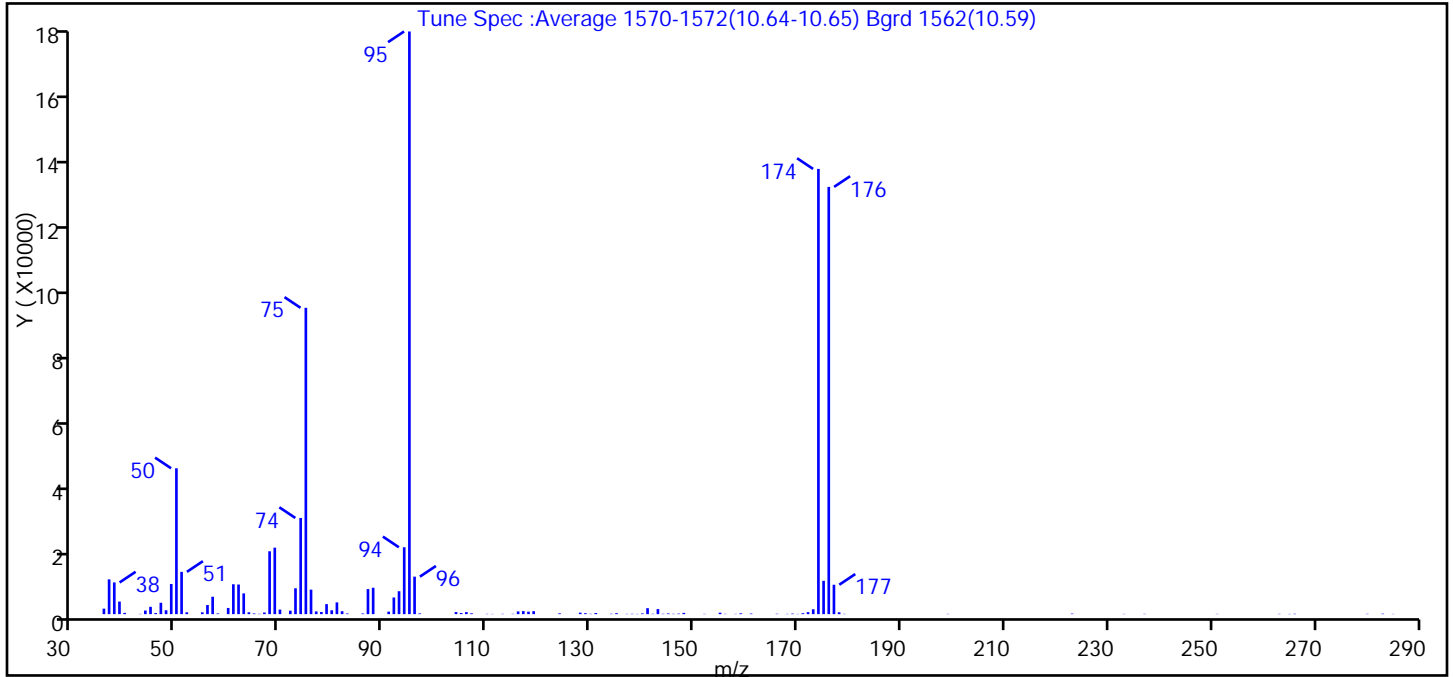
**Reagents:**

VOABFB50\_00062 Amount Added: 1.00 Units: uL

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP4\20150509-6844.b\4050901.D  
 Injection Date: 09-May-2015 11:24:30 Instrument ID: CHHP4  
 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\_CHHP4 Limit Group: VOA 8260C ICAL  
 Tune Method: BFB Method 8260

\$ 9 BFB



| m/z | Ion Abundance Criteria                         | % Relative Abundance |
|-----|--|----------------------|
| 95  | Base peak, 100% relative abundance             | 100.0                |
| 50  | 15 to 40% of m/z 95                            | 25.0                 |
| 75  | 30 to 60% of m/z 95                            | 52.6                 |
| 96  | 5 to 9% of m/z 95                              | 6.4                  |
| 173 | Less than 2% of m/z 174                        | 0.8 (1.1)            |
| 174 | 50 to 120% of m/z 95                           | 76.4                 |
| 175 | 5 to 9% of m/z 174                             | 5.7 (7.5)            |
| 176 | Greater than 95% but less than 101% of m/z 174 | 73.3 (96.0)          |
| 177 | 5 to 9% of m/z 176                             | 5.0 (6.9)            |

Data File: \\PITCHROM\ChromData\CHHP4\20150509-6844.b\4050901.D\MSVOA\_CHHP4.rsl\spectra.d  
Injection Date: 09-May-2015 11:24:30  
Spectrum: Tune Spec :Average 1570-1572(10.64-10.65) Bgrd 1562(10.59)  
Base Peak: 95.00  
Minimum % Base Peak: 0  
Number of Points: 113

| m/z   | Y     | m/z    | Y      | m/z    | Y    | m/z    | Y      |
|-------|-------|--------|--------|--------|------|--------|--------|
| 36.00 | 1649  | 70.00  | 1366   | 113.00 | 95   | 159.00 | 249    |
| 37.00 | 10415 | 72.00  | 1037   | 115.00 | 100  | 161.00 | 180    |
| 38.00 | 9489  | 73.00  | 7739   | 116.00 | 816  | 166.00 | 118    |
| 39.00 | 3763  | 74.00  | 28800  | 117.00 | 903  | 168.00 | 81     |
| 40.00 | 380   | 75.00  | 91720  | 118.00 | 737  | 169.00 | 166    |
| 43.00 | 79    | 76.00  | 7338   | 119.00 | 886  | 170.00 | 73     |
| 44.00 | 1085  | 77.00  | 812    | 124.00 | 235  | 171.00 | 291    |
| 45.00 | 2191  | 78.00  | 636    | 128.00 | 451  | 172.00 | 601    |
| 46.00 | 327   | 79.00  | 3003   | 129.00 | 284  | 173.00 | 1455   |
| 47.00 | 3414  | 80.00  | 1155   | 130.00 | 90   | 174.00 | 133312 |
| 48.00 | 1164  | 81.00  | 3520   | 131.00 | 333  | 175.00 | 9979   |
| 49.00 | 9033  | 82.00  | 880    | 134.00 | 114  | 176.00 | 127928 |
| 50.00 | 43672 | 83.00  | 197    | 135.00 | 280  | 177.00 | 8807   |
| 51.00 | 12666 | 86.00  | 199    | 137.00 | 87   | 178.00 | 564    |
| 52.00 | 546   | 87.00  | 7509   | 138.00 | 113  | 179.00 | 91     |
| 55.00 | 539   | 88.00  | 7904   | 139.00 | 75   | 199.00 | 84     |
| 56.00 | 2729  | 91.00  | 752    | 140.00 | 215  | 223.00 | 155    |
| 57.00 | 5207  | 92.00  | 4987   | 141.00 | 1789 | 233.00 | 75     |
| 58.00 | 203   | 93.00  | 6865   | 142.00 | 110  | 237.00 | 85     |
| 60.00 | 1855  | 94.00  | 20024  | 143.00 | 1506 | 251.00 | 78     |
| 61.00 | 8949  | 95.00  | 174464 | 144.00 | 103  | 263.00 | 88     |
| 62.00 | 8867  | 96.00  | 11226  | 145.00 | 204  | 265.00 | 68     |
| 63.00 | 6216  | 97.00  | 209    | 146.00 | 102  | 266.00 | 117    |
| 64.00 | 559   | 104.00 | 628    | 147.00 | 154  | 280.00 | 97     |
| 65.00 | 203   | 105.00 | 332    | 148.00 | 382  | 283.00 | 140    |
| 66.00 | 97    | 106.00 | 620    | 152.00 | 84   | 285.00 | 70     |
| 67.00 | 489   | 107.00 | 254    | 155.00 | 439  |        |        |
| 68.00 | 18824 | 110.00 | 87     | 156.00 | 86   |        |        |
| 69.00 | 19904 | 111.00 | 69     | 158.00 | 82   |        |        |

Report Date: 10-May-2015 11:35:21

Chrom Revision: 2.2 09-Apr-2015 10:05:40

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP4\20150509-6844.b\4050901.D

Injection Date: 09-May-2015 11:24:30

Instrument ID: CHHP4

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\_CHHP4

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.: 180-43791-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: \_\_\_\_\_ Lab Sample ID: MB 180-141065/5  
 Matrix: Water Lab File ID: 4050905.D  
 Analysis Method: 8260C Date Collected: \_\_\_\_\_  
 Sample wt/vol: 5 (mL) Date Analyzed: 05/09/2015 14:00  
 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.: 141065 Units: ug/L

| CAS NO.    | COMPOUND NAME             | RESULT | Q | RL  | MDL  |
|------------|---------------------------|--------|---|-----|------|
| 71-55-6    | 1,1,1-Trichloroethane     | ND     |   | 5.0 | 1.0  |
| 79-34-5    | 1,1,2,2-Tetrachloroethane | ND     |   | 5.0 | 0.93 |
| 79-00-5    | 1,1,2-Trichloroethane     | ND     |   | 5.0 | 1.2  |
| 75-34-3    | 1,1-Dichloroethane        | ND     |   | 5.0 | 1.0  |
| 75-35-4    | 1,1-Dichloroethene        | ND     |   | 5.0 | 1.1  |
| 95-50-1    | 1,2-Dichlorobenzene       | ND     |   | 5.0 | 0.68 |
| 107-06-2   | 1,2-Dichloroethane        | ND     |   | 5.0 | 0.96 |
| 78-87-5    | 1,2-Dichloropropane       | ND     |   | 5.0 | 1.3  |
| 541-73-1   | 1,3-Dichlorobenzene       | ND     |   | 5.0 | 0.51 |
| 106-46-7   | 1,4-Dichlorobenzene       | ND     |   | 5.0 | 0.53 |
| 110-75-8   | 2-Chloroethyl vinyl ether | ND     |   | 10  | 1.9  |
| 107-02-8   | Acrolein                  | ND     |   | 100 | 5.7  |
| 107-13-1   | Acrylonitrile             | ND     |   | 50  | 9.0  |
| 71-43-2    | Benzene                   | ND     |   | 5.0 | 0.99 |
| 75-25-2    | Bromoform                 | ND     |   | 5.0 | 1.1  |
| 74-83-9    | Bromomethane              | ND     |   | 5.0 | 1.6  |
| 56-23-5    | Carbon tetrachloride      | ND     |   | 5.0 | 1.1  |
| 108-90-7   | Chlorobenzene             | ND     |   | 5.0 | 0.53 |
| 67-66-3    | Chloroform                | ND     |   | 5.0 | 1.0  |
| 74-87-3    | Chloromethane             | ND     |   | 5.0 | 1.4  |
| 124-48-1   | Chlorodibromomethane      | ND     |   | 5.0 | 0.65 |
| 10061-01-5 | cis-1,3-Dichloropropene   | ND     |   | 5.0 | 0.73 |
| 75-27-4    | Dichlorobromomethane      | ND     |   | 5.0 | 0.93 |
| 100-41-4   | Ethylbenzene              | ND     |   | 5.0 | 0.62 |
| 75-09-2    | Methylene Chloride        | 1.10   | J | 5.0 | 1.1  |
| 127-18-4   | Tetrachloroethene         | ND     |   | 5.0 | 0.82 |
| 108-88-3   | Toluene                   | ND     |   | 5.0 | 0.85 |
| 156-60-5   | trans-1,2-Dichloroethene  | ND     |   | 5.0 | 0.75 |
| 10061-02-6 | trans-1,3-Dichloropropene | ND     |   | 5.0 | 0.58 |
| 79-01-6    | Trichloroethene           | ND     |   | 5.0 | 0.80 |
| 75-01-4    | Vinyl chloride            | ND     |   | 5.0 | 1.3  |
| 75-00-3    | Chloroethane              | ND     |   | 5.0 | 0.75 |

FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-43791-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: \_\_\_\_\_ Lab Sample ID: MB 180-141065/5  
 Matrix: Water Lab File ID: 4050905.D  
 Analysis Method: 8260C Date Collected: \_\_\_\_\_  
 Sample wt/vol: 5 (mL) Date Analyzed: 05/09/2015 14:00  
 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.: 141065 Units: ug/L

| CAS NO.    | SURROGATE                    | %REC | Q | LIMITS |
|------------|------------------------------|------|---|--------|
| 17060-07-0 | 1,2-Dichloroethane-d4 (Surr) | 87   |   | 62-123 |
| 460-00-4   | 4-Bromofluorobenzene (Surr)  | 93   |   | 75-120 |
| 1868-53-7  | Dibromofluoromethane (Surr)  | 103  |   | 80-120 |
| 2037-26-5  | Toluene-d8 (Surr)            | 120  |   | 80-120 |

TestAmerica Pittsburgh  
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHHP4\20150509-6844.b\4050905.D  
 Lims ID: mb  
 Client ID:  
 Sample Type: MB  
 Inject. Date: 09-May-2015 14:00:30 ALS Bottle#: 12 Worklist Smp#: 5  
 Purge Vol: 5.000 mL Dil. Factor: 1.0000  
 Sample Info: mb  
 Misc. Info.: 180-0006844-005  
 Operator ID: 034635 Instrument ID: CHHP4  
 Method: \\PITCHROM\ChromData\CHHP4\20150509-6844.b\MMSVOA\_CHHP4.m  
 Limit Group: VOA 8260C ICAL  
 Last Update: 10-May-2015 12:48:16 Calib Date: 27-Apr-2015 13:50:30  
 Integrator: RTE ID Type: Deconvolution ID  
 Quant Method: Internal Standard Quant By: Initial Calibration  
 Last ICal File: \\PITCHROM\ChromData\CHHP4\20150427-6642.b\4042710.D  
 Column 1 : DB-624 ( 0.18 mm) Det: MS SCAN  
 Process Host: XAWRK017

First Level Reviewer: journetp

Date: 09-May-2015 14:20:43

| Compound                        | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q  | Response | Cal Amt ng | OnCol Amt ng | Flags |
|---------------------------------|-----|-----------|---------------|---------------|----|----------|------------|--------------|-------|
| * 1 TBA-d9 (IS)                 | 65  | 3.094     | 3.144         | -0.050        | 95 | 147639   | 5000.0     | 5000.0       |       |
| * 2 Fluorobenzene (IS)          | 96  | 6.257     | 6.259         | -0.002        | 97 | 979359   | 250.0      | 250.0        |       |
| * 3 Chlorobenzene-d5            | 119 | 9.451     | 9.446         | 0.005         | 88 | 200301   | 250.0      | 250.0        |       |
| * 4 1,4-Dichlorobenzene-d4      | 152 | 11.799    | 11.801        | -0.002        | 97 | 202493   | 250.0      | 250.0        |       |
| \$ 5 Dibromofluoromethane (Surr | 113 | 5.497     | 5.492         | 0.005         | 93 | 208143   | 250.0      | 257.7        |       |
| \$ 6 1,2-Dichloroethane-d4 (Sur | 65  | 5.892     | 5.882         | 0.010         | 95 | 196238   | 250.0      | 218.2        |       |
| \$ 7 Toluene-d8 (Surr)          | 98  | 7.979     | 7.980         | -0.001        | 94 | 952051   | 250.0      | 298.8        |       |
| \$ 8 4-Bromofluorobenzene (Surr | 95  | 10.650    | 10.651        | -0.001        | 89 | 253128   | 250.0      | 231.5        |       |
| 10 Dichlorodifluoromethane      | 85  |           | 1.209         |               |    |          |            | ND           |       |
| 11 Chloromethane                | 50  |           | 1.319         |               |    |          |            | ND           |       |
| 12 Vinyl chloride               | 62  |           | 1.410         |               |    |          |            | ND           |       |
| 13 Butadiene                    | 54  |           | 1.441         |               |    |          |            | ND           |       |
| 14 Bromomethane                 | 94  |           | 1.660         |               |    |          |            | ND           |       |
| 15 Chloroethane                 | 64  |           | 1.739         |               |    |          |            | ND           |       |
| 17 Trichlorofluoromethane       | 101 |           | 1.939         |               |    |          |            | ND           |       |
| 16 Dichlorofluoromethane        | 67  |           | 1.964         |               |    |          |            | ND           |       |
| 19 Ethyl ether                  | 59  |           | 2.219         |               |    |          |            | ND           |       |
| 20 Acrolein                     | 56  |           | 2.359         |               |    |          |            | ND           |       |
| 21 1,1-Dichloroethene           | 96  |           | 2.414         |               |    |          |            | ND           |       |
| 22 1,1,2-Trichloro-1,2,2-trif   | 101 |           | 2.487         |               |    |          |            | ND           |       |
| 23 Acetone                      | 43  |           | 2.511         |               |    |          |            | ND           |       |
| 24 Iodomethane                  | 142 |           | 2.566         |               |    |          |            | ND           |       |
| 25 Carbon disulfide             | 76  |           | 2.615         |               |    |          |            | ND           |       |
| 26 Isopropyl alcohol            | 45  |           | 2.742         |               |    |          |            | ND           |       |
| 28 3-Chloro-1-propene           | 76  |           | 2.828         |               |    |          |            | ND           |       |
| 27 Acetonitrile                 | 40  |           | 2.834         |               |    |          |            | ND           |       |
| 29 Methyl acetate               | 43  |           | 2.858         |               |    |          |            | ND           |       |
| 30 Methylene Chloride           | 84  | 2.997     | 2.992         | 0.005         | 93 | 22015    |            | 5.49         |       |
| 18 Ethanol                      | 45  |           | 3.150         |               |    |          |            | ND           |       |
| 31 2-Methyl-2-propanol          | 59  |           | 3.241         |               |    |          |            | ND           |       |
| 32 Acrylonitrile                | 53  |           | 3.314         |               |    |          |            | ND           |       |

| Compound                       | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ng | OnCol Amt ng | Flags |
|--------------------------------|-----|-----------|---------------|---------------|---|----------|------------|--------------|-------|
| 33 trans-1,2-Dichloroethene    | 96  |           | 3.339         |               |   |          |            | ND           |       |
| 34 Methyl tert-butyl ether     | 73  |           | 3.363         |               |   |          |            | ND           |       |
| 35 Hexane                      | 57  |           | 3.722         |               |   |          |            | ND           |       |
| 38 Vinyl acetate               | 43  |           | 3.728         |               |   |          |            | ND           |       |
| 36 1,1-Dichloroethane          | 63  |           | 3.965         |               |   |          |            | ND           |       |
| 37 2-Chloro-1,3-butadiene      | 53  |           | 4.063         |               |   |          |            | ND           |       |
| 39 Isopropyl ether             | 45  |           | 4.099         |               |   |          |            | ND           |       |
| 40 Tert-butyl ethyl ether      | 59  |           | 4.641         |               |   |          |            | ND           |       |
| 41 2,2-Dichloropropane         | 77  |           | 4.793         |               |   |          |            | ND           |       |
| 42 cis-1,2-Dichloroethene      | 96  |           | 4.805         |               |   |          |            | ND           |       |
| 43 2-Butanone (MEK)            | 43  |           | 4.859         |               |   |          |            | ND           |       |
| 44 Propionitrile               | 54  |           | 4.926         |               |   |          |            | ND           |       |
| 45 Ethyl acetate               | 43  |           | 4.945         |               |   |          |            | ND           |       |
| 47 Methacrylonitrile           | 41  |           | 5.115         |               |   |          |            | ND           |       |
| 46 Chlorobromomethane          | 128 |           | 5.127         |               |   |          |            | ND           |       |
| 48 Tetrahydrofuran             | 42  |           | 5.145         |               |   |          |            | ND           |       |
| 49 Chloroform                  | 83  |           | 5.291         |               |   |          |            | ND           |       |
| 50 1,1,1-Trichloroethane       | 97  |           | 5.437         |               |   |          |            | ND           |       |
| 51 Cyclohexane                 | 56  |           | 5.510         |               |   |          |            | ND           |       |
| 53 Carbon tetrachloride        | 117 |           | 5.620         |               |   |          |            | ND           |       |
| 52 1,1-Dichloropropene         | 75  |           | 5.650         |               |   |          |            | ND           |       |
| 54 Benzene                     | 78  |           | 5.875         |               |   |          |            | ND           |       |
| 59 Isobutyl alcohol            | 41  |           | 5.936         |               |   |          |            | ND           |       |
| 55 1,2-Dichloroethane          | 62  |           | 5.985         |               |   |          |            | ND           |       |
| 57 Isooctane                   | 57  |           | 6.052         |               |   |          |            | ND           |       |
| 56 Tert-amyl methyl ether      | 73  |           | 6.101         |               |   |          |            | ND           |       |
| 58 n-Heptane                   | 43  |           | 6.295         |               |   |          |            | ND           |       |
| 61 Trichloroethene             | 130 |           | 6.666         |               |   |          |            | ND           |       |
| 62 Ethyl acrylate              | 55  |           | 6.837         |               |   |          |            | ND           |       |
| 63 Methylcyclohexane           | 83  |           | 6.904         |               |   |          |            | ND           |       |
| 64 1,2-Dichloropropane         | 63  |           | 6.952         |               |   |          |            | ND           |       |
| 65 Dibromomethane              | 93  |           | 7.043         |               |   |          |            | ND           |       |
| 67 1,4-Dioxane                 | 88  |           | 7.050         |               |   |          |            | ND           |       |
| 60 n-Butanol                   | 56  |           | 7.080         |               |   |          |            | ND           |       |
| 66 Methyl methacrylate         | 69  |           | 7.080         |               |   |          |            | ND           |       |
| 68 Dichlorobromomethane        | 83  |           | 7.262         |               |   |          |            | ND           |       |
| 69 2-Nitropropane              | 41  |           | 7.494         |               |   |          |            | ND           |       |
| 70 2-Chloroethyl vinyl ether   | 63  |           | 7.597         |               |   |          |            | ND           |       |
| 74 trans-1,3-Dichloropropene   | 75  |           | 7.725         |               |   |          |            | ND           |       |
| 72 4-Methyl-2-pentanone (MIBK) | 43  |           | 7.895         |               |   |          |            | ND           |       |
| 73 Toluene                     | 91  |           | 8.047         |               |   |          |            | ND           |       |
| 71 cis-1,3-Dichloropropene     | 75  |           | 8.327         |               |   |          |            | ND           |       |
| 75 Ethyl methacrylate          | 69  |           | 8.412         |               |   |          |            | ND           |       |
| 76 1,1,2-Trichloroethane       | 97  |           | 8.516         |               |   |          |            | ND           |       |
| 77 Tetrachloroethene           | 164 |           | 8.558         |               |   |          |            | ND           |       |
| 78 1,3-Dichloropropane         | 76  |           | 8.674         |               |   |          |            | ND           |       |
| 79 2-Hexanone                  | 43  |           | 8.753         |               |   |          |            | ND           |       |
| 81 Chlorodibromomethane        | 129 |           | 8.881         |               |   |          |            | ND           |       |
| 80 n-Butyl acetate             | 43  |           | 8.893         |               |   |          |            | ND           |       |
| 82 Ethylene Dibromide          | 107 |           | 8.984         |               |   |          |            | ND           |       |
| 84 Chlorobenzene               | 112 |           | 9.477         |               |   |          |            | ND           |       |
| 85 1,1,1,2-Tetrachloroethane   | 131 |           | 9.586         |               |   |          |            | ND           |       |

| Compound                         | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ng | OnCol Amt ng | Flags |
|----------------------------------|-----|-----------|---------------|---------------|---|----------|------------|--------------|-------|
| 86 Ethylbenzene                  | 106 |           | 9.592         |               |   |          |            | ND           |       |
| 87 m-Xylene & p-Xylene           | 106 |           | 9.726         |               |   |          |            | ND           |       |
| 88 o-Xylene                      | 106 |           | 10.103        |               |   |          |            | ND           |       |
| 89 Styrene                       | 104 |           | 10.128        |               |   |          |            | ND           |       |
| 90 Bromoform                     | 173 |           | 10.298        |               |   |          |            | ND           |       |
| 91 Isopropylbenzene              | 105 |           | 10.481        |               |   |          |            | ND           |       |
| 83 4-Chlorobenzotrifluoride      | 180 |           | 10.528        |               |   |          |            | ND           |       |
| 92 Cyclohexanone                 | 55  |           | 10.554        |               |   |          |            | ND           |       |
| 94 Bromobenzene                  | 156 |           | 10.773        |               |   |          |            | ND           |       |
| 93 1,1,2,2-Tetrachloroethane     | 83  |           | 10.803        |               |   |          |            | ND           |       |
| 96 trans-1,4-Dichloro-2-buten    | 53  |           | 10.846        |               |   |          |            | ND           |       |
| 95 1,2,3-Trichloropropane        | 110 |           | 10.852        |               |   |          |            | ND           |       |
| 97 N-Propylbenzene               | 120 |           | 10.894        |               |   |          |            | ND           |       |
| 98 2-Chlorotoluene               | 126 |           | 10.967        |               |   |          |            | ND           |       |
| 99 1,3,5-Trimethylbenzene        | 105 |           | 11.089        |               |   |          |            | ND           |       |
| 100 4-Chlorotoluene              | 126 |           | 11.095        |               |   |          |            | ND           |       |
| 101 tert-Butylbenzene            | 119 |           | 11.393        |               |   |          |            | ND           |       |
| 102 Pentachloroethane            | 167 |           | 11.411        |               |   |          |            | ND           |       |
| 103 1,2,4-Trimethylbenzene       | 105 |           | 11.454        |               |   |          |            | ND           |       |
| 104 sec-Butylbenzene             | 105 |           | 11.618        |               |   |          |            | ND           |       |
| 105 1,3-Dichlorobenzene          | 146 |           | 11.716        |               |   |          |            | ND           |       |
| 106 4-Isopropyltoluene           | 119 |           | 11.783        |               |   |          |            | ND           |       |
| 107 1,4-Dichlorobenzene          | 146 |           | 11.825        |               |   |          |            | ND           |       |
| 108 1,2,3-Trimethylbenzene       | 105 |           | 11.856        |               |   |          |            | ND           |       |
| 109 Benzyl chloride              | 91  |           | 11.941        |               |   |          |            | ND           |       |
| 111 1,2-Dichlorobenzene          | 146 |           | 12.172        |               |   |          |            | ND           |       |
| 110 n-Butylbenzene               | 91  |           | 12.184        |               |   |          |            | ND           |       |
| 112 1,2-Dibromo-3-Chloropropan   | 75  |           | 12.963        |               |   |          |            | ND           |       |
| 114 1,3,5-Trichlorobenzene       | 180 |           | 13.145        |               |   |          |            | ND           |       |
| 113 1,2,4-Trichlorobenzene       | 180 |           | 13.772        |               |   |          |            | ND           |       |
| 115 Hexachlorobutadiene          | 225 |           | 13.930        |               |   |          |            | ND           |       |
| 116 Naphthalene                  | 128 |           | 14.027        |               |   |          |            | ND           |       |
| 117 1,2,3-Trichlorobenzene       | 180 |           | 14.246        |               |   |          |            | ND           |       |
| 118 2-Methylnaphthalene          | 142 |           | 15.171        |               |   |          |            | ND           |       |
| 121 2,4,5-Trichlorotoluene       | 159 |           | 0.000         |               |   |          |            | ND           |       |
| 125 2-Chlorobenzotrifluoride     | 180 |           | 0.000         |               |   |          |            | ND           |       |
| 119 1,2-dichloro-4-(trifluorom   | 214 |           | 0.000         |               |   |          |            | ND           |       |
| 123 2,5-Dichlorobenzotrifluori   | 214 |           | 0.000         |               |   |          |            | ND           |       |
| 126 2,4-Dichloro-1-(triflourom   | 214 |           | 0.000         |               |   |          |            | ND           |       |
| 124 3-Chlorobenzotrifluoride     | 180 |           | 0.000         |               |   |          |            | ND           |       |
| 128 2,3,6-Trichlorotoluene       | 159 |           | 0.000         |               |   |          |            | ND           |       |
| 120 2,4- & 2,5- & 2,6- Dichlor   | 125 |           | 0.000         |               |   |          |            | ND           |       |
| 127 2,3- & 3,4- Dichlorotoluen   | 125 |           | 0.000         |               |   |          |            | ND           |       |
| 122 3-Chlorotoluene              | 126 |           | 0.000         |               |   |          |            | ND           |       |
| S 129 1,2-Dichloroethene, Total  | 96  |           | 1.000         |               |   |          |            | ND           |       |
| S 130 Xylenes, Total             | 106 |           | 1.000         |               |   |          |            | ND           |       |
| S 131 1,3-Dichloropropene, Total | 1   |           | 0.000         |               |   |          |            | ND           |       |
| T 133 Methyl n-amyl ketone TIC   | 43  |           | 0.000         |               |   |          |            | ND           |       |
| T 132 Tetrahydrofuran TIC        | 42  |           | 6.255         |               |   |          |            | ND           |       |
| T 134 Mesityl oxide TIC          | 83  |           | 7.915         |               |   |          |            | ND           |       |

**Reagents:**

VOA8260INT\_00032

Amount Added: 10.00

Units: uL

Run Reagent

VOA8260SURR\_00035

Amount Added: 10.00

Units: uL

Run Reagent

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP4\20150509-6844.b\4050905.D

Injection Date: 09-May-2015 14:00:30

Instrument ID: CHHP4

Operator ID: 034635

Lims ID: mb

Worklist Smp#: 5

Client ID:

Purge Vol: 5.000 mL

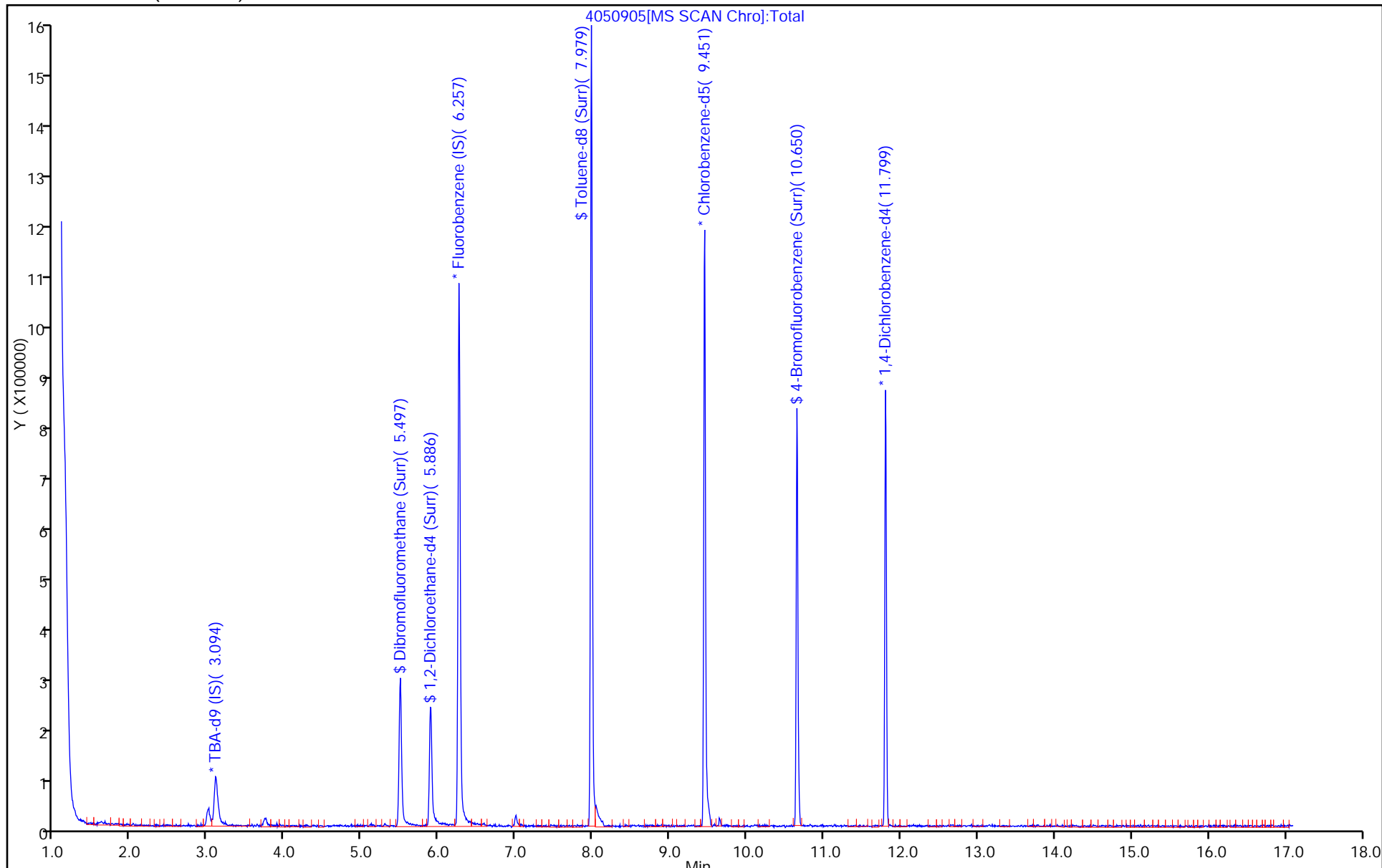
Dil. Factor: 1.0000

ALS Bottle#: 12

Method: MSVOA\_CHHP4

Limit Group: VOA 8260C ICAL

Column: DB-624 (0.18 mm)



TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP4\20150509-6844.b\4050905.D

Injection Date: 09-May-2015 14:00:30 Instrument ID: CHHP4

Lims ID: mb

Client ID:

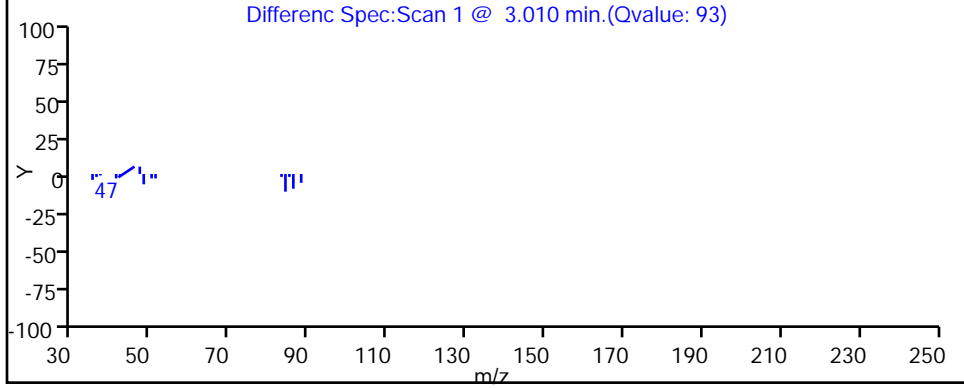
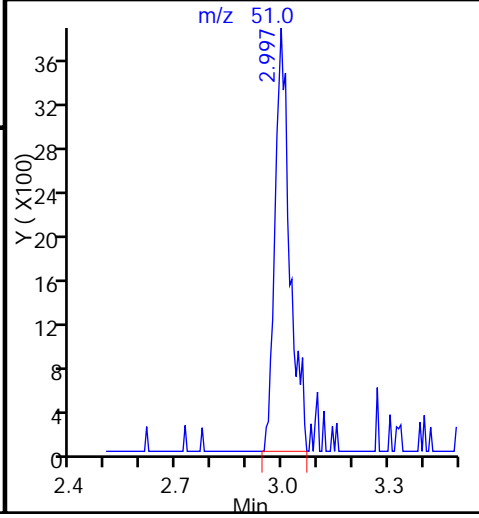
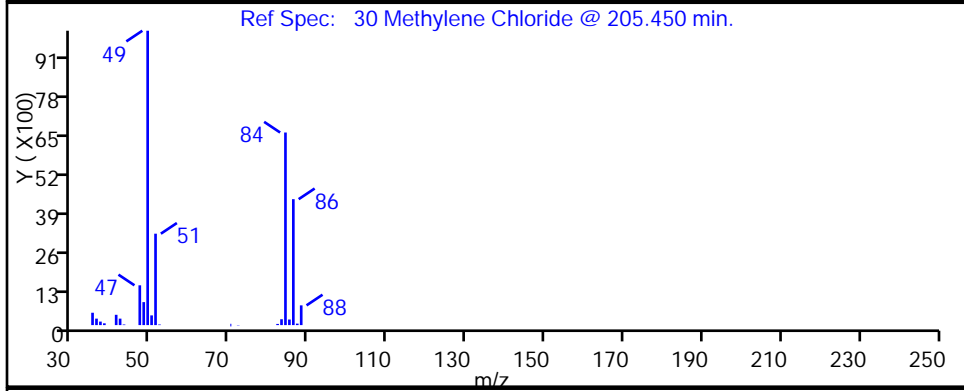
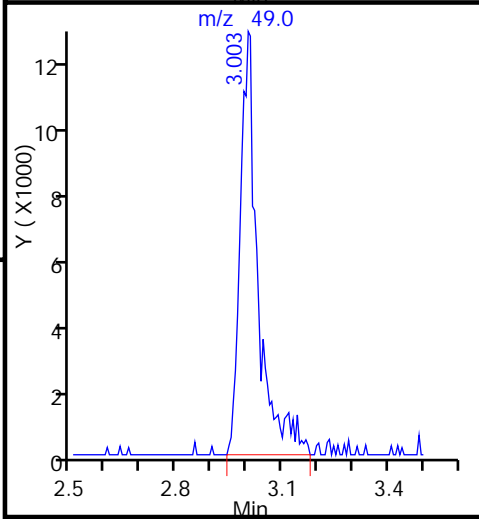
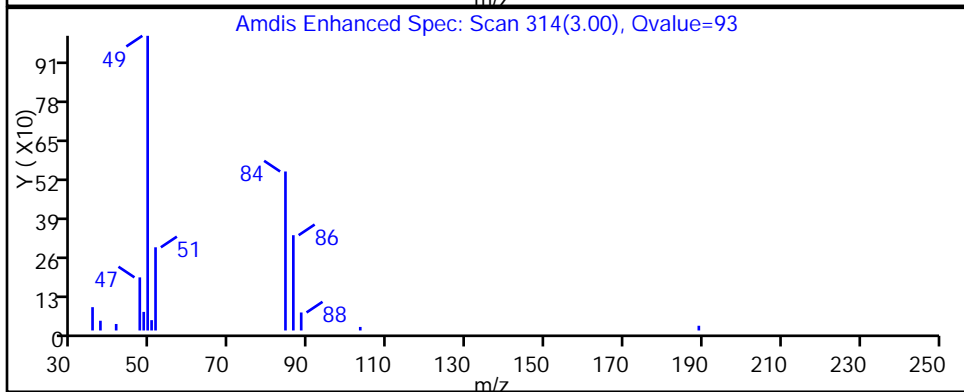
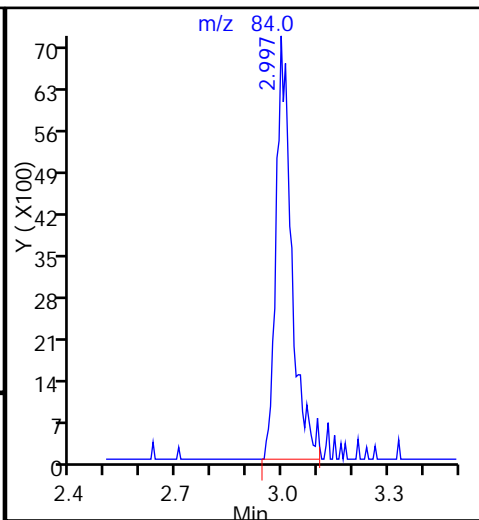
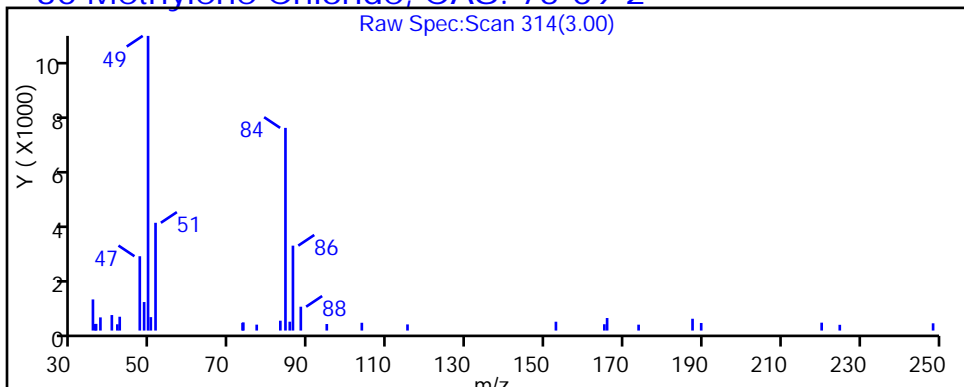
Operator ID: 034635 ALS Bottle#: 12 Worklist Smp#: 5

Purge Vol: 5.000 mL Dil. Factor: 1.0000

Method: MSVOA\_CHHP4 Limit Group: VOA 8260C ICAL

Column: DB-624 (0.18 mm) Detector: MS SCAN

### 30 Methylene Chloride, CAS: 75-09-2





FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-43791-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: \_\_\_\_\_ Lab Sample ID: LCS 180-141065/9  
 Matrix: Water Lab File ID: 4050909.D  
 Analysis Method: 8260C Date Collected: \_\_\_\_\_  
 Sample wt/vol: 5 (mL) Date Analyzed: 05/09/2015 15:48  
 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.: 141065 Units: ug/L

| CAS NO.    | COMPOUND NAME             | RESULT | Q | RL  | MDL  |
|------------|---------------------------|--------|---|-----|------|
| 71-55-6    | 1,1,1-Trichloroethane     | 40.4   |   | 5.0 | 1.0  |
| 79-34-5    | 1,1,2,2-Tetrachloroethane | 29.9   |   | 5.0 | 0.93 |
| 79-00-5    | 1,1,2-Trichloroethane     | 31.5   |   | 5.0 | 1.2  |
| 75-34-3    | 1,1-Dichloroethane        | 38.3   |   | 5.0 | 1.0  |
| 75-35-4    | 1,1-Dichloroethene        | 38.2   |   | 5.0 | 1.1  |
| 95-50-1    | 1,2-Dichlorobenzene       | 36.8   |   | 5.0 | 0.68 |
| 107-06-2   | 1,2-Dichloroethane        | 35.8   |   | 5.0 | 0.96 |
| 78-87-5    | 1,2-Dichloropropane       | 36.6   |   | 5.0 | 1.3  |
| 541-73-1   | 1,3-Dichlorobenzene       | 40.9   |   | 5.0 | 0.51 |
| 106-46-7   | 1,4-Dichlorobenzene       | 38.1   |   | 5.0 | 0.53 |
| 110-75-8   | 2-Chloroethyl vinyl ether | 73.4   |   | 10  | 1.9  |
| 107-02-8   | Acrolein                  | 221    |   | 100 | 5.7  |
| 107-13-1   | Acrylonitrile             | 270    |   | 50  | 9.0  |
| 71-43-2    | Benzene                   | 38.7   |   | 5.0 | 0.99 |
| 75-25-2    | Bromoform                 | 30.8   |   | 5.0 | 1.1  |
| 74-83-9    | Bromomethane              | 45.0   |   | 5.0 | 1.6  |
| 56-23-5    | Carbon tetrachloride      | 42.5   |   | 5.0 | 1.1  |
| 108-90-7   | Chlorobenzene             | 39.7   |   | 5.0 | 0.53 |
| 67-66-3    | Chloroform                | 38.1   |   | 5.0 | 1.0  |
| 74-87-3    | Chloromethane             | 40.5   |   | 5.0 | 1.4  |
| 124-48-1   | Chlorodibromomethane      | 35.9   |   | 5.0 | 0.65 |
| 10061-01-5 | cis-1,3-Dichloropropene   | 34.7   |   | 5.0 | 0.73 |
| 75-27-4    | Dichlorobromomethane      | 39.3   |   | 5.0 | 0.93 |
| 100-41-4   | Ethylbenzene              | 41.8   |   | 5.0 | 0.62 |
| 75-09-2    | Methylene Chloride        | 35.9   |   | 5.0 | 1.1  |
| 127-18-4   | Tetrachloroethene         | 40.6   |   | 5.0 | 0.82 |
| 108-88-3   | Toluene                   | 39.4   |   | 5.0 | 0.85 |
| 156-60-5   | trans-1,2-Dichloroethene  | 37.5   |   | 5.0 | 0.75 |
| 10061-02-6 | trans-1,3-Dichloropropene | 37.0   |   | 5.0 | 0.58 |
| 79-01-6    | Trichloroethene           | 39.6   |   | 5.0 | 0.80 |
| 75-01-4    | Vinyl chloride            | 38.6   |   | 5.0 | 1.3  |
| 75-00-3    | Chloroethane              | 44.2   |   | 5.0 | 0.75 |

FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-43791-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: \_\_\_\_\_ Lab Sample ID: LCS 180-141065/9  
 Matrix: Water Lab File ID: 4050909.D  
 Analysis Method: 8260C Date Collected: \_\_\_\_\_  
 Sample wt/vol: 5 (mL) Date Analyzed: 05/09/2015 15:48  
 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.: 141065 Units: ug/L

| CAS NO.    | SURROGATE                    | %REC | Q | LIMITS |
|------------|------------------------------|------|---|--------|
| 17060-07-0 | 1,2-Dichloroethane-d4 (Surr) | 94   |   | 62-123 |
| 460-00-4   | 4-Bromofluorobenzene (Surr)  | 97   |   | 75-120 |
| 1868-53-7  | Dibromofluoromethane (Surr)  | 102  |   | 80-120 |
| 2037-26-5  | Toluene-d8 (Surr)            | 100  |   | 80-120 |

TestAmerica Pittsburgh  
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHHP4\20150509-6844.b\4050909.D  
 Lims ID: lcs  
 Client ID:  
 Sample Type: LCS  
 Inject. Date: 09-May-2015 15:48:30 ALS Bottle#: 16 Worklist Smp#: 9  
 Purge Vol: 5.000 mL Dil. Factor: 1.0000  
 Sample Info: lcs  
 Misc. Info.: 180-0006844-009  
 Operator ID: 034635 Instrument ID: CHHP4  
 Method: \\PITCHROM\ChromData\CHHP4\20150509-6844.b\MSVOA\_CHHP4.m  
 Limit Group: VOA 8260C ICAL  
 Last Update: 10-May-2015 11:35:24 Calib Date: 27-Apr-2015 13:50:30  
 Integrator: RTE ID Type: Deconvolution ID  
 Quant Method: Internal Standard Quant By: Initial Calibration  
 Last ICal File: \\PITCHROM\ChromData\CHHP4\20150427-6642.b\4042710.D  
 Column 1 : DB-624 ( 0.18 mm) Det: MS SCAN  
 Process Host: XAWRK017

First Level Reviewer: journey

Date: 10-May-2015 10:50:02

| Compound                        | Sig | RT (min.) | Exp RT (min.) | Diff RT (min.) | Q   | Response | Cal Amt ng | OnCol Amt ng | Flags |
|---------------------------------|-----|-----------|---------------|----------------|-----|----------|------------|--------------|-------|
| * 1 TBA-d9 (IS)                 | 65  | 3.164     | 3.144         | 0.020          | 99  | 162242   | 5000.0     | 5000.0       |       |
| * 2 Fluorobenzene (IS)          | 96  | 6.254     | 6.259         | -0.005         | 98  | 923359   | 250.0      | 250.0        |       |
| * 3 Chlorobenzene-d5            | 119 | 9.448     | 9.446         | 0.002          | 88  | 215803   | 250.0      | 250.0        |       |
| * 4 1,4-Dichlorobenzene-d4      | 152 | 11.803    | 11.801        | 0.002          | 95  | 283557   | 250.0      | 250.0        |       |
| \$ 5 Dibromofluoromethane (Surr | 113 | 5.488     | 5.492         | -0.004         | 93  | 193934   | 250.0      | 254.7        |       |
| \$ 6 1,2-Dichloroethane-d4 (Sur | 65  | 5.883     | 5.882         | 0.001          | 94  | 199367   | 250.0      | 235.2        |       |
| \$ 7 Toluene-d8 (Surr)          | 98  | 7.976     | 7.980         | -0.004         | 94  | 862590   | 250.0      | 251.2        |       |
| \$ 8 4-Bromofluorobenzene (Surr | 95  | 10.647    | 10.651        | -0.004         | 89  | 285917   | 250.0      | 242.7        |       |
| 10 Dichlorodifluoromethane      | 85  | 1.205     | 1.209         | -0.004         | 99  | 310652   | 200.0      | 212.9        |       |
| 11 Chloromethane                | 50  | 1.309     | 1.319         | -0.010         | 99  | 436835   | 200.0      | 202.6        |       |
| 12 Vinyl chloride               | 62  | 1.412     | 1.410         | 0.002          | 98  | 353292   | 200.0      | 192.8        |       |
| 13 Butadiene                    | 54  | 1.430     | 1.441         | -0.011         | 94  | 346751   | 200.0      | 190.4        |       |
| 14 Bromomethane                 | 94  | 1.649     | 1.660         | -0.011         | 91  | 55393    | 200.0      | 224.9        |       |
| 15 Chloroethane                 | 64  | 1.741     | 1.739         | 0.001          | 96  | 67228    | 200.0      | 220.9        |       |
| 16 Dichlorofluoromethane        | 67  | 1.941     | 1.964         | -0.023         | 97  | 336262   | 200.0      | 378.7        |       |
| 17 Trichlorofluoromethane       | 101 | 1.905     | 1.939         | -0.034         | 97  | 288145   | 200.0      | 401.6        |       |
| 19 Ethyl ether                  | 59  | 2.233     | 2.219         | 0.014          | 96  | 117947   | 200.0      | 193.3        |       |
| 20 Acrolein                     | 56  | 2.355     | 2.359         | -0.004         | 98  | 56225    | 875.0      | 1104.1       |       |
| 21 1,1-Dichloroethene           | 96  | 2.404     | 2.414         | -0.010         | 94  | 192697   | 200.0      | 190.9        |       |
| 22 1,1,2-Trichloro-1,2,2-trif   | 101 | 2.458     | 2.487         | -0.029         | 95  | 228777   | 200.0      | 189.2        |       |
| 23 Acetone                      | 43  | 2.525     | 2.511         | 0.014          | 91  | 43935    | 200.0      | 142.4        |       |
| 24 Iodomethane                  | 142 | 2.550     | 2.566         | -0.016         | 98  | 277068   | 200.0      | 183.1        |       |
| 25 Carbon disulfide             | 76  | 2.610     | 2.615         | -0.005         | 100 | 561945   | 200.0      | 183.4        |       |
| 28 3-Chloro-1-propene           | 76  | 2.823     | 2.828         | -0.005         | 92  | 122986   | 200.0      | 167.2        |       |
| 29 Methyl acetate               | 43  | 2.860     | 2.858         | 0.002          | 99  | 471087   | 1000.0     | 714.9        |       |
| 30 Methylene Chloride           | 84  | 2.982     | 2.992         | -0.010         | 95  | 219787   | 200.0      | 179.7        |       |
| 31 2-Methyl-2-propanol          | 59  | 3.274     | 3.241         | 0.033          | 91  | 88615    | 2000.0     | 2018.0       |       |
| 33 trans-1,2-Dichloroethene     | 96  | 3.322     | 3.339         | -0.017         | 95  | 210975   | 200.0      | 187.5        |       |
| 32 Acrylonitrile                | 53  | 3.316     | 3.314         | 0.002          | 99  | 410991   | 2000.0     | 1348.6       |       |
| 34 Methyl tert-butyl ether      | 73  | 3.365     | 3.363         | 0.002          | 97  | 335084   | 200.0      | 147.5        |       |
| 38 Vinyl acetate                | 43  | 3.718     | 3.728         | -0.010         | 68  | 314059   | 200.0      | 185.3        |       |

| Compound                       | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q  | Response | Cal Amt ng | OnCol Amt ng | Flags |
|--------------------------------|-----|-----------|---------------|---------------|----|----------|------------|--------------|-------|
| 35 Hexane                      | 57  | 3.718     | 3.722         | -0.004        | 95 | 446423   | 200.0      | 181.7        |       |
| 36 1,1-Dichloroethane          | 63  | 3.967     | 3.965         | 0.002         | 96 | 424384   | 200.0      | 191.6        |       |
| 41 2,2-Dichloropropane         | 77  | 4.794     | 4.793         | 0.001         | 85 | 191653   | 200.0      | 216.8        |       |
| 42 cis-1,2-Dichloroethene      | 96  | 4.807     | 4.805         | 0.002         | 86 | 200038   | 200.0      | 178.0        |       |
| 43 2-Butanone (MEK)            | 43  | 4.855     | 4.859         | -0.004        | 97 | 46322    | 200.0      | 118.2        |       |
| 46 Chlorobromomethane          | 128 | 5.123     | 5.127         | -0.004        | 89 | 70542    | 200.0      | 169.2        |       |
| 48 Tetrahydrofuran             | 42  | 5.141     | 5.145         | -0.004        | 95 | 62440    | 400.0      | 239.1        |       |
| 49 Chloroform                  | 83  | 5.293     | 5.291         | 0.002         | 96 | 308489   | 200.0      | 190.3        |       |
| 50 1,1,1-Trichloroethane       | 97  | 5.445     | 5.437         | 0.008         | 97 | 256793   | 200.0      | 202.2        |       |
| 51 Cyclohexane                 | 56  | 5.506     | 5.510         | -0.004        | 94 | 514570   | 200.0      | 177.7        |       |
| 53 Carbon tetrachloride        | 117 | 5.628     | 5.620         | 0.008         | 94 | 246665   | 200.0      | 212.6        |       |
| 52 1,1-Dichloropropene         | 75  | 5.652     | 5.650         | 0.002         | 93 | 279486   | 200.0      | 188.6        |       |
| 54 Benzene                     | 78  | 5.871     | 5.875         | -0.004        | 98 | 803145   | 200.0      | 193.7        |       |
| 59 Isobutyl alcohol            | 41  | 5.944     | 5.936         | 0.008         | 95 | 67849    | 5000.0     | 3372.8       |       |
| 55 1,2-Dichloroethane          | 62  | 5.981     | 5.985         | -0.004        | 95 | 183465   | 200.0      | 179.0        |       |
| 58 n-Heptane                   | 43  | 6.291     | 6.295         | -0.004        | 97 | 469327   | 200.0      | 191.9        |       |
| 61 Trichloroethene             | 130 | 6.668     | 6.666         | 0.002         | 96 | 188527   | 200.0      | 198.0        |       |
| 63 Methylcyclohexane           | 83  | 6.905     | 6.904         | 0.001         | 95 | 402215   | 200.0      | 187.3        |       |
| 64 1,2-Dichloropropane         | 63  | 6.954     | 6.952         | 0.002         | 97 | 205448   | 200.0      | 183.0        |       |
| 65 Dibromomethane              | 93  | 7.039     | 7.043         | -0.004        | 94 | 66257    | 200.0      | 157.4        |       |
| 67 1,4-Dioxane                 | 88  | 7.057     | 7.050         | 0.007         | 99 | 18653    | 4000.0     | 2558.6       |       |
| 68 Dichlorobromomethane        | 83  | 7.258     | 7.262         | -0.004        | 98 | 182346   | 200.0      | 196.3        |       |
| 70 2-Chloroethyl vinyl ether   | 63  | 7.593     | 7.597         | -0.004        | 91 | 147099   | 400.0      | 367.1        |       |
| 74 trans-1,3-Dichloropropene   | 75  | 7.721     | 7.725         | -0.004        | 97 | 243534   | 200.0      | 185.1        |       |
| 72 4-Methyl-2-pentanone (MIBK) | 43  | 7.891     | 7.895         | -0.004        | 98 | 106260   | 200.0      | 140.9        |       |
| 73 Toluene                     | 91  | 8.043     | 8.047         | -0.004        | 98 | 835286   | 200.0      | 196.8        |       |
| 71 cis-1,3-Dichloropropene     | 75  | 8.323     | 8.327         | -0.004        | 93 | 168282   | 200.0      | 173.3        |       |
| 75 Ethyl methacrylate          | 69  | 8.408     | 8.412         | -0.004        | 93 | 143628   | 200.0      | 150.7        |       |
| 76 1,1,2-Trichloroethane       | 97  | 8.517     | 8.516         | 0.001         | 91 | 104577   | 200.0      | 157.6        |       |
| 77 Tetrachloroethene           | 164 | 8.560     | 8.558         | 0.002         | 97 | 165734   | 200.0      | 202.9        |       |
| 78 1,3-Dichloropropane         | 76  | 8.670     | 8.674         | -0.004        | 97 | 196753   | 200.0      | 161.8        |       |
| 79 2-Hexanone                  | 43  | 8.749     | 8.753         | -0.004        | 99 | 65505    | 200.0      | 127.7        |       |
| 81 Chlorodibromomethane        | 129 | 8.876     | 8.881         | -0.005        | 91 | 97859    | 200.0      | 179.5        |       |
| 82 Ethylene Dibromide          | 107 | 8.980     | 8.984         | -0.004        | 96 | 86944    | 200.0      | 143.4        |       |
| 84 Chlorobenzene               | 112 | 9.479     | 9.477         | 0.002         | 92 | 490484   | 200.0      | 198.7        |       |
| 85 1,1,1,2-Tetrachloroethane   | 131 | 9.582     | 9.586         | -0.004        | 95 | 162335   | 200.0      | 208.5        |       |
| 86 Ethylbenzene                | 106 | 9.588     | 9.592         | -0.004        | 98 | 327366   | 200.0      | 208.8        |       |
| 87 m-Xylene & p-Xylene         | 106 | 9.728     | 9.726         | 0.002         | 99 | 399769   | 200.0      | 196.1        |       |
| 88 o-Xylene                    | 106 | 10.099    | 10.103        | -0.004        | 98 | 381392   | 200.0      | 205.9        |       |
| 89 Styrene                     | 104 | 10.130    | 10.128        | 0.002         | 95 | 571781   | 200.0      | 200.2        |       |
| 90 Bromoform                   | 173 | 10.300    | 10.298        | 0.002         | 97 | 44354    | 200.0      | 154.1        |       |
| 91 Isopropylbenzene            | 105 | 10.476    | 10.481        | -0.005        | 97 | 994377   | 200.0      | 212.7        |       |
| 94 Bromobenzene                | 156 | 10.768    | 10.773        | -0.005        | 96 | 179539   | 200.0      | 192.2        |       |
| 93 1,1,2,2-Tetrachloroethane   | 83  | 10.805    | 10.803        | 0.002         | 93 | 111628   | 200.0      | 149.5        |       |
| 96 trans-1,4-Dichloro-2-buten  | 53  | 10.841    | 10.846        | -0.005        | 71 | 26804    | 200.0      | 140.8        |       |
| 95 1,2,3-Trichloropropane      | 110 | 10.854    | 10.852        | 0.002         | 88 | 32588    | 200.0      | 152.9        |       |
| 97 N-Propylbenzene             | 120 | 10.896    | 10.894        | 0.002         | 98 | 299364   | 200.0      | 218.7        |       |
| 98 2-Chlorotoluene             | 126 | 10.969    | 10.967        | 0.002         | 96 | 220367   | 200.0      | 210.1        |       |
| 99 1,3,5-Trimethylbenzene      | 105 | 11.085    | 11.089        | -0.004        | 95 | 822686   | 200.0      | 206.1        |       |
| 100 4-Chlorotoluene            | 126 | 11.097    | 11.095        | 0.002         | 99 | 213213   | 200.0      | 210.5        |       |
| 101 tert-Butylbenzene          | 119 | 11.389    | 11.393        | -0.004        | 95 | 759008   | 200.0      | 214.3        |       |
| 103 1,2,4-Trimethylbenzene     | 105 | 11.456    | 11.454        | 0.002         | 98 | 817060   | 200.0      | 205.4        |       |

| Compound                         | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q  | Response | Cal Amt ng | OnCol Amt ng | Flags |
|----------------------------------|-----|-----------|---------------|---------------|----|----------|------------|--------------|-------|
| 104 sec-Butylbenzene             | 105 | 11.614    | 11.618        | -0.004        | 95 | 1135476  | 200.0      | 214.1        |       |
| 105 1,3-Dichlorobenzene          | 146 | 11.717    | 11.716        | 0.001         | 99 | 384507   | 200.0      | 204.5        |       |
| 106 4-Isopropyltoluene           | 119 | 11.778    | 11.783        | -0.004        | 96 | 933265   | 200.0      | 215.0        |       |
| 107 1,4-Dichlorobenzene          | 146 | 11.827    | 11.825        | 0.002         | 94 | 347886   | 200.0      | 190.3        |       |
| 111 1,2-Dichlorobenzene          | 146 | 12.168    | 12.172        | -0.004        | 97 | 312977   | 200.0      | 184.1        |       |
| 110 n-Butylbenzene               | 91  | 12.186    | 12.184        | 0.002         | 98 | 867396   | 200.0      | 210.1        |       |
| 112 1,2-Dibromo-3-Chloropropan   | 75  | 12.964    | 12.963        | 0.001         | 78 | 9227     | 200.0      | 117.1        |       |
| 113 1,2,4-Trichlorobenzene       | 180 | 13.774    | 13.772        | 0.002         | 94 | 116337   | 200.0      | 150.4        |       |
| 115 Hexachlorobutadiene          | 225 | 13.932    | 13.930        | 0.002         | 97 | 160426   | 200.0      | 211.5        |       |
| 116 Naphthalene                  | 128 | 14.029    | 14.027        | 0.002         | 97 | 149200   | 200.0      | 110.8        |       |
| 117 1,2,3-Trichlorobenzene       | 180 | 14.248    | 14.246        | 0.002         | 94 | 85468    | 200.0      | 137.4        |       |
| S 129 1,2-Dichloroethene, Total  | 96  |           |               |               | 0  |          | 400.0      | 365.4        |       |
| S 130 Xylenes, Total             | 106 |           |               |               | 0  |          | 400.0      | 402.0        |       |
| S 131 1,3-Dichloropropene, Total | 1   |           |               |               | 0  |          | 400.0      | 358.4        |       |

**Reagents:**

|                     |                     |           |             |
|---------------------|---------------------|-----------|-------------|
| voaWacro2 Res_00003 | Amount Added: 35.00 | Units: uL |             |
| voaWVA2ndRes_00001  | Amount Added: 8.00  | Units: uL |             |
| VOA8260VOA2ND_00115 | Amount Added: 8.00  | Units: uL |             |
| VOACEVEPRI_00006    | Amount Added: 8.00  | Units: uL |             |
| VOA8260INT_00032    | Amount Added: 10.00 | Units: uL | Run Reagent |
| VOA8260SURR_00035   | Amount Added: 10.00 | Units: uL | Run Reagent |

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP4\20150509-6844.b\4050909.D

Injection Date: 09-May-2015 15:48:30

Instrument ID: CHHP4

Operator ID: 034635

Lims ID: lcs

Worklist Smp#: 9

Client ID:

Purge Vol: 5.000 mL

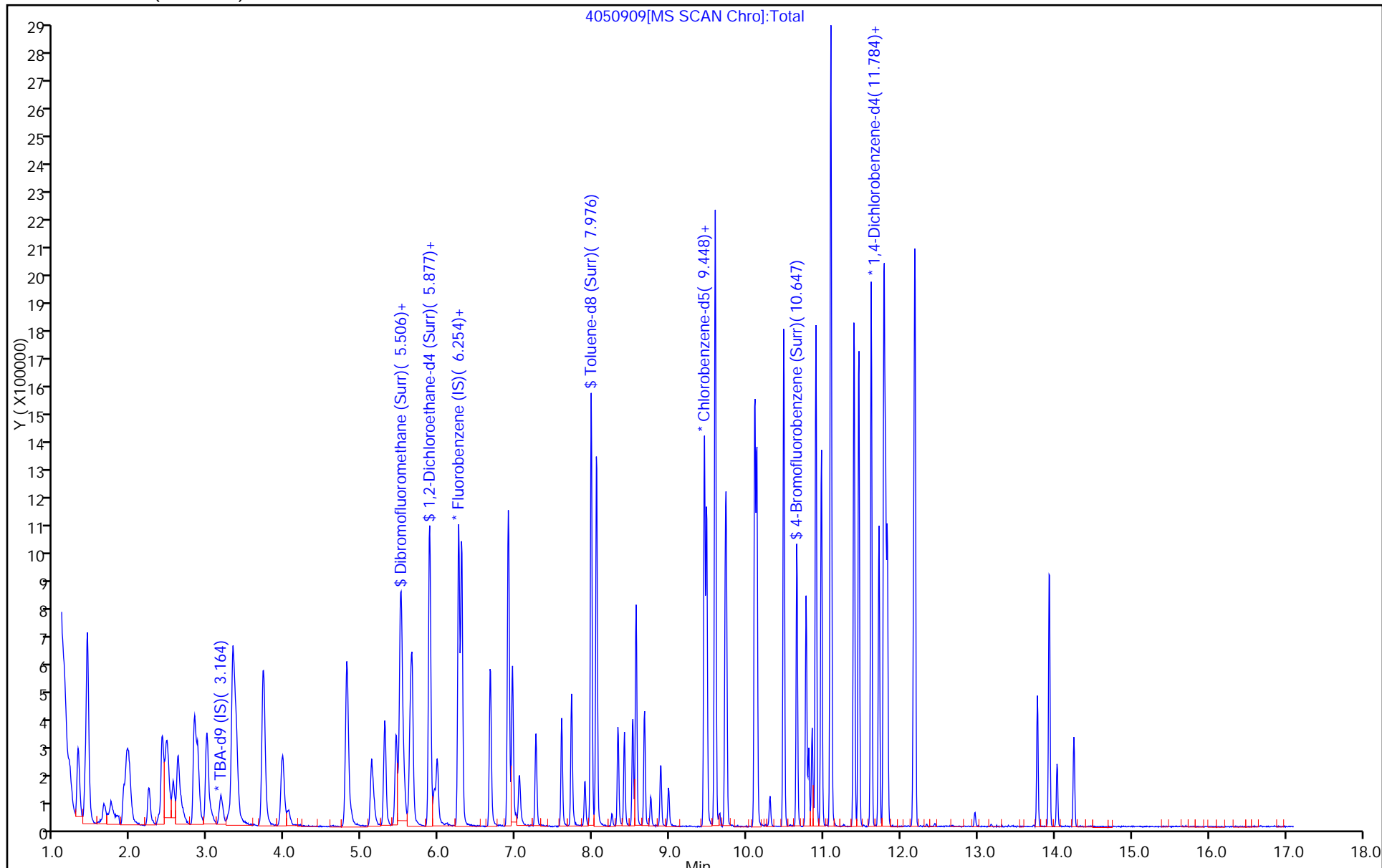
Dil. Factor: 1.0000

ALS Bottle#: 16

Method: MSVOA\_CHHP4

Limit Group: VOA 8260C ICAL

Column: DB-624 (0.18 mm)



## GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Pittsburgh Job No.: 180-43791-1

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

Instrument ID: CHHP4 Start Date: 11/03/2014 09:04Analysis Batch Number: 123648 End Date: 11/04/2014 14:07

| LAB SAMPLE ID     | CLIENT SAMPLE ID | DATE ANALYZED    | DILUTION FACTOR | LAB FILE ID | COLUMN ID        |
|-------------------|------------------|------------------|-----------------|-------------|------------------|
| BFB 180-123648/1  |                  | 11/03/2014 09:04 | 1               | 4110301.D   | DB-624 0.18 (mm) |
| IC 180-123648/4   |                  | 11/03/2014 12:22 | 1               | 4110304.D   | DB-624 0.18 (mm) |
| IC 180-123648/5   |                  | 11/03/2014 12:49 | 1               | 4110305.D   | DB-624 0.18 (mm) |
| IC 180-123648/6   |                  | 11/03/2014 13:15 | 1               | 4110306.D   | DB-624 0.18 (mm) |
| ICIS 180-123648/7 |                  | 11/03/2014 13:42 | 1               | 4110307.D   | DB-624 0.18 (mm) |
| IC 180-123648/9   |                  | 11/03/2014 14:35 | 1               | 4110309.D   | DB-624 0.18 (mm) |
| IC 180-123648/10  |                  | 11/03/2014 15:02 | 1               | 4110310.D   | DB-624 0.18 (mm) |
| IC 180-123648/12  |                  | 11/03/2014 16:24 | 1               | 4110312.D   | DB-624 0.18 (mm) |
| ICV 180-123648/15 |                  | 11/03/2014 18:49 | 1               |             | DB-624 0.18 (mm) |
| ICV 180-123648/16 |                  | 11/04/2014 14:07 | 1               |             | DB-624 0.18 (mm) |

## GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Pittsburgh Job No.: 180-43791-1

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

Instrument ID: CHHP4 Start Date: 05/09/2015 11:24Analysis Batch Number: 141065 End Date: 05/09/2015 23:32

| LAB SAMPLE ID      | CLIENT SAMPLE ID | DATE ANALYZED    | DILUTION FACTOR | LAB FILE ID | COLUMN ID        |
|--------------------|------------------|------------------|-----------------|-------------|------------------|
| BFB 180-141065/1   |                  | 05/09/2015 11:24 | 1               | 4050901.D   | DB-624 0.18 (mm) |
| CCVIS 180-141065/2 |                  | 05/09/2015 12:04 | 1               | 4050902.D   | DB-624 0.18 (mm) |
| CCV 180-141065/3   |                  | 05/09/2015 12:46 | 1               | 4050903.D   | DB-624 0.18 (mm) |
| LODV 180-141065/4  |                  | 05/09/2015 13:20 | 1               |             | DB-624 0.18 (mm) |
| MB 180-141065/5    |                  | 05/09/2015 14:00 | 1               | 4050905.D   | DB-624 0.18 (mm) |
| ZZZZZ              |                  | 05/09/2015 14:27 | 1               |             | DB-624 0.18 (mm) |
| ZZZZZ              |                  | 05/09/2015 14:54 | 1               |             | DB-624 0.18 (mm) |
| ZZZZZ              |                  | 05/09/2015 15:21 | 1               |             | DB-624 0.18 (mm) |
| LCS 180-141065/9   |                  | 05/09/2015 15:48 | 1               | 4050909.D   | DB-624 0.18 (mm) |
| ZZZZZ              |                  | 05/09/2015 16:15 | 1               |             | DB-624 0.18 (mm) |
| ZZZZZ              |                  | 05/09/2015 16:43 | 1               |             | DB-624 0.18 (mm) |
| 180-43791-2        | FB-CORE          | 05/09/2015 18:04 | 1               | 4050914.D   | DB-624 0.18 (mm) |
| 180-43791-7        | TRIP BLANK       | 05/09/2015 18:33 | 1               | 4050915.D   | DB-624 0.18 (mm) |
| 180-43791-1        | RB-CORE          | 05/09/2015 19:00 | 1               | 4050916.D   | DB-624 0.18 (mm) |
| ZZZZZ              |                  | 05/09/2015 19:54 | 1               |             | DB-624 0.18 (mm) |
| ZZZZZ              |                  | 05/09/2015 23:32 | 250             |             | DB-624 0.18 (mm) |



# Method 8270D Low Level

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Semivolatile Organic Compounds  
(GC/MS) Low Level by Method 8270D

FORM II  
GC/MS SEMI VOA SURROGATE RECOVERY

Lab Name: TestAmerica Pittsburgh Job No.: 180-43791-1

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

Matrix: Water Level: Low

GC Column (1): Rxi-5SilMS ID: 0.32 (mm)

| Client Sample ID | Lab Sample ID         | 2FP # | PHL # | NBZ # | FBP # | TBP # | TPH # |
|------------------|-----------------------|-------|-------|-------|-------|-------|-------|
| RB-CORE          | 180-43791-1           | 74    | 80    | 81    | 71    | 76    | 66    |
| FB-CORE          | 180-43791-2           | 57    | 62    | 62    | 56    | 62    | 60    |
| RB-PW            | 180-43791-3           | 58    | 64    | 64    | 57    | 58    | 62    |
| FB-PW            | 180-43791-4           | 53    | 58    | 62    | 56    | 65    | 59    |
|                  | MB<br>180-141152/1-A  | 65    | 66    | 61    | 54    | 60    | 69    |
|                  | LCS<br>180-141152/2-A | 66    | 69    | 70    | 65    | 70    | 70    |

|                                   | <u>QC LIMITS</u> |
|-----------------------------------|------------------|
| 2FP = 2-Fluorophenol (Surr)       | 20-105           |
| PHL = Phenol-d5 (Surr)            | 25-105           |
| NBZ = Nitrobenzene-d5 (Surr)      | 27-114           |
| FBP = 2-Fluorobiphenyl            | 28-109           |
| TBP = 2,4,6-Tribromophenol (Surr) | 30-118           |
| TPH = Terphenyl-d14 (Surr)        | 20-118           |

# Column to be used to flag recovery values

FORM III  
GC/MS SEMI VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Pittsburgh Job No.: 180-43791-1

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

Matrix: Water Level: Low Lab File ID: D052N010.D

Lab ID: LCS 180-141152/2-A Client ID: \_\_\_\_\_

| COMPOUND                    | SPIKE<br>ADDED<br>(ug/L) | LCS<br>CONCENTRATION<br>(ug/L) | LCS<br>%<br>REC | QC<br>LIMITS<br>REC | # |
|-----------------------------|--------------------------|--------------------------------|-----------------|---------------------|---|
| Anthracene                  | 20.0                     | 15.2                           | 76              | 49-100              |   |
| Benzo[a]anthracene          | 20.0                     | 16.5                           | 82              | 50-100              |   |
| Benzo[b]fluoranthene        | 20.0                     | 16.2                           | 81              | 43-100              |   |
| Benzo[k]fluoranthene        | 20.0                     | 16.5                           | 82              | 47-100              |   |
| Benzo[g,h,i]perylene        | 20.0                     | 17.5                           | 87              | 48-100              |   |
| Benzo[a]pyrene              | 20.0                     | 17.3                           | 86              | 47-100              |   |
| Chrysene                    | 20.0                     | 16.4                           | 82              | 49-100              |   |
| Dibenz(a,h)anthracene       | 20.0                     | 17.4                           | 87              | 48-100              |   |
| Fluoranthene                | 20.0                     | 15.9                           | 80              | 48-100              |   |
| Fluorene                    | 20.0                     | 15.1                           | 76              | 48-100              |   |
| Indeno[1,2,3-cd]pyrene      | 20.0                     | 17.2                           | 86              | 47-100              |   |
| Phenanthrene                | 20.0                     | 15.3                           | 77              | 48-100              |   |
| Pyrene                      | 20.0                     | 16.1                           | 81              | 44-100              |   |
| Acenaphthene                | 20.0                     | 13.3                           | 66              | 47-100              |   |
| Acenaphthylene              | 20.0                     | 14.5                           | 73              | 47-100              |   |
| Naphthalene                 | 20.0                     | 13.6                           | 68              | 44-100              |   |
| Bis(2-ethylhexyl) phthalate | 20.0                     | 17.5                           | 87              | 35-118              |   |

# Column to be used to flag recovery and RPD values

FORM IV  
GC/MS SEMI VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-43791-1  
 SDG No.: \_\_\_\_\_  
 Lab File ID: D052N005.D Lab Sample ID: MB 180-141152/1-A  
 Matrix: Water Date Extracted: 05/11/2015 10:21  
 Instrument ID: CH732 Date Analyzed: 05/20/2015 14:54  
 Level: (Low/Med) Low

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

| CLIENT SAMPLE ID | LAB SAMPLE ID      | LAB FILE ID | DATE ANALYZED    |
|------------------|--------------------|-------------|------------------|
|                  | LCS 180-141152/2-A | D052N010.D  | 05/20/2015 16:53 |
| RB-CORE          | 180-43791-1        | D052N028.D  | 05/21/2015 00:31 |
| FB-CORE          | 180-43791-2        | D052N029.D  | 05/21/2015 00:57 |
| RB-PW            | 180-43791-3        | D052N030.D  | 05/21/2015 01:24 |
| FB-PW            | 180-43791-4        | D052N031.D  | 05/21/2015 01:50 |

FORM V  
GC/MS SEMI VOA INSTRUMENT PERFORMANCE CHECK  
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: TestAmerica Pittsburgh Job No.: 180-43791-1  
 SDG No.: \_\_\_\_\_  
 Lab File ID: D0203002.D DFTPP Injection Date: 02/03/2015  
 Instrument ID: CH732 DFTPP Injection Time: 05:37  
 Analysis Batch No.: 132436

| M/E | ION ABUNDANCE CRITERIA              | % RELATIVE ABUNDANCE |
|-----|-------------------------------------|----------------------|
| 51  | 30.0 - 60.0 % of mass 198           | 49.1                 |
| 68  | Less than 2.0 % of mass 69          | 0.6 (1.4)1           |
| 69  | Mass 69 relative abundance          | 41.6                 |
| 70  | Less than 2.0 % of mass 69          | 0.1 (0.3)1           |
| 127 | 40.0 - 60.0 % of mass 198           | 52.2                 |
| 197 | Less than 1.0 % of mass 198         | 0.0                  |
| 198 | Base Peak, 100 % relative abundance | 100.0                |
| 199 | 5.0- 9.0 % of mass 198              | 7.0                  |
| 275 | 10.0 - 30.0 % of mass 198           | 22.0                 |
| 365 | Greater than 1.0 % of mass 198      | 2.8                  |
| 441 | Present but less than mass 443      | 9.0 (81.1)3          |
| 442 | Greater than 40.0 % of mass 198     | 58.4                 |
| 443 | 17.0 - 23.0 % of mass 442           | 11.1 (19.0)2         |

1-Value is % mass 69                      2-Value is % mass 442                      3-Value is % mass 443

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 180-132436/3   | D0203003.D  | 02/03/2015    | 05:53         |
|                  | IC 180-132436/4   | D0203004.D  | 02/03/2015    | 06:20         |
|                  | IC 180-132436/5   | D0203005.D  | 02/03/2015    | 06:46         |
|                  | ICIS 180-132436/6 | D0203006.D  | 02/03/2015    | 07:13         |
|                  | IC 180-132436/7   | D0203007.D  | 02/03/2015    | 07:40         |
|                  | IC 180-132436/8   | D0203008.D  | 02/03/2015    | 08:07         |
|                  | IC 180-132436/9   | D0203009.D  | 02/03/2015    | 08:33         |
|                  | IC 180-132436/10  | D0203010.D  | 02/03/2015    | 09:00         |

FORM V  
GC/MS SEMI VOA INSTRUMENT PERFORMANCE CHECK  
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: TestAmerica Pittsburgh Job No.: 180-43791-1  
 SDG No.: \_\_\_\_\_  
 Lab File ID: D052N002.D DFTPP Injection Date: 05/20/2015  
 Instrument ID: CH732 DFTPP Injection Time: 13:52  
 Analysis Batch No.: 142205

| M/E | ION ABUNDANCE CRITERIA              | % RELATIVE ABUNDANCE |
|-----|-------------------------------------|----------------------|
| 51  | 30.0 - 60.0 % of mass 198           | 46.0                 |
| 68  | Less than 2.0 % of mass 69          | 0.0 (0.0)1           |
| 69  | Mass 69 relative abundance          | 39.4                 |
| 70  | Less than 2.0 % of mass 69          | 0.0 (0.0)1           |
| 127 | 40.0 - 60.0 % of mass 198           | 51.4                 |
| 197 | Less than 1.0 % of mass 198         | 0.7                  |
| 198 | Base Peak, 100 % relative abundance | 100.0                |
| 199 | 5.0- 9.0 % of mass 198              | 6.8                  |
| 275 | 10.0 - 30.0 % of mass 198           | 20.1                 |
| 365 | Greater than 1.0 % of mass 198      | 2.7                  |
| 441 | Present but less than mass 443      | 8.2 (84.3)3          |
| 442 | Greater than 40.0 % of mass 198     | 53.5                 |
| 443 | 17.0 - 23.0 % of mass 442           | 9.8 (18.2)2          |

1-Value is % mass 69                      2-Value is % mass 442                      3-Value is % mass 443

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 180-142205/3 | D052N003.D  | 05/20/2015    | 14:05         |
|                  | MB 180-141152/1-A  | D052N005.D  | 05/20/2015    | 14:54         |
|                  | LCS 180-141152/2-A | D052N010.D  | 05/20/2015    | 16:53         |
| RB-CORE          | 180-43791-1        | D052N028.D  | 05/21/2015    | 00:31         |
| FB-CORE          | 180-43791-2        | D052N029.D  | 05/21/2015    | 00:57         |
| RB-PW            | 180-43791-3        | D052N030.D  | 05/21/2015    | 01:24         |
| FB-PW            | 180-43791-4        | D052N031.D  | 05/21/2015    | 01:50         |

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

Lab Name: TestAmerica Pittsburgh Job No.: 180-43791-1  
 SDG No.: \_\_\_\_\_  
 Sample No.: CCVIS 180-142205/3 Date Analyzed: 05/20/2015 14:05  
 Instrument ID: CH732 GC Column: Rxi-5SilMS ID: 0.32 (mm)  
 Lab File ID (Standard): D052N003.D Heated Purge: (Y/N) N  
 Calibration ID: 21642

|                    | DCB              |       | NPT    |        | ANT    |        |      |
|--------------------|------------------|-------|--------|--------|--------|--------|------|
|                    | AREA #           | RT #  | AREA # | RT #   | AREA # | RT #   |      |
| 12/24 HOUR STD     | 98136            | 6.20  | 473387 | 7.48   | 355795 | 9.19   |      |
| UPPER LIMIT        | 196272           | 6.70  | 946774 | 7.98   | 711590 | 9.69   |      |
| LOWER LIMIT        | 49068            | 5.70  | 236694 | 6.98   | 177898 | 8.69   |      |
| LAB SAMPLE ID      | CLIENT SAMPLE ID |       |        |        |        |        |      |
| MB 180-141152/1-A  | 74327            | 6.20  | 376248 | 7.48   | 293239 | 9.19   |      |
| LCS 180-141152/2-A | 65167            | 6.20  | 325374 | 7.49   | 234947 | 9.20   |      |
| 180-43791-1        | RB-CORE          | 66364 | 6.19   | 306484 | 7.48   | 228191 | 9.19 |
| 180-43791-2        | FB-CORE          | 71971 | 6.19   | 346050 | 7.48   | 259322 | 9.19 |
| 180-43791-3        | RB-PW            | 68134 | 6.18   | 322438 | 7.47   | 244218 | 9.19 |
| 180-43791-4        | FB-PW            | 69424 | 6.19   | 331865 | 7.48   | 247401 | 9.19 |

DCB = 1,4-Dichlorobenzene-d4  
 NPT = Naphthalene-d8  
 ANT = Acenaphthene-d10

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 SEMI VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-43791-1  
 SDG No.: \_\_\_\_\_  
 Sample No.: CCVIS 180-142205/3 Date Analyzed: 05/20/2015 14:05  
 Instrument ID: CH732 GC Column: Rxi-5SilMS ID: 0.32 (mm)  
 Lab File ID (Standard): D052N003.D Heated Purge: (Y/N) N  
 Calibration ID: 21642

|                    | PHN              |        | CRY     |        | PRY     |        |       |
|--------------------|------------------|--------|---------|--------|---------|--------|-------|
|                    | AREA #           | RT #   | AREA #  | RT #   | AREA #  | RT #   |       |
| 12/24 HOUR STD     | 695575           | 10.63  | 662492  | 14.40  | 578588  | 17.29  |       |
| UPPER LIMIT        | 1391150          | 11.13  | 1324984 | 14.90  | 1157176 | 17.79  |       |
| LOWER LIMIT        | 347788           | 10.13  | 331246  | 13.90  | 289294  | 16.79  |       |
| LAB SAMPLE ID      | CLIENT SAMPLE ID |        |         |        |         |        |       |
| MB 180-141152/1-A  | 577225           | 10.64  | 527528  | 14.41  | 436735  | 17.31  |       |
| LCS 180-141152/2-A | 444685           | 10.65  | 421558  | 14.42  | 366346  | 17.32  |       |
| 180-43791-1        | RB-CORE          | 438518 | 10.64   | 417894 | 14.42   | 399386 | 17.32 |
| 180-43791-2        | FB-CORE          | 483700 | 10.64   | 461751 | 14.41   | 443005 | 17.31 |
| 180-43791-3        | RB-PW            | 468929 | 10.64   | 444289 | 14.41   | 418344 | 17.31 |
| 180-43791-4        | FB-PW            | 464594 | 10.64   | 430824 | 14.42   | 411331 | 17.32 |

PHN = Phenanthrene-d10  
 CRY = Chrysene-d12  
 PRY = Perylene-d12

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 SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-43791-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: RB-CORE Lab Sample ID: 180-43791-1  
 Matrix: Water Lab File ID: D052N028.D  
 Analysis Method: 8270D LL Date Collected: 05/05/2015 15:30  
 Extract. Method: 3520C Date Extracted: 05/11/2015 10:21  
 Sample wt/vol: 240 (mL) Date Analyzed: 05/21/2015 00:31  
 Con. Extract Vol.: 0.25 (mL) Dilution Factor: 1  
 Injection Volume: 2 (uL) Level: (low/med) Low  
 % Moisture: \_\_\_\_\_ GPC Cleanup: (Y/N) N  
 Analysis Batch No.: 142205 Units: ug/L

| CAS NO.  | COMPOUND NAME               | RESULT | Q | RL   | MDL   |
|----------|-----------------------------|--------|---|------|-------|
| 120-12-7 | Anthracene                  | ND     |   | 0.21 | 0.020 |
| 56-55-3  | Benzo[a]anthracene          | ND     |   | 0.21 | 0.038 |
| 205-99-2 | Benzo[b]fluoranthene        | ND     |   | 0.21 | 0.051 |
| 207-08-9 | Benzo[k]fluoranthene        | ND     |   | 0.21 | 0.031 |
| 191-24-2 | Benzo[g,h,i]perylene        | ND     |   | 0.21 | 0.030 |
| 50-32-8  | Benzo[a]pyrene              | ND     |   | 0.21 | 0.029 |
| 218-01-9 | Chrysene                    | ND     |   | 0.21 | 0.032 |
| 53-70-3  | Dibenz(a,h)anthracene       | ND     |   | 0.21 | 0.028 |
| 206-44-0 | Fluoranthene                | ND     |   | 0.21 | 0.022 |
| 86-73-7  | Fluorene                    | ND     |   | 0.21 | 0.025 |
| 193-39-5 | Indeno[1,2,3-cd]pyrene      | ND     |   | 0.21 | 0.045 |
| 85-01-8  | Phenanthrene                | ND     |   | 0.21 | 0.043 |
| 129-00-0 | Pyrene                      | ND     |   | 0.21 | 0.024 |
| 83-32-9  | Acenaphthene                | ND     |   | 0.21 | 0.030 |
| 208-96-8 | Acenaphthylene              | ND     |   | 0.21 | 0.022 |
| 91-20-3  | Naphthalene                 | ND     |   | 0.21 | 0.024 |
| 117-81-7 | Bis(2-ethylhexyl) phthalate | 0.89   | J | 2.1  | 0.46  |

| CAS NO.   | SURROGATE                   | %REC | Q | LIMITS |
|-----------|-----------------------------|------|---|--------|
| 4165-60-0 | Nitrobenzene-d5 (Surr)      | 81   |   | 27-114 |
| 321-60-8  | 2-Fluorobiphenyl            | 71   |   | 28-109 |
| 1718-51-0 | Terphenyl-d14 (Surr)        | 66   |   | 20-118 |
| 367-12-4  | 2-Fluorophenol (Surr)       | 74   |   | 20-105 |
| 118-79-6  | 2,4,6-Tribromophenol (Surr) | 76   |   | 30-118 |
| 4165-62-2 | Phenol-d5 (Surr)            | 80   |   | 25-105 |

TestAmerica Pittsburgh  
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CH732\20150520-7021.b\D052N028.D  
 Lims ID: 180-43791-E-1-A Lab Sample ID: 180-43791-1  
 Client ID: RB-CORE  
 Sample Type: Client  
 Inject. Date: 21-May-2015 00:31:30 ALS Bottle#: 27 Worklist Smp#: 28  
 Injection Vol: 2.0 ul Dil. Factor: 1.0000  
 Sample Info: 180-0007021-028  
 Operator ID: 003200 Instrument ID: CH732  
 Method: \\PITCHROM\ChromData\CH732\20150520-7021.b\BNA\_CH732.m  
 Limit Group: BNA 8270D ICAL  
 Last Update: 21-May-2015 02:16:03 Calib Date: 18-Mar-2015 11:54:30  
 Integrator: RTE ID Type: Deconvolution ID  
 Quant Method: Internal Standard Quant By: Initial Calibration  
 Last ICal File: \\PITCHROM\ChromData\CH732\20150318-6063.b\D0318011.D  
 Column 1 : Rxi-5SiIMS ( 0.32 mm) Det: MS SCAN  
 Process Host: XAWRK048

First Level Reviewer: piccolinov

Date: 21-May-2015 02:12:11

| Compound                       | Sig | RT (min.) | Adj RT (min.) | Dlt RT (min.) | Q   | Response | OnCol Amt ng | Flags |
|--------------------------------|-----|-----------|---------------|---------------|-----|----------|--------------|-------|
| * 1 1,4-Dichlorobenzene-d4     | 152 | 6.185     | 6.196         | -0.011        | 97  | 66364    | 8.00         |       |
| * 2 Naphthalene-d8             | 136 | 7.478     | 7.478         | 0.000         | 100 | 306484   | 8.00         |       |
| * 3 Acenaphthene-d10           | 164 | 9.193     | 9.188         | 0.005         | 92  | 228191   | 8.00         |       |
| * 4 Phenanthrene-d10           | 188 | 10.641    | 10.630        | 0.011         | 97  | 438518   | 8.00         |       |
| * 5 Chrysene-d12               | 240 | 14.423    | 14.396        | 0.027         | 97  | 417894   | 8.00         |       |
| * 6 Perylene-d12               | 264 | 17.324    | 17.287        | 0.038         | 96  | 399386   | 8.00         |       |
| \$ 7 2-Fluorophenol            | 112 | 4.754     | 4.754         | 0.000         | 91  | 253537   | 29.5         |       |
| \$ 8 Phenol-d5                 | 99  | 5.822     | 5.817         | 0.005         | 93  | 370419   | 32.0         |       |
| \$ 9 Nitrobenzene-d5           | 82  | 6.752     | 6.752         | 0.000         | 94  | 418801   | 32.6         |       |
| \$ 10 2-Fluorobiphenyl         | 172 | 8.520     | 8.520         | 0.000         | 99  | 1064814  | 28.4         |       |
| \$ 11 2,4,6-Tribromophenol     | 330 | 9.952     | 9.946         | 0.006         | 86  | 145945   | 30.3         |       |
| \$ 12 Terphenyl-d14            | 244 | 12.580    | 12.559        | 0.021         | 99  | 1202937  | 26.4         |       |
| 58 Naphthalene                 | 128 |           | 7.500         |               |     |          | ND           |       |
| 85 Acenaphthylene              | 152 |           | 9.054         |               |     |          | ND           |       |
| 88 Acenaphthene                | 153 |           | 9.220         |               |     |          | ND           |       |
| 103 Fluorene                   | 166 |           | 9.711         |               |     |          | ND           |       |
| 121 Phenanthrene               | 178 |           | 10.657        |               |     |          | ND           |       |
| 122 Anthracene                 | 178 |           | 10.710        |               |     |          | ND           |       |
| 131 Fluoranthene               | 202 |           | 12.056        |               |     |          | ND           |       |
| 133 Pyrene                     | 202 |           | 12.382        |               |     |          | ND           |       |
| 145 Bis(2-ethylhexyl) phthalat | 149 | 14.375    | 14.343        | 0.032         | 97  | 72215    | 1.70         |       |
| 146 Benzo[a]anthracene         | 228 |           | 14.375        |               |     |          | ND           |       |
| 147 Chrysene                   | 228 |           | 14.444        |               |     |          | ND           |       |
| 152 Benzo[b]fluoranthene       | 252 |           | 16.517        |               |     |          | ND           |       |
| 153 Benzo[k]fluoranthene       | 252 |           | 16.565        |               |     |          | ND           |       |
| 154 Benzo[a]pyrene             | 252 |           | 17.174        |               |     |          | ND           |       |
| 157 Indeno[1,2,3-cd]pyrene     | 276 |           | 19.648        |               |     |          | ND           |       |
| 158 Dibenz(a,h)anthracene      | 278 |           | 19.685        |               |     |          | ND           |       |
| 159 Benzo[g,h,i]perylene       | 276 |           | 20.337        |               |     |          | ND           |       |

Reagents:

SVTAPITINTRNi\_00007

Amount Added: 1.00

Units: uL

Run Reagent

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CH732\20150520-7021.b\D052N028.D

Injection Date: 21-May-2015 00:31:30

Instrument ID: CH732

Operator ID: 003200

Lims ID: 180-43791-E-1-A

Lab Sample ID: 180-43791-1

Worklist Smp#: 28

Client ID: RB-CORE

Injection Vol: 2.0 ul

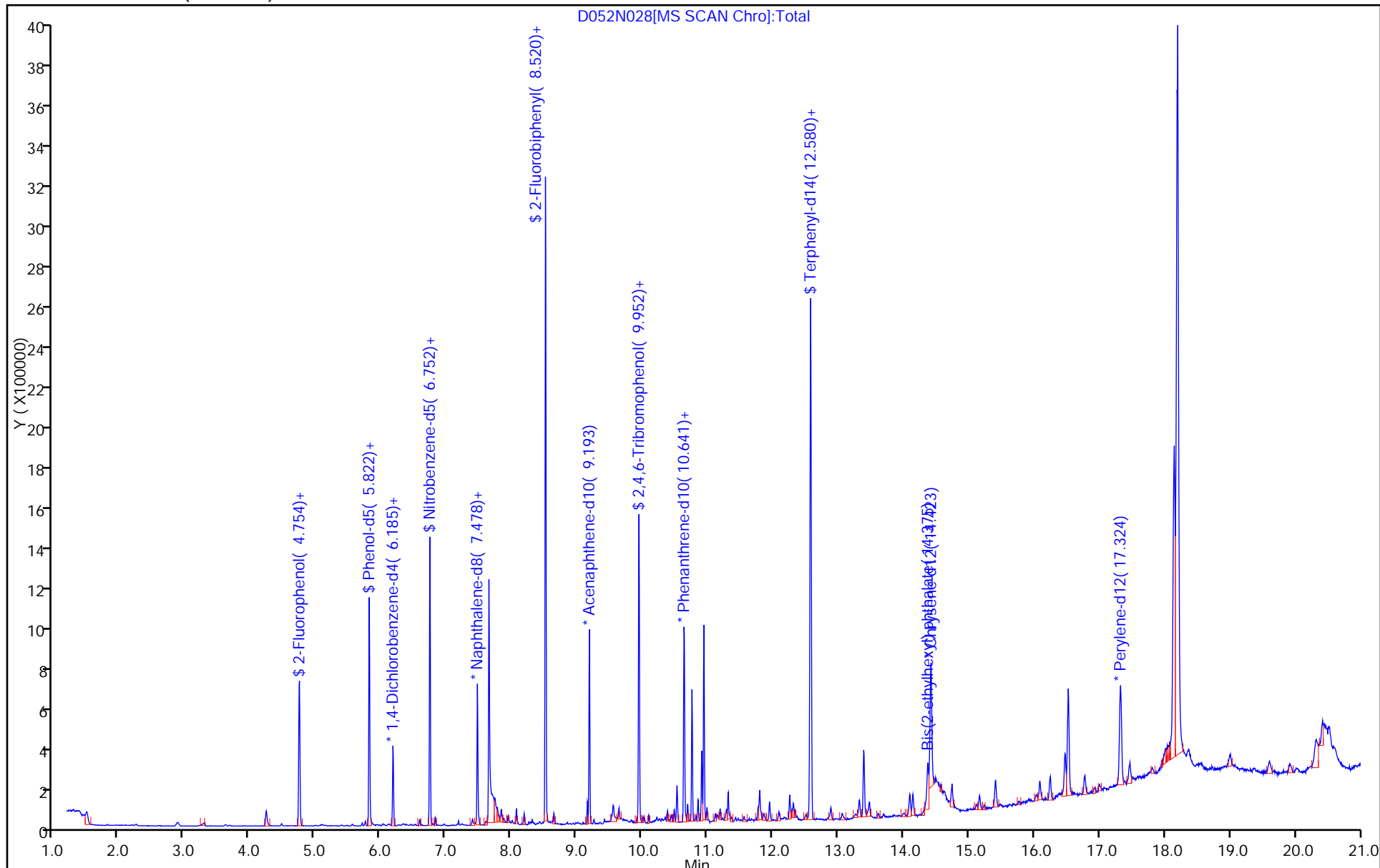
Dil. Factor: 1.0000

ALS Bottle#: 27

Method: BNA\_CH732

Limit Group: BNA 8270D ICAL

Column: Rxi-5SiIMS (0.32 mm)



TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CH732\20150520-7021.b\D052N028.D

Injection Date: 21-May-2015 00:31:30

Instrument ID: CH732

Lims ID: 180-43791-E-1-A

Lab Sample ID: 180-43791-1

Client ID: RB-CORE

Operator ID: 003200

ALS Bottle#: 27

Worklist Smp#: 28

Injection Vol: 2.0 ul

Dil. Factor: 1.0000

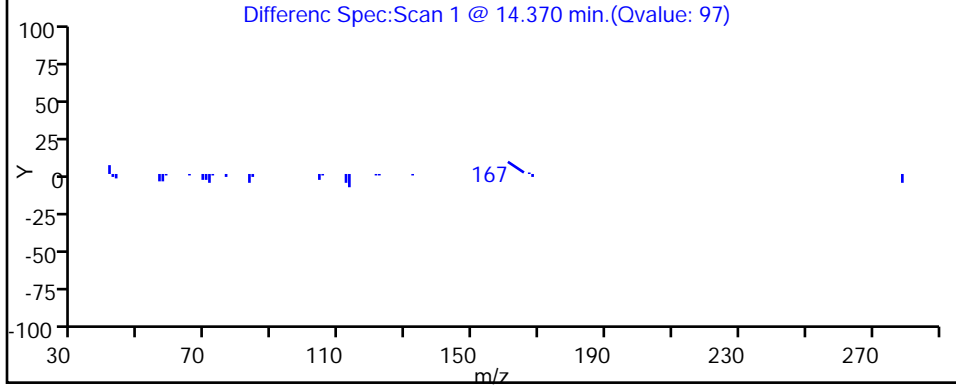
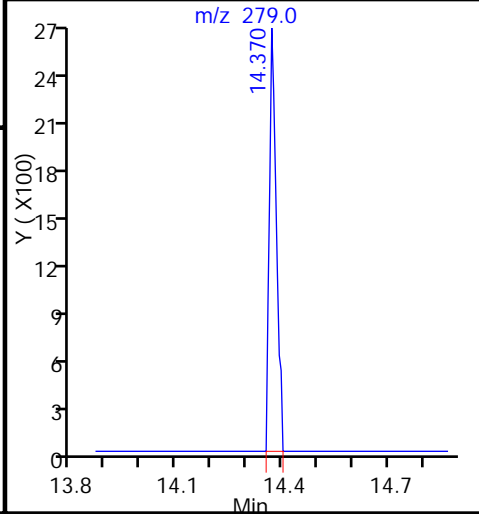
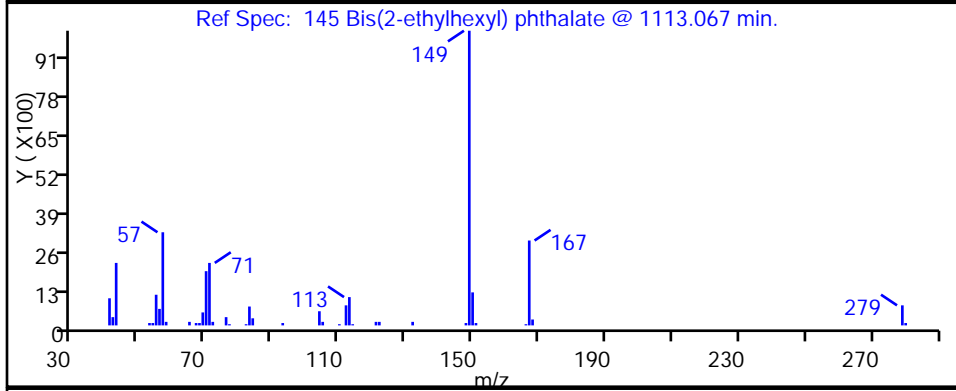
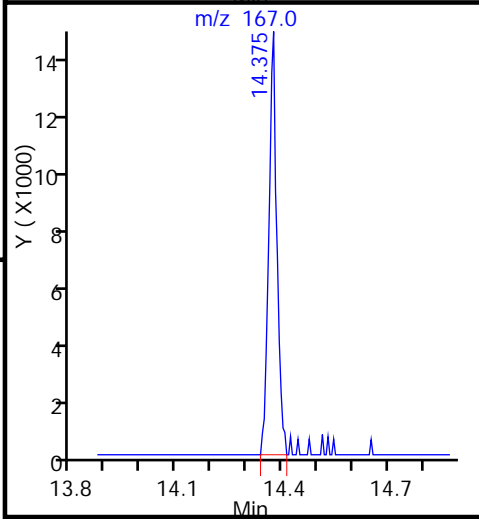
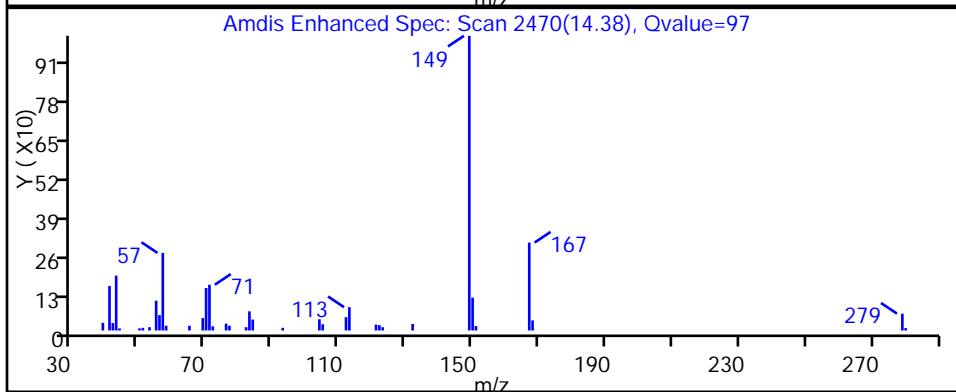
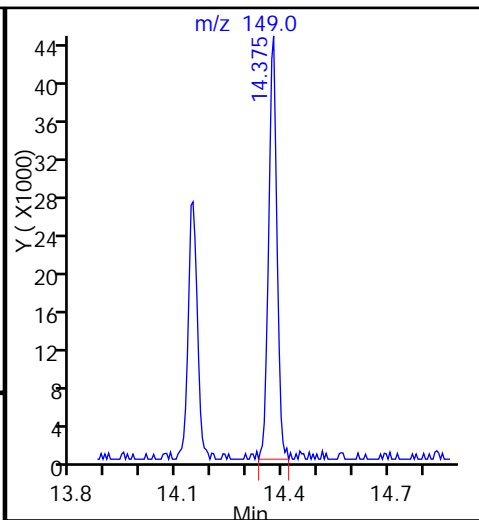
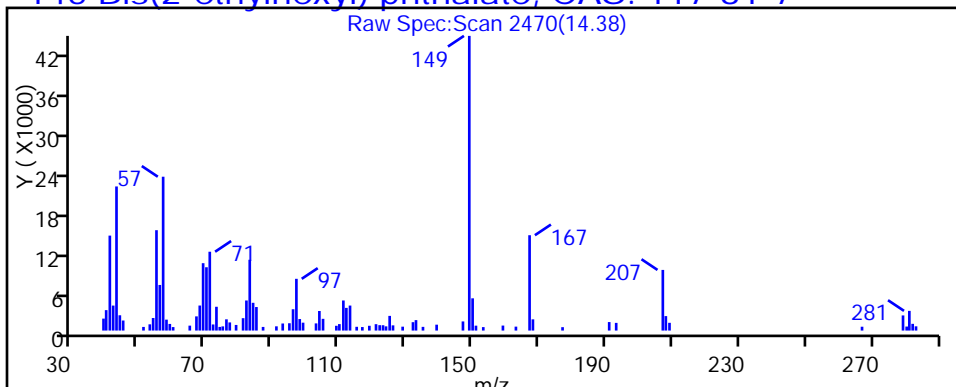
Method: BNA\_CH732

Limit Group: BNA 8270D ICAL

Column: Rxi-5SilMS (0.32 mm)

Detector: MS SCAN

145 Bis(2-ethylhexyl) phthalate, CAS: 117-81-7



FORM I  
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-43791-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: FB-CORE Lab Sample ID: 180-43791-2  
 Matrix: Water Lab File ID: D052N029.D  
 Analysis Method: 8270D LL Date Collected: 05/05/2015 15:40  
 Extract. Method: 3520C Date Extracted: 05/11/2015 10:21  
 Sample wt/vol: 250 (mL) Date Analyzed: 05/21/2015 00:57  
 Con. Extract Vol.: 0.25 (mL) Dilution Factor: 1  
 Injection Volume: 2 (uL) Level: (low/med) Low  
 % Moisture: \_\_\_\_\_ GPC Cleanup: (Y/N) N  
 Analysis Batch No.: 142205 Units: ug/L

| CAS NO.  | COMPOUND NAME               | RESULT | Q | RL   | MDL   |
|----------|-----------------------------|--------|---|------|-------|
| 120-12-7 | Anthracene                  | ND     |   | 0.20 | 0.019 |
| 56-55-3  | Benzo[a]anthracene          | ND     |   | 0.20 | 0.037 |
| 205-99-2 | Benzo[b]fluoranthene        | ND     |   | 0.20 | 0.049 |
| 207-08-9 | Benzo[k]fluoranthene        | ND     |   | 0.20 | 0.030 |
| 191-24-2 | Benzo[g,h,i]perylene        | ND     |   | 0.20 | 0.029 |
| 50-32-8  | Benzo[a]pyrene              | ND     |   | 0.20 | 0.028 |
| 218-01-9 | Chrysene                    | ND     |   | 0.20 | 0.031 |
| 53-70-3  | Dibenz(a,h)anthracene       | ND     |   | 0.20 | 0.027 |
| 206-44-0 | Fluoranthene                | ND     |   | 0.20 | 0.021 |
| 86-73-7  | Fluorene                    | ND     |   | 0.20 | 0.024 |
| 193-39-5 | Indeno[1,2,3-cd]pyrene      | ND     |   | 0.20 | 0.043 |
| 85-01-8  | Phenanthrene                | ND     |   | 0.20 | 0.042 |
| 129-00-0 | Pyrene                      | ND     |   | 0.20 | 0.023 |
| 83-32-9  | Acenaphthene                | ND     |   | 0.20 | 0.029 |
| 208-96-8 | Acenaphthylene              | ND     |   | 0.20 | 0.022 |
| 91-20-3  | Naphthalene                 | ND     |   | 0.20 | 0.023 |
| 117-81-7 | Bis(2-ethylhexyl) phthalate | 0.68   | J | 2.0  | 0.44  |

| CAS NO.   | SURROGATE                   | %REC | Q | LIMITS |
|-----------|-----------------------------|------|---|--------|
| 4165-60-0 | Nitrobenzene-d5 (Surr)      | 62   |   | 27-114 |
| 321-60-8  | 2-Fluorobiphenyl            | 56   |   | 28-109 |
| 1718-51-0 | Terphenyl-d14 (Surr)        | 60   |   | 20-118 |
| 367-12-4  | 2-Fluorophenol (Surr)       | 57   |   | 20-105 |
| 118-79-6  | 2,4,6-Tribromophenol (Surr) | 62   |   | 30-118 |
| 4165-62-2 | Phenol-d5 (Surr)            | 62   |   | 25-105 |

TestAmerica Pittsburgh  
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CH732\20150520-7021.b\D052N029.D  
 Lims ID: 180-43791-E-2-A Lab Sample ID: 180-43791-2  
 Client ID: FB-CORE  
 Sample Type: Client  
 Inject. Date: 21-May-2015 00:57:30 ALS Bottle#: 28 Worklist Smp#: 29  
 Injection Vol: 2.0 ul Dil. Factor: 1.0000  
 Sample Info: 180-0007021-029  
 Operator ID: 003200 Instrument ID: CH732  
 Method: \\PITCHROM\ChromData\CH732\20150520-7021.b\BNA\_CH732.m  
 Limit Group: BNA 8270D ICAL  
 Last Update: 21-May-2015 02:16:03 Calib Date: 18-Mar-2015 11:54:30  
 Integrator: RTE ID Type: Deconvolution ID  
 Quant Method: Internal Standard Quant By: Initial Calibration  
 Last ICal File: \\PITCHROM\ChromData\CH732\20150318-6063.b\D0318011.D  
 Column 1 : Rxi-5SiIMS ( 0.32 mm) Det: MS SCAN  
 Process Host: XAWRK048

First Level Reviewer: piccolinov Date: 21-May-2015 02:12:22

| Compound                       | Sig | RT (min.) | Adj RT (min.) | Dlt RT (min.) | Q   | Response | OnCol Amt ng | Flags |
|--------------------------------|-----|-----------|---------------|---------------|-----|----------|--------------|-------|
| * 1 1,4-Dichlorobenzene-d4     | 152 | 6.185     | 6.196         | -0.011        | 97  | 71971    | 8.00         |       |
| * 2 Naphthalene-d8             | 136 | 7.478     | 7.478         | 0.000         | 100 | 346050   | 8.00         |       |
| * 3 Acenaphthene-d10           | 164 | 9.188     | 9.188         | 0.000         | 91  | 259322   | 8.00         |       |
| * 4 Phenanthrene-d10           | 188 | 10.641    | 10.630        | 0.011         | 97  | 483700   | 8.00         |       |
| * 5 Chrysene-d12               | 240 | 14.412    | 14.396        | 0.016         | 97  | 461751   | 8.00         |       |
| * 6 Perylene-d12               | 264 | 17.313    | 17.287        | 0.027         | 96  | 443005   | 8.00         |       |
| \$ 7 2-Fluorophenol            | 112 | 4.754     | 4.754         | 0.000         | 92  | 212238   | 22.7         |       |
| \$ 8 Phenol-d5                 | 99  | 5.822     | 5.817         | 0.005         | 94  | 311581   | 24.8         |       |
| \$ 9 Nitrobenzene-d5           | 82  | 6.752     | 6.752         | 0.000         | 94  | 362282   | 24.9         |       |
| \$ 10 2-Fluorobiphenyl         | 172 | 8.520     | 8.520         | 0.000         | 99  | 950185   | 22.3         |       |
| \$ 11 2,4,6-Tribromophenol     | 330 | 9.952     | 9.946         | 0.006         | 90  | 131780   | 24.8         |       |
| \$ 12 Terphenyl-d14            | 244 | 12.575    | 12.559        | 0.016         | 99  | 1212125  | 24.1         |       |
| 58 Naphthalene                 | 128 |           | 7.500         |               |     |          | ND           |       |
| 85 Acenaphthylene              | 152 |           | 9.054         |               |     |          | ND           |       |
| 88 Acenaphthene                | 153 |           | 9.220         |               |     |          | ND           |       |
| 103 Fluorene                   | 166 |           | 9.711         |               |     |          | ND           |       |
| 121 Phenanthrene               | 178 |           | 10.657        |               |     |          | ND           |       |
| 122 Anthracene                 | 178 |           | 10.710        |               |     |          | ND           |       |
| 131 Fluoranthene               | 202 |           | 12.056        |               |     |          | ND           |       |
| 133 Pyrene                     | 202 |           | 12.382        |               |     |          | ND           |       |
| 145 Bis(2-ethylhexyl) phthalat | 149 | 14.364    | 14.343        | 0.021         | 98  | 63603    | 1.36         |       |
| 146 Benzo[a]anthracene         | 228 |           | 14.375        |               |     |          | ND           |       |
| 147 Chrysene                   | 228 |           | 14.444        |               |     |          | ND           |       |
| 152 Benzo[b]fluoranthene       | 252 |           | 16.517        |               |     |          | ND           |       |
| 153 Benzo[k]fluoranthene       | 252 |           | 16.565        |               |     |          | ND           |       |
| 154 Benzo[a]pyrene             | 252 |           | 17.174        |               |     |          | ND           |       |
| 157 Indeno[1,2,3-cd]pyrene     | 276 |           | 19.648        |               |     |          | ND           |       |
| 158 Dibenz(a,h)anthracene      | 278 |           | 19.685        |               |     |          | ND           |       |
| 159 Benzo[g,h,i]perylene       | 276 |           | 20.337        |               |     |          | ND           |       |

Reagents:

SVTAPITINTRNi\_00007

Amount Added: 1.00

Units: uL

Run Reagent



TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CH732\20150520-7021.b\D052N029.D

Injection Date: 21-May-2015 00:57:30

Instrument ID: CH732

Operator ID: 003200

Lims ID: 180-43791-E-2-A

Lab Sample ID: 180-43791-2

Worklist Smp#: 29

Client ID: FB-CORE

Injection Vol: 2.0 ul

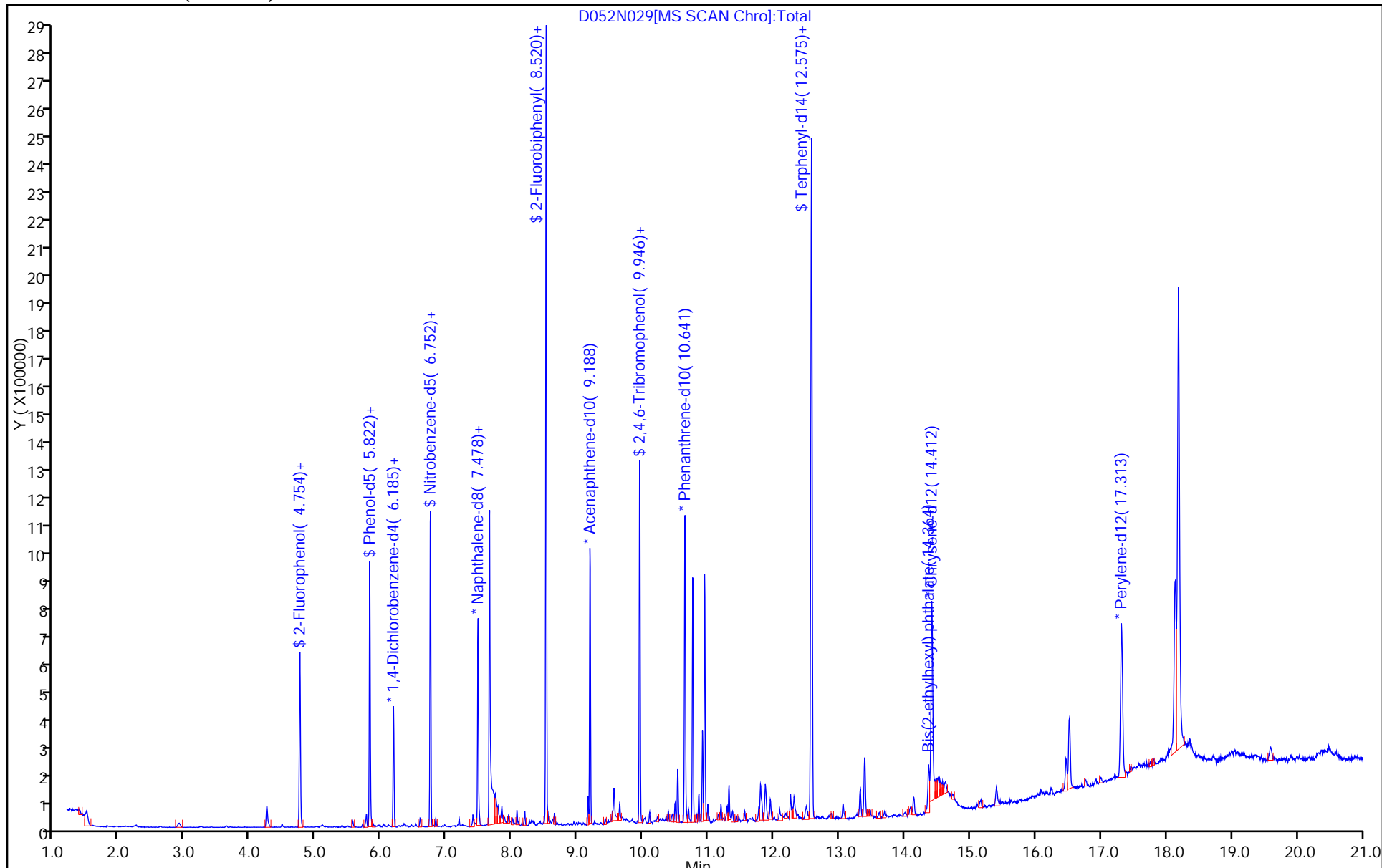
Dil. Factor: 1.0000

ALS Bottle#: 28

Method: BNA\_CH732

Limit Group: BNA 8270D ICAL

Column: Rxi-5SiIMS (0.32 mm)



TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CH732\20150520-7021.b\D052N029.D

Injection Date: 21-May-2015 00:57:30

Instrument ID: CH732

Lims ID: 180-43791-E-2-A

Lab Sample ID: 180-43791-2

Client ID: FB-CORE

Operator ID: 003200

ALS Bottle#: 28

Worklist Smp#: 29

Injection Vol: 2.0 ul

Dil. Factor: 1.0000

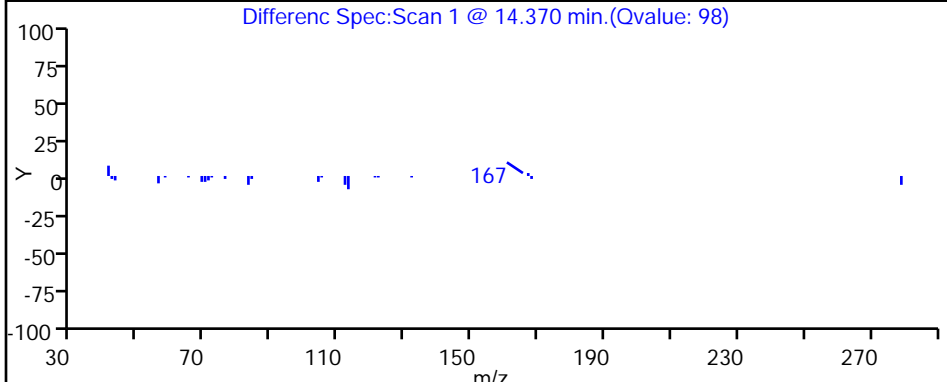
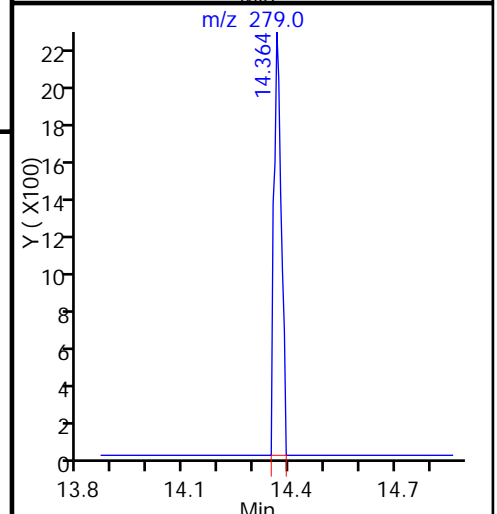
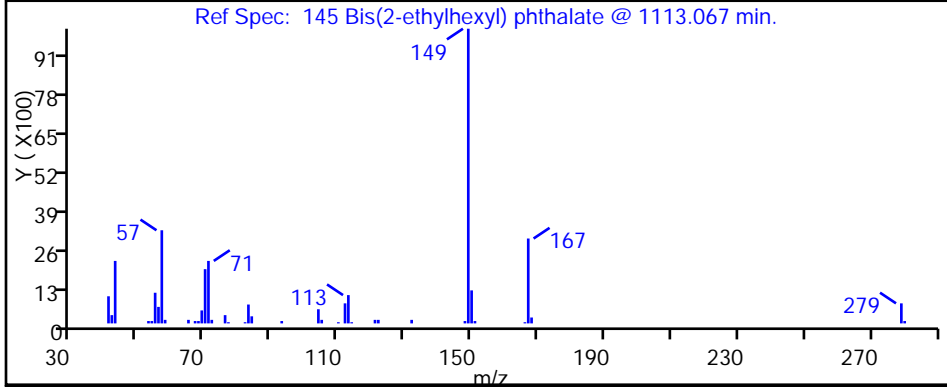
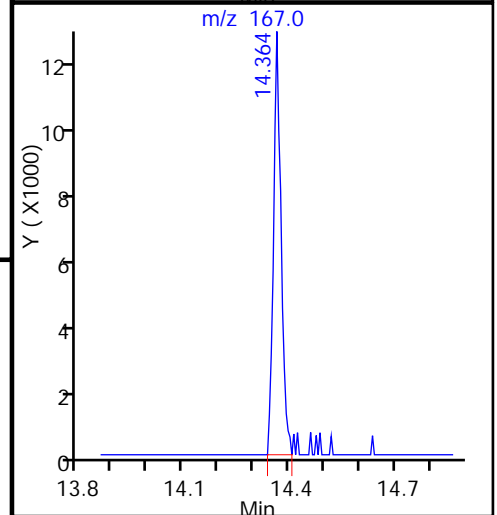
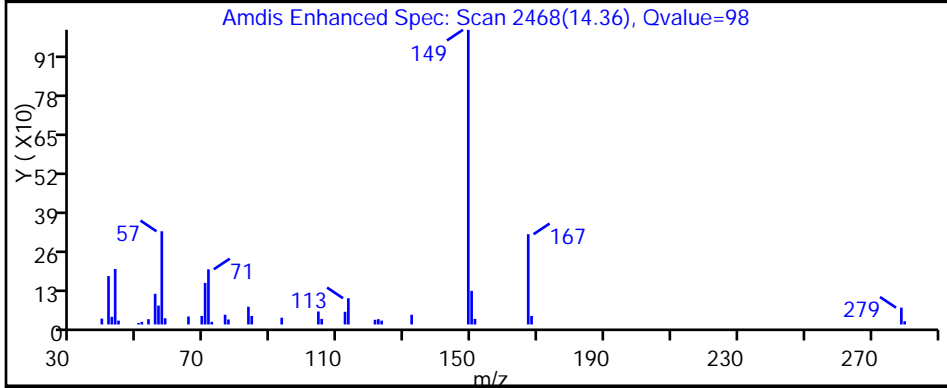
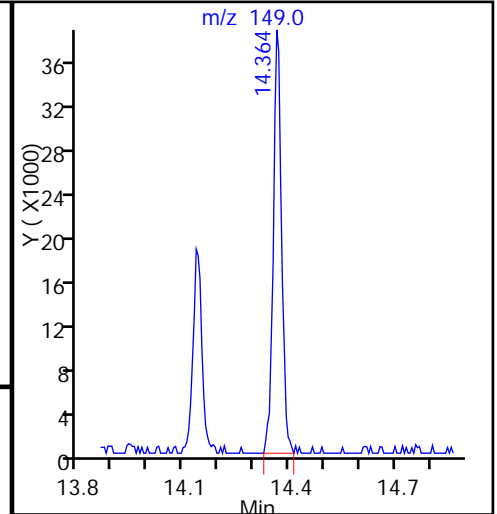
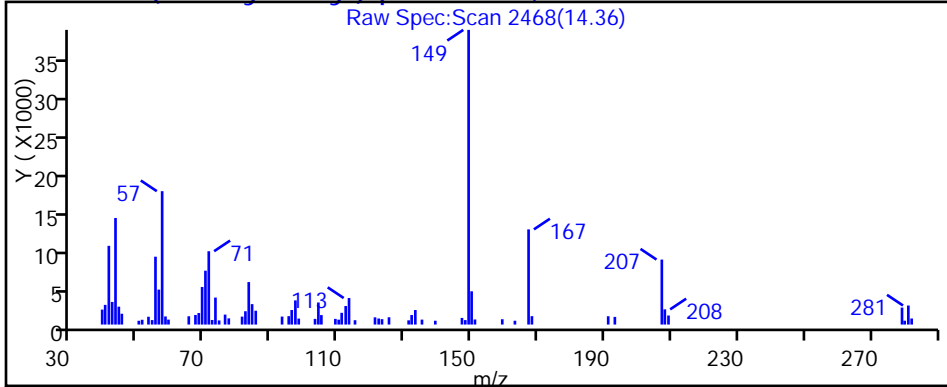
Method: BNA\_CH732

Limit Group: BNA 8270D ICAL

Column: Rxi-5SilMS (0.32 mm)

Detector: MS SCAN

145 Bis(2-ethylhexyl) phthalate, CAS: 117-81-7



FORM I  
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-43791-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: RB-PW Lab Sample ID: 180-43791-3  
 Matrix: Water Lab File ID: D052N030.D  
 Analysis Method: 8270D LL Date Collected: 05/05/2015 16:00  
 Extract. Method: 3520C Date Extracted: 05/11/2015 10:21  
 Sample wt/vol: 260 (mL) Date Analyzed: 05/21/2015 01:24  
 Con. Extract Vol.: 0.25 (mL) Dilution Factor: 1  
 Injection Volume: 2 (uL) Level: (low/med) Low  
 % Moisture: \_\_\_\_\_ GPC Cleanup: (Y/N) N  
 Analysis Batch No.: 142205 Units: ug/L

| CAS NO.  | COMPOUND NAME               | RESULT | Q | RL   | MDL   |
|----------|-----------------------------|--------|---|------|-------|
| 120-12-7 | Anthracene                  | ND     |   | 0.19 | 0.018 |
| 56-55-3  | Benzo[a]anthracene          | ND     |   | 0.19 | 0.035 |
| 205-99-2 | Benzo[b]fluoranthene        | ND     |   | 0.19 | 0.047 |
| 207-08-9 | Benzo[k]fluoranthene        | ND     |   | 0.19 | 0.029 |
| 191-24-2 | Benzo[g,h,i]perylene        | ND     |   | 0.19 | 0.028 |
| 50-32-8  | Benzo[a]pyrene              | ND     |   | 0.19 | 0.027 |
| 218-01-9 | Chrysene                    | ND     |   | 0.19 | 0.030 |
| 53-70-3  | Dibenz(a,h)anthracene       | ND     |   | 0.19 | 0.026 |
| 206-44-0 | Fluoranthene                | ND     |   | 0.19 | 0.020 |
| 86-73-7  | Fluorene                    | ND     |   | 0.19 | 0.023 |
| 193-39-5 | Indeno[1,2,3-cd]pyrene      | ND     |   | 0.19 | 0.042 |
| 85-01-8  | Phenanthrene                | ND     |   | 0.19 | 0.040 |
| 129-00-0 | Pyrene                      | ND     |   | 0.19 | 0.022 |
| 83-32-9  | Acenaphthene                | ND     |   | 0.19 | 0.028 |
| 208-96-8 | Acenaphthylene              | ND     |   | 0.19 | 0.021 |
| 91-20-3  | Naphthalene                 | ND     |   | 0.19 | 0.022 |
| 117-81-7 | Bis(2-ethylhexyl) phthalate | 2.4    |   | 1.9  | 0.42  |

| CAS NO.   | SURROGATE                   | %REC | Q | LIMITS |
|-----------|-----------------------------|------|---|--------|
| 4165-60-0 | Nitrobenzene-d5 (Surr)      | 64   |   | 27-114 |
| 321-60-8  | 2-Fluorobiphenyl            | 57   |   | 28-109 |
| 1718-51-0 | Terphenyl-d14 (Surr)        | 62   |   | 20-118 |
| 367-12-4  | 2-Fluorophenol (Surr)       | 58   |   | 20-105 |
| 118-79-6  | 2,4,6-Tribromophenol (Surr) | 58   |   | 30-118 |
| 4165-62-2 | Phenol-d5 (Surr)            | 64   |   | 25-105 |

TestAmerica Pittsburgh  
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CH732\20150520-7021.b\D052N030.D  
 Lims ID: 180-43791-A-3-A Lab Sample ID: 180-43791-3  
 Client ID: RB-PW  
 Sample Type: Client  
 Inject. Date: 21-May-2015 01:24:30 ALS Bottle#: 29 Worklist Smp#: 30  
 Injection Vol: 2.0 ul Dil. Factor: 1.0000  
 Sample Info: 180-0007021-030  
 Operator ID: 003200 Instrument ID: CH732  
 Method: \\PITCHROM\ChromData\CH732\20150520-7021.b\BNA\_CH732.m  
 Limit Group: BNA 8270D ICAL  
 Last Update: 21-May-2015 02:16:03 Calib Date: 18-Mar-2015 11:54:30  
 Integrator: RTE ID Type: Deconvolution ID  
 Quant Method: Internal Standard Quant By: Initial Calibration  
 Last ICal File: \\PITCHROM\ChromData\CH732\20150318-6063.b\D0318011.D  
 Column 1 : Rxi-5SiIMS ( 0.32 mm) Det: MS SCAN  
 Process Host: XAWRK048

First Level Reviewer: piccolinov

Date: 21-May-2015 02:12:37

| Compound                       | Sig | RT (min.) | Adj RT (min.) | Dlt RT (min.) | Q   | Response | OnCol Amt ng | Flags |
|--------------------------------|-----|-----------|---------------|---------------|-----|----------|--------------|-------|
| * 1 1,4-Dichlorobenzene-d4     | 152 | 6.180     | 6.196         | -0.016        | 98  | 68134    | 8.00         |       |
| * 2 Naphthalene-d8             | 136 | 7.473     | 7.478         | -0.005        | 100 | 322438   | 8.00         |       |
| * 3 Acenaphthene-d10           | 164 | 9.188     | 9.188         | 0.000         | 91  | 244218   | 8.00         |       |
| * 4 Phenanthrene-d10           | 188 | 10.635    | 10.630        | 0.005         | 97  | 468929   | 8.00         |       |
| * 5 Chrysene-d12               | 240 | 14.407    | 14.396        | 0.011         | 97  | 444289   | 8.00         |       |
| * 6 Perylene-d12               | 264 | 17.308    | 17.287        | 0.022         | 96  | 418344   | 8.00         |       |
| \$ 7 2-Fluorophenol            | 112 | 4.743     | 4.754         | -0.011        | 92  | 206168   | 23.3         |       |
| \$ 8 Phenol-d5                 | 99  | 5.817     | 5.817         | 0.000         | 94  | 305076   | 25.6         |       |
| \$ 9 Nitrobenzene-d5           | 82  | 6.746     | 6.752         | -0.006        | 94  | 344504   | 25.5         |       |
| \$ 10 2-Fluorobiphenyl         | 172 | 8.514     | 8.520         | -0.006        | 99  | 918920   | 22.9         |       |
| \$ 11 2,4,6-Tribromophenol     | 330 | 9.946     | 9.946         | 0.000         | 87  | 119861   | 23.3         |       |
| \$ 12 Terphenyl-d14            | 244 | 12.569    | 12.559        | 0.010         | 99  | 1190778  | 24.6         |       |
| 58 Naphthalene                 | 128 |           | 7.500         |               |     |          | ND           |       |
| 85 Acenaphthylene              | 152 |           | 9.054         |               |     |          | ND           |       |
| 88 Acenaphthene                | 153 |           | 9.220         |               |     |          | ND           |       |
| 103 Fluorene                   | 166 |           | 9.711         |               |     |          | ND           |       |
| 121 Phenanthrene               | 178 |           | 10.657        |               |     |          | ND           |       |
| 122 Anthracene                 | 178 |           | 10.710        |               |     |          | ND           |       |
| 131 Fluoranthene               | 202 |           | 12.056        |               |     |          | ND           |       |
| 133 Pyrene                     | 202 |           | 12.382        |               |     |          | ND           |       |
| 145 Bis(2-ethylhexyl) phthalat | 149 | 14.364    | 14.343        | 0.021         | 96  | 222247   | 4.93         |       |
| 146 Benzo[a]anthracene         | 228 |           | 14.375        |               |     |          | ND           |       |
| 147 Chrysene                   | 228 |           | 14.444        |               |     |          | ND           |       |
| 152 Benzo[b]fluoranthene       | 252 |           | 16.517        |               |     |          | ND           |       |
| 153 Benzo[k]fluoranthene       | 252 |           | 16.565        |               |     |          | ND           |       |
| 154 Benzo[a]pyrene             | 252 |           | 17.174        |               |     |          | ND           |       |
| 157 Indeno[1,2,3-cd]pyrene     | 276 |           | 19.648        |               |     |          | ND           |       |
| 158 Dibenz(a,h)anthracene      | 278 |           | 19.685        |               |     |          | ND           |       |
| 159 Benzo[g,h,i]perylene       | 276 |           | 20.337        |               |     |          | ND           |       |

Reagents:

SVTAPITINTRNi\_00007

Amount Added: 1.00

Units: uL

Run Reagent

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CH732\20150520-7021.b\D052N030.D

Injection Date: 21-May-2015 01:24:30

Instrument ID: CH732

Operator ID: 003200

Lims ID: 180-43791-A-3-A

Lab Sample ID: 180-43791-3

Worklist Smp#: 30

Client ID: RB-PW

Injection Vol: 2.0 ul

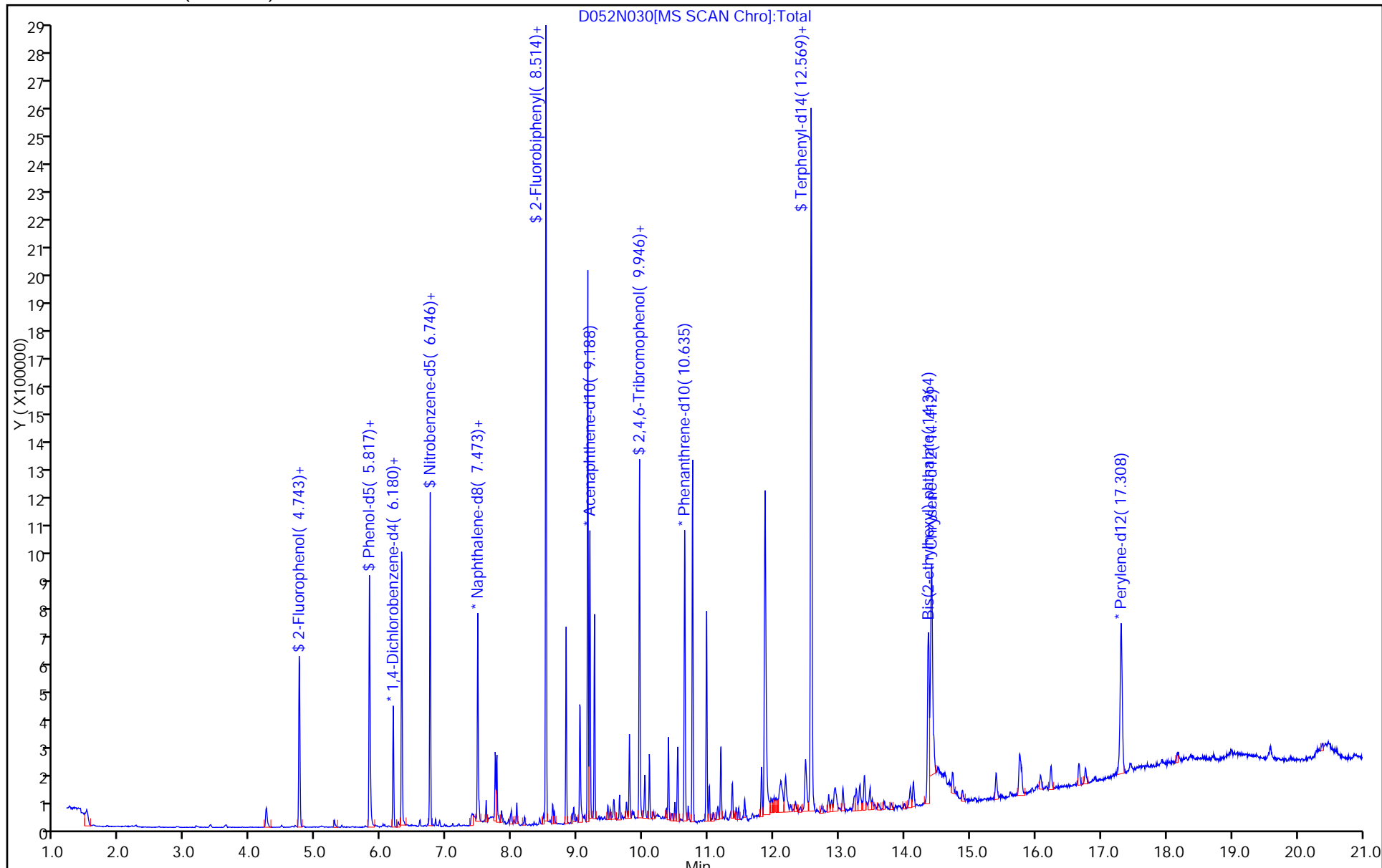
Dil. Factor: 1.0000

ALS Bottle#: 29

Method: BNA\_CH732

Limit Group: BNA 8270D ICAL

Column: Rxi-5SiIMS (0.32 mm)



TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CH732\20150520-7021.b\D052N030.D

Injection Date: 21-May-2015 01:24:30

Instrument ID: CH732

Lims ID: 180-43791-A-3-A

Lab Sample ID: 180-43791-3

Client ID: RB-PW

Operator ID: 003200

ALS Bottle#: 29

Worklist Smp#: 30

Injection Vol: 2.0 ul

Dil. Factor: 1.0000

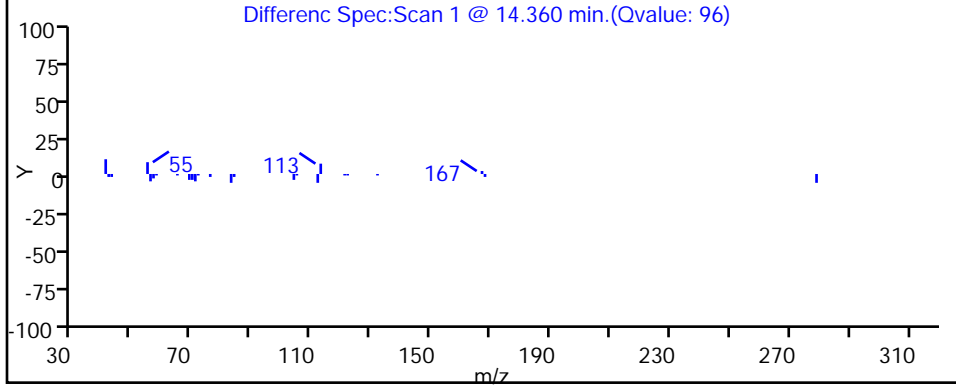
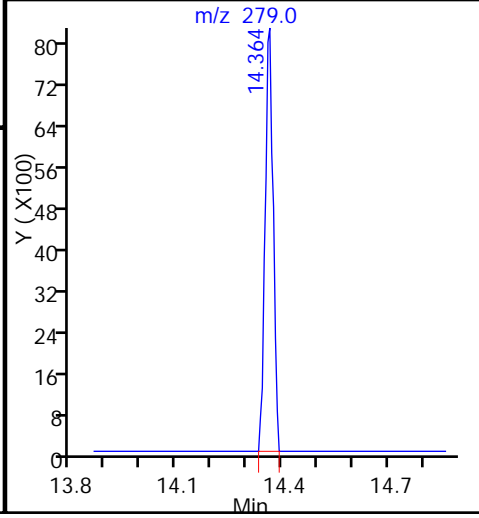
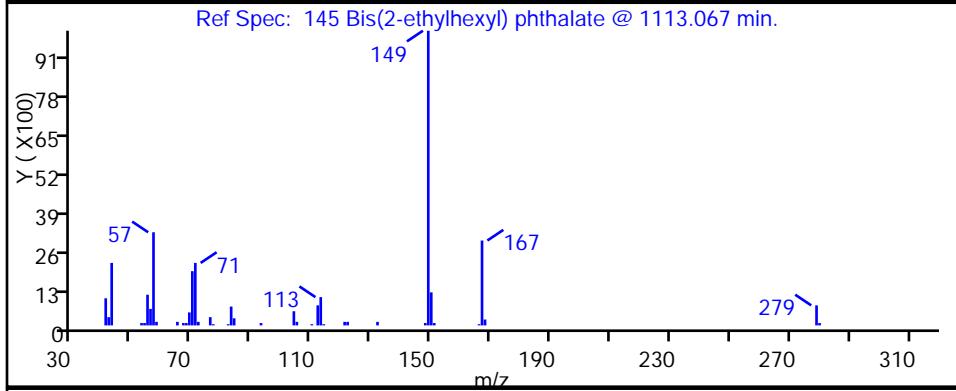
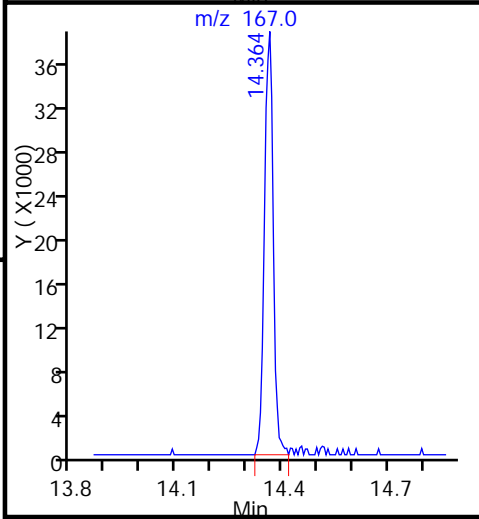
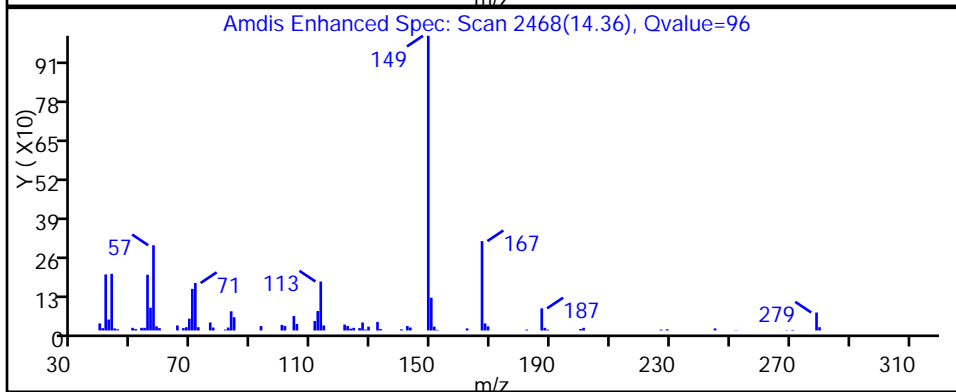
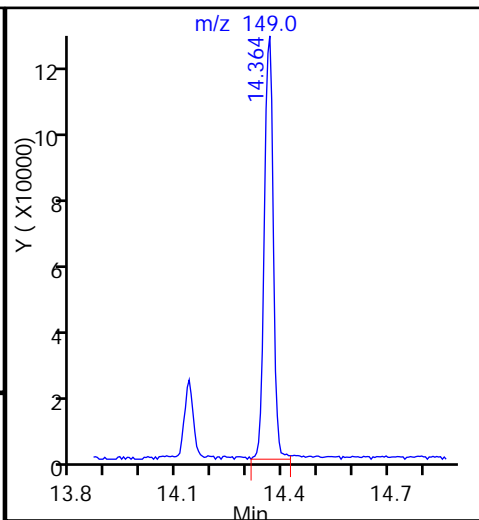
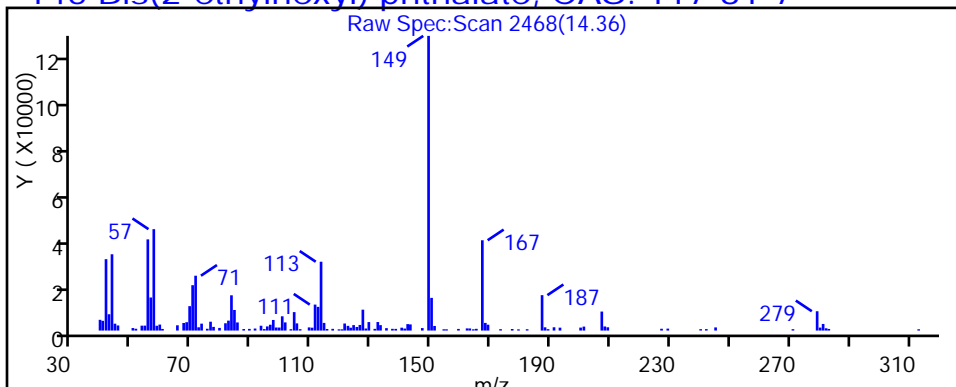
Method: BNA\_CH732

Limit Group: BNA 8270D ICAL

Column: Rxi-5SilMS (0.32 mm)

Detector: MS SCAN

145 Bis(2-ethylhexyl) phthalate, CAS: 117-81-7



FORM I  
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-43791-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: FB-PW Lab Sample ID: 180-43791-4  
 Matrix: Water Lab File ID: D052N031.D  
 Analysis Method: 8270D LL Date Collected: 05/05/2015 16:10  
 Extract. Method: 3520C Date Extracted: 05/11/2015 10:21  
 Sample wt/vol: 250 (mL) Date Analyzed: 05/21/2015 01:50  
 Con. Extract Vol.: 0.25 (mL) Dilution Factor: 1  
 Injection Volume: 2 (uL) Level: (low/med) Low  
 % Moisture: \_\_\_\_\_ GPC Cleanup: (Y/N) N  
 Analysis Batch No.: 142205 Units: ug/L

| CAS NO.  | COMPOUND NAME               | RESULT | Q | RL   | MDL   |
|----------|-----------------------------|--------|---|------|-------|
| 120-12-7 | Anthracene                  | ND     |   | 0.20 | 0.019 |
| 56-55-3  | Benzo[a]anthracene          | ND     |   | 0.20 | 0.037 |
| 205-99-2 | Benzo[b]fluoranthene        | ND     |   | 0.20 | 0.049 |
| 207-08-9 | Benzo[k]fluoranthene        | ND     |   | 0.20 | 0.030 |
| 191-24-2 | Benzo[g,h,i]perylene        | ND     |   | 0.20 | 0.029 |
| 50-32-8  | Benzo[a]pyrene              | ND     |   | 0.20 | 0.028 |
| 218-01-9 | Chrysene                    | ND     |   | 0.20 | 0.031 |
| 53-70-3  | Dibenz(a,h)anthracene       | ND     |   | 0.20 | 0.027 |
| 206-44-0 | Fluoranthene                | ND     |   | 0.20 | 0.021 |
| 86-73-7  | Fluorene                    | ND     |   | 0.20 | 0.024 |
| 193-39-5 | Indeno[1,2,3-cd]pyrene      | ND     |   | 0.20 | 0.043 |
| 85-01-8  | Phenanthrene                | ND     |   | 0.20 | 0.042 |
| 129-00-0 | Pyrene                      | ND     |   | 0.20 | 0.023 |
| 83-32-9  | Acenaphthene                | ND     |   | 0.20 | 0.029 |
| 208-96-8 | Acenaphthylene              | ND     |   | 0.20 | 0.022 |
| 91-20-3  | Naphthalene                 | ND     |   | 0.20 | 0.023 |
| 117-81-7 | Bis(2-ethylhexyl) phthalate | 2.6    |   | 2.0  | 0.44  |

| CAS NO.   | SURROGATE                   | %REC | Q | LIMITS |
|-----------|-----------------------------|------|---|--------|
| 4165-60-0 | Nitrobenzene-d5 (Surr)      | 62   |   | 27-114 |
| 321-60-8  | 2-Fluorobiphenyl            | 56   |   | 28-109 |
| 1718-51-0 | Terphenyl-d14 (Surr)        | 59   |   | 20-118 |
| 367-12-4  | 2-Fluorophenol (Surr)       | 53   |   | 20-105 |
| 118-79-6  | 2,4,6-Tribromophenol (Surr) | 65   |   | 30-118 |
| 4165-62-2 | Phenol-d5 (Surr)            | 58   |   | 25-105 |



TestAmerica Pittsburgh  
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CH732\20150520-7021.b\D052N031.D  
 Lims ID: 180-43791-A-4-A Lab Sample ID: 180-43791-4  
 Client ID: FB-PW  
 Sample Type: Client  
 Inject. Date: 21-May-2015 01:50:30 ALS Bottle#: 30 Worklist Smp#: 54  
 Injection Vol: 2.0 ul Dil. Factor: 1.0000  
 Sample Info: 180-0007021-031  
 Operator ID: 003200 Instrument ID: CH732  
 Method: \\PITCHROM\ChromData\CH732\20150520-7021.b\BNA\_CH732.m  
 Limit Group: BNA 8270D ICAL  
 Last Update: 21-May-2015 02:16:03 Calib Date: 18-Mar-2015 11:54:30  
 Integrator: RTE ID Type: Deconvolution ID  
 Quant Method: Internal Standard Quant By: Initial Calibration  
 Last ICal File: \\PITCHROM\ChromData\CH732\20150318-6063.b\D0318011.D  
 Column 1 : Rxi-5SiIMS ( 0.32 mm) Det: MS SCAN  
 Process Host: XAWRK048

First Level Reviewer: piccolinov

Date: 21-May-2015 02:15:25

| Compound                       | Sig | RT (min.) | Adj RT (min.) | Diff RT (min.) | Q   | Response | OnCol Amt ng | Flags |
|--------------------------------|-----|-----------|---------------|----------------|-----|----------|--------------|-------|
| * 1 1,4-Dichlorobenzene-d4     | 152 | 6.185     | 6.196         | -0.011         | 97  | 69424    | 8.00         |       |
| * 2 Naphthalene-d8             | 136 | 7.478     | 7.478         | 0.000          | 100 | 331865   | 8.00         |       |
| * 3 Acenaphthene-d10           | 164 | 9.188     | 9.188         | 0.000          | 92  | 247401   | 8.00         |       |
| * 4 Phenanthrene-d10           | 188 | 10.641    | 10.630        | 0.011          | 97  | 464594   | 8.00         |       |
| * 5 Chrysene-d12               | 240 | 14.418    | 14.396        | 0.022          | 97  | 430824   | 8.00         |       |
| * 6 Perylene-d12               | 264 | 17.319    | 17.287        | 0.033          | 96  | 411331   | 8.00         |       |
| \$ 7 2-Fluorophenol            | 112 | 4.748     | 4.754         | -0.006         | 91  | 191987   | 21.3         |       |
| \$ 8 Phenol-d5                 | 99  | 5.822     | 5.817         | 0.005          | 93  | 282830   | 23.3         |       |
| \$ 9 Nitrobenzene-d5           | 82  | 6.746     | 6.752         | -0.006         | 94  | 344238   | 24.7         |       |
| \$ 10 2-Fluorobiphenyl         | 172 | 8.520     | 8.520         | 0.000          | 99  | 916769   | 22.6         |       |
| \$ 11 2,4,6-Tribromophenol     | 330 | 9.952     | 9.946         | 0.006          | 91  | 132376   | 25.9         |       |
| \$ 12 Terphenyl-d14            | 244 | 12.575    | 12.559        | 0.016          | 99  | 1106810  | 23.6         |       |
| 58 Naphthalene                 | 128 |           | 7.500         |                |     |          | ND           |       |
| 85 Acenaphthylene              | 152 |           | 9.054         |                |     |          | ND           |       |
| 88 Acenaphthene                | 153 |           | 9.220         |                |     |          | ND           |       |
| 103 Fluorene                   | 166 |           | 9.711         |                |     |          | ND           |       |
| 121 Phenanthrene               | 178 |           | 10.657        |                |     |          | ND           |       |
| 122 Anthracene                 | 178 |           | 10.710        |                |     |          | ND           |       |
| 131 Fluoranthene               | 202 |           | 12.056        |                |     |          | ND           |       |
| 133 Pyrene                     | 202 |           | 12.382        |                |     |          | ND           |       |
| 145 Bis(2-ethylhexyl) phthalat | 149 | 14.364    | 14.343        | 0.021          | 96  | 231575   | 5.30         |       |
| 146 Benzo[a]anthracene         | 228 |           | 14.375        |                |     |          | ND           |       |
| 147 Chrysene                   | 228 |           | 14.444        |                |     |          | ND           |       |
| 152 Benzo[b]fluoranthene       | 252 |           | 16.517        |                |     |          | ND           |       |
| 153 Benzo[k]fluoranthene       | 252 |           | 16.565        |                |     |          | ND           |       |
| 154 Benzo[a]pyrene             | 252 |           | 17.174        |                |     |          | ND           |       |
| 157 Indeno[1,2,3-cd]pyrene     | 276 |           | 19.648        |                |     |          | ND           |       |
| 158 Dibenz(a,h)anthracene      | 278 |           | 19.685        |                |     |          | ND           |       |
| 159 Benzo[g,h,i]perylene       | 276 |           | 20.337        |                |     |          | ND           |       |

Reagents:

SVTAPITINTRNi\_00007

Amount Added: 1.00

Units: uL

Run Reagent

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CH732\20150520-7021.b\D052N031.D

Injection Date: 21-May-2015 01:50:30

Instrument ID: CH732

Operator ID: 003200

Lims ID: 180-43791-A-4-A

Lab Sample ID: 180-43791-4

Worklist Smp#: 54

Client ID: FB-PW

Injection Vol: 2.0 ul

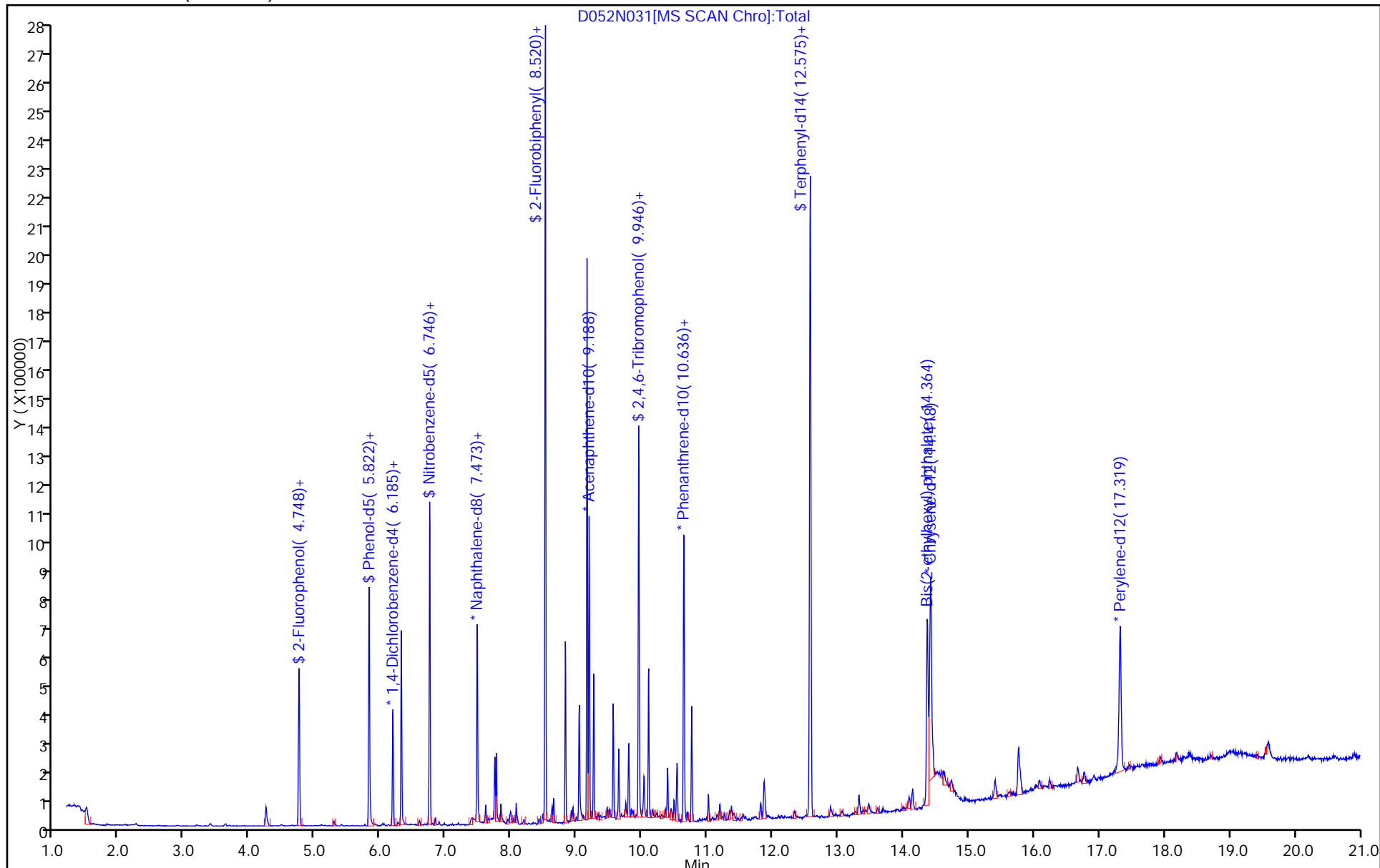
Dil. Factor: 1.0000

ALS Bottle#: 30

Method: BNA\_CH732

Limit Group: BNA 8270D ICAL

Column: Rxi-5SiIMS (0.32 mm)



TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CH732\20150520-7021.b\D052N031.D

Injection Date: 21-May-2015 01:50:30

Instrument ID: CH732

Lims ID: 180-43791-A-4-A

Lab Sample ID: 180-43791-4

Client ID: FB-PW

Operator ID: 003200

ALS Bottle#: 30

Worklist Smp#: 54

Injection Vol: 2.0 ul

Dil. Factor: 1.0000

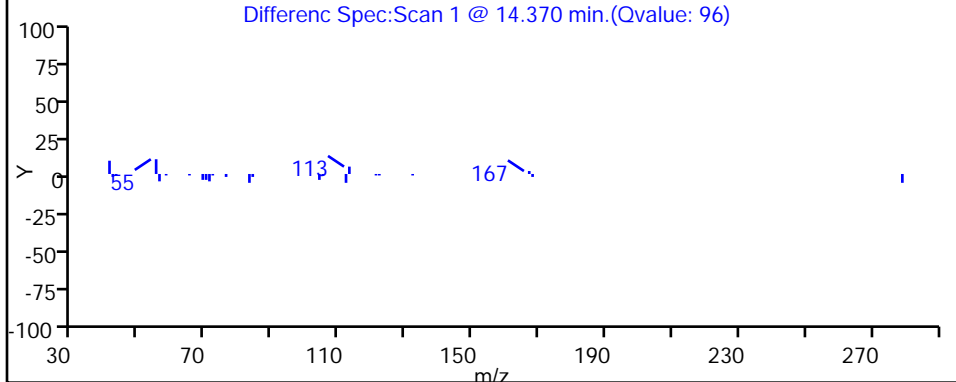
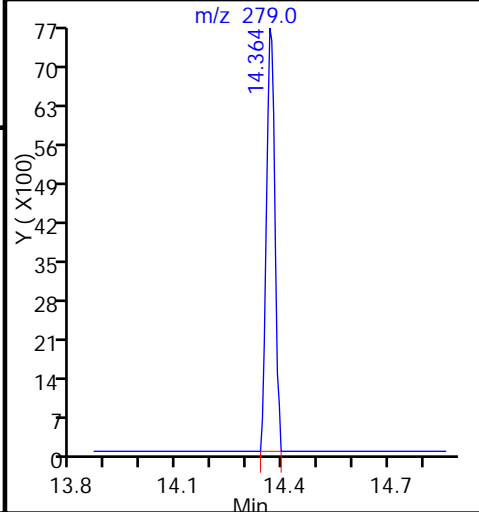
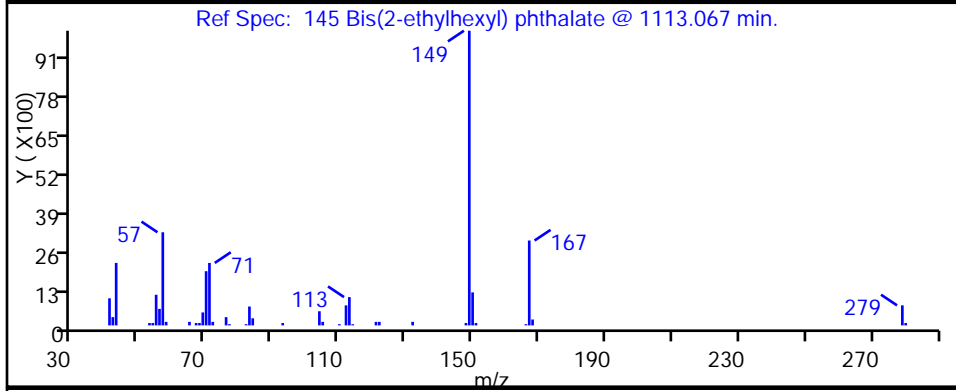
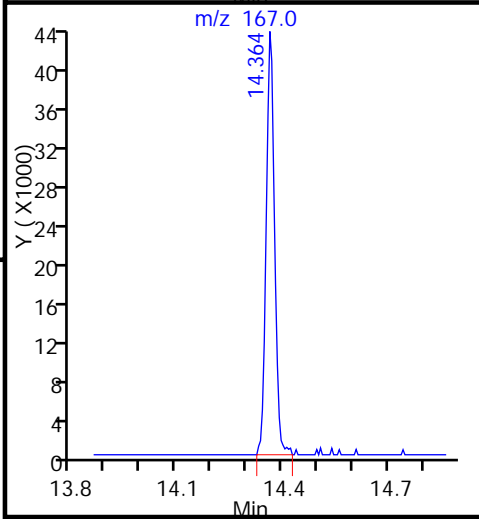
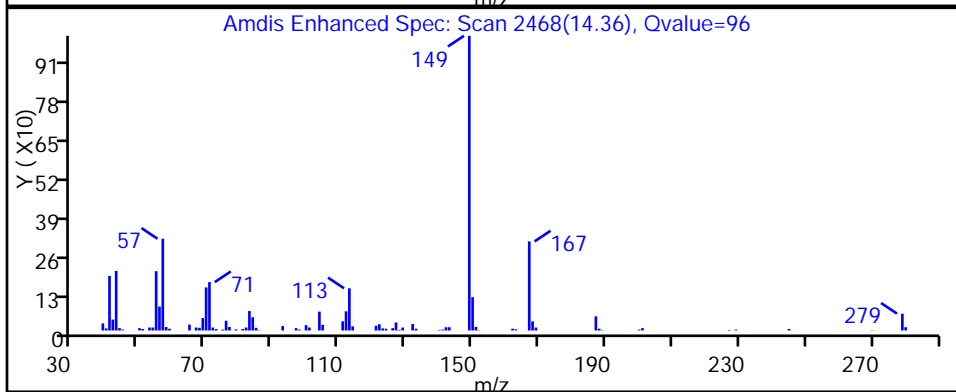
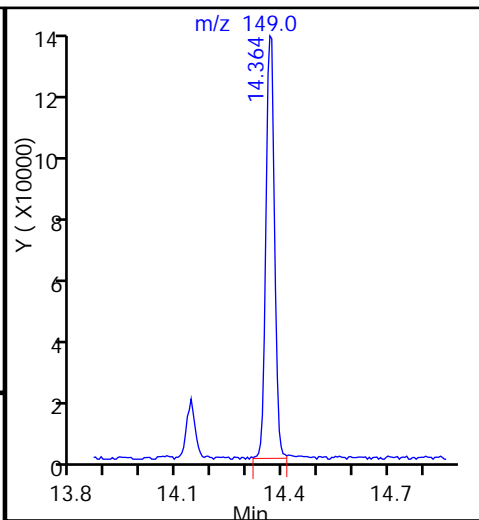
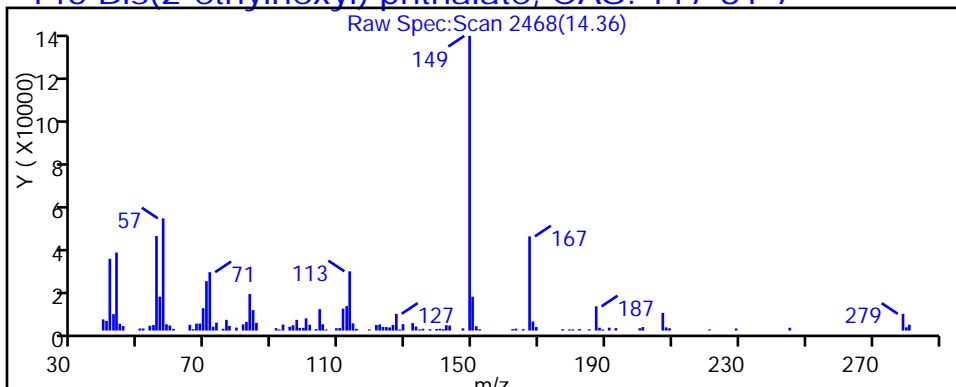
Method: BNA\_CH732

Limit Group: BNA 8270D ICAL

Column: Rxi-5SilMS (0.32 mm)

Detector: MS SCAN

145 Bis(2-ethylhexyl) phthalate, CAS: 117-81-7



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

Lab Name: TestAmerica Pittsburgh Job No.: 180-43791-1 Analy Batch No.: 132436

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

Instrument ID: CH732 GC Column: Rxi-5SilMS ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/03/2015 05:53 Calibration End Date: 02/03/2015 09:00 Calibration ID: 21642

Calibration Files:

| LEVEL:  | LAB SAMPLE ID:    | LAB FILE ID: |
|---------|-------------------|--------------|
| Level 1 | IC 180-132436/3   | D0203003.D   |
| Level 2 | IC 180-132436/4   | D0203004.D   |
| Level 3 | IC 180-132436/5   | D0203005.D   |
| Level 4 | ICIS 180-132436/6 | D0203006.D   |
| Level 5 | IC 180-132436/7   | D0203007.D   |
| Level 6 | IC 180-132436/8   | D0203008.D   |
| Level 7 | IC 180-132436/9   | D0203009.D   |
| Level 8 | IC 180-132436/10  | D0203010.D   |

| ANALYTE                 | RRF              |                  |                  |        |        | CURVE TYPE | COEFFICIENT |        |    | #      | MIN RRF | %RSD | #    | MAX %RSD | R^2 OR COD | # | MIN R^2 OR COD |
|-------------------------|------------------|------------------|------------------|--------|--------|------------|-------------|--------|----|--------|---------|------|------|----------|------------|---|----------------|
|                         | LVL 1            | LVL 2            | LVL 3            | LVL 4  | LVL 5  |            | B           | M1     | M2 |        |         |      |      |          |            |   |                |
|                         | LVL 6            | LVL 7            | LVL 8            |        |        |            |             |        |    |        |         |      |      |          |            |   |                |
| 1,4-Dioxane             | 0.2894<br>0.3232 | 0.3261<br>0.3192 | 0.3327<br>0.3142 | 0.3264 | 0.3179 | Ave        |             | 0.3186 |    | 0.0100 | 4.1     |      | 20.0 |          |            |   |                |
| N-Nitrosodimethylamine  | 0.3996<br>0.4396 | 0.4307<br>0.4384 | 0.4292<br>0.4385 | 0.4393 | 0.4287 | Ave        |             | 0.4305 |    | 0.0100 | 3.1     |      | 20.0 |          |            |   |                |
| Pyridine                | 0.6306<br>0.7824 | 0.7337<br>0.7815 | 0.7719<br>0.7636 | 0.7738 | 0.7696 | Ave        |             | 0.7509 |    | 0.0100 | 6.8     |      | 20.0 |          |            |   |                |
| Methyl methanesulfonate | 0.5847<br>0.5946 | 0.6333<br>0.5934 | 0.6501<br>0.5766 | 0.6218 | 0.5934 | Ave        |             | 0.6060 |    | 0.0100 | 4.3     |      | 20.0 |          |            |   |                |
| Benzaldehyde            | 0.6297<br>0.7987 | 0.6041<br>0.7206 | 0.6312<br>0.6357 | 0.6301 | 0.7534 | Ave        |             | 0.6754 |    | 0.0100 | 11.0    |      | 20.0 |          |            |   |                |
| Phenol                  | 1.6566<br>1.5518 | 1.6696<br>1.5021 | 1.6880<br>1.4680 | 1.5906 | 1.5654 | Ave        |             | 1.5865 |    | 0.8000 | 5.1     |      | 20.0 |          |            |   |                |
| Aniline                 | 1.7678<br>1.7687 | 1.7915<br>1.7175 | 1.8542<br>1.6350 | 1.7762 | 1.7351 | Ave        |             | 1.7557 |    | 0.0100 | 3.6     |      | 20.0 |          |            |   |                |
| Bis(2-chloroethyl)ether | 1.2240<br>1.0827 | 1.1553<br>1.0665 | 1.1821<br>1.0456 | 1.1180 | 1.0850 | Ave        |             | 1.1199 |    | 0.7000 | 5.5     |      | 20.0 |          |            |   |                |
| 2-Chlorophenol          | 1.3213<br>1.3691 | 1.3583<br>1.3347 | 1.4311<br>1.3215 | 1.3713 | 1.3354 | Ave        |             | 1.3553 |    | 0.8000 | 2.7     |      | 20.0 |          |            |   |                |
| n-Decane                | 1.7844<br>1.5383 | 1.6952<br>1.4335 | 1.7046<br>1.3670 | 1.6121 | 1.5819 | Ave        |             | 1.5896 |    |        | 8.9     |      | 20.0 |          |            |   |                |
| 1,3-Dichlorobenzene     | 1.5278<br>1.5967 | 1.6341<br>1.5442 | 1.6362<br>1.5131 | 1.6179 | 1.5562 | Ave        |             | 1.5783 |    | 0.0100 | 3.1     |      | 20.0 |          |            |   |                |
| 1,4-Dichlorobenzene     | 1.6487<br>1.6065 | 1.6240<br>1.6015 | 1.7358<br>1.5476 | 1.6058 | 1.5859 | Ave        |             | 1.6195 |    | 0.0100 | 3.4     |      | 20.0 |          |            |   |                |
| Benzyl alcohol          | 0.8053<br>0.8464 | 0.8659<br>0.8422 | 0.9413<br>0.8086 | 0.8759 | 0.8311 | Ave        |             | 0.8521 |    | 0.0100 | 5.1     |      | 20.0 |          |            |   |                |
| 1,2-Dichlorobenzene     | 1.6482<br>1.5539 | 1.6131<br>1.5183 | 1.6459<br>1.4935 | 1.5758 | 1.5449 | Ave        |             | 1.5742 |    | 0.0100 | 3.6     |      | 20.0 |          |            |   |                |

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

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

Lab Name: TestAmerica Pittsburgh

Job No.: 180-43791-1

Analy Batch No.: 132436

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

Instrument ID: CH732

GC Column: Rxi-5SilMS ID: 0.32 (mm)

Heated Purge: (Y/N) N

Calibration Start Date: 02/03/2015 05:53

Calibration End Date: 02/03/2015 09:00

Calibration ID: 21642

| ANALYTE                      | RRF              |                  |                  |        |        | CURVE TYPE | COEFFICIENT |        |    | # | MIN RRF | %RSD | #    | MAX %RSD | R^2 OR COD | #      | MIN R^2 OR COD |
|------------------------------|------------------|------------------|------------------|--------|--------|------------|-------------|--------|----|---|---------|------|------|----------|------------|--------|----------------|
|                              | LVL 1            | LVL 2            | LVL 3            | LVL 4  | LVL 5  |            | B           | M1     | M2 |   |         |      |      |          |            |        |                |
|                              | LVL 6            | LVL 7            | LVL 8            |        |        |            |             |        |    |   |         |      |      |          |            |        |                |
| 2-Methylphenol               | 1.2615<br>1.1778 | 1.2521<br>1.1518 | 1.3156<br>1.0897 | 1.2215 | 1.1588 | Ave        |             | 1.2036 |    |   | 0.7000  | 6.0  | 20.0 |          |            |        |                |
| Indene                       | 2.3133<br>2.1398 | 2.2209<br>2.1085 | 2.3406<br>1.9870 | 2.2347 | 2.1387 | Ave        |             | 2.1854 |    |   | 0.0100  | 5.3  | 20.0 |          |            |        |                |
| 2,2'-oxybis[1-chloropropane] | 2.5131<br>2.2628 | 2.5045<br>2.2085 | 2.6347<br>2.0194 | 2.4316 | 2.3000 | Ave        |             | 2.3593 |    |   | 0.0100  | 8.4  | 20.0 |          |            |        |                |
| N-Nitrosopyrrolidine         | 0.5262<br>0.5893 | 0.6009<br>0.5880 | 0.6401<br>0.5653 | 0.5954 | 0.5859 | Ave        |             | 0.5864 |    |   | 0.0100  | 5.5  | 20.0 |          |            |        |                |
| Acetophenone                 | 2.0369<br>1.7219 | 1.9688<br>1.6379 | 2.0045<br>1.5364 | 1.8680 | 1.7454 | Ave        |             | 1.8150 |    |   | 0.0100  | 10.0 | 20.0 |          |            |        |                |
| N-Nitrosodi-n-propylamine    | 0.9492<br>0.7944 | 0.9543<br>0.7526 | 0.9805<br>0.7006 | 0.8774 | 0.8314 | Ave        |             | 0.8551 |    |   | 0.5000  | 12.0 | 20.0 |          |            |        |                |
| Methylphenol, 3 & 4          | 1.2641<br>1.1848 | 1.3320<br>1.1393 | 1.3945<br>1.0530 | 1.2967 | 1.2224 | Ave        |             | 1.2358 |    |   | 0.6000  | 8.9  | 20.0 |          |            |        |                |
| Hexachloroethane             | 0.7385<br>0.6865 | 0.7117<br>0.6822 | 0.7467<br>0.6648 | 0.7026 | 0.6776 | Ave        |             | 0.7013 |    |   | 0.3000  | 4.2  | 20.0 |          |            |        |                |
| Nitrobenzene                 | 0.3271<br>0.3336 | 0.3446<br>0.3293 | 0.3443<br>0.3120 | 0.3390 | 0.3372 | Ave        |             | 0.3334 |    |   | 0.2000  | 3.2  | 20.0 |          |            |        |                |
| Isophorone                   | 0.5945<br>0.5873 | 0.5897<br>0.5783 | 0.6005<br>0.5621 | 0.6022 | 0.5816 | Ave        |             | 0.5870 |    |   | 0.4000  | 2.2  | 20.0 |          |            |        |                |
| 2-Nitrophenol                | 0.1657<br>0.1902 | 0.1840<br>0.1903 | 0.1844<br>0.1819 | 0.1896 | 0.1897 | Ave        |             | 0.1845 |    |   | 0.1000  | 4.5  | 20.0 |          |            |        |                |
| 2,4-Dimethylphenol           | 0.3280<br>0.3348 | 0.3513<br>0.3350 | 0.3524<br>0.3006 | 0.3537 | 0.3374 | Ave        |             | 0.3367 |    |   | 0.2000  | 5.2  | 20.0 |          |            |        |                |
| Benzoic acid                 | ++++<br>0.1987   | 0.1125<br>0.2033 | 0.1360<br>0.2048 | 0.1402 | 0.1689 | Lin1       | -0.274      | 0.2037 |    |   | 0.0100  |      |      | 0.9960   |            | 0.9900 |                |
| Bis(2-chloroethoxy)methane   | 0.3834<br>0.3557 | 0.3759<br>0.3474 | 0.3766<br>0.3299 | 0.3693 | 0.3508 | Ave        |             | 0.3611 |    |   | 0.3000  | 5.0  | 20.0 |          |            |        |                |
| 2,4-Dichlorophenol           | 0.2934<br>0.2950 | 0.2935<br>0.2893 | 0.2980<br>0.2824 | 0.3042 | 0.2969 | Ave        |             | 0.2941 |    |   | 0.2000  | 2.2  | 20.0 |          |            |        |                |
| 1,2,4-Trichlorobenzene       | 0.3394<br>0.3347 | 0.3522<br>0.3268 | 0.3505<br>0.3188 | 0.3506 | 0.3259 | Ave        |             | 0.3374 |    |   | 0.0100  | 3.8  | 20.0 |          |            |        |                |
| Naphthalene                  | 1.0933<br>1.0643 | 1.1149<br>1.0677 | 1.1083<br>1.0388 | 1.0934 | 1.0774 | Ave        |             | 1.0823 |    |   | 0.7000  | 2.3  | 20.0 |          |            |        |                |
| 4-Chloroaniline              | 0.4263<br>0.4369 | 0.4351<br>0.4265 | 0.4505<br>0.4043 | 0.4433 | 0.4460 | Ave        |             | 0.4336 |    |   | 0.0100  | 3.4  | 20.0 |          |            |        |                |
| 2,6-Dichlorophenol           | 0.2615<br>0.2923 | 0.3132<br>0.2825 | 0.3169<br>0.2731 | 0.3025 | 0.2976 | Ave        |             | 0.2924 |    |   | 0.0100  | 6.6  | 20.0 |          |            |        |                |
| Hexachlorobutadiene          | 0.2188<br>0.1970 | 0.2056<br>0.1955 | 0.2032<br>0.1917 | 0.2049 | 0.1985 | Ave        |             | 0.2019 |    |   | 0.0100  | 4.2  | 20.0 |          |            |        |                |

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

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

Lab Name: TestAmerica Pittsburgh

Job No.: 180-43791-1

Analy Batch No.: 132436

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

Instrument ID: CH732

GC Column: Rxi-5SilMS ID: 0.32 (mm)

Heated Purge: (Y/N) N

Calibration Start Date: 02/03/2015 05:53

Calibration End Date: 02/03/2015 09:00

Calibration ID: 21642

| ANALYTE                    | RRF              |                  |                  |        |        | CURVE TYPE | COEFFICIENT |        |    | # | MIN RRF | %RSD | # | MAX %RSD | R <sup>2</sup> OR COD | # | MIN R <sup>2</sup> OR COD |
|----------------------------|------------------|------------------|------------------|--------|--------|------------|-------------|--------|----|---|---------|------|---|----------|-----------------------|---|---------------------------|
|                            | LVL 1            | LVL 2            | LVL 3            | LVL 4  | LVL 5  |            | B           | M1     | M2 |   |         |      |   |          |                       |   |                           |
|                            | LVL 6            | LVL 7            | LVL 8            | LVL 5  |        |            |             |        |    |   |         |      |   |          |                       |   |                           |
| Caprolactam                | 0.0936<br>0.0987 | 0.1004<br>0.1006 | 0.1010<br>0.0967 | 0.0971 | 0.1001 | Ave        |             | 0.0985 |    |   | 0.0100  | 2.6  |   | 20.0     |                       |   |                           |
| 4-Chloro-3-methylphenol    | 0.3259<br>0.3032 | 0.3118<br>0.3010 | 0.3190<br>0.2893 | 0.3127 | 0.3048 | Ave        |             | 0.3085 |    |   | 0.2000  | 3.7  |   | 20.0     |                       |   |                           |
| 2-Methylnaphthalene        | 0.7854<br>0.7616 | 0.7970<br>0.7409 | 0.7819<br>0.7178 | 0.7854 | 0.7530 | Ave        |             | 0.7654 |    |   | 0.4000  | 3.5  |   | 20.0     |                       |   |                           |
| 1-Methylnaphthalene        | 0.7588<br>0.7095 | 0.7356<br>0.6944 | 0.7462<br>0.6677 | 0.7283 | 0.7014 | Ave        |             | 0.7177 |    |   | 0.0100  | 4.2  |   | 20.0     |                       |   |                           |
| Hexachlorocyclopentadiene  | 0.2878<br>0.3872 | 0.3363<br>0.3718 | 0.3406<br>0.3157 | 0.3633 | 0.3814 | Ave        |             | 0.3480 |    |   | 0.0500  | 9.9  |   | 20.0     |                       |   |                           |
| 1,2,4,5-Tetrachlorobenzene | 0.5271<br>0.5157 | 0.5490<br>0.4843 | 0.5616<br>0.4793 | 0.5356 | 0.5187 | Ave        |             | 0.5214 |    |   | 0.0100  | 5.5  |   | 20.0     |                       |   |                           |
| 2,4,6-Trichlorophenol      | 0.3384<br>0.3625 | 0.3491<br>0.3512 | 0.3640<br>0.3551 | 0.3670 | 0.3587 | Ave        |             | 0.3558 |    |   | 0.2000  | 2.6  |   | 20.0     |                       |   |                           |
| 2,4,5-Trichlorophenol      | 0.3632<br>0.3897 | 0.3616<br>0.3754 | 0.3889<br>0.3774 | 0.3794 | 0.3834 | Ave        |             | 0.3774 |    |   | 0.2000  | 2.8  |   | 20.0     |                       |   |                           |
| 1,1'-Biphenyl              | 1.4675<br>1.5500 | 1.5477<br>1.4658 | 1.5307<br>1.4591 | 1.5290 | 1.4933 | Ave        |             | 1.5054 |    |   | 0.0100  | 2.5  |   | 20.0     |                       |   |                           |
| 2-Chloronaphthalene        | 1.2012<br>1.2780 | 1.2764<br>1.1651 | 1.2437<br>1.1616 | 1.2325 | 1.1984 | Ave        |             | 1.2196 |    |   | 0.8000  | 3.7  |   | 20.0     |                       |   |                           |
| 2-Nitroaniline             | 0.3160<br>0.3609 | 0.3422<br>0.3402 | 0.3641<br>0.3482 | 0.3507 | 0.3502 | Ave        |             | 0.3466 |    |   | 0.0100  | 4.3  |   | 20.0     |                       |   |                           |
| Dimethyl phthalate         | 1.2918<br>1.2997 | 1.2696<br>1.2239 | 1.3080<br>1.2415 | 1.2660 | 1.2604 | Ave        |             | 1.2701 |    |   | 0.0100  | 2.3  |   | 20.0     |                       |   |                           |
| 1,3-Dinitrobenzene         | 0.1398<br>0.2093 | 0.1828<br>0.2040 | 0.1949<br>0.1996 | 0.1986 | 0.2017 | Ave        |             | 0.1913 |    |   | 0.0100  | 12.0 |   | 20.0     |                       |   |                           |
| 2,6-Dinitrotoluene         | 0.2531<br>0.2910 | 0.2768<br>0.2735 | 0.2901<br>0.2792 | 0.2856 | 0.2829 | Ave        |             | 0.2790 |    |   | 0.2000  | 4.4  |   | 20.0     |                       |   |                           |
| Acenaphthylene             | 1.9319<br>1.9727 | 1.8890<br>1.9400 | 1.9822<br>1.9233 | 1.9235 | 1.9095 | Ave        |             | 1.9340 |    |   | 0.9000  | 1.6  |   | 20.0     |                       |   |                           |
| 3-Nitroaniline             | 0.3033<br>0.3545 | 0.3298<br>0.3468 | 0.3443<br>0.3405 | 0.3513 | 0.3466 | Ave        |             | 0.3396 |    |   | 0.0100  | 4.8  |   | 20.0     |                       |   |                           |
| 2,4-Dinitrophenol          | 0.0832<br>0.1969 | 0.1126<br>0.1883 | 0.1416<br>0.1859 | 0.1702 | 0.1865 | Lin1       | -0.142      | 0.1889 |    |   | 0.0100  |      |   |          | 0.9980                |   | 0.9900                    |
| Acenaphthene               | 1.2341<br>1.1644 | 1.2375<br>1.0882 | 1.2536<br>1.0424 | 1.2271 | 1.1994 | Ave        |             | 1.1808 |    |   | 0.9000  | 6.5  |   | 20.0     |                       |   |                           |
| 4-Nitrophenol              | 0.1449<br>0.2049 | 0.1773<br>0.1990 | 0.1858<br>0.1985 | 0.1926 | 0.2002 | Ave        |             | 0.1879 |    |   | 0.0100  | 10.0 |   | 20.0     |                       |   |                           |
| 2,4-Dinitrotoluene         | 0.3258<br>0.3820 | 0.3710<br>0.3605 | 0.3746<br>0.3591 | 0.3785 | 0.3817 | Ave        |             | 0.3667 |    |   | 0.2000  | 5.1  |   | 20.0     |                       |   |                           |

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

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

Lab Name: TestAmerica Pittsburgh

Job No.: 180-43791-1

Analy Batch No.: 132436

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

Instrument ID: CH732

GC Column: Rxi-5SilMS ID: 0.32 (mm)

Heated Purge: (Y/N) N

Calibration Start Date: 02/03/2015 05:53

Calibration End Date: 02/03/2015 09:00

Calibration ID: 21642

| ANALYTE                               | RRF              |                  |                  |        |        | CURVE TYPE | COEFFICIENT |        |    | # | MIN RRF | %RSD | #    | MAX %RSD | R^2 OR COD | # | MIN R^2 OR COD |
|---------------------------------------|------------------|------------------|------------------|--------|--------|------------|-------------|--------|----|---|---------|------|------|----------|------------|---|----------------|
|                                       | LVL 1            | LVL 2            | LVL 3            | LVL 4  | LVL 5  |            | B           | M1     | M2 |   |         |      |      |          |            |   |                |
|                                       | LVL 6            | LVL 7            | LVL 8            |        |        |            |             |        |    |   |         |      |      |          |            |   |                |
| Dibenzofuran                          | 1.7039<br>1.6974 | 1.7236<br>1.6717 | 1.7324<br>1.6535 | 1.6806 | 1.6861 | Ave        |             | 1.6936 |    |   | 0.8000  | 1.6  | 20.0 |          |            |   |                |
| 2,3,5,6-Tetrachlorophenol             | 0.2784<br>0.3522 | 0.3231<br>0.3411 | 0.3288<br>0.3332 | 0.3290 | 0.3409 | Ave        |             | 0.3283 |    |   | 0.0100  | 6.7  | 20.0 |          |            |   |                |
| 2,3,4,6-Tetrachlorophenol             | 0.2692<br>0.3331 | 0.3234<br>0.3255 | 0.3364<br>0.3231 | 0.3274 | 0.3351 | Ave        |             | 0.3217 |    |   | 0.0100  | 6.8  | 20.0 |          |            |   |                |
| 2-Naphthylamine                       | 1.1143<br>1.2587 | 1.2501<br>1.2075 | 1.2670<br>1.1115 | 1.2281 | 1.2187 | Ave        |             | 1.2070 |    |   | 0.0100  | 5.1  | 20.0 |          |            |   |                |
| Diethyl phthalate                     | 1.3162<br>1.2963 | 1.3893<br>1.2225 | 1.3466<br>1.1760 | 1.3204 | 1.3148 | Ave        |             | 1.2978 |    |   | 0.0100  | 5.2  | 20.0 |          |            |   |                |
| Hexadecane                            | 0.6523<br>0.5660 | 0.6318<br>0.5102 | 0.6572<br>0.4522 | 0.6386 | 0.6137 | Ave        |             | 0.5903 |    |   |         | 13.0 | 20.0 |          |            |   |                |
| 4-Chlorophenyl phenyl ether           | 0.6117<br>0.6273 | 0.6466<br>0.6042 | 0.6486<br>0.5941 | 0.6234 | 0.6183 | Ave        |             | 0.6218 |    |   | 0.4000  | 3.1  | 20.0 |          |            |   |                |
| 4-Nitroaniline                        | 0.2857<br>0.3410 | 0.3374<br>0.3366 | 0.3445<br>0.3302 | 0.3513 | 0.3549 | Ave        |             | 0.3352 |    |   | 0.0100  | 6.4  | 20.0 |          |            |   |                |
| Fluorene                              | 1.3053<br>1.3254 | 1.3617<br>1.2560 | 1.3725<br>1.2546 | 1.3428 | 1.3245 | Ave        |             | 1.3179 |    |   | 0.9000  | 3.3  | 20.0 |          |            |   |                |
| 4,6-Dinitro-2-methylphenol            | ++++<br>0.1432   | 0.0985<br>0.1462 | 0.1142<br>0.1453 | 0.1268 | 0.1361 | Ave        |             | 0.1300 |    |   | 0.0100  | 14.0 | 20.0 |          |            |   |                |
| N-Nitrosodiphenylamine                | 0.5815<br>0.5842 | 0.5335<br>0.5775 | 0.5631<br>0.5899 | 0.5591 | 0.5578 | Ave        |             | 0.5683 |    |   | 0.0100  | 3.3  | 20.0 |          |            |   |                |
| 1,2-Diphenylhydrazine (as Azobenzene) | 0.7667<br>0.8428 | 0.8041<br>0.8121 | 0.8471<br>0.8091 | 0.8166 | 0.8146 | Ave        |             | 0.8141 |    |   | 0.0100  | 3.0  | 20.0 |          |            |   |                |
| 4-Bromophenyl phenyl ether            | 0.2046<br>0.2116 | 0.1971<br>0.2114 | 0.2124<br>0.2103 | 0.2105 | 0.2134 | Ave        |             | 0.2089 |    |   | 0.1000  | 2.6  | 20.0 |          |            |   |                |
| Hexachlorobenzene                     | 0.1992<br>0.2131 | 0.2049<br>0.2119 | 0.2145<br>0.2089 | 0.2091 | 0.2086 | Ave        |             | 0.2088 |    |   | 0.1000  | 2.3  | 20.0 |          |            |   |                |
| Atrazine                              | 0.1508<br>0.1701 | 0.1598<br>0.1692 | 0.1695<br>0.1557 | 0.1710 | 0.1740 | Ave        |             | 0.1650 |    |   | 0.0100  | 5.1  | 20.0 |          |            |   |                |
| Pentachlorophenol                     | 0.1520<br>0.1572 | 0.1371<br>0.1550 | 0.1337<br>0.1472 | 0.1463 | 0.1491 | Ave        |             | 0.1472 |    |   | 0.0500  | 5.6  | 20.0 |          |            |   |                |
| n-Octadecane                          | 2.9279<br>2.7791 | 2.9973<br>2.6531 | 3.2672<br>2.3073 | 3.0215 | 2.8258 | Ave        |             | 2.8474 |    |   |         | 10.0 | 20.0 |          |            |   |                |
| Phenanthrene                          | 1.2333<br>1.2156 | 1.1493<br>1.2158 | 1.2014<br>1.2428 | 1.1714 | 1.1853 | Ave        |             | 1.2019 |    |   | 0.7000  | 2.6  | 20.0 |          |            |   |                |
| Anthracene                            | 1.1639<br>1.2594 | 1.1596<br>1.2828 | 1.2305<br>1.2914 | 1.2094 | 1.2361 | Ave        |             | 1.2292 |    |   | 0.7000  | 4.0  | 20.0 |          |            |   |                |
| Carbazole                             | 0.9973<br>1.0904 | 1.0318<br>1.1270 | 1.0917<br>1.1210 | 1.0590 | 1.0898 | Ave        |             | 1.0760 |    |   | 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 SEMI VOA INITIAL CALIBRATION DATA  
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Pittsburgh

Job No.: 180-43791-1

Analy Batch No.: 132436

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

Instrument ID: CH732

GC Column: Rxi-5SilMS ID: 0.32 (mm)

Heated Purge: (Y/N) N

Calibration Start Date: 02/03/2015 05:53

Calibration End Date: 02/03/2015 09:00

Calibration ID: 21642

| ANALYTE                        | RRF              |                  |                  |        |        | CURVE TYPE | COEFFICIENT |        |    | # | MIN RRF | %RSD | # | MAX %RSD | R^2 OR COD | # | MIN R^2 OR COD |
|--------------------------------|------------------|------------------|------------------|--------|--------|------------|-------------|--------|----|---|---------|------|---|----------|------------|---|----------------|
|                                | LVL 1            | LVL 2            | LVL 3            | LVL 4  | LVL 5  |            | B           | M1     | M2 |   |         |      |   |          |            |   |                |
|                                | LVL 6            | LVL 7            | LVL 8            |        |        |            |             |        |    |   |         |      |   |          |            |   |                |
| Di-n-butyl phthalate           | 1.2435<br>1.4028 | 1.2478<br>1.4108 | 1.2963<br>1.4534 | 1.3362 | 1.3749 | Ave        |             | 1.3457 |    |   | 0.0100  | 5.8  |   | 20.0     |            |   |                |
| Fluoranthene                   | 1.2269<br>1.2465 | 1.1395<br>1.2579 | 1.1842<br>1.2493 | 1.1722 | 1.2253 | Ave        |             | 1.2127 |    |   | 0.6000  | 3.5  |   | 20.0     |            |   |                |
| Benzidine                      | ++++<br>0.6087   | 0.3381<br>0.5884 | 0.3417<br>++++   | 0.4319 | 0.5499 | Lin1       | -0.796      | 0.6014 |    |   | 0.0100  |      |   |          | 0.9950     |   | 0.9900         |
| Pyrene                         | 1.2316<br>1.3821 | 1.3123<br>1.3377 | 1.3222<br>1.3790 | 1.3011 | 1.2959 | Ave        |             | 1.3202 |    |   | 0.6000  | 3.7  |   | 20.0     |            |   |                |
| Butyl benzyl phthalate         | 0.5641<br>0.6167 | 0.5570<br>0.6045 | 0.5764<br>0.6090 | 0.5730 | 0.5894 | Ave        |             | 0.5863 |    |   | 0.0100  | 3.8  |   | 20.0     |            |   |                |
| 3,3'-Dichlorobenzidine         | 0.3540<br>0.4211 | 0.3483<br>0.4265 | 0.3548<br>0.4206 | 0.3825 | 0.3790 | Ave        |             | 0.3859 |    |   | 0.0100  | 8.5  |   | 20.0     |            |   |                |
| Bis(2-ethylhexyl) phthalate    | 0.7021<br>0.8761 | 0.7843<br>0.8596 | 0.7648<br>0.8725 | 0.8242 | 0.8129 | Ave        |             | 0.8121 |    |   | 0.0100  | 7.4  |   | 20.0     |            |   |                |
| Benzo[a]anthracene             | 1.1208<br>1.1714 | 1.1533<br>1.1649 | 1.1486<br>1.1975 | 1.1557 | 1.1481 | Ave        |             | 1.1575 |    |   | 0.8000  | 1.9  |   | 20.0     |            |   |                |
| Chrysene                       | 1.0300<br>1.1228 | 1.0963<br>1.1040 | 1.0801<br>1.1217 | 1.0966 | 1.0755 | Ave        |             | 1.0909 |    |   | 0.7000  | 2.7  |   | 20.0     |            |   |                |
| Di-n-octyl phthalate           | 1.2730<br>1.7268 | 1.3219<br>1.7538 | 1.4451<br>1.7590 | 1.5535 | 1.6017 | Ave        |             | 1.5544 |    |   | 0.0100  | 12.0 |   | 20.0     |            |   |                |
| 7,12-Dimethylbenz(a)anthracene | 0.4916<br>0.5923 | 0.5158<br>0.5834 | 0.5403<br>0.5803 | 0.5553 | 0.5564 | Ave        |             | 0.5519 |    |   | 0.0100  | 6.3  |   | 20.0     |            |   |                |
| Benzo[b]fluoranthene           | 1.1665<br>1.3564 | 1.2427<br>1.3265 | 1.3292<br>1.3265 | 1.2863 | 1.3392 | Ave        |             | 1.2967 |    |   | 0.7000  | 4.9  |   | 20.0     |            |   |                |
| Benzo[k]fluoranthene           | 1.1740<br>1.3060 | 1.2282<br>1.3366 | 1.2104<br>1.3323 | 1.2992 | 1.2796 | Ave        |             | 1.2708 |    |   | 0.7000  | 4.7  |   | 20.0     |            |   |                |
| Benzo[e]pyrene                 | 1.0767<br>1.2070 | 1.1193<br>1.2216 | 1.1574<br>1.2121 | 1.1816 | 1.1791 | Ave        |             | 1.1694 |    |   | 0.0100  | 4.3  |   | 20.0     |            |   |                |
| Benzo[a]pyrene                 | 1.0264<br>1.2368 | 1.1216<br>1.2146 | 1.1478<br>1.2456 | 1.1816 | 1.1717 | Ave        |             | 1.1682 |    |   | 0.7000  | 6.1  |   | 20.0     |            |   |                |
| Indeno[1,2,3-cd]pyrene         | 1.0328<br>1.3270 | 1.1037<br>1.3836 | 1.1196<br>1.4315 | 1.2105 | 1.2218 | Ave        |             | 1.2288 |    |   | 0.5000  | 12.0 |   | 20.0     |            |   |                |
| Dibenz(a,h)anthracene          | 0.8585<br>1.1035 | 0.9322<br>1.1407 | 0.9486<br>1.1741 | 1.0061 | 1.0090 | Ave        |             | 1.0216 |    |   | 0.4000  | 11.0 |   | 20.0     |            |   |                |
| Benzo[g,h,i]perylene           | 0.9029<br>1.1236 | 0.9484<br>1.1747 | 0.9727<br>1.2283 | 1.0095 | 1.0273 | Ave        |             | 1.0484 |    |   | 0.5000  | 11.0 |   | 20.0     |            |   |                |
| 2-Fluorophenol (Surr)          | 0.9661<br>1.0450 | 1.0460<br>1.0420 | 1.0861<br>1.0374 | 1.0544 | 1.0213 | Ave        |             | 1.0373 |    |   |         | 3.3  |   | 20.0     |            |   |                |
| Phenol-d5 (Surr)               | 1.2867<br>1.4119 | 1.3965<br>1.3682 | 1.5097<br>1.3500 | 1.4614 | 1.3893 | Ave        |             | 1.3967 |    |   |         | 4.9  |   | 20.0     |            |   |                |

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

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

Lab Name: TestAmerica Pittsburgh Job No.: 180-43791-1 Analy Batch No.: 132436

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

Instrument ID: CH732 GC Column: Rxi-5SilMS ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/03/2015 05:53 Calibration End Date: 02/03/2015 09:00 Calibration ID: 21642

| ANALYTE                     | RRF              |                  |                  |        |        | CURVE<br>TYPE | COEFFICIENT |        |    | #      | MIN RRF | %RSD | #    | MAX<br>%RSD | R <sup>2</sup><br>OR COD | # | MIN R <sup>2</sup><br>OR COD |
|-----------------------------|------------------|------------------|------------------|--------|--------|---------------|-------------|--------|----|--------|---------|------|------|-------------|--------------------------|---|------------------------------|
|                             | LVL 1            | LVL 2            | LVL 3            | LVL 4  | LVL 5  |               | B           | M1     | M2 |        |         |      |      |             |                          |   |                              |
|                             | LVL 6            | LVL 7            | LVL 8            |        |        |               |             |        |    |        |         |      |      |             |                          |   |                              |
| Nitrobenzene-d5 (Surr)      | 0.3197<br>0.3403 | 0.3409<br>0.3398 | 0.3393<br>0.3237 | 0.3449 | 0.3373 | Ave           |             | 0.3358 |    |        | 2.7     |      | 20.0 |             |                          |   |                              |
| 2-Fluorobiphenyl            | 1.2937<br>1.3368 | 1.3465<br>1.2809 | 1.3527<br>1.2654 | 1.3156 | 1.3177 | Ave           |             | 1.3136 |    |        | 2.4     |      | 20.0 |             |                          |   |                              |
| 2,4,6-Tribromophenol (Surr) | 0.0707<br>0.0958 | 0.0803<br>0.0956 | 0.0889<br>0.0947 | 0.0887 | 0.0888 | Ave           |             | 0.0879 |    | 0.0100 | 9.8     |      | 20.0 |             |                          |   |                              |
| Terphenyl-d14 (Surr)        | 0.8113<br>0.8873 | 0.8676<br>0.8789 | 0.8868<br>0.8883 | 0.8805 | 0.8663 | Ave           |             | 0.8709 |    |        | 2.9     |      | 20.0 |             |                          |   |                              |

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

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

Lab Name: TestAmerica Pittsburgh Job No.: 180-43791-1 Analy Batch No.: 132436

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

Instrument ID: CH732 GC Column: Rxi-5SilMS ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/03/2015 05:53 Calibration End Date: 02/03/2015 09:00 Calibration ID: 21642

Calibration Files:

| LEVEL:  | LAB SAMPLE ID:    | LAB FILE ID: |
|---------|-------------------|--------------|
| Level 1 | IC 180-132436/3   | D0203003.D   |
| Level 2 | IC 180-132436/4   | D0203004.D   |
| Level 3 | IC 180-132436/5   | D0203005.D   |
| Level 4 | ICIS 180-132436/6 | D0203006.D   |
| Level 5 | IC 180-132436/7   | D0203007.D   |
| Level 6 | IC 180-132436/8   | D0203008.D   |
| Level 7 | IC 180-132436/9   | D0203009.D   |
| Level 8 | IC 180-132436/10  | D0203010.D   |

| ANALYTE                 | IS REF | CURVE TYPE | RESPONSE         |                  |                   |        |        | CONCENTRATION (NG) |              |              |       |       |
|-------------------------|--------|------------|------------------|------------------|-------------------|--------|--------|--------------------|--------------|--------------|-------|-------|
|                         |        |            | LVL 1            | LVL 2            | LVL 3             | LVL 4  | LVL 5  | LVL 1              | LVL 2        | LVL 3        | LVL 4 | LVL 5 |
|                         |        |            | LVL 6            | LVL 7            | LVL 8             |        |        | LVL 6              | LVL 7        | LVL 8        |       |       |
| 1,4-Dioxane             | DCB    | Ave        | 1934<br>209470   | 11737<br>302556  | 23830<br>408930   | 55464  | 109242 | 0.400<br>40.0      | 2.00<br>60.0 | 4.00<br>80.0 | 10.0  | 20.0  |
| N-Nitrosodimethylamine  | DCB    | Ave        | 2670<br>284868   | 15503<br>415506  | 30743<br>570621   | 74663  | 147321 | 0.400<br>40.0      | 2.00<br>60.0 | 4.00<br>80.0 | 10.0  | 20.0  |
| Pyridine                | DCB    | Ave        | 4214<br>507054   | 26410<br>740621  | 55290<br>993662   | 131501 | 264484 | 0.400<br>40.0      | 2.00<br>60.0 | 4.00<br>80.0 | 10.0  | 20.0  |
| Methyl methanesulfonate | DCB    | Ave        | 3907<br>385315   | 22793<br>562394  | 46560<br>750302   | 105679 | 203934 | 0.400<br>40.0      | 2.00<br>60.0 | 4.00<br>80.0 | 10.0  | 20.0  |
| Benzaldehyde            | DCB    | Ave        | 4208<br>517593   | 21743<br>682953  | 45208<br>827212   | 107077 | 258918 | 0.400<br>40.0      | 2.00<br>60.0 | 4.00<br>80.0 | 10.0  | 20.0  |
| Phenol                  | DCB    | Ave        | 11070<br>1005636 | 60095<br>1423572 | 120902<br>1910430 | 270314 | 537943 | 0.400<br>40.0      | 2.00<br>60.0 | 4.00<br>80.0 | 10.0  | 20.0  |
| Aniline                 | DCB    | Ave        | 11813<br>1146158 | 64483<br>1627756 | 132805<br>2127696 | 301857 | 596247 | 0.400<br>40.0      | 2.00<br>60.0 | 4.00<br>80.0 | 10.0  | 20.0  |
| Bis(2-chloroethyl)ether | DCB    | Ave        | 8179<br>701627   | 41584<br>1010724 | 84668<br>1360669  | 190003 | 372868 | 0.400<br>40.0      | 2.00<br>60.0 | 4.00<br>80.0 | 10.0  | 20.0  |
| 2-Chlorophenol          | DCB    | Ave        | 8829<br>887214   | 48891<br>1264905 | 102500<br>1719757 | 233051 | 458905 | 0.400<br>40.0      | 2.00<br>60.0 | 4.00<br>80.0 | 10.0  | 20.0  |
| n-Decane                | DCB    | Ave        | 11924<br>996855  | 61014<br>1358551 | 122092<br>1778933 | 273969 | 543602 | 0.400<br>40.0      | 2.00<br>60.0 | 4.00<br>80.0 | 10.0  | 20.0  |
| 1,3-Dichlorobenzene     | DCB    | Ave        | 10209<br>1034697 | 58818<br>1463480 | 117189<br>1969048 | 274959 | 534786 | 0.400<br>40.0      | 2.00<br>60.0 | 4.00<br>80.0 | 10.0  | 20.0  |
| 1,4-Dichlorobenzene     | DCB    | Ave        | 11017<br>1041084 | 58452<br>1517829 | 124324<br>2013954 | 272903 | 544982 | 0.400<br>40.0      | 2.00<br>60.0 | 4.00<br>80.0 | 10.0  | 20.0  |
| Benzyl alcohol          | DCB    | Ave        | 5381<br>548480   | 31167<br>798172  | 67422<br>1052255  | 148867 | 285603 | 0.400<br>40.0      | 2.00<br>60.0 | 4.00<br>80.0 | 10.0  | 20.0  |
| 1,2-Dichlorobenzene     | DCB    | Ave        | 11014<br>1006967 | 58062<br>1438910 | 117889<br>1943533 | 267807 | 530899 | 0.400<br>40.0      | 2.00<br>60.0 | 4.00<br>80.0 | 10.0  | 20.0  |
| 2-Methylphenol          | DCB    | Ave        | 8430<br>763283   | 45068<br>1091611 | 94232<br>1418095  | 207591 | 398202 | 0.400<br>40.0      | 2.00<br>60.0 | 4.00<br>80.0 | 10.0  | 20.0  |

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

Lab Name: TestAmerica Pittsburgh Job No.: 180-43791-1 Analy Batch No.: 132436

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

Instrument ID: CH732 GC Column: Rxi-5SilMS ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/03/2015 05:53 Calibration End Date: 02/03/2015 09:00 Calibration ID: 21642

| ANALYTE                      | IS REF | CURVE TYPE | RESPONSE         |                   |                   |        |         | CONCENTRATION (NG) |                |                |       |       |
|------------------------------|--------|------------|------------------|-------------------|-------------------|--------|---------|--------------------|----------------|----------------|-------|-------|
|                              |        |            | LVL 1<br>LVL 6   | LVL 2<br>LVL 7    | LVL 3<br>LVL 8    | LVL 4  | LVL 5   | LVL 1<br>LVL 6     | LVL 2<br>LVL 7 | LVL 3<br>LVL 8 | LVL 4 | LVL 5 |
| Indene                       | DCB    | Ave        | 15458<br>1386687 | 79937<br>1998319  | 167642<br>2585818 | 379789 | 734967  | 0.400<br>40.0      | 2.00<br>60.0   | 4.00<br>80.0   | 10.0  | 20.0  |
| 2,2'-oxybis[1-chloropropane] | DCB    | Ave        | 16793<br>1466380 | 90145<br>2093118  | 188707<br>2627938 | 413246 | 790384  | 0.400<br>40.0      | 2.00<br>60.0   | 4.00<br>80.0   | 10.0  | 20.0  |
| N-Nitrosopyrrolidine         | DCB    | Ave        | 3516<br>381909   | 21630<br>557274   | 45845<br>735704   | 101195 | 201336  | 0.400<br>40.0      | 2.00<br>60.0   | 4.00<br>80.0   | 10.0  | 20.0  |
| Acetophenone                 | DCB    | Ave        | 13611<br>1115856 | 70865<br>1552275  | 143572<br>1999395 | 317474 | 599792  | 0.400<br>40.0      | 2.00<br>60.0   | 4.00<br>80.0   | 10.0  | 20.0  |
| N-Nitrosodi-n-propylamine    | DCB    | Ave        | 6343<br>514816   | 34348<br>713290   | 70224<br>911733   | 149121 | 285723  | 0.400<br>40.0      | 2.00<br>60.0   | 4.00<br>80.0   | 10.0  | 20.0  |
| Methylphenol, 3 & 4          | DCB    | Ave        | 8447<br>767791   | 47943<br>1079768  | 99882<br>1370355  | 220366 | 420058  | 0.400<br>40.0      | 2.00<br>60.0   | 4.00<br>80.0   | 10.0  | 20.0  |
| Hexachloroethane             | DCB    | Ave        | 4935<br>444909   | 25617<br>646511   | 53481<br>865068   | 119409 | 232849  | 0.400<br>40.0      | 2.00<br>60.0   | 4.00<br>80.0   | 10.0  | 20.0  |
| Nitrobenzene                 | NPT    | Ave        | 9966<br>927641   | 55637<br>1350399  | 114851<br>1755924 | 251361 | 498871  | 0.400<br>40.0      | 2.00<br>60.0   | 4.00<br>80.0   | 10.0  | 20.0  |
| Isophorone                   | NPT    | Ave        | 18114<br>1633037 | 95220<br>2371427  | 200303<br>3163519 | 446570 | 860436  | 0.400<br>40.0      | 2.00<br>60.0   | 4.00<br>80.0   | 10.0  | 20.0  |
| 2-Nitrophenol                | NPT    | Ave        | 5049<br>529004   | 29702<br>780171   | 61516<br>1023420  | 140596 | 280608  | 0.400<br>40.0      | 2.00<br>60.0   | 4.00<br>80.0   | 10.0  | 20.0  |
| 2,4-Dimethylphenol           | NPT    | Ave        | 9995<br>931124   | 56716<br>1373726  | 117563<br>1691801 | 262290 | 499190  | 0.400<br>40.0      | 2.00<br>60.0   | 4.00<br>80.0   | 10.0  | 20.0  |
| Benzoic acid                 | NPT    | Lin1       | +++++<br>552644  | 18161<br>833727   | 45351<br>1152352  | 103970 | 249876  | +++++<br>40.0      | 2.00<br>60.0   | 4.00<br>80.0   | 10.0  | 20.0  |
| Bis(2-chloroethoxy)methane   | NPT    | Ave        | 11681<br>989031  | 60701<br>1424492  | 125607<br>1856791 | 273809 | 519031  | 0.400<br>40.0      | 2.00<br>60.0   | 4.00<br>80.0   | 10.0  | 20.0  |
| 2,4-Dichlorophenol           | NPT    | Ave        | 8940<br>820358   | 47384<br>1186303  | 99409<br>1589300  | 225553 | 439198  | 0.400<br>40.0      | 2.00<br>60.0   | 4.00<br>80.0   | 10.0  | 20.0  |
| 1,2,4-Trichlorobenzene       | NPT    | Ave        | 10340<br>930596  | 56870<br>1339792  | 116908<br>1794324 | 259967 | 482199  | 0.400<br>40.0      | 2.00<br>60.0   | 4.00<br>80.0   | 10.0  | 20.0  |
| Naphthalene                  | NPT    | Ave        | 33313<br>2959547 | 180017<br>4378054 | 369682<br>5845912 | 810769 | 1593857 | 0.400<br>40.0      | 2.00<br>60.0   | 4.00<br>80.0   | 10.0  | 20.0  |
| 4-Chloroaniline              | NPT    | Ave        | 12989<br>1214856 | 70259<br>1748750  | 150282<br>2275054 | 328724 | 659764  | 0.400<br>40.0      | 2.00<br>60.0   | 4.00<br>80.0   | 10.0  | 20.0  |
| 2,6-Dichlorophenol           | NPT    | Ave        | 7969<br>812683   | 50566<br>1158271  | 105695<br>1537038 | 224288 | 440269  | 0.400<br>40.0      | 2.00<br>60.0   | 4.00<br>80.0   | 10.0  | 20.0  |
| Hexachlorobutadiene          | NPT    | Ave        | 6668<br>547750   | 33197<br>801613   | 67792<br>1078670  | 151937 | 293629  | 0.400<br>40.0      | 2.00<br>60.0   | 4.00<br>80.0   | 10.0  | 20.0  |
| Caprolactam                  | NPT    | Ave        | 2851<br>274556   | 16212<br>412304   | 33697<br>544085   | 72011  | 148052  | 0.400<br>40.0      | 2.00<br>60.0   | 4.00<br>80.0   | 10.0  | 20.0  |
| 4-Chloro-3-methylphenol      | NPT    | Ave        | 9929<br>843095   | 50346<br>1234208  | 106402<br>1628392 | 231893 | 450969  | 0.400<br>40.0      | 2.00<br>60.0   | 4.00<br>80.0   | 10.0  | 20.0  |

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

Lab Name: TestAmerica Pittsburgh

Job No.: 180-43791-1

Analy Batch No.: 132436

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

Instrument ID: CH732

GC Column: Rxi-5SilMS ID: 0.32 (mm)

Heated Purge: (Y/N) N

Calibration Start Date: 02/03/2015 05:53

Calibration End Date: 02/03/2015 09:00

Calibration ID: 21642

| ANALYTE                    | IS REF | CURVE TYPE | RESPONSE         |                   |                   |        |         | CONCENTRATION (NG) |                |                |       |       |
|----------------------------|--------|------------|------------------|-------------------|-------------------|--------|---------|--------------------|----------------|----------------|-------|-------|
|                            |        |            | LVL 1<br>LVL 6   | LVL 2<br>LVL 7    | LVL 3<br>LVL 8    | LVL 4  | LVL 5   | LVL 1<br>LVL 6     | LVL 2<br>LVL 7 | LVL 3<br>LVL 8 | LVL 4 | LVL 5 |
| 2-Methylnaphthalene        | NPT    | Ave        | 23929<br>2117761 | 128685<br>3038002 | 260830<br>4039867 | 582381 | 1113976 | 0.400<br>40.0      | 2.00<br>60.0   | 4.00<br>80.0   | 10.0  | 20.0  |
| 1-Methylnaphthalene        | NPT    | Ave        | 23121<br>1972940 | 118777<br>2847445 | 248893<br>3757680 | 540054 | 1037675 | 0.400<br>40.0      | 2.00<br>60.0   | 4.00<br>80.0   | 10.0  | 20.0  |
| Hexachlorocyclopentadiene  | ANT    | Ave        | 5682<br>644566   | 34246<br>941368   | 71542<br>1063917  | 170705 | 347500  | 0.400<br>40.0      | 2.00<br>60.0   | 4.00<br>80.0   | 10.0  | 20.0  |
| 1,2,4,5-Tetrachlorobenzene | ANT    | Ave        | 10408<br>858550  | 55917<br>1226308  | 117976<br>1614990 | 251697 | 472692  | 0.400<br>40.0      | 2.00<br>60.0   | 4.00<br>80.0   | 10.0  | 20.0  |
| 2,4,6-Trichlorophenol      | ANT    | Ave        | 6681<br>603497   | 35559<br>889199   | 76466<br>1196597  | 172469 | 326888  | 0.400<br>40.0      | 2.00<br>60.0   | 4.00<br>80.0   | 10.0  | 20.0  |
| 2,4,5-Trichlorophenol      | ANT    | Ave        | 7171<br>648683   | 36826<br>950450   | 81693<br>1271911  | 178301 | 349406  | 0.400<br>40.0      | 2.00<br>60.0   | 4.00<br>80.0   | 10.0  | 20.0  |
| 1,1'-Biphenyl              | ANT    | Ave        | 28976<br>2580419 | 157628<br>3711661 | 321551<br>4916975 | 718467 | 1360765 | 0.400<br>40.0      | 2.00<br>60.0   | 4.00<br>80.0   | 10.0  | 20.0  |
| 2-Chloronaphthalene        | ANT    | Ave        | 23718<br>2127629 | 129992<br>2950139 | 261278<br>3914388 | 579154 | 1091984 | 0.400<br>40.0      | 2.00<br>60.0   | 4.00<br>80.0   | 10.0  | 20.0  |
| 2-Nitroaniline             | ANT    | Ave        | 6240<br>600873   | 34853<br>861359   | 76492<br>1173309  | 164804 | 319101  | 0.400<br>40.0      | 2.00<br>60.0   | 4.00<br>80.0   | 10.0  | 20.0  |
| Dimethyl phthalate         | ANT    | Ave        | 25507<br>2163658 | 129303<br>3099106 | 274773<br>4183619 | 594888 | 1148510 | 0.400<br>40.0      | 2.00<br>60.0   | 4.00<br>80.0   | 10.0  | 20.0  |
| 1,3-Dinitrobenzene         | ANT    | Ave        | 2761<br>348418   | 18618<br>516502   | 40950<br>672638   | 93300  | 183786  | 0.400<br>40.0      | 2.00<br>60.0   | 4.00<br>80.0   | 10.0  | 20.0  |
| 2,6-Dinitrotoluene         | ANT    | Ave        | 4998<br>484496   | 28186<br>692489   | 60939<br>940800   | 134217 | 257767  | 0.400<br>40.0      | 2.00<br>60.0   | 4.00<br>80.0   | 10.0  | 20.0  |
| Acenaphthylene             | ANT    | Ave        | 38147<br>3284115 | 192381<br>4912276 | 416410<br>6481156 | 903822 | 1740013 | 0.400<br>40.0      | 2.00<br>60.0   | 4.00<br>80.0   | 10.0  | 20.0  |
| 3-Nitroaniline             | ANT    | Ave        | 5989<br>590172   | 33591<br>878098   | 72336<br>1147441  | 165063 | 315804  | 0.400<br>40.0      | 2.00<br>60.0   | 4.00<br>80.0   | 10.0  | 20.0  |
| 2,4-Dinitrophenol          | ANT    | Lin1       | 3286<br>655440   | 22936<br>953848   | 59478<br>1253184  | 159961 | 339911  | 0.800<br>80.0      | 4.00<br>120    | 8.00<br>160    | 20.0  | 40.0  |
| Acenaphthene               | ANT    | Ave        | 24369<br>1938543 | 126036<br>2755493 | 263354<br>3512775 | 576591 | 1092870 | 0.400<br>40.0      | 2.00<br>60.0   | 4.00<br>80.0   | 10.0  | 20.0  |
| 4-Nitrophenol              | ANT    | Ave        | 5723<br>682381   | 36110<br>1007845  | 78078<br>1337557  | 181010 | 364939  | 0.800<br>80.0      | 4.00<br>120    | 8.00<br>160    | 20.0  | 40.0  |
| 2,4-Dinitrotoluene         | ANT    | Ave        | 6434<br>635934   | 37788<br>912905   | 78701<br>1210224  | 177872 | 347851  | 0.400<br>40.0      | 2.00<br>60.0   | 4.00<br>80.0   | 10.0  | 20.0  |
| Dibenzofuran               | ANT    | Ave        | 33645<br>2825768 | 175543<br>4232923 | 363941<br>5571795 | 789696 | 1536391 | 0.400<br>40.0      | 2.00<br>60.0   | 4.00<br>80.0   | 10.0  | 20.0  |
| 2,3,5,6-Tetrachlorophenol  | ANT    | Ave        | 5498<br>586262   | 32909<br>863773   | 69064<br>1122675  | 154617 | 310668  | 0.400<br>40.0      | 2.00<br>60.0   | 4.00<br>80.0   | 10.0  | 20.0  |
| 2,3,4,6-Tetrachlorophenol  | ANT    | Ave        | 5315<br>554584   | 32937<br>824302   | 70676<br>1088782  | 153842 | 305329  | 0.400<br>40.0      | 2.00<br>60.0   | 4.00<br>80.0   | 10.0  | 20.0  |

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

Lab Name: TestAmerica Pittsburgh

Job No.: 180-43791-1

Analy Batch No.: 132436

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

Instrument ID: CH732

GC Column: Rxi-5SilMS ID: 0.32 (mm)

Heated Purge: (Y/N) N

Calibration Start Date: 02/03/2015 05:53

Calibration End Date: 02/03/2015 09:00

Calibration ID: 21642

| ANALYTE                               | IS REF | CURVE TYPE | RESPONSE         |                   |                   |         |         | CONCENTRATION (NG) |                |                |       |       |
|---------------------------------------|--------|------------|------------------|-------------------|-------------------|---------|---------|--------------------|----------------|----------------|-------|-------|
|                                       |        |            | LVL 1<br>LVL 6   | LVL 2<br>LVL 7    | LVL 3<br>LVL 8    | LVL 4   | LVL 5   | LVL 1<br>LVL 6     | LVL 2<br>LVL 7 | LVL 3<br>LVL 8 | LVL 4 | LVL 5 |
| 2-Naphthylamine                       | ANT    | Ave        | 22002<br>2095491 | 127319<br>3057555 | 266173<br>3745510 | 577092  | 1110540 | 0.400<br>40.0      | 2.00<br>60.0   | 4.00<br>80.0   | 10.0  | 20.0  |
| Diethyl phthalate                     | ANT    | Ave        | 25990<br>2158069 | 141494<br>3095548 | 282894<br>3962742 | 620434  | 1198085 | 0.400<br>40.0      | 2.00<br>60.0   | 4.00<br>80.0   | 10.0  | 20.0  |
| Hexadecane                            | NPT    | Ave        | 19875<br>1573793 | 102020<br>2091830 | 219225<br>2544862 | 473542  | 907979  | 0.400<br>40.0      | 2.00<br>60.0   | 4.00<br>80.0   | 10.0  | 20.0  |
| 4-Chlorophenyl phenyl ether           | ANT    | Ave        | 12078<br>1044305 | 65852<br>1529802  | 136257<br>2002066 | 292933  | 563422  | 0.400<br>40.0      | 2.00<br>60.0   | 4.00<br>80.0   | 10.0  | 20.0  |
| 4-Nitroaniline                        | ANT    | Ave        | 5641<br>567688   | 34362<br>852366   | 72364<br>1112682  | 165071  | 323357  | 0.400<br>40.0      | 2.00<br>60.0   | 4.00<br>80.0   | 10.0  | 20.0  |
| Fluorene                              | ANT    | Ave        | 25774<br>2206480 | 138685<br>3180401 | 288323<br>4227850 | 630958  | 1206930 | 0.400<br>40.0      | 2.00<br>60.0   | 4.00<br>80.0   | 10.0  | 20.0  |
| 4,6-Dinitro-2-methylphenol            | PHN    | Ave        | ++++<br>811928   | 36409<br>1229972  | 84343<br>1636050  | 207551  | 426277  | ++++<br>80.0       | 4.00<br>120    | 8.00<br>160    | 20.0  | 40.0  |
| N-Nitrosodiphenylamine                | PHN    | Ave        | 19976<br>1656272 | 98631<br>2429181  | 207962<br>3320829 | 457506  | 873779  | 0.400<br>40.0      | 2.00<br>60.0   | 4.00<br>80.0   | 10.0  | 20.0  |
| 1,2-Diphenylhydrazine (as Azobenzene) | PHN    | Ave        | 26337<br>2389339 | 148666<br>3415954 | 312827<br>4555078 | 668173  | 1276008 | 0.400<br>40.0      | 2.00<br>60.0   | 4.00<br>80.0   | 10.0  | 20.0  |
| 4-Bromophenyl phenyl ether            | PHN    | Ave        | 7027<br>599814   | 36435<br>889331   | 78447<br>1183915  | 172260  | 334279  | 0.400<br>40.0      | 2.00<br>60.0   | 4.00<br>80.0   | 10.0  | 20.0  |
| Hexachlorobenzene                     | PHN    | Ave        | 6843<br>604183   | 37887<br>891428   | 79204<br>1175832  | 171081  | 326768  | 0.400<br>40.0      | 2.00<br>60.0   | 4.00<br>80.0   | 10.0  | 20.0  |
| Atrazine                              | PHN    | Ave        | 5181<br>482114   | 29538<br>711536   | 62578<br>876625   | 139931  | 272565  | 0.400<br>40.0      | 2.00<br>60.0   | 4.00<br>80.0   | 10.0  | 20.0  |
| Pentachlorophenol                     | PHN    | Ave        | 10440<br>891131  | 50690<br>1304271  | 98731<br>1657954  | 239474  | 467256  | 0.800<br>80.0      | 4.00<br>120    | 8.00<br>160    | 20.0  | 40.0  |
| n-Octadecane                          | DCB    | Ave        | 19565<br>1800945 | 107882<br>2514404 | 234012<br>3002594 | 513509  | 971090  | 0.400<br>40.0      | 2.00<br>60.0   | 4.00<br>80.0   | 10.0  | 20.0  |
| Phenanthrene                          | PHN    | Ave        | 42368<br>3446256 | 212492<br>5114269 | 443670<br>6996513 | 958538  | 1856746 | 0.400<br>40.0      | 2.00<br>60.0   | 4.00<br>80.0   | 10.0  | 20.0  |
| Anthracene                            | PHN    | Ave        | 39984<br>3570591 | 214399<br>5395998 | 454435<br>7270383 | 989626  | 1936292 | 0.400<br>40.0      | 2.00<br>60.0   | 4.00<br>80.0   | 10.0  | 20.0  |
| Carbazole                             | PHN    | Ave        | 34259<br>3091224 | 190765<br>4740553 | 403180<br>6310858 | 866503  | 1707133 | 0.400<br>40.0      | 2.00<br>60.0   | 4.00<br>80.0   | 10.0  | 20.0  |
| Di-n-butyl phthalate                  | PHN    | Ave        | 42717<br>3976938 | 230689<br>5934589 | 478707<br>8182573 | 1093325 | 2153696 | 0.400<br>40.0      | 2.00<br>60.0   | 4.00<br>80.0   | 10.0  | 20.0  |
| Fluoranthene                          | PHN    | Ave        | 42149<br>3533786 | 210680<br>5291453 | 437332<br>7033592 | 959196  | 1919281 | 0.400<br>40.0      | 2.00<br>60.0   | 4.00<br>80.0   | 10.0  | 20.0  |
| Benzidine                             | CRY    | Lin1       | ++++<br>1638838  | 56969<br>2399353  | 115541<br>++++    | 327820  | 826654  | ++++<br>40.0       | 2.00<br>60.0   | 4.00<br>++++   | 10.0  | 20.0  |
| Pyrene                                | CRY    | Ave        | 40844<br>3720835 | 221103<br>5454551 | 447116<br>7357760 | 987653  | 1948062 | 0.400<br>40.0      | 2.00<br>60.0   | 4.00<br>80.0   | 10.0  | 20.0  |

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

Lab Name: TestAmerica Pittsburgh

Job No.: 180-43791-1

Analy Batch No.: 132436

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

Instrument ID: CH732

GC Column: Rxi-5SilMS ID: 0.32 (mm)

Heated Purge: (Y/N) N

Calibration Start Date: 02/03/2015 05:53

Calibration End Date: 02/03/2015 09:00

Calibration ID: 21642

| ANALYTE                        | IS REF | CURVE TYPE | RESPONSE         |                   |                   |        |         | CONCENTRATION (NG) |                |                |       |       |
|--------------------------------|--------|------------|------------------|-------------------|-------------------|--------|---------|--------------------|----------------|----------------|-------|-------|
|                                |        |            | LVL 1<br>LVL 6   | LVL 2<br>LVL 7    | LVL 3<br>LVL 8    | LVL 4  | LVL 5   | LVL 1<br>LVL 6     | LVL 2<br>LVL 7 | LVL 3<br>LVL 8 | LVL 4 | LVL 5 |
| Butyl benzyl phthalate         | CRY    | Ave        | 18708<br>1660263 | 93839<br>2464856  | 194904<br>3249211 | 434962 | 886116  | 0.400<br>40.0      | 2.00<br>60.0   | 4.00<br>80.0   | 10.0  | 20.0  |
| 3,3'-Dichlorobenzidine         | CRY    | Ave        | 11741<br>1133566 | 58677<br>1739062  | 119990<br>2244278 | 290343 | 569808  | 0.400<br>40.0      | 2.00<br>60.0   | 4.00<br>80.0   | 10.0  | 20.0  |
| Bis(2-ethylhexyl) phthalate    | CRY    | Ave        | 23285<br>2358686 | 132135<br>3504948 | 258611<br>4655604 | 625648 | 1221960 | 0.400<br>40.0      | 2.00<br>60.0   | 4.00<br>80.0   | 10.0  | 20.0  |
| Benzo[a]anthracene             | CRY    | Ave        | 37171<br>3153612 | 194307<br>4749712 | 388390<br>6389372 | 877303 | 1725874 | 0.400<br>40.0      | 2.00<br>60.0   | 4.00<br>80.0   | 10.0  | 20.0  |
| Chrysene                       | CRY    | Ave        | 34157<br>3022852 | 184718<br>4501660 | 365240<br>5985101 | 832413 | 1616774 | 0.400<br>40.0      | 2.00<br>60.0   | 4.00<br>80.0   | 10.0  | 20.0  |
| Di-n-octyl phthalate           | PRY    | Ave        | 34973<br>3924029 | 185265<br>5987889 | 382318<br>8321767 | 967260 | 1974782 | 0.400<br>40.0      | 2.00<br>60.0   | 4.00<br>80.0   | 10.0  | 20.0  |
| 7,12-Dimethylbenz(a)anthracene | PRY    | Ave        | 13505<br>1345948 | 72293<br>1992000  | 142947<br>2745346 | 345745 | 686009  | 0.400<br>40.0      | 2.00<br>60.0   | 4.00<br>80.0   | 10.0  | 20.0  |
| Benzo[b]fluoranthene           | PRY    | Ave        | 32046<br>3082246 | 174164<br>4528904 | 351632<br>6275756 | 800926 | 1651159 | 0.400<br>40.0      | 2.00<br>60.0   | 4.00<br>80.0   | 10.0  | 20.0  |
| Benzo[k]fluoranthene           | PRY    | Ave        | 32254<br>2967704 | 172135<br>4563372 | 320222<br>6303252 | 808910 | 1577594 | 0.400<br>40.0      | 2.00<br>60.0   | 4.00<br>80.0   | 10.0  | 20.0  |
| Benzo[e]pyrene                 | PRY    | Ave        | 29579<br>2742921 | 156862<br>4171014 | 306198<br>5734616 | 735708 | 1453734 | 0.400<br>40.0      | 2.00<br>60.0   | 4.00<br>80.0   | 10.0  | 20.0  |
| Benzo[a]pyrene                 | PRY    | Ave        | 28197<br>2810546 | 157185<br>4146954 | 303646<br>5893073 | 735703 | 1444557 | 0.400<br>40.0      | 2.00<br>60.0   | 4.00<br>80.0   | 10.0  | 20.0  |
| Indeno[1,2,3-cd]pyrene         | PRY    | Ave        | 28373<br>3015474 | 154678<br>4723890 | 296192<br>6772582 | 753684 | 1506352 | 0.400<br>40.0      | 2.00<br>60.0   | 4.00<br>80.0   | 10.0  | 20.0  |
| Dibenz(a,h)anthracene          | PRY    | Ave        | 23584<br>2507561 | 130639<br>3894722 | 250943<br>5554542 | 626416 | 1244003 | 0.400<br>40.0      | 2.00<br>60.0   | 4.00<br>80.0   | 10.0  | 20.0  |
| Benzo[g,h,i]perylene           | PRY    | Ave        | 24806<br>2553190 | 132922<br>4010862 | 257341<br>5811207 | 628584 | 1266587 | 0.400<br>40.0      | 2.00<br>60.0   | 4.00<br>80.0   | 10.0  | 20.0  |
| 2-Fluorophenol (Surr)          | DCB    | Ave        | 6456<br>677215   | 37650<br>987546   | 77789<br>1350034  | 179189 | 350979  | 0.400<br>40.0      | 2.00<br>60.0   | 4.00<br>80.0   | 10.0  | 20.0  |
| Phenol-d5 (Surr)               | DCB    | Ave        | 8598<br>914976   | 50263<br>1296709  | 108130<br>1756748 | 248370 | 477417  | 0.400<br>40.0      | 2.00<br>60.0   | 4.00<br>80.0   | 10.0  | 20.0  |
| Nitrobenzene-d5 (Surr)         | NPT    | Ave        | 9741<br>946397   | 55043<br>1393487  | 113169<br>1821929 | 255780 | 498999  | 0.400<br>40.0      | 2.00<br>60.0   | 4.00<br>80.0   | 10.0  | 20.0  |
| 2-Fluorobiphenyl               | ANT    | Ave        | 25545<br>2225410 | 137132<br>3243372 | 284174<br>4264201 | 618183 | 1200667 | 0.400<br>40.0      | 2.00<br>60.0   | 4.00<br>80.0   | 10.0  | 20.0  |
| 2,4,6-Tribromophenol (Surr)    | PHN    | Ave        | 2430<br>271556   | 14848<br>402216   | 32838<br>533212   | 72581  | 139101  | 0.400<br>40.0      | 2.00<br>60.0   | 4.00<br>80.0   | 10.0  | 20.0  |
| Terphenyl-d14 (Surr)           | CRY    | Ave        | 26904<br>2388667 | 146177<br>3583724 | 299886<br>4739579 | 668366 | 1302313 | 0.400<br>40.0      | 2.00<br>60.0   | 4.00<br>80.0   | 10.0  | 20.0  |

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

Lab Name: TestAmerica Pittsburgh Job No.: 180-43791-1 Analy Batch No.: 132436

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

Instrument ID: CH732 GC Column: Rxi-5SilMS ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/03/2015 05:53 Calibration End Date: 02/03/2015 09:00 Calibration ID: 21642

Curve Type Legend:

|                           |
|---------------------------|
| Ave = Average ISTD        |
| Lin1 = Linear 1/conc ISTD |



TestAmerica Laboratories  
Initial Calibration %Drift Report

Method: \\PITCHROM\ChromData\CH732\20150203-5518.b\BNA\_CH732.m

Instrument: CH732

Lims Location: 180

Lock State: Unlocked

Cpnd Order: Compound Type

Integrator: RTE

Last Modified: 04-Feb-2015 06:46:57

No.Compounds:209

## Initial Calibration Batches

Ical Batch: \\PITCHROM\ChromData\CH732\20150203-5518.b

Inj Date : 03-Feb-2015 05:53:30, Sublist: chrom-BNA\_CH732\*sub4

Limit Group: BNA 8270C ICAL

Detector 1: MS SCAN

| Compound                   | Level 1  | Level 2 | Level 3 | Level 4 | Level 5 | Level 6 | Level 7 | Level 8 |
|----------------------------|----------|---------|---------|---------|---------|---------|---------|---------|
| * 1 1,4-Dichlorobenzene-d4 | 133646   | 143973  | 143248  | 135960  | 137459  | 129608  | 126365  | 130134  |
| * 2 Naphthalene-d8         | 609382   | 645863  | 667133  | 593216  | 591759  | 556151  | 546713  | 562776  |
| * 3 Acenaphthene-d10       | 394913   | 407379  | 420149  | 375917  | 364487  | 332955  | 337620  | 336979  |
| * 4 Phenanthrene-d10       | 687055   | 739534  | 738596  | 654603  | 626567  | 567011  | 560871  | 562981  |
| * 5 Chrysene-d12           | 663270   | 673939  | 676299  | 607262  | 601321  | 538430  | 543659  | 533575  |
| * 6 Perylene-d12           | 549453   | 560589  | 529106  | 498112  | 493170  | 454484  | 455236  | 473099  |
| \$ 7 2-Fluorophenol        | -6.9     | 0.8     | 4.7     | 1.6     | -1.5    | 0.7     | 0.5     | 0.0     |
| \$ 8 Phenol-d5             | -7.9     | 0.0     | 8.1     | 4.6     | -0.5    | 1.1     | -2.0    | -3.3    |
| \$ 9 Nitrobenzene-d5       | -4.8     | 1.5     | 1.0     | 2.7     | 0.5     | 1.4     | 1.2     | -3.6    |
| \$ 10 2-Fluorobiphenyl     | -1.5     | 2.5     | 3.0     | 0.1     | 0.3     | 1.8     | -2.5    | -3.7    |
| \$ 11 2,4,6-Tribromophenol | -19.6    | -8.7    | 1.1     | 0.9     | 1.0     | 8.9     | 8.7     | 7.7     |
| \$ 12 Terphenyl-d14        | -6.8     | -0.4    | 1.8     | 1.1     | -0.5    | 1.9     | 0.9     | 2.0     |
| 13 1,4-Dioxane             | -9.2     | 2.3     | 4.4     | 2.4     | -0.2    | 1.4     | 0.2     | -1.4    |
| 14 N-Nitrosodimethylamine  | -7.2     | 0.1     | -0.3    | 2.0     | -0.4    | 2.1     | 1.8     | 1.9     |
| 15 Pyridine                | -16.0    | -2.3    | 2.8     | 3.0     | 2.5     | 4.2     | 4.1     | 1.7     |
| 21 Methyl methanesulfonat  | -3.5     | 4.5     | 7.3     | 2.6     | -2.1    | -1.9    | -2.1    | -4.9    |
| 25 Benzaldehyde            | -6.8     | -10.6   | -6.6    | -6.7    | 11.5    | 18.3    | 6.7     | -5.9    |
| 26 Phenol                  | 4.4      | 5.2     | 6.4     | 0.3     | -1.3    | -2.2    | -5.3    | -7.5    |
| 27 Aniline                 | 0.7      | 2.0     | 5.6     | 1.2     | -1.2    | 0.7     | -2.2    | -6.9    |
| 29 Bis(2-chloroethyl)ethe  | 9.3      | 3.2     | 5.6     | -0.2    | -3.1    | -3.3    | -4.8    | -6.6    |
| 30 2-Chlorophenol          | -2.5     | 0.2     | 5.6     | 1.2     | -1.5    | 1.0     | -1.5    | -2.5    |
| 31 n-Decane                | 12.3     | 6.6     | 7.2     | 1.4     | -0.5    | -3.2    | -9.8    | -14.0   |
| 32 1,3-Dichlorobenzene     | -3.2     | 3.5     | 3.7     | 2.5     | -1.4    | 1.2     | -2.2    | -4.1    |
| 33 1,4-Dichlorobenzene     | 1.8      | 0.3     | 7.2     | -0.8    | -2.1    | -0.8    | -1.1    | -4.4    |
| 34 Benzyl alcohol          | -5.5     | 1.6     | 10.5    | 2.8     | -2.5    | -0.7    | -1.2    | -5.1    |
| 35 1,2-Dichlorobenzene     | 4.7      | 2.5     | 4.6     | 0.1     | -1.9    | -1.3    | -3.6    | -5.1    |
| 36 2-Methylphenol          | 4.8      | 4.0     | 9.3     | 1.5     | -3.7    | -2.1    | -4.3    | -9.5    |
| 37 Indene                  | 5.8      | 1.6     | 7.1     | 2.3     | -2.1    | -2.1    | -3.5    | -9.1    |
| 38 2,2'-oxybis[1-chloropr  | 6.5      | 6.2     | 11.7    | 3.1     | -2.5    | -4.1    | -6.4    | -14.4   |
| 39 N-Nitrosopyrrolidine    | -10.3    | 2.5     | 9.2     | 1.5     | -0.1    | 0.5     | 0.3     | -3.6    |
| 41 N-Nitrosodi-n-propylam  | 11.0     | 11.6    | 14.7    | 2.6     | -2.8    | -7.1    | -12.0   | -18.1   |
| 40 Acetophenone            | 12.2     | 8.5     | 10.4    | 2.9     | -3.8    | -5.1    | -9.8    | -15.3   |
| 42 4-Methylphenol          | 2.3      | 7.8     | 12.8    | 4.9     | -1.1    | -4.1    | -7.8    | -14.8   |
| 45 Hexachloroethane        | 5.3      | 1.5     | 6.5     | 0.2     | -3.4    | -2.1    | -2.7    | -5.2    |
| 46 Nitrobenzene            | -1.9     | 3.4     | 3.3     | 1.7     | 1.1     | 0.1     | -1.2    | -6.4    |
| 48 Isophorone              | 1.3      | 0.5     | 2.3     | 2.6     | -0.9    | 0.0     | -1.5    | -4.2    |
| 49 2-Nitrophenol           | -10.2    | -0.3    | 0.0     | 2.8     | 2.8     | 3.1     | 3.1     | -1.4    |
| 50 2,4-Dimethylphenol      | -2.6     | 4.3     | 4.7     | 5.1     | 0.2     | -0.5    | -0.5    | -10.7   |
| 52 Benzoic acid            | Disabled | 22.5    | 0.4     | -17.7   | -10.4   | 0.9     | 2.1     | 2.2     |
| 53 Bis(2-chloroethoxy)met  | 6.2      | 4.1     | 4.3     | 2.3     | -2.8    | -1.5    | -3.8    | -8.6    |
| 54 2,4-Dichlorophenol      | -0.2     | -0.2    | 1.3     | 3.4     | 0.9     | 0.3     | -1.6    | -4.0    |
| 56 1,2,4-Trichlorobenzene  | 0.6      | 4.4     | 3.9     | 3.9     | -3.4    | -0.8    | -3.1    | -5.5    |
| 58 Naphthalene             | 1.0      | 3.0     | 2.4     | 1.0     | -0.5    | -1.7    | -1.3    | -4.0    |

Method: \\PITCHROM\ChromData\CH732\20150203-5518.b\BNA\_CH732.m

| Compound                   | Level 1  | Level 2 | Level 3 | Level 4 | Level 5 | Level 6 | Level 7 | Level 8  |
|----------------------------|----------|---------|---------|---------|---------|---------|---------|----------|
| 59 4-Chloroaniline         | -1.7     | 0.4     | 3.9     | 2.2     | 2.9     | 0.8     | -1.6    | -6.8     |
| 60 2,6-Dichlorophenol      | -10.6    | 7.1     | 8.4     | 3.4     | 1.8     | -0.1    | -3.4    | -6.6     |
| 62 Hexachlorobutadiene     | 8.4      | 1.8     | 0.7     | 1.5     | -1.7    | -2.4    | -3.2    | -5.1     |
| 64 Caprolactam             | -5.0     | 1.9     | 2.5     | -1.4    | 1.6     | 0.2     | 2.1     | -1.9     |
| 67 4-Chloro-3-methylpheno  | 5.6      | 1.1     | 3.4     | 1.4     | -1.2    | -1.7    | -2.4    | -6.2     |
| 69 2-Methylnaphthalene     | 2.6      | 4.1     | 2.2     | 2.6     | -1.6    | -0.5    | -3.2    | -6.2     |
| 71 1-Methylnaphthalene     | 5.7      | 2.5     | 4.0     | 1.5     | -2.3    | -1.1    | -3.2    | -7.0     |
| 72 Hexachlorocyclopentadi  | -17.3    | -3.4    | -2.1    | 4.4     | 9.6     | 11.3    | 6.8     | -9.3     |
| 73 1,2,4,5-Tetrachloroben  | 1.1      | 5.3     | 7.7     | 2.7     | -0.5    | -1.1    | -7.1    | -8.1     |
| 74 2,4,6-Trichlorophenol   | -4.9     | -1.9    | 2.3     | 3.2     | 0.8     | 1.9     | -1.3    | -0.2     |
| 75 2,4,5-Trichlorophenol   | -3.8     | -4.2    | 3.0     | 0.5     | 1.6     | 3.3     | -0.5    | 0.0      |
| 76 1,1'-Biphenyl           | -2.5     | 2.8     | 1.7     | 1.6     | -0.8    | 3.0     | -2.6    | -3.1     |
| 77 2-Chloronaphthalene     | -1.5     | 4.7     | 2.0     | 1.1     | -1.7    | 4.8     | -4.5    | -4.8     |
| 79 2-Nitroaniline          | -8.8     | -1.3    | 5.1     | 1.2     | 1.0     | 4.1     | -1.8    | 0.5      |
| 82 Dimethyl phthalate      | 1.7      | 0.0     | 3.0     | -0.3    | -0.8    | 2.3     | -3.6    | -2.3     |
| 83 1,3-Dinitrobenzene      | -26.9    | -4.5    | 1.9     | 3.8     | 5.4     | 9.4     | 6.6     | 4.3      |
| 84 2,6-Dinitrotoluene      | -9.3     | -0.8    | 4.0     | 2.4     | 1.4     | 4.3     | -2.0    | 0.1      |
| 85 Acenaphthylene          | -0.1     | -2.3    | 2.5     | -0.5    | -1.3    | 2.0     | 0.3     | -0.6     |
| 86 3-Nitroaniline          | -10.7    | -2.9    | 1.4     | 3.4     | 2.0     | 4.4     | 2.1     | 0.3      |
| 87 2,4-Dinitrophenol       | * 38.3   | -21.5   | -15.6   | -6.1    | 0.6     | 5.2     | 0.3     | -1.1     |
| 88 Acenaphthene            | 4.5      | 4.8     | 6.2     | 3.9     | 1.6     | -1.4    | -7.8    | -11.7    |
| 89 4-Nitrophenol           | -22.9    | -5.7    | -1.1    | 2.5     | 6.6     | 9.1     | 5.9     | 5.6      |
| 91 2,4-Dinitrotoluene      | -11.1    | 1.2     | 2.2     | 3.2     | 4.1     | 4.2     | -1.7    | -2.1     |
| 93 Dibenzofuran            | 0.6      | 1.8     | 2.3     | -0.8    | -0.4    | 0.2     | -1.3    | -2.4     |
| 95 2,3,5,6-Tetrachlorophe  | -15.2    | -1.6    | 0.1     | 0.2     | 3.8     | 7.3     | 3.9     | 1.5      |
| 96 2,3,4,6-Tetrachlorophe  | -16.3    | 0.5     | 4.6     | 1.8     | 4.2     | 3.6     | 1.2     | 0.4      |
| 97 2-Naphthylamine         | -7.7     | 3.6     | 5.0     | 1.8     | 1.0     | 4.3     | 0.0     | -7.9     |
| 98 Diethyl phthalate       | 1.4      | 7.1     | 3.8     | 1.7     | 1.3     | -0.1    | -5.8    | -9.4     |
| 99 Hexadecane              | 10.5     | 7.0     | 11.3    | 8.2     | 4.0     | -4.1    | -13.6   | -23.4    |
| 100 4-Chlorophenyl phenyl  | -1.6     | 4.0     | 4.3     | 0.3     | -0.6    | 0.9     | -2.8    | -4.4     |
| 101 4-Nitroaniline         | -14.8    | 0.7     | 2.8     | 4.8     | 5.9     | 1.7     | 0.4     | -1.5     |
| 103 Fluorene               | -1.0     | 3.3     | 4.1     | 1.9     | 0.5     | 0.6     | -4.7    | -4.8     |
| 104 4,6-Dinitro-2-methylph | Disabled | -24.3   | -12.2   | -2.5    | 4.6     | 10.1    | 12.4    | 11.7     |
| 105 N-Nitrosodiphenylamine | 2.3      | -6.1    | -0.9    | -1.6    | -1.8    | 2.8     | 1.6     | 3.8      |
| 90 1,2-Diphenylhydrazine   | -5.8     | -1.2    | 4.0     | 0.3     | 0.1     | 3.5     | -0.3    | -0.6     |
| 110 4-Bromophenyl phenyl e | -2.1     | -5.7    | 1.7     | 0.8     | 2.2     | 1.3     | 1.2     | 0.7      |
| 112 Hexachlorobenzene      | -4.6     | -1.8    | 2.7     | 0.1     | -0.1    | 2.1     | 1.5     | 0.0      |
| 113 Atrazine               | -8.6     | -3.2    | 2.7     | 3.6     | 5.5     | 3.1     | 2.5     | -5.6     |
| 116 Pentachlorophenol      | 3.2      | -6.9    | -9.2    | -0.6    | 1.3     | 6.8     | 5.3     | 0.0      |
| 115 n-Octadecane           | 2.8      | 5.3     | 14.7    | 6.1     | -0.8    | -2.4    | -6.8    | -19.0    |
| 121 Phenanthrene           | 2.6      | -4.4    | 0.0     | -2.5    | -1.4    | 1.1     | 1.2     | 3.4      |
| 122 Anthracene             | -5.3     | -5.7    | 0.1     | -1.6    | 0.6     | 2.5     | 4.4     | 5.1      |
| 124 Carbazole              | -7.3     | -4.1    | 1.5     | -1.6    | 1.3     | 1.3     | 4.7     | 4.2      |
| 126 Di-n-butyl phthalate   | -7.6     | -7.3    | -3.7    | -0.7    | 2.2     | 4.2     | 4.8     | 8.0      |
| 131 Fluoranthene           | 1.2      | -6.0    | -2.4    | -3.3    | 1.0     | 2.8     | 3.7     | 3.0      |
| 132 Benzidine              | Disabled | 22.4    | -10.1   | -15.0   | -1.9    | 4.5     | 0.0     | Disabled |
| 133 Pyrene                 | -6.7     | -0.6    | 0.2     | -1.4    | -1.8    | 4.7     | 1.3     | 4.4      |
| 138 Butyl benzyl phthalate | -3.8     | -5.0    | -1.7    | -2.3    | 0.5     | 5.2     | 3.1     | 3.9      |
| 144 3,3'-Dichlorobenzidine | -8.2     | -9.7    | -8.0    | -0.9    | -1.8    | 9.1     | 10.5    | 9.0      |
| 145 Bis(2-ethylhexyl) phth | -13.5    | -3.4    | -5.8    | 1.5     | 0.1     | 7.9     | 5.9     | 7.4      |
| 146 Benzo[a]anthracene     | -3.2     | -0.4    | -0.8    | -0.2    | -0.8    | 1.2     | 0.6     | 3.5      |
| 147 Chrysene               | -5.6     | 0.5     | -1.0    | 0.5     | -1.4    | 2.9     | 1.2     | 2.8      |
| 150 Di-n-octyl phthalate   | -18.1    | -15.0   | -7.0    | -0.1    | 3.0     | 11.1    | 12.8    | 13.2     |
| 151 7,12-Dimethylbenz(a)an | -10.9    | -6.5    | -2.1    | 0.6     | 0.8     | 7.3     | 5.7     | 5.1      |
| 152 Benzo[b]fluoranthene   | -10.0    | -4.2    | 2.5     | -0.8    | 3.3     | 4.6     | 2.3     | 2.3      |
| 153 Benzo[k]fluoranthene   | -7.6     | -3.3    | -4.7    | 2.2     | 0.7     | 2.8     | 5.2     | 4.8      |
| 219 Benzo[e]pyrene         | -7.9     | -4.3    | -1.0    | 1.0     | 0.8     | 3.2     | 4.5     | 3.7      |
| 154 Benzo[a]pyrene         | -12.1    | -4.0    | -1.8    | 1.1     | 0.3     | 5.9     | 4.0     | 6.6      |
| 157 Indeno[1,2,3-cd]pyrene | -16.0    | -10.2   | -8.9    | -1.5    | -0.6    | 8.0     | 12.6    | 16.5     |
| 158 Dibenzo(a,h)anthracene | -16.0    | -8.8    | -7.1    | -1.5    | -1.2    | 8.0     | 11.7    | 14.9     |

Method: \\PITCHROM\ChromData\CH732\20150203-5518.b\BNA\_CH732.m

| Compound                 | Level 1 | Level 2 | Level 3 | Level 4 | Level 5 | Level 6 | Level 7 | Level 8 |
|--------------------------|---------|---------|---------|---------|---------|---------|---------|---------|
| 159 Benzo[g,h,i]perylene | -13.9   | -9.5    | -7.2    | -3.7    | -2.0    | 7.2     | 12.0    | 17.2    |

TestAmerica Pittsburgh  
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CH732\20150203-5518.b\D0203003.D  
 Lims ID: IC  
 Client ID:  
 Sample Type: IC Calib Level: 1  
 Inject. Date: 03-Feb-2015 05:53:30 ALS Bottle#: 2 Worklist Smp#: 3  
 Injection Vol: 2.0 ul Dil. Factor: 1.0000  
 Sample Info: 180-0005518-003  
 Misc. Info.: IC  
 Operator ID: 003200 Instrument ID: CH732  
 Sublist: chrom-BNA\_CH732\*sub4  
 Method: \\PITCHROM\ChromData\CH732\20150203-5518.b\BNA\_CH732.m  
 Limit Group: BNA 8270D ICAL  
 Last Update: 04-Feb-2015 06:40:52 Calib Date: 03-Feb-2015 09:00:30  
 Integrator: RTE ID Type: Deconvolution ID  
 Quant Method: Internal Standard Quant By: Initial Calibration  
 Last ICal File: \\PITCHROM\ChromData\CH732\20150203-5518.b\D0203010.D  
 Column 1 : Rxi-5SiIMS ( 0.32 mm) Det: MS SCAN  
 Process Host: XAWRK011

First Level Reviewer: piccolinov

Date: 04-Feb-2015 06:38:29

| Compound                      | Sig | RT (min.) | Adj RT (min.) | Dlt RT (min.) | Q   | Response | Cal Amt ng | OnCol Amt ng | Flags |
|-------------------------------|-----|-----------|---------------|---------------|-----|----------|------------|--------------|-------|
| * 1 1,4-Dichlorobenzene-d4    | 152 | 6.185     | 6.185         | 0.000         | 97  | 133646   | 8.00       | 8.00         |       |
| * 2 Naphthalene-d8            | 136 | 7.484     | 7.484         | 0.000         | 100 | 609382   | 8.00       | 8.00         |       |
| * 3 Acenaphthene-d10          | 164 | 9.209     | 9.209         | 0.000         | 92  | 394913   | 8.00       | 8.00         |       |
| * 4 Phenanthrene-d10          | 188 | 10.668    | 10.668        | 0.000         | 97  | 687055   | 8.00       | 8.00         |       |
| * 5 Chrysene-d12              | 240 | 14.471    | 14.471        | 0.000         | 97  | 663270   | 8.00       | 8.00         |       |
| * 6 Perylene-d12              | 264 | 17.388    | 17.388        | 0.000         | 96  | 549453   | 8.00       | 8.00         |       |
| \$ 7 2-Fluorophenol           | 112 | 4.716     | 4.716         | 0.000         | 90  | 6456     | 0.4000     | 0.3726       |       |
| \$ 8 Phenol-d5                | 99  | 5.801     | 5.801         | 0.000         | 90  | 8598     | 0.4000     | 0.3685       |       |
| \$ 9 Nitrobenzene-d5          | 82  | 6.752     | 6.752         | 0.000         | 96  | 9741     | 0.4000     | 0.3809       |       |
| \$ 10 2-Fluorobiphenyl        | 172 | 8.531     | 8.531         | 0.000         | 99  | 25545    | 0.4000     | 0.3939       |       |
| \$ 11 2,4,6-Tribromophenol    | 330 | 9.973     | 9.973         | 0.000         | 83  | 2430     | 0.4000     | 0.3217       |       |
| \$ 12 Terphenyl-d14           | 244 | 12.628    | 12.628        | 0.000         | 98  | 26904    | 0.4000     | 0.3726       |       |
| 13 1,4-Dioxane                | 88  | 1.548     | 1.548         | 0.000         | 1   | 1934     | 0.4000     | 0.3633       | M     |
| 14 N-Nitrosodimethylamine     | 74  | 2.141     | 2.141         | 0.000         | 71  | 2670     | 0.4000     | 0.3713       | M     |
| 15 Pyridine                   | 79  | 2.243     | 2.243         | 0.000         | 93  | 4214     | 0.4000     | 0.3359       | M     |
| 21 Methyl methanesulfonate    | 80  | 4.471     | 4.471         | 0.000         | 86  | 3907     | 0.4000     | 0.3859       |       |
| 25 Benzaldehyde               | 77  | 5.710     | 5.710         | 0.000         | 89  | 4208     | 0.4000     | 0.3729       |       |
| 26 Phenol                     | 94  | 5.812     | 5.812         | 0.000         | 97  | 11070    | 0.4000     | 0.4177       |       |
| 27 Aniline                    | 93  | 5.833     | 5.833         | 0.000         | 97  | 11813    | 0.4000     | 0.4027       |       |
| 29 Bis(2-chloroethyl)ether    | 93  | 5.902     | 5.902         | 0.000         | 90  | 8179     | 0.4000     | 0.4372       |       |
| 30 2-Chlorophenol             | 128 | 5.961     | 5.961         | 0.000         | 97  | 8829     | 0.4000     | 0.3899       |       |
| 31 n-Decane                   | 43  | 6.036     | 6.036         | 0.000         | 92  | 11924    | 0.4000     | 0.4490       |       |
| 32 1,3-Dichlorobenzene        | 146 | 6.127     | 6.127         | 0.000         | 95  | 10209    | 0.4000     | 0.3872       |       |
| 33 1,4-Dichlorobenzene        | 146 | 6.207     | 6.207         | 0.000         | 91  | 11017    | 0.4000     | 0.4072       |       |
| 34 Benzyl alcohol             | 108 | 6.324     | 6.324         | 0.000         | 88  | 5381     | 0.4000     | 0.3780       |       |
| 35 1,2-Dichlorobenzene        | 146 | 6.367     | 6.367         | 0.000         | 94  | 11014    | 0.4000     | 0.4188       |       |
| 36 2-Methylphenol             | 108 | 6.442     | 6.442         | 0.000         | 95  | 8430     | 0.4000     | 0.4193       |       |
| 37 Indene                     | 116 | 6.458     | 6.458         | 0.000         | 87  | 15458    | 0.4000     | 0.4234       |       |
| 38 2,2'-oxybis[1-chloropropan | 45  | 6.474     | 6.474         | 0.000         | 91  | 16793    | 0.4000     | 0.4261       |       |
| 39 N-Nitrosopyrrolidine       | 100 | 6.559     | 6.559         | 0.000         | 75  | 3516     | 0.4000     | 0.3589       |       |

| Compound                       | Sig | RT (min.) | Adj RT (min.) | Dlt RT (min.) | Q  | Response | Cal Amt ng | OnCol Amt ng | Flags |
|--------------------------------|-----|-----------|---------------|---------------|----|----------|------------|--------------|-------|
| 40 Acetophenone                | 105 | 6.597     | 6.597         | 0.000         | 79 | 13611    | 0.4000     | 0.4489       |       |
| 41 N-Nitrosodi-n-propylamine   | 70  | 6.597     | 6.597         | 0.000         | 74 | 6343     | 0.4000     | 0.4440       |       |
| 42 4-Methylphenol              | 108 | 6.591     | 6.591         | 0.000         | 60 | 8447     | 0.4000     | 0.4091       |       |
| 45 Hexachloroethane            | 117 | 6.720     | 6.720         | 0.000         | 93 | 4935     | 0.4000     | 0.4212       |       |
| 46 Nitrobenzene                | 77  | 6.768     | 6.768         | 0.000         | 95 | 9966     | 0.4000     | 0.3924       |       |
| 48 Isophorone                  | 82  | 7.008     | 7.008         | 0.000         | 98 | 18114    | 0.4000     | 0.4051       |       |
| 49 2-Nitrophenol               | 139 | 7.094     | 7.094         | 0.000         | 94 | 5049     | 0.4000     | 0.3593       |       |
| 50 2,4-Dimethylphenol          | 107 | 7.131     | 7.131         | 0.000         | 95 | 9995     | 0.4000     | 0.3897       |       |
| 52 Benzoic acid                | 122 | 7.152     | 7.152         | 0.000         | 83 | 2959     | 0.4000     | 1.54         | M     |
| 53 Bis(2-chloroethoxy)methane  | 93  | 7.222     | 7.222         | 0.000         | 97 | 11681    | 0.4000     | 0.4246       |       |
| 54 2,4-Dichlorophenol          | 162 | 7.334     | 7.334         | 0.000         | 92 | 8940     | 0.4000     | 0.3991       |       |
| 56 1,2,4-Trichlorobenzene      | 180 | 7.425     | 7.425         | 0.000         | 94 | 10340    | 0.4000     | 0.4024       |       |
| 58 Naphthalene                 | 128 | 7.505     | 7.505         | 0.000         | 95 | 33313    | 0.4000     | 0.4041       |       |
| 59 4-Chloroaniline             | 127 | 7.542     | 7.542         | 0.000         | 96 | 12989    | 0.4000     | 0.3933       |       |
| 60 2,6-Dichlorophenol          | 162 | 7.558     | 7.558         | 0.000         | 92 | 7969     | 0.4000     | 0.3577       |       |
| 62 Hexachlorobutadiene         | 225 | 7.628     | 7.628         | 0.000         | 95 | 6668     | 0.4000     | 0.4336       |       |
| 64 Caprolactam                 | 113 | 7.842     | 7.842         | 0.000         | 75 | 2851     | 0.4000     | 0.3799       |       |
| 67 4-Chloro-3-methylphenol     | 107 | 8.007     | 8.007         | 0.000         | 95 | 9929     | 0.4000     | 0.4226       |       |
| 69 2-Methylnaphthalene         | 142 | 8.183     | 8.183         | 0.000         | 91 | 23929    | 0.4000     | 0.4104       |       |
| 71 1-Methylnaphthalene         | 142 | 8.285     | 8.285         | 0.000         | 94 | 23121    | 0.4000     | 0.4229       |       |
| 72 Hexachlorocyclopentadiene   | 237 | 8.344     | 8.344         | 0.000         | 90 | 5682     | 0.4000     | 0.3308       |       |
| 73 1,2,4,5-Tetrachlorobenzene  | 216 | 8.349     | 8.349         | 0.000         | 93 | 10408    | 0.4000     | 0.4044       |       |
| 74 2,4,6-Trichlorophenol       | 196 | 8.451     | 8.451         | 0.000         | 91 | 6681     | 0.4000     | 0.3804       |       |
| 75 2,4,5-Trichlorophenol       | 196 | 8.488     | 8.488         | 0.000         | 92 | 7171     | 0.4000     | 0.3849       |       |
| 76 1,1'-Biphenyl               | 154 | 8.632     | 8.632         | 0.000         | 96 | 28976    | 0.4000     | 0.3899       |       |
| 77 2-Chloronaphthalene         | 162 | 8.664     | 8.664         | 0.000         | 98 | 23718    | 0.4000     | 0.3940       |       |
| 79 2-Nitroaniline              | 65  | 8.744     | 8.744         | 0.000         | 81 | 6240     | 0.4000     | 0.3647       |       |
| 82 Dimethyl phthalate          | 163 | 8.905     | 8.905         | 0.000         | 98 | 25507    | 0.4000     | 0.4068       |       |
| 83 1,3-Dinitrobenzene          | 168 | 8.942     | 8.942         | 0.000         | 82 | 2761     | 0.4000     | 0.2923       |       |
| 84 2,6-Dinitrotoluene          | 165 | 8.969     | 8.969         | 0.000         | 86 | 4998     | 0.4000     | 0.3629       |       |
| 85 Acenaphthylene              | 152 | 9.070     | 9.070         | 0.000         | 97 | 38147    | 0.4000     | 0.3996       |       |
| 86 3-Nitroaniline              | 138 | 9.134     | 9.134         | 0.000         | 70 | 5989     | 0.4000     | 0.3572       |       |
| 87 2,4-Dinitrophenol           | 184 | 9.241     | 9.241         | 0.000         | 60 | 3286     | 0.8000     | 1.11         |       |
| 88 Acenaphthene                | 153 | 9.241     | 9.241         | 0.000         | 90 | 24369    | 0.4000     | 0.4181       |       |
| 89 4-Nitrophenol               | 109 | 9.273     | 9.273         | 0.000         | 94 | 5723     | 0.8000     | 0.6170       |       |
| 91 2,4-Dinitrotoluene          | 165 | 9.364     | 9.364         | 0.000         | 91 | 6434     | 0.4000     | 0.3555       |       |
| 93 Dibenzofuran                | 168 | 9.401     | 9.401         | 0.000         | 96 | 33645    | 0.4000     | 0.4024       |       |
| 95 2,3,5,6-Tetrachlorophenol   | 232 | 9.476     | 9.476         | 0.000         | 90 | 5498     | 0.4000     | 0.3392       |       |
| 96 2,3,4,6-Tetrachlorophenol   | 232 | 9.514     | 9.514         | 0.000         | 74 | 5315     | 0.4000     | 0.3347       |       |
| 97 2-Naphthylamine             | 143 | 9.546     | 9.546         | 0.000         | 96 | 22002    | 0.4000     | 0.3693       |       |
| 98 Diethyl phthalate           | 149 | 9.583     | 9.583         | 0.000         | 97 | 25990    | 0.4000     | 0.4057       |       |
| 99 Hexadecane                  | 57  | 9.594     | 9.594         | 0.000         | 92 | 19875    | 0.4000     | 0.4420       |       |
| 100 4-Chlorophenyl phenyl ethe | 204 | 9.717     | 9.717         | 0.000         | 96 | 12078    | 0.4000     | 0.3935       |       |
| 101 4-Nitroaniline             | 138 | 9.727     | 9.727         | 0.000         | 78 | 5641     | 0.4000     | 0.3409       |       |
| 103 Fluorene                   | 166 | 9.738     | 9.738         | 0.000         | 93 | 25774    | 0.4000     | 0.3962       |       |
| 104 4,6-Dinitro-2-methylphenol | 198 | 9.759     | 9.759         | 0.000         | 76 | 5271     | 0.8000     | 0.4720       |       |
| 105 N-Nitrosodiphenylamine     | 169 | 9.829     | 9.829         | 0.000         | 62 | 19976    | 0.4000     | 0.4093       |       |
| 90 1,2-Diphenylhydrazine       | 77  | 9.872     | 9.872         | 0.000         | 97 | 26337    | 0.4000     | 0.3767       |       |
| 110 4-Bromophenyl phenyl ether | 248 | 10.192    | 10.192        | 0.000         | 72 | 7027     | 0.4000     | 0.3917       |       |
| 112 Hexachlorobenzene          | 284 | 10.283    | 10.283        | 0.000         | 89 | 6843     | 0.4000     | 0.3817       |       |
| 113 Atrazine                   | 200 | 10.315    | 10.315        | 0.000         | 84 | 5181     | 0.4000     | 0.3656       |       |
| 116 Pentachlorophenol          | 266 | 10.465    | 10.465        | 0.000         | 86 | 10440    | 0.8000     | 0.8258       |       |

| Compound                       | Sig | RT (min.) | Adj RT (min.) | Diff RT (min.) | Q   | Response | Cal Amt ng | OnCol Amt ng | Flags |
|--------------------------------|-----|-----------|---------------|----------------|-----|----------|------------|--------------|-------|
| 115 n-Octadecane               | 57  | 10.475    | 10.475        | 0.000          | 93  | 19565    | 0.4000     | 0.4113       |       |
| 121 Phenanthrene               | 178 | 10.694    | 10.694        | 0.000          | 95  | 42368    | 0.4000     | 0.4105       |       |
| 122 Anthracene                 | 178 | 10.748    | 10.748        | 0.000          | 97  | 39984    | 0.4000     | 0.3788       |       |
| 124 Carbazole                  | 167 | 10.903    | 10.903        | 0.000          | 96  | 34259    | 0.4000     | 0.3707       |       |
| 126 Di-n-butyl phthalate       | 149 | 11.239    | 11.239        | 0.000          | 100 | 42717    | 0.4000     | 0.3696       |       |
| 57 Azobenzene                  | 77  |           | 11.923        |                |     |          | ND         | ND           |       |
| 131 Fluoranthene               | 202 | 12.121    | 12.121        | 0.000          | 98  | 42149    | 0.4000     | 0.4047       |       |
| 132 Benzidine                  | 184 | 12.260    | 12.260        | 0.000          | 98  | 10812    | 0.4000     | 1.54         |       |
| 133 Pyrene                     | 202 | 12.447    | 12.447        | 0.000          | 97  | 40844    | 0.4000     | 0.3731       |       |
| 138 Butyl benzyl phthalate     | 149 | 13.387    | 13.387        | 0.000          | 97  | 18708    | 0.4000     | 0.3849       |       |
| 144 3,3'-Dichlorobenzidine     | 252 | 14.375    | 14.375        | 0.000          | 74  | 11741    | 0.4000     | 0.3670       |       |
| 145 Bis(2-ethylhexyl) phthalat | 149 | 14.445    | 14.445        | 0.000          | 96  | 23285    | 0.4000     | 0.3458       |       |
| 146 Benzo[a]anthracene         | 228 | 14.461    | 14.461        | 0.000          | 98  | 37171    | 0.4000     | 0.3873       |       |
| 147 Chrysene                   | 228 | 14.525    | 14.525        | 0.000          | 97  | 34157    | 0.4000     | 0.3777       |       |
| 150 Di-n-octyl phthalate       | 149 | 15.764    | 15.764        | 0.000          | 66  | 34973    | 0.4000     | 0.3276       |       |
| 151 7,12-Dimethylbenz(a)anthra | 256 | 16.597    | 16.597        | 0.000          | 86  | 13505    | 0.4000     | 0.3563       |       |
| 152 Benzo[b]fluoranthene       | 252 | 16.614    | 16.614        | 0.000          | 98  | 32046    | 0.4000     | 0.3598       |       |
| 153 Benzo[k]fluoranthene       | 252 | 16.667    | 16.667        | 0.000          | 97  | 32254    | 0.4000     | 0.3695       |       |
| 219 Benzo[e]pyrene             | 252 | 17.174    | 17.174        | 0.000          | 0   | 29579    | 0.4000     | 0.3683       |       |
| 154 Benzo[a]pyrene             | 252 | 17.276    | 17.276        | 0.000          | 80  | 28197    | 0.4000     | 0.3514       |       |
| 157 Indeno[1,2,3-cd]pyrene     | 276 | 19.792    | 19.792        | 0.000          | 91  | 28373    | 0.4000     | 0.3362       | M     |
| 158 Dibenz(a,h)anthracene      | 278 | 19.851    | 19.851        | 0.000          | 76  | 23584    | 0.4000     | 0.3361       | M     |
| 159 Benzo[g,h,i]perylene       | 276 | 20.497    | 20.497        | 0.000          | 94  | 24806    | 0.4000     | 0.3445       | M     |
| S 199 Total Cresols            | 108 |           |               |                | 0   |          | 0.8000     | 0.8284       |       |
| S 197 Methyl Phenols,Total     | 108 |           |               |                | 0   |          | 0.8000     | 0.8284       |       |

**QC Flag Legend**

Processing Flags

ND - Not Detected or Marked ND

Review Flags

M - Manually Integrated

**Reagents:**

SVTAPSTD0.4i\_00007

Amount Added: 1.00

Units: mL

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CH732\20150203-5518.b\D0203003.D

Injection Date: 03-Feb-2015 05:53:30

Instrument ID: CH732

Operator ID: 003200

Lims ID: IC

Worklist Smp#: 3

Client ID:

Injection Vol: 2.0 ul

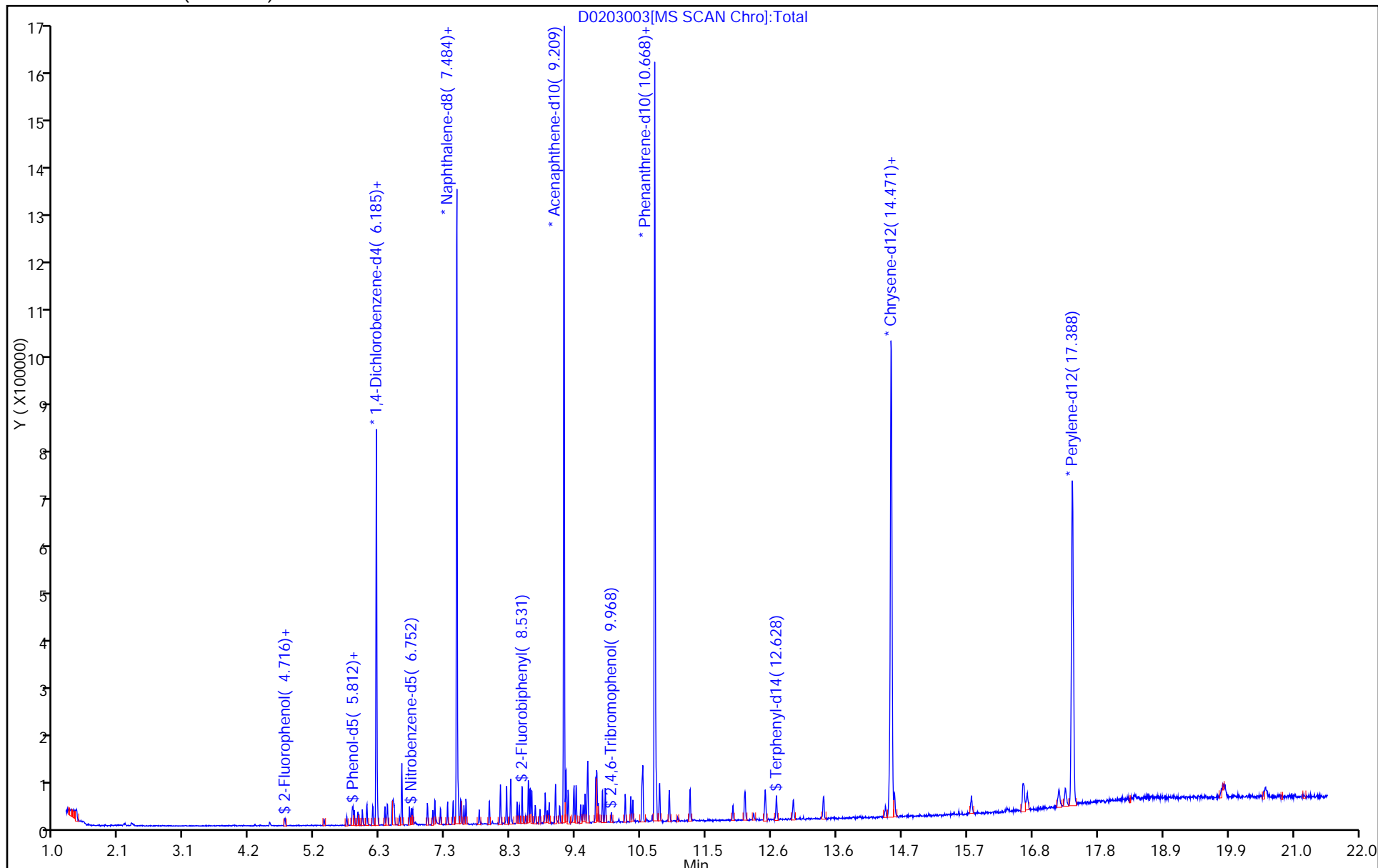
Dil. Factor: 1.0000

ALS Bottle#: 2

Method: BNA\_CH732

Limit Group: BNA 8270D ICAL

Column: Rxi-5SiIMS (0.32 mm)



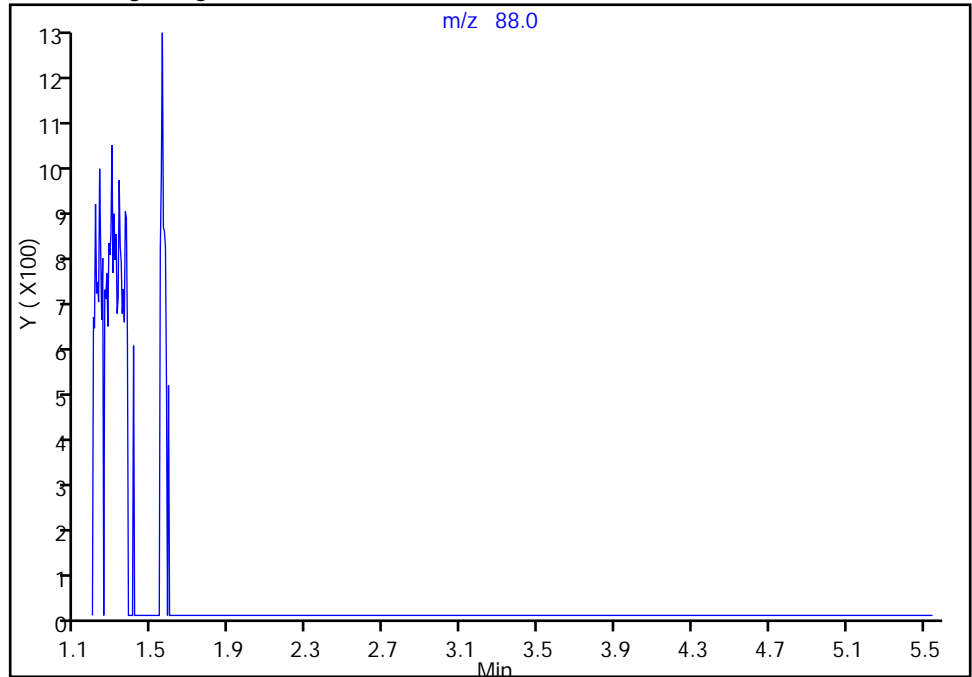
TestAmerica Pittsburgh

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Injection Date: 03-Feb-2015 05:53:30 Instrument ID: CH732  
Lims ID: IC  
Client ID:  
Operator ID: 003200 ALS Bottle#: 2 Worklist Smp#: 3  
Injection Vol: 2.0 ul Dil. Factor: 1.0000  
Method: BNA\_CH732 Limit Group: BNA 8270D ICAL  
Column: Rxi-5SiIMS (0.32 mm) Detector: MS SCAN

13 1,4-Dioxane, CAS: 123-91-1

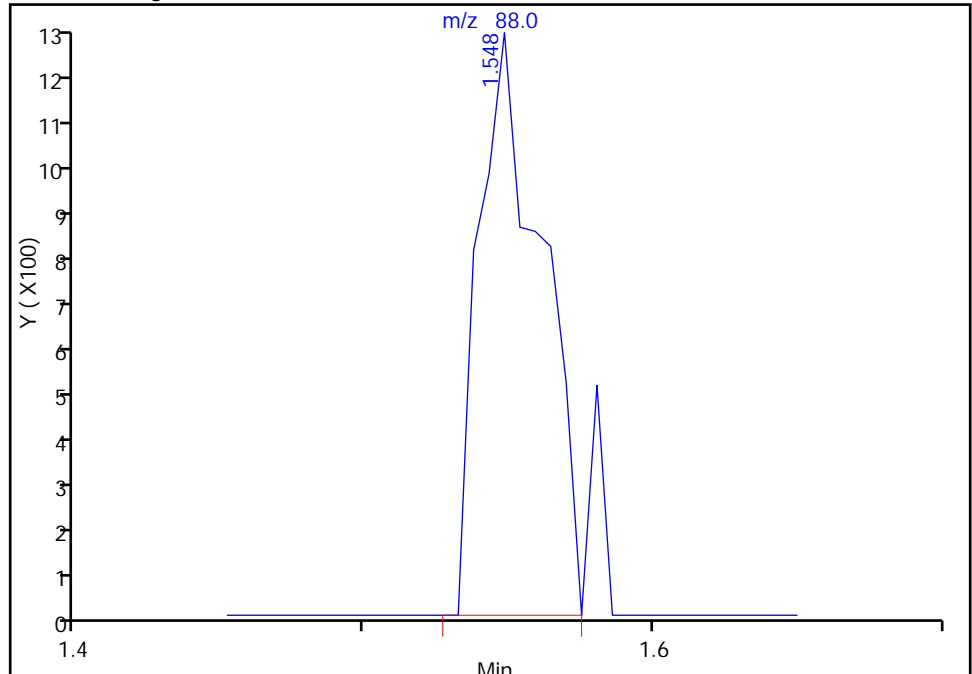
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Expected RT: 1.55

Processing Integration Results



RT: 1.55  
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Amount: 0.363312  
Amount Units: ng

Manual Integration Results



Reviewer: piccolinov, 03-Feb-2015 08:47:03  
Audit Action: Manually Integrated  
Audit Reason: Poor chromatography



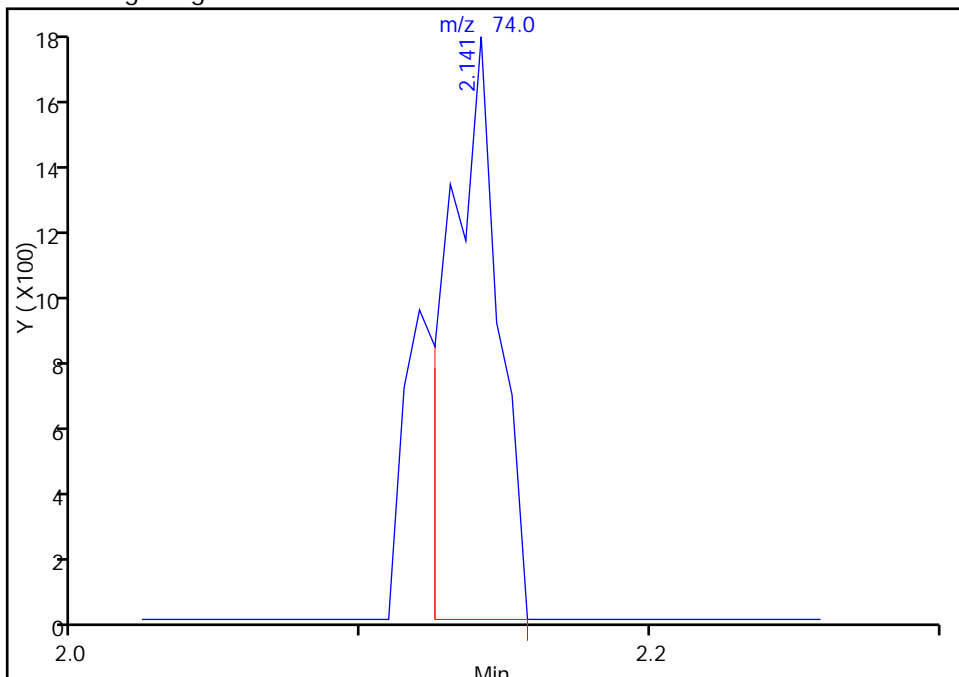
TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CH732\20150203-5518.b\D0203003.D  
Injection Date: 03-Feb-2015 05:53:30 Instrument ID: CH732  
Lims ID: IC  
Client ID:  
Operator ID: 003200 ALS Bottle#: 2 Worklist Smp#: 3  
Injection Vol: 2.0 ul Dil. Factor: 1.0000  
Method: BNA\_CH732 Limit Group: BNA 8270D ICAL  
Column: Rxi-5SilMS (0.32 mm) Detector: MS SCAN

14 N-Nitrosodimethylamine, CAS: 62-75-9

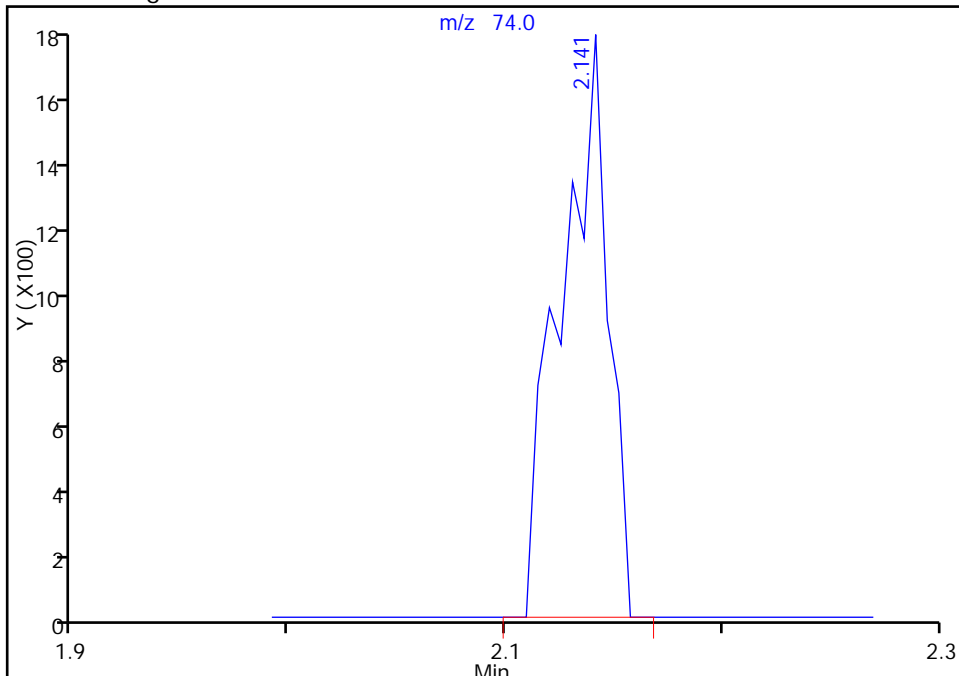
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Area: 2141  
Amount: 0.309072  
Amount Units: ng

Processing Integration Results



RT: 2.14  
Area: 2670  
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Amount Units: ng

Manual Integration Results



Reviewer: piccolinov, 03-Feb-2015 08:47:03  
Audit Action: Manually Integrated  
Audit Reason: Poor chromatography

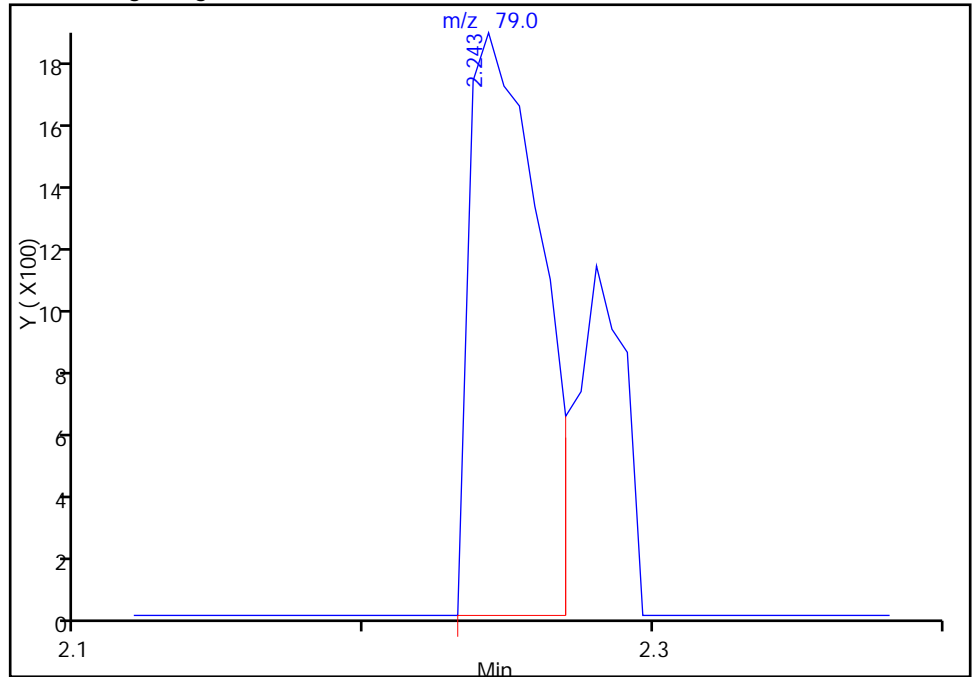
TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CH732\20150203-5518.b\D0203003.D  
Injection Date: 03-Feb-2015 05:53:30 Instrument ID: CH732  
Lims ID: IC  
Client ID:  
Operator ID: 003200 ALS Bottle#: 2 Worklist Smp#: 3  
Injection Vol: 2.0 ul Dil. Factor: 1.0000  
Method: BNA\_CH732 Limit Group: BNA 8270D ICAL  
Column: Rxi-5SilMS (0.32 mm) Detector: MS SCAN

15 Pyridine, CAS: 110-86-1

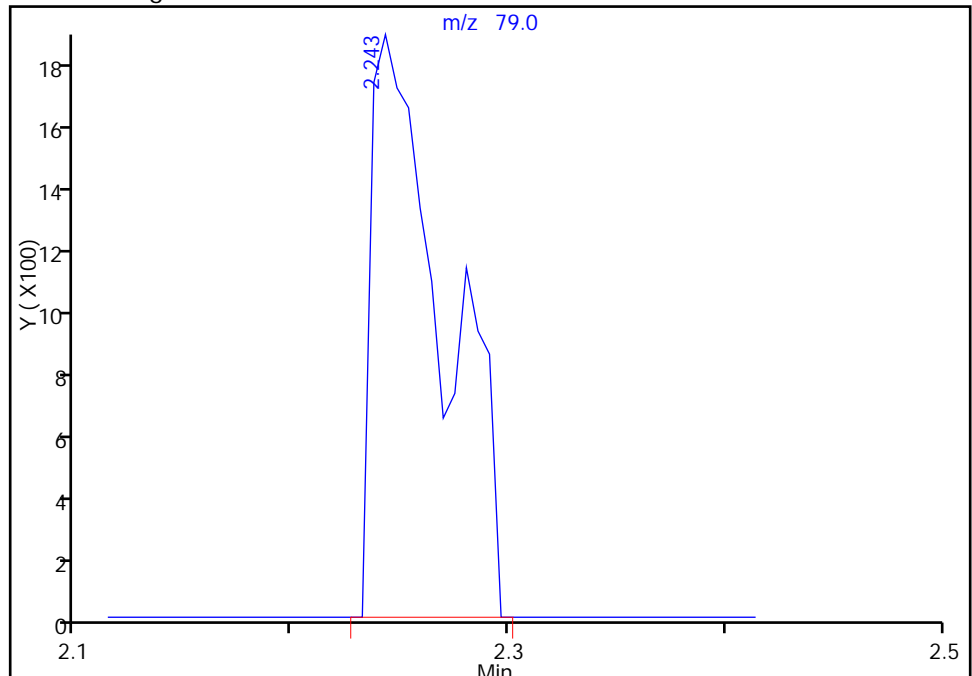
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Amount Units: ng

Processing Integration Results



RT: 2.24  
Area: 4214  
Amount: 0.335929  
Amount Units: ng

Manual Integration Results



Reviewer: piccolinov, 03-Feb-2015 08:47:03  
Audit Action: Manually Integrated  
Audit Reason: Poor chromatography

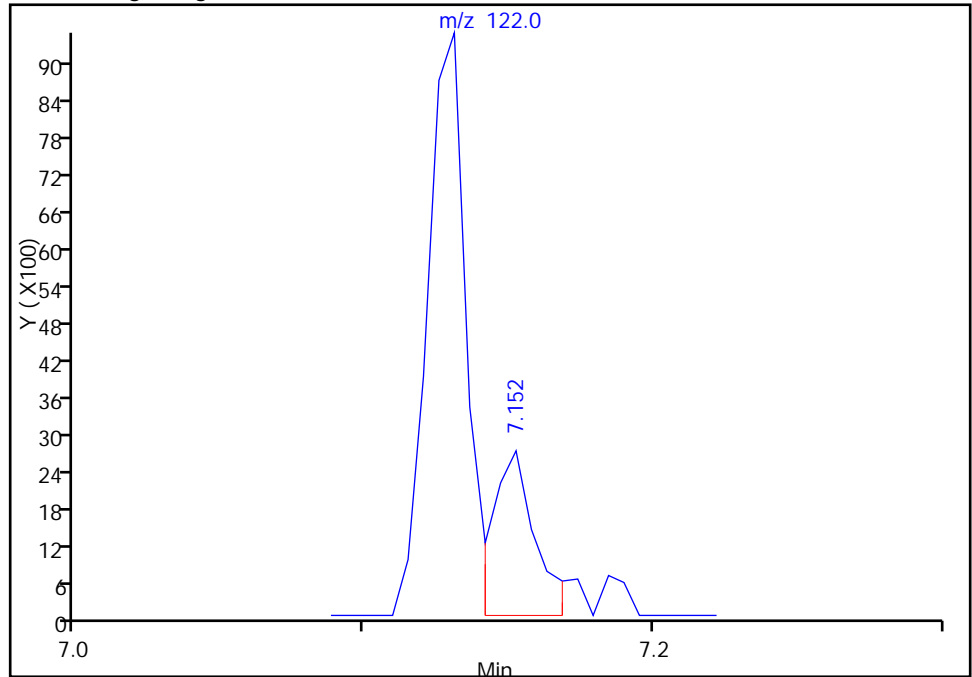
TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CH732\20150203-5518.b\D0203003.D  
Injection Date: 03-Feb-2015 05:53:30 Instrument ID: CH732  
Lims ID: IC  
Client ID:  
Operator ID: 003200 ALS Bottle#: 2 Worklist Smp#: 3  
Injection Vol: 2.0 ul Dil. Factor: 1.0000  
Method: BNA\_CH732 Limit Group: BNA 8270D ICAL  
Column: Rxi-5SiIMS (0.32 mm) Detector: MS SCAN

52 Benzoic acid, CAS: 65-85-0

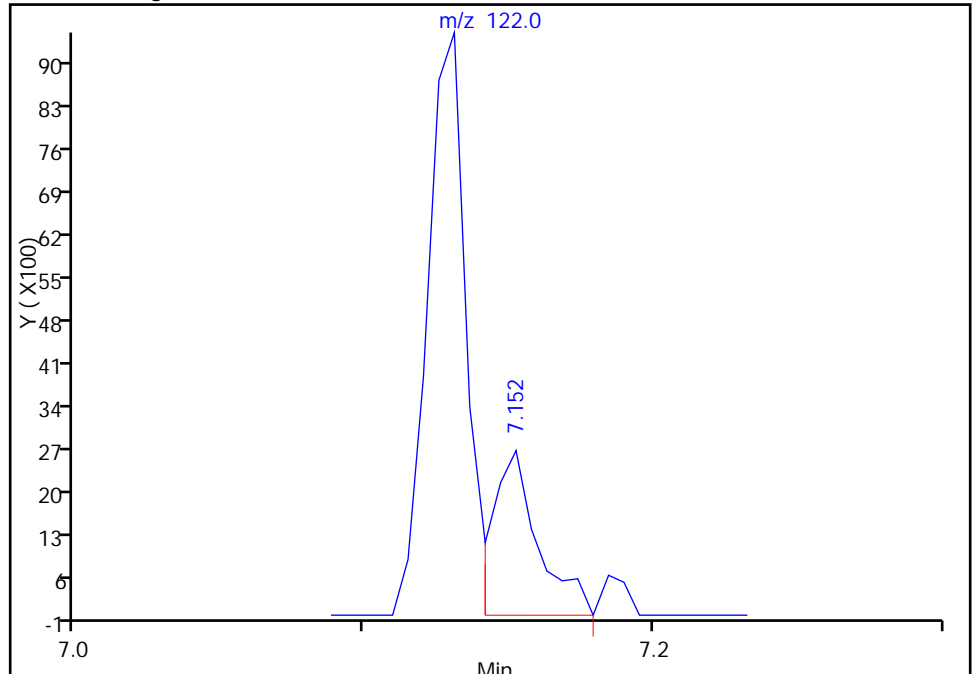
RT: 7.15  
Area: 2769  
Amount: 0.268892  
Amount Units: ng

Processing Integration Results



RT: 7.15  
Area: 2959  
Amount: 1.535991  
Amount Units: ng

Manual Integration Results



Reviewer: piccolinov, 03-Feb-2015 08:47:03  
Audit Action: Manually Integrated  
Audit Reason: Poor chromatography

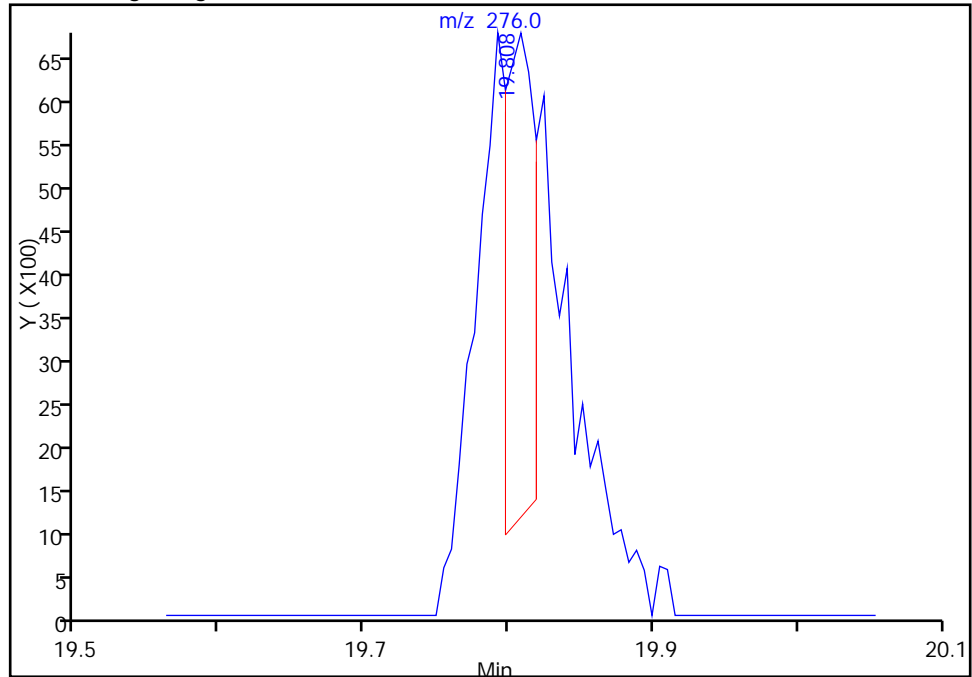
TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CH732\20150203-5518.b\D0203003.D  
 Injection Date: 03-Feb-2015 05:53:30 Instrument ID: CH732  
 Lims ID: IC  
 Client ID:  
 Operator ID: 003200 ALS Bottle#: 2 Worklist Smp#: 3  
 Injection Vol: 2.0 ul Dil. Factor: 1.0000  
 Method: BNA\_CH732 Limit Group: BNA 8270D ICAL  
 Column: Rxi-5SiIMS (0.32 mm) Detector: MS SCAN

157 Indeno[1,2,3-cd]pyrene, CAS: 193-39-5

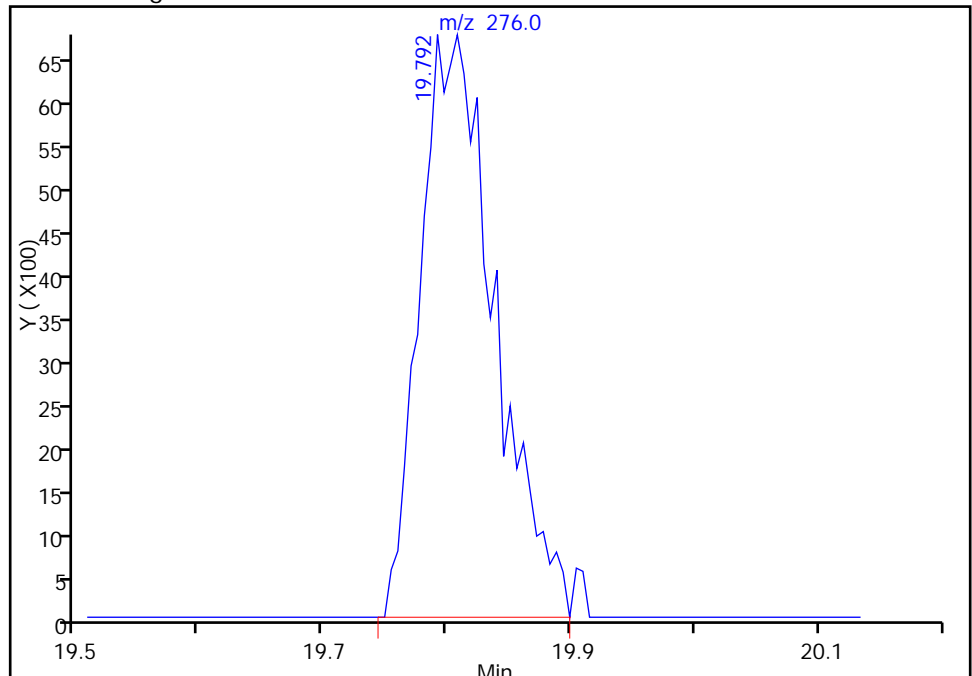
Processing Integration Results

RT: 19.81  
 Area: 8168  
 Amount: 0.144835  
 Amount Units: ng



Manual Integration Results

RT: 19.79  
 Area: 28373  
 Amount: 0.336190  
 Amount Units: ng



Reviewer: piccolinov, 03-Feb-2015 08:47:03  
 Audit Action: Manually Integrated  
 Audit Reason: Poor chromatography

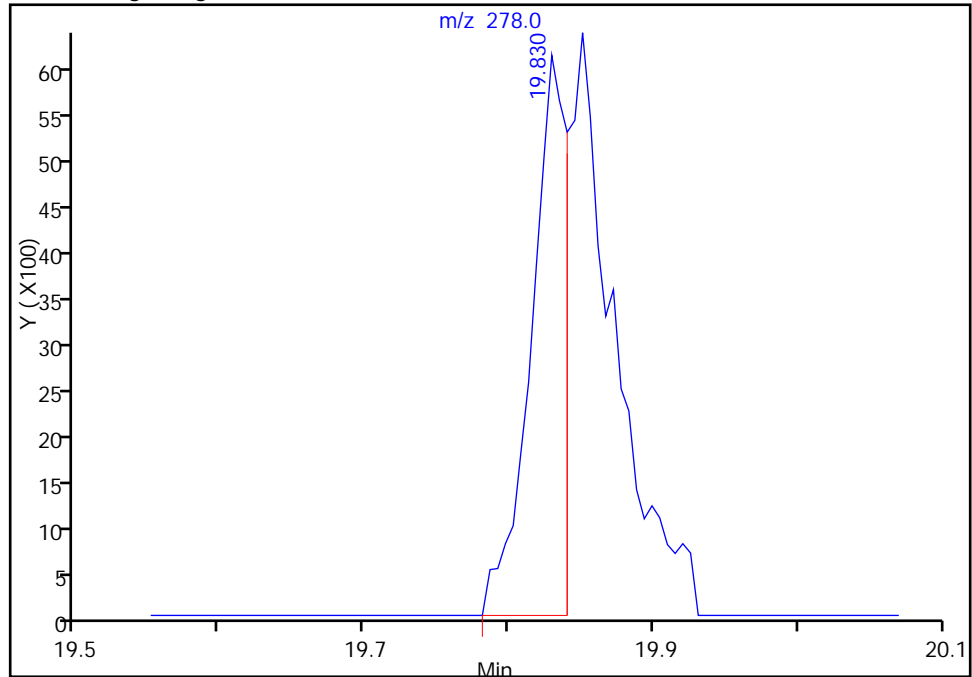
TestAmerica Pittsburgh

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Injection Date: 03-Feb-2015 05:53:30 Instrument ID: CH732  
Lims ID: IC  
Client ID:  
Operator ID: 003200 ALS Bottle#: 2 Worklist Smp#: 3  
Injection Vol: 2.0 ul Dil. Factor: 1.0000  
Method: BNA\_CH732 Limit Group: BNA 8270D ICAL  
Column: Rxi-5SiIMS (0.32 mm) Detector: MS SCAN

158 Dibenz(a,h)anthracene, CAS: 53-70-3

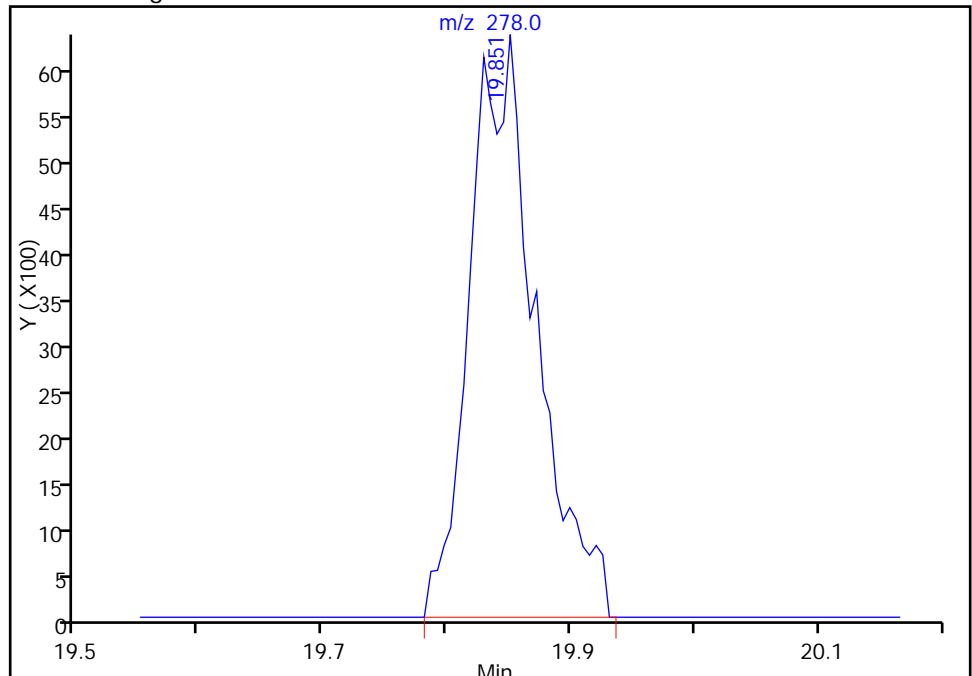
RT: 19.83  
Area: 10594  
Amount: 0.204719  
Amount Units: ng

Processing Integration Results



RT: 19.85  
Area: 23584  
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Amount Units: ng

Manual Integration Results



Reviewer: piccolinov, 03-Feb-2015 08:47:03  
Audit Action: Manually Integrated  
Audit Reason: Poor chromatography

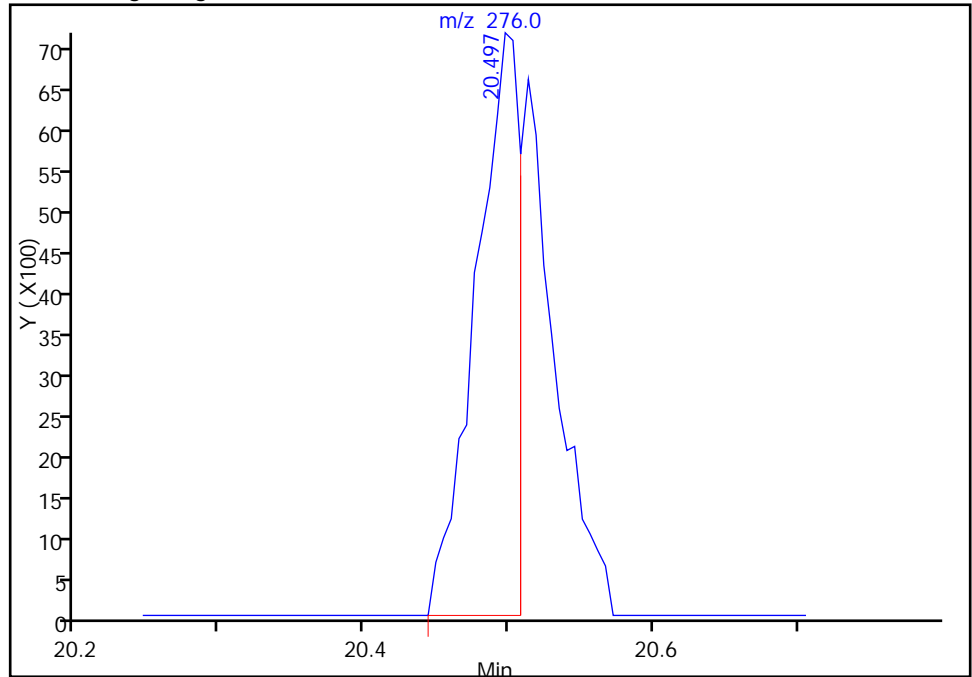
TestAmerica Pittsburgh

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Injection Date: 03-Feb-2015 05:53:30 Instrument ID: CH732  
Lims ID: IC  
Client ID:  
Operator ID: 003200 ALS Bottle#: 2 Worklist Smp#: 3  
Injection Vol: 2.0 ul Dil. Factor: 1.0000  
Method: BNA\_CH732 Limit Group: BNA 8270D ICAL  
Column: Rxi-5SiIMS (0.32 mm) Detector: MS SCAN

159 Benzo[g,h,i]perylene, CAS: 191-24-2

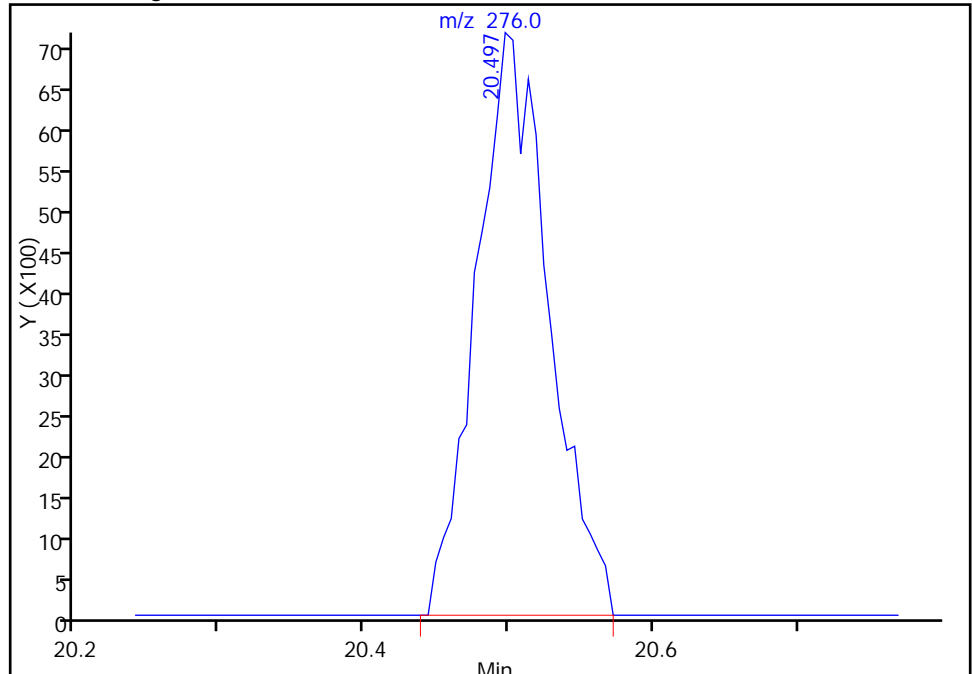
RT: 20.50  
Area: 15111  
Amount: 0.402477  
Amount Units: ng

Processing Integration Results



RT: 20.50  
Area: 24806  
Amount: 0.344484  
Amount Units: ng

Manual Integration Results



Reviewer: piccolinov, 03-Feb-2015 08:47:03  
Audit Action: Manually Integrated  
Audit Reason: Poor chromatography

TestAmerica Pittsburgh  
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CH732\20150203-5518.b\D0203004.D  
 Lims ID: IC  
 Client ID:  
 Sample Type: IC Calib Level: 2  
 Inject. Date: 03-Feb-2015 06:20:30 ALS Bottle#: 3 Worklist Smp#: 4  
 Injection Vol: 2.0 ul Dil. Factor: 1.0000  
 Sample Info: 180-0005518-004  
 Misc. Info.: IC  
 Operator ID: 003200 Instrument ID: CH732  
 Sublist: chrom-BNA\_CH732\*sub4  
 Method: \\PITCHROM\ChromData\CH732\20150203-5518.b\BNA\_CH732.m  
 Limit Group: BNA 8270D ICAL  
 Last Update: 04-Feb-2015 06:40:58 Calib Date: 03-Feb-2015 09:00:30  
 Integrator: RTE ID Type: Deconvolution ID  
 Quant Method: Internal Standard Quant By: Initial Calibration  
 Last ICal File: \\PITCHROM\ChromData\CH732\20150203-5518.b\D0203010.D  
 Column 1 : Rxi-5SiIMS ( 0.32 mm) Det: MS SCAN  
 Process Host: XAWRK011

First Level Reviewer: piccolinov

Date: 03-Feb-2015 08:48:35

| Compound                      | Sig | RT (min.) | Adj RT (min.) | Dlt RT (min.) | Q   | Response | Cal Amt ng | OnCol Amt ng | Flags |
|-------------------------------|-----|-----------|---------------|---------------|-----|----------|------------|--------------|-------|
| * 1 1,4-Dichlorobenzene-d4    | 152 | 6.180     | 6.180         | 0.000         | 97  | 143973   | 8.00       | 8.00         |       |
| * 2 Naphthalene-d8            | 136 | 7.478     | 7.478         | 0.000         | 100 | 645863   | 8.00       | 8.00         |       |
| * 3 Acenaphthene-d10          | 164 | 9.204     | 9.204         | 0.000         | 92  | 407379   | 8.00       | 8.00         |       |
| * 4 Phenanthrene-d10          | 188 | 10.668    | 10.668        | 0.000         | 97  | 739534   | 8.00       | 8.00         |       |
| * 5 Chrysene-d12              | 240 | 14.477    | 14.477        | 0.000         | 97  | 673939   | 8.00       | 8.00         |       |
| * 6 Perylene-d12              | 264 | 17.388    | 17.388        | 0.000         | 96  | 560589   | 8.00       | 8.00         |       |
| \$ 7 2-Fluorophenol           | 112 | 4.706     | 4.706         | 0.000         | 92  | 37650    | 2.00       | 2.02         |       |
| \$ 8 Phenol-d5                | 99  | 5.796     | 5.796         | 0.000         | 95  | 50263    | 2.00       | 2.00         |       |
| \$ 9 Nitrobenzene-d5          | 82  | 6.746     | 6.746         | 0.000         | 94  | 55043    | 2.00       | 2.03         |       |
| \$ 10 2-Fluorobiphenyl        | 172 | 8.531     | 8.531         | 0.000         | 99  | 137132   | 2.00       | 2.05         |       |
| \$ 11 2,4,6-Tribromophenol    | 330 | 9.968     | 9.968         | 0.000         | 88  | 14848    | 2.00       | 1.83         |       |
| \$ 12 Terphenyl-d14           | 244 | 12.628    | 12.628        | 0.000         | 99  | 146177   | 2.00       | 1.99         |       |
| 13 1,4-Dioxane                | 88  | 1.548     | 1.548         | 0.000         | 95  | 11737    | 2.00       | 2.05         |       |
| 14 N-Nitrosodimethylamine     | 74  | 2.120     | 2.120         | 0.000         | 80  | 15503    | 2.00       | 2.00         |       |
| 15 Pyridine                   | 79  | 2.216     | 2.216         | 0.000         | 91  | 26410    | 2.00       | 1.95         | M     |
| 21 Methyl methanesulfonate    | 80  | 4.455     | 4.455         | 0.000         | 89  | 22793    | 2.00       | 2.09         |       |
| 25 Benzaldehyde               | 77  | 5.705     | 5.705         | 0.000         | 91  | 21743    | 2.00       | 1.79         |       |
| 26 Phenol                     | 94  | 5.806     | 5.806         | 0.000         | 95  | 60095    | 2.00       | 2.10         |       |
| 27 Aniline                    | 93  | 5.828     | 5.828         | 0.000         | 95  | 64483    | 2.00       | 2.04         |       |
| 29 Bis(2-chloroethyl)ether    | 93  | 5.897     | 5.897         | 0.000         | 93  | 41584    | 2.00       | 2.06         |       |
| 30 2-Chlorophenol             | 128 | 5.956     | 5.956         | 0.000         | 96  | 48891    | 2.00       | 2.00         |       |
| 31 n-Decane                   | 43  | 6.031     | 6.031         | 0.000         | 93  | 61014    | 2.00       | 2.13         |       |
| 32 1,3-Dichlorobenzene        | 146 | 6.121     | 6.121         | 0.000         | 97  | 58818    | 2.00       | 2.07         |       |
| 33 1,4-Dichlorobenzene        | 146 | 6.202     | 6.202         | 0.000         | 95  | 58452    | 2.00       | 2.01         |       |
| 34 Benzyl alcohol             | 108 | 6.319     | 6.319         | 0.000         | 90  | 31167    | 2.00       | 2.03         |       |
| 35 1,2-Dichlorobenzene        | 146 | 6.362     | 6.362         | 0.000         | 96  | 58062    | 2.00       | 2.05         |       |
| 36 2-Methylphenol             | 108 | 6.437     | 6.437         | 0.000         | 96  | 45068    | 2.00       | 2.08         |       |
| 37 Indene                     | 116 | 6.453     | 6.453         | 0.000         | 89  | 79937    | 2.00       | 2.03         |       |
| 38 2,2'-oxybis[1-chloropropan | 45  | 6.469     | 6.469         | 0.000         | 91  | 90145    | 2.00       | 2.12         |       |
| 39 N-Nitrosopyrrolidine       | 100 | 6.559     | 6.559         | 0.000         | 79  | 21630    | 2.00       | 2.05         |       |

| Compound                        | Sig | RT (min.) | Adj RT (min.) | Dlt RT (min.) | Q  | Response | Cal Amt ng | OnCol Amt ng | Flags |
|---------------------------------|-----|-----------|---------------|---------------|----|----------|------------|--------------|-------|
| 40 Acetophenone                 | 105 | 6.592     | 6.592         | 0.000         | 76 | 70865    | 2.00       | 2.17         |       |
| 41 N-Nitrosodi-n-propylamine    | 70  | 6.592     | 6.592         | 0.000         | 77 | 34348    | 2.00       | 2.23         |       |
| 42 4-Methylphenol               | 108 | 6.592     | 6.592         | 0.000         | 62 | 47943    | 2.00       | 2.16         |       |
| 45 Hexachloroethane             | 117 | 6.714     | 6.714         | 0.000         | 95 | 25617    | 2.00       | 2.03         |       |
| 46 Nitrobenzene                 | 77  | 6.768     | 6.768         | 0.000         | 92 | 55637    | 2.00       | 2.07         |       |
| 48 Isophorone                   | 82  | 7.003     | 7.003         | 0.000         | 97 | 95220    | 2.00       | 2.01         |       |
| 49 2-Nitrophenol                | 139 | 7.094     | 7.094         | 0.000         | 96 | 29702    | 2.00       | 1.99         |       |
| 50 2,4-Dimethylphenol           | 107 | 7.126     | 7.126         | 0.000         | 96 | 56716    | 2.00       | 2.09         |       |
| 52 Benzoic acid                 | 122 | 7.158     | 7.158         | 0.000         | 91 | 18161    | 2.00       | 2.45         | M     |
| 53 Bis(2-chloroethoxy)methane   | 93  | 7.217     | 7.217         | 0.000         | 95 | 60701    | 2.00       | 2.08         |       |
| 54 2,4-Dichlorophenol           | 162 | 7.329     | 7.329         | 0.000         | 96 | 47384    | 2.00       | 2.00         |       |
| 56 1,2,4-Trichlorobenzene       | 180 | 7.420     | 7.420         | 0.000         | 94 | 56870    | 2.00       | 2.09         |       |
| 58 Naphthalene                  | 128 | 7.500     | 7.500         | 0.000         | 98 | 180017   | 2.00       | 2.06         |       |
| 59 4-Chloroaniline              | 127 | 7.542     | 7.542         | 0.000         | 96 | 70259    | 2.00       | 2.01         |       |
| 60 2,6-Dichlorophenol           | 162 | 7.553     | 7.553         | 0.000         | 96 | 50566    | 2.00       | 2.14         |       |
| 62 Hexachlorobutadiene          | 225 | 7.628     | 7.628         | 0.000         | 97 | 33197    | 2.00       | 2.04         |       |
| 64 Caprolactam                  | 113 | 7.842     | 7.842         | 0.000         | 74 | 16212    | 2.00       | 2.04         |       |
| 67 4-Chloro-3-methylphenol      | 107 | 8.002     | 8.002         | 0.000         | 96 | 50346    | 2.00       | 2.02         |       |
| 69 2-Methylnaphthalene          | 142 | 8.183     | 8.183         | 0.000         | 92 | 128685   | 2.00       | 2.08         |       |
| 71 1-Methylnaphthalene          | 142 | 8.280     | 8.280         | 0.000         | 93 | 118777   | 2.00       | 2.05         |       |
| 72 Hexachlorocyclopentadiene    | 237 | 8.344     | 8.344         | 0.000         | 97 | 34246    | 2.00       | 1.93         |       |
| 73 1,2,4,5-Tetrachlorobenzene   | 216 | 8.349     | 8.349         | 0.000         | 98 | 55917    | 2.00       | 2.11         |       |
| 74 2,4,6-Trichlorophenol        | 196 | 8.451     | 8.451         | 0.000         | 94 | 35559    | 2.00       | 1.96         |       |
| 75 2,4,5-Trichlorophenol        | 196 | 8.483     | 8.483         | 0.000         | 92 | 36826    | 2.00       | 1.92         |       |
| 76 1,1'-Biphenyl                | 154 | 8.632     | 8.632         | 0.000         | 94 | 157628   | 2.00       | 2.06         |       |
| 77 2-Chloronaphthalene          | 162 | 8.659     | 8.659         | 0.000         | 97 | 129992   | 2.00       | 2.09         |       |
| 79 2-Nitroaniline               | 65  | 8.744     | 8.744         | 0.000         | 85 | 34853    | 2.00       | 1.97         |       |
| 82 Dimethyl phthalate           | 163 | 8.905     | 8.905         | 0.000         | 98 | 129303   | 2.00       | 2.00         |       |
| 83 1,3-Dinitrobenzene           | 168 | 8.937     | 8.937         | 0.000         | 85 | 18618    | 2.00       | 1.91         |       |
| 84 2,6-Dinitrotoluene           | 165 | 8.969     | 8.969         | 0.000         | 92 | 28186    | 2.00       | 1.98         |       |
| 85 Acenaphthylene               | 152 | 9.070     | 9.070         | 0.000         | 98 | 192381   | 2.00       | 1.95         |       |
| 86 3-Nitroaniline               | 138 | 9.134     | 9.134         | 0.000         | 93 | 33591    | 2.00       | 1.94         |       |
| 87 2,4-Dinitrophenol            | 184 | 9.236     | 9.236         | 0.000         | 62 | 22936    | 4.00       | 3.14         |       |
| 88 Acenaphthene                 | 153 | 9.236     | 9.236         | 0.000         | 91 | 126036   | 2.00       | 2.10         |       |
| 89 4-Nitrophenol                | 109 | 9.273     | 9.273         | 0.000         | 97 | 36110    | 4.00       | 3.77         |       |
| 91 2,4-Dinitrotoluene           | 165 | 9.364     | 9.364         | 0.000         | 92 | 37788    | 2.00       | 2.02         |       |
| 93 Dibenzofuran                 | 168 | 9.402     | 9.402         | 0.000         | 96 | 175543   | 2.00       | 2.04         |       |
| 95 2,3,5,6-Tetrachlorophenol    | 232 | 9.476     | 9.476         | 0.000         | 93 | 32909    | 2.00       | 1.97         |       |
| 96 2,3,4,6-Tetrachlorophenol    | 232 | 9.519     | 9.519         | 0.000         | 74 | 32937    | 2.00       | 2.01         |       |
| 97 2-Naphthylamine              | 143 | 9.546     | 9.546         | 0.000         | 97 | 127319   | 2.00       | 2.07         |       |
| 98 Diethyl phthalate            | 149 | 9.583     | 9.583         | 0.000         | 98 | 141494   | 2.00       | 2.14         |       |
| 99 Hexadecane                   | 57  | 9.588     | 9.588         | 0.000         | 91 | 102020   | 2.00       | 2.14         |       |
| 100 4-Chlorophenyl phenyl ether | 204 | 9.717     | 9.717         | 0.000         | 94 | 65852    | 2.00       | 2.08         |       |
| 101 4-Nitroaniline              | 138 | 9.727     | 9.727         | 0.000         | 89 | 34362    | 2.00       | 2.01         |       |
| 103 Fluorene                    | 166 | 9.738     | 9.738         | 0.000         | 94 | 138685   | 2.00       | 2.07         |       |
| 104 4,6-Dinitro-2-methylphenol  | 198 | 9.759     | 9.759         | 0.000         | 81 | 36409    | 4.00       | 3.03         |       |
| 105 N-Nitrosodiphenylamine      | 169 | 9.829     | 9.829         | 0.000         | 64 | 98631    | 2.00       | 1.88         |       |
| 90 1,2-Diphenylhydrazine        | 77  | 9.872     | 9.872         | 0.000         | 99 | 148666   | 2.00       | 1.98         |       |
| 110 4-Bromophenyl phenyl ether  | 248 | 10.192    | 10.192        | 0.000         | 71 | 36435    | 2.00       | 1.89         |       |
| 112 Hexachlorobenzene           | 284 | 10.278    | 10.278        | 0.000         | 93 | 37887    | 2.00       | 1.96         |       |
| 113 Atrazine                    | 200 | 10.315    | 10.315        | 0.000         | 89 | 29538    | 2.00       | 1.94         |       |
| 116 Pentachlorophenol           | 266 | 10.459    | 10.459        | 0.000         | 90 | 50690    | 4.00       | 3.73         |       |



| Compound                       | Sig | RT (min.) | Adj RT (min.) | Dlt RT (min.) | Q  | Response | Cal Amt ng | OnCol Amt ng | Flags |
|--------------------------------|-----|-----------|---------------|---------------|----|----------|------------|--------------|-------|
| 115 n-Octadecane               | 57  | 10.475    | 10.475        | 0.000         | 91 | 107882   | 2.00       | 2.11         |       |
| 121 Phenanthrene               | 178 | 10.694    | 10.694        | 0.000         | 97 | 212492   | 2.00       | 1.91         |       |
| 122 Anthracene                 | 178 | 10.748    | 10.748        | 0.000         | 97 | 214399   | 2.00       | 1.89         |       |
| 124 Carbazole                  | 167 | 10.903    | 10.903        | 0.000         | 93 | 190765   | 2.00       | 1.92         |       |
| 126 Di-n-butyl phthalate       | 149 | 11.234    | 11.234        | 0.000         | 99 | 230689   | 2.00       | 1.85         |       |
| 57 Azobenzene                  | 77  |           | 11.923        |               |    |          | ND         | ND           |       |
| 131 Fluoranthene               | 202 | 12.115    | 12.115        | 0.000         | 98 | 210680   | 2.00       | 1.88         |       |
| 132 Benzidine                  | 184 | 12.260    | 12.260        | 0.000         | 99 | 56969    | 2.00       | 2.45         |       |
| 133 Pyrene                     | 202 | 12.447    | 12.447        | 0.000         | 97 | 221103   | 2.00       | 1.99         |       |
| 138 Butyl benzyl phthalate     | 149 | 13.381    | 13.381        | 0.000         | 98 | 93839    | 2.00       | 1.90         |       |
| 144 3,3'-Dichlorobenzidine     | 252 | 14.380    | 14.380        | 0.000         | 75 | 58677    | 2.00       | 1.81         |       |
| 145 Bis(2-ethylhexyl) phthalat | 149 | 14.445    | 14.445        | 0.000         | 96 | 132135   | 2.00       | 1.93         |       |
| 146 Benzo[a]anthracene         | 228 | 14.455    | 14.455        | 0.000         | 99 | 194307   | 2.00       | 1.99         |       |
| 147 Chrysene                   | 228 | 14.525    | 14.525        | 0.000         | 98 | 184718   | 2.00       | 2.01         |       |
| 150 Di-n-octyl phthalate       | 149 | 15.759    | 15.759        | 0.000         | 99 | 185265   | 2.00       | 1.70         |       |
| 151 7,12-Dimethylbenz(a)anthra | 256 | 16.598    | 16.598        | 0.000         | 82 | 72293    | 2.00       | 1.87         |       |
| 152 Benzo[b]fluoranthene       | 252 | 16.614    | 16.614        | 0.000         | 97 | 174164   | 2.00       | 1.92         |       |
| 153 Benzo[k]fluoranthene       | 252 | 16.662    | 16.662        | 0.000         | 98 | 172135   | 2.00       | 1.93         |       |
| 219 Benzo[e]pyrene             | 252 | 17.174    | 17.174        | 0.000         | 0  | 156862   | 2.00       | 1.91         |       |
| 154 Benzo[a]pyrene             | 252 | 17.271    | 17.271        | 0.000         | 79 | 157185   | 2.00       | 1.92         |       |
| 157 Indeno[1,2,3-cd]pyrene     | 276 | 19.792    | 19.792        | 0.000         | 93 | 154678   | 2.00       | 1.80         | M     |
| 158 Dibenz(a,h)anthracene      | 278 | 19.840    | 19.840        | 0.000         | 93 | 130639   | 2.00       | 1.82         | M     |
| 159 Benzo[g,h,i]perylene       | 276 | 20.497    | 20.497        | 0.000         | 96 | 132922   | 2.00       | 1.81         | M     |
| S 197 Methyl Phenols, Total    | 108 |           |               |               | 0  |          | 4.00       | 4.24         |       |
| S 199 Total Cresols            | 108 |           |               |               | 0  |          | 4.00       | 4.24         |       |

### QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

M - Manually Integrated

### Reagents:

SVTAPSTD2.0i\_00005

Amount Added: 1.00

Units: mL

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CH732\20150203-5518.b\D0203004.D

Injection Date: 03-Feb-2015 06:20:30

Instrument ID: CH732

Operator ID: 003200

Lims ID: IC

Worklist Smp#: 4

Client ID:

Injection Vol: 2.0 ul

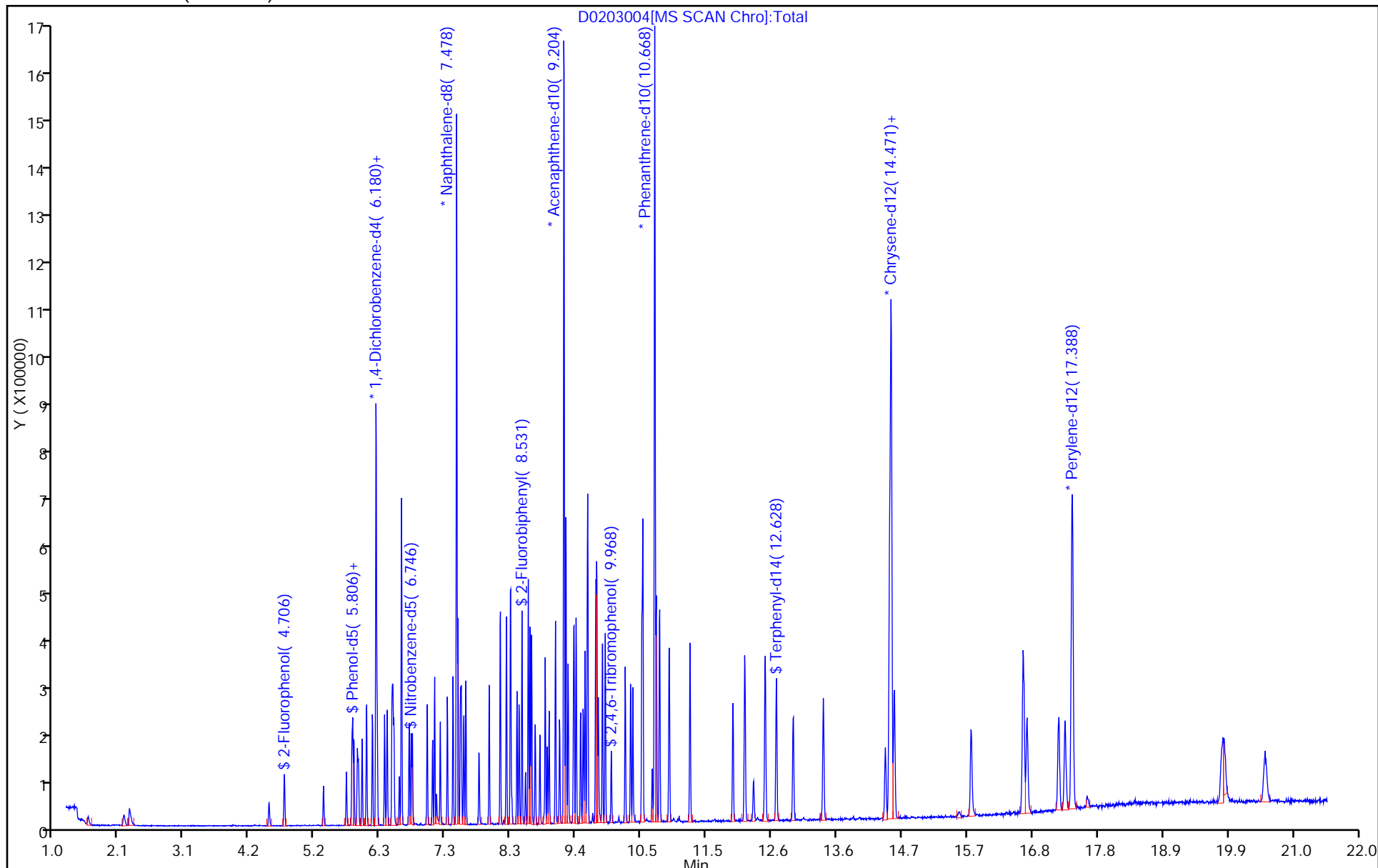
Dil. Factor: 1.0000

ALS Bottle#: 3

Method: BNA\_CH732

Limit Group: BNA 8270D ICAL

Column: Rxi-5SiIMS (0.32 mm)



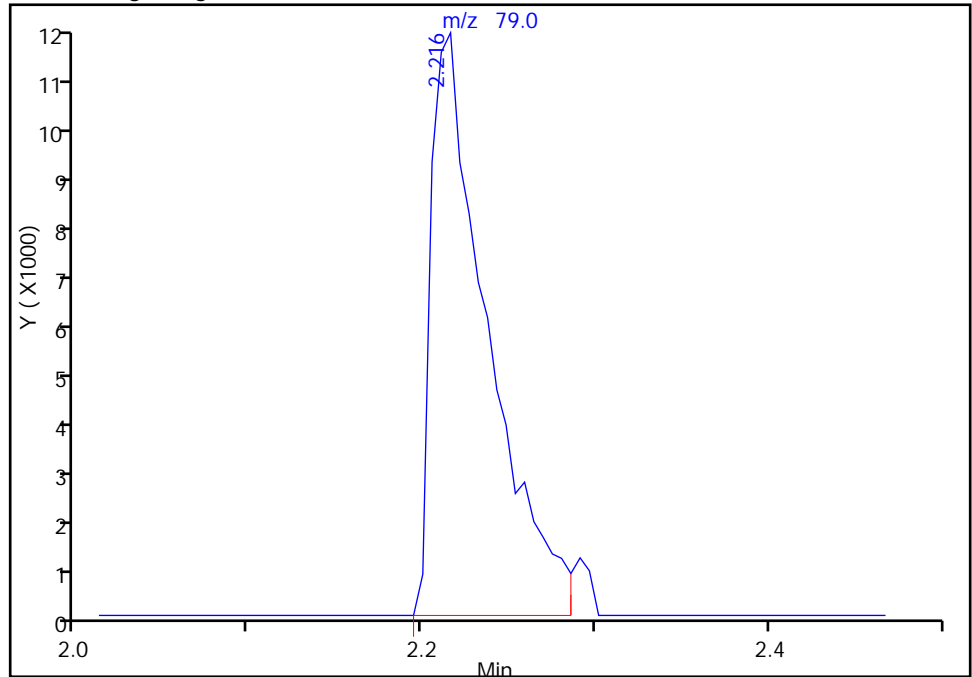
TestAmerica Pittsburgh

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Injection Date: 03-Feb-2015 06:20:30 Instrument ID: CH732  
Lims ID: IC  
Client ID:  
Operator ID: 003200 ALS Bottle#: 3 Worklist Smp#: 4  
Injection Vol: 2.0 ul Dil. Factor: 1.0000  
Method: BNA\_CH732 Limit Group: BNA 8270D ICAL  
Column: Rxi-5SiIMS (0.32 mm) Detector: MS SCAN

15 Pyridine, CAS: 110-86-1

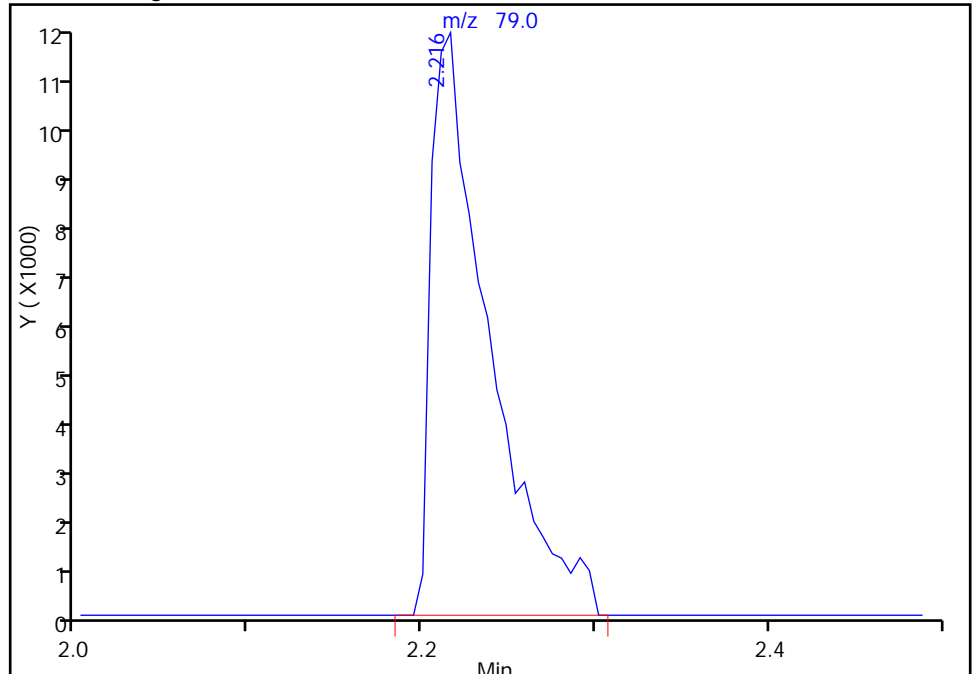
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Area: 25773  
Amount: 1.933329  
Amount Units: ng

Processing Integration Results



RT: 2.22  
Area: 26410  
Amount: 1.954321  
Amount Units: ng

Manual Integration Results



Reviewer: piccolinov, 03-Feb-2015 08:48:35  
Audit Action: Manually Integrated  
Audit Reason: Poor chromatography

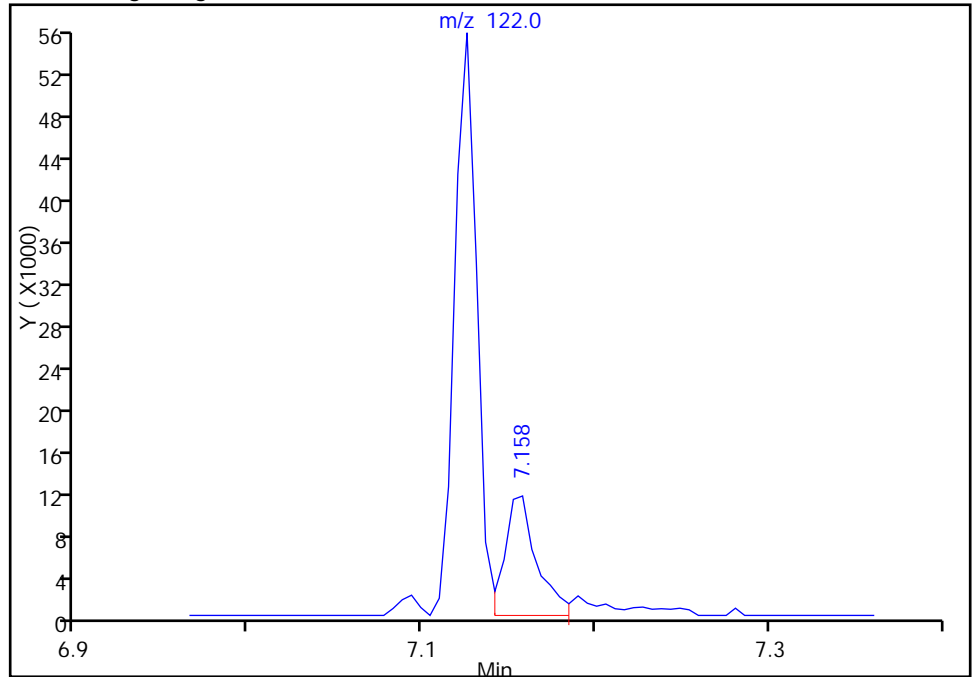
TestAmerica Pittsburgh

|                 |   |                |                |
|-----------------|---|----------------|----------------|
| Data File:      | \\PITCHROM\ChromData\CH732\20150203-5518.b\D0203004.D |                |                |
| Injection Date: | 03-Feb-2015 06:20:30                                  | Instrument ID: | CH732          |
| Lims ID:        | IC  |                |                |
| Client ID:      |   |                |                |
| Operator ID:    | 003200  | ALS Bottle#:   | 3              |
| Injection Vol:  | 2.0 ul  | Dil. Factor:   | 1.0000         |
| Method:         | BNA_CH732   | Limit Group:   | BNA 8270D ICAL |
| Column:         | Rxi-5SiIMS (0.32 mm)                                  | Detector:      | MS SCAN        |
|                 |   | Worklist Smp#: | 4              |

52 Benzoic acid, CAS: 65-85-0

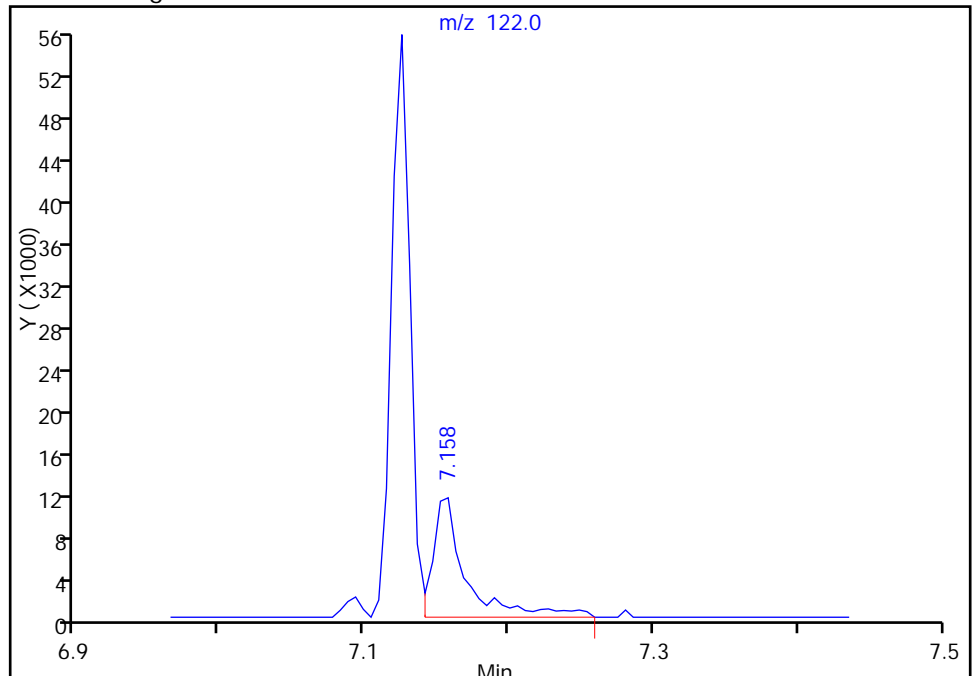
RT: 7.16  
 Area: 14759  
 Amount: 1.341947  
 Amount Units: ng

Processing Integration Results



RT: 7.16  
 Area: 18161  
 Amount: 2.449653  
 Amount Units: ng

Manual Integration Results



Reviewer: piccolinov, 03-Feb-2015 08:48:35  
 Audit Action: Manually Integrated  
 Audit Reason: Poor chromatography

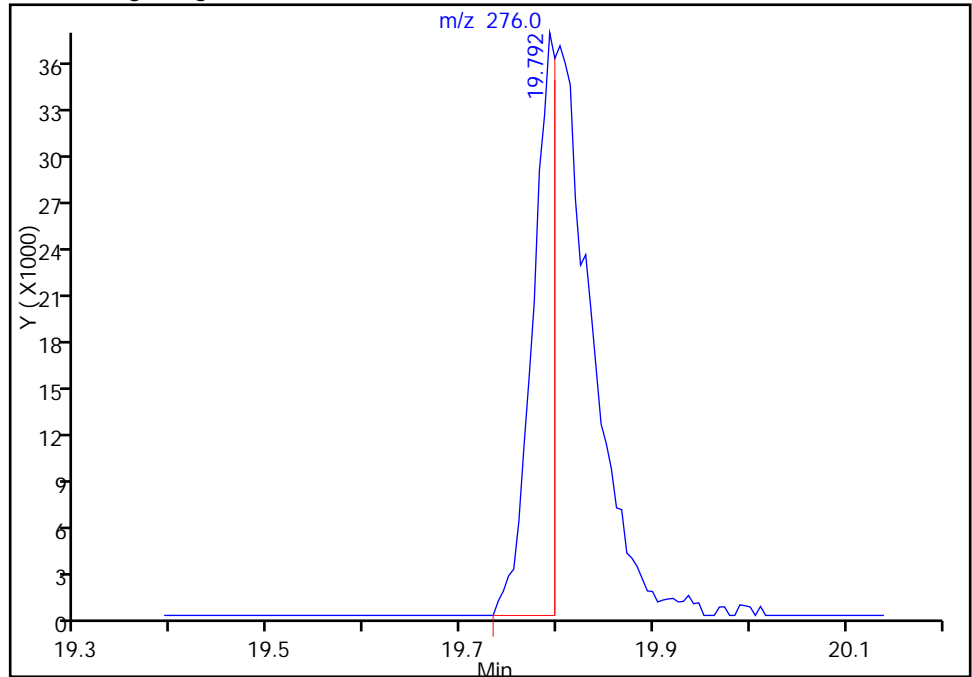
TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CH732\20150203-5518.b\D0203004.D  
Injection Date: 03-Feb-2015 06:20:30 Instrument ID: CH732  
Lims ID: IC  
Client ID:  
Operator ID: 003200 ALS Bottle#: 3 Worklist Smp#: 4  
Injection Vol: 2.0 ul Dil. Factor: 1.0000  
Method: BNA\_CH732 Limit Group: BNA 8270D ICAL  
Column: Rxi-5SiIMS (0.32 mm) Detector: MS SCAN

157 Indeno[1,2,3-cd]pyrene, CAS: 193-39-5

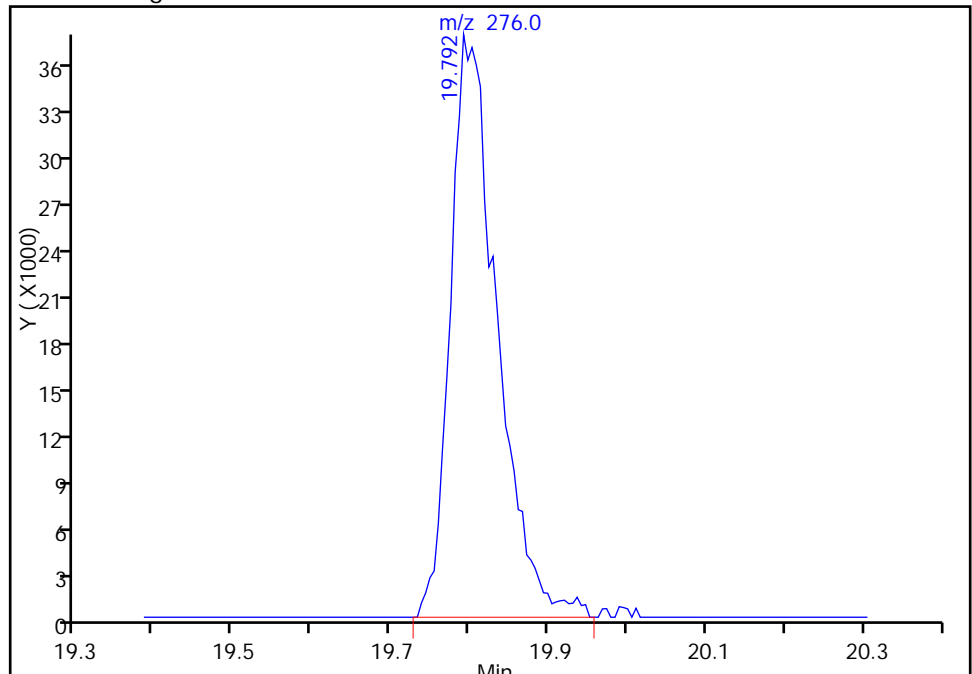
Processing Integration Results

RT: 19.79  
Area: 62619  
Amount: 0.946944  
Amount Units: ng



Manual Integration Results

RT: 19.79  
Area: 154678  
Amount: 1.796361  
Amount Units: ng



Reviewer: piccolinov, 03-Feb-2015 08:48:35  
Audit Action: Manually Integrated  
Audit Reason: Poor chromatography

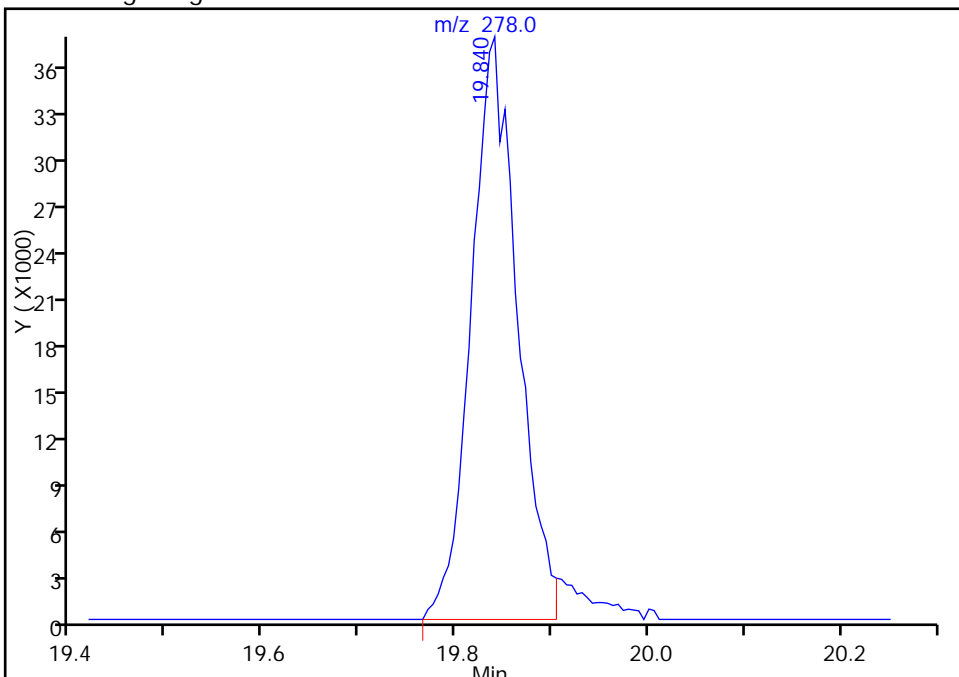
TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CH732\20150203-5518.b\D0203004.D  
Injection Date: 03-Feb-2015 06:20:30 Instrument ID: CH732  
Lims ID: IC  
Client ID:  
Operator ID: 003200 ALS Bottle#: 3 Worklist Smp#: 4  
Injection Vol: 2.0 ul Dil. Factor: 1.0000  
Method: BNA\_CH732 Limit Group: BNA 8270D ICAL  
Column: Rxi-5SiIMS (0.32 mm) Detector: MS SCAN

158 Dibenz(a,h)anthracene, CAS: 53-70-3

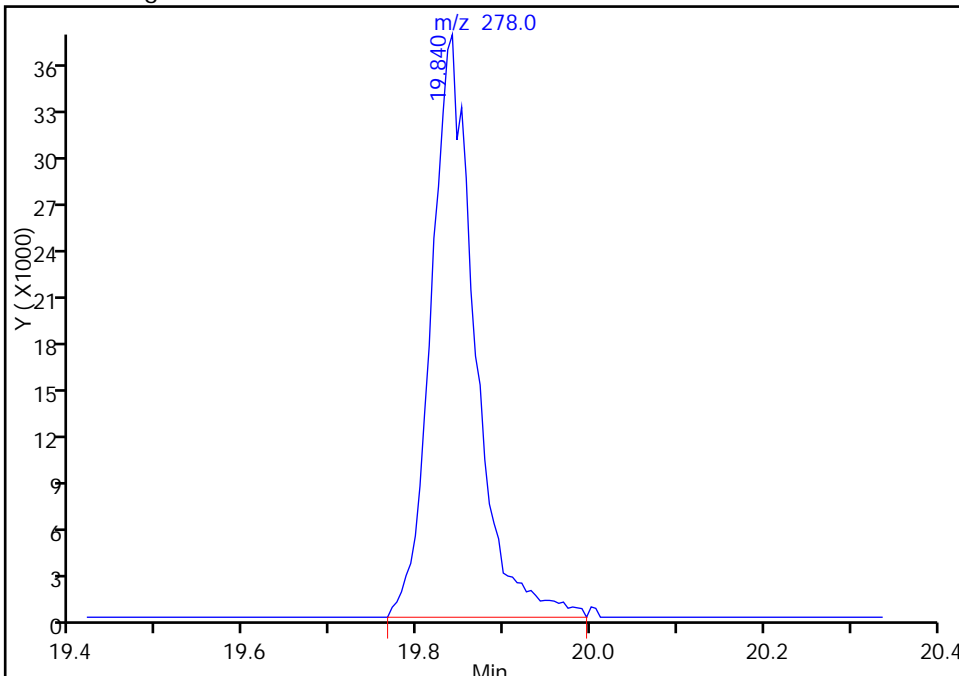
RT: 19.84  
Area: 124199  
Amount: 2.129613  
Amount Units: ng

Processing Integration Results



RT: 19.84  
Area: 130639  
Amount: 1.824963  
Amount Units: ng

Manual Integration Results



Reviewer: piccolinov, 03-Feb-2015 08:48:35  
Audit Action: Manually Integrated  
Audit Reason: Poor chromatography

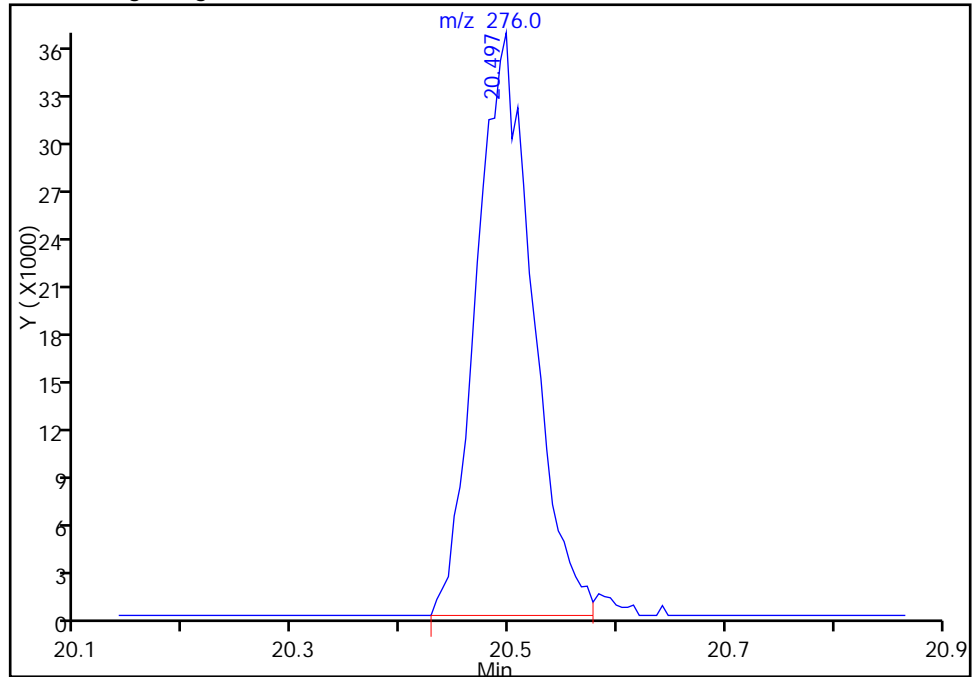
TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CH732\20150203-5518.b\D0203004.D  
 Injection Date: 03-Feb-2015 06:20:30 Instrument ID: CH732  
 Lims ID: IC  
 Client ID:  
 Operator ID: 003200 ALS Bottle#: 3 Worklist Smp#: 4  
 Injection Vol: 2.0 ul Dil. Factor: 1.0000  
 Method: BNA\_CH732 Limit Group: BNA 8270D ICAL  
 Column: Rxi-5SiIMS (0.32 mm) Detector: MS SCAN

159 Benzo[g,h,i]perylene, CAS: 191-24-2

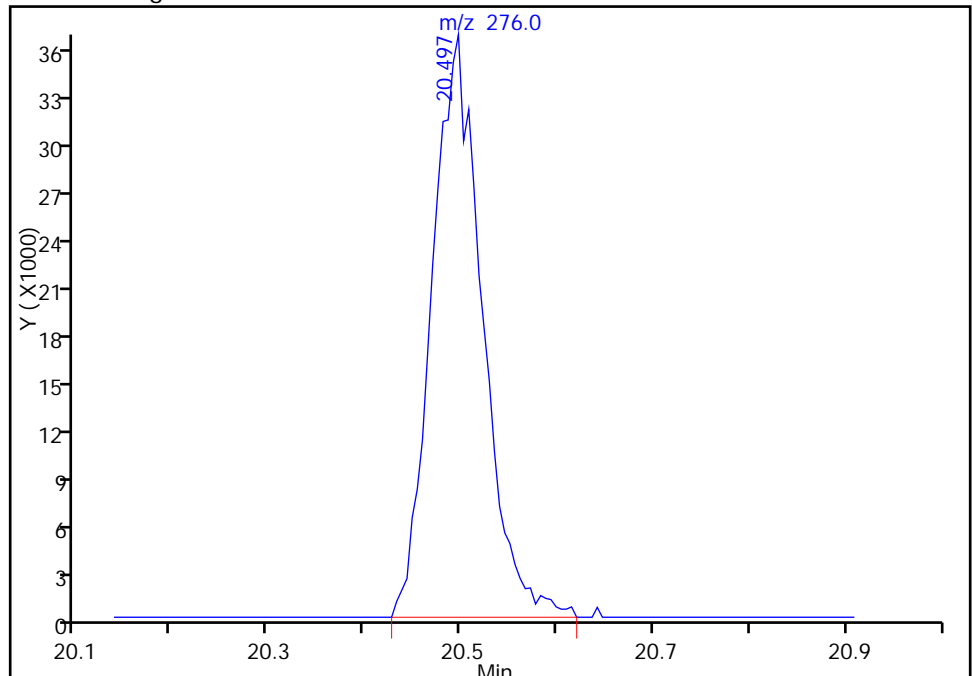
RT: 20.50  
 Area: 131022  
 Amount: 1.878868  
 Amount Units: ng

Processing Integration Results



RT: 20.50  
 Area: 132922  
 Amount: 1.809236  
 Amount Units: ng

Manual Integration Results



Reviewer: piccolinov, 03-Feb-2015 08:48:35  
 Audit Action: Manually Integrated  
 Audit Reason: Poor chromatography

TestAmerica Pittsburgh  
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CH732\20150203-5518.b\D0203005.D  
 Lims ID: IC  
 Client ID:  
 Sample Type: IC Calib Level: 3  
 Inject. Date: 03-Feb-2015 06:46:30 ALS Bottle#: 4 Worklist Smp#: 5  
 Injection Vol: 2.0 ul Dil. Factor: 1.0000  
 Sample Info: 180-0005518-005  
 Misc. Info.: IC  
 Operator ID: 003200 Instrument ID: CH732  
 Sublist: chrom-BNA\_CH732\*sub4  
 Method: \\PITCHROM\ChromData\CH732\20150203-5518.b\BNA\_CH732.m  
 Limit Group: BNA 8270D ICAL  
 Last Update: 04-Feb-2015 06:41:05 Calib Date: 03-Feb-2015 09:00:30  
 Integrator: RTE ID Type: Deconvolution ID  
 Quant Method: Internal Standard Quant By: Initial Calibration  
 Last ICal File: \\PITCHROM\ChromData\CH732\20150203-5518.b\D0203010.D  
 Column 1 : Rxi-5SiIMS ( 0.32 mm) Det: MS SCAN  
 Process Host: XAWRK011

First Level Reviewer: piccolinov

Date: 03-Feb-2015 08:41:14

| Compound                      | Sig | RT (min.) | Adj RT (min.) | Dlt RT (min.) | Q   | Response | Cal Amt ng | OnCol Amt ng | Flags |
|-------------------------------|-----|-----------|---------------|---------------|-----|----------|------------|--------------|-------|
| * 1 1,4-Dichlorobenzene-d4    | 152 | 6.175     | 6.175         | 0.000         | 97  | 143248   | 8.00       | 8.00         |       |
| * 2 Naphthalene-d8            | 136 | 7.473     | 7.473         | 0.000         | 100 | 667133   | 8.00       | 8.00         |       |
| * 3 Acenaphthene-d10          | 164 | 9.204     | 9.204         | 0.000         | 91  | 420149   | 8.00       | 8.00         |       |
| * 4 Phenanthrene-d10          | 188 | 10.662    | 10.662        | 0.000         | 95  | 738596   | 8.00       | 8.00         |       |
| * 5 Chrysene-d12              | 240 | 14.466    | 14.466        | 0.000         | 96  | 676299   | 8.00       | 8.00         |       |
| * 6 Perylene-d12              | 264 | 17.383    | 17.383        | 0.000         | 96  | 529106   | 8.00       | 8.00         |       |
| \$ 7 2-Fluorophenol           | 112 | 4.695     | 4.695         | 0.000         | 86  | 77789    | 4.00       | 4.19         |       |
| \$ 8 Phenol-d5                | 99  | 5.790     | 5.790         | 0.000         | 93  | 108130   | 4.00       | 4.32         |       |
| \$ 9 Nitrobenzene-d5          | 82  | 6.741     | 6.741         | 0.000         | 90  | 113169   | 4.00       | 4.04         |       |
| \$ 10 2-Fluorobiphenyl        | 172 | 8.531     | 8.531         | 0.000         | 99  | 284174   | 4.00       | 4.12         |       |
| \$ 11 2,4,6-Tribromophenol    | 330 | 9.968     | 9.968         | 0.000         | 86  | 32838    | 4.00       | 4.04         |       |
| \$ 12 Terphenyl-d14           | 244 | 12.623    | 12.623        | 0.000         | 97  | 299886   | 4.00       | 4.07         |       |
| 13 1,4-Dioxane                | 88  | 1.527     | 1.527         | 0.000         | 81  | 23830    | 4.00       | 4.18         |       |
| 14 N-Nitrosodimethylamine     | 74  | 2.093     | 2.093         | 0.000         | 64  | 30743    | 4.00       | 3.99         |       |
| 15 Pyridine                   | 79  | 2.179     | 2.179         | 0.000         | 87  | 55290    | 4.00       | 4.11         |       |
| 21 Methyl methanesulfonate    | 80  | 4.444     | 4.444         | 0.000         | 90  | 46560    | 4.00       | 4.29         |       |
| 25 Benzaldehyde               | 77  | 5.699     | 5.699         | 0.000         | 85  | 45208    | 4.00       | 3.74         |       |
| 26 Phenol                     | 94  | 5.801     | 5.801         | 0.000         | 95  | 120902   | 4.00       | 4.26         |       |
| 27 Aniline                    | 93  | 5.822     | 5.822         | 0.000         | 59  | 132805   | 4.00       | 4.22         |       |
| 29 Bis(2-chloroethyl)ether    | 93  | 5.892     | 5.892         | 0.000         | 87  | 84668    | 4.00       | 4.22         |       |
| 30 2-Chlorophenol             | 128 | 5.950     | 5.950         | 0.000         | 96  | 102500   | 4.00       | 4.22         |       |
| 31 n-Decane                   | 43  | 6.025     | 6.025         | 0.000         | 94  | 122092   | 4.00       | 4.29         |       |
| 32 1,3-Dichlorobenzene        | 146 | 6.116     | 6.116         | 0.000         | 96  | 117189   | 4.00       | 4.15         |       |
| 33 1,4-Dichlorobenzene        | 146 | 6.196     | 6.196         | 0.000         | 84  | 124324   | 4.00       | 4.29         |       |
| 34 Benzyl alcohol             | 108 | 6.314     | 6.314         | 0.000         | 87  | 67422    | 4.00       | 4.42         |       |
| 35 1,2-Dichlorobenzene        | 146 | 6.356     | 6.356         | 0.000         | 91  | 117889   | 4.00       | 4.18         |       |
| 36 2-Methylphenol             | 108 | 6.436     | 6.436         | 0.000         | 96  | 94232    | 4.00       | 4.37         |       |
| 37 Indene                     | 116 | 6.447     | 6.447         | 0.000         | 84  | 167642   | 4.00       | 4.28         |       |
| 38 2,2'-oxybis[1-chloropropan | 45  | 6.463     | 6.463         | 0.000         | 60  | 188707   | 4.00       | 4.47         |       |
| 39 N-Nitrosopyrrolidine       | 100 | 6.554     | 6.554         | 0.000         | 76  | 45845    | 4.00       | 4.37         |       |



| Compound                       | Sig | RT (min.) | Adj RT (min.) | Dlt RT (min.) | Q  | Response | Cal Amt ng | OnCol Amt ng | Flags |
|--------------------------------|-----|-----------|---------------|---------------|----|----------|------------|--------------|-------|
| 42 4-Methylphenol              | 108 | 6.591     | 6.591         | 0.000         | 69 | 99882    | 4.00       | 4.51         |       |
| 40 Acetophenone                | 105 | 6.586     | 6.586         | 0.000         | 77 | 143572   | 4.00       | 4.42         |       |
| 41 N-Nitrosodi-n-propylamine   | 70  | 6.586     | 6.586         | 0.000         | 72 | 70224    | 4.00       | 4.59         |       |
| 45 Hexachloroethane            | 117 | 6.709     | 6.709         | 0.000         | 95 | 53481    | 4.00       | 4.26         |       |
| 46 Nitrobenzene                | 77  | 6.762     | 6.762         | 0.000         | 93 | 114851   | 4.00       | 4.13         |       |
| 48 Isophorone                  | 82  | 7.003     | 7.003         | 0.000         | 95 | 200303   | 4.00       | 4.09         |       |
| 49 2-Nitrophenol               | 139 | 7.088     | 7.088         | 0.000         | 95 | 61516    | 4.00       | 4.00         |       |
| 50 2,4-Dimethylphenol          | 107 | 7.120     | 7.120         | 0.000         | 74 | 117563   | 4.00       | 4.19         |       |
| 52 Benzoic acid                | 122 | 7.158     | 7.158         | 0.000         | 78 | 45351    | 4.00       | 4.02         | M     |
| 53 Bis(2-chloroethoxy)methane  | 93  | 7.211     | 7.211         | 0.000         | 95 | 125607   | 4.00       | 4.17         |       |
| 54 2,4-Dichlorophenol          | 162 | 7.329     | 7.329         | 0.000         | 94 | 99409    | 4.00       | 4.05         |       |
| 56 1,2,4-Trichlorobenzene      | 180 | 7.419     | 7.419         | 0.000         | 94 | 116908   | 4.00       | 4.16         |       |
| 58 Naphthalene                 | 128 | 7.494     | 7.494         | 0.000         | 84 | 369682   | 4.00       | 4.10         |       |
| 59 4-Chloroaniline             | 127 | 7.537     | 7.537         | 0.000         | 76 | 150282   | 4.00       | 4.16         |       |
| 60 2,6-Dichlorophenol          | 162 | 7.553     | 7.553         | 0.000         | 92 | 105695   | 4.00       | 4.33         |       |
| 62 Hexachlorobutadiene         | 225 | 7.622     | 7.622         | 0.000         | 74 | 67792    | 4.00       | 4.03         |       |
| 64 Caprolactam                 | 113 | 7.836     | 7.836         | 0.000         | 61 | 33697    | 4.00       | 4.10         |       |
| 67 4-Chloro-3-methylphenol     | 107 | 8.002     | 8.002         | 0.000         | 91 | 106402   | 4.00       | 4.14         |       |
| 69 2-Methylnaphthalene         | 142 | 8.178     | 8.178         | 0.000         | 88 | 260830   | 4.00       | 4.09         |       |
| 71 1-Methylnaphthalene         | 142 | 8.280     | 8.280         | 0.000         | 82 | 248893   | 4.00       | 4.16         |       |
| 72 Hexachlorocyclopentadiene   | 237 | 8.338     | 8.338         | 0.000         | 96 | 71542    | 4.00       | 3.91         |       |
| 73 1,2,4,5-Tetrachlorobenzene  | 216 | 8.344     | 8.344         | 0.000         | 95 | 117976   | 4.00       | 4.31         |       |
| 74 2,4,6-Trichlorophenol       | 196 | 8.445     | 8.445         | 0.000         | 94 | 76466    | 4.00       | 4.09         |       |
| 75 2,4,5-Trichlorophenol       | 196 | 8.483     | 8.483         | 0.000         | 94 | 81693    | 4.00       | 4.12         |       |
| 76 1,1'-Biphenyl               | 154 | 8.627     | 8.627         | 0.000         | 96 | 321551   | 4.00       | 4.07         |       |
| 77 2-Chloronaphthalene         | 162 | 8.659     | 8.659         | 0.000         | 71 | 261278   | 4.00       | 4.08         |       |
| 79 2-Nitroaniline              | 65  | 8.739     | 8.739         | 0.000         | 71 | 76492    | 4.00       | 4.20         |       |
| 82 Dimethyl phthalate          | 163 | 8.905     | 8.905         | 0.000         | 98 | 274773   | 4.00       | 4.12         |       |
| 83 1,3-Dinitrobenzene          | 168 | 8.937     | 8.937         | 0.000         | 80 | 40950    | 4.00       | 4.08         |       |
| 84 2,6-Dinitrotoluene          | 165 | 8.963     | 8.963         | 0.000         | 67 | 60939    | 4.00       | 4.16         |       |
| 85 Acenaphthylene              | 152 | 9.065     | 9.065         | 0.000         | 89 | 416410   | 4.00       | 4.10         |       |
| 86 3-Nitroaniline              | 138 | 9.134     | 9.134         | 0.000         | 93 | 72336    | 4.00       | 4.06         |       |
| 87 2,4-Dinitrophenol           | 184 | 9.236     | 9.236         | 0.000         | 45 | 59478    | 8.00       | 6.75         |       |
| 88 Acenaphthene                | 153 | 9.236     | 9.236         | 0.000         | 86 | 263354   | 4.00       | 4.25         |       |
| 89 4-Nitrophenol               | 109 | 9.268     | 9.268         | 0.000         | 80 | 78078    | 8.00       | 7.91         |       |
| 91 2,4-Dinitrotoluene          | 165 | 9.359     | 9.359         | 0.000         | 87 | 78701    | 4.00       | 4.09         |       |
| 93 Dibenzofuran                | 168 | 9.401     | 9.401         | 0.000         | 79 | 363941   | 4.00       | 4.09         |       |
| 95 2,3,5,6-Tetrachlorophenol   | 232 | 9.471     | 9.471         | 0.000         | 91 | 69064    | 4.00       | 4.01         |       |
| 96 2,3,4,6-Tetrachlorophenol   | 232 | 9.514     | 9.514         | 0.000         | 74 | 70676    | 4.00       | 4.18         |       |
| 97 2-Naphthylamine             | 143 | 9.540     | 9.540         | 0.000         | 83 | 266173   | 4.00       | 4.20         |       |
| 98 Diethyl phthalate           | 149 | 9.578     | 9.578         | 0.000         | 95 | 282894   | 4.00       | 4.15         |       |
| 99 Hexadecane                  | 57  | 9.588     | 9.588         | 0.000         | 91 | 219225   | 4.00       | 4.45         |       |
| 100 4-Chlorophenyl phenyl ethe | 204 | 9.717     | 9.717         | 0.000         | 93 | 136257   | 4.00       | 4.17         |       |
| 101 4-Nitroaniline             | 138 | 9.722     | 9.722         | 0.000         | 76 | 72364    | 4.00       | 4.11         |       |
| 103 Fluorene                   | 166 | 9.733     | 9.733         | 0.000         | 80 | 288323   | 4.00       | 4.17         |       |
| 104 4,6-Dinitro-2-methylphenol | 198 | 9.759     | 9.759         | 0.000         | 65 | 84343    | 8.00       | 7.03         |       |
| 105 N-Nitrosodiphenylamine     | 169 | 9.823     | 9.823         | 0.000         | 61 | 207962   | 4.00       | 3.96         |       |
| 90 1,2-Diphenylhydrazine       | 77  | 9.866     | 9.866         | 0.000         | 98 | 312827   | 4.00       | 4.16         |       |
| 110 4-Bromophenyl phenyl ether | 248 | 10.192    | 10.192        | 0.000         | 64 | 78447    | 4.00       | 4.07         |       |
| 112 Hexachlorobenzene          | 284 | 10.278    | 10.278        | 0.000         | 89 | 79204    | 4.00       | 4.11         |       |
| 113 Atrazine                   | 200 | 10.315    | 10.315        | 0.000         | 72 | 62578    | 4.00       | 4.11         |       |
| 116 Pentachlorophenol          | 266 | 10.459    | 10.459        | 0.000         | 90 | 98731    | 8.00       | 7.26         |       |

| Compound                       | Sig | RT (min.) | Adj RT (min.) | Dlt RT (min.) | Q  | Response | Cal Amt ng | OnCol Amt ng | Flags |
|--------------------------------|-----|-----------|---------------|---------------|----|----------|------------|--------------|-------|
| 115 n-Octadecane               | 57  | 10.470    | 10.470        | 0.000         | 90 | 234012   | 4.00       | 4.59         |       |
| 121 Phenanthrene               | 178 | 10.689    | 10.689        | 0.000         | 96 | 443670   | 4.00       | 4.00         |       |
| 122 Anthracene                 | 178 | 10.742    | 10.742        | 0.000         | 97 | 454435   | 4.00       | 4.00         |       |
| 124 Carbazole                  | 167 | 10.897    | 10.897        | 0.000         | 82 | 403180   | 4.00       | 4.06         |       |
| 126 Di-n-butyl phthalate       | 149 | 11.234    | 11.234        | 0.000         | 99 | 478707   | 4.00       | 3.85         |       |
| 57 Azobenzene                  | 77  |           | 11.923        |               |    |          | ND         | ND           |       |
| 131 Fluoranthene               | 202 | 12.115    | 12.115        | 0.000         | 97 | 437332   | 4.00       | 3.91         |       |
| 132 Benzidine                  | 184 | 12.260    | 12.260        | 0.000         | 94 | 115541   | 4.00       | 3.60         |       |
| 133 Pyrene                     | 202 | 12.441    | 12.441        | 0.000         | 97 | 447116   | 4.00       | 4.01         |       |
| 138 Butyl benzyl phthalate     | 149 | 13.376    | 13.376        | 0.000         | 96 | 194904   | 4.00       | 3.93         |       |
| 144 3,3'-Dichlorobenzidine     | 252 | 14.375    | 14.375        | 0.000         | 57 | 119990   | 4.00       | 3.68         |       |
| 145 Bis(2-ethylhexyl) phthalat | 149 | 14.439    | 14.439        | 0.000         | 94 | 258611   | 4.00       | 3.77         |       |
| 146 Benzo[a]anthracene         | 228 | 14.450    | 14.450        | 0.000         | 98 | 388390   | 4.00       | 3.97         |       |
| 147 Chrysene                   | 228 | 14.519    | 14.519        | 0.000         | 91 | 365240   | 4.00       | 3.96         |       |
| 150 Di-n-octyl phthalate       | 149 | 15.753    | 15.753        | 0.000         | 98 | 382318   | 4.00       | 3.72         |       |
| 151 7,12-Dimethylbenz(a)anthra | 256 | 16.587    | 16.587        | 0.000         | 70 | 142947   | 4.00       | 3.92         |       |
| 152 Benzo[b]fluoranthene       | 252 | 16.603    | 16.603        | 0.000         | 95 | 351632   | 4.00       | 4.10         |       |
| 153 Benzo[k]fluoranthene       | 252 | 16.656    | 16.656        | 0.000         | 99 | 320222   | 4.00       | 3.81         |       |
| 219 Benzo[e]pyrene             | 252 | 17.164    | 17.164        | 0.000         | 0  | 306198   | 4.00       | 3.96         |       |
| 154 Benzo[a]pyrene             | 252 | 17.265    | 17.265        | 0.000         | 72 | 303646   | 4.00       | 3.93         |       |
| 157 Indeno[1,2,3-cd]pyrene     | 276 | 19.787    | 19.787        | 0.000         | 92 | 296192   | 4.00       | 3.64         |       |
| 158 Dibenz(a,h)anthracene      | 278 | 19.840    | 19.840        | 0.000         | 56 | 250943   | 4.00       | 3.71         | M     |
| 159 Benzo[g,h,i]perylene       | 276 | 20.487    | 20.487        | 0.000         | 85 | 257341   | 4.00       | 3.71         |       |
| S 199 Total Cresols            | 108 |           |               |               | 0  |          | 8.00       | 8.89         |       |
| S 197 Methyl Phenols,Total     | 108 |           |               |               | 0  |          | 8.00       | 8.89         |       |

**QC Flag Legend**

Processing Flags

ND - Not Detected or Marked ND

Review Flags

M - Manually Integrated

**Reagents:**

SVTAPSTD4.0i\_00006

Amount Added: 1.00

Units: mL

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CH732\20150203-5518.b\D0203005.D

Injection Date: 03-Feb-2015 06:46:30

Instrument ID: CH732

Operator ID: 003200

Lims ID: IC

Worklist Smp#: 5

Client ID:

Injection Vol: 2.0 ul

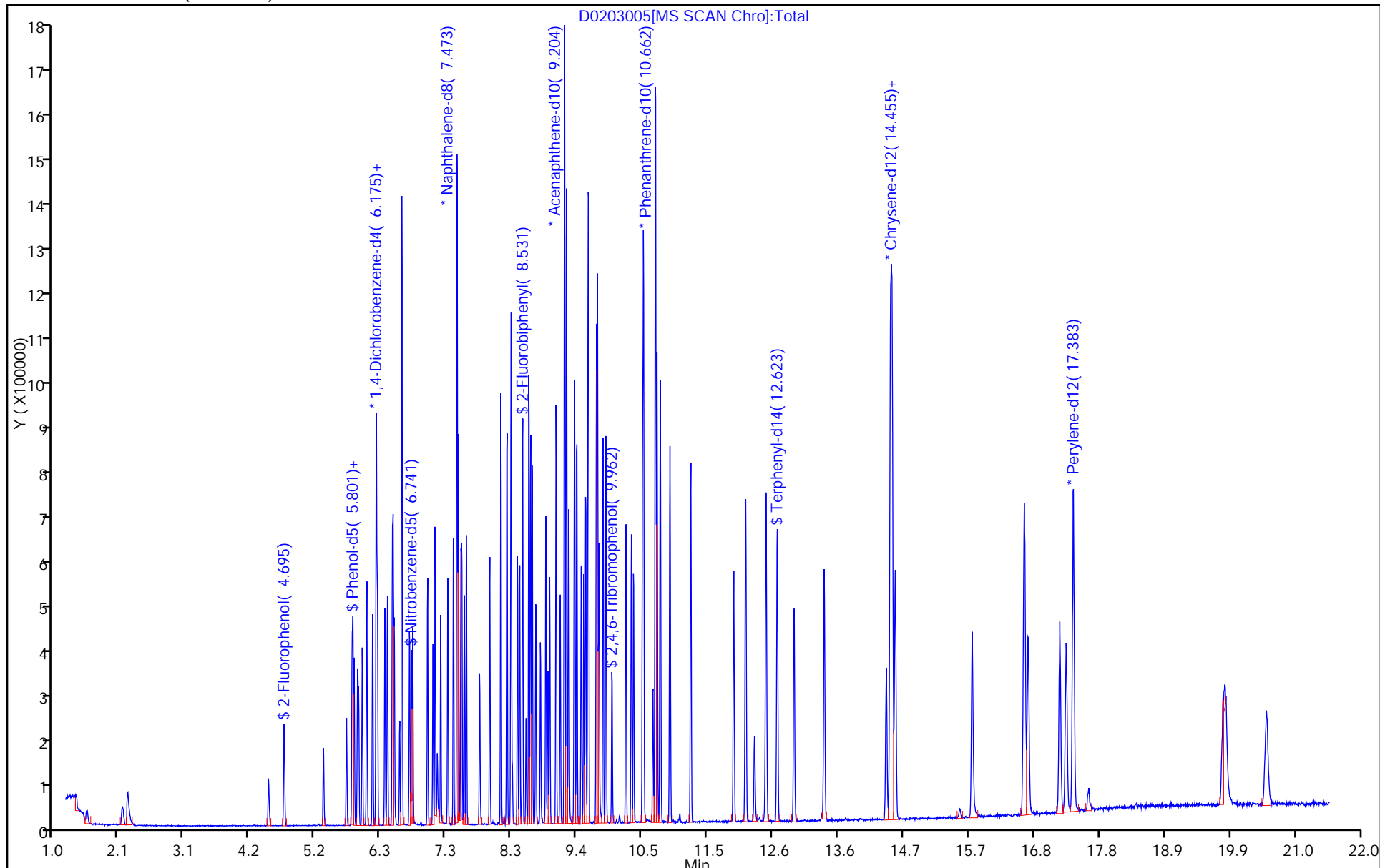
Dil. Factor: 1.0000

ALS Bottle#: 4

Method: BNA\_CH732

Limit Group: BNA 8270D ICAL

Column: Rxi-5SiIMS (0.32 mm)



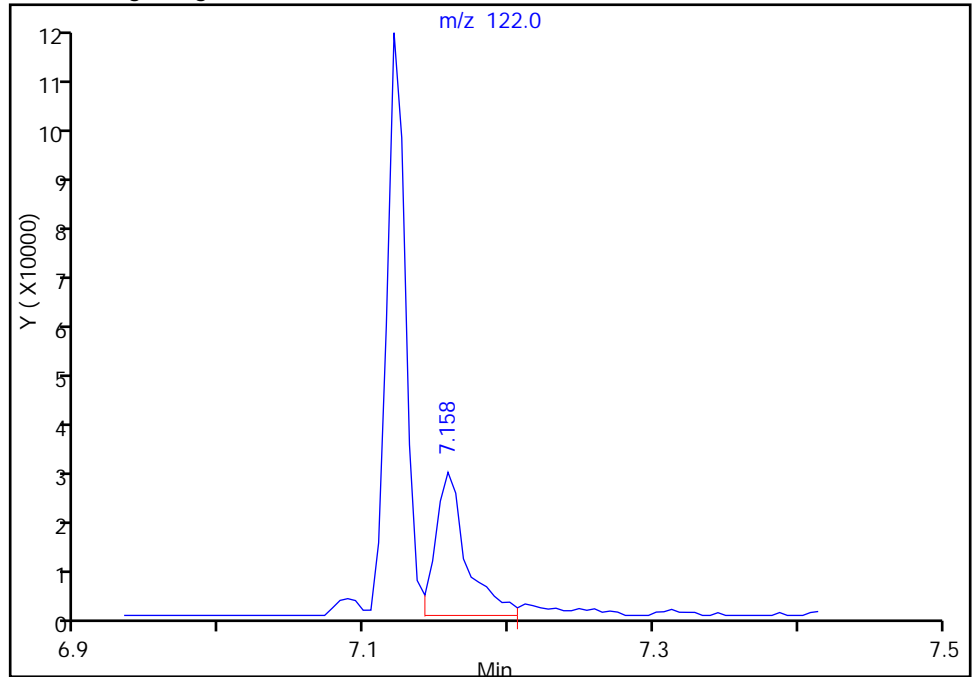
TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CH732\20150203-5518.b\D0203005.D  
Injection Date: 03-Feb-2015 06:46:30 Instrument ID: CH732  
Lims ID: IC  
Client ID:  
Operator ID: 003200 ALS Bottle#: 4 Worklist Smp#: 5  
Injection Vol: 2.0 ul Dil. Factor: 1.0000  
Method: BNA\_CH732 Limit Group: BNA 8270D ICAL  
Column: Rxi-5SilMS (0.32 mm) Detector: MS SCAN

52 Benzoic acid, CAS: 65-85-0

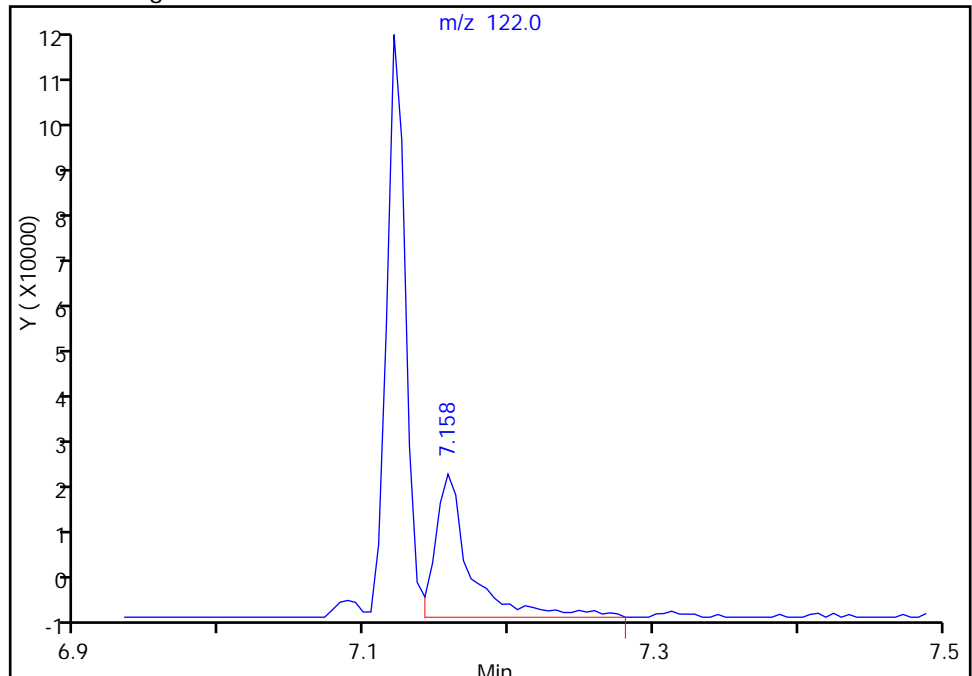
RT: 7.16  
Area: 40362  
Amount: 3.463586  
Amount Units: ng

Processing Integration Results



RT: 7.16  
Area: 45351  
Amount: 4.015151  
Amount Units: ng

Manual Integration Results



Reviewer: piccolinov, 03-Feb-2015 08:50:34  
Audit Action: Manually Integrated  
Audit Reason: Poor chromatography

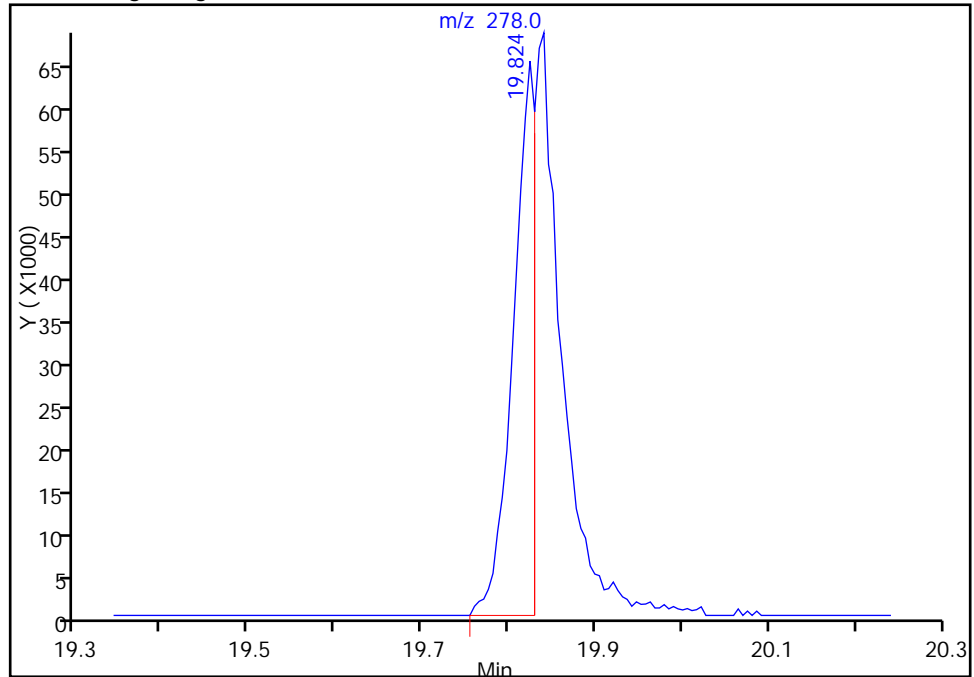
TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CH732\20150203-5518.b\D0203005.D  
Injection Date: 03-Feb-2015 06:46:30 Instrument ID: CH732  
Lims ID: IC  
Client ID:  
Operator ID: 003200 ALS Bottle#: 4 Worklist Smp#: 5  
Injection Vol: 2.0 ul Dil. Factor: 1.0000  
Method: BNA\_CH732 Limit Group: BNA 8270D ICAL  
Column: Rxi-5SiIMS (0.32 mm) Detector: MS SCAN

158 Dibenz(a,h)anthracene, CAS: 53-70-3

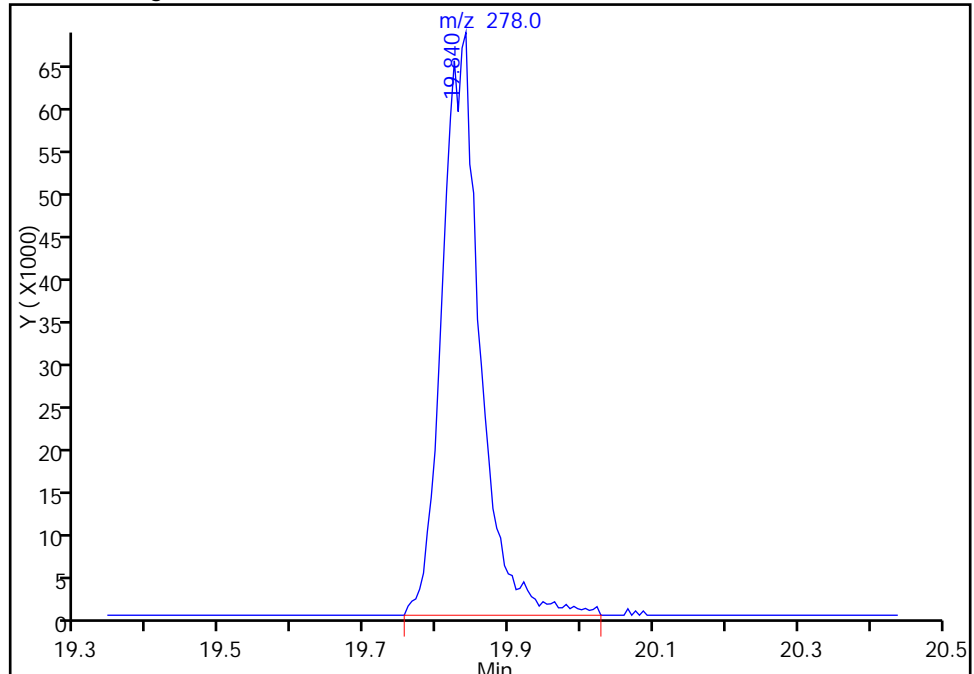
RT: 19.82  
Area: 114832  
Amount: 2.067137  
Amount Units: ng

Processing Integration Results



RT: 19.84  
Area: 250943  
Amount: 3.714140  
Amount Units: ng

Manual Integration Results



Reviewer: piccolinov, 03-Feb-2015 08:50:34  
Audit Action: Manually Integrated  
Audit Reason: Poor chromatography

TestAmerica Pittsburgh  
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CH732\20150203-5518.b\D0203006.D  
 Lims ID: ICIS  
 Client ID:  
 Sample Type: ICIS Calib Level: 4  
 Inject. Date: 03-Feb-2015 07:13:30 ALS Bottle#: 5 Worklist Smp#: 6  
 Injection Vol: 2.0 ul Dil. Factor: 1.0000  
 Sample Info: 180-0005518-006  
 Misc. Info.: ICIS  
 Operator ID: 003200 Instrument ID: CH732  
 Sublist: chrom-BNA\_CH732\*sub4  
 Method: \\PITCHROM\ChromData\CH732\20150203-5518.b\BNA\_CH732.m  
 Limit Group: BNA 8270D ICAL  
 Last Update: 04-Feb-2015 06:41:10 Calib Date: 03-Feb-2015 09:00:30  
 Integrator: RTE ID Type: RT Order ID  
 Quant Method: Internal Standard Quant By: Initial Calibration  
 Last ICal File: \\PITCHROM\ChromData\CH732\20150203-5518.b\D0203010.D  
 Column 1 : Rxi-5SiIMS ( 0.32 mm) Det: MS SCAN  
 Process Host: XAWRK011

First Level Reviewer: piccolinov

Date: 03-Feb-2015 08:43:04

| Compound                      | Sig | RT (min.) | Adj RT (min.) | Dlt RT (min.) | Q   | Response | Cal Amt ng | OnCol Amt ng | Flags |
|-------------------------------|-----|-----------|---------------|---------------|-----|----------|------------|--------------|-------|
| * 1 1,4-Dichlorobenzene-d4    | 152 | 6.175     | 6.175         | 0.000         | 97  | 135960   | 8.00       | 8.00         |       |
| * 2 Naphthalene-d8            | 136 | 7.473     | 7.473         | 0.000         | 100 | 593216   | 8.00       | 8.00         |       |
| * 3 Acenaphthene-d10          | 164 | 9.204     | 9.204         | 0.000         | 91  | 375917   | 8.00       | 8.00         |       |
| * 4 Phenanthrene-d10          | 188 | 10.662    | 10.662        | 0.000         | 91  | 654603   | 8.00       | 8.00         |       |
| * 5 Chrysene-d12              | 240 | 14.471    | 14.471        | 0.000         | 97  | 607262   | 8.00       | 8.00         |       |
| * 6 Perylene-d12              | 264 | 17.377    | 17.377        | 0.000         | 96  | 498112   | 8.00       | 8.00         |       |
| \$ 7 2-Fluorophenol           | 112 | 4.695     | 4.695         | 0.000         | 88  | 179189   | 10.0       | 10.2         |       |
| \$ 8 Phenol-d5                | 99  | 5.785     | 5.785         | 0.000         | 95  | 248370   | 10.0       | 10.5         |       |
| \$ 9 Nitrobenzene-d5          | 82  | 6.741     | 6.741         | 0.000         | 90  | 255780   | 10.0       | 10.3         |       |
| \$ 10 2-Fluorobiphenyl        | 172 | 8.525     | 8.525         | 0.000         | 99  | 618183   | 10.0       | 10.0         |       |
| \$ 11 2,4,6-Tribromophenol    | 330 | 9.962     | 9.962         | 0.000         | 86  | 72581    | 10.0       | 10.1         |       |
| \$ 12 Terphenyl-d14           | 244 | 12.617    | 12.617        | 0.000         | 98  | 668366   | 10.0       | 10.1         |       |
| 13 1,4-Dioxane                | 88  | 1.511     | 1.511         | 0.000         | 90  | 55464    | 10.0       | 10.2         |       |
| 14 N-Nitrosodimethylamine     | 74  | 2.077     | 2.077         | 0.000         | 75  | 74663    | 10.0       | 10.2         |       |
| 15 Pyridine                   | 79  | 2.157     | 2.157         | 0.000         | 91  | 131501   | 10.0       | 10.3         |       |
| 21 Methyl methanesulfonate    | 80  | 4.438     | 4.438         | 0.000         | 90  | 105679   | 10.0       | 10.3         |       |
| 25 Benzaldehyde               | 77  | 5.694     | 5.694         | 0.000         | 85  | 107077   | 10.0       | 9.33         |       |
| 26 Phenol                     | 94  | 5.801     | 5.801         | 0.000         | 95  | 270314   | 10.0       | 10.0         |       |
| 27 Aniline                    | 93  | 5.817     | 5.817         | 0.000         | 93  | 301857   | 10.0       | 10.1         |       |
| 29 Bis(2-chloroethyl)ether    | 93  | 5.892     | 5.892         | 0.000         | 88  | 190003   | 10.0       | 9.98         |       |
| 30 2-Chlorophenol             | 128 | 5.950     | 5.950         | 0.000         | 96  | 233051   | 10.0       | 10.1         |       |
| 31 n-Decane                   | 43  | 6.020     | 6.020         | 0.000         | 93  | 273969   | 10.0       | 10.1         |       |
| 32 1,3-Dichlorobenzene        | 146 | 6.116     | 6.116         | 0.000         | 97  | 274959   | 10.0       | 10.3         |       |
| 33 1,4-Dichlorobenzene        | 146 | 6.191     | 6.191         | 0.000         | 93  | 272903   | 10.0       | 9.92         |       |
| 34 Benzyl alcohol             | 108 | 6.314     | 6.314         | 0.000         | 89  | 148867   | 10.0       | 10.3         |       |
| 35 1,2-Dichlorobenzene        | 146 | 6.356     | 6.356         | 0.000         | 95  | 267807   | 10.0       | 10.0         |       |
| 36 2-Methylphenol             | 108 | 6.431     | 6.431         | 0.000         | 97  | 207591   | 10.0       | 10.1         |       |
| 37 Indene                     | 116 | 6.447     | 6.447         | 0.000         | 85  | 379789   | 10.0       | 10.2         |       |
| 38 2,2'-oxybis[1-chloropropan | 45  | 6.463     | 6.463         | 0.000         | 89  | 413246   | 10.0       | 10.3         |       |
| 39 N-Nitrosopyrrolidine       | 100 | 6.549     | 6.549         | 0.000         | 75  | 101195   | 10.0       | 10.2         |       |

| Compound                        | Sig | RT (min.) | Adj RT (min.) | Dlt RT (min.) | Q  | Response | Cal Amt ng | OnCol Amt ng | Flags |
|---------------------------------|-----|-----------|---------------|---------------|----|----------|------------|--------------|-------|
| 42 4-Methylphenol               | 108 | 6.586     | 6.586         | 0.000         | 65 | 220366   | 10.0       | 10.5         |       |
| 40 Acetophenone                 | 105 | 6.586     | 6.586         | 0.000         | 79 | 317474   | 10.0       | 10.3         |       |
| 41 N-Nitrosodi-n-propylamine    | 70  | 6.586     | 6.586         | 0.000         | 70 | 149121   | 10.0       | 10.3         |       |
| 45 Hexachloroethane             | 117 | 6.709     | 6.709         | 0.000         | 96 | 119409   | 10.0       | 10.0         |       |
| 46 Nitrobenzene                 | 77  | 6.762     | 6.762         | 0.000         | 89 | 251361   | 10.0       | 10.2         |       |
| 48 Isophorone                   | 82  | 6.997     | 6.997         | 0.000         | 96 | 446570   | 10.0       | 10.3         |       |
| 49 2-Nitrophenol                | 139 | 7.088     | 7.088         | 0.000         | 95 | 140596   | 10.0       | 10.3         |       |
| 50 2,4-Dimethylphenol           | 107 | 7.120     | 7.120         | 0.000         | 82 | 262290   | 10.0       | 10.5         |       |
| 52 Benzoic acid                 | 122 | 7.168     | 7.168         | 0.000         | 84 | 103970   | 10.0       | 8.23         |       |
| 53 Bis(2-chloroethoxy)methane   | 93  | 7.211     | 7.211         | 0.000         | 96 | 273809   | 10.0       | 10.2         |       |
| 54 2,4-Dichlorophenol           | 162 | 7.323     | 7.323         | 0.000         | 95 | 225553   | 10.0       | 10.3         |       |
| 56 1,2,4-Trichlorobenzene       | 180 | 7.414     | 7.414         | 0.000         | 93 | 259967   | 10.0       | 10.4         |       |
| 58 Naphthalene                  | 128 | 7.494     | 7.494         | 0.000         | 97 | 810769   | 10.0       | 10.1         |       |
| 59 4-Chloroaniline              | 127 | 7.537     | 7.537         | 0.000         | 77 | 328724   | 10.0       | 10.2         |       |
| 60 2,6-Dichlorophenol           | 162 | 7.553     | 7.553         | 0.000         | 94 | 224288   | 10.0       | 10.3         |       |
| 62 Hexachlorobutadiene          | 225 | 7.622     | 7.622         | 0.000         | 80 | 151937   | 10.0       | 10.1         |       |
| 64 Caprolactam                  | 113 | 7.841     | 7.841         | 0.000         | 61 | 72011    | 10.0       | 9.86         |       |
| 67 4-Chloro-3-methylphenol      | 107 | 8.002     | 8.002         | 0.000         | 92 | 231893   | 10.0       | 10.1         |       |
| 69 2-Methylnaphthalene          | 142 | 8.178     | 8.178         | 0.000         | 82 | 582381   | 10.0       | 10.3         |       |
| 71 1-Methylnaphthalene          | 142 | 8.274     | 8.274         | 0.000         | 82 | 540054   | 10.0       | 10.1         |       |
| 72 Hexachlorocyclopentadiene    | 237 | 8.338     | 8.338         | 0.000         | 90 | 170705   | 10.0       | 10.4         |       |
| 73 1,2,4,5-Tetrachlorobenzene   | 216 | 8.344     | 8.344         | 0.000         | 97 | 251697   | 10.0       | 10.3         |       |
| 74 2,4,6-Trichlorophenol        | 196 | 8.445     | 8.445         | 0.000         | 95 | 172469   | 10.0       | 10.3         |       |
| 75 2,4,5-Trichlorophenol        | 196 | 8.482     | 8.482         | 0.000         | 93 | 178301   | 10.0       | 10.1         |       |
| 76 1,1'-Biphenyl                | 154 | 8.627     | 8.627         | 0.000         | 95 | 718467   | 10.0       | 10.2         |       |
| 77 2-Chloronaphthalene          | 162 | 8.659     | 8.659         | 0.000         | 65 | 579154   | 10.0       | 10.1         |       |
| 79 2-Nitroaniline               | 65  | 8.739     | 8.739         | 0.000         | 84 | 164804   | 10.0       | 10.1         |       |
| 82 Dimethyl phthalate           | 163 | 8.899     | 8.899         | 0.000         | 98 | 594888   | 10.0       | 9.97         |       |
| 83 1,3-Dinitrobenzene           | 168 | 8.937     | 8.937         | 0.000         | 84 | 93300    | 10.0       | 10.4         |       |
| 84 2,6-Dinitrotoluene           | 165 | 8.963     | 8.963         | 0.000         | 72 | 134217   | 10.0       | 10.2         |       |
| 85 Acenaphthylene               | 152 | 9.065     | 9.065         | 0.000         | 90 | 903822   | 10.0       | 9.95         |       |
| 86 3-Nitroaniline               | 138 | 9.134     | 9.134         | 0.000         | 95 | 165063   | 10.0       | 10.3         |       |
| 87 2,4-Dinitrophenol            | 184 | 9.230     | 9.230         | 0.000         | 54 | 159961   | 20.0       | 18.8         |       |
| 88 Acenaphthene                 | 153 | 9.236     | 9.236         | 0.000         | 88 | 576591   | 10.0       | 10.4         |       |
| 89 4-Nitrophenol                | 109 | 9.273     | 9.273         | 0.000         | 80 | 181010   | 20.0       | 20.5         |       |
| 91 2,4-Dinitrotoluene           | 165 | 9.359     | 9.359         | 0.000         | 89 | 177872   | 10.0       | 10.3         |       |
| 93 Dibenzofuran                 | 168 | 9.401     | 9.401         | 0.000         | 80 | 789696   | 10.0       | 9.92         |       |
| 95 2,3,5,6-Tetrachlorophenol    | 232 | 9.471     | 9.471         | 0.000         | 91 | 154617   | 10.0       | 10.0         |       |
| 96 2,3,4,6-Tetrachlorophenol    | 232 | 9.514     | 9.514         | 0.000         | 75 | 153842   | 10.0       | 10.2         |       |
| 97 2-Naphthylamine              | 143 | 9.540     | 9.540         | 0.000         | 88 | 577092   | 10.0       | 10.2         |       |
| 98 Diethyl phthalate            | 149 | 9.578     | 9.578         | 0.000         | 95 | 620434   | 10.0       | 10.2         |       |
| 99 Hexadecane                   | 57  | 9.588     | 9.588         | 0.000         | 91 | 473542   | 10.0       | 10.8         |       |
| 100 4-Chlorophenyl phenyl ether | 204 | 9.711     | 9.711         | 0.000         | 95 | 292933   | 10.0       | 10.0         |       |
| 101 4-Nitroaniline              | 138 | 9.722     | 9.722         | 0.000         | 77 | 165071   | 10.0       | 10.5         |       |
| 103 Fluorene                    | 166 | 9.733     | 9.733         | 0.000         | 80 | 630958   | 10.0       | 10.2         |       |
| 104 4,6-Dinitro-2-methylphenol  | 198 | 9.754     | 9.754         | 0.000         | 55 | 207551   | 20.0       | 19.5         |       |
| 105 N-Nitrosodiphenylamine      | 169 | 9.823     | 9.823         | 0.000         | 59 | 457506   | 10.0       | 9.84         |       |
| 90 1,2-Diphenylhydrazine        | 77  | 9.866     | 9.866         | 0.000         | 99 | 668173   | 10.0       | 10.0         |       |
| 110 4-Bromophenyl phenyl ether  | 248 | 10.192    | 10.192        | 0.000         | 62 | 172260   | 10.0       | 10.1         |       |
| 112 Hexachlorobenzene           | 284 | 10.277    | 10.277        | 0.000         | 92 | 171081   | 10.0       | 10.0         |       |
| 113 Atrazine                    | 200 | 10.310    | 10.310        | 0.000         | 72 | 139931   | 10.0       | 10.4         |       |
| 116 Pentachlorophenol           | 266 | 10.454    | 10.454        | 0.000         | 90 | 239474   | 20.0       | 19.9         |       |

| Compound                       | Sig | RT (min.) | Adj RT (min.) | Diff RT (min.) | Q   | Response | Cal Amt ng | OnCol Amt ng | Flags |
|--------------------------------|-----|-----------|---------------|----------------|-----|----------|------------|--------------|-------|
| 115 n-Octadecane               | 57  | 10.470    | 10.470        | 0.000          | 89  | 513509   | 10.0       | 10.6         |       |
| 121 Phenanthrene               | 178 | 10.689    | 10.689        | 0.000          | 97  | 958538   | 10.0       | 9.75         |       |
| 122 Anthracene                 | 178 | 10.742    | 10.742        | 0.000          | 97  | 989626   | 10.0       | 9.84         |       |
| 124 Carbazole                  | 167 | 10.897    | 10.897        | 0.000          | 82  | 866503   | 10.0       | 9.84         |       |
| 126 Di-n-butyl phthalate       | 149 | 11.234    | 11.234        | 0.000          | 100 | 1093325  | 10.0       | 9.93         |       |
| 57 Azobenzene                  | 77  |           | 11.923        |                |     |          | ND         | ND           |       |
| 131 Fluoranthene               | 202 | 12.110    | 12.110        | 0.000          | 98  | 959196   | 10.0       | 9.67         |       |
| 132 Benzidine                  | 184 | 12.254    | 12.254        | 0.000          | 97  | 327820   | 10.0       | 8.50         |       |
| 133 Pyrene                     | 202 | 12.441    | 12.441        | 0.000          | 97  | 987653   | 10.0       | 9.86         |       |
| 138 Butyl benzyl phthalate     | 149 | 13.376    | 13.376        | 0.000          | 95  | 434962   | 10.0       | 9.77         |       |
| 144 3,3'-Dichlorobenzidine     | 252 | 14.375    | 14.375        | 0.000          | 68  | 290343   | 10.0       | 9.91         |       |
| 145 Bis(2-ethylhexyl) phthalat | 149 | 14.434    | 14.434        | 0.000          | 96  | 625648   | 10.0       | 10.1         |       |
| 146 Benzo[a]anthracene         | 228 | 14.450    | 14.450        | 0.000          | 98  | 877303   | 10.0       | 9.98         |       |
| 147 Chrysene                   | 228 | 14.519    | 14.519        | 0.000          | 93  | 832413   | 10.0       | 10.1         |       |
| 150 Di-n-octyl phthalate       | 149 | 15.753    | 15.753        | 0.000          | 99  | 967260   | 10.0       | 10.0         |       |
| 151 7,12-Dimethylbenz(a)anthra | 256 | 16.581    | 16.581        | 0.000          | 74  | 345745   | 10.0       | 10.1         |       |
| 152 Benzo[b]fluoranthene       | 252 | 16.597    | 16.597        | 0.000          | 95  | 800926   | 10.0       | 9.92         |       |
| 153 Benzo[k]fluoranthene       | 252 | 16.656    | 16.656        | 0.000          | 98  | 808910   | 10.0       | 10.2         |       |
| 219 Benzo[e]pyrene             | 252 | 17.158    | 17.158        | 0.000          | 0   | 735708   | 10.0       | 10.1         |       |
| 154 Benzo[a]pyrene             | 252 | 17.265    | 17.265        | 0.000          | 75  | 735703   | 10.0       | 10.1         |       |
| 157 Indeno[1,2,3-cd]pyrene     | 276 | 19.787    | 19.787        | 0.000          | 96  | 753684   | 10.0       | 9.85         |       |
| 158 Dibenz(a,h)anthracene      | 278 | 19.824    | 19.824        | 0.000          | 1   | 626416   | 10.0       | 9.85         | M     |
| 159 Benzo[g,h,i]perylene       | 276 | 20.481    | 20.481        | 0.000          | 87  | 628584   | 10.0       | 9.63         |       |
| S 197 Methyl Phenols, Total    | 108 |           |               |                | 0   |          | 20.0       | 20.6         |       |
| S 199 Total Cresols            | 108 |           |               |                | 0   |          | 20.0       | 20.6         |       |

**QC Flag Legend**

Processing Flags

ND - Not Detected or Marked ND

Review Flags

M - Manually Integrated

**Reagents:**

SVTAPSTD10i\_00088

Amount Added: 1.00

Units: mL



TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CH732\20150203-5518.b\D0203006.D

Injection Date: 03-Feb-2015 07:13:30

Instrument ID: CH732

Operator ID: 003200

Lims ID: ICIS

Worklist Smp#: 6

Client ID:

Injection Vol: 2.0 ul

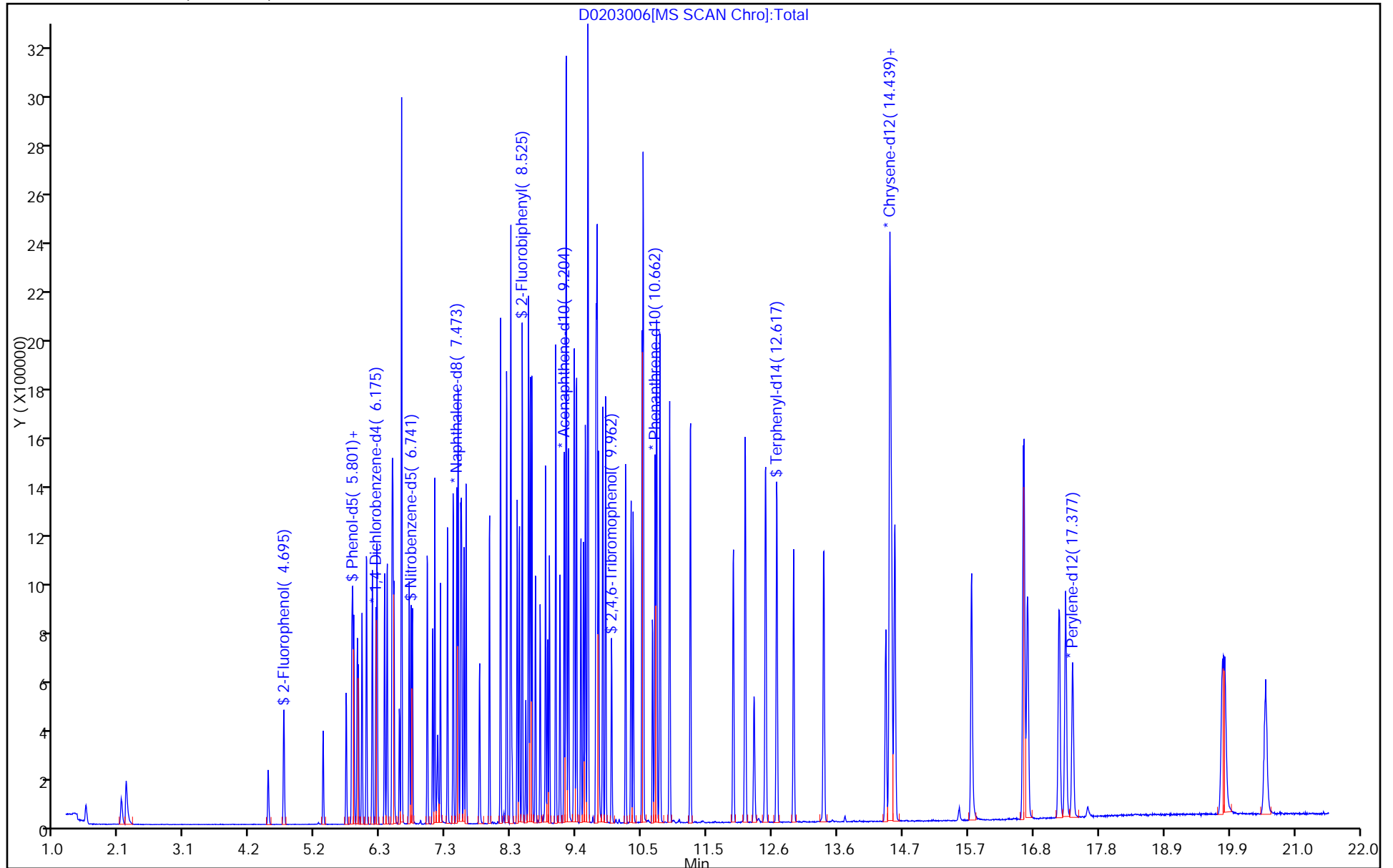
Dil. Factor: 1.0000

ALS Bottle#: 5

Method: BNA\_CH732

Limit Group: BNA 8270D ICAL

Column: Rxi-5SiIMS (0.32 mm)



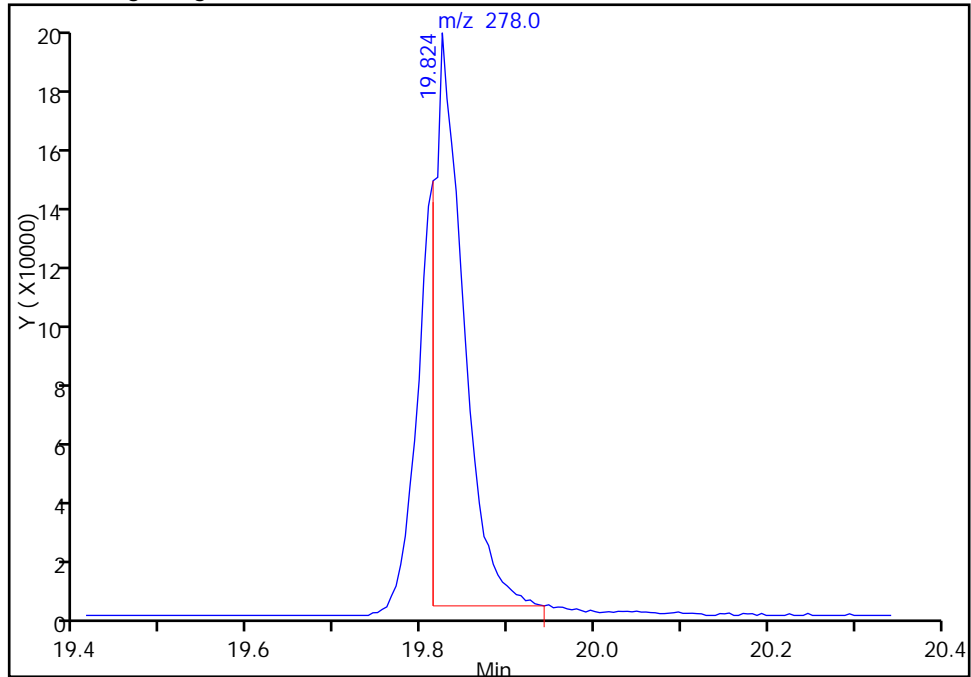
TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CH732\20150203-5518.b\D0203006.D  
Injection Date: 03-Feb-2015 07:13:30 Instrument ID: CH732  
Lims ID: ICIS  
Client ID:  
Operator ID: 003200 ALS Bottle#: 5 Worklist Smp#: 6  
Injection Vol: 2.0 ul Dil. Factor: 1.0000  
Method: BNA\_CH732 Limit Group: BNA 8270D ICAL  
Column: Rxi-5SiIMS (0.32 mm) Detector: MS SCAN

158 Dibenz(a,h)anthracene, CAS: 53-70-3

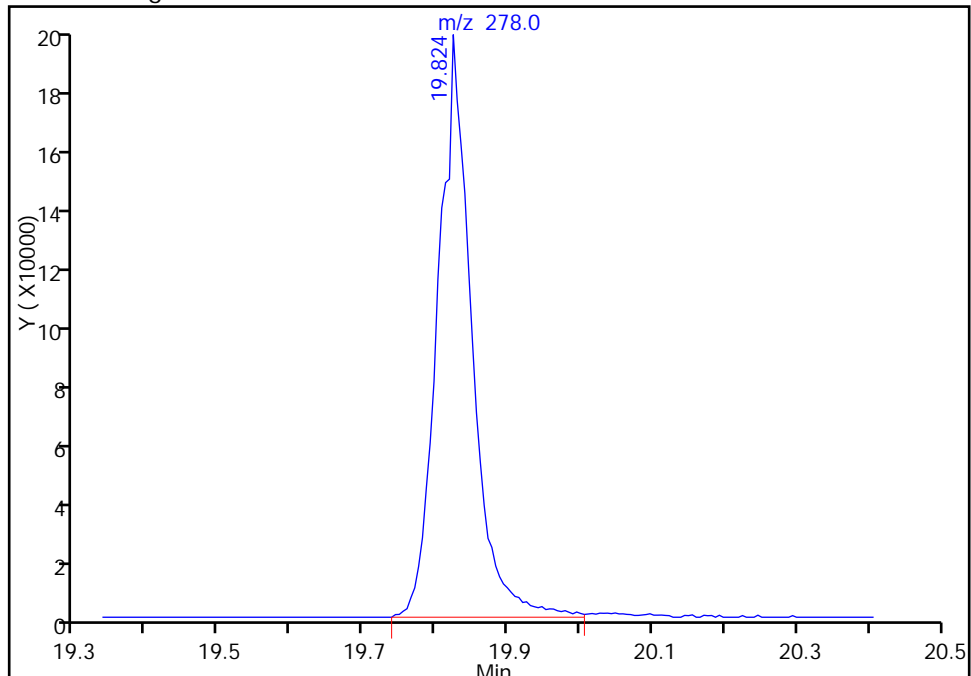
Processing Integration Results

RT: 19.82  
Area: 437358  
Amount: 7.588248  
Amount Units: ng



Manual Integration Results

RT: 19.82  
Area: 626416  
Amount: 9.848310  
Amount Units: ng



Reviewer: piccolinov, 03-Feb-2015 08:51:49  
Audit Action: Manually Integrated  
Audit Reason: Poor chromatography

TestAmerica Pittsburgh  
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CH732\20150203-5518.b\D0203007.D  
 Lims ID: IC  
 Client ID:  
 Sample Type: IC Calib Level: 5  
 Inject. Date: 03-Feb-2015 07:40:30 ALS Bottle#: 6 Worklist Smp#: 7  
 Injection Vol: 2.0 ul Dil. Factor: 1.0000  
 Sample Info: 180-0005518-007  
 Misc. Info.: IC  
 Operator ID: 003200 Instrument ID: CH732  
 Sublist: chrom-BNA\_CH732\*sub4  
 Method: \\PITCHROM\ChromData\CH732\20150203-5518.b\BNA\_CH732.m  
 Limit Group: BNA 8270D ICAL  
 Last Update: 04-Feb-2015 06:41:16 Calib Date: 03-Feb-2015 09:00:30  
 Integrator: RTE ID Type: RT Order ID  
 Quant Method: Internal Standard Quant By: Initial Calibration  
 Last ICal File: \\PITCHROM\ChromData\CH732\20150203-5518.b\D0203010.D  
 Column 1 : Rxi-5SiIMS ( 0.32 mm) Det: MS SCAN  
 Process Host: XAWRK011

First Level Reviewer: piccolinov

Date: 03-Feb-2015 08:52:42

| Compound                      | Sig | RT (min.) | Adj RT (min.) | Dlt RT (min.) | Q   | Response | Cal Amt ng | OnCol Amt ng | Flags |
|-------------------------------|-----|-----------|---------------|---------------|-----|----------|------------|--------------|-------|
| * 1 1,4-Dichlorobenzene-d4    | 152 | 6.180     | 6.175         | 0.005         | 97  | 137459   | 8.00       | 8.00         |       |
| * 2 Naphthalene-d8            | 136 | 7.478     | 7.473         | 0.005         | 100 | 591759   | 8.00       | 8.00         |       |
| * 3 Acenaphthene-d10          | 164 | 9.209     | 9.204         | 0.005         | 90  | 364487   | 8.00       | 8.00         |       |
| * 4 Phenanthrene-d10          | 188 | 10.668    | 10.662        | 0.006         | 83  | 626567   | 8.00       | 8.00         |       |
| * 5 Chrysene-d12              | 240 | 14.477    | 14.471        | 0.006         | 96  | 601321   | 8.00       | 8.00         |       |
| * 6 Perylene-d12              | 264 | 17.388    | 17.377        | 0.011         | 97  | 493170   | 8.00       | 8.00         |       |
| \$ 7 2-Fluorophenol           | 112 | 4.706     | 4.695         | 0.011         | 90  | 350979   | 20.0       | 19.7         |       |
| \$ 8 Phenol-d5                | 99  | 5.795     | 5.785         | 0.010         | 94  | 477417   | 20.0       | 19.9         |       |
| \$ 9 Nitrobenzene-d5          | 82  | 6.746     | 6.741         | 0.005         | 93  | 498999   | 20.0       | 20.1         |       |
| \$ 10 2-Fluorobiphenyl        | 172 | 8.531     | 8.525         | 0.006         | 100 | 1200667  | 20.0       | 20.1         |       |
| \$ 11 2,4,6-Tribromophenol    | 330 | 9.968     | 9.962         | 0.006         | 86  | 139101   | 20.0       | 20.2         |       |
| \$ 12 Terphenyl-d14           | 244 | 12.623    | 12.617        | 0.006         | 98  | 1302313  | 20.0       | 19.9         |       |
| 13 1,4-Dioxane                | 88  | 1.532     | 1.511         | 0.021         | 91  | 109242   | 20.0       | 20.0         |       |
| 14 N-Nitrosodimethylamine     | 74  | 2.104     | 2.077         | 0.027         | 75  | 147321   | 20.0       | 19.9         |       |
| 15 Pyridine                   | 79  | 2.173     | 2.157         | 0.016         | 92  | 264484   | 20.0       | 20.5         |       |
| 21 Methyl methanesulfonate    | 80  | 4.449     | 4.438         | 0.011         | 90  | 203934   | 20.0       | 19.6         |       |
| 25 Benzaldehyde               | 77  | 5.705     | 5.694         | 0.011         | 85  | 258918   | 20.0       | 22.3         |       |
| 26 Phenol                     | 94  | 5.806     | 5.801         | 0.005         | 95  | 537943   | 20.0       | 19.7         |       |
| 27 Aniline                    | 93  | 5.828     | 5.817         | 0.011         | 74  | 596247   | 20.0       | 19.8         |       |
| 29 Bis(2-chloroethyl)ether    | 93  | 5.897     | 5.892         | 0.005         | 89  | 372868   | 20.0       | 19.4         |       |
| 30 2-Chlorophenol             | 128 | 5.956     | 5.950         | 0.006         | 96  | 458905   | 20.0       | 19.7         |       |
| 31 n-Decane                   | 43  | 6.031     | 6.020         | 0.011         | 94  | 543602   | 20.0       | 19.9         |       |
| 32 1,3-Dichlorobenzene        | 146 | 6.127     | 6.116         | 0.011         | 98  | 534786   | 20.0       | 19.7         |       |
| 33 1,4-Dichlorobenzene        | 146 | 6.201     | 6.191         | 0.010         | 93  | 544982   | 20.0       | 19.6         |       |
| 34 Benzyl alcohol             | 108 | 6.319     | 6.314         | 0.005         | 88  | 285603   | 20.0       | 19.5         |       |
| 35 1,2-Dichlorobenzene        | 146 | 6.362     | 6.356         | 0.006         | 92  | 530899   | 20.0       | 19.6         |       |
| 36 2-Methylphenol             | 108 | 6.442     | 6.431         | 0.011         | 96  | 398202   | 20.0       | 19.3         |       |
| 37 Indene                     | 116 | 6.453     | 6.447         | 0.006         | 85  | 734967   | 20.0       | 19.6         |       |
| 38 2,2'-oxybis[1-chloropropan | 45  | 6.469     | 6.463         | 0.006         | 86  | 790384   | 20.0       | 19.5         |       |
| 39 N-Nitrosopyrrolidine       | 100 | 6.559     | 6.549         | 0.010         | 77  | 201336   | 20.0       | 20.0         |       |

| Compound                       | Sig | RT (min.) | Adj RT (min.) | Dlt RT (min.) | Q  | Response | Cal Amt ng | OnCol Amt ng | Flags |
|--------------------------------|-----|-----------|---------------|---------------|----|----------|------------|--------------|-------|
| 41 N-Nitrosodi-n-propylamine   | 70  | 6.591     | 6.586         | 0.005         | 65 | 285723   | 20.0       | 19.4         |       |
| 40 Acetophenone                | 105 | 6.591     | 6.586         | 0.005         | 77 | 599792   | 20.0       | 19.2         |       |
| 42 4-Methylphenol              | 108 | 6.597     | 6.586         | 0.011         | 69 | 420058   | 20.0       | 19.8         |       |
| 45 Hexachloroethane            | 117 | 6.714     | 6.709         | 0.005         | 96 | 232849   | 20.0       | 19.3         |       |
| 46 Nitrobenzene                | 77  | 6.768     | 6.762         | 0.006         | 92 | 498871   | 20.0       | 20.2         |       |
| 48 Isophorone                  | 82  | 7.008     | 6.997         | 0.011         | 95 | 860436   | 20.0       | 19.8         |       |
| 49 2-Nitrophenol               | 139 | 7.094     | 7.088         | 0.006         | 96 | 280608   | 20.0       | 20.6         |       |
| 50 2,4-Dimethylphenol          | 107 | 7.126     | 7.120         | 0.006         | 78 | 499190   | 20.0       | 20.0         |       |
| 52 Benzoic acid                | 122 | 7.190     | 7.168         | 0.022         | 82 | 249876   | 20.0       | 17.9         |       |
| 53 Bis(2-chloroethoxy)methane  | 93  | 7.217     | 7.211         | 0.006         | 90 | 519031   | 20.0       | 19.4         |       |
| 54 2,4-Dichlorophenol          | 162 | 7.329     | 7.323         | 0.006         | 96 | 439198   | 20.0       | 20.2         |       |
| 56 1,2,4-Trichlorobenzene      | 180 | 7.425     | 7.414         | 0.011         | 92 | 482199   | 20.0       | 19.3         |       |
| 58 Naphthalene                 | 128 | 7.500     | 7.494         | 0.006         | 97 | 1593857  | 20.0       | 19.9         |       |
| 59 4-Chloroaniline             | 127 | 7.542     | 7.537         | 0.005         | 78 | 659764   | 20.0       | 20.6         |       |
| 60 2,6-Dichlorophenol          | 162 | 7.558     | 7.553         | 0.005         | 96 | 440269   | 20.0       | 20.4         |       |
| 62 Hexachlorobutadiene         | 225 | 7.628     | 7.622         | 0.006         | 76 | 293629   | 20.0       | 19.7         |       |
| 64 Caprolactam                 | 113 | 7.852     | 7.841         | 0.011         | 67 | 148052   | 20.0       | 20.3         |       |
| 67 4-Chloro-3-methylphenol     | 107 | 8.007     | 8.002         | 0.005         | 92 | 450969   | 20.0       | 19.8         |       |
| 69 2-Methylnaphthalene         | 142 | 8.183     | 8.178         | 0.005         | 86 | 1113976  | 20.0       | 19.7         |       |
| 71 1-Methylnaphthalene         | 142 | 8.285     | 8.274         | 0.011         | 82 | 1037675  | 20.0       | 19.5         |       |
| 72 Hexachlorocyclopentadiene   | 237 | 8.344     | 8.338         | 0.006         | 96 | 347500   | 20.0       | 21.9         |       |
| 73 1,2,4,5-Tetrachlorobenzene  | 216 | 8.349     | 8.344         | 0.005         | 97 | 472692   | 20.0       | 19.9         |       |
| 74 2,4,6-Trichlorophenol       | 196 | 8.451     | 8.445         | 0.006         | 95 | 326888   | 20.0       | 20.2         |       |
| 75 2,4,5-Trichlorophenol       | 196 | 8.488     | 8.482         | 0.006         | 93 | 349406   | 20.0       | 20.3         |       |
| 76 1,1'-Biphenyl               | 154 | 8.632     | 8.627         | 0.005         | 95 | 1360765  | 20.0       | 19.8         |       |
| 77 2-Chloronaphthalene         | 162 | 8.664     | 8.659         | 0.005         | 65 | 1091984  | 20.0       | 19.7         |       |
| 79 2-Nitroaniline              | 65  | 8.744     | 8.739         | 0.005         | 81 | 319101   | 20.0       | 20.2         |       |
| 82 Dimethyl phthalate          | 163 | 8.910     | 8.899         | 0.011         | 99 | 1148510  | 20.0       | 19.8         |       |
| 83 1,3-Dinitrobenzene          | 168 | 8.942     | 8.937         | 0.005         | 61 | 183786   | 20.0       | 21.1         |       |
| 84 2,6-Dinitrotoluene          | 165 | 8.969     | 8.963         | 0.006         | 71 | 257767   | 20.0       | 20.3         |       |
| 85 Acenaphthylene              | 152 | 9.070     | 9.065         | 0.005         | 91 | 1740013  | 20.0       | 19.7         |       |
| 86 3-Nitroaniline              | 138 | 9.140     | 9.134         | 0.006         | 92 | 315804   | 20.0       | 20.4         |       |
| 87 2,4-Dinitrophenol           | 184 | 9.236     | 9.230         | 0.006         | 59 | 339911   | 40.0       | 40.2         |       |
| 88 Acenaphthene                | 153 | 9.241     | 9.236         | 0.005         | 87 | 1092870  | 20.0       | 20.3         |       |
| 89 4-Nitrophenol               | 109 | 9.279     | 9.273         | 0.006         | 82 | 364939   | 40.0       | 42.6         |       |
| 91 2,4-Dinitrotoluene          | 165 | 9.364     | 9.359         | 0.005         | 89 | 347851   | 20.0       | 20.8         |       |
| 93 Dibenzofuran                | 168 | 9.407     | 9.401         | 0.006         | 80 | 1536391  | 20.0       | 19.9         |       |
| 95 2,3,5,6-Tetrachlorophenol   | 232 | 9.476     | 9.471         | 0.005         | 92 | 310668   | 20.0       | 20.8         |       |
| 96 2,3,4,6-Tetrachlorophenol   | 232 | 9.519     | 9.514         | 0.005         | 73 | 305329   | 20.0       | 20.8         |       |
| 97 2-Naphthylamine             | 143 | 9.551     | 9.540         | 0.011         | 88 | 1110540  | 20.0       | 20.2         |       |
| 98 Diethyl phthalate           | 149 | 9.583     | 9.578         | 0.005         | 97 | 1198085  | 20.0       | 20.3         |       |
| 99 Hexadecane                  | 57  | 9.594     | 9.588         | 0.006         | 91 | 907979   | 20.0       | 20.8         |       |
| 100 4-Chlorophenyl phenyl ethe | 204 | 9.717     | 9.711         | 0.006         | 97 | 563422   | 20.0       | 19.9         |       |
| 101 4-Nitroaniline             | 138 | 9.733     | 9.722         | 0.011         | 65 | 323357   | 20.0       | 21.2         |       |
| 103 Fluorene                   | 166 | 9.738     | 9.733         | 0.005         | 80 | 1206930  | 20.0       | 20.1         |       |
| 104 4,6-Dinitro-2-methylphenol | 198 | 9.759     | 9.754         | 0.005         | 52 | 426277   | 40.0       | 41.9         |       |
| 105 N-Nitrosodiphenylamine     | 169 | 9.829     | 9.823         | 0.006         | 63 | 873779   | 20.0       | 19.6         |       |
| 90 1,2-Diphenylhydrazine       | 77  | 9.872     | 9.866         | 0.006         | 99 | 1276008  | 20.0       | 20.0         |       |
| 110 4-Bromophenyl phenyl ether | 248 | 10.192    | 10.192        | 0.000         | 67 | 334279   | 20.0       | 20.4         |       |
| 112 Hexachlorobenzene          | 284 | 10.283    | 10.277        | 0.006         | 92 | 326768   | 20.0       | 20.0         |       |
| 113 Atrazine                   | 200 | 10.320    | 10.310        | 0.010         | 75 | 272565   | 20.0       | 21.1         |       |
| 116 Pentachlorophenol          | 266 | 10.459    | 10.454        | 0.005         | 89 | 467256   | 40.0       | 40.5         |       |

| Compound                       | Sig | RT (min.) | Adj RT (min.) | Dlt RT (min.) | Q  | Response | Cal Amt ng | OnCol Amt ng | Flags |
|--------------------------------|-----|-----------|---------------|---------------|----|----------|------------|--------------|-------|
| 115 n-Octadecane               | 57  | 10.475    | 10.470        | 0.005         | 90 | 971090   | 20.0       | 19.8         |       |
| 121 Phenanthrene               | 178 | 10.694    | 10.689        | 0.005         | 96 | 1856746  | 20.0       | 19.7         |       |
| 122 Anthracene                 | 178 | 10.748    | 10.742        | 0.006         | 97 | 1936292  | 20.0       | 20.1         |       |
| 124 Carbazole                  | 167 | 10.903    | 10.897        | 0.006         | 82 | 1707133  | 20.0       | 20.3         |       |
| 126 Di-n-butyl phthalate       | 149 | 11.234    | 11.234        | 0.000         | 99 | 2153696  | 20.0       | 20.4         |       |
| 57 Azobenzene                  | 77  |           | 11.923        |               |    |          | ND         | ND           |       |
| 131 Fluoranthene               | 202 | 12.121    | 12.110        | 0.011         | 97 | 1919281  | 20.0       | 20.2         |       |
| 132 Benzidine                  | 184 | 12.265    | 12.254        | 0.011         | 99 | 826654   | 20.0       | 19.6         |       |
| 133 Pyrene                     | 202 | 12.447    | 12.441        | 0.006         | 97 | 1948062  | 20.0       | 19.6         |       |
| 138 Butyl benzyl phthalate     | 149 | 13.381    | 13.376        | 0.005         | 97 | 886116   | 20.0       | 20.1         |       |
| 144 3,3'-Dichlorobenzidine     | 252 | 14.380    | 14.375        | 0.005         | 71 | 569808   | 20.0       | 19.6         |       |
| 145 Bis(2-ethylhexyl) phthalat | 149 | 14.439    | 14.434        | 0.005         | 96 | 1221960  | 20.0       | 20.0         |       |
| 146 Benzo[a]anthracene         | 228 | 14.455    | 14.450        | 0.005         | 97 | 1725874  | 20.0       | 19.8         |       |
| 147 Chrysene                   | 228 | 14.525    | 14.519        | 0.006         | 94 | 1616774  | 20.0       | 19.7         |       |
| 150 Di-n-octyl phthalate       | 149 | 15.764    | 15.753        | 0.011         | 99 | 1974782  | 20.0       | 20.6         |       |
| 151 7,12-Dimethylbenz(a)anthra | 256 | 16.597    | 16.581        | 0.016         | 68 | 686009   | 20.0       | 20.2         |       |
| 152 Benzo[b]fluoranthene       | 252 | 16.614    | 16.597        | 0.017         | 93 | 1651159  | 20.0       | 20.7         |       |
| 153 Benzo[k]fluoranthene       | 252 | 16.662    | 16.656        | 0.006         | 95 | 1577594  | 20.0       | 20.1         |       |
| 219 Benzo[e]pyrene             | 252 | 17.174    | 17.158        | 0.016         | 0  | 1453734  | 20.0       | 20.2         |       |
| 154 Benzo[a]pyrene             | 252 | 17.276    | 17.265        | 0.011         | 75 | 1444557  | 20.0       | 20.1         |       |
| 157 Indeno[1,2,3-cd]pyrene     | 276 | 19.808    | 19.787        | 0.021         | 96 | 1506352  | 20.0       | 19.9         |       |
| 158 Dibenz(a,h)anthracene      | 278 | 19.840    | 19.824        | 0.016         | 66 | 1244003  | 20.0       | 19.8         |       |
| 159 Benzo[g,h,i]perylene       | 276 | 20.497    | 20.481        | 0.016         | 88 | 1266587  | 20.0       | 19.6         |       |
| S 199 Total Cresols            | 108 |           |               |               | 0  |          | 40.0       | 39.0         |       |
| S 197 Methyl Phenols,Total     | 108 |           |               |               | 0  |          | 40.0       | 39.0         |       |

**QC Flag Legend**

Processing Flags

ND - Not Detected or Marked ND

**Reagents:**

SVTAPSTD20i\_00005

Amount Added: 1.00

Units: mL

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CH732\20150203-5518.b\D0203007.D

Injection Date: 03-Feb-2015 07:40:30

Instrument ID: CH732

Operator ID: 003200

Lims ID: IC

Worklist Smp#: 7

Client ID:

Injection Vol: 2.0 ul

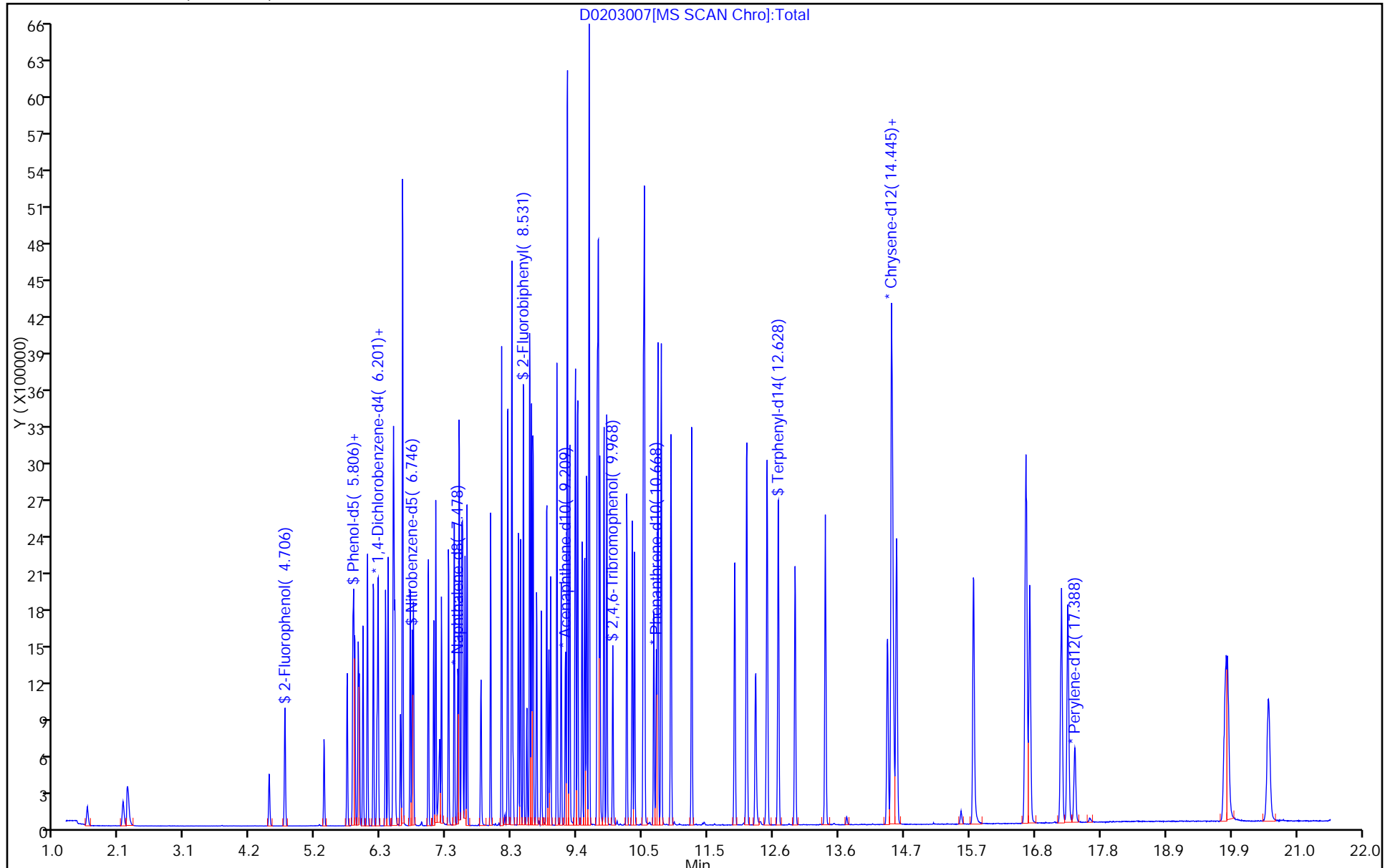
Dil. Factor: 1.0000

ALS Bottle#: 6

Method: BNA\_CH732

Limit Group: BNA 8270D ICAL

Column: Rxi-5SiIMS (0.32 mm)



TestAmerica Pittsburgh  
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CH732\20150203-5518.b\D0203008.D  
 Lims ID: IC  
 Client ID:  
 Sample Type: IC Calib Level: 6  
 Inject. Date: 03-Feb-2015 08:07:30 ALS Bottle#: 7 Worklist Smp#: 8  
 Injection Vol: 2.0 ul Dil. Factor: 1.0000  
 Sample Info: 180-0005518-008  
 Misc. Info.: IC  
 Operator ID: 003200 Instrument ID: CH732  
 Sublist: chrom-BNA\_CH732\*sub4  
 Method: \\PITCHROM\ChromData\CH732\20150203-5518.b\BNA\_CH732.m  
 Limit Group: BNA 8270D ICAL  
 Last Update: 04-Feb-2015 06:41:24 Calib Date: 03-Feb-2015 09:00:30  
 Integrator: RTE ID Type: RT Order ID  
 Quant Method: Internal Standard Quant By: Initial Calibration  
 Last ICal File: \\PITCHROM\ChromData\CH732\20150203-5518.b\D0203010.D  
 Column 1 : Rxi-5SiIMS ( 0.32 mm) Det: MS SCAN  
 Process Host: XAWRK011

First Level Reviewer: piccolinov

Date: 03-Feb-2015 08:58:16

| Compound                      | Sig | RT (min.) | Adj RT (min.) | Dlt RT (min.) | Q   | Response | Cal Amt ng | OnCol Amt ng | Flags |
|-------------------------------|-----|-----------|---------------|---------------|-----|----------|------------|--------------|-------|
| * 1 1,4-Dichlorobenzene-d4    | 152 | 6.175     | 6.175         | 0.000         | 97  | 129608   | 8.00       | 8.00         |       |
| * 2 Naphthalene-d8            | 136 | 7.478     | 7.473         | 0.005         | 100 | 556151   | 8.00       | 8.00         |       |
| * 3 Acenaphthene-d10          | 164 | 9.204     | 9.204         | 0.000         | 92  | 332955   | 8.00       | 8.00         |       |
| * 4 Phenanthrene-d10          | 188 | 10.668    | 10.662        | 0.006         | 73  | 567011   | 8.00       | 8.00         |       |
| * 5 Chrysene-d12              | 240 | 14.477    | 14.471        | 0.006         | 88  | 538430   | 8.00       | 8.00         |       |
| * 6 Perylene-d12              | 264 | 17.388    | 17.377        | 0.011         | 96  | 454484   | 8.00       | 8.00         |       |
| \$ 7 2-Fluorophenol           | 112 | 4.695     | 4.695         | 0.000         | 91  | 677215   | 40.0       | 40.3         |       |
| \$ 8 Phenol-d5                | 99  | 5.790     | 5.785         | 0.005         | 95  | 914976   | 40.0       | 40.4         |       |
| \$ 9 Nitrobenzene-d5          | 82  | 6.746     | 6.741         | 0.005         | 92  | 946397   | 40.0       | 40.5         |       |
| \$ 10 2-Fluorobiphenyl        | 172 | 8.531     | 8.525         | 0.006         | 98  | 2225410  | 40.0       | 40.7         |       |
| \$ 11 2,4,6-Tribromophenol    | 330 | 9.968     | 9.962         | 0.006         | 88  | 271556   | 40.0       | 43.6         |       |
| \$ 12 Terphenyl-d14           | 244 | 12.628    | 12.617        | 0.011         | 98  | 2388667  | 40.0       | 40.8         |       |
| 13 1,4-Dioxane                | 88  | 1.506     | 1.511         | -0.005        | 93  | 209470   | 40.0       | 40.6         |       |
| 14 N-Nitrosodimethylamine     | 74  | 2.077     | 2.077         | 0.000         | 76  | 284868   | 40.0       | 40.8         |       |
| 15 Pyridine                   | 79  | 2.147     | 2.157         | -0.010        | 93  | 507054   | 40.0       | 41.7         |       |
| 21 Methyl methanesulfonate    | 80  | 4.439     | 4.438         | 0.001         | 91  | 385315   | 40.0       | 39.2         |       |
| 25 Benzaldehyde               | 77  | 5.699     | 5.694         | 0.005         | 87  | 517593   | 40.0       | 47.3         |       |
| 26 Phenol                     | 94  | 5.806     | 5.801         | 0.005         | 94  | 1005636  | 40.0       | 39.1         |       |
| 27 Aniline                    | 93  | 5.822     | 5.817         | 0.005         | 64  | 1146158  | 40.0       | 40.3         |       |
| 29 Bis(2-chloroethyl)ether    | 93  | 5.897     | 5.892         | 0.005         | 90  | 701627   | 40.0       | 38.7         |       |
| 30 2-Chlorophenol             | 128 | 5.950     | 5.950         | 0.000         | 97  | 887214   | 40.0       | 40.4         |       |
| 31 n-Decane                   | 43  | 6.025     | 6.020         | 0.005         | 93  | 996855   | 40.0       | 38.7         |       |
| 32 1,3-Dichlorobenzene        | 146 | 6.121     | 6.116         | 0.005         | 98  | 1034697  | 40.0       | 40.5         |       |
| 33 1,4-Dichlorobenzene        | 146 | 6.196     | 6.191         | 0.005         | 94  | 1041084  | 40.0       | 39.7         |       |
| 34 Benzyl alcohol             | 108 | 6.319     | 6.314         | 0.005         | 89  | 548480   | 40.0       | 39.7         |       |
| 35 1,2-Dichlorobenzene        | 146 | 6.356     | 6.356         | 0.000         | 92  | 1006967  | 40.0       | 39.5         |       |
| 36 2-Methylphenol             | 108 | 6.442     | 6.431         | 0.011         | 88  | 763283   | 40.0       | 39.1         |       |
| 37 Indene                     | 116 | 6.447     | 6.447         | 0.000         | 84  | 1386687  | 40.0       | 39.2         |       |
| 38 2,2'-oxybis[1-chloropropan | 45  | 6.469     | 6.463         | 0.006         | 90  | 1466380  | 40.0       | 38.4         |       |
| 39 N-Nitrosopyrrolidine       | 100 | 6.559     | 6.549         | 0.010         | 78  | 381909   | 40.0       | 40.2         |       |



| Compound                        | Sig | RT (min.) | Adj RT (min.) | Dlt RT (min.) | Q  | Response | Cal Amt ng | OnCol Amt ng | Flags |
|---------------------------------|-----|-----------|---------------|---------------|----|----------|------------|--------------|-------|
| 41 N-Nitrosodi-n-propylamine    | 70  | 6.592     | 6.586         | 0.006         | 63 | 514816   | 40.0       | 37.2         |       |
| 40 Acetophenone                 | 105 | 6.592     | 6.586         | 0.006         | 79 | 1115856  | 40.0       | 37.9         |       |
| 42 4-Methylphenol               | 108 | 6.592     | 6.586         | 0.006         | 69 | 767791   | 40.0       | 38.3         |       |
| 45 Hexachloroethane             | 117 | 6.709     | 6.709         | 0.000         | 97 | 444909   | 40.0       | 39.2         |       |
| 46 Nitrobenzene                 | 77  | 6.768     | 6.762         | 0.006         | 88 | 927641   | 40.0       | 40.0         |       |
| 48 Isophorone                   | 82  | 7.003     | 6.997         | 0.006         | 96 | 1633037  | 40.0       | 40.0         |       |
| 49 2-Nitrophenol                | 139 | 7.088     | 7.088         | 0.000         | 96 | 529004   | 40.0       | 41.3         |       |
| 50 2,4-Dimethylphenol           | 107 | 7.126     | 7.120         | 0.006         | 57 | 931124   | 40.0       | 39.8         |       |
| 52 Benzoic acid                 | 122 | 7.206     | 7.168         | 0.038         | 72 | 552644   | 40.0       | 40.4         |       |
| 53 Bis(2-chloroethoxy)methane   | 93  | 7.217     | 7.211         | 0.006         | 96 | 989031   | 40.0       | 39.4         |       |
| 54 2,4-Dichlorophenol           | 162 | 7.329     | 7.323         | 0.006         | 95 | 820358   | 40.0       | 40.1         |       |
| 56 1,2,4-Trichlorobenzene       | 180 | 7.420     | 7.414         | 0.006         | 94 | 930596   | 40.0       | 39.7         |       |
| 58 Naphthalene                  | 128 | 7.500     | 7.494         | 0.006         | 97 | 2959547  | 40.0       | 39.3         |       |
| 59 4-Chloroaniline              | 127 | 7.542     | 7.537         | 0.005         | 74 | 1214856  | 40.0       | 40.3         |       |
| 60 2,6-Dichlorophenol           | 162 | 7.553     | 7.553         | 0.000         | 95 | 812683   | 40.0       | 40.0         |       |
| 62 Hexachlorobutadiene          | 225 | 7.628     | 7.622         | 0.006         | 55 | 547750   | 40.0       | 39.0         |       |
| 64 Caprolactam                  | 113 | 7.858     | 7.841         | 0.017         | 71 | 274556   | 40.0       | 40.1         |       |
| 67 4-Chloro-3-methylphenol      | 107 | 8.007     | 8.002         | 0.005         | 95 | 843095   | 40.0       | 39.3         |       |
| 69 2-Methylnaphthalene          | 142 | 8.183     | 8.178         | 0.005         | 87 | 2117761  | 40.0       | 39.8         |       |
| 71 1-Methylnaphthalene          | 142 | 8.280     | 8.274         | 0.006         | 83 | 1972940  | 40.0       | 39.5         |       |
| 72 Hexachlorocyclopentadiene    | 237 | 8.344     | 8.338         | 0.006         | 95 | 644566   | 40.0       | 44.5         |       |
| 73 1,2,4,5-Tetrachlorobenzene   | 216 | 8.349     | 8.344         | 0.005         | 98 | 858550   | 40.0       | 39.6         |       |
| 74 2,4,6-Trichlorophenol        | 196 | 8.451     | 8.445         | 0.006         | 94 | 603497   | 40.0       | 40.8         |       |
| 75 2,4,5-Trichlorophenol        | 196 | 8.488     | 8.482         | 0.006         | 93 | 648683   | 40.0       | 41.3         |       |
| 76 1,1'-Biphenyl                | 154 | 8.632     | 8.627         | 0.005         | 94 | 2580419  | 40.0       | 41.2         |       |
| 77 2-Chloronaphthalene          | 162 | 8.659     | 8.659         | 0.000         | 78 | 2127629  | 40.0       | 41.9         |       |
| 79 2-Nitroaniline               | 65  | 8.744     | 8.739         | 0.005         | 84 | 600873   | 40.0       | 41.7         |       |
| 82 Dimethyl phthalate           | 163 | 8.905     | 8.899         | 0.006         | 98 | 2163658  | 40.0       | 40.9         |       |
| 83 1,3-Dinitrobenzene           | 168 | 8.942     | 8.937         | 0.005         | 62 | 348418   | 40.0       | 43.8         |       |
| 84 2,6-Dinitrotoluene           | 165 | 8.969     | 8.963         | 0.006         | 67 | 484496   | 40.0       | 41.7         |       |
| 85 Acenaphthylene               | 152 | 9.070     | 9.065         | 0.005         | 91 | 3284115  | 40.0       | 40.8         |       |
| 86 3-Nitroaniline               | 138 | 9.140     | 9.134         | 0.006         | 94 | 590172   | 40.0       | 41.8         |       |
| 87 2,4-Dinitrophenol            | 184 | 9.236     | 9.230         | 0.006         | 64 | 655440   | 80.0       | 84.1         |       |
| 88 Acenaphthene                 | 153 | 9.241     | 9.236         | 0.005         | 87 | 1938543  | 40.0       | 39.4         |       |
| 89 4-Nitrophenol                | 109 | 9.279     | 9.273         | 0.006         | 81 | 682381   | 80.0       | 87.3         |       |
| 91 2,4-Dinitrotoluene           | 165 | 9.364     | 9.359         | 0.005         | 89 | 635934   | 40.0       | 41.7         |       |
| 93 Dibenzofuran                 | 168 | 9.402     | 9.401         | 0.001         | 70 | 2825768  | 40.0       | 40.1         |       |
| 95 2,3,5,6-Tetrachlorophenol    | 232 | 9.476     | 9.471         | 0.005         | 89 | 586262   | 40.0       | 42.9         |       |
| 96 2,3,4,6-Tetrachlorophenol    | 232 | 9.519     | 9.514         | 0.005         | 73 | 554584   | 40.0       | 41.4         |       |
| 97 2-Naphthylamine              | 143 | 9.546     | 9.540         | 0.006         | 92 | 2095491  | 40.0       | 41.7         |       |
| 98 Diethyl phthalate            | 149 | 9.583     | 9.578         | 0.005         | 96 | 2158069  | 40.0       | 40.0         |       |
| 99 Hexadecane                   | 57  | 9.588     | 9.588         | 0.000         | 86 | 1573793  | 40.0       | 38.4         |       |
| 100 4-Chlorophenyl phenyl ether | 204 | 9.717     | 9.711         | 0.006         | 95 | 1044305  | 40.0       | 40.4         |       |
| 101 4-Nitroaniline              | 138 | 9.733     | 9.722         | 0.011         | 62 | 567688   | 40.0       | 40.7         |       |
| 103 Fluorene                    | 166 | 9.738     | 9.733         | 0.005         | 83 | 2206480  | 40.0       | 40.2         |       |
| 104 4,6-Dinitro-2-methylphenol  | 198 | 9.765     | 9.754         | 0.011         | 57 | 811928   | 80.0       | 88.1         |       |
| 105 N-Nitrosodiphenylamine      | 169 | 9.829     | 9.823         | 0.006         | 59 | 1656272  | 40.0       | 41.1         |       |
| 90 1,2-Diphenylhydrazine        | 77  | 9.872     | 9.866         | 0.006         | 99 | 2389339  | 40.0       | 41.4         |       |
| 110 4-Bromophenyl phenyl ether  | 248 | 10.192    | 10.192        | 0.000         | 65 | 599814   | 40.0       | 40.5         |       |
| 112 Hexachlorobenzene           | 284 | 10.283    | 10.277        | 0.006         | 94 | 604183   | 40.0       | 40.8         |       |
| 113 Atrazine                    | 200 | 10.320    | 10.310        | 0.010         | 80 | 482114   | 40.0       | 41.2         |       |
| 116 Pentachlorophenol           | 266 | 10.459    | 10.454        | 0.005         | 90 | 891131   | 80.0       | 85.4         |       |



| Compound                       | Sig | RT (min.) | Adj RT (min.) | Dlt RT (min.) | Q  | Response | Cal Amt ng | OnCol Amt ng | Flags |
|--------------------------------|-----|-----------|---------------|---------------|----|----------|------------|--------------|-------|
| 115 n-Octadecane               | 57  | 10.475    | 10.470        | 0.005         | 91 | 1800945  | 40.0       | 39.0         |       |
| 121 Phenanthrene               | 178 | 10.694    | 10.689        | 0.005         | 96 | 3446256  | 40.0       | 40.5         |       |
| 122 Anthracene                 | 178 | 10.748    | 10.742        | 0.006         | 96 | 3570591  | 40.0       | 41.0         |       |
| 124 Carbazole                  | 167 | 10.903    | 10.897        | 0.006         | 82 | 3091224  | 40.0       | 40.5         |       |
| 126 Di-n-butyl phthalate       | 149 | 11.234    | 11.234        | 0.000         | 99 | 3976938  | 40.0       | 41.7         |       |
| 57 Azobenzene                  | 77  |           | 11.923        |               |    |          | ND         | ND           |       |
| 131 Fluoranthene               | 202 | 12.121    | 12.110        | 0.011         | 97 | 3533786  | 40.0       | 41.1         |       |
| 132 Benzidine                  | 184 | 12.260    | 12.254        | 0.006         | 99 | 1638838  | 40.0       | 41.8         |       |
| 133 Pyrene                     | 202 | 12.447    | 12.441        | 0.006         | 98 | 3720835  | 40.0       | 41.9         |       |
| 138 Butyl benzyl phthalate     | 149 | 13.381    | 13.376        | 0.005         | 97 | 1660263  | 40.0       | 42.1         |       |
| 144 3,3'-Dichlorobenzidine     | 252 | 14.380    | 14.375        | 0.005         | 66 | 1133566  | 40.0       | 43.6         |       |
| 145 Bis(2-ethylhexyl) phthalat | 149 | 14.439    | 14.434        | 0.005         | 96 | 2358686  | 40.0       | 43.2         |       |
| 146 Benzo[a]anthracene         | 228 | 14.455    | 14.450        | 0.005         | 98 | 3153612  | 40.0       | 40.5         |       |
| 147 Chrysene                   | 228 | 14.525    | 14.519        | 0.006         | 94 | 3022852  | 40.0       | 41.2         |       |
| 150 Di-n-octyl phthalate       | 149 | 15.759    | 15.753        | 0.006         | 99 | 3924029  | 40.0       | 44.4         |       |
| 151 7,12-Dimethylbenz(a)anthra | 256 | 16.598    | 16.581        | 0.017         | 69 | 1345948  | 40.0       | 42.9         |       |
| 152 Benzo[b]fluoranthene       | 252 | 16.614    | 16.597        | 0.017         | 96 | 3082246  | 40.0       | 41.8         |       |
| 153 Benzo[k]fluoranthene       | 252 | 16.667    | 16.656        | 0.011         | 95 | 2967704  | 40.0       | 41.1         |       |
| 219 Benzo[e]pyrene             | 252 | 17.180    | 17.158        | 0.022         | 0  | 2742921  | 40.0       | 41.3         |       |
| 154 Benzo[a]pyrene             | 252 | 17.276    | 17.265        | 0.011         | 74 | 2810546  | 40.0       | 42.3         |       |
| 157 Indeno[1,2,3-cd]pyrene     | 276 | 19.819    | 19.787        | 0.032         | 93 | 3015474  | 40.0       | 43.2         | M     |
| 158 Dibenz(a,h)anthracene      | 278 | 19.840    | 19.824        | 0.016         | 77 | 2507561  | 40.0       | 43.2         |       |
| 159 Benzo[g,h,i]perylene       | 276 | 20.508    | 20.481        | 0.027         | 91 | 2553190  | 40.0       | 42.9         |       |
| S 197 Methyl Phenols, Total    | 108 |           |               |               | 0  |          | 80.0       | 77.5         |       |
| S 199 Total Cresols            | 108 |           |               |               | 0  |          | 80.0       | 77.5         |       |

### QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

M - Manually Integrated

### Reagents:

SVTAPSTD40i\_00005

Amount Added: 1.00

Units: mL

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CH732\20150203-5518.b\D0203008.D

Injection Date: 03-Feb-2015 08:07:30

Instrument ID: CH732

Operator ID: 003200

Lims ID: IC

Worklist Smp#: 8

Client ID:

Injection Vol: 2.0 ul

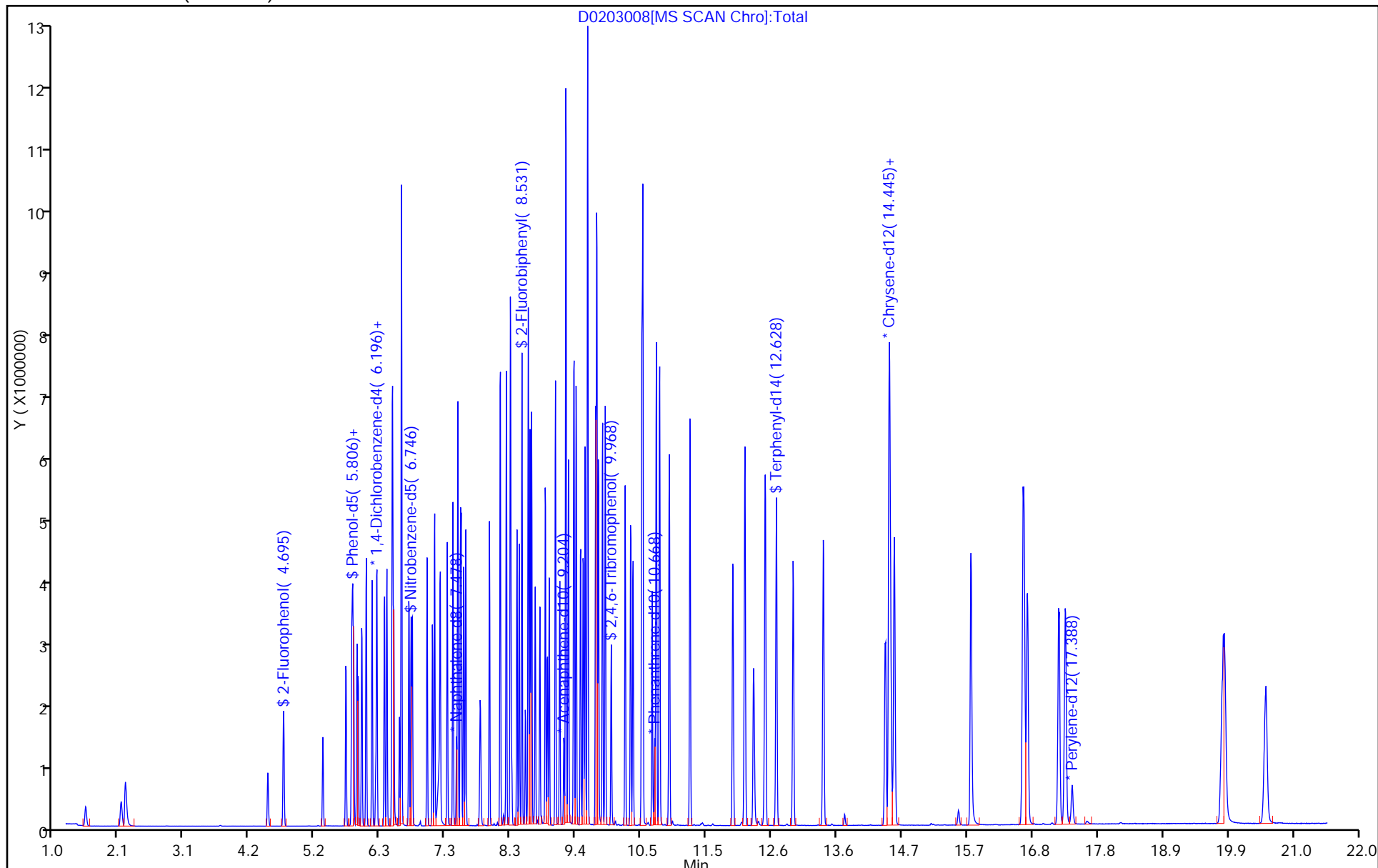
Dil. Factor: 1.0000

ALS Bottle#: 7

Method: BNA\_CH732

Limit Group: BNA 8270D ICAL

Column: Rxi-5SiIMS (0.32 mm)



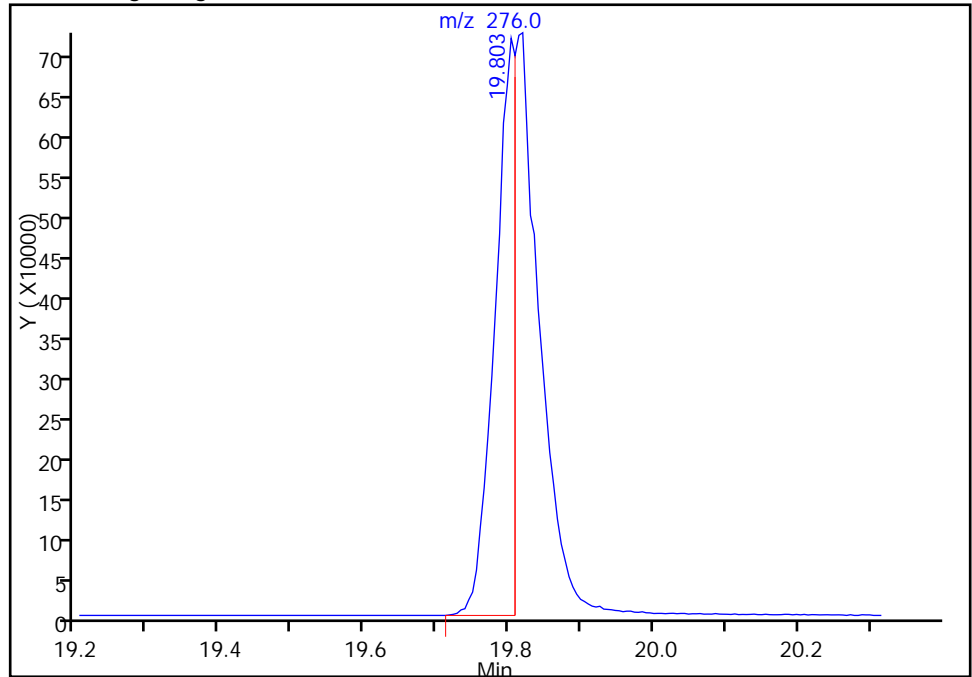
TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CH732\20150203-5518.b\D0203008.D  
Injection Date: 03-Feb-2015 08:07:30 Instrument ID: CH732  
Lims ID: IC  
Client ID:  
Operator ID: 003200 ALS Bottle#: 7 Worklist Smp#: 8  
Injection Vol: 2.0 ul Dil. Factor: 1.0000  
Method: BNA\_CH732 Limit Group: BNA 8270D ICAL  
Column: Rxi-5SiIMS (0.32 mm) Detector: MS SCAN

157 Indeno[1,2,3-cd]pyrene, CAS: 193-39-5

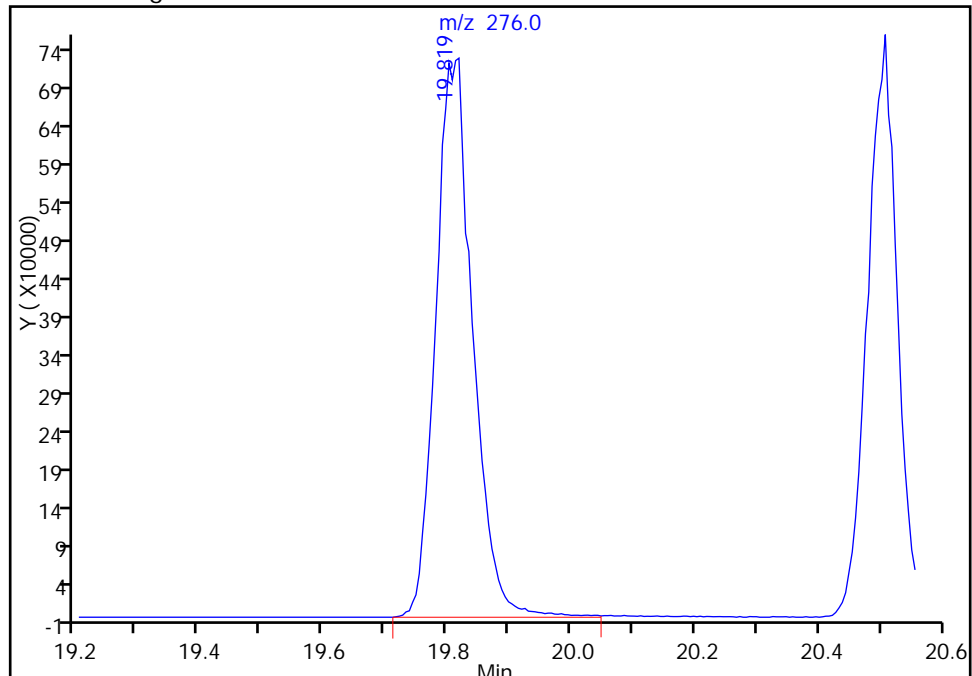
Processing Integration Results

RT: 19.80  
Area: 1433224  
Amount: 23.954611  
Amount Units: ng



Manual Integration Results

RT: 19.82  
Area: 3015474  
Amount: 43.196305  
Amount Units: ng



Reviewer: piccolinov, 03-Feb-2015 08:58:16  
Audit Action: Manually Integrated  
Audit Reason: Poor chromatography

TestAmerica Pittsburgh  
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CH732\20150203-5518.b\D0203009.D  
 Lims ID: IC  
 Client ID:  
 Sample Type: IC Calib Level: 7  
 Inject. Date: 03-Feb-2015 08:33:30 ALS Bottle#: 8 Worklist Smp#: 9  
 Injection Vol: 2.0 ul Dil. Factor: 1.0000  
 Sample Info: 180-0005518-009  
 Misc. Info.: IC  
 Operator ID: 003200 Instrument ID: CH732  
 Sublist: chrom-BNA\_CH732\*sub4  
 Method: \\PITCHROM\ChromData\CH732\20150203-5518.b\BNA\_CH732.m  
 Limit Group: BNA 8270D ICAL  
 Last Update: 04-Feb-2015 06:41:31 Calib Date: 03-Feb-2015 09:00:30  
 Integrator: RTE ID Type: RT Order ID  
 Quant Method: Internal Standard Quant By: Initial Calibration  
 Last Ical File: \\PITCHROM\ChromData\CH732\20150203-5518.b\D0203010.D  
 Column 1 : Rxi-5SiIMS ( 0.32 mm) Det: MS SCAN  
 Process Host: XAWRK011

First Level Reviewer: piccolinov

Date: 03-Feb-2015 08:59:37

| Compound                      | Sig | RT (min.) | Adj RT (min.) | Dlt RT (min.) | Q   | Response | Cal Amt ng | OnCol Amt ng | Flags |
|-------------------------------|-----|-----------|---------------|---------------|-----|----------|------------|--------------|-------|
| * 1 1,4-Dichlorobenzene-d4    | 152 | 6.175     | 6.175         | 0.000         | 97  | 126365   | 8.00       | 8.00         |       |
| * 2 Naphthalene-d8            | 136 | 7.478     | 7.473         | 0.005         | 100 | 546713   | 8.00       | 8.00         |       |
| * 3 Acenaphthene-d10          | 164 | 9.209     | 9.204         | 0.005         | 91  | 337620   | 8.00       | 8.00         |       |
| * 4 Phenanthrene-d10          | 188 | 10.667    | 10.662        | 0.005         | 73  | 560871   | 8.00       | 8.00         |       |
| * 5 Chrysene-d12              | 240 | 14.482    | 14.471        | 0.011         | 66  | 543659   | 8.00       | 8.00         |       |
| * 6 Perylene-d12              | 264 | 17.393    | 17.377        | 0.016         | 95  | 455236   | 8.00       | 8.00         |       |
| \$ 7 2-Fluorophenol           | 112 | 4.689     | 4.695         | -0.006        | 91  | 987546   | 60.0       | 60.3         |       |
| \$ 8 Phenol-d5                | 99  | 5.790     | 5.785         | 0.005         | 96  | 1296709  | 60.0       | 58.8         |       |
| \$ 9 Nitrobenzene-d5          | 82  | 6.746     | 6.741         | 0.005         | 90  | 1393487  | 60.0       | 60.7         |       |
| \$ 10 2-Fluorobiphenyl        | 172 | 8.531     | 8.525         | 0.006         | 93  | 3243372  | 60.0       | 58.5         |       |
| \$ 11 2,4,6-Tribromophenol    | 330 | 9.973     | 9.962         | 0.011         | 91  | 402216   | 60.0       | 65.2         |       |
| \$ 12 Terphenyl-d14           | 244 | 12.628    | 12.617        | 0.011         | 98  | 3583724  | 60.0       | 60.6         |       |
| 13 1,4-Dioxane                | 88  | 1.500     | 1.511         | -0.011        | 93  | 302556   | 60.0       | 60.1         |       |
| 14 N-Nitrosodimethylamine     | 74  | 2.077     | 2.077         | 0.000         | 78  | 415506   | 60.0       | 61.1         |       |
| 15 Pyridine                   | 79  | 2.141     | 2.157         | -0.016        | 90  | 740621   | 60.0       | 62.4         |       |
| 21 Methyl methanesulfonate    | 80  | 4.438     | 4.438         | 0.000         | 90  | 562394   | 60.0       | 58.8         |       |
| 25 Benzaldehyde               | 77  | 5.699     | 5.694         | 0.005         | 86  | 682953   | 60.0       | 64.0         |       |
| 26 Phenol                     | 94  | 5.806     | 5.801         | 0.005         | 94  | 1423572  | 60.0       | 56.8         |       |
| 27 Aniline                    | 93  | 5.822     | 5.817         | 0.005         | 74  | 1627756  | 60.0       | 58.7         |       |
| 29 Bis(2-chloroethyl)ether    | 93  | 5.897     | 5.892         | 0.005         | 91  | 1010724  | 60.0       | 57.1         |       |
| 30 2-Chlorophenol             | 128 | 5.956     | 5.950         | 0.006         | 96  | 1264905  | 60.0       | 59.1         |       |
| 31 n-Decane                   | 43  | 6.025     | 6.020         | 0.005         | 92  | 1358551  | 60.0       | 54.1         |       |
| 32 1,3-Dichlorobenzene        | 146 | 6.116     | 6.116         | 0.000         | 97  | 1463480  | 60.0       | 58.7         |       |
| 33 1,4-Dichlorobenzene        | 146 | 6.196     | 6.191         | 0.005         | 94  | 1517829  | 60.0       | 59.3         |       |
| 34 Benzyl alcohol             | 108 | 6.319     | 6.314         | 0.005         | 88  | 798172   | 60.0       | 59.3         |       |
| 35 1,2-Dichlorobenzene        | 146 | 6.356     | 6.356         | 0.000         | 90  | 1438910  | 60.0       | 57.9         |       |
| 36 2-Methylphenol             | 108 | 6.442     | 6.431         | 0.011         | 86  | 1091611  | 60.0       | 57.4         |       |
| 37 Indene                     | 116 | 6.447     | 6.447         | 0.000         | 84  | 1998319  | 60.0       | 57.9         |       |
| 38 2,2'-oxybis[1-chloropropan | 45  | 6.468     | 6.463         | 0.005         | 91  | 2093118  | 60.0       | 56.2         |       |
| 39 N-Nitrosopyrrolidine       | 100 | 6.565     | 6.549         | 0.016         | 78  | 557274   | 60.0       | 60.2         |       |

| Compound                       | Sig | RT (min.) | Adj RT (min.) | Dlt RT (min.) | Q  | Response | Cal Amt ng | OnCol Amt ng | Flags |
|--------------------------------|-----|-----------|---------------|---------------|----|----------|------------|--------------|-------|
| 41 N-Nitrosodi-n-propylamine   | 70  | 6.591     | 6.586         | 0.005         | 45 | 713290   | 60.0       | 52.8         |       |
| 40 Acetophenone                | 105 | 6.591     | 6.586         | 0.005         | 81 | 1552275  | 60.0       | 54.1         |       |
| 42 4-Methylphenol              | 108 | 6.597     | 6.586         | 0.011         | 75 | 1079768  | 60.0       | 55.3         |       |
| 45 Hexachloroethane            | 117 | 6.714     | 6.709         | 0.005         | 96 | 646511   | 60.0       | 58.4         |       |
| 46 Nitrobenzene                | 77  | 6.768     | 6.762         | 0.006         | 92 | 1350399  | 60.0       | 59.3         |       |
| 48 Isophorone                  | 82  | 7.003     | 6.997         | 0.006         | 96 | 2371427  | 60.0       | 59.1         |       |
| 49 2-Nitrophenol               | 139 | 7.093     | 7.088         | 0.005         | 95 | 780171   | 60.0       | 61.9         |       |
| 50 2,4-Dimethylphenol          | 107 | 7.126     | 7.120         | 0.006         | 57 | 1373726  | 60.0       | 59.7         |       |
| 52 Benzoic acid                | 122 | 7.227     | 7.168         | 0.059         | 84 | 833727   | 60.0       | 61.2         |       |
| 53 Bis(2-chloroethoxy)methane  | 93  | 7.216     | 7.211         | 0.005         | 97 | 1424492  | 60.0       | 57.7         |       |
| 54 2,4-Dichlorophenol          | 162 | 7.329     | 7.323         | 0.005         | 95 | 1186303  | 60.0       | 59.0         |       |
| 56 1,2,4-Trichlorobenzene      | 180 | 7.419     | 7.414         | 0.005         | 91 | 1339792  | 60.0       | 58.1         |       |
| 58 Naphthalene                 | 128 | 7.499     | 7.494         | 0.005         | 97 | 4378054  | 60.0       | 59.2         |       |
| 59 4-Chloroaniline             | 127 | 7.542     | 7.537         | 0.005         | 78 | 1748750  | 60.0       | 59.0         |       |
| 60 2,6-Dichlorophenol          | 162 | 7.558     | 7.553         | 0.005         | 97 | 1158271  | 60.0       | 58.0         |       |
| 62 Hexachlorobutadiene         | 225 | 7.628     | 7.622         | 0.006         | 54 | 801613   | 60.0       | 58.1         |       |
| 64 Caprolactam                 | 113 | 7.868     | 7.841         | 0.027         | 70 | 412304   | 60.0       | 61.2         |       |
| 67 4-Chloro-3-methylphenol     | 107 | 8.012     | 8.002         | 0.010         | 96 | 1234208  | 60.0       | 58.5         |       |
| 69 2-Methylnaphthalene         | 142 | 8.183     | 8.178         | 0.005         | 87 | 3038002  | 60.0       | 58.1         |       |
| 71 1-Methylnaphthalene         | 142 | 8.279     | 8.274         | 0.005         | 90 | 2847445  | 60.0       | 58.1         |       |
| 72 Hexachlorocyclopentadiene   | 237 | 8.344     | 8.338         | 0.006         | 96 | 941368   | 60.0       | 64.1         |       |
| 73 1,2,4,5-Tetrachlorobenzene  | 216 | 8.349     | 8.344         | 0.005         | 97 | 1226308  | 60.0       | 55.7         |       |
| 74 2,4,6-Trichlorophenol       | 196 | 8.456     | 8.445         | 0.011         | 93 | 889199   | 60.0       | 59.2         |       |
| 75 2,4,5-Trichlorophenol       | 196 | 8.493     | 8.482         | 0.011         | 95 | 950450   | 60.0       | 59.7         |       |
| 76 1,1'-Biphenyl               | 154 | 8.632     | 8.627         | 0.005         | 94 | 3711661  | 60.0       | 58.4         |       |
| 77 2-Chloronaphthalene         | 162 | 8.664     | 8.659         | 0.005         | 65 | 2950139  | 60.0       | 57.3         |       |
| 79 2-Nitroaniline              | 65  | 8.744     | 8.739         | 0.005         | 83 | 861359   | 60.0       | 58.9         |       |
| 82 Dimethyl phthalate          | 163 | 8.910     | 8.899         | 0.011         | 98 | 3099106  | 60.0       | 57.8         |       |
| 83 1,3-Dinitrobenzene          | 168 | 8.942     | 8.937         | 0.005         | 60 | 516502   | 60.0       | 64.0         |       |
| 84 2,6-Dinitrotoluene          | 165 | 8.974     | 8.963         | 0.011         | 71 | 692489   | 60.0       | 58.8         |       |
| 85 Acenaphthylene              | 152 | 9.070     | 9.065         | 0.005         | 91 | 4912276  | 60.0       | 60.2         |       |
| 86 3-Nitroaniline              | 138 | 9.140     | 9.134         | 0.006         | 92 | 878098   | 60.0       | 61.3         |       |
| 87 2,4-Dinitrophenol           | 184 | 9.241     | 9.230         | 0.011         | 64 | 953848   | 120.0      | 120.4        |       |
| 88 Acenaphthene                | 153 | 9.241     | 9.236         | 0.005         | 86 | 2755493  | 60.0       | 55.3         |       |
| 89 4-Nitrophenol               | 109 | 9.284     | 9.273         | 0.011         | 55 | 1007845  | 120.0      | 127.1        |       |
| 91 2,4-Dinitrotoluene          | 165 | 9.364     | 9.359         | 0.005         | 87 | 912905   | 60.0       | 59.0         |       |
| 93 Dibenzofuran                | 168 | 9.407     | 9.401         | 0.006         | 80 | 4232923  | 60.0       | 59.2         |       |
| 95 2,3,5,6-Tetrachlorophenol   | 232 | 9.476     | 9.471         | 0.005         | 89 | 863773   | 60.0       | 62.3         |       |
| 96 2,3,4,6-Tetrachlorophenol   | 232 | 9.519     | 9.514         | 0.005         | 75 | 824302   | 60.0       | 60.7         |       |
| 97 2-Naphthylamine             | 143 | 9.551     | 9.540         | 0.011         | 88 | 3057555  | 60.0       | 60.0         |       |
| 98 Diethyl phthalate           | 149 | 9.588     | 9.578         | 0.010         | 96 | 3095548  | 60.0       | 56.5         |       |
| 99 Hexadecane                  | 57  | 9.594     | 9.588         | 0.006         | 91 | 2091830  | 60.0       | 51.9         |       |
| 100 4-Chlorophenyl phenyl ethe | 204 | 9.716     | 9.711         | 0.005         | 97 | 1529802  | 60.0       | 58.3         |       |
| 101 4-Nitroaniline             | 138 | 9.738     | 9.722         | 0.016         | 57 | 852366   | 60.0       | 60.3         |       |
| 103 Fluorene                   | 166 | 9.738     | 9.733         | 0.005         | 79 | 3180401  | 60.0       | 57.2         |       |
| 104 4,6-Dinitro-2-methylphenol | 198 | 9.765     | 9.754         | 0.011         | 63 | 1229972  | 120.0      | 134.9        |       |
| 105 N-Nitrosodiphenylamine     | 169 | 9.829     | 9.823         | 0.006         | 60 | 2429181  | 60.0       | 61.0         |       |
| 90 1,2-Diphenylhydrazine       | 77  | 9.877     | 9.866         | 0.011         | 99 | 3415954  | 60.0       | 59.8         |       |
| 110 4-Bromophenyl phenyl ether | 248 | 10.197    | 10.192        | 0.005         | 62 | 889331   | 60.0       | 60.7         |       |
| 112 Hexachlorobenzene          | 284 | 10.283    | 10.277        | 0.006         | 93 | 891428   | 60.0       | 60.9         |       |
| 113 Atrazine                   | 200 | 10.320    | 10.310        | 0.010         | 73 | 711536   | 60.0       | 61.5         |       |
| 116 Pentachlorophenol          | 266 | 10.464    | 10.454        | 0.010         | 91 | 1304271  | 120.0      | 126.4        |       |

| Compound                       | Sig | RT (min.) | Adj RT (min.) | Dlt RT (min.) | Q  | Response | Cal Amt ng | OnCol Amt ng | Flags |
|--------------------------------|-----|-----------|---------------|---------------|----|----------|------------|--------------|-------|
| 115 n-Octadecane               | 57  | 10.480    | 10.470        | 0.010         | 91 | 2514404  | 60.0       | 55.9         |       |
| 121 Phenanthrene               | 178 | 10.694    | 10.689        | 0.005         | 97 | 5114269  | 60.0       | 60.7         |       |
| 122 Anthracene                 | 178 | 10.748    | 10.742        | 0.006         | 96 | 5395998  | 60.0       | 62.6         |       |
| 124 Carbazole                  | 167 | 10.908    | 10.897        | 0.011         | 82 | 4740553  | 60.0       | 62.8         |       |
| 126 Di-n-butyl phthalate       | 149 | 11.239    | 11.234        | 0.005         | 99 | 5934589  | 60.0       | 62.9         |       |
| 57 Azobenzene                  | 77  |           | 11.923        |               |    |          | ND         | ND           |       |
| 131 Fluoranthene               | 202 | 12.121    | 12.110        | 0.010         | 97 | 5291453  | 60.0       | 62.2         |       |
| 132 Benzidine                  | 184 | 12.265    | 12.254        | 0.011         | 99 | 2399353  | 60.0       | 60.0         |       |
| 133 Pyrene                     | 202 | 12.452    | 12.441        | 0.011         | 98 | 5454551  | 60.0       | 60.8         |       |
| 138 Butyl benzyl phthalate     | 149 | 13.387    | 13.376        | 0.011         | 97 | 2464856  | 60.0       | 61.9         |       |
| 144 3,3'-Dichlorobenzidine     | 252 | 14.391    | 14.375        | 0.016         | 70 | 1739062  | 60.0       | 66.3         |       |
| 145 Bis(2-ethylhexyl) phthalat | 149 | 14.444    | 14.434        | 0.010         | 96 | 3504948  | 60.0       | 63.5         |       |
| 146 Benzo[a]anthracene         | 228 | 14.460    | 14.450        | 0.010         | 95 | 4749712  | 60.0       | 60.4         |       |
| 147 Chrysene                   | 228 | 14.535    | 14.519        | 0.016         | 94 | 4501660  | 60.0       | 60.7         |       |
| 150 Di-n-octyl phthalate       | 149 | 15.764    | 15.753        | 0.011         | 99 | 5987889  | 60.0       | 67.7         |       |
| 151 7,12-Dimethylbenz(a)anthra | 256 | 16.608    | 16.581        | 0.027         | 70 | 1992000  | 60.0       | 63.4         |       |
| 152 Benzo[b]fluoranthene       | 252 | 16.629    | 16.597        | 0.032         | 94 | 4528904  | 60.0       | 61.4         |       |
| 153 Benzo[k]fluoranthene       | 252 | 16.677    | 16.656        | 0.021         | 99 | 4563372  | 60.0       | 63.1         |       |
| 219 Benzo[e]pyrene             | 252 | 17.185    | 17.158        | 0.027         | 0  | 4171014  | 60.0       | 62.7         |       |
| 154 Benzo[a]pyrene             | 252 | 17.286    | 17.265        | 0.021         | 76 | 4146954  | 60.0       | 62.4         |       |
| 157 Indeno[1,2,3-cd]pyrene     | 276 | 19.813    | 19.787        | 0.026         | 93 | 4723890  | 60.0       | 67.6         | M     |
| 158 Dibenz(a,h)anthracene      | 278 | 19.861    | 19.824        | 0.037         | 69 | 3894722  | 60.0       | 67.0         |       |
| 159 Benzo[g,h,i]perylene       | 276 | 20.529    | 20.481        | 0.048         | 89 | 4010862  | 60.0       | 67.2         |       |
| S 199 Total Cresols            | 108 |           |               |               | 0  |          | 120.0      | 112.7        |       |
| S 197 Methyl Phenols,Total     | 108 |           |               |               | 0  |          | 120.0      | 112.7        |       |

### QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

M - Manually Integrated

### Reagents:

SVTAPSTD60i\_00005

Amount Added: 1.00

Units: mL

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CH732\20150203-5518.b\D0203009.D

Injection Date: 03-Feb-2015 08:33:30

Instrument ID: CH732

Operator ID: 003200

Lims ID: IC

Worklist Smp#: 9

Client ID:

Injection Vol: 2.0 ul

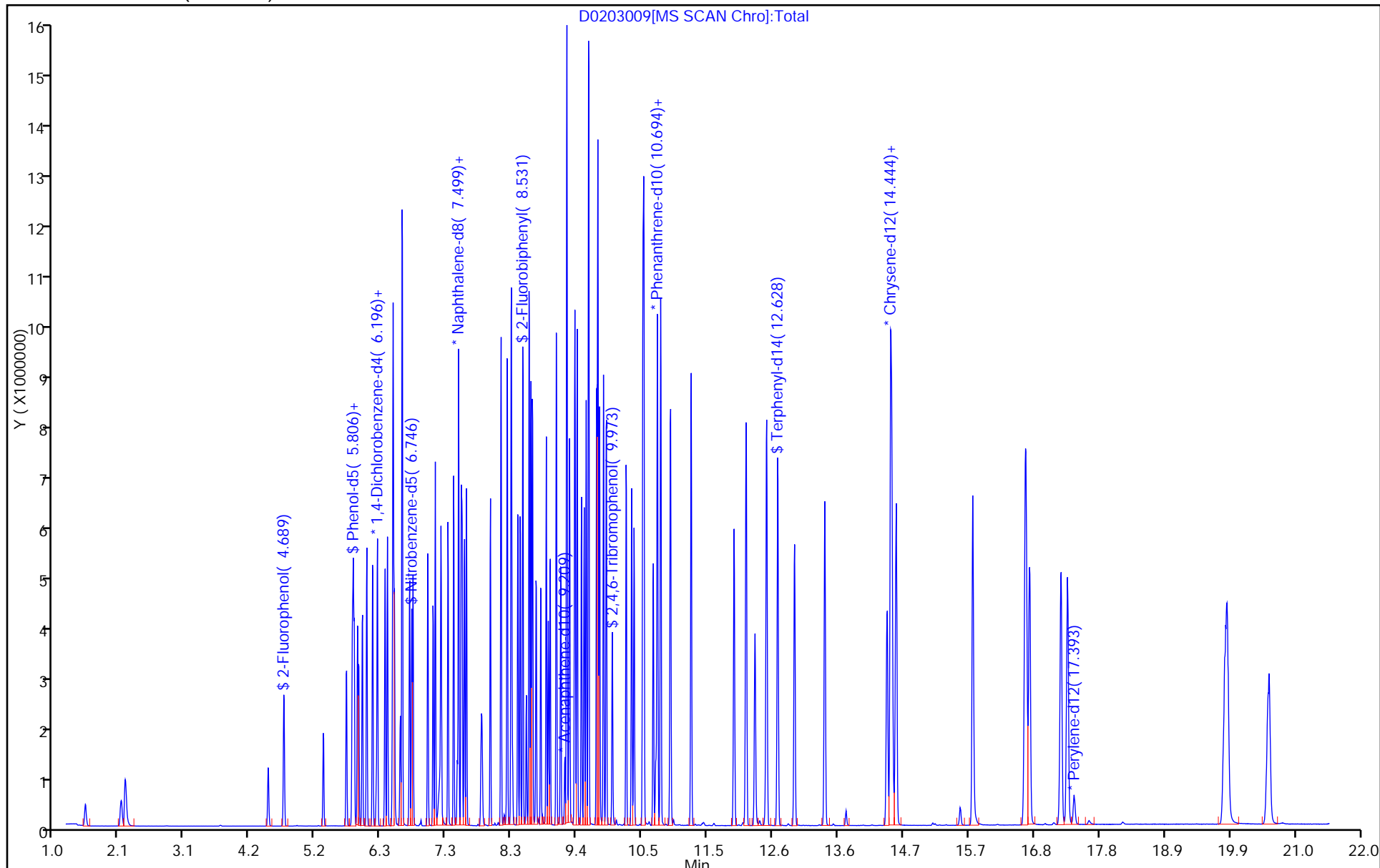
Dil. Factor: 1.0000

ALS Bottle#: 8

Method: BNA\_CH732

Limit Group: BNA 8270D ICAL

Column: Rxi-5SiIMS (0.32 mm)



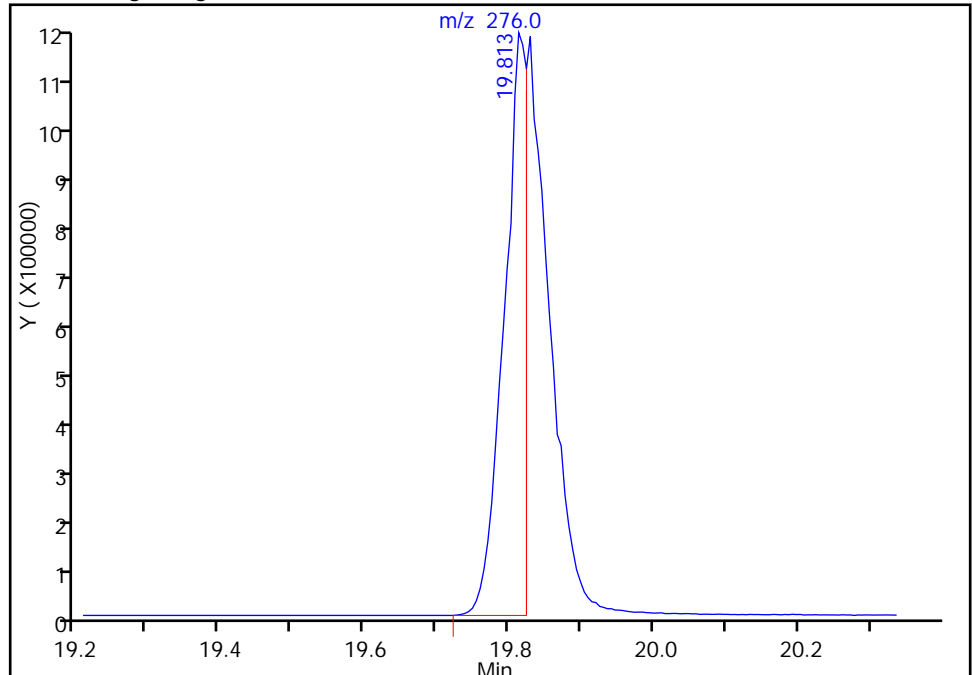
TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CH732\20150203-5518.b\D0203009.D  
Injection Date: 03-Feb-2015 08:33:30 Instrument ID: CH732  
Lims ID: IC  
Client ID:  
Operator ID: 003200 ALS Bottle#: 8 Worklist Smp#: 9  
Injection Vol: 2.0 ul Dil. Factor: 1.0000  
Method: BNA\_CH732 Limit Group: BNA 8270D ICAL  
Column: Rxi-5SiIMS (0.32 mm) Detector: MS SCAN

157 Indeno[1,2,3-cd]pyrene, CAS: 193-39-5

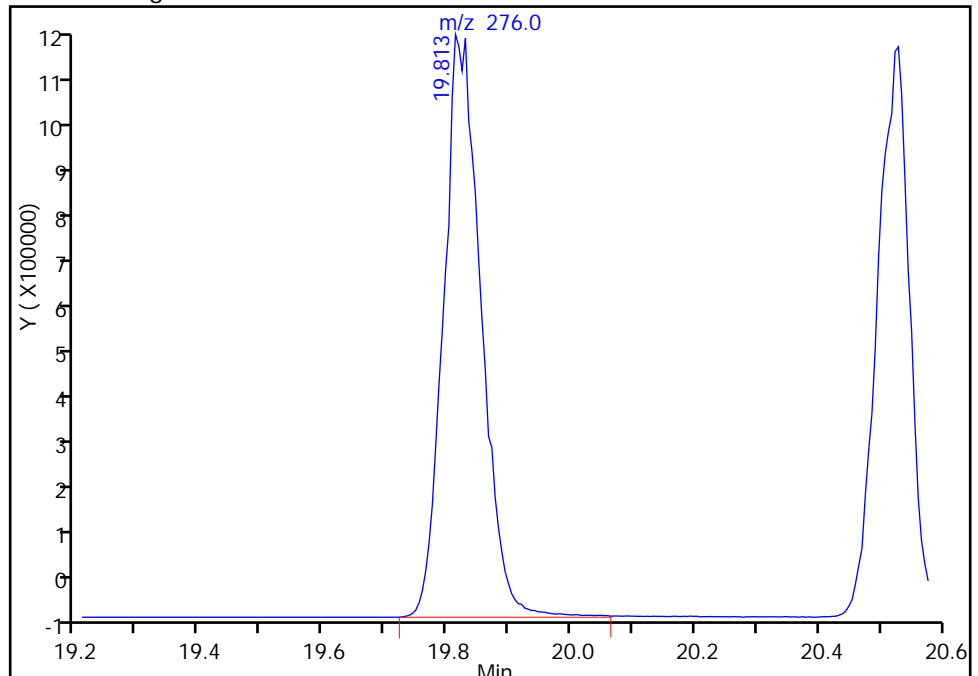
RT: 19.81  
Area: 2423593  
Amount: 38.592788  
Amount Units: ng

Processing Integration Results



RT: 19.81  
Area: 4723890  
Amount: 67.557379  
Amount Units: ng

Manual Integration Results



Reviewer: piccolinov, 03-Feb-2015 08:59:37  
Audit Action: Manually Integrated  
Audit Reason: Poor chromatography



TestAmerica Pittsburgh  
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CH732\20150203-5518.b\D0203010.D  
 Lims ID: IC  
 Client ID:  
 Sample Type: IC Calib Level: 8  
 Inject. Date: 03-Feb-2015 09:00:30 ALS Bottle#: 9 Worklist Smp#: 10  
 Injection Vol: 2.0 ul Dil. Factor: 1.0000  
 Sample Info: 180-0005518-010  
 Misc. Info.: IC  
 Operator ID: 003200 Instrument ID: CH732  
 Sublist: chrom-BNA\_CH732\*sub4  
 Method: \\PITCHROM\ChromData\CH732\20150203-5518.b\BNA\_CH732.m  
 Limit Group: BNA 8270D ICAL  
 Last Update: 04-Feb-2015 06:41:39 Calib Date: 03-Feb-2015 09:00:30  
 Integrator: RTE ID Type: RT Order ID  
 Quant Method: Internal Standard Quant By: Initial Calibration  
 Last ICal File: \\PITCHROM\ChromData\CH732\20150203-5518.b\D0203010.D  
 Column 1 : Rxi-5SiIMS ( 0.32 mm) Det: MS SCAN  
 Process Host: XAWRK011

First Level Reviewer: piccolinov

Date: 03-Feb-2015 09:33:58

| Compound                      | Sig | RT (min.) | Adj RT (min.) | Dlt RT (min.) | Q   | Response | Cal Amt ng | OnCol Amt ng | Flags |
|-------------------------------|-----|-----------|---------------|---------------|-----|----------|------------|--------------|-------|
| * 1 1,4-Dichlorobenzene-d4    | 152 | 6.185     | 6.175         | 0.010         | 95  | 130134   | 8.00       | 8.00         |       |
| * 2 Naphthalene-d8            | 136 | 7.483     | 7.473         | 0.010         | 100 | 562776   | 8.00       | 8.00         |       |
| * 3 Acenaphthene-d10          | 164 | 9.209     | 9.204         | 0.005         | 91  | 336979   | 8.00       | 8.00         |       |
| * 4 Phenanthrene-d10          | 188 | 10.673    | 10.662        | 0.011         | 56  | 562981   | 8.00       | 8.00         |       |
| * 5 Chrysene-d12              | 240 | 14.487    | 14.471        | 0.016         | 75  | 533575   | 8.00       | 8.00         |       |
| * 6 Perylene-d12              | 264 | 17.399    | 17.377        | 0.022         | 95  | 473099   | 8.00       | 8.00         |       |
| \$ 7 2-Fluorophenol           | 112 | 4.706     | 4.695         | 0.011         | 91  | 1350034  | 80.0       | 80.0         |       |
| \$ 8 Phenol-d5                | 99  | 5.801     | 5.785         | 0.016         | 96  | 1756748  | 80.0       | 77.3         |       |
| \$ 9 Nitrobenzene-d5          | 82  | 6.757     | 6.741         | 0.016         | 89  | 1821929  | 80.0       | 77.1         |       |
| \$ 10 2-Fluorobiphenyl        | 172 | 8.536     | 8.525         | 0.011         | 92  | 4264201  | 80.0       | 77.1         |       |
| \$ 11 2,4,6-Tribromophenol    | 330 | 9.978     | 9.962         | 0.016         | 92  | 533212   | 80.0       | 86.2         |       |
| \$ 12 Terphenyl-d14           | 244 | 12.633    | 12.617        | 0.016         | 98  | 4739579  | 80.0       | 81.6         |       |
| 13 1,4-Dioxane                | 88  | 1.532     | 1.511         | 0.021         | 94  | 408930   | 80.0       | 78.9         |       |
| 14 N-Nitrosodimethylamine     | 74  | 2.115     | 2.077         | 0.037         | 83  | 570621   | 80.0       | 81.5         |       |
| 15 Pyridine                   | 79  | 2.173     | 2.157         | 0.016         | 93  | 993662   | 80.0       | 81.3         |       |
| 21 Methyl methanesulfonate    | 80  | 4.460     | 4.438         | 0.022         | 90  | 750302   | 80.0       | 76.1         |       |
| 25 Benzaldehyde               | 77  | 5.704     | 5.694         | 0.010         | 85  | 827212   | 80.0       | 75.3         |       |
| 26 Phenol                     | 94  | 5.817     | 5.801         | 0.016         | 94  | 1910430  | 80.0       | 74.0         |       |
| 27 Aniline                    | 93  | 5.833     | 5.817         | 0.016         | 95  | 2127696  | 80.0       | 74.5         |       |
| 29 Bis(2-chloroethyl)ether    | 93  | 5.908     | 5.892         | 0.016         | 92  | 1360669  | 80.0       | 74.7         |       |
| 30 2-Chlorophenol             | 128 | 5.961     | 5.950         | 0.011         | 96  | 1719757  | 80.0       | 78.0         |       |
| 31 n-Decane                   | 43  | 6.030     | 6.020         | 0.010         | 92  | 1778933  | 80.0       | 68.8         |       |
| 32 1,3-Dichlorobenzene        | 146 | 6.127     | 6.116         | 0.011         | 98  | 1969048  | 80.0       | 76.7         |       |
| 33 1,4-Dichlorobenzene        | 146 | 6.201     | 6.191         | 0.010         | 94  | 2013954  | 80.0       | 76.4         |       |
| 34 Benzyl alcohol             | 108 | 6.330     | 6.314         | 0.016         | 89  | 1052255  | 80.0       | 75.9         |       |
| 35 1,2-Dichlorobenzene        | 146 | 6.362     | 6.356         | 0.006         | 91  | 1943533  | 80.0       | 75.9         |       |
| 36 2-Methylphenol             | 108 | 6.452     | 6.431         | 0.021         | 69  | 1418095  | 80.0       | 72.4         |       |
| 37 Indene                     | 116 | 6.458     | 6.447         | 0.011         | 76  | 2585818  | 80.0       | 72.7         |       |
| 38 2,2'-oxybis[1-chloropropan | 45  | 6.474     | 6.463         | 0.011         | 91  | 2627938  | 80.0       | 68.5         |       |
| 39 N-Nitrosopyrrolidine       | 100 | 6.575     | 6.549         | 0.026         | 79  | 735704   | 80.0       | 77.1         |       |

| Compound                       | Sig | RT (min.) | Adj RT (min.) | Dlt RT (min.) | Q  | Response | Cal Amt ng | OnCol Amt ng | Flags |
|--------------------------------|-----|-----------|---------------|---------------|----|----------|------------|--------------|-------|
| 41 N-Nitrosodi-n-propylamine   | 70  | 6.602     | 6.586         | 0.016         | 44 | 911733   | 80.0       | 65.5         |       |
| 40 Acetophenone                | 105 | 6.602     | 6.586         | 0.016         | 84 | 1999395  | 80.0       | 67.7         |       |
| 42 4-Methylphenol              | 108 | 6.602     | 6.586         | 0.016         | 73 | 1370355  | 80.0       | 68.2         |       |
| 45 Hexachloroethane            | 117 | 6.720     | 6.709         | 0.011         | 97 | 865068   | 80.0       | 75.8         |       |
| 46 Nitrobenzene                | 77  | 6.773     | 6.762         | 0.011         | 90 | 1755924  | 80.0       | 74.9         |       |
| 48 Isophorone                  | 82  | 7.013     | 6.997         | 0.016         | 96 | 3163519  | 80.0       | 76.6         |       |
| 49 2-Nitrophenol               | 139 | 7.099     | 7.088         | 0.011         | 97 | 1023420  | 80.0       | 78.9         |       |
| 50 2,4-Dimethylphenol          | 107 | 7.131     | 7.120         | 0.011         | 53 | 1691801  | 80.0       | 71.4         |       |
| 52 Benzoic acid                | 122 | 7.243     | 7.168         | 0.075         | 84 | 1152352  | 80.0       | 81.8         |       |
| 53 Bis(2-chloroethoxy)methane  | 93  | 7.222     | 7.211         | 0.011         | 96 | 1856791  | 80.0       | 73.1         |       |
| 54 2,4-Dichlorophenol          | 162 | 7.334     | 7.323         | 0.011         | 94 | 1589300  | 80.0       | 76.8         |       |
| 56 1,2,4-Trichlorobenzene      | 180 | 7.425     | 7.414         | 0.011         | 94 | 1794324  | 80.0       | 75.6         |       |
| 58 Naphthalene                 | 128 | 7.505     | 7.494         | 0.011         | 96 | 5845912  | 80.0       | 76.8         |       |
| 59 4-Chloroaniline             | 127 | 7.548     | 7.537         | 0.011         | 79 | 2275054  | 80.0       | 74.6         |       |
| 60 2,6-Dichlorophenol          | 162 | 7.564     | 7.553         | 0.011         | 97 | 1537038  | 80.0       | 74.7         |       |
| 62 Hexachlorobutadiene         | 225 | 7.633     | 7.622         | 0.011         | 53 | 1078670  | 80.0       | 75.9         |       |
| 64 Caprolactam                 | 113 | 7.889     | 7.841         | 0.048         | 72 | 544085   | 80.0       | 78.5         |       |
| 67 4-Chloro-3-methylphenol     | 107 | 8.018     | 8.002         | 0.016         | 94 | 1628392  | 80.0       | 75.0         |       |
| 69 2-Methylnaphthalene         | 142 | 8.189     | 8.178         | 0.011         | 87 | 4039867  | 80.0       | 75.0         |       |
| 71 1-Methylnaphthalene         | 142 | 8.285     | 8.274         | 0.011         | 83 | 3757680  | 80.0       | 74.4         |       |
| 72 Hexachlorocyclopentadiene   | 237 | 8.349     | 8.338         | 0.011         | 95 | 1063917  | 80.0       | 72.6         |       |
| 73 1,2,4,5-Tetrachlorobenzene  | 216 | 8.354     | 8.344         | 0.010         | 98 | 1614990  | 80.0       | 73.5         |       |
| 74 2,4,6-Trichlorophenol       | 196 | 8.461     | 8.445         | 0.016         | 91 | 1196597  | 80.0       | 79.9         |       |
| 75 2,4,5-Trichlorophenol       | 196 | 8.498     | 8.482         | 0.016         | 95 | 1271911  | 80.0       | 80.0         |       |
| 76 1,1'-Biphenyl               | 154 | 8.637     | 8.627         | 0.010         | 94 | 4916975  | 80.0       | 77.5         |       |
| 77 2-Chloronaphthalene         | 162 | 8.669     | 8.659         | 0.010         | 77 | 3914388  | 80.0       | 76.2         |       |
| 79 2-Nitroaniline              | 65  | 8.750     | 8.739         | 0.011         | 81 | 1173309  | 80.0       | 80.4         |       |
| 82 Dimethyl phthalate          | 163 | 8.915     | 8.899         | 0.016         | 98 | 4183619  | 80.0       | 78.2         |       |
| 83 1,3-Dinitrobenzene          | 168 | 8.947     | 8.937         | 0.010         | 60 | 672638   | 80.0       | 83.5         |       |
| 84 2,6-Dinitrotoluene          | 165 | 8.979     | 8.963         | 0.016         | 72 | 940800   | 80.0       | 80.0         |       |
| 85 Acenaphthylene              | 152 | 9.075     | 9.065         | 0.010         | 90 | 6481156  | 80.0       | 79.6         |       |
| 86 3-Nitroaniline              | 138 | 9.145     | 9.134         | 0.011         | 93 | 1147441  | 80.0       | 80.2         |       |
| 87 2,4-Dinitrophenol           | 184 | 9.246     | 9.230         | 0.016         | 66 | 1253184  | 160.0      | 158.3        |       |
| 88 Acenaphthene                | 153 | 9.246     | 9.236         | 0.010         | 86 | 3512775  | 80.0       | 70.6         |       |
| 89 4-Nitrophenol               | 109 | 9.294     | 9.273         | 0.021         | 39 | 1337557  | 160.0      | 169.0        |       |
| 91 2,4-Dinitrotoluene          | 165 | 9.369     | 9.359         | 0.010         | 89 | 1210224  | 80.0       | 78.4         |       |
| 93 Dibenzofuran                | 168 | 9.412     | 9.401         | 0.011         | 79 | 5571795  | 80.0       | 78.1         |       |
| 95 2,3,5,6-Tetrachlorophenol   | 232 | 9.481     | 9.471         | 0.010         | 89 | 1122675  | 80.0       | 81.2         |       |
| 96 2,3,4,6-Tetrachlorophenol   | 232 | 9.524     | 9.514         | 0.010         | 72 | 1088782  | 80.0       | 80.4         |       |
| 97 2-Naphthylamine             | 143 | 9.556     | 9.540         | 0.016         | 88 | 3745510  | 80.0       | 73.7         |       |
| 98 Diethyl phthalate           | 149 | 9.594     | 9.578         | 0.016         | 92 | 3962742  | 80.0       | 72.5         |       |
| 99 Hexadecane                  | 57  | 9.599     | 9.588         | 0.011         | 92 | 2544862  | 80.0       | 61.3         |       |
| 100 4-Chlorophenyl phenyl ethe | 204 | 9.722     | 9.711         | 0.011         | 94 | 2002066  | 80.0       | 76.4         |       |
| 101 4-Nitroaniline             | 138 | 9.743     | 9.722         | 0.021         | 55 | 1112682  | 80.0       | 78.8         |       |
| 103 Fluorene                   | 166 | 9.743     | 9.733         | 0.010         | 73 | 4227850  | 80.0       | 76.2         |       |
| 104 4,6-Dinitro-2-methylphenol | 198 | 9.775     | 9.754         | 0.021         | 66 | 1636050  | 160.0      | 178.8        |       |
| 105 N-Nitrosodiphenylamine     | 169 | 9.834     | 9.823         | 0.011         | 60 | 3320829  | 80.0       | 83.0         |       |
| 90 1,2-Diphenylhydrazine       | 77  | 9.877     | 9.866         | 0.011         | 99 | 4555078  | 80.0       | 79.5         |       |
| 110 4-Bromophenyl phenyl ether | 248 | 10.197    | 10.192        | 0.005         | 65 | 1183915  | 80.0       | 80.5         |       |
| 112 Hexachlorobenzene          | 284 | 10.288    | 10.277        | 0.011         | 93 | 1175832  | 80.0       | 80.0         |       |
| 113 Atrazine                   | 200 | 10.326    | 10.310        | 0.016         | 73 | 876625   | 80.0       | 75.5         |       |
| 116 Pentachlorophenol          | 266 | 10.470    | 10.454        | 0.016         | 90 | 1657954  | 160.0      | 160.0        |       |

| Compound                       | Sig | RT (min.) | Adj RT (min.) | Dlt RT (min.) | Q  | Response | Cal Amt ng | OnCol Amt ng | Flags |
|--------------------------------|-----|-----------|---------------|---------------|----|----------|------------|--------------|-------|
| 115 n-Octadecane               | 57  | 10.480    | 10.470        | 0.010         | 92 | 3002594  | 80.0       | 64.8         |       |
| 121 Phenanthrene               | 178 | 10.699    | 10.689        | 0.010         | 96 | 6996513  | 80.0       | 82.7         |       |
| 122 Anthracene                 | 178 | 10.753    | 10.742        | 0.011         | 96 | 7270383  | 80.0       | 84.1         |       |
| 124 Carbazole                  | 167 | 10.908    | 10.897        | 0.011         | 82 | 6310858  | 80.0       | 83.3         |       |
| 126 Di-n-butyl phthalate       | 149 | 11.239    | 11.234        | 0.005         | 99 | 8182573  | 80.0       | 86.4         |       |
| 57 Azobenzene                  | 77  |           | 11.923        |               |    |          | ND         | ND           |       |
| 131 Fluoranthene               | 202 | 12.126    | 12.110        | 0.016         | 97 | 7033592  | 80.0       | 82.4         |       |
| 132 Benzidine                  | 184 | 12.270    | 12.254        | 0.016         | 99 | 2219269  | 80.0       | 56.6         |       |
| 133 Pyrene                     | 202 | 12.452    | 12.441        | 0.011         | 98 | 7357760  | 80.0       | 83.6         |       |
| 138 Butyl benzyl phthalate     | 149 | 13.392    | 13.376        | 0.016         | 96 | 3249211  | 80.0       | 83.1         |       |
| 144 3,3'-Dichlorobenzidine     | 252 | 14.391    | 14.375        | 0.016         | 72 | 2244278  | 80.0       | 87.2         |       |
| 145 Bis(2-ethylhexyl) phthalat | 149 | 14.444    | 14.434        | 0.010         | 95 | 4655604  | 80.0       | 86.0         |       |
| 146 Benzo[a]anthracene         | 228 | 14.466    | 14.450        | 0.016         | 93 | 6389372  | 80.0       | 82.8         |       |
| 147 Chrysene                   | 228 | 14.535    | 14.519        | 0.016         | 93 | 5985101  | 80.0       | 82.3         |       |
| 150 Di-n-octyl phthalate       | 149 | 15.769    | 15.753        | 0.016         | 99 | 8321767  | 80.0       | 90.5         |       |
| 151 7,12-Dimethylbenz(a)anthra | 256 | 16.613    | 16.581        | 0.032         | 70 | 2745346  | 80.0       | 84.1         |       |
| 152 Benzo[b]fluoranthene       | 252 | 16.629    | 16.597        | 0.032         | 94 | 6275756  | 80.0       | 81.8         |       |
| 153 Benzo[k]fluoranthene       | 252 | 16.683    | 16.656        | 0.027         | 95 | 6303252  | 80.0       | 83.9         |       |
| 219 Benzo[e]pyrene             | 252 | 17.190    | 17.158        | 0.032         | 0  | 5734616  | 80.0       | 82.9         |       |
| 154 Benzo[a]pyrene             | 252 | 17.297    | 17.265        | 0.032         | 75 | 5893073  | 80.0       | 85.3         |       |
| 157 Indeno[1,2,3-cd]pyrene     | 276 | 19.829    | 19.787        | 0.042         | 97 | 6772582  | 80.0       | 93.2         |       |
| 158 Dibenz(a,h)anthracene      | 278 | 19.867    | 19.824        | 0.043         | 69 | 5554542  | 80.0       | 91.9         |       |
| 159 Benzo[g,h,i]perylene       | 276 | 20.535    | 20.481        | 0.054         | 91 | 5811207  | 80.0       | 93.7         |       |
| S 197 Methyl Phenols, Total    | 108 |           |               |               | 0  |          | 160.0      | 140.6        |       |
| S 199 Total Cresols            | 108 |           |               |               | 0  |          | 160.0      | 140.6        |       |

**QC Flag Legend**

Processing Flags

ND - Not Detected or Marked ND

**Reagents:**

SVTAPSTD80i\_00005

Amount Added: 1.00

Units: mL

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CH732\20150203-5518.b\D0203010.D

Injection Date: 03-Feb-2015 09:00:30

Instrument ID: CH732

Operator ID: 003200

Lims ID: IC

Worklist Smp#: 10

Client ID:

Injection Vol: 2.0 ul

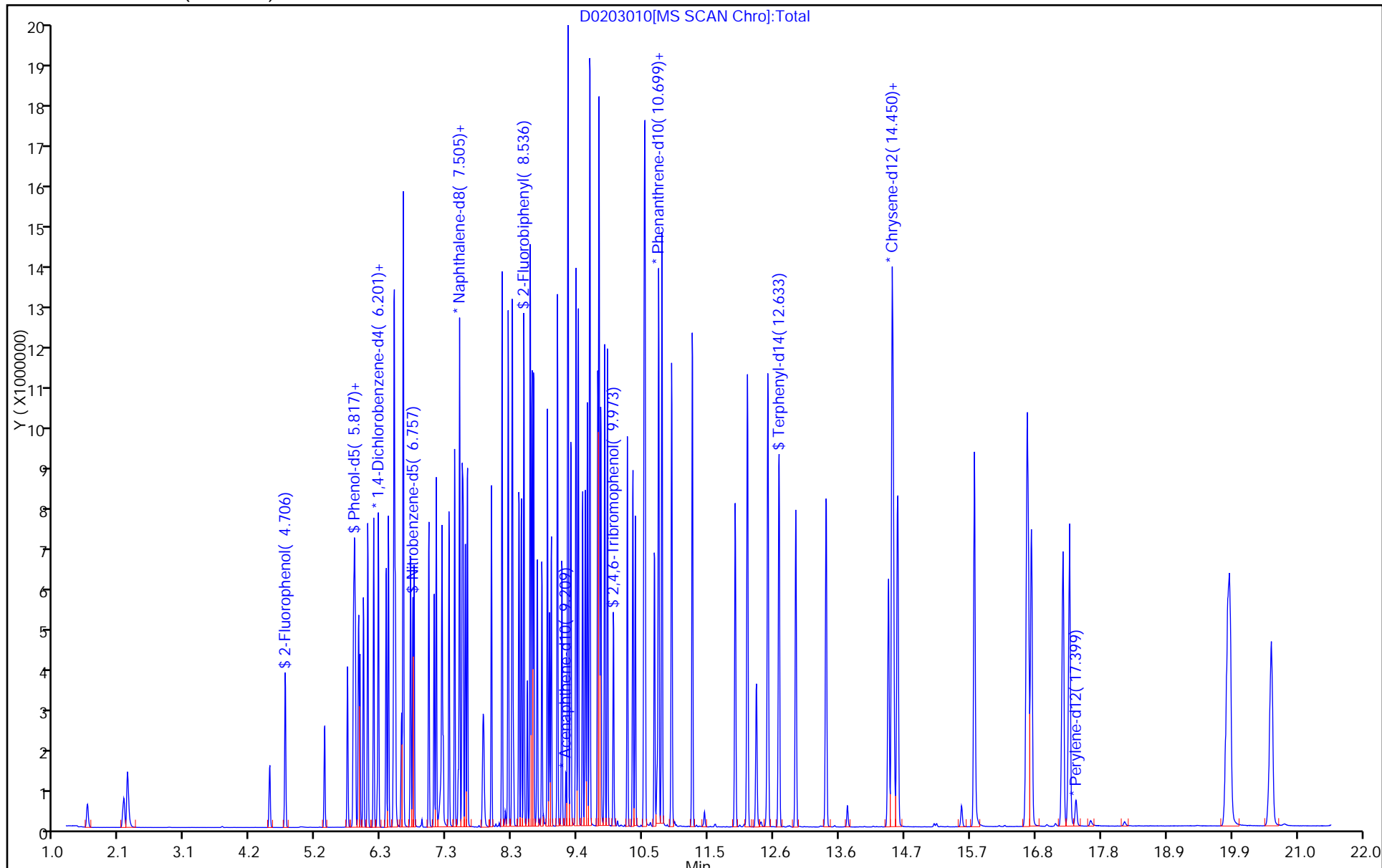
Dil. Factor: 1.0000

ALS Bottle#: 9

Method: BNA\_CH732

Limit Group: BNA 8270D ICAL

Column: Rxi-5SiIMS (0.32 mm)



FORM VII  
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Pittsburgh Job No.: 180-43791-1  
 SDG No.: \_\_\_\_\_  
 Lab Sample ID: CCVIS 180-142205/3 Calibration Date: 05/20/2015 14:05  
 Instrument ID: CH732 Calib Start Date: 02/03/2015 05:53  
 GC Column: Rxi-5SilMS ID: 0.32 (mm) Calib End Date: 02/03/2015 09:00  
 Lab File ID: D052N003.D Conc. Units: ng/uL

| ANALYTE                      | CURVE TYPE | AVE RRF | RRF    | MIN RRF | CALC AMOUNT | SPIKE AMOUNT | %D    | MAX %D |
|------------------------------|------------|---------|--------|---------|-------------|--------------|-------|--------|
| 1,4-Dioxane                  | Ave        | 0.3186  | 0.3266 | 0.0100  | 5.12        | 5.00         | 2.5   | 20.0   |
| N-Nitrosodimethylamine       | Ave        | 0.4305  | 0.4480 | 0.0100  | 5.20        | 5.00         | 4.1   | 20.0   |
| Pyridine                     | Ave        | 0.7509  | 0.7084 | 0.0100  | 4.72        | 5.00         | -5.7  | 20.0   |
| Methyl methanesulfonate      | Ave        | 0.6060  | 0.6630 | 0.0100  | 5.47        | 5.00         | 9.4   | 20.0   |
| Benzaldehyde                 | Ave        | 0.6754  | 0.7875 | 0.0100  | 5.83        | 5.00         | 16.6  | 20.0   |
| Phenol                       | Ave        | 1.587   | 1.534  | 0.8000  | 4.83        | 5.00         | -3.3  | 20.0   |
| Aniline                      | Ave        | 1.756   | 1.737  | 0.0100  | 4.95        | 5.00         | -1.1  | 20.0   |
| Bis(2-chloroethyl)ether      | Ave        | 1.120   | 1.075  | 0.7000  | 4.80        | 5.00         | -4.0  | 20.0   |
| 2-Chlorophenol               | Ave        | 1.355   | 1.350  | 0.8000  | 4.98        | 5.00         | -0.4  | 20.0   |
| n-Decane                     | Ave        | 1.590   | 1.571  |         | 4.94        | 5.00         | -1.2  | 20.0   |
| 1,3-Dichlorobenzene          | Ave        | 1.578   | 1.574  | 0.0100  | 4.99        | 5.00         | -0.3  | 20.0   |
| 1,4-Dichlorobenzene          | Ave        | 1.619   | 1.601  | 0.0100  | 4.94        | 5.00         | -1.1  | 20.0   |
| Benzyl alcohol               | Ave        | 0.8521  | 0.7388 | 0.0100  | 4.34        | 5.00         | -13.3 | 20.0   |
| 1,2-Dichlorobenzene          | Ave        | 1.574   | 1.592  | 0.0100  | 5.06        | 5.00         | 1.1   | 20.0   |
| 2-Methylphenol               | Ave        | 1.204   | 1.158  | 0.7000  | 4.81        | 5.00         | -3.8  | 20.0   |
| Indene                       | Ave        | 2.185   | 2.191  | 0.0100  | 5.01        | 5.00         | 0.2   | 20.0   |
| 2,2'-oxybis[1-chloropropane] | Ave        | 2.359   | 2.357  | 0.0100  | 4.99        | 5.00         | -0.1  | 20.0   |
| N-Nitrosopyrrolidine         | Ave        | 0.5864  | 0.5976 | 0.0100  | 5.10        | 5.00         | 1.9   | 20.0   |
| Acetophenone                 | Ave        | 1.815   | 1.884  | 0.0100  | 5.19        | 5.00         | 3.8   | 20.0   |
| N-Nitrosodi-n-propylamine    | Ave        | 0.8551  | 0.8881 | 0.5000  | 5.19        | 5.00         | 3.9   | 20.0   |
| Methylphenol, 3 & 4          | Ave        | 1.236   | 1.255  | 0.6000  | 5.08        | 5.00         | 1.5   | 20.0   |
| Hexachloroethane             | Ave        | 0.7013  | 0.7724 | 0.3000  | 5.51        | 5.00         | 10.1  | 20.0   |
| Nitrobenzene                 | Ave        | 0.3334  | 0.3251 | 0.2000  | 4.88        | 5.00         | -2.5  | 20.0   |
| Isophorone                   | Ave        | 0.5870  | 0.5783 | 0.4000  | 4.93        | 5.00         | -1.5  | 20.0   |
| 2-Nitrophenol                | Ave        | 0.1845  | 0.1853 | 0.1000  | 5.02        | 5.00         | 0.5   | 20.0   |
| 2,4-Dimethylphenol           | Ave        | 0.3367  | 0.3253 | 0.2000  | 4.83        | 5.00         | -3.4  | 20.0   |
| Benzoic acid                 | Lin1       |         | 0.1531 | 0.0100  | 4.43        | 5.00         | -11.4 | 20.0   |
| Bis(2-chloroethoxy)methane   | Ave        | 0.3611  | 0.3513 | 0.3000  | 4.86        | 5.00         | -2.7  | 20.0   |
| 2,4-Dichlorophenol           | Ave        | 0.2941  | 0.2912 | 0.2000  | 4.95        | 5.00         | -1.0  | 20.0   |
| 1,2,4-Trichlorobenzene       | Ave        | 0.3374  | 0.3344 | 0.0100  | 4.96        | 5.00         | -0.9  | 20.0   |
| Naphthalene                  | Ave        | 1.082   | 1.053  | 0.7000  | 4.87        | 5.00         | -2.7  | 20.0   |
| 4-Chloroaniline              | Ave        | 0.4336  | 0.4440 | 0.0100  | 5.12        | 5.00         | 2.4   | 20.0   |
| 2,6-Dichlorophenol           | Ave        | 0.2924  | 0.3037 | 0.0100  | 5.19        | 5.00         | 3.8   | 20.0   |
| Hexachlorobutadiene          | Ave        | 0.2019  | 0.2088 | 0.0100  | 5.17        | 5.00         | 3.4   | 20.0   |
| Caprolactam                  | Ave        | 0.0985  | 0.1061 | 0.0100  | 5.38        | 5.00         | 7.7   | 20.0   |
| 4-Chloro-3-methylphenol      | Ave        | 0.3085  | 0.3253 | 0.2000  | 5.27        | 5.00         | 5.5   | 20.0   |
| 2-Methylnaphthalene          | Ave        | 0.7654  | 0.8152 | 0.4000  | 5.33        | 5.00         | 6.5   | 20.0   |
| 1-Methylnaphthalene          | Ave        | 0.7177  | 0.7837 | 0.0100  | 5.46        | 5.00         | 9.2   | 20.0   |
| Hexachlorocyclopentadiene    | Ave        | 0.3480  | 0.3395 | 0.0500  | 4.88        | 5.00         | -2.4  | 20.0   |
| 1,2,4,5-Tetrachlorobenzene   | Ave        | 0.5214  | 0.4543 | 0.0100  | 4.36        | 5.00         | -12.9 | 20.0   |
| 2,4,6-Trichlorophenol        | Ave        | 0.3558  | 0.3376 | 0.2000  | 4.74        | 5.00         | -5.1  | 20.0   |

FORM VII  
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Pittsburgh Job No.: 180-43791-1  
 SDG No.: \_\_\_\_\_  
 Lab Sample ID: CCVIS 180-142205/3 Calibration Date: 05/20/2015 14:05  
 Instrument ID: CH732 Calib Start Date: 02/03/2015 05:53  
 GC Column: Rxi-5SilMS ID: 0.32 (mm) Calib End Date: 02/03/2015 09:00  
 Lab File ID: D052N003.D Conc. Units: ng/uL

| ANALYTE                               | CURVE TYPE | AVE RRF | RRF    | MIN RRF | CALC AMOUNT | SPIKE AMOUNT | %D    | MAX %D |
|---------------------------------------|------------|---------|--------|---------|-------------|--------------|-------|--------|
| 2,4,5-Trichlorophenol                 | Ave        | 0.3774  | 0.3432 | 0.2000  | 4.55        | 5.00         | -9.1  | 20.0   |
| 1,1'-Biphenyl                         | Ave        | 1.505   | 1.416  | 0.0100  | 4.70        | 5.00         | -5.9  | 20.0   |
| 2-Chloronaphthalene                   | Ave        | 1.220   | 1.094  | 0.8000  | 4.49        | 5.00         | -10.3 | 20.0   |
| 2-Nitroaniline                        | Ave        | 0.3466  | 0.3334 | 0.0100  | 4.81        | 5.00         | -3.8  | 20.0   |
| Dimethyl phthalate                    | Ave        | 1.270   | 1.211  | 0.0100  | 4.77        | 5.00         | -4.7  | 20.0   |
| 1,3-Dinitrobenzene                    | Ave        | 0.1913  | 0.2017 | 0.0100  | 5.27        | 5.00         | 5.4   | 20.0   |
| 2,6-Dinitrotoluene                    | Ave        | 0.2790  | 0.2878 | 0.2000  | 5.16        | 5.00         | 3.1   | 20.0   |
| Acenaphthylene                        | Ave        | 1.934   | 1.857  | 0.9000  | 4.80        | 5.00         | -4.0  | 20.0   |
| 3-Nitroaniline                        | Ave        | 0.3396  | 0.3452 | 0.0100  | 5.08        | 5.00         | 1.6   | 20.0   |
| 2,4-Dinitrophenol                     | Lin1       |         | 0.1682 | 0.0100  | 9.28        | 10.0         | -7.2  | 20.0   |
| Acenaphthene                          | Ave        | 1.181   | 1.133  | 0.9000  | 4.80        | 5.00         | -4.0  | 20.0   |
| 4-Nitrophenol                         | Ave        | 0.1879  | 0.1837 | 0.0100  | 9.78        | 10.0         | -2.2  | 20.0   |
| 2,4-Dinitrotoluene                    | Ave        | 0.3667  | 0.3811 | 0.2000  | 5.20        | 5.00         | 3.9   | 20.0   |
| Dibenzofuran                          | Ave        | 1.694   | 1.675  | 0.8000  | 4.94        | 5.00         | -1.1  | 20.0   |
| 2,3,5,6-Tetrachlorophenol             | Ave        | 0.3283  | 0.3237 | 0.0100  | 4.93        | 5.00         | -1.4  | 20.0   |
| 2,3,4,6-Tetrachlorophenol             | Ave        | 0.3217  | 0.3137 | 0.0100  | 4.88        | 5.00         | -2.5  | 20.0   |
| 2-Naphthylamine                       | Ave        | 1.207   | 1.236  | 0.0100  | 5.12        | 5.00         | 2.4   | 20.0   |
| Diethyl phthalate                     | Ave        | 1.298   | 1.284  | 0.0100  | 4.95        | 5.00         | -1.0  | 20.0   |
| Hexadecane                            | Ave        | 0.5903  | 0.7173 |         | 6.08        | 5.00         | 21.5* | 20.0   |
| 4-Chlorophenyl phenyl ether           | Ave        | 0.6218  | 0.6321 | 0.4000  | 5.08        | 5.00         | 1.7   | 20.0   |
| 4-Nitroaniline                        | Ave        | 0.3352  | 0.3497 | 0.0100  | 5.22        | 5.00         | 4.3   | 20.0   |
| Fluorene                              | Ave        | 1.318   | 1.349  | 0.9000  | 5.12        | 5.00         | 2.4   | 20.0   |
| 4,6-Dinitro-2-methylphenol            | Ave        | 0.1300  | 0.1204 | 0.0100  | 9.26        | 10.0         | -7.4  | 20.0   |
| N-Nitrosodiphenylamine                | Ave        | 0.5683  | 0.5188 | 0.0100  | 4.56        | 5.00         | -8.7  | 20.0   |
| 1,2-Diphenylhydrazine (as Azobenzene) | Ave        | 0.8141  | 0.7426 | 0.0100  | 4.56        | 5.00         | -8.8  | 20.0   |
| 4-Bromophenyl phenyl ether            | Ave        | 0.2089  | 0.1928 | 0.1000  | 4.62        | 5.00         | -7.7  | 20.0   |
| Hexachlorobenzene                     | Ave        | 0.2088  | 0.1903 | 0.1000  | 4.56        | 5.00         | -8.9  | 20.0   |
| Atrazine                              | Ave        | 0.1650  | 0.1676 | 0.0100  | 5.08        | 5.00         | 1.6   | 20.0   |
| n-Octadecane                          | Ave        | 2.847   | 3.798  |         | 6.67        | 5.00         | 33.4* | 20.0   |
| Pentachlorophenol                     | Ave        | 0.1472  | 0.1190 | 0.0500  | 8.08        | 10.0         | -19.2 | 20.0   |
| Phenanthrene                          | Ave        | 1.202   | 1.170  | 0.7000  | 4.87        | 5.00         | -2.7  | 20.0   |
| Anthracene                            | Ave        | 1.229   | 1.179  | 0.7000  | 4.80        | 5.00         | -4.0  | 20.0   |
| Carbazole                             | Ave        | 1.076   | 1.063  | 0.0100  | 4.94        | 5.00         | -1.2  | 20.0   |
| Di-n-butyl phthalate                  | Ave        | 1.346   | 1.323  | 0.0100  | 4.92        | 5.00         | -1.7  | 20.0   |
| Fluoranthene                          | Ave        | 1.213   | 1.194  | 0.6000  | 4.92        | 5.00         | -1.5  | 20.0   |
| Benzidine                             | Lin1       |         | 0.4619 | 0.0100  |             | 5.00         | -10.0 | 20.0   |
| Pyrene                                | Ave        | 1.320   | 1.299  | 0.6000  | 4.92        | 5.00         | -1.6  | 20.0   |
| Butyl benzyl phthalate                | Ave        | 0.5863  | 0.6043 | 0.0100  | 5.15        | 5.00         | 3.1   | 20.0   |
| 3,3'-Dichlorobenzidine                | Ave        | 0.3859  | 0.3809 | 0.0100  | 4.94        | 5.00         | -1.3  | 20.0   |
| Bis(2-ethylhexyl) phthalate           | Ave        | 0.8121  | 0.8444 | 0.0100  | 5.20        | 5.00         | 4.0   | 20.0   |

FORM VII  
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Pittsburgh Job No.: 180-43791-1  
 SDG No.: \_\_\_\_\_  
 Lab Sample ID: CCVIS 180-142205/3 Calibration Date: 05/20/2015 14:05  
 Instrument ID: CH732 Calib Start Date: 02/03/2015 05:53  
 GC Column: Rxi-5SilMS ID: 0.32 (mm) Calib End Date: 02/03/2015 09:00  
 Lab File ID: D052N003.D Conc. Units: ng/uL

| ANALYTE                        | CURVE TYPE | AVE RRF | RRF    | MIN RRF | CALC AMOUNT | SPIKE AMOUNT | %D    | MAX %D |
|--------------------------------|------------|---------|--------|---------|-------------|--------------|-------|--------|
| Benzo[a]anthracene             | Ave        | 1.158   | 1.140  | 0.8000  | 4.92        | 5.00         | -1.5  | 20.0   |
| Chrysene                       | Ave        | 1.091   | 1.115  | 0.7000  | 5.11        | 5.00         | 2.2   | 20.0   |
| Di-n-octyl phthalate           | Ave        | 1.554   | 1.600  | 0.0100  | 5.15        | 5.00         | 3.0   | 20.0   |
| 7,12-Dimethylbenz(a)anthracene | Ave        | 0.5519  | 0.4923 | 0.0100  | 4.46        | 5.00         | -10.8 | 20.0   |
| Benzo[b]fluoranthene           | Ave        | 1.297   | 1.237  | 0.7000  | 4.77        | 5.00         | -4.6  | 20.0   |
| Benzo[k]fluoranthene           | Ave        | 1.271   | 1.285  | 0.7000  | 5.06        | 5.00         | 1.1   | 20.0   |
| Benzo[e]pyrene                 | Ave        | 1.169   | 1.179  | 0.0100  | 5.04        | 5.00         | 0.8   | 20.0   |
| Benzo[a]pyrene                 | Ave        | 1.168   | 1.183  | 0.7000  | 5.06        | 5.00         | 1.2   | 20.0   |
| Indeno[1,2,3-cd]pyrene         | Ave        | 1.229   | 1.203  | 0.5000  | 4.89        | 5.00         | -2.1  | 20.0   |
| Dibenz(a,h)anthracene          | Ave        | 1.022   | 1.005  | 0.4000  | 4.92        | 5.00         | -1.6  | 20.0   |
| Benzo[g,h,i]perylene           | Ave        | 1.048   | 1.040  | 0.5000  | 4.96        | 5.00         | -0.8  | 20.0   |
| 2-Fluorophenol (Surr)          | Ave        | 1.037   | 0.995  |         | 4.80        | 5.00         | -4.0  | 20.0   |
| Phenol-d5 (Surr)               | Ave        | 1.397   | 1.374  |         | 4.92        | 5.00         | -1.6  | 20.0   |
| Nitrobenzene-d5 (Surr)         | Ave        | 0.3358  | 0.3323 |         | 4.95        | 5.00         | -1.0  | 20.0   |
| 2-Fluorobiphenyl               | Ave        | 1.314   | 1.189  |         | 4.52        | 5.00         | -9.5  | 20.0   |
| 2,4,6-Tribromophenol (Surr)    | Ave        | 0.0879  | 0.0787 | 0.0100  | 4.47        | 5.00         | -10.5 | 20.0   |
| Terphenyl-d14 (Surr)           | Ave        | 0.8709  | 0.8545 |         | 4.91        | 5.00         | -1.9  | 20.0   |

TestAmerica Pittsburgh  
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CH732\20150520-7021.b\D052N003.D  
 Lims ID: CCVIS  
 Client ID:  
 Sample Type: CCVIS  
 Inject. Date: 20-May-2015 14:05:30 ALS Bottle#: 2 Worklist Smp#: 3  
 Injection Vol: 2.0 ul Dil. Factor: 1.0000  
 Sample Info: 180-0007021-003  
 Misc. Info.: CCVIS  
 Operator ID: 003200 Instrument ID: CH732  
 Sublist: chrom-BNA\_CH732\*sub4  
 Method: \\PITCHROM\ChromData\CH732\20150520-7021.b\BNA\_CH732.m  
 Limit Group: BNA 8270D ICAL  
 Last Update: 21-May-2015 02:16:03 Calib Date: 18-Mar-2015 11:54:30  
 Integrator: RTE ID Type: Deconvolution ID  
 Quant Method: Internal Standard Quant By: Initial Calibration  
 Last Ical File: \\PITCHROM\ChromData\CH732\20150318-6063.b\D0318011.D  
 Column 1 : Rxi-5SiIMS ( 0.32 mm) Det: MS SCAN  
 Process Host: XAWRK048

First Level Reviewer: piccolinov

Date: 20-May-2015 14:31:25

| Compound                      | Sig | RT (min.) | Adj RT (min.) | Dlt RT (min.) | Q   | Response | Cal Amt ng | OnCol Amt ng | Flags |
|-------------------------------|-----|-----------|---------------|---------------|-----|----------|------------|--------------|-------|
| * 1 1,4-Dichlorobenzene-d4    | 152 | 6.196     | 6.196         | 0.000         | 97  | 98136    | 8.00       | 8.00         |       |
| * 2 Naphthalene-d8            | 136 | 7.478     | 7.478         | 0.000         | 100 | 473387   | 8.00       | 8.00         |       |
| * 3 Acenaphthene-d10          | 164 | 9.188     | 9.188         | 0.000         | 92  | 355795   | 8.00       | 8.00         |       |
| * 4 Phenanthrene-d10          | 188 | 10.630    | 10.630        | 0.000         | 97  | 695575   | 8.00       | 8.00         |       |
| * 5 Chrysene-d12              | 240 | 14.396    | 14.396        | 0.000         | 97  | 662492   | 8.00       | 8.00         |       |
| * 6 Perylene-d12              | 264 | 17.287    | 17.287        | 0.000         | 96  | 578588   | 8.00       | 8.00         |       |
| \$ 7 2-Fluorophenol           | 112 | 4.754     | 4.754         | 0.000         | 92  | 122112   | 10.0       | 9.60         |       |
| \$ 8 Phenol-d5                | 99  | 5.817     | 5.817         | 0.000         | 93  | 168579   | 10.0       | 9.84         |       |
| \$ 9 Nitrobenzene-d5          | 82  | 6.752     | 6.752         | 0.000         | 94  | 196622   | 10.0       | 9.90         |       |
| \$ 10 2-Fluorobiphenyl        | 172 | 8.520     | 8.520         | 0.000         | 99  | 528711   | 10.0       | 9.05         |       |
| \$ 11 2,4,6-Tribromophenol    | 330 | 9.946     | 9.946         | 0.000         | 89  | 68426    | 10.0       | 8.95         |       |
| \$ 12 Terphenyl-d14           | 244 | 12.559    | 12.559        | 0.000         | 99  | 707638   | 10.0       | 9.81         |       |
| 13 1,4-Dioxane                | 88  | 1.596     | 1.596         | 0.000         | 93  | 40065    | 10.0       | 10.2         |       |
| 14 N-Nitrosodimethylamine     | 74  | 2.189     | 2.189         | 0.000         | 83  | 54955    | 10.0       | 10.4         |       |
| 15 Pyridine                   | 79  | 2.275     | 2.275         | 0.000         | 89  | 86902    | 10.0       | 9.43         |       |
| 21 Methyl methanesulfonate    | 80  | 4.497     | 4.497         | 0.000         | 92  | 81334    | 10.0       | 10.9         |       |
| 25 Benzaldehyde               | 77  | 5.726     | 5.726         | 0.000         | 90  | 96596    | 10.0       | 11.7         |       |
| 26 Phenol                     | 94  | 5.833     | 5.833         | 0.000         | 97  | 188164   | 10.0       | 9.67         |       |
| 27 Aniline                    | 93  | 5.843     | 5.843         | 0.000         | 97  | 213054   | 10.0       | 9.89         |       |
| 29 Bis(2-chloroethyl)ether    | 93  | 5.913     | 5.913         | 0.000         | 91  | 131901   | 10.0       | 9.60         |       |
| 30 2-Chlorophenol             | 128 | 5.977     | 5.977         | 0.000         | 96  | 165662   | 10.0       | 9.96         |       |
| 31 n-Decane                   | 43  | 6.041     | 6.041         | 0.000         | 92  | 192754   | 10.0       | 9.88         |       |
| 32 1,3-Dichlorobenzene        | 146 | 6.137     | 6.137         | 0.000         | 96  | 193053   | 10.0       | 9.97         |       |
| 33 1,4-Dichlorobenzene        | 146 | 6.212     | 6.212         | 0.000         | 92  | 196414   | 10.0       | 9.89         |       |
| 34 Benzyl alcohol             | 108 | 6.335     | 6.335         | 0.000         | 89  | 90625    | 10.0       | 8.67         | M     |
| 35 1,2-Dichlorobenzene        | 146 | 6.372     | 6.372         | 0.000         | 95  | 195327   | 10.0       | 10.1         |       |
| 36 2-Methylphenol             | 108 | 6.452     | 6.452         | 0.000         | 97  | 142094   | 10.0       | 9.62         |       |
| 37 Indene                     | 116 | 6.463     | 6.463         | 0.000         | 90  | 268724   | 10.0       | 10.0         |       |
| 38 2,2'-oxybis[1-chloropropan | 45  | 6.479     | 6.479         | 0.000         | 88  | 289096   | 10.0       | 9.99         |       |
| 39 N-Nitrosopyrrolidine       | 100 | 6.570     | 6.570         | 0.000         | 78  | 73308    | 10.0       | 10.2         |       |



| Compound                        | Sig | RT (min.) | Adj RT (min.) | Dlt RT (min.) | Q  | Response | Cal Amt ng | OnCol Amt ng | Flags |
|---------------------------------|-----|-----------|---------------|---------------|----|----------|------------|--------------|-------|
| 40 Acetophenone                 | 105 | 6.602     | 6.602         | 0.000         | 89 | 231056   | 10.0       | 10.4         |       |
| 41 N-Nitrosodi-n-propylamine    | 70  | 6.602     | 6.602         | 0.000         | 78 | 108938   | 10.0       | 10.4         |       |
| 42 4-Methylphenol               | 108 | 6.607     | 6.607         | 0.000         | 93 | 153947   | 10.0       | 10.2         |       |
| 45 Hexachloroethane             | 117 | 6.720     | 6.720         | 0.000         | 96 | 94745    | 10.0       | 11.0         |       |
| 46 Nitrobenzene                 | 77  | 6.773     | 6.773         | 0.000         | 94 | 192365   | 10.0       | 9.75         |       |
| 48 Isophorone                   | 82  | 7.008     | 7.008         | 0.000         | 97 | 342211   | 10.0       | 9.85         |       |
| 49 2-Nitrophenol                | 139 | 7.099     | 7.099         | 0.000         | 97 | 109665   | 10.0       | 10.0         |       |
| 50 2,4-Dimethylphenol           | 107 | 7.131     | 7.131         | 0.000         | 96 | 192490   | 10.0       | 9.66         |       |
| 52 Benzoic acid                 | 122 | 7.190     | 7.190         | 0.000         | 90 | 90593    | 10.0       | 8.86         |       |
| 53 Bis(2-chloroethoxy)methane   | 93  | 7.216     | 7.216         | 0.000         | 95 | 207868   | 10.0       | 9.73         |       |
| 54 2,4-Dichlorophenol           | 162 | 7.334     | 7.334         | 0.000         | 96 | 172328   | 10.0       | 9.90         |       |
| 56 1,2,4-Trichlorobenzene       | 180 | 7.419     | 7.419         | 0.000         | 94 | 197866   | 10.0       | 9.91         |       |
| 58 Naphthalene                  | 128 | 7.500     | 7.500         | 0.000         | 97 | 623294   | 10.0       | 9.73         |       |
| 59 4-Chloroaniline              | 127 | 7.542     | 7.542         | 0.000         | 95 | 262698   | 10.0       | 10.2         |       |
| 60 2,6-Dichlorophenol           | 162 | 7.558     | 7.558         | 0.000         | 95 | 179702   | 10.0       | 10.4         |       |
| 62 Hexachlorobutadiene          | 225 | 7.628     | 7.628         | 0.000         | 96 | 123564   | 10.0       | 10.3         |       |
| 64 Caprolactam                  | 113 | 7.852     | 7.852         | 0.000         | 74 | 62778    | 10.0       | 10.8         |       |
| 67 4-Chloro-3-methylphenol      | 107 | 8.002     | 8.002         | 0.000         | 97 | 192507   | 10.0       | 10.5         |       |
| 69 2-Methylnaphthalene          | 142 | 8.173     | 8.173         | 0.000         | 92 | 482389   | 10.0       | 10.7         |       |
| 71 1-Methylnaphthalene          | 142 | 8.269     | 8.269         | 0.000         | 93 | 463762   | 10.0       | 10.9         |       |
| 72 Hexachlorocyclopentadiene    | 237 | 8.333     | 8.333         | 0.000         | 97 | 151004   | 10.0       | 9.76         |       |
| 73 1,2,4,5-Tetrachlorobenzene   | 216 | 8.338     | 8.338         | 0.000         | 97 | 202035   | 10.0       | 8.71         |       |
| 74 2,4,6-Trichlorophenol        | 196 | 8.440     | 8.440         | 0.000         | 95 | 150149   | 10.0       | 9.49         |       |
| 75 2,4,5-Trichlorophenol        | 196 | 8.477     | 8.477         | 0.000         | 94 | 152634   | 10.0       | 9.09         |       |
| 76 1,1'-Biphenyl                | 154 | 8.621     | 8.621         | 0.000         | 94 | 629717   | 10.0       | 9.41         |       |
| 77 2-Chloronaphthalene          | 162 | 8.648     | 8.648         | 0.000         | 97 | 486587   | 10.0       | 8.97         |       |
| 79 2-Nitroaniline               | 65  | 8.734     | 8.734         | 0.000         | 85 | 148294   | 10.0       | 9.62         |       |
| 82 Dimethyl phthalate           | 163 | 8.889     | 8.889         | 0.000         | 98 | 538554   | 10.0       | 9.53         |       |
| 83 1,3-Dinitrobenzene           | 168 | 8.926     | 8.926         | 0.000         | 85 | 89702    | 10.0       | 10.5         |       |
| 84 2,6-Dinitrotoluene           | 165 | 8.953     | 8.953         | 0.000         | 93 | 127990   | 10.0       | 10.3         |       |
| 85 Acenaphthylene               | 152 | 9.054     | 9.054         | 0.000         | 98 | 825995   | 10.0       | 9.60         |       |
| 86 3-Nitroaniline               | 138 | 9.124     | 9.124         | 0.000         | 95 | 153521   | 10.0       | 10.2         |       |
| 87 2,4-Dinitrophenol            | 184 | 9.220     | 9.220         | 0.000         | 68 | 149588   | 20.0       | 18.6         |       |
| 88 Acenaphthene                 | 153 | 9.220     | 9.220         | 0.000         | 88 | 503911   | 10.0       | 9.60         |       |
| 89 4-Nitrophenol                | 109 | 9.262     | 9.262         | 0.000         | 95 | 163406   | 20.0       | 19.6         |       |
| 91 2,4-Dinitrotoluene           | 165 | 9.343     | 9.343         | 0.000         | 93 | 169473   | 10.0       | 10.4         |       |
| 93 Dibenzofuran                 | 168 | 9.385     | 9.385         | 0.000         | 96 | 744830   | 10.0       | 9.89         |       |
| 95 2,3,5,6-Tetrachlorophenol    | 232 | 9.455     | 9.455         | 0.000         | 93 | 143957   | 10.0       | 9.86         |       |
| 96 2,3,4,6-Tetrachlorophenol    | 232 | 9.498     | 9.498         | 0.000         | 75 | 139499   | 10.0       | 9.75         |       |
| 97 2-Naphthylamine              | 143 | 9.524     | 9.524         | 0.000         | 97 | 549813   | 10.0       | 10.2         |       |
| 98 Diethyl phthalate            | 149 | 9.556     | 9.556         | 0.000         | 98 | 571176   | 10.0       | 9.90         |       |
| 99 Hexadecane                   | 57  | 9.562     | 9.562         | 0.000         | 91 | 424445   | 10.0       | 12.2         |       |
| 100 4-Chlorophenyl phenyl ether | 204 | 9.695     | 9.695         | 0.000         | 94 | 281117   | 10.0       | 10.2         |       |
| 101 4-Nitroaniline              | 138 | 9.706     | 9.706         | 0.000         | 87 | 155504   | 10.0       | 10.4         |       |
| 103 Fluorene                    | 166 | 9.711     | 9.711         | 0.000         | 94 | 600041   | 10.0       | 10.2         |       |
| 104 4,6-Dinitro-2-methylphenol  | 198 | 9.738     | 9.738         | 0.000         | 82 | 209291   | 20.0       | 18.5         |       |
| 105 N-Nitrosodiphenylamine      | 169 | 9.802     | 9.802         | 0.000         | 63 | 451098   | 10.0       | 9.13         |       |
| 90 1,2-Diphenylhydrazine        | 77  | 9.845     | 9.845         | 0.000         | 99 | 645640   | 10.0       | 9.12         |       |
| 110 4-Bromophenyl phenyl ether  | 248 | 10.165    | 10.165        | 0.000         | 69 | 167668   | 10.0       | 9.23         |       |
| 112 Hexachlorobenzene           | 284 | 10.256    | 10.256        | 0.000         | 92 | 165419   | 10.0       | 9.11         |       |
| 113 Atrazine                    | 200 | 10.283    | 10.283        | 0.000         | 90 | 145719   | 10.0       | 10.2         |       |
| 116 Pentachlorophenol           | 266 | 10.432    | 10.432        | 0.000         | 89 | 206851   | 20.0       | 16.2         |       |

| Compound                       | Sig | RT (min.) | Adj RT (min.) | Dlt RT (min.) | Q   | Response | Cal Amt ng | OnCol Amt ng | Flags |
|--------------------------------|-----|-----------|---------------|---------------|-----|----------|------------|--------------|-------|
| 115 n-Octadecane               | 57  | 10.432    | 10.432        | 0.000         | 93  | 465937   | 10.0       | 13.3         |       |
| 121 Phenanthrene               | 178 | 10.657    | 10.657        | 0.000         | 97  | 1016890  | 10.0       | 9.73         |       |
| 122 Anthracene                 | 178 | 10.710    | 10.710        | 0.000         | 97  | 1025453  | 10.0       | 9.60         |       |
| 124 Carbazole                  | 167 | 10.860    | 10.860        | 0.000         | 96  | 924663   | 10.0       | 9.88         |       |
| 126 Di-n-butyl phthalate       | 149 | 11.186    | 11.186        | 0.000         | 100 | 1150473  | 10.0       | 9.83         |       |
| 57 Azobenzene                  | 77  |           | 11.869        |               |     |          | ND         | ND           |       |
| 131 Fluoranthene               | 202 | 12.056    | 12.056        | 0.000         | 98  | 1038525  | 10.0       | 9.85         |       |
| 132 Benzidine                  | 184 | 12.201    | 12.201        | 0.000         | 100 | 382495   | 10.0       | 9.00         |       |
| 133 Pyrene                     | 202 | 12.382    | 12.382        | 0.000         | 97  | 1075552  | 10.0       | 9.84         |       |
| 138 Butyl benzyl phthalate     | 149 | 13.301    | 13.301        | 0.000         | 98  | 500426   | 10.0       | 10.3         |       |
| 144 3,3'-Dichlorobenzidine     | 252 | 14.300    | 14.300        | 0.000         | 75  | 315466   | 10.0       | 9.87         |       |
| 145 Bis(2-ethylhexyl) phthalat | 149 | 14.343    | 14.343        | 0.000         | 97  | 699286   | 10.0       | 10.4         |       |
| 146 Benzo[a]anthracene         | 228 | 14.375    | 14.375        | 0.000         | 99  | 944188   | 10.0       | 9.85         |       |
| 147 Chrysene                   | 228 | 14.444    | 14.444        | 0.000         | 98  | 923249   | 10.0       | 10.2         |       |
| 150 Di-n-octyl phthalate       | 149 | 15.646    | 15.646        | 0.000         | 99  | 1157520  | 10.0       | 10.3         |       |
| 151 7,12-Dimethylbenz(a)anthra | 256 | 16.496    | 16.496        | 0.000         | 91  | 356058   | 10.0       | 8.92         |       |
| 152 Benzo[b]fluoranthene       | 252 | 16.517    | 16.517        | 0.000         | 98  | 894787   | 10.0       | 9.54         |       |
| 153 Benzo[k]fluoranthene       | 252 | 16.565    | 16.565        | 0.000         | 99  | 929570   | 10.0       | 10.1         |       |
| 219 Benzo[e]pyrene             | 252 | 17.073    | 17.073        | 0.000         | 0   | 852873   | 10.0       | 10.1         |       |
| 154 Benzo[a]pyrene             | 252 | 17.174    | 17.174        | 0.000         | 79  | 855289   | 10.0       | 10.1         |       |
| 157 Indeno[1,2,3-cd]pyrene     | 276 | 19.648    | 19.648        | 0.000         | 97  | 870020   | 10.0       | 9.79         |       |
| 158 Dibenz(a,h)anthracene      | 278 | 19.685    | 19.685        | 0.000         | 90  | 727066   | 10.0       | 9.84         |       |
| 159 Benzo[g,h,i]perylene       | 276 | 20.337    | 20.337        | 0.000         | 95  | 752292   | 10.0       | 9.92         |       |
| S 199 Total Cresols            | 108 |           |               |               | 0   |          | 20.0       | 19.8         |       |
| S 197 Methyl Phenols,Total     | 108 |           |               |               | 0   |          | 20.0       | 19.8         |       |

**QC Flag Legend**

Processing Flags

ND - Not Detected or Marked ND

Review Flags

M - Manually Integrated

**Reagents:**

SVTAPSTD10i\_00105

Amount Added: 1.00

Units: mL

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CH732\20150520-7021.b\D052N003.D

Injection Date: 20-May-2015 14:05:30 Instrument ID: CH732

Lims ID: CCVIS

Operator ID: 003200

Worklist Smp#: 3

Client ID:

Injection Vol: 2.0 ul

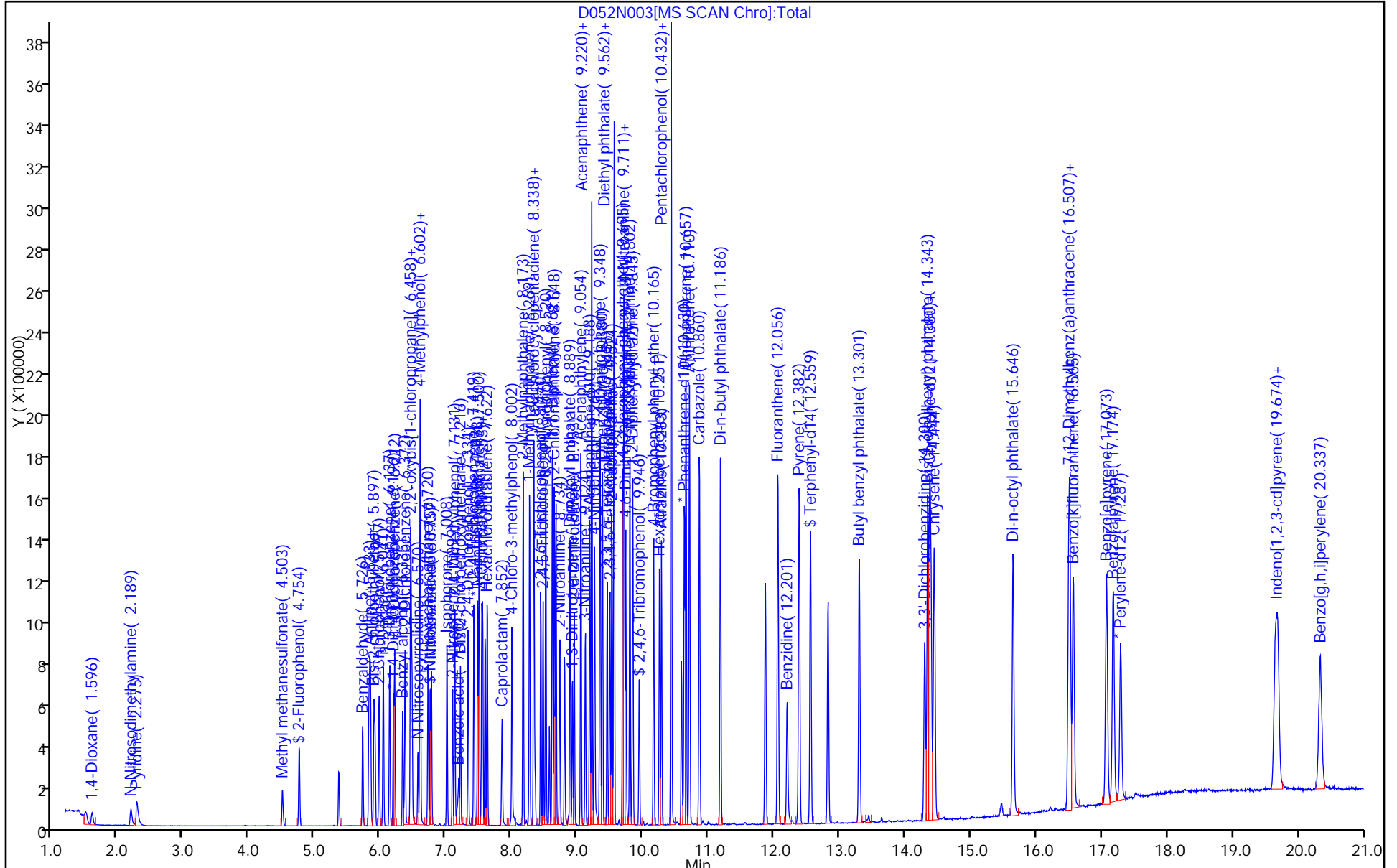
Dil. Factor: 1.0000

ALS Bottle#: 2

Method: BNA\_CH732

Limit Group: BNA 8270D ICAL

Column: Rxi-5SiIMS (0.32 mm)



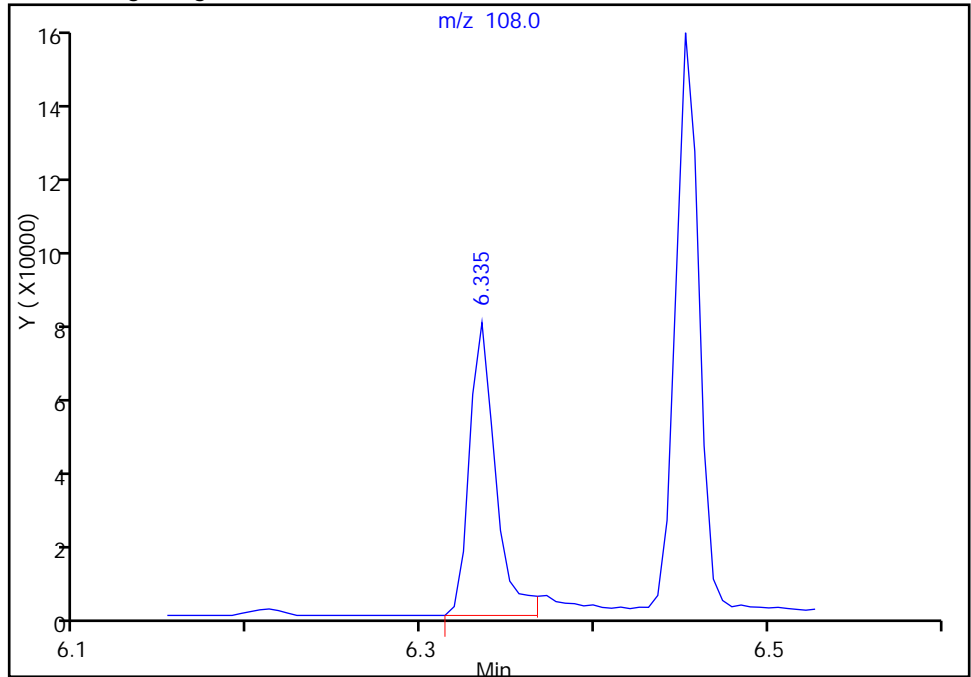
TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CH732\20150520-7021.b\D052N003.D  
Injection Date: 20-May-2015 14:05:30 Instrument ID: CH732  
Lims ID: CCVIS  
Client ID:  
Operator ID: 003200 ALS Bottle#: 2 Worklist Smp#: 3  
Injection Vol: 2.0 ul Dil. Factor: 1.0000  
Method: BNA\_CH732 Limit Group: BNA 8270D ICAL  
Column: Rxi-5SiIMS (0.32 mm) Detector: MS SCAN

34 Benzyl alcohol, CAS: 100-51-6

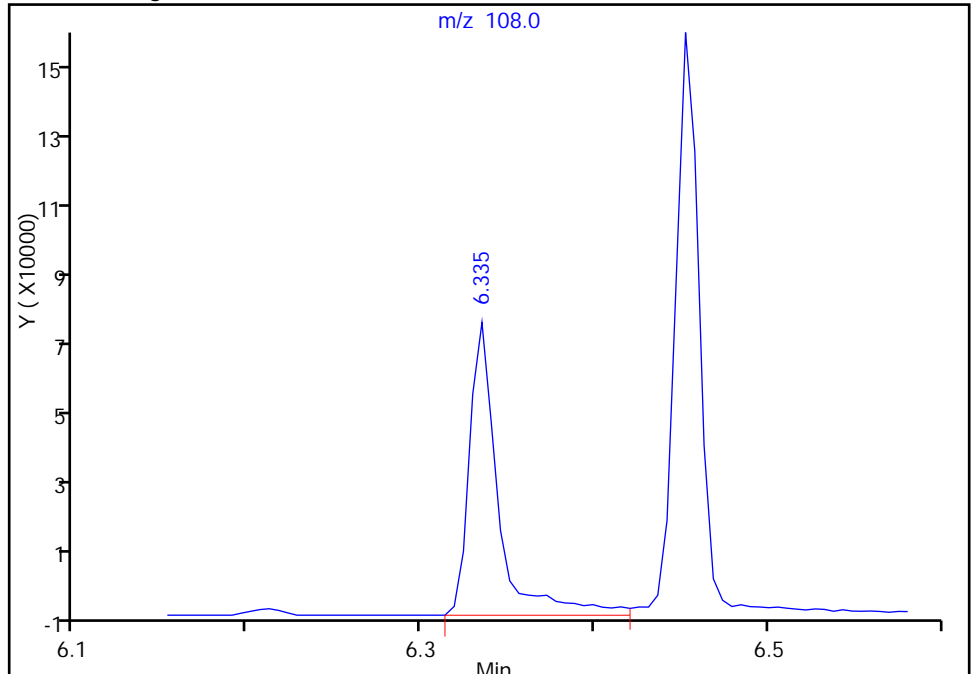
RT: 6.33  
Area: 81361  
Amount: 7.783845  
Amount Units: ng

Processing Integration Results



RT: 6.33  
Area: 90625  
Amount: 8.670136  
Amount Units: ng

Manual Integration Results



Reviewer: piccolinov, 20-May-2015 14:31:25  
Audit Action: Manually Integrated  
Audit Reason: Poor chromatography

TestAmerica Pittsburgh  
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CH732\20150203-5518.b\D0203002.D  
 Lims ID: DFTPP  
 Client ID:  
 Sample Type: DFTPP  
 Inject. Date: 03-Feb-2015 05:37:30 ALS Bottle#: 1 Worklist Smp#: 2  
 Injection Vol: 2.0 ul Dil. Factor: 1.0000  
 Sample Info: 180-0005518-002  
 Misc. Info.: DFTPP  
 Operator ID: 003200 Instrument ID: CH732  
 Method: \\PITCHROM\ChromData\CH732\20150203-5518.b\BNA\_CH732.m  
 Limit Group: BNA 8270D ICAL  
 Last Update: 04-Feb-2015 06:46:42 Calib Date: 03-Feb-2015 09:00:30  
 Integrator: RTE ID Type: Deconvolution ID  
 Quant Method: Internal Standard Quant By: Initial Calibration  
 Last ICal File: \\PITCHROM\ChromData\CH732\20150203-5518.b\D0203010.D  
 Column 1 : Rxi-5SiIMS ( 0.32 mm) Det: MS SCAN  
 Process Host: XAWRK011

First Level Reviewer: piccolinov Date: 03-Feb-2015 06:00:13

| Compound                | Sig | RT (min.) | Adj RT (min.) | Dlt RT (min.) | Q  | Response | Cal Amt ng | OnCol Amt ng | Flags |
|-------------------------|-----|-----------|---------------|---------------|----|----------|------------|--------------|-------|
| 189 Pentachlorophenol_T | 266 | 5.541     | 5.541         | 0.000         | 90 | 228517   | NR         | NR           |       |
| 190 DFTPP               |     |           |               |               |    |          |            |              |       |
| 191 Benzidine_T         | 184 | 8.239     | 8.239         | 0.000         | 99 | 1731687  | NR         | NR           |       |
| 192 4,4'-DDE            | 246 |           | 9.229         |               |    |          |            | ND           |       |
| 193 4,4'-DDD            | 235 |           | 9.644         |               |    |          |            | ND           |       |
| 194 4,4'-DDT            | 235 | 9.943     | 9.943         | 0.000         | 97 | 677011   | NR         | NR           |       |

QC Flag Legend

Processing Flags  
 NR - Missing Quant Standard

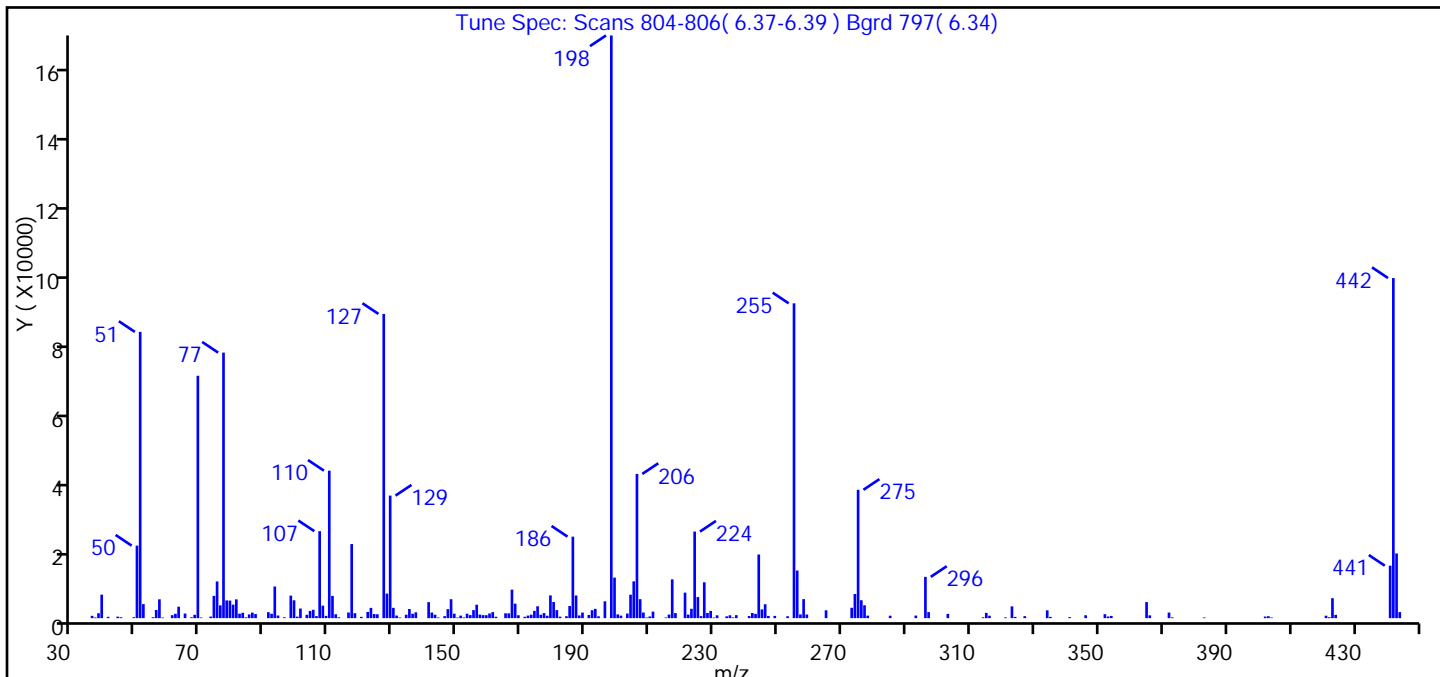
Reagents:

SVDFTPP50i\_00021 Amount Added: 1.00 Units: mL

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CH732\20150203-5518.b\D0203002.D  
 Injection Date: 03-Feb-2015 05:37:30 Instrument ID: CH732  
 Lims ID: DFTPP  
 Client ID:  
 Operator ID: 003200 ALS Bottle#: 1 Worklist Smp#: 2  
 Injection Vol: 2.0 ul Dil. Factor: 1.0000  
 Method: BNA\_CH732 Limit Group: BNA 8270D ICAL  
 Tune Method: DFTPP Method 8270

190 DFTPP



| m/z | Ion Abundance Criteria             | % Relative Abundance |
|-----|------------------------------------|----------------------|
| 198 | Base peak, 100% relative abundance | 100.0                |
| 51  | 30-60% of mass 198                 | 49.1                 |
| 68  | <2% of mass 69                     | 0.6 (1.4)            |
| 69  | Present                            | 41.6                 |
| 70  | <2% of mass 69                     | 0.1 (0.3)            |
| 127 | 40-60% of mass 198                 | 52.2                 |
| 197 | <1% of mass 198                    | 0.0                  |
| 199 | 5-9% of mass 198                   | 7.0                  |
| 275 | 10-30% of mass 198                 | 22.0                 |
| 365 | >1% of mass 198                    | 2.8                  |
| 441 | Present but less than mass 443     | 9.0 (81.1)           |
| 442 | >40% of mass 198                   | 58.4                 |
| 443 | 17-23% of mass 442                 | 11.1 (19.0)          |

Data File: \\PITCHROM\ChromData\CH732\20150203-5518.b\D0203002.D\BNA\_CH732.rslt\spectra.d  
Injection Date: 03-Feb-2015 05:37:30  
Spectrum: Tune Spec: Scans 804-806( 6.37-6.39 ) Bgrd 797( 6.34)  
Base Peak: 198.00  
Minimum % Base Peak: 0  
Number of Points: 213

| m/z   | Y     | m/z    | Y     | m/z    | Y      | m/z    | Y     |
|-------|-------|--------|-------|--------|--------|--------|-------|
| 36.00 | 641   | 110.00 | 40888 | 177.00 | 1400   | 246.00 | 3858  |
| 37.00 | 196   | 111.00 | 6157  | 178.00 | 667    | 247.00 | 605   |
| 38.00 | 1360  | 112.00 | 1080  | 179.00 | 6308   | 249.00 | 622   |
| 39.00 | 6505  | 113.00 | 242   | 180.00 | 4481   | 253.00 | 526   |
| 41.00 | 369   | 116.00 | 1570  | 181.00 | 2224   | 255.00 | 87280 |
| 44.00 | 421   | 117.00 | 20536 | 182.00 | 417    | 256.00 | 13192 |
| 45.00 | 249   | 118.00 | 1372  | 184.00 | 535    | 257.00 | 1032  |
| 49.00 | 256   | 120.00 | 362   | 185.00 | 3363   | 258.00 | 5277  |
| 50.00 | 20104 | 122.00 | 1729  | 186.00 | 22592  | 259.00 | 1004  |
| 51.00 | 79360 | 123.00 | 2848  | 187.00 | 6291   | 265.00 | 2181  |
| 52.00 | 3890  | 124.00 | 1133  | 188.00 | 750    | 273.00 | 2868  |
| 55.00 | 253   | 125.00 | 1077  | 189.00 | 1549   | 274.00 | 6701  |
| 56.00 | 2253  | 127.00 | 84344 | 191.00 | 882    | 275.00 | 35584 |
| 57.00 | 5218  | 128.00 | 6813  | 192.00 | 2190   | 276.00 | 4965  |
| 58.00 | 174   | 129.00 | 33976 | 193.00 | 2577   | 277.00 | 3568  |
| 61.00 | 821   | 130.00 | 2850  | 194.00 | 515    | 278.00 | 695   |
| 62.00 | 1212  | 131.00 | 712   | 196.00 | 4671   | 285.00 | 675   |
| 63.00 | 3174  | 132.00 | 181   | 198.00 | 161536 | 293.00 | 716   |
| 65.00 | 1277  | 134.00 | 945   | 199.00 | 11241  | 296.00 | 11440 |
| 67.00 | 238   | 135.00 | 2536  | 200.00 | 1039   | 297.00 | 1667  |
| 68.00 | 928   | 136.00 | 1206  | 201.00 | 696    | 303.00 | 1188  |
| 69.00 | 67192 | 137.00 | 1611  | 203.00 | 1280   | 314.00 | 233   |
| 70.00 | 176   | 141.00 | 4442  | 204.00 | 6500   | 315.00 | 1463  |
| 73.00 | 435   | 142.00 | 1556  | 205.00 | 10201  | 316.00 | 675   |
| 74.00 | 6175  | 143.00 | 957   | 206.00 | 39976  | 321.00 | 215   |
| 75.00 | 10182 | 144.00 | 183   | 207.00 | 5259   | 323.00 | 3265  |
| 76.00 | 3546  | 146.00 | 553   | 208.00 | 1563   | 324.00 | 344   |
| 77.00 | 73616 | 147.00 | 2497  | 209.00 | 169    | 327.00 | 557   |
| 78.00 | 4918  | 148.00 | 5243  | 210.00 | 469    | 334.00 | 2160  |
| 79.00 | 4871  | 149.00 | 1234  | 211.00 | 1803   | 335.00 | 348   |
| 80.00 | 3741  | 150.00 | 167   | 215.00 | 179    | 341.00 | 288   |
| 81.00 | 5211  | 151.00 | 700   | 216.00 | 984    | 346.00 | 797   |
| 82.00 | 1226  | 152.00 | 199   | 217.00 | 10744  | 352.00 | 1104  |

Data File: \\PITCHROM\ChromData\CH732\20150203-5518.b\D0203002.D\BNA\_CH732.rslt\spectra.d

Injection Date: 03-Feb-2015 05:37:30

Spectrum: Tune Spec: Scans 804-806( 6.37-6.39 ) Bgrd 797( 6.34)

Base Peak: 198.00

Minimum % Base Peak: 0

Number of Points: 213

| m/z    | Y     | m/z    | Y    | m/z    | Y     | m/z    | Y     |
|--------|-------|--------|------|--------|-------|--------|-------|
| 83.00  | 1487  | 153.00 | 1243 | 218.00 | 1420  | 353.00 | 451   |
| 84.00  | 226   | 154.00 | 840  | 221.00 | 7080  | 354.00 | 616   |
| 85.00  | 1037  | 155.00 | 2223 | 222.00 | 986   | 365.00 | 4455  |
| 86.00  | 1526  | 156.00 | 3721 | 223.00 | 2592  | 366.00 | 776   |
| 87.00  | 1130  | 157.00 | 990  | 224.00 | 24000 | 372.00 | 1542  |
| 91.00  | 1661  | 158.00 | 834  | 225.00 | 5857  | 373.00 | 224   |
| 92.00  | 1215  | 159.00 | 819  | 226.00 | 557   | 383.00 | 182   |
| 93.00  | 8770  | 160.00 | 1293 | 227.00 | 9937  | 402.00 | 444   |
| 94.00  | 734   | 161.00 | 1667 | 228.00 | 1431  | 403.00 | 539   |
| 96.00  | 231   | 162.00 | 386  | 229.00 | 2011  | 404.00 | 179   |
| 98.00  | 6243  | 165.00 | 1346 | 230.00 | 168   | 421.00 | 681   |
| 99.00  | 4952  | 166.00 | 1321 | 231.00 | 787   | 422.00 | 261   |
| 100.00 | 420   | 167.00 | 7901 | 234.00 | 504   | 423.00 | 5526  |
| 101.00 | 2667  | 168.00 | 4017 | 235.00 | 797   | 424.00 | 907   |
| 103.00 | 925   | 169.00 | 805  | 236.00 | 199   | 441.00 | 14539 |
| 104.00 | 1998  | 171.00 | 379  | 237.00 | 830   | 442.00 | 94288 |
| 105.00 | 2322  | 172.00 | 707  | 241.00 | 582   | 443.00 | 17936 |
| 106.00 | 566   | 173.00 | 958  | 242.00 | 1422  | 444.00 | 1672  |
| 107.00 | 24112 | 174.00 | 2018 | 243.00 | 1186  |        |       |
| 108.00 | 3469  | 175.00 | 3293 | 244.00 | 17640 |        |       |
| 109.00 | 621   | 176.00 | 949  | 245.00 | 2431  |        |       |



TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CH732\20150203-5518.b\D0203002.D

Injection Date: 03-Feb-2015 05:37:30

Instrument ID: CH732

Operator ID: 003200

Lims ID: DFTPP

Worklist Smp#: 2

Client ID:

Injection Vol: 2.0 ul

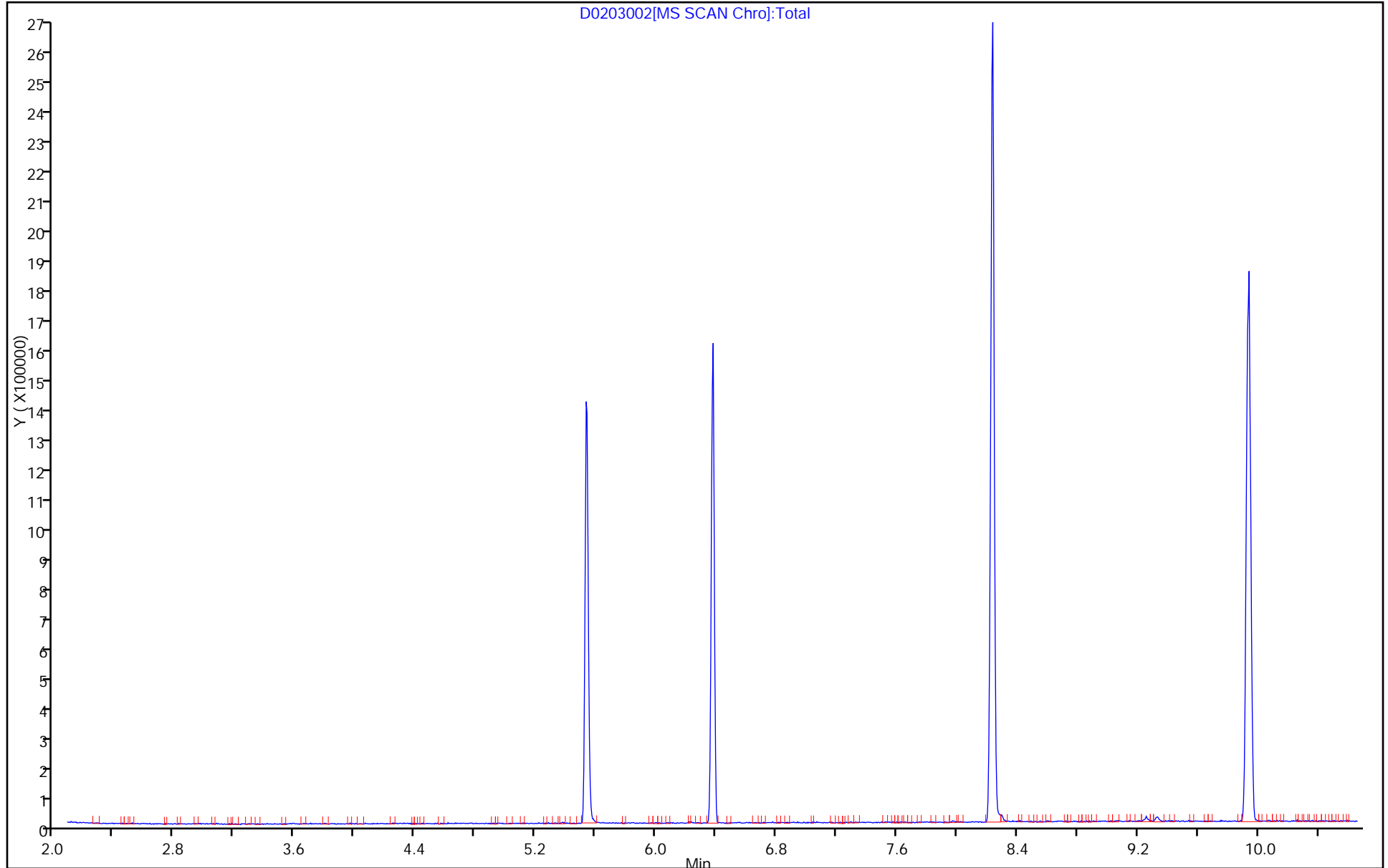
Dil. Factor: 1.0000

ALS Bottle#: 1

Method: BNA\_CH732

Limit Group: BNA 8270D ICAL

Column: Rxi-5SiIMS (0.32 mm)



TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CH732\20150203-5518.b\D0203002.D  
Injection Date: 03-Feb-2015 05:37:30 Instrument ID: CH732  
Lims ID: DFTPP  
Client ID:  
Operator ID: 003200 ALS Bottle#: 1 Worklist Smp#: 2  
Injection Vol: 2.0 ul Dil. Factor: 1.0000  
Method: BNA\_CH732 Limit Group: BNA 8270D ICAL

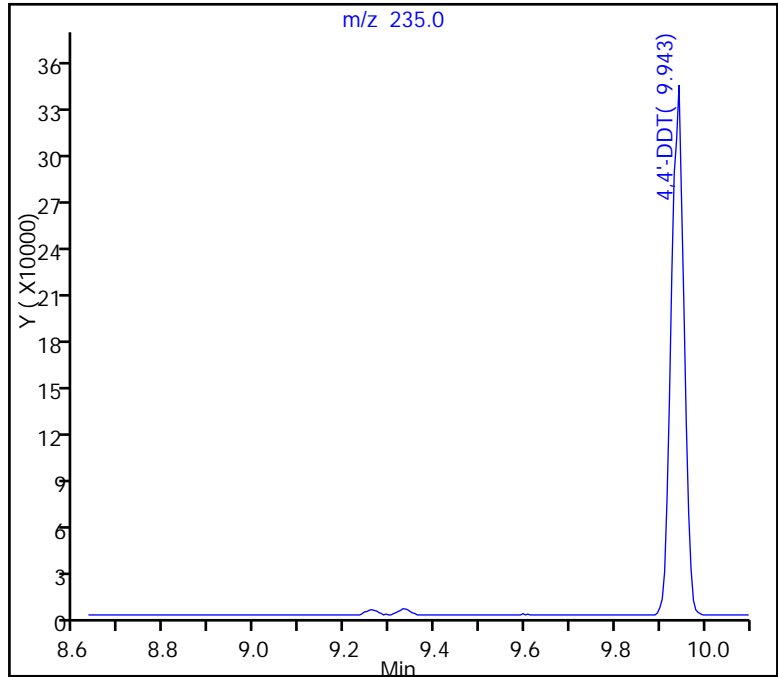
194 4,4'-DDT, Detector: MS SCAN

SW-846 Method

%Breakdown =  
(Area Breakdown Cpnds/  
Total Area Breakdown Cpnds) \* 100

194 4,4'-DDT, Area = 677011  
192 4,4'-DDE, Area = 0  
193 4,4'-DDD, Area = 0

%Breakdown: 0.00%, Max Limit: 20.00%  
Passed



TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CH732\20150203-5518.b\D0203002.D  
Injection Date: 03-Feb-2015 05:37:30 Instrument ID: CH732  
Lims ID: DFTPP  
Client ID:  
Operator ID: 003200 ALS Bottle#: 1 Worklist Smp#: 2  
Injection Vol: 2.0 ul Dil. Factor: 1.0000  
Method: BNA\_CH732 Limit Group: BNA 8270D ICAL

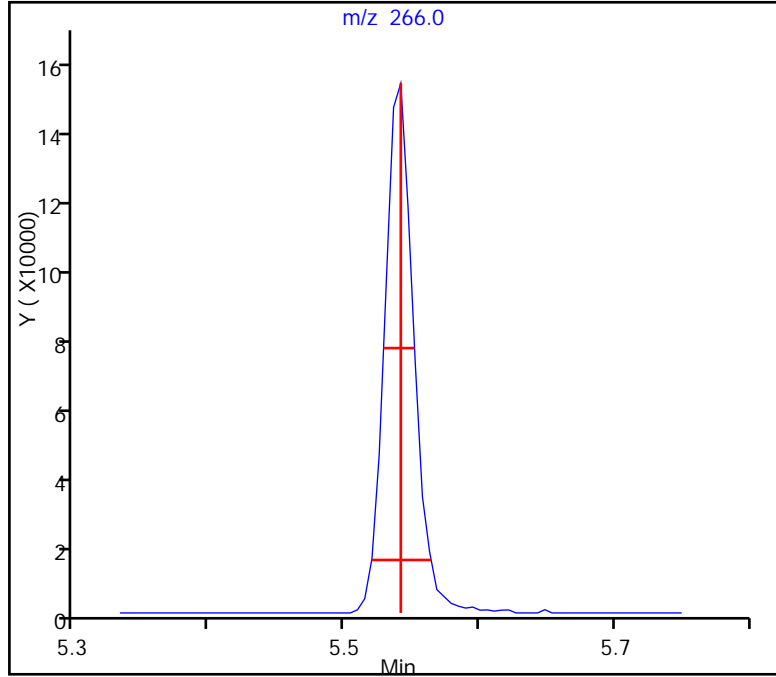
189 Pentachlorophenol\_T, Detector: MS SCAN

Peak Tailing Factor =  
BackWidth/FrontWidth @ 10% Peak Height

Back Width = 0.023 (min.)  
Front Width = 0.022 (min.)

Tailing Factor = 1.0, Max. Tailing < 2.00  
Passed

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TestAmerica Pittsburgh

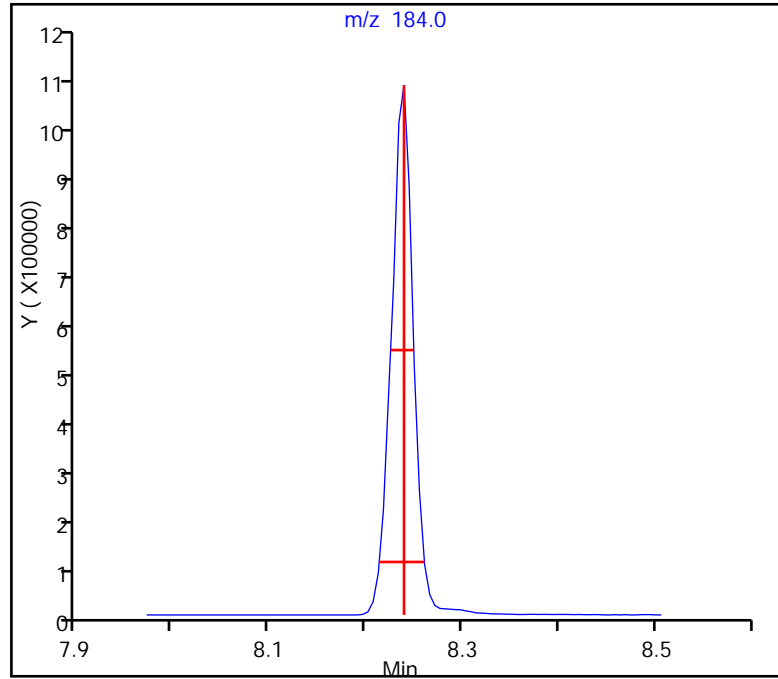
Data File: \\PITCHROM\ChromData\CH732\20150203-5518.b\D0203002.D  
Injection Date: 03-Feb-2015 05:37:30 Instrument ID: CH732  
Lims ID: DFTPP  
Client ID:  
Operator ID: 003200 ALS Bottle#: 1 Worklist Smp#: 2  
Injection Vol: 2.0 ul Dil. Factor: 1.0000  
Method: BNA\_CH732 Limit Group: BNA 8270D ICAL  
191 Benzidine\_T, Detector: MS SCAN

Peak Tailing Factor =  
BackWidth/FrontWidth @ 10% Peak Height

Back Width = 0.021 (min.)  
Front Width = 0.026 (min.)

Tailing Factor = 0.8, Max. Tailing < 2.00  
Passed

-----



TestAmerica Pittsburgh  
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CH732\20150520-7021.b\D052N002.D  
 Lims ID: DFTPP  
 Client ID:  
 Sample Type: DFTPP  
 Inject. Date: 20-May-2015 13:52:30 ALS Bottle#: 1 Worklist Smp#: 2  
 Injection Vol: 2.0 ul Dil. Factor: 1.0000  
 Sample Info: 180-0007021-002  
 Misc. Info.: DFTPP  
 Operator ID: 003200 Instrument ID: CH732  
 Method: \\PITCHROM\ChromData\CH732\20150520-7021.b\BNA\_CH732.m  
 Limit Group: BNA 8270D ICAL  
 Last Update: 21-May-2015 02:16:02 Calib Date: 18-Mar-2015 11:54:30  
 Integrator: RTE ID Type: Deconvolution ID  
 Quant Method: Internal Standard Quant By: Initial Calibration  
 Last ICal File: \\PITCHROM\ChromData\CH732\20150318-6063.b\D0318011.D  
 Column 1 : Rxi-5SiIMS ( 0.32 mm) Det: MS SCAN  
 Process Host: XAWRK048

First Level Reviewer: piccolinov Date: 20-May-2015 14:30:34

| Compound                | Sig | RT (min.) | Adj RT (min.) | Dlt RT (min.) | Q  | Response | Cal Amt ng | OnCol Amt ng | Flags |
|-------------------------|-----|-----------|---------------|---------------|----|----------|------------|--------------|-------|
| 189 Pentachlorophenol_T | 266 | 5.616     | 5.616         | 0.000         | 92 | 212867   | NR         | NR           |       |
| 190 DFTPP               |     |           |               |               |    |          |            |              |       |
| 191 Benzidine_T         | 184 | 8.261     | 8.261         | 0.000         | 99 | 1716558  | NR         | NR           |       |
| 192 4,4'-DDE            | 246 |           | 8.725         |               |    |          |            | ND           |       |
| 193 4,4'-DDD            | 235 | 9.340     | 9.340         | 0.000         | 92 | 8330     |            | NR           |       |
| 194 4,4'-DDT            | 235 | 9.933     | 9.933         | 0.000         | 97 | 774368   | NR         | NR           |       |

QC Flag Legend

Processing Flags  
 NR - Missing Quant Standard

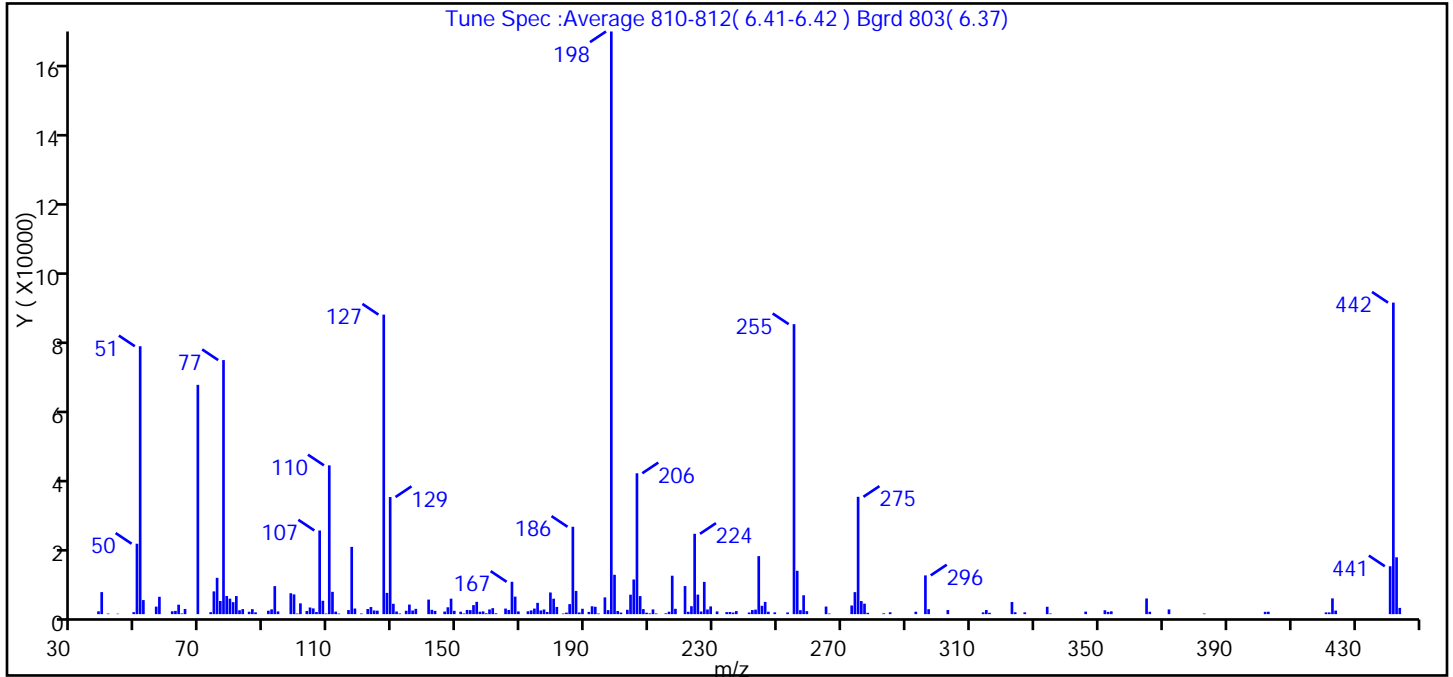
Reagents:

SVDFTPP50i\_00022 Amount Added: 1.00 Units: mL

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CH732\20150520-7021.b\D052N002.D  
 Injection Date: 20-May-2015 13:52:30 Instrument ID: CH732  
 Lims ID: DFTPP  
 Client ID:  
 Operator ID: 003200 ALS Bottle#: 1 Worklist Smp#: 2  
 Injection Vol: 2.0 ul Dil. Factor: 1.0000  
 Method: BNA\_CH732 Limit Group: BNA 8270D ICAL  
 Tune Method: DFTPP Method 8270

190 DFTPP



| m/z | Ion Abundance Criteria             | % Relative Abundance |
|-----|------------------------------------|----------------------|
| 198 | Base peak, 100% relative abundance | 100.0                |
| 51  | 30-60% of mass 198                 | 46.0                 |
| 68  | <2% of mass 69                     | 0.0 (0.0)            |
| 69  | Present                            | 39.4                 |
| 70  | <2% of mass 69                     | 0.0 (0.0)            |
| 127 | 40-60% of mass 198                 | 51.4                 |
| 197 | <1% of mass 198                    | 0.7                  |
| 199 | 5-9% of mass 198                   | 6.8                  |
| 275 | 10-30% of mass 198                 | 20.1                 |
| 365 | >1% of mass 198                    | 2.7                  |
| 441 | Present but less than mass 443     | 8.2 (84.3)           |
| 442 | >40% of mass 198                   | 53.5                 |
| 443 | 17-23% of mass 442                 | 9.8 (18.2)           |

Data File: \\PITCHROM\ChromData\CH732\20150520-7021.b\D052N002.D\BNA\_CH732.rslt\spectra.d  
Injection Date: 20-May-2015 13:52:30  
Spectrum: Tune Spec :Average 810-812( 6.41-6.42 ) Bgrd 803( 6.37)  
Base Peak: 198.00  
Minimum % Base Peak: 0  
Number of Points: 200

| m/z   | Y     | m/z    | Y     | m/z    | Y      | m/z    | Y     |
|-------|-------|--------|-------|--------|--------|--------|-------|
| 38.00 | 797   | 117.00 | 18880 | 181.00 | 2023   | 245.00 | 2343  |
| 39.00 | 6188  | 118.00 | 1576  | 183.00 | 177    | 246.00 | 3438  |
| 41.00 | 166   | 120.00 | 177   | 184.00 | 436    | 247.00 | 678   |
| 44.00 | 122   | 122.00 | 1449  | 185.00 | 2812   | 249.00 | 495   |
| 49.00 | 561   | 123.00 | 1996  | 186.00 | 24528  | 253.00 | 480   |
| 50.00 | 19768 | 124.00 | 1033  | 187.00 | 6516   | 255.00 | 81416 |
| 51.00 | 75216 | 125.00 | 978   | 188.00 | 477    | 256.00 | 12174 |
| 52.00 | 3944  | 127.00 | 84096 | 189.00 | 1507   | 257.00 | 1117  |
| 56.00 | 2115  | 128.00 | 5969  | 191.00 | 619    | 258.00 | 5305  |
| 57.00 | 4875  | 129.00 | 32880 | 192.00 | 2215   | 259.00 | 842   |
| 61.00 | 805   | 130.00 | 2908  | 193.00 | 2067   | 265.00 | 2136  |
| 62.00 | 913   | 131.00 | 736   | 194.00 | 183    | 266.00 | 169   |
| 63.00 | 2657  | 132.00 | 179   | 196.00 | 4705   | 273.00 | 2428  |
| 64.00 | 180   | 134.00 | 951   | 197.00 | 1126   | 274.00 | 6179  |
| 65.00 | 1456  | 135.00 | 2685  | 198.00 | 163584 | 275.00 | 32944 |
| 69.00 | 64376 | 136.00 | 1021  | 199.00 | 11043  | 276.00 | 3671  |
| 73.00 | 554   | 137.00 | 1485  | 200.00 | 875    | 277.00 | 2939  |
| 74.00 | 6390  | 141.00 | 4087  | 201.00 | 438    | 278.00 | 372   |
| 75.00 | 10199 | 142.00 | 1217  | 203.00 | 1223   | 283.00 | 227   |
| 76.00 | 3690  | 143.00 | 922   | 204.00 | 5464   | 285.00 | 519   |
| 77.00 | 71328 | 146.00 | 733   | 205.00 | 9732   | 293.00 | 677   |
| 78.00 | 5099  | 147.00 | 1924  | 206.00 | 39552  | 296.00 | 10881 |
| 79.00 | 4343  | 148.00 | 4348  | 207.00 | 5068   | 297.00 | 1389  |
| 80.00 | 3368  | 149.00 | 932   | 208.00 | 1420   | 303.00 | 1153  |
| 81.00 | 5079  | 151.00 | 682   | 209.00 | 404    | 314.00 | 496   |
| 82.00 | 1094  | 152.00 | 174   | 210.00 | 211    | 315.00 | 1152  |
| 83.00 | 1416  | 153.00 | 1180  | 211.00 | 1335   | 316.00 | 380   |
| 85.00 | 673   | 154.00 | 1132  | 212.00 | 190    | 323.00 | 3412  |
| 86.00 | 1412  | 155.00 | 2538  | 215.00 | 229    | 324.00 | 525   |
| 87.00 | 508   | 156.00 | 3454  | 216.00 | 687    | 327.00 | 503   |
| 91.00 | 966   | 157.00 | 684   | 217.00 | 10791  | 334.00 | 2074  |
| 92.00 | 1350  | 158.00 | 775   | 218.00 | 1499   | 335.00 | 174   |
| 93.00 | 7866  | 159.00 | 243   | 221.00 | 7887   | 346.00 | 712   |

Data File: \\PITCHROM\ChromData\CH732\20150520-7021.b\D052N002.D\BNA\_CH732.rsl\spectra.d

Injection Date: 20-May-2015 13:52:30

Spectrum: Tune Spec :Average 810-812( 6.41-6.42 ) Bgrd 803( 6.37)

Base Peak: 198.00

Minimum % Base Peak: 0

Number of Points: 200

| m/z    | Y     | m/z    | Y    | m/z    | Y     | m/z    | Y     |
|--------|-------|--------|------|--------|-------|--------|-------|
| 94.00  | 766   | 160.00 | 1317 | 222.00 | 663   | 352.00 | 1089  |
| 98.00  | 5870  | 161.00 | 1679 | 223.00 | 2225  | 353.00 | 640   |
| 99.00  | 5545  | 162.00 | 235  | 224.00 | 22552 | 354.00 | 792   |
| 100.00 | 171   | 165.00 | 1566 | 225.00 | 5485  | 365.00 | 4399  |
| 101.00 | 3029  | 166.00 | 1182 | 226.00 | 742   | 366.00 | 683   |
| 103.00 | 876   | 167.00 | 9081 | 227.00 | 9054  | 372.00 | 1323  |
| 104.00 | 1861  | 168.00 | 4919 | 228.00 | 1312  | 383.00 | 172   |
| 105.00 | 1614  | 169.00 | 766  | 229.00 | 2168  | 402.00 | 652   |
| 106.00 | 587   | 172.00 | 799  | 231.00 | 762   | 403.00 | 680   |
| 107.00 | 23488 | 173.00 | 1052 | 234.00 | 573   | 421.00 | 497   |
| 108.00 | 3755  | 174.00 | 1566 | 235.00 | 607   | 422.00 | 491   |
| 109.00 | 178   | 175.00 | 3165 | 236.00 | 448   | 423.00 | 4423  |
| 110.00 | 41776 | 176.00 | 1038 | 237.00 | 857   | 424.00 | 998   |
| 111.00 | 6264  | 177.00 | 1313 | 241.00 | 465   | 441.00 | 13448 |
| 112.00 | 714   | 178.00 | 611  | 242.00 | 1146  | 442.00 | 87464 |
| 113.00 | 168   | 179.00 | 6080 | 243.00 | 1268  | 443.00 | 15958 |
| 116.00 | 1149  | 180.00 | 4330 | 244.00 | 16289 | 444.00 | 1755  |



TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CH732\20150520-7021.b\D052N002.D

Injection Date: 20-May-2015 13:52:30 Instrument ID: CH732

Lims ID: DFTPP

Operator ID: 003200

Worklist Smp#: 2

Client ID:

Injection Vol: 2.0 ul

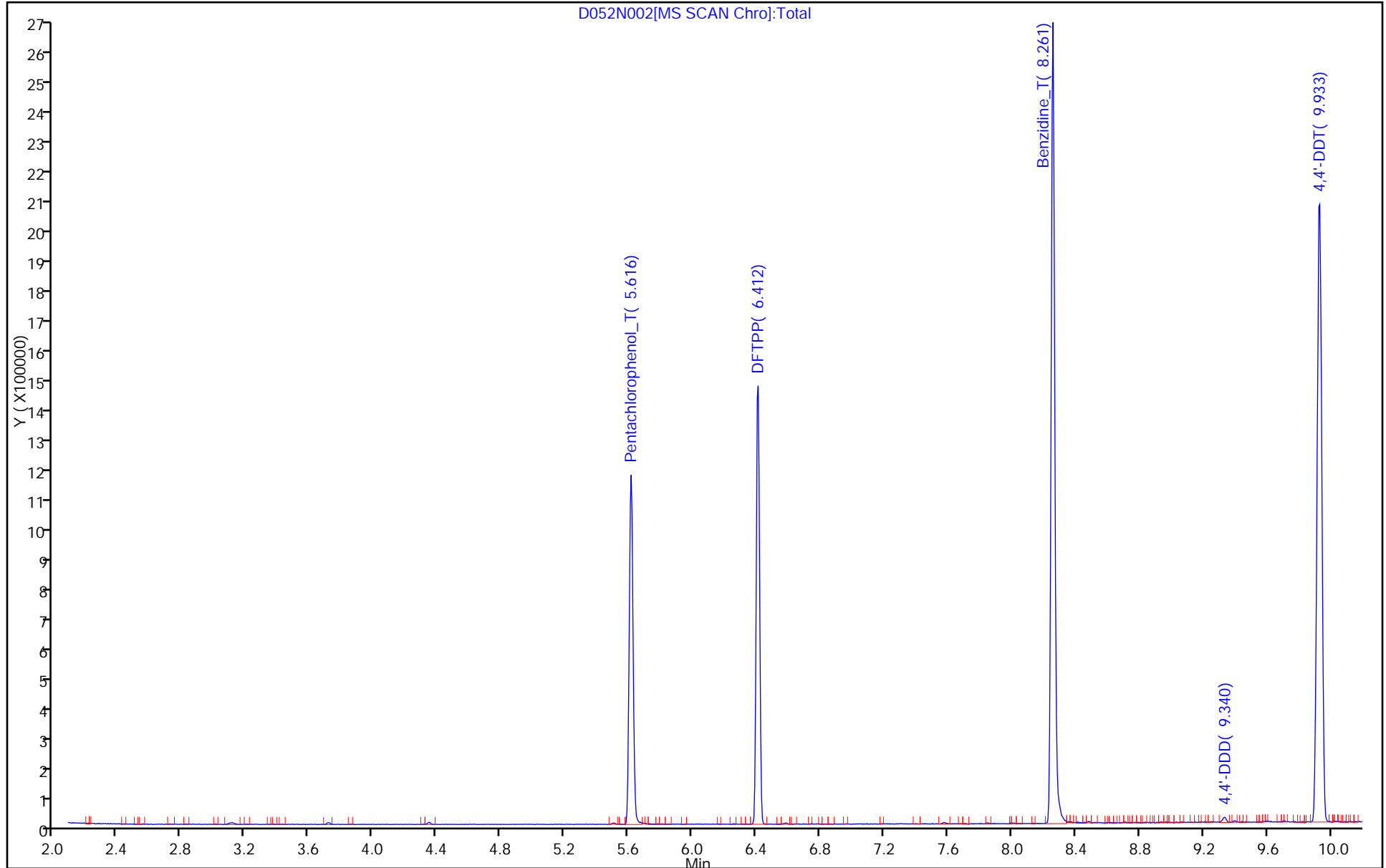
Dil. Factor: 1.0000

ALS Bottle#: 1

Method: BNA\_CH732

Limit Group: BNA 8270D ICAL

Column: Rxi-5SiIMS (0.32 mm)



TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CH732\20150520-7021.b\D052N002.D  
Injection Date: 20-May-2015 13:52:30 Instrument ID: CH732  
Lims ID: DFTPP  
Client ID:  
Operator ID: 003200 ALS Bottle#: 1 Worklist Smp#: 2  
Injection Vol: 2.0 ul Dil. Factor: 1.0000  
Method: BNA\_CH732 Limit Group: BNA 8270D ICAL

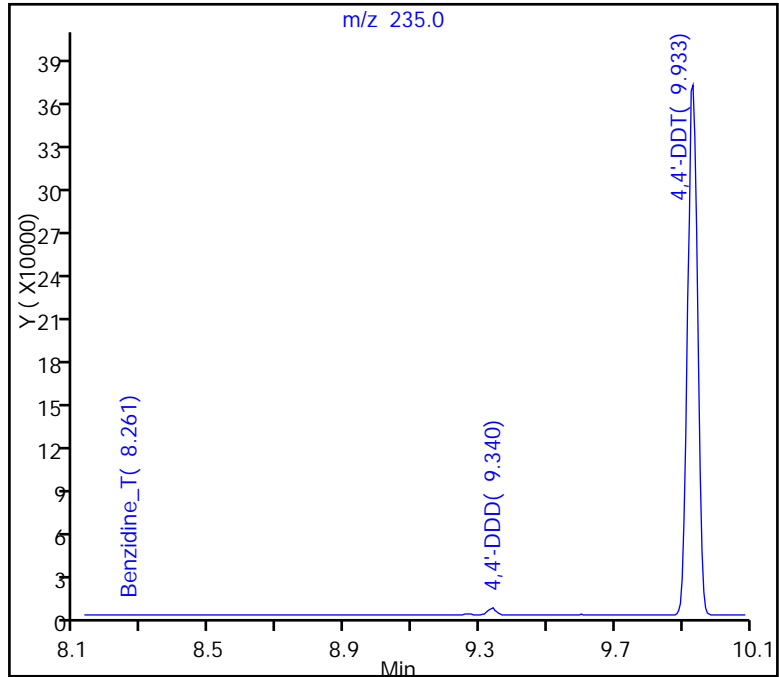
194 4,4'-DDT, Detector: MS SCAN

SW-846 Method

%Breakdown =  
(Area Breakdown Cpnds/  
Total Area Breakdown Cpnds) \* 100

194 4,4'-DDT, Area = 774368  
192 4,4'-DDE, Area = 0  
193 4,4'-DDD, Area = 8330

%Breakdown: 1.06%, Max Limit: 20.00%  
Passed



TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CH732\20150520-7021.b\D052N002.D  
Injection Date: 20-May-2015 13:52:30 Instrument ID: CH732  
Lims ID: DFTPP  
Client ID:  
Operator ID: 003200 ALS Bottle#: 1 Worklist Smp#: 2  
Injection Vol: 2.0 ul Dil. Factor: 1.0000  
Method: BNA\_CH732 Limit Group: BNA 8270D ICAL

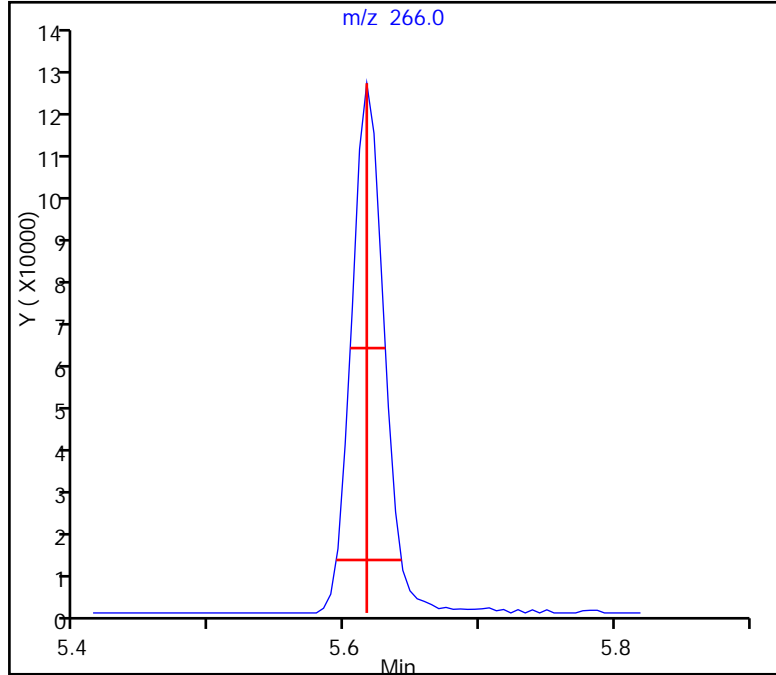
189 Pentachlorophenol\_T, Detector: MS SCAN

Peak Tailing Factor =  
BackWidth/FrontWidth @ 10% Peak Height

Back Width = 0.026 (min.)  
Front Width = 0.023 (min.)

Tailing Factor = 1.1, Max. Tailing < 2.00  
Passed

-----



TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CH732\20150520-7021.b\D052N002.D  
Injection Date: 20-May-2015 13:52:30 Instrument ID: CH732  
Lims ID: DFTPP  
Client ID:  
Operator ID: 003200 ALS Bottle#: 1 Worklist Smp#: 2  
Injection Vol: 2.0 ul Dil. Factor: 1.0000  
Method: BNA\_CH732 Limit Group: BNA 8270D ICAL

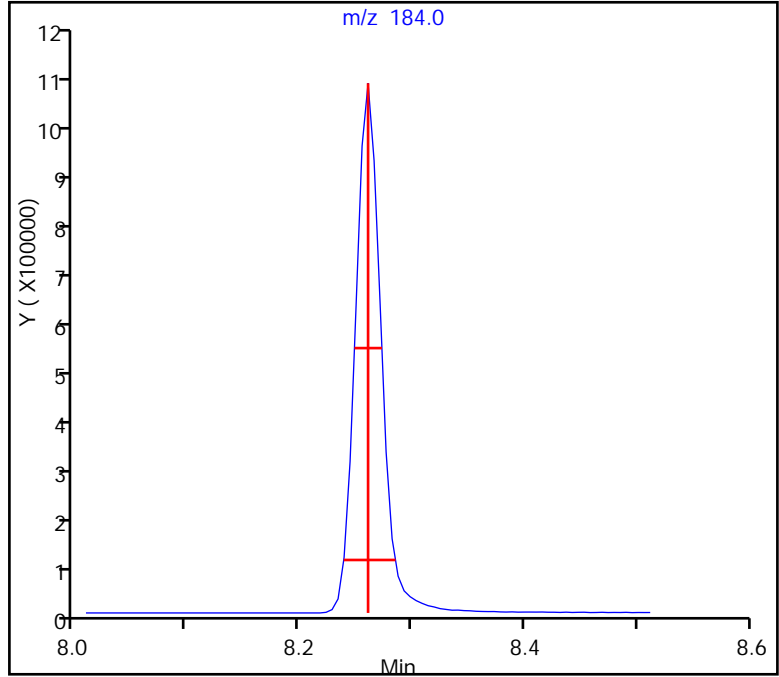
191 Benzidine\_T, Detector: MS SCAN

Peak Tailing Factor =  
BackWidth/FrontWidth @ 10% Peak Height

Back Width = 0.024 (min.)  
Front Width = 0.022 (min.)

Tailing Factor = 1.1, Max. Tailing < 2.00  
Passed

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FORM I  
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-43791-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: \_\_\_\_\_ Lab Sample ID: MB 180-141152/1-A  
 Matrix: Water Lab File ID: D052N005.D  
 Analysis Method: 8270D LL Date Collected: \_\_\_\_\_  
 Extract. Method: 3520C Date Extracted: 05/11/2015 10:21  
 Sample wt/vol: 250 (mL) Date Analyzed: 05/20/2015 14:54  
 Con. Extract Vol.: 0.25 (mL) Dilution Factor: 1  
 Injection Volume: 2 (uL) Level: (low/med) Low  
 % Moisture: \_\_\_\_\_ GPC Cleanup: (Y/N) N  
 Analysis Batch No.: 142205 Units: ug/L

| CAS NO.  | COMPOUND NAME               | RESULT | Q | RL   | MDL   |
|----------|-----------------------------|--------|---|------|-------|
| 120-12-7 | Anthracene                  | ND     |   | 0.20 | 0.019 |
| 56-55-3  | Benzo[a]anthracene          | ND     |   | 0.20 | 0.037 |
| 205-99-2 | Benzo[b]fluoranthene        | ND     |   | 0.20 | 0.049 |
| 207-08-9 | Benzo[k]fluoranthene        | ND     |   | 0.20 | 0.030 |
| 191-24-2 | Benzo[g,h,i]perylene        | ND     |   | 0.20 | 0.029 |
| 50-32-8  | Benzo[a]pyrene              | ND     |   | 0.20 | 0.028 |
| 218-01-9 | Chrysene                    | ND     |   | 0.20 | 0.031 |
| 53-70-3  | Dibenz(a,h)anthracene       | ND     |   | 0.20 | 0.027 |
| 206-44-0 | Fluoranthene                | ND     |   | 0.20 | 0.021 |
| 86-73-7  | Fluorene                    | ND     |   | 0.20 | 0.024 |
| 193-39-5 | Indeno[1,2,3-cd]pyrene      | ND     |   | 0.20 | 0.043 |
| 85-01-8  | Phenanthrene                | ND     |   | 0.20 | 0.042 |
| 129-00-0 | Pyrene                      | ND     |   | 0.20 | 0.023 |
| 83-32-9  | Acenaphthene                | ND     |   | 0.20 | 0.029 |
| 208-96-8 | Acenaphthylene              | ND     |   | 0.20 | 0.022 |
| 91-20-3  | Naphthalene                 | ND     |   | 0.20 | 0.023 |
| 117-81-7 | Bis(2-ethylhexyl) phthalate | ND     |   | 2.0  | 0.44  |

| CAS NO.   | SURROGATE                   | %REC | Q | LIMITS |
|-----------|-----------------------------|------|---|--------|
| 4165-60-0 | Nitrobenzene-d5 (Surr)      | 61   |   | 27-114 |
| 321-60-8  | 2-Fluorobiphenyl            | 54   |   | 28-109 |
| 1718-51-0 | Terphenyl-d14 (Surr)        | 69   |   | 20-118 |
| 367-12-4  | 2-Fluorophenol (Surr)       | 65   |   | 20-105 |
| 118-79-6  | 2,4,6-Tribromophenol (Surr) | 60   |   | 30-118 |
| 4165-62-2 | Phenol-d5 (Surr)            | 66   |   | 25-105 |

TestAmerica Pittsburgh  
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CH732\20150520-7021.b\D052N005.D  
 Lims ID: MB 180-141152/1-A  
 Client ID:  
 Sample Type: MB  
 Inject. Date: 20-May-2015 14:54:30 ALS Bottle#: 4 Worklist Smp#: 5  
 Injection Vol: 2.0 ul Dil. Factor: 1.0000  
 Sample Info: 180-0007021-005  
 Operator ID: 003200 Instrument ID: CH732  
 Method: \\PITCHROM\ChromData\CH732\20150520-7021.b\BNA\_CH732.m  
 Limit Group: BNA 8270D ICAL  
 Last Update: 21-May-2015 02:16:03 Calib Date: 18-Mar-2015 11:54:30  
 Integrator: RTE ID Type: Deconvolution ID  
 Quant Method: Internal Standard Quant By: Initial Calibration  
 Last ICal File: \\PITCHROM\ChromData\CH732\20150318-6063.b\D0318011.D  
 Column 1 : Rxi-5SilMS ( 0.32 mm) Det: MS SCAN  
 Process Host: XAWRK048

First Level Reviewer: piccolinov

Date: 21-May-2015 02:04:19

| Compound                     | Sig | RT (min.) | Adj RT (min.) | Dlt RT (min.) | Q   | Response | Cal Amt ng | OnCol Amt ng | Flags |
|------------------------------|-----|-----------|---------------|---------------|-----|----------|------------|--------------|-------|
| * 1 1,4-Dichlorobenzene-d4   | 152 | 6.196     | 6.196         | 0.000         | 98  | 74327    | 8.00       | 8.00         |       |
| * 2 Naphthalene-d8           | 136 | 7.483     | 7.478         | 0.005         | 100 | 376248   | 8.00       | 8.00         |       |
| * 3 Acenaphthene-d10         | 164 | 9.193     | 9.188         | 0.005         | 91  | 293239   | 8.00       | 8.00         |       |
| * 4 Phenanthrene-d10         | 188 | 10.641    | 10.630        | 0.011         | 97  | 577225   | 8.00       | 8.00         |       |
| * 5 Chrysene-d12             | 240 | 14.407    | 14.396        | 0.011         | 97  | 527528   | 8.00       | 8.00         |       |
| * 6 Perylene-d12             | 264 | 17.308    | 17.287        | 0.022         | 96  | 436735   | 8.00       | 8.00         |       |
| \$ 7 2-Fluorophenol          | 112 | 4.759     | 4.754         | 0.005         | 92  | 252243   | 40.0       | 26.2         |       |
| \$ 8 Phenol-d5               | 99  | 5.822     | 5.817         | 0.005         | 93  | 341215   | 40.0       | 26.3         |       |
| \$ 9 Nitrobenzene-d5         | 82  | 6.757     | 6.752         | 0.005         | 95  | 388273   | 40.0       | 24.6         |       |
| \$ 10 2-Fluorobiphenyl       | 172 | 8.525     | 8.520         | 0.005         | 99  | 1046420  | 40.0       | 21.7         |       |
| \$ 11 2,4,6-Tribromophenol   | 330 | 9.952     | 9.946         | 0.006         | 87  | 151592   | 40.0       | 23.9         |       |
| \$ 12 Terphenyl-d14          | 244 | 12.569    | 12.559        | 0.010         | 99  | 1577650  | 40.0       | 27.5         |       |
| 13 1,4-Dioxane               | 88  |           | 1.596         |               |     |          |            |              | ND    |
| 14 N-Nitrosodimethylamine    | 74  |           | 2.189         |               |     |          |            |              | ND    |
| 15 Pyridine                  | 79  |           | 2.275         |               |     |          |            |              | ND    |
| 17 Dibromoacetonitrile       | 120 |           | 3.590         |               |     |          |            |              | ND    |
| 18 2-Picoline                | 93  |           | 4.030         |               |     |          |            |              | ND    |
| 19 N-Nitrosomethylethylamine | 88  |           | 4.233         |               |     |          |            |              | ND    |
| 21 Methyl methanesulfonate   | 80  |           | 4.497         |               |     |          |            |              | ND    |
| 20 Acrylamide                | 71  | 4.759     | 4.597         | 0.163         | 26  | 822      |            |              | NC    |
| 22 Phenylmercaptan           | 110 | 4.759     | 5.000         | -0.241        | 44  | 1031     |            |              | NC    |
| 23 N-Nitrosodiethylamine     | 102 |           | 5.115         |               |     |          |            |              | ND    |
| 24 Ethyl methanesulfonate    | 79  |           | 5.256         |               |     |          |            |              | ND    |
| 25 Benzaldehyde              | 77  |           | 5.726         |               |     |          |            |              | ND    |
| 28 Pentachloroethane         | 167 |           | 5.806         |               |     |          |            |              | ND    |
| 26 Phenol                    | 94  |           | 5.833         |               |     |          |            |              | ND    |
| 27 Aniline                   | 93  |           | 5.843         |               |     |          |            |              | ND    |
| 29 Bis(2-chloroethyl)ether   | 93  |           | 5.913         |               |     |          |            |              | ND    |
| 30 2-Chlorophenol            | 128 |           | 5.977         |               |     |          |            |              | ND    |
| 31 n-Decane                  | 43  |           | 6.041         |               |     |          |            |              | ND    |
| 32 1,3-Dichlorobenzene       | 146 |           | 6.137         |               |     |          |            |              | ND    |
| 33 1,4-Dichlorobenzene       | 146 |           | 6.212         |               |     |          |            |              | ND    |

| Compound                      | Sig | RT (min.) | Adj RT (min.) | Dlt RT (min.) | Q  | Response | Cal Amt ng | OnCol Amt ng | Flags |
|-------------------------------|-----|-----------|---------------|---------------|----|----------|------------|--------------|-------|
| 34 Benzyl alcohol             | 108 |           | 6.335         |               |    |          |            | ND           |       |
| 35 1,2-Dichlorobenzene        | 146 |           | 6.372         |               |    |          |            | ND           |       |
| 36 2-Methylphenol             | 108 |           | 6.452         |               |    |          |            | ND           |       |
| 37 Indene                     | 116 |           | 6.463         |               |    |          |            | ND           |       |
| 38 2,2'-oxybis[1-chloropropan | 45  |           | 6.479         |               |    |          |            | ND           |       |
| 39 N-Nitrosopyrrolidine       | 100 |           | 6.570         |               |    |          |            | ND           |       |
| 40 Acetophenone               | 105 |           | 6.602         |               |    |          |            | ND           |       |
| 41 N-Nitrosodi-n-propylamine  | 70  |           | 6.602         |               |    |          |            | ND           |       |
| 42 4-Methylphenol             | 108 |           | 6.607         |               |    |          |            | ND           |       |
| 43 N-Nitrosomorpholine        | 116 |           | 6.632         |               |    |          |            | ND           |       |
| 44 2-Toluidine                | 106 |           | 6.664         |               |    |          |            | ND           |       |
| 45 Hexachloroethane           | 117 |           | 6.720         |               |    |          |            | ND           |       |
| 46 Nitrobenzene               | 77  |           | 6.773         |               |    |          |            | ND           |       |
| 47 N-Nitrosopiperidine        | 114 |           | 6.926         |               |    |          |            | ND           |       |
| 48 Isophorone                 | 82  |           | 7.008         |               |    |          |            | ND           |       |
| 49 2-Nitrophenol              | 139 |           | 7.099         |               |    |          |            | ND           |       |
| 50 2,4-Dimethylphenol         | 107 |           | 7.131         |               |    |          |            | ND           |       |
| 51 o,o',o"-Triethylphosphoro  | 198 |           | 7.182         |               |    |          |            | ND           |       |
| 52 Benzoic acid               | 122 |           | 7.190         |               |    |          |            | ND           |       |
| 53 Bis(2-chloroethoxy)methane | 93  |           | 7.216         |               |    |          |            | ND           |       |
| 54 2,4-Dichlorophenol         | 162 |           | 7.334         |               |    |          |            | ND           |       |
| 55 alpha,alpha-Dimethyl phene | 58  |           | 7.353         |               |    |          |            | ND           |       |
| 56 1,2,4-Trichlorobenzene     | 180 |           | 7.419         |               |    |          |            | ND           |       |
| 58 Naphthalene                | 128 |           | 7.500         |               |    |          |            | ND           |       |
| 61 Hexachloropropene          | 213 |           | 7.526         |               |    |          |            | ND           |       |
| 59 4-Chloroaniline            | 127 |           | 7.542         |               |    |          |            | ND           |       |
| 60 2,6-Dichlorophenol         | 162 |           | 7.558         |               |    |          |            | ND           |       |
| 62 Hexachlorobutadiene        | 225 |           | 7.628         |               |    |          |            | ND           |       |
| 63 Quinoline                  | 129 |           | 7.786         |               |    |          |            | ND           |       |
| 65 N-Nitrosodi-n-butylamine   | 84  |           | 7.818         |               |    |          |            | ND           |       |
| 66 p-Phenylene diamine        | 108 | 7.483     | 7.834         | -0.351        | 49 | 41574    |            | NC           |       |
| 64 Caprolactam                | 113 |           | 7.852         |               |    |          |            | ND           |       |
| 67 4-Chloro-3-methylphenol    | 107 |           | 8.002         |               |    |          |            | ND           |       |
| 68 Safrole, Total             | 162 |           | 8.026         |               |    |          |            | ND           |       |
| 69 2-Methylnaphthalene        | 142 |           | 8.173         |               |    |          |            | ND           |       |
| 71 1-Methylnaphthalene        | 142 |           | 8.269         |               |    |          |            | ND           |       |
| 72 Hexachlorocyclopentadiene  | 237 |           | 8.333         |               |    |          |            | ND           |       |
| 73 1,2,4,5-Tetrachlorobenzene | 216 |           | 8.338         |               |    |          |            | ND           |       |
| 74 2,4,6-Trichlorophenol      | 196 |           | 8.440         |               |    |          |            | ND           |       |
| 75 2,4,5-Trichlorophenol      | 196 |           | 8.477         |               |    |          |            | ND           |       |
| 180 Isosafrole                | 162 |           | 8.514         |               |    |          |            | ND           |       |
| 78 1-Chloronaphthalene        | 162 |           | 8.616         |               |    |          |            | ND           |       |
| 76 1,1'-Biphenyl              | 154 |           | 8.621         |               |    |          |            | ND           |       |
| 77 2-Chloronaphthalene        | 162 |           | 8.648         |               |    |          |            | ND           |       |
| 79 2-Nitroaniline             | 65  |           | 8.734         |               |    |          |            | ND           |       |
| 80 1,4-Naphthoquinone         | 158 | 8.520     | 8.750         | -0.230        | 44 | 2077     |            | NC           |       |
| 81 1,4-Dinitrobenzene         | 168 | 8.525     | 8.769         | -0.244        | 31 | 13870    |            | NC           |       |
| 82 Dimethyl phthalate         | 163 |           | 8.889         |               |    |          |            | ND           |       |
| 83 1,3-Dinitrobenzene         | 168 |           | 8.926         |               |    |          |            | ND           |       |
| 84 2,6-Dinitrotoluene         | 165 |           | 8.953         |               |    |          |            | ND           |       |
| 85 Acenaphthylene             | 152 |           | 9.054         |               |    |          |            | ND           |       |
| 86 3-Nitroaniline             | 138 |           | 9.124         |               |    |          |            | ND           |       |

| Compound                       | Sig | RT (min.) | Adj RT (min.) | Dlt RT (min.) | Q  | Response | Cal Amt ng | OnCol Amt ng | Flags |
|--------------------------------|-----|-----------|---------------|---------------|----|----------|------------|--------------|-------|
| 87 2,4-Dinitrophenol           | 184 |           | 9.220         |               |    |          |            | ND           |       |
| 88 Acenaphthene                | 153 |           | 9.220         |               |    |          |            | ND           |       |
| 89 4-Nitrophenol               | 109 |           | 9.262         |               |    |          |            | ND           |       |
| 92 Pentachlorobenzene          | 250 |           | 9.294         |               |    |          |            | ND           |       |
| 94 1-Naphthylamine             | 143 |           | 9.340         |               |    |          |            | ND           |       |
| 91 2,4-Dinitrotoluene          | 165 |           | 9.343         |               |    |          |            | ND           |       |
| 93 Dibenzofuran                | 168 |           | 9.385         |               |    |          |            | ND           |       |
| 95 2,3,5,6-Tetrachlorophenol   | 232 |           | 9.455         |               |    |          |            | ND           |       |
| 96 2,3,4,6-Tetrachlorophenol   | 232 |           | 9.498         |               |    |          |            | ND           |       |
| 97 2-Naphthylamine             | 143 |           | 9.524         |               |    |          |            | ND           |       |
| 98 Diethyl phthalate           | 149 |           | 9.556         |               |    |          |            | ND           |       |
| 99 Hexadecane                  | 57  |           | 9.562         |               |    |          |            | ND           |       |
| 102 N-Nitro-o-toluidine        | 152 | 9.946     | 9.586         | 0.360         | 40 | 2858     |            |              | NC    |
| 100 4-Chlorophenyl phenyl ethe | 204 |           | 9.695         |               |    |          |            | ND           |       |
| 101 4-Nitroaniline             | 138 |           | 9.706         |               |    |          |            | ND           |       |
| 103 Fluorene                   | 166 |           | 9.711         |               |    |          |            | ND           |       |
| 104 4,6-Dinitro-2-methylphenol | 198 |           | 9.738         |               |    |          |            | ND           |       |
| 105 N-Nitrosodiphenylamine     | 169 |           | 9.802         |               |    |          |            | ND           |       |
| 90 1,2-Diphenylhydrazine       | 77  |           | 9.845         |               |    |          |            | ND           |       |
| 107 1,3,5-Trinitrobenzene      | 213 |           | 9.896         |               |    |          |            | ND           |       |
| 108 Phenacetin                 | 108 |           | 9.939         |               |    |          |            | ND           |       |
| 109 Phorate                    | 121 |           | 9.944         |               |    |          |            | ND           |       |
| 111 Dimethoate                 | 87  |           | 10.099        |               |    |          |            | ND           |       |
| 110 4-Bromophenyl phenyl ether | 248 |           | 10.165        |               |    |          |            | ND           |       |
| 112 Hexachlorobenzene          | 284 |           | 10.256        |               |    |          |            | ND           |       |
| 114 4-Aminobiphenyl            | 169 | 9.952     | 10.265        | -0.312        | 54 | 7409     |            |              | NC    |
| 113 Atrazine                   | 200 |           | 10.283        |               |    |          |            | ND           |       |
| 117 Pronamide                  | 173 | 9.946     | 10.297        | -0.351        | 56 | 3983     |            |              | NC    |
| 118 Pentachloronitrobenzene    | 237 |           | 10.302        |               |    |          |            | ND           |       |
| 119 Disulfoton                 | 88  |           | 10.419        |               |    |          |            | ND           |       |
| 116 Pentachlorophenol          | 266 |           | 10.432        |               |    |          |            | ND           |       |
| 115 n-Octadecane               | 57  |           | 10.432        |               |    |          |            | ND           |       |
| 120 Dinoseb                    | 211 |           | 10.545        |               |    |          |            | ND           |       |
| 123 Hexachlorophene TIC        | 198 |           | 10.600        |               |    |          |            | ND           |       |
| 121 Phenanthrene               | 178 |           | 10.657        |               |    |          |            | ND           |       |
| 122 Anthracene                 | 178 |           | 10.710        |               |    |          |            | ND           |       |
| 125 Methyl parathion           | 109 |           | 10.793        |               |    |          |            | ND           |       |
| 124 Carbazole                  | 167 |           | 10.860        |               |    |          |            | ND           |       |
| 126 Di-n-butyl phthalate       | 149 |           | 11.186        |               |    |          |            | ND           |       |
| 127 Ethyl Parathion            | 109 |           | 11.189        |               |    |          |            | ND           |       |
| 128 4-Nitroquinoline-1-oxide   | 190 |           | 11.263        |               |    |          |            | ND           |       |
| 129 Methapyrilene              | 58  |           | 11.317        |               |    |          |            | ND           |       |
| 70 Diphenamid                  | 167 |           | 11.474        |               |    |          |            | ND           |       |
| 106 Diphenylamine              | 167 |           | 11.620        |               |    |          |            | ND           |       |
| 130 Isodrin                    | 193 |           | 11.821        |               |    |          |            | ND           |       |
| 57 Azobenzene                  | 77  |           | 11.869        |               |    |          |            | ND           |       |
| 131 Fluoranthene               | 202 |           | 12.056        |               |    |          |            | ND           |       |
| 132 Benzidine                  | 184 |           | 12.201        |               |    |          |            | ND           |       |
| 134 1,2,3,4 -Tetrachlorobenzen | 216 |           | 12.215        |               |    |          |            | ND           |       |
| 133 Pyrene                     | 202 |           | 12.382        |               |    |          |            | ND           |       |
| 135 p-Dimethylamino azobenzene | 225 | 12.575    | 12.428        | 0.147         | 44 | 9343     |            |              | NC    |
| 136 Chlorobenzilate            | 139 |           | 12.783        |               |    |          |            | ND           |       |



| Compound                       | Sig | RT (min.) | Adj RT (min.) | Dlt RT (min.) | Q  | Response | Cal Amt ng | OnCol Amt ng | Flags |
|--------------------------------|-----|-----------|---------------|---------------|----|----------|------------|--------------|-------|
| 137 Famphur                    | 218 |           | 12.850        |               |    |          |            | ND           |       |
| 139 3,3'-Dimethylbenzidine     | 212 | 12.569    | 12.936        | -0.367        | 56 | 112989   |            |              | NC    |
| 140 Kepone                     | 272 |           | 13.030        |               |    |          |            | ND           |       |
| 138 Butyl benzyl phthalate     | 149 |           | 13.301        |               |    |          |            | ND           |       |
| 141 2-Acetylaminofluorene      | 181 |           | 13.363        |               |    |          |            | ND           |       |
| 142 Thionazin                  | 97  |           | 13.789        |               |    |          |            | ND           |       |
| 143 4,4'-Methylene bis(2-chlor | 231 |           | 13.881        |               |    |          |            | ND           |       |
| 144 3,3'-Dichlorobenzidine     | 252 |           | 14.300        |               |    |          |            | ND           |       |
| 145 Bis(2-ethylhexyl) phthalat | 149 |           | 14.343        |               |    |          |            | ND           |       |
| 146 Benzo[a]anthracene         | 228 |           | 14.375        |               |    |          |            | ND           |       |
| 147 Chrysene                   | 228 |           | 14.444        |               |    |          |            | ND           |       |
| 148 Sulfotepp                  | 97  |           | 14.530        |               |    |          |            | ND           |       |
| 149 6-Methylchrysene           | 242 |           | 14.907        |               |    |          |            | ND           |       |
| 150 Di-n-octyl phthalate       | 149 |           | 15.646        |               |    |          |            | ND           |       |
| 151 7,12-Dimethylbenz(a)anthra | 256 |           | 16.496        |               |    |          |            | ND           |       |
| 152 Benzo[b]fluoranthene       | 252 |           | 16.517        |               |    |          |            | ND           |       |
| 153 Benzo[k]fluoranthene       | 252 |           | 16.565        |               |    |          |            | ND           |       |
| 219 Benzo[e]pyrene             | 252 |           | 17.073        |               |    |          |            | ND           |       |
| 154 Benzo[a]pyrene             | 252 |           | 17.174        |               |    |          |            | ND           |       |
| 155 3-Methylcholanthrene       | 268 |           | 17.524        |               |    |          |            | ND           |       |
| 156 Dibenz[a,h]acridine        | 279 |           | 18.636        |               |    |          |            | ND           |       |
| 220 Dibenz[a,j]acridine        | 279 |           | 19.247        |               |    |          |            | ND           |       |
| 157 Indeno[1,2,3-cd]pyrene     | 276 |           | 19.648        |               |    |          |            | ND           |       |
| 158 Dibenz(a,h)anthracene      | 278 |           | 19.685        |               |    |          |            | ND           |       |
| 159 Benzo[g,h,i]perylene       | 276 |           | 20.337        |               |    |          |            | ND           |       |
| 188 2-Bromonaphthalene         | 127 |           | 0.000         |               |    |          |            | ND           |       |
| 185 4-Nitrobiphenyl            | 199 |           | 0.000         |               |    |          |            | ND           |       |
| 217 1-Phenyl-1-(4-methylphenyl | 1   |           | 0.000         |               |    |          |            | ND           |       |
| 166 4-Chloro-3-nitro-alpha,alp | 179 |           | 0.000         |               |    |          |            | ND           |       |
| 160 n,n'-Dimethylaniline       | 120 |           | 0.000         |               |    |          |            | ND           |       |
| 212 2,3,7,8-TCDD TIC           | 1   |           | 0.000         |               |    |          |            | ND           |       |
| 178 Trifluralin                | 306 |           | 0.000         |               |    |          |            | ND           |       |
| 173 Octachlorocyclopentene     | 307 |           | 0.000         |               |    |          |            | ND           |       |
| 170 4-tert-Octylphenol         | 135 |           | 0.000         |               |    |          |            | ND           |       |
| 169 Octachlorostyrene          | 308 |           | 0.000         |               |    |          |            | ND           |       |
| 218 Benzotrichloride TIC       | 1   |           | 0.000         |               |    |          |            | ND           |       |
| 213 3-Methylphenol             | 1   |           | 0.000         |               |    |          |            | ND           |       |
| 183 2,3-Dichlorophenol         | 162 |           | 0.000         |               |    |          |            | ND           |       |
| 216 1-Phenyl-1-(2,4-dimethylph | 1   |           | 0.000         |               |    |          |            | ND           |       |
| 214 1-Phenyl-1-(4-methylphenyl | 1   |           | 0.000         |               |    |          |            | ND           |       |
| 179 2,5-Dichlorophenol         | 162 |           | 0.000         |               |    |          |            | ND           |       |
| 184 Diallate Peak 1            | 86  |           | 0.000         |               |    |          |            | ND           |       |
| 172 Carbaryl                   | 144 |           | 0.000         |               |    |          |            | ND           |       |
| 164 Aramite Peak 2             | 185 |           | 0.000         |               |    |          |            | ND           |       |
| 162 3-Chlorobenzoic Acid       | 139 |           | 0.000         |               |    |          |            | ND           |       |
| 168 Aramite Peak 1             | 185 |           | 0.000         |               |    |          |            | ND           |       |
| 187 1,2-Dibromo-3-Chloropropan | 157 |           | 0.000         |               |    |          |            | ND           |       |
| 174 2-Chlorobenzoic Acid       | 139 |           | 0.000         |               |    |          |            | ND           |       |
| 215 1-Phenyl-1-(2,4-dimethylph | 1   |           | 0.000         |               |    |          |            | ND           |       |
| 161 4-Methyl-1-cyclohexanemeth | 97  |           | 0.000         |               |    |          |            | ND           |       |
| 165 Benzotrichloride           | 159 |           | 0.000         |               |    |          |            | ND           |       |
| 182 4-Chlorophenol             | 128 |           | 0.000         |               |    |          |            | ND           |       |

| Compound                         | Sig | RT (min.) | Adj RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ng | OnCol Amt ng | Flags |
|----------------------------------|-----|-----------|---------------|---------------|---|----------|------------|--------------|-------|
| 177 1,2,3,4-Tetrahydronaphthal   | 104 |           | 0.000         |               |   |          |            | ND           |       |
| 167 Phthalic anhydride           | 104 |           | 0.000         |               |   |          |            | ND           |       |
| 176 Dimethylformamide            | 73  |           | 0.000         |               |   |          |            | ND           |       |
| 163 Diallate Peak 2              | 86  |           | 0.000         |               |   |          |            | ND           |       |
| 186 o-Phenylphenol               | 1   |           | 0.000         |               |   |          |            | ND           |       |
| 175 1,2,3-Trimethylbenzene       | 105 |           | 0.000         |               |   |          |            | ND           |       |
| 181 4-Chlorobenzoic Acid         | 139 |           | 0.000         |               |   |          |            | ND           |       |
| 171 4-Methyl-1-cyclohexanemeth   | 97  |           | 0.000         |               |   |          |            | ND           |       |
| 189 Pentachlorophenol_T          | 266 |           | 5.616         |               |   |          |            | ND           |       |
| 191 Benzidine_T                  | 184 |           | 8.261         |               |   |          |            | ND           |       |
| 192 4,4'-DDE                     | 246 |           | 8.725         |               |   |          |            | ND           |       |
| 193 4,4'-DDD                     | 235 |           | 9.340         |               |   |          |            | ND           |       |
| 194 4,4'-DDT                     | 235 |           | 9.933         |               |   |          |            | ND           |       |
| S 195 Aramite, Total             | 185 |           | 1.000         |               |   |          |            | ND           |       |
| S 198 Diallate                   | 86  |           | 0.000         |               |   |          |            | ND           |       |
| S 199 Total Cresols              | 108 |           | 0.000         |               |   |          |            | ND           |       |
| S 196 4-Methyl-1-cyclohexanemeth | 97  |           | 0.000         |               |   |          |            | ND           |       |
| S 197 Methyl Phenols, Total      | 108 |           | 0.000         |               |   |          |            | ND           |       |
| T 221 Phenyl ether TIC           | 170 | 12.569    | 11.500        | 1.069         | 0 | 15866    |            | 0.4328       |       |
| T 200 Quinoline TIC              | 129 |           | 0.000         |               |   |          |            | ND           |       |

**QC Flag Legend**

Processing Flags

NC - Not Calibrated

**Reagents:**

SVTAPITINTRNi\_00007

Amount Added: 1.00

Units: uL

Run Reagent

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CH732\20150520-7021.b\D052N005.D

Injection Date: 20-May-2015 14:54:30 Instrument ID: CH732

Lims ID: MB 180-141152/1-A

Operator ID: 003200

Worklist Smp#: 5

Client ID:

Injection Vol: 2.0 ul

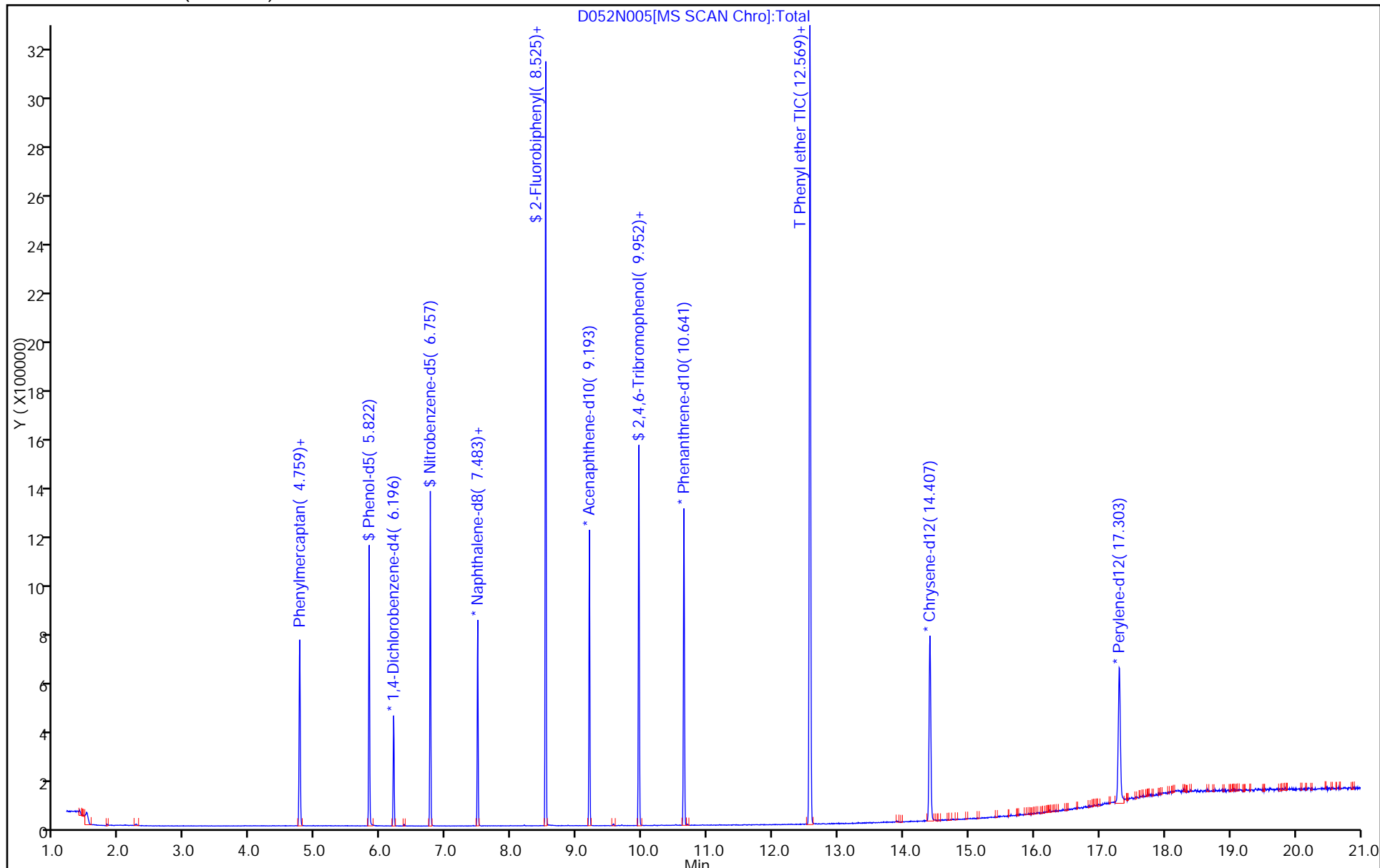
Dil. Factor: 1.0000

ALS Bottle#: 4

Method: BNA\_CH732

Limit Group: BNA 8270D ICAL

Column: Rxi-5SiIMS (0.32 mm)



FORM I  
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-43791-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: \_\_\_\_\_ Lab Sample ID: LCS 180-141152/2-A  
 Matrix: Water Lab File ID: D052N010.D  
 Analysis Method: 8270D LL Date Collected: \_\_\_\_\_  
 Extract. Method: 3520C Date Extracted: 05/11/2015 10:21  
 Sample wt/vol: 250 (mL) Date Analyzed: 05/20/2015 16:53  
 Con. Extract Vol.: 0.25 (mL) Dilution Factor: 1  
 Injection Volume: 2 (uL) Level: (low/med) Low  
 % Moisture: \_\_\_\_\_ GPC Cleanup: (Y/N) N  
 Analysis Batch No.: 142205 Units: ug/L

| CAS NO.  | COMPOUND NAME               | RESULT | Q | RL   | MDL   |
|----------|-----------------------------|--------|---|------|-------|
| 120-12-7 | Anthracene                  | 15.2   |   | 0.20 | 0.019 |
| 56-55-3  | Benzo[a]anthracene          | 16.5   |   | 0.20 | 0.037 |
| 205-99-2 | Benzo[b]fluoranthene        | 16.2   |   | 0.20 | 0.049 |
| 207-08-9 | Benzo[k]fluoranthene        | 16.5   |   | 0.20 | 0.030 |
| 191-24-2 | Benzo[g,h,i]perylene        | 17.5   |   | 0.20 | 0.029 |
| 50-32-8  | Benzo[a]pyrene              | 17.3   |   | 0.20 | 0.028 |
| 218-01-9 | Chrysene                    | 16.4   |   | 0.20 | 0.031 |
| 53-70-3  | Dibenz(a,h)anthracene       | 17.4   |   | 0.20 | 0.027 |
| 206-44-0 | Fluoranthene                | 15.9   |   | 0.20 | 0.021 |
| 86-73-7  | Fluorene                    | 15.1   |   | 0.20 | 0.024 |
| 193-39-5 | Indeno[1,2,3-cd]pyrene      | 17.2   |   | 0.20 | 0.043 |
| 85-01-8  | Phenanthrene                | 15.3   |   | 0.20 | 0.042 |
| 129-00-0 | Pyrene                      | 16.1   |   | 0.20 | 0.023 |
| 83-32-9  | Acenaphthene                | 13.3   |   | 0.20 | 0.029 |
| 208-96-8 | Acenaphthylene              | 14.5   |   | 0.20 | 0.022 |
| 91-20-3  | Naphthalene                 | 13.6   |   | 0.20 | 0.023 |
| 117-81-7 | Bis(2-ethylhexyl) phthalate | 17.5   |   | 2.0  | 0.44  |

| CAS NO.   | SURROGATE                   | %REC | Q | LIMITS |
|-----------|-----------------------------|------|---|--------|
| 4165-60-0 | Nitrobenzene-d5 (Surr)      | 70   |   | 27-114 |
| 321-60-8  | 2-Fluorobiphenyl            | 65   |   | 28-109 |
| 1718-51-0 | Terphenyl-d14 (Surr)        | 70   |   | 20-118 |
| 367-12-4  | 2-Fluorophenol (Surr)       | 66   |   | 20-105 |
| 118-79-6  | 2,4,6-Tribromophenol (Surr) | 70   |   | 30-118 |
| 4165-62-2 | Phenol-d5 (Surr)            | 69   |   | 25-105 |

TestAmerica Pittsburgh  
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CH732\20150520-7021.b\D052N010.D

Lims ID: LCS 180-141152/2-A

Client ID:

Sample Type: LCS

Inject. Date: 20-May-2015 16:53:30

ALS Bottle#: 9

Worklist Smp#: 10

Injection Vol: 2.0 ul

Dil. Factor: 1.0000

Sample Info: 180-0007021-010

Operator ID: 003200

Instrument ID: CH732

Method: \\PITCHROM\ChromData\CH732\20150520-7021.b\BNA\_CH732.m

Limit Group: BNA 8270D ICAL

Last Update: 21-May-2015 02:16:03

Calib Date: 18-Mar-2015 11:54:30

Integrator: RTE

ID Type: Deconvolution ID

Quant Method: Internal Standard

Quant By: Initial Calibration

Last ICal File: \\PITCHROM\ChromData\CH732\20150318-6063.b\D0318011.D

Column 1 : Rxi-5SilMS ( 0.32 mm)

Det: MS SCAN

Process Host: XAWRK048

First Level Reviewer: piccolinov

Date: 21-May-2015 02:06:01

| Compound                      | Sig | RT (min.) | Adj RT (min.) | Dlt RT (min.) | Q  | Response | Cal Amt ng | OnCol Amt ng | Flags |
|-------------------------------|-----|-----------|---------------|---------------|----|----------|------------|--------------|-------|
| * 1 1,4-Dichlorobenzene-d4    | 152 | 6.196     | 6.196         | 0.000         | 97 | 65167    | 8.00       | 8.00         |       |
| * 2 Naphthalene-d8            | 136 | 7.489     | 7.478         | 0.011         | 99 | 325374   | 8.00       | 8.00         |       |
| * 3 Acenaphthene-d10          | 164 | 9.198     | 9.188         | 0.010         | 92 | 234947   | 8.00       | 8.00         |       |
| * 4 Phenanthrene-d10          | 188 | 10.646    | 10.630        | 0.016         | 97 | 444685   | 8.00       | 8.00         |       |
| * 5 Chrysene-d12              | 240 | 14.423    | 14.396        | 0.027         | 97 | 421558   | 8.00       | 8.00         |       |
| * 6 Perylene-d12              | 264 | 17.319    | 17.287        | 0.033         | 96 | 366346   | 8.00       | 8.00         |       |
| \$ 7 2-Fluorophenol           | 112 | 4.754     | 4.754         | 0.000         | 91 | 224361   | 40.0       | 26.6         |       |
| \$ 8 Phenol-d5                | 99  | 5.822     | 5.817         | 0.005         | 93 | 315070   | 40.0       | 27.7         |       |
| \$ 9 Nitrobenzene-d5          | 82  | 6.762     | 6.752         | 0.010         | 94 | 385038   | 40.0       | 28.2         |       |
| \$ 10 2-Fluorobiphenyl        | 172 | 8.531     | 8.520         | 0.011         | 99 | 1007376  | 40.0       | 26.1         |       |
| \$ 11 2,4,6-Tribromophenol    | 330 | 9.957     | 9.946         | 0.011         | 85 | 137614   | 40.0       | 28.1         |       |
| \$ 12 Terphenyl-d14           | 244 | 12.580    | 12.559        | 0.021         | 99 | 1281682  | 40.0       | 27.9         |       |
| 13 1,4-Dioxane                | 88  | 1.580     | 1.596         | -0.016        | 94 | 72771    | 40.0       | 28.0         |       |
| 14 N-Nitrosodimethylamine     | 74  | 2.173     | 2.189         | -0.016        | 83 | 104321   | 40.0       | 29.7         |       |
| 15 Pyridine                   | 79  | 2.254     | 2.275         | -0.021        | 90 | 196819   | 40.0       | 32.2         |       |
| 25 Benzaldehyde               | 77  | 5.726     | 5.726         | 0.000         | 90 | 158946   | 40.0       | 28.9         |       |
| 26 Phenol                     | 94  | 5.838     | 5.833         | 0.005         | 89 | 356364   | 40.0       | 27.6         |       |
| 27 Aniline                    | 93  | 5.849     | 5.843         | 0.006         | 91 | 407800   | 40.0       | 28.5         |       |
| 29 Bis(2-chloroethyl)ether    | 93  | 5.918     | 5.913         | 0.005         | 91 | 259559   | 40.0       | 28.5         |       |
| 30 2-Chlorophenol             | 128 | 5.977     | 5.977         | 0.000         | 96 | 319310   | 40.0       | 28.9         |       |
| 31 n-Decane                   | 43  | 6.041     | 6.041         | 0.000         | 92 | 333439   | 40.0       | 25.8         |       |
| 32 1,3-Dichlorobenzene        | 146 | 6.137     | 6.137         | 0.000         | 96 | 346342   | 40.0       | 26.9         |       |
| 33 1,4-Dichlorobenzene        | 146 | 6.217     | 6.212         | 0.005         | 92 | 363680   | 40.0       | 27.6         |       |
| 34 Benzyl alcohol             | 108 | 6.340     | 6.335         | 0.005         | 88 | 150466   | 40.0       | 21.7         |       |
| 35 1,2-Dichlorobenzene        | 146 | 6.378     | 6.372         | 0.006         | 95 | 355894   | 40.0       | 27.8         |       |
| 36 2-Methylphenol             | 108 | 6.458     | 6.452         | 0.006         | 96 | 281309   | 40.0       | 28.7         |       |
| 37 Indene                     | 116 | 6.469     | 6.463         | 0.006         | 90 | 535548   | 40.0       | 30.1         |       |
| 38 2,2'-oxybis[1-chloropropan | 45  | 6.479     | 6.479         | 0.000         | 88 | 531447   | 40.0       | 27.7         |       |
| 40 Acetophenone               | 105 | 6.607     | 6.602         | 0.005         | 93 | 433679   | 40.0       | 29.3         |       |
| 41 N-Nitrosodi-n-propylamine  | 70  | 6.607     | 6.602         | 0.005         | 78 | 212141   | 40.0       | 30.5         |       |
| 42 4-Methylphenol             | 108 | 6.613     | 6.607         | 0.006         | 92 | 294440   | 40.0       | 29.2         |       |
| 45 Hexachloroethane           | 117 | 6.725     | 6.720         | 0.005         | 95 | 168732   | 40.0       | 29.5         |       |

| Compound                       | Sig | RT (min.) | Adj RT (min.) | Dlt RT (min.) | Q   | Response | Cal Amt ng | OnCol Amt ng | Flags |
|--------------------------------|-----|-----------|---------------|---------------|-----|----------|------------|--------------|-------|
| 46 Nitrobenzene                | 77  | 6.778     | 6.773         | 0.005         | 95  | 393319   | 40.0       | 29.0         |       |
| 48 Isophorone                  | 82  | 7.019     | 7.008         | 0.011         | 97  | 671706   | 40.0       | 28.1         |       |
| 49 2-Nitrophenol               | 139 | 7.104     | 7.099         | 0.005         | 96  | 216604   | 40.0       | 28.9         |       |
| 50 2,4-Dimethylphenol          | 107 | 7.136     | 7.131         | 0.005         | 97  | 389653   | 40.0       | 28.5         |       |
| 52 Benzoic acid                | 122 | 7.216     | 7.190         | 0.026         | 91  | 194318   | 40.0       | 24.8         |       |
| 53 Bis(2-chloroethoxy)methane  | 93  | 7.222     | 7.216         | 0.006         | 95  | 404007   | 40.0       | 27.5         |       |
| 54 2,4-Dichlorophenol          | 162 | 7.345     | 7.334         | 0.011         | 97  | 343306   | 40.0       | 28.7         |       |
| 56 1,2,4-Trichlorobenzene      | 180 | 7.430     | 7.419         | 0.011         | 93  | 380148   | 40.0       | 27.7         |       |
| 58 Naphthalene                 | 128 | 7.510     | 7.500         | 0.010         | 98  | 1193855  | 40.0       | 27.1         |       |
| 59 4-Chloroaniline             | 127 | 7.548     | 7.542         | 0.006         | 95  | 495437   | 40.0       | 28.1         |       |
| 60 2,6-Dichlorophenol          | 162 | 7.564     | 7.558         | 0.006         | 94  | 343578   | 40.0       | 28.9         |       |
| 62 Hexachlorobutadiene         | 225 | 7.633     | 7.628         | 0.005         | 96  | 229403   | 40.0       | 27.9         |       |
| 64 Caprolactam                 | 113 | 7.863     | 7.852         | 0.011         | 73  | 131034   | 40.0       | 32.7         |       |
| 67 4-Chloro-3-methylphenol     | 107 | 8.012     | 8.002         | 0.010         | 98  | 415939   | 40.0       | 33.2         |       |
| 69 2-Methylnaphthalene         | 142 | 8.183     | 8.173         | 0.010         | 91  | 928458   | 40.0       | 29.8         |       |
| 71 1-Methylnaphthalene         | 142 | 8.280     | 8.269         | 0.011         | 92  | 846165   | 40.0       | 29.0         |       |
| 72 Hexachlorocyclopentadiene   | 237 | 8.344     | 8.333         | 0.011         | 96  | 283996   | 40.0       | 27.8         |       |
| 73 1,2,4,5-Tetrachlorobenzene  | 216 | 8.349     | 8.338         | 0.011         | 97  | 365667   | 40.0       | 23.9         |       |
| 74 2,4,6-Trichlorophenol       | 196 | 8.451     | 8.440         | 0.010         | 95  | 292889   | 40.0       | 28.0         |       |
| 75 2,4,5-Trichlorophenol       | 196 | 8.488     | 8.477         | 0.011         | 93  | 305029   | 40.0       | 27.5         |       |
| 76 1,1'-Biphenyl               | 154 | 8.627     | 8.621         | 0.006         | 95  | 1188243  | 40.0       | 26.9         |       |
| 77 2-Chloronaphthalene         | 162 | 8.659     | 8.648         | 0.011         | 97  | 916713   | 40.0       | 25.6         |       |
| 79 2-Nitroaniline              | 65  | 8.744     | 8.734         | 0.010         | 84  | 315648   | 40.0       | 31.0         |       |
| 82 Dimethyl phthalate          | 163 | 8.899     | 8.889         | 0.011         | 98  | 1102087  | 40.0       | 29.5         |       |
| 83 1,3-Dinitrobenzene          | 168 | 8.937     | 8.926         | 0.011         | 85  | 194372   | 40.0       | 34.6         |       |
| 84 2,6-Dinitrotoluene          | 165 | 8.963     | 8.953         | 0.010         | 91  | 262665   | 40.0       | 32.1         |       |
| 85 Acenaphthylene              | 152 | 9.065     | 9.054         | 0.011         | 98  | 1647796  | 40.0       | 29.0         |       |
| 86 3-Nitroaniline              | 138 | 9.134     | 9.124         | 0.010         | 94  | 313003   | 40.0       | 31.4         |       |
| 87 2,4-Dinitrophenol           | 184 | 9.230     | 9.220         | 0.010         | 70  | 290323   | 80.0       | 53.1         |       |
| 88 Acenaphthene                | 153 | 9.230     | 9.220         | 0.010         | 86  | 920102   | 40.0       | 26.5         |       |
| 89 4-Nitrophenol               | 109 | 9.279     | 9.262         | 0.017         | 96  | 390211   | 80.0       | 70.7         |       |
| 91 2,4-Dinitrotoluene          | 165 | 9.353     | 9.343         | 0.010         | 92  | 377453   | 40.0       | 35.1         |       |
| 93 Dibenzofuran                | 168 | 9.396     | 9.385         | 0.011         | 95  | 1482818  | 40.0       | 29.8         |       |
| 96 2,3,4,6-Tetrachlorophenol   | 232 | 9.508     | 9.498         | 0.010         | 76  | 297249   | 40.0       | 31.5         |       |
| 98 Diethyl phthalate           | 149 | 9.572     | 9.556         | 0.016         | 98  | 1091286  | 40.0       | 28.6         |       |
| 99 Hexadecane                  | 57  | 9.572     | 9.562         | 0.010         | 91  | 725941   | 40.0       | 30.2         |       |
| 100 4-Chlorophenyl phenyl ethe | 204 | 9.706     | 9.695         | 0.011         | 95  | 548360   | 40.0       | 30.0         |       |
| 101 4-Nitroaniline             | 138 | 9.722     | 9.706         | 0.016         | 80  | 303110   | 40.0       | 30.8         |       |
| 103 Fluorene                   | 166 | 9.727     | 9.711         | 0.016         | 94  | 1171205  | 40.0       | 30.3         |       |
| 104 4,6-Dinitro-2-methylphenol | 198 | 9.754     | 9.738         | 0.016         | 80  | 448854   | 80.0       | 62.1         |       |
| 105 N-Nitrosodiphenylamine     | 169 | 9.813     | 9.802         | 0.011         | 63  | 1658792  | 80.0       | 52.5         |       |
| 90 1,2-Diphenylhydrazine       | 77  | 9.861     | 9.845         | 0.016         | 98  | 1270607  | 40.0       | 28.1         |       |
| 110 4-Bromophenyl phenyl ether | 248 | 10.176    | 10.165        | 0.011         | 70  | 336569   | 40.0       | 29.0         |       |
| 112 Hexachlorobenzene          | 284 | 10.267    | 10.256        | 0.011         | 91  | 333118   | 40.0       | 28.7         |       |
| 113 Atrazine                   | 200 | 10.299    | 10.283        | 0.016         | 90  | 329858   | 40.0       | 36.0         |       |
| 116 Pentachlorophenol          | 266 | 10.443    | 10.432        | 0.011         | 87  | 374141   | 80.0       | 45.7         |       |
| 115 n-Octadecane               | 57  | 10.449    | 10.432        | 0.016         | 92  | 835143   | 40.0       | 36.0         |       |
| 121 Phenanthrene               | 178 | 10.673    | 10.657        | 0.016         | 97  | 2048195  | 40.0       | 30.7         |       |
| 122 Anthracene                 | 178 | 10.726    | 10.710        | 0.016         | 97  | 2078069  | 40.0       | 30.4         |       |
| 124 Carbazole                  | 167 | 10.876    | 10.860        | 0.016         | 96  | 1937869  | 40.0       | 32.4         |       |
| 126 Di-n-butyl phthalate       | 149 | 11.202    | 11.186        | 0.016         | 100 | 2387729  | 40.0       | 31.9         |       |
| 57 Azobenzene                  | 77  | 12.217    | 11.869        | 0.348         | 43  | 14896    | NC         | NC           |       |

| Compound                       | Sig | RT (min.) | Adj RT (min.) | Dlt RT (min.) | Q  | Response | Cal Amt ng | OnCol Amt ng | Flags |
|--------------------------------|-----|-----------|---------------|---------------|----|----------|------------|--------------|-------|
| 131 Fluoranthene               | 202 | 12.078    | 12.056        | 0.022         | 98 | 2149637  | 40.0       | 31.9         |       |
| 132 Benzidine                  | 184 | 12.217    | 12.201        | 0.016         | 99 | 429169   | 40.0       | 14.9         |       |
| 133 Pyrene                     | 202 | 12.404    | 12.382        | 0.022         | 97 | 2240655  | 40.0       | 32.2         |       |
| 138 Butyl benzyl phthalate     | 149 | 13.328    | 13.301        | 0.027         | 98 | 1058184  | 40.0       | 34.3         |       |
| 144 3,3'-Dichlorobenzidine     | 252 | 14.327    | 14.300        | 0.027         | 75 | 607755   | 40.0       | 29.9         |       |
| 145 Bis(2-ethylhexyl) phthalat | 149 | 14.370    | 14.343        | 0.027         | 97 | 1497492  | 40.0       | 35.0         |       |
| 146 Benzo[a]anthracene         | 228 | 14.402    | 14.375        | 0.027         | 98 | 2009173  | 40.0       | 32.9         |       |
| 147 Chrysene                   | 228 | 14.471    | 14.444        | 0.027         | 98 | 1888500  | 40.0       | 32.9         |       |
| 150 Di-n-octyl phthalate       | 149 | 15.679    | 15.646        | 0.033         | 99 | 2536741  | 40.0       | 35.6         |       |
| 152 Benzo[b]fluoranthene       | 252 | 16.549    | 16.517        | 0.032         | 98 | 1920851  | 40.0       | 32.3         |       |
| 153 Benzo[k]fluoranthene       | 252 | 16.603    | 16.565        | 0.038         | 99 | 1917736  | 40.0       | 33.0         |       |
| 154 Benzo[a]pyrene             | 252 | 17.212    | 17.174        | 0.038         | 79 | 1847234  | 40.0       | 34.5         |       |
| 157 Indeno[1,2,3-cd]pyrene     | 276 | 19.707    | 19.648        | 0.059         | 96 | 1936255  | 40.0       | 34.4         |       |
| 158 Dibenz(a,h)anthracene      | 278 | 19.744    | 19.685        | 0.059         | 91 | 1631194  | 40.0       | 34.9         |       |
| 159 Benzo[g,h,i]perylene       | 276 | 20.401    | 20.337        | 0.064         | 96 | 1680358  | 40.0       | 35.0         |       |
| S 199 Total Cresols            | 108 |           |               |               | 0  |          | 80.0       | 57.9         |       |
| S 197 Methyl Phenols,Total     | 108 |           |               |               | 0  |          | 80.0       | 57.9         |       |

**QC Flag Legend**

Processing Flags

NC - Not Calibrated

**Reagents:**

SVTAPITINTRNi\_00007

Amount Added: 1.00

Units: uL

Run Reagent

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CH732\20150520-7021.b\D052N010.D

Injection Date: 20-May-2015 16:53:30

Instrument ID: CH732

Operator ID: 003200

Lims ID: LCS 180-141152/2-A

Worklist Smp#: 10

Client ID:

Injection Vol: 2.0 ul

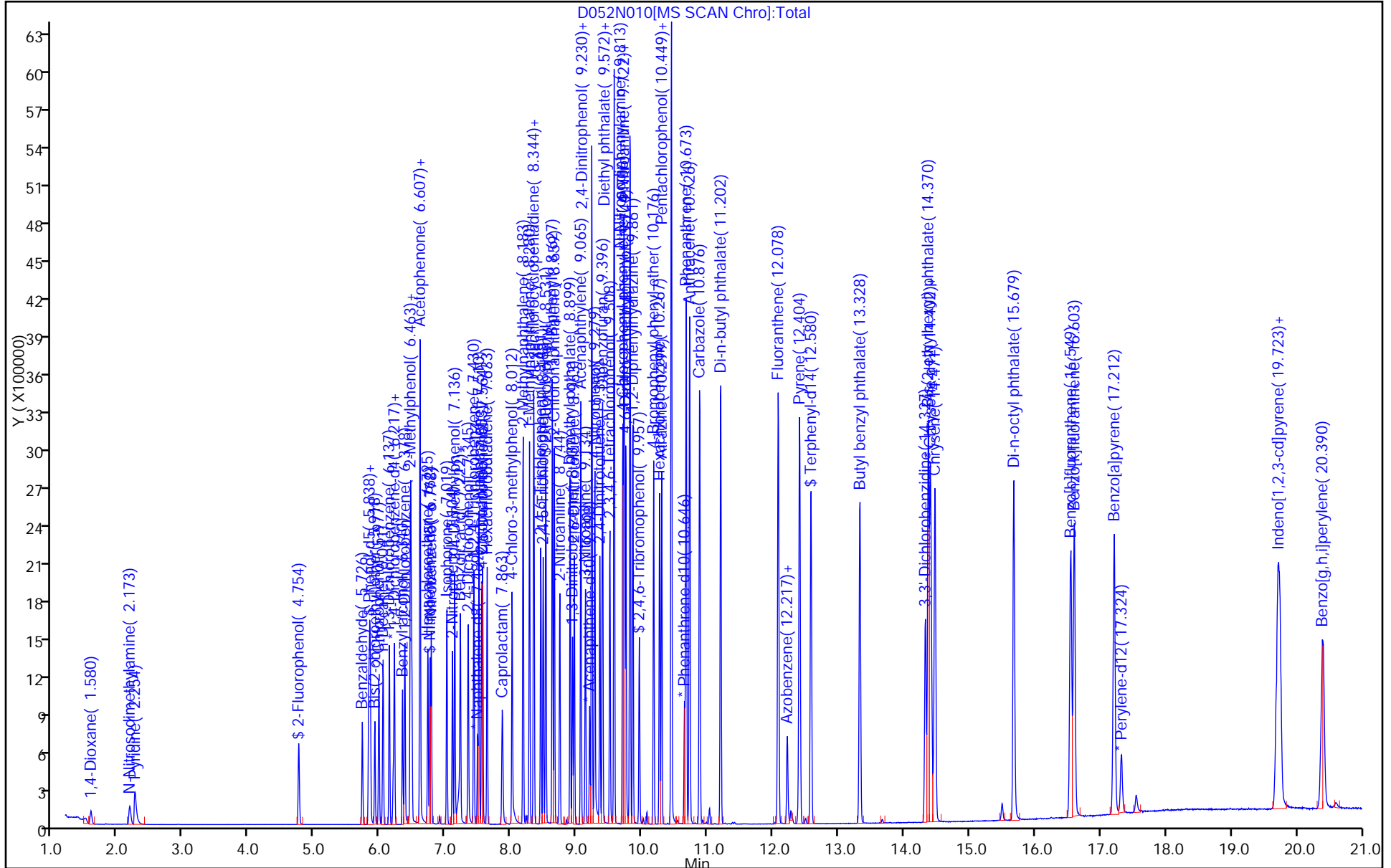
Dil. Factor: 1.0000

ALS Bottle#: 9

Method: BNA\_CH732

Limit Group: BNA 8270D ICAL

Column: Rxi-5SiIMS (0.32 mm)





## GC/MS SEMI VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Pittsburgh Job No.: 180-43791-1

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

Instrument ID: CH732 Start Date: 02/03/2015 05:37Analysis Batch Number: 132436 End Date: 02/03/2015 10:48

| LAB SAMPLE ID      | CLIENT SAMPLE ID | DATE ANALYZED    | DILUTION FACTOR | LAB FILE ID | COLUMN ID            |
|--------------------|------------------|------------------|-----------------|-------------|----------------------|
| DFTPP 180-132436/2 |                  | 02/03/2015 05:37 | 1               | D0203002.D  | Rxi-5SilMS 0.32 (mm) |
| IC 180-132436/3    |                  | 02/03/2015 05:53 | 1               | D0203003.D  | Rxi-5SilMS 0.32 (mm) |
| IC 180-132436/4    |                  | 02/03/2015 06:20 | 1               | D0203004.D  | Rxi-5SilMS 0.32 (mm) |
| IC 180-132436/5    |                  | 02/03/2015 06:46 | 1               | D0203005.D  | Rxi-5SilMS 0.32 (mm) |
| ICIS 180-132436/6  |                  | 02/03/2015 07:13 | 1               | D0203006.D  | Rxi-5SilMS 0.32 (mm) |
| IC 180-132436/7    |                  | 02/03/2015 07:40 | 1               | D0203007.D  | Rxi-5SilMS 0.32 (mm) |
| IC 180-132436/8    |                  | 02/03/2015 08:07 | 1               | D0203008.D  | Rxi-5SilMS 0.32 (mm) |
| IC 180-132436/9    |                  | 02/03/2015 08:33 | 1               | D0203009.D  | Rxi-5SilMS 0.32 (mm) |
| IC 180-132436/10   |                  | 02/03/2015 09:00 | 1               | D0203010.D  | Rxi-5SilMS 0.32 (mm) |
| ICV 180-132436/11  |                  | 02/03/2015 09:27 | 1               |             | Rxi-5SilMS 0.32 (mm) |
| ICV 180-132436/12  |                  | 02/03/2015 09:54 | 1               |             | Rxi-5SilMS 0.32 (mm) |
| ICV 180-132436/13  |                  | 02/03/2015 10:21 | 1               |             | Rxi-5SilMS 0.32 (mm) |
| ICV 180-132436/14  |                  | 02/03/2015 10:48 | 1               |             | Rxi-5SilMS 0.32 (mm) |

## GC/MS SEMI VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Pittsburgh Job No.: 180-43791-1

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

Instrument ID: CH732 Start Date: 05/20/2015 13:52Analysis Batch Number: 142205 End Date: 05/21/2015 01:50

| LAB SAMPLE ID      | CLIENT SAMPLE ID | DATE ANALYZED    | DILUTION FACTOR | LAB FILE ID | COLUMN ID            |
|--------------------|------------------|------------------|-----------------|-------------|----------------------|
| DFTPP 180-142205/2 |                  | 05/20/2015 13:52 | 1               | D052N002.D  | Rxi-5SilMS 0.32 (mm) |
| CCVIS 180-142205/3 |                  | 05/20/2015 14:05 | 1               | D052N003.D  | Rxi-5SilMS 0.32 (mm) |
| ZZZZZ              |                  | 05/20/2015 14:31 | 1               |             | Rxi-5SilMS 0.32 (mm) |
| MB 180-141152/1-A  |                  | 05/20/2015 14:54 | 1               | D052N005.D  | Rxi-5SilMS 0.32 (mm) |
| ZZZZZ              |                  | 05/20/2015 15:21 | 1               |             | Rxi-5SilMS 0.32 (mm) |
| ZZZZZ              |                  | 05/20/2015 15:44 | 1               |             | Rxi-5SilMS 0.32 (mm) |
| ZZZZZ              |                  | 05/20/2015 16:07 | 1               |             | Rxi-5SilMS 0.32 (mm) |
| ZZZZZ              |                  | 05/20/2015 16:30 | 1               |             | Rxi-5SilMS 0.32 (mm) |
| LCS 180-141152/2-A |                  | 05/20/2015 16:53 | 1               | D052N010.D  | Rxi-5SilMS 0.32 (mm) |
| ZZZZZ              |                  | 05/20/2015 17:20 | 1               |             | Rxi-5SilMS 0.32 (mm) |
| ZZZZZ              |                  | 05/20/2015 17:43 | 1               |             | Rxi-5SilMS 0.32 (mm) |
| ZZZZZ              |                  | 05/21/2015 00:05 | 1               |             | Rxi-5SilMS 0.32 (mm) |
| 180-43791-1        | RB-CORE          | 05/21/2015 00:31 | 1               | D052N028.D  | Rxi-5SilMS 0.32 (mm) |
| 180-43791-2        | FB-CORE          | 05/21/2015 00:57 | 1               | D052N029.D  | Rxi-5SilMS 0.32 (mm) |
| 180-43791-3        | RB-PW            | 05/21/2015 01:24 | 1               | D052N030.D  | Rxi-5SilMS 0.32 (mm) |
| 180-43791-4        | FB-PW            | 05/21/2015 01:50 | 1               | D052N031.D  | Rxi-5SilMS 0.32 (mm) |

## GC/MS SEMI VOA BATCH WORKSHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-43791-1

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

Batch Number: 141152 Batch Start Date: 05/11/15 11:00 Batch Analyst: Trout, BillBatch Method: 3520C Batch End Date: 05/12/15 05:10

| Lab Sample ID       | Client Sample ID | Method Chain       | Basis | Initial pH | InitialAmount | FinalAmount | FirstAdjustpH | OPLVISPKMIXli<br>00038 | OPQL8270SURI<br>00030 |
|---------------------|------------------|--------------------|-------|------------|---------------|-------------|---------------|------------------------|-----------------------|
| MB 180-141152/1     |                  | 3520C, 8270D<br>LL |       | 5 SU       | 250 mL        | 0.25 mL     | 2 SU          |                        | 25 uL                 |
| LCS<br>180-141152/2 |                  | 3520C, 8270D<br>LL |       | 5 SU       | 250 mL        | 0.25 mL     | 2 SU          | 25 uL                  | 25 uL                 |
| 180-43791-E-1       | RB-CORE          | 3520C, 8270D<br>LL | T     | 5 SU       | 240 mL        | 0.25 mL     | 2             |                        | 25 uL                 |
| 180-43791-E-2       | FB-CORE          | 3520C, 8270D<br>LL | T     | 5 SU       | 250 mL        | 0.25 mL     | 2             |                        | 25 uL                 |
| 180-43791-A-3       | RB-PW            | 3520C, 8270D<br>LL | T     | 5 SU       | 260 mL        | 0.25 mL     | 2             |                        | 25 uL                 |
| 180-43791-A-4       | FB-PW            | 3520C, 8270D<br>LL | T     | 5 SU       | 250 mL        | 0.25 mL     | 2             |                        | 25 uL                 |

| Batch Notes                             |                    |
|---|--------------------|
| Acid used for pH adjustment             | 1:1 Sulfuric acid  |
| Acid used for pH adjust Lot #           | 1540016            |
| Person's name who did the concentration | cdm                |
| Time the first extraction ended 24hr    | 0510               |
| Time the first extraction started 24 hr | 1100               |
| N-evap #                                | 1                  |
| Na2SO4 Lot Number                       | 1558431            |
| pH Paper Lot Number                     | Ph paper HC432654  |
| Prep Solvent Lot #                      | 1563906            |
| Prep Solvent Name                       | Methylene chloride |
| Prep Solvent Volume Used                | 100 mL             |
| Person's name who did the prep          | BT                 |
| Sufficient volume for MS/MSD?           | Yes                |
| Uncorrected N-evap Temperature          | 26 Celsius         |
| Uncorrected Temperature                 | 75 Celsius         |

| 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.

# Method 8082A Low Level

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Polychlorinated Biphenyls (PCBs)  
(GC) by Method 8082A Low Level

FORM II  
GC SEMI VOA SURROGATE RECOVERY

Lab Name: TestAmerica Pittsburgh Job No.: 180-43791-1

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

Matrix: Water Level: Low

GC Column (1): RTX-CLP1 ID: 0.53 (mm) GC Column (2): RTX-CLP2 ID: 0.53 (mm)

| Client Sample ID | Lab Sample ID          | TCX1 # | TCX2 # | DCB1 # | DCB2 # |
|------------------|------------------------|--------|--------|--------|--------|
| RB-CORE          | 180-43791-1            | 102    | 101    | 98     | 92     |
| FB-CORE          | 180-43791-2            | 112    | 111    | 103    | 95     |
|                  | MB<br>180-140927/1-A   | 93     | 92     | 85     | 79     |
|                  | LCS<br>180-140927/2-A  | 106    | 94     | 99     | 91     |
|                  | LCSD<br>180-140927/3-A | 96     | 95     | 102    | 92     |

TCX = Tetrachloro-m-xylene (Surr)  
DCB = DCB Decachlorobiphenyl (Surr)

QC LIMITS  
34-137  
43-138

# Column to be used to flag recovery values

FORM III  
GC SEMI VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Pittsburgh Job No.: 180-43791-1

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

Matrix: Water Level: Low Lab File ID: 00510056.D

Lab ID: LCS 180-140927/2-A Client ID: \_\_\_\_\_

| COMPOUND | SPIKE<br>ADDED<br>(ug/L) | LCS<br>CONCENTRATION<br>(ug/L) | LCS<br>%<br>REC | QC<br>LIMITS<br>REC | # |
|----------|--------------------------|--------------------------------|-----------------|---------------------|---|
| PCB-1016 | 1.00                     | 0.937                          | 94              | 55-120              |   |
| PCB-1260 | 1.00                     | 0.877                          | 88              | 55-120              |   |

# Column to be used to flag recovery and RPD values

FORM III  
GC SEMI VOA LAB CONTROL SAMPLE DUPLICATE RECOVERY

Lab Name: TestAmerica Pittsburgh Job No.: 180-43791-1

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

Matrix: Water Level: Low Lab File ID: O0510057.D

Lab ID: LCSD 180-140927/3-A Client ID: \_\_\_\_\_

| COMPOUND | SPIKE<br>ADDED<br>(ug/L) | LCSD<br>CONCENTRATION<br>(ug/L) | LCSD<br>%<br>REC | %<br>RPD | QC LIMITS |        | # |
|----------|--------------------------|---------------------------------|------------------|----------|-----------|--------|---|
|          |                          |                                 |                  |          | RPD       | REC    |   |
| PCB-1016 | 1.00                     | 0.986                           | 99               | 5        | 25        | 55-120 |   |
| PCB-1260 | 1.00                     | 0.962                           | 96               | 9        | 25        | 55-120 |   |

# Column to be used to flag recovery and RPD values

FORM IV  
GC SEMI VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-43791-1  
 SDG No.: \_\_\_\_\_  
 Lab Sample ID: MB 180-140927/1-A  
 Matrix: Water Date Extracted: 05/07/2015 13:45  
 Lab File ID: (1) O0510047.D Lab File ID: (2) O0510047.D  
 Date Analyzed: (1) 05/12/2015 03:26 Date Analyzed: (2) 05/12/2015 03:26  
 Instrument ID: (1) CHGC8 Instrument ID: (2) CHGC8  
 GC Column: (1) RTX-CLP1 ID: 0.53(mm) GC Column: (2) RTX-CLP2 ID: 0.53(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

| CLIENT SAMPLE ID | LAB SAMPLE ID       | DATE<br>ANALYZED 1 | DATE<br>ANALYZED 2 |
|------------------|---------------------|--------------------|--------------------|
| RB-CORE          | 180-43791-1         | 05/12/2015 03:46   | 05/12/2015 03:46   |
| FB-CORE          | 180-43791-2         | 05/12/2015 04:06   | 05/12/2015 04:06   |
|                  | LCS 180-140927/2-A  | 05/12/2015 06:25   | 05/12/2015 06:25   |
|                  | LCSD 180-140927/3-A | 05/12/2015 06:45   | 05/12/2015 06:45   |



FORM VIII  
GC SEMI VOA ANALYTICAL SEQUENCE

Lab Name: TestAmerica Pittsburgh Job No.: 180-43791-1  
 SDG No.: \_\_\_\_\_  
 Sample No.: ICRT 180-141160/18 Date Analyzed: 05/11/2015 17:31  
 Instrument ID: CHGC8 GC Column: RTX-CLP1 ID: 0.53 (mm)  
 Lab File ID (Standard): O0510017.D Heated Purge: (Y/N) N  
 Calibration ID: 23852

THE ANALYTICAL SEQUENCE OF BLANKS, SAMPLES, STANDARDS, MS/MSDs AND LCSS IS GIVEN BELOW:

|                               |                  |                  |             | TCX  | DCB   |  |
|-------------------------------|------------------|------------------|-------------|------|-------|--|
|                               |                  |                  |             | RT # | RT #  |  |
| INITIAL CALIBRATION SURROGATE |                  |                  |             | 3.11 | 11.21 |  |
| UPPER LIMIT                   |                  |                  |             | 3.16 | 11.26 |  |
| LOWER LIMIT                   |                  |                  |             | 3.06 | 11.16 |  |
| LAB SAMPLE ID                 | CLIENT SAMPLE ID | DATE ANALYZED    | LAB FILE ID |      |       |  |
| ICRT 180-141160/18            |                  | 05/11/2015 17:31 | O0510017.D  | 3.11 | 11.21 |  |
| CCV 180-141160/47             |                  | 05/12/2015 03:07 | O0510046.D  | 3.11 | 11.20 |  |
| MB 180-140927/1-A             |                  | 05/12/2015 03:26 | O0510047.D  | 3.11 | 11.21 |  |
| 180-43791-1                   | RB-CORE          | 05/12/2015 03:46 | O0510048.D  | 3.11 | 11.21 |  |
| 180-43791-2                   | FB-CORE          | 05/12/2015 04:06 | O0510049.D  | 3.11 | 11.20 |  |
| LCS 180-140927/2-A            |                  | 05/12/2015 06:25 | O0510056.D  | 3.11 | 11.20 |  |
| LCSD 180-140927/3-A           |                  | 05/12/2015 06:45 | O0510057.D  | 3.11 | 11.20 |  |
| CCV 180-141160/59             |                  | 05/12/2015 07:05 | O0510058.D  | 3.11 | 11.20 |  |

TCX = Tetrachloro-m-xylene  
 DCB = DCB Decachlorobiphenyl (Surr)

TCX RT Limit = ± 0 minutes of surrogate RT  
 DCB RT Limit = ± 0 minutes of surrogate RT

# Column used to flag values outside QC limits

FORM VIII  
GC SEMI VOA ANALYTICAL SEQUENCE

Lab Name: TestAmerica Pittsburgh Job No.: 180-43791-1  
 SDG No.: \_\_\_\_\_  
 Sample No.: ICRT 180-141160/18 Date Analyzed: 05/11/2015 17:31  
 Instrument ID: CHGC8 GC Column: RTX-CLP2 ID: 0.53 (mm)  
 Lab File ID (Standard): O0510017.D Heated Purge: (Y/N) N  
 Calibration ID: 23853

THE ANALYTICAL SEQUENCE OF BLANKS, SAMPLES, STANDARDS, MS/MSDs AND LCSS IS GIVEN BELOW:

|                               |                  |                  |             | TCX  | DCB   |  |
|-------------------------------|------------------|------------------|-------------|------|-------|--|
|                               |                  |                  |             | RT # | RT #  |  |
| INITIAL CALIBRATION SURROGATE |                  |                  |             | 3.58 | 12.73 |  |
| UPPER LIMIT                   |                  |                  |             | 3.63 | 12.78 |  |
| LOWER LIMIT                   |                  |                  |             | 3.53 | 12.68 |  |
| LAB SAMPLE ID                 | CLIENT SAMPLE ID | DATE ANALYZED    | LAB FILE ID |      |       |  |
| ICRT 180-141160/18            |                  | 05/11/2015 17:31 | O0510017.D  | 3.58 | 12.73 |  |
| CCV 180-141160/47             |                  | 05/12/2015 03:07 | O0510046.D  | 3.58 | 12.73 |  |
| MB 180-140927/1-A             |                  | 05/12/2015 03:26 | O0510047.D  | 3.58 | 12.73 |  |
| 180-43791-1                   | RB-CORE          | 05/12/2015 03:46 | O0510048.D  | 3.58 | 12.73 |  |
| 180-43791-2                   | FB-CORE          | 05/12/2015 04:06 | O0510049.D  | 3.58 | 12.73 |  |
| LCS 180-140927/2-A            |                  | 05/12/2015 06:25 | O0510056.D  | 3.58 | 12.72 |  |
| LCSD 180-140927/3-A           |                  | 05/12/2015 06:45 | O0510057.D  | 3.58 | 12.72 |  |
| CCV 180-141160/59             |                  | 05/12/2015 07:05 | O0510058.D  | 3.58 | 12.73 |  |

TCX = Tetrachloro-m-xylene  
 DCB = DCB Decachlorobiphenyl (Surr)

TCX RT Limit = ± 0 minutes of surrogate RT  
 DCB RT Limit = ± 0 minutes of surrogate RT

# Column used to flag values outside QC limits

FORM X  
IDENTIFICATION SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-43791-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: \_\_\_\_\_ Lab Sample ID: LCS 180-140927/2-A  
 Instrument ID (1): CHGC8 Instrument ID (2): CHGC8  
 Date Analyzed (1): 05/12/2015 06:25 Date Analyzed (2): 05/12/2015 06:25  
 GC Column (1): RTX-CLP1 ID: 0.53 (mm) GC Column (2): RTX-CLP2 ID: 0.53 (mm)

| ANALYTE  | COL | PEAK | RT    | RT WINDOW |       | CONCENTRATION |       | RPD  |
|----------|-----|------|-------|-----------|-------|---------------|-------|------|
|          |     |      |       | FROM      | TO    | PEAK          | MEAN  |      |
| PCB-1016 | 1   | 1    | 3.41  | 3.36      | 3.46  | 0.910         | 0.937 | 10.0 |
|          |     | 2    | 3.74  | 3.69      | 3.79  | 0.877         |       |      |
|          |     | 3    | 4.37  | 4.32      | 4.42  | 0.946         |       |      |
|          |     | 4    | 4.44  | 4.39      | 4.49  | 0.975         |       |      |
|          |     | 5    | 4.86  | 4.81      | 4.91  | 0.979         |       |      |
|          | 2   | 1    | 5.41  | 5.37      | 5.47  | 0.895         | 0.848 |      |
|          |     | 2    | 5.57  | 5.52      | 5.62  | 0.883         |       |      |
|          |     | 3    | 6.15  | 6.11      | 6.21  | 0.811         |       |      |
|          |     | 4    | 6.89  | 6.84      | 6.94  | 0.841         |       |      |
|          |     | 5    | 7.25  | 7.20      | 7.30  | 0.812         |       |      |
| PCB-1260 | 1   | 1    | 6.68  | 6.63      | 6.73  | 0.892         | 0.877 | 16.4 |
|          |     | 2    | 7.72  | 7.67      | 7.77  | 0.892         |       |      |
|          |     | 3    | 8.44  | 8.39      | 8.49  | 0.884         |       |      |
|          |     | 4    | 9.03  | 8.98      | 9.08  | 0.879         |       |      |
|          |     | 5    | 9.51  | 9.47      | 9.57  | 0.841         |       |      |
|          | 2   | 1    | 9.27  | 9.22      | 9.32  | 0.738         | 0.744 |      |
|          |     | 2    | 9.60  | 9.55      | 9.65  | 0.744         |       |      |
|          |     | 3    | 9.75  | 9.71      | 9.81  | 0.735         |       |      |
|          |     | 4    | 10.23 | 10.18     | 10.28 | 0.719         |       |      |
|          |     | 5    | 10.62 | 10.57     | 10.67 | 0.786         |       |      |

FORM X  
IDENTIFICATION SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-43791-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: \_\_\_\_\_ Lab Sample ID: LCSD 180-140927/3-A  
 Instrument ID (1): CHGC8 Instrument ID (2): CHGC8  
 Date Analyzed (1): 05/12/2015 06:45 Date Analyzed (2): 05/12/2015 06:45  
 GC Column (1): RTX-CLP1 ID: 0.53 (mm) GC Column (2): RTX-CLP2 ID: 0.53 (mm)

| ANALYTE  | COL | PEAK | RT    | RT WINDOW |       | CONCENTRATION |       | RPD  |
|----------|-----|------|-------|-----------|-------|---------------|-------|------|
|          |     |      |       | FROM      | TO    | PEAK          | MEAN  |      |
| PCB-1016 | 1   | 1    | 3.41  | 3.36      | 3.46  | 0.892         | 0.955 | 3.2  |
|          |     | 2    | 3.74  | 3.69      | 3.79  | 0.872         |       |      |
|          |     | 3    | 4.37  | 4.32      | 4.42  | 0.985         |       |      |
|          |     | 4    | 4.44  | 4.39      | 4.49  | 1.01          |       |      |
|          |     | 5    | 4.86  | 4.81      | 4.91  | 1.02          |       |      |
|          | 2   | 1    | 5.42  | 5.37      | 5.47  | 0.993         | 0.986 |      |
|          |     | 2    | 5.57  | 5.52      | 5.62  | 1.00          |       |      |
|          |     | 3    | 6.15  | 6.11      | 6.21  | 0.943         |       |      |
|          |     | 4    | 6.89  | 6.84      | 6.94  | 1.00          |       |      |
|          |     | 5    | 7.25  | 7.20      | 7.30  | 0.991         |       |      |
| PCB-1260 | 1   | 1    | 6.68  | 6.63      | 6.73  | 0.962         | 0.962 | 10.2 |
|          |     | 2    | 7.72  | 7.67      | 7.77  | 0.974         |       |      |
|          |     | 3    | 8.44  | 8.39      | 8.49  | 0.967         |       |      |
|          |     | 4    | 9.03  | 8.98      | 9.08  | 0.977         |       |      |
|          |     | 5    | 9.51  | 9.47      | 9.57  | 0.928         |       |      |
|          | 2   | 1    | 9.27  | 9.22      | 9.32  | 0.891         | 0.869 |      |
|          |     | 2    | 9.60  | 9.55      | 9.65  | 0.880         |       |      |
|          |     | 3    | 9.75  | 9.71      | 9.81  | 0.863         |       |      |
|          |     | 4    | 10.23 | 10.18     | 10.28 | 0.831         |       |      |
|          |     | 5    | 10.62 | 10.57     | 10.67 | 0.878         |       |      |

FORM I  
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-43791-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: RB-CORE Lab Sample ID: 180-43791-1  
 Matrix: Water Lab File ID: O0510048.D  
 Analysis Method: 8082A Date Collected: 05/05/2015 15:30  
 Extraction Method: 3510C Date Extracted: 05/07/2015 13:45  
 Sample wt/vol: 1050 (mL) Date Analyzed: 05/12/2015 03:46  
 Con. Extract Vol.: 1.0 (mL) Dilution Factor: 1  
 Injection Volume: 1 (uL) GC Column: RTX-CLP1 ID: 0.53 (mm)  
 % Moisture: \_\_\_\_\_ GPC Cleanup: (Y/N) N  
 Analysis Batch No.: 141160 Units: ug/L

| CAS NO.    | COMPOUND NAME | RESULT | Q | RL     | MDL    |
|------------|---------------|--------|---|--------|--------|
| 12674-11-2 | PCB-1016      | ND     |   | 0.0095 | 0.0024 |
| 11104-28-2 | PCB-1221      | ND     |   | 0.0095 | 0.0039 |
| 11141-16-5 | PCB-1232      | ND     |   | 0.0095 | 0.0037 |
| 53469-21-9 | PCB-1242      | ND     |   | 0.0095 | 0.0018 |
| 12672-29-6 | PCB-1248      | ND     |   | 0.0095 | 0.0026 |
| 11097-69-1 | PCB-1254      | ND     |   | 0.0095 | 0.0029 |
| 11096-82-5 | PCB-1260      | ND     |   | 0.0095 | 0.0016 |

| CAS NO.   | SURROGATE                     | %REC | Q | LIMITS |
|-----------|-------------------------------|------|---|--------|
| 2051-24-3 | DCB Decachlorobiphenyl (Surr) | 98   |   | 43-138 |
| 877-09-8  | Tetrachloro-m-xylene (Surr)   | 102  |   | 34-137 |

TestAmerica Pittsburgh  
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\O0510048.D  
 Lims ID: 180-43791-A-1-A Lab Sample ID: 180-43791-1  
 Client ID: RB-CORE  
 Sample Type: Client  
 Inject. Date: 12-May-2015 03:46:44 ALS Bottle#: 49 Worklist Smp#: 49  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 180-0006866-049  
 Operator ID: 402360 Instrument ID: CHGC8  
 Method: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\PCB\_CHGC8DUAL.m  
 Limit Group: GCS 8082A ICAL  
 Last Update: 12-May-2015 16:54:58 Calib Date: 11-May-2015 18:31:22  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICal File: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\O0510020.D

Column 1 : Det: GC ECD1A  
 Column 2 : Det: GC ECD2B  
 Process Host: XAWRK022

First Level Reviewer: guptaa Date: 12-May-2015 09:04:50

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | OnCol Amt ng | Flags |
|-----|-----------|---------------|---------------|----------|--------------|-------|
|-----|-----------|---------------|---------------|----------|--------------|-------|

\$ 1 Tetrachloro-m-xylene

|            |       |       |        |           |        |  |
|------------|-------|-------|--------|-----------|--------|--|
| 1          | 3.109 | 3.110 | -0.001 | 46617559H | 0.0203 |  |
| 2          | 3.581 | 3.583 | -0.002 | 81642266H | 0.0203 |  |
| RPD = 0.17 |       |       |        |           |        |  |

2 PCB-1221

|   |  |       |  |  |    |  |
|---|--|-------|--|--|----|--|
| 1 |  | 3.242 |  |  | ND |  |
| 1 |  | 3.370 |  |  |    |  |
| 1 |  | 3.408 |  |  |    |  |
| 2 |  | 3.867 |  |  |    |  |
| 2 |  | 4.024 |  |  |    |  |
| 2 |  | 4.096 |  |  |    |  |

5 PCB-1232

|   |  |       |  |  |    |  |
|---|--|-------|--|--|----|--|
| 1 |  | 3.246 |  |  | ND |  |
| 1 |  | 3.741 |  |  |    |  |
| 1 |  | 4.859 |  |  |    |  |
| 1 |  | 5.365 |  |  |    |  |
| 1 |  | 6.158 |  |  |    |  |
| 2 |  | 3.873 |  |  |    |  |
| 2 |  | 4.028 |  |  |    |  |
| 2 |  | 4.918 |  |  |    |  |
| 2 |  | 5.573 |  |  |    |  |
| 2 |  | 6.367 |  |  |    |  |

Data File: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\O0510048.D

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | OnCol Amt ng | Flags |
|-----|-----------|---------------|---------------|----------|--------------|-------|
|-----|-----------|---------------|---------------|----------|--------------|-------|

## 4 PCB-1016

|   |       |  |  |  |    |  |
|---|-------|--|--|--|----|--|
| 1 | 3.414 |  |  |  | ND |  |
| 1 | 3.741 |  |  |  |    |  |
| 1 | 4.372 |  |  |  |    |  |
| 1 | 4.444 |  |  |  |    |  |
| 1 | 4.859 |  |  |  |    |  |
| 2 | 5.416 |  |  |  |    |  |
| 2 | 5.574 |  |  |  |    |  |
| 2 | 6.155 |  |  |  |    |  |
| 2 | 6.894 |  |  |  |    |  |
| 2 | 7.250 |  |  |  |    |  |

## 6 PCB-1248

|   |       |  |  |  |    |  |
|---|-------|--|--|--|----|--|
| 1 | 4.204 |  |  |  | ND |  |
| 1 | 4.444 |  |  |  |    |  |
| 1 | 5.313 |  |  |  |    |  |
| 1 | 5.432 |  |  |  |    |  |
| 1 | 6.376 |  |  |  |    |  |
| 2 | 6.156 |  |  |  |    |  |
| 2 | 6.368 |  |  |  |    |  |
| 2 | 6.708 |  |  |  |    |  |
| 2 | 8.198 |  |  |  |    |  |
| 2 | 7.341 |  |  |  |    |  |

## 3 PCB-1242

|   |       |  |  |  |    |  |
|---|-------|--|--|--|----|--|
| 1 | 4.371 |  |  |  | ND |  |
| 1 | 4.443 |  |  |  |    |  |
| 1 | 4.858 |  |  |  |    |  |
| 1 | 4.970 |  |  |  |    |  |
| 1 | 5.431 |  |  |  |    |  |
| 2 | 5.414 |  |  |  |    |  |
| 2 | 5.712 |  |  |  |    |  |
| 2 | 6.153 |  |  |  |    |  |
| 2 | 6.365 |  |  |  |    |  |
| 2 | 6.906 |  |  |  |    |  |

## 7 PCB-1254

|   |       |  |  |  |    |  |
|---|-------|--|--|--|----|--|
| 1 | 5.361 |  |  |  | ND |  |
| 1 | 5.743 |  |  |  |    |  |
| 1 | 6.171 |  |  |  |    |  |
| 1 | 7.182 |  |  |  |    |  |
| 1 | 7.718 |  |  |  |    |  |
| 2 | 6.886 |  |  |  |    |  |
| 2 | 7.243 |  |  |  |    |  |
| 2 | 7.952 |  |  |  |    |  |
| 2 | 8.646 |  |  |  |    |  |
| 2 | 9.280 |  |  |  |    |  |

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | OnCol Amt ng | Flags |
|-----|-----------|---------------|---------------|----------|--------------|-------|
|-----|-----------|---------------|---------------|----------|--------------|-------|

8 PCB-1260

|   |        |  |  |  |    |  |
|---|--------|--|--|--|----|--|
| 1 | 6.682  |  |  |  | ND |  |
| 1 | 7.721  |  |  |  |    |  |
| 1 | 8.441  |  |  |  |    |  |
| 1 | 9.033  |  |  |  |    |  |
| 1 | 9.515  |  |  |  |    |  |
| 2 | 9.271  |  |  |  |    |  |
| 2 | 9.604  |  |  |  |    |  |
| 2 | 9.756  |  |  |  |    |  |
| 2 | 10.230 |  |  |  |    |  |
| 2 | 10.624 |  |  |  |    |  |

9 PCB-1262

|   |        |  |  |  |    |  |
|---|--------|--|--|--|----|--|
| 1 | 7.416  |  |  |  | ND |  |
| 1 | 8.057  |  |  |  |    |  |
| 1 | 8.522  |  |  |  |    |  |
| 1 | 10.105 |  |  |  |    |  |
| 1 | 10.519 |  |  |  |    |  |
| 2 | 9.597  |  |  |  |    |  |
| 2 | 9.846  |  |  |  |    |  |
| 2 | 10.342 |  |  |  |    |  |
| 2 | 11.742 |  |  |  |    |  |
| 2 | 11.964 |  |  |  |    |  |

10 PCB-1268

|   |        |  |  |  |    |  |
|---|--------|--|--|--|----|--|
| 1 | 9.579  |  |  |  | ND |  |
| 1 | 9.647  |  |  |  |    |  |
| 1 | 9.955  |  |  |  |    |  |
| 1 | 10.939 |  |  |  |    |  |
| 2 | 11.149 |  |  |  |    |  |
| 2 | 11.216 |  |  |  |    |  |
| 2 | 11.571 |  |  |  |    |  |
| 2 | 12.395 |  |  |  |    |  |

\$ 11 DCB Decachlorobiphenyl (Surr)

|   |        |        |        |           |        |  |
|---|--------|--------|--------|-----------|--------|--|
| 1 | 11.205 | 11.204 | 0.001  | 19000954H | 0.0196 |  |
| 2 | 12.726 | 12.727 | -0.001 | 22585684H | 0.0184 |  |

RPD = 6.29



TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\O0510048.D

Injection Date: 12-May-2015 03:46:44

Instrument ID: CHGC8

Lims ID: 180-43791-A-1-A

Lab Sample ID: 180-43791-1

Client ID: RB-CORE

Operator ID: 402360

ALS Bottle#: 49

Worklist Smp#: 49

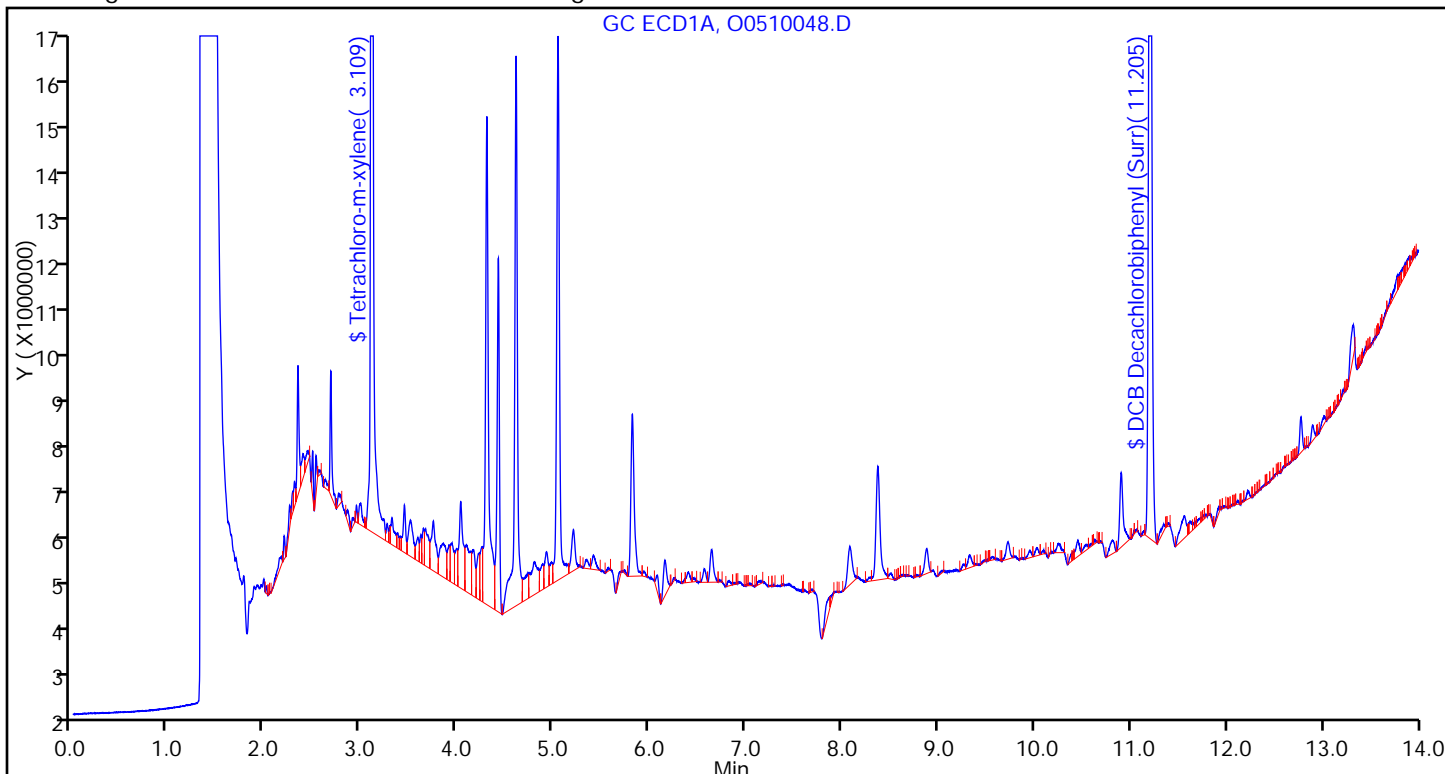
Injection Vol: 1.0 ul

Dil. Factor: 1.0000

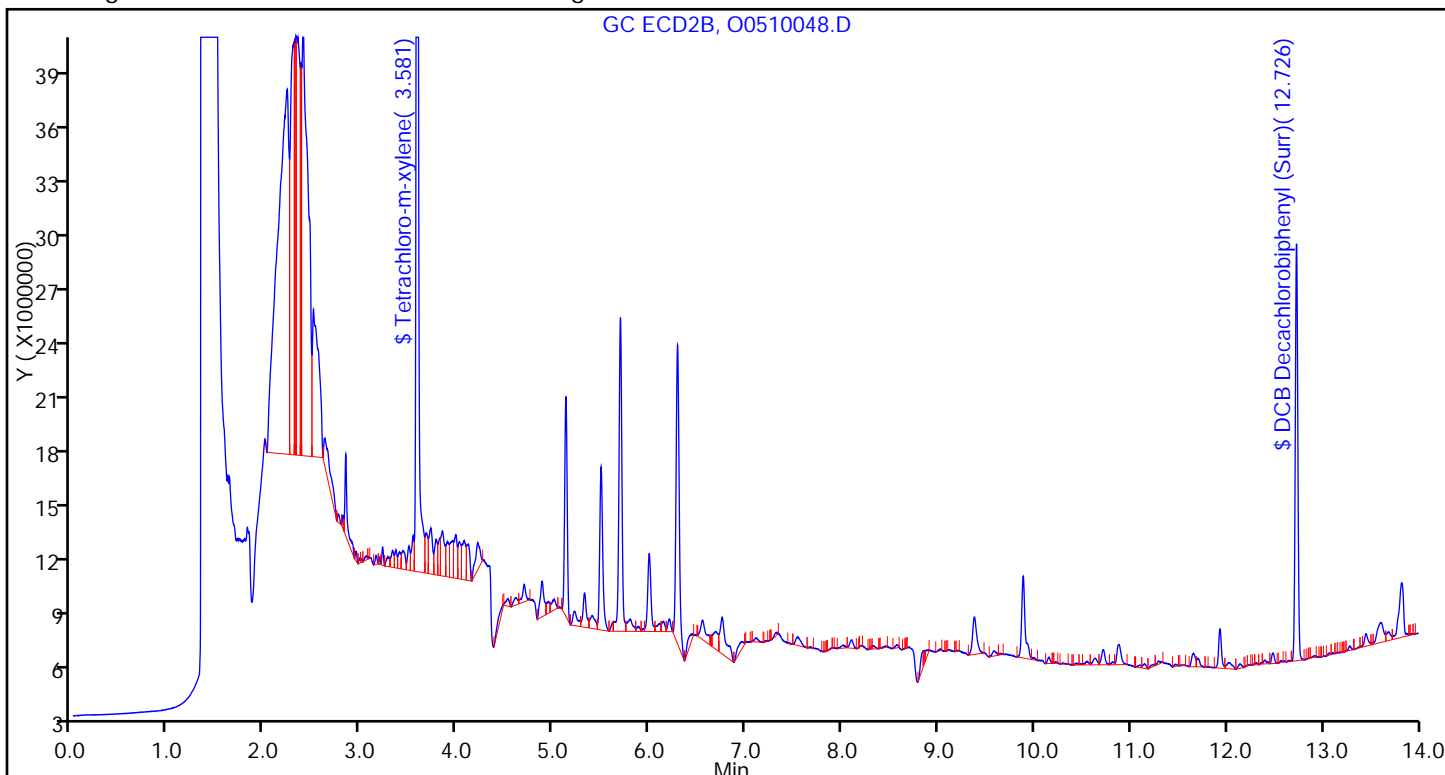
Method: PCB\_CHGC8DUAL

Limit Group: GCS 8082A ICAL

Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



FORM I  
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-43791-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: RB-CORE Lab Sample ID: 180-43791-1  
 Matrix: Water Lab File ID: O0510048.D  
 Analysis Method: 8082A Date Collected: 05/05/2015 15:30  
 Extraction Method: 3510C Date Extracted: 05/07/2015 13:45  
 Sample wt/vol: 1050 (mL) Date Analyzed: 05/12/2015 03:46  
 Con. Extract Vol.: 1.0 (mL) Dilution Factor: 1  
 Injection Volume: 1 (uL) GC Column: RTX-CLP2 ID: 0.53 (mm)  
 % Moisture: \_\_\_\_\_ GPC Cleanup: (Y/N) N  
 Analysis Batch No.: 141160 Units: ug/L

| CAS NO.   | SURROGATE                     | %REC | Q | LIMITS |
|-----------|-------------------------------|------|---|--------|
| 2051-24-3 | DCB Decachlorobiphenyl (Surr) | 92   |   | 43-138 |
| 877-09-8  | Tetrachloro-m-xylene (Surr)   | 101  |   | 34-137 |

TestAmerica Pittsburgh  
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\O0510048.D  
 Lims ID: 180-43791-A-1-A Lab Sample ID: 180-43791-1  
 Client ID: RB-CORE  
 Sample Type: Client  
 Inject. Date: 12-May-2015 03:46:44 ALS Bottle#: 49 Worklist Smp#: 49  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 180-0006866-049  
 Operator ID: 402360 Instrument ID: CHGC8  
 Method: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\PCB\_CHGC8DUAL.m  
 Limit Group: GCS 8082A ICAL  
 Last Update: 12-May-2015 16:54:58 Calib Date: 11-May-2015 18:31:22  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICal File: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\O0510020.D

Column 1 : Det: GC ECD1A  
 Column 2 : Det: GC ECD2B  
 Process Host: XAWRK022

First Level Reviewer: guptaa Date: 12-May-2015 09:04:50

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | OnCol Amt ng | Flags |
|-----|-----------|---------------|---------------|----------|--------------|-------|
|-----|-----------|---------------|---------------|----------|--------------|-------|

\$ 1 Tetrachloro-m-xylene

|   |       |       |        |           |        |            |
|---|-------|-------|--------|-----------|--------|------------|
| 1 | 3.109 | 3.110 | -0.001 | 46617559H | 0.0203 |            |
| 2 | 3.581 | 3.583 | -0.002 | 81642266H | 0.0203 |            |
|   |       |       |        |           |        | RPD = 0.17 |

2 PCB-1221

|   |  |       |  |  |    |  |
|---|--|-------|--|--|----|--|
| 1 |  | 3.242 |  |  | ND |  |
| 1 |  | 3.370 |  |  |    |  |
| 1 |  | 3.408 |  |  |    |  |
| 2 |  | 3.867 |  |  |    |  |
| 2 |  | 4.024 |  |  |    |  |
| 2 |  | 4.096 |  |  |    |  |

5 PCB-1232

|   |  |       |  |  |    |  |
|---|--|-------|--|--|----|--|
| 1 |  | 3.246 |  |  | ND |  |
| 1 |  | 3.741 |  |  |    |  |
| 1 |  | 4.859 |  |  |    |  |
| 1 |  | 5.365 |  |  |    |  |
| 1 |  | 6.158 |  |  |    |  |
| 2 |  | 3.873 |  |  |    |  |
| 2 |  | 4.028 |  |  |    |  |
| 2 |  | 4.918 |  |  |    |  |
| 2 |  | 5.573 |  |  |    |  |
| 2 |  | 6.367 |  |  |    |  |

Data File: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\O0510048.D

| Col        | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | OnCol Amt ng | Flags |
|------------|-----------|---------------|---------------|----------|--------------|-------|
| 4 PCB-1016 |           |               |               |          |              |       |
| 1          |           | 3.414         |               |          | ND           |       |
| 1          |           | 3.741         |               |          |              |       |
| 1          |           | 4.372         |               |          |              |       |
| 1          |           | 4.444         |               |          |              |       |
| 1          |           | 4.859         |               |          |              |       |
| 2          |           | 5.416         |               |          |              |       |
| 2          |           | 5.574         |               |          |              |       |
| 2          |           | 6.155         |               |          |              |       |
| 2          |           | 6.894         |               |          |              |       |
| 2          |           | 7.250         |               |          |              |       |
| 6 PCB-1248 |           |               |               |          |              |       |
| 1          |           | 4.204         |               |          | ND           |       |
| 1          |           | 4.444         |               |          |              |       |
| 1          |           | 5.313         |               |          |              |       |
| 1          |           | 5.432         |               |          |              |       |
| 1          |           | 6.376         |               |          |              |       |
| 2          |           | 6.156         |               |          |              |       |
| 2          |           | 6.368         |               |          |              |       |
| 2          |           | 6.708         |               |          |              |       |
| 2          |           | 8.198         |               |          |              |       |
| 2          |           | 7.341         |               |          |              |       |
| 3 PCB-1242 |           |               |               |          |              |       |
| 1          |           | 4.371         |               |          | ND           |       |
| 1          |           | 4.443         |               |          |              |       |
| 1          |           | 4.858         |               |          |              |       |
| 1          |           | 4.970         |               |          |              |       |
| 1          |           | 5.431         |               |          |              |       |
| 2          |           | 5.414         |               |          |              |       |
| 2          |           | 5.712         |               |          |              |       |
| 2          |           | 6.153         |               |          |              |       |
| 2          |           | 6.365         |               |          |              |       |
| 2          |           | 6.906         |               |          |              |       |
| 7 PCB-1254 |           |               |               |          |              |       |
| 1          |           | 5.361         |               |          | ND           |       |
| 1          |           | 5.743         |               |          |              |       |
| 1          |           | 6.171         |               |          |              |       |
| 1          |           | 7.182         |               |          |              |       |
| 1          |           | 7.718         |               |          |              |       |
| 2          |           | 6.886         |               |          |              |       |
| 2          |           | 7.243         |               |          |              |       |
| 2          |           | 7.952         |               |          |              |       |
| 2          |           | 8.646         |               |          |              |       |
| 2          |           | 9.280         |               |          |              |       |

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | OnCol Amt ng | Flags |
|-----|-----------|---------------|---------------|----------|--------------|-------|
|-----|-----------|---------------|---------------|----------|--------------|-------|

8 PCB-1260

|   |        |  |  |  |    |  |
|---|--------|--|--|--|----|--|
| 1 | 6.682  |  |  |  | ND |  |
| 1 | 7.721  |  |  |  |    |  |
| 1 | 8.441  |  |  |  |    |  |
| 1 | 9.033  |  |  |  |    |  |
| 1 | 9.515  |  |  |  |    |  |
| 2 | 9.271  |  |  |  |    |  |
| 2 | 9.604  |  |  |  |    |  |
| 2 | 9.756  |  |  |  |    |  |
| 2 | 10.230 |  |  |  |    |  |
| 2 | 10.624 |  |  |  |    |  |

9 PCB-1262

|   |        |  |  |  |    |  |
|---|--------|--|--|--|----|--|
| 1 | 7.416  |  |  |  | ND |  |
| 1 | 8.057  |  |  |  |    |  |
| 1 | 8.522  |  |  |  |    |  |
| 1 | 10.105 |  |  |  |    |  |
| 1 | 10.519 |  |  |  |    |  |
| 2 | 9.597  |  |  |  |    |  |
| 2 | 9.846  |  |  |  |    |  |
| 2 | 10.342 |  |  |  |    |  |
| 2 | 11.742 |  |  |  |    |  |
| 2 | 11.964 |  |  |  |    |  |

10 PCB-1268

|   |        |  |  |  |    |  |
|---|--------|--|--|--|----|--|
| 1 | 9.579  |  |  |  | ND |  |
| 1 | 9.647  |  |  |  |    |  |
| 1 | 9.955  |  |  |  |    |  |
| 1 | 10.939 |  |  |  |    |  |
| 2 | 11.149 |  |  |  |    |  |
| 2 | 11.216 |  |  |  |    |  |
| 2 | 11.571 |  |  |  |    |  |
| 2 | 12.395 |  |  |  |    |  |

\$ 11 DCB Decachlorobiphenyl (Surr)

|   |        |        |        |           |        |  |
|---|--------|--------|--------|-----------|--------|--|
| 1 | 11.205 | 11.204 | 0.001  | 19000954H | 0.0196 |  |
| 2 | 12.726 | 12.727 | -0.001 | 22585684H | 0.0184 |  |

RPD = 6.29

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\O0510048.D

Injection Date: 12-May-2015 03:46:44

Instrument ID: CHGC8

Lims ID: 180-43791-A-1-A

Lab Sample ID: 180-43791-1

Client ID: RB-CORE

Operator ID: 402360

ALS Bottle#: 49

Worklist Smp#: 49

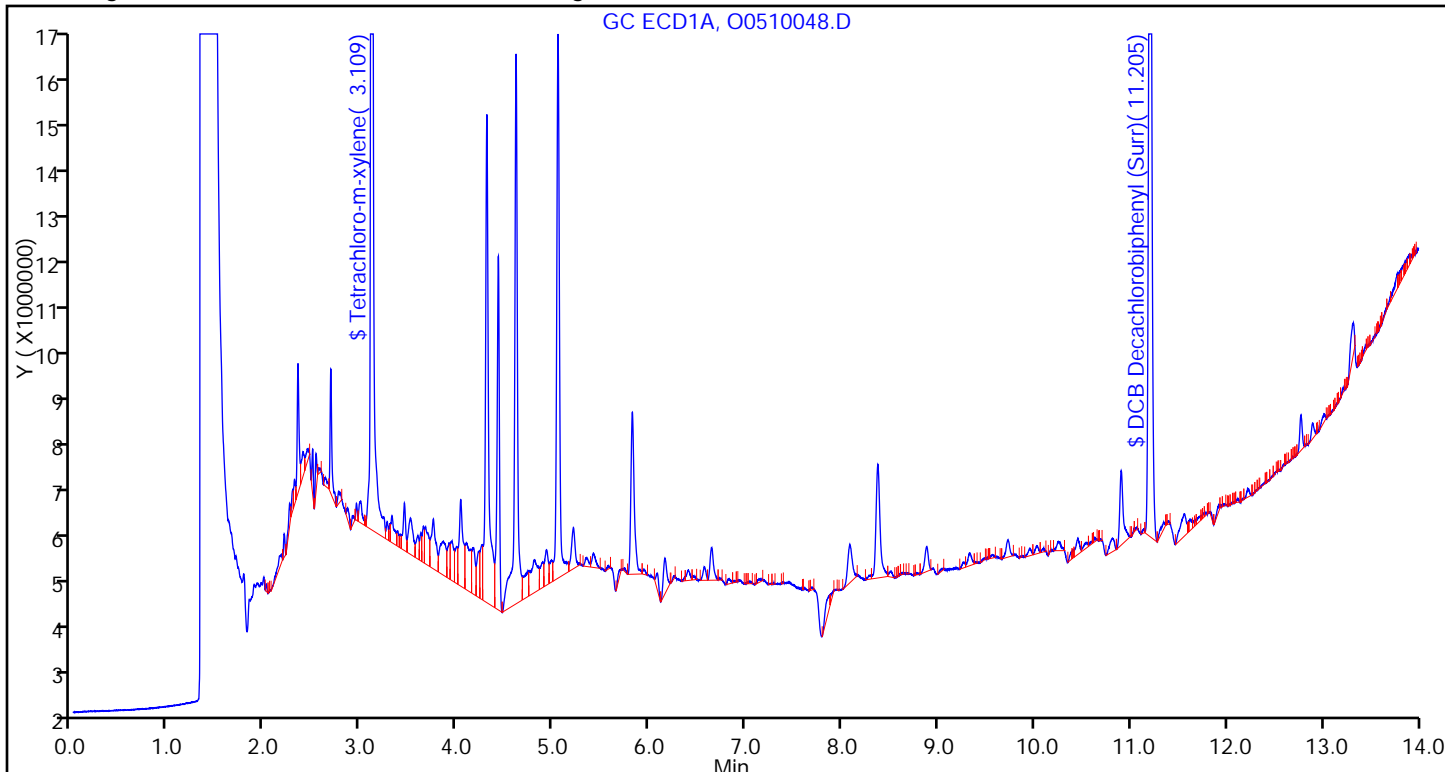
Injection Vol: 1.0 ul

Dil. Factor: 1.0000

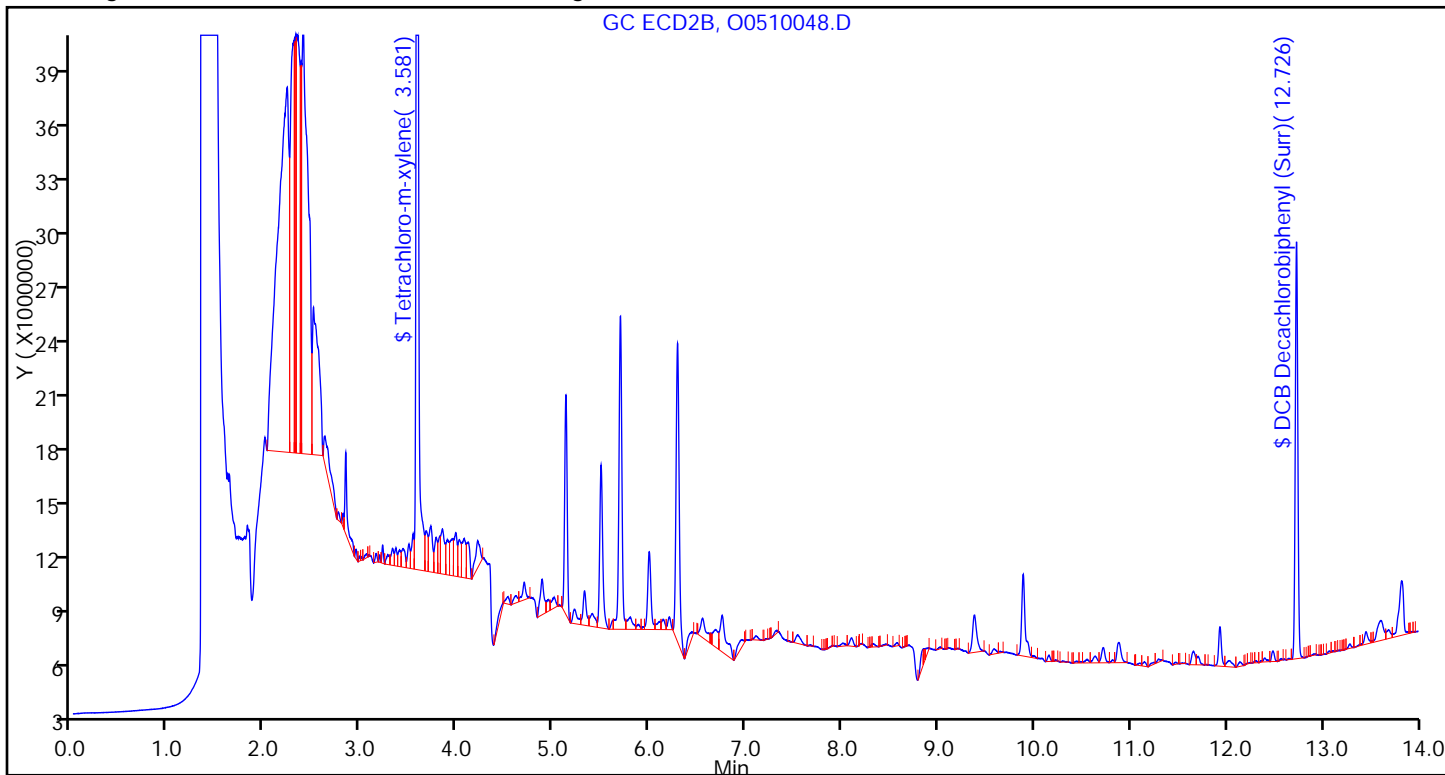
Method: PCB\_CHGC8DUAL

Limit Group: GCS 8082A ICAL

Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



FORM I  
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-43791-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: FB-CORE Lab Sample ID: 180-43791-2  
 Matrix: Water Lab File ID: O0510049.D  
 Analysis Method: 8082A Date Collected: 05/05/2015 15:40  
 Extraction Method: 3510C Date Extracted: 05/07/2015 13:45  
 Sample wt/vol: 1050 (mL) Date Analyzed: 05/12/2015 04:06  
 Con. Extract Vol.: 1.0 (mL) Dilution Factor: 1  
 Injection Volume: 1 (uL) GC Column: RTX-CLP1 ID: 0.53 (mm)  
 % Moisture: \_\_\_\_\_ GPC Cleanup: (Y/N) N  
 Analysis Batch No.: 141160 Units: ug/L

| CAS NO.    | COMPOUND NAME | RESULT | Q | RL     | MDL    |
|------------|---------------|--------|---|--------|--------|
| 12674-11-2 | PCB-1016      | ND     |   | 0.0095 | 0.0024 |
| 11104-28-2 | PCB-1221      | ND     |   | 0.0095 | 0.0039 |
| 11141-16-5 | PCB-1232      | ND     |   | 0.0095 | 0.0037 |
| 53469-21-9 | PCB-1242      | ND     |   | 0.0095 | 0.0018 |
| 12672-29-6 | PCB-1248      | ND     |   | 0.0095 | 0.0026 |
| 11097-69-1 | PCB-1254      | ND     |   | 0.0095 | 0.0029 |
| 11096-82-5 | PCB-1260      | ND     |   | 0.0095 | 0.0016 |

| CAS NO.   | SURROGATE                     | %REC | Q | LIMITS |
|-----------|-------------------------------|------|---|--------|
| 2051-24-3 | DCB Decachlorobiphenyl (Surr) | 103  |   | 43-138 |
| 877-09-8  | Tetrachloro-m-xylene (Surr)   | 112  |   | 34-137 |

TestAmerica Pittsburgh  
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\O0510049.D  
 Lims ID: 180-43791-A-2-A Lab Sample ID: 180-43791-2  
 Client ID: FB-CORE  
 Sample Type: Client  
 Inject. Date: 12-May-2015 04:06:31 ALS Bottle#: 50 Worklist Smp#: 50  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 180-0006866-050  
 Operator ID: 402360 Instrument ID: CHGC8  
 Method: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\PCB\_CHGC8DUAL.m  
 Limit Group: GCS 8082A ICAL  
 Last Update: 12-May-2015 16:54:58 Calib Date: 11-May-2015 18:31:22  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICal File: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\O0510020.D

Column 1 : Det: GC ECD1A  
 Column 2 : Det: GC ECD2B  
 Process Host: XAWRK022

First Level Reviewer: guptaa Date: 12-May-2015 09:05:05

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | OnCol Amt ng | Flags |
|-----|-----------|---------------|---------------|----------|--------------|-------|
|-----|-----------|---------------|---------------|----------|--------------|-------|

\$ 1 Tetrachloro-m-xylene

|   |       |       |        |           |        |            |
|---|-------|-------|--------|-----------|--------|------------|
| 1 | 3.108 | 3.110 | -0.002 | 51203272H | 0.0223 |            |
| 2 | 3.580 | 3.583 | -0.003 | 89208099H | 0.0222 |            |
|   |       |       |        |           |        | RPD = 0.53 |

2 PCB-1221

|   |  |       |  |  |    |  |
|---|--|-------|--|--|----|--|
| 1 |  | 3.242 |  |  | ND |  |
| 1 |  | 3.370 |  |  |    |  |
| 1 |  | 3.408 |  |  |    |  |
| 2 |  | 3.867 |  |  |    |  |
| 2 |  | 4.024 |  |  |    |  |
| 2 |  | 4.096 |  |  |    |  |

5 PCB-1232

|   |  |       |  |  |    |  |
|---|--|-------|--|--|----|--|
| 1 |  | 3.246 |  |  | ND |  |
| 1 |  | 3.741 |  |  |    |  |
| 1 |  | 4.859 |  |  |    |  |
| 1 |  | 5.365 |  |  |    |  |
| 1 |  | 6.158 |  |  |    |  |
| 2 |  | 3.873 |  |  |    |  |
| 2 |  | 4.028 |  |  |    |  |
| 2 |  | 4.918 |  |  |    |  |
| 2 |  | 5.573 |  |  |    |  |
| 2 |  | 6.367 |  |  |    |  |



Data File: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\O0510049.D

| Col | RT<br>(min.) | Exp RT<br>(min.) | Dlt RT<br>(min.) | Response | OnCol Amt<br>ng | Flags |
|-----|--------------|------------------|------------------|----------|-----------------|-------|
|-----|--------------|------------------|------------------|----------|-----------------|-------|

## 4 PCB-1016

|   |       |  |  |  |    |  |
|---|-------|--|--|--|----|--|
| 1 | 3.414 |  |  |  | ND |  |
| 1 | 3.741 |  |  |  |    |  |
| 1 | 4.372 |  |  |  |    |  |
| 1 | 4.444 |  |  |  |    |  |
| 1 | 4.859 |  |  |  |    |  |
| 2 | 5.416 |  |  |  |    |  |
| 2 | 5.574 |  |  |  |    |  |
| 2 | 6.155 |  |  |  |    |  |
| 2 | 6.894 |  |  |  |    |  |
| 2 | 7.250 |  |  |  |    |  |

## 6 PCB-1248

|   |       |  |  |  |    |  |
|---|-------|--|--|--|----|--|
| 1 | 4.204 |  |  |  | ND |  |
| 1 | 4.444 |  |  |  |    |  |
| 1 | 5.313 |  |  |  |    |  |
| 1 | 5.432 |  |  |  |    |  |
| 1 | 6.376 |  |  |  |    |  |
| 2 | 6.156 |  |  |  |    |  |
| 2 | 6.368 |  |  |  |    |  |
| 2 | 6.708 |  |  |  |    |  |
| 2 | 8.198 |  |  |  |    |  |
| 2 | 7.341 |  |  |  |    |  |

## 3 PCB-1242

|   |       |  |  |  |    |  |
|---|-------|--|--|--|----|--|
| 1 | 4.371 |  |  |  | ND |  |
| 1 | 4.443 |  |  |  |    |  |
| 1 | 4.858 |  |  |  |    |  |
| 1 | 4.970 |  |  |  |    |  |
| 1 | 5.431 |  |  |  |    |  |
| 2 | 5.414 |  |  |  |    |  |
| 2 | 5.712 |  |  |  |    |  |
| 2 | 6.153 |  |  |  |    |  |
| 2 | 6.365 |  |  |  |    |  |
| 2 | 6.906 |  |  |  |    |  |

## 7 PCB-1254

|   |       |  |  |  |    |  |
|---|-------|--|--|--|----|--|
| 1 | 5.361 |  |  |  | ND |  |
| 1 | 5.743 |  |  |  |    |  |
| 1 | 6.171 |  |  |  |    |  |
| 1 | 7.182 |  |  |  |    |  |
| 1 | 7.718 |  |  |  |    |  |
| 2 | 6.886 |  |  |  |    |  |
| 2 | 7.243 |  |  |  |    |  |
| 2 | 7.952 |  |  |  |    |  |
| 2 | 8.646 |  |  |  |    |  |
| 2 | 9.280 |  |  |  |    |  |

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | OnCol Amt ng | Flags |
|-----|-----------|---------------|---------------|----------|--------------|-------|
|-----|-----------|---------------|---------------|----------|--------------|-------|

8 PCB-1260

|   |        |  |  |  |    |  |
|---|--------|--|--|--|----|--|
| 1 | 6.682  |  |  |  | ND |  |
| 1 | 7.721  |  |  |  |    |  |
| 1 | 8.441  |  |  |  |    |  |
| 1 | 9.033  |  |  |  |    |  |
| 1 | 9.515  |  |  |  |    |  |
| 2 | 9.271  |  |  |  |    |  |
| 2 | 9.604  |  |  |  |    |  |
| 2 | 9.756  |  |  |  |    |  |
| 2 | 10.230 |  |  |  |    |  |
| 2 | 10.624 |  |  |  |    |  |

9 PCB-1262

|   |        |  |  |  |    |  |
|---|--------|--|--|--|----|--|
| 1 | 7.416  |  |  |  | ND |  |
| 1 | 8.057  |  |  |  |    |  |
| 1 | 8.522  |  |  |  |    |  |
| 1 | 10.105 |  |  |  |    |  |
| 1 | 10.519 |  |  |  |    |  |
| 2 | 9.597  |  |  |  |    |  |
| 2 | 9.846  |  |  |  |    |  |
| 2 | 10.342 |  |  |  |    |  |
| 2 | 11.742 |  |  |  |    |  |
| 2 | 11.964 |  |  |  |    |  |

10 PCB-1268

|   |        |  |  |  |    |  |
|---|--------|--|--|--|----|--|
| 1 | 9.579  |  |  |  | ND |  |
| 1 | 9.647  |  |  |  |    |  |
| 1 | 9.955  |  |  |  |    |  |
| 1 | 10.939 |  |  |  |    |  |
| 2 | 11.149 |  |  |  |    |  |
| 2 | 11.216 |  |  |  |    |  |
| 2 | 11.571 |  |  |  |    |  |
| 2 | 12.395 |  |  |  |    |  |

\$ 11 DCB Decachlorobiphenyl (Surr)

|   |        |        |        |           |        |  |
|---|--------|--------|--------|-----------|--------|--|
| 1 | 11.204 | 11.204 | 0.000  | 19998803H | 0.0206 |  |
| 2 | 12.725 | 12.727 | -0.002 | 23266177H | 0.0189 |  |

RPD = 8.44

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\O0510049.D

Injection Date: 12-May-2015 04:06:31

Instrument ID: CHGC8

Lims ID: 180-43791-A-2-A

Lab Sample ID: 180-43791-2

Client ID: FB-CORE

Operator ID: 402360

ALS Bottle#: 50

Worklist Smp#: 50

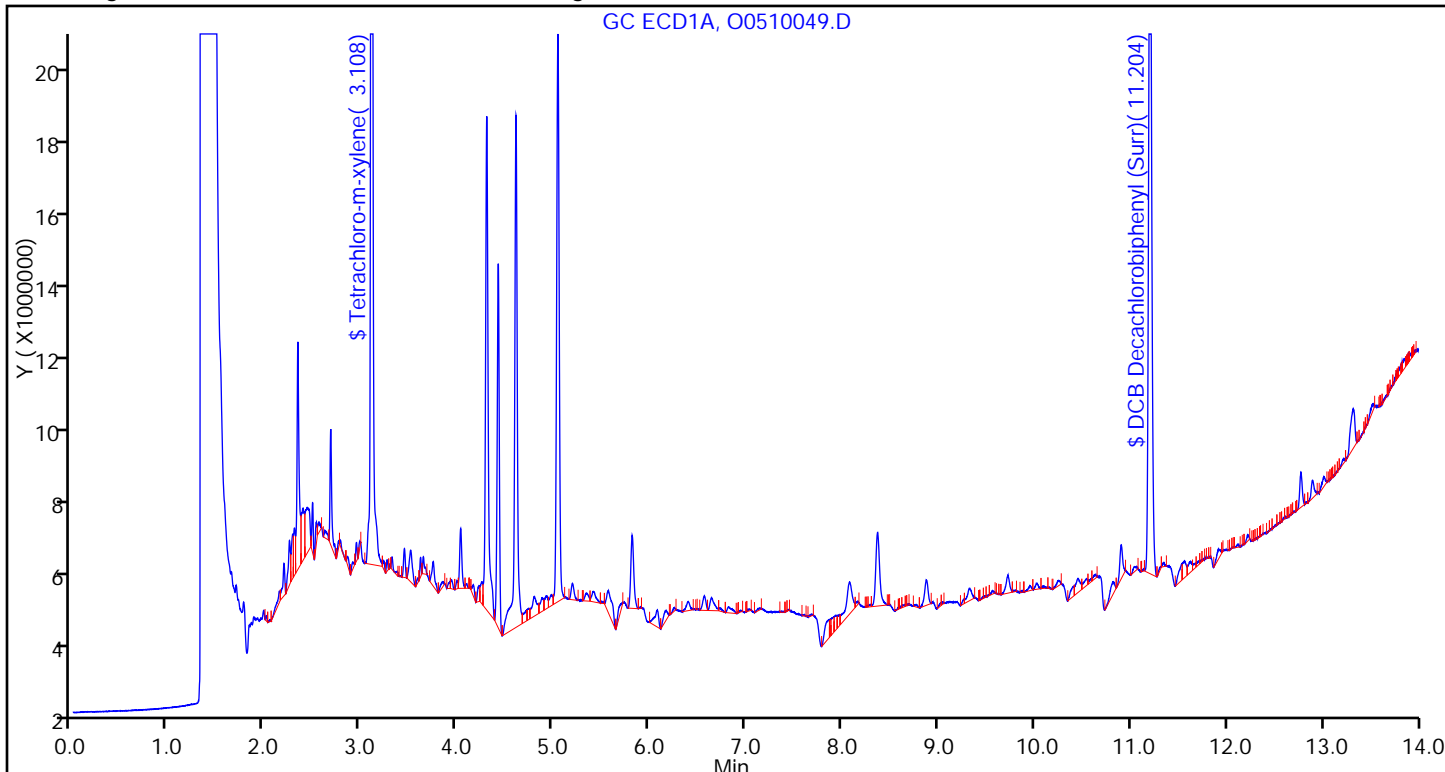
Injection Vol: 1.0 ul

Dil. Factor: 1.0000

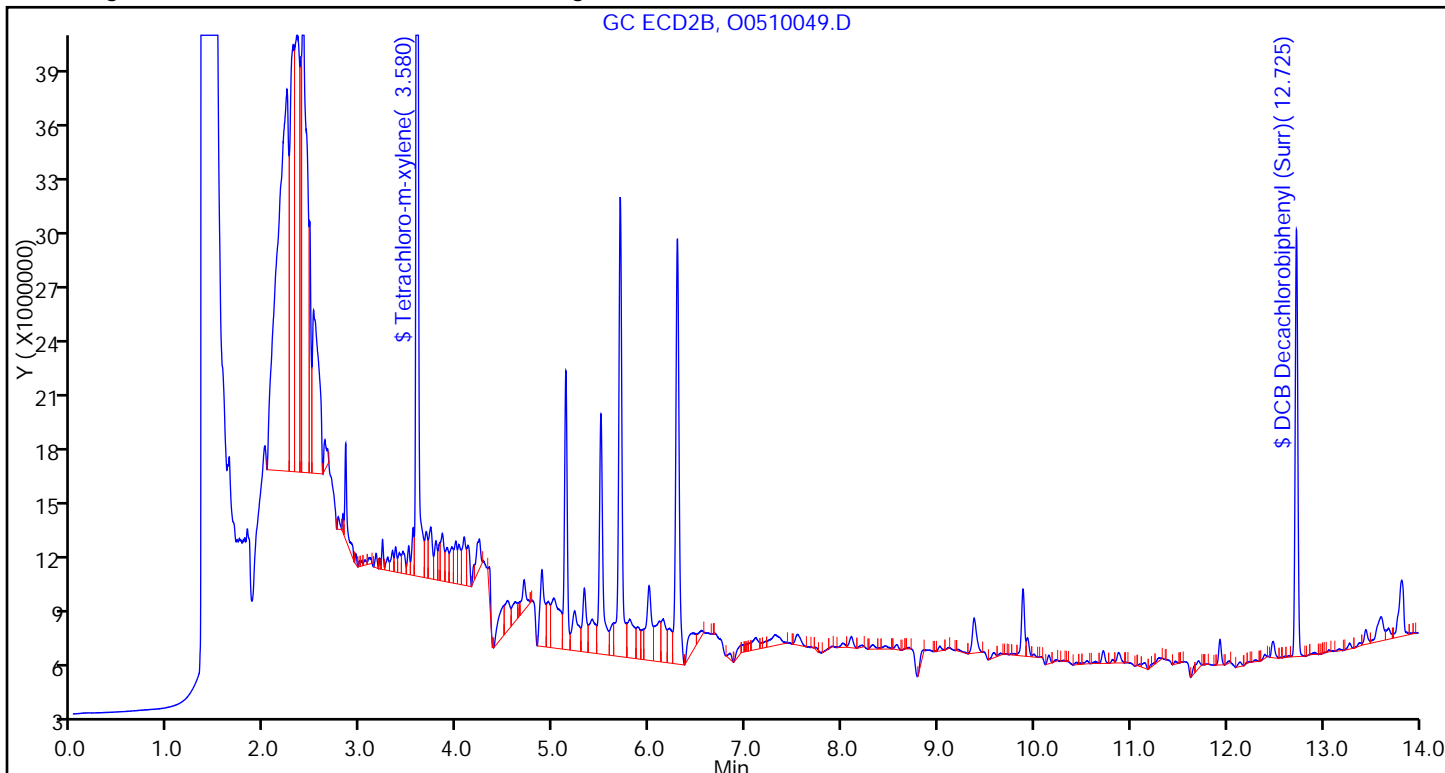
Method: PCB\_CHGC8DUAL

Limit Group: GCS 8082A ICAL

Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



FORM I  
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-43791-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: FB-CORE Lab Sample ID: 180-43791-2  
 Matrix: Water Lab File ID: O0510049.D  
 Analysis Method: 8082A Date Collected: 05/05/2015 15:40  
 Extraction Method: 3510C Date Extracted: 05/07/2015 13:45  
 Sample wt/vol: 1050 (mL) Date Analyzed: 05/12/2015 04:06  
 Con. Extract Vol.: 1.0 (mL) Dilution Factor: 1  
 Injection Volume: 1 (uL) GC Column: RTX-CLP2 ID: 0.53 (mm)  
 % Moisture: \_\_\_\_\_ GPC Cleanup: (Y/N) N  
 Analysis Batch No.: 141160 Units: ug/L

| CAS NO.   | SURROGATE                     | %REC | Q | LIMITS |
|-----------|-------------------------------|------|---|--------|
| 2051-24-3 | DCB Decachlorobiphenyl (Surr) | 95   |   | 43-138 |
| 877-09-8  | Tetrachloro-m-xylene (Surr)   | 111  |   | 34-137 |

TestAmerica Pittsburgh  
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\O0510049.D  
 Lims ID: 180-43791-A-2-A Lab Sample ID: 180-43791-2  
 Client ID: FB-CORE  
 Sample Type: Client  
 Inject. Date: 12-May-2015 04:06:31 ALS Bottle#: 50 Worklist Smp#: 50  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 180-0006866-050  
 Operator ID: 402360 Instrument ID: CHGC8  
 Method: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\PCB\_CHGC8DUAL.m  
 Limit Group: GCS 8082A ICAL  
 Last Update: 12-May-2015 16:54:58 Calib Date: 11-May-2015 18:31:22  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICal File: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\O0510020.D

Column 1 : Det: GC ECD1A  
 Column 2 : Det: GC ECD2B  
 Process Host: XAWRK022

First Level Reviewer: guptaa Date: 12-May-2015 09:05:05

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | OnCol Amt ng | Flags |
|-----|-----------|---------------|---------------|----------|--------------|-------|
|-----|-----------|---------------|---------------|----------|--------------|-------|

\$ 1 Tetrachloro-m-xylene

|   |       |       |        |           |        |            |
|---|-------|-------|--------|-----------|--------|------------|
| 1 | 3.108 | 3.110 | -0.002 | 51203272H | 0.0223 |            |
| 2 | 3.580 | 3.583 | -0.003 | 89208099H | 0.0222 |            |
|   |       |       |        |           |        | RPD = 0.53 |

2 PCB-1221

|   |  |       |  |  |    |  |
|---|--|-------|--|--|----|--|
| 1 |  | 3.242 |  |  | ND |  |
| 1 |  | 3.370 |  |  |    |  |
| 1 |  | 3.408 |  |  |    |  |
| 2 |  | 3.867 |  |  |    |  |
| 2 |  | 4.024 |  |  |    |  |
| 2 |  | 4.096 |  |  |    |  |

5 PCB-1232

|   |  |       |  |  |    |  |
|---|--|-------|--|--|----|--|
| 1 |  | 3.246 |  |  | ND |  |
| 1 |  | 3.741 |  |  |    |  |
| 1 |  | 4.859 |  |  |    |  |
| 1 |  | 5.365 |  |  |    |  |
| 1 |  | 6.158 |  |  |    |  |
| 2 |  | 3.873 |  |  |    |  |
| 2 |  | 4.028 |  |  |    |  |
| 2 |  | 4.918 |  |  |    |  |
| 2 |  | 5.573 |  |  |    |  |
| 2 |  | 6.367 |  |  |    |  |

Data File: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\O0510049.D

| Col | RT<br>(min.) | Exp RT<br>(min.) | Dlt RT<br>(min.) | Response | OnCol Amt<br>ng | Flags |
|-----|--------------|------------------|------------------|----------|-----------------|-------|
|-----|--------------|------------------|------------------|----------|-----------------|-------|

## 4 PCB-1016

|   |       |  |  |  |    |  |
|---|-------|--|--|--|----|--|
| 1 | 3.414 |  |  |  | ND |  |
| 1 | 3.741 |  |  |  |    |  |
| 1 | 4.372 |  |  |  |    |  |
| 1 | 4.444 |  |  |  |    |  |
| 1 | 4.859 |  |  |  |    |  |
| 2 | 5.416 |  |  |  |    |  |
| 2 | 5.574 |  |  |  |    |  |
| 2 | 6.155 |  |  |  |    |  |
| 2 | 6.894 |  |  |  |    |  |
| 2 | 7.250 |  |  |  |    |  |

## 6 PCB-1248

|   |       |  |  |  |    |  |
|---|-------|--|--|--|----|--|
| 1 | 4.204 |  |  |  | ND |  |
| 1 | 4.444 |  |  |  |    |  |
| 1 | 5.313 |  |  |  |    |  |
| 1 | 5.432 |  |  |  |    |  |
| 1 | 6.376 |  |  |  |    |  |
| 2 | 6.156 |  |  |  |    |  |
| 2 | 6.368 |  |  |  |    |  |
| 2 | 6.708 |  |  |  |    |  |
| 2 | 8.198 |  |  |  |    |  |
| 2 | 7.341 |  |  |  |    |  |

## 3 PCB-1242

|   |       |  |  |  |    |  |
|---|-------|--|--|--|----|--|
| 1 | 4.371 |  |  |  | ND |  |
| 1 | 4.443 |  |  |  |    |  |
| 1 | 4.858 |  |  |  |    |  |
| 1 | 4.970 |  |  |  |    |  |
| 1 | 5.431 |  |  |  |    |  |
| 2 | 5.414 |  |  |  |    |  |
| 2 | 5.712 |  |  |  |    |  |
| 2 | 6.153 |  |  |  |    |  |
| 2 | 6.365 |  |  |  |    |  |
| 2 | 6.906 |  |  |  |    |  |

## 7 PCB-1254

|   |       |  |  |  |    |  |
|---|-------|--|--|--|----|--|
| 1 | 5.361 |  |  |  | ND |  |
| 1 | 5.743 |  |  |  |    |  |
| 1 | 6.171 |  |  |  |    |  |
| 1 | 7.182 |  |  |  |    |  |
| 1 | 7.718 |  |  |  |    |  |
| 2 | 6.886 |  |  |  |    |  |
| 2 | 7.243 |  |  |  |    |  |
| 2 | 7.952 |  |  |  |    |  |
| 2 | 8.646 |  |  |  |    |  |
| 2 | 9.280 |  |  |  |    |  |

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | OnCol Amt ng | Flags |
|-----|-----------|---------------|---------------|----------|--------------|-------|
|-----|-----------|---------------|---------------|----------|--------------|-------|

8 PCB-1260

|   |        |  |  |  |    |  |
|---|--------|--|--|--|----|--|
| 1 | 6.682  |  |  |  | ND |  |
| 1 | 7.721  |  |  |  |    |  |
| 1 | 8.441  |  |  |  |    |  |
| 1 | 9.033  |  |  |  |    |  |
| 1 | 9.515  |  |  |  |    |  |
| 2 | 9.271  |  |  |  |    |  |
| 2 | 9.604  |  |  |  |    |  |
| 2 | 9.756  |  |  |  |    |  |
| 2 | 10.230 |  |  |  |    |  |
| 2 | 10.624 |  |  |  |    |  |

9 PCB-1262

|   |        |  |  |  |    |  |
|---|--------|--|--|--|----|--|
| 1 | 7.416  |  |  |  | ND |  |
| 1 | 8.057  |  |  |  |    |  |
| 1 | 8.522  |  |  |  |    |  |
| 1 | 10.105 |  |  |  |    |  |
| 1 | 10.519 |  |  |  |    |  |
| 2 | 9.597  |  |  |  |    |  |
| 2 | 9.846  |  |  |  |    |  |
| 2 | 10.342 |  |  |  |    |  |
| 2 | 11.742 |  |  |  |    |  |
| 2 | 11.964 |  |  |  |    |  |

10 PCB-1268

|   |        |  |  |  |    |  |
|---|--------|--|--|--|----|--|
| 1 | 9.579  |  |  |  | ND |  |
| 1 | 9.647  |  |  |  |    |  |
| 1 | 9.955  |  |  |  |    |  |
| 1 | 10.939 |  |  |  |    |  |
| 2 | 11.149 |  |  |  |    |  |
| 2 | 11.216 |  |  |  |    |  |
| 2 | 11.571 |  |  |  |    |  |
| 2 | 12.395 |  |  |  |    |  |

\$ 11 DCB Decachlorobiphenyl (Surr)

|   |        |        |        |           |        |  |
|---|--------|--------|--------|-----------|--------|--|
| 1 | 11.204 | 11.204 | 0.000  | 19998803H | 0.0206 |  |
| 2 | 12.725 | 12.727 | -0.002 | 23266177H | 0.0189 |  |

RPD = 8.44

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\O0510049.D

Injection Date: 12-May-2015 04:06:31

Instrument ID: CHGC8

Lims ID: 180-43791-A-2-A

Lab Sample ID: 180-43791-2

Client ID: FB-CORE

Operator ID: 402360

ALS Bottle#: 50

Worklist Smp#: 50

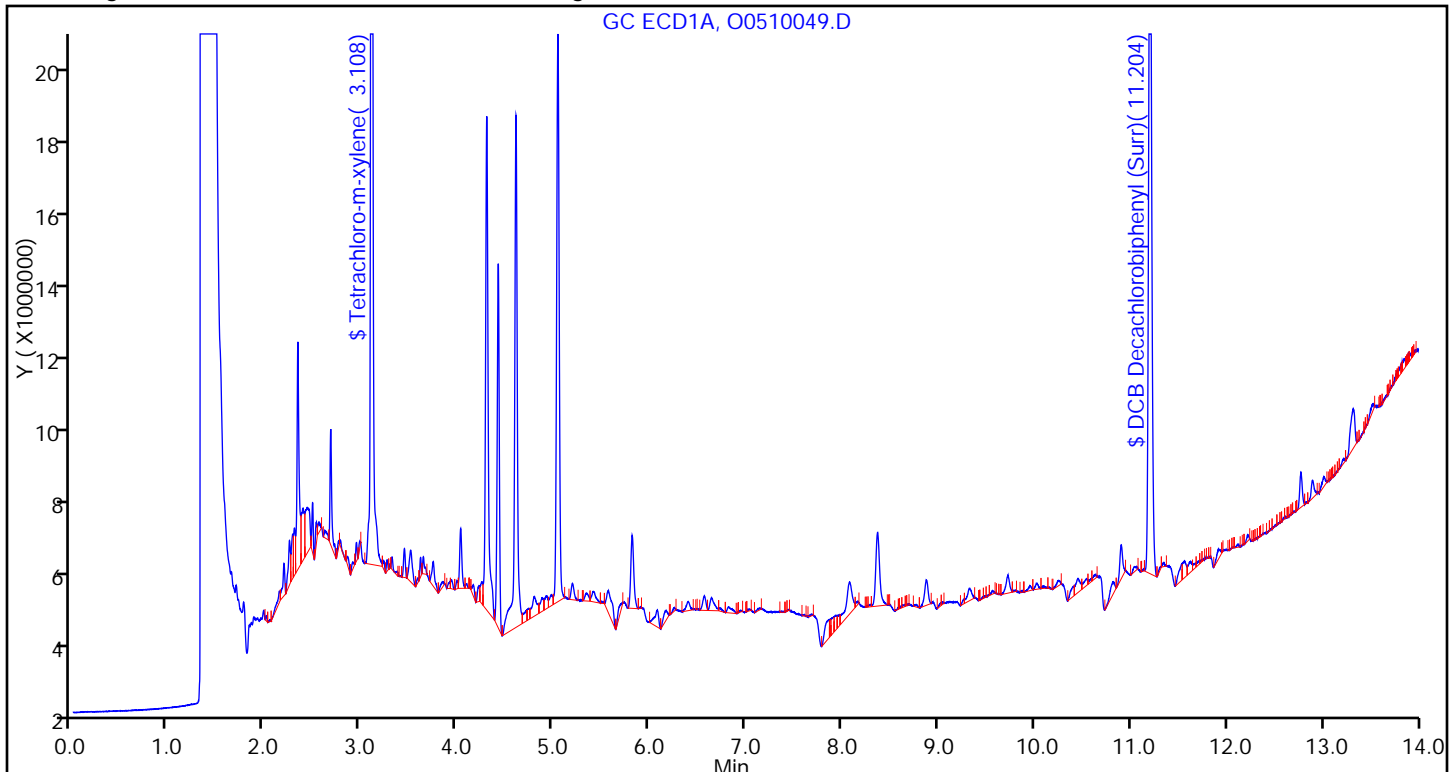
Injection Vol: 1.0 ul

Dil. Factor: 1.0000

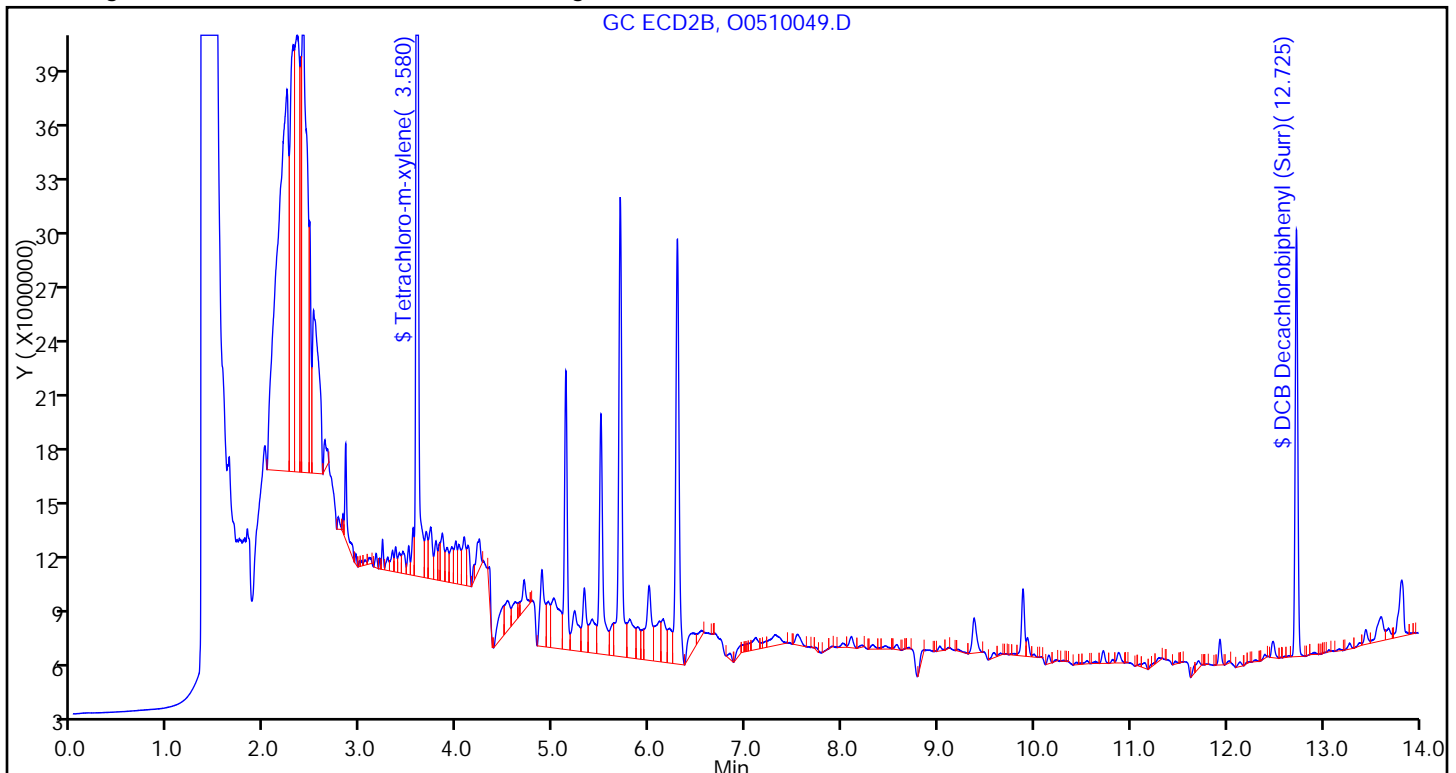
Method: PCB\_CHGC8DUAL

Limit Group: GCS 8082A ICAL

Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3





FORM VI  
GC SEMI VOA INITIAL CALIBRATION DATA  
EXTERNAL STANDARD RETENTION TIME SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-43791-1 Analy Batch No.: 141160

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

Instrument ID: CHGC8 GC Column: RTX-CLP1 ID: 0.53 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/11/2015 12:33 Calibration End Date: 05/11/2015 13:53 Calibration ID: 23828

Calibration Files:

| LEVEL:  | LAB SAMPLE ID:  | LAB FILE ID: |
|---------|-----------------|--------------|
| Level 1 | IC 180-141160/3 | 00510002.D   |
| Level 2 | IC 180-141160/4 | 00510003.D   |
| Level 3 | IC 180-141160/5 | 00510004.D   |
| Level 4 | IC 180-141160/6 | 00510005.D   |
| Level 5 | IC 180-141160/7 | 00510006.D   |

| ANALYTE         | LVL 1 | LVL 2 | LVL 3 | LVL 4 | LVL 5 |  |  |  |  |  | RT WINDOW     | AVG RT |
|-----------------|-------|-------|-------|-------|-------|--|--|--|--|--|---------------|--------|
| PCB-1221 Peak 1 | 3.239 | 3.242 | 3.242 | 3.242 | 3.243 |  |  |  |  |  | 3.192 - 3.292 | 3.242  |
| PCB-1221 Peak 2 | 3.365 | 3.369 | 3.370 | 3.370 | 3.372 |  |  |  |  |  | 3.320 - 3.420 | 3.369  |
| PCB-1221 Peak 3 | 3.407 | 3.408 | 3.408 | 3.408 | 3.409 |  |  |  |  |  | 3.358 - 3.458 | 3.408  |
| PCB-1254 Peak 1 | 5.358 | 5.359 | 5.359 | 5.361 | 5.362 |  |  |  |  |  | 5.291 - 5.431 | 5.360  |
| PCB-1254 Peak 2 | 5.745 | 5.743 | 5.743 | 5.743 | 5.743 |  |  |  |  |  | 5.673 - 5.813 | 5.743  |
| PCB-1254 Peak 3 | 6.165 | 6.171 | 6.171 | 6.171 | 6.173 |  |  |  |  |  | 6.101 - 6.241 | 6.170  |
| PCB-1254 Peak 4 | 7.179 | 7.182 | 7.180 | 7.182 | 7.181 |  |  |  |  |  | 7.112 - 7.252 | 7.181  |
| PCB-1254 Peak 5 | 7.711 | 7.716 | 7.718 | 7.718 | 7.719 |  |  |  |  |  | 7.648 - 7.788 | 7.716  |

FORM VI  
GC SEMI VOA INITIAL CALIBRATION DATA  
EXTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Pittsburgh Job No.: 180-43791-1 Analy Batch No.: 141160

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

Instrument ID: CHGC8 GC Column: RTX-CLP1 ID: 0.53 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/11/2015 12:33 Calibration End Date: 05/11/2015 13:53 Calibration ID: 23828

Calibration Files:

| LEVEL:  | LAB SAMPLE ID:  | LAB FILE ID: |
|---------|-----------------|--------------|
| Level 1 | IC 180-141160/3 | O0510002.D   |
| Level 2 | IC 180-141160/4 | O0510003.D   |
| Level 3 | IC 180-141160/5 | O0510004.D   |
| Level 4 | IC 180-141160/6 | O0510005.D   |
| Level 5 | IC 180-141160/7 | O0510006.D   |

| ANALYTE         | CF                   |          |          |          | CURVE TYPE | COEFFICIENT |            |    | # | MIN CF | %RSD | #    | MAX %RSD | R <sup>2</sup> OR COD | # | MIN R <sup>2</sup> OR COD |
|-----------------|----------------------|----------|----------|----------|------------|-------------|------------|----|---|--------|------|------|----------|-----------------------|---|---------------------------|
|                 | LVL 1<br>LVL 5       | LVL 2    | LVL 3    | LVL 4    |            | B           | M1         | M2 |   |        |      |      |          |                       |   |                           |
| PCB-1221 Peak 1 | 17995200<br>20574106 | 19147650 | 24829824 | 21315202 | Ave        |             | 20772396.4 |    |   | 12.5   |      | 20.0 |          |                       |   |                           |
| PCB-1221 Peak 2 | 10839600<br>12497762 | 12149200 | 15282524 | 13253194 | Ave        |             | 12804456.0 |    |   | 12.8   |      | 20.0 |          |                       |   |                           |
| PCB-1221 Peak 3 | 39354100<br>44174270 | 43447000 | 55135092 | 46940054 | Ave        |             | 45810103.2 |    |   | 12.8   |      | 20.0 |          |                       |   |                           |
| PCB-1254 Peak 1 | 41391800<br>49196045 | 46370860 | 58088300 | 50907972 | Ave        |             | 49190995.4 |    |   | 12.5   |      | 20.0 |          |                       |   |                           |
| PCB-1254 Peak 2 | 52762500<br>58018232 | 52779320 | 67567048 | 59570264 | Ave        |             | 58139472.8 |    |   | 10.5   |      | 20.0 |          |                       |   |                           |
| PCB-1254 Peak 3 | 28714200<br>42083850 | 36092720 | 48446616 | 42151516 | Ave        |             | 39497780.4 |    |   | 18.8   |      | 20.0 |          |                       |   |                           |
| PCB-1254 Peak 4 | 40617900<br>48286026 | 42642510 | 55532848 | 48565138 | Ave        |             | 47128884.4 |    |   | 12.4   |      | 20.0 |          |                       |   |                           |
| PCB-1254 Peak 5 | 41284300<br>50031267 | 43930480 | 57052588 | 50604070 | Ave        |             | 48580541.0 |    |   | 12.7   |      | 20.0 |          |                       |   |                           |

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

FORM VI  
GC SEMI VOA INITIAL CALIBRATION DATA  
EXTERNAL STANDARD RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Pittsburgh Job No.: 180-43791-1 Analy Batch No.: 141160

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

Instrument ID: CHGC8 GC Column: RTX-CLP1 ID: 0.53 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/11/2015 12:33 Calibration End Date: 05/11/2015 13:53 Calibration ID: 23828

Calibration Files:

| LEVEL:  | LAB SAMPLE ID:  | LAB FILE ID: |
|---------|-----------------|--------------|
| Level 1 | IC 180-141160/3 | O0510002.D   |
| Level 2 | IC 180-141160/4 | O0510003.D   |
| Level 3 | IC 180-141160/5 | O0510004.D   |
| Level 4 | IC 180-141160/6 | O0510005.D   |
| Level 5 | IC 180-141160/7 | O0510006.D   |

| ANALYTE         | CURVE TYPE | RESPONSE |         |          |          |          | CONCENTRATION (NG) |       |       |       |       |
|-----------------|------------|----------|---------|----------|----------|----------|--------------------|-------|-------|-------|-------|
|                 |            | LVL 1    | LVL 2   | LVL 3    | LVL 4    | LVL 5    | LVL 1              | LVL 2 | LVL 3 | LVL 4 | LVL 5 |
| PCB-1221 Peak 1 | Ave        | 179952   | 1914765 | 6207456  | 10657601 | 20574106 | 0.0100             | 0.100 | 0.250 | 0.500 | 1.00  |
| PCB-1221 Peak 2 | Ave        | 108396   | 1214920 | 3820631  | 6626597  | 12497762 | 0.0100             | 0.100 | 0.250 | 0.500 | 1.00  |
| PCB-1221 Peak 3 | Ave        | 393541   | 4344700 | 13783773 | 23470027 | 44174270 | 0.0100             | 0.100 | 0.250 | 0.500 | 1.00  |
| PCB-1254 Peak 1 | Ave        | 413918   | 4637086 | 14522075 | 25453986 | 49196045 | 0.0100             | 0.100 | 0.250 | 0.500 | 1.00  |
| PCB-1254 Peak 2 | Ave        | 527625   | 5277932 | 16891762 | 29785132 | 58018232 | 0.0100             | 0.100 | 0.250 | 0.500 | 1.00  |
| PCB-1254 Peak 3 | Ave        | 287142   | 3609272 | 12111654 | 21075758 | 42083850 | 0.0100             | 0.100 | 0.250 | 0.500 | 1.00  |
| PCB-1254 Peak 4 | Ave        | 406179   | 4264251 | 13883212 | 24282569 | 48286026 | 0.0100             | 0.100 | 0.250 | 0.500 | 1.00  |
| PCB-1254 Peak 5 | Ave        | 412843   | 4393048 | 14263147 | 25302035 | 50031267 | 0.0100             | 0.100 | 0.250 | 0.500 | 1.00  |

Curve Type Legend:

Ave = Average by Height

TestAmerica Pittsburgh  
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\O0510002.D  
 Lims ID: IC  
 Client ID:  
 Sample Type: IC Calib Level: 1  
 Inject. Date: 11-May-2015 12:33:50 ALS Bottle#: 3 Worklist Smp#: 3  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 180-0006866-003  
 Operator ID: 402360 Instrument ID: CHGC8  
 Sublist: chrom-PCB\_CHGC8DUAL\*sub2  
 Method: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\PCB\_CHGC8DUAL.m  
 Limit Group: GCS 8082A ICAL  
 Last Update: 12-May-2015 16:52:37 Calib Date: 11-May-2015 18:31:22  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICal File: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\O0510020.D  
 Column 1 : Det: GC ECD1A  
 Column 2 : Det: GC ECD2B  
 Process Host: XAWRK022

First Level Reviewer: guptaa Date: 11-May-2015 13:41:45

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng | OnCol Amt ng | Flags |
|-----|-----------|---------------|---------------|----------|------------|--------------|-------|
|-----|-----------|---------------|---------------|----------|------------|--------------|-------|

2 PCB-1221 M

|                           |       |       |        |         |        |             |   |
|---------------------------|-------|-------|--------|---------|--------|-------------|---|
| 1                         | 3.239 | 3.242 | -0.003 | 179952H | 0.0100 | 0.008663    |   |
| 1                         | 3.365 | 3.370 | -0.005 | 108396H | 0.0100 | 0.008465    |   |
| 1                         | 3.407 | 3.408 | -0.001 | 393541H | 0.0100 | 0.008591    |   |
| Average of Peak Amounts = |       |       |        |         |        | 0.008573    |   |
| 2                         | 3.845 | 3.867 | -0.022 | 406202H | 0.0100 | 0.0119      | M |
| 2                         | 4.012 | 4.024 | -0.012 | 207261H | 0.0100 | 0.0107      | M |
| 2                         | 4.091 | 4.096 | -0.005 | 592861H | 0.0100 | 0.009604    | M |
| Average of Peak Amounts = |       |       |        |         |        | 0.0107      |   |
|                           |       |       |        |         |        | RPD = 22.48 |   |

7 PCB-1254

|                           |       |       |        |         |        |            |  |
|---------------------------|-------|-------|--------|---------|--------|------------|--|
| 1                         | 5.358 | 5.361 | -0.003 | 413918H | 0.0100 | 0.008415   |  |
| 1                         | 5.745 | 5.743 | 0.002  | 527625H | 0.0100 | 0.009075   |  |
| 1                         | 6.165 | 6.171 | -0.006 | 287142H | 0.0100 | 0.007270   |  |
| 1                         | 7.179 | 7.182 | -0.003 | 406179H | 0.0100 | 0.008618   |  |
| 1                         | 7.711 | 7.718 | -0.007 | 412843H | 0.0100 | 0.008498   |  |
| Average of Peak Amounts = |       |       |        |         |        | 0.008375   |  |
| 2                         | 6.884 | 6.886 | -0.002 | 560468H | 0.0100 | 0.007464   |  |
| 2                         | 7.245 | 7.243 | 0.002  | 836168H | 0.0100 | 0.009357   |  |
| 2                         | 7.950 | 7.952 | -0.002 | 513904H | 0.0100 | 0.008213   |  |
| 2                         | 8.637 | 8.646 | -0.009 | 568220H | 0.0100 | 0.007664   |  |
| 2                         | 9.272 | 9.280 | -0.008 | 527007H | 0.0100 | 0.009105   |  |
| Average of Peak Amounts = |       |       |        |         |        | 0.008361   |  |
|                           |       |       |        |         |        | RPD = 0.17 |  |

**QC Flag Legend**

Review Flags

M - Manually Integrated

**Reagents:**

GCAR2154CALL1\_00011

Amount Added: 1.00

Units: mL

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\O0510002.D

Injection Date: 11-May-2015 12:33:50

Instrument ID: CHGC8

Lims ID: IC

Client ID:

Operator ID: 402360

ALS Bottle#: 3

Worklist Smp#: 3

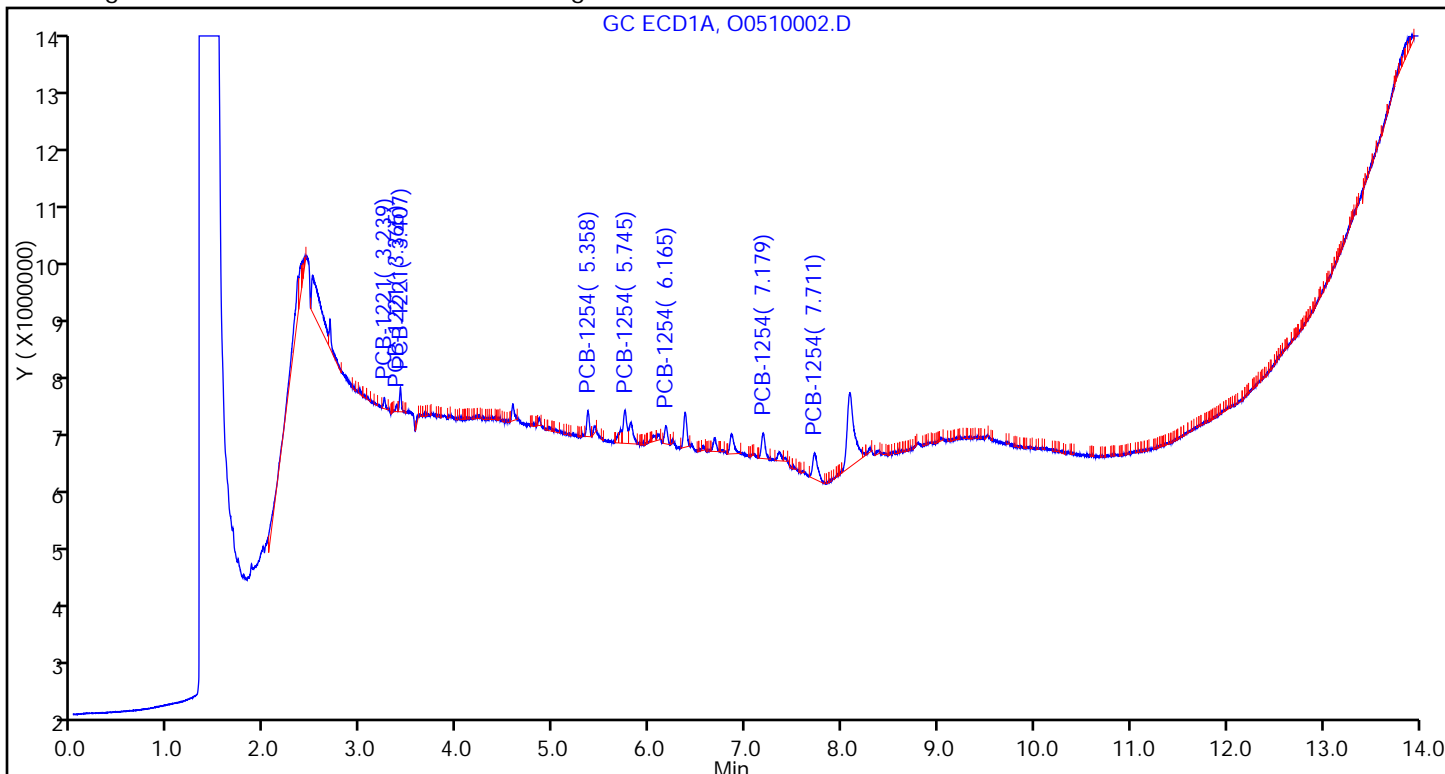
Injection Vol: 1.0 ul

Dil. Factor: 1.0000

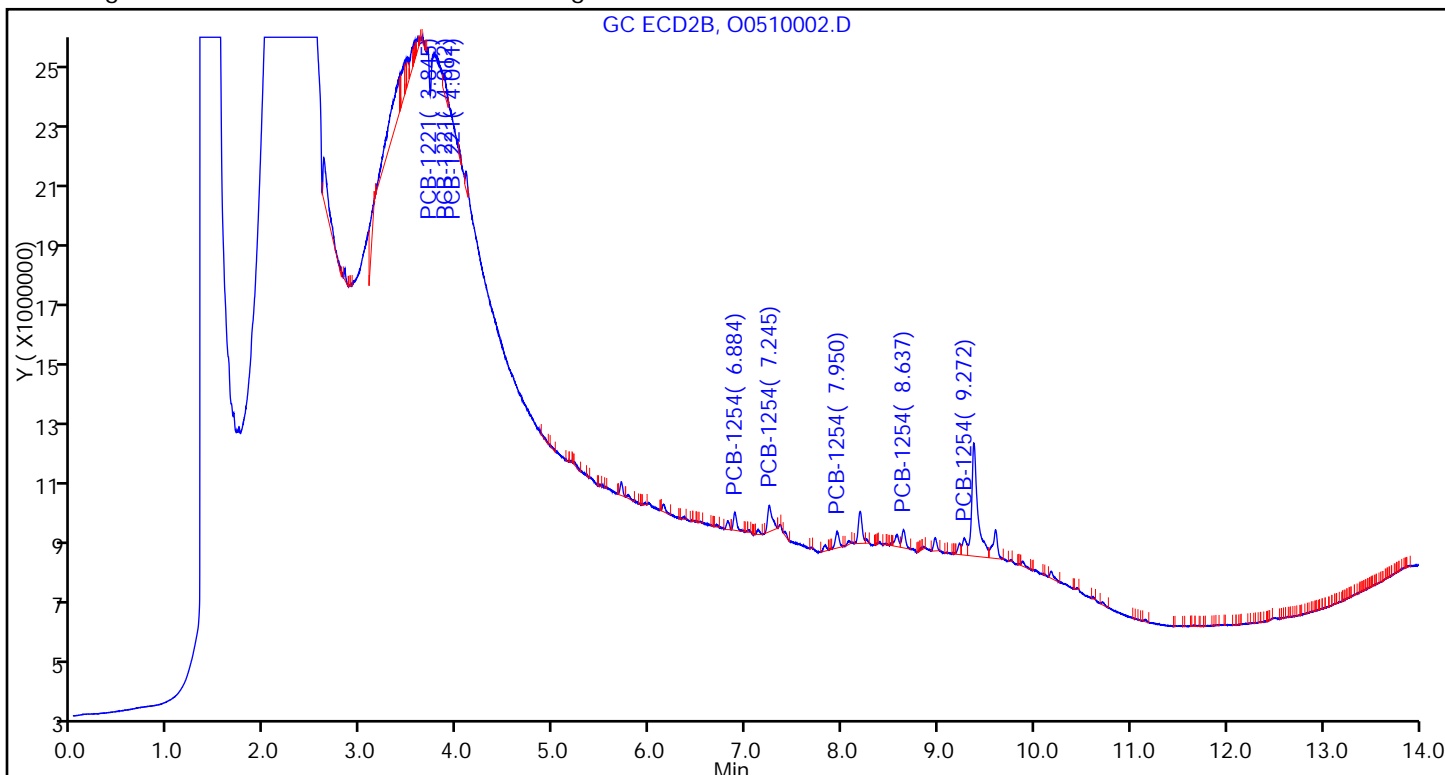
Method: PCB\_CHGC8DUAL

Limit Group: GCS 8082A ICAL

Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



TestAmerica Pittsburgh  
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\O0510003.D  
 Lims ID: IC  
 Client ID:  
 Sample Type: IC Calib Level: 2  
 Inject. Date: 11-May-2015 12:53:41 ALS Bottle#: 4 Worklist Smp#: 4  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 180-0006866-004  
 Operator ID: 402360 Instrument ID: CHGC8  
 Sublist: chrom-PCB\_CHGC8DUAL\*sub2  
 Method: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\PCB\_CHGC8DUAL.m  
 Limit Group: GCS 8082A ICAL  
 Last Update: 12-May-2015 16:52:40 Calib Date: 11-May-2015 18:31:22  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICal File: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\O0510020.D  
 Column 1 : Det: GC ECD1A  
 Column 2 : Det: GC ECD2B  
 Process Host: XAWRK022

First Level Reviewer: guptaa Date: 11-May-2015 13:44:44

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng | OnCol Amt ng | Flags |
|-----|-----------|---------------|---------------|----------|------------|--------------|-------|
|-----|-----------|---------------|---------------|----------|------------|--------------|-------|

2 PCB-1221 M

|                           |       |       |        |          |        |            |   |
|---------------------------|-------|-------|--------|----------|--------|------------|---|
| 1                         | 3.242 | 3.242 | 0.000  | 1914765H | 0.1000 | 0.0922     |   |
| 1                         | 3.369 | 3.370 | -0.001 | 1214920H | 0.1000 | 0.0949     |   |
| 1                         | 3.408 | 3.408 | 0.000  | 4344700H | 0.1000 | 0.0948     |   |
| Average of Peak Amounts = |       |       |        |          |        | 0.0940     |   |
| 2                         | 3.867 | 3.867 | 0.000  | 2979964H | 0.1000 | 0.0872     |   |
| 2                         | 4.023 | 4.024 | -0.001 | 1683961H | 0.1000 | 0.0873     |   |
| 2                         | 4.094 | 4.096 | -0.002 | 5598112H | 0.1000 | 0.0907     | M |
| Average of Peak Amounts = |       |       |        |          |        | 0.0884     |   |
|                           |       |       |        |          |        | RPD = 6.12 |   |

7 PCB-1254

|                           |       |       |        |          |        |            |  |
|---------------------------|-------|-------|--------|----------|--------|------------|--|
| 1                         | 5.359 | 5.361 | -0.002 | 4637086H | 0.1000 | 0.0943     |  |
| 1                         | 5.743 | 5.743 | 0.000  | 5277932H | 0.1000 | 0.0908     |  |
| 1                         | 6.171 | 6.171 | 0.000  | 3609272H | 0.1000 | 0.0914     |  |
| 1                         | 7.182 | 7.182 | 0.000  | 4264251H | 0.1000 | 0.0905     |  |
| 1                         | 7.716 | 7.718 | -0.002 | 4393048H | 0.1000 | 0.0904     |  |
| Average of Peak Amounts = |       |       |        |          |        | 0.0915     |  |
| 2                         | 6.884 | 6.886 | -0.002 | 7057031H | 0.1000 | 0.0940     |  |
| 2                         | 7.242 | 7.243 | -0.001 | 8243381H | 0.1000 | 0.0922     |  |
| 2                         | 7.951 | 7.952 | -0.001 | 5832611H | 0.1000 | 0.0932     |  |
| 2                         | 8.643 | 8.646 | -0.003 | 6705302H | 0.1000 | 0.0904     |  |
| 2                         | 9.273 | 9.280 | -0.007 | 5008797H | 0.1000 | 0.0865     |  |
| Average of Peak Amounts = |       |       |        |          |        | 0.0913     |  |
|                           |       |       |        |          |        | RPD = 0.20 |  |

**QC Flag Legend**

Review Flags

M - Manually Integrated

**Reagents:**

GCAR2154CALL2\_00008

Amount Added: 1.00

Units: mL



TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\O0510003.D

Injection Date: 11-May-2015 12:53:41

Instrument ID: CHGC8

Lims ID: IC

Client ID:

Operator ID: 402360

ALS Bottle#: 4

Worklist Smp#: 4

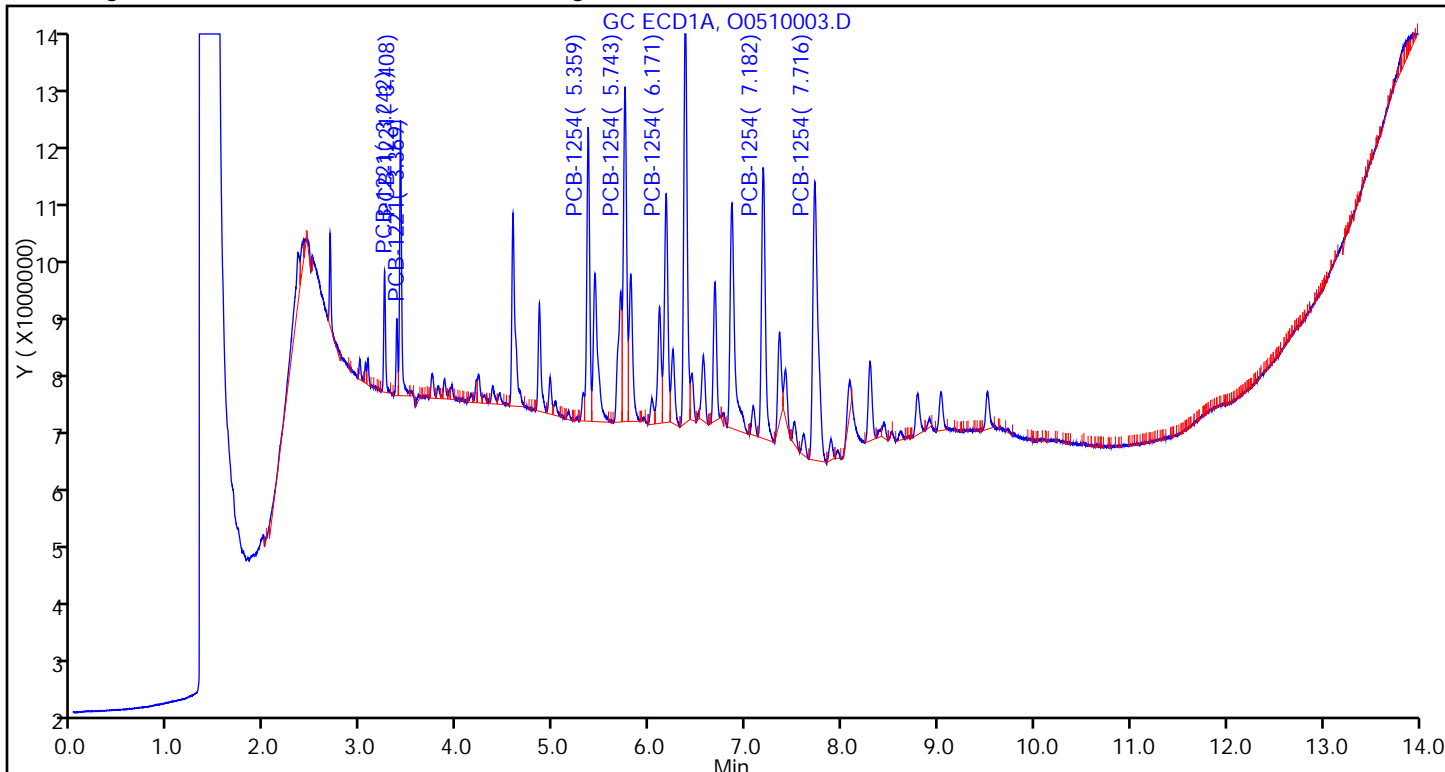
Injection Vol: 1.0 ul

Dil. Factor: 1.0000

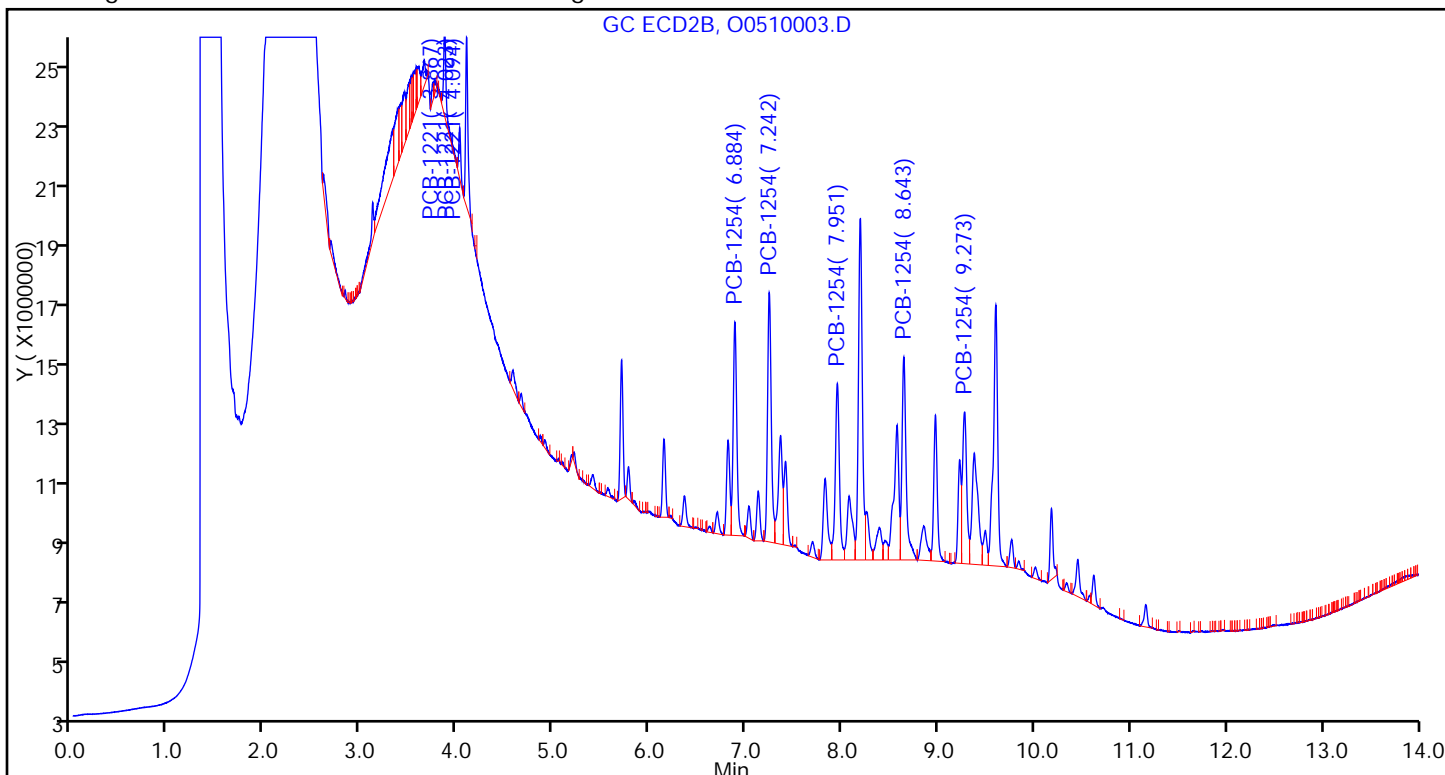
Method: PCB\_CHGC8DUAL

Limit Group: GCS 8082A ICAL

Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



TestAmerica Pittsburgh  
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\O0510004.D  
 Lims ID: IC  
 Client ID:  
 Sample Type: IC Calib Level: 3  
 Inject. Date: 11-May-2015 13:13:32 ALS Bottle#: 5 Worklist Smp#: 5  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 180-0006866-005  
 Operator ID: 402360 Instrument ID: CHGC8  
 Sublist: chrom-PCB\_CHGC8DUAL\*sub2  
 Method: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\PCB\_CHGC8DUAL.m  
 Limit Group: GCS 8082A ICAL  
 Last Update: 12-May-2015 16:52:43 Calib Date: 11-May-2015 18:31:22  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICal File: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\O0510020.D  
 Column 1 : Det: GC ECD1A  
 Column 2 : Det: GC ECD2B  
 Process Host: XAWRK022

First Level Reviewer: guptaa Date: 11-May-2015 14:01:54

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng | OnCol Amt ng | Flags |
|-----|-----------|---------------|---------------|----------|------------|--------------|-------|
|-----|-----------|---------------|---------------|----------|------------|--------------|-------|

2 PCB-1221 M

|                           |       |       |        |           |        |        |   |
|---------------------------|-------|-------|--------|-----------|--------|--------|---|
| 1                         | 3.242 | 3.242 | 0.000  | 6207456H  | 0.2500 | 0.2988 |   |
| 1                         | 3.370 | 3.370 | 0.000  | 3820631H  | 0.2500 | 0.2984 |   |
| 1                         | 3.408 | 3.408 | 0.000  | 13783773H | 0.2500 | 0.3009 |   |
| Average of Peak Amounts = |       |       |        |           |        | 0.2994 |   |
| 2                         | 3.868 | 3.867 | 0.001  | 9363334H  | 0.2500 | 0.2739 | M |
| 2                         | 4.023 | 4.024 | -0.001 | 5329244H  | 0.2500 | 0.2763 | M |
| 2                         | 4.095 | 4.096 | -0.001 | 18311630H | 0.2500 | 0.2966 | M |
| Average of Peak Amounts = |       |       |        |           |        | 0.2823 |   |

RPD = 5.88

7 PCB-1254

|                           |       |       |        |           |        |        |  |
|---------------------------|-------|-------|--------|-----------|--------|--------|--|
| 1                         | 5.359 | 5.361 | -0.002 | 14522075H | 0.2500 | 0.2952 |  |
| 1                         | 5.743 | 5.743 | 0.000  | 16891762H | 0.2500 | 0.2905 |  |
| 1                         | 6.171 | 6.171 | 0.000  | 12111654H | 0.2500 | 0.3066 |  |
| 1                         | 7.180 | 7.182 | -0.002 | 13883212H | 0.2500 | 0.2946 |  |
| 1                         | 7.718 | 7.718 | 0.000  | 14263147H | 0.2500 | 0.2936 |  |
| Average of Peak Amounts = |       |       |        |           |        | 0.2961 |  |
| 2                         | 6.885 | 6.886 | -0.001 | 23008990H | 0.2500 | 0.3064 |  |
| 2                         | 7.243 | 7.243 | 0.000  | 25953101H | 0.2500 | 0.2904 |  |
| 2                         | 7.949 | 7.952 | -0.003 | 18564782H | 0.2500 | 0.2967 |  |
| 2                         | 8.639 | 8.646 | -0.007 | 21901885H | 0.2500 | 0.2954 |  |
| 2                         | 9.273 | 9.280 | -0.007 | 16691024H | 0.2500 | 0.2884 |  |
| Average of Peak Amounts = |       |       |        |           |        | 0.2955 |  |

RPD = 0.22

### QC Flag Legend

Review Flags

M - Manually Integrated

### Reagents:

GCAR2154CALL3\_00008

Amount Added: 1.00

Units: mL

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\O0510004.D

Injection Date: 11-May-2015 13:13:32 Instrument ID: CHGC8

Lims ID: IC

Client ID:

Operator ID: 402360

ALS Bottle#: 5

Worklist Smp#: 5

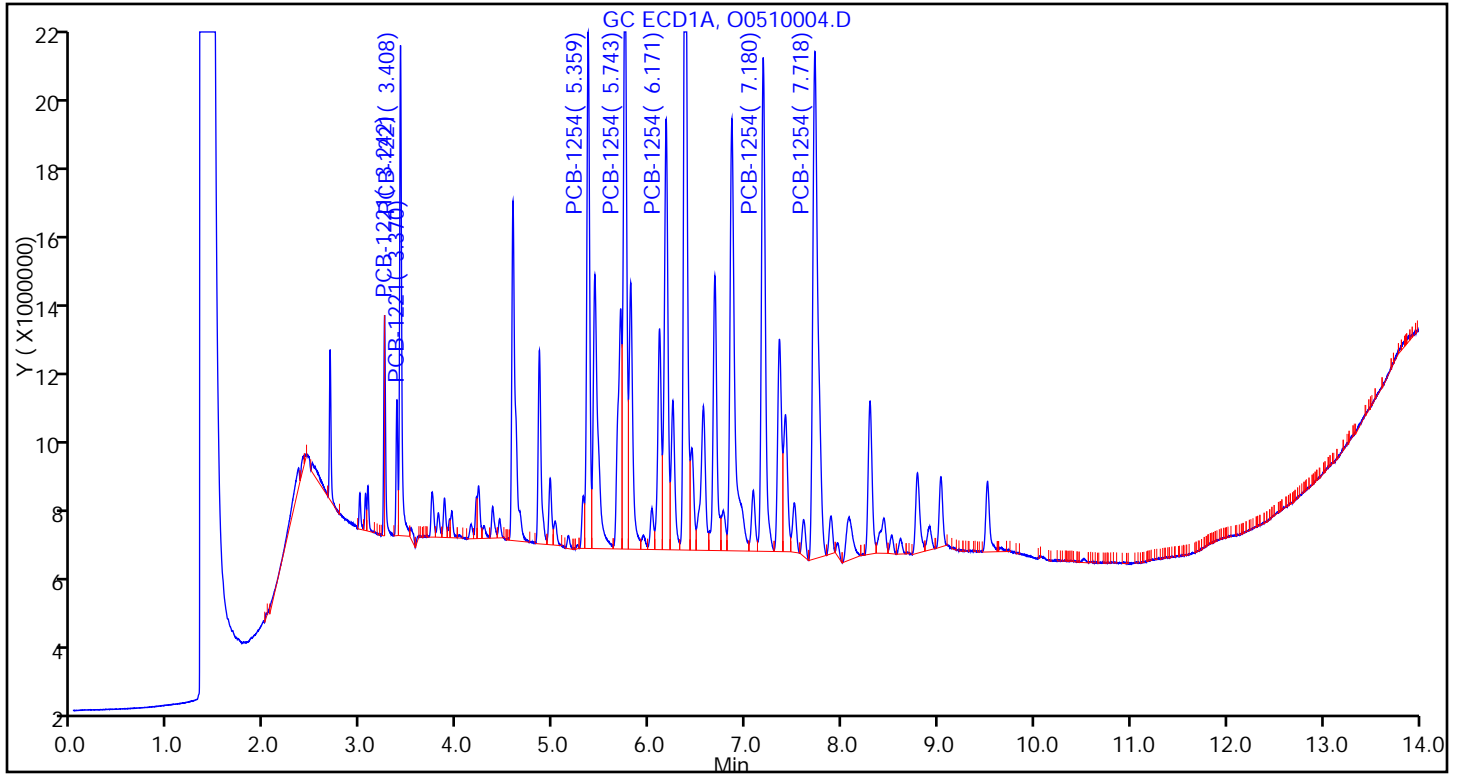
Injection Vol: 1.0 ul

Dil. Factor: 1.0000

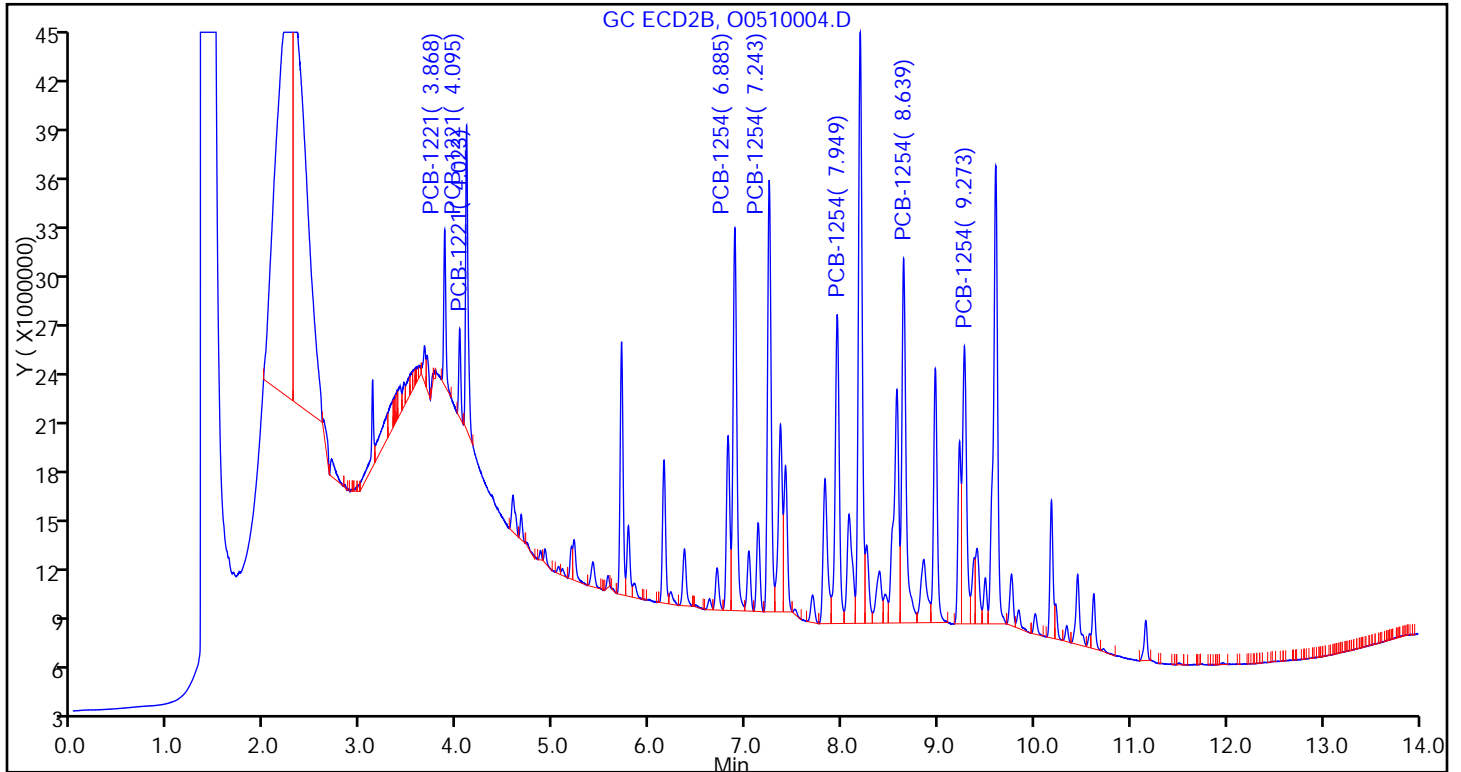
Method: PCB\_CHGC8DUAL

Limit Group: GCS 8082A ICAL

Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



TestAmerica Pittsburgh  
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\O0510005.D  
 Lims ID: IC  
 Client ID:  
 Sample Type: IC Calib Level: 4  
 Inject. Date: 11-May-2015 13:33:22 ALS Bottle#: 6 Worklist Smp#: 6  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 180-0006866-006  
 Operator ID: 402360 Instrument ID: CHGC8  
 Sublist: chrom-PCB\_CHGC8DUAL\*sub2  
 Method: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\PCB\_CHGC8DUAL.m  
 Limit Group: GCS 8082A ICAL  
 Last Update: 12-May-2015 16:52:47 Calib Date: 11-May-2015 18:31:22  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICal File: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\O0510020.D  
 Column 1 : Det: GC ECD1A  
 Column 2 : Det: GC ECD2B  
 Process Host: XAWRK022

First Level Reviewer: guptaa Date: 11-May-2015 14:36:17

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng | OnCol Amt ng | Flags |
|-----|-----------|---------------|---------------|----------|------------|--------------|-------|
|-----|-----------|---------------|---------------|----------|------------|--------------|-------|

2 PCB-1221 M

|                           |       |       |       |           |        |            |   |
|---------------------------|-------|-------|-------|-----------|--------|------------|---|
| 1                         | 3.242 | 3.242 | 0.000 | 10657601H | 0.5000 | 0.5131     |   |
| 1                         | 3.370 | 3.370 | 0.000 | 6626597H  | 0.5000 | 0.5175     |   |
| 1                         | 3.408 | 3.408 | 0.000 | 23470027H | 0.5000 | 0.5123     |   |
| Average of Peak Amounts = |       |       |       |           |        | 0.5143     |   |
| 2                         | 3.867 | 3.867 | 0.000 | 16394673H | 0.5000 | 0.4796     | M |
| 2                         | 4.024 | 4.024 | 0.000 | 9529851H  | 0.5000 | 0.4941     | M |
| 2                         | 4.096 | 4.096 | 0.000 | 31433617H | 0.5000 | 0.5092     |   |
| Average of Peak Amounts = |       |       |       |           |        | 0.4943     |   |
|                           |       |       |       |           |        | RPD = 3.97 |   |

7 PCB-1254

|                           |       |       |       |           |        |            |  |
|---------------------------|-------|-------|-------|-----------|--------|------------|--|
| 1                         | 5.361 | 5.361 | 0.000 | 25453986H | 0.5000 | 0.5175     |  |
| 1                         | 5.743 | 5.743 | 0.000 | 29785132H | 0.5000 | 0.5123     |  |
| 1                         | 6.171 | 6.171 | 0.000 | 21075758H | 0.5000 | 0.5336     |  |
| 1                         | 7.182 | 7.182 | 0.000 | 24282569H | 0.5000 | 0.5152     |  |
| 1                         | 7.718 | 7.718 | 0.000 | 25302035H | 0.5000 | 0.5208     |  |
| Average of Peak Amounts = |       |       |       |           |        | 0.5199     |  |
| 2                         | 6.886 | 6.886 | 0.000 | 40274056H | 0.5000 | 0.5364     |  |
| 2                         | 7.243 | 7.243 | 0.000 | 45340213H | 0.5000 | 0.5074     |  |
| 2                         | 7.952 | 7.952 | 0.000 | 32448165H | 0.5000 | 0.5186     |  |
| 2                         | 8.646 | 8.646 | 0.000 | 41893844H | 0.5000 | 0.5651     |  |
| 2                         | 9.280 | 9.280 | 0.000 | 30755855H | 0.5000 | 0.5314     |  |
| Average of Peak Amounts = |       |       |       |           |        | 0.5317     |  |
|                           |       |       |       |           |        | RPD = 2.26 |  |

**QC Flag Legend**

Review Flags

M - Manually Integrated

**Reagents:**

GCAR2154CALL4\_00008

Amount Added: 1.00

Units: mL

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\O0510005.D

Injection Date: 11-May-2015 13:33:22

Instrument ID: CHGC8

Lims ID: IC

Client ID:

Operator ID: 402360

ALS Bottle#: 6

Worklist Smp#: 6

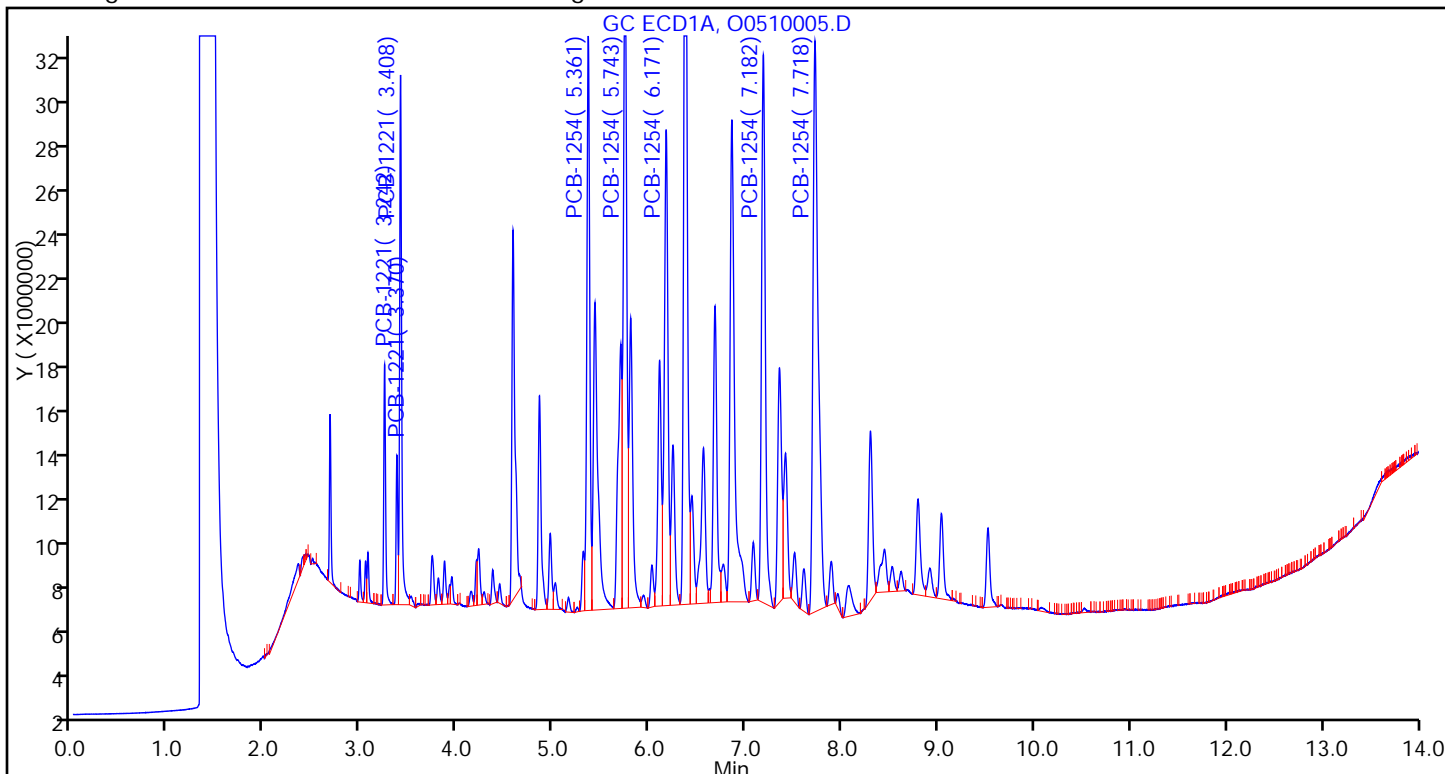
Injection Vol: 1.0 ul

Dil. Factor: 1.0000

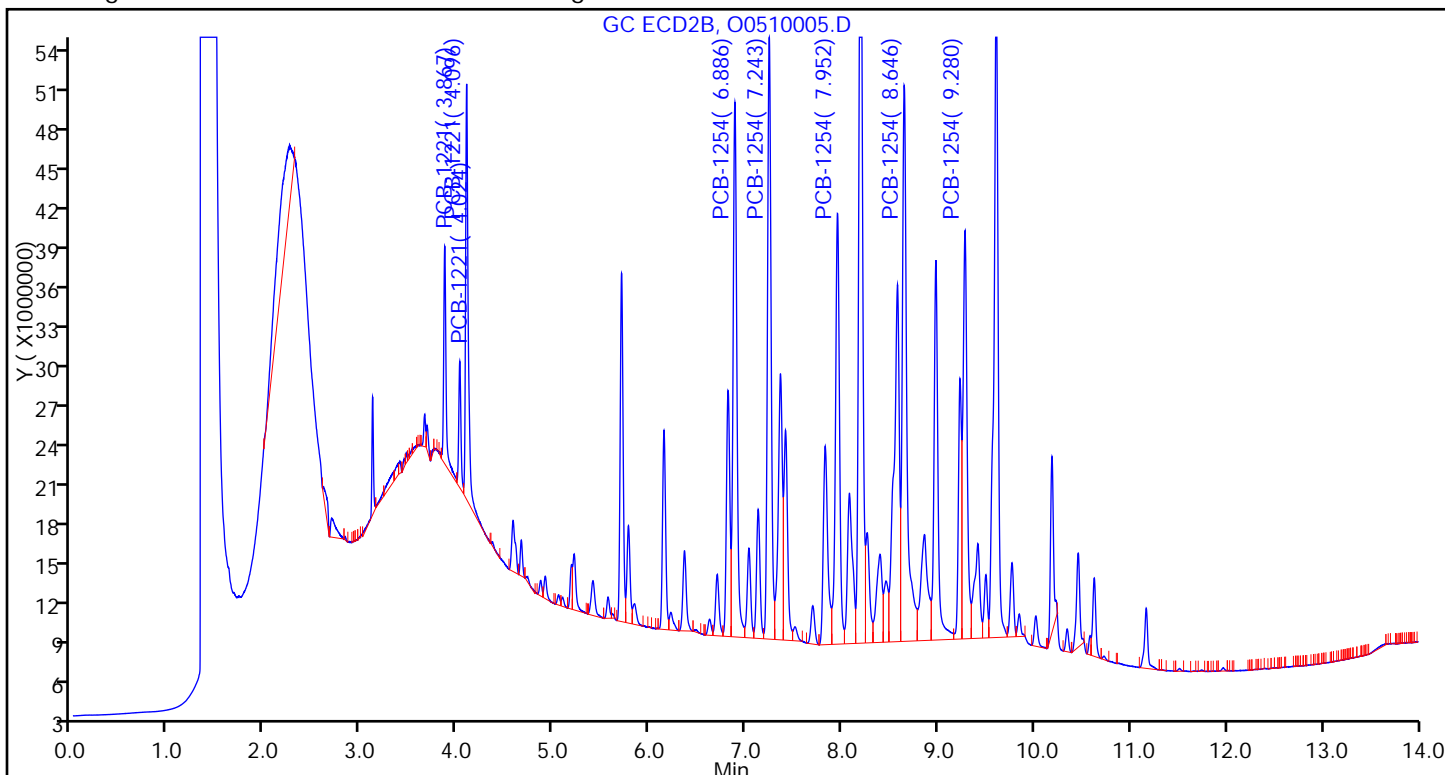
Method: PCB\_CHGC8DUAL

Limit Group: GCS 8082A ICAL

Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



TestAmerica Pittsburgh  
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\O0510006.D  
 Lims ID: IC  
 Client ID:  
 Sample Type: IC Calib Level: 5  
 Inject. Date: 11-May-2015 13:53:12 ALS Bottle#: 7 Worklist Smp#: 7  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 180-0006866-007  
 Operator ID: 402360 Instrument ID: CHGC8  
 Sublist: chrom-PCB\_CHGC8DUAL\*sub2  
 Method: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\PCB\_CHGC8DUAL.m  
 Limit Group: GCS 8082A ICAL  
 Last Update: 12-May-2015 16:52:50 Calib Date: 11-May-2015 18:31:22  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICal File: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\O0510020.D  
 Column 1 : Det: GC ECD1A  
 Column 2 : Det: GC ECD2B  
 Process Host: XAWRK022

First Level Reviewer: guptaa Date: 11-May-2015 14:38:20

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng | OnCol Amt ng | Flags |
|-----|-----------|---------------|---------------|----------|------------|--------------|-------|
|-----|-----------|---------------|---------------|----------|------------|--------------|-------|

2 PCB-1221 M

|                           |       |       |       |           |      |        |   |
|---------------------------|-------|-------|-------|-----------|------|--------|---|
| 1                         | 3.243 | 3.242 | 0.001 | 20574106H | 1.00 | 0.99   |   |
| 1                         | 3.372 | 3.370 | 0.002 | 12497762H | 1.00 | 0.9760 |   |
| 1                         | 3.409 | 3.408 | 0.001 | 44174270H | 1.00 | 0.9643 |   |
| Average of Peak Amounts = |       |       |       |           |      | 0.9769 |   |
| 2                         | 3.868 | 3.867 | 0.001 | 30264117H | 1.00 | 0.8853 | M |
| 2                         | 4.025 | 4.024 | 0.001 | 18502406H | 1.00 | 0.9592 | M |
| 2                         | 4.097 | 4.096 | 0.001 | 57264885H | 1.00 | 0.9277 | M |
| Average of Peak Amounts = |       |       |       |           |      | 0.9241 |   |

RPD = 5.56

7 PCB-1254

|                           |       |       |        |           |      |        |  |
|---------------------------|-------|-------|--------|-----------|------|--------|--|
| 1                         | 5.362 | 5.361 | 0.001  | 49196045H | 1.00 | 1.00   |  |
| 1                         | 5.743 | 5.743 | 0.000  | 58018232H | 1.00 | 1.00   |  |
| 1                         | 6.173 | 6.171 | 0.002  | 42083850H | 1.00 | 1.07   |  |
| 1                         | 7.181 | 7.182 | -0.001 | 48286026H | 1.00 | 1.02   |  |
| 1                         | 7.719 | 7.718 | 0.001  | 50031267H | 1.00 | 1.03   |  |
| Average of Peak Amounts = |       |       |        |           |      | 1.02   |  |
| 2                         | 6.888 | 6.886 | 0.002  | 76242997H | 1.00 | 1.02   |  |
| 2                         | 7.244 | 7.243 | 0.001  | 86269764H | 1.00 | 0.9654 |  |
| 2                         | 7.952 | 7.952 | 0.000  | 63989281H | 1.00 | 1.02   |  |
| 2                         | 8.643 | 8.646 | -0.003 | 75427570H | 1.00 | 1.02   |  |
| 2                         | 9.275 | 9.280 | -0.005 | 58347473H | 1.00 | 1.01   |  |
| Average of Peak Amounts = |       |       |        |           |      | 1.01   |  |

RPD = 1.76



**QC Flag Legend**

Review Flags

M - Manually Integrated

**Reagents:**

GCAR2154CALL5\_00008

Amount Added: 1.00

Units: mL

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\O0510006.D

Injection Date: 11-May-2015 13:53:12

Instrument ID: CHGC8

Lims ID: IC

Client ID:

Operator ID: 402360

ALS Bottle#: 7

Worklist Smp#: 7

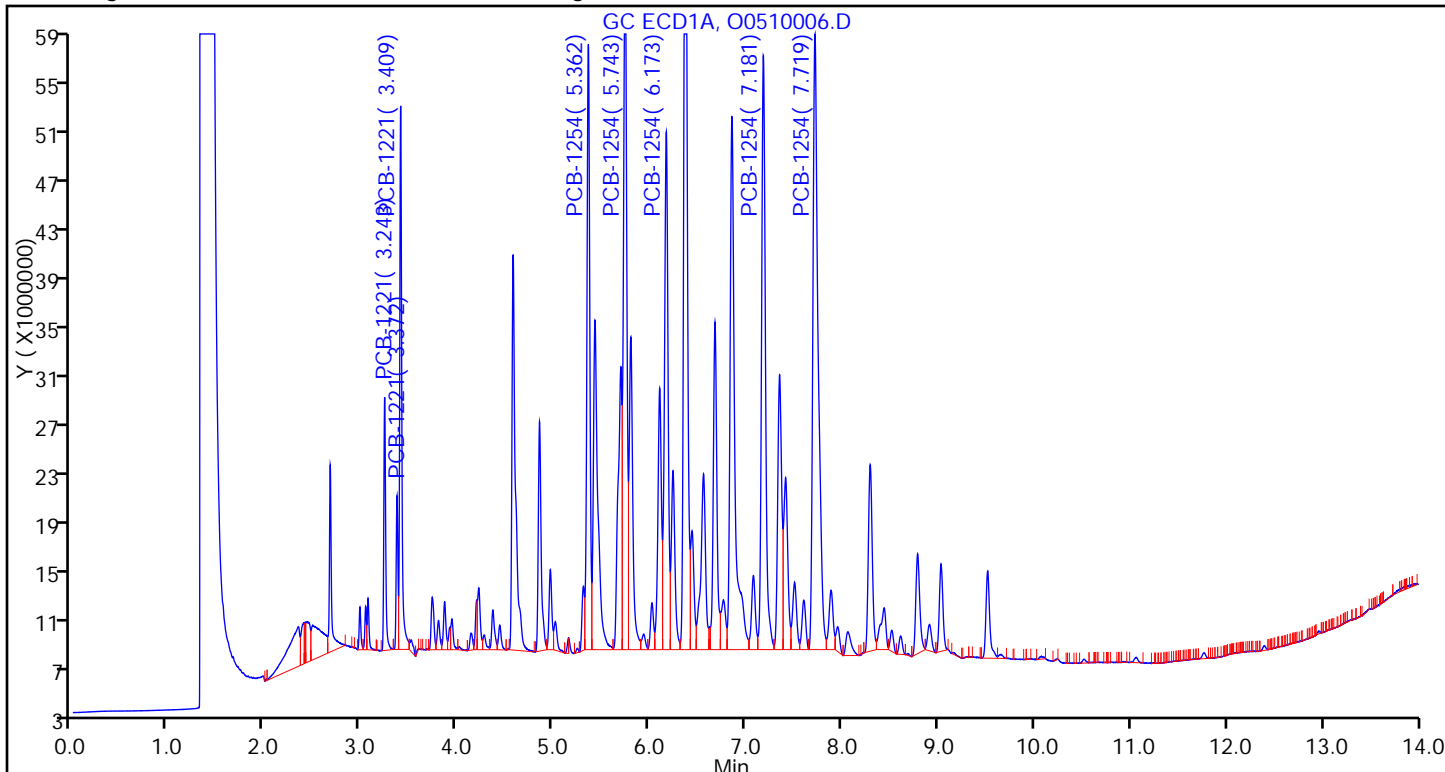
Injection Vol: 1.0 ul

Dil. Factor: 1.0000

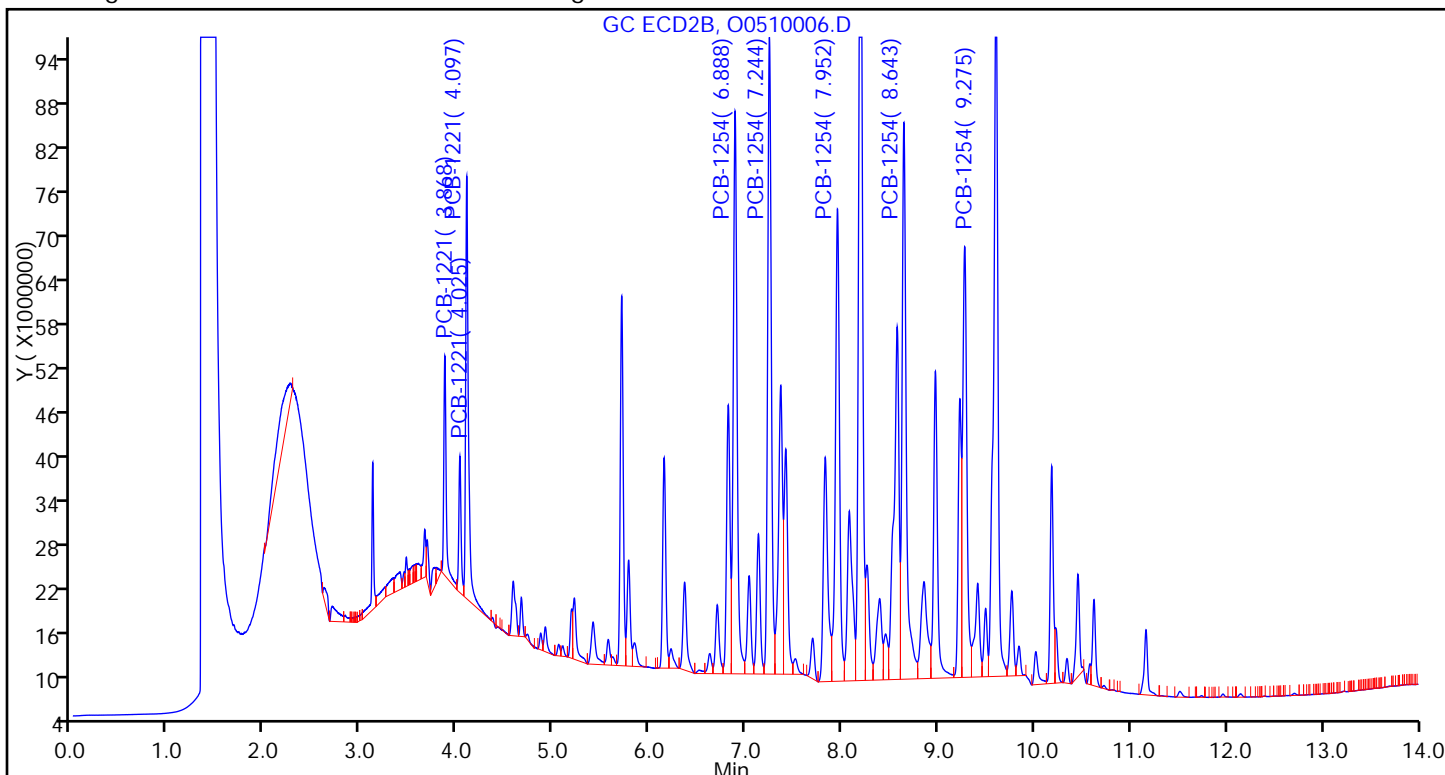
Method: PCB\_CHGC8DUAL

Limit Group: GCS 8082A ICAL

Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



FORM VI  
GC SEMI VOA INITIAL CALIBRATION DATA  
EXTERNAL STANDARD RETENTION TIME SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-43791-1 Analy Batch No.: 141160

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

Instrument ID: CHGC8 GC Column: RTX-CLP2 ID: 0.53 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/11/2015 12:33 Calibration End Date: 05/11/2015 13:53 Calibration ID: 23829

Calibration Files:

| LEVEL:  | LAB SAMPLE ID:  | LAB FILE ID: |
|---------|-----------------|--------------|
| Level 1 | IC 180-141160/3 | O0510002.D   |
| Level 2 | IC 180-141160/4 | O0510003.D   |
| Level 3 | IC 180-141160/5 | O0510004.D   |
| Level 4 | IC 180-141160/6 | O0510005.D   |
| Level 5 | IC 180-141160/7 | O0510006.D   |

| ANALYTE         | LVL 1 | LVL 2 | LVL 3 | LVL 4 | LVL 5 |  |  |  |  |  | RT WINDOW     | AVG RT |
|-----------------|-------|-------|-------|-------|-------|--|--|--|--|--|---------------|--------|
| PCB-1221 Peak 1 | 3.845 | 3.867 | 3.868 | 3.867 | 3.868 |  |  |  |  |  | 3.817 - 3.917 | 3.863  |
| PCB-1221 Peak 2 | 4.012 | 4.023 | 4.023 | 4.024 | 4.025 |  |  |  |  |  | 3.974 - 4.074 | 4.021  |
| PCB-1221 Peak 3 | 4.091 | 4.094 | 4.095 | 4.096 | 4.097 |  |  |  |  |  | 4.046 - 4.146 | 4.095  |
| PCB-1254 Peak 1 | 6.884 | 6.884 | 6.885 | 6.886 | 6.888 |  |  |  |  |  | 6.816 - 6.956 | 6.885  |
| PCB-1254 Peak 2 | 7.245 | 7.242 | 7.243 | 7.243 | 7.244 |  |  |  |  |  | 7.173 - 7.313 | 7.243  |
| PCB-1254 Peak 3 | 7.950 | 7.951 | 7.949 | 7.952 | 7.952 |  |  |  |  |  | 7.882 - 8.022 | 7.951  |
| PCB-1254 Peak 4 | 8.637 | 8.643 | 8.639 | 8.646 | 8.643 |  |  |  |  |  | 8.576 - 8.716 | 8.642  |
| PCB-1254 Peak 5 | 9.272 | 9.273 | 9.273 | 9.280 | 9.275 |  |  |  |  |  | 9.210 - 9.350 | 9.275  |

FORM VI  
GC SEMI VOA INITIAL CALIBRATION DATA  
EXTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Pittsburgh Job No.: 180-43791-1 Analy Batch No.: 141160

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

Instrument ID: CHGC8 GC Column: RTX-CLP2 ID: 0.53 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/11/2015 12:33 Calibration End Date: 05/11/2015 13:53 Calibration ID: 23829

Calibration Files:

| LEVEL:  | LAB SAMPLE ID:  | LAB FILE ID: |
|---------|-----------------|--------------|
| Level 1 | IC 180-141160/3 | O0510002.D   |
| Level 2 | IC 180-141160/4 | O0510003.D   |
| Level 3 | IC 180-141160/5 | O0510004.D   |
| Level 4 | IC 180-141160/6 | O0510005.D   |
| Level 5 | IC 180-141160/7 | O0510006.D   |

| ANALYTE         | CF                   |          |           |          | CURVE TYPE | COEFFICIENT |            |    | # | MIN CF | %RSD | #    | MAX %RSD | R^2 OR COD | # | MIN R^2 OR COD |
|-----------------|----------------------|----------|-----------|----------|------------|-------------|------------|----|---|--------|------|------|----------|------------|---|----------------|
|                 | LVL 1<br>LVL 5       | LVL 2    | LVL 3     | LVL 4    |            | B           | M1         | M2 |   |        |      |      |          |            |   |                |
| PCB-1221 Peak 1 | 40620200<br>30264117 | 29799640 | 37453336  | 32789346 | Ave        |             | 34185327.8 |    |   | 13.8   |      | 20.0 |          |            |   |                |
| PCB-1221 Peak 2 | 20726100<br>18502406 | 16839610 | 21316976  | 19059702 | Ave        |             | 19288958.8 |    |   | 9.3    |      | 20.0 |          |            |   |                |
| PCB-1221 Peak 3 | 59286100<br>57264885 | 55981120 | 73246520  | 62867234 | Ave        |             | 61729171.8 |    |   | 11.2   |      | 20.0 |          |            |   |                |
| PCB-1254 Peak 1 | 56046800<br>76242997 | 70570310 | 92035960  | 80548112 | Ave        |             | 75088835.8 |    |   | 17.6   |      | 20.0 |          |            |   |                |
| PCB-1254 Peak 2 | 83616800<br>86269764 | 82433810 | 103812404 | 90680426 | Ave        |             | 89362640.8 |    |   | 9.7    |      | 20.0 |          |            |   |                |
| PCB-1254 Peak 3 | 51390400<br>63989281 | 58326110 | 74259128  | 64896330 | Ave        |             | 62572249.8 |    |   | 13.5   |      | 20.0 |          |            |   |                |
| PCB-1254 Peak 4 | 56822000<br>75427570 | 67053020 | 87607540  | 83787688 | Ave        |             | 74139563.6 |    |   | 16.9   |      | 20.0 |          |            |   |                |
| PCB-1254 Peak 5 | 52700700<br>58347473 | 50087970 | 66764096  | 61511710 | Ave        |             | 57882389.8 |    |   | 11.6   |      | 20.0 |          |            |   |                |

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

FORM VI  
GC SEMI VOA INITIAL CALIBRATION DATA  
EXTERNAL STANDARD RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Pittsburgh Job No.: 180-43791-1 Analy Batch No.: 141160

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

Instrument ID: CHGC8 GC Column: RTX-CLP2 ID: 0.53 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/11/2015 12:33 Calibration End Date: 05/11/2015 13:53 Calibration ID: 23829

Calibration Files:

| LEVEL:  | LAB SAMPLE ID:  | LAB FILE ID: |
|---------|-----------------|--------------|
| Level 1 | IC 180-141160/3 | O0510002.D   |
| Level 2 | IC 180-141160/4 | O0510003.D   |
| Level 3 | IC 180-141160/5 | O0510004.D   |
| Level 4 | IC 180-141160/6 | O0510005.D   |
| Level 5 | IC 180-141160/7 | O0510006.D   |

| ANALYTE         | CURVE TYPE | RESPONSE |         |          |          |          | CONCENTRATION (NG) |       |       |       |       |
|-----------------|------------|----------|---------|----------|----------|----------|--------------------|-------|-------|-------|-------|
|                 |            | LVL 1    | LVL 2   | LVL 3    | LVL 4    | LVL 5    | LVL 1              | LVL 2 | LVL 3 | LVL 4 | LVL 5 |
| PCB-1221 Peak 1 | Ave        | 406202   | 2979964 | 9363334  | 16394673 | 30264117 | 0.0100             | 0.100 | 0.250 | 0.500 | 1.00  |
| PCB-1221 Peak 2 | Ave        | 207261   | 1683961 | 5329244  | 9529851  | 18502406 | 0.0100             | 0.100 | 0.250 | 0.500 | 1.00  |
| PCB-1221 Peak 3 | Ave        | 592861   | 5598112 | 18311630 | 31433617 | 57264885 | 0.0100             | 0.100 | 0.250 | 0.500 | 1.00  |
| PCB-1254 Peak 1 | Ave        | 560468   | 7057031 | 23008990 | 40274056 | 76242997 | 0.0100             | 0.100 | 0.250 | 0.500 | 1.00  |
| PCB-1254 Peak 2 | Ave        | 836168   | 8243381 | 25953101 | 45340213 | 86269764 | 0.0100             | 0.100 | 0.250 | 0.500 | 1.00  |
| PCB-1254 Peak 3 | Ave        | 513904   | 5832611 | 18564782 | 32448165 | 63989281 | 0.0100             | 0.100 | 0.250 | 0.500 | 1.00  |
| PCB-1254 Peak 4 | Ave        | 568220   | 6705302 | 21901885 | 41893844 | 75427570 | 0.0100             | 0.100 | 0.250 | 0.500 | 1.00  |
| PCB-1254 Peak 5 | Ave        | 527007   | 5008797 | 16691024 | 30755855 | 58347473 | 0.0100             | 0.100 | 0.250 | 0.500 | 1.00  |

Curve Type Legend:

Ave = Average by Height

TestAmerica Pittsburgh  
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\O0510002.D  
 Lims ID: IC  
 Client ID:  
 Sample Type: IC Calib Level: 1  
 Inject. Date: 11-May-2015 12:33:50 ALS Bottle#: 3 Worklist Smp#: 3  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 180-0006866-003  
 Operator ID: 402360 Instrument ID: CHGC8  
 Sublist: chrom-PCB\_CHGC8DUAL\*sub2  
 Method: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\PCB\_CHGC8DUAL.m  
 Limit Group: GCS 8082A ICAL  
 Last Update: 12-May-2015 16:52:37 Calib Date: 11-May-2015 18:31:22  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICal File: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\O0510020.D  
 Column 1 : Det: GC ECD1A  
 Column 2 : Det: GC ECD2B  
 Process Host: XAWRK022

First Level Reviewer: guptaa Date: 11-May-2015 13:41:45

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng | OnCol Amt ng | Flags |
|-----|-----------|---------------|---------------|----------|------------|--------------|-------|
|-----|-----------|---------------|---------------|----------|------------|--------------|-------|

2 PCB-1221 M

|                           |       |       |        |         |        |          |   |
|---------------------------|-------|-------|--------|---------|--------|----------|---|
| 1                         | 3.239 | 3.242 | -0.003 | 179952H | 0.0100 | 0.008663 |   |
| 1                         | 3.365 | 3.370 | -0.005 | 108396H | 0.0100 | 0.008465 |   |
| 1                         | 3.407 | 3.408 | -0.001 | 393541H | 0.0100 | 0.008591 |   |
| Average of Peak Amounts = |       |       |        |         |        | 0.008573 |   |
| 2                         | 3.845 | 3.867 | -0.022 | 406202H | 0.0100 | 0.0119   | M |
| 2                         | 4.012 | 4.024 | -0.012 | 207261H | 0.0100 | 0.0107   | M |
| 2                         | 4.091 | 4.096 | -0.005 | 592861H | 0.0100 | 0.009604 | M |
| Average of Peak Amounts = |       |       |        |         |        | 0.0107   |   |
| RPD = 22.48               |       |       |        |         |        |          |   |

7 PCB-1254

|                           |       |       |        |         |        |          |  |
|---------------------------|-------|-------|--------|---------|--------|----------|--|
| 1                         | 5.358 | 5.361 | -0.003 | 413918H | 0.0100 | 0.008415 |  |
| 1                         | 5.745 | 5.743 | 0.002  | 527625H | 0.0100 | 0.009075 |  |
| 1                         | 6.165 | 6.171 | -0.006 | 287142H | 0.0100 | 0.007270 |  |
| 1                         | 7.179 | 7.182 | -0.003 | 406179H | 0.0100 | 0.008618 |  |
| 1                         | 7.711 | 7.718 | -0.007 | 412843H | 0.0100 | 0.008498 |  |
| Average of Peak Amounts = |       |       |        |         |        | 0.008375 |  |
| 2                         | 6.884 | 6.886 | -0.002 | 560468H | 0.0100 | 0.007464 |  |
| 2                         | 7.245 | 7.243 | 0.002  | 836168H | 0.0100 | 0.009357 |  |
| 2                         | 7.950 | 7.952 | -0.002 | 513904H | 0.0100 | 0.008213 |  |
| 2                         | 8.637 | 8.646 | -0.009 | 568220H | 0.0100 | 0.007664 |  |
| 2                         | 9.272 | 9.280 | -0.008 | 527007H | 0.0100 | 0.009105 |  |
| Average of Peak Amounts = |       |       |        |         |        | 0.008361 |  |
| RPD = 0.17                |       |       |        |         |        |          |  |

### QC Flag Legend

Review Flags

M - Manually Integrated

### Reagents:

GCAR2154CALL1\_00011

Amount Added: 1.00

Units: mL

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\O0510002.D

Injection Date: 11-May-2015 12:33:50

Instrument ID: CHGC8

Lims ID: IC

Client ID:

Operator ID: 402360

ALS Bottle#: 3

Worklist Smp#: 3

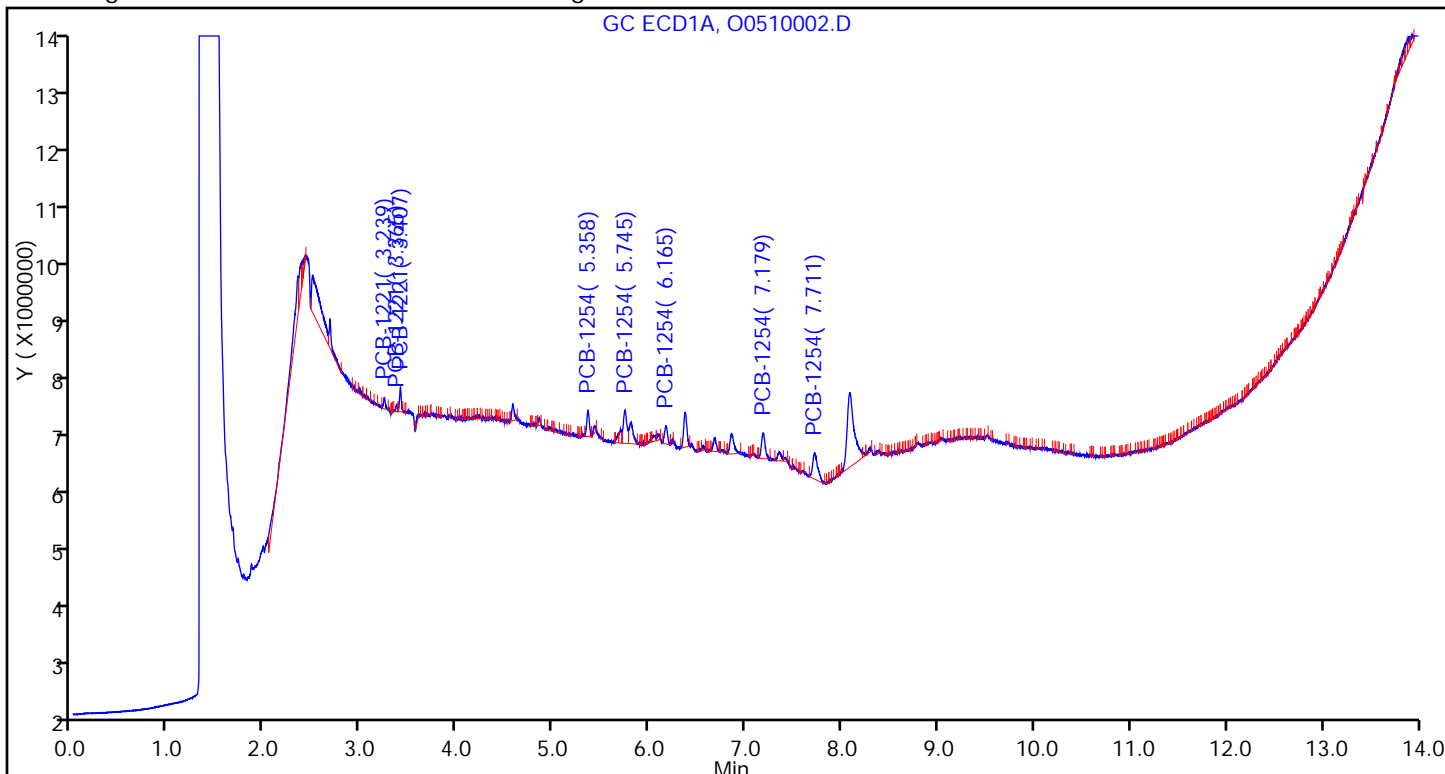
Injection Vol: 1.0 ul

Dil. Factor: 1.0000

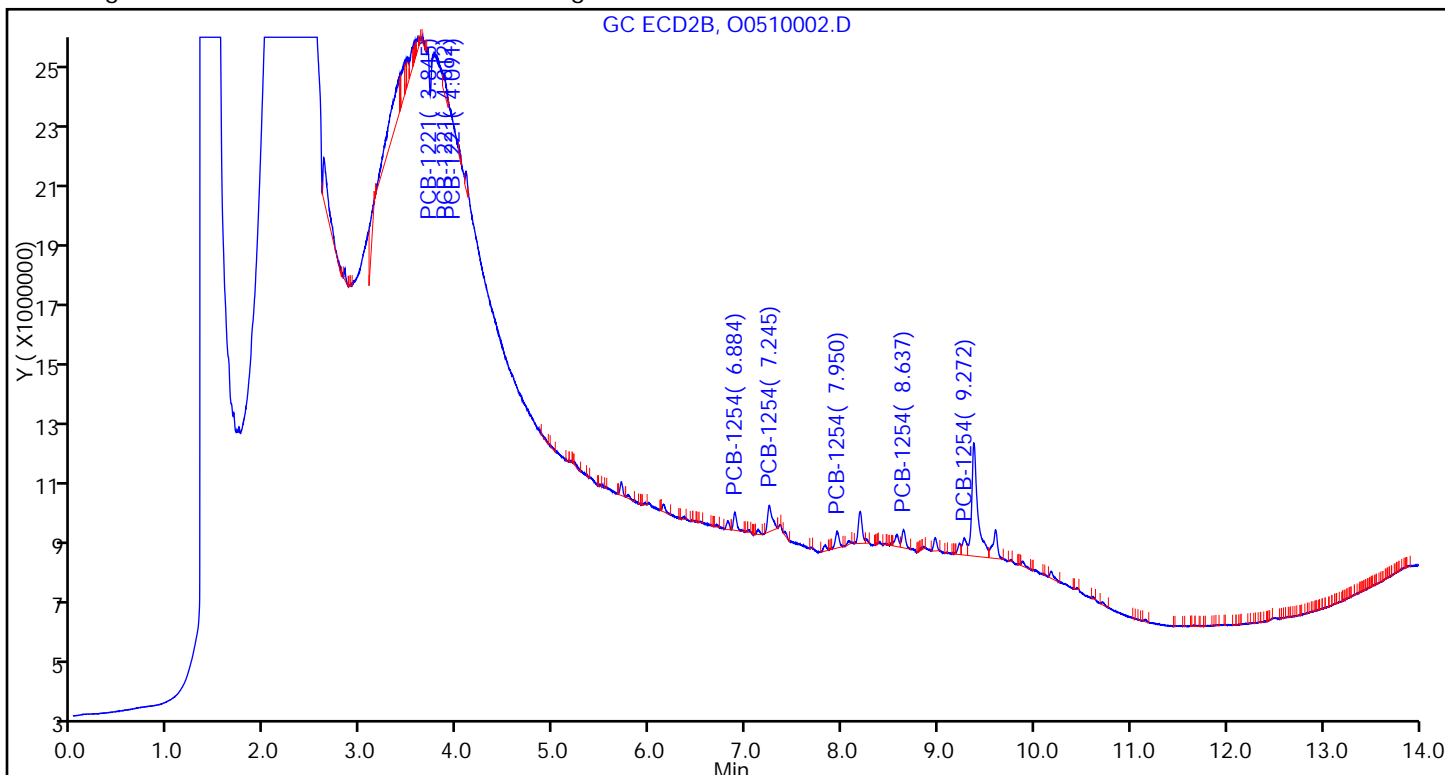
Method: PCB\_CHGC8DUAL

Limit Group: GCS 8082A ICAL

Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3





TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\O0510002.D

Injection Date: 11-May-2015 12:33:50

Instrument ID: CHGC8

Lims ID: IC

Client ID:

Operator ID: 402360

ALS Bottle#: 3

Worklist Smp#: 3

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

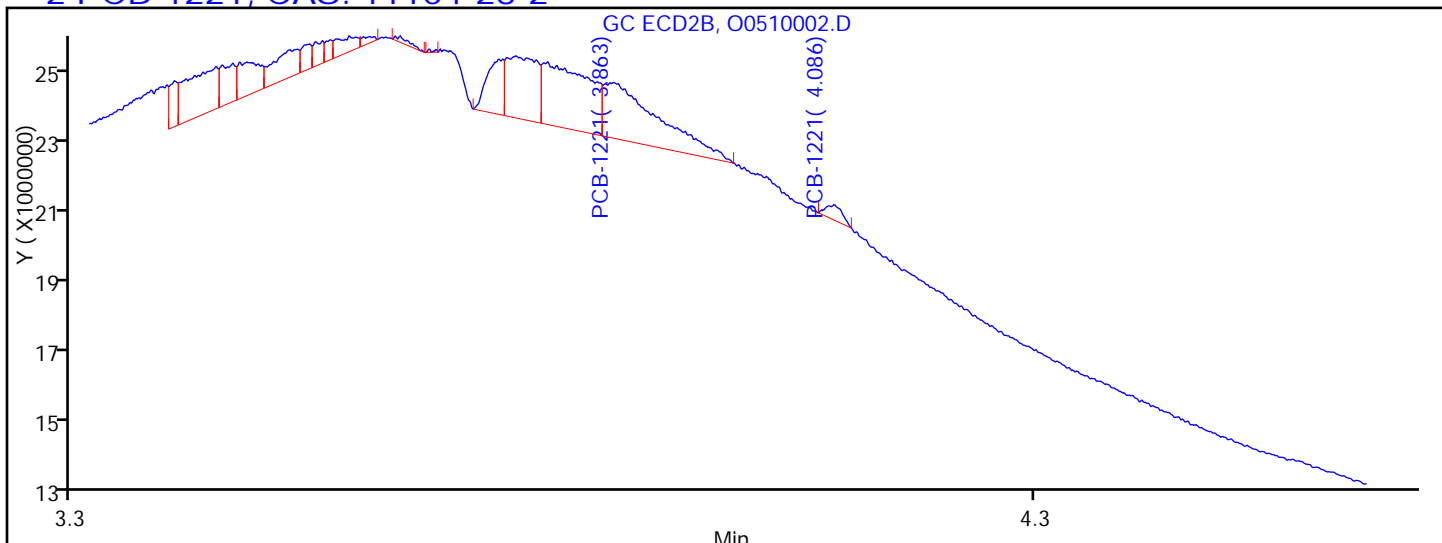
Method: PCB\_CHGC8DUAL

Limit Group: GCS 8082A ICAL

Column:

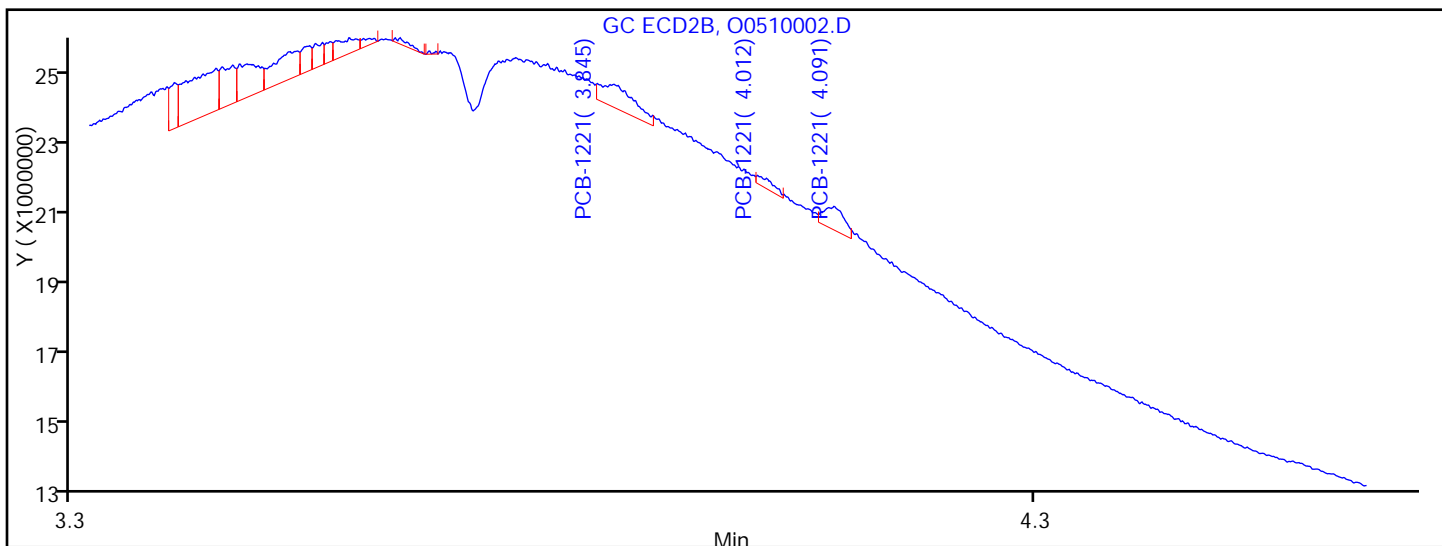
Detector: GC ECD2B

2 PCB-1221, CAS: 11104-28-2



Processing Integration Results

|            |                    |   |
|------------|--------------------|---|
| RT = 3.863 | Response = 1412983 | M |
| RT = 0.000 | Response = 0       | M |
| RT = 4.086 | Response = 300630  | M |



Manual Integration Results

|            |                   |   |
|------------|-------------------|---|
| RT = 3.845 | Response = 406202 | M |
| RT = 4.012 | Response = 207261 | M |
| RT = 4.091 | Response = 592861 | M |

Reviewer: guptaa, 11-May-2015 15:53:30

Audit Action: Assigned New Baseline

Audit Reason: Instrument noise

TestAmerica Pittsburgh  
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\O0510003.D  
 Lims ID: IC  
 Client ID:  
 Sample Type: IC Calib Level: 2  
 Inject. Date: 11-May-2015 12:53:41 ALS Bottle#: 4 Worklist Smp#: 4  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 180-0006866-004  
 Operator ID: 402360 Instrument ID: CHGC8  
 Sublist: chrom-PCB\_CHGC8DUAL\*sub2  
 Method: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\PCB\_CHGC8DUAL.m  
 Limit Group: GCS 8082A ICAL  
 Last Update: 12-May-2015 16:52:40 Calib Date: 11-May-2015 18:31:22  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICal File: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\O0510020.D  
 Column 1 : Det: GC ECD1A  
 Column 2 : Det: GC ECD2B  
 Process Host: XAWRK022

First Level Reviewer: guptaa Date: 11-May-2015 13:44:44

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng | OnCol Amt ng | Flags |
|-----|-----------|---------------|---------------|----------|------------|--------------|-------|
|-----|-----------|---------------|---------------|----------|------------|--------------|-------|

2 PCB-1221 M

|                           |       |       |        |          |        |            |   |
|---------------------------|-------|-------|--------|----------|--------|------------|---|
| 1                         | 3.242 | 3.242 | 0.000  | 1914765H | 0.1000 | 0.0922     |   |
| 1                         | 3.369 | 3.370 | -0.001 | 1214920H | 0.1000 | 0.0949     |   |
| 1                         | 3.408 | 3.408 | 0.000  | 4344700H | 0.1000 | 0.0948     |   |
| Average of Peak Amounts = |       |       |        |          |        | 0.0940     |   |
| 2                         | 3.867 | 3.867 | 0.000  | 2979964H | 0.1000 | 0.0872     |   |
| 2                         | 4.023 | 4.024 | -0.001 | 1683961H | 0.1000 | 0.0873     |   |
| 2                         | 4.094 | 4.096 | -0.002 | 5598112H | 0.1000 | 0.0907     | M |
| Average of Peak Amounts = |       |       |        |          |        | 0.0884     |   |
|                           |       |       |        |          |        | RPD = 6.12 |   |

7 PCB-1254

|                           |       |       |        |          |        |            |  |
|---------------------------|-------|-------|--------|----------|--------|------------|--|
| 1                         | 5.359 | 5.361 | -0.002 | 4637086H | 0.1000 | 0.0943     |  |
| 1                         | 5.743 | 5.743 | 0.000  | 5277932H | 0.1000 | 0.0908     |  |
| 1                         | 6.171 | 6.171 | 0.000  | 3609272H | 0.1000 | 0.0914     |  |
| 1                         | 7.182 | 7.182 | 0.000  | 4264251H | 0.1000 | 0.0905     |  |
| 1                         | 7.716 | 7.718 | -0.002 | 4393048H | 0.1000 | 0.0904     |  |
| Average of Peak Amounts = |       |       |        |          |        | 0.0915     |  |
| 2                         | 6.884 | 6.886 | -0.002 | 7057031H | 0.1000 | 0.0940     |  |
| 2                         | 7.242 | 7.243 | -0.001 | 8243381H | 0.1000 | 0.0922     |  |
| 2                         | 7.951 | 7.952 | -0.001 | 5832611H | 0.1000 | 0.0932     |  |
| 2                         | 8.643 | 8.646 | -0.003 | 6705302H | 0.1000 | 0.0904     |  |
| 2                         | 9.273 | 9.280 | -0.007 | 5008797H | 0.1000 | 0.0865     |  |
| Average of Peak Amounts = |       |       |        |          |        | 0.0913     |  |
|                           |       |       |        |          |        | RPD = 0.20 |  |

**QC Flag Legend**

Review Flags

M - Manually Integrated

**Reagents:**

GCAR2154CALL2\_00008

Amount Added: 1.00

Units: mL

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\O0510003.D

Injection Date: 11-May-2015 12:53:41

Instrument ID: CHGC8

Lims ID: IC

Client ID:

Operator ID: 402360

ALS Bottle#: 4

Worklist Smp#: 4

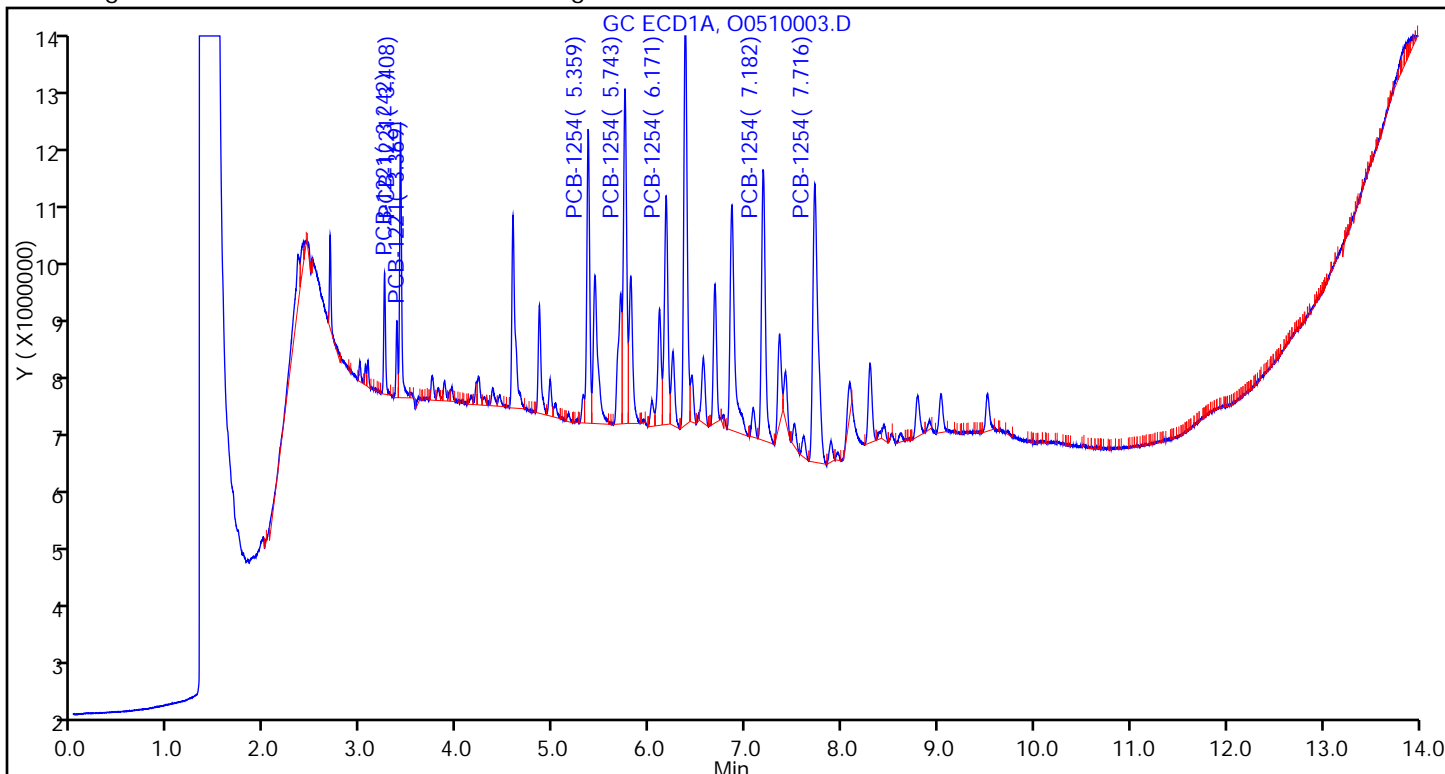
Injection Vol: 1.0 ul

Dil. Factor: 1.0000

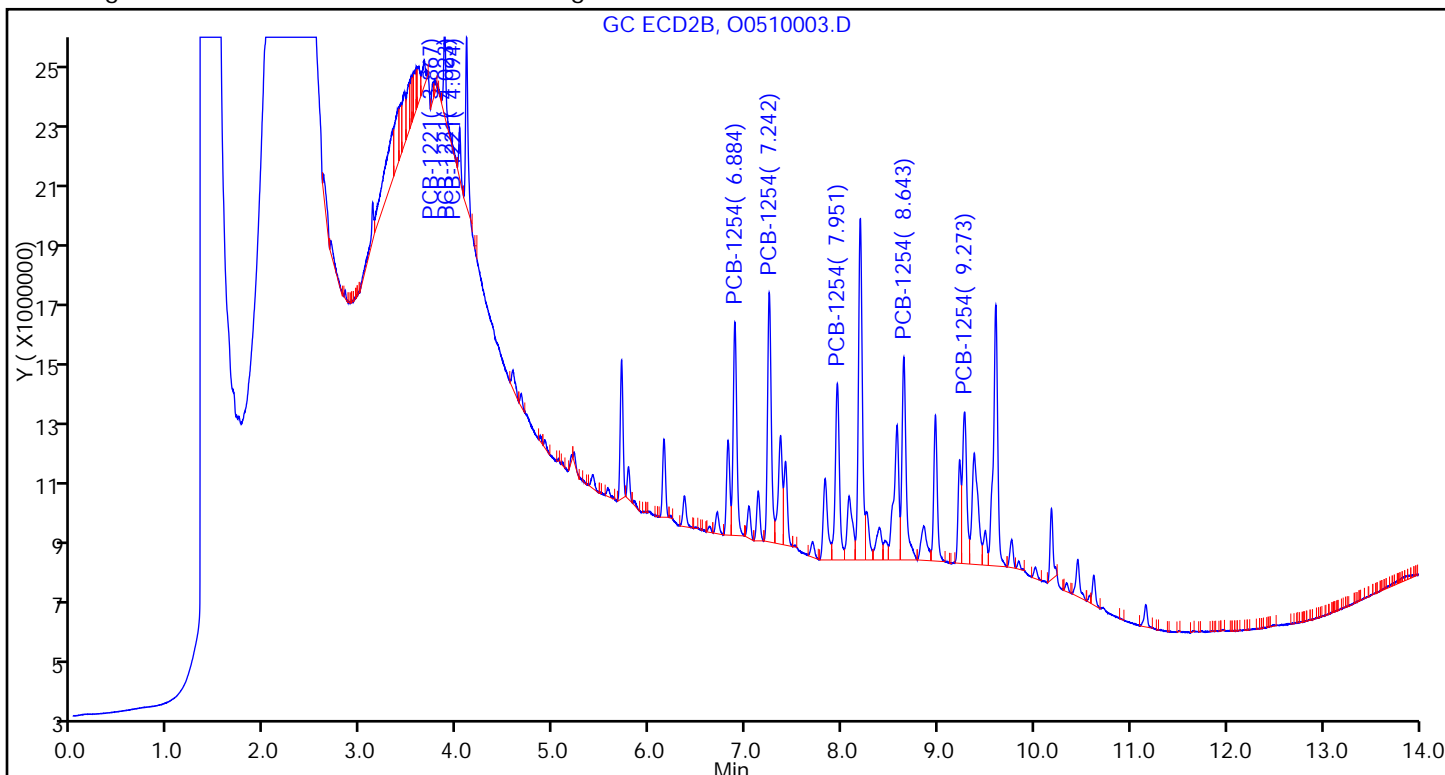
Method: PCB\_CHGC8DUAL

Limit Group: GCS 8082A ICAL

Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\O0510003.D

Injection Date: 11-May-2015 12:53:41

Instrument ID: CHGC8

Lims ID: IC

Client ID:

Operator ID: 402360

ALS Bottle#: 4

Worklist Smp#: 4

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

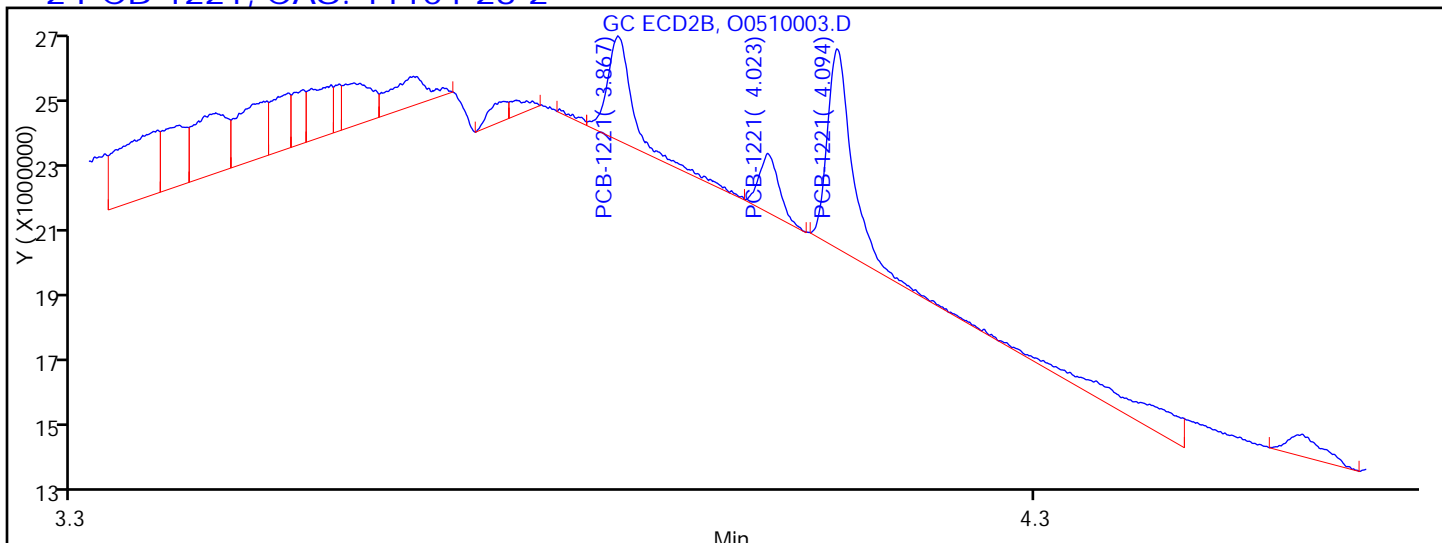
Method: PCB\_CHGC8DUAL

Limit Group: GCS 8082A ICAL

Column:

Detector: GC ECD2B

2 PCB-1221, CAS: 11104-28-2



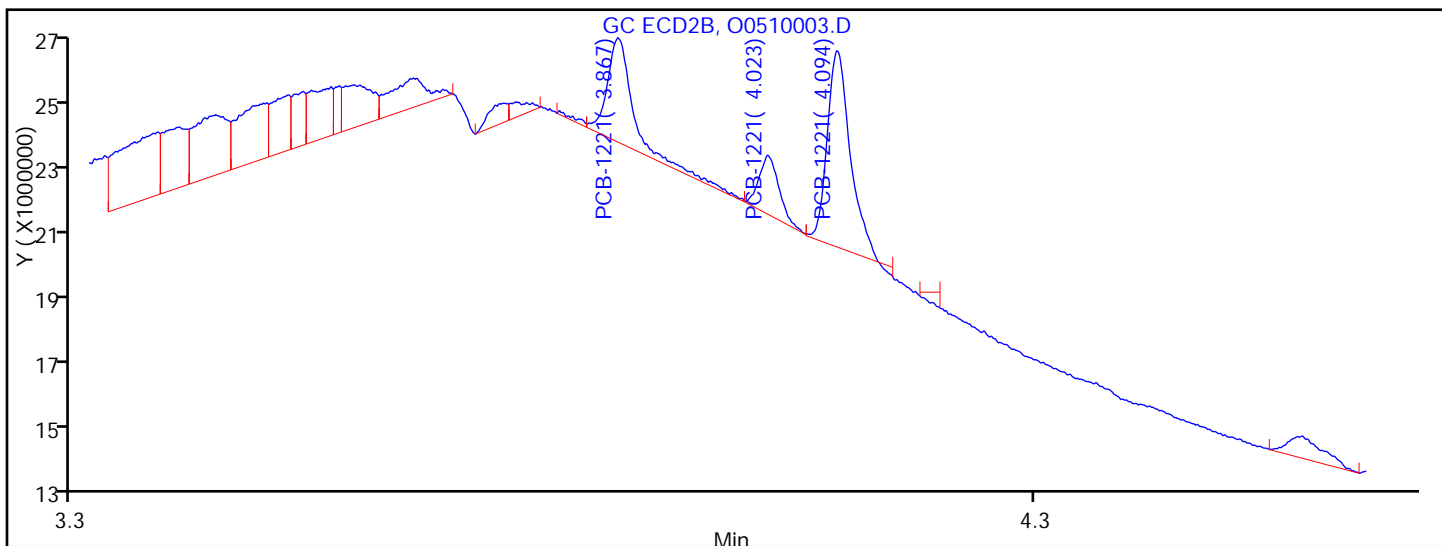
Processing Integration Results

RT = 3.867 Response = 2979964

RT = 4.023 Response = 1683961

RT = 4.094 Response = 5683453

M



Manual Integration Results

RT = 3.867 Response = 2979964

RT = 4.023 Response = 1683961

RT = 4.094 Response = 5598112

M

Reviewer: guptaa, 11-May-2015 15:40:57

Audit Action: Manually Integrated/Assigned Compound ID

Audit Reason: Split Peak

TestAmerica Pittsburgh  
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\O0510004.D  
 Lims ID: IC  
 Client ID:  
 Sample Type: IC Calib Level: 3  
 Inject. Date: 11-May-2015 13:13:32 ALS Bottle#: 5 Worklist Smp#: 5  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 180-0006866-005  
 Operator ID: 402360 Instrument ID: CHGC8  
 Sublist: chrom-PCB\_CHGC8DUAL\*sub2  
 Method: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\PCB\_CHGC8DUAL.m  
 Limit Group: GCS 8082A ICAL  
 Last Update: 12-May-2015 16:52:43 Calib Date: 11-May-2015 18:31:22  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICal File: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\O0510020.D  
 Column 1 : Det: GC ECD1A  
 Column 2 : Det: GC ECD2B  
 Process Host: XAWRK022

First Level Reviewer: guptaa Date: 11-May-2015 14:01:54

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng | OnCol Amt ng | Flags |
|-----|-----------|---------------|---------------|----------|------------|--------------|-------|
|-----|-----------|---------------|---------------|----------|------------|--------------|-------|

2 PCB-1221 M

|                           |       |       |        |           |        |        |   |
|---------------------------|-------|-------|--------|-----------|--------|--------|---|
| 1                         | 3.242 | 3.242 | 0.000  | 6207456H  | 0.2500 | 0.2988 |   |
| 1                         | 3.370 | 3.370 | 0.000  | 3820631H  | 0.2500 | 0.2984 |   |
| 1                         | 3.408 | 3.408 | 0.000  | 13783773H | 0.2500 | 0.3009 |   |
| Average of Peak Amounts = |       |       |        |           |        | 0.2994 |   |
| 2                         | 3.868 | 3.867 | 0.001  | 9363334H  | 0.2500 | 0.2739 | M |
| 2                         | 4.023 | 4.024 | -0.001 | 5329244H  | 0.2500 | 0.2763 | M |
| 2                         | 4.095 | 4.096 | -0.001 | 18311630H | 0.2500 | 0.2966 | M |
| Average of Peak Amounts = |       |       |        |           |        | 0.2823 |   |

RPD = 5.88

7 PCB-1254

|                           |       |       |        |           |        |        |  |
|---------------------------|-------|-------|--------|-----------|--------|--------|--|
| 1                         | 5.359 | 5.361 | -0.002 | 14522075H | 0.2500 | 0.2952 |  |
| 1                         | 5.743 | 5.743 | 0.000  | 16891762H | 0.2500 | 0.2905 |  |
| 1                         | 6.171 | 6.171 | 0.000  | 12111654H | 0.2500 | 0.3066 |  |
| 1                         | 7.180 | 7.182 | -0.002 | 13883212H | 0.2500 | 0.2946 |  |
| 1                         | 7.718 | 7.718 | 0.000  | 14263147H | 0.2500 | 0.2936 |  |
| Average of Peak Amounts = |       |       |        |           |        | 0.2961 |  |
| 2                         | 6.885 | 6.886 | -0.001 | 23008990H | 0.2500 | 0.3064 |  |
| 2                         | 7.243 | 7.243 | 0.000  | 25953101H | 0.2500 | 0.2904 |  |
| 2                         | 7.949 | 7.952 | -0.003 | 18564782H | 0.2500 | 0.2967 |  |
| 2                         | 8.639 | 8.646 | -0.007 | 21901885H | 0.2500 | 0.2954 |  |
| 2                         | 9.273 | 9.280 | -0.007 | 16691024H | 0.2500 | 0.2884 |  |
| Average of Peak Amounts = |       |       |        |           |        | 0.2955 |  |

RPD = 0.22

**QC Flag Legend**

Review Flags

M - Manually Integrated

**Reagents:**

GCAR2154CALL3\_00008

Amount Added: 1.00

Units: mL

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\O0510004.D

Injection Date: 11-May-2015 13:13:32 Instrument ID: CHGC8

Lims ID: IC

Client ID:

Operator ID: 402360

ALS Bottle#: 5

Worklist Smp#: 5

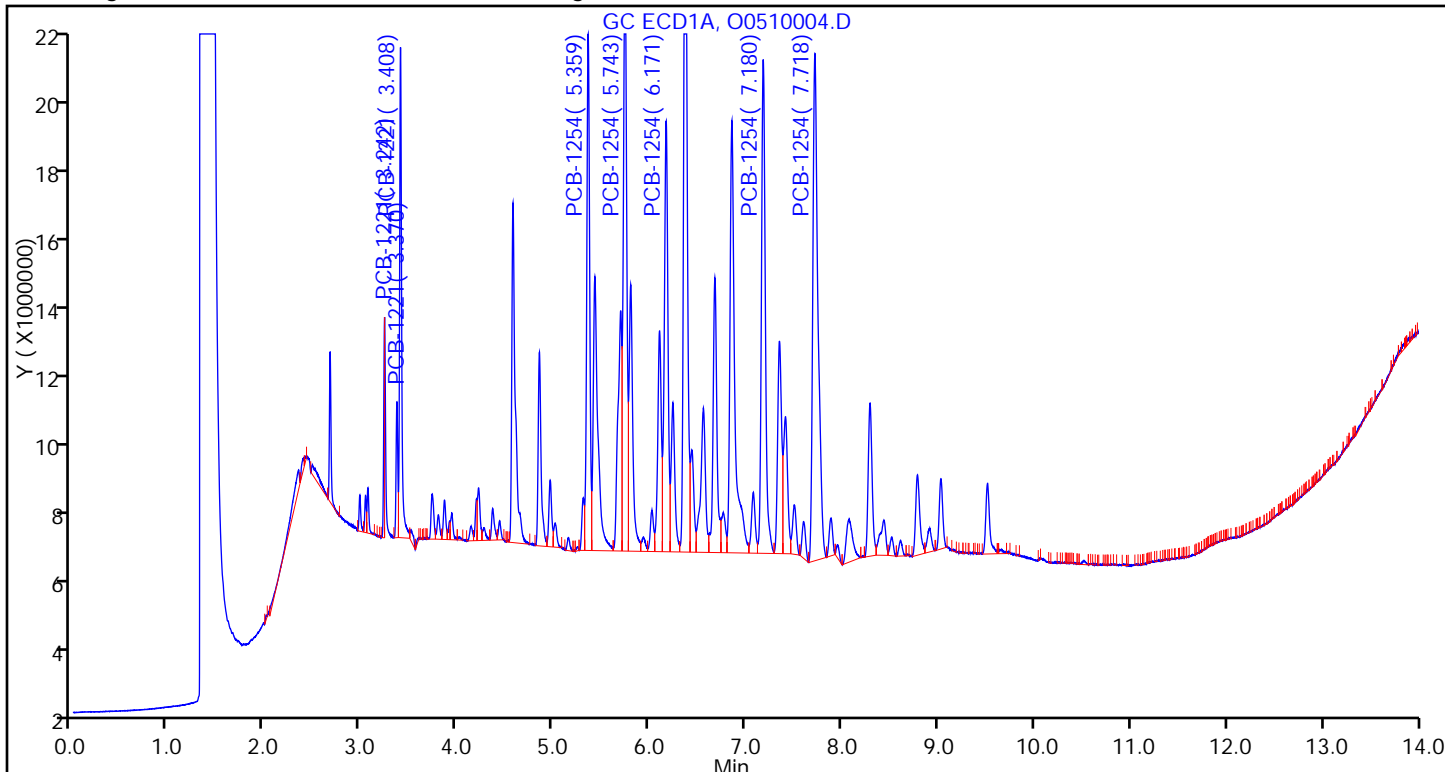
Injection Vol: 1.0 ul

Dil. Factor: 1.0000

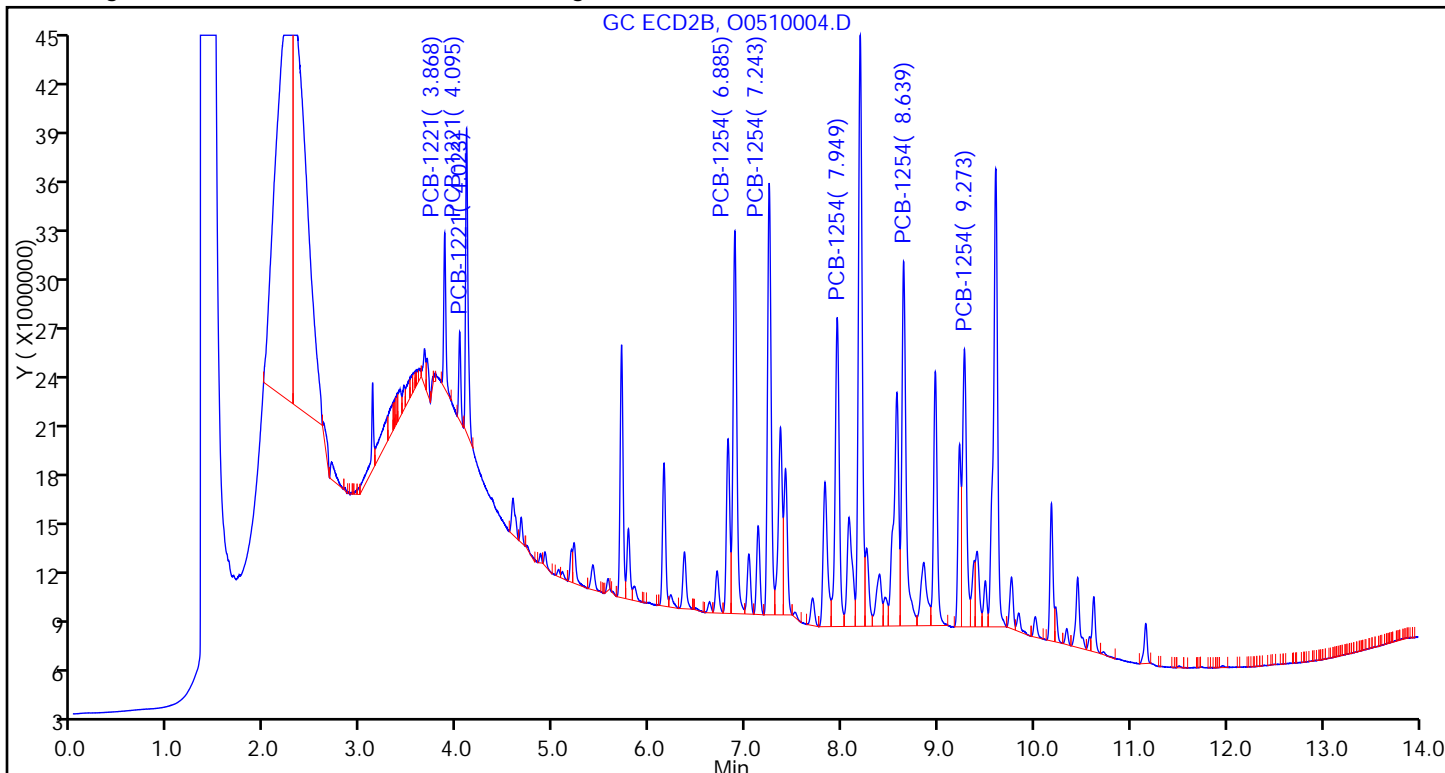
Method: PCB\_CHGC8DUAL

Limit Group: GCS 8082A ICAL

Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3





TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\O0510004.D

Injection Date: 11-May-2015 13:13:32 Instrument ID: CHGC8

Lims ID: IC

Client ID:

Operator ID: 402360

ALS Bottle#: 5 Worklist Smp#: 5

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

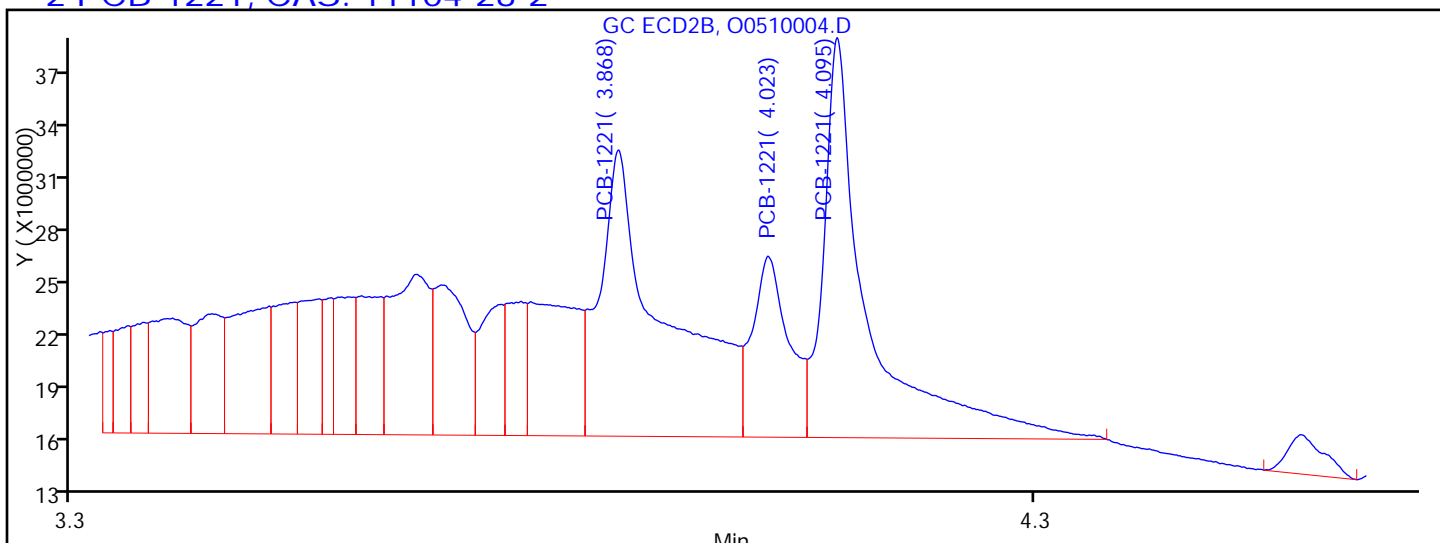
Method: PCB\_CHGC8DUAL

Limit Group: GCS 8082A ICAL

Column:

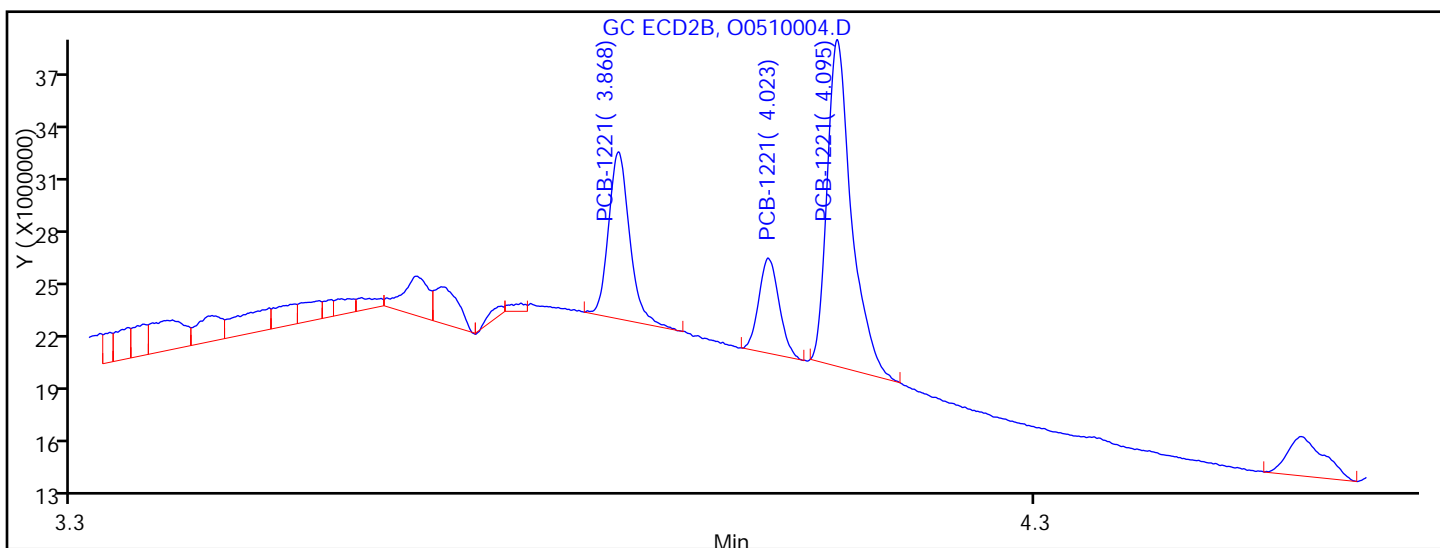
Detector GC ECD2B

2 PCB-1221, CAS: 11104-28-2



Processing Integration Results

|            |                     |   |
|------------|---------------------|---|
| RT = 3.868 | Response = 16039807 | M |
| RT = 4.023 | Response = 10141882 | M |
| RT = 4.095 | Response = 22406014 | M |



Manual Integration Results

|            |                     |   |
|------------|---------------------|---|
| RT = 3.868 | Response = 9363334  | M |
| RT = 4.023 | Response = 5329244  | M |
| RT = 4.095 | Response = 18311630 | M |

Reviewer: guptaa, 11-May-2015 15:46:55

Audit Action: Manually Integrated

Audit Reason: Instrument noise

TestAmerica Pittsburgh  
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\O0510005.D  
 Lims ID: IC  
 Client ID:  
 Sample Type: IC Calib Level: 4  
 Inject. Date: 11-May-2015 13:33:22 ALS Bottle#: 6 Worklist Smp#: 6  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 180-0006866-006  
 Operator ID: 402360 Instrument ID: CHGC8  
 Sublist: chrom-PCB\_CHGC8DUAL\*sub2  
 Method: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\PCB\_CHGC8DUAL.m  
 Limit Group: GCS 8082A ICAL  
 Last Update: 12-May-2015 16:52:47 Calib Date: 11-May-2015 18:31:22  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICal File: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\O0510020.D  
 Column 1 : Det: GC ECD1A  
 Column 2 : Det: GC ECD2B  
 Process Host: XAWRK022

First Level Reviewer: guptaa Date: 11-May-2015 14:36:17

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng | OnCol Amt ng | Flags |
|-----|-----------|---------------|---------------|----------|------------|--------------|-------|
|-----|-----------|---------------|---------------|----------|------------|--------------|-------|

2 PCB-1221 M

|                           |       |       |       |           |        |            |   |
|---------------------------|-------|-------|-------|-----------|--------|------------|---|
| 1                         | 3.242 | 3.242 | 0.000 | 10657601H | 0.5000 | 0.5131     |   |
| 1                         | 3.370 | 3.370 | 0.000 | 6626597H  | 0.5000 | 0.5175     |   |
| 1                         | 3.408 | 3.408 | 0.000 | 23470027H | 0.5000 | 0.5123     |   |
| Average of Peak Amounts = |       |       |       |           |        | 0.5143     |   |
| 2                         | 3.867 | 3.867 | 0.000 | 16394673H | 0.5000 | 0.4796     | M |
| 2                         | 4.024 | 4.024 | 0.000 | 9529851H  | 0.5000 | 0.4941     | M |
| 2                         | 4.096 | 4.096 | 0.000 | 31433617H | 0.5000 | 0.5092     |   |
| Average of Peak Amounts = |       |       |       |           |        | 0.4943     |   |
|                           |       |       |       |           |        | RPD = 3.97 |   |

7 PCB-1254

|                           |       |       |       |           |        |            |  |
|---------------------------|-------|-------|-------|-----------|--------|------------|--|
| 1                         | 5.361 | 5.361 | 0.000 | 25453986H | 0.5000 | 0.5175     |  |
| 1                         | 5.743 | 5.743 | 0.000 | 29785132H | 0.5000 | 0.5123     |  |
| 1                         | 6.171 | 6.171 | 0.000 | 21075758H | 0.5000 | 0.5336     |  |
| 1                         | 7.182 | 7.182 | 0.000 | 24282569H | 0.5000 | 0.5152     |  |
| 1                         | 7.718 | 7.718 | 0.000 | 25302035H | 0.5000 | 0.5208     |  |
| Average of Peak Amounts = |       |       |       |           |        | 0.5199     |  |
| 2                         | 6.886 | 6.886 | 0.000 | 40274056H | 0.5000 | 0.5364     |  |
| 2                         | 7.243 | 7.243 | 0.000 | 45340213H | 0.5000 | 0.5074     |  |
| 2                         | 7.952 | 7.952 | 0.000 | 32448165H | 0.5000 | 0.5186     |  |
| 2                         | 8.646 | 8.646 | 0.000 | 41893844H | 0.5000 | 0.5651     |  |
| 2                         | 9.280 | 9.280 | 0.000 | 30755855H | 0.5000 | 0.5314     |  |
| Average of Peak Amounts = |       |       |       |           |        | 0.5317     |  |
|                           |       |       |       |           |        | RPD = 2.26 |  |

**QC Flag Legend**

Review Flags

M - Manually Integrated

**Reagents:**

GCAR2154CALL4\_00008

Amount Added: 1.00

Units: mL

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\O0510005.D

Injection Date: 11-May-2015 13:33:22 Instrument ID: CHGC8

Lims ID: IC

Client ID:

Operator ID: 402360

ALS Bottle#: 6

Worklist Smp#: 6

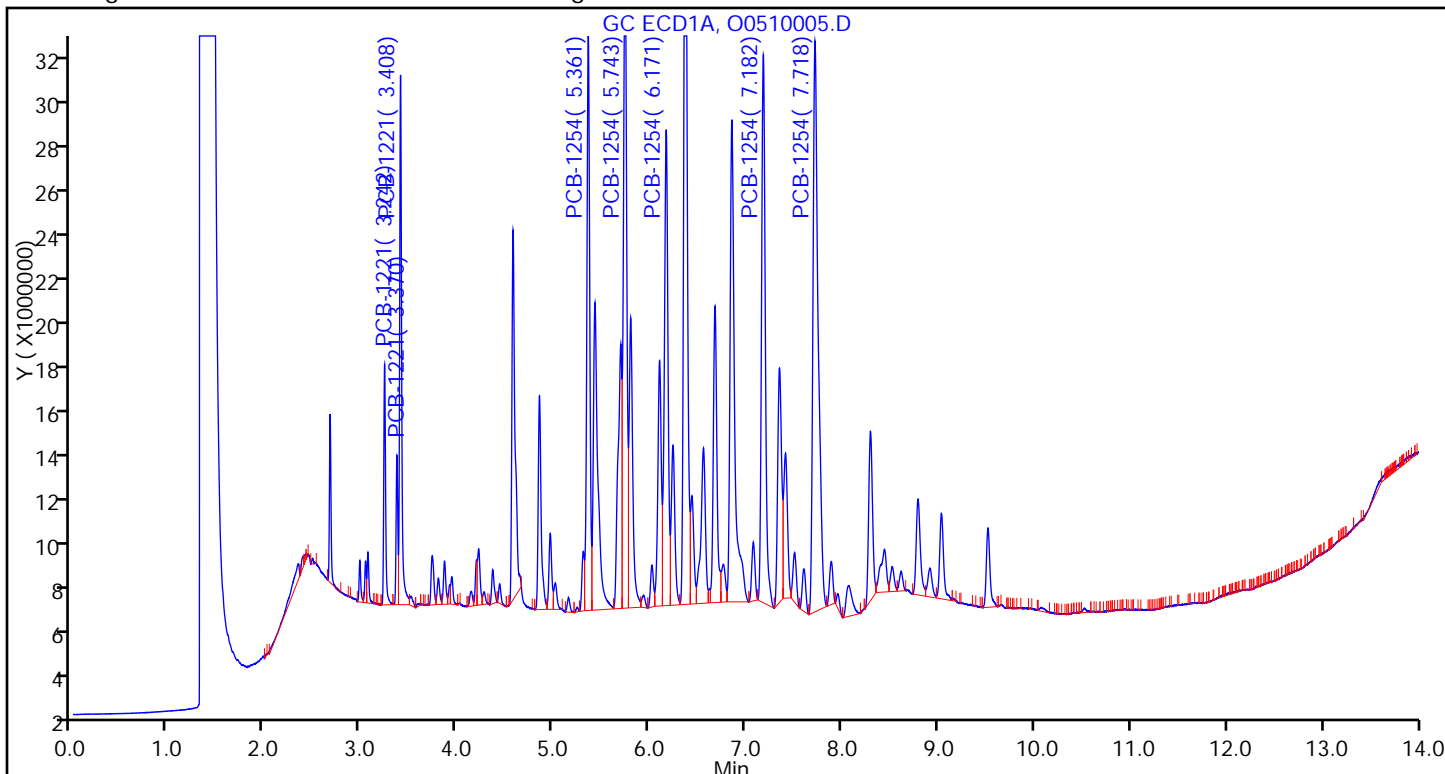
Injection Vol: 1.0 ul

Dil. Factor: 1.0000

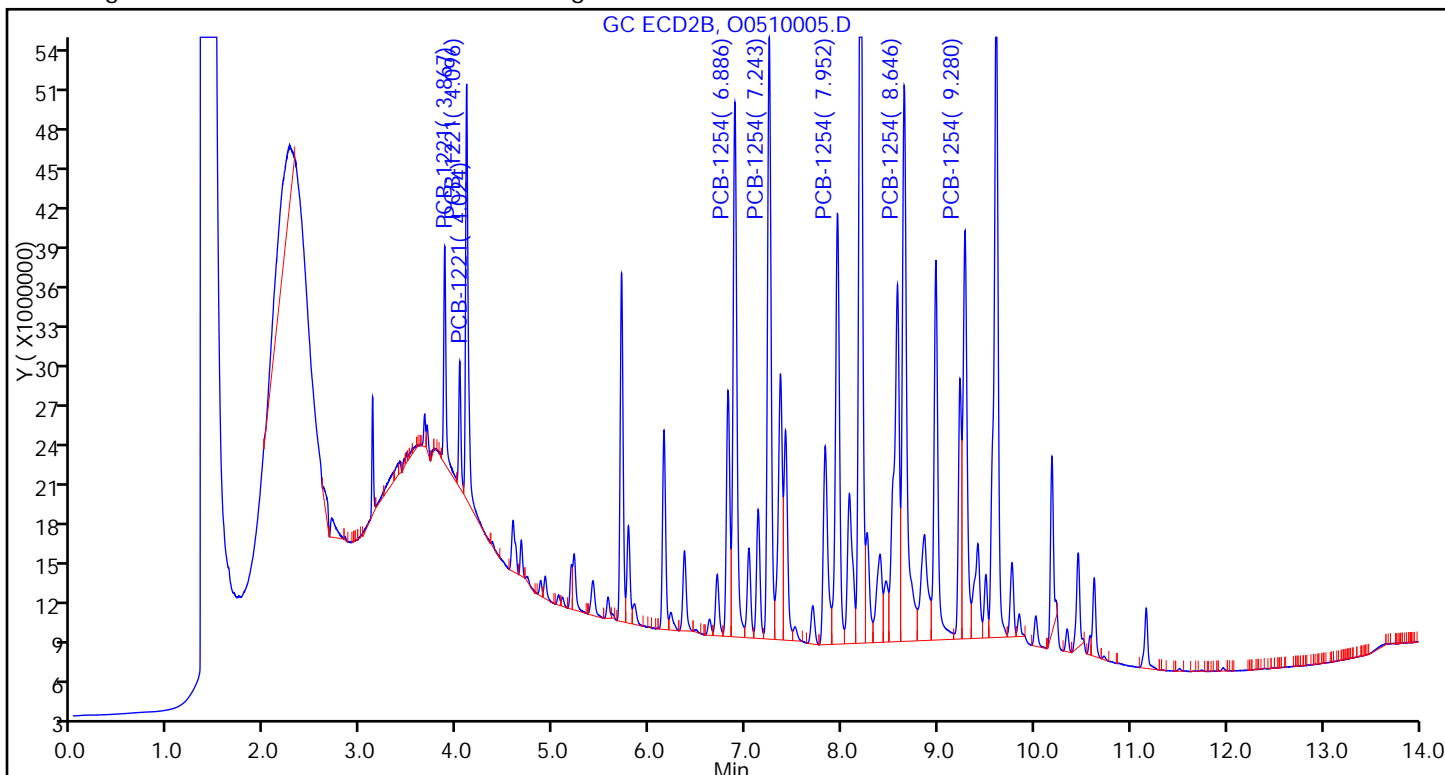
Method: PCB\_CHGC8DUAL

Limit Group: GCS 8082A ICAL

Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\O0510005.D

Injection Date: 11-May-2015 13:33:22

Instrument ID: CHGC8

Lims ID: IC

Client ID:

Operator ID: 402360

ALS Bottle#: 6

Worklist Smp#: 6

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

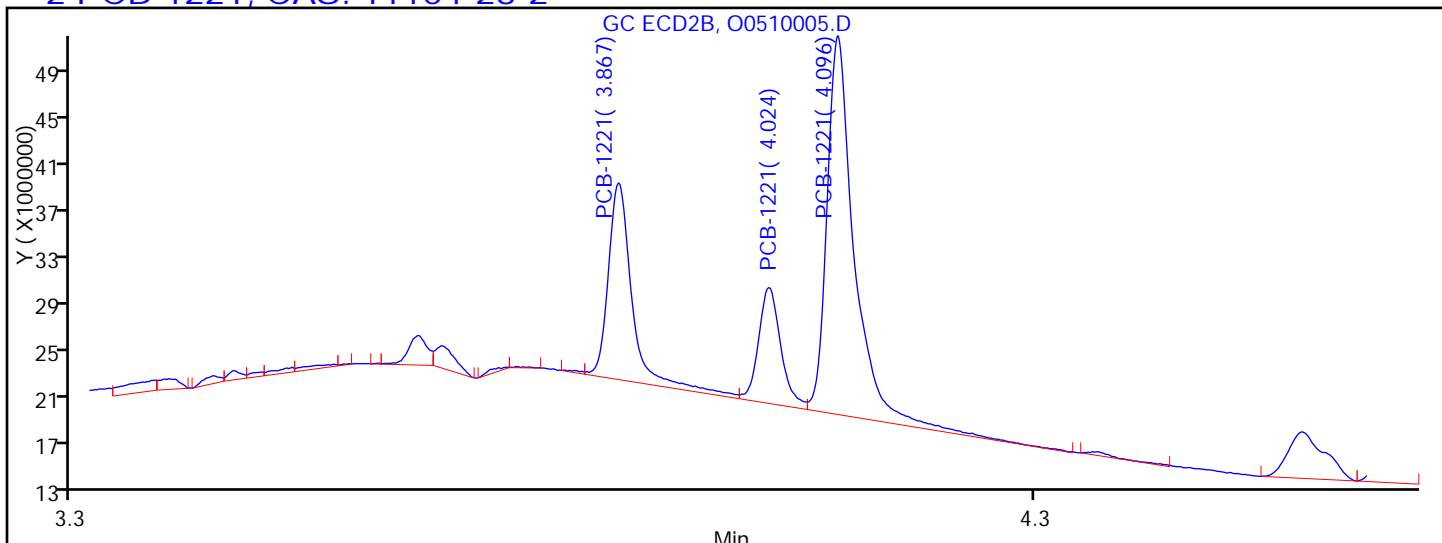
Method: PCB\_CHGC8DUAL

Limit Group: GCS 8082A ICAL

Column:

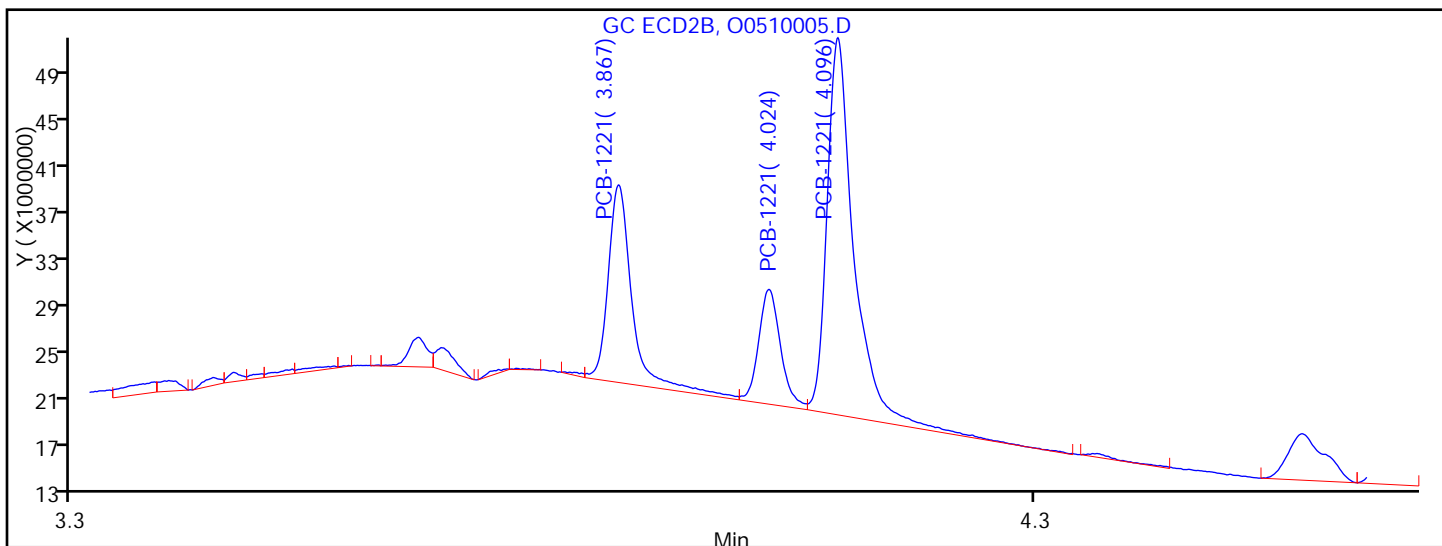
Detector GC ECD2B

2 PCB-1221, CAS: 11104-28-2



Processing Integration Results

|            |                     |   |
|------------|---------------------|---|
| RT = 3.867 | Response = 16304458 | M |
| RT = 4.024 | Response = 9619376  | M |
| RT = 4.096 | Response = 31433617 |   |



Manual Integration Results

|            |                     |   |
|------------|---------------------|---|
| RT = 3.867 | Response = 16394673 | M |
| RT = 4.024 | Response = 9529851  | M |
| RT = 4.096 | Response = 31433617 |   |

Reviewer: guptaa, 11-May-2015 15:47:27

Audit Action: Assigned New Baseline

Audit Reason: Instrument noise

TestAmerica Pittsburgh  
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\O0510006.D  
 Lims ID: IC  
 Client ID:  
 Sample Type: IC Calib Level: 5  
 Inject. Date: 11-May-2015 13:53:12 ALS Bottle#: 7 Worklist Smp#: 7  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 180-0006866-007  
 Operator ID: 402360 Instrument ID: CHGC8  
 Sublist: chrom-PCB\_CHGC8DUAL\*sub2  
 Method: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\PCB\_CHGC8DUAL.m  
 Limit Group: GCS 8082A ICAL  
 Last Update: 12-May-2015 16:52:50 Calib Date: 11-May-2015 18:31:22  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICal File: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\O0510020.D  
 Column 1 : Det: GC ECD1A  
 Column 2 : Det: GC ECD2B  
 Process Host: XAWRK022

First Level Reviewer: guptaa Date: 11-May-2015 14:38:20

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng | OnCol Amt ng | Flags |
|-----|-----------|---------------|---------------|----------|------------|--------------|-------|
|-----|-----------|---------------|---------------|----------|------------|--------------|-------|

2 PCB-1221 M

|                           |       |       |       |           |      |        |   |
|---------------------------|-------|-------|-------|-----------|------|--------|---|
| 1                         | 3.243 | 3.242 | 0.001 | 20574106H | 1.00 | 0.99   |   |
| 1                         | 3.372 | 3.370 | 0.002 | 12497762H | 1.00 | 0.9760 |   |
| 1                         | 3.409 | 3.408 | 0.001 | 44174270H | 1.00 | 0.9643 |   |
| Average of Peak Amounts = |       |       |       |           |      | 0.9769 |   |
| 2                         | 3.868 | 3.867 | 0.001 | 30264117H | 1.00 | 0.8853 | M |
| 2                         | 4.025 | 4.024 | 0.001 | 18502406H | 1.00 | 0.9592 | M |
| 2                         | 4.097 | 4.096 | 0.001 | 57264885H | 1.00 | 0.9277 | M |
| Average of Peak Amounts = |       |       |       |           |      | 0.9241 |   |

RPD = 5.56

7 PCB-1254

|                           |       |       |        |           |      |        |  |
|---------------------------|-------|-------|--------|-----------|------|--------|--|
| 1                         | 5.362 | 5.361 | 0.001  | 49196045H | 1.00 | 1.00   |  |
| 1                         | 5.743 | 5.743 | 0.000  | 58018232H | 1.00 | 1.00   |  |
| 1                         | 6.173 | 6.171 | 0.002  | 42083850H | 1.00 | 1.07   |  |
| 1                         | 7.181 | 7.182 | -0.001 | 48286026H | 1.00 | 1.02   |  |
| 1                         | 7.719 | 7.718 | 0.001  | 50031267H | 1.00 | 1.03   |  |
| Average of Peak Amounts = |       |       |        |           |      | 1.02   |  |
| 2                         | 6.888 | 6.886 | 0.002  | 76242997H | 1.00 | 1.02   |  |
| 2                         | 7.244 | 7.243 | 0.001  | 86269764H | 1.00 | 0.9654 |  |
| 2                         | 7.952 | 7.952 | 0.000  | 63989281H | 1.00 | 1.02   |  |
| 2                         | 8.643 | 8.646 | -0.003 | 75427570H | 1.00 | 1.02   |  |
| 2                         | 9.275 | 9.280 | -0.005 | 58347473H | 1.00 | 1.01   |  |
| Average of Peak Amounts = |       |       |        |           |      | 1.01   |  |

RPD = 1.76

### QC Flag Legend

Review Flags

M - Manually Integrated

### Reagents:

GCAR2154CALL5\_00008

Amount Added: 1.00

Units: mL

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\O0510006.D

Injection Date: 11-May-2015 13:53:12 Instrument ID: CHGC8

Lims ID: IC

Client ID:

Operator ID: 402360

ALS Bottle#: 7

Worklist Smp#: 7

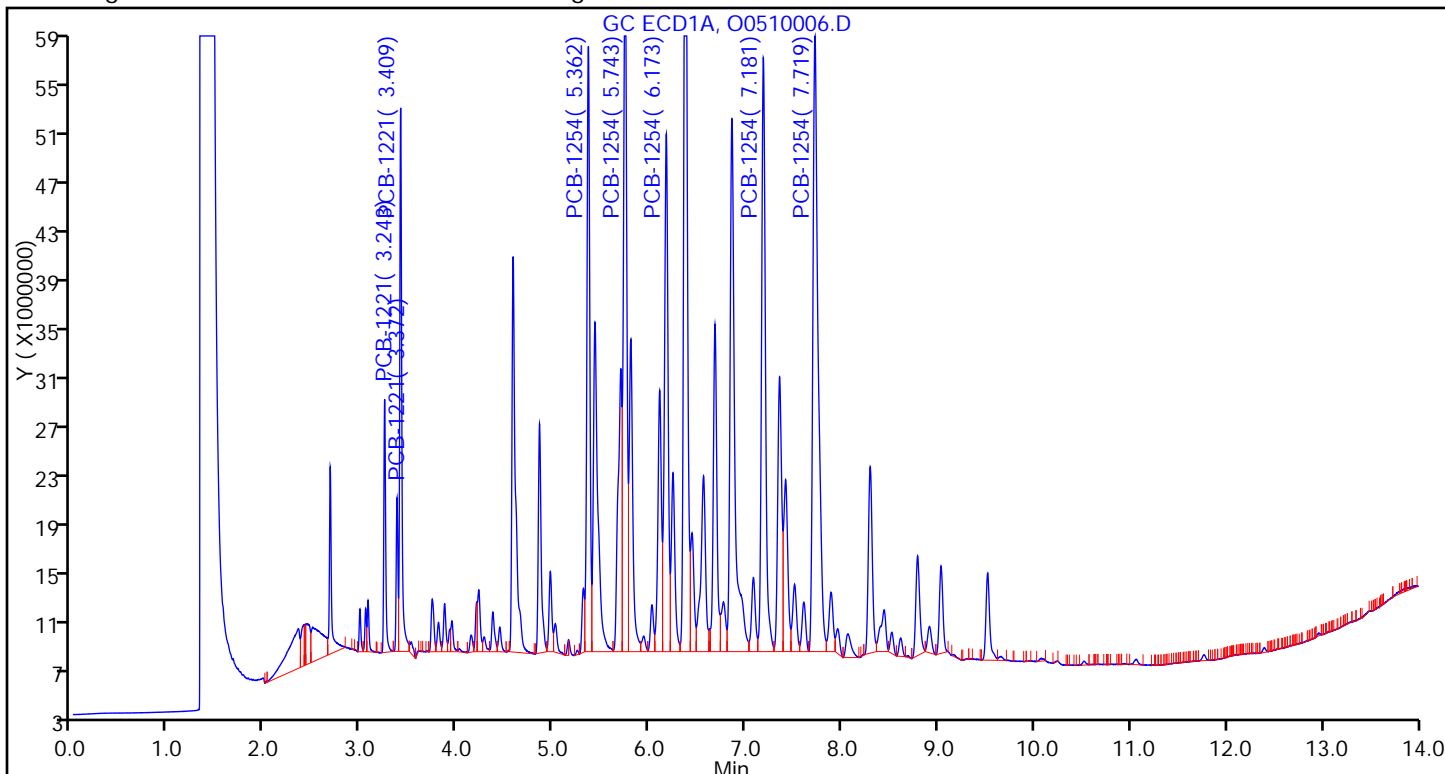
Injection Vol: 1.0 ul

Dil. Factor: 1.0000

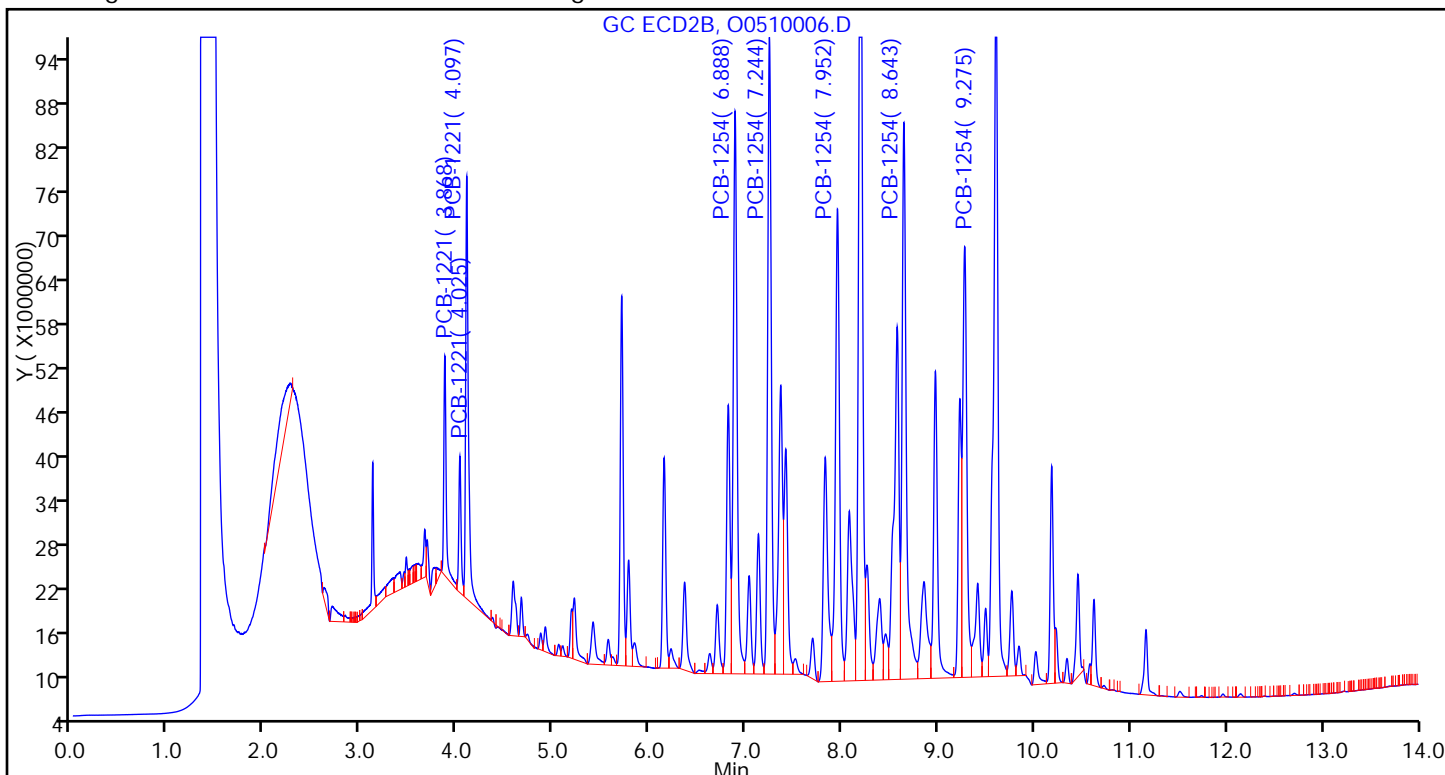
Method: PCB\_CHGC8DUAL

Limit Group: GCS 8082A ICAL

Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3





TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\O0510006.D

Injection Date: 11-May-2015 13:53:12

Instrument ID: CHGC8

Lims ID: IC

Client ID:

Operator ID: 402360

ALS Bottle#: 7

Worklist Smp#: 7

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

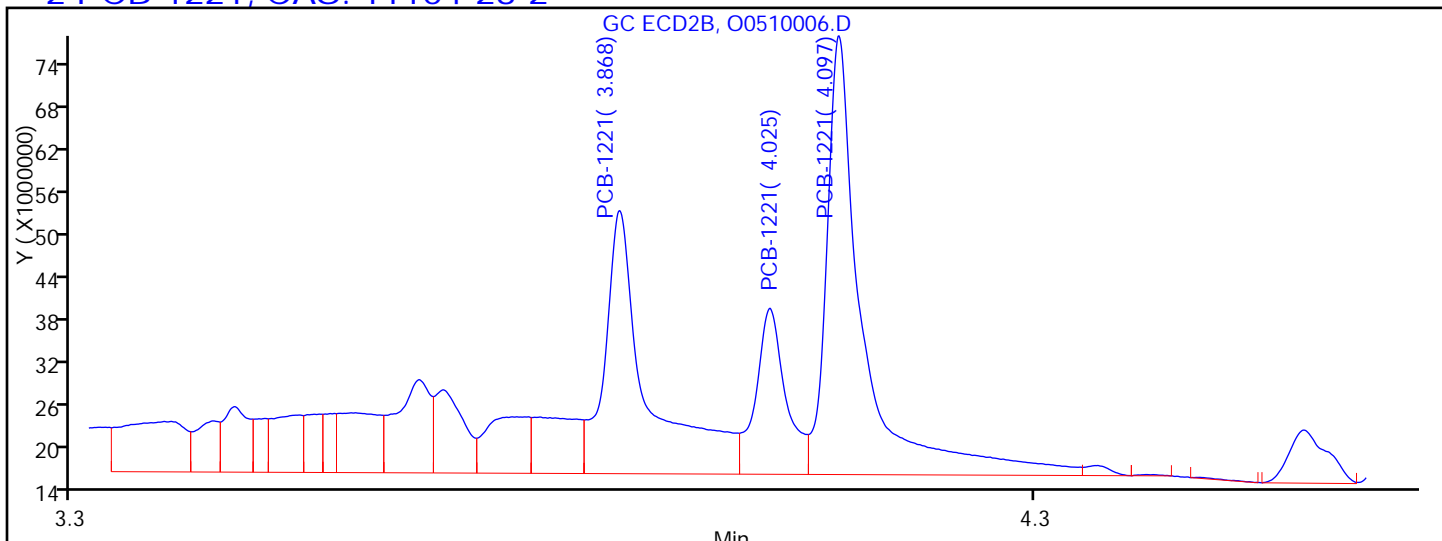
Method: PCB\_CHGC8DUAL

Limit Group: GCS 8082A ICAL

Column:

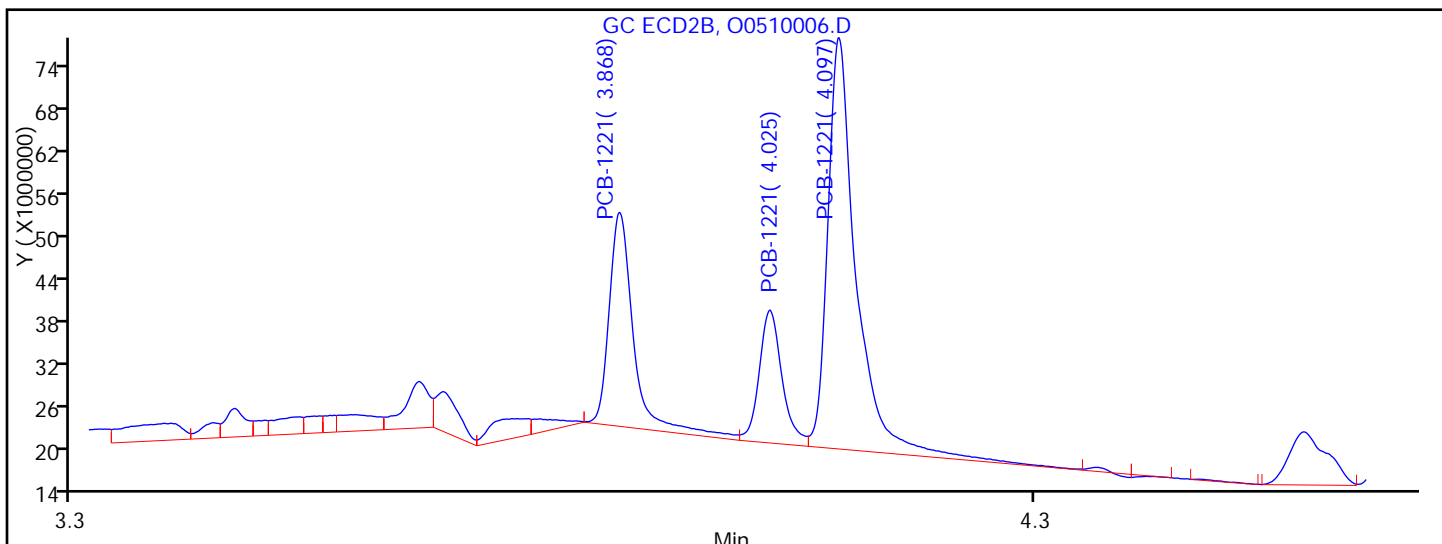
Detector: GC ECD2B

2 PCB-1221, CAS: 11104-28-2



Processing Integration Results

|            |                     |   |
|------------|---------------------|---|
| RT = 3.868 | Response = 36615645 | M |
| RT = 4.025 | Response = 23112284 | M |
| RT = 4.097 | Response = 61078050 | M |



Manual Integration Results

|            |                     |   |
|------------|---------------------|---|
| RT = 3.868 | Response = 30264117 | M |
| RT = 4.025 | Response = 18502406 | M |
| RT = 4.097 | Response = 57264885 | M |

Reviewer: guptaa, 11-May-2015 15:38:00

Audit Action: Assigned New Baseline

Audit Reason: Instrument noise

FORM VI  
GC SEMI VOA INITIAL CALIBRATION DATA  
EXTERNAL STANDARD RETENTION TIME SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-43791-1 Analy Batch No.: 141160

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

Instrument ID: CHGC8 GC Column: RTX-CLP1 ID: 0.53 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/11/2015 14:13 Calibration End Date: 05/11/2015 15:32 Calibration ID: 23834

Calibration Files:

| LEVEL:  | LAB SAMPLE ID:   | LAB FILE ID: |
|---------|------------------|--------------|
| Level 1 | IC 180-141160/8  | O0510007.D   |
| Level 2 | IC 180-141160/9  | O0510008.D   |
| Level 3 | IC 180-141160/10 | O0510009.D   |
| Level 4 | IC 180-141160/11 | O0510010.D   |
| Level 5 | IC 180-141160/12 | O0510011.D   |

| ANALYTE         | LVL 1  | LVL 2  | LVL 3  | LVL 4  | LVL 5  |  |  |  |  |  | RT WINDOW       | AVG RT |
|-----------------|--------|--------|--------|--------|--------|--|--|--|--|--|-----------------|--------|
| PCB-1242 Peak 1 | 4.372  | 4.370  | 4.371  | 4.371  | 4.372  |  |  |  |  |  | 4.321 - 4.421   | 4.371  |
| PCB-1242 Peak 2 | 4.439  | 4.442  | 4.443  | 4.443  | 4.444  |  |  |  |  |  | 4.393 - 4.493   | 4.442  |
| PCB-1242 Peak 3 | 4.854  | 4.857  | 4.858  | 4.858  | 4.859  |  |  |  |  |  | 4.808 - 4.908   | 4.857  |
| PCB-1242 Peak 4 | 4.964  | 4.968  | 4.969  | 4.970  | 4.969  |  |  |  |  |  | 4.920 - 5.020   | 4.968  |
| PCB-1242 Peak 5 | 5.425  | 5.432  | 5.433  | 5.431  | 5.433  |  |  |  |  |  | 5.381 - 5.481   | 5.431  |
| PCB-1268 Peak 1 | 9.577  | 9.579  | 9.578  | 9.579  | 9.579  |  |  |  |  |  | 9.529 - 9.629   | 9.578  |
| PCB-1268 Peak 2 | 9.642  | 9.646  | 9.644  | 9.647  | 9.646  |  |  |  |  |  | 9.597 - 9.697   | 9.645  |
| PCB-1268 Peak 3 | 9.952  | 9.954  | 9.954  | 9.955  | 9.956  |  |  |  |  |  | 9.905 - 10.005  | 9.954  |
| PCB-1268 Peak 4 | 10.938 | 10.940 | 10.939 | 10.939 | 10.939 |  |  |  |  |  | 10.889 - 10.989 | 10.939 |

FORM VI  
GC SEMI VOA INITIAL CALIBRATION DATA  
EXTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Pittsburgh Job No.: 180-43791-1 Analy Batch No.: 141160

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

Instrument ID: CHGC8 GC Column: RTX-CLP1 ID: 0.53 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/11/2015 14:13 Calibration End Date: 05/11/2015 15:32 Calibration ID: 23834

Calibration Files:

| LEVEL:  | LAB SAMPLE ID:   | LAB FILE ID: |
|---------|------------------|--------------|
| Level 1 | IC 180-141160/8  | O0510007.D   |
| Level 2 | IC 180-141160/9  | O0510008.D   |
| Level 3 | IC 180-141160/10 | O0510009.D   |
| Level 4 | IC 180-141160/11 | O0510010.D   |
| Level 5 | IC 180-141160/12 | O0510011.D   |

| ANALYTE         | CF                     |           |           |           | CURVE TYPE | COEFFICIENT |            |    | # | MIN CF | %RSD | #    | MAX %RSD | R^2 OR COD | # | MIN R^2 OR COD |
|-----------------|------------------------|-----------|-----------|-----------|------------|-------------|------------|----|---|--------|------|------|----------|------------|---|----------------|
|                 | LVL 1<br>LVL 5         | LVL 2     | LVL 3     | LVL 4     |            | B           | M1         | M2 |   |        |      |      |          |            |   |                |
| PCB-1242 Peak 1 | 27710000<br>29909535   | 32787060  | 32470984  | 31762930  | Ave        |             | 30928101.8 |    |   | 6.8    |      | 20.0 |          |            |   |                |
| PCB-1242 Peak 2 | 20592100<br>21629663   | 22464790  | 22563376  | 22994160  | Ave        |             | 22048817.8 |    |   | 4.3    |      | 20.0 |          |            |   |                |
| PCB-1242 Peak 3 | 25576900<br>29110431   | 28766060  | 28288700  | 31634440  | Ave        |             | 28675306.2 |    |   | 7.5    |      | 20.0 |          |            |   |                |
| PCB-1242 Peak 4 | 15482900<br>18414431   | 18114530  | 17868620  | 19662786  | Ave        |             | 17908653.4 |    |   | 8.5    |      | 20.0 |          |            |   |                |
| PCB-1242 Peak 5 | 15558700<br>22620319   | 21995480  | 21974136  | 23739298  | Ave        |             | 21177586.6 |    |   | 15.2   |      | 20.0 |          |            |   |                |
| PCB-1268 Peak 1 | 156088400<br>150901581 | 170181340 | 165749152 | 161194232 | Ave        |             | 160822941  |    |   | 4.7    |      | 20.0 |          |            |   |                |
| PCB-1268 Peak 2 | 128234700<br>131093529 | 143382740 | 141055520 | 135761874 | Ave        |             | 135905673  |    |   | 4.7    |      | 20.0 |          |            |   |                |
| PCB-1268 Peak 3 | 125827400<br>120955247 | 133720260 | 131315236 | 125319838 | Ave        |             | 127427596  |    |   | 4.0    |      | 20.0 |          |            |   |                |
| PCB-1268 Peak 4 | 358148500<br>347497363 | 386616570 | 385939656 | 368293366 | Ave        |             | 369299091  |    |   | 4.6    |      | 20.0 |          |            |   |                |

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

FORM VI  
GC SEMI VOA INITIAL CALIBRATION DATA  
EXTERNAL STANDARD RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Pittsburgh Job No.: 180-43791-1 Analy Batch No.: 141160

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

Instrument ID: CHGC8 GC Column: RTX-CLP1 ID: 0.53 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/11/2015 14:13 Calibration End Date: 05/11/2015 15:32 Calibration ID: 23834

Calibration Files:

| LEVEL:  | LAB SAMPLE ID:   | LAB FILE ID: |
|---------|------------------|--------------|
| Level 1 | IC 180-141160/8  | O0510007.D   |
| Level 2 | IC 180-141160/9  | O0510008.D   |
| Level 3 | IC 180-141160/10 | O0510009.D   |
| Level 4 | IC 180-141160/11 | O0510010.D   |
| Level 5 | IC 180-141160/12 | O0510011.D   |

| ANALYTE         | CURVE TYPE | RESPONSE |          |          |           |           | CONCENTRATION (NG) |       |       |       |       |
|-----------------|------------|----------|----------|----------|-----------|-----------|--------------------|-------|-------|-------|-------|
|                 |            | LVL 1    | LVL 2    | LVL 3    | LVL 4     | LVL 5     | LVL 1              | LVL 2 | LVL 3 | LVL 4 | LVL 5 |
| PCB-1242 Peak 1 | Ave        | 277100   | 3278706  | 8117746  | 15881465  | 29909535  | 0.0100             | 0.100 | 0.250 | 0.500 | 1.00  |
| PCB-1242 Peak 2 | Ave        | 205921   | 2246479  | 5640844  | 11497080  | 21629663  | 0.0100             | 0.100 | 0.250 | 0.500 | 1.00  |
| PCB-1242 Peak 3 | Ave        | 255769   | 2876606  | 7072175  | 15817220  | 29110431  | 0.0100             | 0.100 | 0.250 | 0.500 | 1.00  |
| PCB-1242 Peak 4 | Ave        | 154829   | 1811453  | 4467155  | 9831393   | 18414431  | 0.0100             | 0.100 | 0.250 | 0.500 | 1.00  |
| PCB-1242 Peak 5 | Ave        | 155587   | 2199548  | 5493534  | 11869649  | 22620319  | 0.0100             | 0.100 | 0.250 | 0.500 | 1.00  |
| PCB-1268 Peak 1 | Ave        | 1560884  | 17018134 | 41437288 | 80597116  | 150901581 | 0.0100             | 0.100 | 0.250 | 0.500 | 1.00  |
| PCB-1268 Peak 2 | Ave        | 1282347  | 14338274 | 35263880 | 67880937  | 131093529 | 0.0100             | 0.100 | 0.250 | 0.500 | 1.00  |
| PCB-1268 Peak 3 | Ave        | 1258274  | 13372026 | 32828809 | 62659919  | 120955247 | 0.0100             | 0.100 | 0.250 | 0.500 | 1.00  |
| PCB-1268 Peak 4 | Ave        | 3581485  | 38661657 | 96484914 | 184146683 | 347497363 | 0.0100             | 0.100 | 0.250 | 0.500 | 1.00  |

Curve Type Legend:

Ave = Average by Height

TestAmerica Pittsburgh  
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\O0510007.D  
 Lims ID: IC  
 Client ID:  
 Sample Type: IC Calib Level: 1  
 Inject. Date: 11-May-2015 14:13:02 ALS Bottle#: 8 Worklist Smp#: 8  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 180-0006866-008  
 Operator ID: 402360 Instrument ID: CHGC8  
 Sublist: chrom-PCB\_CHGC8DUAL\*sub9  
 Method: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\PCB\_CHGC8DUAL.m  
 Limit Group: GCS 8082A ICAL  
 Last Update: 12-May-2015 16:52:54 Calib Date: 11-May-2015 18:31:22  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICal File: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\O0510020.D

Column 1 : Det: GC ECD1A  
 Column 2 : Det: GC ECD2B

Process Host: XAWRK022

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng | OnCol Amt ng | Flags |
|-----|-----------|---------------|---------------|----------|------------|--------------|-------|
|-----|-----------|---------------|---------------|----------|------------|--------------|-------|

3 PCB-1242

|   |       |       |        |         |        |          |  |
|---|-------|-------|--------|---------|--------|----------|--|
| 1 | 4.372 | 4.371 | 0.001  | 277100H | 0.0100 | 0.008959 |  |
| 1 | 4.439 | 4.443 | -0.004 | 205921H | 0.0100 | 0.009339 |  |
| 1 | 4.854 | 4.858 | -0.004 | 255769H | 0.0100 | 0.008919 |  |
| 1 | 4.964 | 4.970 | -0.006 | 154829H | 0.0100 | 0.008645 |  |
| 1 | 5.425 | 5.431 | -0.006 | 155587H | 0.0100 | 0.007347 |  |

Average of Peak Amounts = 0.008642

|   |       |       |        |         |        |          |  |
|---|-------|-------|--------|---------|--------|----------|--|
| 2 | 5.413 | 5.414 | -0.001 | 448871H | 0.0100 | 0.009683 |  |
| 2 | 5.709 | 5.712 | -0.003 | 339498H | 0.0100 | 0.009807 |  |
| 2 | 6.151 | 6.153 | -0.002 | 446965H | 0.0100 | 0.009299 |  |
| 2 | 6.363 | 6.365 | -0.002 | 352256H | 0.0100 | 0.009000 |  |
| 2 | 6.905 | 6.906 | -0.001 | 336137H | 0.0100 | 0.008864 |  |

Average of Peak Amounts = 0.009330

RPD = 7.66

10 PCB-1268

|   |        |        |        |          |        |          |  |
|---|--------|--------|--------|----------|--------|----------|--|
| 1 | 9.577  | 9.579  | -0.002 | 1560884H | 0.0100 | 0.009706 |  |
| 1 | 9.642  | 9.647  | -0.005 | 1282347H | 0.0100 | 0.009436 |  |
| 1 | 9.952  | 9.955  | -0.003 | 1258274H | 0.0100 | 0.009874 |  |
| 1 | 10.938 | 10.939 | -0.001 | 3581485H | 0.0100 | 0.009698 |  |

Average of Peak Amounts = 0.009678

|   |        |        |        |          |        |          |  |
|---|--------|--------|--------|----------|--------|----------|--|
| 2 | 11.147 | 11.149 | -0.002 | 2034027H | 0.0100 | 0.009338 |  |
| 2 | 11.214 | 11.216 | -0.002 | 1555354H | 0.0100 | 0.009009 |  |
| 2 | 11.569 | 11.571 | -0.002 | 1564160H | 0.0100 | 0.009722 |  |
| 2 | 12.393 | 12.395 | -0.002 | 4420935H | 0.0100 | 0.009215 |  |

Average of Peak Amounts = 0.009321

RPD = 3.76

**Reagents:**

GCAR4268CALL1\_00001

Amount Added: 1.00

Units: mL

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\O0510007.D

Injection Date: 11-May-2015 14:13:02 Instrument ID: CHGC8

Lims ID: IC

Client ID:

Operator ID: 402360

ALS Bottle#: 8

Worklist Smp#: 8

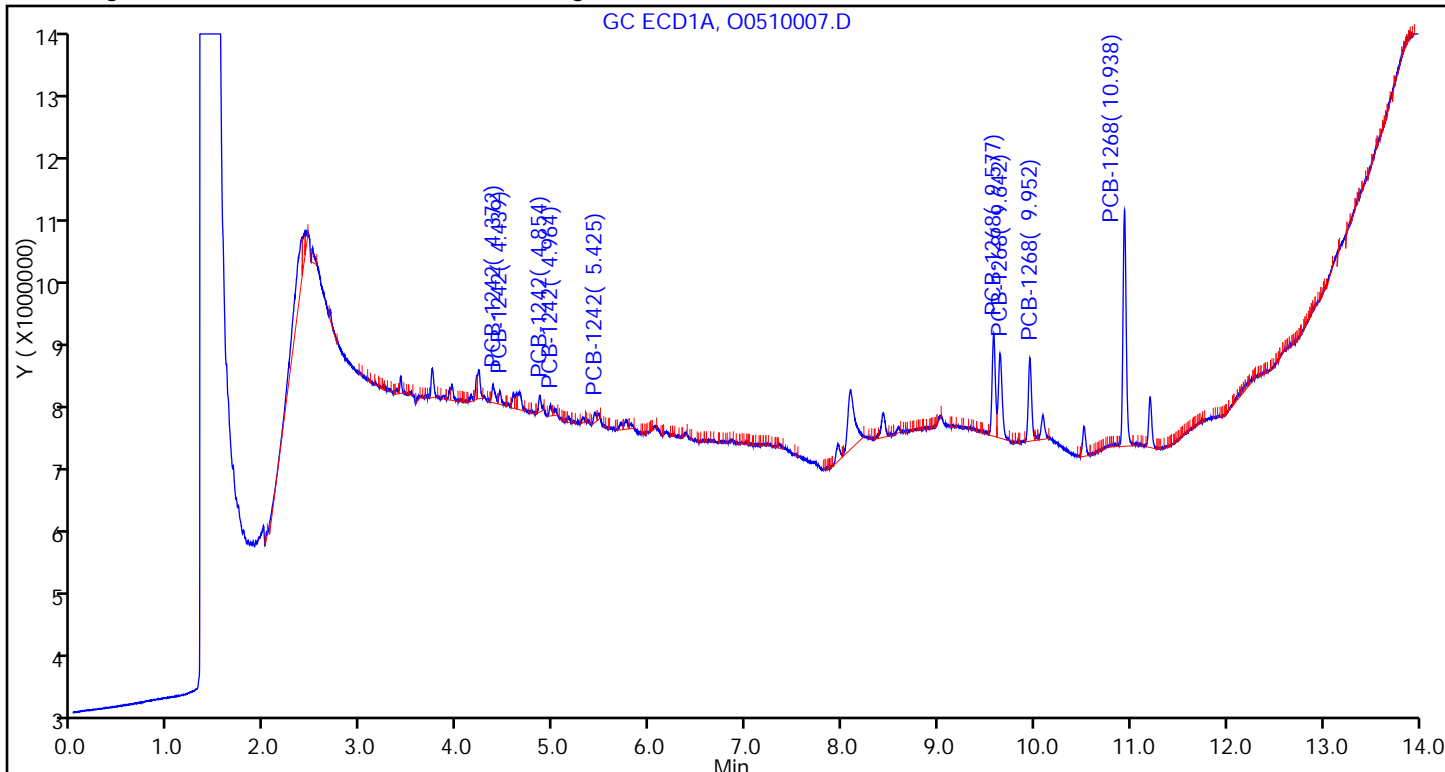
Injection Vol: 1.0 ul

Dil. Factor: 1.0000

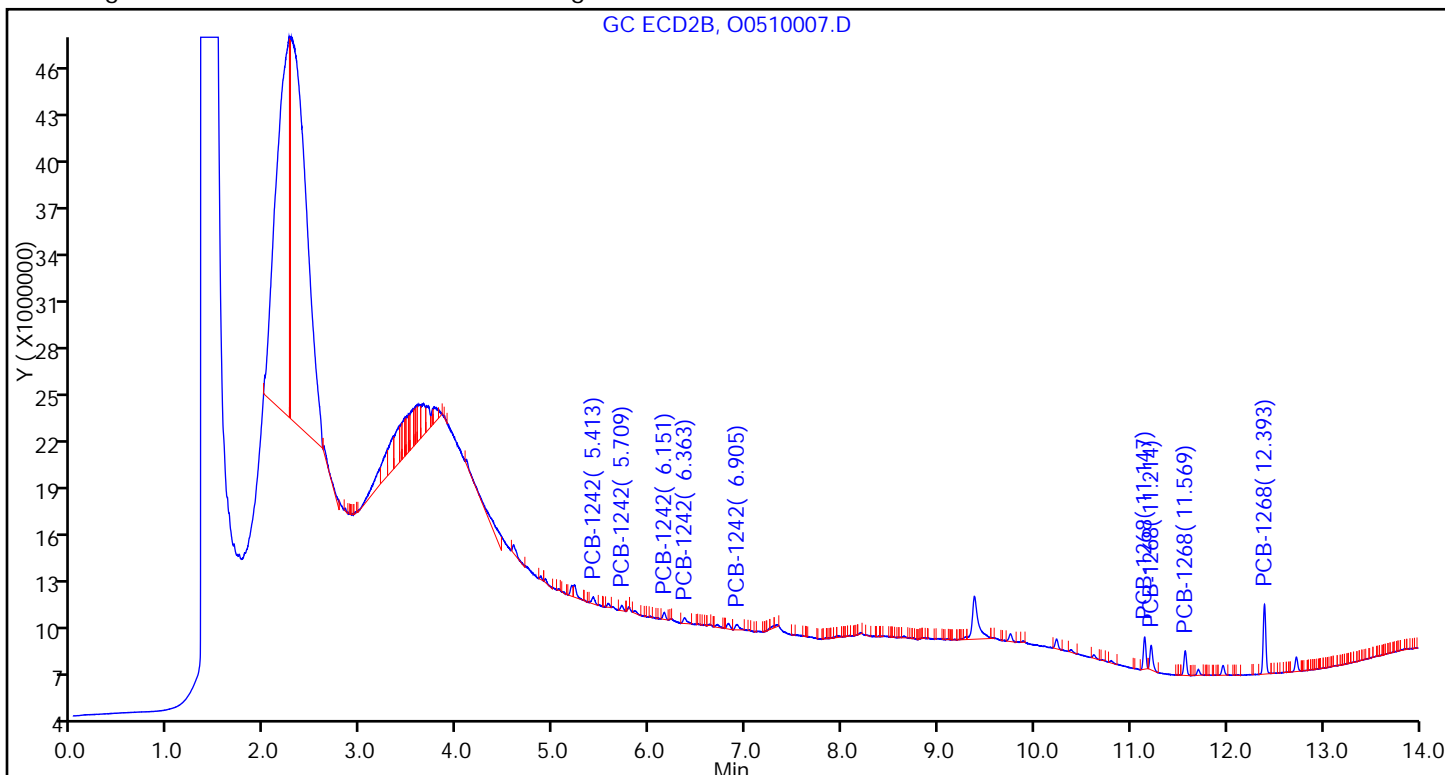
Method: PCB\_CHGC8DUAL

Limit Group: GCS 8082A ICAL

Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



TestAmerica Pittsburgh  
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\O0510008.D  
 Lims ID: IC  
 Client ID:  
 Sample Type: IC Calib Level: 2  
 Inject. Date: 11-May-2015 14:32:59 ALS Bottle#: 9 Worklist Smp#: 9  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 180-0006866-009  
 Operator ID: 402360 Instrument ID: CHGC8  
 Sublist: chrom-PCB\_CHGC8DUAL\*sub9  
 Method: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\PCB\_CHGC8DUAL.m  
 Limit Group: GCS 8082A ICAL  
 Last Update: 12-May-2015 16:52:57 Calib Date: 11-May-2015 18:31:22  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICal File: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\O0510020.D  
 Column 1 : Det: GC ECD1A  
 Column 2 : Det: GC ECD2B  
 Process Host: XAWRK022

First Level Reviewer: guptaa Date: 11-May-2015 16:07:06

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng | OnCol Amt ng | Flags |
|-----|-----------|---------------|---------------|----------|------------|--------------|-------|
|-----|-----------|---------------|---------------|----------|------------|--------------|-------|

3 PCB-1242

|   |       |       |        |          |        |        |  |
|---|-------|-------|--------|----------|--------|--------|--|
| 1 | 4.370 | 4.371 | -0.001 | 3278706H | 0.1000 | 0.1060 |  |
| 1 | 4.442 | 4.443 | -0.001 | 2246479H | 0.1000 | 0.1019 |  |
| 1 | 4.857 | 4.858 | -0.001 | 2876606H | 0.1000 | 0.1003 |  |
| 1 | 4.968 | 4.970 | -0.002 | 1811453H | 0.1000 | 0.1011 |  |
| 1 | 5.432 | 5.431 | 0.001  | 2199548H | 0.1000 | 0.1039 |  |

Average of Peak Amounts = 0.1026

|   |       |       |        |          |        |        |  |
|---|-------|-------|--------|----------|--------|--------|--|
| 2 | 5.413 | 5.414 | -0.001 | 4807244H | 0.1000 | 0.1037 |  |
| 2 | 5.712 | 5.712 | 0.000  | 3639430H | 0.1000 | 0.1051 |  |
| 2 | 6.152 | 6.153 | -0.001 | 5149523H | 0.1000 | 0.1071 |  |
| 2 | 6.365 | 6.365 | 0.000  | 4092888H | 0.1000 | 0.1046 |  |
| 2 | 6.904 | 6.906 | -0.002 | 3745564H | 0.1000 | 0.0988 |  |

Average of Peak Amounts = 0.1039

RPD = 1.18

10 PCB-1268

|   |        |        |        |           |        |        |  |
|---|--------|--------|--------|-----------|--------|--------|--|
| 1 | 9.579  | 9.579  | 0.000  | 17018134H | 0.1000 | 0.1058 |  |
| 1 | 9.646  | 9.647  | -0.001 | 14338274H | 0.1000 | 0.1055 |  |
| 1 | 9.954  | 9.955  | -0.001 | 13372026H | 0.1000 | 0.1049 |  |
| 1 | 10.940 | 10.939 | 0.001  | 38661657H | 0.1000 | 0.1047 |  |

Average of Peak Amounts = 0.1052

|   |        |        |        |           |        |        |  |
|---|--------|--------|--------|-----------|--------|--------|--|
| 2 | 11.148 | 11.149 | -0.001 | 22568157H | 0.1000 | 0.1036 |  |
| 2 | 11.216 | 11.216 | 0.000  | 18090966H | 0.1000 | 0.1048 |  |
| 2 | 11.571 | 11.571 | 0.000  | 16500830H | 0.1000 | 0.1026 |  |
| 2 | 12.393 | 12.395 | -0.002 | 48810324H | 0.1000 | 0.1017 |  |

Average of Peak Amounts = 0.1032

RPD = 1.98



Reagents:

GCAR4268CALL2\_00001

Amount Added: 1.00

Units: mL

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\O0510008.D

Injection Date: 11-May-2015 14:32:59

Instrument ID: CHGC8

Lims ID: IC

Client ID:

Operator ID: 402360

ALS Bottle#: 9

Worklist Smp#: 9

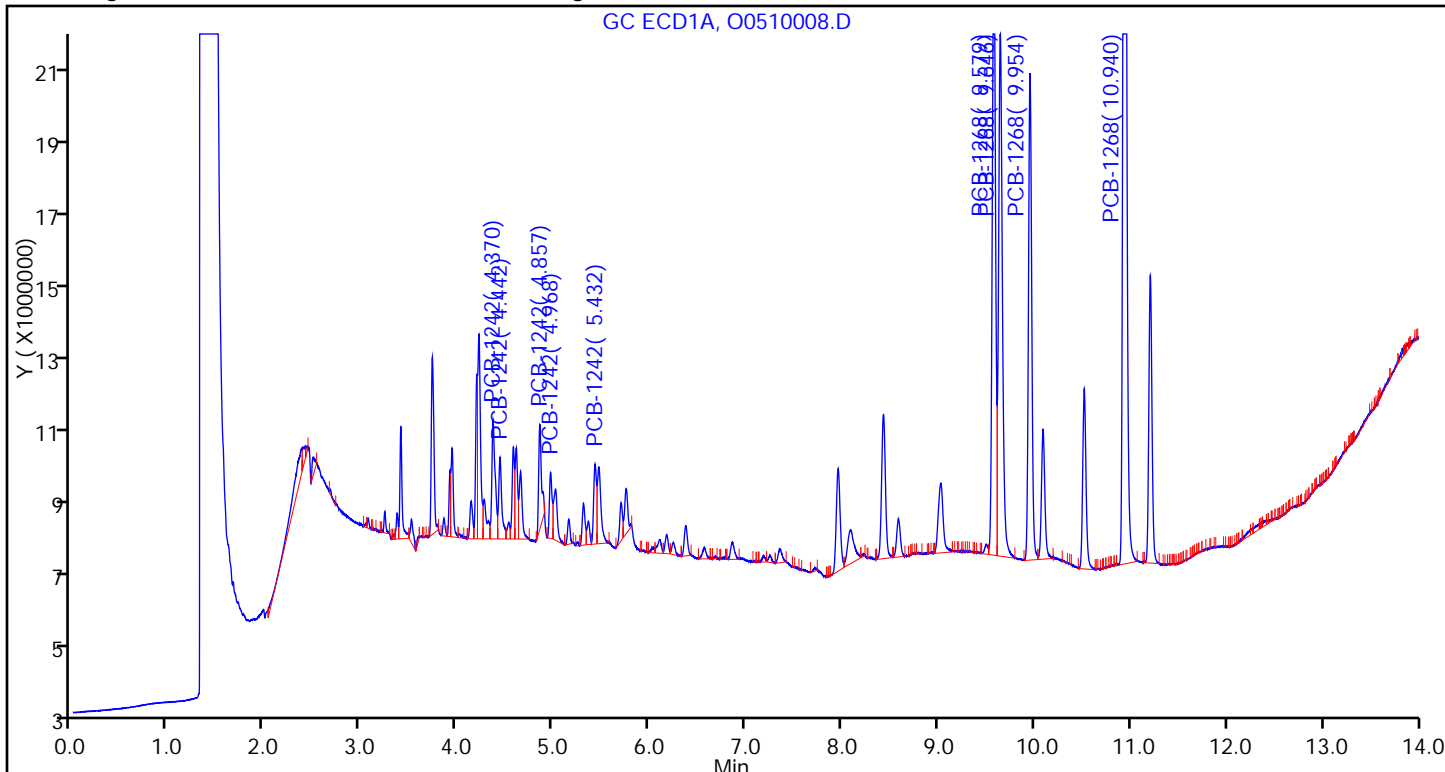
Injection Vol: 1.0 ul

Dil. Factor: 1.0000

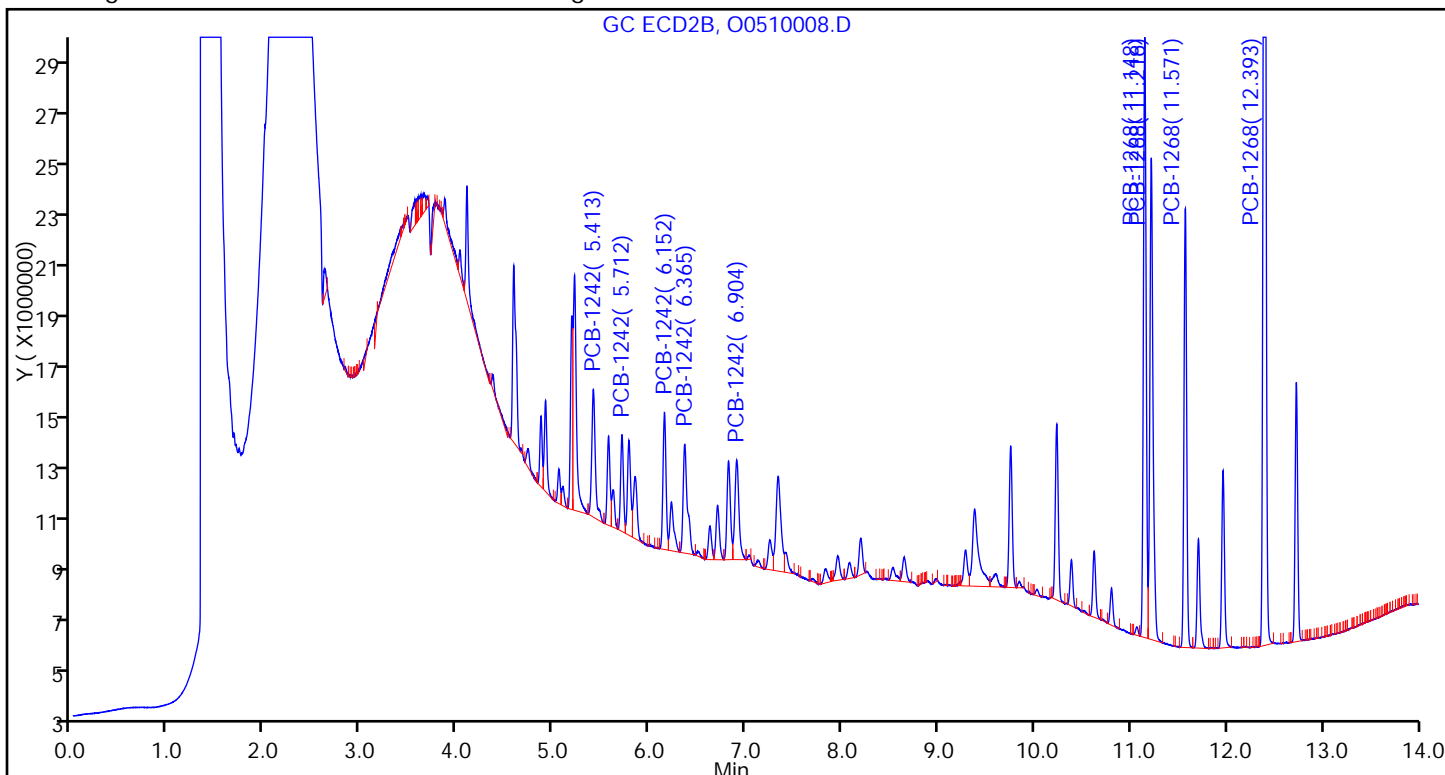
Method: PCB\_CHGC8DUAL

Limit Group: GCS 8082A ICAL

Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



TestAmerica Pittsburgh  
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\O0510009.D  
 Lims ID: IC  
 Client ID:  
 Sample Type: IC Calib Level: 3  
 Inject. Date: 11-May-2015 14:52:50 ALS Bottle#: 10 Worklist Smp#: 10  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 180-0006866-010  
 Operator ID: 402360 Instrument ID: CHGC8  
 Sublist: chrom-PCB\_CHGC8DUAL\*sub9  
 Method: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\PCB\_CHGC8DUAL.m  
 Limit Group: GCS 8082A ICAL  
 Last Update: 12-May-2015 16:53:00 Calib Date: 11-May-2015 18:31:22  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICal File: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\O0510020.D

Column 1 : Det: GC ECD1A  
 Column 2 : Det: GC ECD2B  
 Process Host: XAWRK022

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng | OnCol Amt ng | Flags |
|-----|-----------|---------------|---------------|----------|------------|--------------|-------|
|-----|-----------|---------------|---------------|----------|------------|--------------|-------|

3 PCB-1242

|   |       |       |        |          |        |        |  |
|---|-------|-------|--------|----------|--------|--------|--|
| 1 | 4.371 | 4.371 | 0.000  | 8117746H | 0.2500 | 0.2625 |  |
| 1 | 4.443 | 4.443 | 0.000  | 5640844H | 0.2500 | 0.2558 |  |
| 1 | 4.858 | 4.858 | 0.000  | 7072175H | 0.2500 | 0.2466 |  |
| 1 | 4.969 | 4.970 | -0.001 | 4467155H | 0.2500 | 0.2494 |  |
| 1 | 5.433 | 5.431 | 0.002  | 5493534H | 0.2500 | 0.2594 |  |

Average of Peak Amounts = 0.2548

|   |       |       |        |           |        |        |  |
|---|-------|-------|--------|-----------|--------|--------|--|
| 2 | 5.414 | 5.414 | 0.000  | 11720871H | 0.2500 | 0.2528 |  |
| 2 | 5.711 | 5.712 | -0.001 | 8993193H  | 0.2500 | 0.2598 |  |
| 2 | 6.153 | 6.153 | 0.000  | 12655360H | 0.2500 | 0.2633 |  |
| 2 | 6.366 | 6.365 | 0.001  | 10293364H | 0.2500 | 0.2630 |  |
| 2 | 6.905 | 6.906 | -0.001 | 10115654H | 0.2500 | 0.2667 |  |

Average of Peak Amounts = 0.2611

RPD = 2.47

10 PCB-1268

|   |        |        |        |           |        |        |  |
|---|--------|--------|--------|-----------|--------|--------|--|
| 1 | 9.578  | 9.579  | -0.001 | 41437288H | 0.2500 | 0.2577 |  |
| 1 | 9.644  | 9.647  | -0.003 | 35263880H | 0.2500 | 0.2595 |  |
| 1 | 9.954  | 9.955  | -0.001 | 32828809H | 0.2500 | 0.2576 |  |
| 1 | 10.939 | 10.939 | 0.000  | 96484914H | 0.2500 | 0.2613 |  |

Average of Peak Amounts = 0.2590

|   |        |        |        |            |        |        |  |
|---|--------|--------|--------|------------|--------|--------|--|
| 2 | 11.148 | 11.149 | -0.001 | 57154599H  | 0.2500 | 0.2624 |  |
| 2 | 11.215 | 11.216 | -0.001 | 45446879H  | 0.2500 | 0.2632 |  |
| 2 | 11.569 | 11.571 | -0.002 | 41396694H  | 0.2500 | 0.2573 |  |
| 2 | 12.393 | 12.395 | -0.002 | 124390878H | 0.2500 | 0.2593 |  |

Average of Peak Amounts = 0.2606

RPD = 0.60

**Reagents:**

GCAR4268CALL3\_00001

Amount Added: 1.00

Units: mL

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\O0510009.D

Injection Date: 11-May-2015 14:52:50

Instrument ID: CHGC8

Lims ID: IC

Client ID:

Operator ID: 402360

ALS Bottle#: 10

Worklist Smp#: 10

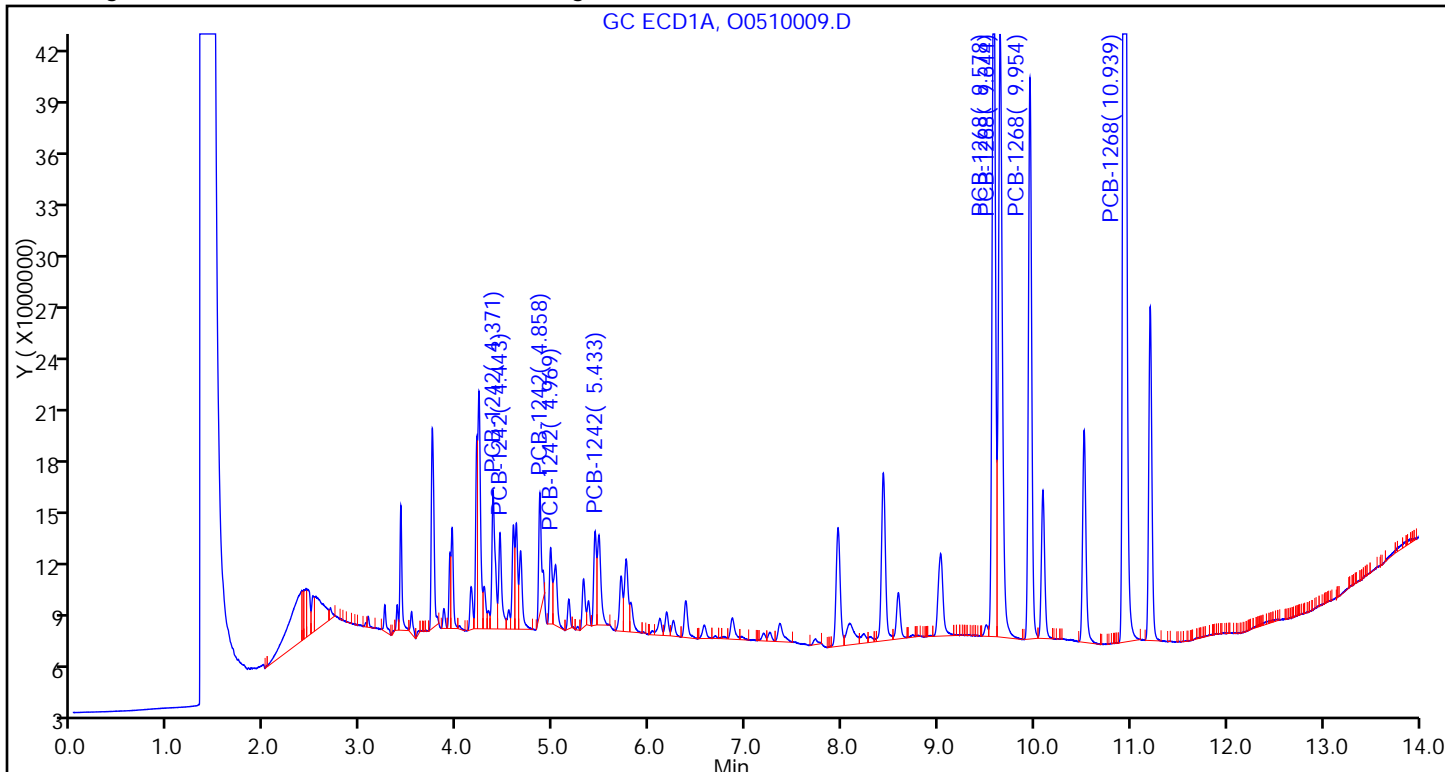
Injection Vol: 1.0 ul

Dil. Factor: 1.0000

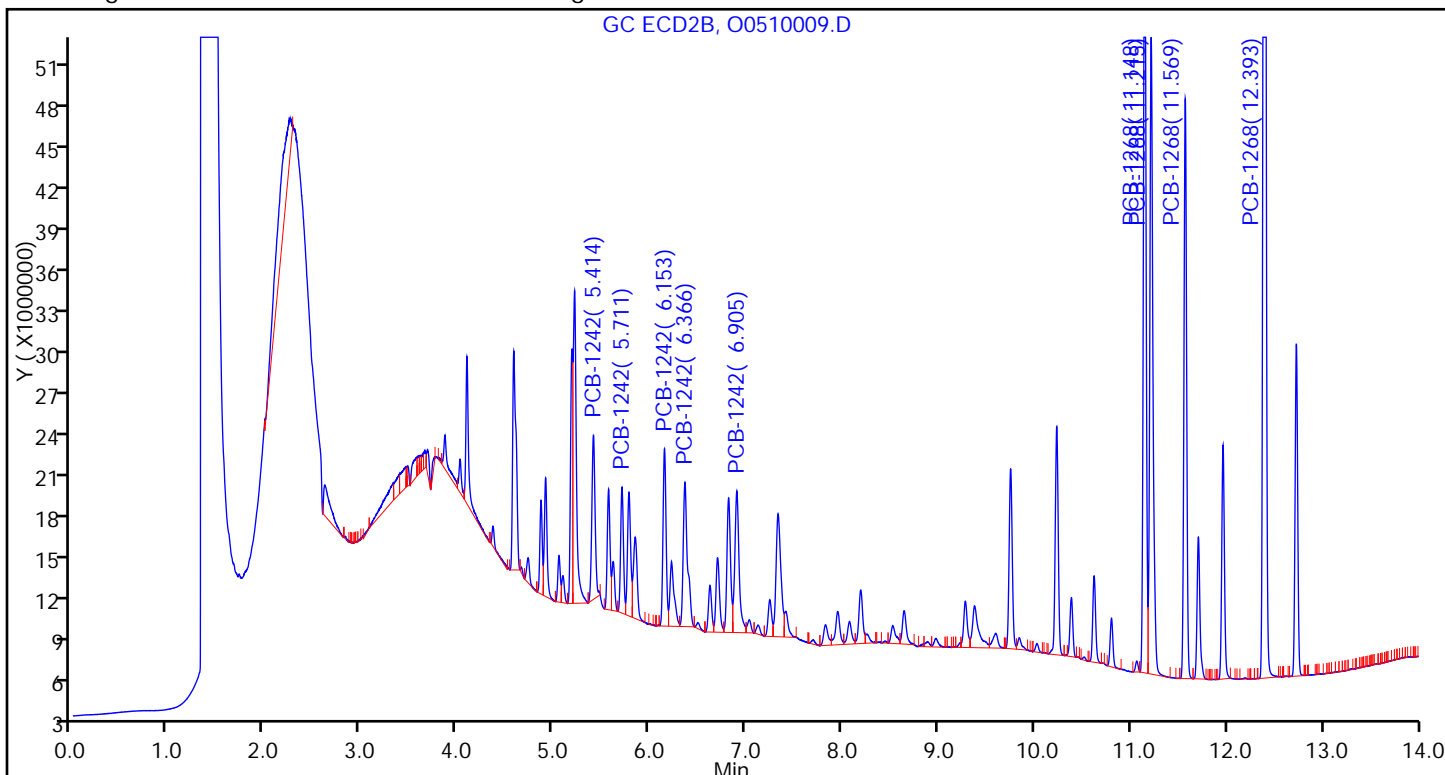
Method: PCB\_CHGC8DUAL

Limit Group: GCS 8082A ICAL

Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



TestAmerica Pittsburgh  
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\O0510010.D  
 Lims ID: IC  
 Client ID:  
 Sample Type: IC Calib Level: 4  
 Inject. Date: 11-May-2015 15:12:42 ALS Bottle#: 11 Worklist Smp#: 11  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 180-0006866-011  
 Operator ID: 402360 Instrument ID: CHGC8  
 Sublist: chrom-PCB\_CHGC8DUAL\*sub9  
 Method: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\PCB\_CHGC8DUAL.m  
 Limit Group: GCS 8082A ICAL  
 Last Update: 12-May-2015 16:53:04 Calib Date: 11-May-2015 18:31:22  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICal File: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\O0510020.D  
 Column 1 : Det: GC ECD1A  
 Column 2 : Det: GC ECD2B  
 Process Host: XAWRK022

First Level Reviewer: guptaa Date: 11-May-2015 15:49:29

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng | OnCol Amt ng | Flags |
|-----|-----------|---------------|---------------|----------|------------|--------------|-------|
|-----|-----------|---------------|---------------|----------|------------|--------------|-------|

3 PCB-1242

|   |       |       |       |           |        |        |   |
|---|-------|-------|-------|-----------|--------|--------|---|
| 1 | 4.371 | 4.371 | 0.000 | 15881465H | 0.5000 | 0.5135 | M |
| 1 | 4.443 | 4.443 | 0.000 | 11497080H | 0.5000 | 0.5214 | M |
| 1 | 4.858 | 4.858 | 0.000 | 15817220H | 0.5000 | 0.5516 | M |
| 1 | 4.970 | 4.970 | 0.000 | 9831393H  | 0.5000 | 0.5490 | M |
| 1 | 5.431 | 5.431 | 0.000 | 11869649H | 0.5000 | 0.5605 | M |

Average of Peak Amounts = 0.5392

|   |       |       |       |           |        |        |  |
|---|-------|-------|-------|-----------|--------|--------|--|
| 2 | 5.414 | 5.414 | 0.000 | 23297976H | 0.5000 | 0.5026 |  |
| 2 | 5.712 | 5.712 | 0.000 | 17143320H | 0.5000 | 0.4952 |  |
| 2 | 6.153 | 6.153 | 0.000 | 24388526H | 0.5000 | 0.5074 |  |
| 2 | 6.365 | 6.365 | 0.000 | 20256159H | 0.5000 | 0.5175 |  |
| 2 | 6.906 | 6.906 | 0.000 | 20075235H | 0.5000 | 0.5294 |  |

Average of Peak Amounts = 0.5104

RPD = 5.49

10 PCB-1268

|   |        |        |       |            |        |        |  |
|---|--------|--------|-------|------------|--------|--------|--|
| 1 | 9.579  | 9.579  | 0.000 | 80597116H  | 0.5000 | 0.5012 |  |
| 1 | 9.647  | 9.647  | 0.000 | 67880937H  | 0.5000 | 0.4995 |  |
| 1 | 9.955  | 9.955  | 0.000 | 62659919H  | 0.5000 | 0.4917 |  |
| 1 | 10.939 | 10.939 | 0.000 | 184146683H | 0.5000 | 0.4986 |  |

Average of Peak Amounts = 0.4977

|   |        |        |       |            |        |        |  |
|---|--------|--------|-------|------------|--------|--------|--|
| 2 | 11.149 | 11.149 | 0.000 | 108752292H | 0.5000 | 0.4993 |  |
| 2 | 11.216 | 11.216 | 0.000 | 87677727H  | 0.5000 | 0.5079 |  |
| 2 | 11.571 | 11.571 | 0.000 | 80581642H  | 0.5000 | 0.5008 |  |
| 2 | 12.395 | 12.395 | 0.000 | 248288960H | 0.5000 | 0.5175 |  |

Average of Peak Amounts = 0.5064

RPD = 1.72

**QC Flag Legend**

Review Flags

M - Manually Integrated

**Reagents:**

GCAR4268CALL4\_00001

Amount Added: 1.00

Units: mL

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\O0510010.D

Injection Date: 11-May-2015 15:12:42

Instrument ID: CHGC8

Lims ID: IC

Client ID:

Operator ID: 402360

ALS Bottle#: 11

Worklist Smp#: 11

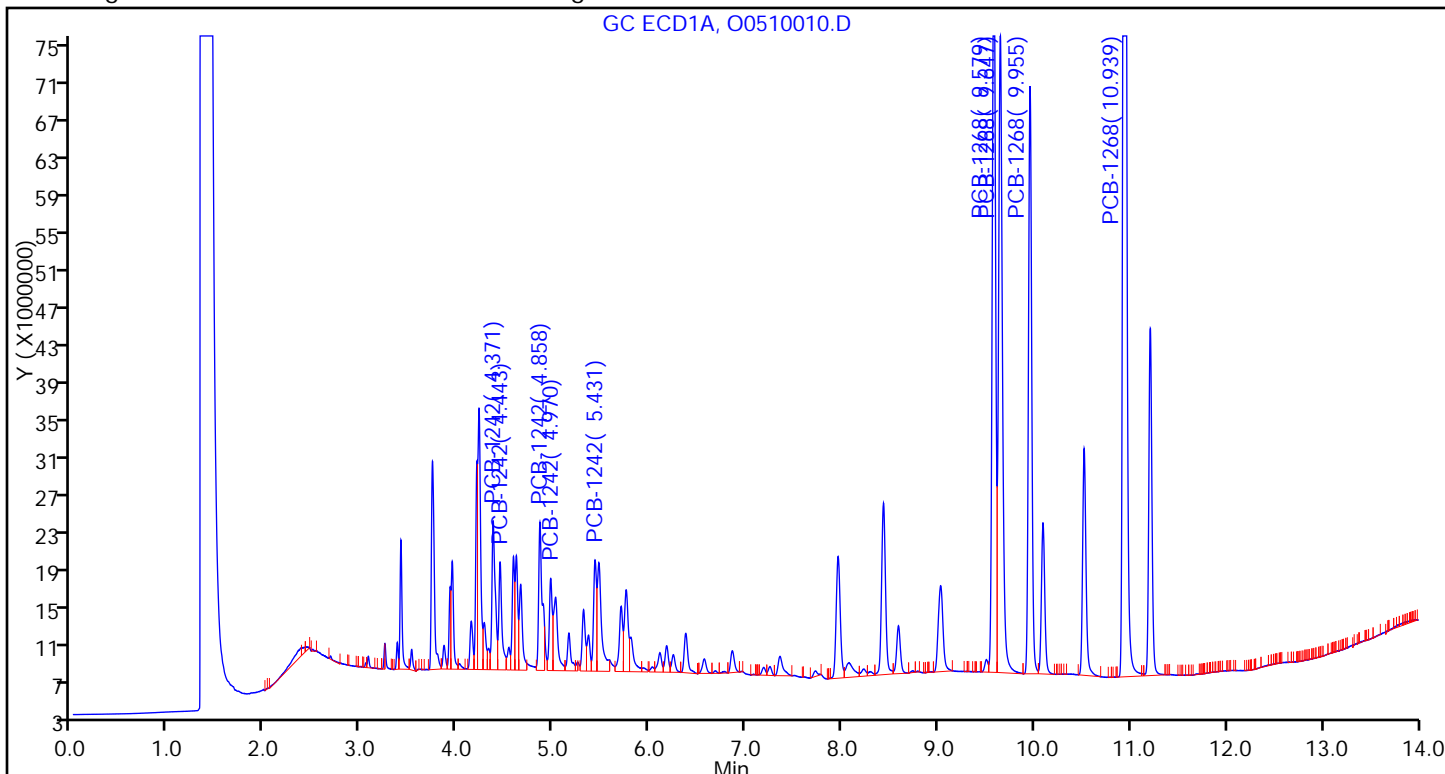
Injection Vol: 1.0 ul

Dil. Factor: 1.0000

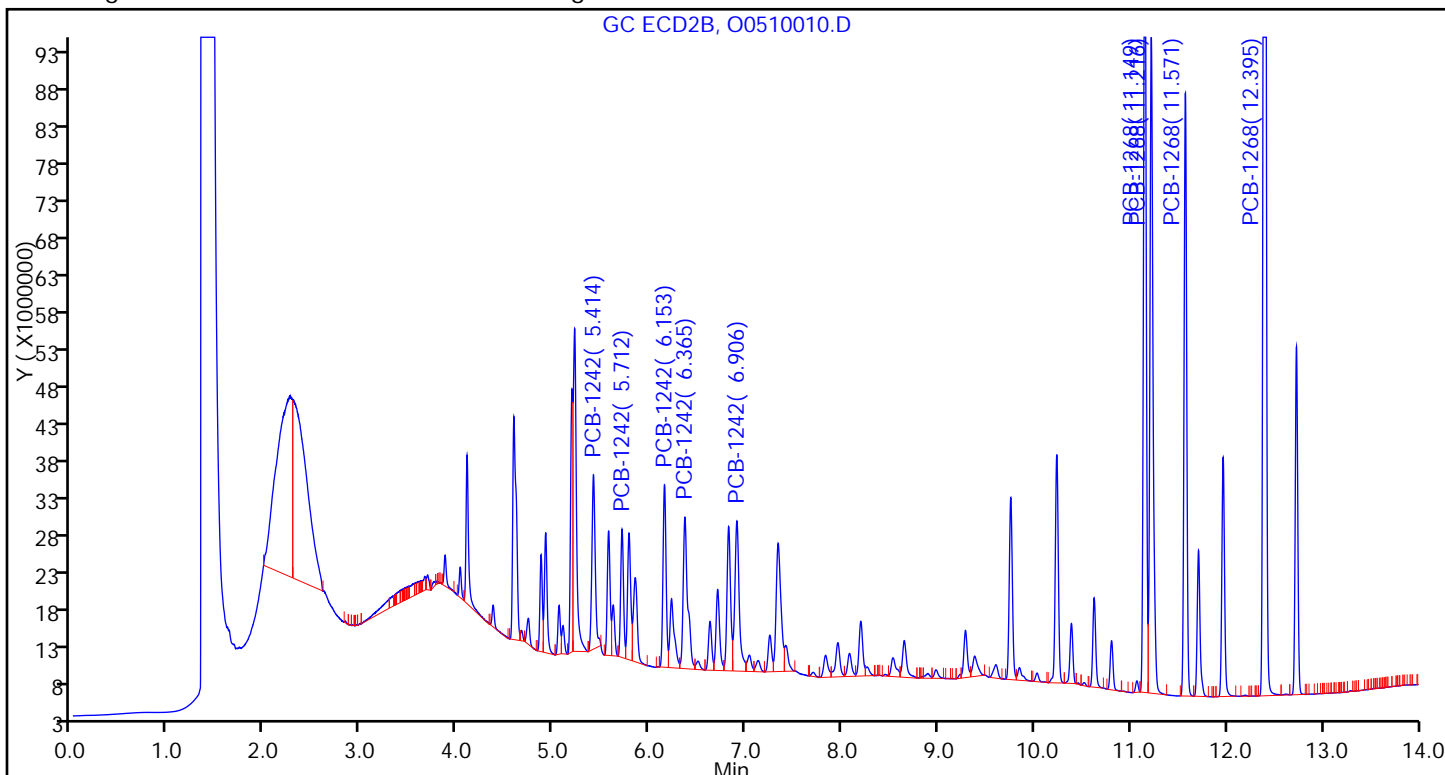
Method: PCB\_CHGC8DUAL

Limit Group: GCS 8082A ICAL

Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3





TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\O0510010.D

Injection Date: 11-May-2015 15:12:42 Instrument ID: CHGC8

Lims ID: IC

Client ID:

Operator ID: 402360

ALS Bottle#: 11 Worklist Smp#: 11

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

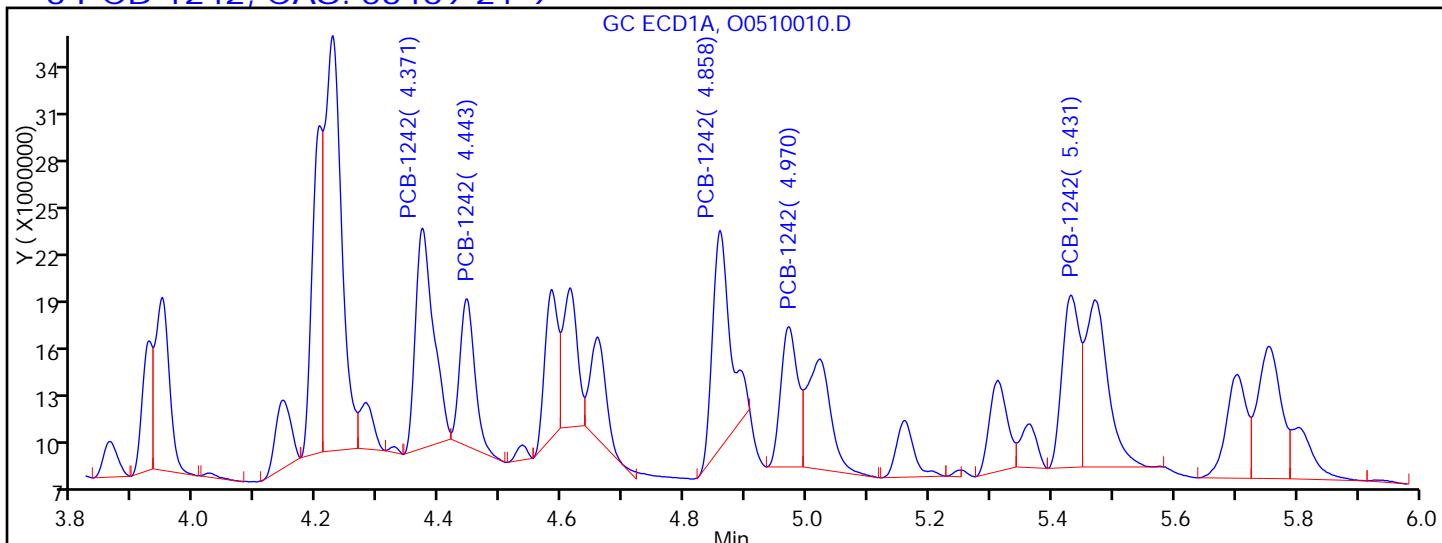
Method: PCB\_CHGC8DUAL

Limit Group: GCS 8082A ICAL

Column:

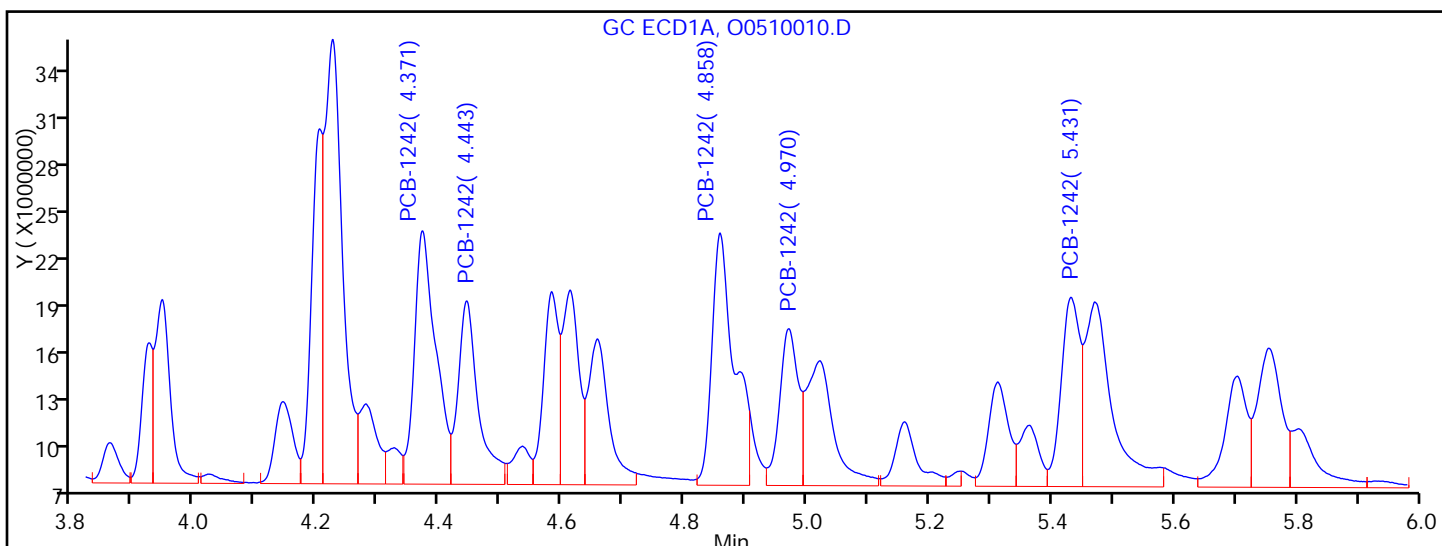
Detector GC ECD1A

3 PCB-1242, CAS: 53469-21-9



Processing Integration Results

|            |                     |   |
|------------|---------------------|---|
| RT = 4.371 | Response = 13711629 | M |
| RT = 4.443 | Response = 9160712  | M |
| RT = 4.858 | Response = 13587266 | M |
| RT = 4.970 | Response = 8733672  | M |
| RT = 5.431 | Response = 10736848 | M |



Manual Integration Results

|            |                     |   |
|------------|---------------------|---|
| RT = 4.371 | Response = 15881465 | M |
| RT = 4.443 | Response = 11497080 | M |
| RT = 4.858 | Response = 15817220 | M |
| RT = 4.970 | Response = 9831393  | M |
| RT = 5.431 | Response = 11869649 | M |

Reviewer: guptaa, 11-May-2015 16:08:09

Audit Action: Assigned New Baseline

Audit Reason: Instrument noise

TestAmerica Pittsburgh  
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\O0510011.D  
 Lims ID: IC  
 Client ID:  
 Sample Type: IC Calib Level: 5  
 Inject. Date: 11-May-2015 15:32:33 ALS Bottle#: 12 Worklist Smp#: 12  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 180-0006866-012  
 Operator ID: 402360 Instrument ID: CHGC8  
 Sublist: chrom-PCB\_CHGC8DUAL\*sub9  
 Method: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\PCB\_CHGC8DUAL.m  
 Limit Group: GCS 8082A ICAL  
 Last Update: 12-May-2015 16:53:07 Calib Date: 11-May-2015 18:31:22  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICal File: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\O0510020.D  
 Column 1 : Det: GC ECD1A  
 Column 2 : Det: GC ECD2B  
 Process Host: XAWRK022

First Level Reviewer: guptaa Date: 11-May-2015 16:04:06

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng | OnCol Amt ng | Flags |
|-----|-----------|---------------|---------------|----------|------------|--------------|-------|
|-----|-----------|---------------|---------------|----------|------------|--------------|-------|

| 3 PCB-1242 |       |       |        |           |      |        |   |
|------------|-------|-------|--------|-----------|------|--------|---|
| 1          | 4.372 | 4.371 | 0.001  | 29909535H | 1.00 | 0.9671 | M |
| 1          | 4.444 | 4.443 | 0.001  | 21629663H | 1.00 | 0.9810 | M |
| 1          | 4.859 | 4.858 | 0.001  | 29110431H | 1.00 | 1.02   | M |
| 1          | 4.969 | 4.970 | -0.001 | 18414431H | 1.00 | 1.03   | M |
| 1          | 5.433 | 5.431 | 0.002  | 22620319H | 1.00 | 1.07   | M |

Average of Peak Amounts = 1.01  
 2 5.415 5.414 0.001 45353938H 1.00 0.9783  
 2 5.713 5.712 0.001 32488037H 1.00 0.9385  
 2 6.154 6.153 0.001 44748763H 1.00 0.9310  
 2 6.366 6.365 0.001 37854293H 1.00 0.9672  
 2 6.905 6.906 -0.001 37935804H 1.00 1.00  
 Average of Peak Amounts = 0.9630

RPD = 4.95

| 10 PCB-1268 |        |        |        |            |      |        |  |
|-------------|--------|--------|--------|------------|------|--------|--|
| 1           | 9.579  | 9.579  | 0.000  | 150901581H | 1.00 | 0.9383 |  |
| 1           | 9.646  | 9.647  | -0.001 | 131093529H | 1.00 | 0.9646 |  |
| 1           | 9.956  | 9.955  | 0.001  | 120955247H | 1.00 | 0.9492 |  |
| 1           | 10.939 | 10.939 | 0.000  | 347497363H | 1.00 | 0.9410 |  |

Average of Peak Amounts = 0.9483  
 2 11.149 11.149 0.000 213938256H 1.00 0.9821  
 2 11.216 11.216 0.000 169624424H 1.00 0.9825  
 2 11.571 11.571 0.000 156279673H 1.00 0.9713  
 2 12.394 12.395 -0.001 474368100H 1.00 0.9888  
 Average of Peak Amounts = 0.9812

RPD = 3.41

**QC Flag Legend**

Review Flags

M - Manually Integrated

**Reagents:**

GCAR4268CALL5\_00001

Amount Added: 1.00

Units: mL

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\O0510011.D

Injection Date: 11-May-2015 15:32:33

Instrument ID: CHGC8

Lims ID: IC

Client ID:

Operator ID: 402360

ALS Bottle#: 12

Worklist Smp#: 12

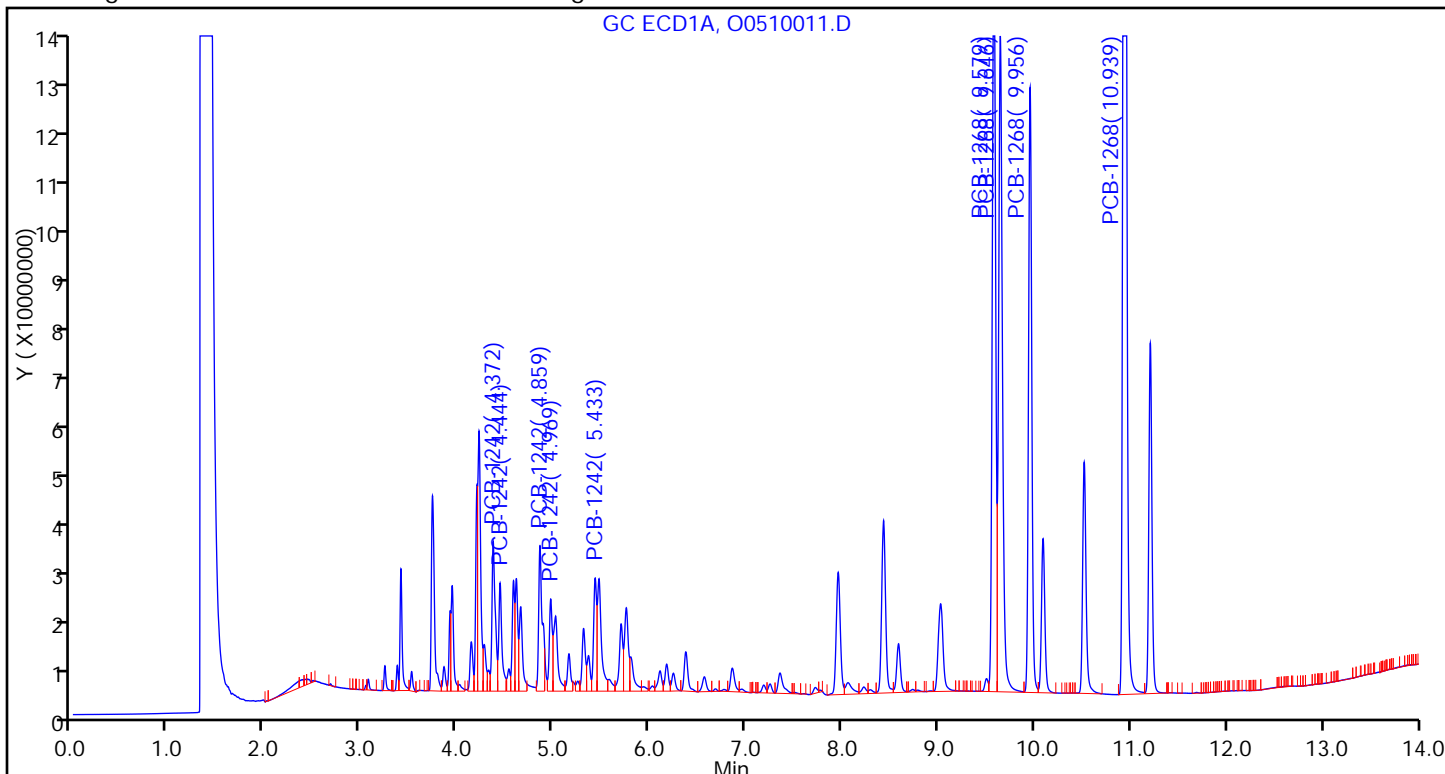
Injection Vol: 1.0 ul

Dil. Factor: 1.0000

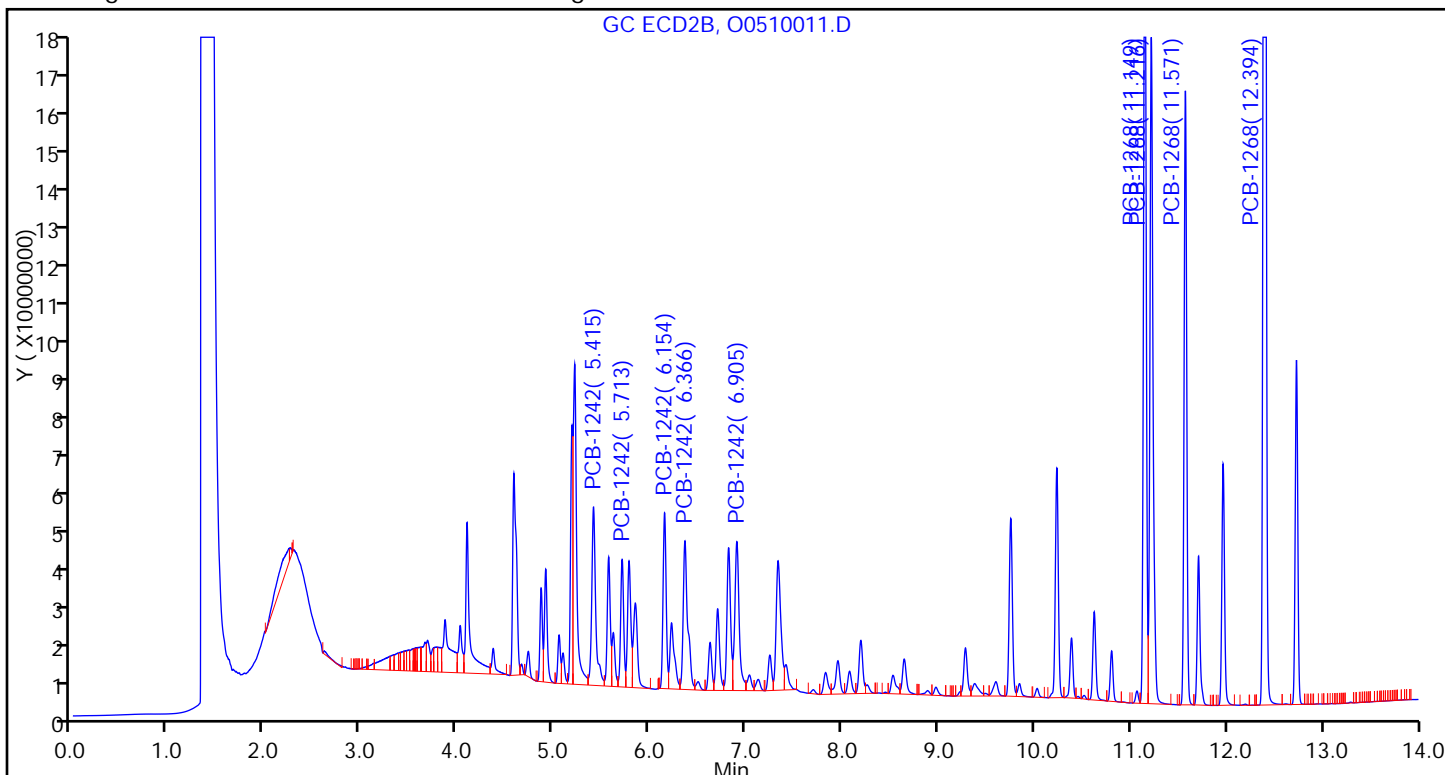
Method: PCB\_CHGC8DUAL

Limit Group: GCS 8082A ICAL

Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\O0510011.D

Injection Date: 11-May-2015 15:32:33 Instrument ID: CHGC8

Lims ID: IC

Client ID:

Operator ID: 402360

ALS Bottle#: 12

Worklist Smp#: 12

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

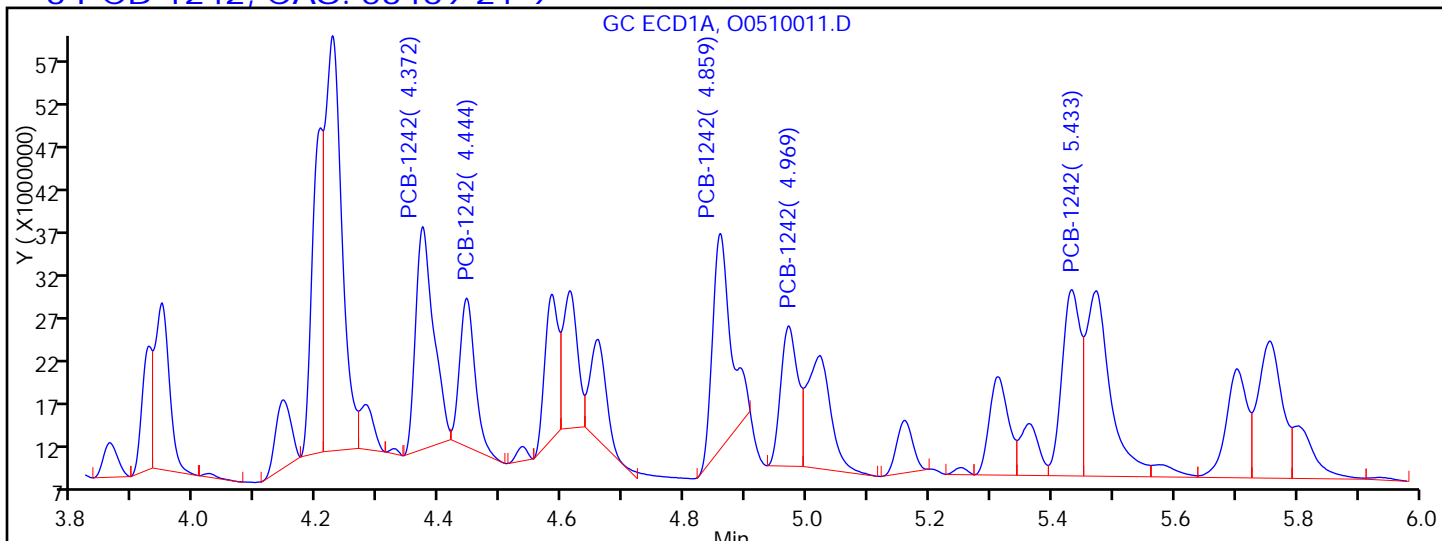
Method: PCB\_CHGC8DUAL

Limit Group: GCS 8082A ICAL

Column:

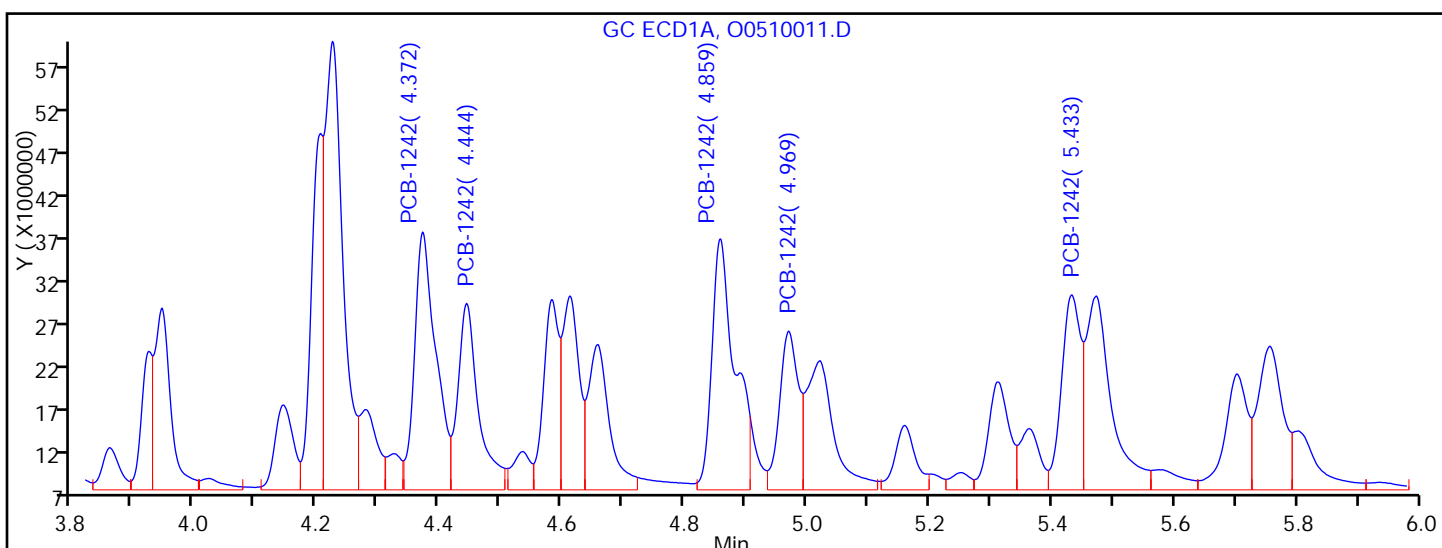
Detector GC ECD1A

3 PCB-1242, CAS: 53469-21-9



Processing Integration Results

|            |                     |   |
|------------|---------------------|---|
| RT = 4.372 | Response = 25778670 | M |
| RT = 4.444 | Response = 17191530 | M |
| RT = 4.859 | Response = 24926513 | M |
| RT = 4.969 | Response = 16241569 | M |
| RT = 5.433 | Response = 21577923 | M |



Manual Integration Results

|            |                     |   |
|------------|---------------------|---|
| RT = 4.372 | Response = 29909535 | M |
| RT = 4.444 | Response = 21629663 | M |
| RT = 4.859 | Response = 29110431 | M |
| RT = 4.969 | Response = 18414431 | M |
| RT = 5.433 | Response = 22620319 | M |

Reviewer: guptaa, 11-May-2015 16:07:45

Audit Action: Assigned New Baseline

Audit Reason: Instrument noise

FORM VI  
GC SEMI VOA INITIAL CALIBRATION DATA  
EXTERNAL STANDARD RETENTION TIME SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-43791-1 Analy Batch No.: 141160

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

Instrument ID: CHGC8 GC Column: RTX-CLP2 ID: 0.53 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/11/2015 14:13 Calibration End Date: 05/11/2015 15:32 Calibration ID: 23835

Calibration Files:

| LEVEL:  | LAB SAMPLE ID:   | LAB FILE ID: |
|---------|------------------|--------------|
| Level 1 | IC 180-141160/8  | O0510007.D   |
| Level 2 | IC 180-141160/9  | O0510008.D   |
| Level 3 | IC 180-141160/10 | O0510009.D   |
| Level 4 | IC 180-141160/11 | O0510010.D   |
| Level 5 | IC 180-141160/12 | O0510011.D   |

| ANALYTE         | LVL 1  | LVL 2  | LVL 3  | LVL 4  | LVL 5  |  |  |  |  |  | RT WINDOW       | AVG RT |
|-----------------|--------|--------|--------|--------|--------|--|--|--|--|--|-----------------|--------|
| PCB-1242 Peak 1 | 5.413  | 5.413  | 5.414  | 5.414  | 5.415  |  |  |  |  |  | 5.364 - 5.464   | 5.414  |
| PCB-1242 Peak 2 | 5.709  | 5.712  | 5.711  | 5.712  | 5.713  |  |  |  |  |  | 5.662 - 5.762   | 5.711  |
| PCB-1242 Peak 3 | 6.151  | 6.152  | 6.153  | 6.153  | 6.154  |  |  |  |  |  | 6.103 - 6.203   | 6.153  |
| PCB-1242 Peak 4 | 6.363  | 6.365  | 6.366  | 6.365  | 6.366  |  |  |  |  |  | 6.315 - 6.415   | 6.365  |
| PCB-1242 Peak 5 | 6.905  | 6.904  | 6.905  | 6.906  | 6.905  |  |  |  |  |  | 6.856 - 6.956   | 6.905  |
| PCB-1268 Peak 1 | 11.147 | 11.148 | 11.148 | 11.149 | 11.149 |  |  |  |  |  | 11.099 - 11.199 | 11.148 |
| PCB-1268 Peak 2 | 11.214 | 11.216 | 11.215 | 11.216 | 11.216 |  |  |  |  |  | 11.166 - 11.266 | 11.215 |
| PCB-1268 Peak 3 | 11.569 | 11.571 | 11.569 | 11.571 | 11.571 |  |  |  |  |  | 11.521 - 11.621 | 11.570 |
| PCB-1268 Peak 4 | 12.393 | 12.393 | 12.393 | 12.395 | 12.394 |  |  |  |  |  | 12.345 - 12.445 | 12.394 |

FORM VI  
GC SEMI VOA INITIAL CALIBRATION DATA  
EXTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Pittsburgh Job No.: 180-43791-1 Analy Batch No.: 141160

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

Instrument ID: CHGC8 GC Column: RTX-CLP2 ID: 0.53 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/11/2015 14:13 Calibration End Date: 05/11/2015 15:32 Calibration ID: 23835

Calibration Files:

| LEVEL:  | LAB SAMPLE ID:   | LAB FILE ID: |
|---------|------------------|--------------|
| Level 1 | IC 180-141160/8  | O0510007.D   |
| Level 2 | IC 180-141160/9  | O0510008.D   |
| Level 3 | IC 180-141160/10 | O0510009.D   |
| Level 4 | IC 180-141160/11 | O0510010.D   |
| Level 5 | IC 180-141160/12 | O0510011.D   |

| ANALYTE         | CF                     |           |           |           | CURVE TYPE | COEFFICIENT |            |    | # | MIN CF | %RSD | #    | MAX %RSD | R^2 OR COD | # | MIN R^2 OR COD |
|-----------------|------------------------|-----------|-----------|-----------|------------|-------------|------------|----|---|--------|------|------|----------|------------|---|----------------|
|                 | LVL 1<br>LVL 5         | LVL 2     | LVL 3     | LVL 4     |            | B           | M1         | M2 |   |        |      |      |          |            |   |                |
| PCB-1242 Peak 1 | 44887100<br>45353938   | 48072440  | 46883484  | 46595952  | Ave        |             | 46358582.8 |    |   | 2.7    |      | 20.0 |          |            |   |                |
| PCB-1242 Peak 2 | 33949800<br>32488037   | 36394300  | 35972772  | 34286640  | Ave        |             | 34618309.8 |    |   | 4.6    |      | 20.0 |          |            |   |                |
| PCB-1242 Peak 3 | 44696500<br>44748763   | 51495230  | 50621440  | 48777052  | Ave        |             | 48067797.0 |    |   | 6.7    |      | 20.0 |          |            |   |                |
| PCB-1242 Peak 4 | 35225600<br>37854293   | 40928880  | 41173456  | 40512318  | Ave        |             | 39138909.4 |    |   | 6.5    |      | 20.0 |          |            |   |                |
| PCB-1242 Peak 5 | 33613700<br>37935804   | 37455640  | 40462616  | 40150470  | Ave        |             | 37923646.0 |    |   | 7.2    |      | 20.0 |          |            |   |                |
| PCB-1268 Peak 1 | 203402700<br>213938256 | 225681570 | 228618396 | 217504584 | Ave        |             | 217829101  |    |   | 4.6    |      | 20.0 |          |            |   |                |
| PCB-1268 Peak 2 | 155535400<br>169624424 | 180909660 | 181787516 | 175355454 | Ave        |             | 172642491  |    |   | 6.2    |      | 20.0 |          |            |   |                |
| PCB-1268 Peak 3 | 156416000<br>156279673 | 165008300 | 165586776 | 161163284 | Ave        |             | 160890807  |    |   | 2.8    |      | 20.0 |          |            |   |                |
| PCB-1268 Peak 4 | 442093500<br>474368100 | 488103240 | 497563512 | 496577920 | Ave        |             | 479741254  |    |   | 4.8    |      | 20.0 |          |            |   |                |

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

FORM VI  
GC SEMI VOA INITIAL CALIBRATION DATA  
EXTERNAL STANDARD RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Pittsburgh Job No.: 180-43791-1 Analy Batch No.: 141160

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

Instrument ID: CHGC8 GC Column: RTX-CLP2 ID: 0.53 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/11/2015 14:13 Calibration End Date: 05/11/2015 15:32 Calibration ID: 23835

Calibration Files:

| LEVEL:  | LAB SAMPLE ID:   | LAB FILE ID: |
|---------|------------------|--------------|
| Level 1 | IC 180-141160/8  | O0510007.D   |
| Level 2 | IC 180-141160/9  | O0510008.D   |
| Level 3 | IC 180-141160/10 | O0510009.D   |
| Level 4 | IC 180-141160/11 | O0510010.D   |
| Level 5 | IC 180-141160/12 | O0510011.D   |

| ANALYTE         | CURVE TYPE | RESPONSE |          |           |           |           | CONCENTRATION (NG) |       |       |       |       |
|-----------------|------------|----------|----------|-----------|-----------|-----------|--------------------|-------|-------|-------|-------|
|                 |            | LVL 1    | LVL 2    | LVL 3     | LVL 4     | LVL 5     | LVL 1              | LVL 2 | LVL 3 | LVL 4 | LVL 5 |
| PCB-1242 Peak 1 | Ave        | 448871   | 4807244  | 11720871  | 23297976  | 45353938  | 0.0100             | 0.100 | 0.250 | 0.500 | 1.00  |
| PCB-1242 Peak 2 | Ave        | 339498   | 3639430  | 8993193   | 17143320  | 32488037  | 0.0100             | 0.100 | 0.250 | 0.500 | 1.00  |
| PCB-1242 Peak 3 | Ave        | 446965   | 5149523  | 12655360  | 24388526  | 44748763  | 0.0100             | 0.100 | 0.250 | 0.500 | 1.00  |
| PCB-1242 Peak 4 | Ave        | 352256   | 4092888  | 10293364  | 20256159  | 37854293  | 0.0100             | 0.100 | 0.250 | 0.500 | 1.00  |
| PCB-1242 Peak 5 | Ave        | 336137   | 3745564  | 10115654  | 20075235  | 37935804  | 0.0100             | 0.100 | 0.250 | 0.500 | 1.00  |
| PCB-1268 Peak 1 | Ave        | 2034027  | 22568157 | 57154599  | 108752292 | 213938256 | 0.0100             | 0.100 | 0.250 | 0.500 | 1.00  |
| PCB-1268 Peak 2 | Ave        | 1555354  | 18090966 | 45446879  | 87677727  | 169624424 | 0.0100             | 0.100 | 0.250 | 0.500 | 1.00  |
| PCB-1268 Peak 3 | Ave        | 1564160  | 16500830 | 41396694  | 80581642  | 156279673 | 0.0100             | 0.100 | 0.250 | 0.500 | 1.00  |
| PCB-1268 Peak 4 | Ave        | 4420935  | 48810324 | 124390878 | 248288960 | 474368100 | 0.0100             | 0.100 | 0.250 | 0.500 | 1.00  |

Curve Type Legend:

Ave = Average by Height



TestAmerica Pittsburgh  
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\O0510007.D  
 Lims ID: IC  
 Client ID:  
 Sample Type: IC Calib Level: 1  
 Inject. Date: 11-May-2015 14:13:02 ALS Bottle#: 8 Worklist Smp#: 8  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 180-0006866-008  
 Operator ID: 402360 Instrument ID: CHGC8  
 Sublist: chrom-PCB\_CHGC8DUAL\*sub9  
 Method: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\PCB\_CHGC8DUAL.m  
 Limit Group: GCS 8082A ICAL  
 Last Update: 12-May-2015 16:52:54 Calib Date: 11-May-2015 18:31:22  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICal File: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\O0510020.D

Column 1 : Det: GC ECD1A  
 Column 2 : Det: GC ECD2B

Process Host: XAWRK022

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng | OnCol Amt ng | Flags |
|-----|-----------|---------------|---------------|----------|------------|--------------|-------|
|-----|-----------|---------------|---------------|----------|------------|--------------|-------|

3 PCB-1242

|   |       |       |        |         |        |          |  |
|---|-------|-------|--------|---------|--------|----------|--|
| 1 | 4.372 | 4.371 | 0.001  | 277100H | 0.0100 | 0.008959 |  |
| 1 | 4.439 | 4.443 | -0.004 | 205921H | 0.0100 | 0.009339 |  |
| 1 | 4.854 | 4.858 | -0.004 | 255769H | 0.0100 | 0.008919 |  |
| 1 | 4.964 | 4.970 | -0.006 | 154829H | 0.0100 | 0.008645 |  |
| 1 | 5.425 | 5.431 | -0.006 | 155587H | 0.0100 | 0.007347 |  |

Average of Peak Amounts = 0.008642

|   |       |       |        |         |        |          |  |
|---|-------|-------|--------|---------|--------|----------|--|
| 2 | 5.413 | 5.414 | -0.001 | 448871H | 0.0100 | 0.009683 |  |
| 2 | 5.709 | 5.712 | -0.003 | 339498H | 0.0100 | 0.009807 |  |
| 2 | 6.151 | 6.153 | -0.002 | 446965H | 0.0100 | 0.009299 |  |
| 2 | 6.363 | 6.365 | -0.002 | 352256H | 0.0100 | 0.009000 |  |
| 2 | 6.905 | 6.906 | -0.001 | 336137H | 0.0100 | 0.008864 |  |

Average of Peak Amounts = 0.009330

RPD = 7.66

10 PCB-1268

|   |        |        |        |          |        |          |  |
|---|--------|--------|--------|----------|--------|----------|--|
| 1 | 9.577  | 9.579  | -0.002 | 1560884H | 0.0100 | 0.009706 |  |
| 1 | 9.642  | 9.647  | -0.005 | 1282347H | 0.0100 | 0.009436 |  |
| 1 | 9.952  | 9.955  | -0.003 | 1258274H | 0.0100 | 0.009874 |  |
| 1 | 10.938 | 10.939 | -0.001 | 3581485H | 0.0100 | 0.009698 |  |

Average of Peak Amounts = 0.009678

|   |        |        |        |          |        |          |  |
|---|--------|--------|--------|----------|--------|----------|--|
| 2 | 11.147 | 11.149 | -0.002 | 2034027H | 0.0100 | 0.009338 |  |
| 2 | 11.214 | 11.216 | -0.002 | 1555354H | 0.0100 | 0.009009 |  |
| 2 | 11.569 | 11.571 | -0.002 | 1564160H | 0.0100 | 0.009722 |  |
| 2 | 12.393 | 12.395 | -0.002 | 4420935H | 0.0100 | 0.009215 |  |

Average of Peak Amounts = 0.009321

RPD = 3.76

Reagents:

GCAR4268CALL1\_00001

Amount Added: 1.00

Units: mL

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\O0510007.D

Injection Date: 11-May-2015 14:13:02

Instrument ID: CHGC8

Lims ID: IC

Client ID:

Operator ID: 402360

ALS Bottle#: 8

Worklist Smp#: 8

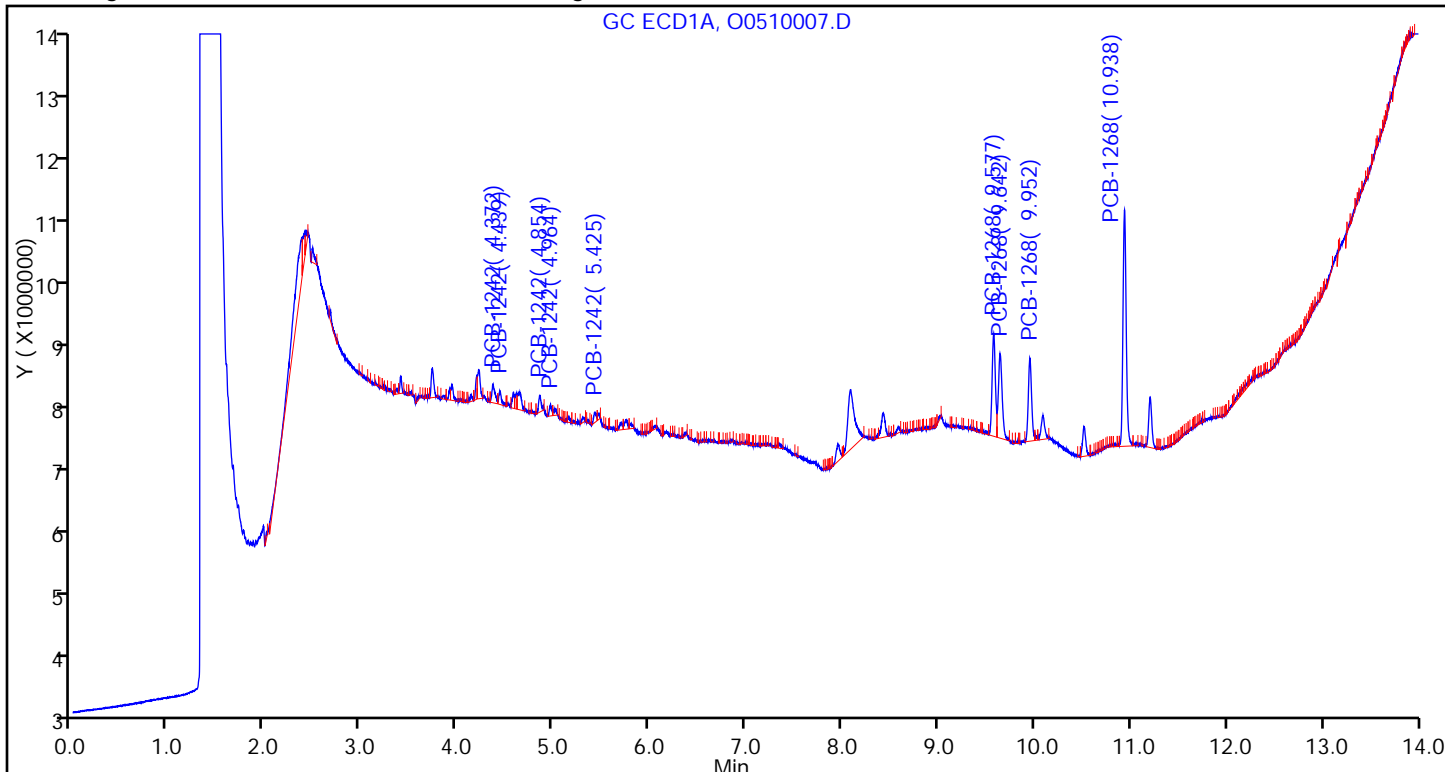
Injection Vol: 1.0 ul

Dil. Factor: 1.0000

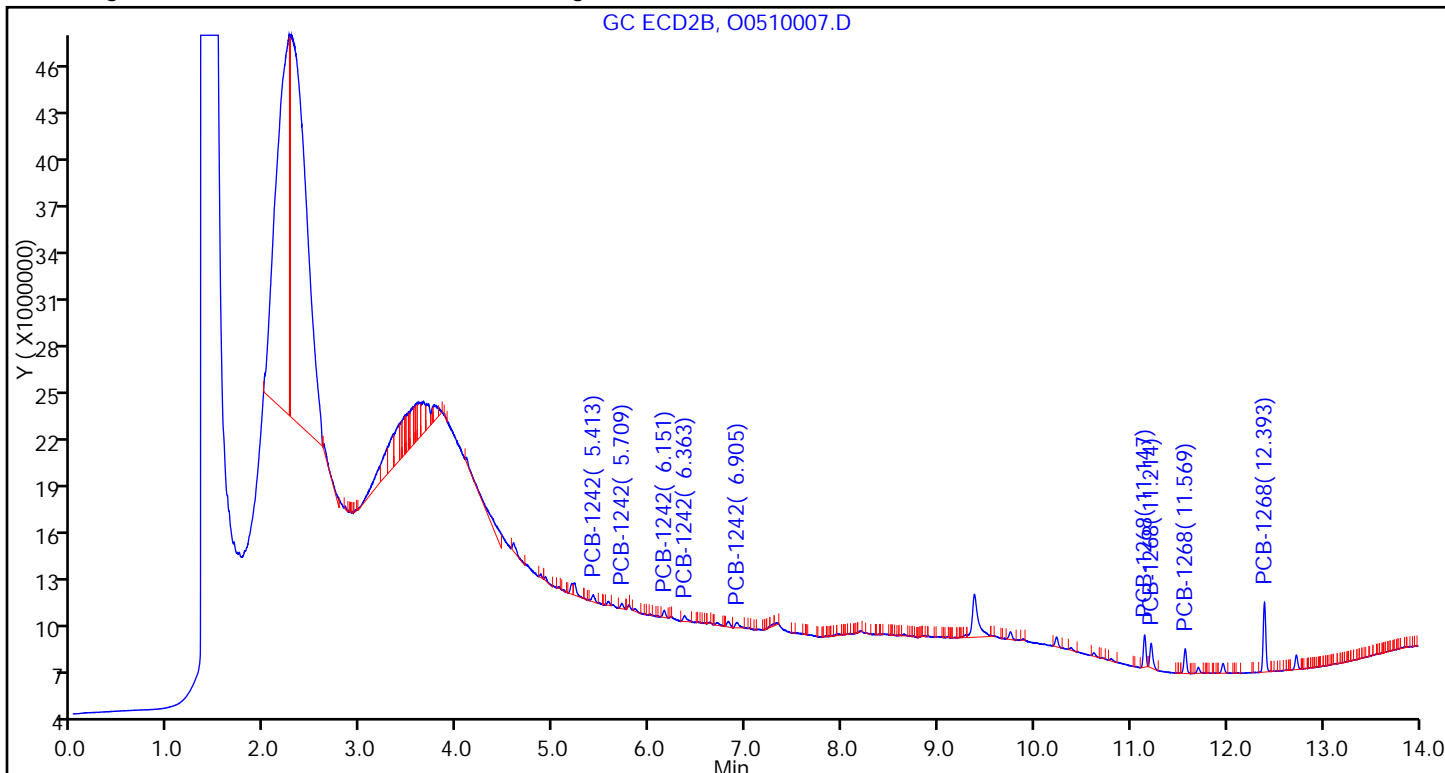
Method: PCB\_CHGC8DUAL

Limit Group: GCS 8082A ICAL

Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



TestAmerica Pittsburgh  
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\O0510008.D  
 Lims ID: IC  
 Client ID:  
 Sample Type: IC Calib Level: 2  
 Inject. Date: 11-May-2015 14:32:59 ALS Bottle#: 9 Worklist Smp#: 9  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 180-0006866-009  
 Operator ID: 402360 Instrument ID: CHGC8  
 Sublist: chrom-PCB\_CHGC8DUAL\*sub9  
 Method: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\PCB\_CHGC8DUAL.m  
 Limit Group: GCS 8082A ICAL  
 Last Update: 12-May-2015 16:52:57 Calib Date: 11-May-2015 18:31:22  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICal File: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\O0510020.D  
 Column 1 : Det: GC ECD1A  
 Column 2 : Det: GC ECD2B  
 Process Host: XAWRK022

First Level Reviewer: guptaa Date: 11-May-2015 16:07:06

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng | OnCol Amt ng | Flags |
|-----|-----------|---------------|---------------|----------|------------|--------------|-------|
|-----|-----------|---------------|---------------|----------|------------|--------------|-------|

3 PCB-1242

|   |       |       |        |          |        |        |  |
|---|-------|-------|--------|----------|--------|--------|--|
| 1 | 4.370 | 4.371 | -0.001 | 3278706H | 0.1000 | 0.1060 |  |
| 1 | 4.442 | 4.443 | -0.001 | 2246479H | 0.1000 | 0.1019 |  |
| 1 | 4.857 | 4.858 | -0.001 | 2876606H | 0.1000 | 0.1003 |  |
| 1 | 4.968 | 4.970 | -0.002 | 1811453H | 0.1000 | 0.1011 |  |
| 1 | 5.432 | 5.431 | 0.001  | 2199548H | 0.1000 | 0.1039 |  |

Average of Peak Amounts = 0.1026

|   |       |       |        |          |        |        |  |
|---|-------|-------|--------|----------|--------|--------|--|
| 2 | 5.413 | 5.414 | -0.001 | 4807244H | 0.1000 | 0.1037 |  |
| 2 | 5.712 | 5.712 | 0.000  | 3639430H | 0.1000 | 0.1051 |  |
| 2 | 6.152 | 6.153 | -0.001 | 5149523H | 0.1000 | 0.1071 |  |
| 2 | 6.365 | 6.365 | 0.000  | 4092888H | 0.1000 | 0.1046 |  |
| 2 | 6.904 | 6.906 | -0.002 | 3745564H | 0.1000 | 0.0988 |  |

Average of Peak Amounts = 0.1039

RPD = 1.18

10 PCB-1268

|   |        |        |        |           |        |        |  |
|---|--------|--------|--------|-----------|--------|--------|--|
| 1 | 9.579  | 9.579  | 0.000  | 17018134H | 0.1000 | 0.1058 |  |
| 1 | 9.646  | 9.647  | -0.001 | 14338274H | 0.1000 | 0.1055 |  |
| 1 | 9.954  | 9.955  | -0.001 | 13372026H | 0.1000 | 0.1049 |  |
| 1 | 10.940 | 10.939 | 0.001  | 38661657H | 0.1000 | 0.1047 |  |

Average of Peak Amounts = 0.1052

|   |        |        |        |           |        |        |  |
|---|--------|--------|--------|-----------|--------|--------|--|
| 2 | 11.148 | 11.149 | -0.001 | 22568157H | 0.1000 | 0.1036 |  |
| 2 | 11.216 | 11.216 | 0.000  | 18090966H | 0.1000 | 0.1048 |  |
| 2 | 11.571 | 11.571 | 0.000  | 16500830H | 0.1000 | 0.1026 |  |
| 2 | 12.393 | 12.395 | -0.002 | 48810324H | 0.1000 | 0.1017 |  |

Average of Peak Amounts = 0.1032

RPD = 1.98

**Reagents:**

GCAR4268CALL2\_00001

Amount Added: 1.00

Units: mL

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\O0510008.D

Injection Date: 11-May-2015 14:32:59 Instrument ID: CHGC8

Lims ID: IC

Client ID:

Operator ID: 402360

ALS Bottle#: 9

Worklist Smp#: 9

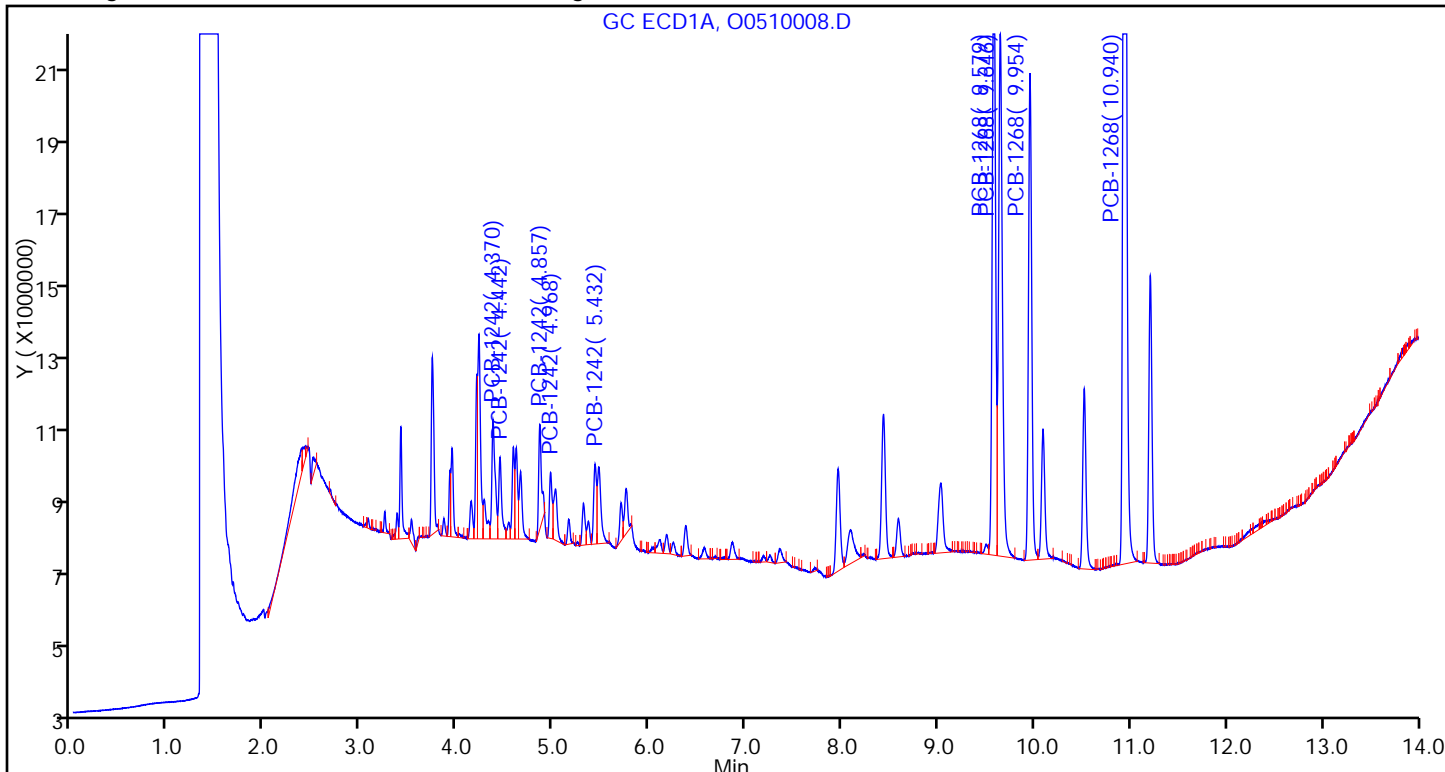
Injection Vol: 1.0 ul

Dil. Factor: 1.0000

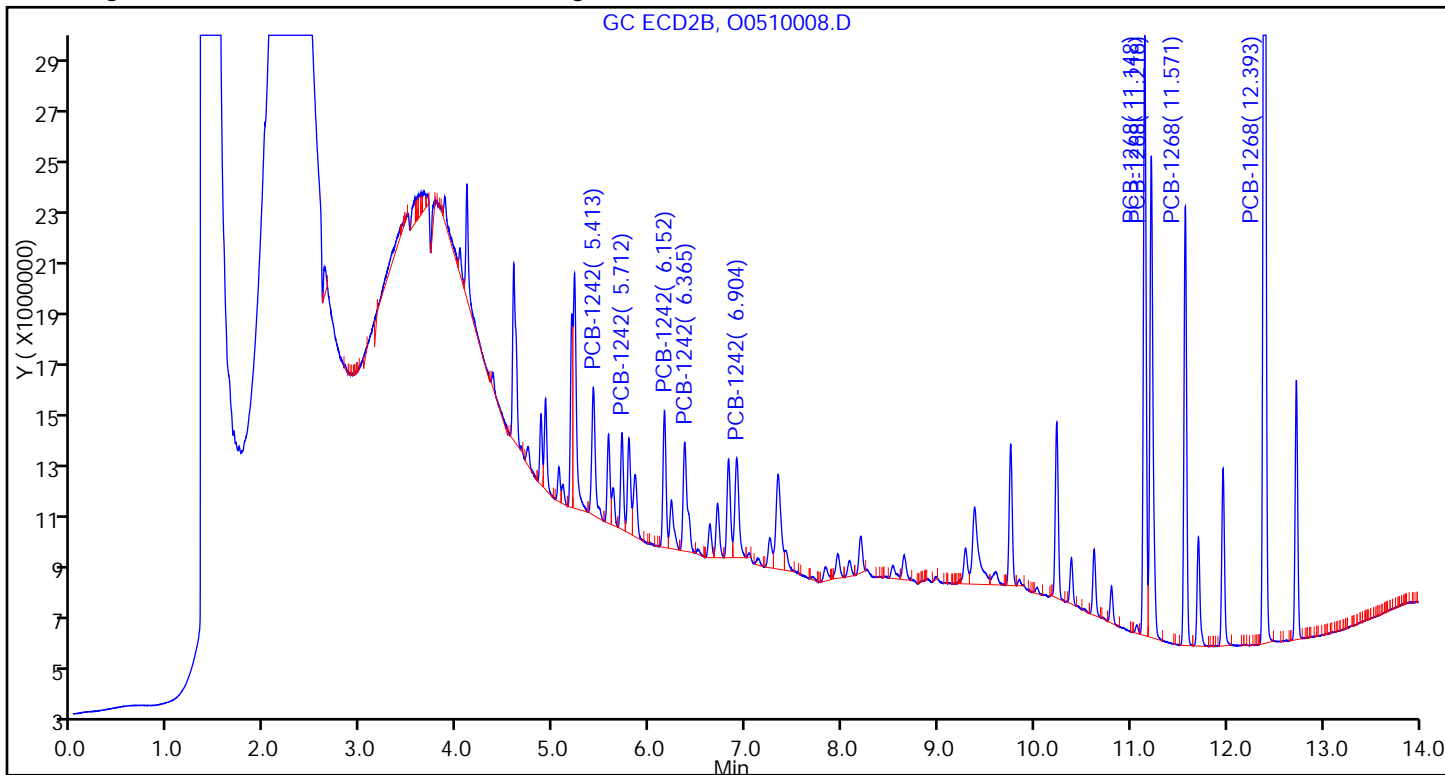
Method: PCB\_CHGC8DUAL

Limit Group: GCS 8082A ICAL

Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



TestAmerica Pittsburgh  
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\O0510009.D  
 Lims ID: IC  
 Client ID:  
 Sample Type: IC Calib Level: 3  
 Inject. Date: 11-May-2015 14:52:50 ALS Bottle#: 10 Worklist Smp#: 10  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 180-0006866-010  
 Operator ID: 402360 Instrument ID: CHGC8  
 Sublist: chrom-PCB\_CHGC8DUAL\*sub9  
 Method: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\PCB\_CHGC8DUAL.m  
 Limit Group: GCS 8082A ICAL  
 Last Update: 12-May-2015 16:53:00 Calib Date: 11-May-2015 18:31:22  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICal File: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\O0510020.D

Column 1 : Det: GC ECD1A  
 Column 2 : Det: GC ECD2B

Process Host: XAWRK022

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng | OnCol Amt ng | Flags |
|-----|-----------|---------------|---------------|----------|------------|--------------|-------|
|-----|-----------|---------------|---------------|----------|------------|--------------|-------|

3 PCB-1242

|   |       |       |        |          |        |        |  |
|---|-------|-------|--------|----------|--------|--------|--|
| 1 | 4.371 | 4.371 | 0.000  | 8117746H | 0.2500 | 0.2625 |  |
| 1 | 4.443 | 4.443 | 0.000  | 5640844H | 0.2500 | 0.2558 |  |
| 1 | 4.858 | 4.858 | 0.000  | 7072175H | 0.2500 | 0.2466 |  |
| 1 | 4.969 | 4.970 | -0.001 | 4467155H | 0.2500 | 0.2494 |  |
| 1 | 5.433 | 5.431 | 0.002  | 5493534H | 0.2500 | 0.2594 |  |

Average of Peak Amounts = 0.2548

|   |       |       |        |           |        |        |  |
|---|-------|-------|--------|-----------|--------|--------|--|
| 2 | 5.414 | 5.414 | 0.000  | 11720871H | 0.2500 | 0.2528 |  |
| 2 | 5.711 | 5.712 | -0.001 | 8993193H  | 0.2500 | 0.2598 |  |
| 2 | 6.153 | 6.153 | 0.000  | 12655360H | 0.2500 | 0.2633 |  |
| 2 | 6.366 | 6.365 | 0.001  | 10293364H | 0.2500 | 0.2630 |  |
| 2 | 6.905 | 6.906 | -0.001 | 10115654H | 0.2500 | 0.2667 |  |

Average of Peak Amounts = 0.2611

RPD = 2.47

10 PCB-1268

|   |        |        |        |           |        |        |  |
|---|--------|--------|--------|-----------|--------|--------|--|
| 1 | 9.578  | 9.579  | -0.001 | 41437288H | 0.2500 | 0.2577 |  |
| 1 | 9.644  | 9.647  | -0.003 | 35263880H | 0.2500 | 0.2595 |  |
| 1 | 9.954  | 9.955  | -0.001 | 32828809H | 0.2500 | 0.2576 |  |
| 1 | 10.939 | 10.939 | 0.000  | 96484914H | 0.2500 | 0.2613 |  |

Average of Peak Amounts = 0.2590

|   |        |        |        |            |        |        |  |
|---|--------|--------|--------|------------|--------|--------|--|
| 2 | 11.148 | 11.149 | -0.001 | 57154599H  | 0.2500 | 0.2624 |  |
| 2 | 11.215 | 11.216 | -0.001 | 45446879H  | 0.2500 | 0.2632 |  |
| 2 | 11.569 | 11.571 | -0.002 | 41396694H  | 0.2500 | 0.2573 |  |
| 2 | 12.393 | 12.395 | -0.002 | 124390878H | 0.2500 | 0.2593 |  |

Average of Peak Amounts = 0.2606

RPD = 0.60

**Reagents:**

GCAR4268CALL3\_00001

Amount Added: 1.00

Units: mL



TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\O0510009.D

Injection Date: 11-May-2015 14:52:50

Instrument ID: CHGC8

Lims ID: IC

Client ID:

Operator ID: 402360

ALS Bottle#: 10

Worklist Smp#: 10

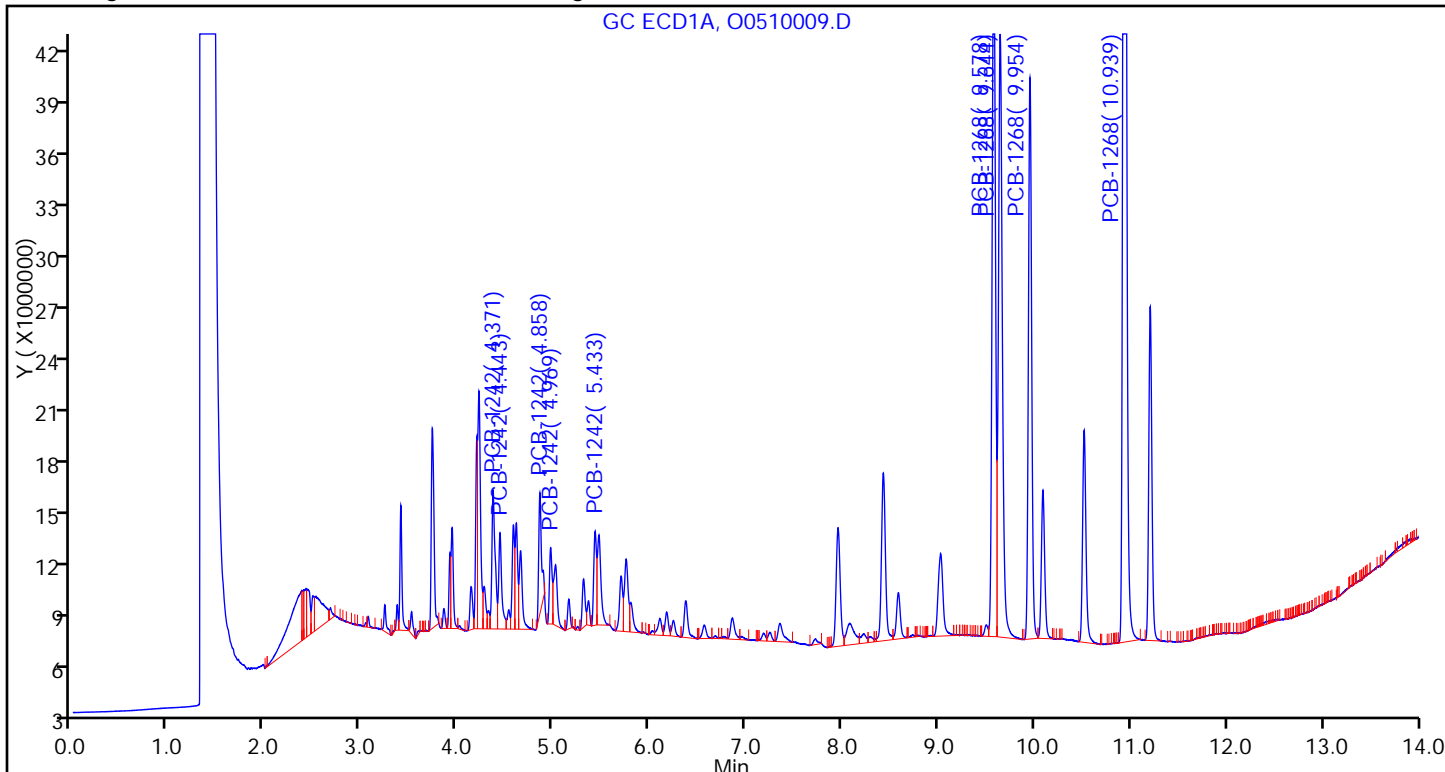
Injection Vol: 1.0 ul

Dil. Factor: 1.0000

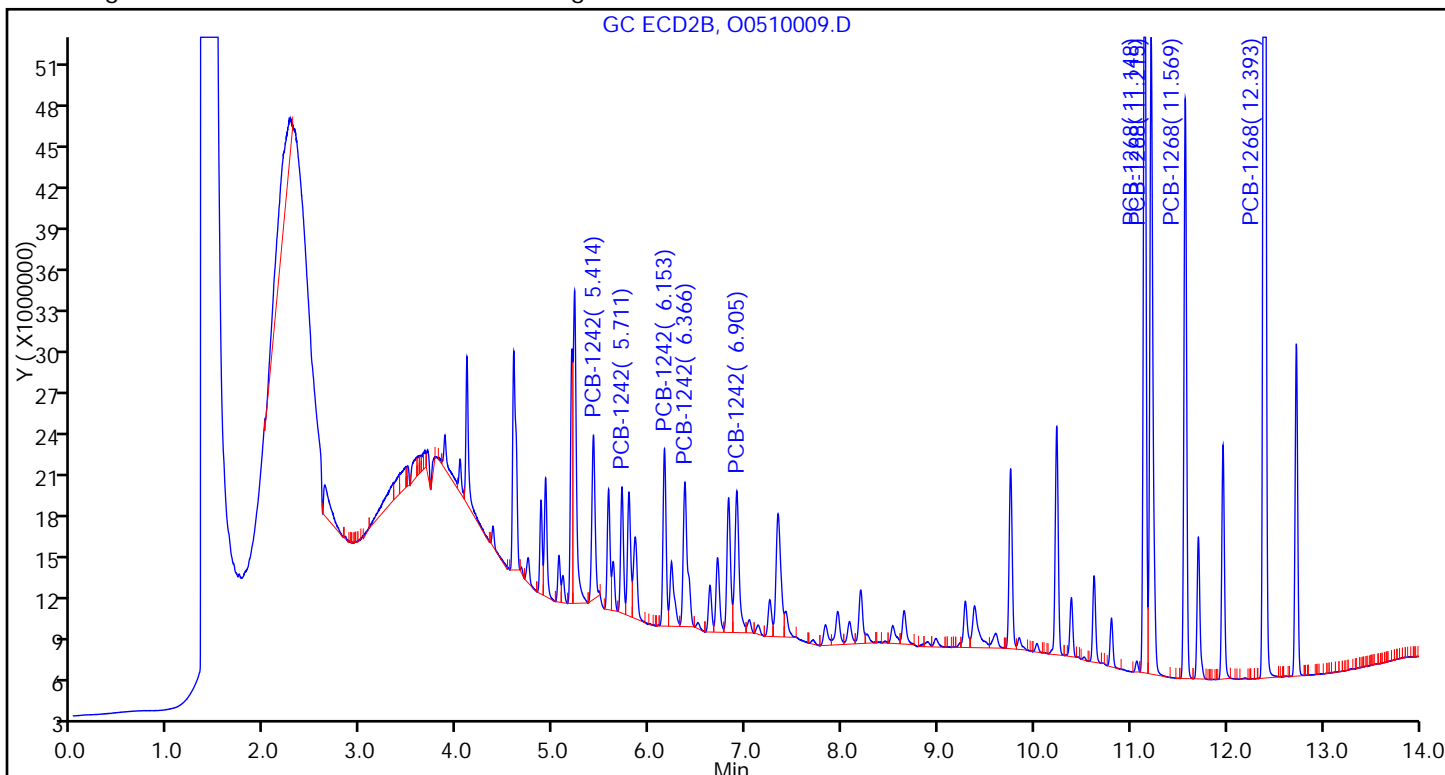
Method: PCB\_CHGC8DUAL

Limit Group: GCS 8082A ICAL

Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



TestAmerica Pittsburgh  
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\O0510010.D  
 Lims ID: IC  
 Client ID:  
 Sample Type: IC Calib Level: 4  
 Inject. Date: 11-May-2015 15:12:42 ALS Bottle#: 11 Worklist Smp#: 11  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 180-0006866-011  
 Operator ID: 402360 Instrument ID: CHGC8  
 Sublist: chrom-PCB\_CHGC8DUAL\*sub9  
 Method: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\PCB\_CHGC8DUAL.m  
 Limit Group: GCS 8082A ICAL  
 Last Update: 12-May-2015 16:53:04 Calib Date: 11-May-2015 18:31:22  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICal File: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\O0510020.D  
 Column 1 : Det: GC ECD1A  
 Column 2 : Det: GC ECD2B  
 Process Host: XAWRK022

First Level Reviewer: guptaa Date: 11-May-2015 15:49:29

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng | OnCol Amt ng | Flags |
|-----|-----------|---------------|---------------|----------|------------|--------------|-------|
|-----|-----------|---------------|---------------|----------|------------|--------------|-------|

3 PCB-1242

|   |       |       |       |           |        |        |   |
|---|-------|-------|-------|-----------|--------|--------|---|
| 1 | 4.371 | 4.371 | 0.000 | 15881465H | 0.5000 | 0.5135 | M |
| 1 | 4.443 | 4.443 | 0.000 | 11497080H | 0.5000 | 0.5214 | M |
| 1 | 4.858 | 4.858 | 0.000 | 15817220H | 0.5000 | 0.5516 | M |
| 1 | 4.970 | 4.970 | 0.000 | 9831393H  | 0.5000 | 0.5490 | M |
| 1 | 5.431 | 5.431 | 0.000 | 11869649H | 0.5000 | 0.5605 | M |

Average of Peak Amounts = 0.5392

|   |       |       |       |           |        |        |  |
|---|-------|-------|-------|-----------|--------|--------|--|
| 2 | 5.414 | 5.414 | 0.000 | 23297976H | 0.5000 | 0.5026 |  |
| 2 | 5.712 | 5.712 | 0.000 | 17143320H | 0.5000 | 0.4952 |  |
| 2 | 6.153 | 6.153 | 0.000 | 24388526H | 0.5000 | 0.5074 |  |
| 2 | 6.365 | 6.365 | 0.000 | 20256159H | 0.5000 | 0.5175 |  |
| 2 | 6.906 | 6.906 | 0.000 | 20075235H | 0.5000 | 0.5294 |  |

Average of Peak Amounts = 0.5104

RPD = 5.49

10 PCB-1268

|   |        |        |       |            |        |        |  |
|---|--------|--------|-------|------------|--------|--------|--|
| 1 | 9.579  | 9.579  | 0.000 | 80597116H  | 0.5000 | 0.5012 |  |
| 1 | 9.647  | 9.647  | 0.000 | 67880937H  | 0.5000 | 0.4995 |  |
| 1 | 9.955  | 9.955  | 0.000 | 62659919H  | 0.5000 | 0.4917 |  |
| 1 | 10.939 | 10.939 | 0.000 | 184146683H | 0.5000 | 0.4986 |  |

Average of Peak Amounts = 0.4977

|   |        |        |       |            |        |        |  |
|---|--------|--------|-------|------------|--------|--------|--|
| 2 | 11.149 | 11.149 | 0.000 | 108752292H | 0.5000 | 0.4993 |  |
| 2 | 11.216 | 11.216 | 0.000 | 87677727H  | 0.5000 | 0.5079 |  |
| 2 | 11.571 | 11.571 | 0.000 | 80581642H  | 0.5000 | 0.5008 |  |
| 2 | 12.395 | 12.395 | 0.000 | 248288960H | 0.5000 | 0.5175 |  |

Average of Peak Amounts = 0.5064

RPD = 1.72

**QC Flag Legend**

Review Flags

M - Manually Integrated

**Reagents:**

GCAR4268CALL4\_00001

Amount Added: 1.00

Units: mL

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\O0510010.D

Injection Date: 11-May-2015 15:12:42 Instrument ID: CHGC8

Lims ID: IC

Client ID:

Operator ID: 402360

ALS Bottle#: 11

Worklist Smp#: 11

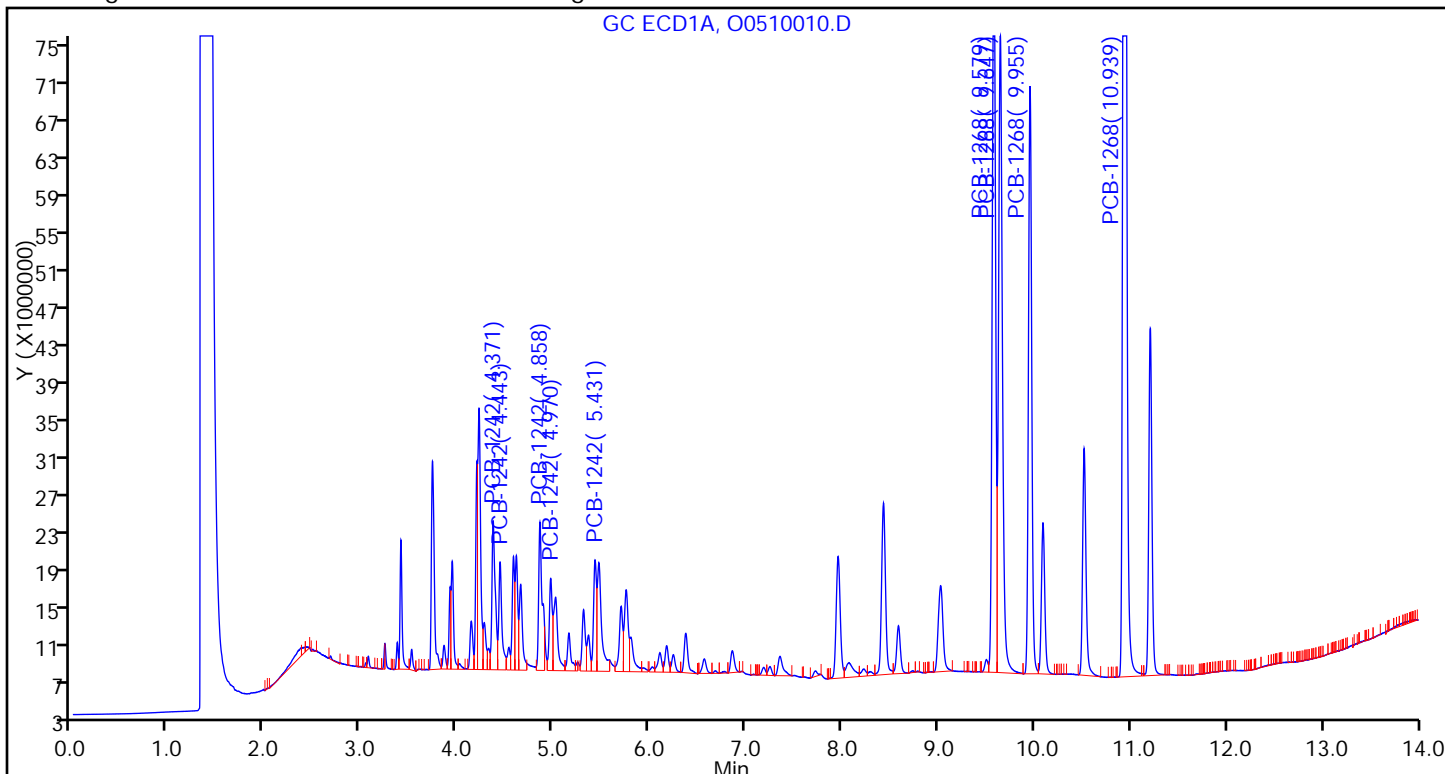
Injection Vol: 1.0 ul

Dil. Factor: 1.0000

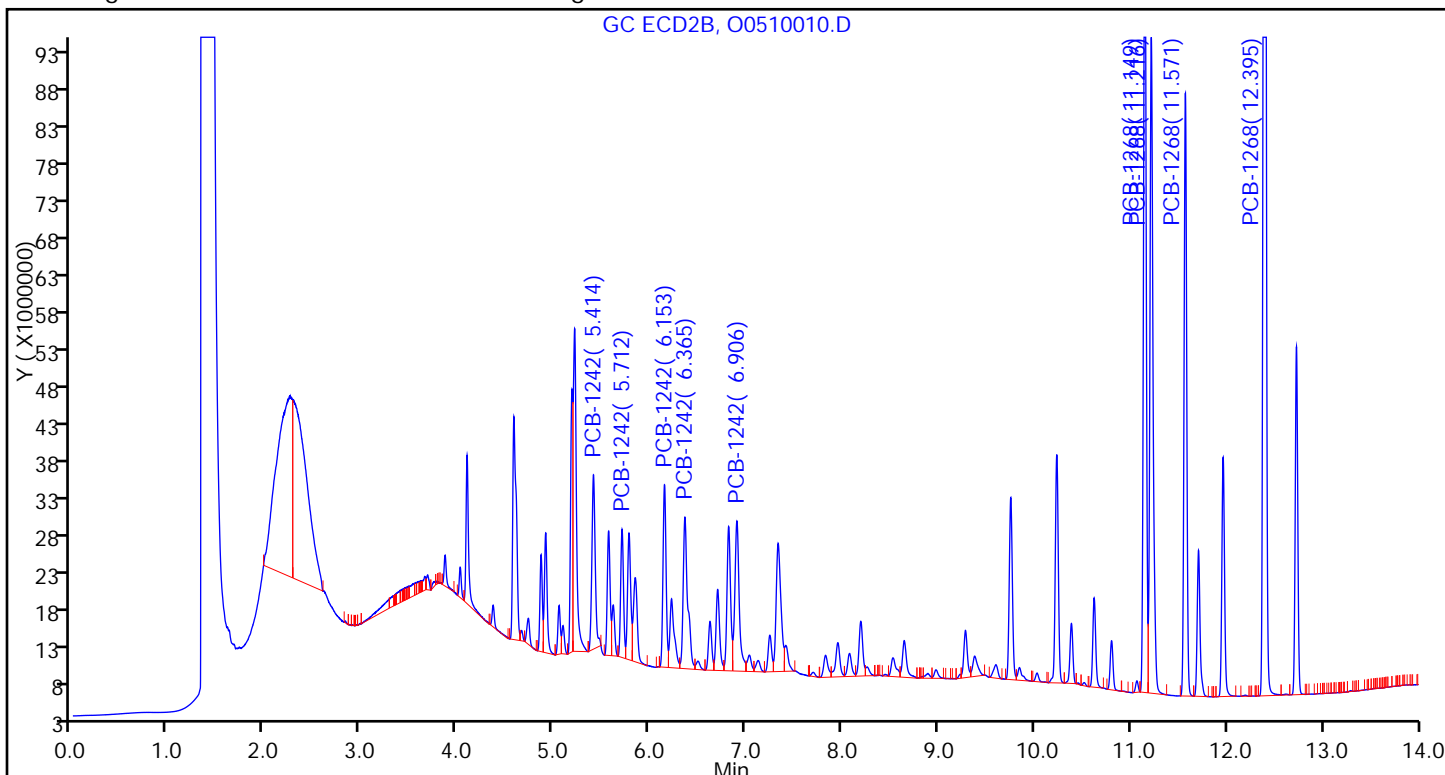
Method: PCB\_CHGC8DUAL

Limit Group: GCS 8082A ICAL

Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



TestAmerica Pittsburgh  
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\O0510011.D  
 Lims ID: IC  
 Client ID:  
 Sample Type: IC Calib Level: 5  
 Inject. Date: 11-May-2015 15:32:33 ALS Bottle#: 12 Worklist Smp#: 12  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 180-0006866-012  
 Operator ID: 402360 Instrument ID: CHGC8  
 Sublist: chrom-PCB\_CHGC8DUAL\*sub9  
 Method: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\PCB\_CHGC8DUAL.m  
 Limit Group: GCS 8082A ICAL  
 Last Update: 12-May-2015 16:53:07 Calib Date: 11-May-2015 18:31:22  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICal File: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\O0510020.D  
 Column 1 : Det: GC ECD1A  
 Column 2 : Det: GC ECD2B  
 Process Host: XAWRK022

First Level Reviewer: guptaa Date: 11-May-2015 16:04:06

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng | OnCol Amt ng | Flags |
|-----|-----------|---------------|---------------|----------|------------|--------------|-------|
|-----|-----------|---------------|---------------|----------|------------|--------------|-------|

3 PCB-1242

|   |       |       |        |           |      |        |   |
|---|-------|-------|--------|-----------|------|--------|---|
| 1 | 4.372 | 4.371 | 0.001  | 29909535H | 1.00 | 0.9671 | M |
| 1 | 4.444 | 4.443 | 0.001  | 21629663H | 1.00 | 0.9810 | M |
| 1 | 4.859 | 4.858 | 0.001  | 29110431H | 1.00 | 1.02   | M |
| 1 | 4.969 | 4.970 | -0.001 | 18414431H | 1.00 | 1.03   | M |
| 1 | 5.433 | 5.431 | 0.002  | 22620319H | 1.00 | 1.07   | M |

Average of Peak Amounts = 1.01

|   |       |       |        |           |      |        |  |
|---|-------|-------|--------|-----------|------|--------|--|
| 2 | 5.415 | 5.414 | 0.001  | 45353938H | 1.00 | 0.9783 |  |
| 2 | 5.713 | 5.712 | 0.001  | 32488037H | 1.00 | 0.9385 |  |
| 2 | 6.154 | 6.153 | 0.001  | 44748763H | 1.00 | 0.9310 |  |
| 2 | 6.366 | 6.365 | 0.001  | 37854293H | 1.00 | 0.9672 |  |
| 2 | 6.905 | 6.906 | -0.001 | 37935804H | 1.00 | 1.00   |  |

RPD = 4.95

10 PCB-1268

|   |        |        |        |            |      |        |  |
|---|--------|--------|--------|------------|------|--------|--|
| 1 | 9.579  | 9.579  | 0.000  | 150901581H | 1.00 | 0.9383 |  |
| 1 | 9.646  | 9.647  | -0.001 | 131093529H | 1.00 | 0.9646 |  |
| 1 | 9.956  | 9.955  | 0.001  | 120955247H | 1.00 | 0.9492 |  |
| 1 | 10.939 | 10.939 | 0.000  | 347497363H | 1.00 | 0.9410 |  |

Average of Peak Amounts = 0.9483

|   |        |        |        |            |      |        |  |
|---|--------|--------|--------|------------|------|--------|--|
| 2 | 11.149 | 11.149 | 0.000  | 213938256H | 1.00 | 0.9821 |  |
| 2 | 11.216 | 11.216 | 0.000  | 169624424H | 1.00 | 0.9825 |  |
| 2 | 11.571 | 11.571 | 0.000  | 156279673H | 1.00 | 0.9713 |  |
| 2 | 12.394 | 12.395 | -0.001 | 474368100H | 1.00 | 0.9888 |  |

RPD = 3.41

### QC Flag Legend

Review Flags

M - Manually Integrated

### Reagents:

GCAR4268CALL5\_00001

Amount Added: 1.00

Units: mL

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\O0510011.D

Injection Date: 11-May-2015 15:32:33 Instrument ID: CHGC8

Lims ID: IC

Client ID:

Operator ID: 402360

ALS Bottle#: 12

Worklist Smp#: 12

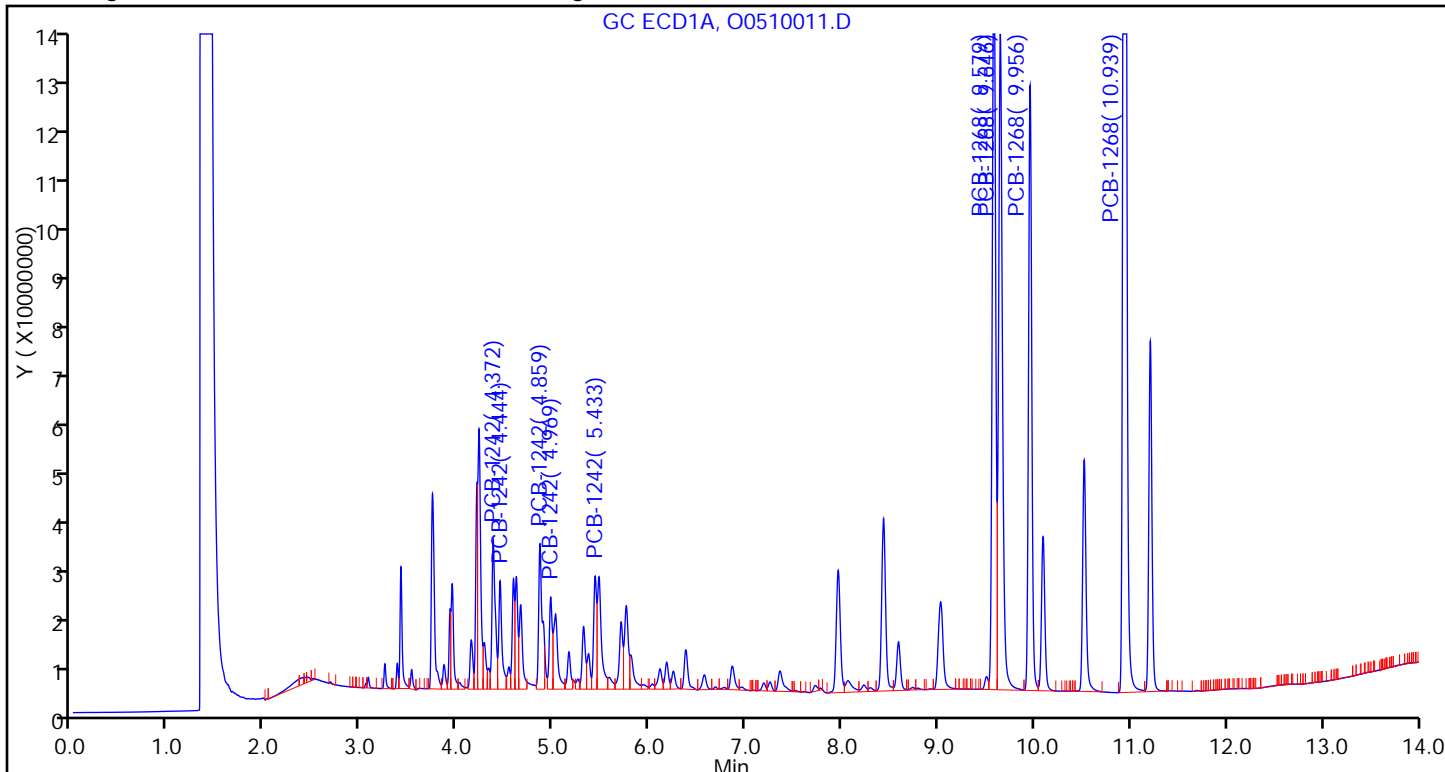
Injection Vol: 1.0 ul

Dil. Factor: 1.0000

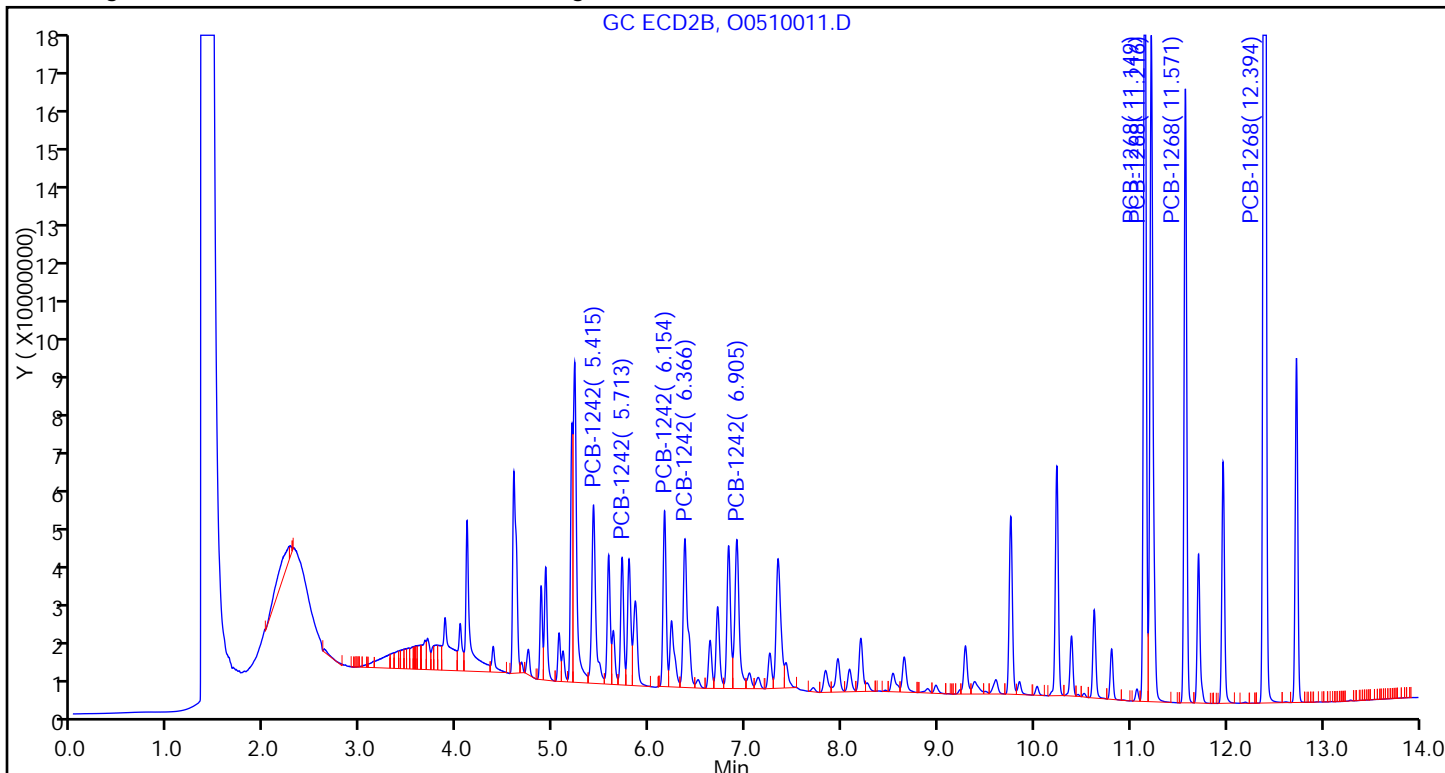
Method: PCB\_CHGC8DUAL

Limit Group: GCS 8082A ICAL

Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



FORM VI  
GC SEMI VOA INITIAL CALIBRATION DATA  
EXTERNAL STANDARD RETENTION TIME SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-43791-1 Analy Batch No.: 141160

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

Instrument ID: CHGC8 GC Column: RTX-CLP1 ID: 0.53 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/11/2015 15:52 Calibration End Date: 05/11/2015 15:52 Calibration ID: 23840

Calibration Files:

|         |                  |              |
|---------|------------------|--------------|
| LEVEL:  | LAB SAMPLE ID:   | LAB FILE ID: |
| Level 1 | IC 180-141160/13 | 00510012.D   |

| ANALYTE         | LVL 1  |  |  |  |  |  |  |  |  |  | RT WINDOW       | AVG RT |
|-----------------|--------|--|--|--|--|--|--|--|--|--|-----------------|--------|
| PCB-1232 Peak 1 | 3.246  |  |  |  |  |  |  |  |  |  | 3.196 - 3.296   | 3.246  |
| PCB-1232 Peak 2 | 3.741  |  |  |  |  |  |  |  |  |  | 3.691 - 3.791   | 3.741  |
| PCB-1232 Peak 3 | 4.859  |  |  |  |  |  |  |  |  |  | 4.809 - 4.909   | 4.859  |
| PCB-1232 Peak 4 | 5.365  |  |  |  |  |  |  |  |  |  | 5.315 - 5.415   | 5.365  |
| PCB-1232 Peak 5 | 6.158  |  |  |  |  |  |  |  |  |  | 6.108 - 6.208   | 6.158  |
| PCB-1262 Peak 1 | 7.416  |  |  |  |  |  |  |  |  |  | 7.366 - 7.466   | 7.416  |
| PCB-1262 Peak 2 | 8.057  |  |  |  |  |  |  |  |  |  | 8.007 - 8.107   | 8.057  |
| PCB-1262 Peak 3 | 8.522  |  |  |  |  |  |  |  |  |  | 8.472 - 8.572   | 8.522  |
| PCB-1262 Peak 4 | 10.105 |  |  |  |  |  |  |  |  |  | 10.055 - 10.155 | 10.105 |
| PCB-1262 Peak 5 | 10.519 |  |  |  |  |  |  |  |  |  | 10.469 - 10.569 | 10.519 |



FORM VI  
GC SEMI VOA INITIAL CALIBRATION DATA  
EXTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Pittsburgh Job No.: 180-43791-1 Analy Batch No.: 141160

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

Instrument ID: CHGC8 GC Column: RTX-CLP1 ID: 0.53 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/11/2015 15:52 Calibration End Date: 05/11/2015 15:52 Calibration ID: 23840

Calibration Files:

|         |                  |              |
|---------|------------------|--------------|
| LEVEL:  | LAB SAMPLE ID:   | LAB FILE ID: |
| Level 1 | IC 180-141160/13 | 00510012.D   |

| ANALYTE         | CF       |  |  | CURVE TYPE | COEFFICIENT |            |    | # | MIN CF | %RSD | # | MAX %RSD | R^2 OR COD | # | MIN R^2 OR COD |
|-----------------|----------|--|--|------------|-------------|------------|----|---|--------|------|---|----------|------------|---|----------------|
|                 | LVL 1    |  |  |            | B           | M1         | M2 |   |        |      |   |          |            |   |                |
| PCB-1232 Peak 1 | 13509540 |  |  | Ave        |             | 13509540.0 |    |   |        |      |   | 20.0     |            |   |                |
| PCB-1232 Peak 2 | 23284952 |  |  | Ave        |             | 23284952.0 |    |   |        |      |   | 20.0     |            |   |                |
| PCB-1232 Peak 3 | 12984854 |  |  | Ave        |             | 12984854.0 |    |   |        |      |   | 20.0     |            |   |                |
| PCB-1232 Peak 4 | 9744782  |  |  | Ave        |             | 9744782.00 |    |   |        |      |   | 20.0     |            |   |                |
| PCB-1232 Peak 5 | 8761170  |  |  | Ave        |             | 8761170.00 |    |   |        |      |   | 20.0     |            |   |                |
| PCB-1262 Peak 1 | 20616268 |  |  | Ave        |             | 20616268.0 |    |   |        |      |   | 20.0     |            |   |                |
| PCB-1262 Peak 2 | 28280026 |  |  | Ave        |             | 28280026.0 |    |   |        |      |   | 20.0     |            |   |                |
| PCB-1262 Peak 3 | 27269690 |  |  | Ave        |             | 27269690.0 |    |   |        |      |   | 20.0     |            |   |                |
| PCB-1262 Peak 4 | 19065798 |  |  | Ave        |             | 19065798.0 |    |   |        |      |   | 20.0     |            |   |                |
| PCB-1262 Peak 5 | 43778002 |  |  | Ave        |             | 43778002.0 |    |   |        |      |   | 20.0     |            |   |                |

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

FORM VI  
GC SEMI VOA INITIAL CALIBRATION DATA  
EXTERNAL STANDARD RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Pittsburgh Job No.: 180-43791-1 Analy Batch No.: 141160

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

Instrument ID: CHGC8 GC Column: RTX-CLP1 ID: 0.53 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/11/2015 15:52 Calibration End Date: 05/11/2015 15:52 Calibration ID: 23840

Calibration Files:

|         |                  |              |
|---------|------------------|--------------|
| LEVEL:  | LAB SAMPLE ID:   | LAB FILE ID: |
| Level 1 | IC 180-141160/13 | 00510012.D   |

| ANALYTE         | CURVE TYPE | RESPONSE |  |  |  |  | CONCENTRATION (NG) |  |  |  |  |
|-----------------|------------|----------|--|--|--|--|--------------------|--|--|--|--|
|                 |            | LVL 1    |  |  |  |  | LVL 1              |  |  |  |  |
| PCB-1232 Peak 1 | Ave        | 6754770  |  |  |  |  | 0.500              |  |  |  |  |
| PCB-1232 Peak 2 | Ave        | 11642476 |  |  |  |  | 0.500              |  |  |  |  |
| PCB-1232 Peak 3 | Ave        | 6492427  |  |  |  |  | 0.500              |  |  |  |  |
| PCB-1232 Peak 4 | Ave        | 4872391  |  |  |  |  | 0.500              |  |  |  |  |
| PCB-1232 Peak 5 | Ave        | 4380585  |  |  |  |  | 0.500              |  |  |  |  |
| PCB-1262 Peak 1 | Ave        | 10308134 |  |  |  |  | 0.500              |  |  |  |  |
| PCB-1262 Peak 2 | Ave        | 14140013 |  |  |  |  | 0.500              |  |  |  |  |
| PCB-1262 Peak 3 | Ave        | 13634845 |  |  |  |  | 0.500              |  |  |  |  |
| PCB-1262 Peak 4 | Ave        | 9532899  |  |  |  |  | 0.500              |  |  |  |  |
| PCB-1262 Peak 5 | Ave        | 21889001 |  |  |  |  | 0.500              |  |  |  |  |

Curve Type Legend:

Ave = Average by Height

TestAmerica Pittsburgh  
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\O0510012.D  
 Lims ID: IC  
 Client ID:  
 Sample Type: IC Calib Level: 4  
 Inject. Date: 11-May-2015 15:52:23 ALS Bottle#: 13 Worklist Smp#: 13  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 180-0006866-013  
 Operator ID: 402360 Instrument ID: CHGC8  
 Sublist: chrom-PCB\_CHGC8DUAL\*sub10  
 Method: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\PCB\_CHGC8DUAL.m  
 Limit Group: GCS 8082A ICAL  
 Last Update: 12-May-2015 16:53:10 Calib Date: 11-May-2015 18:31:22  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICal File: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\O0510020.D  
 Column 1 : Det: GC ECD1A  
 Column 2 : Det: GC ECD2B  
 Process Host: XAWRK022

First Level Reviewer: gupta Date: 11-May-2015 16:51:05

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng | OnCol Amt ng | Flags |
|-----|-----------|---------------|---------------|----------|------------|--------------|-------|
|-----|-----------|---------------|---------------|----------|------------|--------------|-------|

5 PCB-1232

|   |       |       |       |           |        |        |  |
|---|-------|-------|-------|-----------|--------|--------|--|
| 1 | 3.246 | 3.246 | 0.000 | 6754770H  | 0.5000 | 0.5000 |  |
| 1 | 3.741 | 3.741 | 0.000 | 11642476H | 0.5000 | 0.5000 |  |
| 1 | 4.859 | 4.859 | 0.000 | 6492427H  | 0.5000 | 0.5000 |  |
| 1 | 5.365 | 5.365 | 0.000 | 4872391H  | 0.5000 | 0.5000 |  |
| 1 | 6.158 | 6.158 | 0.000 | 4380585H  | 0.5000 | 0.5000 |  |

Average of Peak Amounts = 0.5000

|   |       |       |       |           |        |        |  |
|---|-------|-------|-------|-----------|--------|--------|--|
| 2 | 3.873 | 3.873 | 0.000 | 15908983H | 0.5000 | 0.5000 |  |
| 2 | 4.028 | 4.028 | 0.000 | 11328853H | 0.5000 | 0.5000 |  |
| 2 | 4.918 | 4.918 | 0.000 | 8814893H  | 0.5000 | 0.5000 |  |
| 2 | 5.573 | 5.573 | 0.000 | 8863632H  | 0.5000 | 0.5000 |  |
| 2 | 6.367 | 6.367 | 0.000 | 9305962H  | 0.5000 | 0.5000 |  |

Average of Peak Amounts = 0.5000

RPD = 0.00

9 PCB-1262

|   |        |        |       |           |        |        |  |
|---|--------|--------|-------|-----------|--------|--------|--|
| 1 | 7.416  | 7.416  | 0.000 | 10308134H | 0.5000 | 0.5000 |  |
| 1 | 8.057  | 8.057  | 0.000 | 14140013H | 0.5000 | 0.5000 |  |
| 1 | 8.522  | 8.522  | 0.000 | 13634845H | 0.5000 | 0.5000 |  |
| 1 | 10.105 | 10.105 | 0.000 | 9532899H  | 0.5000 | 0.5000 |  |
| 1 | 10.519 | 10.519 | 0.000 | 21889001H | 0.5000 | 0.5000 |  |

Average of Peak Amounts = 0.5000

|   |        |        |       |           |        |        |  |
|---|--------|--------|-------|-----------|--------|--------|--|
| 2 | 9.597  | 9.597  | 0.000 | 26821352H | 0.5000 | 0.5000 |  |
| 2 | 9.846  | 9.846  | 0.000 | 27031591H | 0.5000 | 0.5000 |  |
| 2 | 10.342 | 10.342 | 0.000 | 22721089H | 0.5000 | 0.5000 |  |
| 2 | 11.742 | 11.742 | 0.000 | 11653144H | 0.5000 | 0.5000 |  |
| 2 | 11.964 | 11.964 | 0.000 | 28475723H | 0.5000 | 0.5000 |  |

Average of Peak Amounts = 0.5000

RPD = 0.00

Reagents:

GCAR3262CALL4\_00001

Amount Added: 1.00

Units: mL

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\O0510012.D

Injection Date: 11-May-2015 15:52:23 Instrument ID: CHGC8

Lims ID: IC

Client ID:

Operator ID: 402360

ALS Bottle#: 13

Worklist Smp#: 13

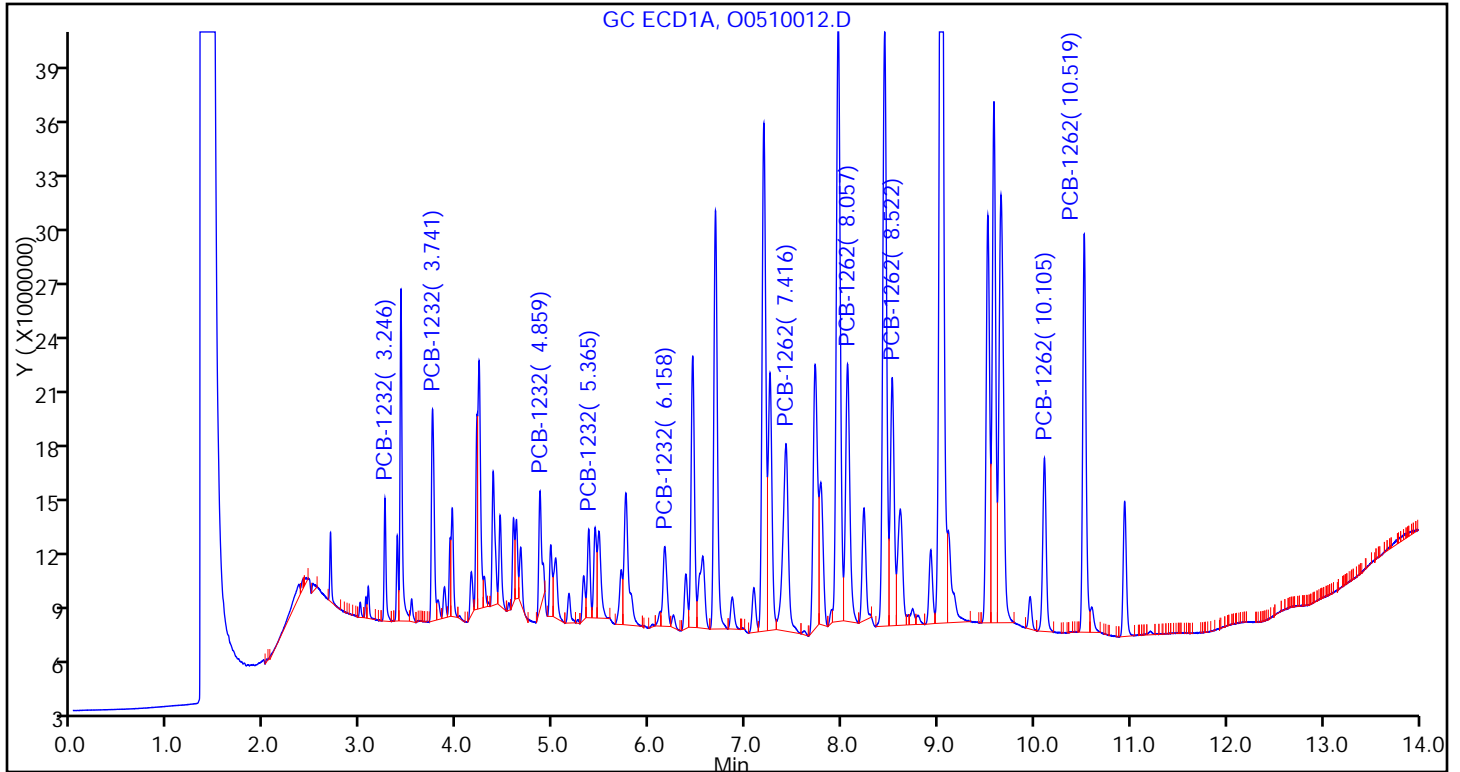
Injection Vol: 1.0 ul

Dil. Factor: 1.0000

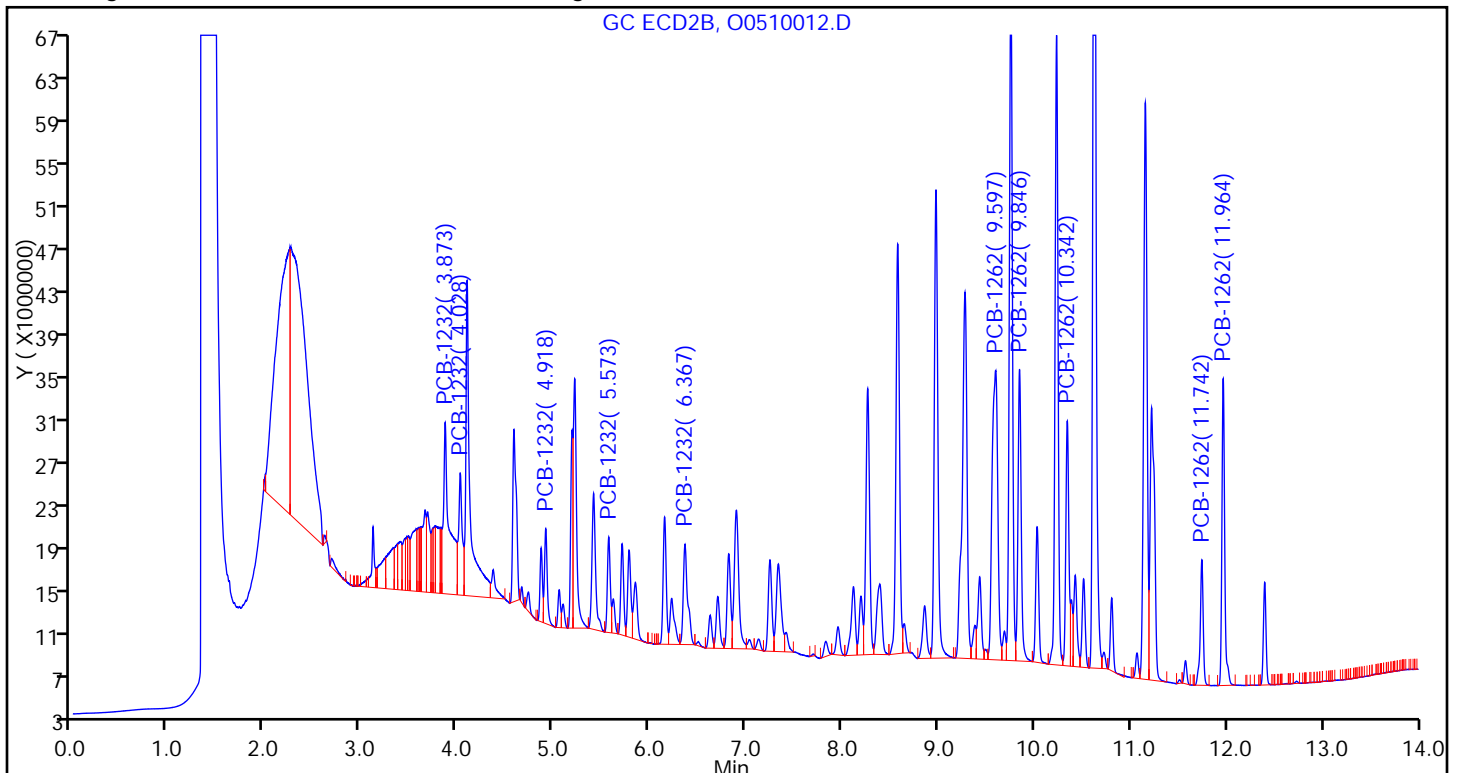
Method: PCB\_CHGC8DUAL

Limit Group: GCS 8082A ICAL

Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



FORM VI  
GC SEMI VOA INITIAL CALIBRATION DATA  
EXTERNAL STANDARD RETENTION TIME SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-43791-1 Analy Batch No.: 141160

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

Instrument ID: CHGC8 GC Column: RTX-CLP2 ID: 0.53 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/11/2015 15:52 Calibration End Date: 05/11/2015 15:52 Calibration ID: 23841

Calibration Files:

|         |                  |              |
|---------|------------------|--------------|
| LEVEL:  | LAB SAMPLE ID:   | LAB FILE ID: |
| Level 1 | IC 180-141160/13 | 00510012.D   |

| ANALYTE         | LVL 1  |  |  |  |  |  |  |  |  |  | RT WINDOW       | AVG RT |
|-----------------|--------|--|--|--|--|--|--|--|--|--|-----------------|--------|
| PCB-1232 Peak 1 | 3.873  |  |  |  |  |  |  |  |  |  | 3.823 - 3.923   | 3.873  |
| PCB-1232 Peak 2 | 4.028  |  |  |  |  |  |  |  |  |  | 3.978 - 4.078   | 4.028  |
| PCB-1232 Peak 3 | 4.918  |  |  |  |  |  |  |  |  |  | 4.868 - 4.968   | 4.918  |
| PCB-1232 Peak 4 | 5.573  |  |  |  |  |  |  |  |  |  | 5.523 - 5.623   | 5.573  |
| PCB-1232 Peak 5 | 6.367  |  |  |  |  |  |  |  |  |  | 6.317 - 6.417   | 6.367  |
| PCB-1262 Peak 1 | 9.597  |  |  |  |  |  |  |  |  |  | 9.547 - 9.647   | 9.597  |
| PCB-1262 Peak 2 | 9.846  |  |  |  |  |  |  |  |  |  | 9.796 - 9.896   | 9.846  |
| PCB-1262 Peak 3 | 10.342 |  |  |  |  |  |  |  |  |  | 10.292 - 10.392 | 10.342 |
| PCB-1262 Peak 4 | 11.742 |  |  |  |  |  |  |  |  |  | 11.692 - 11.792 | 11.742 |
| PCB-1262 Peak 5 | 11.964 |  |  |  |  |  |  |  |  |  | 11.914 - 12.014 | 11.964 |

FORM VI  
GC SEMI VOA INITIAL CALIBRATION DATA  
EXTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Pittsburgh Job No.: 180-43791-1 Analy Batch No.: 141160

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

Instrument ID: CHGC8 GC Column: RTX-CLP2 ID: 0.53 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/11/2015 15:52 Calibration End Date: 05/11/2015 15:52 Calibration ID: 23841

Calibration Files:

|         |                  |              |
|---------|------------------|--------------|
| LEVEL:  | LAB SAMPLE ID:   | LAB FILE ID: |
| Level 1 | IC 180-141160/13 | 00510012.D   |

| ANALYTE         | CF       |  |  | CURVE TYPE | COEFFICIENT |            |    | # | MIN CF | %RSD | # | MAX %RSD | R^2 OR COD | # | MIN R^2 OR COD |
|-----------------|----------|--|--|------------|-------------|------------|----|---|--------|------|---|----------|------------|---|----------------|
|                 | LVL 1    |  |  |            | B           | M1         | M2 |   |        |      |   |          |            |   |                |
| PCB-1232 Peak 1 | 31817966 |  |  | Ave        |             | 31817966.0 |    |   |        |      |   | 20.0     |            |   |                |
| PCB-1232 Peak 2 | 22657706 |  |  | Ave        |             | 22657706.0 |    |   |        |      |   | 20.0     |            |   |                |
| PCB-1232 Peak 3 | 17629786 |  |  | Ave        |             | 17629786.0 |    |   |        |      |   | 20.0     |            |   |                |
| PCB-1232 Peak 4 | 17727264 |  |  | Ave        |             | 17727264.0 |    |   |        |      |   | 20.0     |            |   |                |
| PCB-1232 Peak 5 | 18611924 |  |  | Ave        |             | 18611924.0 |    |   |        |      |   | 20.0     |            |   |                |
| PCB-1262 Peak 1 | 53642704 |  |  | Ave        |             | 53642704.0 |    |   |        |      |   | 20.0     |            |   |                |
| PCB-1262 Peak 2 | 54063182 |  |  | Ave        |             | 54063182.0 |    |   |        |      |   | 20.0     |            |   |                |
| PCB-1262 Peak 3 | 45442178 |  |  | Ave        |             | 45442178.0 |    |   |        |      |   | 20.0     |            |   |                |
| PCB-1262 Peak 4 | 23306288 |  |  | Ave        |             | 23306288.0 |    |   |        |      |   | 20.0     |            |   |                |
| PCB-1262 Peak 5 | 56951446 |  |  | Ave        |             | 56951446.0 |    |   |        |      |   | 20.0     |            |   |                |

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

FORM VI  
GC SEMI VOA INITIAL CALIBRATION DATA  
EXTERNAL STANDARD RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Pittsburgh Job No.: 180-43791-1 Analy Batch No.: 141160

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

Instrument ID: CHGC8 GC Column: RTX-CLP2 ID: 0.53 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/11/2015 15:52 Calibration End Date: 05/11/2015 15:52 Calibration ID: 23841

Calibration Files:

|         |                  |              |
|---------|------------------|--------------|
| LEVEL:  | LAB SAMPLE ID:   | LAB FILE ID: |
| Level 1 | IC 180-141160/13 | 00510012.D   |

| ANALYTE         | CURVE TYPE | RESPONSE |  |  |  |  | CONCENTRATION (NG) |  |  |  |  |
|-----------------|------------|----------|--|--|--|--|--------------------|--|--|--|--|
|                 |            | LVL 1    |  |  |  |  | LVL 1              |  |  |  |  |
| PCB-1232 Peak 1 | Ave        | 15908983 |  |  |  |  | 0.500              |  |  |  |  |
| PCB-1232 Peak 2 | Ave        | 11328853 |  |  |  |  | 0.500              |  |  |  |  |
| PCB-1232 Peak 3 | Ave        | 8814893  |  |  |  |  | 0.500              |  |  |  |  |
| PCB-1232 Peak 4 | Ave        | 8863632  |  |  |  |  | 0.500              |  |  |  |  |
| PCB-1232 Peak 5 | Ave        | 9305962  |  |  |  |  | 0.500              |  |  |  |  |
| PCB-1262 Peak 1 | Ave        | 26821352 |  |  |  |  | 0.500              |  |  |  |  |
| PCB-1262 Peak 2 | Ave        | 27031591 |  |  |  |  | 0.500              |  |  |  |  |
| PCB-1262 Peak 3 | Ave        | 22721089 |  |  |  |  | 0.500              |  |  |  |  |
| PCB-1262 Peak 4 | Ave        | 11653144 |  |  |  |  | 0.500              |  |  |  |  |
| PCB-1262 Peak 5 | Ave        | 28475723 |  |  |  |  | 0.500              |  |  |  |  |

Curve Type Legend:

Ave = Average by Height



TestAmerica Pittsburgh  
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\O0510012.D  
 Lims ID: IC  
 Client ID:  
 Sample Type: IC Calib Level: 4  
 Inject. Date: 11-May-2015 15:52:23 ALS Bottle#: 13 Worklist Smp#: 13  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 180-0006866-013  
 Operator ID: 402360 Instrument ID: CHGC8  
 Sublist: chrom-PCB\_CHGC8DUAL\*sub10  
 Method: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\PCB\_CHGC8DUAL.m  
 Limit Group: GCS 8082A ICAL  
 Last Update: 12-May-2015 16:53:10 Calib Date: 11-May-2015 18:31:22  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICal File: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\O0510020.D

Column 1 : Det: GC ECD1A  
 Column 2 : Det: GC ECD2B  
 Process Host: XAWRK022

First Level Reviewer: gupta Date: 11-May-2015 16:51:05

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng | OnCol Amt ng | Flags |
|-----|-----------|---------------|---------------|----------|------------|--------------|-------|
|-----|-----------|---------------|---------------|----------|------------|--------------|-------|

5 PCB-1232

|   |       |       |       |           |        |        |  |
|---|-------|-------|-------|-----------|--------|--------|--|
| 1 | 3.246 | 3.246 | 0.000 | 6754770H  | 0.5000 | 0.5000 |  |
| 1 | 3.741 | 3.741 | 0.000 | 11642476H | 0.5000 | 0.5000 |  |
| 1 | 4.859 | 4.859 | 0.000 | 6492427H  | 0.5000 | 0.5000 |  |
| 1 | 5.365 | 5.365 | 0.000 | 4872391H  | 0.5000 | 0.5000 |  |
| 1 | 6.158 | 6.158 | 0.000 | 4380585H  | 0.5000 | 0.5000 |  |

Average of Peak Amounts = 0.5000

|   |       |       |       |           |        |        |  |
|---|-------|-------|-------|-----------|--------|--------|--|
| 2 | 3.873 | 3.873 | 0.000 | 15908983H | 0.5000 | 0.5000 |  |
| 2 | 4.028 | 4.028 | 0.000 | 11328853H | 0.5000 | 0.5000 |  |
| 2 | 4.918 | 4.918 | 0.000 | 8814893H  | 0.5000 | 0.5000 |  |
| 2 | 5.573 | 5.573 | 0.000 | 8863632H  | 0.5000 | 0.5000 |  |
| 2 | 6.367 | 6.367 | 0.000 | 9305962H  | 0.5000 | 0.5000 |  |

Average of Peak Amounts = 0.5000

RPD = 0.00

9 PCB-1262

|   |        |        |       |           |        |        |  |
|---|--------|--------|-------|-----------|--------|--------|--|
| 1 | 7.416  | 7.416  | 0.000 | 10308134H | 0.5000 | 0.5000 |  |
| 1 | 8.057  | 8.057  | 0.000 | 14140013H | 0.5000 | 0.5000 |  |
| 1 | 8.522  | 8.522  | 0.000 | 13634845H | 0.5000 | 0.5000 |  |
| 1 | 10.105 | 10.105 | 0.000 | 9532899H  | 0.5000 | 0.5000 |  |
| 1 | 10.519 | 10.519 | 0.000 | 21889001H | 0.5000 | 0.5000 |  |

Average of Peak Amounts = 0.5000

|   |        |        |       |           |        |        |  |
|---|--------|--------|-------|-----------|--------|--------|--|
| 2 | 9.597  | 9.597  | 0.000 | 26821352H | 0.5000 | 0.5000 |  |
| 2 | 9.846  | 9.846  | 0.000 | 27031591H | 0.5000 | 0.5000 |  |
| 2 | 10.342 | 10.342 | 0.000 | 22721089H | 0.5000 | 0.5000 |  |
| 2 | 11.742 | 11.742 | 0.000 | 11653144H | 0.5000 | 0.5000 |  |
| 2 | 11.964 | 11.964 | 0.000 | 28475723H | 0.5000 | 0.5000 |  |

Average of Peak Amounts = 0.5000

RPD = 0.00

**Reagents:**

GCAR3262CALL4\_00001

Amount Added: 1.00

Units: mL

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\O0510012.D

Injection Date: 11-May-2015 15:52:23 Instrument ID: CHGC8

Lims ID: IC

Client ID:

Operator ID: 402360

ALS Bottle#: 13

Worklist Smp#: 13

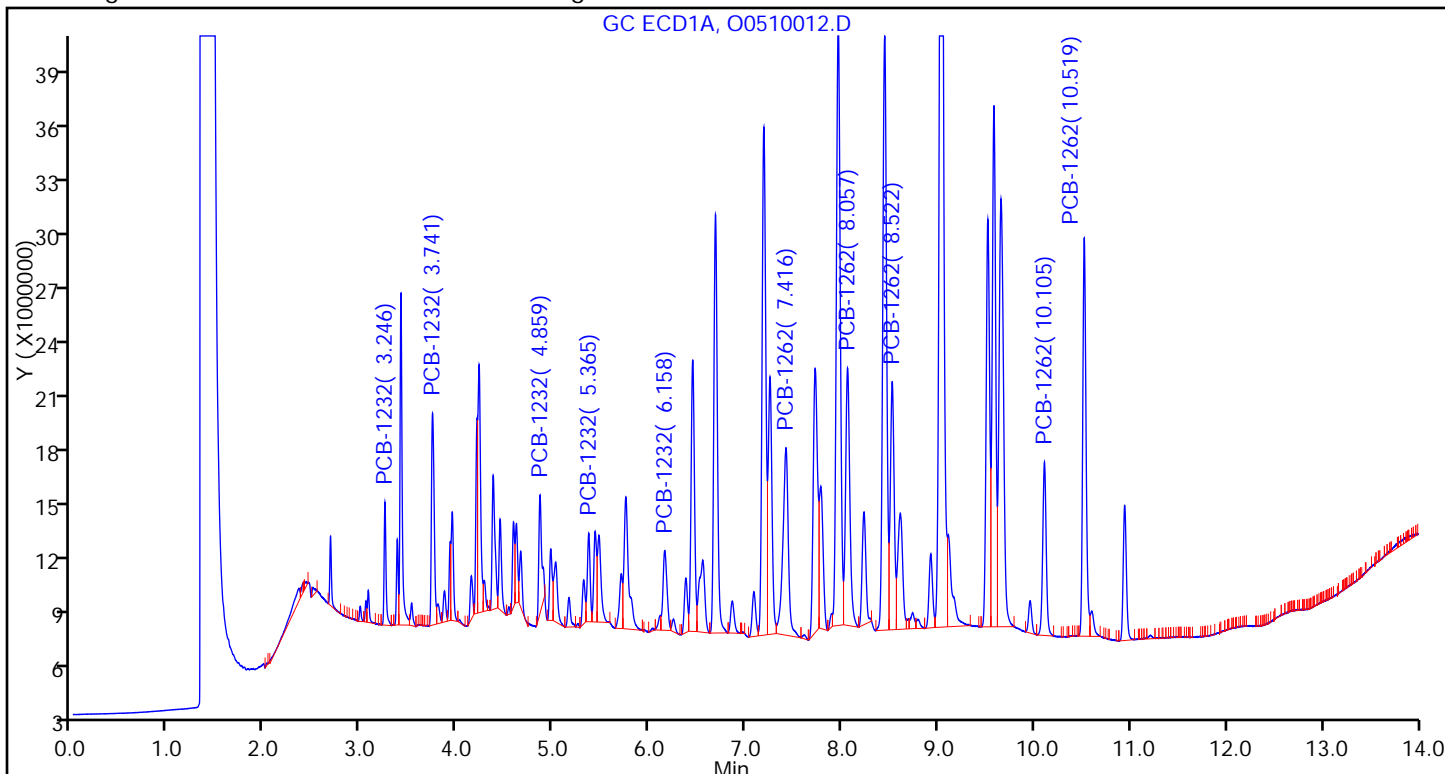
Injection Vol: 1.0 ul

Dil. Factor: 1.0000

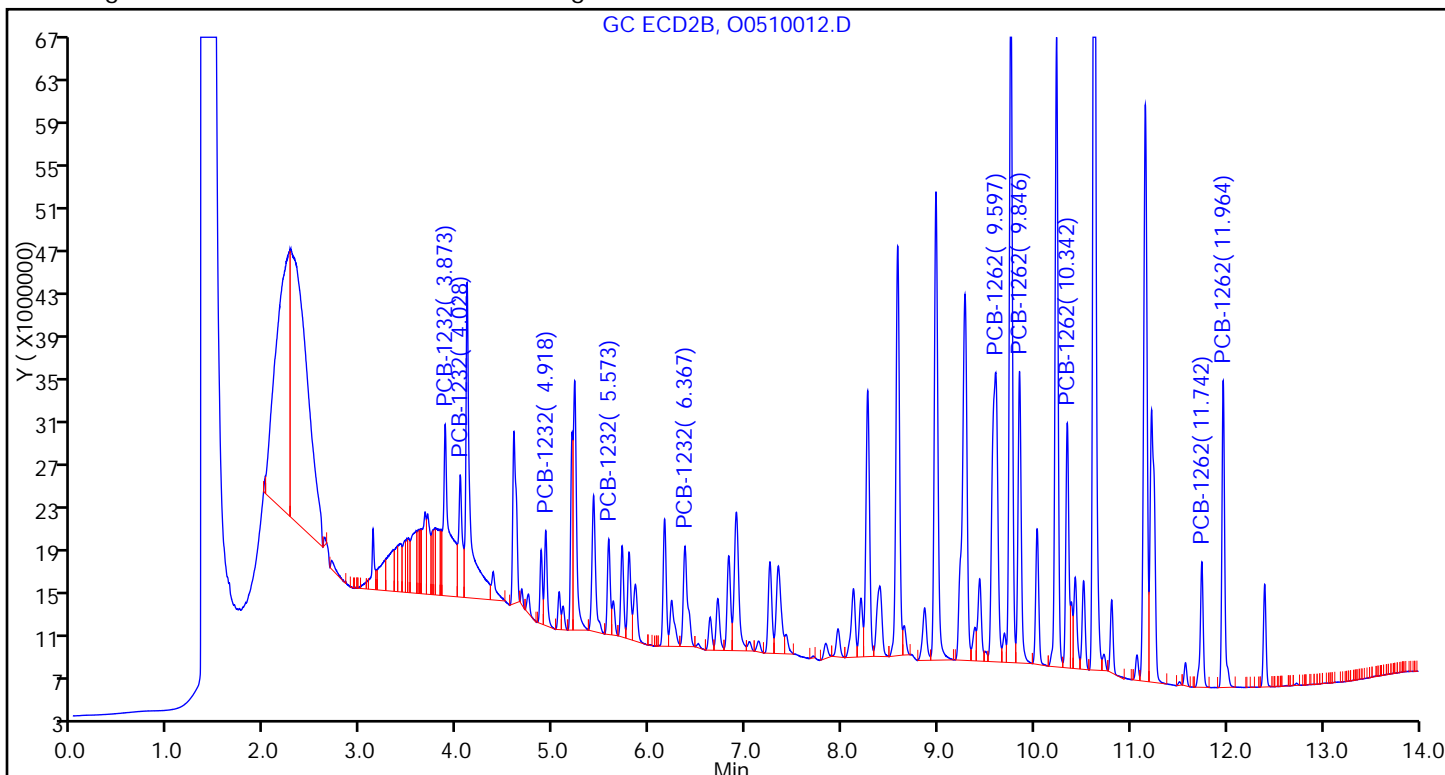
Method: PCB\_CHGC8DUAL

Limit Group: GCS 8082A ICAL

Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



FORM VI  
GC SEMI VOA INITIAL CALIBRATION DATA  
EXTERNAL STANDARD RETENTION TIME SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-43791-1 Analy Batch No.: 141160

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

Instrument ID: CHGC8 GC Column: RTX-CLP1 ID: 0.53 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/11/2015 16:12 Calibration End Date: 05/11/2015 16:12 Calibration ID: 23846

Calibration Files:

|         |                  |              |
|---------|------------------|--------------|
| LEVEL:  | LAB SAMPLE ID:   | LAB FILE ID: |
| Level 1 | IC 180-141160/14 | O0510013.D   |

| ANALYTE         | LVL 1 |  |  |  |  |  |  |  |  |  | RT WINDOW     | AVG RT |
|-----------------|-------|--|--|--|--|--|--|--|--|--|---------------|--------|
| PCB-1248 Peak 1 | 4.204 |  |  |  |  |  |  |  |  |  | 4.154 - 4.254 | 4.204  |
| PCB-1248 Peak 2 | 4.444 |  |  |  |  |  |  |  |  |  | 4.394 - 4.494 | 4.444  |
| PCB-1248 Peak 3 | 5.313 |  |  |  |  |  |  |  |  |  | 5.263 - 5.363 | 5.313  |
| PCB-1248 Peak 4 | 5.432 |  |  |  |  |  |  |  |  |  | 5.382 - 5.482 | 5.432  |
| PCB-1248 Peak 5 | 6.376 |  |  |  |  |  |  |  |  |  | 6.326 - 6.426 | 6.376  |

FORM VI  
GC SEMI VOA INITIAL CALIBRATION DATA  
EXTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Pittsburgh Job No.: 180-43791-1 Analy Batch No.: 141160

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

Instrument ID: CHGC8 GC Column: RTX-CLP1 ID: 0.53 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/11/2015 16:12 Calibration End Date: 05/11/2015 16:12 Calibration ID: 23846

Calibration Files:

|         |                  |              |
|---------|------------------|--------------|
| LEVEL:  | LAB SAMPLE ID:   | LAB FILE ID: |
| Level 1 | IC 180-141160/14 | O0510013.D   |

| ANALYTE         | CF       |  |  | CURVE TYPE | COEFFICIENT |            |    | # | MIN CF | %RSD | # | MAX %RSD | R <sup>2</sup> OR COD | # | MIN R <sup>2</sup> OR COD |
|-----------------|----------|--|--|------------|-------------|------------|----|---|--------|------|---|----------|-----------------------|---|---------------------------|
|                 | LVL 1    |  |  |            | B           | M1         | M2 |   |        |      |   |          |                       |   |                           |
| PCB-1248 Peak 1 | 31031894 |  |  | Ave        |             | 31031894.0 |    |   |        |      |   | 20.0     |                       |   |                           |
| PCB-1248 Peak 2 | 12114888 |  |  | Ave        |             | 12114888.0 |    |   |        |      |   | 20.0     |                       |   |                           |
| PCB-1248 Peak 3 | 19356928 |  |  | Ave        |             | 19356928.0 |    |   |        |      |   | 20.0     |                       |   |                           |
| PCB-1248 Peak 4 | 41731344 |  |  | Ave        |             | 41731344.0 |    |   |        |      |   | 20.0     |                       |   |                           |
| PCB-1248 Peak 5 | 22709484 |  |  | Ave        |             | 22709484.0 |    |   |        |      |   | 20.0     |                       |   |                           |

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

FORM VI  
GC SEMI VOA INITIAL CALIBRATION DATA  
EXTERNAL STANDARD RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Pittsburgh Job No.: 180-43791-1 Analy Batch No.: 141160

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

Instrument ID: CHGC8 GC Column: RTX-CLP1 ID: 0.53 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/11/2015 16:12 Calibration End Date: 05/11/2015 16:12 Calibration ID: 23846

Calibration Files:

|         |                  |              |
|---------|------------------|--------------|
| LEVEL:  | LAB SAMPLE ID:   | LAB FILE ID: |
| Level 1 | IC 180-141160/14 | O0510013.D   |

| ANALYTE         | CURVE TYPE | RESPONSE |  |  |  |  | CONCENTRATION (NG) |  |  |  |  |
|-----------------|------------|----------|--|--|--|--|--------------------|--|--|--|--|
|                 |            | LVL 1    |  |  |  |  | LVL 1              |  |  |  |  |
| PCB-1248 Peak 1 | Ave        | 15515947 |  |  |  |  | 0.500              |  |  |  |  |
| PCB-1248 Peak 2 | Ave        | 6057444  |  |  |  |  | 0.500              |  |  |  |  |
| PCB-1248 Peak 3 | Ave        | 9678464  |  |  |  |  | 0.500              |  |  |  |  |
| PCB-1248 Peak 4 | Ave        | 20865672 |  |  |  |  | 0.500              |  |  |  |  |
| PCB-1248 Peak 5 | Ave        | 11354742 |  |  |  |  | 0.500              |  |  |  |  |

Curve Type Legend:

Ave = Average by Height

TestAmerica Pittsburgh  
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\O0510013.D  
 Lims ID: IC  
 Client ID:  
 Sample Type: IC Calib Level: 4  
 Inject. Date: 11-May-2015 16:12:14 ALS Bottle#: 14 Worklist Smp#: 14  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 180-0006866-014  
 Operator ID: 402360 Instrument ID: CHGC8  
 Sublist: chrom-PCB\_CHGC8DUAL\*sub5  
 Method: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\PCB\_CHGC8DUAL.m  
 Limit Group: GCS 8082A ICAL  
 Last Update: 12-May-2015 16:53:13 Calib Date: 11-May-2015 18:31:22  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICal File: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\O0510020.D

Column 1 : Det: GC ECD1A  
 Column 2 : Det: GC ECD2B  
 Process Host: XAWRK022

First Level Reviewer: guptaa Date: 11-May-2015 16:50:29

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng | OnCol Amt ng | Flags |
|-----|-----------|---------------|---------------|----------|------------|--------------|-------|
|-----|-----------|---------------|---------------|----------|------------|--------------|-------|

|                           |       |       |       |           |        |        |   |
|---------------------------|-------|-------|-------|-----------|--------|--------|---|
| 6 PCB-1248                |       |       |       |           |        |        | M |
| 1                         | 4.204 | 4.204 | 0.000 | 15515947H | 0.5000 | 0.5000 | M |
| 1                         | 4.444 | 4.444 | 0.000 | 6057444H  | 0.5000 | 0.5000 | M |
| 1                         | 5.313 | 5.313 | 0.000 | 9678464H  | 0.5000 | 0.5000 | M |
| 1                         | 5.432 | 5.432 | 0.000 | 20865672H | 0.5000 | 0.5000 | M |
| 1                         | 6.376 | 6.376 | 0.000 | 11354742H | 0.5000 | 0.5000 | M |
| Average of Peak Amounts = |       |       |       |           |        | 0.5000 |   |
| 2                         | 6.156 | 6.156 | 0.000 | 38573593H | 0.5000 | 0.5000 |   |
| 2                         | 6.368 | 6.368 | 0.000 | 31096544H | 0.5000 | 0.5000 |   |
| 2                         | 6.708 | 6.708 | 0.000 | 16352896H | 0.5000 | 0.5000 |   |
| 2                         | 8.198 | 8.198 | 0.000 | 18078155H | 0.5000 | 0.5000 |   |
| 2                         | 7.341 | 7.341 | 0.000 | 25493656H | 0.5000 | 0.5000 |   |
| Average of Peak Amounts = |       |       |       |           |        | 0.5000 |   |

RPD = 0.00

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

GCAR1248CALL4\_00010

Amount Added: 1.00

Units: mL

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\O0510013.D

Injection Date: 11-May-2015 16:12:14

Instrument ID: CHGC8

Lims ID: IC

Client ID:

Operator ID: 402360

ALS Bottle#: 14

Worklist Smp#: 14

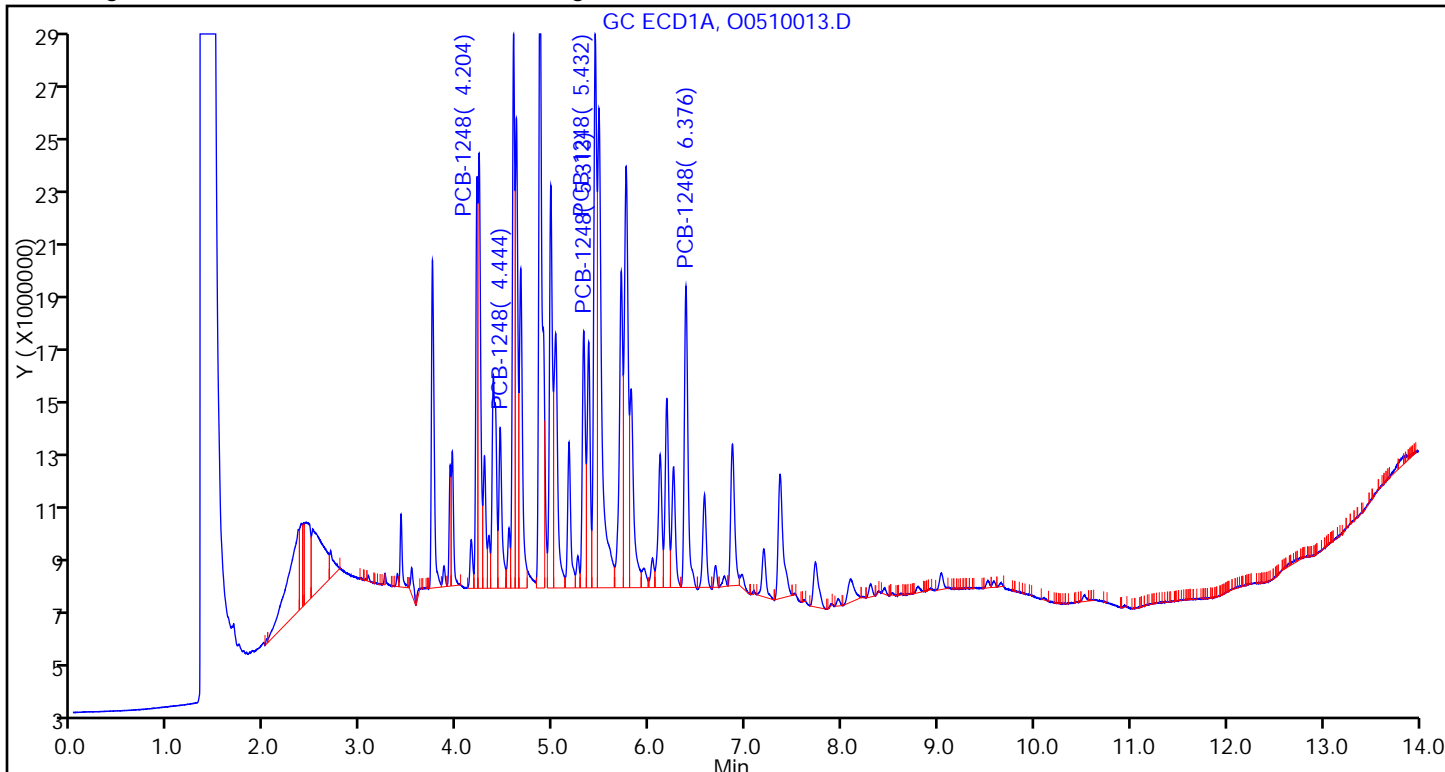
Injection Vol: 1.0 ul

Dil. Factor: 1.0000

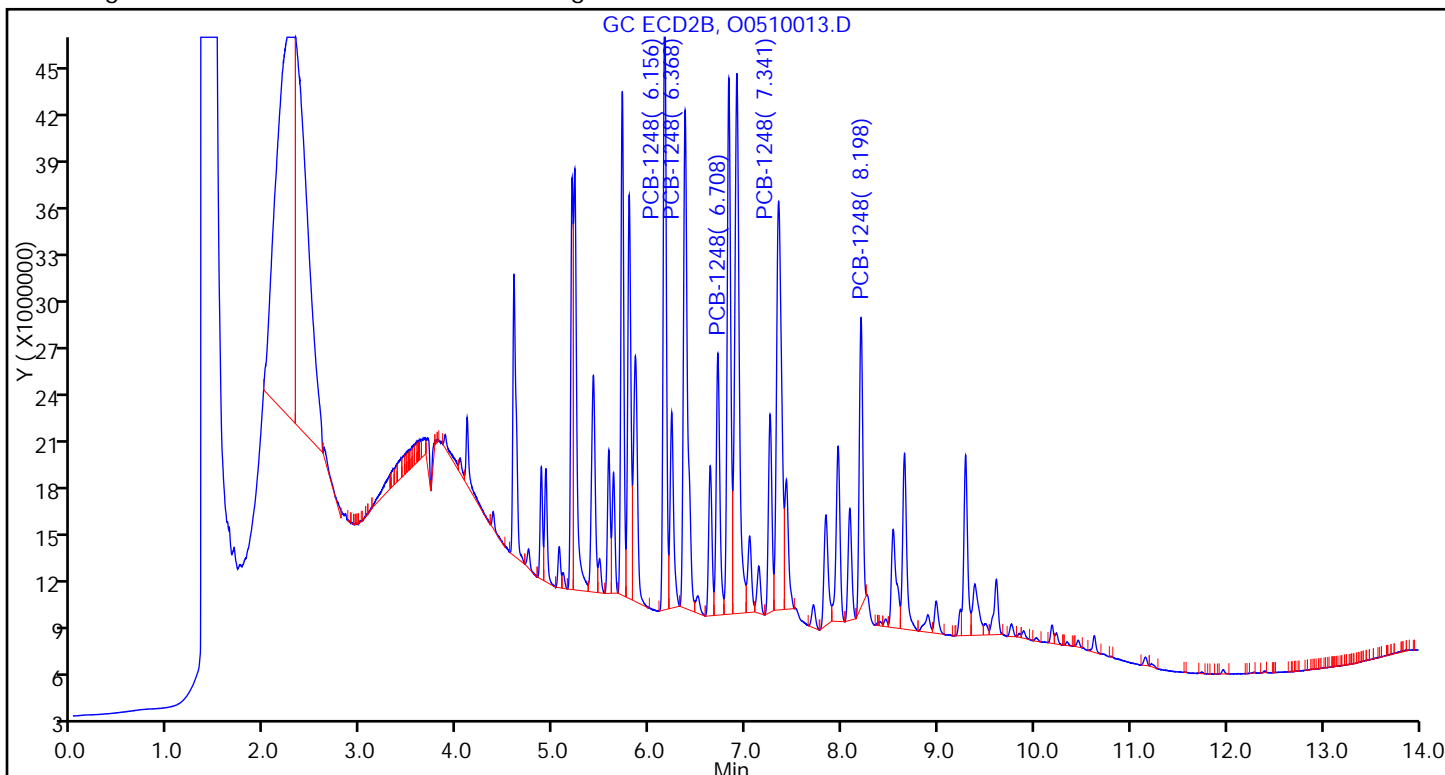
Method: PCB\_CHGC8DUAL

Limit Group: GCS 8082A ICAL

Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3





TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\O0510013.D

Injection Date: 11-May-2015 16:12:14 Instrument ID: CHGC8

Lims ID: IC

Client ID:

Operator ID: 402360

ALS Bottle#: 14

Worklist Smp#: 14

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

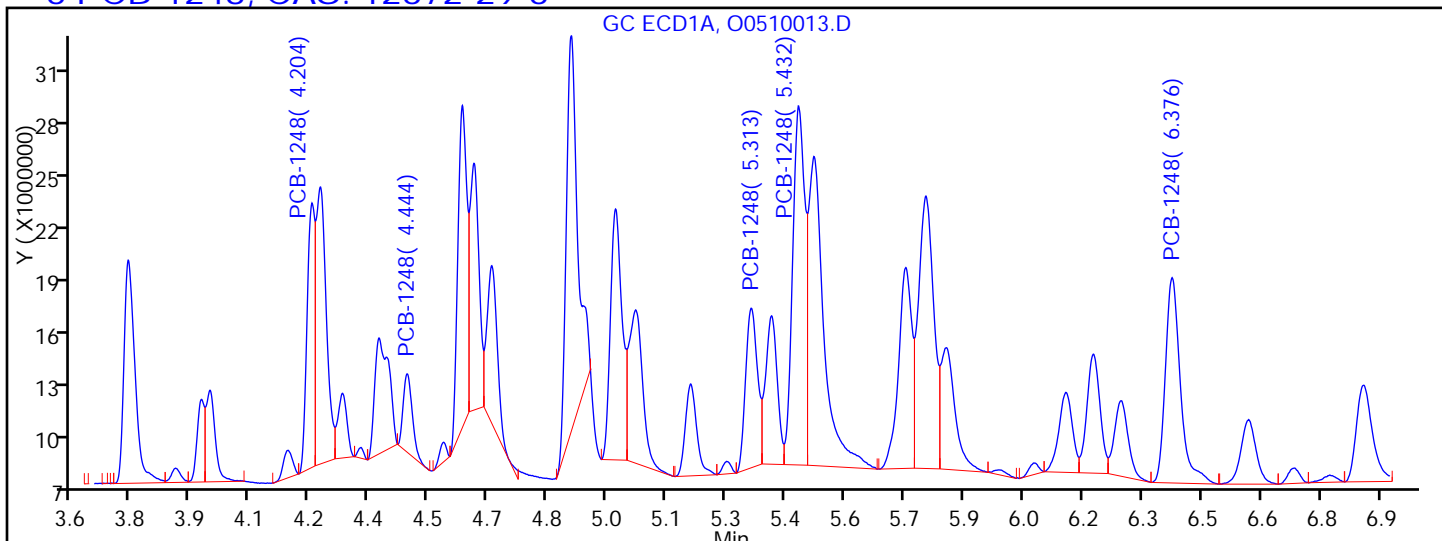
Method: PCB\_CHGC8DUAL

Limit Group: GCS 8082A ICAL

Column:

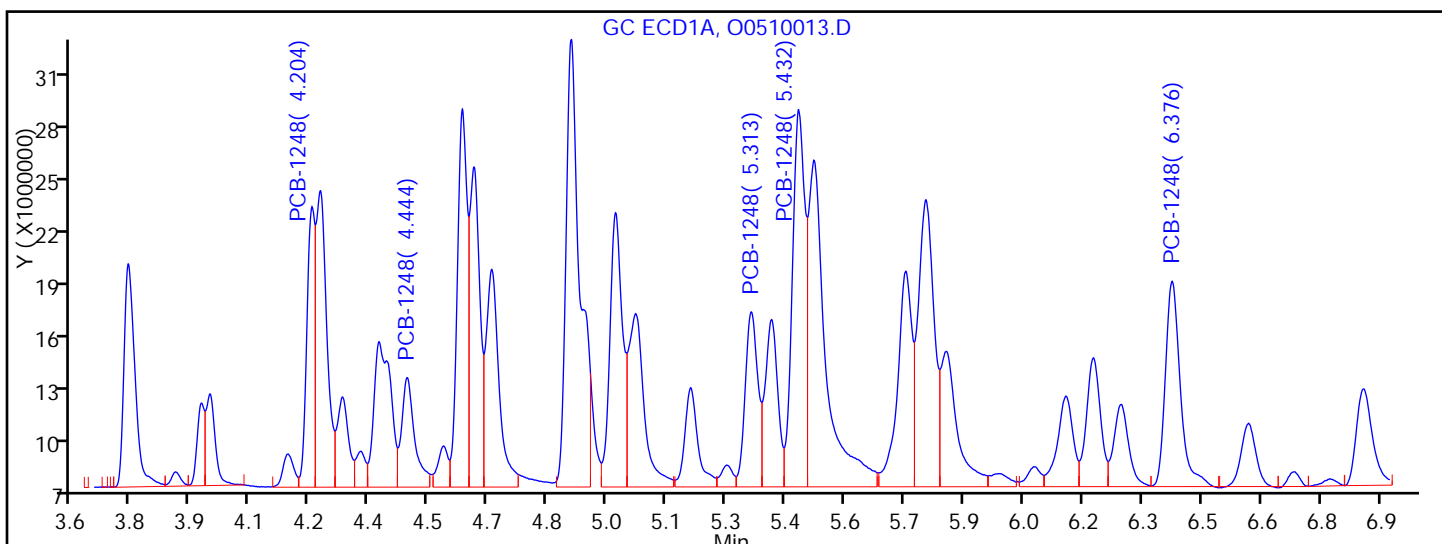
Detector GC ECD1A

6 PCB-1248, CAS: 12672-29-6



Processing Integration Results

|            |                     |   |
|------------|---------------------|---|
| RT = 4.204 | Response = 14627268 | M |
| RT = 4.444 | Response = 4325300  | M |
| RT = 5.313 | Response = 8828941  | M |
| RT = 5.432 | Response = 19859324 | M |
| RT = 6.376 | Response = 11358670 | M |



Manual Integration Results

|            |                     |   |
|------------|---------------------|---|
| RT = 4.204 | Response = 15515947 | M |
| RT = 4.444 | Response = 6057444  | M |
| RT = 5.313 | Response = 9678464  | M |
| RT = 5.432 | Response = 20865672 | M |
| RT = 6.376 | Response = 11354742 | M |

Reviewer: guptaa, 12-May-2015 09:45:54

Audit Action: Assigned New Baseline

Audit Reason: Instrument noise

FORM VI  
GC SEMI VOA INITIAL CALIBRATION DATA  
EXTERNAL STANDARD RETENTION TIME SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-43791-1 Analy Batch No.: 141160

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

Instrument ID: CHGC8 GC Column: RTX-CLP2 ID: 0.53 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/11/2015 16:12 Calibration End Date: 05/11/2015 16:12 Calibration ID: 23847

Calibration Files:

|         |                  |              |
|---------|------------------|--------------|
| LEVEL:  | LAB SAMPLE ID:   | LAB FILE ID: |
| Level 1 | IC 180-141160/14 | O0510013.D   |

| ANALYTE         | LVL 1 |  |  |  |  |  |  |  |  |  | RT WINDOW     | AVG RT |
|-----------------|-------|--|--|--|--|--|--|--|--|--|---------------|--------|
| PCB-1248 Peak 1 | 6.156 |  |  |  |  |  |  |  |  |  | 6.106 - 6.206 | 6.156  |
| PCB-1248 Peak 2 | 6.368 |  |  |  |  |  |  |  |  |  | 6.318 - 6.418 | 6.368  |
| PCB-1248 Peak 3 | 6.708 |  |  |  |  |  |  |  |  |  | 6.658 - 6.758 | 6.708  |
| PCB-1248 Peak 5 | 7.341 |  |  |  |  |  |  |  |  |  | 7.291 - 7.391 | 7.341  |
| PCB-1248 Peak 4 | 8.198 |  |  |  |  |  |  |  |  |  | 8.148 - 8.248 | 8.198  |

FORM VI  
GC SEMI VOA INITIAL CALIBRATION DATA  
EXTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Pittsburgh Job No.: 180-43791-1 Analy Batch No.: 141160

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

Instrument ID: CHGC8 GC Column: RTX-CLP2 ID: 0.53 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/11/2015 16:12 Calibration End Date: 05/11/2015 16:12 Calibration ID: 23847

Calibration Files:

|         |                  |              |
|---------|------------------|--------------|
| LEVEL:  | LAB SAMPLE ID:   | LAB FILE ID: |
| Level 1 | IC 180-141160/14 | O0510013.D   |

| ANALYTE         | CF       |  |  | CURVE TYPE | COEFFICIENT |            |    | # | MIN CF | %RSD | # | MAX %RSD | R <sup>2</sup> OR COD | # | MIN R <sup>2</sup> OR COD |
|-----------------|----------|--|--|------------|-------------|------------|----|---|--------|------|---|----------|-----------------------|---|---------------------------|
|                 | LVL 1    |  |  |            | B           | M1         | M2 |   |        |      |   |          |                       |   |                           |
| PCB-1248 Peak 1 | 77147186 |  |  | Ave        |             | 77147186.0 |    |   |        |      |   | 20.0     |                       |   |                           |
| PCB-1248 Peak 2 | 62193088 |  |  | Ave        |             | 62193088.0 |    |   |        |      |   | 20.0     |                       |   |                           |
| PCB-1248 Peak 3 | 32705792 |  |  | Ave        |             | 32705792.0 |    |   |        |      |   | 20.0     |                       |   |                           |
| PCB-1248 Peak 5 | 50987312 |  |  | Ave        |             | 50987312.0 |    |   |        |      |   | 20.0     |                       |   |                           |
| PCB-1248 Peak 4 | 36156310 |  |  | Ave        |             | 36156310.0 |    |   |        |      |   | 20.0     |                       |   |                           |

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

FORM VI  
GC SEMI VOA INITIAL CALIBRATION DATA  
EXTERNAL STANDARD RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Pittsburgh Job No.: 180-43791-1 Analy Batch No.: 141160

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

Instrument ID: CHGC8 GC Column: RTX-CLP2 ID: 0.53 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/11/2015 16:12 Calibration End Date: 05/11/2015 16:12 Calibration ID: 23847

Calibration Files:

|         |                  |              |
|---------|------------------|--------------|
| LEVEL:  | LAB SAMPLE ID:   | LAB FILE ID: |
| Level 1 | IC 180-141160/14 | O0510013.D   |

| ANALYTE         | CURVE TYPE | RESPONSE |  |  |  |  | CONCENTRATION (NG) |  |  |  |  |
|-----------------|------------|----------|--|--|--|--|--------------------|--|--|--|--|
|                 |            | LVL 1    |  |  |  |  | LVL 1              |  |  |  |  |
| PCB-1248 Peak 1 | Ave        | 38573593 |  |  |  |  | 0.500              |  |  |  |  |
| PCB-1248 Peak 2 | Ave        | 31096544 |  |  |  |  | 0.500              |  |  |  |  |
| PCB-1248 Peak 3 | Ave        | 16352896 |  |  |  |  | 0.500              |  |  |  |  |
| PCB-1248 Peak 5 | Ave        | 25493656 |  |  |  |  | 0.500              |  |  |  |  |
| PCB-1248 Peak 4 | Ave        | 18078155 |  |  |  |  | 0.500              |  |  |  |  |

Curve Type Legend:

Ave = Average by Height

TestAmerica Pittsburgh  
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\O0510013.D  
 Lims ID: IC  
 Client ID:  
 Sample Type: IC Calib Level: 4  
 Inject. Date: 11-May-2015 16:12:14 ALS Bottle#: 14 Worklist Smp#: 14  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 180-0006866-014  
 Operator ID: 402360 Instrument ID: CHGC8  
 Sublist: chrom-PCB\_CHGC8DUAL\*sub5  
 Method: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\PCB\_CHGC8DUAL.m  
 Limit Group: GCS 8082A ICAL  
 Last Update: 12-May-2015 16:53:13 Calib Date: 11-May-2015 18:31:22  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICal File: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\O0510020.D  
 Column 1 : Det: GC ECD1A  
 Column 2 : Det: GC ECD2B  
 Process Host: XAWRK022

First Level Reviewer: guptaa Date: 11-May-2015 16:50:29

| Col                       | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response  | Cal Amt ng | OnCol Amt ng | Flags |
|---------------------------|-----------|---------------|---------------|-----------|------------|--------------|-------|
| 6 PCB-1248                |           |               |               |           |            |              | M     |
| 1                         | 4.204     | 4.204         | 0.000         | 15515947H | 0.5000     | 0.5000       | M     |
| 1                         | 4.444     | 4.444         | 0.000         | 6057444H  | 0.5000     | 0.5000       | M     |
| 1                         | 5.313     | 5.313         | 0.000         | 9678464H  | 0.5000     | 0.5000       | M     |
| 1                         | 5.432     | 5.432         | 0.000         | 20865672H | 0.5000     | 0.5000       | M     |
| 1                         | 6.376     | 6.376         | 0.000         | 11354742H | 0.5000     | 0.5000       | M     |
| Average of Peak Amounts = |           |               |               |           |            | 0.5000       |       |
| 2                         | 6.156     | 6.156         | 0.000         | 38573593H | 0.5000     | 0.5000       |       |
| 2                         | 6.368     | 6.368         | 0.000         | 31096544H | 0.5000     | 0.5000       |       |
| 2                         | 6.708     | 6.708         | 0.000         | 16352896H | 0.5000     | 0.5000       |       |
| 2                         | 8.198     | 8.198         | 0.000         | 18078155H | 0.5000     | 0.5000       |       |
| 2                         | 7.341     | 7.341         | 0.000         | 25493656H | 0.5000     | 0.5000       |       |
| Average of Peak Amounts = |           |               |               |           |            | 0.5000       |       |
| RPD = 0.00                |           |               |               |           |            |              |       |

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

GCAR1248CALL4\_00010

Amount Added: 1.00

Units: mL

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\O0510013.D

Injection Date: 11-May-2015 16:12:14 Instrument ID: CHGC8

Lims ID: IC

Client ID:

Operator ID: 402360

ALS Bottle#: 14

Worklist Smp#: 14

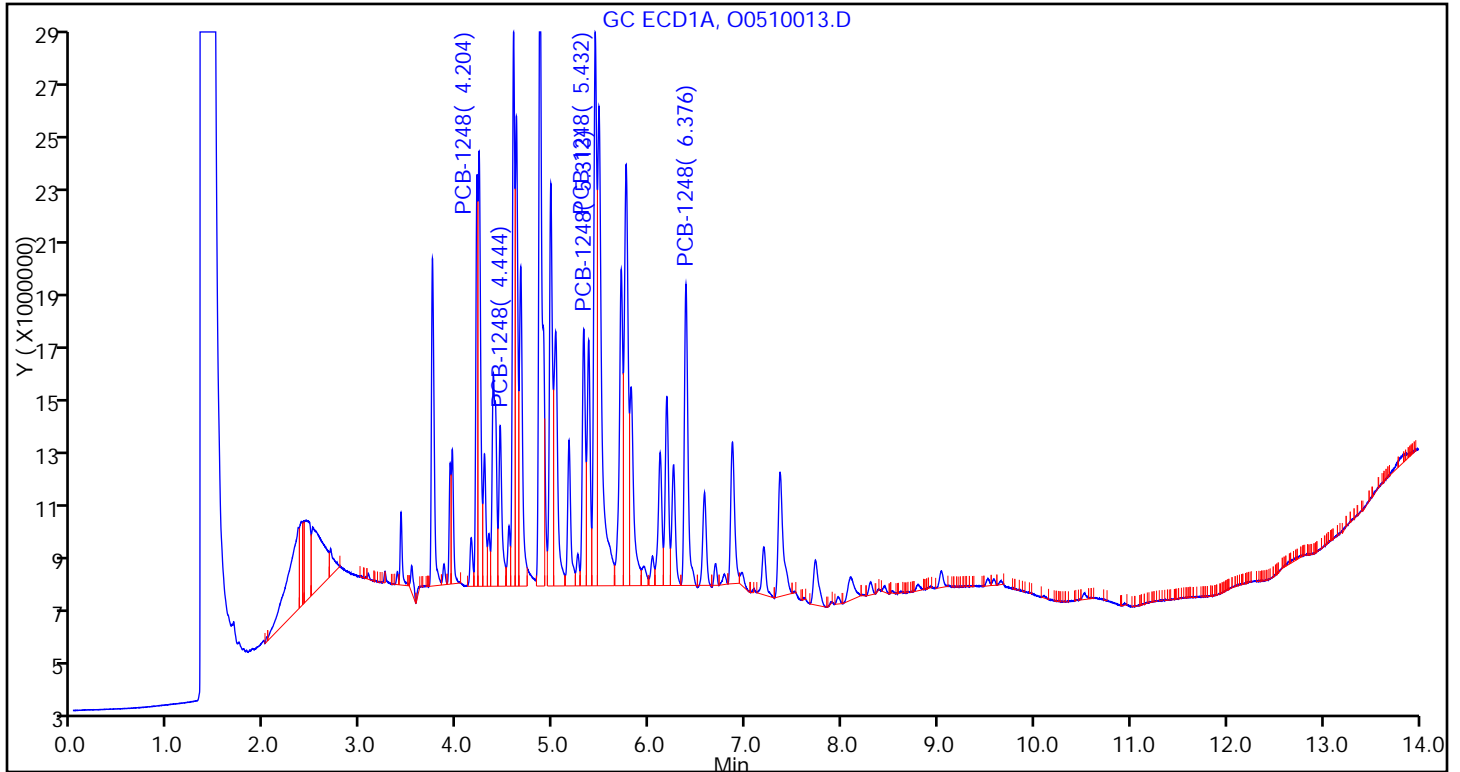
Injection Vol: 1.0 ul

Dil. Factor: 1.0000

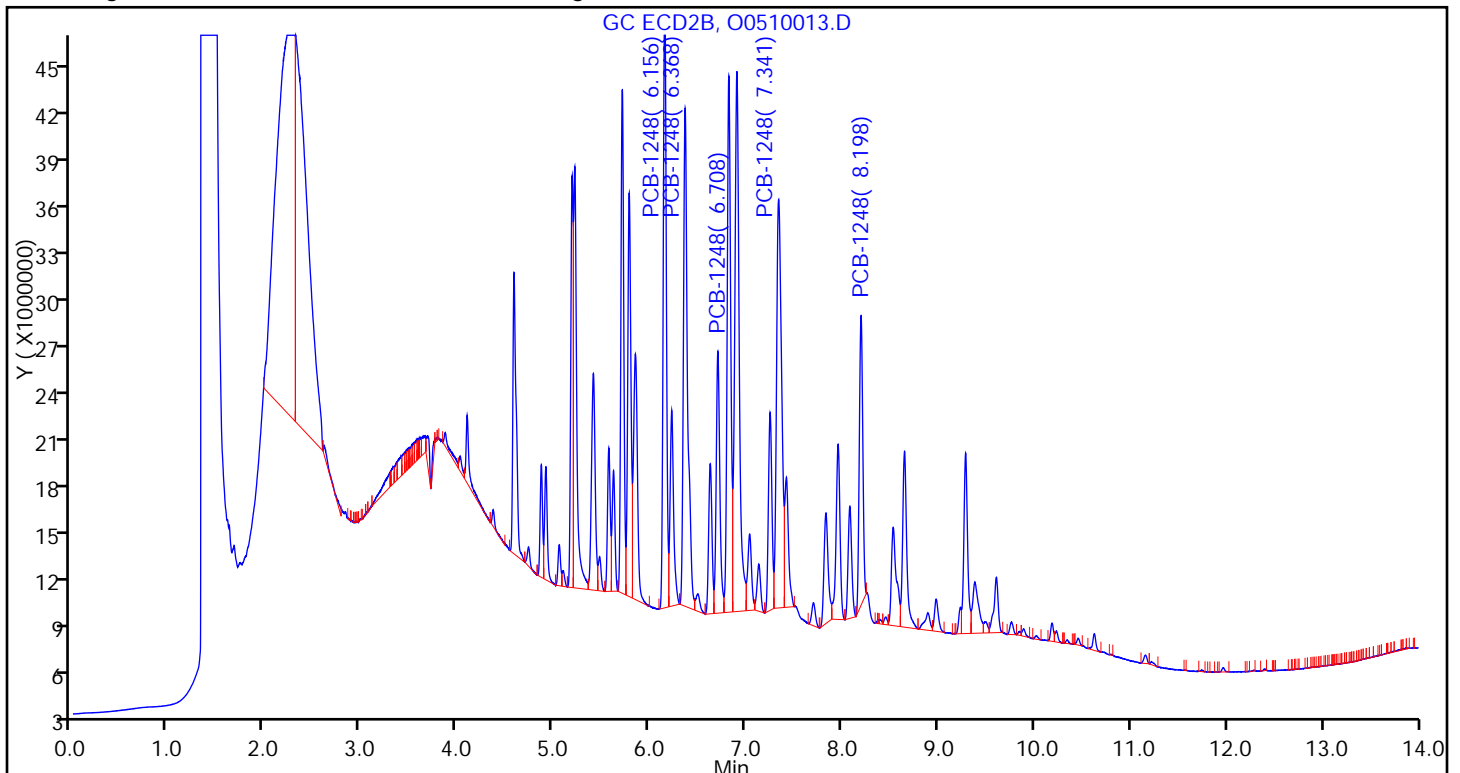
Method: PCB\_CHGC8DUAL

Limit Group: GCS 8082A ICAL

Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



FORM VI  
GC SEMI VOA INITIAL CALIBRATION DATA  
EXTERNAL STANDARD RETENTION TIME SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-43791-1 Analy Batch No.: 141160

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

Instrument ID: CHGC8 GC Column: RTX-CLP1 ID: 0.53 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/11/2015 16:32 Calibration End Date: 05/11/2015 18:31 Calibration ID: 23852

Calibration Files:

| LEVEL:  | LAB SAMPLE ID:     | LAB FILE ID: |
|---------|--------------------|--------------|
| Level 1 | IC 180-141160/15   | O0510014.D   |
| Level 2 | IC 180-141160/16   | O0510015.D   |
| Level 3 | IC 180-141160/17   | O0510016.D   |
| Level 4 | ICRT 180-141160/18 | O0510017.D   |
| Level 5 | IC 180-141160/19   | O0510018.D   |
| Level 6 | IC 180-141160/20   | O0510019.D   |
| Level 7 | IC 180-141160/21   | O0510020.D   |

| ANALYTE                       | LVL 1  | LVL 2  | LVL 3  | LVL 4  | LVL 5  | LVL 6  | LVL 7  |  |  |  | RT WINDOW       | AVG RT |
|-------------------------------|--------|--------|--------|--------|--------|--------|--------|--|--|--|-----------------|--------|
| PCB-1016 Peak 1               | 3.414  | 3.412  | 3.414  | 3.414  | 3.414  | 3.415  | 3.416  |  |  |  | 3.368 - 3.468   | 3.414  |
| PCB-1016 Peak 2               | 3.743  | 3.740  | 3.741  | 3.741  | 3.741  | 3.742  | 3.744  |  |  |  | 3.696 - 3.796   | 3.742  |
| PCB-1016 Peak 3               | 4.373  | 4.372  | 4.373  | 4.374  | 4.372  | 4.374  | 4.375  |  |  |  | 4.328 - 4.428   | 4.373  |
| PCB-1016 Peak 4               | 4.440  | 4.444  | 4.445  | 4.445  | 4.445  | 4.446  | 4.446  |  |  |  | 4.400 - 4.500   | 4.444  |
| PCB-1016 Peak 5               | 4.857  | 4.859  | 4.860  | 4.860  | 4.860  | 4.860  | 4.861  |  |  |  | 4.815 - 4.915   | 4.860  |
| PCB-1260 Peak 1               | 6.683  | 6.684  | 6.686  | 6.685  | 6.684  | 6.684  | 6.686  |  |  |  | 6.640 - 6.740   | 6.685  |
| PCB-1260 Peak 2               | 7.721  | 7.723  | 7.725  | 7.725  | 7.722  | 7.723  | 7.724  |  |  |  | 7.680 - 7.780   | 7.723  |
| PCB-1260 Peak 3               | 8.446  | 8.442  | 8.445  | 8.445  | 8.443  | 8.445  | 8.445  |  |  |  | 8.400 - 8.500   | 8.444  |
| PCB-1260 Peak 4               | 9.033  | 9.033  | 9.035  | 9.035  | 9.032  | 9.034  | 9.035  |  |  |  | 8.986 - 9.086   | 9.034  |
| PCB-1260 Peak 5               | 9.519  | 9.519  | 9.518  | 9.519  | 9.517  | 9.517  | 9.516  |  |  |  | 9.471 - 9.571   | 9.518  |
| Tetrachloro-m-xylene (Surr)   | 3.109  | 3.108  | 3.110  | 3.109  | 3.110  | 3.111  | 3.113  |  |  |  | 3.064 - 3.164   | 3.110  |
| DCB Decachlorobiphenyl (Surr) | 11.206 | 11.208 | 11.208 | 11.208 | 11.206 | 11.207 | 11.206 |  |  |  | 11.139 - 11.279 | 11.207 |

FORM VI  
GC SEMI VOA INITIAL CALIBRATION DATA  
EXTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Pittsburgh Job No.: 180-43791-1 Analy Batch No.: 141160

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

Instrument ID: CHGC8 GC Column: RTX-CLP1 ID: 0.53 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/11/2015 16:32 Calibration End Date: 05/11/2015 18:31 Calibration ID: 23852

Calibration Files:

| LEVEL:  | LAB SAMPLE ID:     | LAB FILE ID: |
|---------|--------------------|--------------|
| Level 1 | IC 180-141160/15   | 00510014.D   |
| Level 2 | IC 180-141160/16   | 00510015.D   |
| Level 3 | IC 180-141160/17   | 00510016.D   |
| Level 4 | ICRT 180-141160/18 | 00510017.D   |
| Level 5 | IC 180-141160/19   | 00510018.D   |
| Level 6 | IC 180-141160/20   | 00510019.D   |
| Level 7 | IC 180-141160/21   | 00510020.D   |

| ANALYTE                       | CF                       |                          |                          |            | CURVE TYPE | COEFFICIENT |            |    | # | MIN CF | %RSD | # | MAX %RSD | R <sup>2</sup> OR COD | # | MIN R <sup>2</sup> OR COD |
|-------------------------------|--------------------------|--------------------------|--------------------------|------------|------------|-------------|------------|----|---|--------|------|---|----------|-----------------------|---|---------------------------|
|                               | LVL 1<br>LVL 5           | LVL 2<br>LVL 6           | LVL 3<br>LVL 7           | LVL 4      |            | B           | M1         | M2 |   |        |      |   |          |                       |   |                           |
| PCB-1016 Peak 1               | 29226000<br>34195011     | 32934000<br>30882718     | 35319005<br>28171440     | 33827336   | Ave        |             | 32079358.5 |    |   | 8.4    |      |   | 20.0     |                       |   |                           |
| PCB-1016 Peak 2               | 53355300<br>53221981     | 55637160<br>47431789     | 57594000<br>42644919     | 54527458   | Ave        |             | 52058943.8 |    |   | 10.0   |      |   | 20.0     |                       |   |                           |
| PCB-1016 Peak 3               | 34285600<br>36201476     | 37539660<br>37396301     | 39565545<br>35213889     | 38996622   | Ave        |             | 37028441.8 |    |   | 5.2    |      |   | 20.0     |                       |   |                           |
| PCB-1016 Peak 4               | 22834900<br>24789621     | 25403680<br>27370272     | 28162410<br>26027281     | 27974816   | Ave        |             | 26080425.6 |    |   | 7.4    |      |   | 20.0     |                       |   |                           |
| PCB-1016 Peak 5               | 27827500<br>33359310     | 32254940<br>34313681     | 38516390<br>32079911     | 37087352   | Ave        |             | 33634154.8 |    |   | 10.5   |      |   | 20.0     |                       |   |                           |
| PCB-1260 Peak 1               | 59700500<br>61494423     | 60856460<br>53464586     | 63005115<br>52110459     | 60108888   | Ave        |             | 58677204.4 |    |   | 7.1    |      |   | 20.0     |                       |   |                           |
| PCB-1260 Peak 2               | 53863700<br>60013089     | 57487360<br>54617170     | 58767450<br>53627000     | 57962280   | Ave        |             | 56619721.2 |    |   | 4.5    |      |   | 20.0     |                       |   |                           |
| PCB-1260 Peak 3               | 48084200<br>53458371     | 48846400<br>48527045     | 50394335<br>47367559     | 51522494   | Ave        |             | 49742914.8 |    |   | 4.3    |      |   | 20.0     |                       |   |                           |
| PCB-1260 Peak 4               | 99772800<br>117000892    | 107438360<br>105738730   | 114971635<br>104764928   | 113259148  | Ave        |             | 108992356  |    |   | 5.7    |      |   | 20.0     |                       |   |                           |
| PCB-1260 Peak 5               | 54785600<br>62680524     | 56389940<br>56195287     | 60965885<br>54929749     | 59511380   | Ave        |             | 57922623.4 |    |   | 5.4    |      |   | 20.0     |                       |   |                           |
| Tetrachloro-m-xylene (Surr)   | 2145396000<br>2460037340 | 2360099200<br>2178046370 | 2544263100<br>1920273235 | 2442760240 | Ave        |             | 2292982212 |    |   | 9.6    |      |   | 20.0     |                       |   |                           |
| DCB Decachlorobiphenyl (Surr) | 984290000<br>1013340600  | 977084000<br>927508020   | 990778000<br>948144705   | 957285120  | Ave        |             | 971204349  |    |   | 3.0    |      |   | 20.0     |                       |   |                           |

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



FORM VI  
GC SEMI VOA INITIAL CALIBRATION DATA  
EXTERNAL STANDARD RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Pittsburgh Job No.: 180-43791-1 Analy Batch No.: 141160

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

Instrument ID: CHGC8 GC Column: RTX-CLP1 ID: 0.53 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/11/2015 16:32 Calibration End Date: 05/11/2015 18:31 Calibration ID: 23852

Calibration Files:

| LEVEL:  | LAB SAMPLE ID:     | LAB FILE ID: |
|---------|--------------------|--------------|
| Level 1 | IC 180-141160/15   | O0510014.D   |
| Level 2 | IC 180-141160/16   | O0510015.D   |
| Level 3 | IC 180-141160/17   | O0510016.D   |
| Level 4 | ICRT 180-141160/18 | O0510017.D   |
| Level 5 | IC 180-141160/19   | O0510018.D   |
| Level 6 | IC 180-141160/20   | O0510019.D   |
| Level 7 | IC 180-141160/21   | O0510020.D   |

| ANALYTE                       | CURVE TYPE | RESPONSE             |                      |          |          |           | CONCENTRATION (NG) |                  |        |        |        |
|-------------------------------|------------|----------------------|----------------------|----------|----------|-----------|--------------------|------------------|--------|--------|--------|
|                               |            | LVL 1<br>LVL 6       | LVL 2<br>LVL 7       | LVL 3    | LVL 4    | LVL 5     | LVL 1<br>LVL 6     | LVL 2<br>LVL 7   | LVL 3  | LVL 4  | LVL 5  |
| PCB-1016 Peak 1               | Ave        | 292260<br>61765436   | 1646700<br>112685759 | 7063801  | 16913668 | 34195011  | 0.0100<br>2.00     | 0.0500<br>4.00   | 0.200  | 0.500  | 1.00   |
| PCB-1016 Peak 2               | Ave        | 533553<br>94863578   | 2781858<br>170579674 | 11518800 | 27263729 | 53221981  | 0.0100<br>2.00     | 0.0500<br>4.00   | 0.200  | 0.500  | 1.00   |
| PCB-1016 Peak 3               | Ave        | 342856<br>74792601   | 1876983<br>140855556 | 7913109  | 19498311 | 36201476  | 0.0100<br>2.00     | 0.0500<br>4.00   | 0.200  | 0.500  | 1.00   |
| PCB-1016 Peak 4               | Ave        | 228349<br>54740543   | 1270184<br>104109124 | 5632482  | 13987408 | 24789621  | 0.0100<br>2.00     | 0.0500<br>4.00   | 0.200  | 0.500  | 1.00   |
| PCB-1016 Peak 5               | Ave        | 278275<br>68627362   | 1612747<br>128319642 | 7703278  | 18543676 | 33359310  | 0.0100<br>2.00     | 0.0500<br>4.00   | 0.200  | 0.500  | 1.00   |
| PCB-1260 Peak 1               | Ave        | 597005<br>106929172  | 3042823<br>208441834 | 12601023 | 30054444 | 61494423  | 0.0100<br>2.00     | 0.0500<br>4.00   | 0.200  | 0.500  | 1.00   |
| PCB-1260 Peak 2               | Ave        | 538637<br>109234339  | 2874368<br>214507999 | 11753490 | 28981140 | 60013089  | 0.0100<br>2.00     | 0.0500<br>4.00   | 0.200  | 0.500  | 1.00   |
| PCB-1260 Peak 3               | Ave        | 480842<br>97054089   | 2442320<br>189470236 | 10078867 | 25761247 | 53458371  | 0.0100<br>2.00     | 0.0500<br>4.00   | 0.200  | 0.500  | 1.00   |
| PCB-1260 Peak 4               | Ave        | 997728<br>211477460  | 5371918<br>419059711 | 22994327 | 56629574 | 117000892 | 0.0100<br>2.00     | 0.0500<br>4.00   | 0.200  | 0.500  | 1.00   |
| PCB-1260 Peak 5               | Ave        | 547856<br>112390573  | 2819497<br>219718994 | 12193177 | 29755690 | 62680524  | 0.0100<br>2.00     | 0.0500<br>4.00   | 0.200  | 0.500  | 1.00   |
| Tetrachloro-m-xylene (Surr)   | Ave        | 1072698<br>217804637 | 5900248<br>384054647 | 25442631 | 61069006 | 123001867 | 0.000500<br>0.100  | 0.00250<br>0.200 | 0.0100 | 0.0250 | 0.0500 |
| DCB Decachlorobiphenyl (Surr) | Ave        | 492145<br>92750802   | 2442710<br>189628941 | 9907780  | 23932128 | 50667030  | 0.000500<br>0.100  | 0.00250<br>0.200 | 0.0100 | 0.0250 | 0.0500 |

Curve Type Legend:

Ave = Average by Height

TestAmerica Pittsburgh  
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\O0510014.D  
 Lims ID: IC  
 Client ID:  
 Sample Type: IC Calib Level: 1  
 Inject. Date: 11-May-2015 16:32:08 ALS Bottle#: 15 Worklist Smp#: 15  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 180-0006866-015  
 Operator ID: 402360 Instrument ID: CHGC8  
 Sublist: chrom-PCB\_CHGC8DUAL\*sub1  
 Method: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\PCB\_CHGC8DUAL.m  
 Limit Group: GCS 8082A ICAL  
 Last Update: 12-May-2015 16:53:16 Calib Date: 11-May-2015 18:31:22  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICal File: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\O0510020.D  
 Column 1 : Det: GC ECD1A  
 Column 2 : Det: GC ECD2B  
 Process Host: XAWRK022

First Level Reviewer: guptaa Date: 11-May-2015 17:03:57

| Col | RT (min.) | Exp RT (min.) | Diff RT (min.) | Response | Cal Amt ng | OnCol Amt ng | Flags |
|-----|-----------|---------------|----------------|----------|------------|--------------|-------|
|-----|-----------|---------------|----------------|----------|------------|--------------|-------|

\$ 1 Tetrachloro-m-xylene

|   |       |       |        |          |          |            |  |
|---|-------|-------|--------|----------|----------|------------|--|
| 1 | 3.109 | 3.114 | -0.005 | 1072698H | 0.000500 | 0.000468   |  |
| 2 | 3.581 | 3.587 | -0.006 | 3425413H | 0.000500 | 0.000488   |  |
|   |       |       |        |          |          | RPD = 4.27 |  |

4 PCB-1016

|                           |       |       |        |         |        |            |  |
|---------------------------|-------|-------|--------|---------|--------|------------|--|
| 1                         | 3.414 | 3.418 | -0.004 | 292260H | 0.0100 | 0.009111   |  |
| 1                         | 3.743 | 3.746 | -0.003 | 533553H | 0.0100 | 0.0102     |  |
| 1                         | 4.373 | 4.378 | -0.005 | 342856H | 0.0100 | 0.009259   |  |
| 1                         | 4.440 | 4.450 | -0.010 | 228349H | 0.0100 | 0.008756   |  |
| 1                         | 4.857 | 4.865 | -0.008 | 278275H | 0.0100 | 0.008274   |  |
| Average of Peak Amounts = |       |       |        |         |        | 0.009130   |  |
| 2                         | 5.419 | 5.423 | -0.004 | 507852H | 0.0100 | 0.009255   |  |
| 2                         | 5.574 | 5.581 | -0.007 | 372114H | 0.0100 | 0.009228   |  |
| 2                         | 6.155 | 6.162 | -0.007 | 511768H | 0.0100 | 0.009173   |  |
| 2                         | 6.896 | 6.902 | -0.006 | 327853H | 0.0100 | 0.008676   |  |
| 2                         | 7.255 | 7.258 | -0.003 | 233814H | 0.0100 | 0.007347   |  |
| Average of Peak Amounts = |       |       |        |         |        | 0.008736   |  |
|                           |       |       |        |         |        | RPD = 4.41 |  |

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng | OnCol Amt ng | Flags |
|-----|-----------|---------------|---------------|----------|------------|--------------|-------|
|-----|-----------|---------------|---------------|----------|------------|--------------|-------|

8 PCB-1260

|   |       |       |        |         |        |          |  |
|---|-------|-------|--------|---------|--------|----------|--|
| 1 | 6.683 | 6.690 | -0.007 | 597005H | 0.0100 | 0.0102   |  |
| 1 | 7.721 | 7.730 | -0.009 | 538637H | 0.0100 | 0.009513 |  |
| 1 | 8.446 | 8.450 | -0.004 | 480842H | 0.0100 | 0.009667 |  |
| 1 | 9.033 | 9.036 | -0.003 | 997728H | 0.0100 | 0.009154 |  |
| 1 | 9.519 | 9.521 | -0.002 | 547856H | 0.0100 | 0.009458 |  |

Average of Peak Amounts = 0.009593

|   |        |        |        |          |        |          |  |
|---|--------|--------|--------|----------|--------|----------|--|
| 2 | 9.276  | 9.277  | -0.001 | 690240H  | 0.0100 | 0.0101   |  |
| 2 | 9.604  | 9.611  | -0.007 | 1013841H | 0.0100 | 0.0101   |  |
| 2 | 9.757  | 9.762  | -0.005 | 869159H  | 0.0100 | 0.009774 |  |
| 2 | 10.232 | 10.237 | -0.005 | 907542H  | 0.0100 | 0.009611 |  |
| 2 | 10.624 | 10.629 | -0.005 | 1738394H | 0.0100 | 0.009374 |  |

Average of Peak Amounts = 0.009785

RPD = 1.98

\$ 11 DCB Decachlorobiphenyl (Surr)

|   |        |        |        |         |          |          |  |
|---|--------|--------|--------|---------|----------|----------|--|
| 1 | 11.206 | 11.209 | -0.003 | 492145H | 0.000500 | 0.000507 |  |
| 2 | 12.726 | 12.731 | -0.005 | 594185H | 0.000500 | 0.000483 |  |

RPD = 4.73

Reagents:

GCAR1660CALL1\_00015

Amount Added: 1.00

Units: mL

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\O0510014.D

Injection Date: 11-May-2015 16:32:08

Instrument ID: CHGC8

Lims ID: IC

Client ID:

Operator ID: 402360

ALS Bottle#: 15

Worklist Smp#: 15

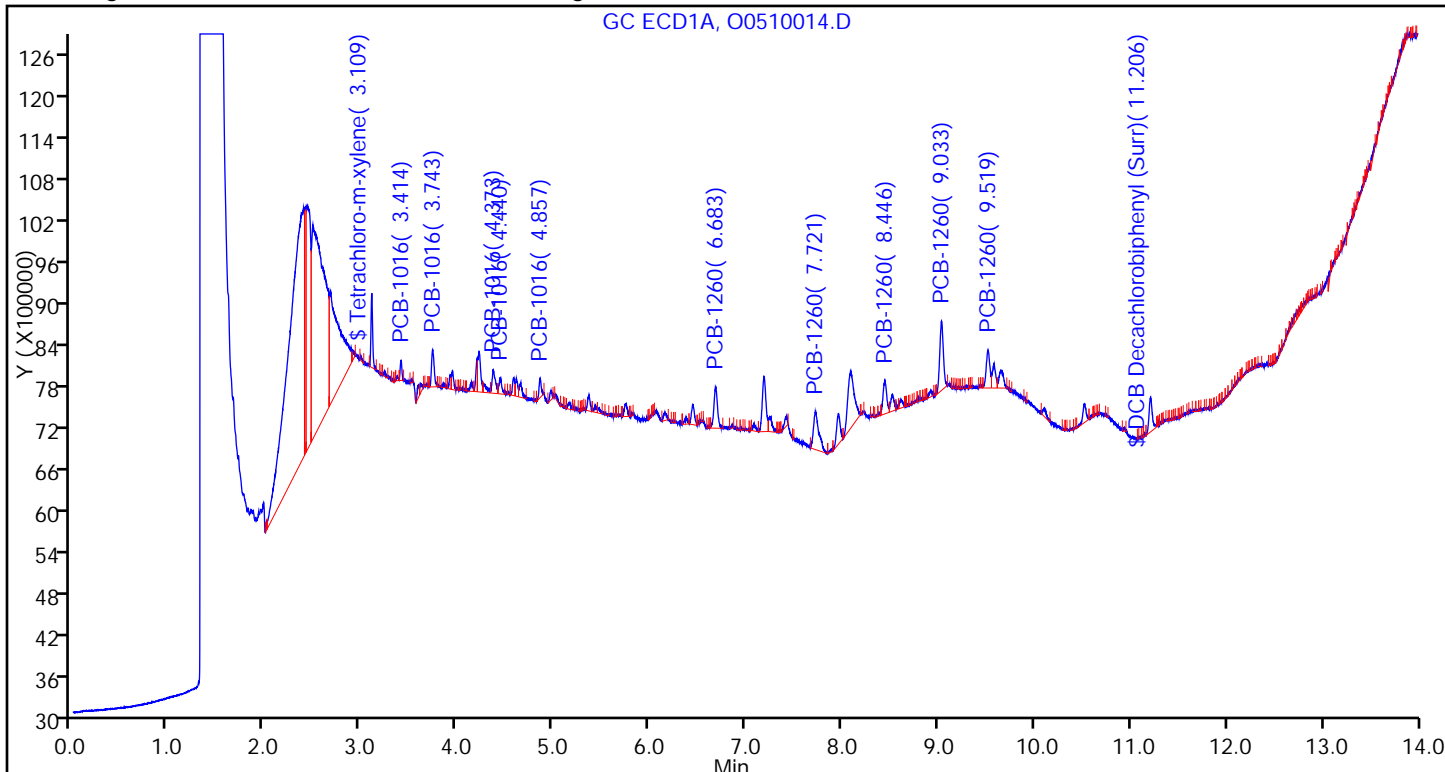
Injection Vol: 1.0 ul

Dil. Factor: 1.0000

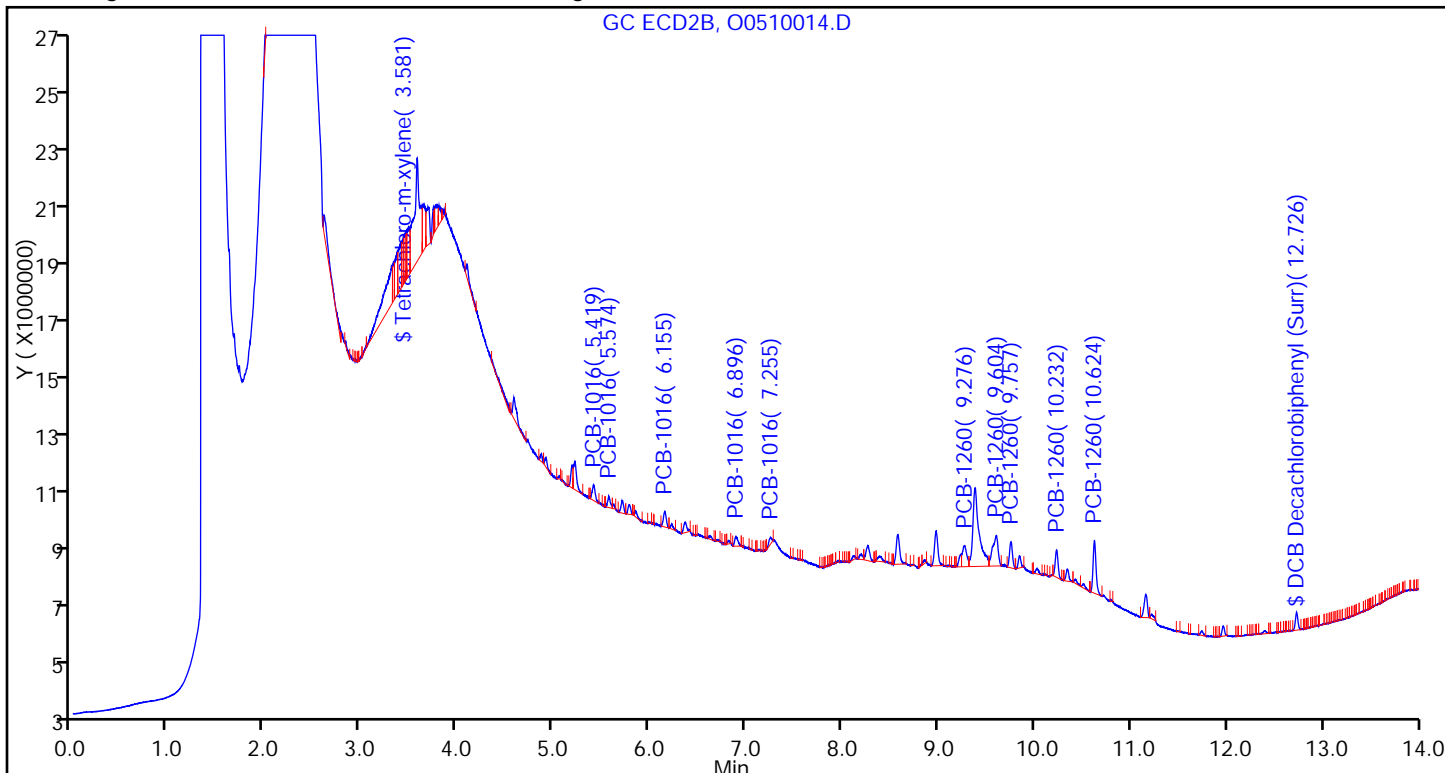
Method: PCB\_CHGC8DUAL

Limit Group: GCS 8082A ICAL

Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



TestAmerica Pittsburgh  
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\O0510015.D  
 Lims ID: IC  
 Client ID:  
 Sample Type: IC Calib Level: 2  
 Inject. Date: 11-May-2015 16:52:05 ALS Bottle#: 16 Worklist Smp#: 16  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 180-0006866-016  
 Operator ID: 402360 Instrument ID: CHGC8  
 Sublist: chrom-PCB\_CHGC8DUAL\*sub1  
 Method: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\PCB\_CHGC8DUAL.m  
 Limit Group: GCS 8082A ICAL  
 Last Update: 12-May-2015 16:53:21 Calib Date: 11-May-2015 18:31:22  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICal File: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\O0510020.D  
 Column 1 : Det: GC ECD1A  
 Column 2 : Det: GC ECD2B  
 Process Host: XAWRK022

First Level Reviewer: guptaa Date: 12-May-2015 07:15:39

| Col | RT (min.) | Exp RT (min.) | Diff RT (min.) | Response | Cal Amt ng | OnCol Amt ng | Flags |
|-----|-----------|---------------|----------------|----------|------------|--------------|-------|
|-----|-----------|---------------|----------------|----------|------------|--------------|-------|

\$ 1 Tetrachloro-m-xylene

|   |       |       |        |           |          |            |  |
|---|-------|-------|--------|-----------|----------|------------|--|
| 1 | 3.108 | 3.114 | -0.006 | 5900248H  | 0.002500 | 0.002573   |  |
| 2 | 3.581 | 3.587 | -0.006 | 12357808H | 0.002500 | 0.002750   |  |
|   |       |       |        |           |          | RPD = 6.65 |  |

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|                           |       |       |        |          |        |            |  |
|---------------------------|-------|-------|--------|----------|--------|------------|--|
| 1                         | 3.412 | 3.418 | -0.006 | 1646700H | 0.0500 | 0.0513     |  |
| 1                         | 3.740 | 3.746 | -0.006 | 2781858H | 0.0500 | 0.0534     |  |
| 1                         | 4.372 | 4.378 | -0.006 | 1876983H | 0.0500 | 0.0507     |  |
| 1                         | 4.444 | 4.450 | -0.006 | 1270184H | 0.0500 | 0.0487     |  |
| 1                         | 4.859 | 4.865 | -0.006 | 1612747H | 0.0500 | 0.0479     |  |
| Average of Peak Amounts = |       |       |        |          |        | 0.0504     |  |
| 2                         | 5.415 | 5.423 | -0.008 | 2750476H | 0.0500 | 0.0501     |  |
| 2                         | 5.572 | 5.581 | -0.009 | 1871114H | 0.0500 | 0.0464     |  |
| 2                         | 6.155 | 6.162 | -0.007 | 2908796H | 0.0500 | 0.0521     |  |
| 2                         | 6.896 | 6.902 | -0.006 | 1713681H | 0.0500 | 0.0454     |  |
| 2                         | 7.252 | 7.258 | -0.006 | 1711675H | 0.0500 | 0.0538     |  |
| Average of Peak Amounts = |       |       |        |          |        | 0.0496     |  |
|                           |       |       |        |          |        | RPD = 1.72 |  |

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng | OnCol Amt ng | Flags |
|-----|-----------|---------------|---------------|----------|------------|--------------|-------|
|-----|-----------|---------------|---------------|----------|------------|--------------|-------|

8 PCB-1260

|   |       |       |        |          |        |        |  |
|---|-------|-------|--------|----------|--------|--------|--|
| 1 | 6.684 | 6.690 | -0.006 | 3042823H | 0.0500 | 0.0519 |  |
| 1 | 7.723 | 7.730 | -0.007 | 2874368H | 0.0500 | 0.0508 |  |
| 1 | 8.442 | 8.450 | -0.008 | 2442320H | 0.0500 | 0.0491 |  |
| 1 | 9.033 | 9.036 | -0.003 | 5371918H | 0.0500 | 0.0493 |  |
| 1 | 9.519 | 9.521 | -0.002 | 2819497H | 0.0500 | 0.0487 |  |

Average of Peak Amounts = 0.0499

|   |        |        |        |          |        |        |  |
|---|--------|--------|--------|----------|--------|--------|--|
| 2 | 9.271  | 9.277  | -0.006 | 3476457H | 0.0500 | 0.0507 |  |
| 2 | 9.604  | 9.611  | -0.007 | 5177117H | 0.0500 | 0.0516 |  |
| 2 | 9.756  | 9.762  | -0.006 | 4541011H | 0.0500 | 0.0511 |  |
| 2 | 10.232 | 10.237 | -0.005 | 4825164H | 0.0500 | 0.0511 |  |
| 2 | 10.624 | 10.629 | -0.005 | 9099363H | 0.0500 | 0.0491 |  |

Average of Peak Amounts = 0.0507

RPD = 1.52

\$ 11 DCB Decachlorobiphenyl (Surr)

|   |        |        |        |          |          |          |  |
|---|--------|--------|--------|----------|----------|----------|--|
| 1 | 11.208 | 11.209 | -0.001 | 2442710H | 0.002500 | 0.002515 |  |
| 2 | 12.727 | 12.731 | -0.004 | 3048352H | 0.002500 | 0.002480 |  |

RPD = 1.43

Reagents:

GCAR1660CALL2\_00010

Amount Added: 1.00

Units: mL

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\O0510015.D

Injection Date: 11-May-2015 16:52:05 Instrument ID: CHGC8

Lims ID: IC

Client ID:

Operator ID: 402360

ALS Bottle#: 16

Worklist Smp#: 16

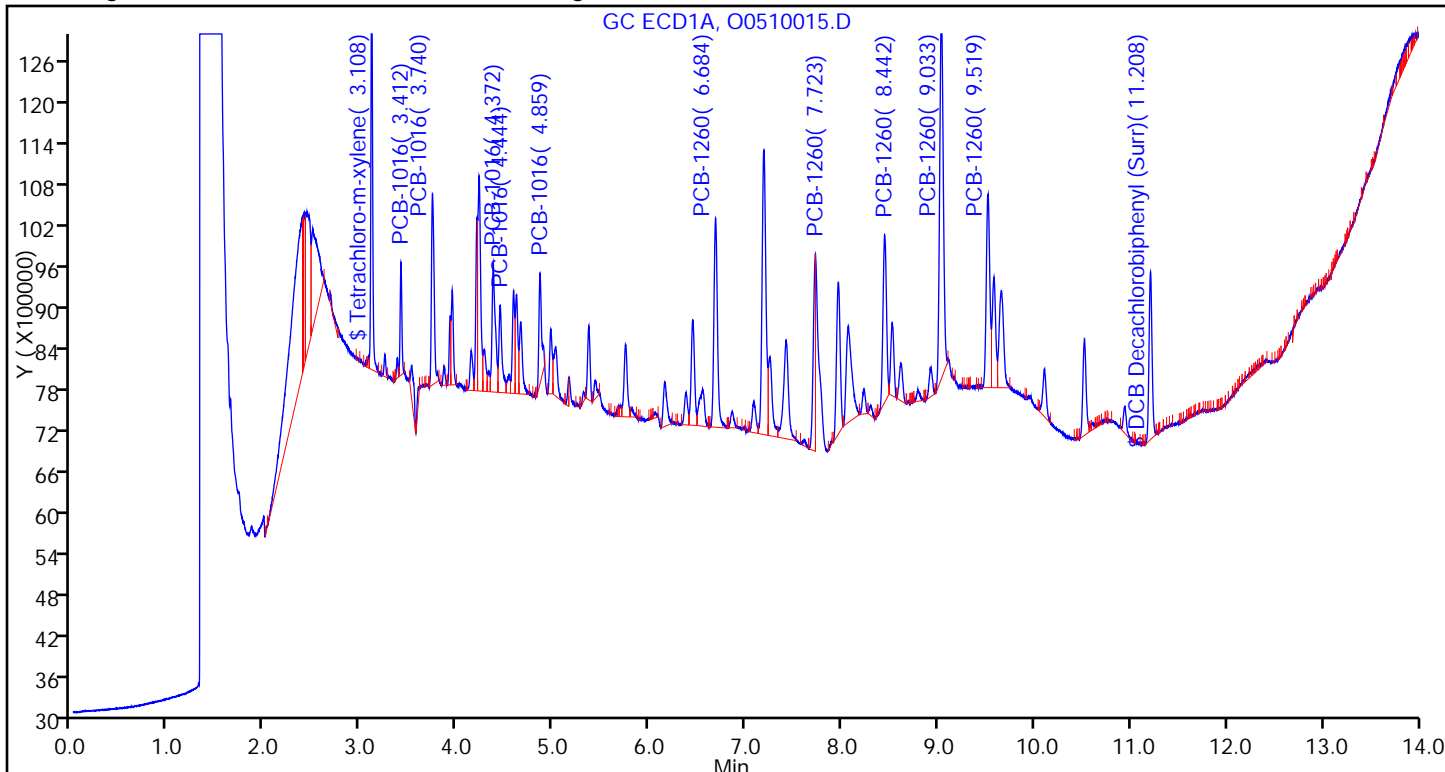
Injection Vol: 1.0 ul

Dil. Factor: 1.0000

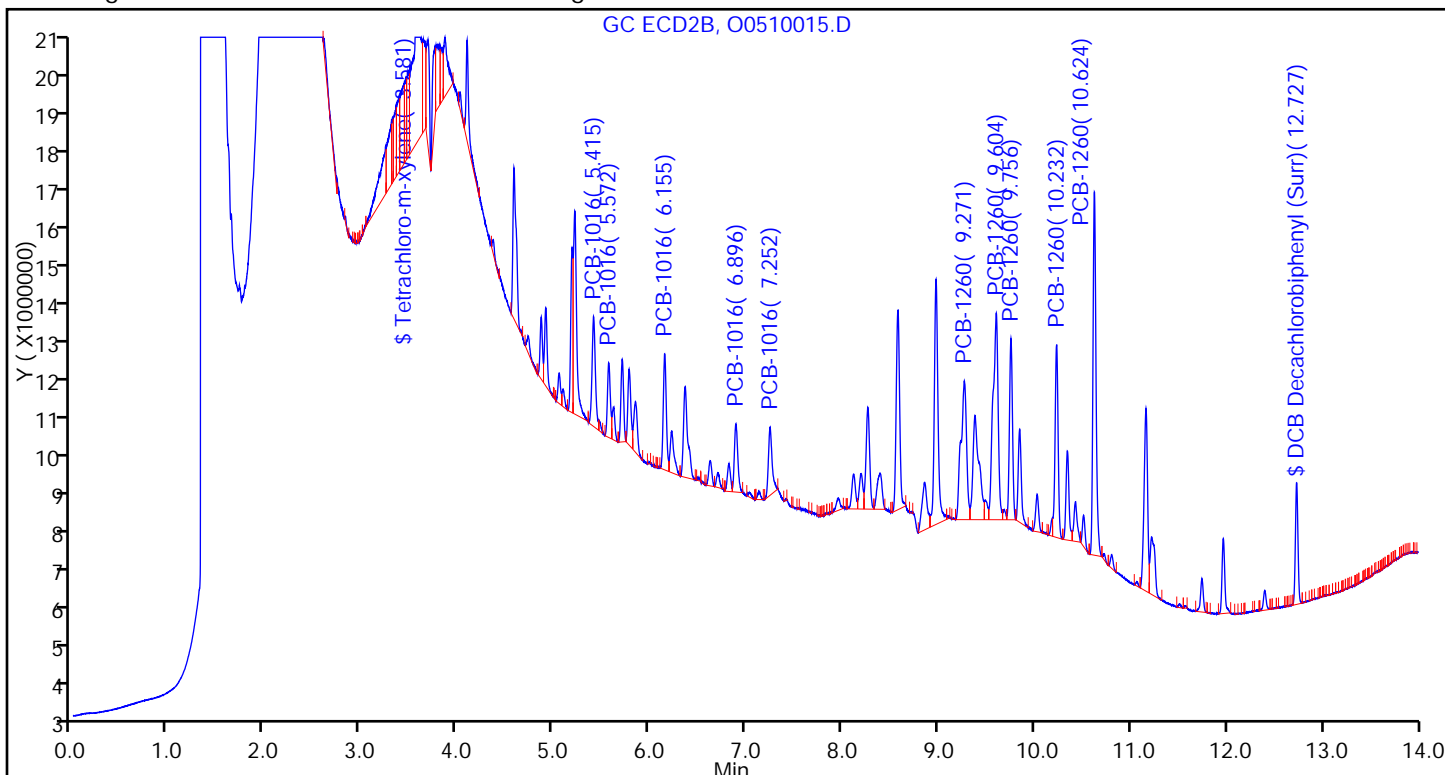
Method: PCB\_CHGC8DUAL

Limit Group: GCS 8082A ICAL

Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



TestAmerica Pittsburgh  
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\O0510016.D  
 Lims ID: IC  
 Client ID:  
 Sample Type: IC Calib Level: 3  
 Inject. Date: 11-May-2015 17:11:57 ALS Bottle#: 17 Worklist Smp#: 17  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 180-0006866-017  
 Operator ID: 402360 Instrument ID: CHGC8  
 Sublist: chrom-PCB\_CHGC8DUAL\*sub1  
 Method: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\PCB\_CHGC8DUAL.m  
 Limit Group: GCS 8082A ICAL  
 Last Update: 12-May-2015 16:53:24 Calib Date: 11-May-2015 18:31:22  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICal File: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\O0510020.D  
 Column 1 : Det: GC ECD1A  
 Column 2 : Det: GC ECD2B  
 Process Host: XAWRK022

First Level Reviewer: guptaa Date: 12-May-2015 07:16:15

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng | OnCol Amt ng | Flags |
|-----|-----------|---------------|---------------|----------|------------|--------------|-------|
|-----|-----------|---------------|---------------|----------|------------|--------------|-------|

\$ 1 Tetrachloro-m-xylene

|   |       |       |        |           |        |            |  |
|---|-------|-------|--------|-----------|--------|------------|--|
| 1 | 3.110 | 3.114 | -0.004 | 25442631H | 0.0100 | 0.0111     |  |
| 2 | 3.582 | 3.587 | -0.005 | 43392439H | 0.0100 | 0.0106     |  |
|   |       |       |        |           |        | RPD = 4.48 |  |

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|                           |       |       |        |           |        |            |  |
|---------------------------|-------|-------|--------|-----------|--------|------------|--|
| 1                         | 3.414 | 3.418 | -0.004 | 7063801H  | 0.2000 | 0.2202     |  |
| 1                         | 3.741 | 3.746 | -0.005 | 11518800H | 0.2000 | 0.2213     |  |
| 1                         | 4.373 | 4.378 | -0.005 | 7913109H  | 0.2000 | 0.2137     |  |
| 1                         | 4.445 | 4.450 | -0.005 | 5632482H  | 0.2000 | 0.2160     |  |
| 1                         | 4.860 | 4.865 | -0.005 | 7703278H  | 0.2000 | 0.2290     |  |
| Average of Peak Amounts = |       |       |        |           |        | 0.2200     |  |
| 2                         | 5.418 | 5.423 | -0.005 | 11230800H | 0.2000 | 0.2047     |  |
| 2                         | 5.575 | 5.581 | -0.006 | 8336817H  | 0.2000 | 0.2067     |  |
| 2                         | 6.157 | 6.162 | -0.005 | 12138136H | 0.2000 | 0.2176     |  |
| 2                         | 6.895 | 6.902 | -0.007 | 8326924H  | 0.2000 | 0.2204     |  |
| 2                         | 7.252 | 7.258 | -0.006 | 7147083H  | 0.2000 | 0.2246     |  |
| Average of Peak Amounts = |       |       |        |           |        | 0.2148     |  |
|                           |       |       |        |           |        | RPD = 2.41 |  |



| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng | OnCol Amt ng | Flags |
|-----|-----------|---------------|---------------|----------|------------|--------------|-------|
|-----|-----------|---------------|---------------|----------|------------|--------------|-------|

8 PCB-1260

|                           |        |        |        |           |        |        |  |
|---------------------------|--------|--------|--------|-----------|--------|--------|--|
| 1                         | 6.686  | 6.690  | -0.004 | 12601023H | 0.2000 | 0.2148 |  |
| 1                         | 7.725  | 7.730  | -0.005 | 11753490H | 0.2000 | 0.2076 |  |
| 1                         | 8.445  | 8.450  | -0.005 | 10078867H | 0.2000 | 0.2026 |  |
| 1                         | 9.035  | 9.036  | -0.001 | 22994327H | 0.2000 | 0.2110 |  |
| 1                         | 9.518  | 9.521  | -0.003 | 12193177H | 0.2000 | 0.2105 |  |
| Average of Peak Amounts = |        |        |        |           |        | 0.2093 |  |
| 2                         | 9.272  | 9.277  | -0.005 | 14599956H | 0.2000 | 0.2129 |  |
| 2                         | 9.604  | 9.611  | -0.007 | 21018004H | 0.2000 | 0.2094 |  |
| 2                         | 9.757  | 9.762  | -0.005 | 19162731H | 0.2000 | 0.2155 |  |
| 2                         | 10.231 | 10.237 | -0.006 | 19903375H | 0.2000 | 0.2108 |  |
| 2                         | 10.625 | 10.629 | -0.004 | 38065454H | 0.2000 | 0.2053 |  |
| Average of Peak Amounts = |        |        |        |           |        | 0.2108 |  |

RPD = 0.70

\$ 11 DCB Decachlorobiphenyl (Surr)

|   |        |        |        |           |        |        |  |
|---|--------|--------|--------|-----------|--------|--------|--|
| 1 | 11.208 | 11.209 | -0.001 | 9907780H  | 0.0100 | 0.0102 |  |
| 2 | 12.728 | 12.731 | -0.003 | 12613316H | 0.0100 | 0.0103 |  |

RPD = 0.57

Reagents:

GCAR1660CALL3\_00009

Amount Added: 1.00

Units: mL

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\O0510016.D

Injection Date: 11-May-2015 17:11:57

Instrument ID: CHGC8

Lims ID: IC

Client ID:

Operator ID: 402360

ALS Bottle#: 17

Worklist Smp#: 17

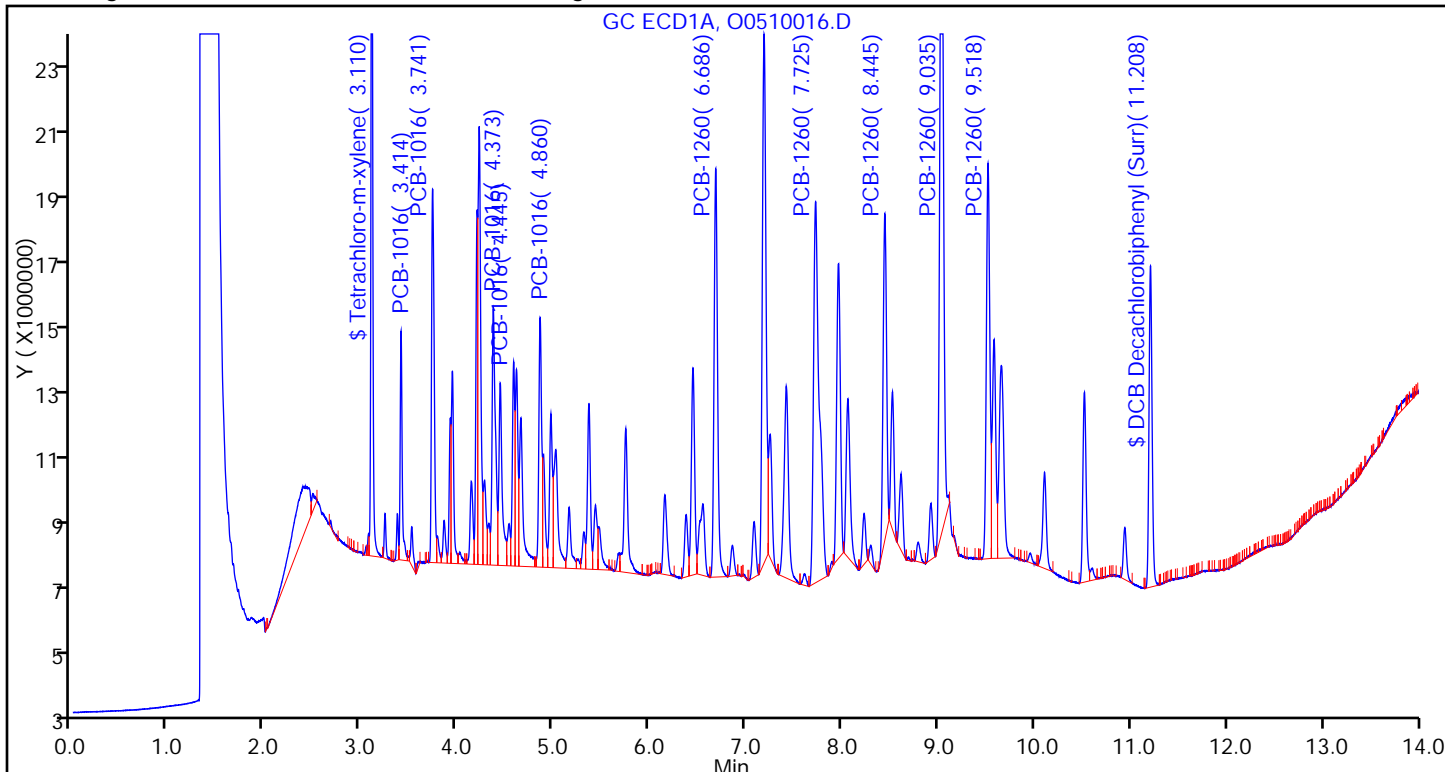
Injection Vol: 1.0 ul

Dil. Factor: 1.0000

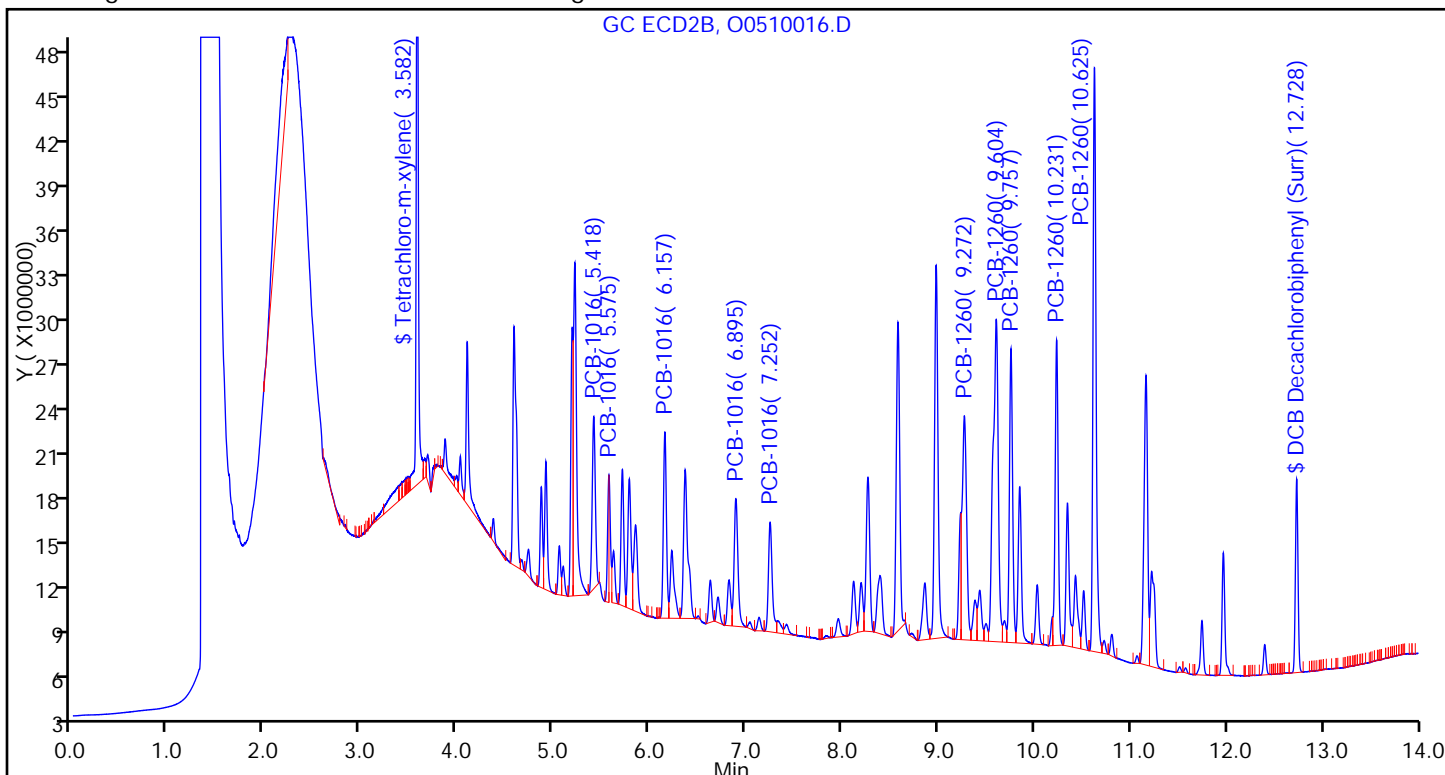
Method: PCB\_CHGC8DUAL

Limit Group: GCS 8082A ICAL

Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



TestAmerica Pittsburgh  
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\O0510017.D  
 Lims ID: ICRT  
 Client ID:  
 Sample Type: ICRT Calib Level: 4  
 Inject. Date: 11-May-2015 17:31:48 ALS Bottle#: 18 Worklist Smp#: 18  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 180-0006866-018  
 Operator ID: 402360 Instrument ID: CHGC8  
 Sublist: chrom-PCB\_CHGC8DUAL\*sub1  
 Method: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\PCB\_CHGC8DUAL.m  
 Limit Group: GCS 8082A ICAL  
 Last Update: 12-May-2015 16:53:28 Calib Date: 11-May-2015 18:31:22  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICal File: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\O0510020.D  
 Column 1 : Det: GC ECD1A  
 Column 2 : Det: GC ECD2B  
 Process Host: XAWRK022

First Level Reviewer: guptaa Date: 12-May-2015 07:16:36

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng | OnCol Amt ng | Flags |
|-----|-----------|---------------|---------------|----------|------------|--------------|-------|
|-----|-----------|---------------|---------------|----------|------------|--------------|-------|

\$ 1 Tetrachloro-m-xylene

|   |       |       |       |            |        |        |  |
|---|-------|-------|-------|------------|--------|--------|--|
| 1 | 3.109 | 3.109 | 0.000 | 61069006H  | 0.0250 | 0.0266 |  |
| 2 | 3.582 | 3.582 | 0.000 | 103835082H | 0.0250 | 0.0259 |  |

RPD = 2.73

4 PCB-1016

|   |       |       |       |           |        |        |  |
|---|-------|-------|-------|-----------|--------|--------|--|
| 1 | 3.414 | 3.414 | 0.000 | 16913668H | 0.5000 | 0.5272 |  |
| 1 | 3.741 | 3.741 | 0.000 | 27263729H | 0.5000 | 0.5237 |  |
| 1 | 4.374 | 4.374 | 0.000 | 19498311H | 0.5000 | 0.5266 |  |
| 1 | 4.445 | 4.445 | 0.000 | 13987408H | 0.5000 | 0.5363 |  |
| 1 | 4.860 | 4.860 | 0.000 | 18543676H | 0.5000 | 0.5513 |  |

Average of Peak Amounts = 0.5330

|   |       |       |       |           |        |        |  |
|---|-------|-------|-------|-----------|--------|--------|--|
| 2 | 5.418 | 5.418 | 0.000 | 28532686H | 0.5000 | 0.5200 |  |
| 2 | 5.576 | 5.576 | 0.000 | 20527230H | 0.5000 | 0.5090 |  |
| 2 | 6.157 | 6.157 | 0.000 | 29441420H | 0.5000 | 0.5277 |  |
| 2 | 6.896 | 6.896 | 0.000 | 20064045H | 0.5000 | 0.5310 |  |
| 2 | 7.252 | 7.252 | 0.000 | 16950666H | 0.5000 | 0.5327 |  |

Average of Peak Amounts = 0.5241

RPD = 1.70

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng | OnCol Amt ng | Flags |
|-----|-----------|---------------|---------------|----------|------------|--------------|-------|
|-----|-----------|---------------|---------------|----------|------------|--------------|-------|

8 PCB-1260

|   |       |       |       |           |        |        |  |
|---|-------|-------|-------|-----------|--------|--------|--|
| 1 | 6.685 | 6.685 | 0.000 | 30054444H | 0.5000 | 0.5122 |  |
| 1 | 7.725 | 7.725 | 0.000 | 28981140H | 0.5000 | 0.5119 |  |
| 1 | 8.445 | 8.445 | 0.000 | 25761247H | 0.5000 | 0.5179 |  |
| 1 | 9.035 | 9.035 | 0.000 | 56629574H | 0.5000 | 0.5196 |  |
| 1 | 9.519 | 9.519 | 0.000 | 29755690H | 0.5000 | 0.5137 |  |

Average of Peak Amounts = 0.5150

|   |        |        |       |           |        |        |  |
|---|--------|--------|-------|-----------|--------|--------|--|
| 2 | 9.271  | 9.271  | 0.000 | 34750403H | 0.5000 | 0.5068 |  |
| 2 | 9.606  | 9.606  | 0.000 | 50588811H | 0.5000 | 0.5040 |  |
| 2 | 9.757  | 9.757  | 0.000 | 46019325H | 0.5000 | 0.5175 |  |
| 2 | 10.232 | 10.232 | 0.000 | 48249474H | 0.5000 | 0.5110 |  |
| 2 | 10.625 | 10.625 | 0.000 | 94483644H | 0.5000 | 0.5095 |  |

Average of Peak Amounts = 0.5097

RPD = 1.03

\$ 11 DCB Decachlorobiphenyl (Surr)

|   |        |        |       |           |        |        |  |
|---|--------|--------|-------|-----------|--------|--------|--|
| 1 | 11.208 | 11.208 | 0.000 | 23932128H | 0.0250 | 0.0246 |  |
| 2 | 12.729 | 12.729 | 0.000 | 31095637H | 0.0250 | 0.0253 |  |

RPD = 2.61

Reagents:

GCAR1660CALL4\_00009

Amount Added: 1.00

Units: mL

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\O0510017.D

Injection Date: 11-May-2015 17:31:48

Instrument ID: CHGC8

Lims ID: ICRT

Client ID:

Operator ID: 402360

ALS Bottle#: 18

Worklist Smp#: 18

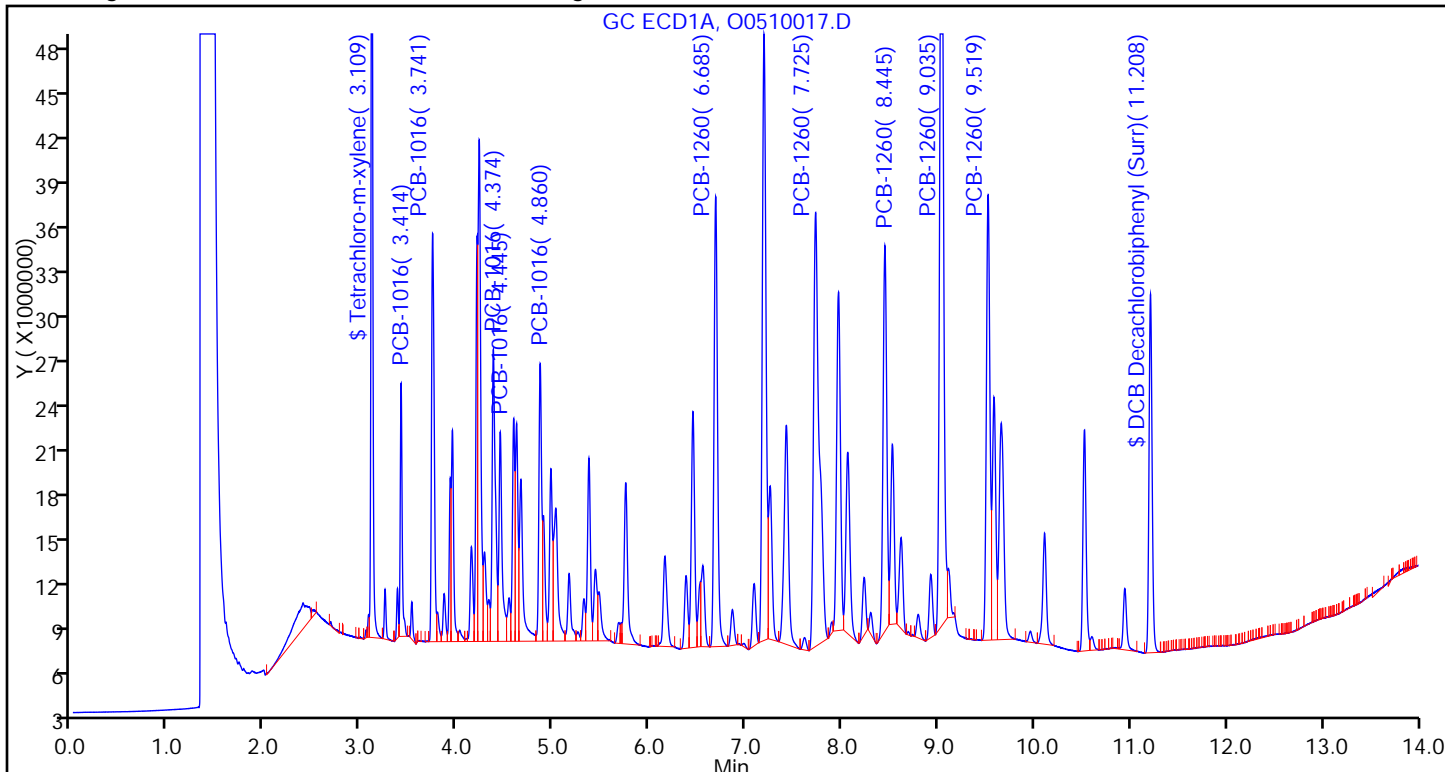
Injection Vol: 1.0 ul

Dil. Factor: 1.0000

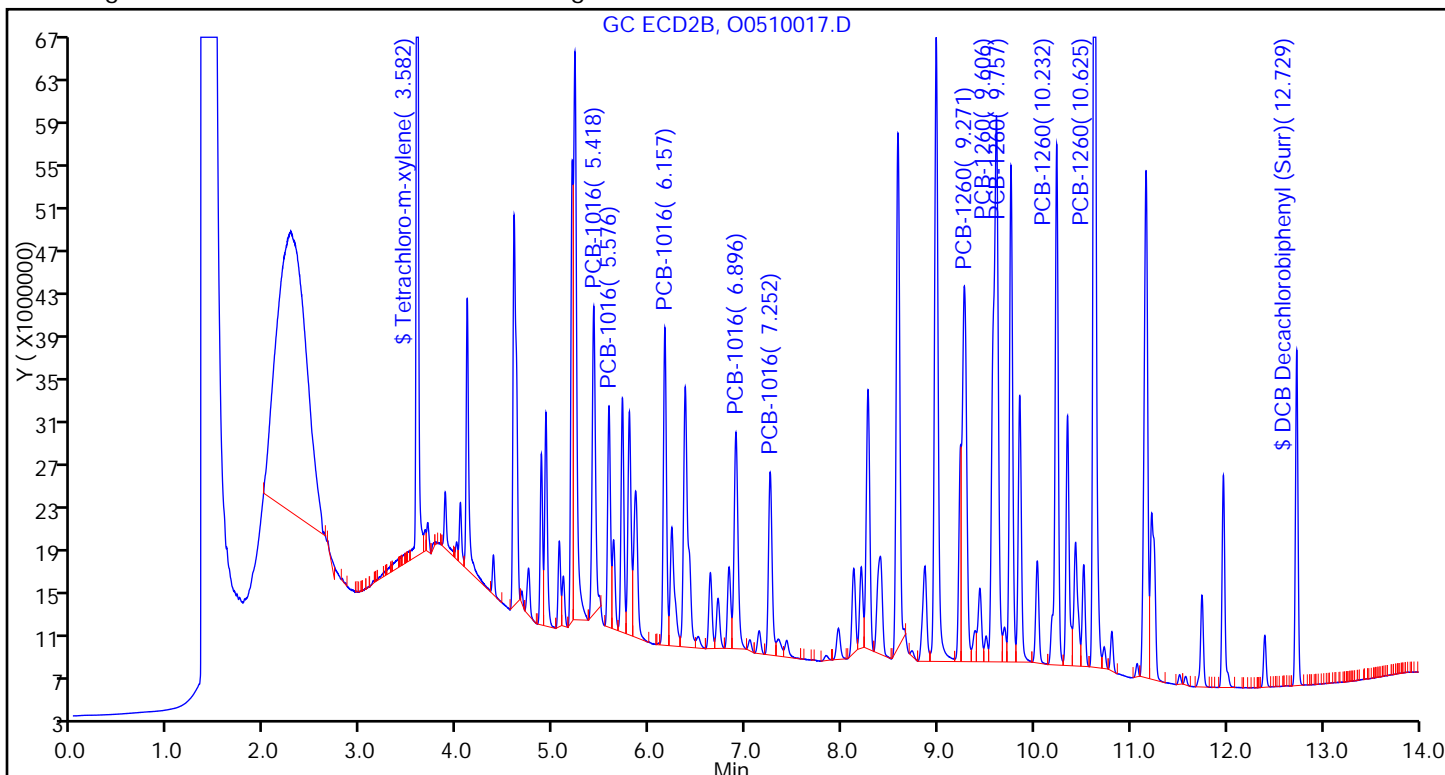
Method: PCB\_CHGC8DUAL

Limit Group: GCS 8082A ICAL

Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



TestAmerica Pittsburgh  
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\O0510018.D  
 Lims ID: IC  
 Client ID:  
 Sample Type: IC Calib Level: 5  
 Inject. Date: 11-May-2015 17:51:38 ALS Bottle#: 19 Worklist Smp#: 19  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 180-0006866-019  
 Operator ID: 402360 Instrument ID: CHGC8  
 Sublist: chrom-PCB\_CHGC8DUAL\*sub1  
 Method: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\PCB\_CHGC8DUAL.m  
 Limit Group: GCS 8082A ICAL  
 Last Update: 12-May-2015 16:53:31 Calib Date: 11-May-2015 18:31:22  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICal File: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\O0510020.D  
 Column 1 : Det: GC ECD1A  
 Column 2 : Det: GC ECD2B  
 Process Host: XAWRK022

First Level Reviewer: guptaa Date: 12-May-2015 07:12:59

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng | OnCol Amt ng | Flags |
|-----|-----------|---------------|---------------|----------|------------|--------------|-------|
|-----|-----------|---------------|---------------|----------|------------|--------------|-------|

\$ 1 Tetrachloro-m-xylene

|   |       |       |       |            |        |            |  |
|---|-------|-------|-------|------------|--------|------------|--|
| 1 | 3.110 | 3.109 | 0.001 | 123001867H | 0.0500 | 0.0536     |  |
| 2 | 3.582 | 3.582 | 0.000 | 208108940H | 0.0500 | 0.0523     |  |
|   |       |       |       |            |        | RPD = 2.49 |  |

4 PCB-1016

|                           |       |       |        |           |      |            |  |
|---------------------------|-------|-------|--------|-----------|------|------------|--|
| 1                         | 3.414 | 3.414 | 0.000  | 34195011H | 1.00 | 1.07       |  |
| 1                         | 3.741 | 3.741 | 0.000  | 53221981H | 1.00 | 1.02       |  |
| 1                         | 4.372 | 4.374 | -0.002 | 36201476H | 1.00 | 0.9777     |  |
| 1                         | 4.445 | 4.445 | 0.000  | 24789621H | 1.00 | 0.9505     |  |
| 1                         | 4.860 | 4.860 | 0.000  | 33359310H | 1.00 | 0.99       |  |
| Average of Peak Amounts = |       |       |        |           |      | 1.00       |  |
| 2                         | 5.417 | 5.418 | -0.001 | 58990376H | 1.00 | 1.07       |  |
| 2                         | 5.575 | 5.576 | -0.001 | 43731548H | 1.00 | 1.08       |  |
| 2                         | 6.156 | 6.157 | -0.001 | 59485231H | 1.00 | 1.07       |  |
| 2                         | 6.895 | 6.896 | -0.001 | 42090859H | 1.00 | 1.11       |  |
| 2                         | 7.250 | 7.252 | -0.002 | 35100449H | 1.00 | 1.10       |  |
| Average of Peak Amounts = |       |       |        |           |      | 1.09       |  |
|                           |       |       |        |           |      | RPD = 8.31 |  |

Data File: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\O0510018.D

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng | OnCol Amt ng | Flags |
|-----|-----------|---------------|---------------|----------|------------|--------------|-------|
|-----|-----------|---------------|---------------|----------|------------|--------------|-------|

8 PCB-1260

|   |       |       |        |            |      |      |  |
|---|-------|-------|--------|------------|------|------|--|
| 1 | 6.684 | 6.685 | -0.001 | 61494423H  | 1.00 | 1.05 |  |
| 1 | 7.722 | 7.725 | -0.003 | 60013089H  | 1.00 | 1.06 |  |
| 1 | 8.443 | 8.445 | -0.002 | 53458371H  | 1.00 | 1.07 |  |
| 1 | 9.032 | 9.035 | -0.003 | 117000892H | 1.00 | 1.07 |  |
| 1 | 9.517 | 9.519 | -0.002 | 62680524H  | 1.00 | 1.08 |  |

Average of Peak Amounts = 1.07

|   |        |        |        |            |      |      |  |
|---|--------|--------|--------|------------|------|------|--|
| 2 | 9.271  | 9.271  | 0.000  | 72533224H  | 1.00 | 1.06 |  |
| 2 | 9.603  | 9.606  | -0.003 | 105005888H | 1.00 | 1.05 |  |
| 2 | 9.756  | 9.757  | -0.001 | 94091480H  | 1.00 | 1.06 |  |
| 2 | 10.231 | 10.232 | -0.001 | 101087542H | 1.00 | 1.07 |  |
| 2 | 10.624 | 10.625 | -0.001 | 196482047H | 1.00 | 1.06 |  |

Average of Peak Amounts = 1.06

RPD = 0.87

\$ 11 DCB Decachlorobiphenyl (Surr)

|   |        |        |        |           |        |        |  |
|---|--------|--------|--------|-----------|--------|--------|--|
| 1 | 11.206 | 11.208 | -0.002 | 50667030H | 0.0500 | 0.0522 |  |
| 2 | 12.728 | 12.729 | -0.001 | 64469688H | 0.0500 | 0.0524 |  |

RPD = 0.52

Reagents:

GCAR1660CALL5\_00010

Amount Added: 1.00

Units: mL

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\O0510018.D

Injection Date: 11-May-2015 17:51:38

Instrument ID: CHGC8

Lims ID: IC

Client ID:

Operator ID: 402360

ALS Bottle#: 19

Worklist Smp#: 19

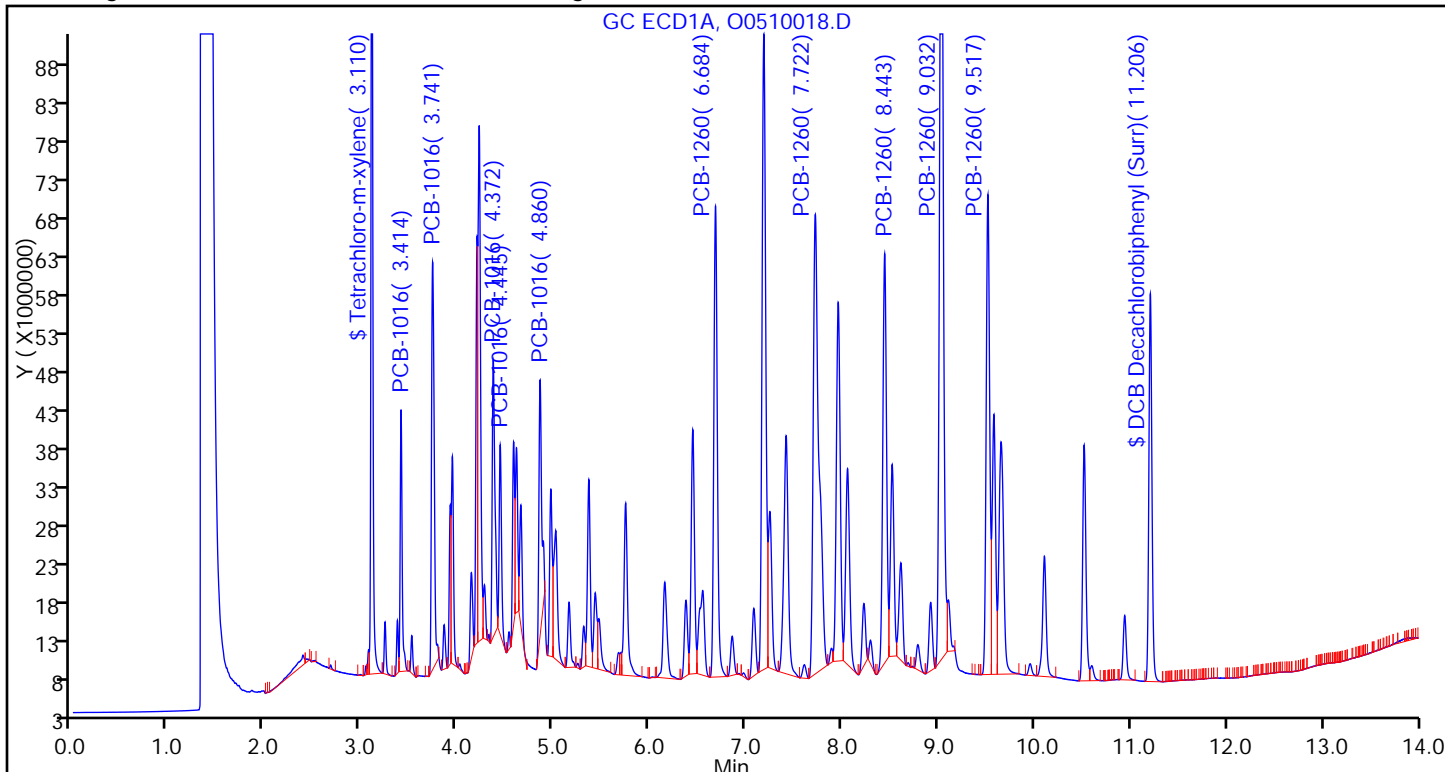
Injection Vol: 1.0 ul

Dil. Factor: 1.0000

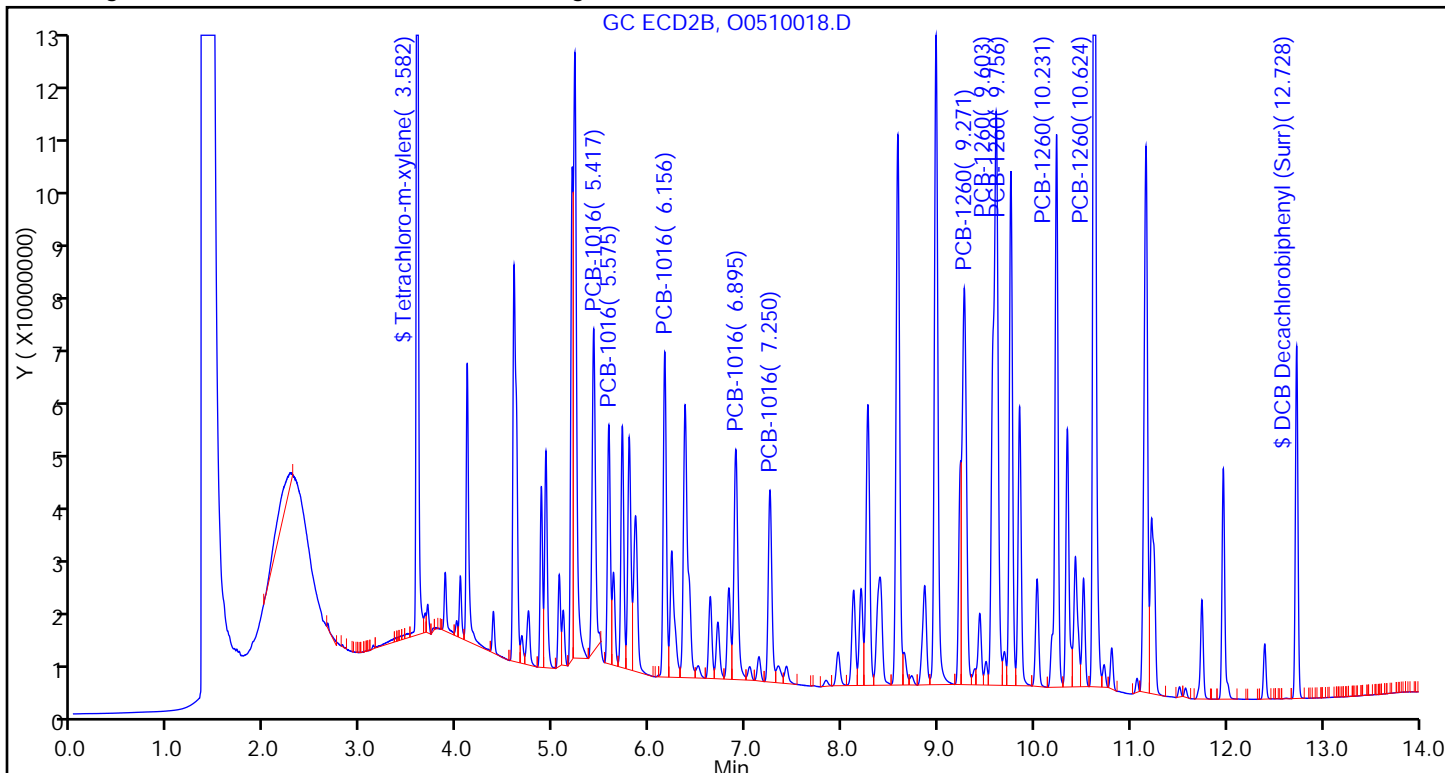
Method: PCB\_CHGC8DUAL

Limit Group: GCS 8082A ICAL

Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3





TestAmerica Pittsburgh  
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\O0510019.D  
 Lims ID: IC  
 Client ID:  
 Sample Type: IC Calib Level: 6  
 Inject. Date: 11-May-2015 18:11:30 ALS Bottle#: 20 Worklist Smp#: 20  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 180-0006866-020  
 Operator ID: 402360 Instrument ID: CHGC8  
 Sublist: chrom-PCB\_CHGC8DUAL\*sub1  
 Method: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\PCB\_CHGC8DUAL.m  
 Limit Group: GCS 8082A ICAL  
 Last Update: 12-May-2015 16:53:34 Calib Date: 11-May-2015 18:31:22  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICal File: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\O0510020.D  
 Column 1 : Det: GC ECD1A  
 Column 2 : Det: GC ECD2B  
 Process Host: XAWRK022

First Level Reviewer: guptaa Date: 12-May-2015 07:17:15

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng | OnCol Amt ng | Flags |
|-----|-----------|---------------|---------------|----------|------------|--------------|-------|
|-----|-----------|---------------|---------------|----------|------------|--------------|-------|

\$ 1 Tetrachloro-m-xylene

|   |       |       |       |            |        |        |  |
|---|-------|-------|-------|------------|--------|--------|--|
| 1 | 3.111 | 3.109 | 0.002 | 217804637H | 0.1000 | 0.0950 |  |
| 2 | 3.583 | 3.582 | 0.001 | 369333943H | 0.1000 | 0.0932 |  |

RPD = 1.95

4 PCB-1016

|   |       |       |       |           |      |      |  |
|---|-------|-------|-------|-----------|------|------|--|
| 1 | 3.415 | 3.414 | 0.001 | 61765436H | 2.00 | 1.93 |  |
| 1 | 3.742 | 3.741 | 0.001 | 94863578H | 2.00 | 1.82 |  |
| 1 | 4.374 | 4.374 | 0.000 | 74792601H | 2.00 | 2.02 |  |
| 1 | 4.446 | 4.445 | 0.001 | 54740543H | 2.00 | 2.10 |  |
| 1 | 4.860 | 4.860 | 0.000 | 68627362H | 2.00 | 2.04 |  |

Average of Peak Amounts = 1.98

|   |       |       |        |            |      |      |  |
|---|-------|-------|--------|------------|------|------|--|
| 2 | 5.418 | 5.418 | 0.000  | 104524221H | 2.00 | 1.90 |  |
| 2 | 5.574 | 5.576 | -0.002 | 80930872H  | 2.00 | 2.01 |  |
| 2 | 6.156 | 6.157 | -0.001 | 104708089H | 2.00 | 1.88 |  |
| 2 | 6.896 | 6.896 | 0.000  | 74586566H  | 2.00 | 1.97 |  |
| 2 | 7.251 | 7.252 | -0.001 | 61164877H  | 2.00 | 1.92 |  |

Average of Peak Amounts = 1.94

RPD = 2.27

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng | OnCol Amt ng | Flags |
|-----|-----------|---------------|---------------|----------|------------|--------------|-------|
|-----|-----------|---------------|---------------|----------|------------|--------------|-------|

8 PCB-1260

|                           |        |        |        |            |      |      |  |
|---------------------------|--------|--------|--------|------------|------|------|--|
| 1                         | 6.684  | 6.685  | -0.001 | 106929172H | 2.00 | 1.82 |  |
| 1                         | 7.723  | 7.725  | -0.002 | 109234339H | 2.00 | 1.93 |  |
| 1                         | 8.445  | 8.445  | 0.000  | 97054089H  | 2.00 | 1.95 |  |
| 1                         | 9.034  | 9.035  | -0.001 | 211477460H | 2.00 | 1.94 |  |
| 1                         | 9.517  | 9.519  | -0.002 | 112390573H | 2.00 | 1.94 |  |
| Average of Peak Amounts = |        |        |        |            |      | 1.92 |  |
| 2                         | 9.273  | 9.271  | 0.002  | 128632957H | 2.00 | 1.88 |  |
| 2                         | 9.604  | 9.606  | -0.002 | 190165344H | 2.00 | 1.89 |  |
| 2                         | 9.757  | 9.757  | 0.000  | 163242338H | 2.00 | 1.84 |  |
| 2                         | 10.232 | 10.232 | 0.000  | 178645498H | 2.00 | 1.89 |  |
| 2                         | 10.624 | 10.625 | -0.001 | 367907713H | 2.00 | 1.98 |  |
| Average of Peak Amounts = |        |        |        |            |      | 1.90 |  |

RPD = 1.06

\$ 11 DCB Decachlorobiphenyl (Surr)

|   |        |        |        |            |        |        |  |
|---|--------|--------|--------|------------|--------|--------|--|
| 1 | 11.207 | 11.208 | -0.001 | 92750802H  | 0.1000 | 0.0955 |  |
| 2 | 12.728 | 12.729 | -0.001 | 118952451H | 0.1000 | 0.0968 |  |

RPD = 1.31

Reagents:

GCAR1660CALL6\_00008

Amount Added: 1.00

Units: mL

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\O0510019.D

Injection Date: 11-May-2015 18:11:30

Instrument ID: CHGC8

Lims ID: IC

Client ID:

Operator ID: 402360

ALS Bottle#: 20

Worklist Smp#: 20

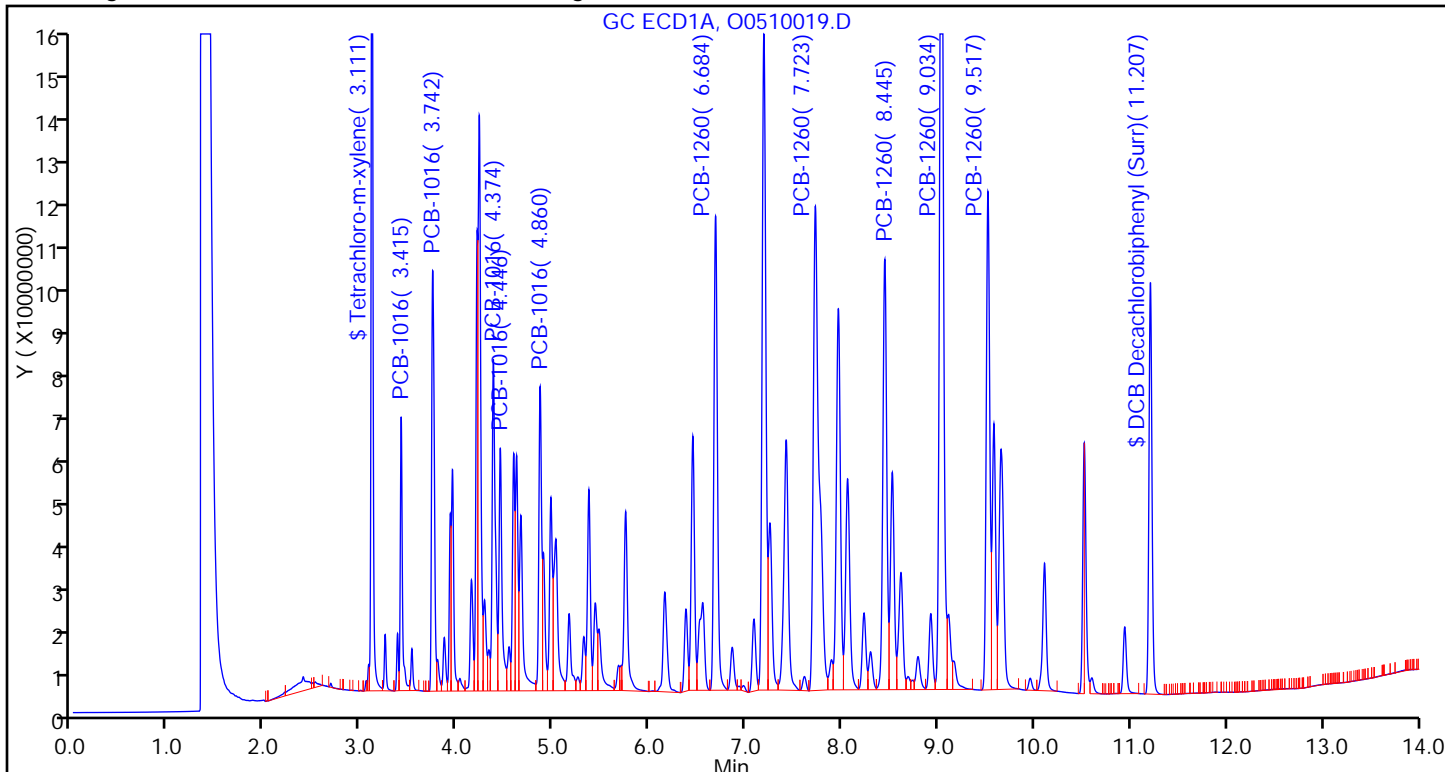
Injection Vol: 1.0 ul

Dil. Factor: 1.0000

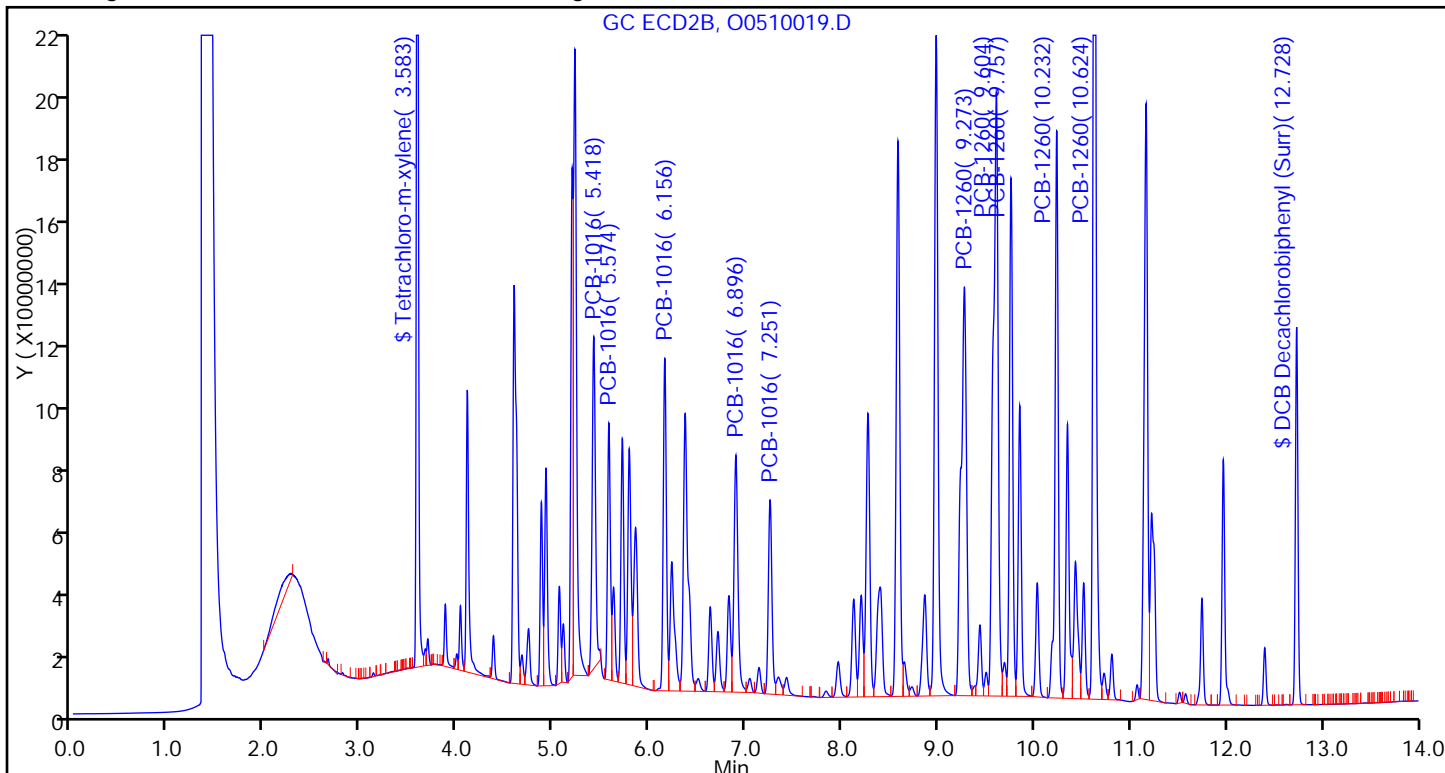
Method: PCB\_CHGC8DUAL

Limit Group: GCS 8082A ICAL

Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



TestAmerica Pittsburgh  
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\O0510020.D  
 Lims ID: IC  
 Client ID:  
 Sample Type: IC Calib Level: 7  
 Inject. Date: 11-May-2015 18:31:22 ALS Bottle#: 21 Worklist Smp#: 21  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 180-0006866-021  
 Operator ID: 402360 Instrument ID: CHGC8  
 Sublist: chrom-PCB\_CHGC8DUAL\*sub1  
 Method: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\PCB\_CHGC8DUAL.m  
 Limit Group: GCS 8082A ICAL  
 Last Update: 12-May-2015 16:53:37 Calib Date: 11-May-2015 18:31:22  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICal File: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\O0510020.D

Column 1 : Det: GC ECD1A  
 Column 2 : Det: GC ECD2B

Process Host: XAWRK022

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng | OnCol Amt ng | Flags |
|-----|-----------|---------------|---------------|----------|------------|--------------|-------|
|-----|-----------|---------------|---------------|----------|------------|--------------|-------|

\$ 1 Tetrachloro-m-xylene

|   |       |       |       |            |        |        |  |
|---|-------|-------|-------|------------|--------|--------|--|
| 1 | 3.113 | 3.109 | 0.004 | 384054647H | 0.2000 | 0.1675 |  |
| 2 | 3.585 | 3.582 | 0.003 | 671110782H | 0.2000 | 0.1696 |  |

RPD = 1.24

4 PCB-1016

|                           |       |       |       |            |      |      |  |
|---------------------------|-------|-------|-------|------------|------|------|--|
| 1                         | 3.416 | 3.414 | 0.002 | 112685759H | 4.00 | 3.51 |  |
| 1                         | 3.744 | 3.741 | 0.003 | 170579674H | 4.00 | 3.28 |  |
| 1                         | 4.375 | 4.374 | 0.001 | 140855556H | 4.00 | 3.80 |  |
| 1                         | 4.446 | 4.445 | 0.001 | 104109124H | 4.00 | 3.99 |  |
| 1                         | 4.861 | 4.860 | 0.001 | 128319642H | 4.00 | 3.82 |  |
| Average of Peak Amounts = |       |       |       |            |      | 3.68 |  |
| 2                         | 5.419 | 5.418 | 0.001 | 215433758H | 4.00 | 3.93 |  |
| 2                         | 5.576 | 5.576 | 0.000 | 162825627H | 4.00 | 4.04 |  |
| 2                         | 6.158 | 6.157 | 0.001 | 199012206H | 4.00 | 3.57 |  |
| 2                         | 6.898 | 6.896 | 0.002 | 145202615H | 4.00 | 3.84 |  |
| 2                         | 7.252 | 7.252 | 0.000 | 119306641H | 4.00 | 3.75 |  |
| Average of Peak Amounts = |       |       |       |            |      | 3.82 |  |

RPD = 3.85

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng | OnCol Amt ng | Flags |
|-----|-----------|---------------|---------------|----------|------------|--------------|-------|
|-----|-----------|---------------|---------------|----------|------------|--------------|-------|

8 PCB-1260

|   |       |       |        |            |      |      |  |
|---|-------|-------|--------|------------|------|------|--|
| 1 | 6.686 | 6.685 | 0.001  | 208441834H | 4.00 | 3.55 |  |
| 1 | 7.724 | 7.725 | -0.001 | 214507999H | 4.00 | 3.79 |  |
| 1 | 8.445 | 8.445 | 0.000  | 189470236H | 4.00 | 3.81 |  |
| 1 | 9.035 | 9.035 | 0.000  | 419059711H | 4.00 | 3.84 |  |
| 1 | 9.516 | 9.519 | -0.003 | 219718994H | 4.00 | 3.79 |  |

Average of Peak Amounts = 3.76

|   |        |        |        |            |      |      |  |
|---|--------|--------|--------|------------|------|------|--|
| 2 | 9.271  | 9.271  | 0.000  | 248440354H | 4.00 | 3.62 |  |
| 2 | 9.605  | 9.606  | -0.001 | 365342786H | 4.00 | 3.64 |  |
| 2 | 9.757  | 9.757  | 0.000  | 324610345H | 4.00 | 3.65 |  |
| 2 | 10.233 | 10.232 | 0.001  | 349298371H | 4.00 | 3.70 |  |
| 2 | 10.626 | 10.625 | 0.001  | 730409964H | 4.00 | 3.94 |  |

Average of Peak Amounts = 3.71

RPD = 1.27

\$ 11 DCB Decachlorobiphenyl (Surr)

|   |        |        |        |            |        |        |  |
|---|--------|--------|--------|------------|--------|--------|--|
| 1 | 11.206 | 11.208 | -0.002 | 189628941H | 0.2000 | 0.1953 |  |
| 2 | 12.728 | 12.729 | -0.001 | 242811843H | 0.2000 | 0.1975 |  |

RPD = 1.15

Reagents:

GCAR1660CALL7\_00009

Amount Added: 1.00

Units: mL

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\O0510020.D

Injection Date: 11-May-2015 18:31:22

Instrument ID: CHGC8

Lims ID: IC

Client ID:

Operator ID: 402360

ALS Bottle#: 21

Worklist Smp#: 21

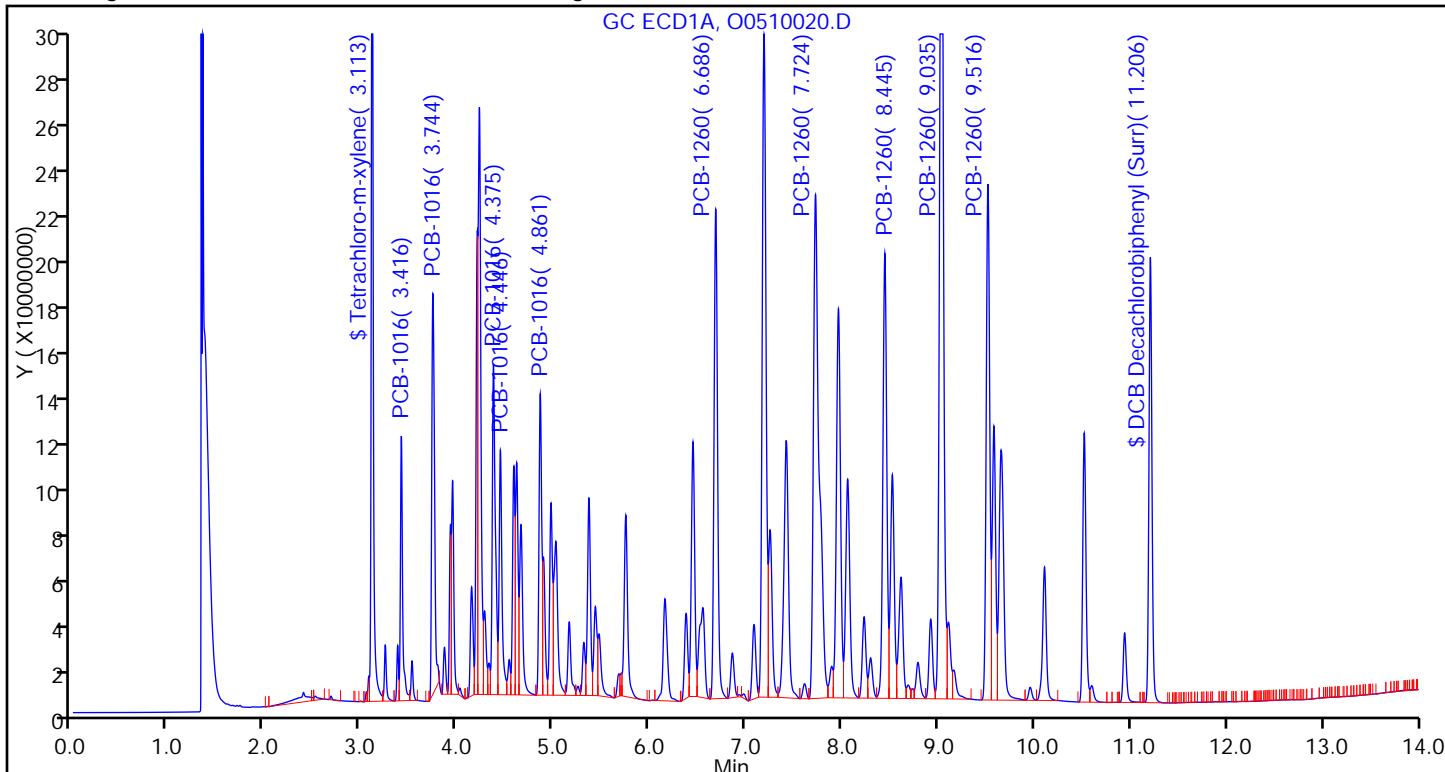
Injection Vol: 1.0 ul

Dil. Factor: 1.0000

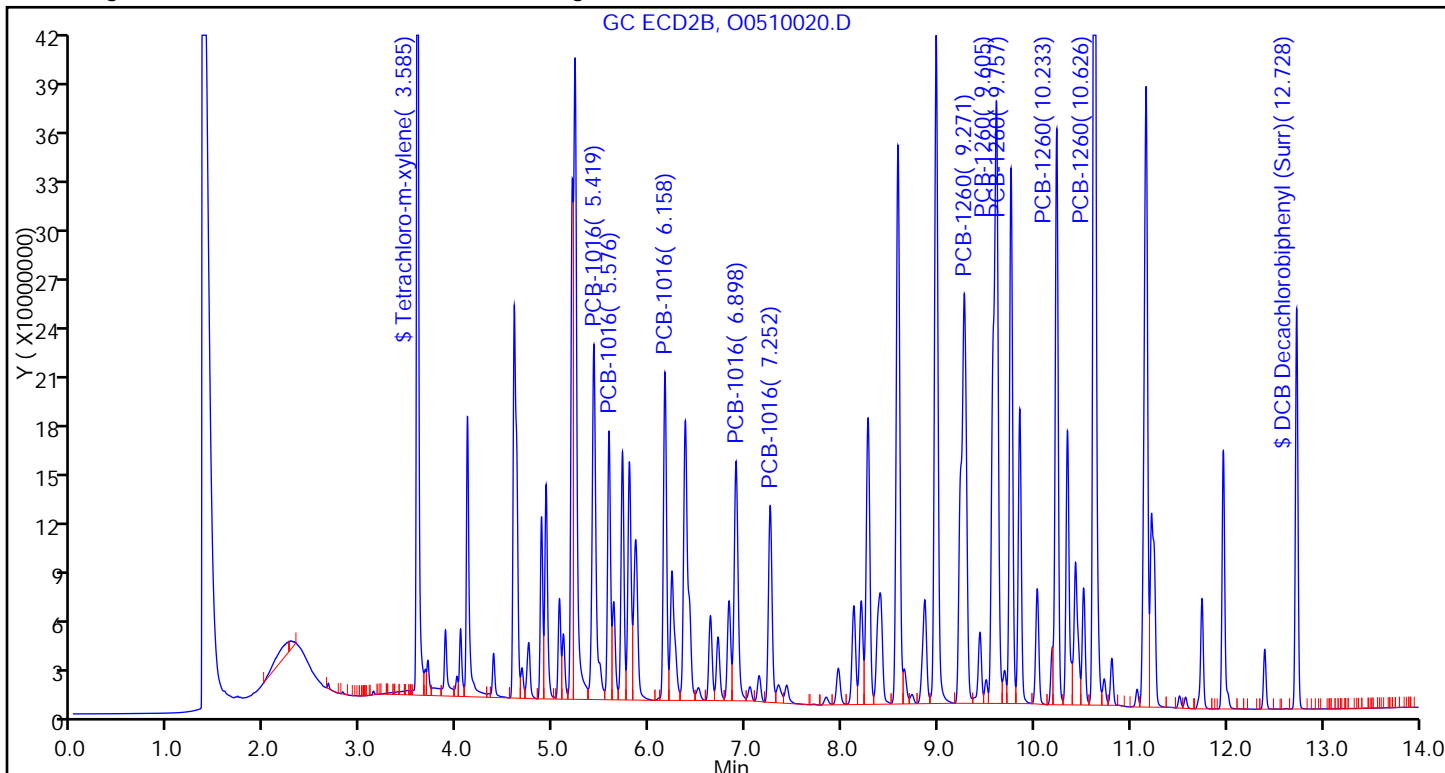
Method: PCB\_CHGC8DUAL

Limit Group: GCS 8082A ICAL

Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



FORM VI  
GC SEMI VOA INITIAL CALIBRATION DATA  
EXTERNAL STANDARD RETENTION TIME SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-43791-1 Analy Batch No.: 141160

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

Instrument ID: CHGC8 GC Column: RTX-CLP2 ID: 0.53 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/11/2015 16:32 Calibration End Date: 05/11/2015 18:31 Calibration ID: 23853

Calibration Files:

| LEVEL:  | LAB SAMPLE ID:     | LAB FILE ID: |
|---------|--------------------|--------------|
| Level 1 | IC 180-141160/15   | O0510014.D   |
| Level 2 | IC 180-141160/16   | O0510015.D   |
| Level 3 | IC 180-141160/17   | O0510016.D   |
| Level 4 | ICRT 180-141160/18 | O0510017.D   |
| Level 5 | IC 180-141160/19   | O0510018.D   |
| Level 6 | IC 180-141160/20   | O0510019.D   |
| Level 7 | IC 180-141160/21   | O0510020.D   |

| ANALYTE                       | LVL 1  | LVL 2  | LVL 3  | LVL 4  | LVL 5  | LVL 6  | LVL 7  |  |  |  | RT WINDOW       | AVG RT |
|-------------------------------|--------|--------|--------|--------|--------|--------|--------|--|--|--|-----------------|--------|
| PCB-1016 Peak 1               | 5.419  | 5.415  | 5.418  | 5.418  | 5.417  | 5.418  | 5.419  |  |  |  | 5.373 - 5.473   | 5.418  |
| PCB-1016 Peak 2               | 5.574  | 5.572  | 5.575  | 5.576  | 5.575  | 5.574  | 5.576  |  |  |  | 5.531 - 5.631   | 5.575  |
| PCB-1016 Peak 3               | 6.155  | 6.155  | 6.157  | 6.157  | 6.156  | 6.156  | 6.158  |  |  |  | 6.112 - 6.212   | 6.156  |
| PCB-1016 Peak 4               | 6.896  | 6.896  | 6.895  | 6.896  | 6.895  | 6.896  | 6.898  |  |  |  | 6.852 - 6.952   | 6.896  |
| PCB-1016 Peak 5               | 7.255  | 7.252  | 7.252  | 7.252  | 7.250  | 7.251  | 7.252  |  |  |  | 7.208 - 7.308   | 7.252  |
| PCB-1260 Peak 1               | 9.276  | 9.271  | 9.272  | 9.271  | 9.271  | 9.273  | 9.271  |  |  |  | 9.227 - 9.327   | 9.272  |
| PCB-1260 Peak 2               | 9.604  | 9.604  | 9.604  | 9.606  | 9.603  | 9.604  | 9.605  |  |  |  | 9.561 - 9.661   | 9.604  |
| PCB-1260 Peak 3               | 9.757  | 9.756  | 9.757  | 9.757  | 9.756  | 9.757  | 9.757  |  |  |  | 9.712 - 9.812   | 9.757  |
| PCB-1260 Peak 4               | 10.232 | 10.232 | 10.231 | 10.232 | 10.231 | 10.232 | 10.233 |  |  |  | 10.187 - 10.287 | 10.232 |
| PCB-1260 Peak 5               | 10.624 | 10.624 | 10.625 | 10.625 | 10.624 | 10.624 | 10.626 |  |  |  | 10.579 - 10.679 | 10.625 |
| Tetrachloro-m-xylene (Surr)   | 3.581  | 3.581  | 3.582  | 3.582  | 3.582  | 3.583  | 3.585  |  |  |  | 3.537 - 3.637   | 3.582  |
| DCB Decachlorobiphenyl (Surr) | 12.726 | 12.727 | 12.728 | 12.729 | 12.728 | 12.728 | 12.728 |  |  |  | 12.661 - 12.801 | 12.728 |

FORM VI  
GC SEMI VOA INITIAL CALIBRATION DATA  
EXTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Pittsburgh Job No.: 180-43791-1 Analy Batch No.: 141160

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

Instrument ID: CHGC8 GC Column: RTX-CLP2 ID: 0.53 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/11/2015 16:32 Calibration End Date: 05/11/2015 18:31 Calibration ID: 23853

Calibration Files:

| LEVEL:  | LAB SAMPLE ID:     | LAB FILE ID: |
|---------|--------------------|--------------|
| Level 1 | IC 180-141160/15   | 00510014.D   |
| Level 2 | IC 180-141160/16   | 00510015.D   |
| Level 3 | IC 180-141160/17   | 00510016.D   |
| Level 4 | ICRT 180-141160/18 | 00510017.D   |
| Level 5 | IC 180-141160/19   | 00510018.D   |
| Level 6 | IC 180-141160/20   | 00510019.D   |
| Level 7 | IC 180-141160/21   | 00510020.D   |

| ANALYTE                       | CF                       |                          |                          |            | CURVE TYPE | COEFFICIENT |            |    | # | MIN CF | %RSD | # | MAX %RSD | R^2 OR COD | # | MIN R^2 OR COD |
|-------------------------------|--------------------------|--------------------------|--------------------------|------------|------------|-------------|------------|----|---|--------|------|---|----------|------------|---|----------------|
|                               | LVL 1<br>LVL 5           | LVL 2<br>LVL 6           | LVL 3<br>LVL 7           | LVL 4      |            | B           | M1         | M2 |   |        |      |   |          |            |   |                |
| PCB-1016 Peak 1               | 50785200<br>58990376     | 55009520<br>52262111     | 56154000<br>53858440     | 57065372   | Ave        |             | 54875002.6 |    |   | 5.2    |      |   | 20.0     |            |   |                |
| PCB-1016 Peak 2               | 37211400<br>43731548     | 37422280<br>40465436     | 41684085<br>40706407     | 41054460   | Ave        |             | 40325088.0 |    |   | 5.8    |      |   | 20.0     |            |   |                |
| PCB-1016 Peak 3               | 51176800<br>59485231     | 58175920<br>52354045     | 60690680<br>49753052     | 58882840   | Ave        |             | 55788366.7 |    |   | 8.1    |      |   | 20.0     |            |   |                |
| PCB-1016 Peak 4               | 32785300<br>42090859     | 34273620<br>37293283     | 41634620<br>36300654     | 40128090   | Ave        |             | 37786632.3 |    |   | 9.6    |      |   | 20.0     |            |   |                |
| PCB-1016 Peak 5               | 23381400<br>35100449     | 34233500<br>30582439     | 35735415<br>29826660     | 33901332   | Ave        |             | 31823027.8 |    |   | 13.6   |      |   | 20.0     |            |   |                |
| PCB-1260 Peak 1               | 69024000<br>72533224     | 69529140<br>64316479     | 72999780<br>62110089     | 69500806   | Ave        |             | 68573359.6 |    |   | 5.9    |      |   | 20.0     |            |   |                |
| PCB-1260 Peak 2               | 101384100<br>105005888   | 103542340<br>95082672    | 105090020<br>91335697    | 101177622  | Ave        |             | 100374048  |    |   | 5.2    |      |   | 20.0     |            |   |                |
| PCB-1260 Peak 3               | 86915900<br>94091480     | 90820220<br>81621169     | 95813655<br>81152586     | 92038650   | Ave        |             | 88921951.5 |    |   | 6.6    |      |   | 20.0     |            |   |                |
| PCB-1260 Peak 4               | 90754200<br>101087542    | 96503280<br>89322749     | 99516875<br>87324593     | 96498948   | Ave        |             | 94429741.0 |    |   | 5.6    |      |   | 20.0     |            |   |                |
| PCB-1260 Peak 5               | 173839400<br>196482047   | 181987260<br>183953857   | 190327270<br>182602491   | 188967288  | Ave        |             | 185451373  |    |   | 3.9    |      |   | 20.0     |            |   |                |
| Tetrachloro-m-xylene (Surr)   | 6850826000<br>4162178800 | 4943123200<br>3693339430 | 4339243900<br>3355553910 | 4153403280 | Lin2       | 1497499.11  | 3948801186 |    |   |        |      |   |          | 0.9920     |   | 0.9900         |
| DCB Decachlorobiphenyl (Surr) | 1188370000<br>1289393760 | 1219340800<br>1189524510 | 1261331600<br>1214059215 | 1243825480 | Ave        |             | 1229406481 |    |   | 3.1    |      |   | 20.0     |            |   |                |

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



FORM VI  
GC SEMI VOA INITIAL CALIBRATION DATA  
EXTERNAL STANDARD RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Pittsburgh Job No.: 180-43791-1 Analy Batch No.: 141160

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

Instrument ID: CHGC8 GC Column: RTX-CLP2 ID: 0.53 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/11/2015 16:32 Calibration End Date: 05/11/2015 18:31 Calibration ID: 23853

Calibration Files:

| LEVEL:  | LAB SAMPLE ID:     | LAB FILE ID: |
|---------|--------------------|--------------|
| Level 1 | IC 180-141160/15   | O0510014.D   |
| Level 2 | IC 180-141160/16   | O0510015.D   |
| Level 3 | IC 180-141160/17   | O0510016.D   |
| Level 4 | ICRT 180-141160/18 | O0510017.D   |
| Level 5 | IC 180-141160/19   | O0510018.D   |
| Level 6 | IC 180-141160/20   | O0510019.D   |
| Level 7 | IC 180-141160/21   | O0510020.D   |

| ANALYTE                       | CURVE TYPE | RESPONSE             |                       |          |           |           | CONCENTRATION (NG) |                  |        |        |        |
|-------------------------------|------------|----------------------|-----------------------|----------|-----------|-----------|--------------------|------------------|--------|--------|--------|
|                               |            | LVL 1<br>LVL 6       | LVL 2<br>LVL 7        | LVL 3    | LVL 4     | LVL 5     | LVL 1<br>LVL 6     | LVL 2<br>LVL 7   | LVL 3  | LVL 4  | LVL 5  |
| PCB-1016 Peak 1               | Ave        | 507852<br>104524221  | 2750476<br>215433758  | 11230800 | 28532686  | 58990376  | 0.0100<br>2.00     | 0.0500<br>4.00   | 0.200  | 0.500  | 1.00   |
| PCB-1016 Peak 2               | Ave        | 372114<br>80930872   | 1871114<br>162825627  | 8336817  | 20527230  | 43731548  | 0.0100<br>2.00     | 0.0500<br>4.00   | 0.200  | 0.500  | 1.00   |
| PCB-1016 Peak 3               | Ave        | 511768<br>104708089  | 2908796<br>199012206  | 12138136 | 29441420  | 59485231  | 0.0100<br>2.00     | 0.0500<br>4.00   | 0.200  | 0.500  | 1.00   |
| PCB-1016 Peak 4               | Ave        | 327853<br>74586566   | 1713681<br>145202615  | 8326924  | 20064045  | 42090859  | 0.0100<br>2.00     | 0.0500<br>4.00   | 0.200  | 0.500  | 1.00   |
| PCB-1016 Peak 5               | Ave        | 233814<br>61164877   | 1711675<br>119306641  | 7147083  | 16950666  | 35100449  | 0.0100<br>2.00     | 0.0500<br>4.00   | 0.200  | 0.500  | 1.00   |
| PCB-1260 Peak 1               | Ave        | 690240<br>128632957  | 3476457<br>248440354  | 14599956 | 34750403  | 72533224  | 0.0100<br>2.00     | 0.0500<br>4.00   | 0.200  | 0.500  | 1.00   |
| PCB-1260 Peak 2               | Ave        | 1013841<br>190165344 | 5177117<br>365342786  | 21018004 | 50588811  | 105005888 | 0.0100<br>2.00     | 0.0500<br>4.00   | 0.200  | 0.500  | 1.00   |
| PCB-1260 Peak 3               | Ave        | 869159<br>163242338  | 4541011<br>324610345  | 19162731 | 46019325  | 94091480  | 0.0100<br>2.00     | 0.0500<br>4.00   | 0.200  | 0.500  | 1.00   |
| PCB-1260 Peak 4               | Ave        | 907542<br>178645498  | 4825164<br>349298371  | 19903375 | 48249474  | 101087542 | 0.0100<br>2.00     | 0.0500<br>4.00   | 0.200  | 0.500  | 1.00   |
| PCB-1260 Peak 5               | Ave        | 1738394<br>367907713 | 9099363<br>730409964  | 38065454 | 94483644  | 196482047 | 0.0100<br>2.00     | 0.0500<br>4.00   | 0.200  | 0.500  | 1.00   |
| Tetrachloro-m-xylene (Surr)   | Lin2       | 3425413<br>369333943 | 12357808<br>671110782 | 43392439 | 103835082 | 208108940 | 0.000500<br>0.100  | 0.00250<br>0.200 | 0.0100 | 0.0250 | 0.0500 |
| DCB Decachlorobiphenyl (Surr) | Ave        | 594185<br>118952451  | 3048352<br>242811843  | 12613316 | 31095637  | 64469688  | 0.000500<br>0.100  | 0.00250<br>0.200 | 0.0100 | 0.0250 | 0.0500 |

Curve Type Legend:

Ave = Average by Height  
Lin2 = Linear 1/conc^2 by height

TestAmerica Pittsburgh  
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\O0510014.D  
 Lims ID: IC  
 Client ID:  
 Sample Type: IC Calib Level: 1  
 Inject. Date: 11-May-2015 16:32:08 ALS Bottle#: 15 Worklist Smp#: 15  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 180-0006866-015  
 Operator ID: 402360 Instrument ID: CHGC8  
 Sublist: chrom-PCB\_CHGC8DUAL\*sub1  
 Method: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\PCB\_CHGC8DUAL.m  
 Limit Group: GCS 8082A ICAL  
 Last Update: 12-May-2015 16:53:16 Calib Date: 11-May-2015 18:31:22  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICal File: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\O0510020.D  
 Column 1 : Det: GC ECD1A  
 Column 2 : Det: GC ECD2B  
 Process Host: XAWRK022

First Level Reviewer: guptaa Date: 11-May-2015 17:03:57

| Col | RT (min.) | Exp RT (min.) | Diff RT (min.) | Response | Cal Amt ng | OnCol Amt ng | Flags |
|-----|-----------|---------------|----------------|----------|------------|--------------|-------|
|-----|-----------|---------------|----------------|----------|------------|--------------|-------|

\$ 1 Tetrachloro-m-xylene

|   |       |       |        |          |          |            |  |
|---|-------|-------|--------|----------|----------|------------|--|
| 1 | 3.109 | 3.114 | -0.005 | 1072698H | 0.000500 | 0.000468   |  |
| 2 | 3.581 | 3.587 | -0.006 | 3425413H | 0.000500 | 0.000488   |  |
|   |       |       |        |          |          | RPD = 4.27 |  |

4 PCB-1016

|                           |       |       |        |         |        |            |  |
|---------------------------|-------|-------|--------|---------|--------|------------|--|
| 1                         | 3.414 | 3.418 | -0.004 | 292260H | 0.0100 | 0.009111   |  |
| 1                         | 3.743 | 3.746 | -0.003 | 533553H | 0.0100 | 0.0102     |  |
| 1                         | 4.373 | 4.378 | -0.005 | 342856H | 0.0100 | 0.009259   |  |
| 1                         | 4.440 | 4.450 | -0.010 | 228349H | 0.0100 | 0.008756   |  |
| 1                         | 4.857 | 4.865 | -0.008 | 278275H | 0.0100 | 0.008274   |  |
| Average of Peak Amounts = |       |       |        |         |        | 0.009130   |  |
| 2                         | 5.419 | 5.423 | -0.004 | 507852H | 0.0100 | 0.009255   |  |
| 2                         | 5.574 | 5.581 | -0.007 | 372114H | 0.0100 | 0.009228   |  |
| 2                         | 6.155 | 6.162 | -0.007 | 511768H | 0.0100 | 0.009173   |  |
| 2                         | 6.896 | 6.902 | -0.006 | 327853H | 0.0100 | 0.008676   |  |
| 2                         | 7.255 | 7.258 | -0.003 | 233814H | 0.0100 | 0.007347   |  |
| Average of Peak Amounts = |       |       |        |         |        | 0.008736   |  |
|                           |       |       |        |         |        | RPD = 4.41 |  |

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng | OnCol Amt ng | Flags |
|-----|-----------|---------------|---------------|----------|------------|--------------|-------|
|-----|-----------|---------------|---------------|----------|------------|--------------|-------|

8 PCB-1260

|   |       |       |        |         |        |          |  |
|---|-------|-------|--------|---------|--------|----------|--|
| 1 | 6.683 | 6.690 | -0.007 | 597005H | 0.0100 | 0.0102   |  |
| 1 | 7.721 | 7.730 | -0.009 | 538637H | 0.0100 | 0.009513 |  |
| 1 | 8.446 | 8.450 | -0.004 | 480842H | 0.0100 | 0.009667 |  |
| 1 | 9.033 | 9.036 | -0.003 | 997728H | 0.0100 | 0.009154 |  |
| 1 | 9.519 | 9.521 | -0.002 | 547856H | 0.0100 | 0.009458 |  |

Average of Peak Amounts = 0.009593

|   |        |        |        |          |        |          |  |
|---|--------|--------|--------|----------|--------|----------|--|
| 2 | 9.276  | 9.277  | -0.001 | 690240H  | 0.0100 | 0.0101   |  |
| 2 | 9.604  | 9.611  | -0.007 | 1013841H | 0.0100 | 0.0101   |  |
| 2 | 9.757  | 9.762  | -0.005 | 869159H  | 0.0100 | 0.009774 |  |
| 2 | 10.232 | 10.237 | -0.005 | 907542H  | 0.0100 | 0.009611 |  |
| 2 | 10.624 | 10.629 | -0.005 | 1738394H | 0.0100 | 0.009374 |  |

Average of Peak Amounts = 0.009785

RPD = 1.98

\$ 11 DCB Decachlorobiphenyl (Surr)

|   |        |        |        |         |          |          |  |
|---|--------|--------|--------|---------|----------|----------|--|
| 1 | 11.206 | 11.209 | -0.003 | 492145H | 0.000500 | 0.000507 |  |
| 2 | 12.726 | 12.731 | -0.005 | 594185H | 0.000500 | 0.000483 |  |

RPD = 4.73

Reagents:

GCAR1660CALL1\_00015

Amount Added: 1.00

Units: mL

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\O0510014.D

Injection Date: 11-May-2015 16:32:08

Instrument ID: CHGC8

Lims ID: IC

Client ID:

Operator ID: 402360

ALS Bottle#: 15

Worklist Smp#: 15

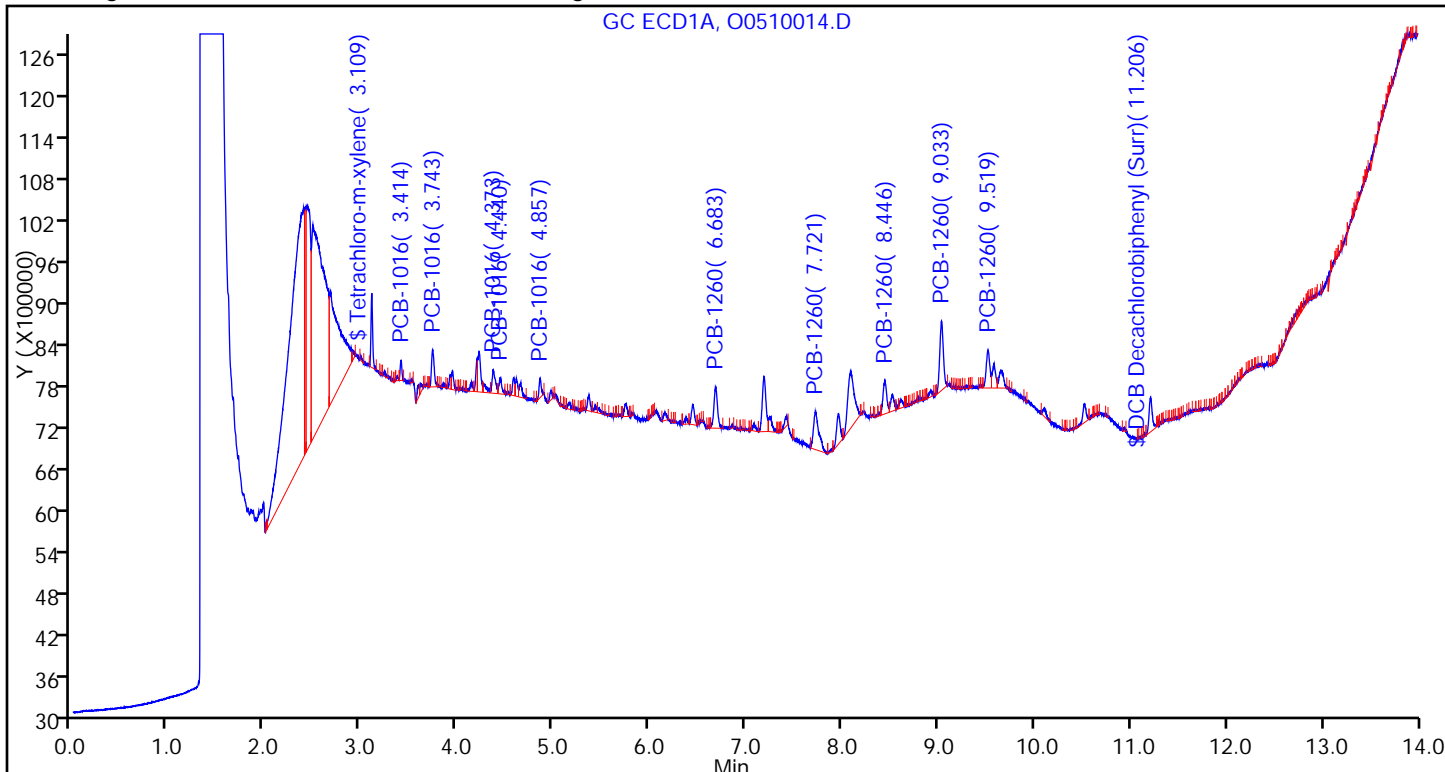
Injection Vol: 1.0 ul

Dil. Factor: 1.0000

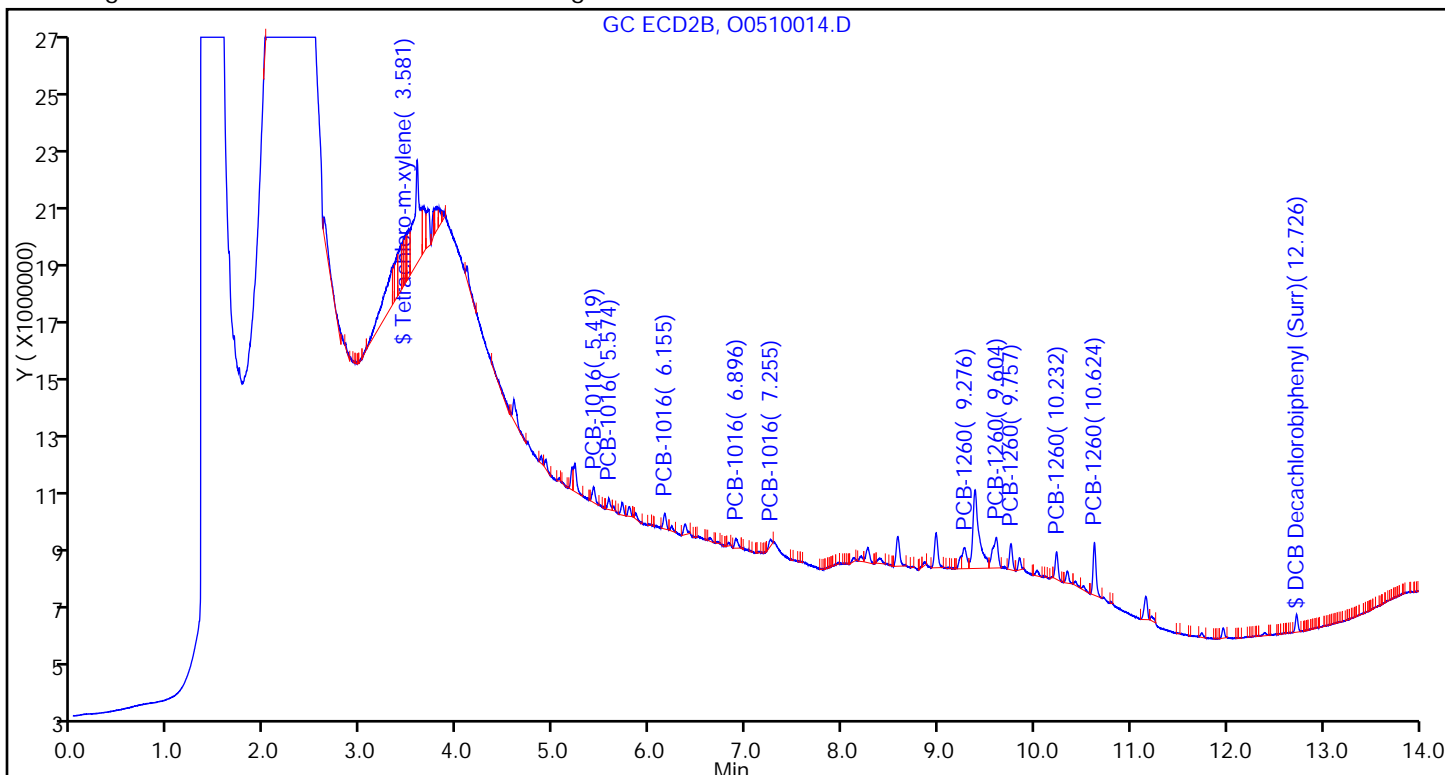
Method: PCB\_CHGC8DUAL

Limit Group: GCS 8082A ICAL

Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



TestAmerica Pittsburgh  
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\O0510015.D  
 Lims ID: IC  
 Client ID:  
 Sample Type: IC Calib Level: 2  
 Inject. Date: 11-May-2015 16:52:05 ALS Bottle#: 16 Worklist Smp#: 16  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 180-0006866-016  
 Operator ID: 402360 Instrument ID: CHGC8  
 Sublist: chrom-PCB\_CHGC8DUAL\*sub1  
 Method: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\PCB\_CHGC8DUAL.m  
 Limit Group: GCS 8082A ICAL  
 Last Update: 12-May-2015 16:53:21 Calib Date: 11-May-2015 18:31:22  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICal File: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\O0510020.D  
 Column 1 : Det: GC ECD1A  
 Column 2 : Det: GC ECD2B  
 Process Host: XAWRK022

First Level Reviewer: guptaa Date: 12-May-2015 07:15:39

| Col | RT (min.) | Exp RT (min.) | Diff RT (min.) | Response | Cal Amt ng | OnCol Amt ng | Flags |
|-----|-----------|---------------|----------------|----------|------------|--------------|-------|
|-----|-----------|---------------|----------------|----------|------------|--------------|-------|

\$ 1 Tetrachloro-m-xylene

|   |       |       |        |           |          |            |  |
|---|-------|-------|--------|-----------|----------|------------|--|
| 1 | 3.108 | 3.114 | -0.006 | 5900248H  | 0.002500 | 0.002573   |  |
| 2 | 3.581 | 3.587 | -0.006 | 12357808H | 0.002500 | 0.002750   |  |
|   |       |       |        |           |          | RPD = 6.65 |  |

4 PCB-1016

|                           |       |       |        |          |        |            |  |
|---------------------------|-------|-------|--------|----------|--------|------------|--|
| 1                         | 3.412 | 3.418 | -0.006 | 1646700H | 0.0500 | 0.0513     |  |
| 1                         | 3.740 | 3.746 | -0.006 | 2781858H | 0.0500 | 0.0534     |  |
| 1                         | 4.372 | 4.378 | -0.006 | 1876983H | 0.0500 | 0.0507     |  |
| 1                         | 4.444 | 4.450 | -0.006 | 1270184H | 0.0500 | 0.0487     |  |
| 1                         | 4.859 | 4.865 | -0.006 | 1612747H | 0.0500 | 0.0479     |  |
| Average of Peak Amounts = |       |       |        |          |        | 0.0504     |  |
| 2                         | 5.415 | 5.423 | -0.008 | 2750476H | 0.0500 | 0.0501     |  |
| 2                         | 5.572 | 5.581 | -0.009 | 1871114H | 0.0500 | 0.0464     |  |
| 2                         | 6.155 | 6.162 | -0.007 | 2908796H | 0.0500 | 0.0521     |  |
| 2                         | 6.896 | 6.902 | -0.006 | 1713681H | 0.0500 | 0.0454     |  |
| 2                         | 7.252 | 7.258 | -0.006 | 1711675H | 0.0500 | 0.0538     |  |
| Average of Peak Amounts = |       |       |        |          |        | 0.0496     |  |
|                           |       |       |        |          |        | RPD = 1.72 |  |

Data File: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\O0510015.D

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng | OnCol Amt ng | Flags |
|-----|-----------|---------------|---------------|----------|------------|--------------|-------|
|-----|-----------|---------------|---------------|----------|------------|--------------|-------|

8 PCB-1260

|   |       |       |        |          |        |        |  |
|---|-------|-------|--------|----------|--------|--------|--|
| 1 | 6.684 | 6.690 | -0.006 | 3042823H | 0.0500 | 0.0519 |  |
| 1 | 7.723 | 7.730 | -0.007 | 2874368H | 0.0500 | 0.0508 |  |
| 1 | 8.442 | 8.450 | -0.008 | 2442320H | 0.0500 | 0.0491 |  |
| 1 | 9.033 | 9.036 | -0.003 | 5371918H | 0.0500 | 0.0493 |  |
| 1 | 9.519 | 9.521 | -0.002 | 2819497H | 0.0500 | 0.0487 |  |

Average of Peak Amounts = 0.0499

|   |        |        |        |          |        |        |  |
|---|--------|--------|--------|----------|--------|--------|--|
| 2 | 9.271  | 9.277  | -0.006 | 3476457H | 0.0500 | 0.0507 |  |
| 2 | 9.604  | 9.611  | -0.007 | 5177117H | 0.0500 | 0.0516 |  |
| 2 | 9.756  | 9.762  | -0.006 | 4541011H | 0.0500 | 0.0511 |  |
| 2 | 10.232 | 10.237 | -0.005 | 4825164H | 0.0500 | 0.0511 |  |
| 2 | 10.624 | 10.629 | -0.005 | 9099363H | 0.0500 | 0.0491 |  |

Average of Peak Amounts = 0.0507

RPD = 1.52

\$ 11 DCB Decachlorobiphenyl (Surr)

|   |        |        |        |          |          |          |  |
|---|--------|--------|--------|----------|----------|----------|--|
| 1 | 11.208 | 11.209 | -0.001 | 2442710H | 0.002500 | 0.002515 |  |
| 2 | 12.727 | 12.731 | -0.004 | 3048352H | 0.002500 | 0.002480 |  |

RPD = 1.43

Reagents:

GCAR1660CALL2\_00010

Amount Added: 1.00

Units: mL

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\O0510015.D

Injection Date: 11-May-2015 16:52:05 Instrument ID: CHGC8

Lims ID: IC

Client ID:

Operator ID: 402360

ALS Bottle#: 16

Worklist Smp#: 16

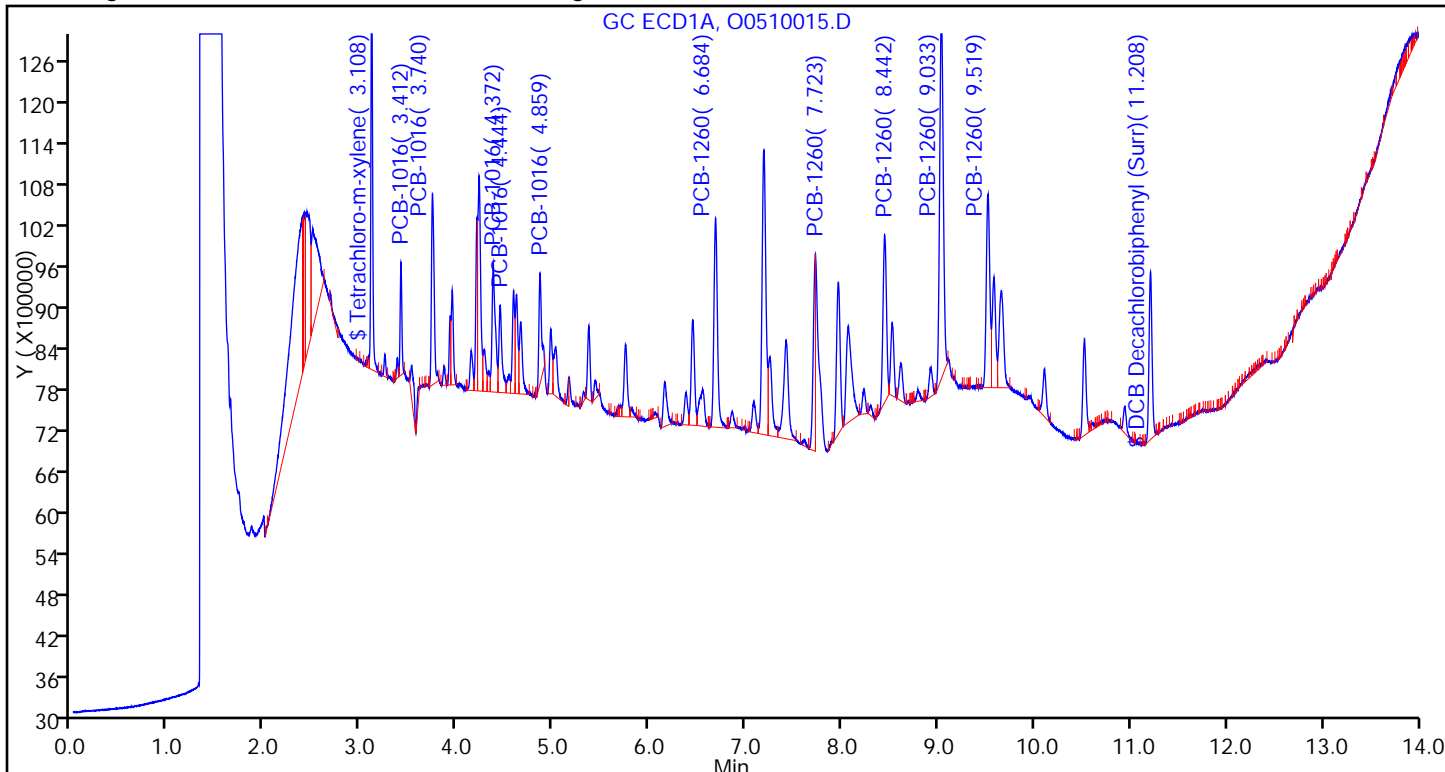
Injection Vol: 1.0 ul

Dil. Factor: 1.0000

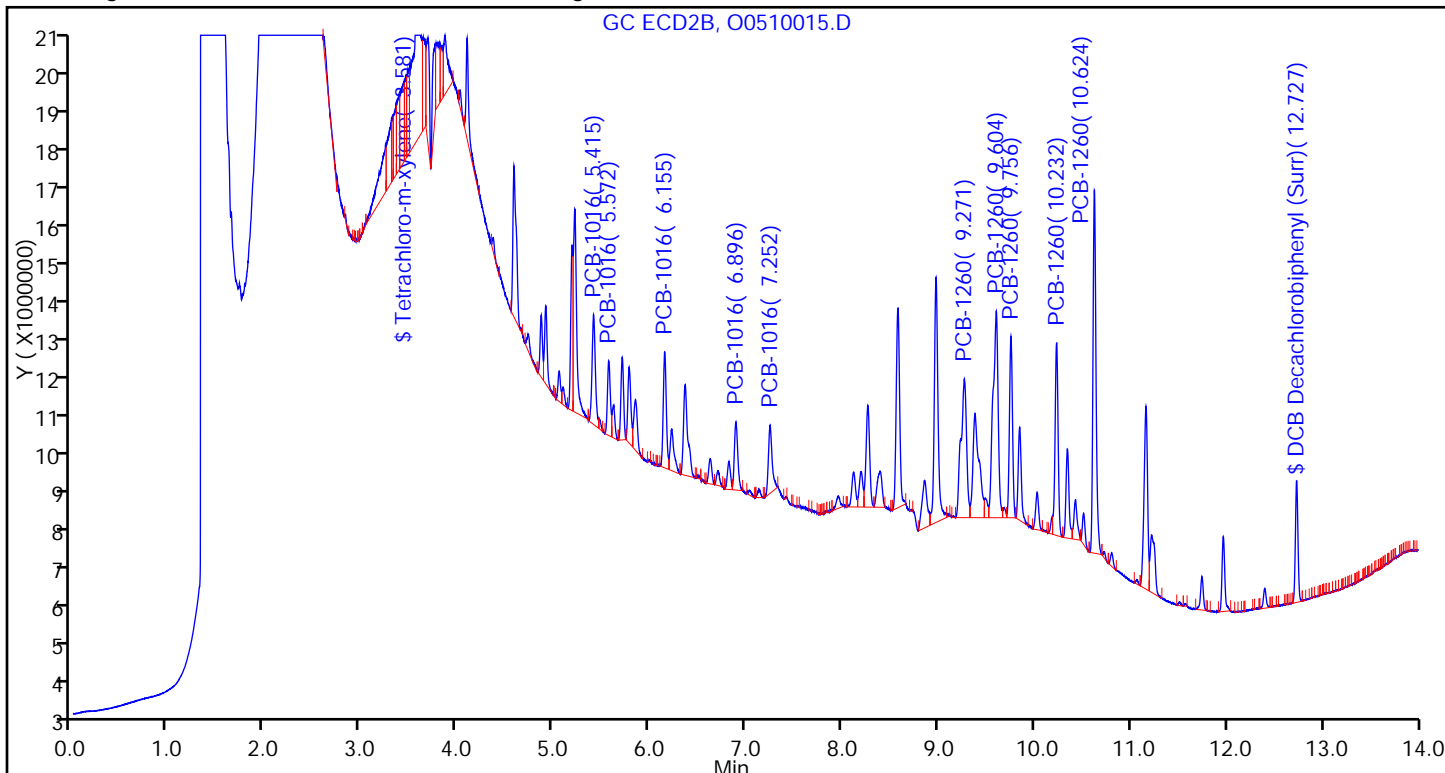
Method: PCB\_CHGC8DUAL

Limit Group: GCS 8082A ICAL

Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



TestAmerica Pittsburgh  
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\O0510016.D  
 Lims ID: IC  
 Client ID:  
 Sample Type: IC Calib Level: 3  
 Inject. Date: 11-May-2015 17:11:57 ALS Bottle#: 17 Worklist Smp#: 17  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 180-0006866-017  
 Operator ID: 402360 Instrument ID: CHGC8  
 Sublist: chrom-PCB\_CHGC8DUAL\*sub1  
 Method: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\PCB\_CHGC8DUAL.m  
 Limit Group: GCS 8082A ICAL  
 Last Update: 12-May-2015 16:53:24 Calib Date: 11-May-2015 18:31:22  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICal File: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\O0510020.D  
 Column 1 : Det: GC ECD1A  
 Column 2 : Det: GC ECD2B  
 Process Host: XAWRK022

First Level Reviewer: guptaa Date: 12-May-2015 07:16:15

| Col | RT (min.) | Exp RT (min.) | Diff RT (min.) | Response | Cal Amt ng | OnCol Amt ng | Flags |
|-----|-----------|---------------|----------------|----------|------------|--------------|-------|
|-----|-----------|---------------|----------------|----------|------------|--------------|-------|

\$ 1 Tetrachloro-m-xylene

|   |       |       |        |           |        |            |  |
|---|-------|-------|--------|-----------|--------|------------|--|
| 1 | 3.110 | 3.114 | -0.004 | 25442631H | 0.0100 | 0.0111     |  |
| 2 | 3.582 | 3.587 | -0.005 | 43392439H | 0.0100 | 0.0106     |  |
|   |       |       |        |           |        | RPD = 4.48 |  |

4 PCB-1016

|                           |       |       |        |           |        |            |  |
|---------------------------|-------|-------|--------|-----------|--------|------------|--|
| 1                         | 3.414 | 3.418 | -0.004 | 7063801H  | 0.2000 | 0.2202     |  |
| 1                         | 3.741 | 3.746 | -0.005 | 11518800H | 0.2000 | 0.2213     |  |
| 1                         | 4.373 | 4.378 | -0.005 | 7913109H  | 0.2000 | 0.2137     |  |
| 1                         | 4.445 | 4.450 | -0.005 | 5632482H  | 0.2000 | 0.2160     |  |
| 1                         | 4.860 | 4.865 | -0.005 | 7703278H  | 0.2000 | 0.2290     |  |
| Average of Peak Amounts = |       |       |        |           |        | 0.2200     |  |
| 2                         | 5.418 | 5.423 | -0.005 | 11230800H | 0.2000 | 0.2047     |  |
| 2                         | 5.575 | 5.581 | -0.006 | 8336817H  | 0.2000 | 0.2067     |  |
| 2                         | 6.157 | 6.162 | -0.005 | 12138136H | 0.2000 | 0.2176     |  |
| 2                         | 6.895 | 6.902 | -0.007 | 8326924H  | 0.2000 | 0.2204     |  |
| 2                         | 7.252 | 7.258 | -0.006 | 7147083H  | 0.2000 | 0.2246     |  |
| Average of Peak Amounts = |       |       |        |           |        | 0.2148     |  |
|                           |       |       |        |           |        | RPD = 2.41 |  |



| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng | OnCol Amt ng | Flags |
|-----|-----------|---------------|---------------|----------|------------|--------------|-------|
|-----|-----------|---------------|---------------|----------|------------|--------------|-------|

8 PCB-1260

|                           |        |        |        |           |        |        |  |
|---------------------------|--------|--------|--------|-----------|--------|--------|--|
| 1                         | 6.686  | 6.690  | -0.004 | 12601023H | 0.2000 | 0.2148 |  |
| 1                         | 7.725  | 7.730  | -0.005 | 11753490H | 0.2000 | 0.2076 |  |
| 1                         | 8.445  | 8.450  | -0.005 | 10078867H | 0.2000 | 0.2026 |  |
| 1                         | 9.035  | 9.036  | -0.001 | 22994327H | 0.2000 | 0.2110 |  |
| 1                         | 9.518  | 9.521  | -0.003 | 12193177H | 0.2000 | 0.2105 |  |
| Average of Peak Amounts = |        |        |        |           |        | 0.2093 |  |
| 2                         | 9.272  | 9.277  | -0.005 | 14599956H | 0.2000 | 0.2129 |  |
| 2                         | 9.604  | 9.611  | -0.007 | 21018004H | 0.2000 | 0.2094 |  |
| 2                         | 9.757  | 9.762  | -0.005 | 19162731H | 0.2000 | 0.2155 |  |
| 2                         | 10.231 | 10.237 | -0.006 | 19903375H | 0.2000 | 0.2108 |  |
| 2                         | 10.625 | 10.629 | -0.004 | 38065454H | 0.2000 | 0.2053 |  |
| Average of Peak Amounts = |        |        |        |           |        | 0.2108 |  |

RPD = 0.70

\$ 11 DCB Decachlorobiphenyl (Surr)

|   |        |        |        |           |        |        |  |
|---|--------|--------|--------|-----------|--------|--------|--|
| 1 | 11.208 | 11.209 | -0.001 | 9907780H  | 0.0100 | 0.0102 |  |
| 2 | 12.728 | 12.731 | -0.003 | 12613316H | 0.0100 | 0.0103 |  |

RPD = 0.57

Reagents:

GCAR1660CALL3\_00009

Amount Added: 1.00

Units: mL

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\O0510016.D

Injection Date: 11-May-2015 17:11:57 Instrument ID: CHGC8

Lims ID: IC

Client ID:

Operator ID: 402360

ALS Bottle#: 17

Worklist Smp#: 17

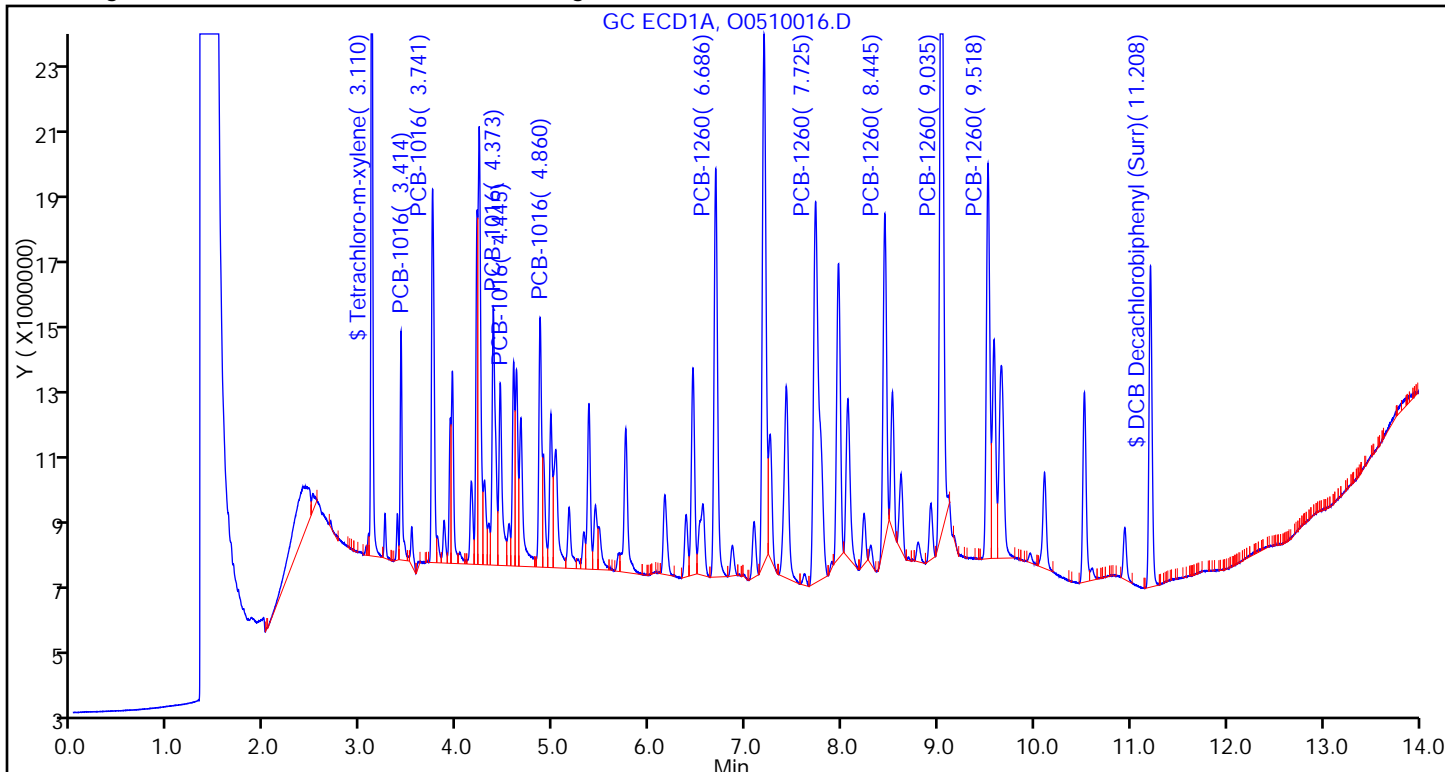
Injection Vol: 1.0 ul

Dil. Factor: 1.0000

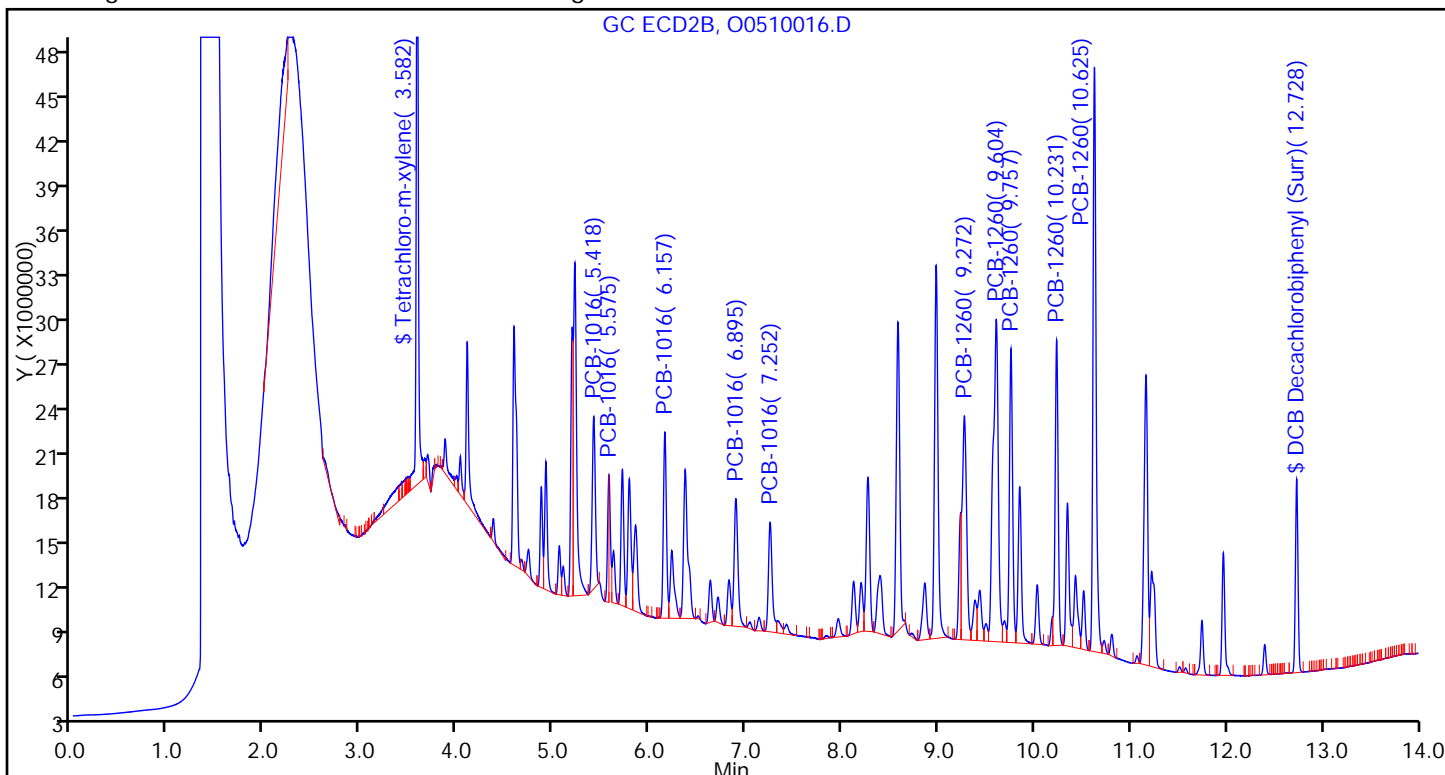
Method: PCB\_CHGC8DUAL

Limit Group: GCS 8082A ICAL

Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



TestAmerica Pittsburgh  
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\O0510017.D  
 Lims ID: ICRT  
 Client ID:  
 Sample Type: ICRT Calib Level: 4  
 Inject. Date: 11-May-2015 17:31:48 ALS Bottle#: 18 Worklist Smp#: 18  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 180-0006866-018  
 Operator ID: 402360 Instrument ID: CHGC8  
 Sublist: chrom-PCB\_CHGC8DUAL\*sub1  
 Method: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\PCB\_CHGC8DUAL.m  
 Limit Group: GCS 8082A ICAL  
 Last Update: 12-May-2015 16:53:28 Calib Date: 11-May-2015 18:31:22  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICal File: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\O0510020.D  
 Column 1 : Det: GC ECD1A  
 Column 2 : Det: GC ECD2B  
 Process Host: XAWRK022

First Level Reviewer: guptaa Date: 12-May-2015 07:16:36

| Col | RT (min.) | Exp RT (min.) | Diff RT (min.) | Response | Cal Amt ng | OnCol Amt ng | Flags |
|-----|-----------|---------------|----------------|----------|------------|--------------|-------|
|-----|-----------|---------------|----------------|----------|------------|--------------|-------|

\$ 1 Tetrachloro-m-xylene

|   |       |       |       |            |        |            |  |
|---|-------|-------|-------|------------|--------|------------|--|
| 1 | 3.109 | 3.109 | 0.000 | 61069006H  | 0.0250 | 0.0266     |  |
| 2 | 3.582 | 3.582 | 0.000 | 103835082H | 0.0250 | 0.0259     |  |
|   |       |       |       |            |        | RPD = 2.73 |  |

4 PCB-1016

|                           |       |       |       |           |        |            |  |
|---------------------------|-------|-------|-------|-----------|--------|------------|--|
| 1                         | 3.414 | 3.414 | 0.000 | 16913668H | 0.5000 | 0.5272     |  |
| 1                         | 3.741 | 3.741 | 0.000 | 27263729H | 0.5000 | 0.5237     |  |
| 1                         | 4.374 | 4.374 | 0.000 | 19498311H | 0.5000 | 0.5266     |  |
| 1                         | 4.445 | 4.445 | 0.000 | 13987408H | 0.5000 | 0.5363     |  |
| 1                         | 4.860 | 4.860 | 0.000 | 18543676H | 0.5000 | 0.5513     |  |
| Average of Peak Amounts = |       |       |       |           |        | 0.5330     |  |
| 2                         | 5.418 | 5.418 | 0.000 | 28532686H | 0.5000 | 0.5200     |  |
| 2                         | 5.576 | 5.576 | 0.000 | 20527230H | 0.5000 | 0.5090     |  |
| 2                         | 6.157 | 6.157 | 0.000 | 29441420H | 0.5000 | 0.5277     |  |
| 2                         | 6.896 | 6.896 | 0.000 | 20064045H | 0.5000 | 0.5310     |  |
| 2                         | 7.252 | 7.252 | 0.000 | 16950666H | 0.5000 | 0.5327     |  |
| Average of Peak Amounts = |       |       |       |           |        | 0.5241     |  |
|                           |       |       |       |           |        | RPD = 1.70 |  |

Data File: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\O0510017.D

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng | OnCol Amt ng | Flags |
|-----|-----------|---------------|---------------|----------|------------|--------------|-------|
|-----|-----------|---------------|---------------|----------|------------|--------------|-------|

8 PCB-1260

|   |       |       |       |           |        |        |  |
|---|-------|-------|-------|-----------|--------|--------|--|
| 1 | 6.685 | 6.685 | 0.000 | 30054444H | 0.5000 | 0.5122 |  |
| 1 | 7.725 | 7.725 | 0.000 | 28981140H | 0.5000 | 0.5119 |  |
| 1 | 8.445 | 8.445 | 0.000 | 25761247H | 0.5000 | 0.5179 |  |
| 1 | 9.035 | 9.035 | 0.000 | 56629574H | 0.5000 | 0.5196 |  |
| 1 | 9.519 | 9.519 | 0.000 | 29755690H | 0.5000 | 0.5137 |  |

Average of Peak Amounts = 0.5150

|   |        |        |       |           |        |        |  |
|---|--------|--------|-------|-----------|--------|--------|--|
| 2 | 9.271  | 9.271  | 0.000 | 34750403H | 0.5000 | 0.5068 |  |
| 2 | 9.606  | 9.606  | 0.000 | 50588811H | 0.5000 | 0.5040 |  |
| 2 | 9.757  | 9.757  | 0.000 | 46019325H | 0.5000 | 0.5175 |  |
| 2 | 10.232 | 10.232 | 0.000 | 48249474H | 0.5000 | 0.5110 |  |
| 2 | 10.625 | 10.625 | 0.000 | 94483644H | 0.5000 | 0.5095 |  |

Average of Peak Amounts = 0.5097

RPD = 1.03

\$ 11 DCB Decachlorobiphenyl (Surr)

|   |        |        |       |           |        |        |  |
|---|--------|--------|-------|-----------|--------|--------|--|
| 1 | 11.208 | 11.208 | 0.000 | 23932128H | 0.0250 | 0.0246 |  |
| 2 | 12.729 | 12.729 | 0.000 | 31095637H | 0.0250 | 0.0253 |  |

RPD = 2.61

Reagents:

GCAR1660CALL4\_00009

Amount Added: 1.00

Units: mL

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\O0510017.D

Injection Date: 11-May-2015 17:31:48

Instrument ID: CHGC8

Lims ID: ICRT

Client ID:

Operator ID: 402360

ALS Bottle#: 18

Worklist Smp#: 18

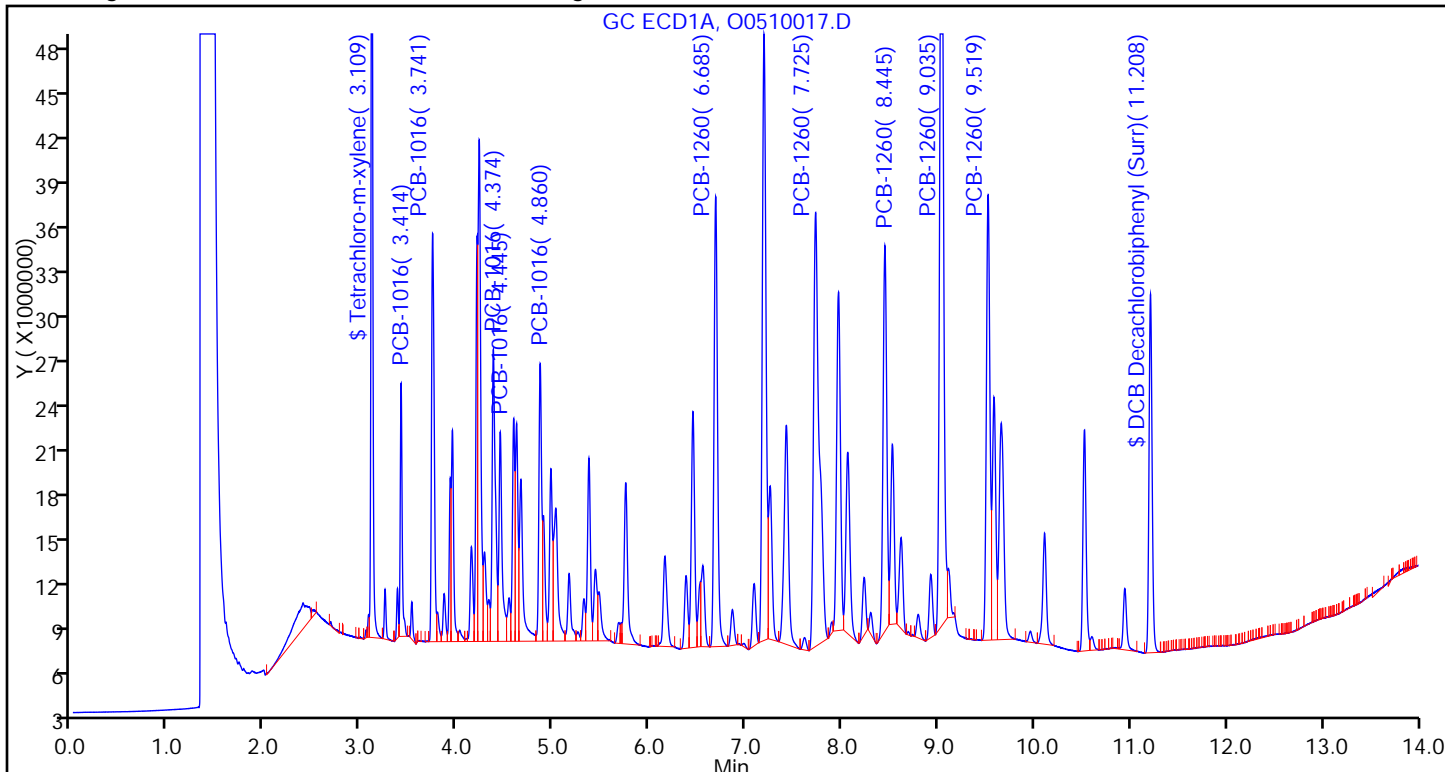
Injection Vol: 1.0 ul

Dil. Factor: 1.0000

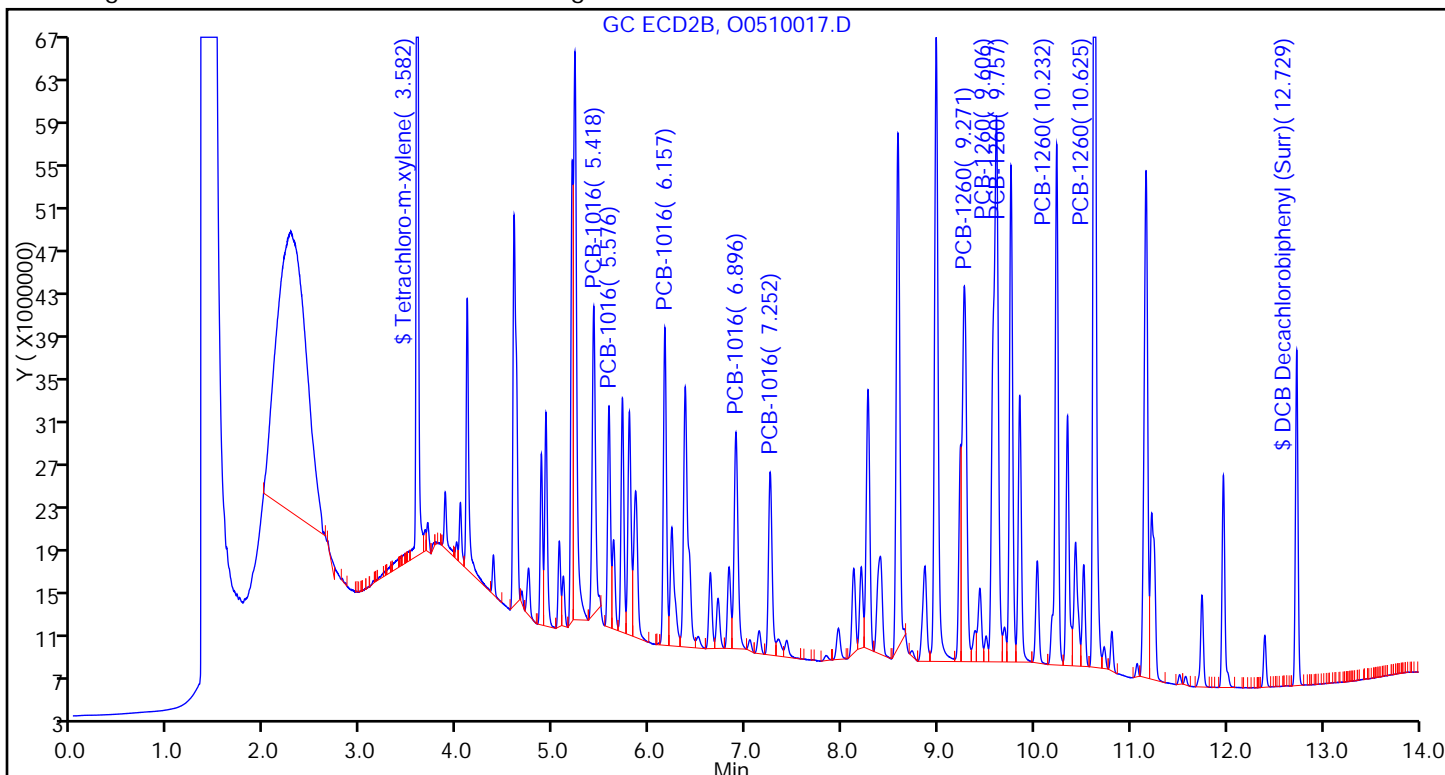
Method: PCB\_CHGC8DUAL

Limit Group: GCS 8082A ICAL

Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



TestAmerica Pittsburgh  
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\O0510018.D  
 Lims ID: IC  
 Client ID:  
 Sample Type: IC Calib Level: 5  
 Inject. Date: 11-May-2015 17:51:38 ALS Bottle#: 19 Worklist Smp#: 19  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 180-0006866-019  
 Operator ID: 402360 Instrument ID: CHGC8  
 Sublist: chrom-PCB\_CHGC8DUAL\*sub1  
 Method: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\PCB\_CHGC8DUAL.m  
 Limit Group: GCS 8082A ICAL  
 Last Update: 12-May-2015 16:53:31 Calib Date: 11-May-2015 18:31:22  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICal File: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\O0510020.D  
 Column 1 : Det: GC ECD1A  
 Column 2 : Det: GC ECD2B  
 Process Host: XAWRK022

First Level Reviewer: guptaa Date: 12-May-2015 07:12:59

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng | OnCol Amt ng | Flags |
|-----|-----------|---------------|---------------|----------|------------|--------------|-------|
|-----|-----------|---------------|---------------|----------|------------|--------------|-------|

\$ 1 Tetrachloro-m-xylene

|   |       |       |       |            |        |            |  |
|---|-------|-------|-------|------------|--------|------------|--|
| 1 | 3.110 | 3.109 | 0.001 | 123001867H | 0.0500 | 0.0536     |  |
| 2 | 3.582 | 3.582 | 0.000 | 208108940H | 0.0500 | 0.0523     |  |
|   |       |       |       |            |        | RPD = 2.49 |  |

4 PCB-1016

|                           |       |       |        |           |      |            |  |
|---------------------------|-------|-------|--------|-----------|------|------------|--|
| 1                         | 3.414 | 3.414 | 0.000  | 34195011H | 1.00 | 1.07       |  |
| 1                         | 3.741 | 3.741 | 0.000  | 53221981H | 1.00 | 1.02       |  |
| 1                         | 4.372 | 4.374 | -0.002 | 36201476H | 1.00 | 0.9777     |  |
| 1                         | 4.445 | 4.445 | 0.000  | 24789621H | 1.00 | 0.9505     |  |
| 1                         | 4.860 | 4.860 | 0.000  | 33359310H | 1.00 | 0.99       |  |
| Average of Peak Amounts = |       |       |        |           |      | 1.00       |  |
| 2                         | 5.417 | 5.418 | -0.001 | 58990376H | 1.00 | 1.07       |  |
| 2                         | 5.575 | 5.576 | -0.001 | 43731548H | 1.00 | 1.08       |  |
| 2                         | 6.156 | 6.157 | -0.001 | 59485231H | 1.00 | 1.07       |  |
| 2                         | 6.895 | 6.896 | -0.001 | 42090859H | 1.00 | 1.11       |  |
| 2                         | 7.250 | 7.252 | -0.002 | 35100449H | 1.00 | 1.10       |  |
| Average of Peak Amounts = |       |       |        |           |      | 1.09       |  |
|                           |       |       |        |           |      | RPD = 8.31 |  |

Data File: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\O0510018.D

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng | OnCol Amt ng | Flags |
|-----|-----------|---------------|---------------|----------|------------|--------------|-------|
|-----|-----------|---------------|---------------|----------|------------|--------------|-------|

8 PCB-1260

|   |       |       |        |            |      |      |  |
|---|-------|-------|--------|------------|------|------|--|
| 1 | 6.684 | 6.685 | -0.001 | 61494423H  | 1.00 | 1.05 |  |
| 1 | 7.722 | 7.725 | -0.003 | 60013089H  | 1.00 | 1.06 |  |
| 1 | 8.443 | 8.445 | -0.002 | 53458371H  | 1.00 | 1.07 |  |
| 1 | 9.032 | 9.035 | -0.003 | 117000892H | 1.00 | 1.07 |  |
| 1 | 9.517 | 9.519 | -0.002 | 62680524H  | 1.00 | 1.08 |  |

Average of Peak Amounts = 1.07

|   |        |        |        |            |      |      |  |
|---|--------|--------|--------|------------|------|------|--|
| 2 | 9.271  | 9.271  | 0.000  | 72533224H  | 1.00 | 1.06 |  |
| 2 | 9.603  | 9.606  | -0.003 | 105005888H | 1.00 | 1.05 |  |
| 2 | 9.756  | 9.757  | -0.001 | 94091480H  | 1.00 | 1.06 |  |
| 2 | 10.231 | 10.232 | -0.001 | 101087542H | 1.00 | 1.07 |  |
| 2 | 10.624 | 10.625 | -0.001 | 196482047H | 1.00 | 1.06 |  |

Average of Peak Amounts = 1.06

RPD = 0.87

\$ 11 DCB Decachlorobiphenyl (Surr)

|   |        |        |        |           |        |        |  |
|---|--------|--------|--------|-----------|--------|--------|--|
| 1 | 11.206 | 11.208 | -0.002 | 50667030H | 0.0500 | 0.0522 |  |
| 2 | 12.728 | 12.729 | -0.001 | 64469688H | 0.0500 | 0.0524 |  |

RPD = 0.52

Reagents:

GCAR1660CALL5\_00010

Amount Added: 1.00

Units: mL

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\O0510018.D

Injection Date: 11-May-2015 17:51:38

Instrument ID: CHGC8

Lims ID: IC

Client ID:

Operator ID: 402360

ALS Bottle#: 19

Worklist Smp#: 19

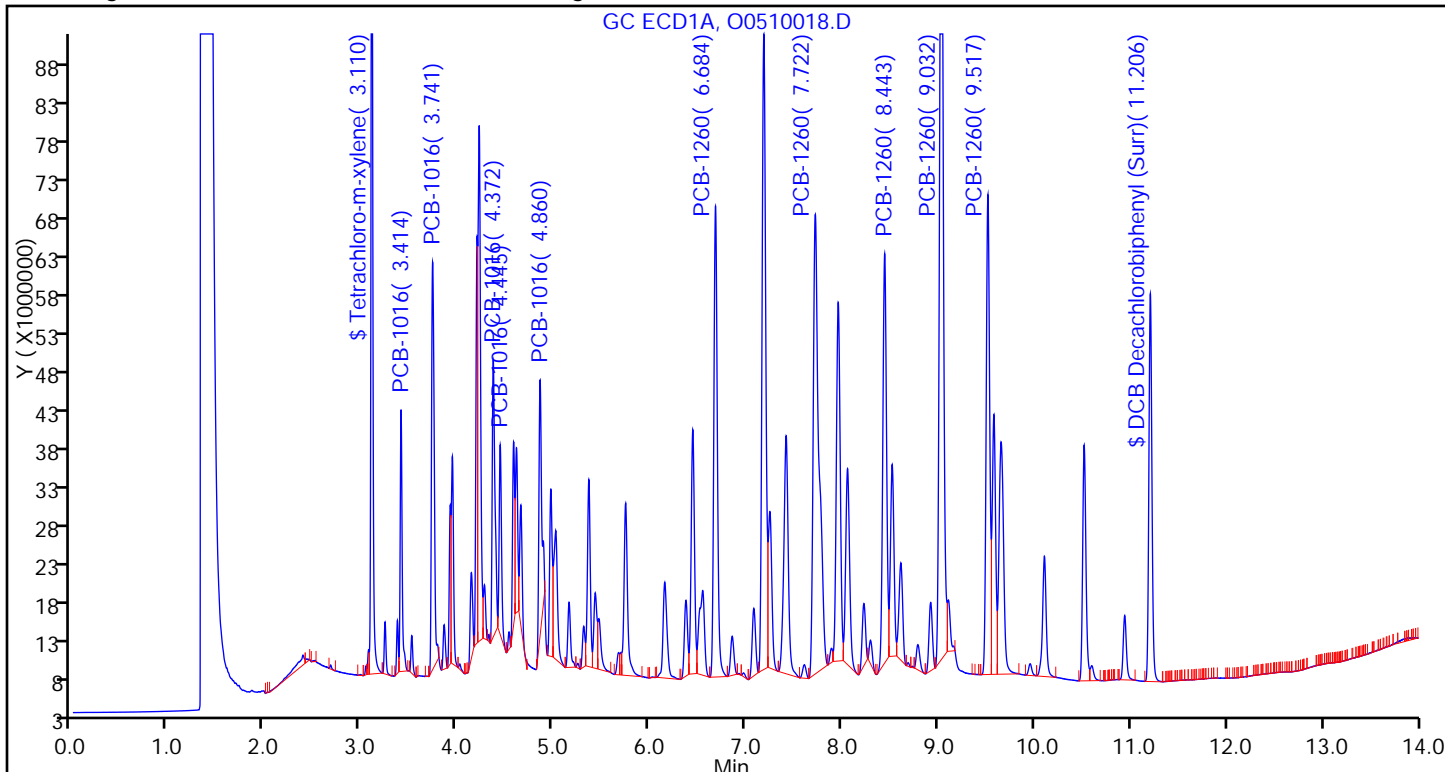
Injection Vol: 1.0 ul

Dil. Factor: 1.0000

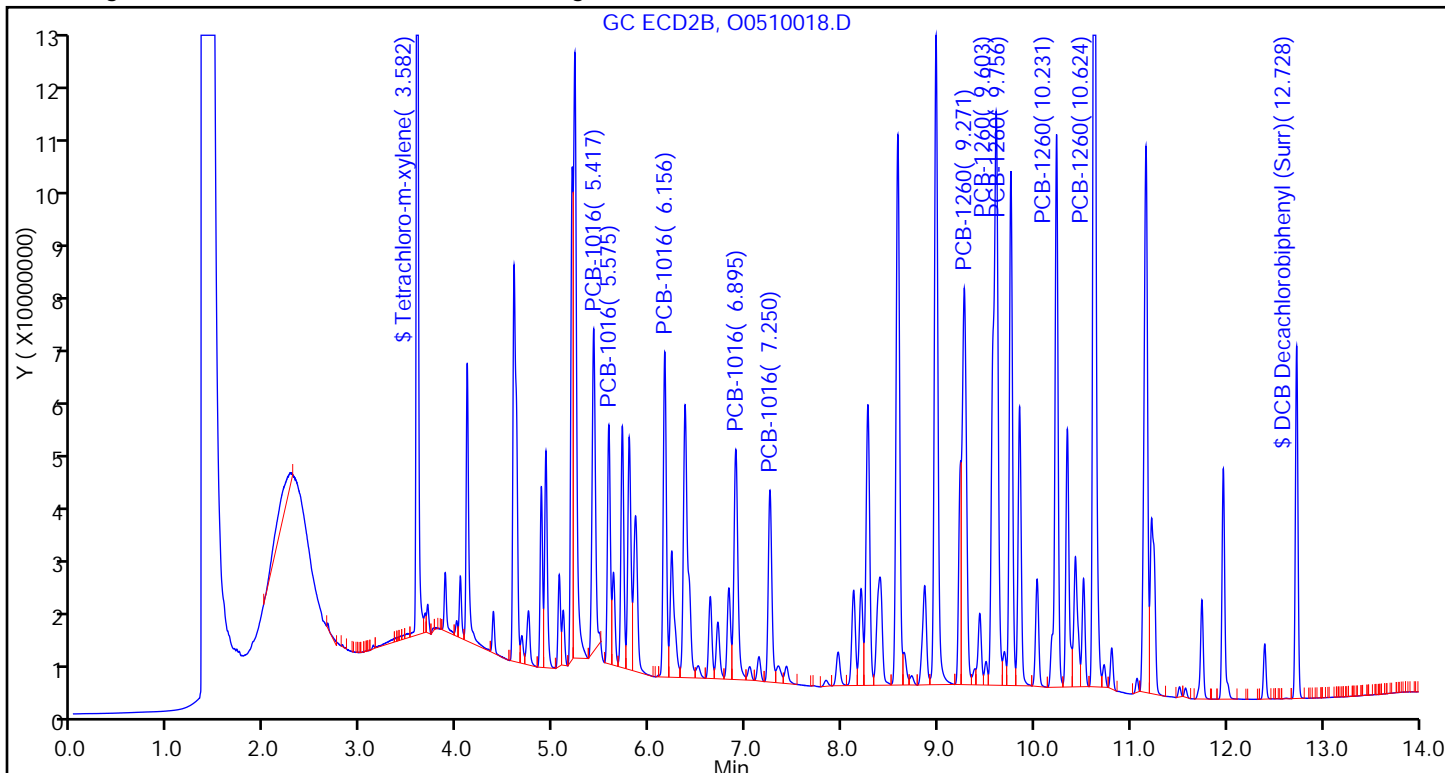
Method: PCB\_CHGC8DUAL

Limit Group: GCS 8082A ICAL

Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3





TestAmerica Pittsburgh  
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\O0510019.D  
 Lims ID: IC  
 Client ID:  
 Sample Type: IC Calib Level: 6  
 Inject. Date: 11-May-2015 18:11:30 ALS Bottle#: 20 Worklist Smp#: 20  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 180-0006866-020  
 Operator ID: 402360 Instrument ID: CHGC8  
 Sublist: chrom-PCB\_CHGC8DUAL\*sub1  
 Method: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\PCB\_CHGC8DUAL.m  
 Limit Group: GCS 8082A ICAL  
 Last Update: 12-May-2015 16:53:34 Calib Date: 11-May-2015 18:31:22  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICal File: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\O0510020.D  
 Column 1 : Det: GC ECD1A  
 Column 2 : Det: GC ECD2B  
 Process Host: XAWRK022

First Level Reviewer: guptaa Date: 12-May-2015 07:17:15

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng | OnCol Amt ng | Flags |
|-----|-----------|---------------|---------------|----------|------------|--------------|-------|
|-----|-----------|---------------|---------------|----------|------------|--------------|-------|

\$ 1 Tetrachloro-m-xylene

|   |       |       |       |            |        |        |  |
|---|-------|-------|-------|------------|--------|--------|--|
| 1 | 3.111 | 3.109 | 0.002 | 217804637H | 0.1000 | 0.0950 |  |
| 2 | 3.583 | 3.582 | 0.001 | 369333943H | 0.1000 | 0.0932 |  |

RPD = 1.95

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|   |       |       |       |           |      |      |  |
|---|-------|-------|-------|-----------|------|------|--|
| 1 | 3.415 | 3.414 | 0.001 | 61765436H | 2.00 | 1.93 |  |
| 1 | 3.742 | 3.741 | 0.001 | 94863578H | 2.00 | 1.82 |  |
| 1 | 4.374 | 4.374 | 0.000 | 74792601H | 2.00 | 2.02 |  |
| 1 | 4.446 | 4.445 | 0.001 | 54740543H | 2.00 | 2.10 |  |
| 1 | 4.860 | 4.860 | 0.000 | 68627362H | 2.00 | 2.04 |  |

Average of Peak Amounts = 1.98

|   |       |       |        |            |      |      |  |
|---|-------|-------|--------|------------|------|------|--|
| 2 | 5.418 | 5.418 | 0.000  | 104524221H | 2.00 | 1.90 |  |
| 2 | 5.574 | 5.576 | -0.002 | 80930872H  | 2.00 | 2.01 |  |
| 2 | 6.156 | 6.157 | -0.001 | 104708089H | 2.00 | 1.88 |  |
| 2 | 6.896 | 6.896 | 0.000  | 74586566H  | 2.00 | 1.97 |  |
| 2 | 7.251 | 7.252 | -0.001 | 61164877H  | 2.00 | 1.92 |  |

Average of Peak Amounts = 1.94

RPD = 2.27

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng | OnCol Amt ng | Flags |
|-----|-----------|---------------|---------------|----------|------------|--------------|-------|
|-----|-----------|---------------|---------------|----------|------------|--------------|-------|

8 PCB-1260

|                           |        |        |        |            |      |      |  |
|---------------------------|--------|--------|--------|------------|------|------|--|
| 1                         | 6.684  | 6.685  | -0.001 | 106929172H | 2.00 | 1.82 |  |
| 1                         | 7.723  | 7.725  | -0.002 | 109234339H | 2.00 | 1.93 |  |
| 1                         | 8.445  | 8.445  | 0.000  | 97054089H  | 2.00 | 1.95 |  |
| 1                         | 9.034  | 9.035  | -0.001 | 211477460H | 2.00 | 1.94 |  |
| 1                         | 9.517  | 9.519  | -0.002 | 112390573H | 2.00 | 1.94 |  |
| Average of Peak Amounts = |        |        |        |            |      | 1.92 |  |
| 2                         | 9.273  | 9.271  | 0.002  | 128632957H | 2.00 | 1.88 |  |
| 2                         | 9.604  | 9.606  | -0.002 | 190165344H | 2.00 | 1.89 |  |
| 2                         | 9.757  | 9.757  | 0.000  | 163242338H | 2.00 | 1.84 |  |
| 2                         | 10.232 | 10.232 | 0.000  | 178645498H | 2.00 | 1.89 |  |
| 2                         | 10.624 | 10.625 | -0.001 | 367907713H | 2.00 | 1.98 |  |
| Average of Peak Amounts = |        |        |        |            |      | 1.90 |  |

RPD = 1.06

\$ 11 DCB Decachlorobiphenyl (Surr)

|   |        |        |        |            |        |        |  |
|---|--------|--------|--------|------------|--------|--------|--|
| 1 | 11.207 | 11.208 | -0.001 | 92750802H  | 0.1000 | 0.0955 |  |
| 2 | 12.728 | 12.729 | -0.001 | 118952451H | 0.1000 | 0.0968 |  |

RPD = 1.31

Reagents:

GCAR1660CALL6\_00008

Amount Added: 1.00

Units: mL

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\O0510019.D

Injection Date: 11-May-2015 18:11:30

Instrument ID: CHGC8

Lims ID: IC

Client ID:

Operator ID: 402360

ALS Bottle#: 20

Worklist Smp#: 20

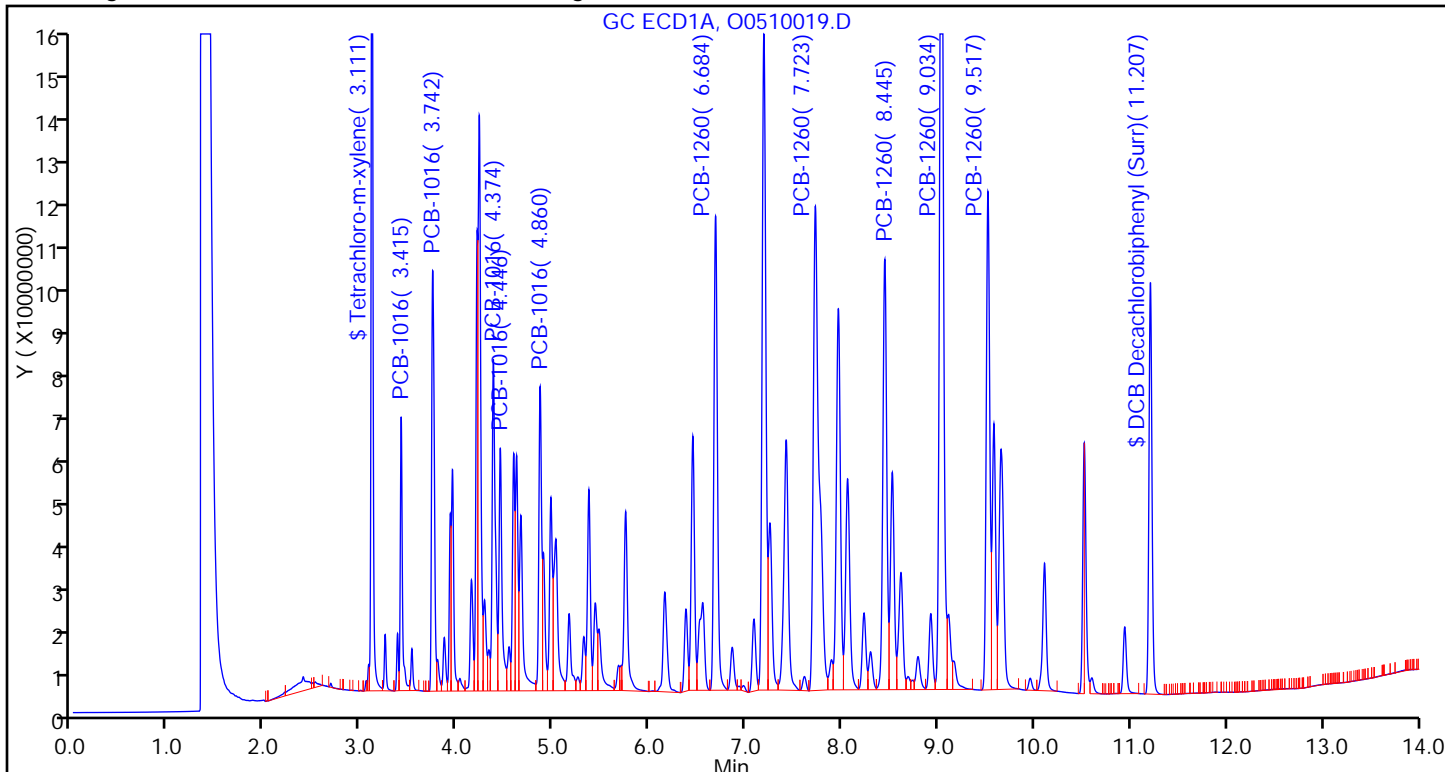
Injection Vol: 1.0 ul

Dil. Factor: 1.0000

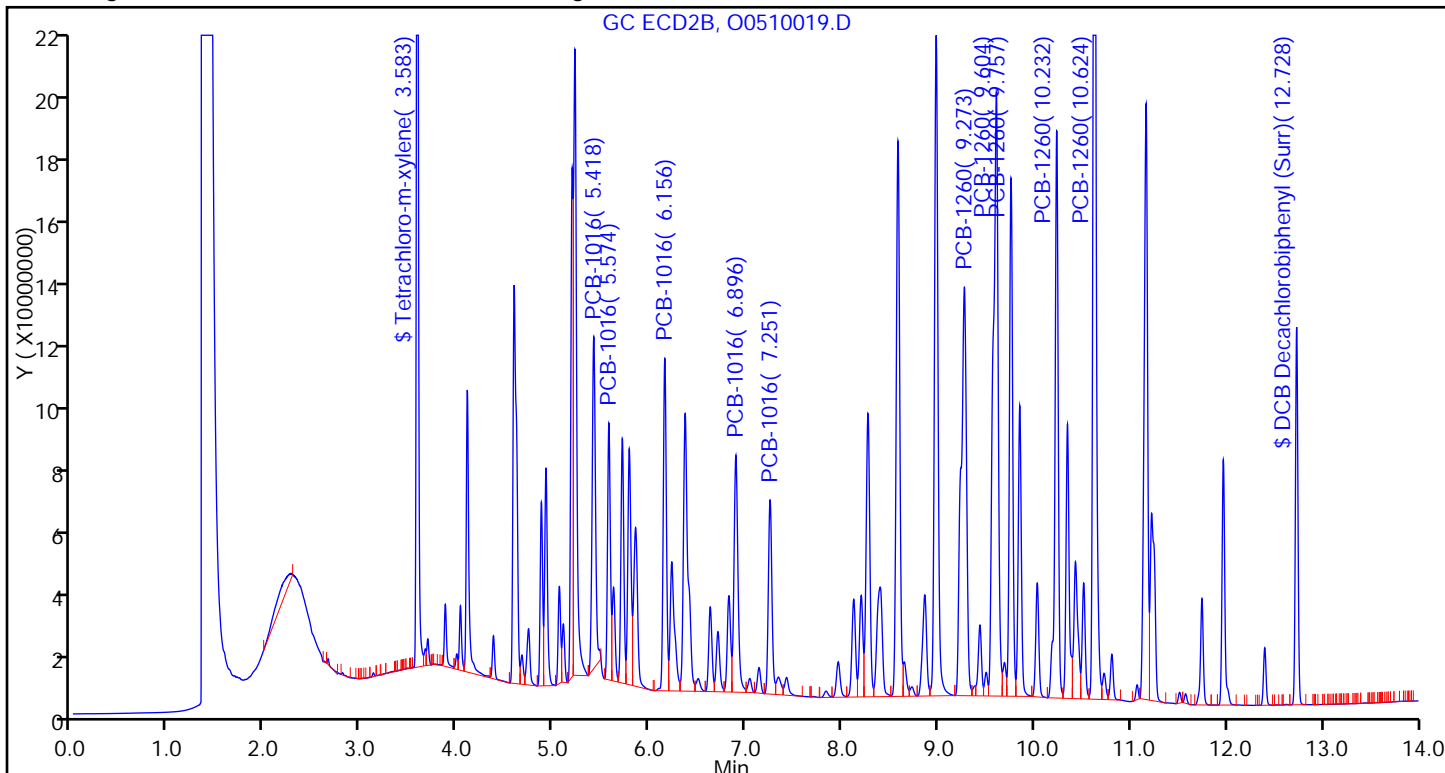
Method: PCB\_CHGC8DUAL

Limit Group: GCS 8082A ICAL

Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



TestAmerica Pittsburgh  
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\O0510020.D  
 Lims ID: IC  
 Client ID:  
 Sample Type: IC Calib Level: 7  
 Inject. Date: 11-May-2015 18:31:22 ALS Bottle#: 21 Worklist Smp#: 21  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 180-0006866-021  
 Operator ID: 402360 Instrument ID: CHGC8  
 Sublist: chrom-PCB\_CHGC8DUAL\*sub1  
 Method: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\PCB\_CHGC8DUAL.m  
 Limit Group: GCS 8082A ICAL  
 Last Update: 12-May-2015 16:53:37 Calib Date: 11-May-2015 18:31:22  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICal File: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\O0510020.D

Column 1 : Det: GC ECD1A  
 Column 2 : Det: GC ECD2B

Process Host: XAWRK022

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng | OnCol Amt ng | Flags |
|-----|-----------|---------------|---------------|----------|------------|--------------|-------|
|-----|-----------|---------------|---------------|----------|------------|--------------|-------|

\$ 1 Tetrachloro-m-xylene

|   |       |       |       |            |        |        |  |
|---|-------|-------|-------|------------|--------|--------|--|
| 1 | 3.113 | 3.109 | 0.004 | 384054647H | 0.2000 | 0.1675 |  |
| 2 | 3.585 | 3.582 | 0.003 | 671110782H | 0.2000 | 0.1696 |  |

RPD = 1.24

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|                           |       |       |       |            |      |      |  |
|---------------------------|-------|-------|-------|------------|------|------|--|
| 1                         | 3.416 | 3.414 | 0.002 | 112685759H | 4.00 | 3.51 |  |
| 1                         | 3.744 | 3.741 | 0.003 | 170579674H | 4.00 | 3.28 |  |
| 1                         | 4.375 | 4.374 | 0.001 | 140855556H | 4.00 | 3.80 |  |
| 1                         | 4.446 | 4.445 | 0.001 | 104109124H | 4.00 | 3.99 |  |
| 1                         | 4.861 | 4.860 | 0.001 | 128319642H | 4.00 | 3.82 |  |
| Average of Peak Amounts = |       |       |       |            |      | 3.68 |  |
| 2                         | 5.419 | 5.418 | 0.001 | 215433758H | 4.00 | 3.93 |  |
| 2                         | 5.576 | 5.576 | 0.000 | 162825627H | 4.00 | 4.04 |  |
| 2                         | 6.158 | 6.157 | 0.001 | 199012206H | 4.00 | 3.57 |  |
| 2                         | 6.898 | 6.896 | 0.002 | 145202615H | 4.00 | 3.84 |  |
| 2                         | 7.252 | 7.252 | 0.000 | 119306641H | 4.00 | 3.75 |  |
| Average of Peak Amounts = |       |       |       |            |      | 3.82 |  |

RPD = 3.85

Data File: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\O0510020.D

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng | OnCol Amt ng | Flags |
|-----|-----------|---------------|---------------|----------|------------|--------------|-------|
|-----|-----------|---------------|---------------|----------|------------|--------------|-------|

8 PCB-1260

|   |       |       |        |            |      |      |  |
|---|-------|-------|--------|------------|------|------|--|
| 1 | 6.686 | 6.685 | 0.001  | 208441834H | 4.00 | 3.55 |  |
| 1 | 7.724 | 7.725 | -0.001 | 214507999H | 4.00 | 3.79 |  |
| 1 | 8.445 | 8.445 | 0.000  | 189470236H | 4.00 | 3.81 |  |
| 1 | 9.035 | 9.035 | 0.000  | 419059711H | 4.00 | 3.84 |  |
| 1 | 9.516 | 9.519 | -0.003 | 219718994H | 4.00 | 3.79 |  |

Average of Peak Amounts = 3.76

|   |        |        |        |            |      |      |  |
|---|--------|--------|--------|------------|------|------|--|
| 2 | 9.271  | 9.271  | 0.000  | 248440354H | 4.00 | 3.62 |  |
| 2 | 9.605  | 9.606  | -0.001 | 365342786H | 4.00 | 3.64 |  |
| 2 | 9.757  | 9.757  | 0.000  | 324610345H | 4.00 | 3.65 |  |
| 2 | 10.233 | 10.232 | 0.001  | 349298371H | 4.00 | 3.70 |  |
| 2 | 10.626 | 10.625 | 0.001  | 730409964H | 4.00 | 3.94 |  |

Average of Peak Amounts = 3.71

RPD = 1.27

\$ 11 DCB Decachlorobiphenyl (Surr)

|   |        |        |        |            |        |        |  |
|---|--------|--------|--------|------------|--------|--------|--|
| 1 | 11.206 | 11.208 | -0.002 | 189628941H | 0.2000 | 0.1953 |  |
| 2 | 12.728 | 12.729 | -0.001 | 242811843H | 0.2000 | 0.1975 |  |

RPD = 1.15

Reagents:

GCAR1660CALL7\_00009

Amount Added: 1.00

Units: mL

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\O0510020.D

Injection Date: 11-May-2015 18:31:22

Instrument ID: CHGC8

Lims ID: IC

Client ID:

Operator ID: 402360

ALS Bottle#: 21

Worklist Smp#: 21

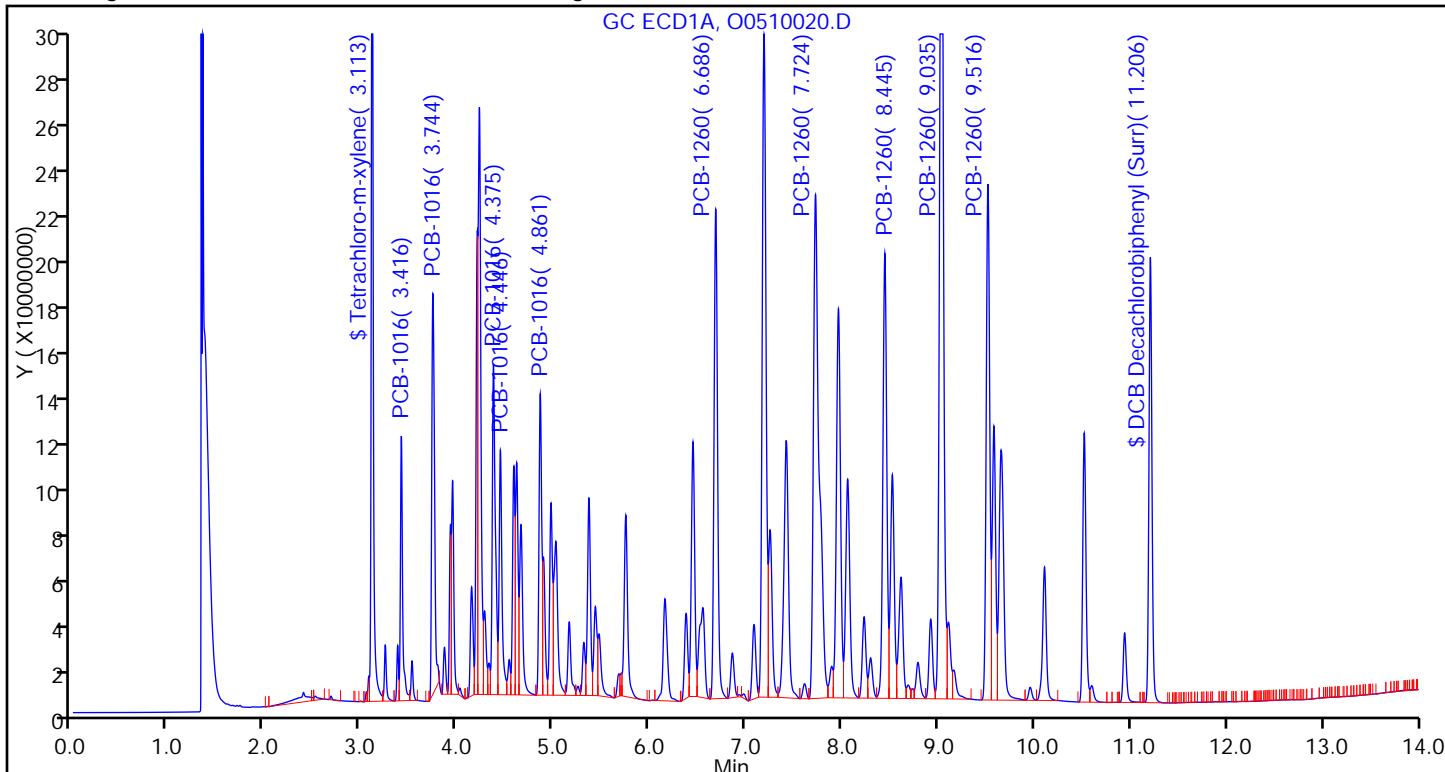
Injection Vol: 1.0 ul

Dil. Factor: 1.0000

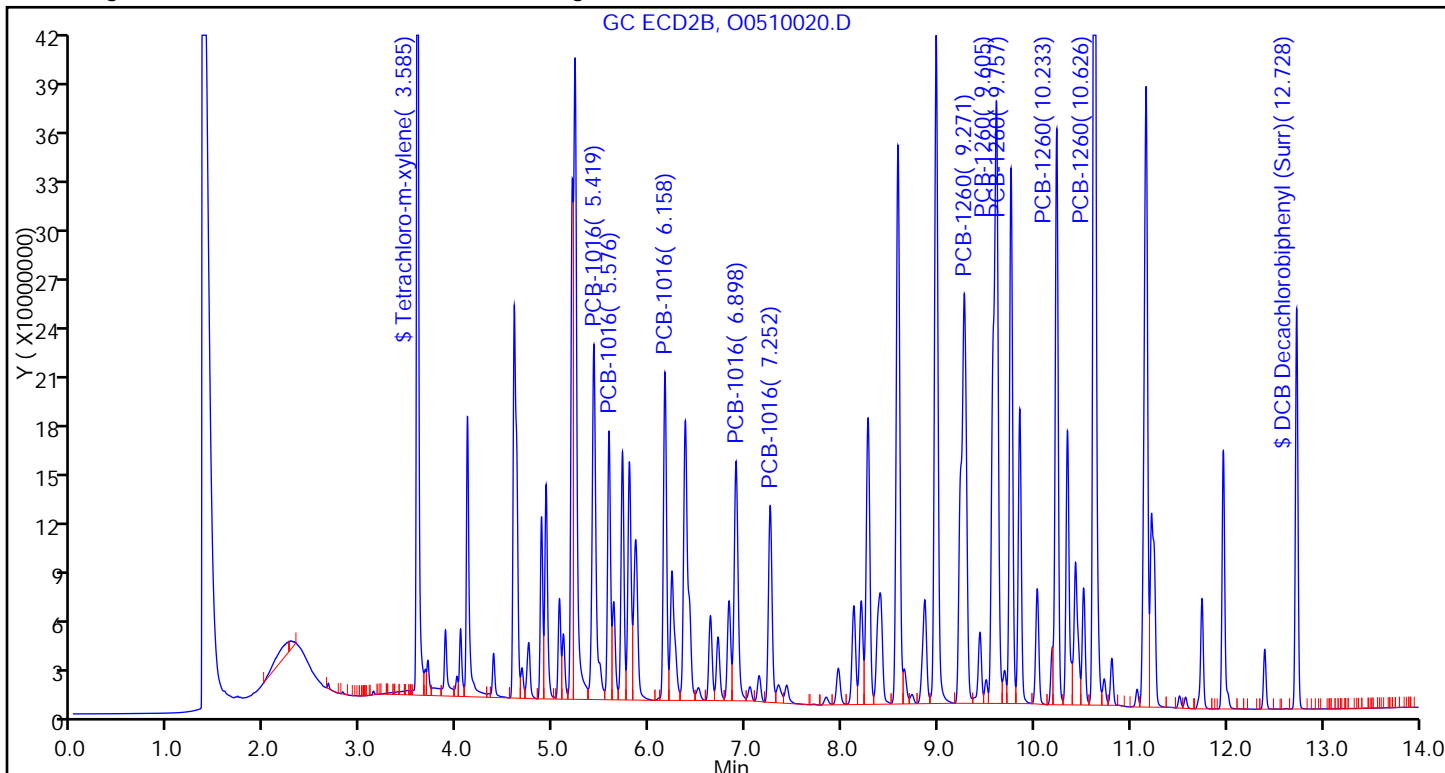
Method: PCB\_CHGC8DUAL

Limit Group: GCS 8082A ICAL

Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



FORM VII  
GC SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Pittsburgh Job No.: 180-43791-1  
 SDG No.: \_\_\_\_\_  
 Lab Sample ID: ICV 180-141160/22 Calibration Date: 05/11/2015 18:51  
 Instrument ID: CHGC8 Calib Start Date: 05/11/2015 12:33  
 GC Column: RTX-CLP1 ID: 0.53 (mm) Calib End Date: 05/11/2015 13:53  
 Lab File ID: O0510021.D Conc. Units: ng/uL

| ANALYTE         | CURVE TYPE | AVE CF   | CF       | MIN CF | CALC AMOUNT | SPIKE AMOUNT | %D    | MAX %D |
|-----------------|------------|----------|----------|--------|-------------|--------------|-------|--------|
| PCB-1221 Peak 1 | Ave        | 20772396 | 24558936 |        | 0.591       | 0.500        | 18.2  | 20.0   |
| PCB-1221 Peak 2 | Ave        | 12804456 | 14937842 |        | 0.583       | 0.500        | 16.7  | 20.0   |
| PCB-1221 Peak 3 | Ave        | 45810103 | 52966150 |        | 0.578       | 0.500        | 15.6  | 20.0   |
| PCB-1254 Peak 1 | Ave        | 49190995 | 54700584 |        | 0.556       | 0.500        | 11.2  | 20.0   |
| PCB-1254 Peak 2 | Ave        | 58139473 | 65381598 |        | 0.562       | 0.500        | 12.5  | 20.0   |
| PCB-1254 Peak 3 | Ave        | 39497780 | 45954044 |        | 0.582       | 0.500        | 16.3  | 20.0   |
| PCB-1254 Peak 4 | Ave        | 47128884 | 59243960 |        | 0.629       | 0.500        | 25.7* | 20.0   |
| PCB-1254 Peak 5 | Ave        | 48580541 | 58747368 |        | 0.605       | 0.500        | 20.9* | 20.0   |

FORM VII  
GC SEMI VOA CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-43791-1  
 SDG No.: \_\_\_\_\_  
 Lab Sample ID: ICV 180-141160/22 Calibration Date: 05/11/2015 18:51  
 Instrument ID: CHGC8 Calib Start Date: 05/11/2015 12:33  
 GC Column: RTX-CLP1 ID: 0.53 (mm) Calib End Date: 05/11/2015 13:53  
 Lab File ID: O0510021.D

| Analyte         | RT   | RT WINDOW |      |
|-----------------|------|-----------|------|
|                 |      | FROM      | TO   |
| PCB-1221 Peak 1 | 3.25 | 3.19      | 3.29 |
| PCB-1221 Peak 2 | 3.38 | 3.32      | 3.42 |
| PCB-1221 Peak 3 | 3.41 | 3.36      | 3.46 |
| PCB-1254 Peak 1 | 5.37 | 5.29      | 5.43 |
| PCB-1254 Peak 2 | 5.75 | 5.67      | 5.81 |
| PCB-1254 Peak 3 | 6.18 | 6.10      | 6.24 |
| PCB-1254 Peak 4 | 7.19 | 7.11      | 7.25 |
| PCB-1254 Peak 5 | 7.72 | 7.65      | 7.79 |



TestAmerica Pittsburgh  
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\O0510021.D  
 Lims ID: ICV  
 Client ID:  
 Sample Type: ICV  
 Inject. Date: 11-May-2015 18:51:13 ALS Bottle#: 22 Worklist Smp#: 22  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 180-0006866-022  
 Operator ID: 402360 Instrument ID: CHGC8  
 Sublist:

Method: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\PCB\_CHGC8DUAL.m  
 Limit Group: GCS 8082A ICAL  
 Last Update: 12-May-2015 16:53:37 Calib Date: 11-May-2015 18:31:22  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICal File: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\O0510020.D

Column 1 : Det: GC ECD1A  
 Column 2 : Det: GC ECD2B  
 Process Host: XAWRK022

First Level Reviewer: guptaa Date: 12-May-2015 07:38:22

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng | OnCol Amt ng | Flags |
|-----|-----------|---------------|---------------|----------|------------|--------------|-------|
|-----|-----------|---------------|---------------|----------|------------|--------------|-------|

2 PCB-1221

|                           |       |       |       |           |        |        |  |
|---------------------------|-------|-------|-------|-----------|--------|--------|--|
| 1                         | 3.247 | 3.242 | 0.005 | 12279468H | 0.5000 | 0.5911 |  |
| 1                         | 3.376 | 3.370 | 0.006 | 7468921H  | 0.5000 | 0.5833 |  |
| 1                         | 3.413 | 3.408 | 0.005 | 26483075H | 0.5000 | 0.5781 |  |
| Average of Peak Amounts = |       |       |       |           |        | 0.5842 |  |
| 2                         | 3.874 | 3.867 | 0.007 | 19357226H | 0.5000 | 0.5662 |  |
| 2                         | 4.030 | 4.024 | 0.006 | 10962106H | 0.5000 | 0.5683 |  |
| 2                         | 4.103 | 4.096 | 0.007 | 35472362H | 0.5000 | 0.5746 |  |
| Average of Peak Amounts = |       |       |       |           |        | 0.5697 |  |

RPD = 2.50

7 PCB-1254

|                           |       |       |       |           |        |        |  |
|---------------------------|-------|-------|-------|-----------|--------|--------|--|
| 1                         | 5.367 | 5.361 | 0.006 | 27350292H | 0.5000 | 0.5560 |  |
| 1                         | 5.748 | 5.743 | 0.005 | 32690799H | 0.5000 | 0.5623 |  |
| 1                         | 6.177 | 6.171 | 0.006 | 22977022H | 0.5000 | 0.5817 |  |
| 1                         | 7.188 | 7.182 | 0.006 | 29621980H | 0.5000 | 0.6285 |  |
| 1                         | 7.723 | 7.718 | 0.005 | 29373684H | 0.5000 | 0.6046 |  |
| Average of Peak Amounts = |       |       |       |           |        | 0.5866 |  |
| 2                         | 6.894 | 6.886 | 0.008 | 43699207H | 0.5000 | 0.5820 |  |
| 2                         | 7.252 | 7.243 | 0.009 | 50206798H | 0.5000 | 0.5618 |  |
| 2                         | 7.959 | 7.952 | 0.007 | 36092416H | 0.5000 | 0.5768 |  |
| 2                         | 8.649 | 8.646 | 0.003 | 41778361H | 0.5000 | 0.5635 |  |
| 2                         | 9.281 | 9.280 | 0.001 | 33235439H | 0.5000 | 0.5742 |  |
| Average of Peak Amounts = |       |       |       |           |        | 0.5717 |  |

RPD = 2.59

Reagents:

GCAR2154ICV\_00012 Amount Added: 1.00 Units: mL

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\O0510021.D

Injection Date: 11-May-2015 18:51:13 Instrument ID: CHGC8

Lims ID: ICV

Client ID:

Operator ID: 402360

ALS Bottle#: 22

Worklist Smp#: 22

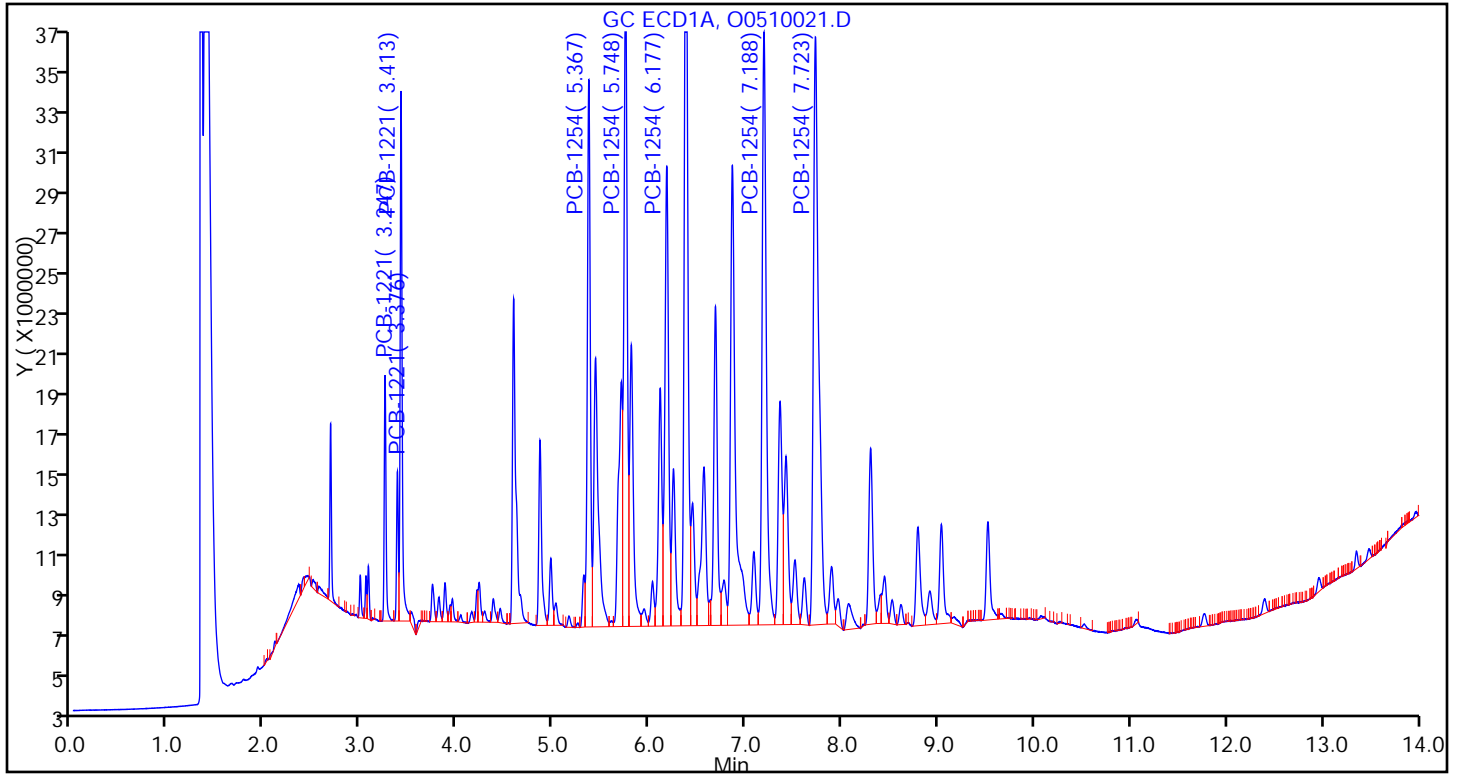
Injection Vol: 1.0 ul

Dil. Factor: 1.0000

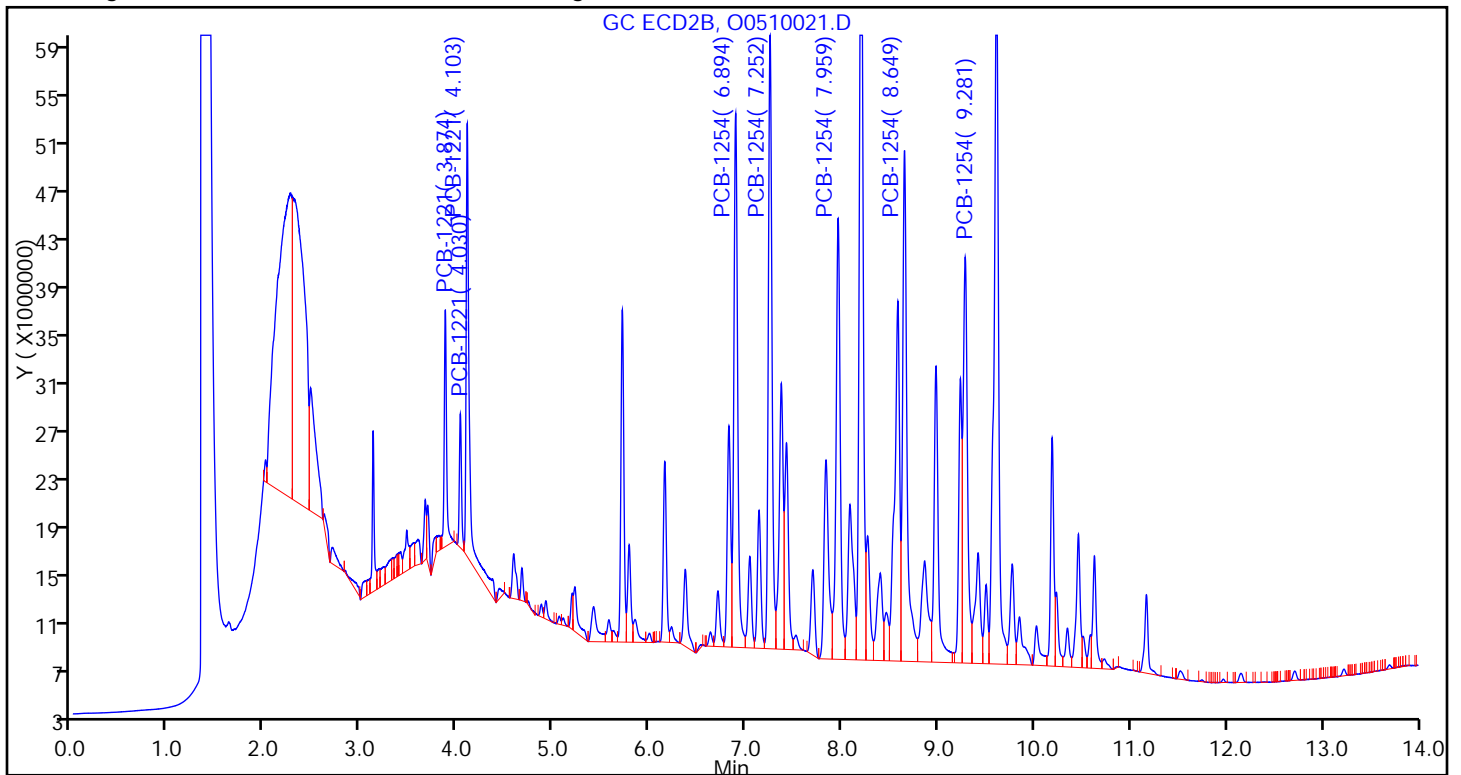
Method: PCB\_CHGC8DUAL

Limit Group: GCS 8082A ICAL

Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



FORM VII  
GC SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Pittsburgh Job No.: 180-43791-1  
 SDG No.: \_\_\_\_\_  
 Lab Sample ID: ICV 180-141160/22 Calibration Date: 05/11/2015 18:51  
 Instrument ID: CHGC8 Calib Start Date: 05/11/2015 12:33  
 GC Column: RTX-CLP2 ID: 0.53 (mm) Calib End Date: 05/11/2015 13:53  
 Lab File ID: O0510021.D Conc. Units: ng/uL

| ANALYTE         | CURVE TYPE | AVE CF   | CF        | MIN CF | CALC AMOUNT | SPIKE AMOUNT | %D   | MAX %D |
|-----------------|------------|----------|-----------|--------|-------------|--------------|------|--------|
| PCB-1221 Peak 1 | Ave        | 34185328 | 38714452  |        | 0.566       | 0.500        | 13.2 | 20.0   |
| PCB-1221 Peak 2 | Ave        | 19288959 | 21924212  |        | 0.568       | 0.500        | 13.7 | 20.0   |
| PCB-1221 Peak 3 | Ave        | 61729172 | 70944724  |        | 0.575       | 0.500        | 14.9 | 20.0   |
| PCB-1254 Peak 1 | Ave        | 75088836 | 87398414  |        | 0.582       | 0.500        | 16.4 | 20.0   |
| PCB-1254 Peak 2 | Ave        | 89362641 | 100413596 |        | 0.562       | 0.500        | 12.4 | 20.0   |
| PCB-1254 Peak 3 | Ave        | 62572250 | 72184832  |        | 0.577       | 0.500        | 15.4 | 20.0   |
| PCB-1254 Peak 4 | Ave        | 74139564 | 83556722  |        | 0.564       | 0.500        | 12.7 | 20.0   |
| PCB-1254 Peak 5 | Ave        | 57882390 | 66470878  |        | 0.574       | 0.500        | 14.8 | 20.0   |

FORM VII  
GC SEMI VOA CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-43791-1  
 SDG No.: \_\_\_\_\_  
 Lab Sample ID: ICV 180-141160/22 Calibration Date: 05/11/2015 18:51  
 Instrument ID: CHGC8 Calib Start Date: 05/11/2015 12:33  
 GC Column: RTX-CLP2 ID: 0.53 (mm) Calib End Date: 05/11/2015 13:53  
 Lab File ID: O0510021.D

| Analyte         | RT   | RT WINDOW |      |
|-----------------|------|-----------|------|
|                 |      | FROM      | TO   |
| PCB-1221 Peak 1 | 3.87 | 3.82      | 3.92 |
| PCB-1221 Peak 2 | 4.03 | 3.97      | 4.07 |
| PCB-1221 Peak 3 | 4.10 | 4.05      | 4.15 |
| PCB-1254 Peak 1 | 6.89 | 6.82      | 6.96 |
| PCB-1254 Peak 2 | 7.25 | 7.17      | 7.31 |
| PCB-1254 Peak 3 | 7.96 | 7.88      | 8.02 |
| PCB-1254 Peak 4 | 8.65 | 8.58      | 8.72 |
| PCB-1254 Peak 5 | 9.28 | 9.21      | 9.35 |

TestAmerica Pittsburgh  
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\O0510021.D  
 Lims ID: ICV  
 Client ID:  
 Sample Type: ICV  
 Inject. Date: 11-May-2015 18:51:13 ALS Bottle#: 22 Worklist Smp#: 22  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 180-0006866-022  
 Operator ID: 402360 Instrument ID: CHGC8  
 Sublist:

Method: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\PCB\_CHGC8DUAL.m  
 Limit Group: GCS 8082A ICAL  
 Last Update: 12-May-2015 16:53:37 Calib Date: 11-May-2015 18:31:22  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICal File: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\O0510020.D

Column 1 : Det: GC ECD1A  
 Column 2 : Det: GC ECD2B  
 Process Host: XAWRK022

First Level Reviewer: guptaa Date: 12-May-2015 07:38:22

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng | OnCol Amt ng | Flags |
|-----|-----------|---------------|---------------|----------|------------|--------------|-------|
|-----|-----------|---------------|---------------|----------|------------|--------------|-------|

2 PCB-1221

|                           |       |       |       |           |        |        |  |
|---------------------------|-------|-------|-------|-----------|--------|--------|--|
| 1                         | 3.247 | 3.242 | 0.005 | 12279468H | 0.5000 | 0.5911 |  |
| 1                         | 3.376 | 3.370 | 0.006 | 7468921H  | 0.5000 | 0.5833 |  |
| 1                         | 3.413 | 3.408 | 0.005 | 26483075H | 0.5000 | 0.5781 |  |
| Average of Peak Amounts = |       |       |       |           |        | 0.5842 |  |
| 2                         | 3.874 | 3.867 | 0.007 | 19357226H | 0.5000 | 0.5662 |  |
| 2                         | 4.030 | 4.024 | 0.006 | 10962106H | 0.5000 | 0.5683 |  |
| 2                         | 4.103 | 4.096 | 0.007 | 35472362H | 0.5000 | 0.5746 |  |
| Average of Peak Amounts = |       |       |       |           |        | 0.5697 |  |

RPD = 2.50

7 PCB-1254

|                           |       |       |       |           |        |        |  |
|---------------------------|-------|-------|-------|-----------|--------|--------|--|
| 1                         | 5.367 | 5.361 | 0.006 | 27350292H | 0.5000 | 0.5560 |  |
| 1                         | 5.748 | 5.743 | 0.005 | 32690799H | 0.5000 | 0.5623 |  |
| 1                         | 6.177 | 6.171 | 0.006 | 22977022H | 0.5000 | 0.5817 |  |
| 1                         | 7.188 | 7.182 | 0.006 | 29621980H | 0.5000 | 0.6285 |  |
| 1                         | 7.723 | 7.718 | 0.005 | 29373684H | 0.5000 | 0.6046 |  |
| Average of Peak Amounts = |       |       |       |           |        | 0.5866 |  |
| 2                         | 6.894 | 6.886 | 0.008 | 43699207H | 0.5000 | 0.5820 |  |
| 2                         | 7.252 | 7.243 | 0.009 | 50206798H | 0.5000 | 0.5618 |  |
| 2                         | 7.959 | 7.952 | 0.007 | 36092416H | 0.5000 | 0.5768 |  |
| 2                         | 8.649 | 8.646 | 0.003 | 41778361H | 0.5000 | 0.5635 |  |
| 2                         | 9.281 | 9.280 | 0.001 | 33235439H | 0.5000 | 0.5742 |  |
| Average of Peak Amounts = |       |       |       |           |        | 0.5717 |  |

RPD = 2.59

Reagents:

GCAR2154ICV\_00012

Amount Added: 1.00

Units: mL

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\O0510021.D

Injection Date: 11-May-2015 18:51:13

Instrument ID: CHGC8

Lims ID: ICV

Client ID:

Operator ID: 402360

ALS Bottle#: 22

Worklist Smp#: 22

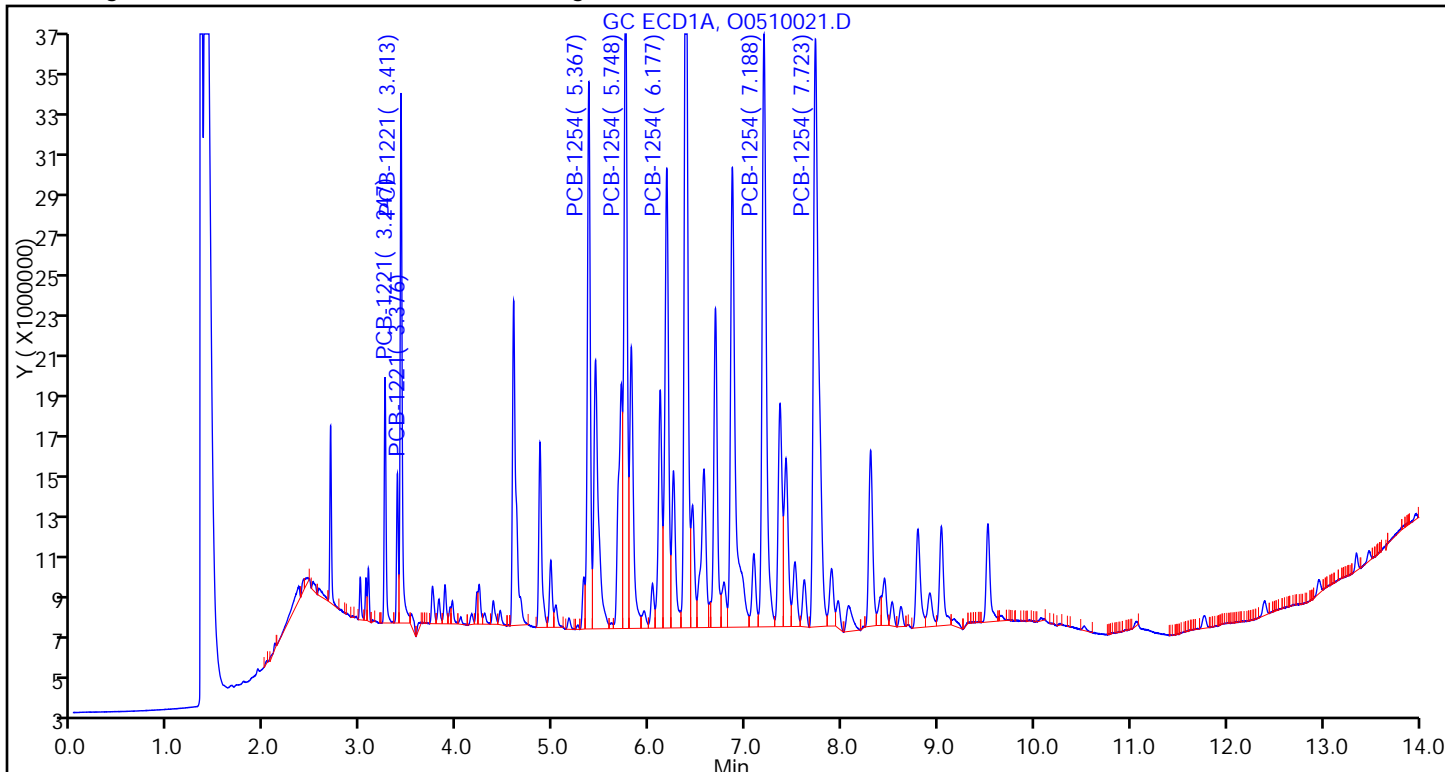
Injection Vol: 1.0 ul

Dil. Factor: 1.0000

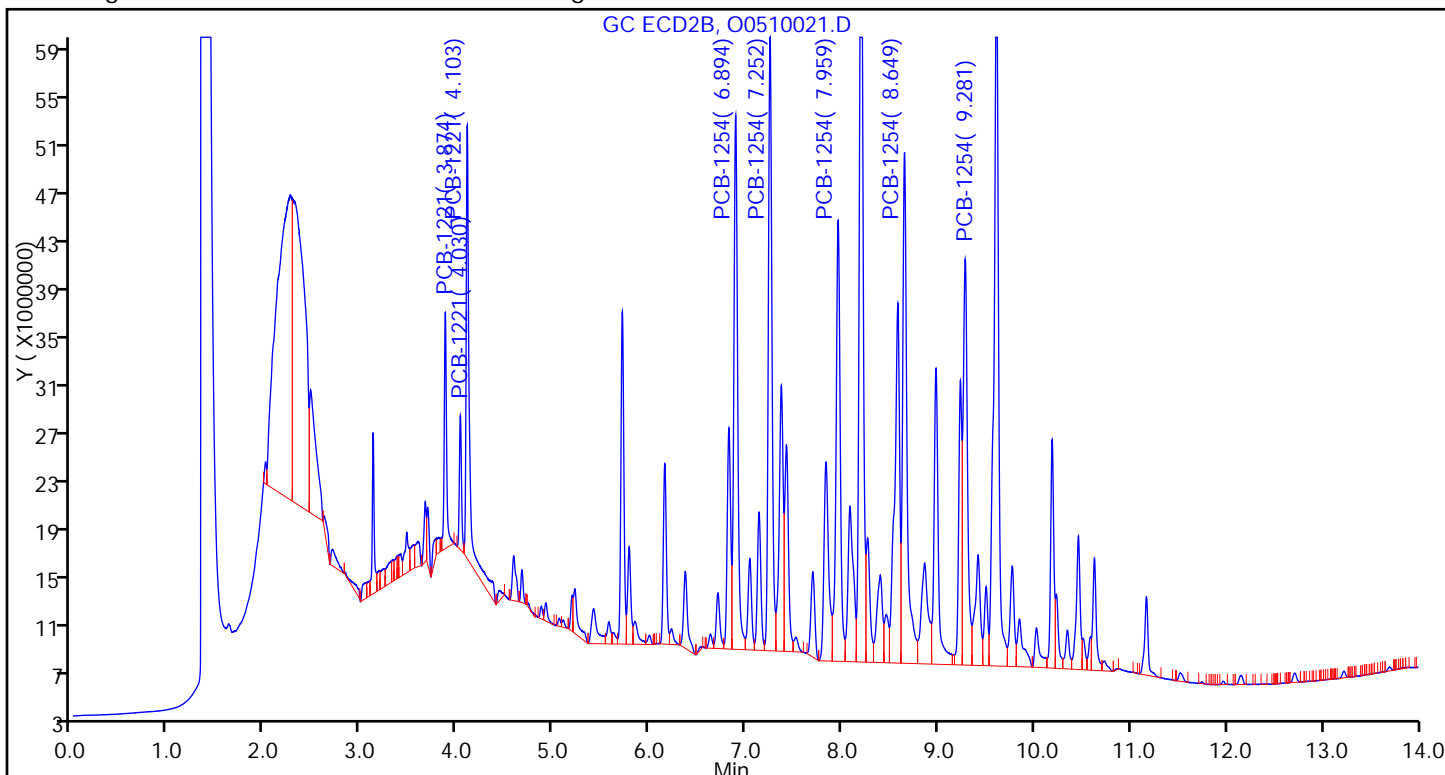
Method: PCB\_CHGC8DUAL

Limit Group: GCS 8082A ICAL

Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



FORM VII  
GC SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Pittsburgh Job No.: 180-43791-1  
 SDG No.: \_\_\_\_\_  
 Lab Sample ID: ICV 180-141160/23 Calibration Date: 05/11/2015 19:11  
 Instrument ID: CHGC8 Calib Start Date: 05/11/2015 15:52  
 GC Column: RTX-CLP1 ID: 0.53 (mm) Calib End Date: 05/11/2015 15:52  
 Lab File ID: O0510022.D Conc. Units: ng/uL

| ANALYTE         | CURVE TYPE | AVE CF   | CF       | MIN CF | CALC AMOUNT | SPIKE AMOUNT | %D    | MAX %D |
|-----------------|------------|----------|----------|--------|-------------|--------------|-------|--------|
| PCB-1232 Peak 1 | Ave        | 13509540 | 14189914 |        | 0.525       | 0.500        | 5.0   | 20.0   |
| PCB-1232 Peak 2 | Ave        | 23284952 | 26024986 |        | 0.559       | 0.500        | 11.8  | 20.0   |
| PCB-1232 Peak 3 | Ave        | 12984854 | 12557734 |        | 0.484       | 0.500        | -3.3  | 20.0   |
| PCB-1232 Peak 4 | Ave        | 9744782  | 12365834 |        | 0.634       | 0.500        | 26.9* | 20.0   |
| PCB-1232 Peak 5 | Ave        | 8761170  | 9712166  |        | 0.554       | 0.500        | 10.9  | 20.0   |
| PCB-1262 Peak 1 | Ave        | 20616268 | 22923752 |        | 0.556       | 0.500        | 11.2  | 20.0   |
| PCB-1262 Peak 2 | Ave        | 28280026 | 29640246 |        | 0.524       | 0.500        | 4.8   | 20.0   |
| PCB-1262 Peak 3 | Ave        | 27269690 | 27134696 |        | 0.498       | 0.500        | -0.5  | 20.0   |
| PCB-1262 Peak 4 | Ave        | 19065798 | 23758438 |        | 0.623       | 0.500        | 24.6* | 20.0   |
| PCB-1262 Peak 5 | Ave        | 43778002 | 53234408 |        | 0.608       | 0.500        | 21.6* | 20.0   |

FORM VII  
GC SEMI VOA CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-43791-1  
 SDG No.: \_\_\_\_\_  
 Lab Sample ID: ICV 180-141160/23 Calibration Date: 05/11/2015 19:11  
 Instrument ID: CHGC8 Calib Start Date: 05/11/2015 15:52  
 GC Column: RTX-CLP1 ID: 0.53 (mm) Calib End Date: 05/11/2015 15:52  
 Lab File ID: O0510022.D

| Analyte         | RT    | RT WINDOW |       |
|-----------------|-------|-----------|-------|
|                 |       | FROM      | TO    |
| PCB-1232 Peak 1 | 3.25  | 3.20      | 3.30  |
| PCB-1232 Peak 2 | 3.74  | 3.69      | 3.79  |
| PCB-1232 Peak 3 | 4.86  | 4.81      | 4.91  |
| PCB-1232 Peak 4 | 5.36  | 5.32      | 5.42  |
| PCB-1232 Peak 5 | 6.16  | 6.11      | 6.21  |
| PCB-1262 Peak 1 | 7.42  | 7.37      | 7.47  |
| PCB-1262 Peak 2 | 8.06  | 8.01      | 8.11  |
| PCB-1262 Peak 3 | 8.52  | 8.47      | 8.57  |
| PCB-1262 Peak 4 | 10.10 | 10.06     | 10.16 |
| PCB-1262 Peak 5 | 10.52 | 10.47     | 10.57 |



TestAmerica Pittsburgh  
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\O0510022.D  
 Lims ID: ICV  
 Client ID:  
 Sample Type: ICV  
 Inject. Date: 11-May-2015 19:11:05 ALS Bottle#: 23 Worklist Smp#: 23  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 180-0006866-023  
 Operator ID: 402360 Instrument ID: CHGC8  
 Sublist:

Method: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\PCB\_CHGC8DUAL.m  
 Limit Group: GCS 8082A ICAL  
 Last Update: 12-May-2015 16:53:37 Calib Date: 11-May-2015 18:31:22  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICal File: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\O0510020.D

Column 1 : Det: GC ECD1A  
 Column 2 : Det: GC ECD2B

Process Host: XAWRK022

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng | OnCol Amt ng | Flags |
|-----|-----------|---------------|---------------|----------|------------|--------------|-------|
|-----|-----------|---------------|---------------|----------|------------|--------------|-------|

5 PCB-1232

|   |       |       |        |           |        |        |  |
|---|-------|-------|--------|-----------|--------|--------|--|
| 1 | 3.246 | 3.246 | 0.000  | 7094957H  | 0.5000 | 0.5252 |  |
| 1 | 3.740 | 3.741 | -0.001 | 13012493H | 0.5000 | 0.5588 |  |
| 1 | 4.859 | 4.859 | 0.000  | 6278867H  | 0.5000 | 0.4836 |  |
| 1 | 5.364 | 5.365 | -0.001 | 6182917H  | 0.5000 | 0.6345 |  |
| 1 | 6.157 | 6.158 | -0.001 | 4856083H  | 0.5000 | 0.5543 |  |

Average of Peak Amounts = 0.5513

|   |       |       |        |           |        |        |  |
|---|-------|-------|--------|-----------|--------|--------|--|
| 2 | 3.872 | 3.873 | -0.001 | 14334596H | 0.5000 | 0.4505 |  |
| 2 | 4.029 | 4.028 | 0.001  | 10349703H | 0.5000 | 0.4568 |  |
| 2 | 4.919 | 4.918 | 0.001  | 9696755H  | 0.5000 | 0.5500 |  |
| 2 | 5.573 | 5.573 | 0.000  | 9690810H  | 0.5000 | 0.5467 |  |
| 2 | 6.367 | 6.367 | 0.000  | 11016800H | 0.5000 | 0.5919 |  |

Average of Peak Amounts = 0.5192

RPD = 5.99

9 PCB-1262

|   |        |        |        |           |        |        |  |
|---|--------|--------|--------|-----------|--------|--------|--|
| 1 | 7.416  | 7.416  | 0.000  | 11461876H | 0.5000 | 0.5560 |  |
| 1 | 8.056  | 8.057  | -0.001 | 14820123H | 0.5000 | 0.5240 |  |
| 1 | 8.522  | 8.522  | 0.000  | 13567348H | 0.5000 | 0.4975 |  |
| 1 | 10.102 | 10.105 | -0.003 | 11879219H | 0.5000 | 0.6231 |  |
| 1 | 10.518 | 10.519 | -0.001 | 26617204H | 0.5000 | 0.6080 |  |

Average of Peak Amounts = 0.5617

|   |        |        |       |           |        |        |  |
|---|--------|--------|-------|-----------|--------|--------|--|
| 2 | 9.602  | 9.597  | 0.005 | 32719694H | 0.5000 | 0.6100 |  |
| 2 | 9.846  | 9.846  | 0.000 | 29227238H | 0.5000 | 0.5406 |  |
| 2 | 10.342 | 10.342 | 0.000 | 25008054H | 0.5000 | 0.5503 |  |
| 2 | 11.742 | 11.742 | 0.000 | 13554365H | 0.5000 | 0.5816 |  |
| 2 | 11.964 | 11.964 | 0.000 | 35063625H | 0.5000 | 0.6157 |  |

Average of Peak Amounts = 0.5796

RPD = 3.14

Reagents:

GCAR3262ICV\_00001

Amount Added: 1.00

Units: mL

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\O0510022.D

Injection Date: 11-May-2015 19:11:05

Instrument ID: CHGC8

Lims ID: ICV

Client ID:

Operator ID: 402360

ALS Bottle#: 23

Worklist Smp#: 23

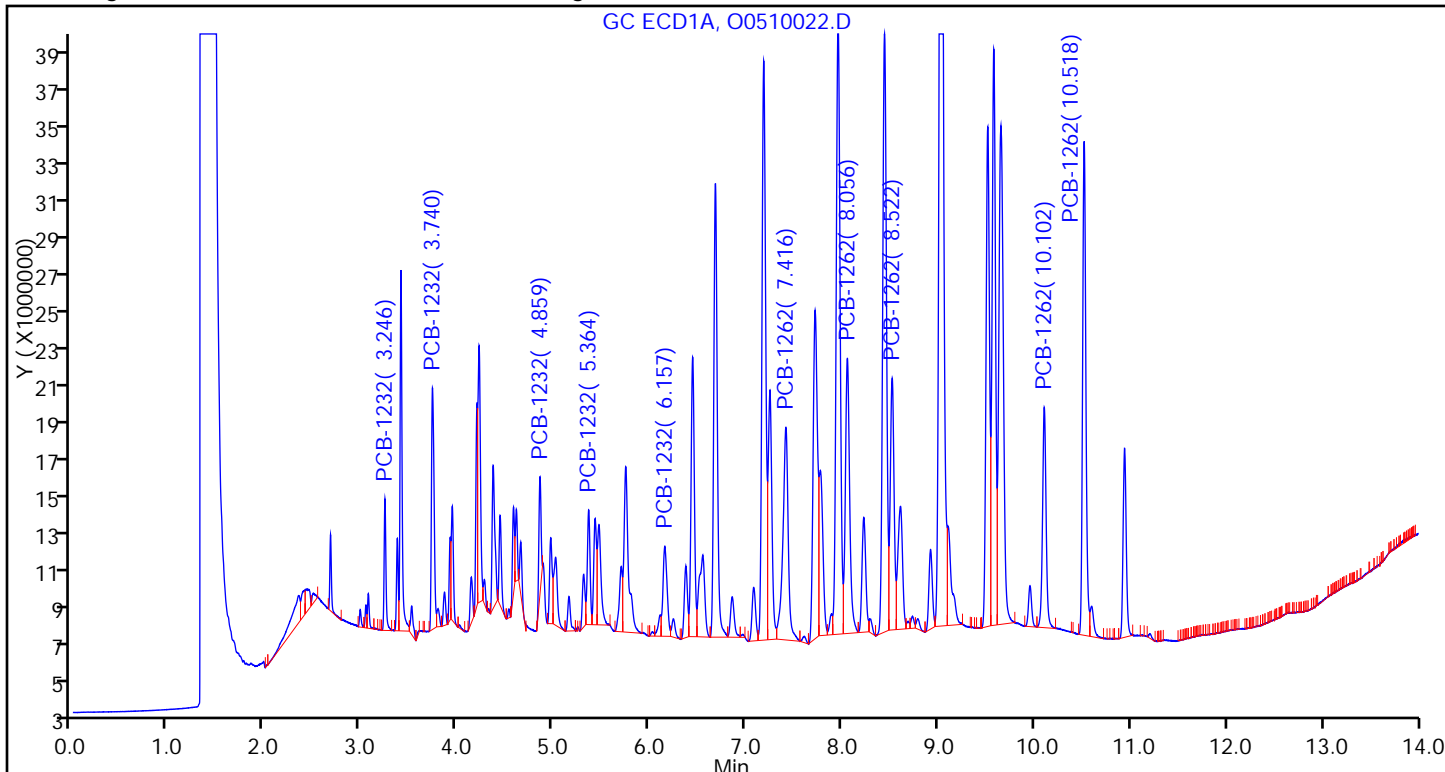
Injection Vol: 1.0 ul

Dil. Factor: 1.0000

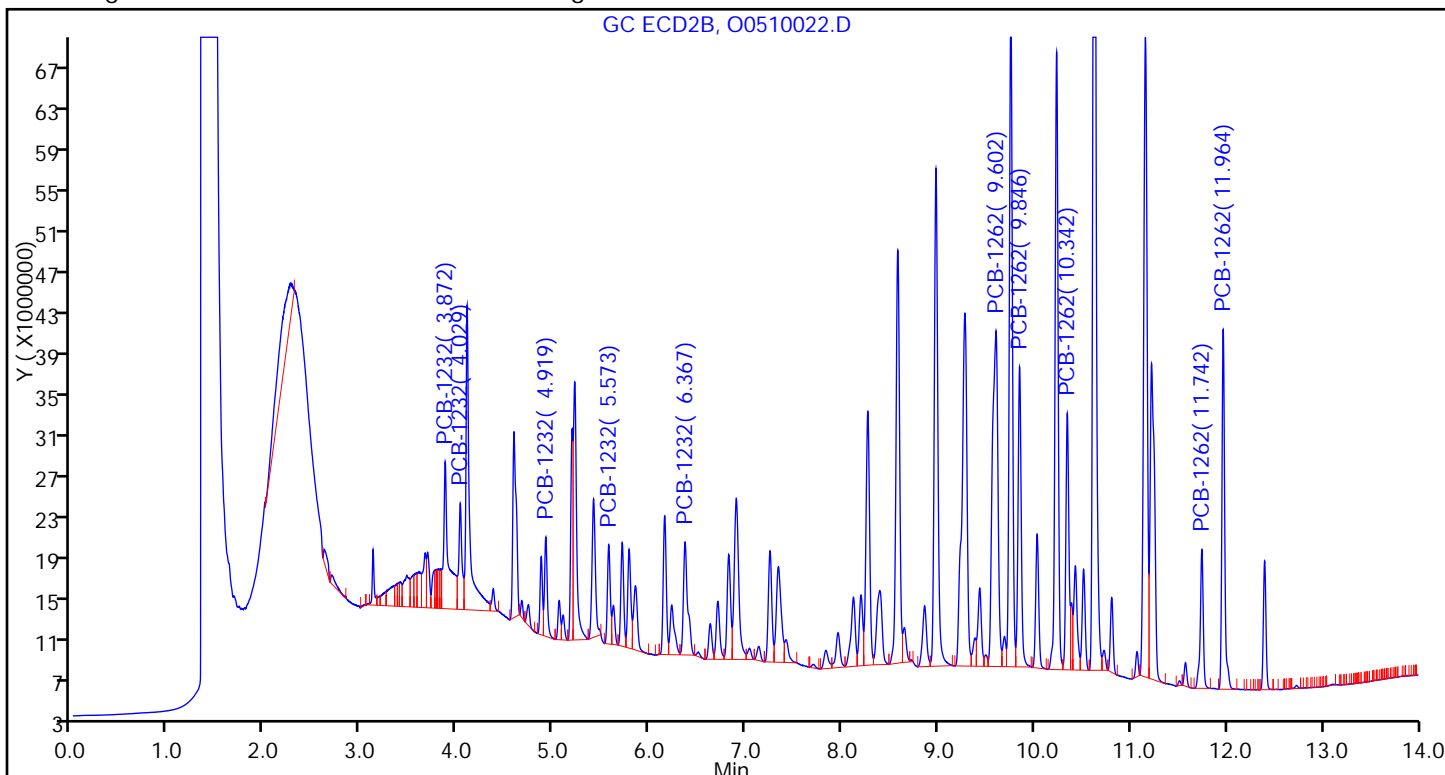
Method: PCB\_CHGC8DUAL

Limit Group: GCS 8082A ICAL

Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



FORM VII  
GC SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Pittsburgh Job No.: 180-43791-1  
 SDG No.: \_\_\_\_\_  
 Lab Sample ID: ICV 180-141160/23 Calibration Date: 05/11/2015 19:11  
 Instrument ID: CHGC8 Calib Start Date: 05/11/2015 15:52  
 GC Column: RTX-CLP2 ID: 0.53 (mm) Calib End Date: 05/11/2015 15:52  
 Lab File ID: O0510022.D Conc. Units: ng/uL

| ANALYTE         | CURVE TYPE | AVE CF   | CF       | MIN CF | CALC AMOUNT | SPIKE AMOUNT | %D    | MAX %D |
|-----------------|------------|----------|----------|--------|-------------|--------------|-------|--------|
| PCB-1232 Peak 1 | Ave        | 31817966 | 28669192 |        | 0.451       | 0.500        | -9.9  | 20.0   |
| PCB-1232 Peak 2 | Ave        | 22657706 | 20699406 |        | 0.457       | 0.500        | -8.6  | 20.0   |
| PCB-1232 Peak 3 | Ave        | 17629786 | 19393510 |        | 0.550       | 0.500        | 10.0  | 20.0   |
| PCB-1232 Peak 4 | Ave        | 17727264 | 19381620 |        | 0.547       | 0.500        | 9.3   | 20.0   |
| PCB-1232 Peak 5 | Ave        | 18611924 | 22033600 |        | 0.592       | 0.500        | 18.4  | 20.0   |
| PCB-1262 Peak 1 | Ave        | 53642704 | 65439388 |        | 0.610       | 0.500        | 22.0* | 20.0   |
| PCB-1262 Peak 2 | Ave        | 54063182 | 58454476 |        | 0.541       | 0.500        | 8.1   | 20.0   |
| PCB-1262 Peak 3 | Ave        | 45442178 | 50016108 |        | 0.550       | 0.500        | 10.1  | 20.0   |
| PCB-1262 Peak 4 | Ave        | 23306288 | 27108730 |        | 0.582       | 0.500        | 16.3  | 20.0   |
| PCB-1262 Peak 5 | Ave        | 56951446 | 70127250 |        | 0.616       | 0.500        | 23.1* | 20.0   |

FORM VII  
GC SEMI VOA CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-43791-1  
 SDG No.: \_\_\_\_\_  
 Lab Sample ID: ICV 180-141160/23 Calibration Date: 05/11/2015 19:11  
 Instrument ID: CHGC8 Calib Start Date: 05/11/2015 15:52  
 GC Column: RTX-CLP2 ID: 0.53 (mm) Calib End Date: 05/11/2015 15:52  
 Lab File ID: O0510022.D

| Analyte         | RT    | RT WINDOW |       |
|-----------------|-------|-----------|-------|
|                 |       | FROM      | TO    |
| PCB-1232 Peak 1 | 3.87  | 3.82      | 3.92  |
| PCB-1232 Peak 2 | 4.03  | 3.98      | 4.08  |
| PCB-1232 Peak 3 | 4.92  | 4.87      | 4.97  |
| PCB-1232 Peak 4 | 5.57  | 5.52      | 5.62  |
| PCB-1232 Peak 5 | 6.37  | 6.32      | 6.42  |
| PCB-1262 Peak 1 | 9.60  | 9.55      | 9.65  |
| PCB-1262 Peak 2 | 9.85  | 9.80      | 9.90  |
| PCB-1262 Peak 3 | 10.34 | 10.29     | 10.39 |
| PCB-1262 Peak 4 | 11.74 | 11.69     | 11.79 |
| PCB-1262 Peak 5 | 11.96 | 11.91     | 12.01 |

TestAmerica Pittsburgh  
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\O0510022.D  
 Lims ID: ICV  
 Client ID:  
 Sample Type: ICV  
 Inject. Date: 11-May-2015 19:11:05 ALS Bottle#: 23 Worklist Smp#: 23  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 180-0006866-023  
 Operator ID: 402360 Instrument ID: CHGC8  
 Sublist:

Method: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\PCB\_CHGC8DUAL.m  
 Limit Group: GCS 8082A ICAL  
 Last Update: 12-May-2015 16:53:37 Calib Date: 11-May-2015 18:31:22  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICal File: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\O0510020.D

Column 1 : Det: GC ECD1A  
 Column 2 : Det: GC ECD2B

Process Host: XAWRK022

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng | OnCol Amt ng | Flags |
|-----|-----------|---------------|---------------|----------|------------|--------------|-------|
|-----|-----------|---------------|---------------|----------|------------|--------------|-------|

5 PCB-1232

|   |       |       |        |           |        |        |  |
|---|-------|-------|--------|-----------|--------|--------|--|
| 1 | 3.246 | 3.246 | 0.000  | 7094957H  | 0.5000 | 0.5252 |  |
| 1 | 3.740 | 3.741 | -0.001 | 13012493H | 0.5000 | 0.5588 |  |
| 1 | 4.859 | 4.859 | 0.000  | 6278867H  | 0.5000 | 0.4836 |  |
| 1 | 5.364 | 5.365 | -0.001 | 6182917H  | 0.5000 | 0.6345 |  |
| 1 | 6.157 | 6.158 | -0.001 | 4856083H  | 0.5000 | 0.5543 |  |

Average of Peak Amounts = 0.5513

|   |       |       |        |           |        |        |  |
|---|-------|-------|--------|-----------|--------|--------|--|
| 2 | 3.872 | 3.873 | -0.001 | 14334596H | 0.5000 | 0.4505 |  |
| 2 | 4.029 | 4.028 | 0.001  | 10349703H | 0.5000 | 0.4568 |  |
| 2 | 4.919 | 4.918 | 0.001  | 9696755H  | 0.5000 | 0.5500 |  |
| 2 | 5.573 | 5.573 | 0.000  | 9690810H  | 0.5000 | 0.5467 |  |
| 2 | 6.367 | 6.367 | 0.000  | 11016800H | 0.5000 | 0.5919 |  |

Average of Peak Amounts = 0.5192

RPD = 5.99

9 PCB-1262

|   |        |        |        |           |        |        |  |
|---|--------|--------|--------|-----------|--------|--------|--|
| 1 | 7.416  | 7.416  | 0.000  | 11461876H | 0.5000 | 0.5560 |  |
| 1 | 8.056  | 8.057  | -0.001 | 14820123H | 0.5000 | 0.5240 |  |
| 1 | 8.522  | 8.522  | 0.000  | 13567348H | 0.5000 | 0.4975 |  |
| 1 | 10.102 | 10.105 | -0.003 | 11879219H | 0.5000 | 0.6231 |  |
| 1 | 10.518 | 10.519 | -0.001 | 26617204H | 0.5000 | 0.6080 |  |

Average of Peak Amounts = 0.5617

|   |        |        |       |           |        |        |  |
|---|--------|--------|-------|-----------|--------|--------|--|
| 2 | 9.602  | 9.597  | 0.005 | 32719694H | 0.5000 | 0.6100 |  |
| 2 | 9.846  | 9.846  | 0.000 | 29227238H | 0.5000 | 0.5406 |  |
| 2 | 10.342 | 10.342 | 0.000 | 25008054H | 0.5000 | 0.5503 |  |
| 2 | 11.742 | 11.742 | 0.000 | 13554365H | 0.5000 | 0.5816 |  |
| 2 | 11.964 | 11.964 | 0.000 | 35063625H | 0.5000 | 0.6157 |  |

Average of Peak Amounts = 0.5796

RPD = 3.14

Reagents:

GCAR3262ICV\_00001

Amount Added: 1.00

Units: mL

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\O0510022.D

Injection Date: 11-May-2015 19:11:05

Instrument ID: CHGC8

Lims ID: ICV

Client ID:

Operator ID: 402360

ALS Bottle#: 23

Worklist Smp#: 23

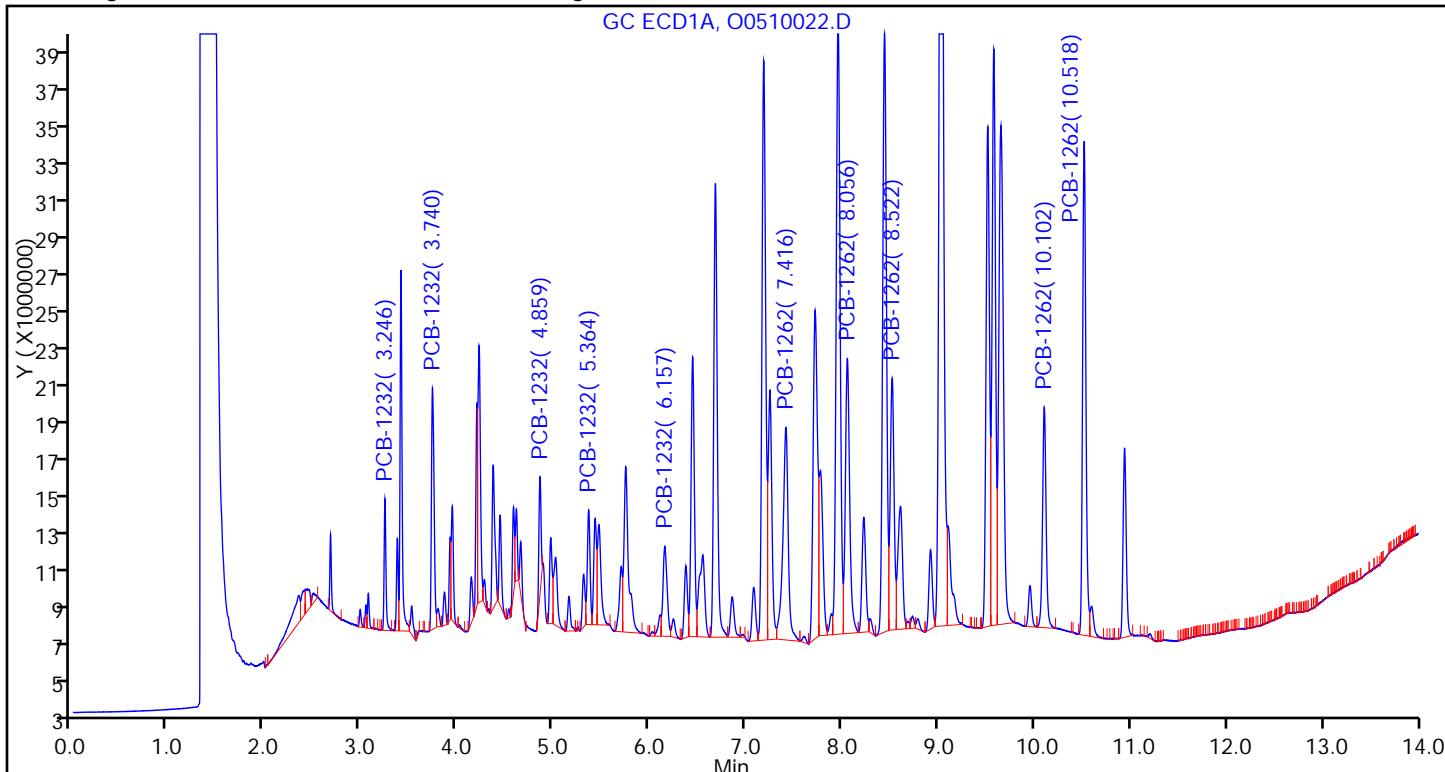
Injection Vol: 1.0 ul

Dil. Factor: 1.0000

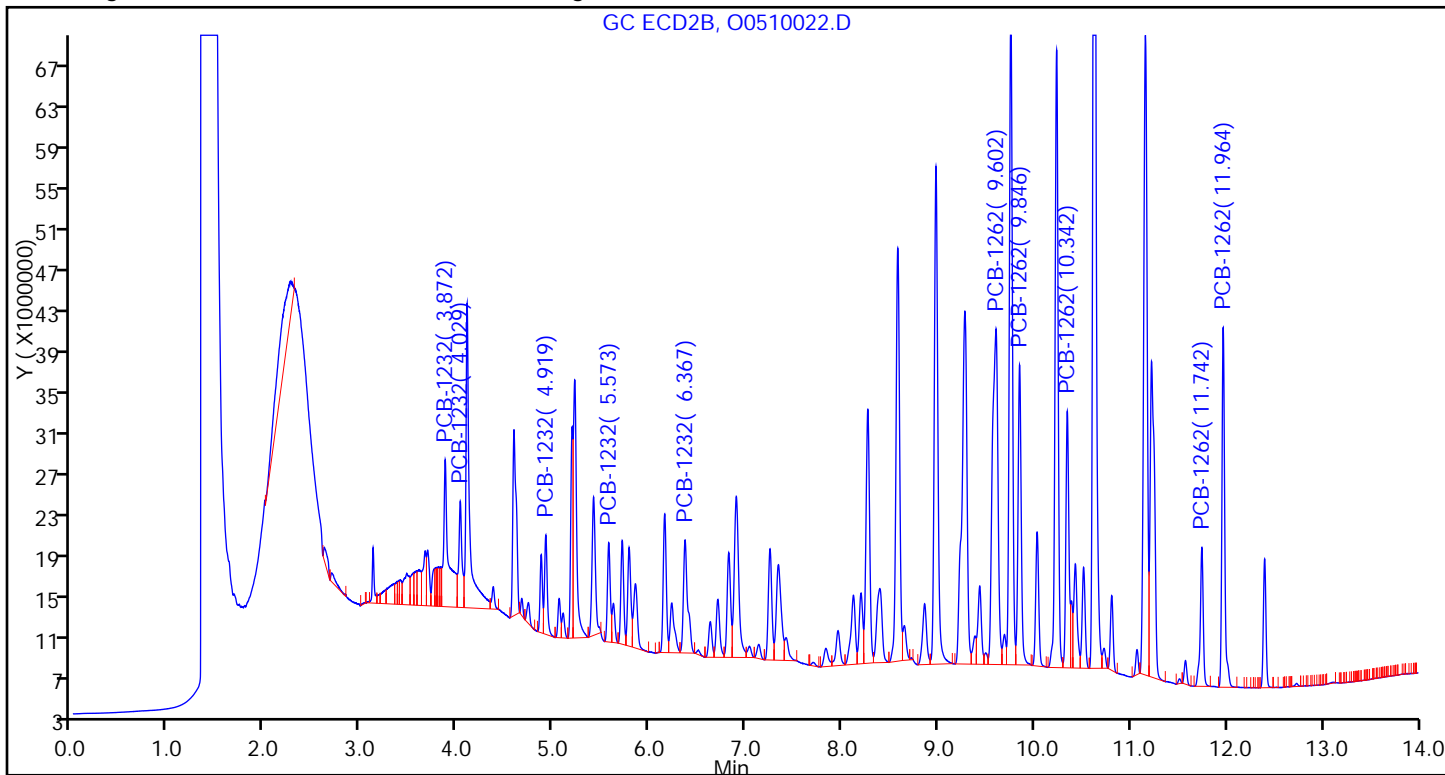
Method: PCB\_CHGC8DUAL

Limit Group: GCS 8082A ICAL

Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3





FORM VII  
GC SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Pittsburgh Job No.: 180-43791-1  
 SDG No.: \_\_\_\_\_  
 Lab Sample ID: ICV 180-141160/24 Calibration Date: 05/11/2015 19:30  
 Instrument ID: CHGC8 Calib Start Date: 05/11/2015 14:13  
 GC Column: RTX-CLP1 ID: 0.53 (mm) Calib End Date: 05/11/2015 15:32  
 Lab File ID: O0510023.D Conc. Units: ng/uL

| ANALYTE         | CURVE TYPE | AVE CF    | CF        | MIN CF | CALC AMOUNT | SPIKE AMOUNT | %D    | MAX %D |
|-----------------|------------|-----------|-----------|--------|-------------|--------------|-------|--------|
| PCB-1242 Peak 1 | Ave        | 30928102  | 30196172  |        | 0.488       | 0.500        | -2.4  | 20.0   |
| PCB-1242 Peak 2 | Ave        | 22048818  | 21473242  |        | 0.487       | 0.500        | -2.6  | 20.0   |
| PCB-1242 Peak 3 | Ave        | 28675306  | 30695418  |        | 0.535       | 0.500        | 7.0   | 20.0   |
| PCB-1242 Peak 4 | Ave        | 17908653  | 18585230  |        | 0.519       | 0.500        | 3.8   | 20.0   |
| PCB-1242 Peak 5 | Ave        | 21177587  | 21815738  |        | 0.515       | 0.500        | 3.0   | 20.0   |
| PCB-1268 Peak 1 | Ave        | 160822941 | 186180270 |        | 0.579       | 0.500        | 15.8  | 20.0   |
| PCB-1268 Peak 2 | Ave        | 135905673 | 160571038 |        | 0.591       | 0.500        | 18.1  | 20.0   |
| PCB-1268 Peak 3 | Ave        | 127427596 | 166035230 |        | 0.651       | 0.500        | 30.3* | 20.0   |
| PCB-1268 Peak 4 | Ave        | 369299091 | 371909592 |        | 0.504       | 0.500        | 0.7   | 20.0   |

FORM VII  
GC SEMI VOA CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-43791-1  
 SDG No.: \_\_\_\_\_  
 Lab Sample ID: ICV 180-141160/24 Calibration Date: 05/11/2015 19:30  
 Instrument ID: CHGC8 Calib Start Date: 05/11/2015 14:13  
 GC Column: RTX-CLP1 ID: 0.53(mm) Calib End Date: 05/11/2015 15:32  
 Lab File ID: O0510023.D

| Analyte         | RT    | RT WINDOW |       |
|-----------------|-------|-----------|-------|
|                 |       | FROM      | TO    |
| PCB-1242 Peak 1 | 4.37  | 4.32      | 4.42  |
| PCB-1242 Peak 2 | 4.45  | 4.39      | 4.49  |
| PCB-1242 Peak 3 | 4.86  | 4.81      | 4.91  |
| PCB-1242 Peak 4 | 4.97  | 4.92      | 5.02  |
| PCB-1242 Peak 5 | 5.43  | 5.38      | 5.48  |
| PCB-1268 Peak 1 | 9.58  | 9.53      | 9.63  |
| PCB-1268 Peak 2 | 9.65  | 9.60      | 9.70  |
| PCB-1268 Peak 3 | 9.96  | 9.91      | 10.01 |
| PCB-1268 Peak 4 | 10.94 | 10.89     | 10.99 |

TestAmerica Pittsburgh  
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\O0510023.D  
 Lims ID: ICV  
 Client ID:  
 Sample Type: ICV  
 Inject. Date: 11-May-2015 19:30:56 ALS Bottle#: 24 Worklist Smp#: 24  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 180-0006866-024  
 Operator ID: 402360 Instrument ID: CHGC8  
 Sublist:

Method: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\PCB\_CHGC8DUAL.m  
 Limit Group: GCS 8082A ICAL  
 Last Update: 12-May-2015 16:53:37 Calib Date: 11-May-2015 18:31:22  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICal File: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\O0510020.D

Column 1 : Det: GC ECD1A  
 Column 2 : Det: GC ECD2B  
 Process Host: XAWRK022

First Level Reviewer: guptaa Date: 12-May-2015 07:29:42

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng | OnCol Amt ng | Flags |
|-----|-----------|---------------|---------------|----------|------------|--------------|-------|
|-----|-----------|---------------|---------------|----------|------------|--------------|-------|

3 PCB-1242

|   |       |       |       |           |        |        |  |
|---|-------|-------|-------|-----------|--------|--------|--|
| 1 | 4.372 | 4.371 | 0.001 | 15098086H | 0.5000 | 0.4882 |  |
| 1 | 4.445 | 4.443 | 0.002 | 10736621H | 0.5000 | 0.4869 |  |
| 1 | 4.859 | 4.858 | 0.001 | 15347709H | 0.5000 | 0.5352 |  |
| 1 | 4.970 | 4.970 | 0.000 | 9292615H  | 0.5000 | 0.5189 |  |
| 1 | 5.434 | 5.431 | 0.003 | 10907869H | 0.5000 | 0.5151 |  |

Average of Peak Amounts = 0.5089

|   |       |       |       |           |        |        |  |
|---|-------|-------|-------|-----------|--------|--------|--|
| 2 | 5.417 | 5.414 | 0.003 | 22930374H | 0.5000 | 0.4946 |  |
| 2 | 5.715 | 5.712 | 0.003 | 18563562H | 0.5000 | 0.5362 |  |
| 2 | 6.157 | 6.153 | 0.004 | 24591631H | 0.5000 | 0.5116 |  |
| 2 | 6.369 | 6.365 | 0.004 | 19660946H | 0.5000 | 0.5023 |  |
| 2 | 6.908 | 6.906 | 0.002 | 19811829H | 0.5000 | 0.5224 |  |

Average of Peak Amounts = 0.5134

RPD = 0.90

10 PCB-1268

|   |        |        |        |            |        |        |  |
|---|--------|--------|--------|------------|--------|--------|--|
| 1 | 9.579  | 9.579  | 0.000  | 93090135H  | 0.5000 | 0.5788 |  |
| 1 | 9.645  | 9.647  | -0.002 | 80285519H  | 0.5000 | 0.5907 |  |
| 1 | 9.956  | 9.955  | 0.001  | 83017615H  | 0.5000 | 0.6515 |  |
| 1 | 10.940 | 10.939 | 0.001  | 185954796H | 0.5000 | 0.5035 |  |

Average of Peak Amounts = 0.5812

|   |        |        |       |            |        |        |  |
|---|--------|--------|-------|------------|--------|--------|--|
| 2 | 11.151 | 11.149 | 0.002 | 130353851H | 0.5000 | 0.5984 |  |
| 2 | 11.219 | 11.216 | 0.003 | 108084302H | 0.5000 | 0.6261 |  |
| 2 | 11.572 | 11.571 | 0.001 | 103516982H | 0.5000 | 0.6434 |  |
| 2 | 12.396 | 12.395 | 0.001 | 244175797H | 0.5000 | 0.5090 |  |

Average of Peak Amounts = 0.5942

RPD = 2.22

**Reagents:**

GCAR4268ICV\_00001

Amount Added: 1.00

Units: mL

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\O0510023.D

Injection Date: 11-May-2015 19:30:56

Instrument ID: CHGC8

Lims ID: ICV

Client ID:

Operator ID: 402360

ALS Bottle#: 24

Worklist Smp#: 24

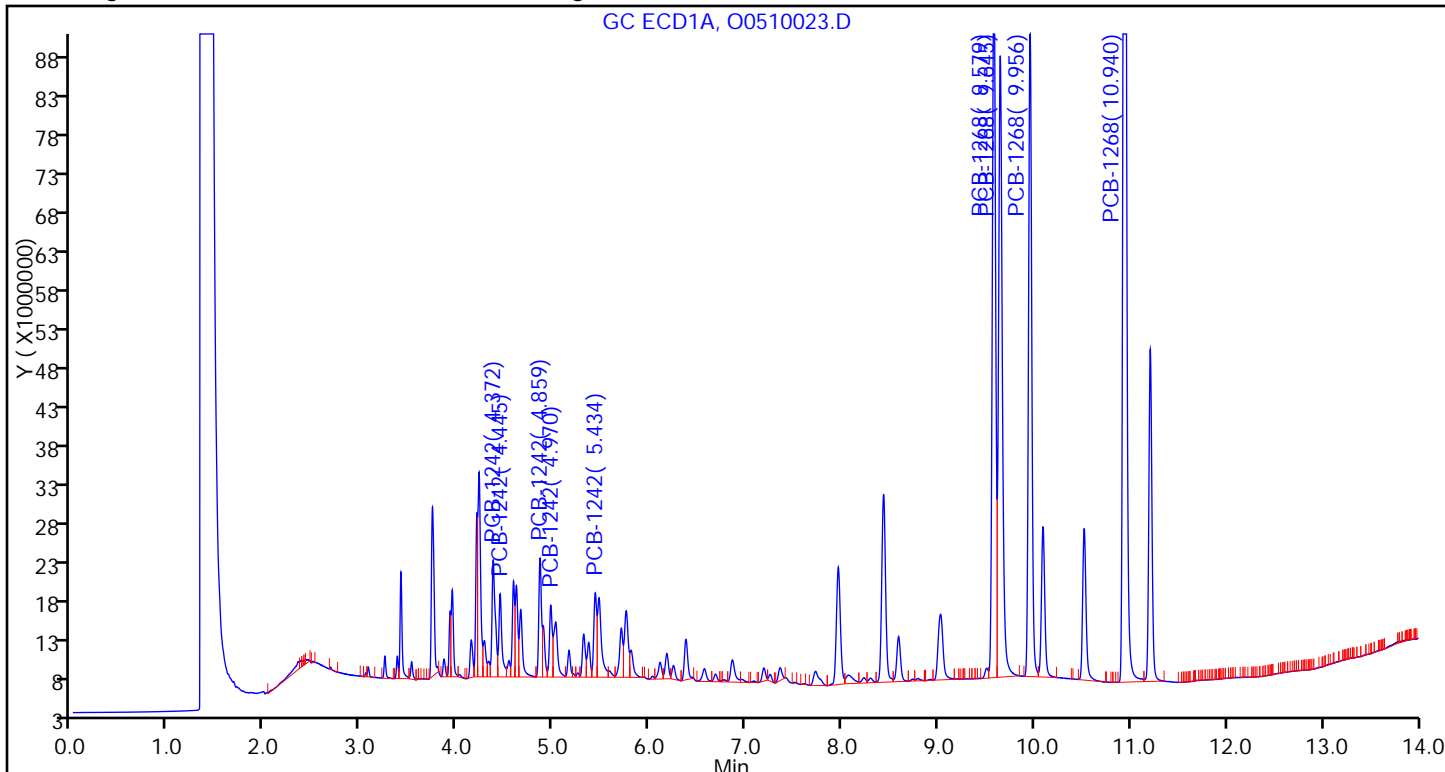
Injection Vol: 1.0 ul

Dil. Factor: 1.0000

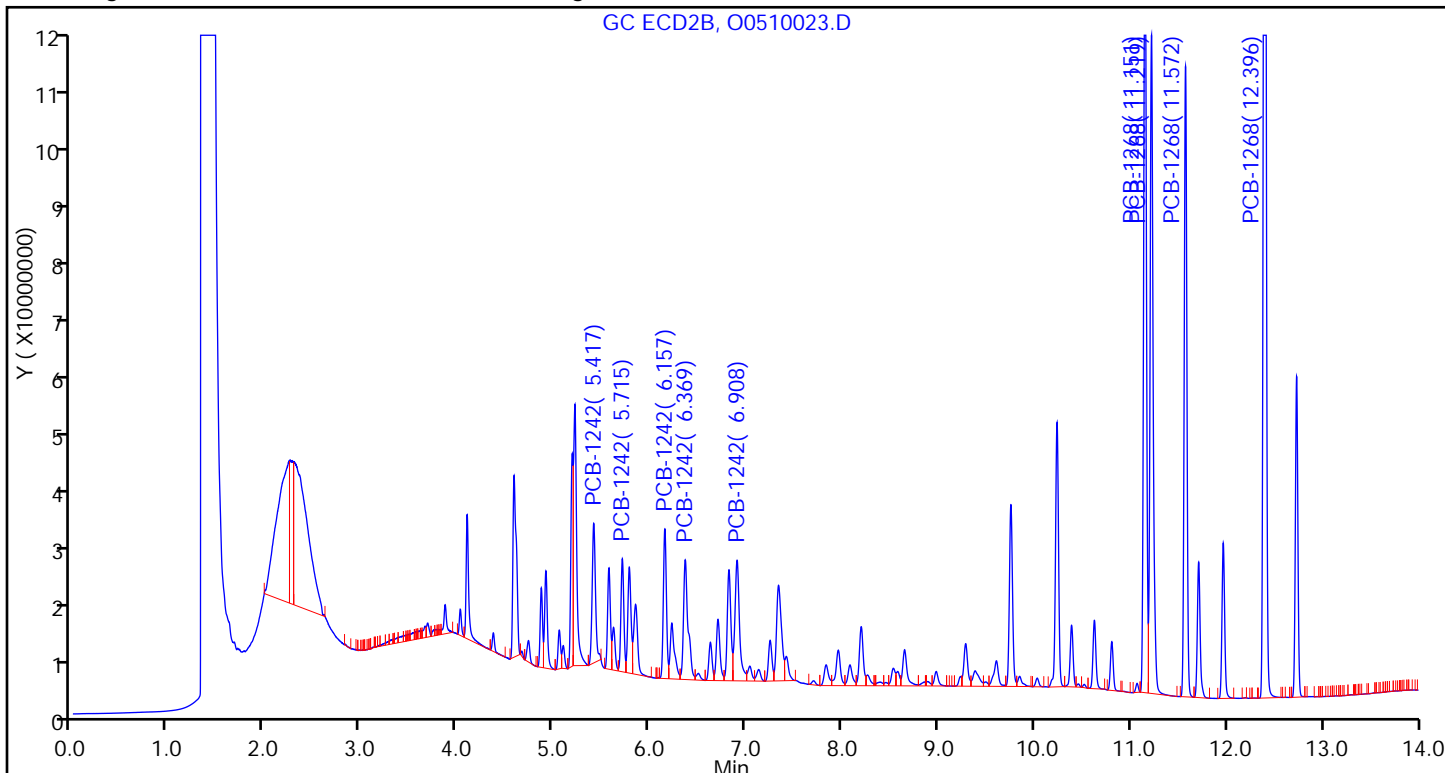
Method: PCB\_CHGC8DUAL

Limit Group: GCS 8082A ICAL

Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



FORM VII  
GC SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Pittsburgh Job No.: 180-43791-1  
 SDG No.: \_\_\_\_\_  
 Lab Sample ID: ICV 180-141160/24 Calibration Date: 05/11/2015 19:30  
 Instrument ID: CHGC8 Calib Start Date: 05/11/2015 14:13  
 GC Column: RTX-CLP2 ID: 0.53 (mm) Calib End Date: 05/11/2015 15:32  
 Lab File ID: O0510023.D Conc. Units: ng/uL

| ANALYTE         | CURVE TYPE | AVE CF    | CF        | MIN CF | CALC AMOUNT | SPIKE AMOUNT | %D    | MAX %D |
|-----------------|------------|-----------|-----------|--------|-------------|--------------|-------|--------|
| PCB-1242 Peak 1 | Ave        | 46358583  | 45860748  |        | 0.495       | 0.500        | -1.1  | 20.0   |
| PCB-1242 Peak 2 | Ave        | 34618310  | 37127124  |        | 0.536       | 0.500        | 7.2   | 20.0   |
| PCB-1242 Peak 3 | Ave        | 48067797  | 49183262  |        | 0.512       | 0.500        | 2.3   | 20.0   |
| PCB-1242 Peak 4 | Ave        | 39138909  | 39321892  |        | 0.502       | 0.500        | 0.5   | 20.0   |
| PCB-1242 Peak 5 | Ave        | 37923646  | 39623658  |        | 0.522       | 0.500        | 4.5   | 20.0   |
| PCB-1268 Peak 1 | Ave        | 217829101 | 260707702 |        | 0.598       | 0.500        | 19.7  | 20.0   |
| PCB-1268 Peak 2 | Ave        | 172642491 | 216168604 |        | 0.626       | 0.500        | 25.2* | 20.0   |
| PCB-1268 Peak 3 | Ave        | 160890807 | 207033964 |        | 0.643       | 0.500        | 28.7* | 20.0   |
| PCB-1268 Peak 4 | Ave        | 479741254 | 488351594 |        | 0.509       | 0.500        | 1.8   | 20.0   |

FORM VII  
GC SEMI VOA CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-43791-1  
 SDG No.: \_\_\_\_\_  
 Lab Sample ID: ICV 180-141160/24 Calibration Date: 05/11/2015 19:30  
 Instrument ID: CHGC8 Calib Start Date: 05/11/2015 14:13  
 GC Column: RTX-CLP2 ID: 0.53 (mm) Calib End Date: 05/11/2015 15:32  
 Lab File ID: O0510023.D

| Analyte         | RT    | RT WINDOW |       |
|-----------------|-------|-----------|-------|
|                 |       | FROM      | TO    |
| PCB-1242 Peak 1 | 5.42  | 5.36      | 5.46  |
| PCB-1242 Peak 2 | 5.72  | 5.66      | 5.76  |
| PCB-1242 Peak 3 | 6.16  | 6.10      | 6.20  |
| PCB-1242 Peak 4 | 6.37  | 6.32      | 6.42  |
| PCB-1242 Peak 5 | 6.91  | 6.86      | 6.96  |
| PCB-1268 Peak 1 | 11.15 | 11.10     | 11.20 |
| PCB-1268 Peak 2 | 11.22 | 11.17     | 11.27 |
| PCB-1268 Peak 3 | 11.57 | 11.52     | 11.62 |
| PCB-1268 Peak 4 | 12.40 | 12.35     | 12.45 |

TestAmerica Pittsburgh  
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\O0510023.D  
 Lims ID: ICV  
 Client ID:  
 Sample Type: ICV  
 Inject. Date: 11-May-2015 19:30:56 ALS Bottle#: 24 Worklist Smp#: 24  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 180-0006866-024  
 Operator ID: 402360 Instrument ID: CHGC8  
 Sublist:

Method: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\PCB\_CHGC8DUAL.m  
 Limit Group: GCS 8082A ICAL  
 Last Update: 12-May-2015 16:53:37 Calib Date: 11-May-2015 18:31:22  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICal File: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\O0510020.D

Column 1 : Det: GC ECD1A  
 Column 2 : Det: GC ECD2B  
 Process Host: XAWRK022

First Level Reviewer: guptaa Date: 12-May-2015 07:29:42

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng | OnCol Amt ng | Flags |
|-----|-----------|---------------|---------------|----------|------------|--------------|-------|
|-----|-----------|---------------|---------------|----------|------------|--------------|-------|

3 PCB-1242

|   |       |       |       |           |        |        |  |
|---|-------|-------|-------|-----------|--------|--------|--|
| 1 | 4.372 | 4.371 | 0.001 | 15098086H | 0.5000 | 0.4882 |  |
| 1 | 4.445 | 4.443 | 0.002 | 10736621H | 0.5000 | 0.4869 |  |
| 1 | 4.859 | 4.858 | 0.001 | 15347709H | 0.5000 | 0.5352 |  |
| 1 | 4.970 | 4.970 | 0.000 | 9292615H  | 0.5000 | 0.5189 |  |
| 1 | 5.434 | 5.431 | 0.003 | 10907869H | 0.5000 | 0.5151 |  |

Average of Peak Amounts = 0.5089

|   |       |       |       |           |        |        |  |
|---|-------|-------|-------|-----------|--------|--------|--|
| 2 | 5.417 | 5.414 | 0.003 | 22930374H | 0.5000 | 0.4946 |  |
| 2 | 5.715 | 5.712 | 0.003 | 18563562H | 0.5000 | 0.5362 |  |
| 2 | 6.157 | 6.153 | 0.004 | 24591631H | 0.5000 | 0.5116 |  |
| 2 | 6.369 | 6.365 | 0.004 | 19660946H | 0.5000 | 0.5023 |  |
| 2 | 6.908 | 6.906 | 0.002 | 19811829H | 0.5000 | 0.5224 |  |

Average of Peak Amounts = 0.5134

RPD = 0.90

10 PCB-1268

|   |        |        |        |            |        |        |  |
|---|--------|--------|--------|------------|--------|--------|--|
| 1 | 9.579  | 9.579  | 0.000  | 93090135H  | 0.5000 | 0.5788 |  |
| 1 | 9.645  | 9.647  | -0.002 | 80285519H  | 0.5000 | 0.5907 |  |
| 1 | 9.956  | 9.955  | 0.001  | 83017615H  | 0.5000 | 0.6515 |  |
| 1 | 10.940 | 10.939 | 0.001  | 185954796H | 0.5000 | 0.5035 |  |

Average of Peak Amounts = 0.5812

|   |        |        |       |            |        |        |  |
|---|--------|--------|-------|------------|--------|--------|--|
| 2 | 11.151 | 11.149 | 0.002 | 130353851H | 0.5000 | 0.5984 |  |
| 2 | 11.219 | 11.216 | 0.003 | 108084302H | 0.5000 | 0.6261 |  |
| 2 | 11.572 | 11.571 | 0.001 | 103516982H | 0.5000 | 0.6434 |  |
| 2 | 12.396 | 12.395 | 0.001 | 244175797H | 0.5000 | 0.5090 |  |

Average of Peak Amounts = 0.5942

RPD = 2.22



**Reagents:**

GCAR4268ICV\_00001

Amount Added: 1.00

Units: mL

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\O0510023.D

Injection Date: 11-May-2015 19:30:56

Instrument ID: CHGC8

Lims ID: ICV

Client ID:

Operator ID: 402360

ALS Bottle#: 24

Worklist Smp#: 24

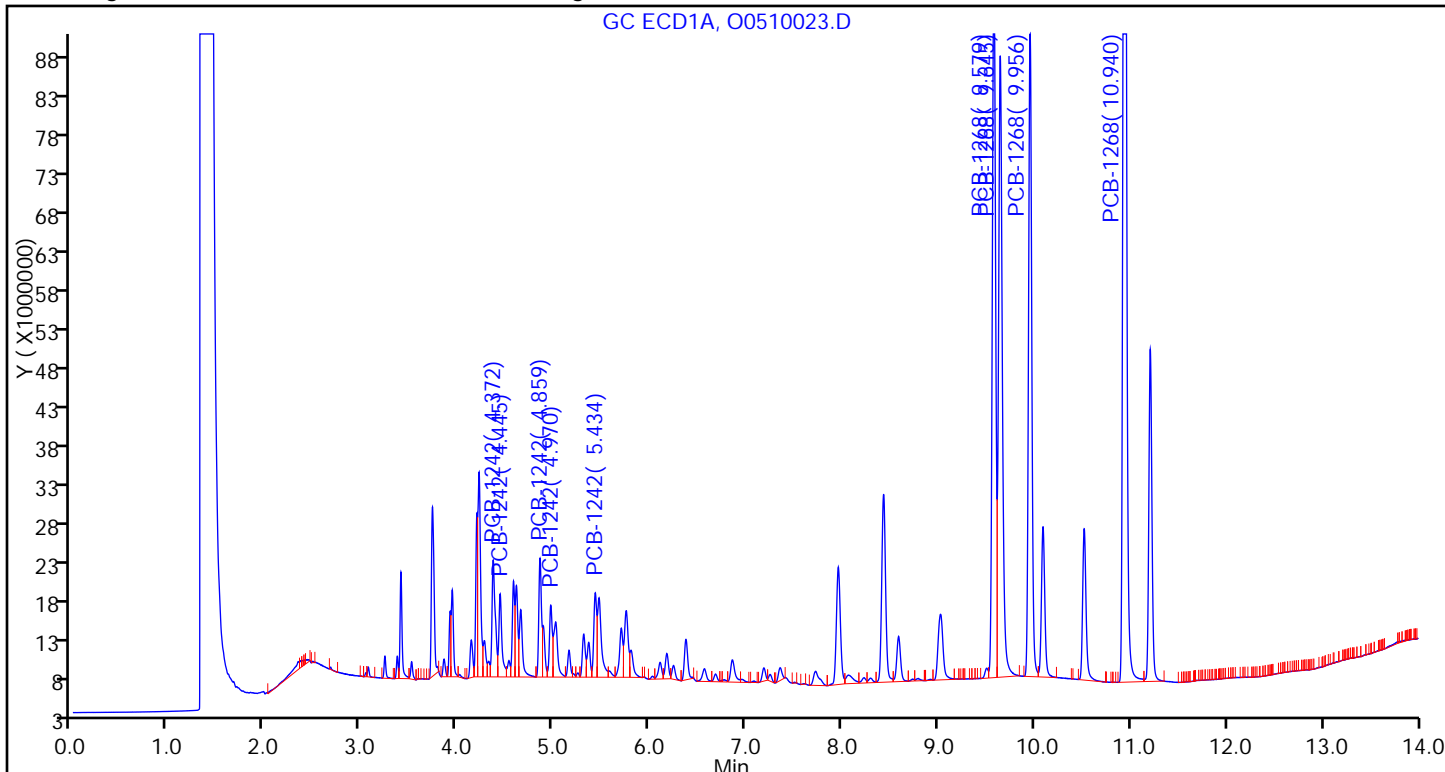
Injection Vol: 1.0 ul

Dil. Factor: 1.0000

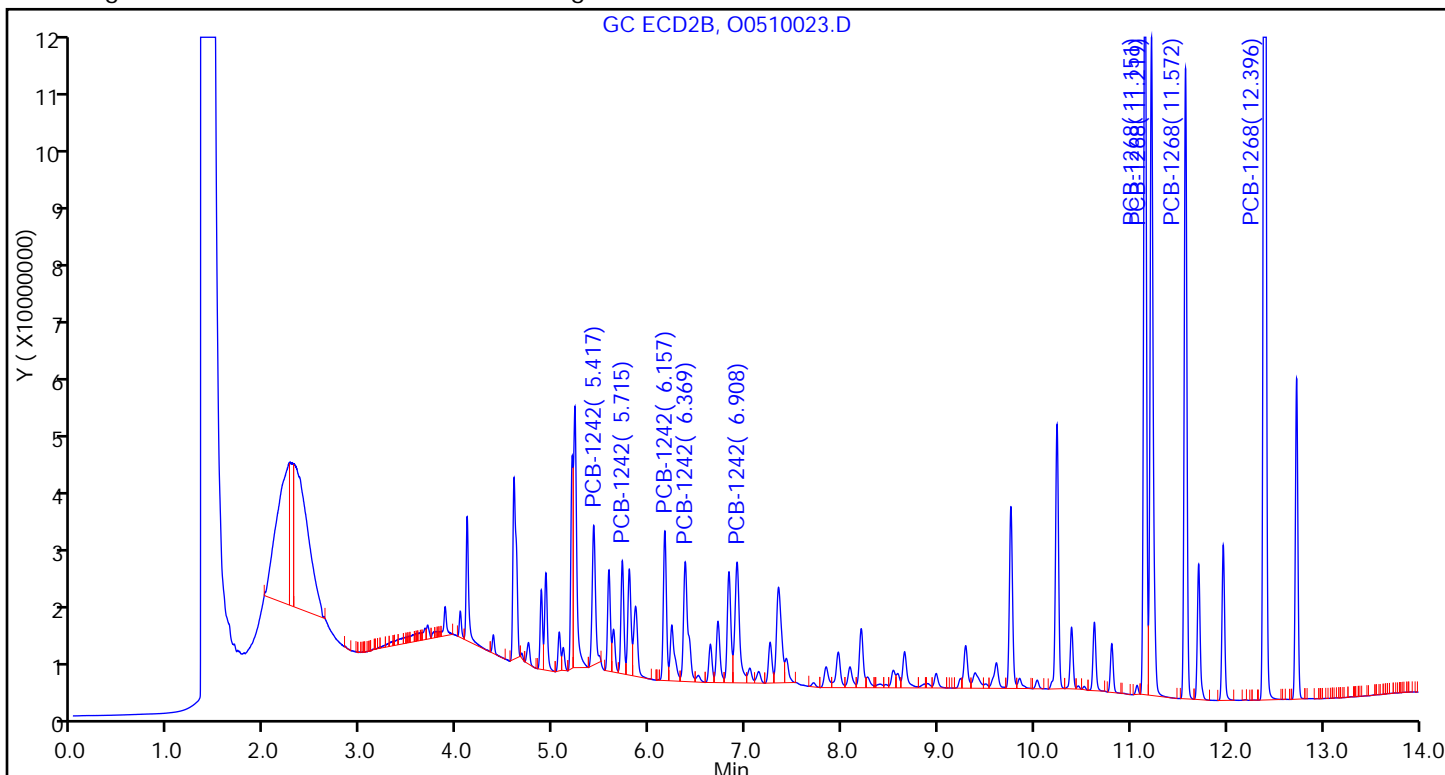
Method: PCB\_CHGC8DUAL

Limit Group: GCS 8082A ICAL

Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



FORM VII  
GC SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Pittsburgh Job No.: 180-43791-1  
 SDG No.: \_\_\_\_\_  
 Lab Sample ID: ICV 180-141160/25 Calibration Date: 05/11/2015 19:50  
 Instrument ID: CHGC8 Calib Start Date: 05/11/2015 16:12  
 GC Column: RTX-CLP1 ID: 0.53 (mm) Calib End Date: 05/11/2015 16:12  
 Lab File ID: O0510024.D Conc. Units: ng/uL

| ANALYTE         | CURVE TYPE | AVE CF   | CF       | MIN CF | CALC AMOUNT | SPIKE AMOUNT | %D   | MAX %D |
|-----------------|------------|----------|----------|--------|-------------|--------------|------|--------|
| PCB-1248 Peak 1 | Ave        | 31031894 | 31592232 |        | 0.509       | 0.500        | 1.8  | 20.0   |
| PCB-1248 Peak 2 | Ave        | 12114888 | 12084406 |        | 0.499       | 0.500        | -0.3 | 20.0   |
| PCB-1248 Peak 3 | Ave        | 19356928 | 21638748 |        | 0.559       | 0.500        | 11.8 | 20.0   |
| PCB-1248 Peak 4 | Ave        | 41731344 | 45746276 |        | 0.548       | 0.500        | 9.6  | 20.0   |
| PCB-1248 Peak 5 | Ave        | 22709484 | 25898564 |        | 0.570       | 0.500        | 14.0 | 20.0   |

FORM VII  
GC SEMI VOA CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-43791-1  
 SDG No.: \_\_\_\_\_  
 Lab Sample ID: ICV 180-141160/25 Calibration Date: 05/11/2015 19:50  
 Instrument ID: CHGC8 Calib Start Date: 05/11/2015 16:12  
 GC Column: RTX-CLP1 ID: 0.53 (mm) Calib End Date: 05/11/2015 16:12  
 Lab File ID: O0510024.D

| Analyte         | RT   | RT WINDOW |      |
|-----------------|------|-----------|------|
|                 |      | FROM      | TO   |
| PCB-1248 Peak 1 | 4.20 | 4.15      | 4.25 |
| PCB-1248 Peak 2 | 4.44 | 4.39      | 4.49 |
| PCB-1248 Peak 3 | 5.31 | 5.26      | 5.36 |
| PCB-1248 Peak 4 | 5.43 | 5.38      | 5.48 |
| PCB-1248 Peak 5 | 6.38 | 6.33      | 6.43 |

TestAmerica Pittsburgh  
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\O0510024.D  
 Lims ID: ICV  
 Client ID:  
 Sample Type: ICV  
 Inject. Date: 11-May-2015 19:50:48 ALS Bottle#: 25 Worklist Smp#: 25  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 180-0006866-025  
 Operator ID: 402360 Instrument ID: CHGC8  
 Sublist:

Method: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\PCB\_CHGC8DUAL.m  
 Limit Group: GCS 8082A ICAL  
 Last Update: 12-May-2015 17:09:44 Calib Date: 11-May-2015 18:31:22  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICal File: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\O0510020.D

Column 1 : Det: GC ECD1A  
 Column 2 : Det: GC ECD2B  
 Process Host: XAWRK022

First Level Reviewer: guptaa Date: 12-May-2015 17:07:57

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng | OnCol Amt ng | Flags |
|-----|-----------|---------------|---------------|----------|------------|--------------|-------|
|-----|-----------|---------------|---------------|----------|------------|--------------|-------|

|                           |       |       |        |           |        |        |  |
|---------------------------|-------|-------|--------|-----------|--------|--------|--|
| 6 PCB-1248                |       |       |        |           |        |        |  |
| 1                         | 4.203 | 4.204 | -0.001 | 15796116H | 0.5000 | 0.5090 |  |
| 1                         | 4.444 | 4.444 | 0.000  | 6042203H  | 0.5000 | 0.4987 |  |
| 1                         | 5.312 | 5.313 | -0.001 | 10819374H | 0.5000 | 0.5589 |  |
| 1                         | 5.433 | 5.432 | 0.001  | 22873138H | 0.5000 | 0.5481 |  |
| 1                         | 6.376 | 6.376 | 0.000  | 12949282H | 0.5000 | 0.5702 |  |
| Average of Peak Amounts = |       |       |        |           |        | 0.5370 |  |
| 2                         | 6.156 | 6.156 | 0.000  | 41173029H | 0.5000 | 0.5337 |  |
| 2                         | 6.367 | 6.368 | -0.001 | 34370821H | 0.5000 | 0.5526 |  |
| 2                         | 6.709 | 6.708 | 0.001  | 18366698H | 0.5000 | 0.5616 |  |
| 2                         | 8.197 | 8.198 | -0.001 | 20712152H | 0.5000 | 0.5729 |  |
| 2                         | 7.339 | 7.341 | -0.002 | 29157561H | 0.5000 | 0.5719 |  |
| Average of Peak Amounts = |       |       |        |           |        | 0.5585 |  |

RPD = 3.93

Reagents:

GCAR1248ICV\_00010 Amount Added: 1.00 Units: mL

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\O0510024.D

Injection Date: 11-May-2015 19:50:48 Instrument ID: CHGC8

Lims ID: ICV

Client ID:

Operator ID: 402360

ALS Bottle#: 25 Worklist Smp#: 25

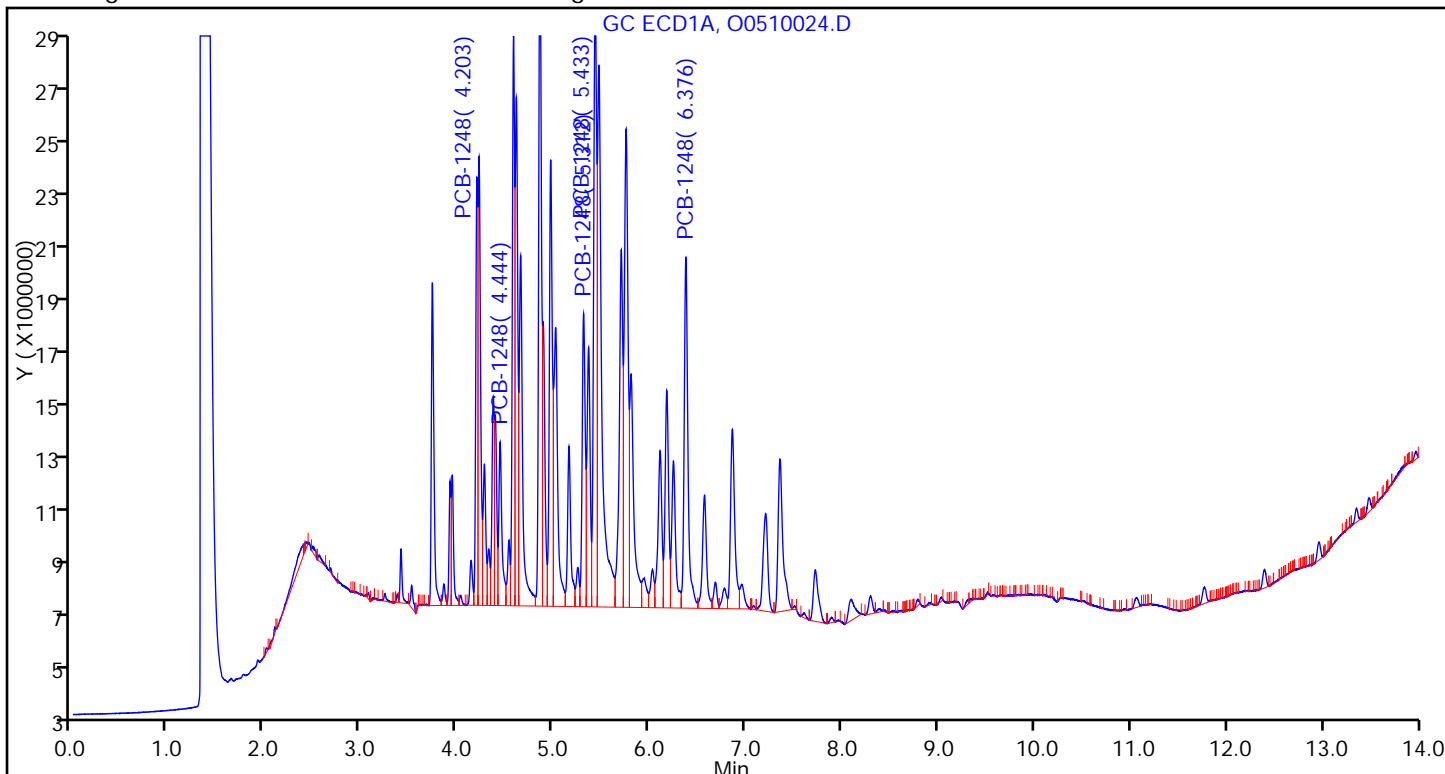
Injection Vol: 1.0 ul

Dil. Factor: 1.0000

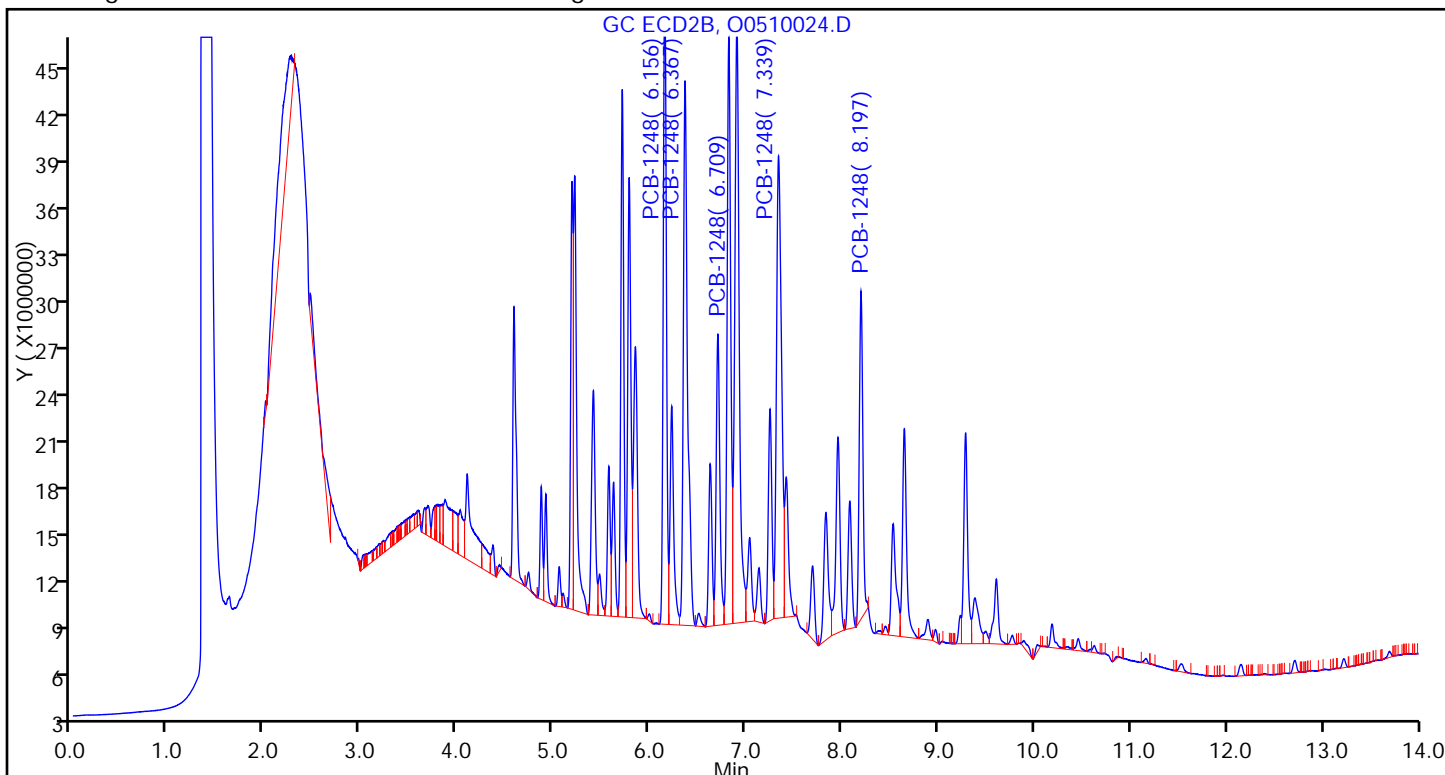
Method: PCB\_CHGC8DUAL

Limit Group: GCS 8082A ICAL

Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



FORM VII  
GC SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Pittsburgh Job No.: 180-43791-1  
 SDG No.: \_\_\_\_\_  
 Lab Sample ID: ICV 180-141160/25 Calibration Date: 05/11/2015 19:50  
 Instrument ID: CHGC8 Calib Start Date: 05/11/2015 16:12  
 GC Column: RTX-CLP2 ID: 0.53 (mm) Calib End Date: 05/11/2015 16:12  
 Lab File ID: O0510024.D Conc. Units: ng/uL

| ANALYTE         | CURVE TYPE | AVE CF   | CF       | MIN CF | CALC AMOUNT | SPIKE AMOUNT | %D   | MAX %D |
|-----------------|------------|----------|----------|--------|-------------|--------------|------|--------|
| PCB-1248 Peak 1 | Ave        | 77147186 | 82346058 |        | 0.534       | 0.500        | 6.7  | 20.0   |
| PCB-1248 Peak 2 | Ave        | 62193088 | 68741642 |        | 0.553       | 0.500        | 10.5 | 20.0   |
| PCB-1248 Peak 3 | Ave        | 32705792 | 36733396 |        | 0.562       | 0.500        | 12.3 | 20.0   |
| PCB-1248 Peak 5 | Ave        | 50987312 | 58315122 |        | 0.572       | 0.500        | 14.4 | 20.0   |
| PCB-1248 Peak 4 | Ave        | 36156310 | 41424304 |        | 0.573       | 0.500        | 14.6 | 20.0   |

FORM VII  
GC SEMI VOA CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-43791-1  
 SDG No.: \_\_\_\_\_  
 Lab Sample ID: ICV 180-141160/25 Calibration Date: 05/11/2015 19:50  
 Instrument ID: CHGC8 Calib Start Date: 05/11/2015 16:12  
 GC Column: RTX-CLP2 ID: 0.53 (mm) Calib End Date: 05/11/2015 16:12  
 Lab File ID: O0510024.D

| Analyte         | RT   | RT WINDOW |      |
|-----------------|------|-----------|------|
|                 |      | FROM      | TO   |
| PCB-1248 Peak 1 | 6.16 | 6.11      | 6.21 |
| PCB-1248 Peak 2 | 6.37 | 6.32      | 6.42 |
| PCB-1248 Peak 3 | 6.71 | 6.66      | 6.76 |
| PCB-1248 Peak 5 | 7.34 | 7.29      | 7.39 |
| PCB-1248 Peak 4 | 8.20 | 8.15      | 8.25 |



TestAmerica Pittsburgh  
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\O0510024.D  
 Lims ID: ICV  
 Client ID:  
 Sample Type: ICV  
 Inject. Date: 11-May-2015 19:50:48 ALS Bottle#: 25 Worklist Smp#: 25  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 180-0006866-025  
 Operator ID: 402360 Instrument ID: CHGC8  
 Sublist:

Method: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\PCB\_CHGC8DUAL.m  
 Limit Group: GCS 8082A ICAL  
 Last Update: 12-May-2015 17:09:44 Calib Date: 11-May-2015 18:31:22  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICal File: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\O0510020.D

Column 1 : Det: GC ECD1A  
 Column 2 : Det: GC ECD2B  
 Process Host: XAWRK022

First Level Reviewer: guptaa Date: 12-May-2015 17:07:57

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng | OnCol Amt ng | Flags |
|-----|-----------|---------------|---------------|----------|------------|--------------|-------|
|-----|-----------|---------------|---------------|----------|------------|--------------|-------|

|            |                           |       |        |           |        |        |        |  |
|------------|---------------------------|-------|--------|-----------|--------|--------|--------|--|
| 6 PCB-1248 |                           |       |        |           |        |        |        |  |
| 1          | 4.203                     | 4.204 | -0.001 | 15796116H | 0.5000 | 0.5090 |        |  |
| 1          | 4.444                     | 4.444 | 0.000  | 6042203H  | 0.5000 | 0.4987 |        |  |
| 1          | 5.312                     | 5.313 | -0.001 | 10819374H | 0.5000 | 0.5589 |        |  |
| 1          | 5.433                     | 5.432 | 0.001  | 22873138H | 0.5000 | 0.5481 |        |  |
| 1          | 6.376                     | 6.376 | 0.000  | 12949282H | 0.5000 | 0.5702 |        |  |
|            | Average of Peak Amounts = |       |        |           |        |        | 0.5370 |  |
| 2          | 6.156                     | 6.156 | 0.000  | 41173029H | 0.5000 | 0.5337 |        |  |
| 2          | 6.367                     | 6.368 | -0.001 | 34370821H | 0.5000 | 0.5526 |        |  |
| 2          | 6.709                     | 6.708 | 0.001  | 18366698H | 0.5000 | 0.5616 |        |  |
| 2          | 8.197                     | 8.198 | -0.001 | 20712152H | 0.5000 | 0.5729 |        |  |
| 2          | 7.339                     | 7.341 | -0.002 | 29157561H | 0.5000 | 0.5719 |        |  |
|            | Average of Peak Amounts = |       |        |           |        |        | 0.5585 |  |

RPD = 3.93

Reagents:

GCAR1248ICV\_00010 Amount Added: 1.00 Units: mL

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\O0510024.D

Injection Date: 11-May-2015 19:50:48

Instrument ID: CHGC8

Lims ID: ICV

Client ID:

Operator ID: 402360

ALS Bottle#: 25

Worklist Smp#: 25

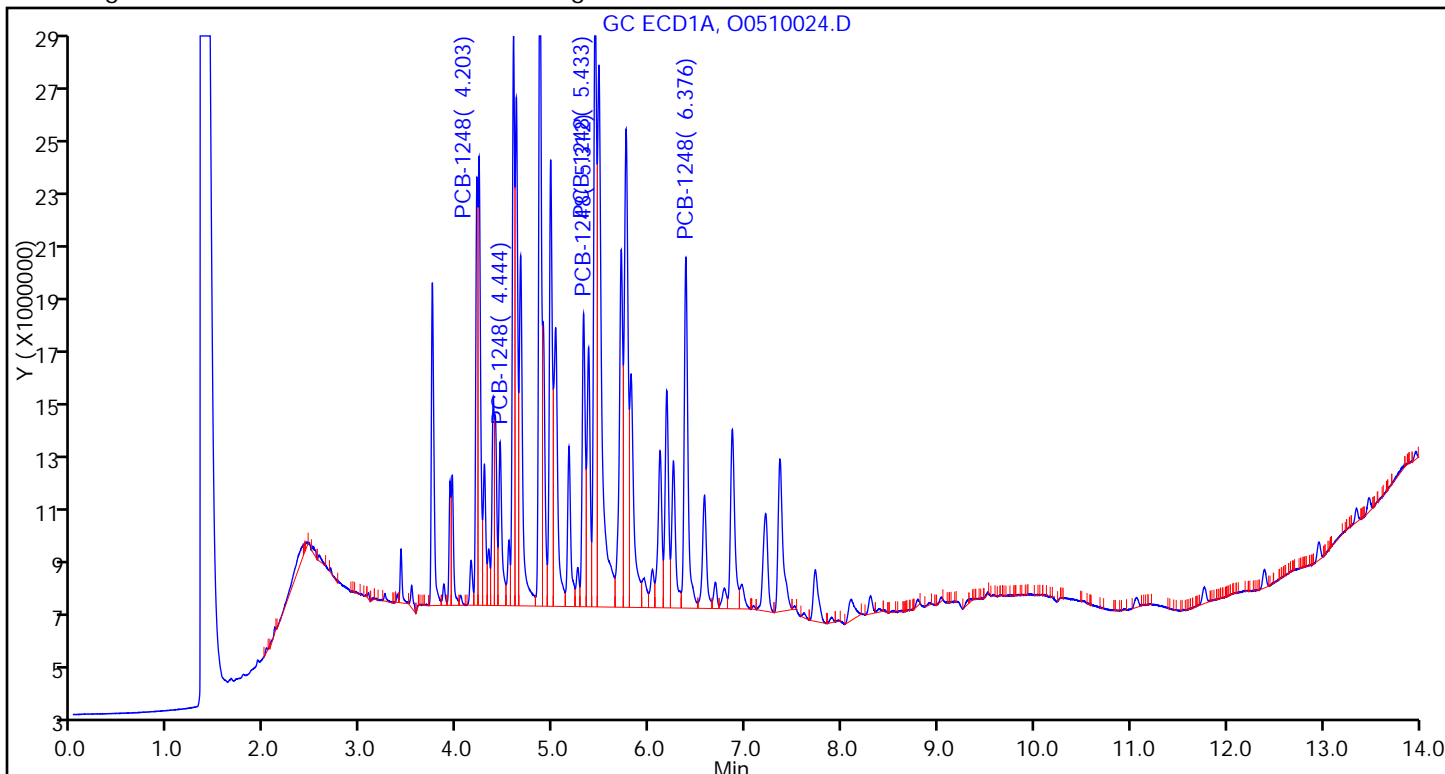
Injection Vol: 1.0 ul

Dil. Factor: 1.0000

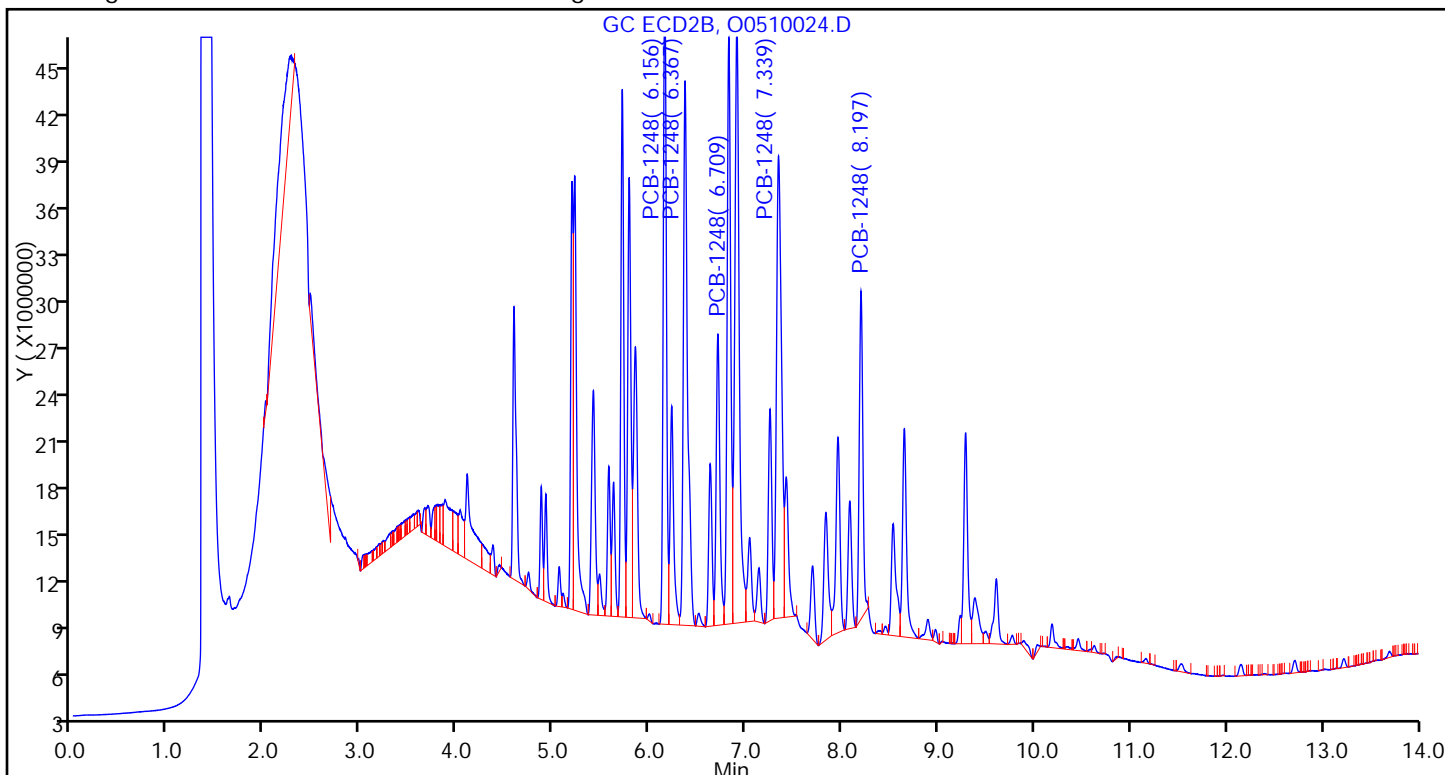
Method: PCB\_CHGC8DUAL

Limit Group: GCS 8082A ICAL

Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



FORM VII  
GC SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Pittsburgh Job No.: 180-43791-1  
 SDG No.: \_\_\_\_\_  
 Lab Sample ID: ICV 180-141160/26 Calibration Date: 05/11/2015 20:10  
 Instrument ID: CHGC8 Calib Start Date: 05/11/2015 16:32  
 GC Column: RTX-CLP1 ID: 0.53 (mm) Calib End Date: 05/11/2015 18:31  
 Lab File ID: O0510025.D Conc. Units: ng/uL

| ANALYTE         | CURVE TYPE | AVE CF    | CF        | MIN CF | CALC AMOUNT | SPIKE AMOUNT | %D    | MAX %D |
|-----------------|------------|-----------|-----------|--------|-------------|--------------|-------|--------|
| PCB-1016 Peak 1 | Ave        | 32079359  | 37355866  |        | 0.582       | 0.500        | 16.4  | 20.0   |
| PCB-1016 Peak 2 | Ave        | 52058944  | 62509550  |        | 0.600       | 0.500        | 20.1* | 20.0   |
| PCB-1016 Peak 3 | Ave        | 37028442  | 43584318  |        | 0.589       | 0.500        | 17.7  | 20.0   |
| PCB-1016 Peak 4 | Ave        | 26080426  | 31213166  |        | 0.598       | 0.500        | 19.7  | 20.0   |
| PCB-1016 Peak 5 | Ave        | 33634155  | 41398738  |        | 0.615       | 0.500        | 23.1* | 20.0   |
| PCB-1260 Peak 1 | Ave        | 58677204  | 66201142  |        | 0.564       | 0.500        | 12.8  | 20.0   |
| PCB-1260 Peak 2 | Ave        | 56619721  | 69966676  |        | 0.618       | 0.500        | 23.6* | 20.0   |
| PCB-1260 Peak 3 | Ave        | 49742915  | 51997452  |        | 0.523       | 0.500        | 4.5   | 20.0   |
| PCB-1260 Peak 4 | Ave        | 108992356 | 115657860 |        | 0.531       | 0.500        | 6.1   | 20.0   |
| PCB-1260 Peak 5 | Ave        | 57922623  | 65856360  |        | 0.568       | 0.500        | 13.7  | 20.0   |

FORM VII  
GC SEMI VOA CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-43791-1  
 SDG No.: \_\_\_\_\_  
 Lab Sample ID: ICV 180-141160/26 Calibration Date: 05/11/2015 20:10  
 Instrument ID: CHGC8 Calib Start Date: 05/11/2015 16:32  
 GC Column: RTX-CLP1 ID: 0.53(mm) Calib End Date: 05/11/2015 18:31  
 Lab File ID: O0510025.D

| Analyte         | RT   | RT WINDOW |      |
|-----------------|------|-----------|------|
|                 |      | FROM      | TO   |
| PCB-1016 Peak 1 | 3.41 | 3.36      | 3.46 |
| PCB-1016 Peak 2 | 3.74 | 3.69      | 3.79 |
| PCB-1016 Peak 3 | 4.37 | 4.32      | 4.42 |
| PCB-1016 Peak 4 | 4.44 | 4.40      | 4.50 |
| PCB-1016 Peak 5 | 4.86 | 4.81      | 4.91 |
| PCB-1260 Peak 1 | 6.68 | 6.64      | 6.74 |
| PCB-1260 Peak 2 | 7.72 | 7.68      | 7.78 |
| PCB-1260 Peak 3 | 8.44 | 8.40      | 8.50 |
| PCB-1260 Peak 4 | 9.03 | 8.99      | 9.09 |
| PCB-1260 Peak 5 | 9.52 | 9.47      | 9.57 |

TestAmerica Pittsburgh  
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\O0510025.D  
 Lims ID: ICV  
 Client ID:  
 Sample Type: ICV  
 Inject. Date: 11-May-2015 20:10:37 ALS Bottle#: 26 Worklist Smp#: 26  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 180-0006866-026  
 Operator ID: 402360 Instrument ID: CHGC8  
 Sublist:

Method: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\PCB\_CHGC8DUAL.m  
 Limit Group: GCS 8082A ICAL  
 Last Update: 12-May-2015 17:09:44 Calib Date: 11-May-2015 18:31:22  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICal File: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\O0510020.D

Column 1 : Det: GC ECD1A  
 Column 2 : Det: GC ECD2B  
 Process Host: XAWRK022

First Level Reviewer: guptaa Date: 12-May-2015 17:07:50

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng | OnCol Amt ng | Flags |
|-----|-----------|---------------|---------------|----------|------------|--------------|-------|
|-----|-----------|---------------|---------------|----------|------------|--------------|-------|

4 PCB-1016

|                           |       |       |        |           |        |        |   |
|---------------------------|-------|-------|--------|-----------|--------|--------|---|
| 1                         | 3.411 | 3.414 | -0.003 | 18677933H | 0.5000 | 0.5822 |   |
| 1                         | 3.739 | 3.741 | -0.002 | 31254775H | 0.5000 | 0.6004 |   |
| 1                         | 4.371 | 4.374 | -0.003 | 21792159H | 0.5000 | 0.5885 | M |
| 1                         | 4.443 | 4.445 | -0.002 | 15606583H | 0.5000 | 0.5984 | M |
| 1                         | 4.858 | 4.860 | -0.002 | 20699369H | 0.5000 | 0.6154 | M |
| Average of Peak Amounts = |       |       |        |           |        | 0.5970 |   |
| 2                         | 5.415 | 5.418 | -0.003 | 32132626H | 0.5000 | 0.5856 |   |
| 2                         | 5.572 | 5.576 | -0.004 | 24004331H | 0.5000 | 0.5953 |   |
| 2                         | 6.154 | 6.157 | -0.003 | 32814087H | 0.5000 | 0.5882 | M |
| 2                         | 6.892 | 6.896 | -0.004 | 21105880H | 0.5000 | 0.5586 |   |
| 2                         | 7.248 | 7.252 | -0.004 | 21292511H | 0.5000 | 0.6691 |   |
| Average of Peak Amounts = |       |       |        |           |        | 0.5993 |   |

RPD = 0.39

8 PCB-1260

|                           |        |        |        |           |        |        |  |
|---------------------------|--------|--------|--------|-----------|--------|--------|--|
| 1                         | 6.681  | 6.685  | -0.004 | 33100571H | 0.5000 | 0.5641 |  |
| 1                         | 7.720  | 7.725  | -0.005 | 34983338H | 0.5000 | 0.6179 |  |
| 1                         | 8.441  | 8.445  | -0.004 | 25998726H | 0.5000 | 0.5227 |  |
| 1                         | 9.031  | 9.035  | -0.004 | 57828930H | 0.5000 | 0.5306 |  |
| 1                         | 9.515  | 9.519  | -0.004 | 32928180H | 0.5000 | 0.5685 |  |
| Average of Peak Amounts = |        |        |        |           |        | 0.5607 |  |
| 2                         | 9.269  | 9.271  | -0.002 | 39180238H | 0.5000 | 0.5714 |  |
| 2                         | 9.603  | 9.606  | -0.003 | 63366514H | 0.5000 | 0.6313 |  |
| 2                         | 9.755  | 9.757  | -0.002 | 45120509H | 0.5000 | 0.5074 |  |
| 2                         | 10.230 | 10.232 | -0.002 | 50084234H | 0.5000 | 0.5304 |  |
| 2                         | 10.622 | 10.625 | -0.003 | 98608928H | 0.5000 | 0.5317 |  |
| Average of Peak Amounts = |        |        |        |           |        | 0.5544 |  |

RPD = 1.13

**QC Flag Legend**

Review Flags

M - Manually Integrated

**Reagents:**

GCAR 1660ICV\_00003

Amount Added: 1.00

Units: mL

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\O0510025.D

Injection Date: 11-May-2015 20:10:37

Instrument ID: CHGC8

Lims ID: ICV

Client ID:

Operator ID: 402360

ALS Bottle#: 26

Worklist Smp#: 26

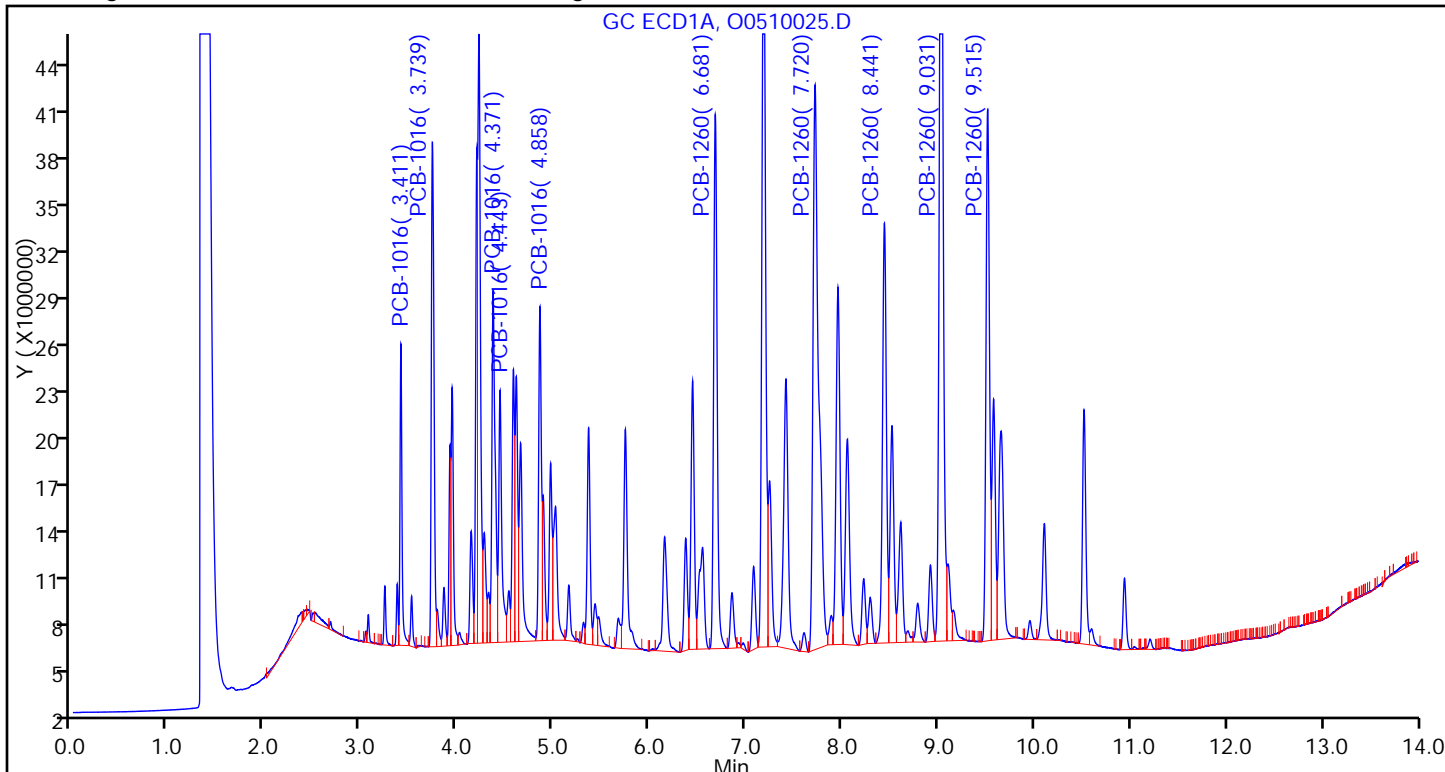
Injection Vol: 1.0 ul

Dil. Factor: 1.0000

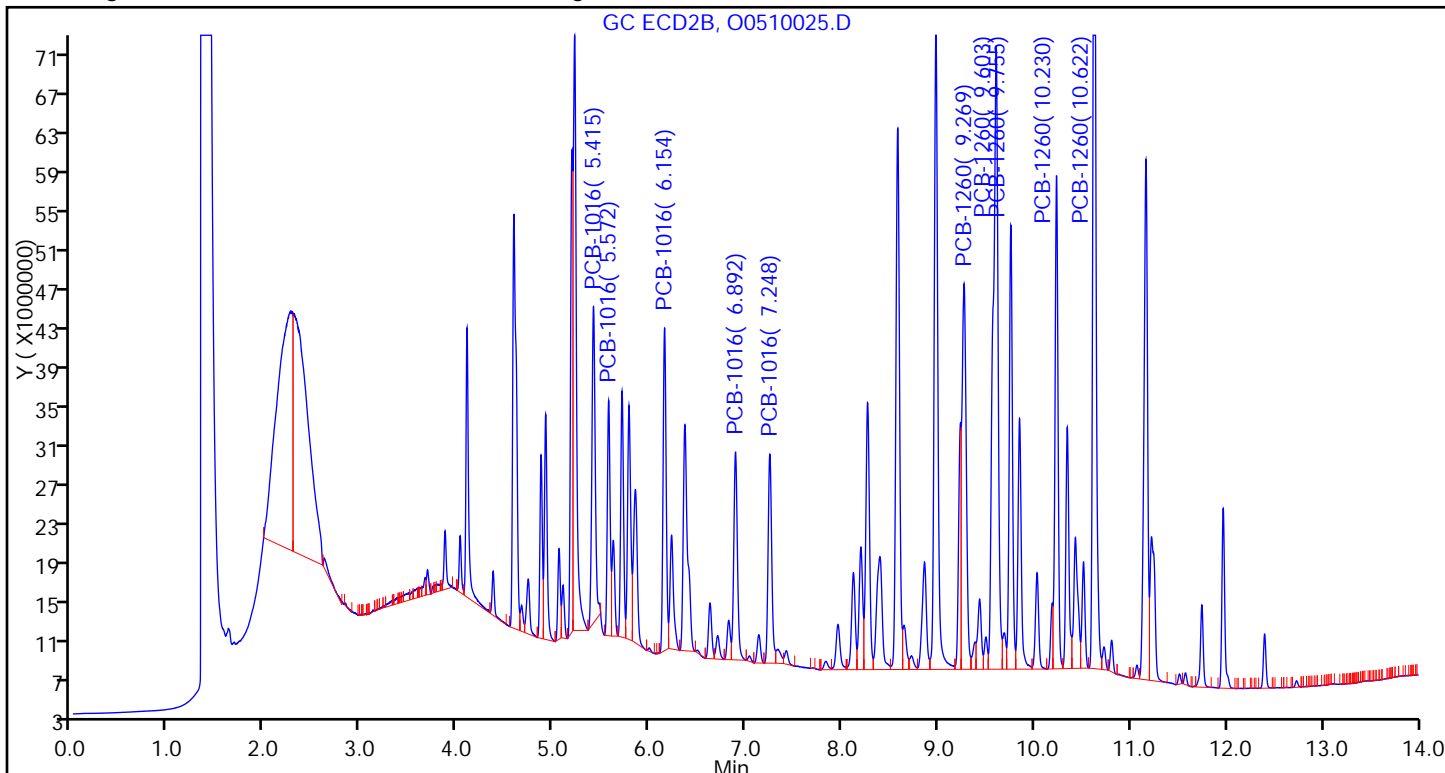
Method: PCB\_CHGC8DUAL

Limit Group: GCS 8082A ICAL

Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\O0510025.D

Injection Date: 11-May-2015 20:10:37

Instrument ID: CHGC8

Lims ID: ICV

Client ID:

Operator ID: 402360

ALS Bottle#: 26

Worklist Smp#: 26

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

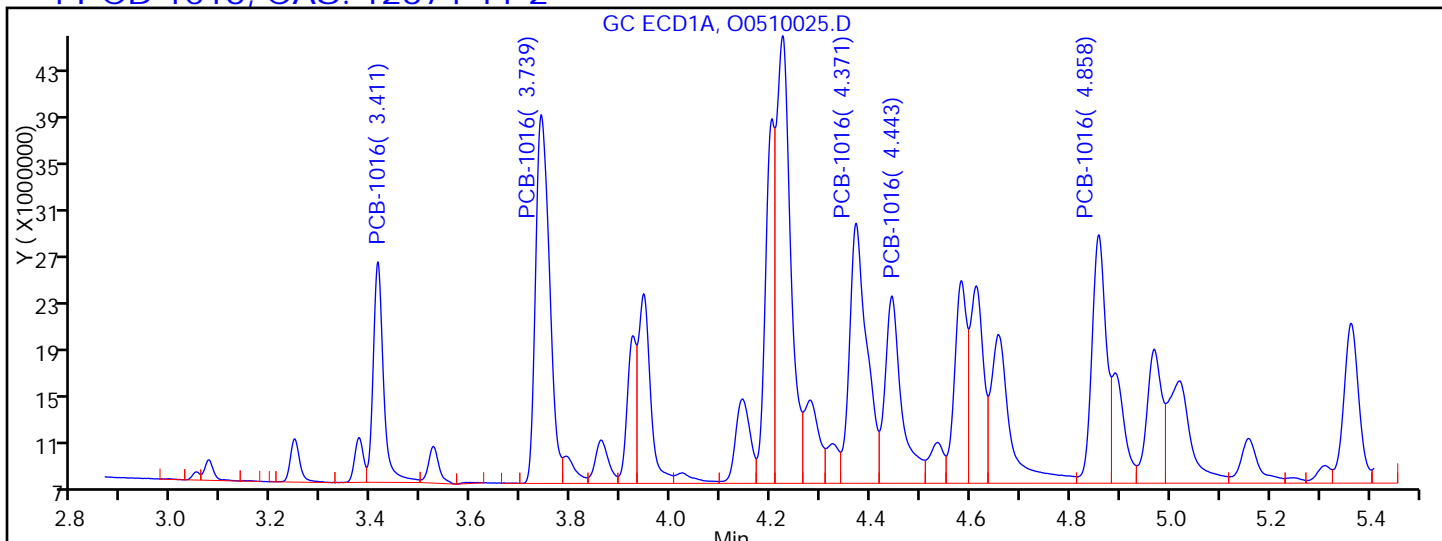
Method: PCB\_CHGC8DUAL

Limit Group: GCS 8082A ICAL

Column:

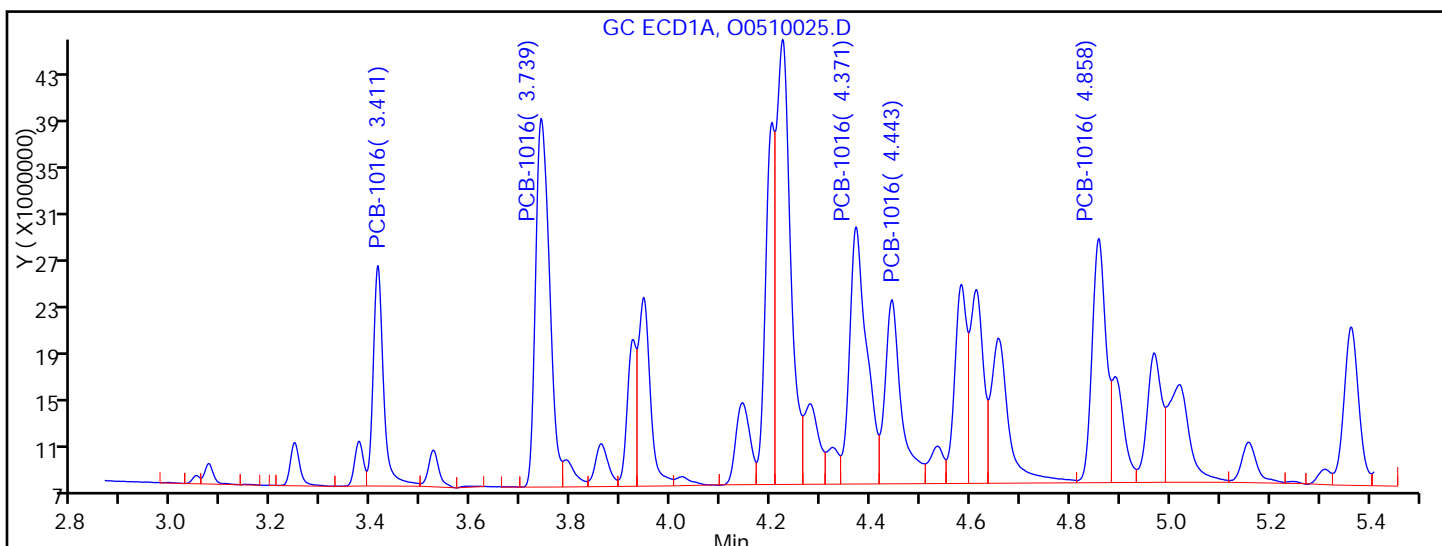
Detector GC ECD1A

4 PCB-1016, CAS: 12674-11-2



Processing Integration Results

|            |                     |   |
|------------|---------------------|---|
| RT = 3.411 | Response = 18677933 |   |
| RT = 3.739 | Response = 31254775 |   |
| RT = 4.371 | Response = 22044483 | M |
| RT = 4.443 | Response = 15875131 | M |
| RT = 4.858 | Response = 21060786 | M |



Manual Integration Results

|            |                     |   |
|------------|---------------------|---|
| RT = 3.411 | Response = 18677933 |   |
| RT = 3.739 | Response = 31254775 |   |
| RT = 4.371 | Response = 21792159 | M |
| RT = 4.443 | Response = 15606583 | M |
| RT = 4.858 | Response = 20699369 | M |

Reviewer: guptaa, 12-May-2015 17:07:50

Audit Action: Assigned New Baseline

Audit Reason: Instrument noise



FORM VII  
GC SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Pittsburgh Job No.: 180-43791-1  
 SDG No.: \_\_\_\_\_  
 Lab Sample ID: ICV 180-141160/26 Calibration Date: 05/11/2015 20:10  
 Instrument ID: CHGC8 Calib Start Date: 05/11/2015 16:32  
 GC Column: RTX-CLP2 ID: 0.53 (mm) Calib End Date: 05/11/2015 18:31  
 Lab File ID: O0510025.D Conc. Units: ng/uL

| ANALYTE         | CURVE TYPE | AVE CF    | CF        | MIN CF | CALC AMOUNT | SPIKE AMOUNT | %D    | MAX %D |
|-----------------|------------|-----------|-----------|--------|-------------|--------------|-------|--------|
| PCB-1016 Peak 1 | Ave        | 54875003  | 64265252  |        | 0.586       | 0.500        | 17.1  | 20.0   |
| PCB-1016 Peak 2 | Ave        | 40325088  | 48008662  |        | 0.595       | 0.500        | 19.1  | 20.0   |
| PCB-1016 Peak 3 | Ave        | 55788367  | 65628174  |        | 0.588       | 0.500        | 17.6  | 20.0   |
| PCB-1016 Peak 4 | Ave        | 37786632  | 42211760  |        | 0.559       | 0.500        | 11.7  | 20.0   |
| PCB-1016 Peak 5 | Ave        | 31823028  | 42585022  |        | 0.669       | 0.500        | 33.8* | 20.0   |
| PCB-1260 Peak 1 | Ave        | 68573360  | 78360476  |        | 0.571       | 0.500        | 14.3  | 20.0   |
| PCB-1260 Peak 2 | Ave        | 100374048 | 126733028 |        | 0.631       | 0.500        | 26.3* | 20.0   |
| PCB-1260 Peak 3 | Ave        | 88921951  | 90241018  |        | 0.507       | 0.500        | 1.5   | 20.0   |
| PCB-1260 Peak 4 | Ave        | 94429741  | 100168468 |        | 0.530       | 0.500        | 6.1   | 20.0   |
| PCB-1260 Peak 5 | Ave        | 185451373 | 197217856 |        | 0.532       | 0.500        | 6.3   | 20.0   |

FORM VII  
GC SEMI VOA CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-43791-1  
 SDG No.: \_\_\_\_\_  
 Lab Sample ID: ICV 180-141160/26 Calibration Date: 05/11/2015 20:10  
 Instrument ID: CHGC8 Calib Start Date: 05/11/2015 16:32  
 GC Column: RTX-CLP2 ID: 0.53 (mm) Calib End Date: 05/11/2015 18:31  
 Lab File ID: O0510025.D

| Analyte         | RT    | RT WINDOW |       |
|-----------------|-------|-----------|-------|
|                 |       | FROM      | TO    |
| PCB-1016 Peak 1 | 5.42  | 5.37      | 5.47  |
| PCB-1016 Peak 2 | 5.57  | 5.53      | 5.63  |
| PCB-1016 Peak 3 | 6.15  | 6.11      | 6.21  |
| PCB-1016 Peak 4 | 6.89  | 6.85      | 6.95  |
| PCB-1016 Peak 5 | 7.25  | 7.20      | 7.30  |
| PCB-1260 Peak 1 | 9.27  | 9.22      | 9.32  |
| PCB-1260 Peak 2 | 9.60  | 9.56      | 9.66  |
| PCB-1260 Peak 3 | 9.76  | 9.71      | 9.81  |
| PCB-1260 Peak 4 | 10.23 | 10.18     | 10.28 |
| PCB-1260 Peak 5 | 10.62 | 10.58     | 10.68 |

TestAmerica Pittsburgh  
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\O0510025.D  
 Lims ID: ICV  
 Client ID:  
 Sample Type: ICV  
 Inject. Date: 11-May-2015 20:10:37 ALS Bottle#: 26 Worklist Smp#: 26  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 180-0006866-026  
 Operator ID: 402360 Instrument ID: CHGC8  
 Sublist:

Method: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\PCB\_CHGC8DUAL.m  
 Limit Group: GCS 8082A ICAL  
 Last Update: 12-May-2015 17:09:44 Calib Date: 11-May-2015 18:31:22  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICal File: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\O0510020.D

Column 1 : Det: GC ECD1A  
 Column 2 : Det: GC ECD2B  
 Process Host: XAWRK022

First Level Reviewer: guptaa Date: 12-May-2015 17:07:50

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng | OnCol Amt ng | Flags |
|-----|-----------|---------------|---------------|----------|------------|--------------|-------|
|-----|-----------|---------------|---------------|----------|------------|--------------|-------|

4 PCB-1016

|                           |       |       |        |           |        |        |   |
|---------------------------|-------|-------|--------|-----------|--------|--------|---|
| 1                         | 3.411 | 3.414 | -0.003 | 18677933H | 0.5000 | 0.5822 |   |
| 1                         | 3.739 | 3.741 | -0.002 | 31254775H | 0.5000 | 0.6004 |   |
| 1                         | 4.371 | 4.374 | -0.003 | 21792159H | 0.5000 | 0.5885 | M |
| 1                         | 4.443 | 4.445 | -0.002 | 15606583H | 0.5000 | 0.5984 | M |
| 1                         | 4.858 | 4.860 | -0.002 | 20699369H | 0.5000 | 0.6154 | M |
| Average of Peak Amounts = |       |       |        |           |        | 0.5970 |   |
| 2                         | 5.415 | 5.418 | -0.003 | 32132626H | 0.5000 | 0.5856 |   |
| 2                         | 5.572 | 5.576 | -0.004 | 24004331H | 0.5000 | 0.5953 |   |
| 2                         | 6.154 | 6.157 | -0.003 | 32814087H | 0.5000 | 0.5882 | M |
| 2                         | 6.892 | 6.896 | -0.004 | 21105880H | 0.5000 | 0.5586 |   |
| 2                         | 7.248 | 7.252 | -0.004 | 21292511H | 0.5000 | 0.6691 |   |
| Average of Peak Amounts = |       |       |        |           |        | 0.5993 |   |

RPD = 0.39

8 PCB-1260

|                           |        |        |        |           |        |        |  |
|---------------------------|--------|--------|--------|-----------|--------|--------|--|
| 1                         | 6.681  | 6.685  | -0.004 | 33100571H | 0.5000 | 0.5641 |  |
| 1                         | 7.720  | 7.725  | -0.005 | 34983338H | 0.5000 | 0.6179 |  |
| 1                         | 8.441  | 8.445  | -0.004 | 25998726H | 0.5000 | 0.5227 |  |
| 1                         | 9.031  | 9.035  | -0.004 | 57828930H | 0.5000 | 0.5306 |  |
| 1                         | 9.515  | 9.519  | -0.004 | 32928180H | 0.5000 | 0.5685 |  |
| Average of Peak Amounts = |        |        |        |           |        | 0.5607 |  |
| 2                         | 9.269  | 9.271  | -0.002 | 39180238H | 0.5000 | 0.5714 |  |
| 2                         | 9.603  | 9.606  | -0.003 | 63366514H | 0.5000 | 0.6313 |  |
| 2                         | 9.755  | 9.757  | -0.002 | 45120509H | 0.5000 | 0.5074 |  |
| 2                         | 10.230 | 10.232 | -0.002 | 50084234H | 0.5000 | 0.5304 |  |
| 2                         | 10.622 | 10.625 | -0.003 | 98608928H | 0.5000 | 0.5317 |  |
| Average of Peak Amounts = |        |        |        |           |        | 0.5544 |  |

RPD = 1.13

**QC Flag Legend**

Review Flags

M - Manually Integrated

**Reagents:**

GCAR 1660ICV\_00003

Amount Added: 1.00

Units: mL

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\O0510025.D

Injection Date: 11-May-2015 20:10:37

Instrument ID: CHGC8

Lims ID: ICV

Client ID:

Operator ID: 402360

ALS Bottle#: 26

Worklist Smp#: 26

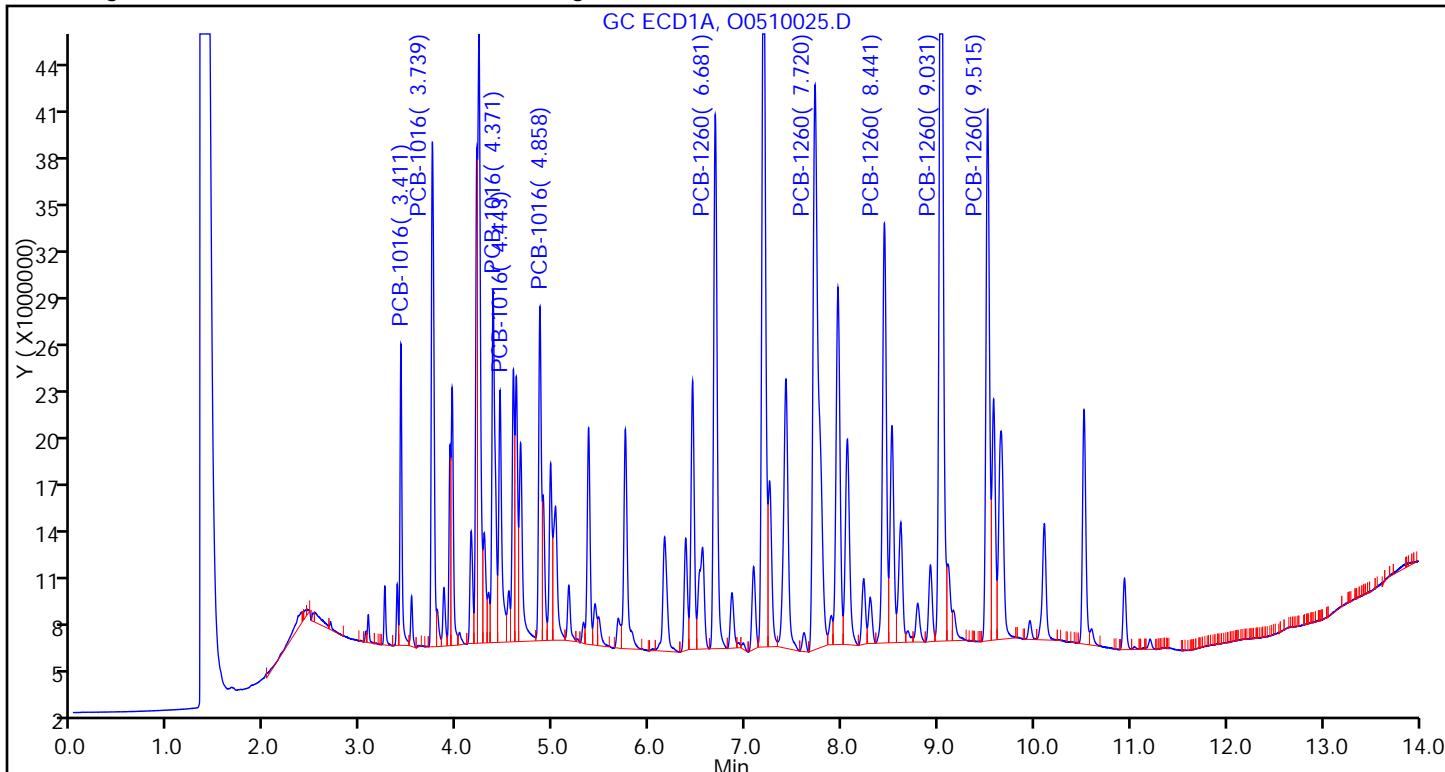
Injection Vol: 1.0 ul

Dil. Factor: 1.0000

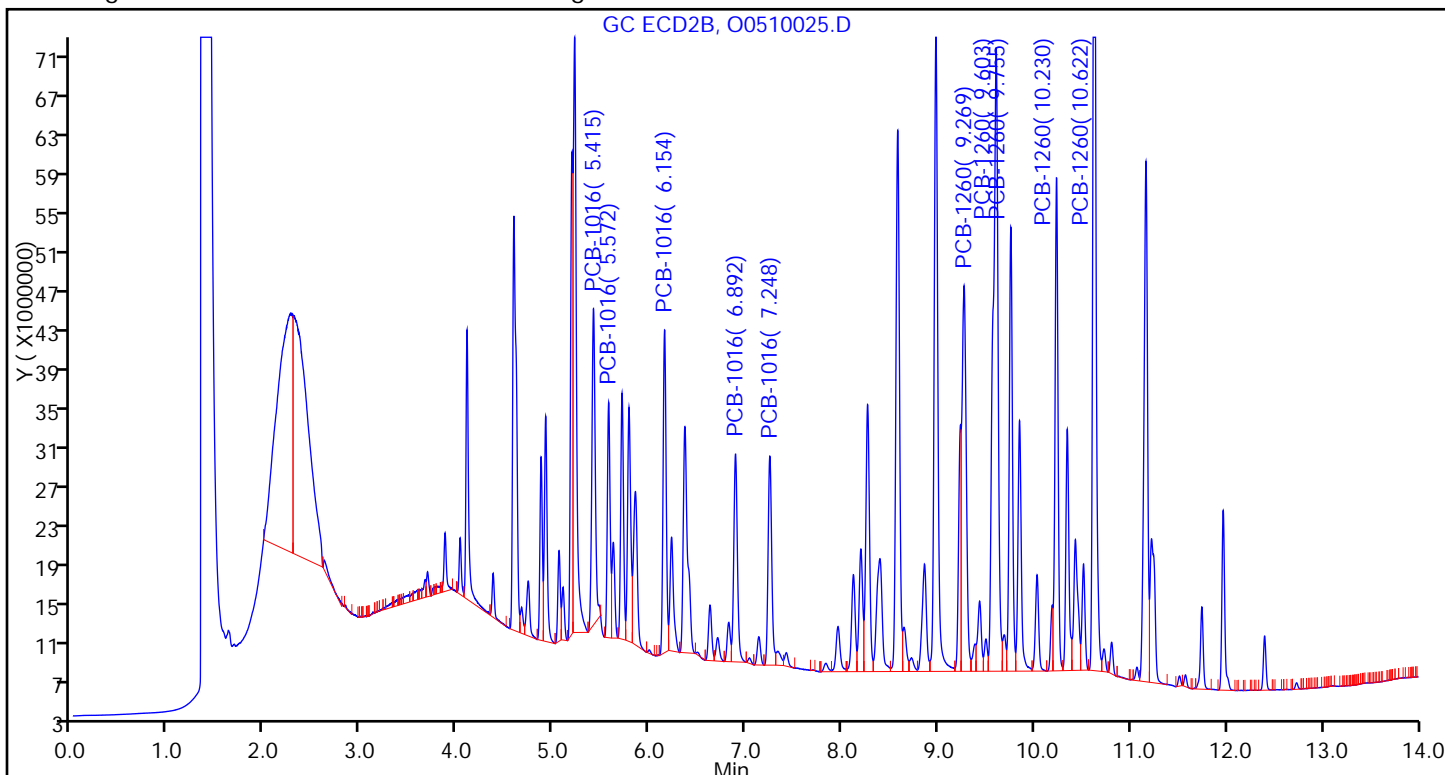
Method: PCB\_CHGC8DUAL

Limit Group: GCS 8082A ICAL

Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\O0510025.D

Injection Date: 11-May-2015 20:10:37 Instrument ID: CHGC8

Lims ID: ICV

Client ID:

Operator ID: 402360

ALS Bottle#: 26

Worklist Smp#: 26

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

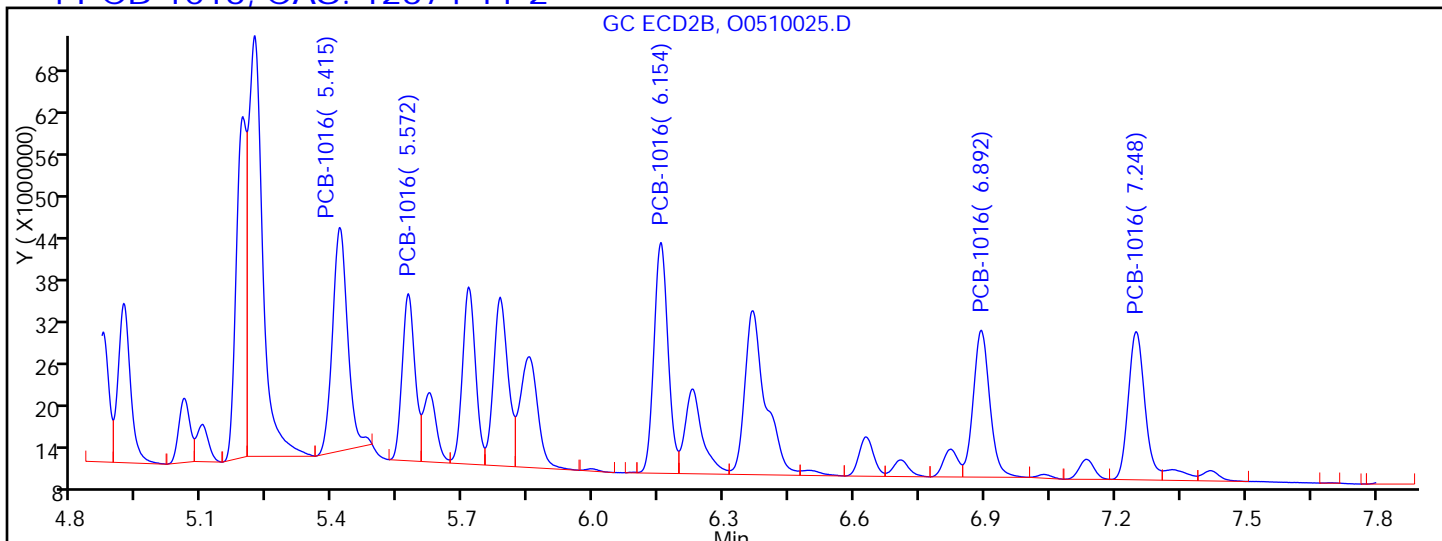
Method: PCB\_CHGC8DUAL

Limit Group: GCS 8082A ICAL

Column:

Detector: GC ECD2B

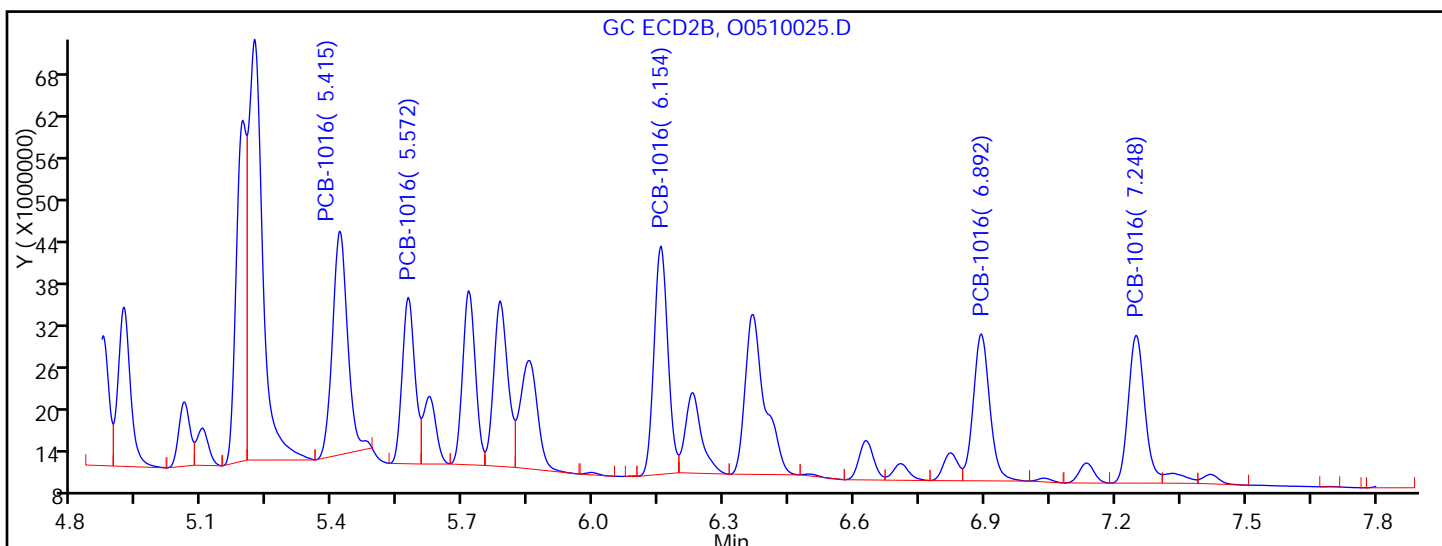
4 PCB-1016, CAS: 12674-11-2



Processing Integration Results

|            |                     |
|------------|---------------------|
| RT = 5.415 | Response = 32132626 |
| RT = 5.572 | Response = 24004331 |
| RT = 6.154 | Response = 33169306 |
| RT = 6.892 | Response = 21105880 |
| RT = 7.248 | Response = 21292511 |

M



Manual Integration Results

|            |                     |
|------------|---------------------|
| RT = 5.415 | Response = 32132626 |
| RT = 5.572 | Response = 24004331 |
| RT = 6.154 | Response = 32814087 |
| RT = 6.892 | Response = 21105880 |
| RT = 7.248 | Response = 21292511 |

M

FORM VII  
GC SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Pittsburgh Job No.: 180-43791-1  
 SDG No.: \_\_\_\_\_  
 Lab Sample ID: CCV 180-141160/47 Calibration Date: 05/12/2015 03:07  
 Instrument ID: CHGC8 Calib Start Date: 05/11/2015 16:32  
 GC Column: RTX-CLP1 ID: 0.53 (mm) Calib End Date: 05/11/2015 18:31  
 Lab File ID: O0510046.D Conc. Units: ng/uL

| ANALYTE                       | CURVE TYPE | AVE CF     | CF         | MIN CF | CALC AMOUNT | SPIKE AMOUNT | %D    | MAX %D |
|-------------------------------|------------|------------|------------|--------|-------------|--------------|-------|--------|
| PCB-1016 Peak 1               | Ave        | 32079359   | 38610816   |        | 1.20        | 1.00         | 20.4* | 20.0   |
| PCB-1016 Peak 2               | Ave        | 52058944   | 59735413   |        | 1.15        | 1.00         | 14.7  | 20.0   |
| PCB-1016 Peak 3               | Ave        | 37028442   | 46004843   |        | 1.24        | 1.00         | 24.2* | 20.0   |
| PCB-1016 Peak 4               | Ave        | 26080426   | 33188628   |        | 1.27        | 1.00         | 27.3* | 20.0   |
| PCB-1016 Peak 5               | Ave        | 33634155   | 41376076   |        | 1.23        | 1.00         | 23.0* | 20.0   |
| PCB-1260 Peak 1               | Ave        | 58677204   | 62147037   |        | 1.06        | 1.00         | 5.9   | 20.0   |
| PCB-1260 Peak 2               | Ave        | 56619721   | 61281699   |        | 1.08        | 1.00         | 8.2   | 20.0   |
| PCB-1260 Peak 3               | Ave        | 49742915   | 52387861   |        | 1.05        | 1.00         | 5.3   | 20.0   |
| PCB-1260 Peak 4               | Ave        | 108992356  | 114287937  |        | 1.05        | 1.00         | 4.9   | 20.0   |
| PCB-1260 Peak 5               | Ave        | 57922623   | 56658530   |        | 0.978       | 1.00         | -2.2  | 20.0   |
| Tetrachloro-m-xylene (Surr)   | Ave        | 2292982212 | 2790471820 |        | 0.0608      | 0.0500       | 21.7* | 20.0   |
| DCB Decachlorobiphenyl (Surr) | Ave        | 971204349  | 957873540  |        | 0.0493      | 0.0500       | -1.4  | 20.0   |

FORM VII  
GC SEMI VOA CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-43791-1  
 SDG No.: \_\_\_\_\_  
 Lab Sample ID: CCV 180-141160/47 Calibration Date: 05/12/2015 03:07  
 Instrument ID: CHGC8 Calib Start Date: 05/11/2015 16:32  
 GC Column: RTX-CLP1 ID: 0.53 (mm) Calib End Date: 05/11/2015 18:31  
 Lab File ID: O0510046.D

| Analyte                       | RT    | RT WINDOW |       |
|-------------------------------|-------|-----------|-------|
|                               |       | FROM      | TO    |
| PCB-1016 Peak 1               | 3.41  | 3.36      | 3.46  |
| PCB-1016 Peak 2               | 3.74  | 3.69      | 3.79  |
| PCB-1016 Peak 3               | 4.37  | 4.32      | 4.42  |
| PCB-1016 Peak 4               | 4.44  | 4.39      | 4.49  |
| PCB-1016 Peak 5               | 4.86  | 4.81      | 4.91  |
| PCB-1260 Peak 1               | 6.68  | 6.63      | 6.73  |
| PCB-1260 Peak 2               | 7.72  | 7.67      | 7.77  |
| PCB-1260 Peak 3               | 8.44  | 8.39      | 8.49  |
| PCB-1260 Peak 4               | 9.03  | 8.98      | 9.08  |
| PCB-1260 Peak 5               | 9.52  | 9.47      | 9.57  |
| Tetrachloro-m-xylene (Surr)   | 3.11  | 3.06      | 3.16  |
| DCB Decachlorobiphenyl (Surr) | 11.20 | 11.13     | 11.27 |



TestAmerica Pittsburgh  
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\O0510046.D  
 Lims ID: CCV  
 Client ID:  
 Sample Type: CCV  
 Inject. Date: 12-May-2015 03:07:09 ALS Bottle#: 47 Worklist Smp#: 47  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 180-0006866-047  
 Operator ID: 402360 Instrument ID: CHGC8  
 Sublist: chrom-PCB\_CHGC8DUAL\*sub1  
 Method: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\PCB\_CHGC8DUAL.m  
 Limit Group: GCS 8082A ICAL  
 Last Update: 12-May-2015 16:54:58 Calib Date: 11-May-2015 18:31:22  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICal File: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\O0510020.D  
 Column 1 : Det: GC ECD1A  
 Column 2 : Det: GC ECD2B  
 Process Host: XAWRK022

First Level Reviewer: guptaa Date: 12-May-2015 07:43:08

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng | OnCol Amt ng | Flags |
|-----|-----------|---------------|---------------|----------|------------|--------------|-------|
|-----|-----------|---------------|---------------|----------|------------|--------------|-------|

\$ 1 Tetrachloro-m-xylene

|   |       |       |       |            |        |        |  |
|---|-------|-------|-------|------------|--------|--------|--|
| 1 | 3.110 | 3.110 | 0.000 | 139523591H | 0.0500 | 0.0608 |  |
| 2 | 3.583 | 3.583 | 0.000 | 239141358H | 0.0500 | 0.0602 |  |

RPD = 1.10

4 PCB-1016

|   |       |       |       |           |      |      |  |
|---|-------|-------|-------|-----------|------|------|--|
| 1 | 3.414 | 3.414 | 0.000 | 38610816H | 1.00 | 1.20 |  |
| 1 | 3.741 | 3.741 | 0.000 | 59735413H | 1.00 | 1.15 |  |
| 1 | 4.372 | 4.372 | 0.000 | 46004843H | 1.00 | 1.24 |  |
| 1 | 4.444 | 4.444 | 0.000 | 33188628H | 1.00 | 1.27 |  |
| 1 | 4.859 | 4.859 | 0.000 | 41376076H | 1.00 | 1.23 |  |

Average of Peak Amounts = 1.22

|   |       |       |       |           |      |      |  |
|---|-------|-------|-------|-----------|------|------|--|
| 2 | 5.416 | 5.416 | 0.000 | 65566533H | 1.00 | 1.19 |  |
| 2 | 5.574 | 5.574 | 0.000 | 49070830H | 1.00 | 1.22 |  |
| 2 | 6.155 | 6.155 | 0.000 | 61692603H | 1.00 | 1.11 |  |
| 2 | 6.894 | 6.894 | 0.000 | 43221637H | 1.00 | 1.14 |  |
| 2 | 7.250 | 7.250 | 0.000 | 34805577H | 1.00 | 1.09 |  |

Average of Peak Amounts = 1.15

RPD = 5.76

Data File: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\O0510046.D

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng | OnCol Amt ng | Flags |
|-----|-----------|---------------|---------------|----------|------------|--------------|-------|
|-----|-----------|---------------|---------------|----------|------------|--------------|-------|

8 PCB-1260

|   |       |       |       |            |      |        |  |
|---|-------|-------|-------|------------|------|--------|--|
| 1 | 6.682 | 6.682 | 0.000 | 62147037H  | 1.00 | 1.06   |  |
| 1 | 7.721 | 7.721 | 0.000 | 61281699H  | 1.00 | 1.08   |  |
| 1 | 8.441 | 8.441 | 0.000 | 52387861H  | 1.00 | 1.05   |  |
| 1 | 9.033 | 9.033 | 0.000 | 114287937H | 1.00 | 1.05   |  |
| 1 | 9.515 | 9.515 | 0.000 | 56658530H  | 1.00 | 0.9782 |  |

Average of Peak Amounts = 1.04

|   |        |        |       |            |      |        |  |
|---|--------|--------|-------|------------|------|--------|--|
| 2 | 9.271  | 9.271  | 0.000 | 65617976H  | 1.00 | 0.9569 |  |
| 2 | 9.604  | 9.604  | 0.000 | 92690511H  | 1.00 | 0.9235 |  |
| 2 | 9.756  | 9.756  | 0.000 | 79787051H  | 1.00 | 0.8973 |  |
| 2 | 10.230 | 10.230 | 0.000 | 82147308H  | 1.00 | 0.8699 |  |
| 2 | 10.624 | 10.624 | 0.000 | 173724113H | 1.00 | 0.9368 |  |

Average of Peak Amounts = 0.9169

RPD = 12.99

\$ 11 DCB Decachlorobiphenyl (Surr)

|   |        |        |       |           |        |        |  |
|---|--------|--------|-------|-----------|--------|--------|--|
| 1 | 11.204 | 11.204 | 0.000 | 47893677H | 0.0500 | 0.0493 |  |
| 2 | 12.727 | 12.727 | 0.000 | 57762251H | 0.0500 | 0.0470 |  |

RPD = 4.84

Reagents:

GCAR1660CALL5\_00010

Amount Added: 1.00

Units: mL

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\O0510046.D

Injection Date: 12-May-2015 03:07:09

Instrument ID: CHGC8

Lims ID: CCV

Client ID:

Operator ID: 402360

ALS Bottle#: 47

Worklist Smp#: 47

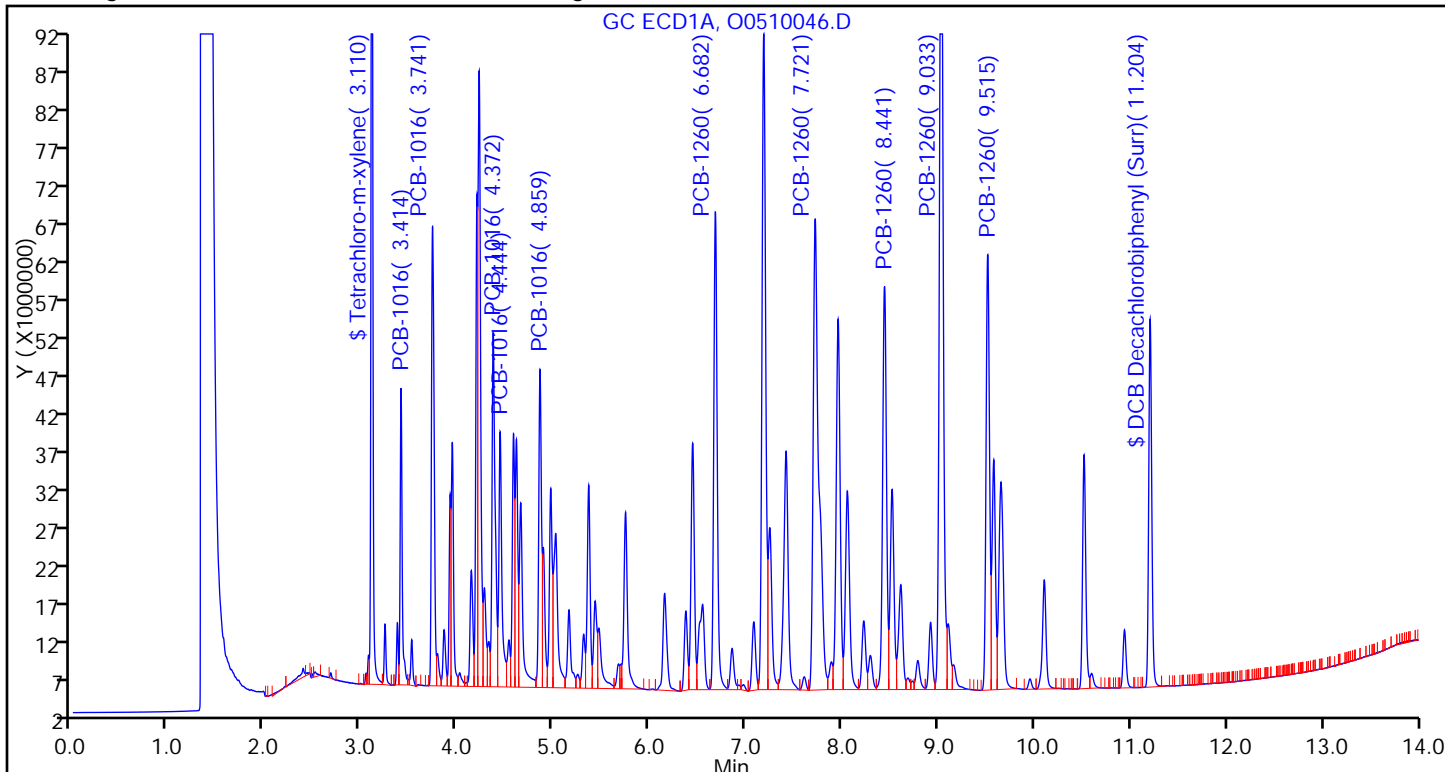
Injection Vol: 1.0 ul

Dil. Factor: 1.0000

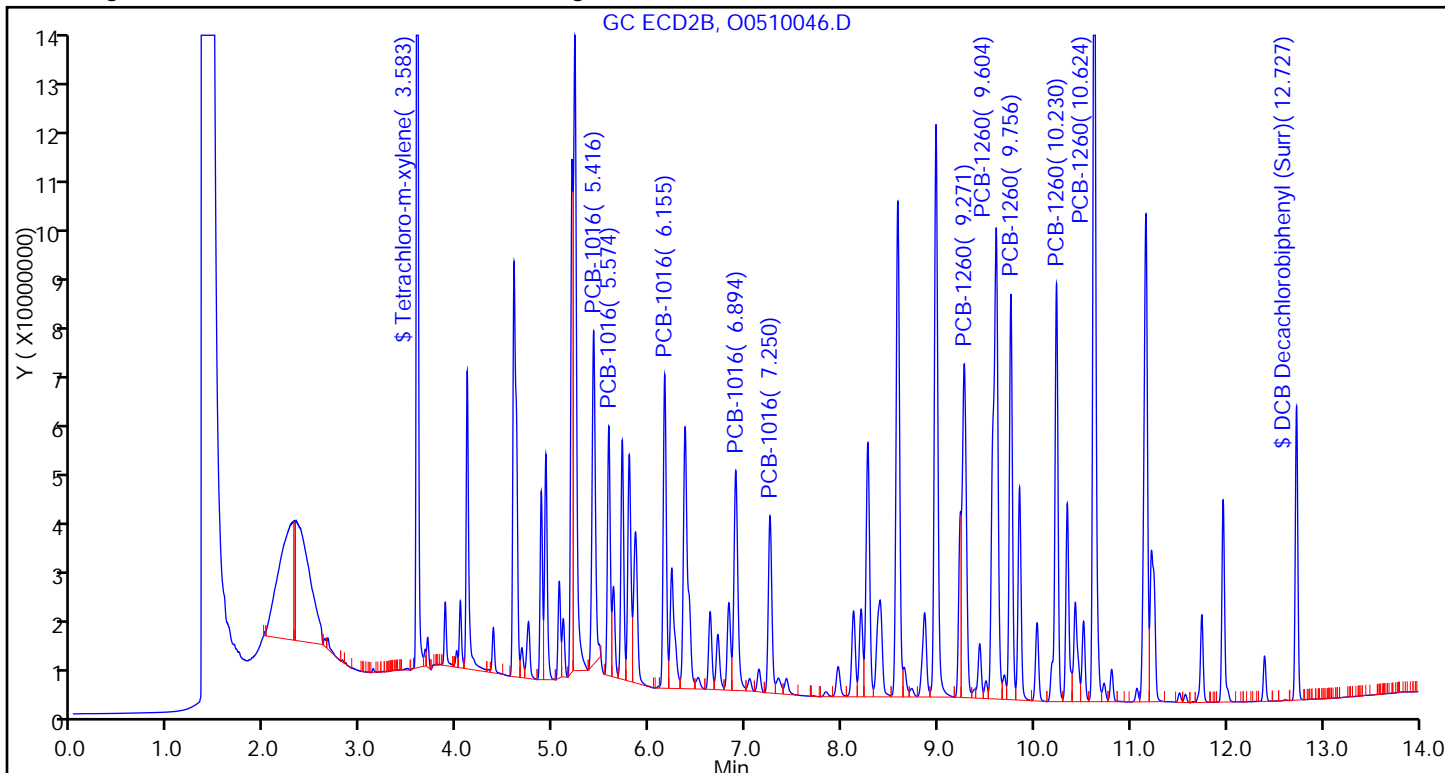
Method: PCB\_CHGC8DUAL

Limit Group: GCS 8082A ICAL

Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



FORM VII  
GC SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Pittsburgh Job No.: 180-43791-1  
 SDG No.: \_\_\_\_\_  
 Lab Sample ID: CCV 180-141160/47 Calibration Date: 05/12/2015 03:07  
 Instrument ID: CHGC8 Calib Start Date: 05/11/2015 16:32  
 GC Column: RTX-CLP2 ID: 0.53 (mm) Calib End Date: 05/11/2015 18:31  
 Lab File ID: O0510046.D Conc. Units: ng/uL

| ANALYTE                       | CURVE TYPE | AVE CF     | CF         | MIN CF | CALC AMOUNT | SPIKE AMOUNT | %D    | MAX %D |
|-------------------------------|------------|------------|------------|--------|-------------|--------------|-------|--------|
| PCB-1016 Peak 1               | Ave        | 54875003   | 65566533   |        | 1.19        | 1.00         | 19.5  | 20.0   |
| PCB-1016 Peak 2               | Ave        | 40325088   | 49070830   |        | 1.22        | 1.00         | 21.7* | 20.0   |
| PCB-1016 Peak 3               | Ave        | 55788367   | 61692603   |        | 1.11        | 1.00         | 10.6  | 20.0   |
| PCB-1016 Peak 4               | Ave        | 37786632   | 43221637   |        | 1.14        | 1.00         | 14.4  | 20.0   |
| PCB-1016 Peak 5               | Ave        | 31823028   | 34805577   |        | 1.09        | 1.00         | 9.4   | 20.0   |
| PCB-1260 Peak 1               | Ave        | 68573360   | 65617976   |        | 0.957       | 1.00         | -4.3  | 20.0   |
| PCB-1260 Peak 2               | Ave        | 100374048  | 92690511   |        | 0.923       | 1.00         | -7.7  | 20.0   |
| PCB-1260 Peak 3               | Ave        | 88921951   | 79787051   |        | 0.897       | 1.00         | -10.3 | 20.0   |
| PCB-1260 Peak 4               | Ave        | 94429741   | 82147308   |        | 0.870       | 1.00         | -13.0 | 20.0   |
| PCB-1260 Peak 5               | Ave        | 185451373  | 173724113  |        | 0.937       | 1.00         | -6.3  | 20.0   |
| Tetrachloro-m-xylene (Surr)   | Lin2       |            | 4782827160 |        | 0.0602      | 0.0500       | 20.4* | 20.0   |
| DCB Decachlorobiphenyl (Surr) | Ave        | 1229406481 | 1155245020 |        | 0.0470      | 0.0500       | -6.0  | 20.0   |

FORM VII  
GC SEMI VOA CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-43791-1  
 SDG No.: \_\_\_\_\_  
 Lab Sample ID: CCV 180-141160/47 Calibration Date: 05/12/2015 03:07  
 Instrument ID: CHGC8 Calib Start Date: 05/11/2015 16:32  
 GC Column: RTX-CLP2 ID: 0.53 (mm) Calib End Date: 05/11/2015 18:31  
 Lab File ID: O0510046.D

| Analyte                       | RT    | RT WINDOW |       |
|-------------------------------|-------|-----------|-------|
|                               |       | FROM      | TO    |
| PCB-1016 Peak 1               | 5.42  | 5.37      | 5.47  |
| PCB-1016 Peak 2               | 5.57  | 5.52      | 5.62  |
| PCB-1016 Peak 3               | 6.16  | 6.11      | 6.21  |
| PCB-1016 Peak 4               | 6.89  | 6.84      | 6.94  |
| PCB-1016 Peak 5               | 7.25  | 7.20      | 7.30  |
| PCB-1260 Peak 1               | 9.27  | 9.22      | 9.32  |
| PCB-1260 Peak 2               | 9.60  | 9.55      | 9.65  |
| PCB-1260 Peak 3               | 9.76  | 9.71      | 9.81  |
| PCB-1260 Peak 4               | 10.23 | 10.18     | 10.28 |
| PCB-1260 Peak 5               | 10.62 | 10.57     | 10.67 |
| Tetrachloro-m-xylene (Surr)   | 3.58  | 3.53      | 3.63  |
| DCB Decachlorobiphenyl (Surr) | 12.73 | 12.66     | 12.80 |

TestAmerica Pittsburgh  
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\O0510046.D  
 Lims ID: CCV  
 Client ID:  
 Sample Type: CCV  
 Inject. Date: 12-May-2015 03:07:09 ALS Bottle#: 47 Worklist Smp#: 47  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 180-0006866-047  
 Operator ID: 402360 Instrument ID: CHGC8  
 Sublist: chrom-PCB\_CHGC8DUAL\*sub1  
 Method: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\PCB\_CHGC8DUAL.m  
 Limit Group: GCS 8082A ICAL  
 Last Update: 12-May-2015 16:54:58 Calib Date: 11-May-2015 18:31:22  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICal File: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\O0510020.D  
 Column 1 : Det: GC ECD1A  
 Column 2 : Det: GC ECD2B  
 Process Host: XAWRK022

First Level Reviewer: guptaa Date: 12-May-2015 07:43:08

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng | OnCol Amt ng | Flags |
|-----|-----------|---------------|---------------|----------|------------|--------------|-------|
|-----|-----------|---------------|---------------|----------|------------|--------------|-------|

\$ 1 Tetrachloro-m-xylene

|   |       |       |       |            |        |        |  |
|---|-------|-------|-------|------------|--------|--------|--|
| 1 | 3.110 | 3.110 | 0.000 | 139523591H | 0.0500 | 0.0608 |  |
| 2 | 3.583 | 3.583 | 0.000 | 239141358H | 0.0500 | 0.0602 |  |

RPD = 1.10

4 PCB-1016

|   |       |       |       |           |      |      |  |
|---|-------|-------|-------|-----------|------|------|--|
| 1 | 3.414 | 3.414 | 0.000 | 38610816H | 1.00 | 1.20 |  |
| 1 | 3.741 | 3.741 | 0.000 | 59735413H | 1.00 | 1.15 |  |
| 1 | 4.372 | 4.372 | 0.000 | 46004843H | 1.00 | 1.24 |  |
| 1 | 4.444 | 4.444 | 0.000 | 33188628H | 1.00 | 1.27 |  |
| 1 | 4.859 | 4.859 | 0.000 | 41376076H | 1.00 | 1.23 |  |

Average of Peak Amounts = 1.22

|   |       |       |       |           |      |      |  |
|---|-------|-------|-------|-----------|------|------|--|
| 2 | 5.416 | 5.416 | 0.000 | 65566533H | 1.00 | 1.19 |  |
| 2 | 5.574 | 5.574 | 0.000 | 49070830H | 1.00 | 1.22 |  |
| 2 | 6.155 | 6.155 | 0.000 | 61692603H | 1.00 | 1.11 |  |
| 2 | 6.894 | 6.894 | 0.000 | 43221637H | 1.00 | 1.14 |  |
| 2 | 7.250 | 7.250 | 0.000 | 34805577H | 1.00 | 1.09 |  |

Average of Peak Amounts = 1.15

RPD = 5.76

Data File: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\O0510046.D

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng | OnCol Amt ng | Flags |
|-----|-----------|---------------|---------------|----------|------------|--------------|-------|
|-----|-----------|---------------|---------------|----------|------------|--------------|-------|

8 PCB-1260

|   |       |       |       |            |      |        |  |
|---|-------|-------|-------|------------|------|--------|--|
| 1 | 6.682 | 6.682 | 0.000 | 62147037H  | 1.00 | 1.06   |  |
| 1 | 7.721 | 7.721 | 0.000 | 61281699H  | 1.00 | 1.08   |  |
| 1 | 8.441 | 8.441 | 0.000 | 52387861H  | 1.00 | 1.05   |  |
| 1 | 9.033 | 9.033 | 0.000 | 114287937H | 1.00 | 1.05   |  |
| 1 | 9.515 | 9.515 | 0.000 | 56658530H  | 1.00 | 0.9782 |  |

Average of Peak Amounts = 1.04

|   |        |        |       |            |      |        |  |
|---|--------|--------|-------|------------|------|--------|--|
| 2 | 9.271  | 9.271  | 0.000 | 65617976H  | 1.00 | 0.9569 |  |
| 2 | 9.604  | 9.604  | 0.000 | 92690511H  | 1.00 | 0.9235 |  |
| 2 | 9.756  | 9.756  | 0.000 | 79787051H  | 1.00 | 0.8973 |  |
| 2 | 10.230 | 10.230 | 0.000 | 82147308H  | 1.00 | 0.8699 |  |
| 2 | 10.624 | 10.624 | 0.000 | 173724113H | 1.00 | 0.9368 |  |

Average of Peak Amounts = 0.9169

RPD = 12.99

\$ 11 DCB Decachlorobiphenyl (Surr)

|   |        |        |       |           |        |        |  |
|---|--------|--------|-------|-----------|--------|--------|--|
| 1 | 11.204 | 11.204 | 0.000 | 47893677H | 0.0500 | 0.0493 |  |
| 2 | 12.727 | 12.727 | 0.000 | 57762251H | 0.0500 | 0.0470 |  |

RPD = 4.84

Reagents:

GCAR1660CALL5\_00010

Amount Added: 1.00

Units: mL

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\O0510046.D

Injection Date: 12-May-2015 03:07:09

Instrument ID: CHGC8

Lims ID: CCV

Client ID:

Operator ID: 402360

ALS Bottle#: 47

Worklist Smp#: 47

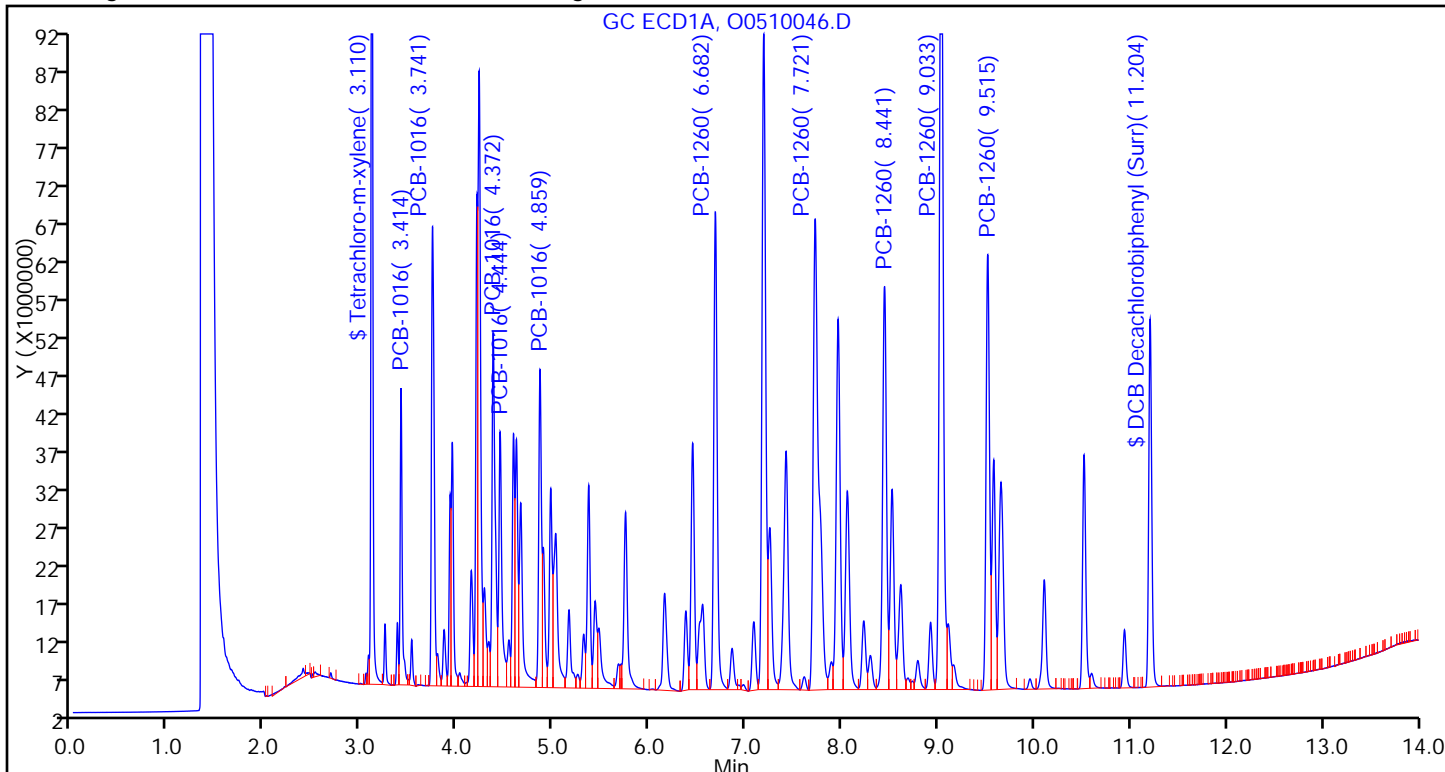
Injection Vol: 1.0 ul

Dil. Factor: 1.0000

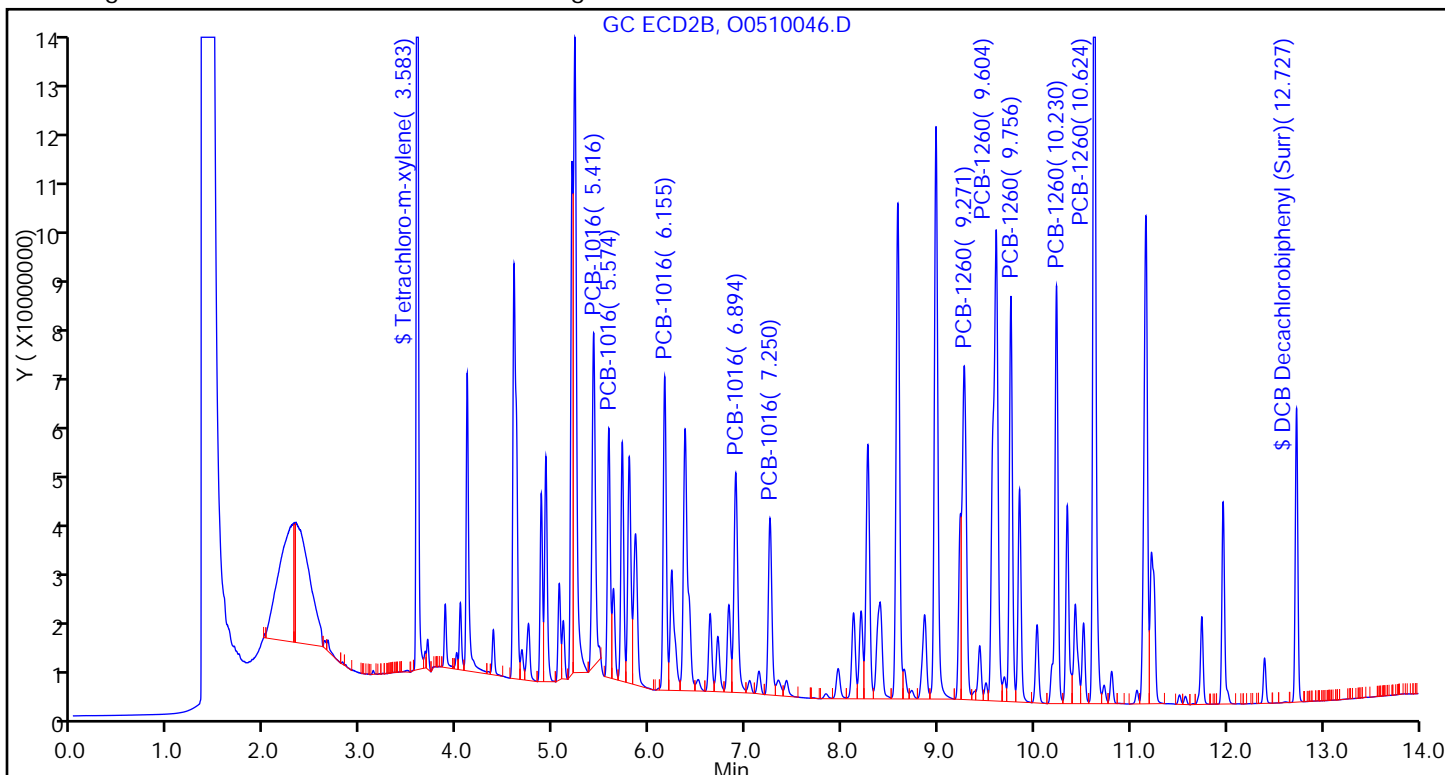
Method: PCB\_CHGC8DUAL

Limit Group: GCS 8082A ICAL

Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3





FORM VII  
GC SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Pittsburgh Job No.: 180-43791-1  
 SDG No.: \_\_\_\_\_  
 Lab Sample ID: CCV 180-141160/59 Calibration Date: 05/12/2015 07:05  
 Instrument ID: CHGC8 Calib Start Date: 05/11/2015 16:32  
 GC Column: RTX-CLP1 ID: 0.53 (mm) Calib End Date: 05/11/2015 18:31  
 Lab File ID: O0510058.D Conc. Units: ng/uL

| ANALYTE                       | CURVE TYPE | AVE CF     | CF         | MIN CF | CALC AMOUNT | SPIKE AMOUNT | %D    | MAX %D |
|-------------------------------|------------|------------|------------|--------|-------------|--------------|-------|--------|
| PCB-1016 Peak 1               | Ave        | 32079359   | 37658399   |        | 1.17        | 1.00         | 17.4  | 20.0   |
| PCB-1016 Peak 2               | Ave        | 52058944   | 57162927   |        | 1.10        | 1.00         | 9.8   | 20.0   |
| PCB-1016 Peak 3               | Ave        | 37028442   | 43933831   |        | 1.19        | 1.00         | 18.6  | 20.0   |
| PCB-1016 Peak 4               | Ave        | 26080426   | 32024315   |        | 1.23        | 1.00         | 22.8* | 20.0   |
| PCB-1016 Peak 5               | Ave        | 33634155   | 40520873   |        | 1.20        | 1.00         | 20.5* | 20.0   |
| PCB-1260 Peak 1               | Ave        | 58677204   | 64314794   |        | 1.10        | 1.00         | 9.6   | 20.0   |
| PCB-1260 Peak 2               | Ave        | 56619721   | 63273991   |        | 1.12        | 1.00         | 11.8  | 20.0   |
| PCB-1260 Peak 3               | Ave        | 49742915   | 55257115   |        | 1.11        | 1.00         | 11.1  | 20.0   |
| PCB-1260 Peak 4               | Ave        | 108992356  | 119452477  |        | 1.10        | 1.00         | 9.6   | 20.0   |
| PCB-1260 Peak 5               | Ave        | 57922623   | 60235200   |        | 1.04        | 1.00         | 4.0   | 20.0   |
| Tetrachloro-m-xylene (Surr)   | Ave        | 2292982212 | 2730202100 |        | 0.0595      | 0.0500       | 19.1  | 20.0   |
| DCB Decachlorobiphenyl (Surr) | Ave        | 971204349  | 1029098460 |        | 0.0530      | 0.0500       | 6.0   | 20.0   |

FORM VII  
GC SEMI VOA CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-43791-1  
 SDG No.: \_\_\_\_\_  
 Lab Sample ID: CCV 180-141160/59 Calibration Date: 05/12/2015 07:05  
 Instrument ID: CHGC8 Calib Start Date: 05/11/2015 16:32  
 GC Column: RTX-CLP1 ID: 0.53 (mm) Calib End Date: 05/11/2015 18:31  
 Lab File ID: O0510058.D

| Analyte                       | RT    | RT WINDOW |       |
|-------------------------------|-------|-----------|-------|
|                               |       | FROM      | TO    |
| PCB-1016 Peak 1               | 3.41  | 3.36      | 3.46  |
| PCB-1016 Peak 2               | 3.74  | 3.69      | 3.79  |
| PCB-1016 Peak 3               | 4.37  | 4.32      | 4.42  |
| PCB-1016 Peak 4               | 4.44  | 4.39      | 4.49  |
| PCB-1016 Peak 5               | 4.86  | 4.81      | 4.91  |
| PCB-1260 Peak 1               | 6.68  | 6.63      | 6.73  |
| PCB-1260 Peak 2               | 7.72  | 7.67      | 7.77  |
| PCB-1260 Peak 3               | 8.44  | 8.39      | 8.49  |
| PCB-1260 Peak 4               | 9.03  | 8.98      | 9.08  |
| PCB-1260 Peak 5               | 9.51  | 9.46      | 9.56  |
| Tetrachloro-m-xylene (Surr)   | 3.11  | 3.06      | 3.16  |
| DCB Decachlorobiphenyl (Surr) | 11.20 | 11.13     | 11.27 |

TestAmerica Pittsburgh  
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\O0510058.D  
 Lims ID: ccv  
 Client ID:  
 Sample Type: CCV  
 Inject. Date: 12-May-2015 07:05:03 ALS Bottle#: 59 Worklist Smp#: 59  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 180-0006866-059  
 Operator ID: 402360 Instrument ID: CHGC8  
 Sublist: chrom-PCB\_CHGC8DUAL\*sub1  
 Method: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\PCB\_CHGC8DUAL.m  
 Limit Group: GCS 8082A ICAL  
 Last Update: 12-May-2015 16:55:29 Calib Date: 11-May-2015 18:31:22  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICal File: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\O0510020.D  
 Column 1 : Det: GC ECD1A  
 Column 2 : Det: GC ECD2B  
 Process Host: XAWRK022

First Level Reviewer: guptaa Date: 12-May-2015 07:41:23

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng | OnCol Amt ng | Flags |
|-----|-----------|---------------|---------------|----------|------------|--------------|-------|
|-----|-----------|---------------|---------------|----------|------------|--------------|-------|

\$ 1 Tetrachloro-m-xylene

|   |       |       |       |            |        |        |  |
|---|-------|-------|-------|------------|--------|--------|--|
| 1 | 3.108 | 3.108 | 0.000 | 136510105H | 0.0500 | 0.0595 |  |
| 2 | 3.580 | 3.580 | 0.000 | 235259770H | 0.0500 | 0.0592 |  |

RPD = 0.57

4 PCB-1016

|   |       |       |       |           |      |      |  |
|---|-------|-------|-------|-----------|------|------|--|
| 1 | 3.411 | 3.411 | 0.000 | 37658399H | 1.00 | 1.17 |  |
| 1 | 3.738 | 3.738 | 0.000 | 57162927H | 1.00 | 1.10 |  |
| 1 | 4.369 | 4.369 | 0.000 | 43933831H | 1.00 | 1.19 |  |
| 1 | 4.441 | 4.441 | 0.000 | 32024315H | 1.00 | 1.23 |  |
| 1 | 4.855 | 4.855 | 0.000 | 40520873H | 1.00 | 1.20 |  |

Average of Peak Amounts = 1.18

|   |       |       |       |           |      |      |  |
|---|-------|-------|-------|-----------|------|------|--|
| 2 | 5.414 | 5.414 | 0.000 | 67632199H | 1.00 | 1.23 |  |
| 2 | 5.571 | 5.571 | 0.000 | 50361242H | 1.00 | 1.25 |  |
| 2 | 6.152 | 6.152 | 0.000 | 63886600H | 1.00 | 1.15 |  |
| 2 | 6.890 | 6.890 | 0.000 | 43990684H | 1.00 | 1.16 |  |
| 2 | 7.246 | 7.246 | 0.000 | 36904098H | 1.00 | 1.16 |  |

Average of Peak Amounts = 1.19

RPD = 1.00

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng | OnCol Amt ng | Flags |
|-----|-----------|---------------|---------------|----------|------------|--------------|-------|
|-----|-----------|---------------|---------------|----------|------------|--------------|-------|

8 PCB-1260

|                           |        |        |       |            |      |        |  |
|---------------------------|--------|--------|-------|------------|------|--------|--|
| 1                         | 6.679  | 6.679  | 0.000 | 64314794H  | 1.00 | 1.10   |  |
| 1                         | 7.715  | 7.715  | 0.000 | 63273991H  | 1.00 | 1.12   |  |
| 1                         | 8.438  | 8.438  | 0.000 | 55257115H  | 1.00 | 1.11   |  |
| 1                         | 9.027  | 9.027  | 0.000 | 119452477H | 1.00 | 1.10   |  |
| 1                         | 9.512  | 9.512  | 0.000 | 60235200H  | 1.00 | 1.04   |  |
| Average of Peak Amounts = |        |        |       |            |      | 1.09   |  |
| 2                         | 9.268  | 9.268  | 0.000 | 72978146H  | 1.00 | 1.06   |  |
| 2                         | 9.600  | 9.600  | 0.000 | 103878974H | 1.00 | 1.03   |  |
| 2                         | 9.752  | 9.752  | 0.000 | 88322787H  | 1.00 | 0.99   |  |
| 2                         | 10.228 | 10.228 | 0.000 | 90696658H  | 1.00 | 0.9605 |  |
| 2                         | 10.621 | 10.621 | 0.000 | 186278952H | 1.00 | 1.00   |  |
| Average of Peak Amounts = |        |        |       |            |      | 1.01   |  |

RPD = 7.66

\$ 11 DCB Decachlorobiphenyl (Surr)

|   |        |        |       |           |        |        |  |
|---|--------|--------|-------|-----------|--------|--------|--|
| 1 | 11.201 | 11.201 | 0.000 | 51454923H | 0.0500 | 0.0530 |  |
| 2 | 12.725 | 12.725 | 0.000 | 59564219H | 0.0500 | 0.0484 |  |

RPD = 8.93

Reagents:

GCAR1660CALL5\_00010

Amount Added: 1.00

Units: mL

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\O0510058.D

Injection Date: 12-May-2015 07:05:03

Instrument ID: CHGC8

Lims ID: ccv

Client ID:

Operator ID: 402360

ALS Bottle#: 59

Worklist Smp#: 59

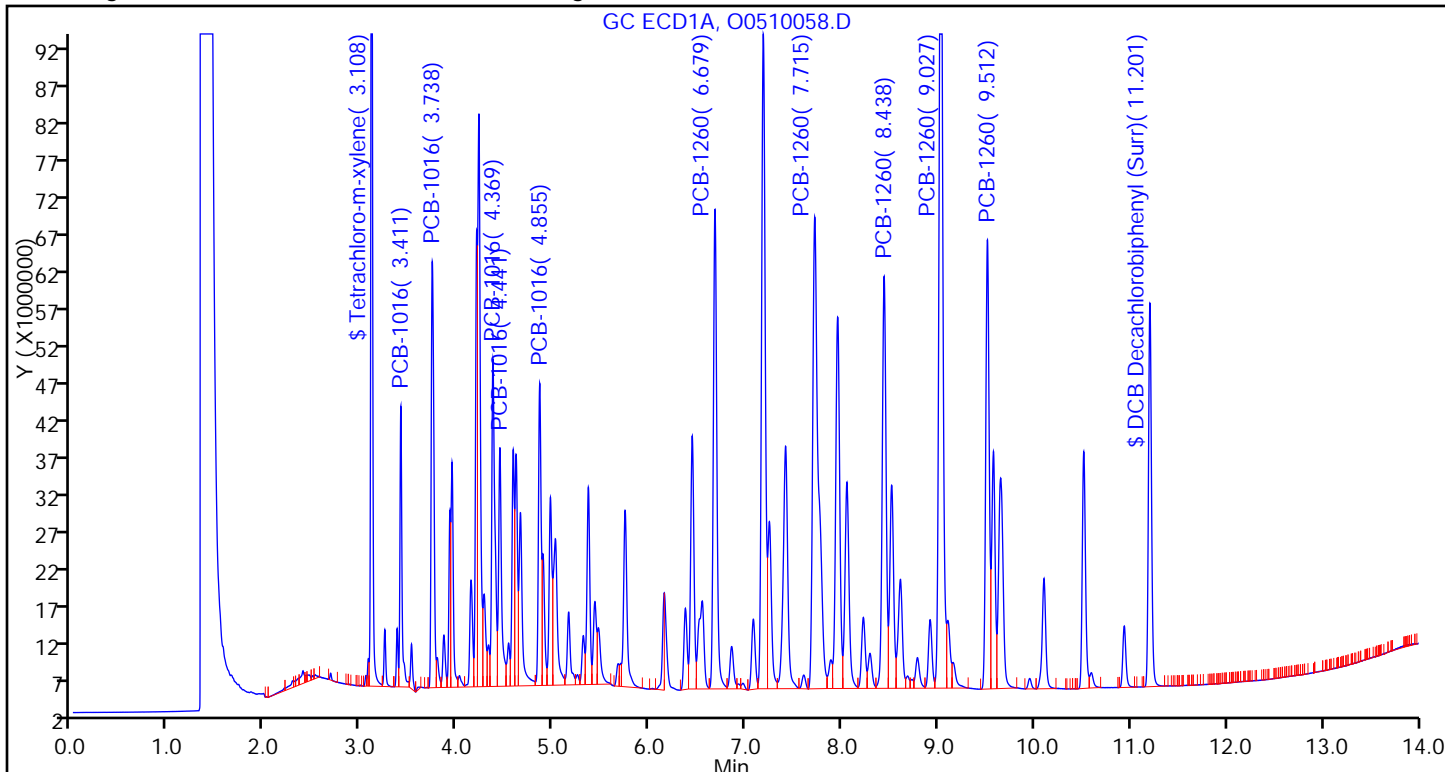
Injection Vol: 1.0 ul

Dil. Factor: 1.0000

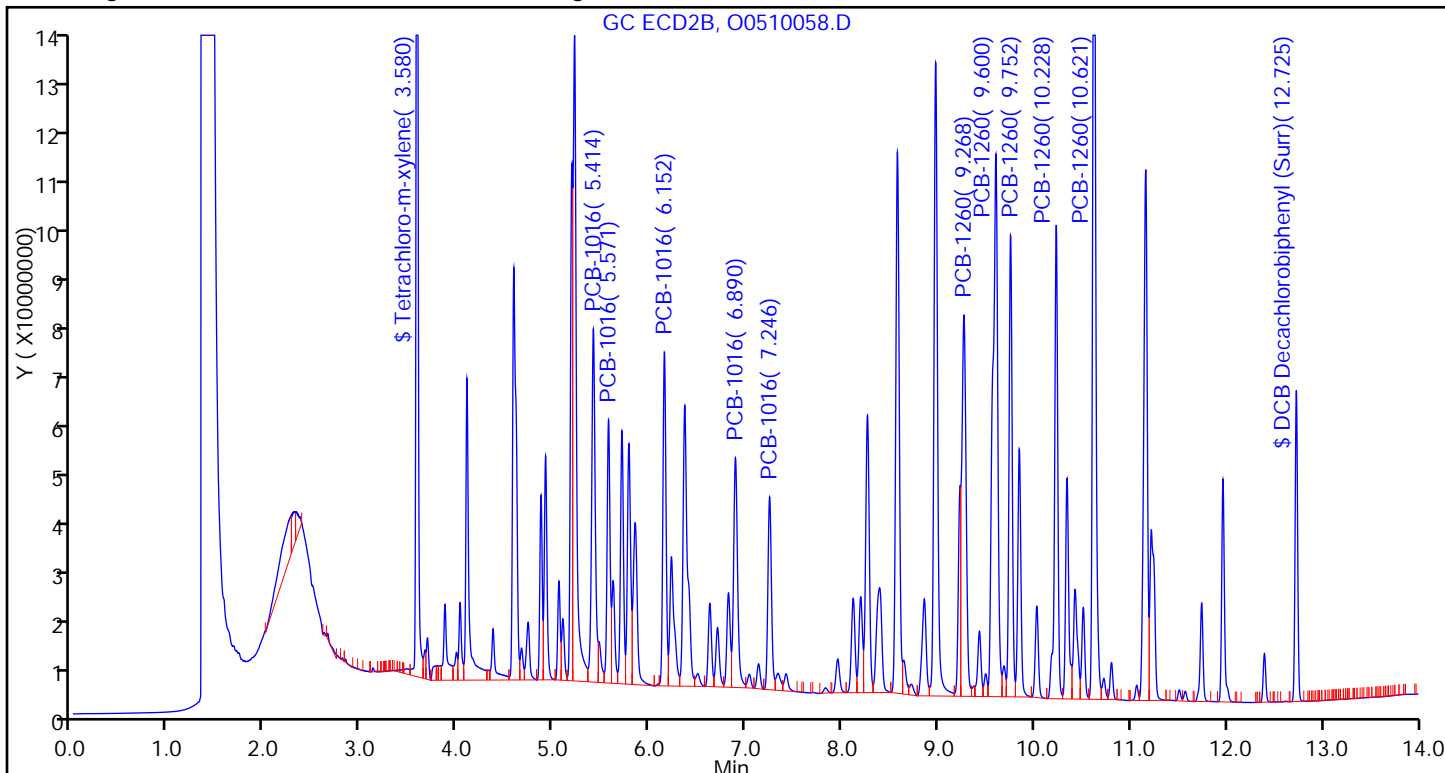
Method: PCB\_CHGC8DUAL

Limit Group: GCS 8082A ICAL

Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



FORM VII  
GC SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Pittsburgh Job No.: 180-43791-1  
 SDG No.: \_\_\_\_\_  
 Lab Sample ID: CCV 180-141160/59 Calibration Date: 05/12/2015 07:05  
 Instrument ID: CHGC8 Calib Start Date: 05/11/2015 16:32  
 GC Column: RTX-CLP2 ID: 0.53 (mm) Calib End Date: 05/11/2015 18:31  
 Lab File ID: O0510058.D Conc. Units: ng/uL

| ANALYTE                       | CURVE TYPE | AVE CF     | CF         | MIN CF | CALC AMOUNT | SPIKE AMOUNT | %D    | MAX %D |
|-------------------------------|------------|------------|------------|--------|-------------|--------------|-------|--------|
| PCB-1016 Peak 1               | Ave        | 54875003   | 67632199   |        | 1.23        | 1.00         | 23.2* | 20.0   |
| PCB-1016 Peak 2               | Ave        | 40325088   | 50361242   |        | 1.25        | 1.00         | 24.9* | 20.0   |
| PCB-1016 Peak 3               | Ave        | 55788367   | 63886600   |        | 1.15        | 1.00         | 14.5  | 20.0   |
| PCB-1016 Peak 4               | Ave        | 37786632   | 43990684   |        | 1.16        | 1.00         | 16.4  | 20.0   |
| PCB-1016 Peak 5               | Ave        | 31823028   | 36904098   |        | 1.16        | 1.00         | 16.0  | 20.0   |
| PCB-1260 Peak 1               | Ave        | 68573360   | 72978146   |        | 1.06        | 1.00         | 6.4   | 20.0   |
| PCB-1260 Peak 2               | Ave        | 100374048  | 103878974  |        | 1.03        | 1.00         | 3.5   | 20.0   |
| PCB-1260 Peak 3               | Ave        | 88921951   | 88322787   |        | 0.993       | 1.00         | -0.7  | 20.0   |
| PCB-1260 Peak 4               | Ave        | 94429741   | 90696658   |        | 0.960       | 1.00         | -4.0  | 20.0   |
| PCB-1260 Peak 5               | Ave        | 185451373  | 186278952  |        | 1.00        | 1.00         | 0.4   | 20.0   |
| Tetrachloro-m-xylene (Surr)   | Lin2       |            | 4705195400 |        | 0.0592      | 0.0500       | 18.4  | 20.0   |
| DCB Decachlorobiphenyl (Surr) | Ave        | 1229406481 | 1191284380 |        | 0.0484      | 0.0500       | -3.1  | 20.0   |

FORM VII  
GC SEMI VOA CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-43791-1  
 SDG No.: \_\_\_\_\_  
 Lab Sample ID: CCV 180-141160/59 Calibration Date: 05/12/2015 07:05  
 Instrument ID: CHGC8 Calib Start Date: 05/11/2015 16:32  
 GC Column: RTX-CLP2 ID: 0.53 (mm) Calib End Date: 05/11/2015 18:31  
 Lab File ID: O0510058.D

| Analyte                       | RT    | RT WINDOW |       |
|-------------------------------|-------|-----------|-------|
|                               |       | FROM      | TO    |
| PCB-1016 Peak 1               | 5.41  | 5.36      | 5.46  |
| PCB-1016 Peak 2               | 5.57  | 5.52      | 5.62  |
| PCB-1016 Peak 3               | 6.15  | 6.10      | 6.20  |
| PCB-1016 Peak 4               | 6.89  | 6.84      | 6.94  |
| PCB-1016 Peak 5               | 7.25  | 7.20      | 7.30  |
| PCB-1260 Peak 1               | 9.27  | 9.22      | 9.32  |
| PCB-1260 Peak 2               | 9.60  | 9.55      | 9.65  |
| PCB-1260 Peak 3               | 9.75  | 9.70      | 9.80  |
| PCB-1260 Peak 4               | 10.23 | 10.18     | 10.28 |
| PCB-1260 Peak 5               | 10.62 | 10.57     | 10.67 |
| Tetrachloro-m-xylene (Surr)   | 3.58  | 3.53      | 3.63  |
| DCB Decachlorobiphenyl (Surr) | 12.73 | 12.66     | 12.80 |

TestAmerica Pittsburgh  
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\O0510058.D  
 Lims ID: ccv  
 Client ID:  
 Sample Type: CCV  
 Inject. Date: 12-May-2015 07:05:03 ALS Bottle#: 59 Worklist Smp#: 59  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 180-0006866-059  
 Operator ID: 402360 Instrument ID: CHGC8  
 Sublist: chrom-PCB\_CHGC8DUAL\*sub1  
 Method: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\PCB\_CHGC8DUAL.m  
 Limit Group: GCS 8082A ICAL  
 Last Update: 12-May-2015 16:55:29 Calib Date: 11-May-2015 18:31:22  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICal File: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\O0510020.D  
 Column 1 : Det: GC ECD1A  
 Column 2 : Det: GC ECD2B  
 Process Host: XAWRK022

First Level Reviewer: guptaa Date: 12-May-2015 07:41:23

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng | OnCol Amt ng | Flags |
|-----|-----------|---------------|---------------|----------|------------|--------------|-------|
|-----|-----------|---------------|---------------|----------|------------|--------------|-------|

\$ 1 Tetrachloro-m-xylene

|   |       |       |       |            |        |        |  |
|---|-------|-------|-------|------------|--------|--------|--|
| 1 | 3.108 | 3.108 | 0.000 | 136510105H | 0.0500 | 0.0595 |  |
| 2 | 3.580 | 3.580 | 0.000 | 235259770H | 0.0500 | 0.0592 |  |

RPD = 0.57

4 PCB-1016

|   |       |       |       |           |      |      |  |
|---|-------|-------|-------|-----------|------|------|--|
| 1 | 3.411 | 3.411 | 0.000 | 37658399H | 1.00 | 1.17 |  |
| 1 | 3.738 | 3.738 | 0.000 | 57162927H | 1.00 | 1.10 |  |
| 1 | 4.369 | 4.369 | 0.000 | 43933831H | 1.00 | 1.19 |  |
| 1 | 4.441 | 4.441 | 0.000 | 32024315H | 1.00 | 1.23 |  |
| 1 | 4.855 | 4.855 | 0.000 | 40520873H | 1.00 | 1.20 |  |

Average of Peak Amounts = 1.18

|   |       |       |       |           |      |      |  |
|---|-------|-------|-------|-----------|------|------|--|
| 2 | 5.414 | 5.414 | 0.000 | 67632199H | 1.00 | 1.23 |  |
| 2 | 5.571 | 5.571 | 0.000 | 50361242H | 1.00 | 1.25 |  |
| 2 | 6.152 | 6.152 | 0.000 | 63886600H | 1.00 | 1.15 |  |
| 2 | 6.890 | 6.890 | 0.000 | 43990684H | 1.00 | 1.16 |  |
| 2 | 7.246 | 7.246 | 0.000 | 36904098H | 1.00 | 1.16 |  |

Average of Peak Amounts = 1.19

RPD = 1.00



| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng | OnCol Amt ng | Flags |
|-----|-----------|---------------|---------------|----------|------------|--------------|-------|
|-----|-----------|---------------|---------------|----------|------------|--------------|-------|

8 PCB-1260

|   |       |       |       |            |      |      |  |
|---|-------|-------|-------|------------|------|------|--|
| 1 | 6.679 | 6.679 | 0.000 | 64314794H  | 1.00 | 1.10 |  |
| 1 | 7.715 | 7.715 | 0.000 | 63273991H  | 1.00 | 1.12 |  |
| 1 | 8.438 | 8.438 | 0.000 | 55257115H  | 1.00 | 1.11 |  |
| 1 | 9.027 | 9.027 | 0.000 | 119452477H | 1.00 | 1.10 |  |
| 1 | 9.512 | 9.512 | 0.000 | 60235200H  | 1.00 | 1.04 |  |

Average of Peak Amounts = 1.09

|   |        |        |       |            |      |        |  |
|---|--------|--------|-------|------------|------|--------|--|
| 2 | 9.268  | 9.268  | 0.000 | 72978146H  | 1.00 | 1.06   |  |
| 2 | 9.600  | 9.600  | 0.000 | 103878974H | 1.00 | 1.03   |  |
| 2 | 9.752  | 9.752  | 0.000 | 88322787H  | 1.00 | 0.99   |  |
| 2 | 10.228 | 10.228 | 0.000 | 90696658H  | 1.00 | 0.9605 |  |
| 2 | 10.621 | 10.621 | 0.000 | 186278952H | 1.00 | 1.00   |  |

Average of Peak Amounts = 1.01

RPD = 7.66

\$ 11 DCB Decachlorobiphenyl (Surr)

|   |        |        |       |           |        |        |  |
|---|--------|--------|-------|-----------|--------|--------|--|
| 1 | 11.201 | 11.201 | 0.000 | 51454923H | 0.0500 | 0.0530 |  |
| 2 | 12.725 | 12.725 | 0.000 | 59564219H | 0.0500 | 0.0484 |  |

RPD = 8.93

Reagents:

GCAR1660CALL5\_00010

Amount Added: 1.00

Units: mL

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\O0510058.D

Injection Date: 12-May-2015 07:05:03

Instrument ID: CHGC8

Lims ID: ccv

Client ID:

Operator ID: 402360

ALS Bottle#: 59

Worklist Smp#: 59

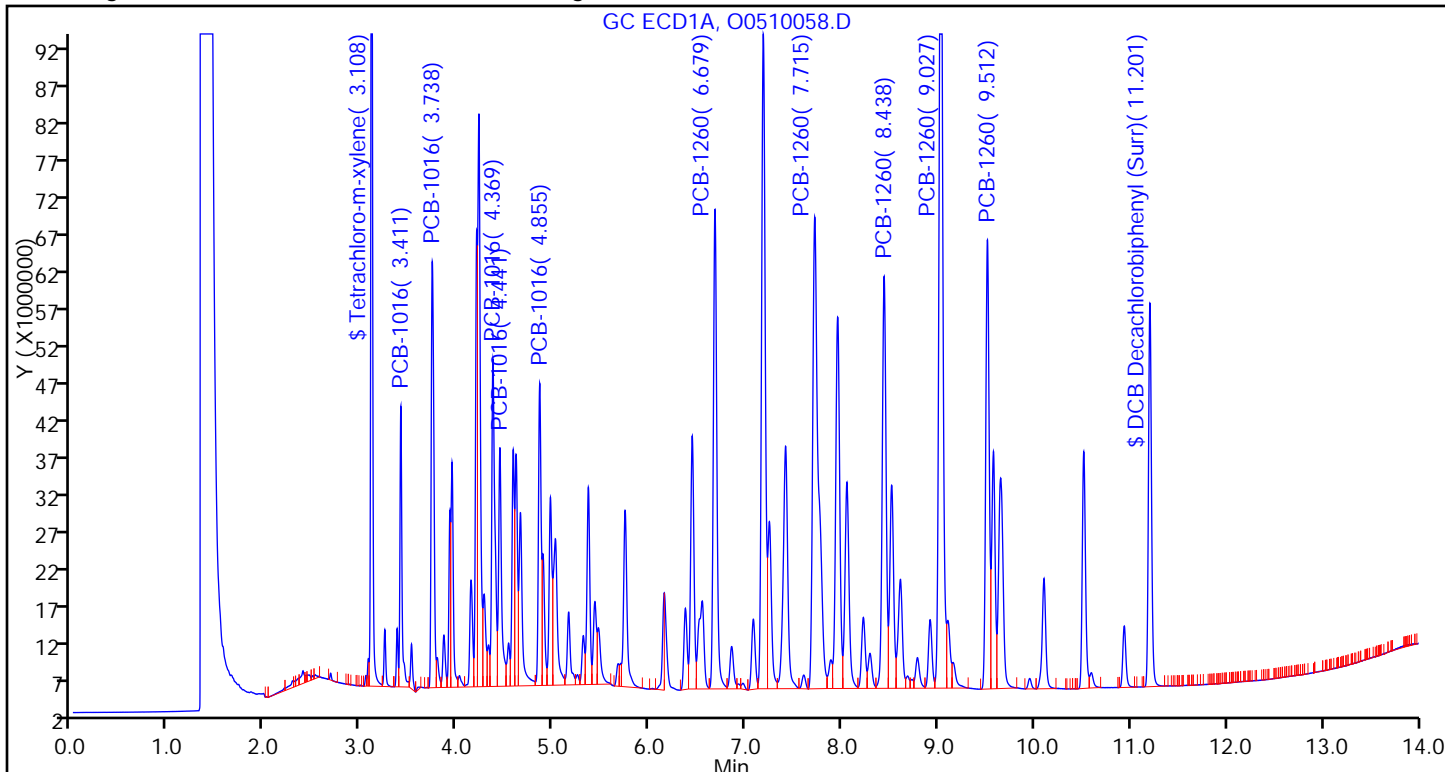
Injection Vol: 1.0 ul

Dil. Factor: 1.0000

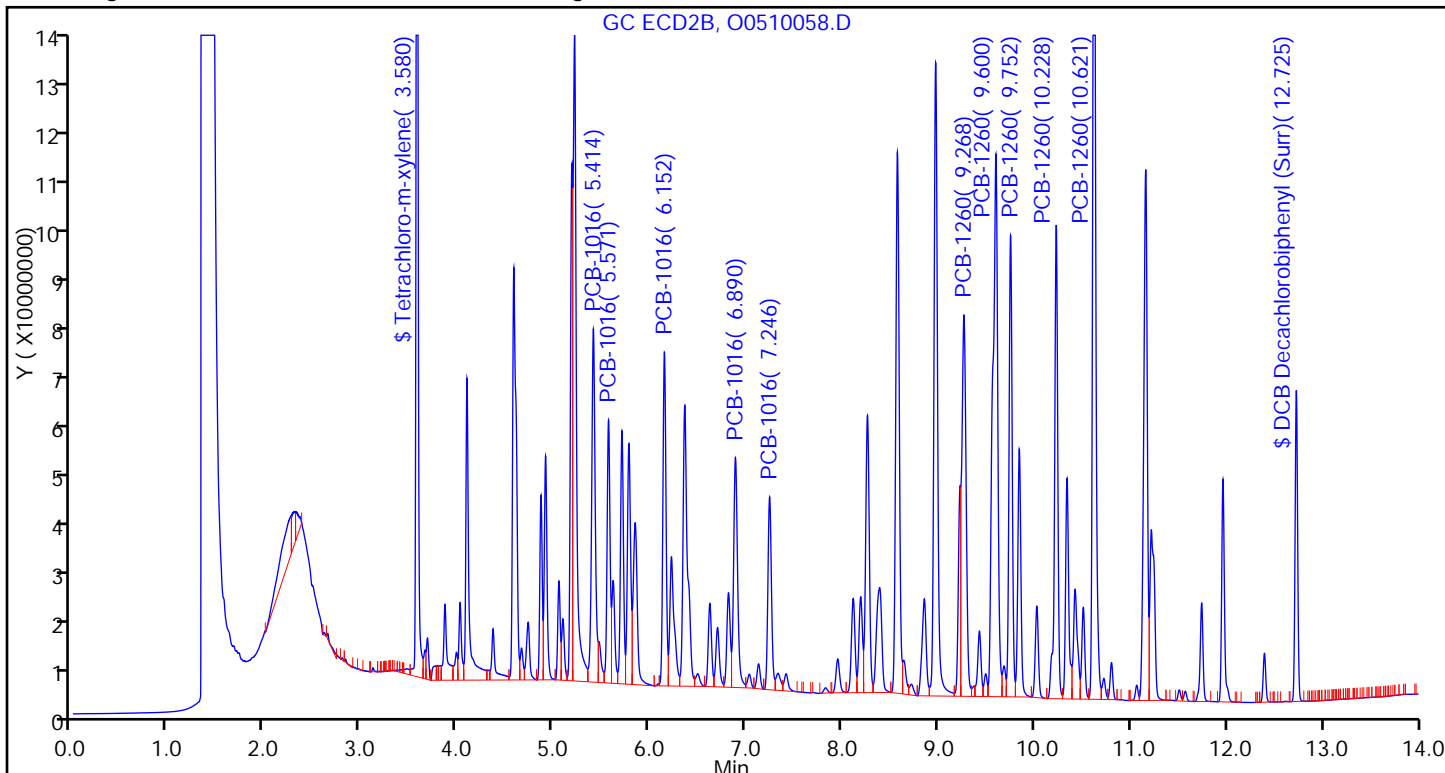
Method: PCB\_CHGC8DUAL

Limit Group: GCS 8082A ICAL

Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



FORM I  
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-43791-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: \_\_\_\_\_ Lab Sample ID: MB 180-140927/1-A  
 Matrix: Water Lab File ID: O0510047.D  
 Analysis Method: 8082A Date Collected: \_\_\_\_\_  
 Extraction Method: 3510C Date Extracted: 05/07/2015 13:45  
 Sample wt/vol: 1000 (mL) Date Analyzed: 05/12/2015 03:26  
 Con. Extract Vol.: 1.0 (mL) Dilution Factor: 1  
 Injection Volume: 1 (uL) GC Column: RTX-CLP1 ID: 0.53 (mm)  
 % Moisture: \_\_\_\_\_ GPC Cleanup: (Y/N) N  
 Analysis Batch No.: 141160 Units: ug/L

| CAS NO.    | COMPOUND NAME | RESULT | Q | RL    | MDL    |
|------------|---------------|--------|---|-------|--------|
| 12674-11-2 | PCB-1016      | ND     |   | 0.010 | 0.0025 |
| 11104-28-2 | PCB-1221      | ND     |   | 0.010 | 0.0041 |
| 11141-16-5 | PCB-1232      | ND     |   | 0.010 | 0.0039 |
| 53469-21-9 | PCB-1242      | ND     |   | 0.010 | 0.0019 |
| 12672-29-6 | PCB-1248      | ND     |   | 0.010 | 0.0027 |
| 11097-69-1 | PCB-1254      | ND     |   | 0.010 | 0.0030 |
| 11096-82-5 | PCB-1260      | ND     |   | 0.010 | 0.0017 |

| CAS NO.   | SURROGATE                     | %REC | Q | LIMITS |
|-----------|-------------------------------|------|---|--------|
| 2051-24-3 | DCB Decachlorobiphenyl (Surr) | 85   |   | 43-138 |
| 877-09-8  | Tetrachloro-m-xylene (Surr)   | 93   |   | 34-137 |

TestAmerica Pittsburgh  
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\O0510047.D  
 Lims ID: MB 180-140927/1-A  
 Client ID:  
 Sample Type: MB  
 Inject. Date: 12-May-2015 03:26:56 ALS Bottle#: 48 Worklist Smp#: 48  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 180-0006866-048  
 Operator ID: 402360 Instrument ID: CHGC8  
 Method: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\PCB\_CHGC8DUAL.m  
 Limit Group: GCS 8082A ICAL  
 Last Update: 12-May-2015 16:54:58 Calib Date: 11-May-2015 18:31:22  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICal File: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\O0510020.D  
 Column 1 : Det: GC ECD1A  
 Column 2 : Det: GC ECD2B  
 Process Host: XAWRK022

First Level Reviewer: guptaa Date: 12-May-2015 09:04:35

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng | OnCol Amt ng | Flags |
|-----|-----------|---------------|---------------|----------|------------|--------------|-------|
|-----|-----------|---------------|---------------|----------|------------|--------------|-------|

\$ 1 Tetrachloro-m-xylene

|   |       |       |       |           |        |        |            |
|---|-------|-------|-------|-----------|--------|--------|------------|
| 1 | 3.112 | 3.110 | 0.002 | 42482228H | 0.0200 | 0.0185 |            |
| 2 | 3.584 | 3.583 | 0.001 | 74180620H | 0.0200 | 0.0184 |            |
|   |       |       |       |           |        |        | RPD = 0.65 |

2 PCB-1221

|   |  |       |  |  |  |    |  |
|---|--|-------|--|--|--|----|--|
| 1 |  | 3.242 |  |  |  | ND |  |
| 1 |  | 3.370 |  |  |  |    |  |
| 1 |  | 3.408 |  |  |  |    |  |
| 2 |  | 3.867 |  |  |  |    |  |
| 2 |  | 4.024 |  |  |  |    |  |
| 2 |  | 4.096 |  |  |  |    |  |

5 PCB-1232

|   |  |       |  |  |  |    |  |
|---|--|-------|--|--|--|----|--|
| 1 |  | 3.246 |  |  |  | ND |  |
| 1 |  | 3.741 |  |  |  |    |  |
| 1 |  | 4.859 |  |  |  |    |  |
| 1 |  | 5.365 |  |  |  |    |  |
| 1 |  | 6.158 |  |  |  |    |  |
| 2 |  | 3.873 |  |  |  |    |  |
| 2 |  | 4.028 |  |  |  |    |  |
| 2 |  | 4.918 |  |  |  |    |  |
| 2 |  | 5.573 |  |  |  |    |  |
| 2 |  | 6.367 |  |  |  |    |  |

| Col | RT<br>(min.) | Exp RT<br>(min.) | Dlt RT<br>(min.) | Response | Cal Amt<br>ng | OnCol Amt<br>ng | Flags |
|-----|--------------|------------------|------------------|----------|---------------|-----------------|-------|
|-----|--------------|------------------|------------------|----------|---------------|-----------------|-------|

## 4 PCB-1016

|   |       |  |  |  |  |    |  |
|---|-------|--|--|--|--|----|--|
| 1 | 3.414 |  |  |  |  | ND |  |
| 1 | 3.741 |  |  |  |  |    |  |
| 1 | 4.372 |  |  |  |  |    |  |
| 1 | 4.444 |  |  |  |  |    |  |
| 1 | 4.859 |  |  |  |  |    |  |
| 2 | 5.416 |  |  |  |  |    |  |
| 2 | 5.574 |  |  |  |  |    |  |
| 2 | 6.155 |  |  |  |  |    |  |
| 2 | 6.894 |  |  |  |  |    |  |
| 2 | 7.250 |  |  |  |  |    |  |

## 6 PCB-1248

|   |       |  |  |  |  |    |  |
|---|-------|--|--|--|--|----|--|
| 1 | 4.204 |  |  |  |  | ND |  |
| 1 | 4.444 |  |  |  |  |    |  |
| 1 | 5.313 |  |  |  |  |    |  |
| 1 | 5.432 |  |  |  |  |    |  |
| 1 | 6.376 |  |  |  |  |    |  |
| 2 | 6.156 |  |  |  |  |    |  |
| 2 | 6.368 |  |  |  |  |    |  |
| 2 | 6.708 |  |  |  |  |    |  |
| 2 | 8.198 |  |  |  |  |    |  |
| 2 | 7.341 |  |  |  |  |    |  |

## 3 PCB-1242

|   |       |  |  |  |  |    |  |
|---|-------|--|--|--|--|----|--|
| 1 | 4.371 |  |  |  |  | ND |  |
| 1 | 4.443 |  |  |  |  |    |  |
| 1 | 4.858 |  |  |  |  |    |  |
| 1 | 4.970 |  |  |  |  |    |  |
| 1 | 5.431 |  |  |  |  |    |  |
| 2 | 5.414 |  |  |  |  |    |  |
| 2 | 5.712 |  |  |  |  |    |  |
| 2 | 6.153 |  |  |  |  |    |  |
| 2 | 6.365 |  |  |  |  |    |  |
| 2 | 6.906 |  |  |  |  |    |  |

## 7 PCB-1254

|   |       |  |  |  |  |    |  |
|---|-------|--|--|--|--|----|--|
| 1 | 5.361 |  |  |  |  | ND |  |
| 1 | 5.743 |  |  |  |  |    |  |
| 1 | 6.171 |  |  |  |  |    |  |
| 1 | 7.182 |  |  |  |  |    |  |
| 1 | 7.718 |  |  |  |  |    |  |
| 2 | 6.886 |  |  |  |  |    |  |
| 2 | 7.243 |  |  |  |  |    |  |
| 2 | 7.952 |  |  |  |  |    |  |
| 2 | 8.646 |  |  |  |  |    |  |
| 2 | 9.280 |  |  |  |  |    |  |

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng | OnCol Amt ng | Flags |
|-----|-----------|---------------|---------------|----------|------------|--------------|-------|
|-----|-----------|---------------|---------------|----------|------------|--------------|-------|

8 PCB-1260

|   |        |  |  |  |  |    |  |
|---|--------|--|--|--|--|----|--|
| 1 | 6.682  |  |  |  |  | ND |  |
| 1 | 7.721  |  |  |  |  |    |  |
| 1 | 8.441  |  |  |  |  |    |  |
| 1 | 9.033  |  |  |  |  |    |  |
| 1 | 9.515  |  |  |  |  |    |  |
| 2 | 9.271  |  |  |  |  |    |  |
| 2 | 9.604  |  |  |  |  |    |  |
| 2 | 9.756  |  |  |  |  |    |  |
| 2 | 10.230 |  |  |  |  |    |  |
| 2 | 10.624 |  |  |  |  |    |  |

9 PCB-1262

|   |        |  |  |  |  |    |  |
|---|--------|--|--|--|--|----|--|
| 1 | 7.416  |  |  |  |  | ND |  |
| 1 | 8.057  |  |  |  |  |    |  |
| 1 | 8.522  |  |  |  |  |    |  |
| 1 | 10.105 |  |  |  |  |    |  |
| 1 | 10.519 |  |  |  |  |    |  |
| 2 | 9.597  |  |  |  |  |    |  |
| 2 | 9.846  |  |  |  |  |    |  |
| 2 | 10.342 |  |  |  |  |    |  |
| 2 | 11.742 |  |  |  |  |    |  |
| 2 | 11.964 |  |  |  |  |    |  |

10 PCB-1268

|   |        |  |  |  |  |    |  |
|---|--------|--|--|--|--|----|--|
| 1 | 9.579  |  |  |  |  | ND |  |
| 1 | 9.647  |  |  |  |  |    |  |
| 1 | 9.955  |  |  |  |  |    |  |
| 1 | 10.939 |  |  |  |  |    |  |
| 2 | 11.149 |  |  |  |  |    |  |
| 2 | 11.216 |  |  |  |  |    |  |
| 2 | 11.571 |  |  |  |  |    |  |
| 2 | 12.395 |  |  |  |  |    |  |

\$ 11 DCB Decachlorobiphenyl (Surr)

|   |        |        |       |           |        |        |  |
|---|--------|--------|-------|-----------|--------|--------|--|
| 1 | 11.206 | 11.204 | 0.002 | 16498245H | 0.0200 | 0.0170 |  |
| 2 | 12.727 | 12.727 | 0.000 | 19365102H | 0.0200 | 0.0158 |  |

RPD = 7.55

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\O0510047.D

Injection Date: 12-May-2015 03:26:56

Instrument ID: CHGC8

Lims ID: MB 180-140927/1-A

Client ID:

Operator ID: 402360

ALS Bottle#: 48

Worklist Smp#: 48

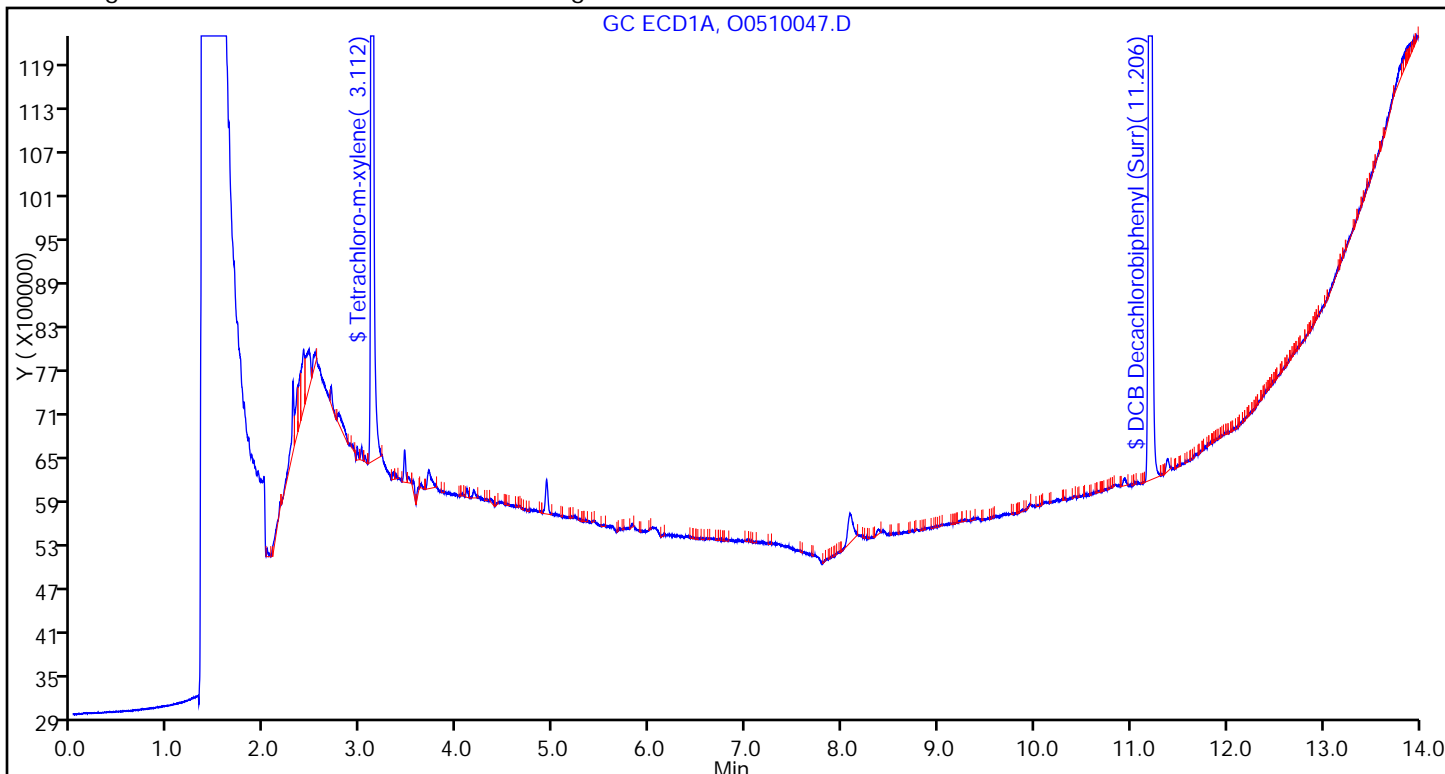
Injection Vol: 1.0 ul

Dil. Factor: 1.0000

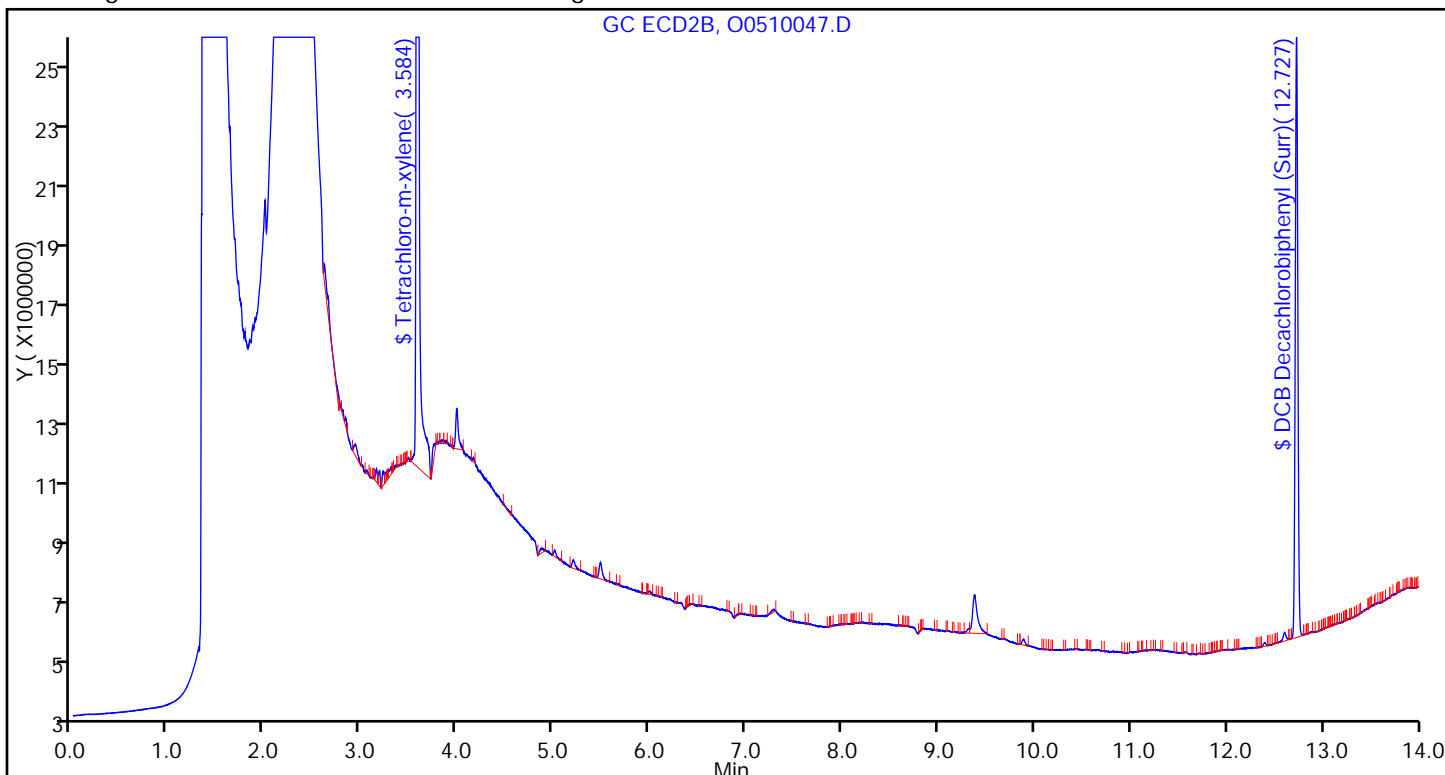
Method: PCB\_CHGC8DUAL

Limit Group: GCS 8082A ICAL

Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



FORM I  
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-43791-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: \_\_\_\_\_ Lab Sample ID: MB 180-140927/1-A  
 Matrix: Water Lab File ID: O0510047.D  
 Analysis Method: 8082A Date Collected: \_\_\_\_\_  
 Extraction Method: 3510C Date Extracted: 05/07/2015 13:45  
 Sample wt/vol: 1000 (mL) Date Analyzed: 05/12/2015 03:26  
 Con. Extract Vol.: 1.0 (mL) Dilution Factor: 1  
 Injection Volume: 1 (uL) GC Column: RTX-CLP2 ID: 0.53 (mm)  
 % Moisture: \_\_\_\_\_ GPC Cleanup: (Y/N) N  
 Analysis Batch No.: 141160 Units: ug/L

| CAS NO.   | SURROGATE                     | %REC | Q | LIMITS |
|-----------|-------------------------------|------|---|--------|
| 2051-24-3 | DCB Decachlorobiphenyl (Surr) | 79   |   | 43-138 |
| 877-09-8  | Tetrachloro-m-xylene (Surr)   | 92   |   | 34-137 |



TestAmerica Pittsburgh  
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\O0510047.D  
 Lims ID: MB 180-140927/1-A  
 Client ID:  
 Sample Type: MB  
 Inject. Date: 12-May-2015 03:26:56 ALS Bottle#: 48 Worklist Smp#: 48  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 180-0006866-048  
 Operator ID: 402360 Instrument ID: CHGC8  
 Method: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\PCB\_CHGC8DUAL.m  
 Limit Group: GCS 8082A ICAL  
 Last Update: 12-May-2015 16:54:58 Calib Date: 11-May-2015 18:31:22  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICal File: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\O0510020.D  
 Column 1 : Det: GC ECD1A  
 Column 2 : Det: GC ECD2B  
 Process Host: XAWRK022

First Level Reviewer: guptaa Date: 12-May-2015 09:04:35

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng | OnCol Amt ng | Flags |
|-----|-----------|---------------|---------------|----------|------------|--------------|-------|
|-----|-----------|---------------|---------------|----------|------------|--------------|-------|

\$ 1 Tetrachloro-m-xylene

|   |       |       |       |           |        |        |            |
|---|-------|-------|-------|-----------|--------|--------|------------|
| 1 | 3.112 | 3.110 | 0.002 | 42482228H | 0.0200 | 0.0185 |            |
| 2 | 3.584 | 3.583 | 0.001 | 74180620H | 0.0200 | 0.0184 |            |
|   |       |       |       |           |        |        | RPD = 0.65 |

2 PCB-1221

|   |  |       |  |  |  |    |  |
|---|--|-------|--|--|--|----|--|
| 1 |  | 3.242 |  |  |  | ND |  |
| 1 |  | 3.370 |  |  |  |    |  |
| 1 |  | 3.408 |  |  |  |    |  |
| 2 |  | 3.867 |  |  |  |    |  |
| 2 |  | 4.024 |  |  |  |    |  |
| 2 |  | 4.096 |  |  |  |    |  |

5 PCB-1232

|   |  |       |  |  |  |    |  |
|---|--|-------|--|--|--|----|--|
| 1 |  | 3.246 |  |  |  | ND |  |
| 1 |  | 3.741 |  |  |  |    |  |
| 1 |  | 4.859 |  |  |  |    |  |
| 1 |  | 5.365 |  |  |  |    |  |
| 1 |  | 6.158 |  |  |  |    |  |
| 2 |  | 3.873 |  |  |  |    |  |
| 2 |  | 4.028 |  |  |  |    |  |
| 2 |  | 4.918 |  |  |  |    |  |
| 2 |  | 5.573 |  |  |  |    |  |
| 2 |  | 6.367 |  |  |  |    |  |

| Col | RT<br>(min.) | Exp RT<br>(min.) | Dlt RT<br>(min.) | Response | Cal Amt<br>ng | OnCol Amt<br>ng | Flags |
|-----|--------------|------------------|------------------|----------|---------------|-----------------|-------|
|-----|--------------|------------------|------------------|----------|---------------|-----------------|-------|

## 4 PCB-1016

|   |       |  |  |  |  |    |  |
|---|-------|--|--|--|--|----|--|
| 1 | 3.414 |  |  |  |  | ND |  |
| 1 | 3.741 |  |  |  |  |    |  |
| 1 | 4.372 |  |  |  |  |    |  |
| 1 | 4.444 |  |  |  |  |    |  |
| 1 | 4.859 |  |  |  |  |    |  |
| 2 | 5.416 |  |  |  |  |    |  |
| 2 | 5.574 |  |  |  |  |    |  |
| 2 | 6.155 |  |  |  |  |    |  |
| 2 | 6.894 |  |  |  |  |    |  |
| 2 | 7.250 |  |  |  |  |    |  |

## 6 PCB-1248

|   |       |  |  |  |  |    |  |
|---|-------|--|--|--|--|----|--|
| 1 | 4.204 |  |  |  |  | ND |  |
| 1 | 4.444 |  |  |  |  |    |  |
| 1 | 5.313 |  |  |  |  |    |  |
| 1 | 5.432 |  |  |  |  |    |  |
| 1 | 6.376 |  |  |  |  |    |  |
| 2 | 6.156 |  |  |  |  |    |  |
| 2 | 6.368 |  |  |  |  |    |  |
| 2 | 6.708 |  |  |  |  |    |  |
| 2 | 8.198 |  |  |  |  |    |  |
| 2 | 7.341 |  |  |  |  |    |  |

## 3 PCB-1242

|   |       |  |  |  |  |    |  |
|---|-------|--|--|--|--|----|--|
| 1 | 4.371 |  |  |  |  | ND |  |
| 1 | 4.443 |  |  |  |  |    |  |
| 1 | 4.858 |  |  |  |  |    |  |
| 1 | 4.970 |  |  |  |  |    |  |
| 1 | 5.431 |  |  |  |  |    |  |
| 2 | 5.414 |  |  |  |  |    |  |
| 2 | 5.712 |  |  |  |  |    |  |
| 2 | 6.153 |  |  |  |  |    |  |
| 2 | 6.365 |  |  |  |  |    |  |
| 2 | 6.906 |  |  |  |  |    |  |

## 7 PCB-1254

|   |       |  |  |  |  |    |  |
|---|-------|--|--|--|--|----|--|
| 1 | 5.361 |  |  |  |  | ND |  |
| 1 | 5.743 |  |  |  |  |    |  |
| 1 | 6.171 |  |  |  |  |    |  |
| 1 | 7.182 |  |  |  |  |    |  |
| 1 | 7.718 |  |  |  |  |    |  |
| 2 | 6.886 |  |  |  |  |    |  |
| 2 | 7.243 |  |  |  |  |    |  |
| 2 | 7.952 |  |  |  |  |    |  |
| 2 | 8.646 |  |  |  |  |    |  |
| 2 | 9.280 |  |  |  |  |    |  |

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng | OnCol Amt ng | Flags |
|-----|-----------|---------------|---------------|----------|------------|--------------|-------|
|-----|-----------|---------------|---------------|----------|------------|--------------|-------|

8 PCB-1260

|   |        |  |  |  |  |    |  |
|---|--------|--|--|--|--|----|--|
| 1 | 6.682  |  |  |  |  | ND |  |
| 1 | 7.721  |  |  |  |  |    |  |
| 1 | 8.441  |  |  |  |  |    |  |
| 1 | 9.033  |  |  |  |  |    |  |
| 1 | 9.515  |  |  |  |  |    |  |
| 2 | 9.271  |  |  |  |  |    |  |
| 2 | 9.604  |  |  |  |  |    |  |
| 2 | 9.756  |  |  |  |  |    |  |
| 2 | 10.230 |  |  |  |  |    |  |
| 2 | 10.624 |  |  |  |  |    |  |

9 PCB-1262

|   |        |  |  |  |  |    |  |
|---|--------|--|--|--|--|----|--|
| 1 | 7.416  |  |  |  |  | ND |  |
| 1 | 8.057  |  |  |  |  |    |  |
| 1 | 8.522  |  |  |  |  |    |  |
| 1 | 10.105 |  |  |  |  |    |  |
| 1 | 10.519 |  |  |  |  |    |  |
| 2 | 9.597  |  |  |  |  |    |  |
| 2 | 9.846  |  |  |  |  |    |  |
| 2 | 10.342 |  |  |  |  |    |  |
| 2 | 11.742 |  |  |  |  |    |  |
| 2 | 11.964 |  |  |  |  |    |  |

10 PCB-1268

|   |        |  |  |  |  |    |  |
|---|--------|--|--|--|--|----|--|
| 1 | 9.579  |  |  |  |  | ND |  |
| 1 | 9.647  |  |  |  |  |    |  |
| 1 | 9.955  |  |  |  |  |    |  |
| 1 | 10.939 |  |  |  |  |    |  |
| 2 | 11.149 |  |  |  |  |    |  |
| 2 | 11.216 |  |  |  |  |    |  |
| 2 | 11.571 |  |  |  |  |    |  |
| 2 | 12.395 |  |  |  |  |    |  |

\$ 11 DCB Decachlorobiphenyl (Surr)

|   |        |        |       |           |        |        |  |
|---|--------|--------|-------|-----------|--------|--------|--|
| 1 | 11.206 | 11.204 | 0.002 | 16498245H | 0.0200 | 0.0170 |  |
| 2 | 12.727 | 12.727 | 0.000 | 19365102H | 0.0200 | 0.0158 |  |

RPD = 7.55

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\O0510047.D

Injection Date: 12-May-2015 03:26:56

Instrument ID: CHGC8

Lims ID: MB 180-140927/1-A

Client ID:

Operator ID: 402360

ALS Bottle#: 48

Worklist Smp#: 48

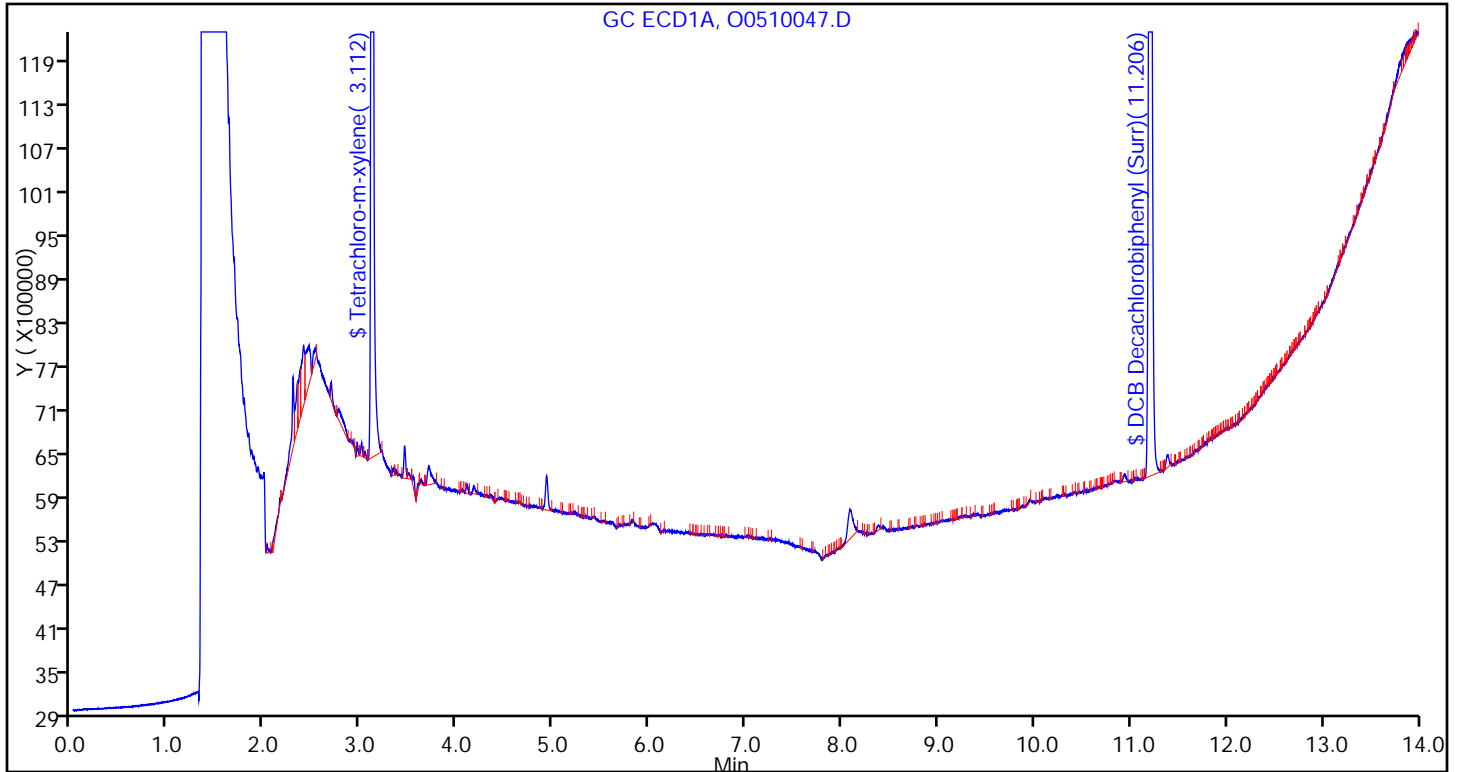
Injection Vol: 1.0 ul

Dil. Factor: 1.0000

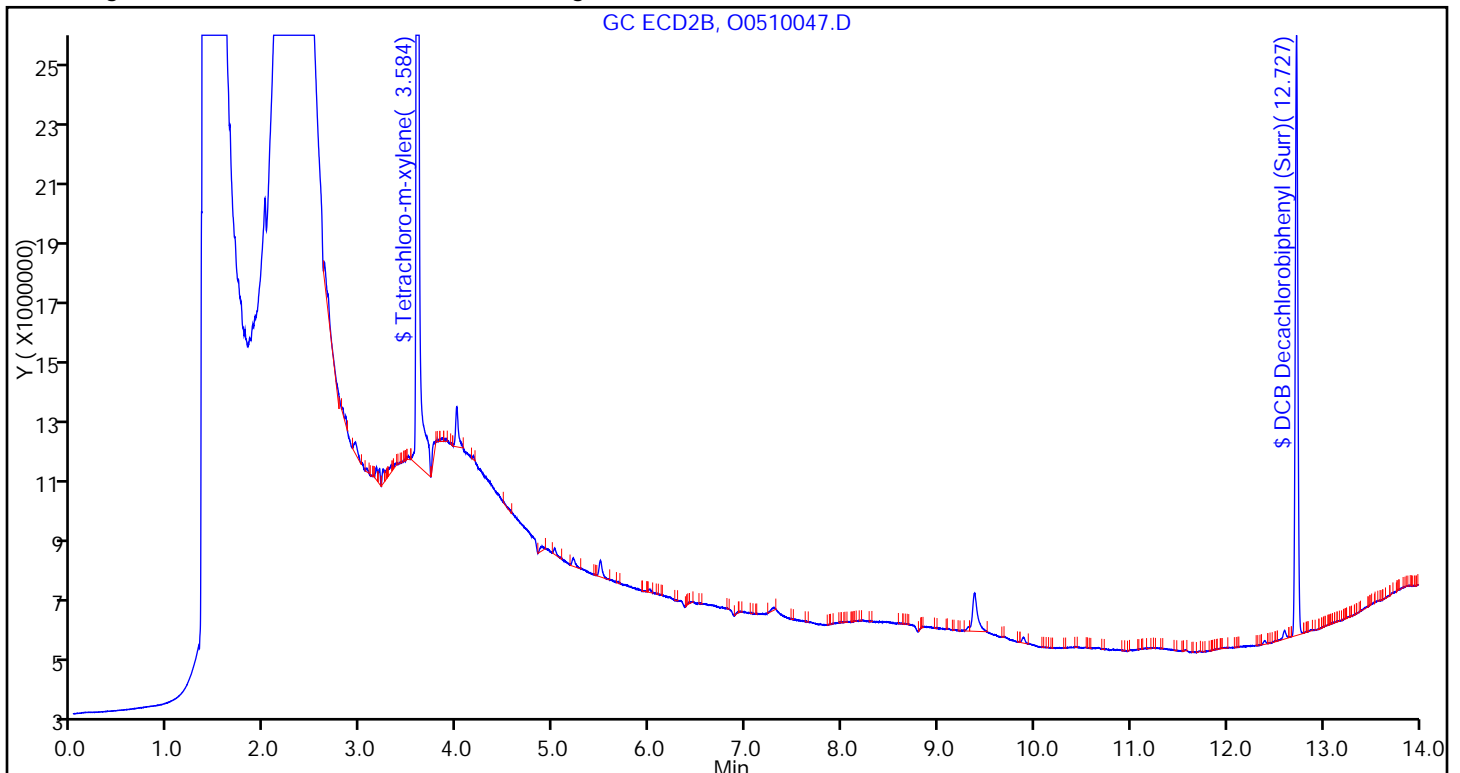
Method: PCB\_CHGC8DUAL

Limit Group: GCS 8082A ICAL

Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



FORM I  
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-43791-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: \_\_\_\_\_ Lab Sample ID: LCS 180-140927/2-A  
 Matrix: Water Lab File ID: O0510056.D  
 Analysis Method: 8082A Date Collected: \_\_\_\_\_  
 Extraction Method: 3510C Date Extracted: 05/07/2015 13:45  
 Sample wt/vol: 1000 (mL) Date Analyzed: 05/12/2015 06:25  
 Con. Extract Vol.: 1.0 (mL) Dilution Factor: 1  
 Injection Volume: 1 (uL) GC Column: RTX-CLP1 ID: 0.53 (mm)  
 % Moisture: \_\_\_\_\_ GPC Cleanup: (Y/N) N  
 Analysis Batch No.: 141160 Units: ug/L

| CAS NO.    | COMPOUND NAME | RESULT | Q | RL    | MDL    |
|------------|---------------|--------|---|-------|--------|
| 12674-11-2 | PCB-1016      | 0.937  |   | 0.010 | 0.0025 |
| 11096-82-5 | PCB-1260      | 0.877  |   | 0.010 | 0.0017 |

| CAS NO.   | SURROGATE                     | %REC | Q | LIMITS |
|-----------|-------------------------------|------|---|--------|
| 2051-24-3 | DCB Decachlorobiphenyl (Surr) | 99   |   | 43-138 |
| 877-09-8  | Tetrachloro-m-xylene (Surr)   | 106  |   | 34-137 |

TestAmerica Pittsburgh  
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\O0510056.D  
 Lims ID: LCS 180-140927/2-A  
 Client ID:  
 Sample Type: LCS  
 Inject. Date: 12-May-2015 06:25:22 ALS Bottle#: 57 Worklist Smp#: 57  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 180-0006866-057  
 Operator ID: 402360 Instrument ID: CHGC8  
 Method: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\PCB\_CHGC8DUAL.m  
 Limit Group: GCS 8082A ICAL  
 Last Update: 12-May-2015 16:54:58 Calib Date: 11-May-2015 18:31:22  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICal File: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\O0510020.D

Column 1 : Det: GC ECD1A  
 Column 2 : Det: GC ECD2B

Process Host: XAWRK022

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng | OnCol Amt ng | Flags |
|-----|-----------|---------------|---------------|----------|------------|--------------|-------|
|-----|-----------|---------------|---------------|----------|------------|--------------|-------|

\$ 1 Tetrachloro-m-xylene

|   |       |       |        |           |        |             |  |
|---|-------|-------|--------|-----------|--------|-------------|--|
| 1 | 3.110 | 3.110 | 0.000  | 48544138H | 0.0200 | 0.0212      |  |
| 2 | 3.582 | 3.583 | -0.001 | 75584251H | 0.0200 | 0.0188      |  |
|   |       |       |        |           |        | RPD = 12.06 |  |

4 PCB-1016

|                           |       |       |        |           |      |            |  |
|---------------------------|-------|-------|--------|-----------|------|------------|--|
| 1                         | 3.413 | 3.414 | -0.001 | 29207734H | 1.00 | 0.9105     |  |
| 1                         | 3.741 | 3.741 | 0.000  | 45652466H | 1.00 | 0.8769     |  |
| 1                         | 4.370 | 4.372 | -0.002 | 35024412H | 1.00 | 0.9459     |  |
| 1                         | 4.442 | 4.444 | -0.002 | 25428253H | 1.00 | 0.9750     |  |
| 1                         | 4.856 | 4.859 | -0.003 | 32924074H | 1.00 | 0.9789     |  |
| Average of Peak Amounts = |       |       |        |           |      | 0.9374     |  |
| 2                         | 5.414 | 5.416 | -0.002 | 49100093H | 1.00 | 0.8948     |  |
| 2                         | 5.572 | 5.574 | -0.002 | 35616460H | 1.00 | 0.8832     |  |
| 2                         | 6.152 | 6.155 | -0.003 | 45232316H | 1.00 | 0.8108     |  |
| 2                         | 6.891 | 6.894 | -0.003 | 31764001H | 1.00 | 0.8406     |  |
| 2                         | 7.246 | 7.250 | -0.004 | 25834961H | 1.00 | 0.8118     |  |
| Average of Peak Amounts = |       |       |        |           |      | 0.8482     |  |
|                           |       |       |        |           |      | RPD = 9.99 |  |

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng | OnCol Amt ng | Flags |
|-----|-----------|---------------|---------------|----------|------------|--------------|-------|
|-----|-----------|---------------|---------------|----------|------------|--------------|-------|

8 PCB-1260

|   |       |       |        |           |      |        |  |
|---|-------|-------|--------|-----------|------|--------|--|
| 1 | 6.679 | 6.682 | -0.003 | 52326764H | 1.00 | 0.8918 |  |
| 1 | 7.716 | 7.721 | -0.005 | 50485055H | 1.00 | 0.8917 |  |
| 1 | 8.437 | 8.441 | -0.004 | 43979129H | 1.00 | 0.8841 |  |
| 1 | 9.027 | 9.033 | -0.006 | 95780842H | 1.00 | 0.8788 |  |
| 1 | 9.512 | 9.515 | -0.003 | 48697670H | 1.00 | 0.8407 |  |

Average of Peak Amounts = 0.8774

|   |        |        |        |            |      |        |  |
|---|--------|--------|--------|------------|------|--------|--|
| 2 | 9.267  | 9.271  | -0.004 | 50638112H  | 1.00 | 0.7385 |  |
| 2 | 9.602  | 9.604  | -0.002 | 74722633H  | 1.00 | 0.7444 |  |
| 2 | 9.753  | 9.756  | -0.003 | 65319315H  | 1.00 | 0.7346 |  |
| 2 | 10.228 | 10.230 | -0.002 | 67912917H  | 1.00 | 0.7192 |  |
| 2 | 10.621 | 10.624 | -0.003 | 145720488H | 1.00 | 0.7858 |  |

Average of Peak Amounts = 0.7445

RPD = 16.39

\$ 11 DCB Decachlorobiphenyl (Surr)

|   |        |        |        |           |        |        |  |
|---|--------|--------|--------|-----------|--------|--------|--|
| 1 | 11.202 | 11.204 | -0.002 | 19318894H | 0.0200 | 0.0199 |  |
| 2 | 12.724 | 12.727 | -0.003 | 22351552H | 0.0200 | 0.0182 |  |

RPD = 8.99

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\O0510056.D

Injection Date: 12-May-2015 06:25:22 Instrument ID: CHGC8

Lims ID: LCS 180-140927/2-A

Client ID:

Operator ID: 402360

ALS Bottle#: 57

Worklist Smp#: 57

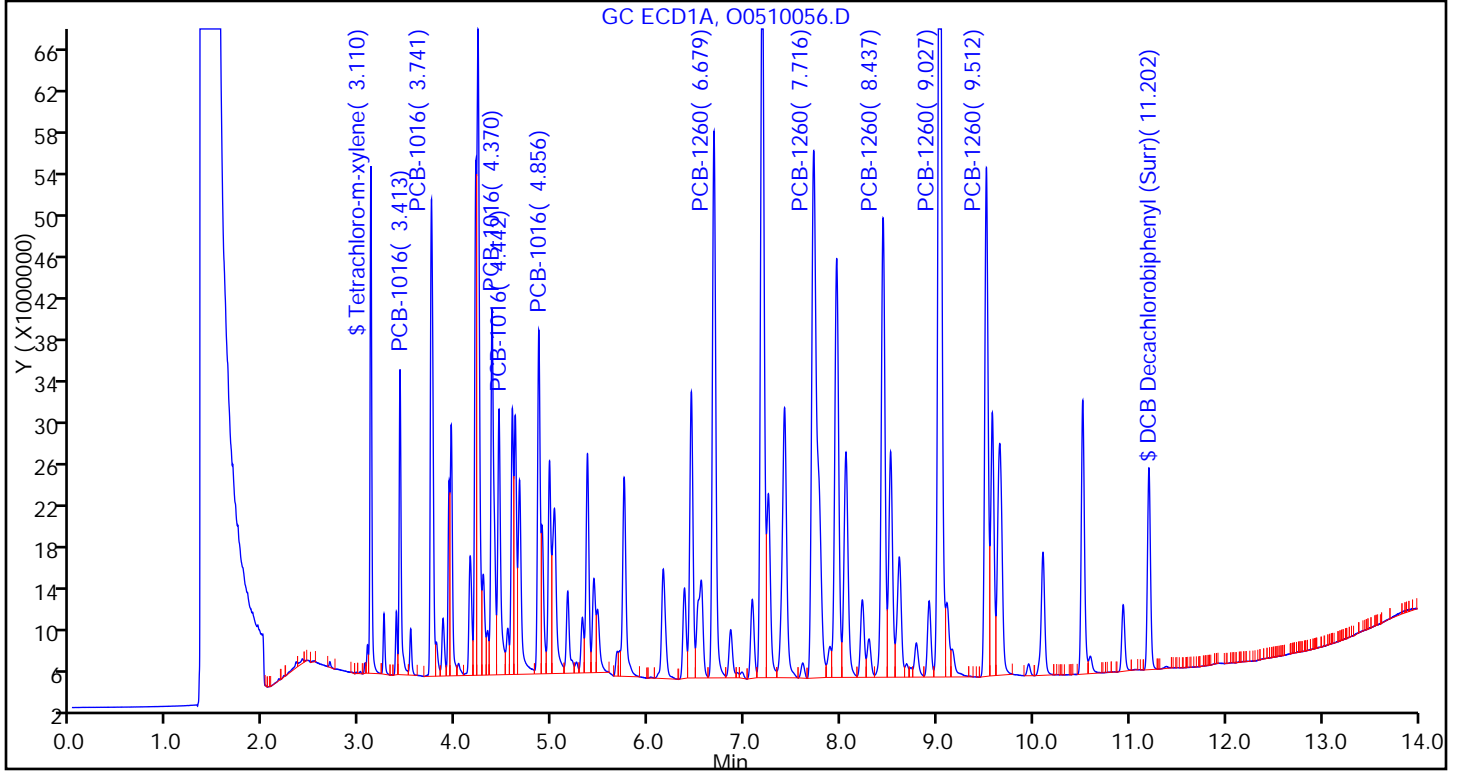
Injection Vol: 1.0 ul

Dil. Factor: 1.0000

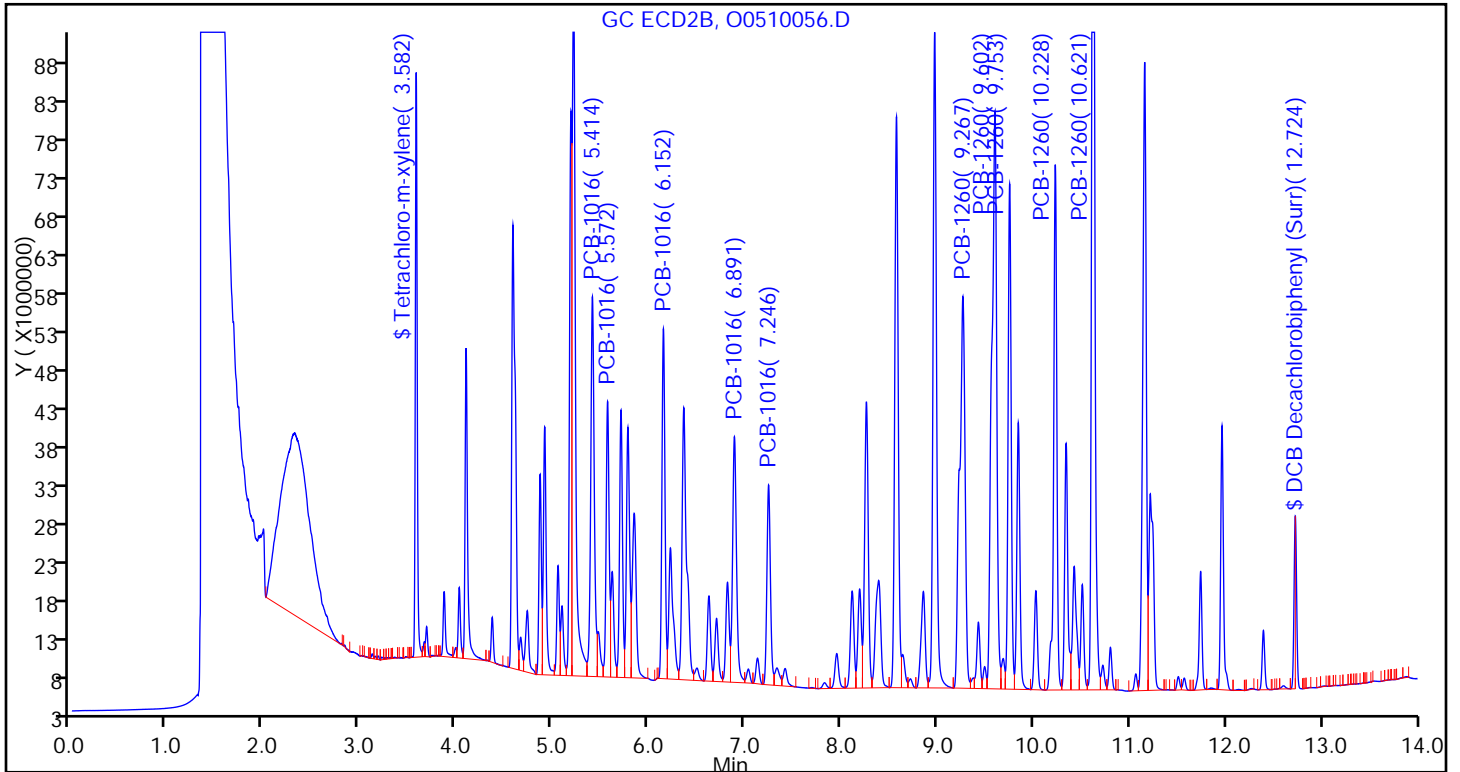
Method: PCB\_CHGC8DUAL

Limit Group: GCS 8082A ICAL

Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3





TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\O0510056.D

Injection Date: 12-May-2015 06:25:22

Instrument ID: CHGC8

Lims ID: LCS 180-140927/2-A

Client ID:

Operator ID: 402360

ALS Bottle#: 57

Worklist Smp#: 57

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

Method: PCB\_CHGC8DUAL

Limit Group: GCS 8082A ICAL

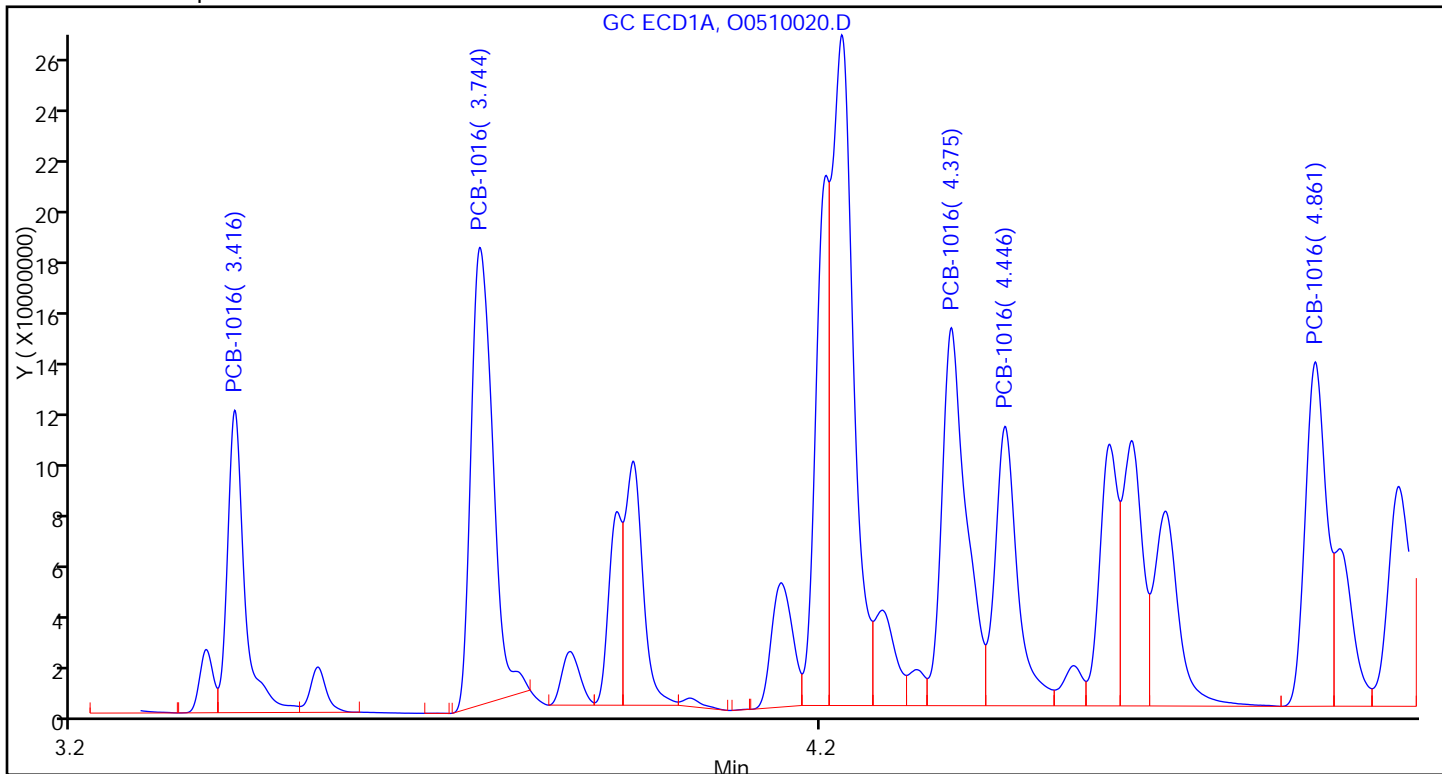
Column:

Detector

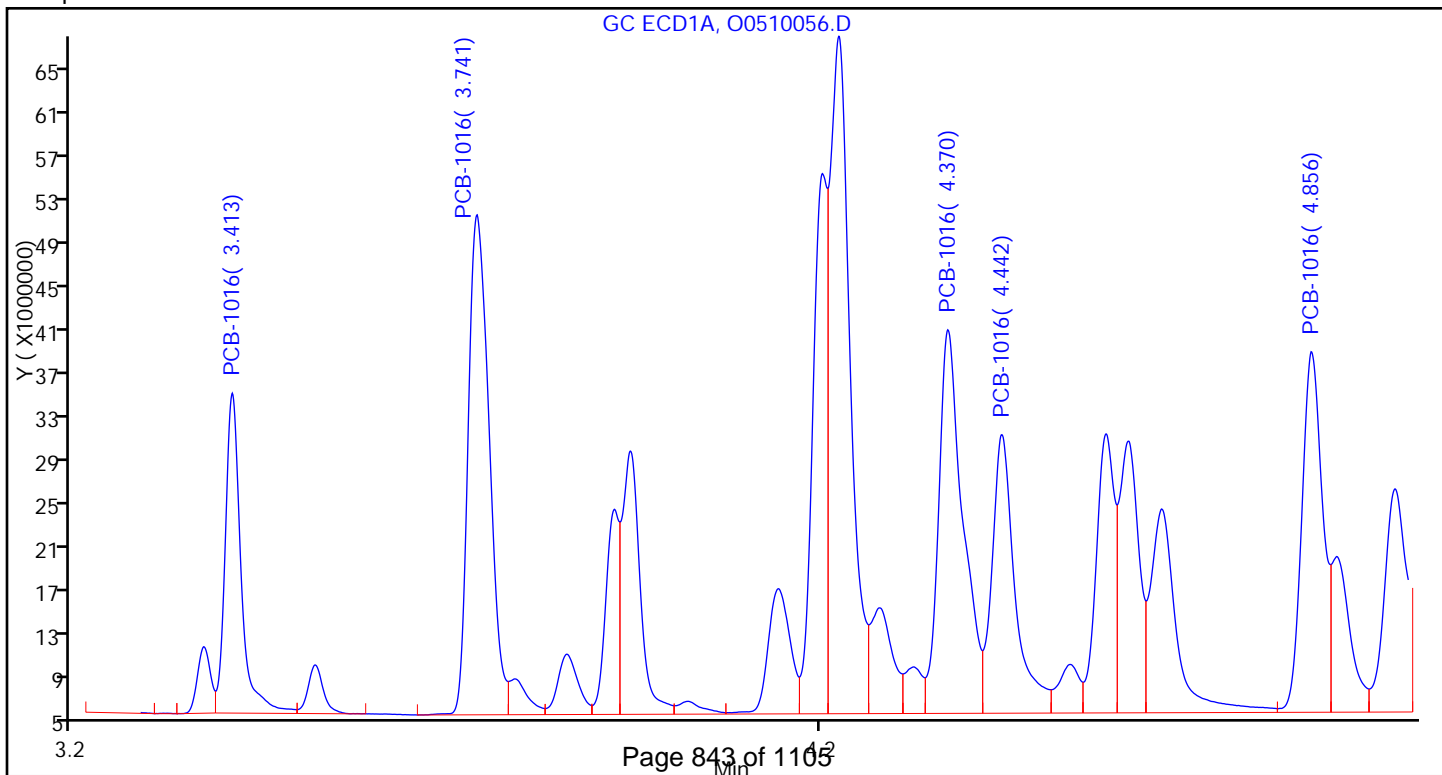
GC ECD1A

4 PCB-1016, CAS: 12674-11-2

Calibration Sample, Level: 7



Sample



TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\O0510056.D

Injection Date: 12-May-2015 06:25:22 Instrument ID: CHGC8

Lims ID: LCS 180-140927/2-A

Client ID:

Operator ID: 402360

ALS Bottle#: 57

Worklist Smp#: 57

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

Method: PCB\_CHGC8DUAL

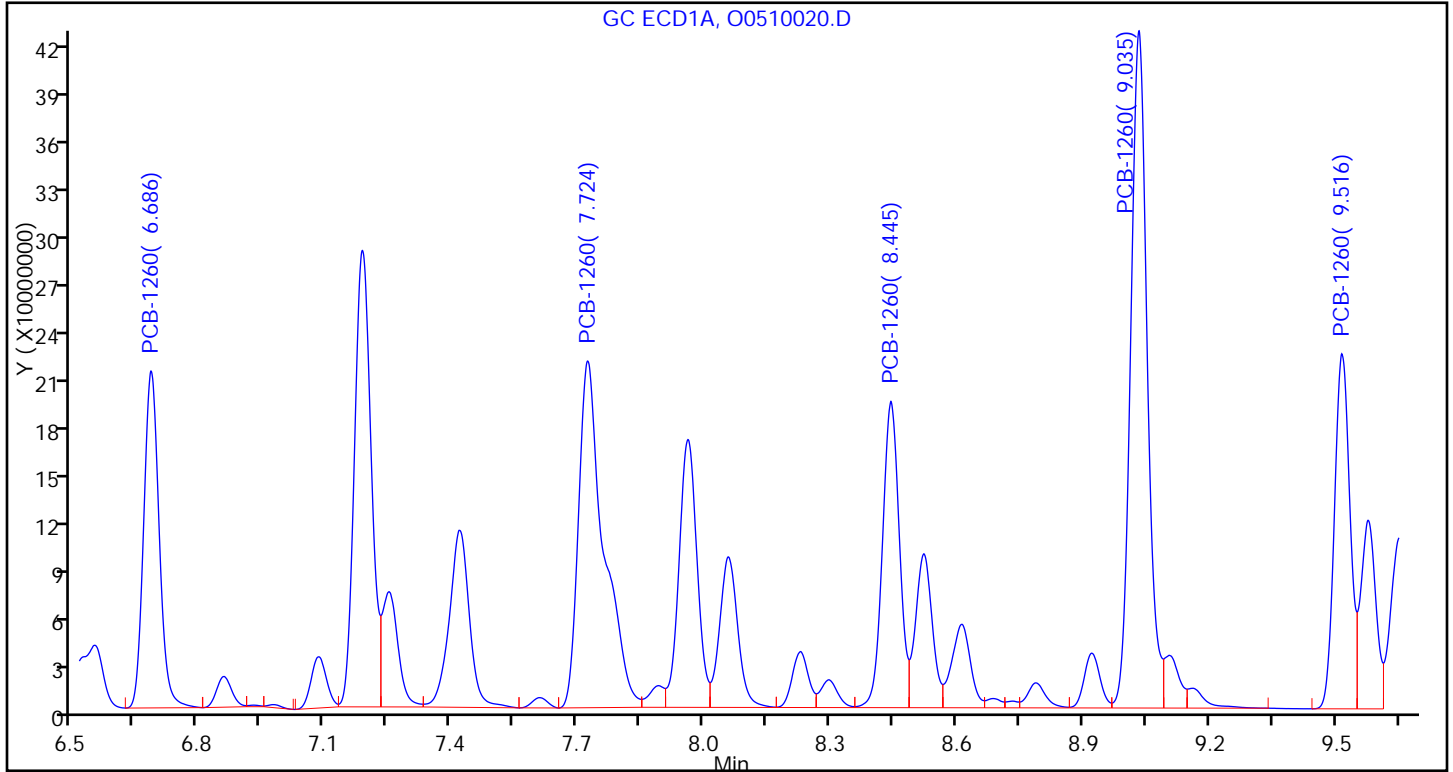
Limit Group: GCS 8082A ICAL

Column:

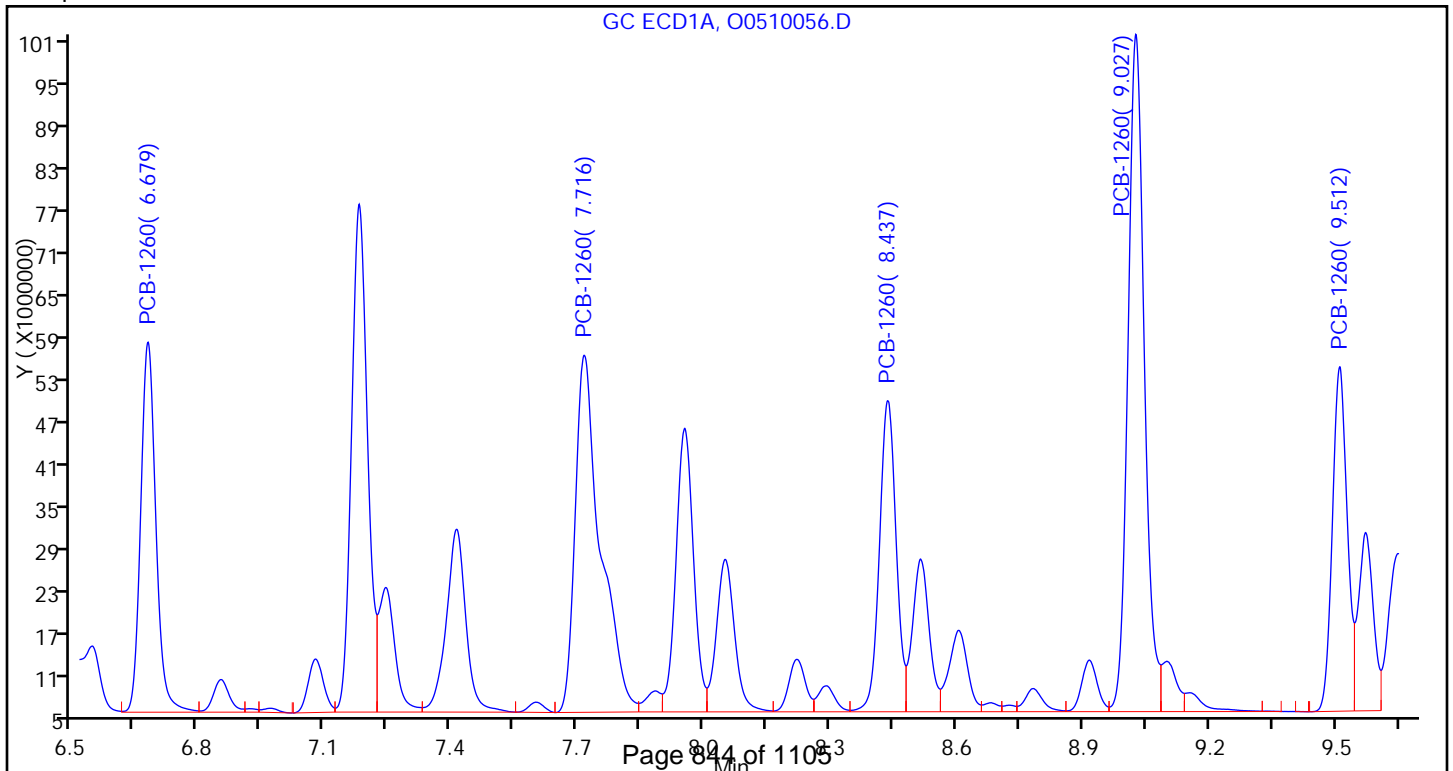
Detector GC ECD1A

8 PCB-1260, CAS: 11096-82-5

Calibration Sample, Level: 7



Sample



FORM I  
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-43791-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: \_\_\_\_\_ Lab Sample ID: LCS 180-140927/2-A  
 Matrix: Water Lab File ID: O0510056.D  
 Analysis Method: 8082A Date Collected: \_\_\_\_\_  
 Extraction Method: 3510C Date Extracted: 05/07/2015 13:45  
 Sample wt/vol: 1000 (mL) Date Analyzed: 05/12/2015 06:25  
 Con. Extract Vol.: 1.0 (mL) Dilution Factor: 1  
 Injection Volume: 1 (uL) GC Column: RTX-CLP2 ID: 0.53 (mm)  
 % Moisture: \_\_\_\_\_ GPC Cleanup: (Y/N) N  
 Analysis Batch No.: 141160 Units: ug/L

| CAS NO.   | SURROGATE                     | %REC | Q | LIMITS |
|-----------|-------------------------------|------|---|--------|
| 2051-24-3 | DCB Decachlorobiphenyl (Surr) | 91   |   | 43-138 |
| 877-09-8  | Tetrachloro-m-xylene (Surr)   | 94   |   | 34-137 |

TestAmerica Pittsburgh  
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\O0510056.D  
 Lims ID: LCS 180-140927/2-A  
 Client ID:  
 Sample Type: LCS  
 Inject. Date: 12-May-2015 06:25:22 ALS Bottle#: 57 Worklist Smp#: 57  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 180-0006866-057  
 Operator ID: 402360 Instrument ID: CHGC8  
 Method: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\PCB\_CHGC8DUAL.m  
 Limit Group: GCS 8082A ICAL  
 Last Update: 12-May-2015 16:54:58 Calib Date: 11-May-2015 18:31:22  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICal File: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\O0510020.D

Column 1 : Det: GC ECD1A  
 Column 2 : Det: GC ECD2B

Process Host: XAWRK022

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng | OnCol Amt ng | Flags |
|-----|-----------|---------------|---------------|----------|------------|--------------|-------|
|-----|-----------|---------------|---------------|----------|------------|--------------|-------|

\$ 1 Tetrachloro-m-xylene

|   |       |       |        |           |        |             |  |
|---|-------|-------|--------|-----------|--------|-------------|--|
| 1 | 3.110 | 3.110 | 0.000  | 48544138H | 0.0200 | 0.0212      |  |
| 2 | 3.582 | 3.583 | -0.001 | 75584251H | 0.0200 | 0.0188      |  |
|   |       |       |        |           |        | RPD = 12.06 |  |

4 PCB-1016

|                           |       |       |        |           |      |            |  |
|---------------------------|-------|-------|--------|-----------|------|------------|--|
| 1                         | 3.413 | 3.414 | -0.001 | 29207734H | 1.00 | 0.9105     |  |
| 1                         | 3.741 | 3.741 | 0.000  | 45652466H | 1.00 | 0.8769     |  |
| 1                         | 4.370 | 4.372 | -0.002 | 35024412H | 1.00 | 0.9459     |  |
| 1                         | 4.442 | 4.444 | -0.002 | 25428253H | 1.00 | 0.9750     |  |
| 1                         | 4.856 | 4.859 | -0.003 | 32924074H | 1.00 | 0.9789     |  |
| Average of Peak Amounts = |       |       |        |           |      | 0.9374     |  |
| 2                         | 5.414 | 5.416 | -0.002 | 49100093H | 1.00 | 0.8948     |  |
| 2                         | 5.572 | 5.574 | -0.002 | 35616460H | 1.00 | 0.8832     |  |
| 2                         | 6.152 | 6.155 | -0.003 | 45232316H | 1.00 | 0.8108     |  |
| 2                         | 6.891 | 6.894 | -0.003 | 31764001H | 1.00 | 0.8406     |  |
| 2                         | 7.246 | 7.250 | -0.004 | 25834961H | 1.00 | 0.8118     |  |
| Average of Peak Amounts = |       |       |        |           |      | 0.8482     |  |
|                           |       |       |        |           |      | RPD = 9.99 |  |

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng | OnCol Amt ng | Flags |
|-----|-----------|---------------|---------------|----------|------------|--------------|-------|
|-----|-----------|---------------|---------------|----------|------------|--------------|-------|

8 PCB-1260

|   |       |       |        |           |      |        |  |
|---|-------|-------|--------|-----------|------|--------|--|
| 1 | 6.679 | 6.682 | -0.003 | 52326764H | 1.00 | 0.8918 |  |
| 1 | 7.716 | 7.721 | -0.005 | 50485055H | 1.00 | 0.8917 |  |
| 1 | 8.437 | 8.441 | -0.004 | 43979129H | 1.00 | 0.8841 |  |
| 1 | 9.027 | 9.033 | -0.006 | 95780842H | 1.00 | 0.8788 |  |
| 1 | 9.512 | 9.515 | -0.003 | 48697670H | 1.00 | 0.8407 |  |

Average of Peak Amounts = 0.8774

|   |        |        |        |            |      |        |  |
|---|--------|--------|--------|------------|------|--------|--|
| 2 | 9.267  | 9.271  | -0.004 | 50638112H  | 1.00 | 0.7385 |  |
| 2 | 9.602  | 9.604  | -0.002 | 74722633H  | 1.00 | 0.7444 |  |
| 2 | 9.753  | 9.756  | -0.003 | 65319315H  | 1.00 | 0.7346 |  |
| 2 | 10.228 | 10.230 | -0.002 | 67912917H  | 1.00 | 0.7192 |  |
| 2 | 10.621 | 10.624 | -0.003 | 145720488H | 1.00 | 0.7858 |  |

Average of Peak Amounts = 0.7445

RPD = 16.39

\$ 11 DCB Decachlorobiphenyl (Surr)

|   |        |        |        |           |        |        |  |
|---|--------|--------|--------|-----------|--------|--------|--|
| 1 | 11.202 | 11.204 | -0.002 | 19318894H | 0.0200 | 0.0199 |  |
| 2 | 12.724 | 12.727 | -0.003 | 22351552H | 0.0200 | 0.0182 |  |

RPD = 8.99

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\O0510056.D

Injection Date: 12-May-2015 06:25:22 Instrument ID: CHGC8

Lims ID: LCS 180-140927/2-A

Client ID:

Operator ID: 402360

ALS Bottle#: 57

Worklist Smp#: 57

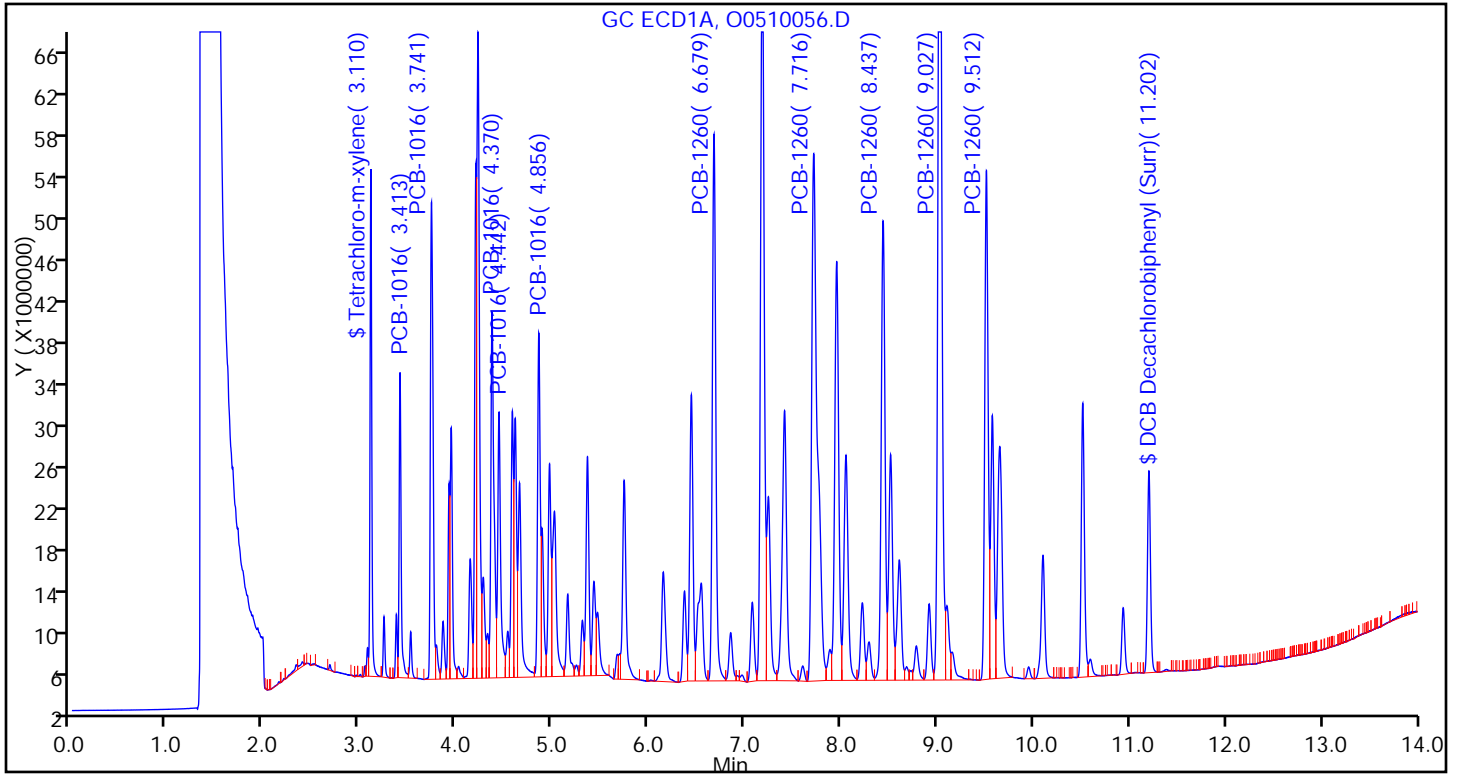
Injection Vol: 1.0 ul

Dil. Factor: 1.0000

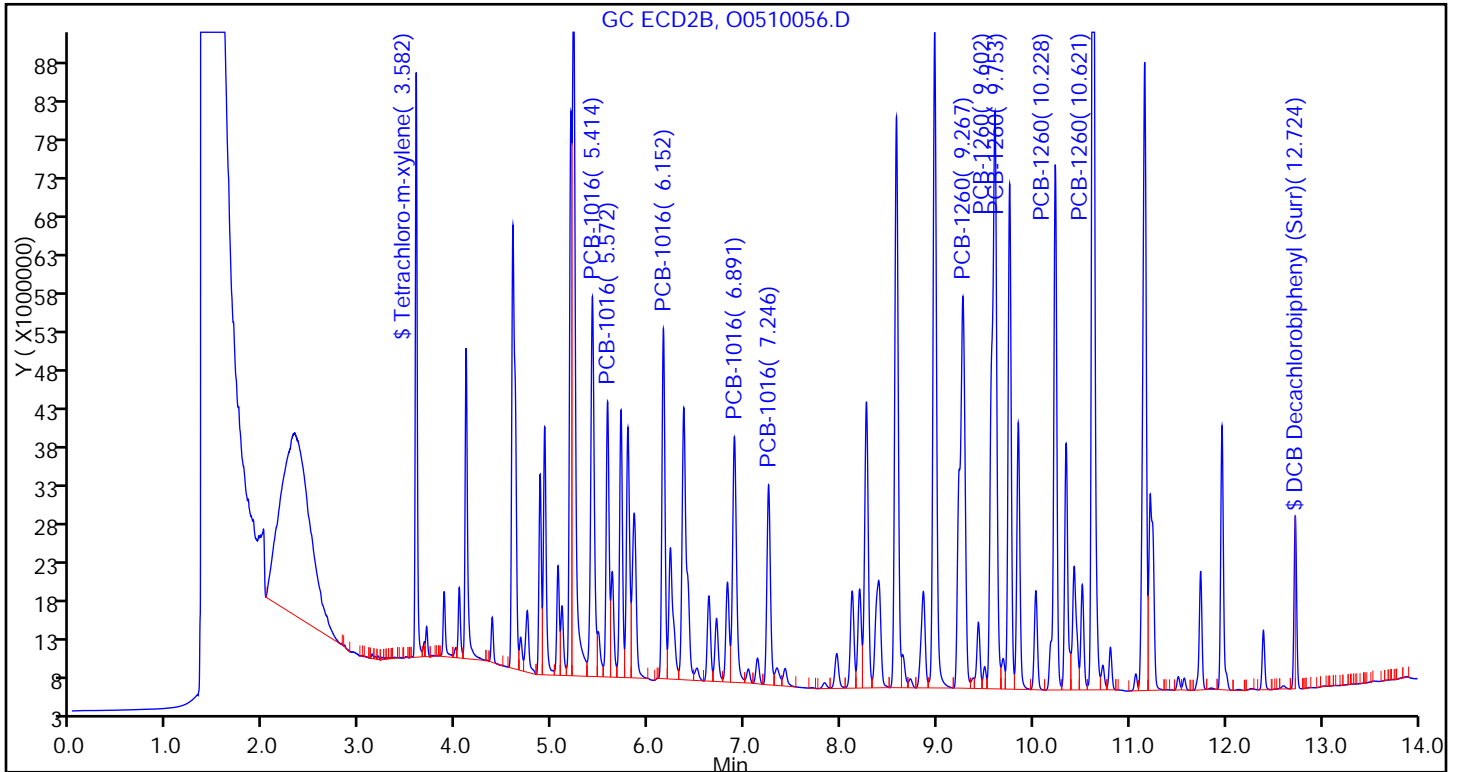
Method: PCB\_CHGC8DUAL

Limit Group: GCS 8082A ICAL

Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\O0510056.D

Injection Date: 12-May-2015 06:25:22

Instrument ID: CHGC8

Lims ID: LCS 180-140927/2-A

Client ID:

Operator ID: 402360

ALS Bottle#: 57

Worklist Smp#: 57

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

Method: PCB\_CHGC8DUAL

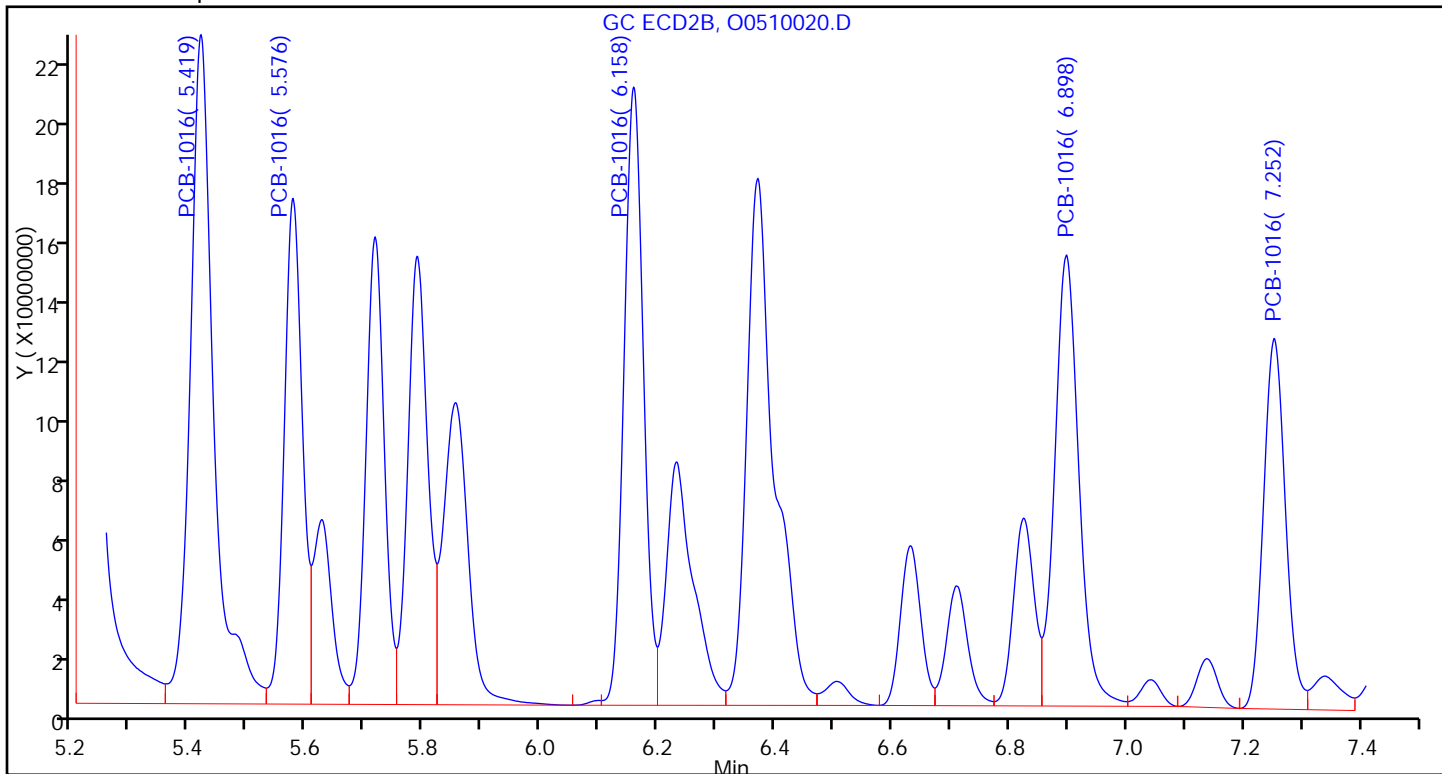
Limit Group: GCS 8082A ICAL

Column:

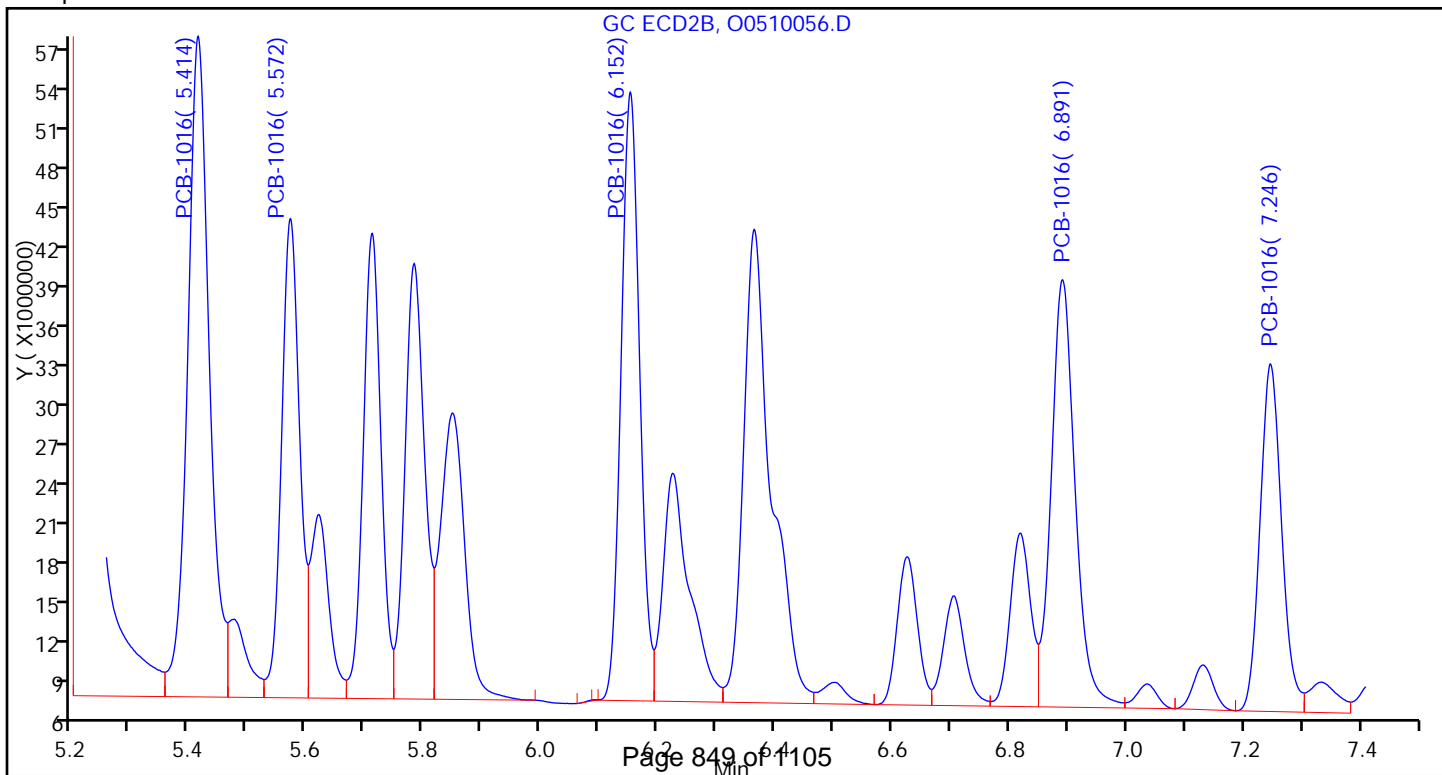
Detector GC ECD2B

4 PCB-1016, CAS: 12674-11-2

Calibration Sample, Level: 7



Sample



TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\O0510056.D

Injection Date: 12-May-2015 06:25:22

Instrument ID: CHGC8

Lims ID: LCS 180-140927/2-A

Client ID:

Operator ID: 402360

ALS Bottle#: 57

Worklist Smp#: 57

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

Method: PCB\_CHGC8DUAL

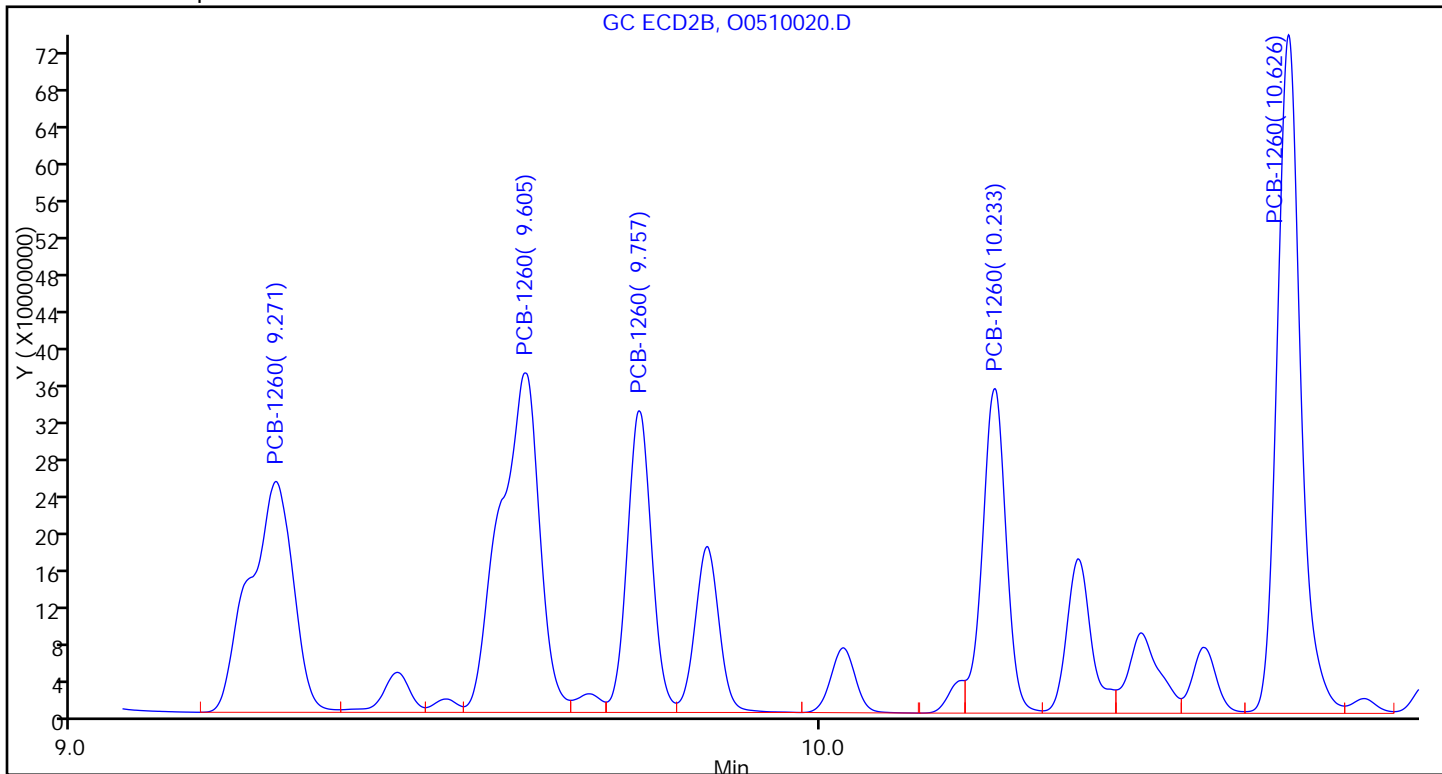
Limit Group: GCS 8082A ICAL

Column:

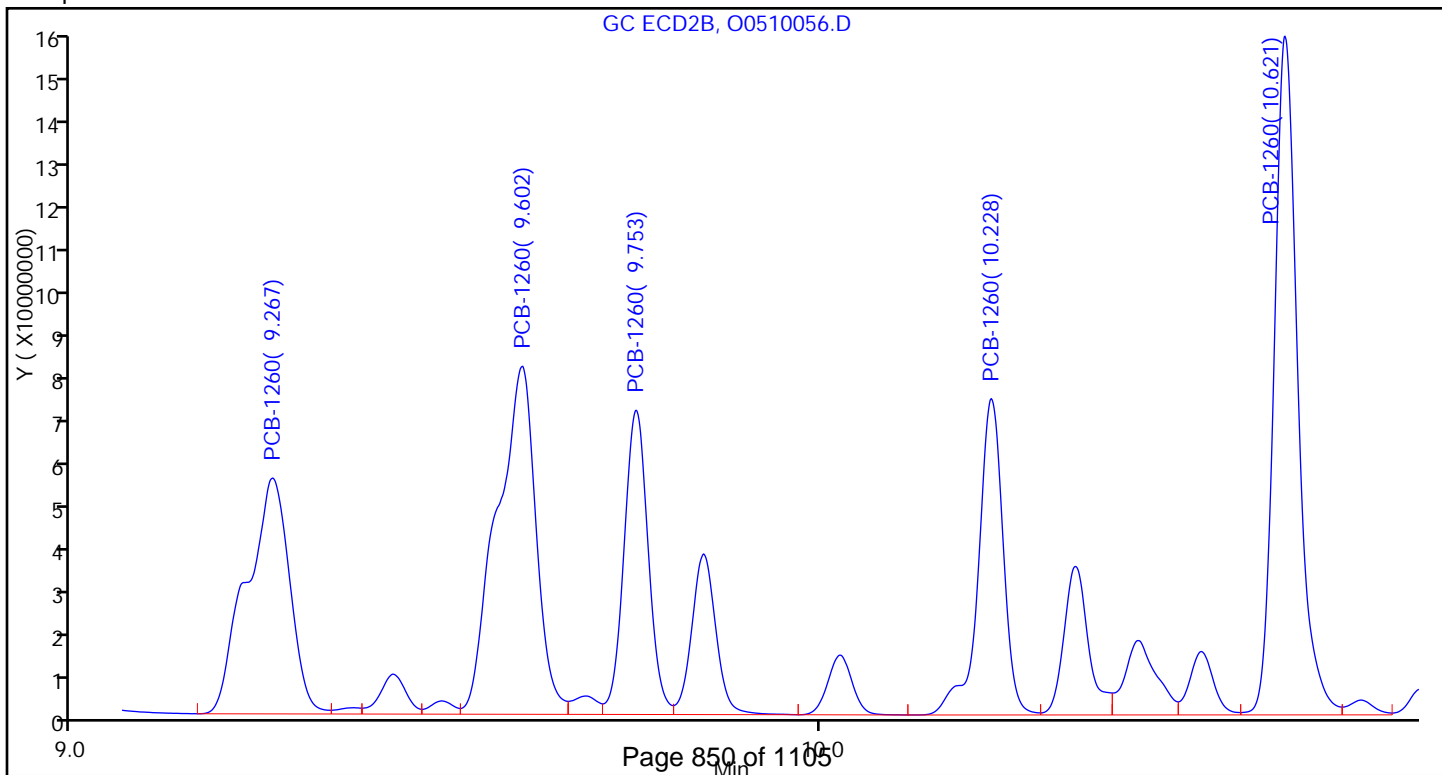
Detector: GC ECD2B

8 PCB-1260, CAS: 11096-82-5

Calibration Sample, Level: 7



Sample





FORM I  
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-43791-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: \_\_\_\_\_ Lab Sample ID: LCSD 180-140927/3-A  
 Matrix: Water Lab File ID: O0510057.D  
 Analysis Method: 8082A Date Collected: \_\_\_\_\_  
 Extraction Method: 3510C Date Extracted: 05/07/2015 13:45  
 Sample wt/vol: 1000 (mL) Date Analyzed: 05/12/2015 06:45  
 Con. Extract Vol.: 1.0 (mL) Dilution Factor: 1  
 Injection Volume: 1 (uL) GC Column: RTX-CLP1 ID: 0.53 (mm)  
 % Moisture: \_\_\_\_\_ GPC Cleanup: (Y/N) N  
 Analysis Batch No.: 141160 Units: ug/L

| CAS NO.    | COMPOUND NAME | RESULT | Q | RL    | MDL    |
|------------|---------------|--------|---|-------|--------|
| 11096-82-5 | PCB-1260      | 0.962  |   | 0.010 | 0.0017 |

| CAS NO.   | SURROGATE                     | %REC | Q | LIMITS |
|-----------|-------------------------------|------|---|--------|
| 2051-24-3 | DCB Decachlorobiphenyl (Surr) | 102  |   | 43-138 |
| 877-09-8  | Tetrachloro-m-xylene (Surr)   | 96   |   | 34-137 |

TestAmerica Pittsburgh  
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\O0510057.D  
 Lims ID: LCSD 180-140927/3-A  
 Client ID:  
 Sample Type: LCSD  
 Inject. Date: 12-May-2015 06:45:12 ALS Bottle#: 58 Worklist Smp#: 58  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 180-0006866-058  
 Operator ID: 402360 Instrument ID: CHGC8  
 Method: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\PCB\_CHGC8DUAL.m  
 Limit Group: GCS 8082A ICAL  
 Last Update: 12-May-2015 16:54:58 Calib Date: 11-May-2015 18:31:22  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICal File: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\O0510020.D

Column 1 : Det: GC ECD1A  
 Column 2 : Det: GC ECD2B  
 Process Host: XAWRK022

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng | OnCol Amt ng | Flags |
|-----|-----------|---------------|---------------|----------|------------|--------------|-------|
|-----|-----------|---------------|---------------|----------|------------|--------------|-------|

\$ 1 Tetrachloro-m-xylene

|   |       |       |        |           |        |            |  |
|---|-------|-------|--------|-----------|--------|------------|--|
| 1 | 3.109 | 3.110 | -0.001 | 44141344H | 0.0200 | 0.0193     |  |
| 2 | 3.582 | 3.583 | -0.001 | 76844086H | 0.0200 | 0.0191     |  |
|   |       |       |        |           |        | RPD = 0.89 |  |

4 PCB-1016

|                           |       |       |        |           |      |            |  |
|---------------------------|-------|-------|--------|-----------|------|------------|--|
| 1                         | 3.413 | 3.414 | -0.001 | 28609477H | 1.00 | 0.8918     |  |
| 1                         | 3.740 | 3.741 | -0.001 | 45389203H | 1.00 | 0.8719     |  |
| 1                         | 4.370 | 4.372 | -0.002 | 36457020H | 1.00 | 0.9846     |  |
| 1                         | 4.443 | 4.444 | -0.001 | 26350554H | 1.00 | 1.01       |  |
| 1                         | 4.856 | 4.859 | -0.003 | 34192714H | 1.00 | 1.02       |  |
| Average of Peak Amounts = |       |       |        |           |      | 0.9550     |  |
| 2                         | 5.415 | 5.416 | -0.001 | 54476820H | 1.00 | 0.99       |  |
| 2                         | 5.572 | 5.574 | -0.002 | 40471057H | 1.00 | 1.00       |  |
| 2                         | 6.153 | 6.155 | -0.002 | 52589746H | 1.00 | 0.9427     |  |
| 2                         | 6.892 | 6.894 | -0.002 | 37759500H | 1.00 | 1.00       |  |
| 2                         | 7.247 | 7.250 | -0.003 | 31552297H | 1.00 | 0.99       |  |
| Average of Peak Amounts = |       |       |        |           |      | 0.9860     |  |
|                           |       |       |        |           |      | RPD = 3.19 |  |

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng | OnCol Amt ng | Flags |
|-----|-----------|---------------|---------------|----------|------------|--------------|-------|
|-----|-----------|---------------|---------------|----------|------------|--------------|-------|

8 PCB-1260

|   |       |       |        |            |      |        |  |
|---|-------|-------|--------|------------|------|--------|--|
| 1 | 6.679 | 6.682 | -0.003 | 56454316H  | 1.00 | 0.9621 |  |
| 1 | 7.716 | 7.721 | -0.005 | 55168761H  | 1.00 | 0.9744 |  |
| 1 | 8.439 | 8.441 | -0.002 | 48077298H  | 1.00 | 0.9665 |  |
| 1 | 9.028 | 9.033 | -0.005 | 106504685H | 1.00 | 0.9772 |  |
| 1 | 9.512 | 9.515 | -0.003 | 53746343H  | 1.00 | 0.9279 |  |

Average of Peak Amounts = 0.9616

|   |        |        |        |            |      |        |  |
|---|--------|--------|--------|------------|------|--------|--|
| 2 | 9.268  | 9.271  | -0.003 | 61118758H  | 1.00 | 0.8913 |  |
| 2 | 9.600  | 9.604  | -0.004 | 88329782H  | 1.00 | 0.8800 |  |
| 2 | 9.754  | 9.756  | -0.002 | 76751181H  | 1.00 | 0.8631 |  |
| 2 | 10.228 | 10.230 | -0.002 | 78424545H  | 1.00 | 0.8305 |  |
| 2 | 10.621 | 10.624 | -0.003 | 162774040H | 1.00 | 0.8777 |  |

Average of Peak Amounts = 0.8685

RPD = 10.17

\$ 11 DCB Decachlorobiphenyl (Surr)

|   |        |        |        |           |        |        |  |
|---|--------|--------|--------|-----------|--------|--------|--|
| 1 | 11.202 | 11.204 | -0.002 | 19834387H | 0.0200 | 0.0204 |  |
| 2 | 12.724 | 12.727 | -0.003 | 22641251H | 0.0200 | 0.0184 |  |

RPD = 10.33

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\O0510057.D

Injection Date: 12-May-2015 06:45:12 Instrument ID: CHGC8

Lims ID: LCSD 180-140927/3-A

Client ID:

Operator ID: 402360

ALS Bottle#: 58

Worklist Smp#: 58

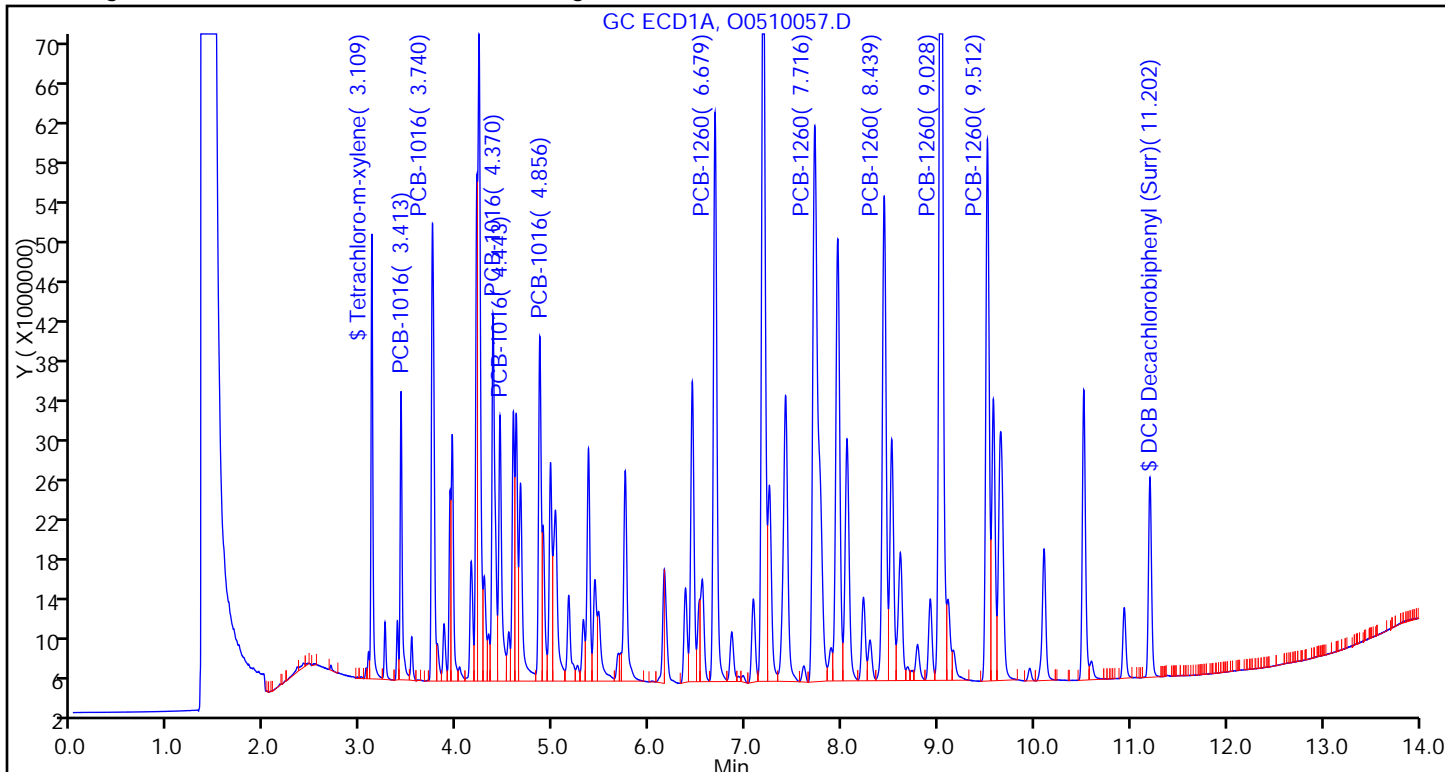
Injection Vol: 1.0 ul

Dil. Factor: 1.0000

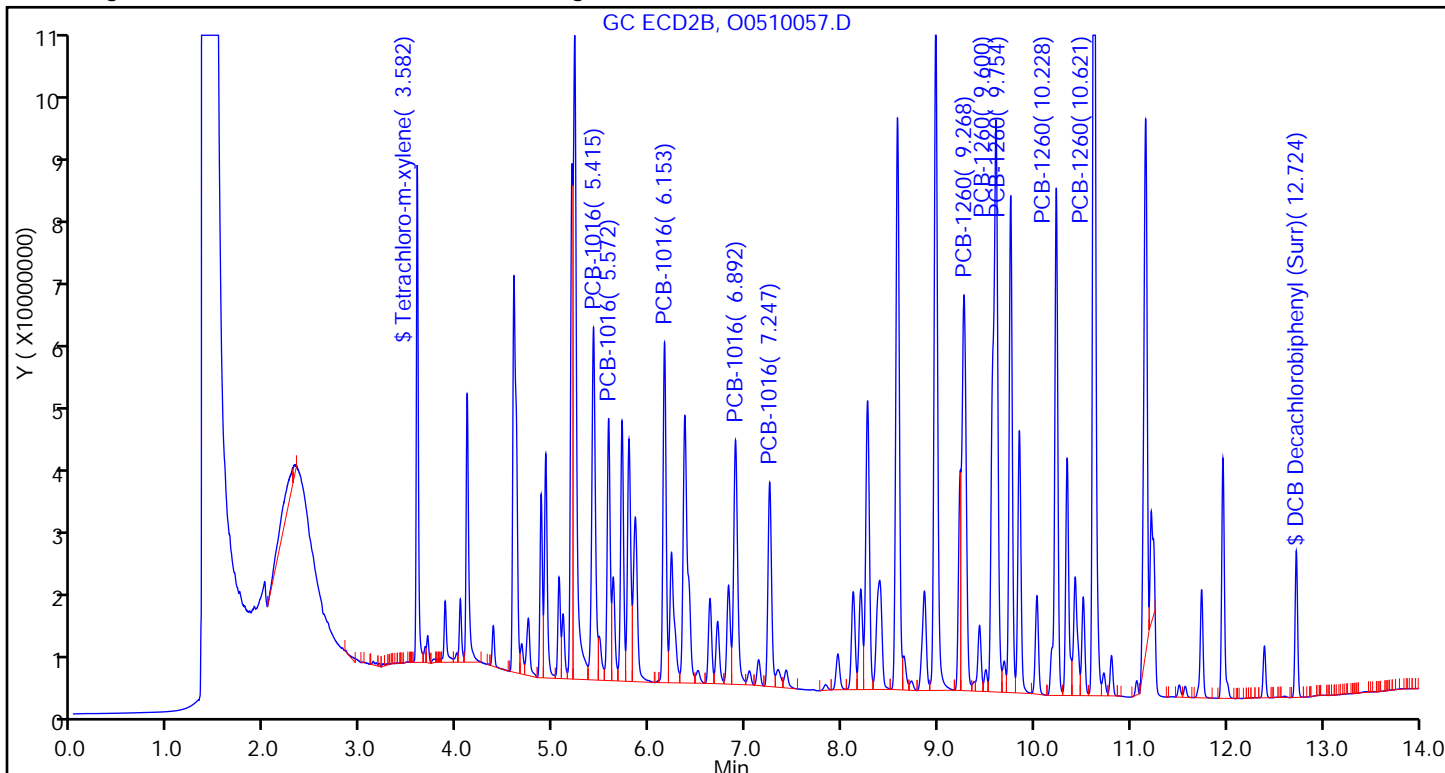
Method: PCB\_CHGC8DUAL

Limit Group: GCS 8082A ICAL

Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\O0510057.D

Injection Date: 12-May-2015 06:45:12 Instrument ID: CHGC8

Lims ID: LCSD 180-140927/3-A

Client ID:

Operator ID: 402360

ALS Bottle#: 58

Worklist Smp#: 58

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

Method: PCB\_CHGC8DUAL

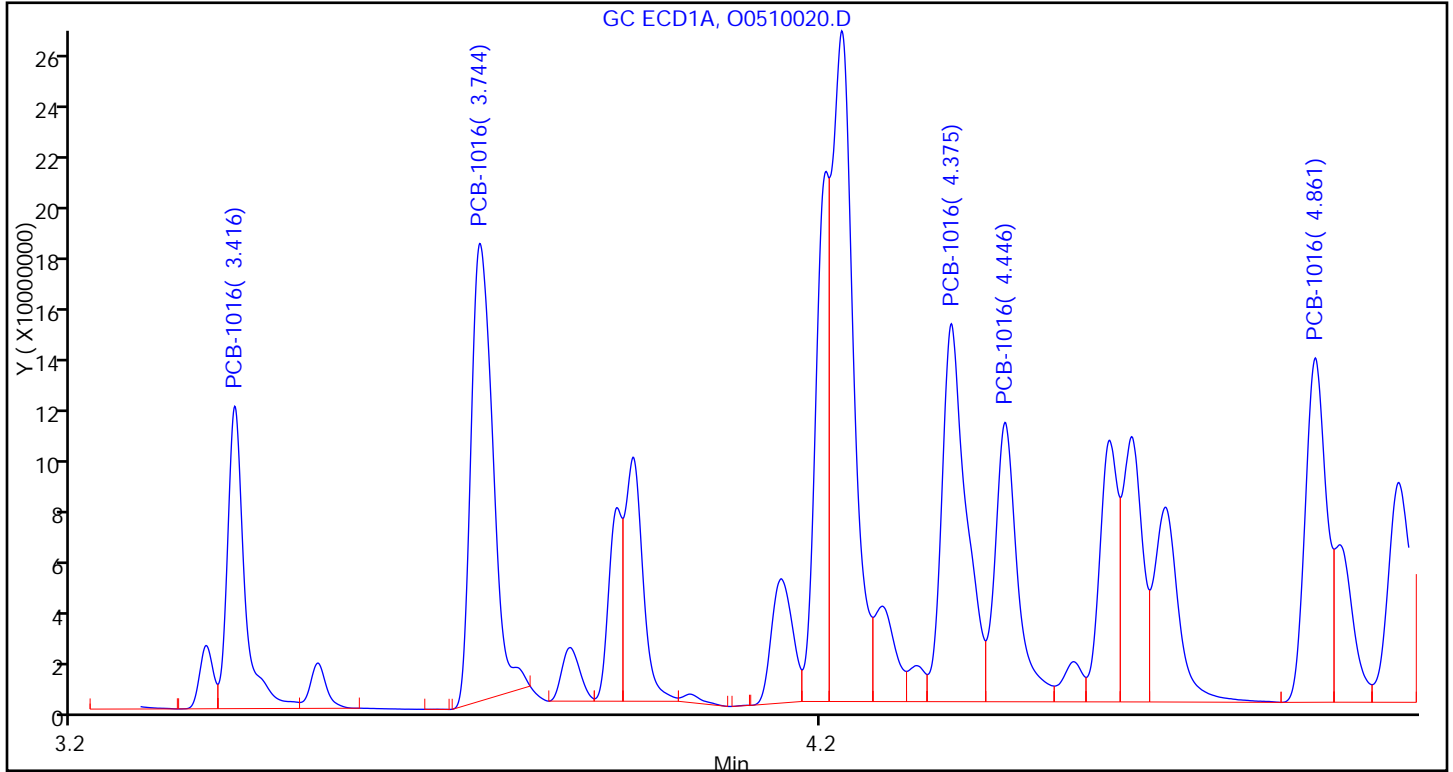
Limit Group: GCS 8082A ICAL

Column:

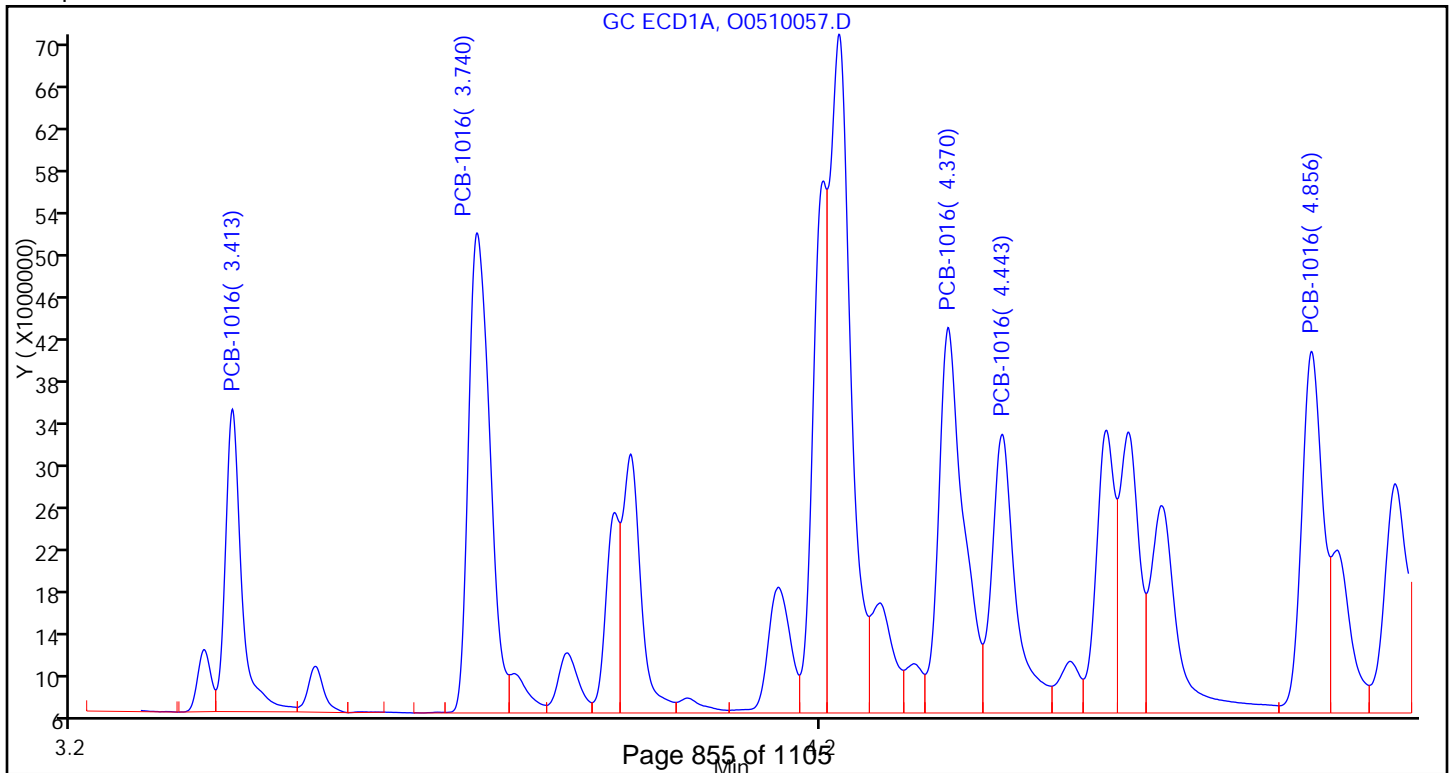
Detector GC ECD1A

4 PCB-1016, CAS: 12674-11-2

Calibration Sample, Level: 7



Sample



TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\O0510057.D

Injection Date: 12-May-2015 06:45:12 Instrument ID: CHGC8

Lims ID: LCSD 180-140927/3-A

Client ID:

Operator ID: 402360

ALS Bottle#: 58

Worklist Smp#: 58

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

Method: PCB\_CHGC8DUAL

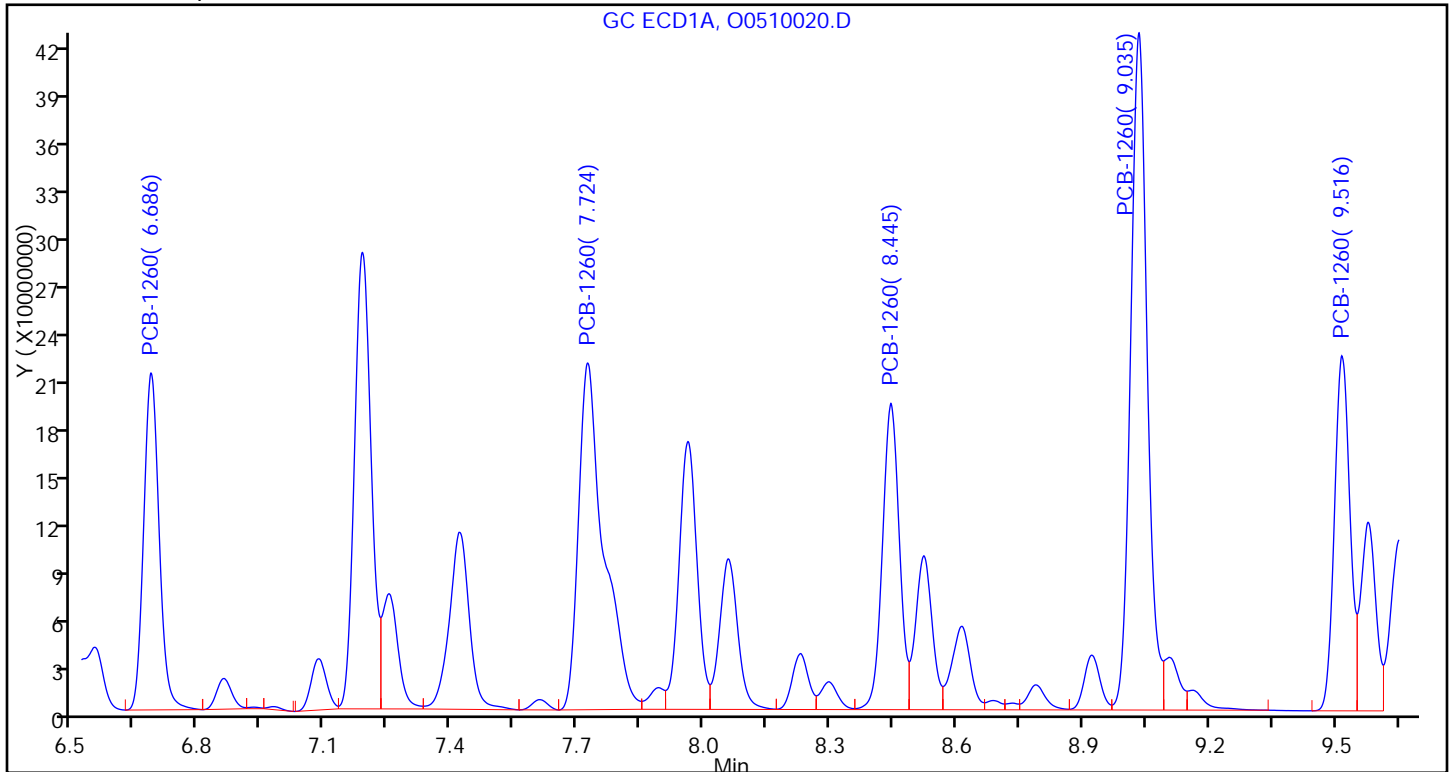
Limit Group: GCS 8082A ICAL

Column:

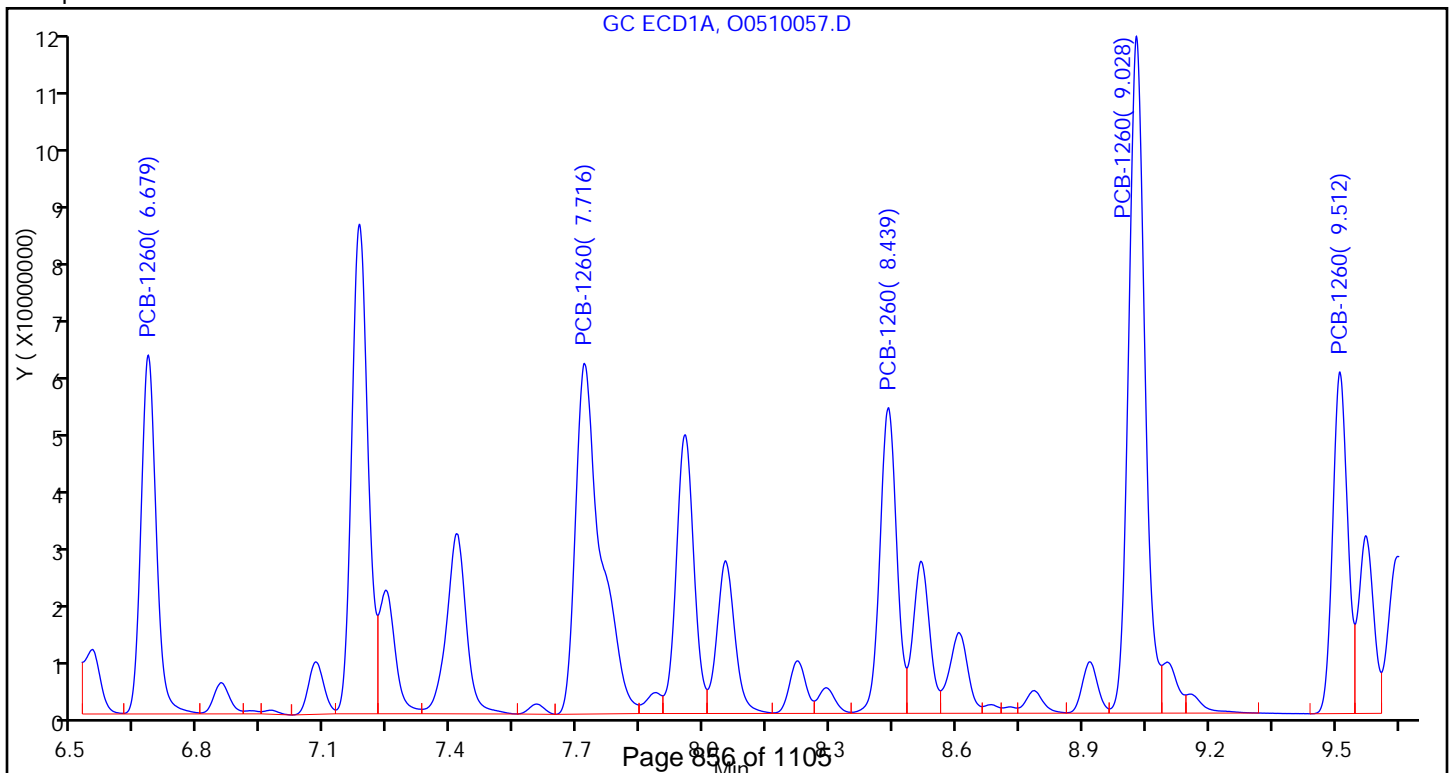
Detector: GC ECD1A

8 PCB-1260, CAS: 11096-82-5

Calibration Sample, Level: 7



Sample



FORM I  
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-43791-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: \_\_\_\_\_ Lab Sample ID: LCSD 180-140927/3-A  
 Matrix: Water Lab File ID: O0510057.D  
 Analysis Method: 8082A Date Collected: \_\_\_\_\_  
 Extraction Method: 3510C Date Extracted: 05/07/2015 13:45  
 Sample wt/vol: 1000 (mL) Date Analyzed: 05/12/2015 06:45  
 Con. Extract Vol.: 1.0 (mL) Dilution Factor: 1  
 Injection Volume: 1 (uL) GC Column: RTX-CLP2 ID: 0.53 (mm)  
 % Moisture: \_\_\_\_\_ GPC Cleanup: (Y/N) N  
 Analysis Batch No.: 141160 Units: ug/L

| CAS NO.    | COMPOUND NAME | RESULT | Q | RL    | MDL    |
|------------|---------------|--------|---|-------|--------|
| 12674-11-2 | PCB-1016      | 0.986  |   | 0.010 | 0.0025 |

| CAS NO.   | SURROGATE                     | %REC | Q | LIMITS |
|-----------|-------------------------------|------|---|--------|
| 2051-24-3 | DCB Decachlorobiphenyl (Surr) | 92   |   | 43-138 |
| 877-09-8  | Tetrachloro-m-xylene (Surr)   | 95   |   | 34-137 |

TestAmerica Pittsburgh  
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\O0510057.D  
 Lims ID: LCSD 180-140927/3-A  
 Client ID:  
 Sample Type: LCSD  
 Inject. Date: 12-May-2015 06:45:12 ALS Bottle#: 58 Worklist Smp#: 58  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 180-0006866-058  
 Operator ID: 402360 Instrument ID: CHGC8  
 Method: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\PCB\_CHGC8DUAL.m  
 Limit Group: GCS 8082A ICAL  
 Last Update: 12-May-2015 16:54:58 Calib Date: 11-May-2015 18:31:22  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICal File: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\O0510020.D

Column 1 : Det: GC ECD1A  
 Column 2 : Det: GC ECD2B  
 Process Host: XAWRK022

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng | OnCol Amt ng | Flags |
|-----|-----------|---------------|---------------|----------|------------|--------------|-------|
|-----|-----------|---------------|---------------|----------|------------|--------------|-------|

\$ 1 Tetrachloro-m-xylene

|   |       |       |        |           |        |            |  |
|---|-------|-------|--------|-----------|--------|------------|--|
| 1 | 3.109 | 3.110 | -0.001 | 44141344H | 0.0200 | 0.0193     |  |
| 2 | 3.582 | 3.583 | -0.001 | 76844086H | 0.0200 | 0.0191     |  |
|   |       |       |        |           |        | RPD = 0.89 |  |

4 PCB-1016

|                           |       |       |        |           |      |            |  |
|---------------------------|-------|-------|--------|-----------|------|------------|--|
| 1                         | 3.413 | 3.414 | -0.001 | 28609477H | 1.00 | 0.8918     |  |
| 1                         | 3.740 | 3.741 | -0.001 | 45389203H | 1.00 | 0.8719     |  |
| 1                         | 4.370 | 4.372 | -0.002 | 36457020H | 1.00 | 0.9846     |  |
| 1                         | 4.443 | 4.444 | -0.001 | 26350554H | 1.00 | 1.01       |  |
| 1                         | 4.856 | 4.859 | -0.003 | 34192714H | 1.00 | 1.02       |  |
| Average of Peak Amounts = |       |       |        |           |      | 0.9550     |  |
| 2                         | 5.415 | 5.416 | -0.001 | 54476820H | 1.00 | 0.99       |  |
| 2                         | 5.572 | 5.574 | -0.002 | 40471057H | 1.00 | 1.00       |  |
| 2                         | 6.153 | 6.155 | -0.002 | 52589746H | 1.00 | 0.9427     |  |
| 2                         | 6.892 | 6.894 | -0.002 | 37759500H | 1.00 | 1.00       |  |
| 2                         | 7.247 | 7.250 | -0.003 | 31552297H | 1.00 | 0.99       |  |
| Average of Peak Amounts = |       |       |        |           |      | 0.9860     |  |
|                           |       |       |        |           |      | RPD = 3.19 |  |



| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng | OnCol Amt ng | Flags |
|-----|-----------|---------------|---------------|----------|------------|--------------|-------|
|-----|-----------|---------------|---------------|----------|------------|--------------|-------|

8 PCB-1260

|   |       |       |        |            |      |        |  |
|---|-------|-------|--------|------------|------|--------|--|
| 1 | 6.679 | 6.682 | -0.003 | 56454316H  | 1.00 | 0.9621 |  |
| 1 | 7.716 | 7.721 | -0.005 | 55168761H  | 1.00 | 0.9744 |  |
| 1 | 8.439 | 8.441 | -0.002 | 48077298H  | 1.00 | 0.9665 |  |
| 1 | 9.028 | 9.033 | -0.005 | 106504685H | 1.00 | 0.9772 |  |
| 1 | 9.512 | 9.515 | -0.003 | 53746343H  | 1.00 | 0.9279 |  |

Average of Peak Amounts = 0.9616

|   |        |        |        |            |      |        |  |
|---|--------|--------|--------|------------|------|--------|--|
| 2 | 9.268  | 9.271  | -0.003 | 61118758H  | 1.00 | 0.8913 |  |
| 2 | 9.600  | 9.604  | -0.004 | 88329782H  | 1.00 | 0.8800 |  |
| 2 | 9.754  | 9.756  | -0.002 | 76751181H  | 1.00 | 0.8631 |  |
| 2 | 10.228 | 10.230 | -0.002 | 78424545H  | 1.00 | 0.8305 |  |
| 2 | 10.621 | 10.624 | -0.003 | 162774040H | 1.00 | 0.8777 |  |

Average of Peak Amounts = 0.8685

RPD = 10.17

\$ 11 DCB Decachlorobiphenyl (Surr)

|   |        |        |        |           |        |        |  |
|---|--------|--------|--------|-----------|--------|--------|--|
| 1 | 11.202 | 11.204 | -0.002 | 19834387H | 0.0200 | 0.0204 |  |
| 2 | 12.724 | 12.727 | -0.003 | 22641251H | 0.0200 | 0.0184 |  |

RPD = 10.33

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\O0510057.D

Injection Date: 12-May-2015 06:45:12 Instrument ID: CHGC8

Lims ID: LCSD 180-140927/3-A

Client ID:

Operator ID: 402360

ALS Bottle#: 58

Worklist Smp#: 58

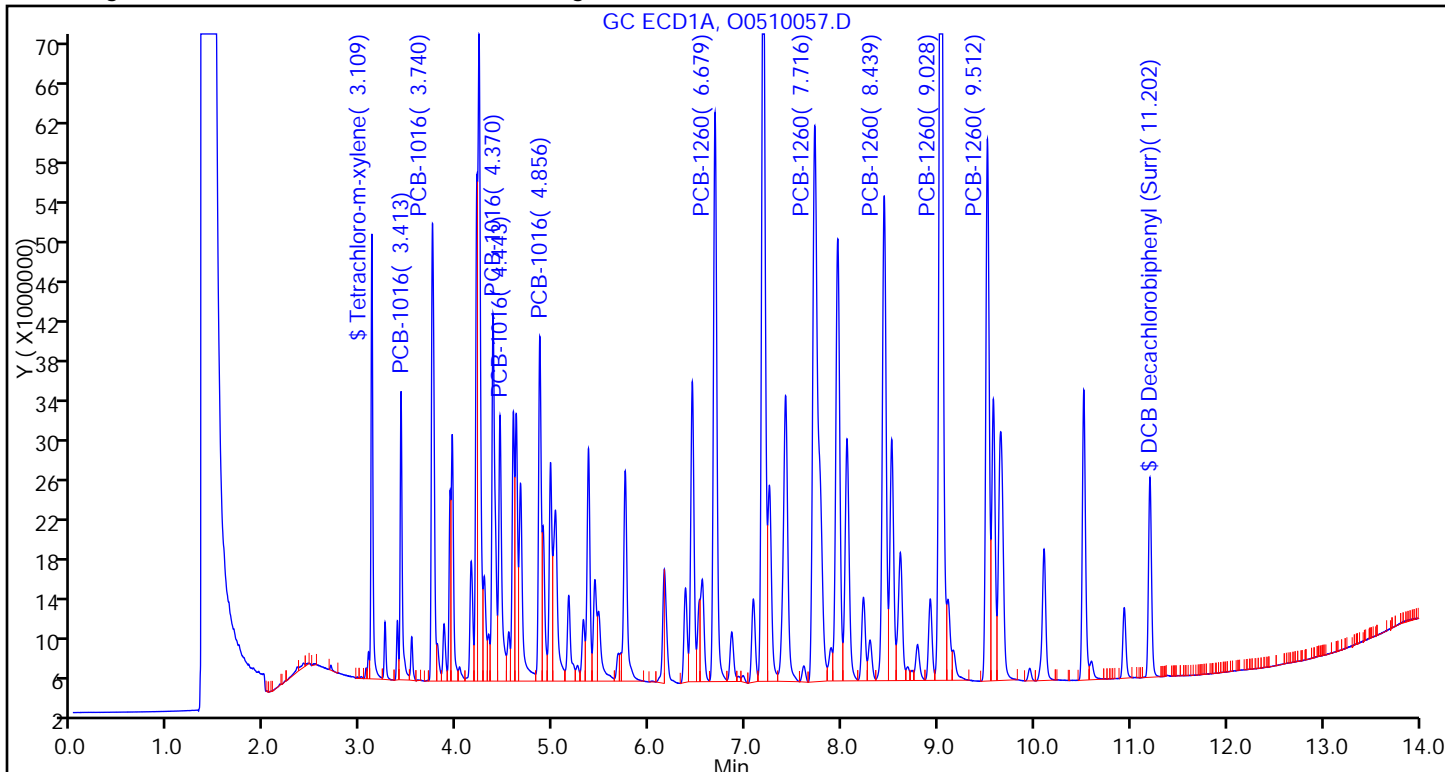
Injection Vol: 1.0 ul

Dil. Factor: 1.0000

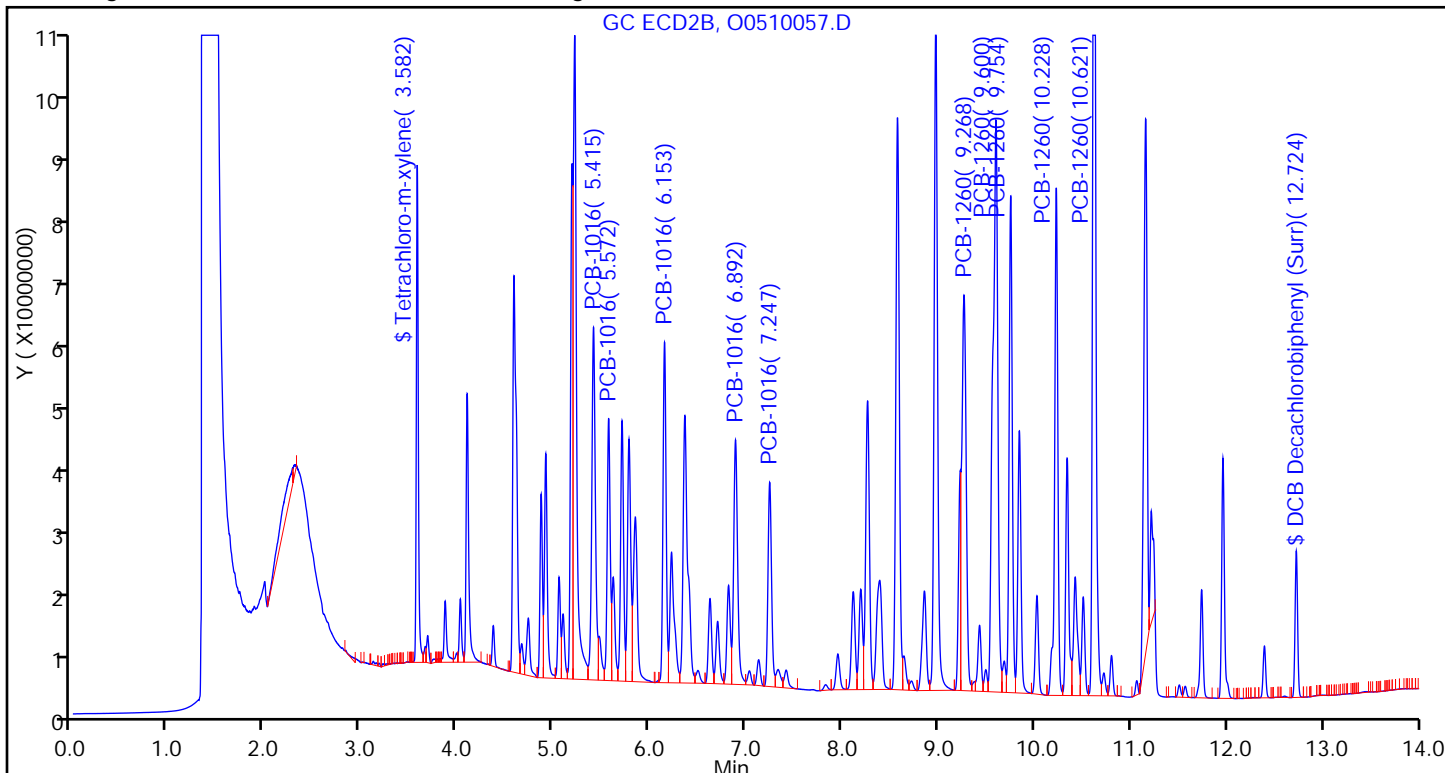
Method: PCB\_CHGC8DUAL

Limit Group: GCS 8082A ICAL

Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\O0510057.D

Injection Date: 12-May-2015 06:45:12

Instrument ID: CHGC8

Lims ID: LCSD 180-140927/3-A

Client ID:

Operator ID: 402360

ALS Bottle#: 58

Worklist Smp#: 58

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

Method: PCB\_CHGC8DUAL

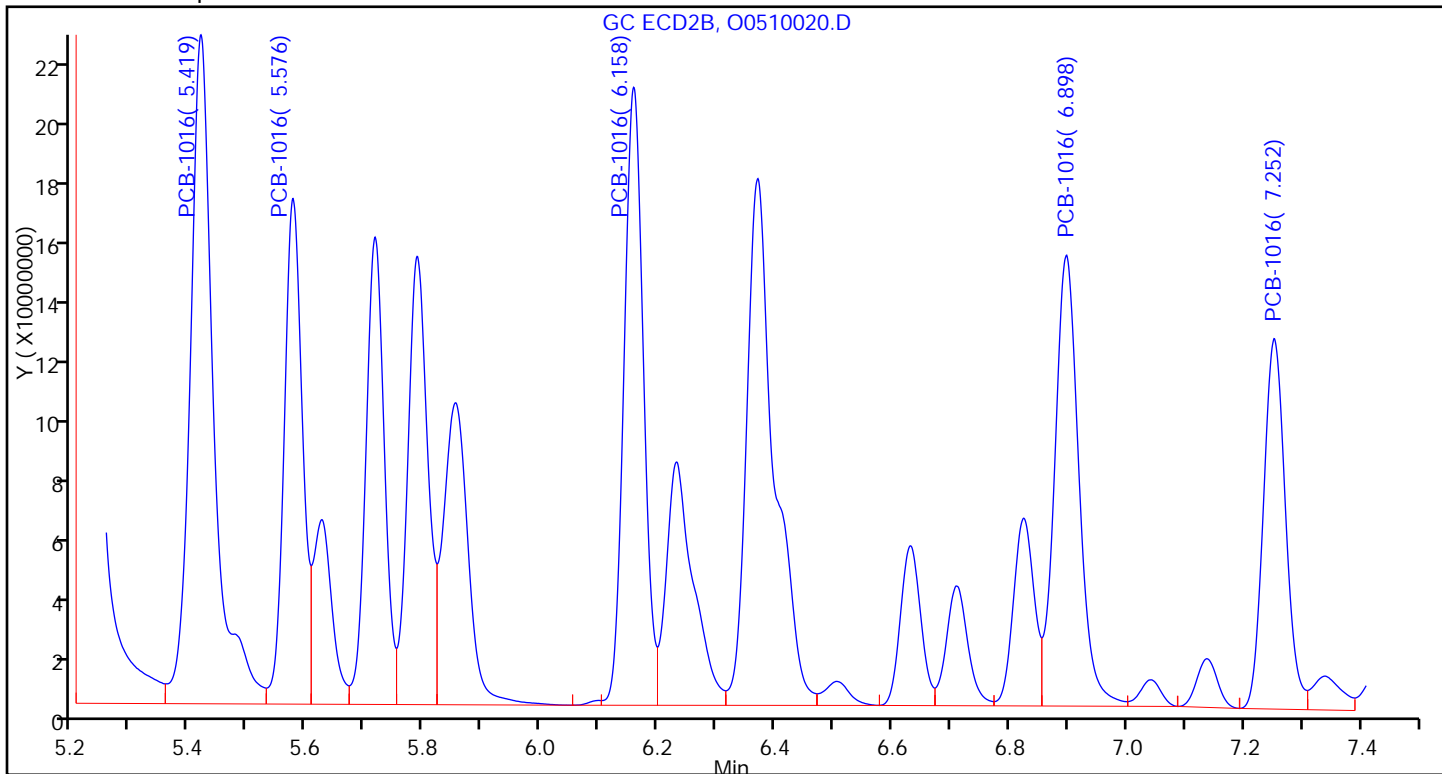
Limit Group: GCS 8082A ICAL

Column:

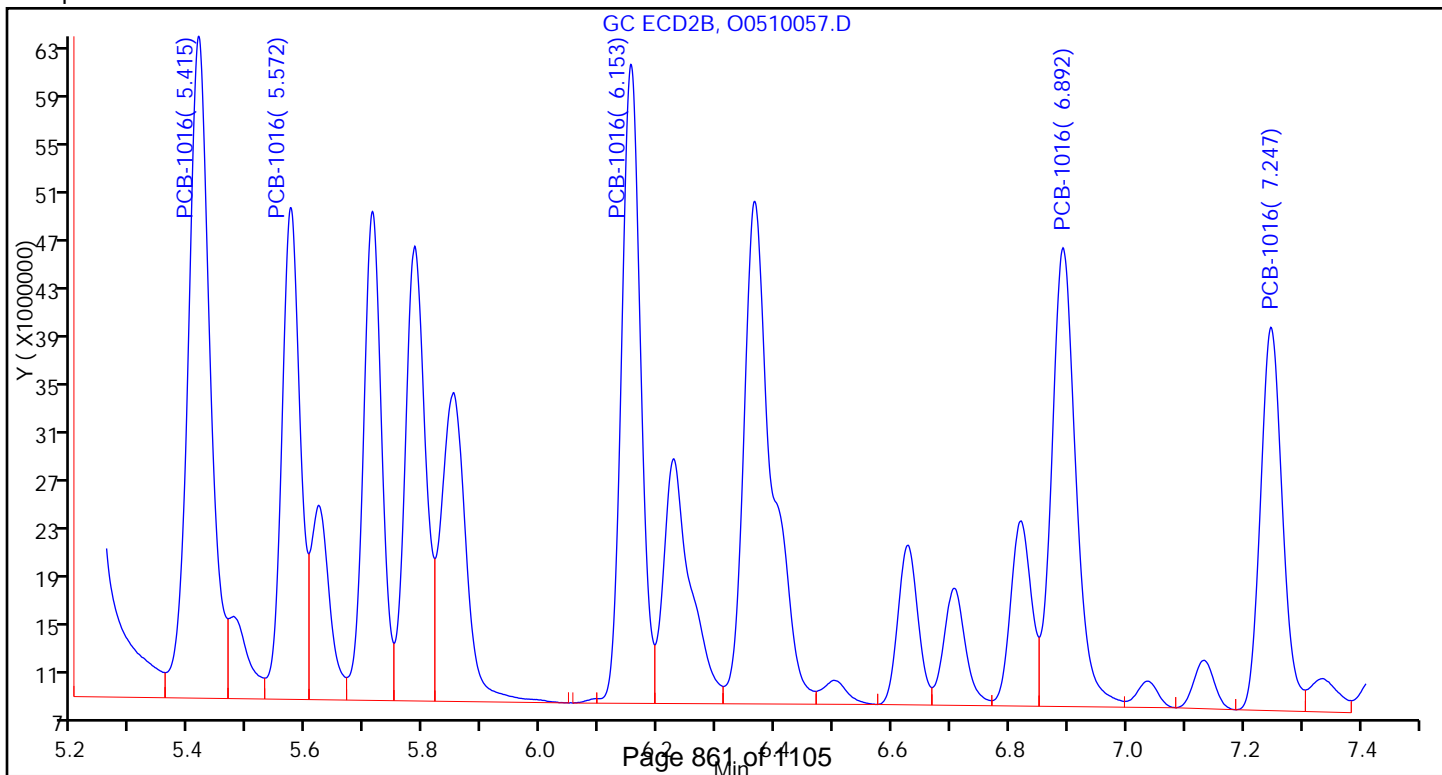
Detector GC ECD2B

4 PCB-1016, CAS: 12674-11-2

Calibration Sample, Level: 7



Sample



TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHGC8\20150511-6866.b\O0510057.D

Injection Date: 12-May-2015 06:45:12 Instrument ID: CHGC8

Lims ID: LCSD 180-140927/3-A

Client ID:

Operator ID: 402360

ALS Bottle#: 58 Worklist Smp#: 58

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

Method: PCB\_CHGC8DUAL

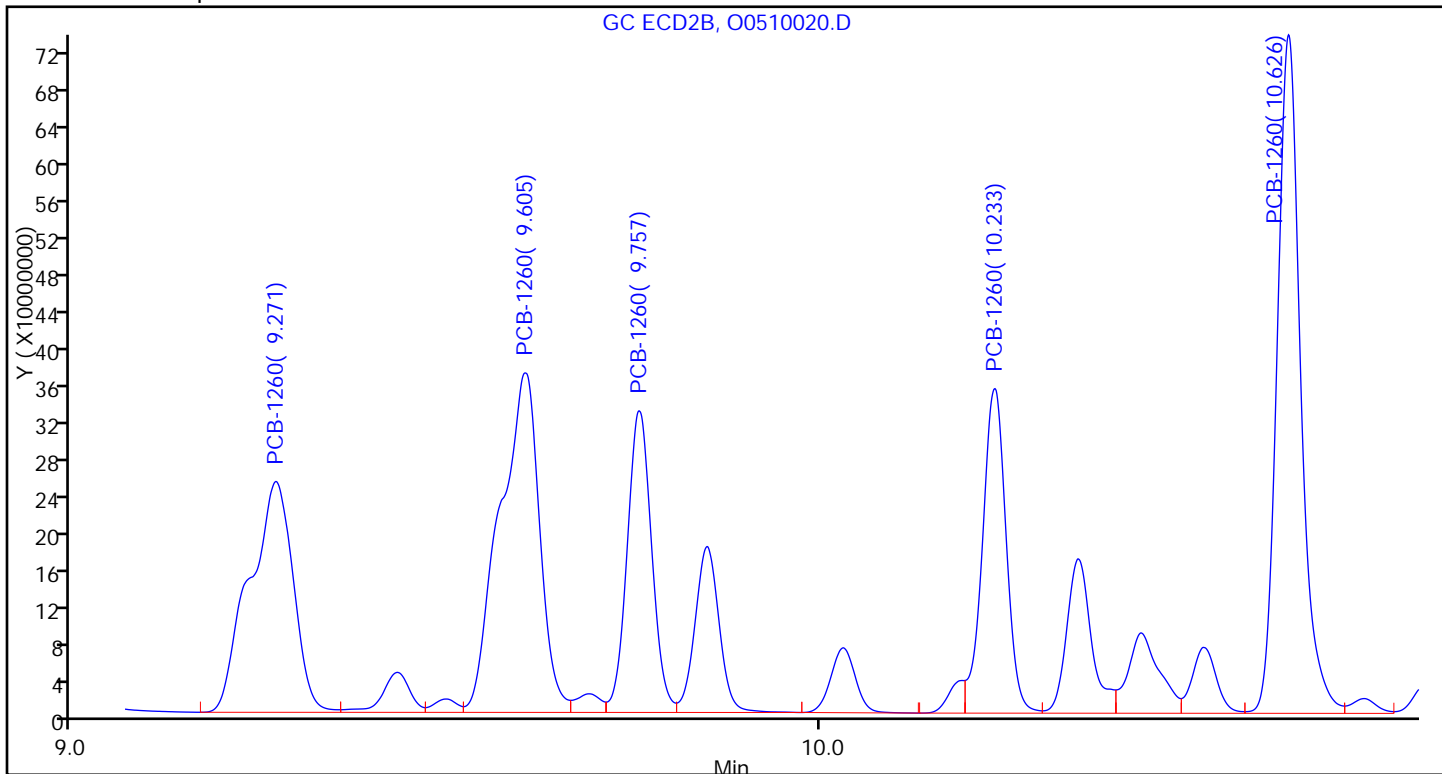
Limit Group: GCS 8082A ICAL

Column:

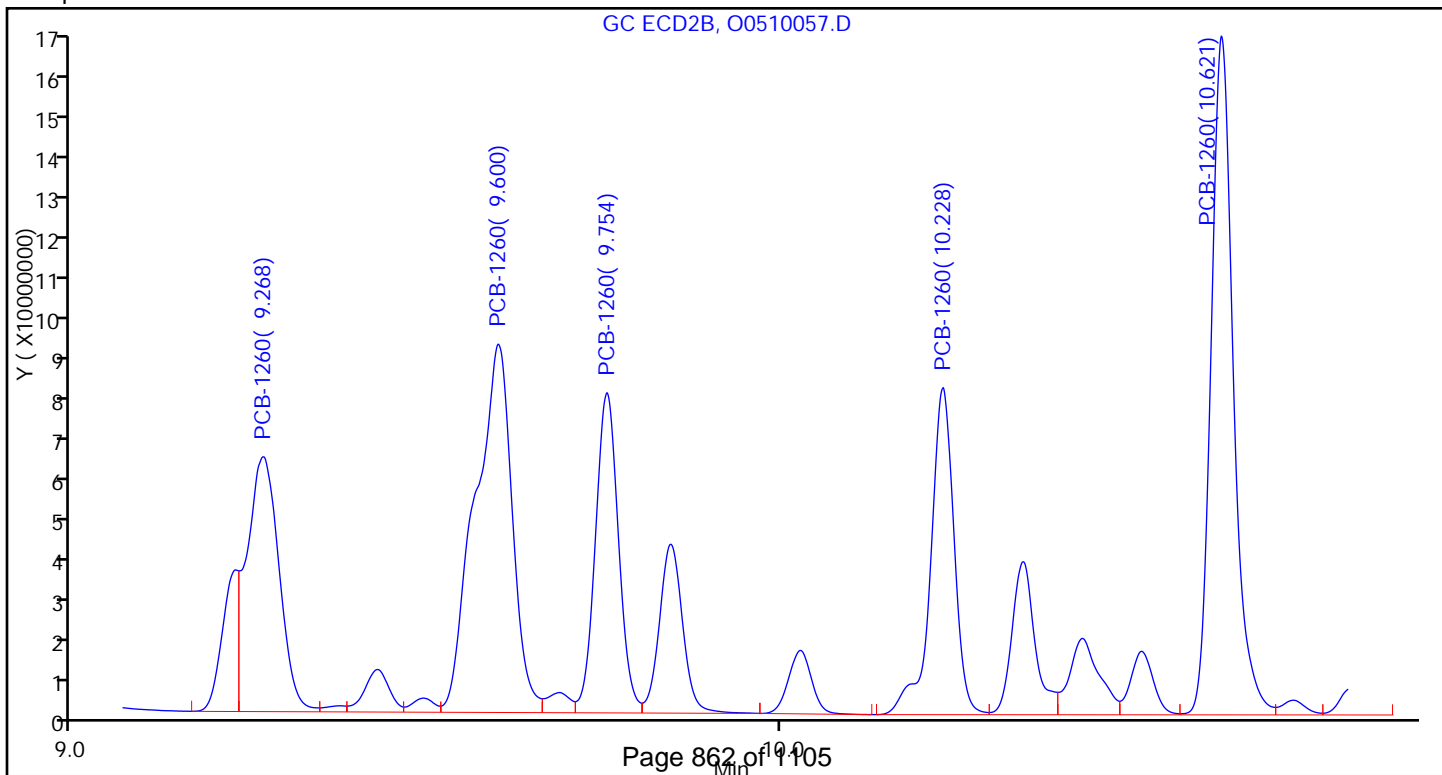
Detector: GC ECD2B

8 PCB-1260, CAS: 11096-82-5

Calibration Sample, Level: 7



Sample



## GC SEMI VOA ANALYSIS RUN LOG

Lab Name: TestAmerica PittsburghJob No.: 180-43791-1

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

Instrument ID: CHGC8Start Date: 05/11/2015 12:33Analysis Batch Number: 141160End Date: 05/12/2015 15:35

| LAB SAMPLE ID      | CLIENT SAMPLE ID | DATE ANALYZED    | DILUTION FACTOR | LAB FILE ID | COLUMN ID          |
|--------------------|------------------|------------------|-----------------|-------------|--------------------|
| IC 180-141160/3    |                  | 05/11/2015 12:33 | 1               | 00510002.D  | RTX-CLP1 0.53 (mm) |
| IC 180-141160/3    |                  | 05/11/2015 12:33 | 1               | 00510002.D  | RTX-CLP2 0.53 (mm) |
| IC 180-141160/4    |                  | 05/11/2015 12:53 | 1               | 00510003.D  | RTX-CLP1 0.53 (mm) |
| IC 180-141160/4    |                  | 05/11/2015 12:53 | 1               | 00510003.D  | RTX-CLP2 0.53 (mm) |
| IC 180-141160/5    |                  | 05/11/2015 13:13 | 1               | 00510004.D  | RTX-CLP1 0.53 (mm) |
| IC 180-141160/5    |                  | 05/11/2015 13:13 | 1               | 00510004.D  | RTX-CLP2 0.53 (mm) |
| IC 180-141160/6    |                  | 05/11/2015 13:33 | 1               | 00510005.D  | RTX-CLP1 0.53 (mm) |
| IC 180-141160/6    |                  | 05/11/2015 13:33 | 1               | 00510005.D  | RTX-CLP2 0.53 (mm) |
| IC 180-141160/7    |                  | 05/11/2015 13:53 | 1               | 00510006.D  | RTX-CLP1 0.53 (mm) |
| IC 180-141160/7    |                  | 05/11/2015 13:53 | 1               | 00510006.D  | RTX-CLP2 0.53 (mm) |
| IC 180-141160/8    |                  | 05/11/2015 14:13 | 1               | 00510007.D  | RTX-CLP1 0.53 (mm) |
| IC 180-141160/8    |                  | 05/11/2015 14:13 | 1               | 00510007.D  | RTX-CLP2 0.53 (mm) |
| IC 180-141160/9    |                  | 05/11/2015 14:32 | 1               | 00510008.D  | RTX-CLP1 0.53 (mm) |
| IC 180-141160/9    |                  | 05/11/2015 14:32 | 1               | 00510008.D  | RTX-CLP2 0.53 (mm) |
| IC 180-141160/10   |                  | 05/11/2015 14:52 | 1               | 00510009.D  | RTX-CLP1 0.53 (mm) |
| IC 180-141160/10   |                  | 05/11/2015 14:52 | 1               | 00510009.D  | RTX-CLP2 0.53 (mm) |
| IC 180-141160/11   |                  | 05/11/2015 15:12 | 1               | 00510010.D  | RTX-CLP1 0.53 (mm) |
| IC 180-141160/11   |                  | 05/11/2015 15:12 | 1               | 00510010.D  | RTX-CLP2 0.53 (mm) |
| IC 180-141160/12   |                  | 05/11/2015 15:32 | 1               | 00510011.D  | RTX-CLP1 0.53 (mm) |
| IC 180-141160/12   |                  | 05/11/2015 15:32 | 1               | 00510011.D  | RTX-CLP2 0.53 (mm) |
| IC 180-141160/13   |                  | 05/11/2015 15:52 | 1               | 00510012.D  | RTX-CLP1 0.53 (mm) |
| IC 180-141160/13   |                  | 05/11/2015 15:52 | 1               | 00510012.D  | RTX-CLP2 0.53 (mm) |
| IC 180-141160/14   |                  | 05/11/2015 16:12 | 1               | 00510013.D  | RTX-CLP1 0.53 (mm) |
| IC 180-141160/14   |                  | 05/11/2015 16:12 | 1               | 00510013.D  | RTX-CLP2 0.53 (mm) |
| IC 180-141160/15   |                  | 05/11/2015 16:32 | 1               | 00510014.D  | RTX-CLP1 0.53 (mm) |
| IC 180-141160/15   |                  | 05/11/2015 16:32 | 1               | 00510014.D  | RTX-CLP2 0.53 (mm) |
| IC 180-141160/16   |                  | 05/11/2015 16:52 | 1               | 00510015.D  | RTX-CLP1 0.53 (mm) |
| IC 180-141160/16   |                  | 05/11/2015 16:52 | 1               | 00510015.D  | RTX-CLP2 0.53 (mm) |
| IC 180-141160/17   |                  | 05/11/2015 17:11 | 1               | 00510016.D  | RTX-CLP1 0.53 (mm) |
| IC 180-141160/17   |                  | 05/11/2015 17:11 | 1               | 00510016.D  | RTX-CLP2 0.53 (mm) |
| ICRT 180-141160/18 |                  | 05/11/2015 17:31 | 1               | 00510017.D  | RTX-CLP1 0.53 (mm) |
| ICRT 180-141160/18 |                  | 05/11/2015 17:31 | 1               | 00510017.D  | RTX-CLP2 0.53 (mm) |
| IC 180-141160/19   |                  | 05/11/2015 17:51 | 1               | 00510018.D  | RTX-CLP1 0.53 (mm) |
| IC 180-141160/19   |                  | 05/11/2015 17:51 | 1               | 00510018.D  | RTX-CLP2 0.53 (mm) |
| IC 180-141160/20   |                  | 05/11/2015 18:11 | 1               | 00510019.D  | RTX-CLP1 0.53 (mm) |
| IC 180-141160/20   |                  | 05/11/2015 18:11 | 1               | 00510019.D  | RTX-CLP2 0.53 (mm) |
| IC 180-141160/21   |                  | 05/11/2015 18:31 | 1               | 00510020.D  | RTX-CLP1 0.53 (mm) |
| IC 180-141160/21   |                  | 05/11/2015 18:31 | 1               | 00510020.D  | RTX-CLP2 0.53 (mm) |
| ICV 180-141160/22  |                  | 05/11/2015 18:51 | 1               | 00510021.D  | RTX-CLP1 0.53 (mm) |
| ICV 180-141160/22  |                  | 05/11/2015 18:51 | 1               | 00510021.D  | RTX-CLP2 0.53 (mm) |
| ICV 180-141160/23  |                  | 05/11/2015 19:11 | 1               | 00510022.D  | RTX-CLP1 0.53 (mm) |
| ICV 180-141160/23  |                  | 05/11/2015 19:11 | 1               | 00510022.D  | RTX-CLP2 0.53 (mm) |
| ICV 180-141160/24  |                  | 05/11/2015 19:30 | 1               | 00510023.D  | RTX-CLP1 0.53 (mm) |
| ICV 180-141160/24  |                  | 05/11/2015 19:30 | 1               | 00510023.D  | RTX-CLP2 0.53 (mm) |
| ICV 180-141160/25  |                  | 05/11/2015 19:50 | 1               | 00510024.D  | RTX-CLP1 0.53 (mm) |

GC SEMI VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Pittsburgh Job No.: 180-43791-1

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

Instrument ID: CHGC8 Start Date: 05/11/2015 12:33

Analysis Batch Number: 141160 End Date: 05/12/2015 15:35

| LAB SAMPLE ID     | CLIENT SAMPLE ID | DATE ANALYZED    | DILUTION FACTOR | LAB FILE ID | COLUMN ID          |
|-------------------|------------------|------------------|-----------------|-------------|--------------------|
| ICV 180-141160/25 |                  | 05/11/2015 19:50 | 1               | O0510024.D  | RTX-CLP2 0.53 (mm) |
| ICV 180-141160/26 |                  | 05/11/2015 20:10 | 1               | O0510025.D  | RTX-CLP1 0.53 (mm) |
| ICV 180-141160/26 |                  | 05/11/2015 20:10 | 1               | O0510025.D  | RTX-CLP2 0.53 (mm) |
| ZZZZZ             |                  | 05/11/2015 20:30 | 1               |             | RTX-CLP1 0.53 (mm) |
| ZZZZZ             |                  | 05/11/2015 20:30 | 1               |             | RTX-CLP2 0.53 (mm) |
| ZZZZZ             |                  | 05/11/2015 20:50 | 5               |             | RTX-CLP1 0.53 (mm) |
| ZZZZZ             |                  | 05/11/2015 20:50 | 5               |             | RTX-CLP2 0.53 (mm) |
| ZZZZZ             |                  | 05/11/2015 21:10 | 5               |             | RTX-CLP1 0.53 (mm) |
| ZZZZZ             |                  | 05/11/2015 21:10 | 5               |             | RTX-CLP2 0.53 (mm) |
| ZZZZZ             |                  | 05/11/2015 21:29 | 100             |             | RTX-CLP1 0.53 (mm) |
| ZZZZZ             |                  | 05/11/2015 21:29 | 100             |             | RTX-CLP2 0.53 (mm) |
| ZZZZZ             |                  | 05/11/2015 21:49 | 100             |             | RTX-CLP1 0.53 (mm) |
| ZZZZZ             |                  | 05/11/2015 21:49 | 100             |             | RTX-CLP2 0.53 (mm) |
| ZZZZZ             |                  | 05/11/2015 22:09 | 5               |             | RTX-CLP1 0.53 (mm) |
| ZZZZZ             |                  | 05/11/2015 22:09 | 5               |             | RTX-CLP2 0.53 (mm) |
| ZZZZZ             |                  | 05/11/2015 22:29 | 10              |             | RTX-CLP1 0.53 (mm) |
| ZZZZZ             |                  | 05/11/2015 22:29 | 10              |             | RTX-CLP2 0.53 (mm) |
| ZZZZZ             |                  | 05/11/2015 22:49 | 100             |             | RTX-CLP1 0.53 (mm) |
| ZZZZZ             |                  | 05/11/2015 22:49 | 100             |             | RTX-CLP2 0.53 (mm) |
| ZZZZZ             |                  | 05/11/2015 23:09 | 5               |             | RTX-CLP1 0.53 (mm) |
| ZZZZZ             |                  | 05/11/2015 23:09 | 5               |             | RTX-CLP2 0.53 (mm) |
| ZZZZZ             |                  | 05/11/2015 23:28 | 5               |             | RTX-CLP1 0.53 (mm) |
| ZZZZZ             |                  | 05/11/2015 23:28 | 5               |             | RTX-CLP2 0.53 (mm) |
| ZZZZZ             |                  | 05/11/2015 23:48 | 50              |             | RTX-CLP1 0.53 (mm) |
| ZZZZZ             |                  | 05/11/2015 23:48 | 50              |             | RTX-CLP2 0.53 (mm) |
| ZZZZZ             |                  | 05/12/2015 00:08 | 50              |             | RTX-CLP1 0.53 (mm) |
| ZZZZZ             |                  | 05/12/2015 00:08 | 50              |             | RTX-CLP2 0.53 (mm) |
| ZZZZZ             |                  | 05/12/2015 00:28 | 50              |             | RTX-CLP1 0.53 (mm) |
| ZZZZZ             |                  | 05/12/2015 00:28 | 50              |             | RTX-CLP2 0.53 (mm) |
| ZZZZZ             |                  | 05/12/2015 00:48 | 10              |             | RTX-CLP1 0.53 (mm) |
| ZZZZZ             |                  | 05/12/2015 00:48 | 10              |             | RTX-CLP2 0.53 (mm) |
| ZZZZZ             |                  | 05/12/2015 01:08 | 100             |             | RTX-CLP1 0.53 (mm) |
| ZZZZZ             |                  | 05/12/2015 01:08 | 100             |             | RTX-CLP2 0.53 (mm) |
| ZZZZZ             |                  | 05/12/2015 01:28 | 10              |             | RTX-CLP1 0.53 (mm) |
| ZZZZZ             |                  | 05/12/2015 01:28 | 10              |             | RTX-CLP2 0.53 (mm) |
| ZZZZZ             |                  | 05/12/2015 01:47 | 5               |             | RTX-CLP1 0.53 (mm) |
| ZZZZZ             |                  | 05/12/2015 01:47 | 5               |             | RTX-CLP2 0.53 (mm) |
| ZZZZZ             |                  | 05/12/2015 02:07 | 25              |             | RTX-CLP1 0.53 (mm) |
| ZZZZZ             |                  | 05/12/2015 02:07 | 25              |             | RTX-CLP2 0.53 (mm) |
| ZZZZZ             |                  | 05/12/2015 02:27 | 25              |             | RTX-CLP1 0.53 (mm) |
| ZZZZZ             |                  | 05/12/2015 02:27 | 25              |             | RTX-CLP2 0.53 (mm) |
| ZZZZZ             |                  | 05/12/2015 02:47 | 1               |             | RTX-CLP1 0.53 (mm) |
| ZZZZZ             |                  | 05/12/2015 02:47 | 1               |             | RTX-CLP2 0.53 (mm) |
| CCV 180-141160/47 |                  | 05/12/2015 03:07 | 1               | O0510046.D  | RTX-CLP1 0.53 (mm) |
| CCV 180-141160/47 |                  | 05/12/2015 03:07 | 1               | O0510046.D  | RTX-CLP2 0.53 (mm) |

GC SEMI VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Pittsburgh Job No.: 180-43791-1

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

Instrument ID: CHGC8 Start Date: 05/11/2015 12:33

Analysis Batch Number: 141160 End Date: 05/12/2015 15:35

| LAB SAMPLE ID       | CLIENT SAMPLE ID | DATE ANALYZED    | DILUTION FACTOR | LAB FILE ID | COLUMN ID          |
|---------------------|------------------|------------------|-----------------|-------------|--------------------|
| MB 180-140927/1-A   |                  | 05/12/2015 03:26 | 1               | O0510047.D  | RTX-CLP1 0.53 (mm) |
| MB 180-140927/1-A   |                  | 05/12/2015 03:26 | 1               | O0510047.D  | RTX-CLP2 0.53 (mm) |
| 180-43791-1         | RB-CORE          | 05/12/2015 03:46 | 1               | O0510048.D  | RTX-CLP1 0.53 (mm) |
| 180-43791-1         | RB-CORE          | 05/12/2015 03:46 | 1               | O0510048.D  | RTX-CLP2 0.53 (mm) |
| 180-43791-2         | FB-CORE          | 05/12/2015 04:06 | 1               | O0510049.D  | RTX-CLP1 0.53 (mm) |
| 180-43791-2         | FB-CORE          | 05/12/2015 04:06 | 1               | O0510049.D  | RTX-CLP2 0.53 (mm) |
| ZZZZZ               |                  | 05/12/2015 04:26 | 5               |             | RTX-CLP1 0.53 (mm) |
| ZZZZZ               |                  | 05/12/2015 04:26 | 5               |             | RTX-CLP2 0.53 (mm) |
| ZZZZZ               |                  | 05/12/2015 04:46 | 5               |             | RTX-CLP1 0.53 (mm) |
| ZZZZZ               |                  | 05/12/2015 04:46 | 5               |             | RTX-CLP2 0.53 (mm) |
| ZZZZZ               |                  | 05/12/2015 05:05 | 5               |             | RTX-CLP1 0.53 (mm) |
| ZZZZZ               |                  | 05/12/2015 05:05 | 5               |             | RTX-CLP2 0.53 (mm) |
| ZZZZZ               |                  | 05/12/2015 05:25 | 5               |             | RTX-CLP1 0.53 (mm) |
| ZZZZZ               |                  | 05/12/2015 05:25 | 5               |             | RTX-CLP2 0.53 (mm) |
| ZZZZZ               |                  | 05/12/2015 05:45 | 5               |             | RTX-CLP1 0.53 (mm) |
| ZZZZZ               |                  | 05/12/2015 05:45 | 5               |             | RTX-CLP2 0.53 (mm) |
| ZZZZZ               |                  | 05/12/2015 06:05 | 5               |             | RTX-CLP1 0.53 (mm) |
| ZZZZZ               |                  | 05/12/2015 06:05 | 5               |             | RTX-CLP2 0.53 (mm) |
| LCS 180-140927/2-A  |                  | 05/12/2015 06:25 | 1               | O0510056.D  | RTX-CLP1 0.53 (mm) |
| LCS 180-140927/2-A  |                  | 05/12/2015 06:25 | 1               | O0510056.D  | RTX-CLP2 0.53 (mm) |
| LCSD 180-140927/3-A |                  | 05/12/2015 06:45 | 1               | O0510057.D  | RTX-CLP1 0.53 (mm) |
| LCSD 180-140927/3-A |                  | 05/12/2015 06:45 | 1               | O0510057.D  | RTX-CLP2 0.53 (mm) |
| CCV 180-141160/59   |                  | 05/12/2015 07:05 | 1               | O0510058.D  | RTX-CLP1 0.53 (mm) |
| CCV 180-141160/59   |                  | 05/12/2015 07:05 | 1               | O0510058.D  | RTX-CLP2 0.53 (mm) |
| ZZZZZ               |                  | 05/12/2015 07:24 | 1               |             | RTX-CLP1 0.53 (mm) |
| ZZZZZ               |                  | 05/12/2015 07:24 | 1               |             | RTX-CLP2 0.53 (mm) |
| ZZZZZ               |                  | 05/12/2015 07:44 | 5               |             | RTX-CLP1 0.53 (mm) |
| ZZZZZ               |                  | 05/12/2015 07:44 | 5               |             | RTX-CLP2 0.53 (mm) |
| ZZZZZ               |                  | 05/12/2015 08:04 | 5               |             | RTX-CLP1 0.53 (mm) |
| ZZZZZ               |                  | 05/12/2015 08:04 | 5               |             | RTX-CLP2 0.53 (mm) |
| ZZZZZ               |                  | 05/12/2015 08:24 | 5               |             | RTX-CLP1 0.53 (mm) |
| ZZZZZ               |                  | 05/12/2015 08:24 | 5               |             | RTX-CLP2 0.53 (mm) |
| ZZZZZ               |                  | 05/12/2015 08:44 | 5               |             | RTX-CLP1 0.53 (mm) |
| ZZZZZ               |                  | 05/12/2015 08:44 | 5               |             | RTX-CLP2 0.53 (mm) |
| ZZZZZ               |                  | 05/12/2015 09:04 | 5               |             | RTX-CLP1 0.53 (mm) |
| ZZZZZ               |                  | 05/12/2015 09:04 | 5               |             | RTX-CLP2 0.53 (mm) |
| ZZZZZ               |                  | 05/12/2015 09:24 | 5               |             | RTX-CLP1 0.53 (mm) |
| ZZZZZ               |                  | 05/12/2015 09:24 | 5               |             | RTX-CLP2 0.53 (mm) |
| ZZZZZ               |                  | 05/12/2015 09:43 | 5               |             | RTX-CLP1 0.53 (mm) |
| ZZZZZ               |                  | 05/12/2015 09:43 | 5               |             | RTX-CLP2 0.53 (mm) |
| ZZZZZ               |                  | 05/12/2015 10:03 | 5               |             | RTX-CLP1 0.53 (mm) |
| ZZZZZ               |                  | 05/12/2015 10:03 | 5               |             | RTX-CLP2 0.53 (mm) |
| ZZZZZ               |                  | 05/12/2015 10:23 | 5               |             | RTX-CLP1 0.53 (mm) |
| ZZZZZ               |                  | 05/12/2015 10:23 | 5               |             | RTX-CLP2 0.53 (mm) |
| ZZZZZ               |                  | 05/12/2015 10:43 | 5               |             | RTX-CLP1 0.53 (mm) |

GC SEMI VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Pittsburgh Job No.: 180-43791-1

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

Instrument ID: CHGC8 Start Date: 05/11/2015 12:33

Analysis Batch Number: 141160 End Date: 05/12/2015 15:35

| LAB SAMPLE ID     | CLIENT SAMPLE ID | DATE ANALYZED    | DILUTION FACTOR | LAB FILE ID | COLUMN ID          |
|-------------------|------------------|------------------|-----------------|-------------|--------------------|
| ZZZZZ             |                  | 05/12/2015 10:43 | 5               |             | RTX-CLP2 0.53 (mm) |
| ZZZZZ             |                  | 05/12/2015 11:43 | 5               |             | RTX-CLP1 0.53 (mm) |
| ZZZZZ             |                  | 05/12/2015 11:43 | 5               |             | RTX-CLP2 0.53 (mm) |
| ZZZZZ             |                  | 05/12/2015 12:03 | 5               |             | RTX-CLP1 0.53 (mm) |
| ZZZZZ             |                  | 05/12/2015 12:03 | 5               |             | RTX-CLP2 0.53 (mm) |
| ZZZZZ             |                  | 05/12/2015 12:22 | 5               |             | RTX-CLP1 0.53 (mm) |
| ZZZZZ             |                  | 05/12/2015 12:22 | 5               |             | RTX-CLP2 0.53 (mm) |
| ZZZZZ             |                  | 05/12/2015 13:02 | 50              |             | RTX-CLP1 0.53 (mm) |
| ZZZZZ             |                  | 05/12/2015 13:02 | 50              |             | RTX-CLP2 0.53 (mm) |
| ZZZZZ             |                  | 05/12/2015 13:22 | 50              |             | RTX-CLP1 0.53 (mm) |
| ZZZZZ             |                  | 05/12/2015 13:22 | 50              |             | RTX-CLP2 0.53 (mm) |
| ZZZZZ             |                  | 05/12/2015 15:15 | 1               |             | RTX-CLP1 0.53 (mm) |
| ZZZZZ             |                  | 05/12/2015 15:15 | 1               |             | RTX-CLP2 0.53 (mm) |
| CCV 180-141160/79 |                  | 05/12/2015 15:35 | 1               |             | RTX-CLP1 0.53 (mm) |
| CCV 180-141160/79 |                  | 05/12/2015 15:35 | 1               |             | RTX-CLP2 0.53 (mm) |



GC SEMI VOA BATCH WORKSHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-43791-1

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

Batch Number: 140927 Batch Start Date: 05/07/15 13:45 Batch Analyst: Yushinski, Charles

Batch Method: 3510C Batch End Date: 05/07/15 20:00

| Lab Sample ID        | Client Sample ID | Method Chain | Basis | ReceivedpH | InitialAmount | FinalAmount | FirstAdjustpH | GCMATRIXWORKS<br>00012 | OP/PESTPCBRTS<br>00002 |
|----------------------|------------------|--------------|-------|------------|---------------|-------------|---------------|------------------------|------------------------|
| MB 180-140927/1      |                  | 3510C, 8082A |       | 6          | 1000 mL       | 1.0 mL      |               |                        | 0.1 mL                 |
| LCS<br>180-140927/2  |                  | 3510C, 8082A |       | 6          | 1000 mL       | 1.0 mL      |               | 25 uL                  | 0.1 mL                 |
| LCSD<br>180-140927/3 |                  | 3510C, 8082A |       | 6          | 1000 mL       | 1.0 mL      |               | 25 uL                  | 0.1 mL                 |
| 180-43791-A-1        | RB-CORE          | 3510C, 8082A | T     | 4          | 1050 mL       | 1.0 mL      | 7             |                        | 0.1 mL                 |
| 180-43791-A-2        | FB-CORE          | 3510C, 8082A | T     | 5          | 1050 mL       | 1.0 mL      |               |                        | 0.1 mL                 |

| Batch Notes                             |                      |
|---|----------------------|
| Acid used for pH adjustment             | 1:1 Sulfuric acid    |
| Acid used for pH adjust Lot #           | 1540016              |
| Base used for pH adjustment             | 10N sodium hydroxide |
| Base used for pH adjust Lot #           | 1539825              |
| Person's name who did the concentration | CBY                  |
| Exchange Solvent Lot #                  | 1531111              |
| Exchange Solvent Name                   | Hexane               |
| N-evap #                                | 1                    |
| N-evap temperature                      | 21 Celsius           |
| Na2SO4 Lot Number                       | 1558431              |
| Oven, Bath or Block Temperature 1       | 79 Celsius           |
| pH Paper Lot Number                     | Ph paper HC432654    |
| Prep Solvent Lot #                      | 1563906              |
| Prep Solvent Name                       | Methylene chloride   |
| Prep Solvent Volume Used                | 180 mL               |
| Person's name who did the prep          | CBY                  |
| Sufficient volume for MS/MSD?           | no                   |
| Uncorrected N-evap Temperature          | 21 Celsius           |
| Uncorrected Temperature                 | 79 Celsius           |

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.

GC SEMI VOA BATCH WORKSHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-43791-1

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

Batch Number: 140927 Batch Start Date: 05/07/15 13:45 Batch Analyst: Yushinski, Charles

Batch Method: 3510C Batch End Date: 05/07/15 20:00

| 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.

# **METALS**

COVER PAGE  
METALS

Lab Name: TestAmerica Pittsburgh Job Number: 180-43791-1

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

Project: Sparrows Point Trust Offshore Investigat

| Client Sample ID | Lab Sample ID      |
|------------------|--------------------|
| <u>RB-CORE</u>   | <u>180-43791-1</u> |
| <u>FB-CORE</u>   | <u>180-43791-2</u> |
| <u>RB-PW</u>     | <u>180-43791-3</u> |
| <u>FB-PW</u>     | <u>180-43791-4</u> |

Comments:

1A-IN  
 INORGANIC ANALYSIS DATA SHEET  
 METALS

Client Sample ID: RB-CORE

Lab Sample ID: 180-43791-1

Lab Name: TestAmerica Pittsburgh

Job No.: 180-43791-1

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

Matrix: Water

Date Sampled: 05/05/2015 15:30

Reporting Basis: WET

Date Received: 05/06/2015 09:40

| CAS No.   | Analyte | Result | RL   | MDL   | Units | C | Q | DIL | Method |
|-----------|---------|--------|------|-------|-------|---|---|-----|--------|
| 7439-97-6 | Mercury | ND     | 0.20 | 0.078 | ug/L  |   |   | 1   | 7470A  |

1A-IN  
 INORGANIC ANALYSIS DATA SHEET  
 METALS - TOTAL RECOVERABLE

Client Sample ID: RB-CORE

Lab Sample ID: 180-43791-1

Lab Name: TestAmerica Pittsburgh

Job No.: 180-43791-1

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

Matrix: Water

Date Sampled: 05/05/2015 15:30

Reporting Basis: WET

Date Received: 05/06/2015 09:40

| CAS No.   | Analyte   | Result | RL  | MDL   | Units | C | Q | DIL | Method |
|-----------|-----------|--------|-----|-------|-------|---|---|-----|--------|
| 7440-38-2 | Arsenic   | ND     | 1.0 | 0.29  | ug/L  |   |   | 1   | 6020A  |
| 7440-43-9 | Cadmium   | ND     | 1.0 | 0.11  | ug/L  |   |   | 1   | 6020A  |
| 7440-47-3 | Chromium  | 1.3    | 2.0 | 0.54  | ug/L  | J |   | 1   | 6020A  |
| 7439-92-1 | Lead      | 0.39   | 1.0 | 0.019 | ug/L  | J |   | 1   | 6020A  |
| 7782-49-2 | Selenium  | ND     | 5.0 | 0.42  | ug/L  |   |   | 1   | 6020A  |
| 7440-22-4 | Silver    | ND     | 1.0 | 0.036 | ug/L  |   |   | 1   | 6020A  |
| 7440-41-7 | Beryllium | ND     | 1.0 | 0.037 | ug/L  |   |   | 1   | 6020A  |
| 7440-28-0 | Thallium  | 0.067  | 1.0 | 0.015 | ug/L  | J |   | 1   | 6020A  |
| 7440-36-0 | Antimony  | 2.2    | 2.0 | 0.019 | ug/L  |   |   | 1   | 6020A  |
| 7440-02-0 | Nickel    | 1.9    | 1.0 | 0.17  | ug/L  |   |   | 1   | 6020A  |
| 7440-66-6 | Zinc      | 8.7    | 5.0 | 0.96  | ug/L  |   |   | 1   | 6020A  |
| 7440-50-8 | Copper    | 0.78   | 2.0 | 0.24  | ug/L  | J |   | 1   | 6020A  |

1A-IN  
 INORGANIC ANALYSIS DATA SHEET  
 METALS

Client Sample ID: FB-CORE

Lab Sample ID: 180-43791-2

Lab Name: TestAmerica Pittsburgh

Job No.: 180-43791-1

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

Matrix: Water

Date Sampled: 05/05/2015 15:40

Reporting Basis: WET

Date Received: 05/06/2015 09:40

| CAS No.   | Analyte | Result | RL   | MDL   | Units | C | Q | DIL | Method |
|-----------|---------|--------|------|-------|-------|---|---|-----|--------|
| 7439-97-6 | Mercury | ND     | 0.20 | 0.078 | ug/L  |   |   | 1   | 7470A  |

1A-IN  
 INORGANIC ANALYSIS DATA SHEET  
 METALS - TOTAL RECOVERABLE

Client Sample ID: FB-CORE

Lab Sample ID: 180-43791-2

Lab Name: TestAmerica Pittsburgh

Job No.: 180-43791-1

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

Matrix: Water

Date Sampled: 05/05/2015 15:40

Reporting Basis: WET

Date Received: 05/06/2015 09:40

| CAS No.   | Analyte   | Result | RL  | MDL   | Units | C | Q | DIL | Method |
|-----------|-----------|--------|-----|-------|-------|---|---|-----|--------|
| 7440-38-2 | Arsenic   | ND     | 1.0 | 0.29  | ug/L  |   |   | 1   | 6020A  |
| 7440-43-9 | Cadmium   | ND     | 1.0 | 0.11  | ug/L  |   |   | 1   | 6020A  |
| 7440-47-3 | Chromium  | 1.4    | 2.0 | 0.54  | ug/L  | J |   | 1   | 6020A  |
| 7439-92-1 | Lead      | 0.32   | 1.0 | 0.019 | ug/L  | J |   | 1   | 6020A  |
| 7782-49-2 | Selenium  | ND     | 5.0 | 0.42  | ug/L  |   |   | 1   | 6020A  |
| 7440-22-4 | Silver    | ND     | 1.0 | 0.036 | ug/L  |   |   | 1   | 6020A  |
| 7440-41-7 | Beryllium | ND     | 1.0 | 0.037 | ug/L  |   |   | 1   | 6020A  |
| 7440-28-0 | Thallium  | 0.034  | 1.0 | 0.015 | ug/L  | J |   | 1   | 6020A  |
| 7440-36-0 | Antimony  | 0.70   | 2.0 | 0.019 | ug/L  | J |   | 1   | 6020A  |
| 7440-02-0 | Nickel    | 2.0    | 1.0 | 0.17  | ug/L  |   |   | 1   | 6020A  |
| 7440-66-6 | Zinc      | 7.7    | 5.0 | 0.96  | ug/L  |   |   | 1   | 6020A  |
| 7440-50-8 | Copper    | 0.65   | 2.0 | 0.24  | ug/L  | J |   | 1   | 6020A  |



1A-IN  
 INORGANIC ANALYSIS DATA SHEET  
 METALS

Client Sample ID: RB-PW

Lab Sample ID: 180-43791-3

Lab Name: TestAmerica Pittsburgh

Job No.: 180-43791-1

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

Matrix: Water

Date Sampled: 05/05/2015 16:00

Reporting Basis: WET

Date Received: 05/06/2015 09:40

| CAS No.   | Analyte | Result | RL   | MDL   | Units | C | Q | DIL | Method |
|-----------|---------|--------|------|-------|-------|---|---|-----|--------|
| 7439-97-6 | Mercury | ND     | 0.20 | 0.078 | ug/L  |   |   | 1   | 7470A  |

1A-IN  
INORGANIC ANALYSIS DATA SHEET  
METALS - TOTAL RECOVERABLE

Client Sample ID: RB-PW

Lab Sample ID: 180-43791-3

Lab Name: TestAmerica Pittsburgh

Job No.: 180-43791-1

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

Matrix: Water

Date Sampled: 05/05/2015 16:00

Reporting Basis: WET

Date Received: 05/06/2015 09:40

| CAS No.   | Analyte   | Result | RL  | MDL   | Units | C | Q | DIL | Method |
|-----------|-----------|--------|-----|-------|-------|---|---|-----|--------|
| 7440-38-2 | Arsenic   | ND     | 1.0 | 0.29  | ug/L  |   |   | 1   | 6020A  |
| 7440-43-9 | Cadmium   | ND     | 1.0 | 0.11  | ug/L  |   |   | 1   | 6020A  |
| 7440-47-3 | Chromium  | 1.1    | 2.0 | 0.54  | ug/L  | J |   | 1   | 6020A  |
| 7439-92-1 | Lead      | 0.39   | 1.0 | 0.019 | ug/L  | J |   | 1   | 6020A  |
| 7782-49-2 | Selenium  | ND     | 5.0 | 0.42  | ug/L  |   |   | 1   | 6020A  |
| 7440-22-4 | Silver    | ND     | 1.0 | 0.036 | ug/L  |   |   | 1   | 6020A  |
| 7440-41-7 | Beryllium | ND     | 1.0 | 0.037 | ug/L  |   |   | 1   | 6020A  |
| 7440-28-0 | Thallium  | 0.024  | 1.0 | 0.015 | ug/L  | J |   | 1   | 6020A  |
| 7440-36-0 | Antimony  | 0.42   | 2.0 | 0.019 | ug/L  | J |   | 1   | 6020A  |
| 7440-02-0 | Nickel    | 2.2    | 1.0 | 0.17  | ug/L  |   |   | 1   | 6020A  |
| 7440-66-6 | Zinc      | 29     | 5.0 | 0.96  | ug/L  |   |   | 1   | 6020A  |
| 7440-50-8 | Copper    | 2.2    | 2.0 | 0.24  | ug/L  |   |   | 1   | 6020A  |

1A-IN  
INORGANIC ANALYSIS DATA SHEET  
METALS

Client Sample ID: FB-PW

Lab Sample ID: 180-43791-4

Lab Name: TestAmerica Pittsburgh

Job No.: 180-43791-1

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

Matrix: Water

Date Sampled: 05/05/2015 16:10

Reporting Basis: WET

Date Received: 05/06/2015 09:40

| CAS No.   | Analyte | Result | RL   | MDL   | Units | C | Q | DIL | Method |
|-----------|---------|--------|------|-------|-------|---|---|-----|--------|
| 7439-97-6 | Mercury | ND     | 0.20 | 0.078 | ug/L  |   |   | 1   | 7470A  |

1A-IN  
 INORGANIC ANALYSIS DATA SHEET  
 METALS - TOTAL RECOVERABLE

Client Sample ID: FB-PW

Lab Sample ID: 180-43791-4

Lab Name: TestAmerica Pittsburgh

Job No.: 180-43791-1

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

Matrix: Water

Date Sampled: 05/05/2015 16:10

Reporting Basis: WET

Date Received: 05/06/2015 09:40

| CAS No.   | Analyte   | Result | RL  | MDL   | Units | C | Q | DIL | Method |
|-----------|-----------|--------|-----|-------|-------|---|---|-----|--------|
| 7440-38-2 | Arsenic   | ND     | 1.0 | 0.29  | ug/L  |   |   | 1   | 6020A  |
| 7440-43-9 | Cadmium   | ND     | 1.0 | 0.11  | ug/L  |   |   | 1   | 6020A  |
| 7440-47-3 | Chromium  | 1.0    | 2.0 | 0.54  | ug/L  | J |   | 1   | 6020A  |
| 7439-92-1 | Lead      | 0.39   | 1.0 | 0.019 | ug/L  | J |   | 1   | 6020A  |
| 7782-49-2 | Selenium  | ND     | 5.0 | 0.42  | ug/L  |   |   | 1   | 6020A  |
| 7440-22-4 | Silver    | ND     | 1.0 | 0.036 | ug/L  |   |   | 1   | 6020A  |
| 7440-41-7 | Beryllium | ND     | 1.0 | 0.037 | ug/L  |   |   | 1   | 6020A  |
| 7440-28-0 | Thallium  | 0.023  | 1.0 | 0.015 | ug/L  | J |   | 1   | 6020A  |
| 7440-36-0 | Antimony  | 0.27   | 2.0 | 0.019 | ug/L  | J |   | 1   | 6020A  |
| 7440-02-0 | Nickel    | 0.35   | 1.0 | 0.17  | ug/L  | J |   | 1   | 6020A  |
| 7440-66-6 | Zinc      | 29     | 5.0 | 0.96  | ug/L  |   |   | 1   | 6020A  |
| 7440-50-8 | Copper    | 3.2    | 2.0 | 0.24  | ug/L  |   |   | 1   | 6020A  |

2A-IN  
 CALIBRATION VERIFICATIONS  
 METALS

Lab Name: TestAmerica Pittsburgh Job No.: 180-43791-1

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

ICV Source: MICVX\_00032 Concentration Units: ug/L

CCV Source: MCCV1X\_00075

| Analyte          | ICV 180-142313/5<br>05/19/2015 21:58 |   |      |     | CCV 180-142313/10<br>05/19/2015 22:22 |   |      |     | CCV 180-142313/22<br>05/19/2015 23:18 |   |      |     |
|------------------|--------------------------------------|---|------|-----|---------------------------------------|---|------|-----|---------------------------------------|---|------|-----|
|                  | Found                                | C | True | %R  | Found                                 | C | True | %R  | Found                                 | C | True | %R  |
| <b>Antimony</b>  | 76.4                                 |   | 80.0 | 96  | 91.8                                  |   | 100  | 92  | 91.5                                  |   | 100  | 92  |
| <b>Arsenic</b>   | 78.9                                 |   | 80.0 | 99  | 95.6                                  |   | 100  | 96  | 96.0                                  |   | 100  | 96  |
| <b>Beryllium</b> | 76.3                                 |   | 80.0 | 95  | 101                                   |   | 100  | 101 | 98.9                                  |   | 100  | 99  |
| <b>Cadmium</b>   | 76.2                                 |   | 80.0 | 95  | 102                                   |   | 100  | 102 | 102                                   |   | 100  | 102 |
| <b>Chromium</b>  | 77.1                                 |   | 80.0 | 96  | 94.8                                  |   | 100  | 95  | 97.1                                  |   | 100  | 97  |
| <b>Copper</b>    | 78.6                                 |   | 80.0 | 98  | 96.3                                  |   | 100  | 96  | 98.7                                  |   | 100  | 99  |
| <b>Lead</b>      | 75.9                                 |   | 80.0 | 95  | 96.5                                  |   | 100  | 96  | 94.6                                  |   | 100  | 95  |
| <b>Nickel</b>    | 77.2                                 |   | 80.0 | 97  | 95.8                                  |   | 100  | 96  | 97.5                                  |   | 100  | 97  |
| <b>Selenium</b>  | 79.5                                 |   | 80.0 | 99  | 98.8                                  |   | 100  | 99  | 98.4                                  |   | 100  | 98  |
| <b>Silver</b>    | 75.5                                 |   | 80.0 | 94  | 98.9                                  |   | 100  | 99  | 97.0                                  |   | 100  | 97  |
| <b>Thallium</b>  | 81.1                                 |   | 80.0 | 101 | 100                                   |   | 100  | 100 | 97.8                                  |   | 100  | 98  |
| <b>Zinc</b>      | 79.1                                 |   | 80.0 | 99  | 93.8                                  |   | 100  | 94  | 92.3                                  |   | 100  | 92  |

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.: 180-43791-1

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

ICV Source: MICVX\_00032 Concentration Units: ug/L

CCV Source: MCCV1X\_00075

| Analyte          | CCV 180-142313/34<br>05/20/2015 00:13 |   |      |     | CCV 180-142313/46<br>05/20/2015 01:05 |   |      |     | CCV 180-142313/58<br>05/20/2015 01:54 |   |      |     |
|------------------|---------------------------------------|---|------|-----|---------------------------------------|---|------|-----|---------------------------------------|---|------|-----|
|                  | Found                                 | C | True | %R  | Found                                 | C | True | %R  | Found                                 | C | True | %R  |
| <b>Antimony</b>  | 92.5                                  |   | 100  | 92  | 92.1                                  |   | 100  | 92  | 92.7                                  |   | 100  | 93  |
| <b>Arsenic</b>   | 97.5                                  |   | 100  | 98  | 96.9                                  |   | 100  | 97  | 96.1                                  |   | 100  | 96  |
| <b>Beryllium</b> | 97.2                                  |   | 100  | 97  | 97.0                                  |   | 100  | 97  | 99.9                                  |   | 100  | 100 |
| <b>Cadmium</b>   | 102                                   |   | 100  | 102 | 103                                   |   | 100  | 103 | 101                                   |   | 100  | 101 |
| <b>Chromium</b>  | 97.6                                  |   | 100  | 98  | 97.8                                  |   | 100  | 98  | 98.0                                  |   | 100  | 98  |
| <b>Copper</b>    | 101                                   |   | 100  | 101 | 98.4                                  |   | 100  | 98  | 98.3                                  |   | 100  | 98  |
| <b>Lead</b>      | 95.9                                  |   | 100  | 96  | 100                                   |   | 100  | 100 | 97.0                                  |   | 100  | 97  |
| <b>Nickel</b>    | 99.5                                  |   | 100  | 99  | 98.1                                  |   | 100  | 98  | 98.0                                  |   | 100  | 98  |
| <b>Selenium</b>  | 98.8                                  |   | 100  | 99  | 98.3                                  |   | 100  | 98  | 97.0                                  |   | 100  | 97  |
| <b>Silver</b>    | 97.6                                  |   | 100  | 98  | 98.7                                  |   | 100  | 99  | 97.2                                  |   | 100  | 97  |
| <b>Thallium</b>  | 99.8                                  |   | 100  | 100 | 104                                   |   | 100  | 104 | 101                                   |   | 100  | 101 |
| <b>Zinc</b>      | 96.1                                  |   | 100  | 96  | 95.7                                  |   | 100  | 96  | 95.0                                  |   | 100  | 95  |

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.: 180-43791-1

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

ICV Source: MHgWorkingicv\_01017 Concentration Units: ug/L

CCV Source: MHgworkingCal\_01049

| Analyte        | ICV 180-141946/7-A<br>05/18/2015 14:46 |   |      |     | CCV 180-141946/10-A<br>05/18/2015 14:52 |   |      |     | CCV 180-141946/10-A<br>05/18/2015 15:15 |   |      |     |
|----------------|--|---|------|-----|---|---|------|-----|---|---|------|-----|
|                | Found                                  | C | True | %R  | Found                                   | C | True | %R  | Found                                   | C | True | %R  |
| <b>Mercury</b> | 2.57                                   |   | 2.50 | 103 | 5.10                                    |   | 5.00 | 102 | 5.21                                    |   | 5.00 | 104 |

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.: 180-43791-1

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

ICV Source: MHgWorkingicv\_01017 Concentration Units: ug/L

CCV Source: MHgworkingCal\_01049

| Analyte        | CCV 180-141946/10-A<br>05/18/2015 17:58 |   |      |     | CCV 180-141946/10-A<br>05/18/2015 18:21 |   |      |     | CCV 180-141946/10-A<br>05/18/2015 18:41 |   |      |     |
|----------------|---|---|------|-----|---|---|------|-----|---|---|------|-----|
|                | Found                                   | C | True | %R  | Found                                   | C | True | %R  | Found                                   | C | True | %R  |
| <b>Mercury</b> | 5.09                                    |   | 5.00 | 102 | 5.09                                    |   | 5.00 | 102 | 5.17                                    |   | 5.00 | 103 |

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.: 180-43791-1  
 SDG No.: \_\_\_\_\_  
 Method: 6020A Instrument ID: M  
 Lab Sample ID: CRI 180-142313/7 Concentration Units: ug/L  
 CRQL Check Standard Source: MCRIX\_00066

| Analyte   | CRQL Check Standard |       |            |       |        |
|-----------|---------------------|-------|------------|-------|--------|
|           | True                | Found | Qualifiers | %R(1) | Limits |
| Arsenic   | 1.00                | 1.04  |            | 104   | 70-130 |
| Cadmium   | 1.00                | 0.986 | J          | 99    | 70-130 |
| Chromium  | 2.00                | 1.84  | J          | 92    | 70-130 |
| Lead      | 1.00                | 0.927 | J          | 93    | 70-130 |
| Selenium  | 5.00                | 4.14  | J          | 83    | 70-130 |
| Silver    | 1.00                | 0.942 | J          | 94    | 70-130 |
| Beryllium | 1.00                | 0.901 | J          | 90    | 70-130 |
| Thallium  | 1.00                | 0.917 | J          | 92    | 70-130 |
| Antimony  | 2.00                | 1.67  | J          | 84    | 70-130 |
| Nickel    | 1.00                | 1.02  |            | 102   | 70-130 |
| Zinc      | 5.00                | 6.06  |            | 121   | 70-130 |
| Copper    | 2.00                | 2.00  |            | 100   | 70-130 |

Lab Sample ID: CRI 180-142313/99 Concentration Units: ug/L  
 CRQL Check Standard Source: MCRIX\_00066

| Analyte   | CRQL Check Standard |       |            |       |        |
|-----------|---------------------|-------|------------|-------|--------|
|           | True                | Found | Qualifiers | %R(1) | Limits |
| Arsenic   | 1.00                | 1.03  |            | 103   | 70-130 |
| Cadmium   | 1.00                | 0.943 | J          | 94    | 70-130 |
| Chromium  | 2.00                | 1.78  | J          | 89    | 70-130 |
| Lead      | 1.00                | 0.919 | J          | 92    | 70-130 |
| Selenium  | 5.00                | 3.91  | J          | 78    | 70-130 |
| Silver    | 1.00                | 0.960 | J          | 96    | 70-130 |
| Beryllium | 1.00                | 0.821 | J          | 82    | 70-130 |
| Thallium  | 1.00                | 0.937 | J          | 94    | 70-130 |
| Antimony  | 2.00                | 1.92  | J          | 96    | 70-130 |
| Nickel    | 1.00                | 0.921 | J          | 92    | 70-130 |
| Copper    | 2.00                | 1.98  | J          | 99    | 70-130 |

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

2B-IN  
CRQL CHECK STANDARD  
METALS

Lab Name: TestAmerica Pittsburgh Job No.: 180-43791-1  
 SDG No.: \_\_\_\_\_  
 Method: 7470A Instrument ID: K  
 Lab Sample ID: CRA 180-141946/9-A Concentration Units: ug/L  
 CRQL Check Standard Source: MHgworkingCal\_01049

| Analyte | CRQL Check Standard |       |            |       |        |
|---------|---------------------|-------|------------|-------|--------|
|         | True                | Found | Qualifiers | %R(1) | Limits |
| Mercury | 0.200               | 0.183 | J          | 91    | 50-150 |

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.: 180-43791-1

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

Concentration Units: ug/L

| Analyte          | RL  | ICB 180-142313/6<br>05/19/2015 22:05 |   | CCB1 180-142313/11<br>05/19/2015 22:29 |   | CCB2 180-142313/23<br>05/19/2015 23:24 |   | CCB3 180-142313/35<br>05/20/2015 00:20 |   |
|------------------|-----|--------------------------------------|---|--|---|--|---|--|---|
|                  |     | Found                                | C | Found                                  | C | Found                                  | C | Found                                  | C |
| <b>Antimony</b>  | 2.0 | ND                                   |   | 0.581                                  | J | 0.576                                  | J | 0.552                                  | J |
| <b>Arsenic</b>   | 1.0 | ND                                   |   | ND                                     |   | ND                                     |   | ND                                     |   |
| <b>Beryllium</b> | 1.0 | ND                                   |   | ND                                     |   | ND                                     |   | ND                                     |   |
| <b>Cadmium</b>   | 1.0 | ND                                   |   | ND                                     |   | ND                                     |   | ND                                     |   |
| <b>Chromium</b>  | 2.0 | ND                                   |   | ND                                     |   | ND                                     |   | ND                                     |   |
| <b>Copper</b>    | 2.0 | ND                                   |   | ND                                     |   | ND                                     |   | ND                                     |   |
| <b>Lead</b>      | 1.0 | ND                                   |   | ND                                     |   | ND                                     |   | ND                                     |   |
| <b>Nickel</b>    | 1.0 | ND                                   |   | ND                                     |   | ND                                     |   | ND                                     |   |
| <b>Selenium</b>  | 5.0 | ND                                   |   | 0.589                                  | J | 0.439                                  | J | ND                                     |   |
| <b>Silver</b>    | 1.0 | ND                                   |   | ND                                     |   | ND                                     |   | ND                                     |   |
| <b>Thallium</b>  | 1.0 | ND                                   |   | 0.0290                                 | J | 0.0260                                 | J | 0.0610                                 | J |
| <b>Zinc</b>      | 5.0 | 3.98                                 | J | 4.10                                   | J | 4.42                                   | J | 4.11                                   | J |

Italicized analytes were not requested for this sequence.

3-IN  
INSTRUMENT BLANKS  
METALS

Lab Name: TestAmerica Pittsburgh Job No.: 180-43791-1

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

Concentration Units: ug/L

| Analyte          | RL  | CCB4 180-142313/47<br>05/20/2015 01:12 |   | CCB5 180-142313/59<br>05/20/2015 02:01 |   | Found | C | Found | C |
|------------------|-----|--|---|--|---|-------|---|-------|---|
|                  |     | Found                                  | C | Found                                  | C |       |   |       |   |
| <b>Antimony</b>  | 2.0 | 0.486                                  | J | 0.581                                  | J |       |   |       |   |
| <b>Arsenic</b>   | 1.0 | ND                                     |   | ND                                     |   |       |   |       |   |
| <b>Beryllium</b> | 1.0 | ND                                     |   | ND                                     |   |       |   |       |   |
| <b>Cadmium</b>   | 1.0 | ND                                     |   | ND                                     |   |       |   |       |   |
| <b>Chromium</b>  | 2.0 | ND                                     |   | ND                                     |   |       |   |       |   |
| <b>Copper</b>    | 2.0 | ND                                     |   | ND                                     |   |       |   |       |   |
| <b>Lead</b>      | 1.0 | ND                                     |   | ND                                     |   |       |   |       |   |
| <b>Nickel</b>    | 1.0 | ND                                     |   | ND                                     |   |       |   |       |   |
| <b>Selenium</b>  | 5.0 | ND                                     |   | ND                                     |   |       |   |       |   |
| <b>Silver</b>    | 1.0 | ND                                     |   | ND                                     |   |       |   |       |   |
| <b>Thallium</b>  | 1.0 | 0.0400                                 | J | 0.0380                                 | J |       |   |       |   |
| <b>Zinc</b>      | 5.0 | 4.41                                   | J | 4.49                                   | J |       |   |       |   |

Italicized analytes were not requested for this sequence.

3-IN  
INSTRUMENT BLANKS  
METALS

Lab Name: TestAmerica Pittsburgh Job No.: 180-43791-1

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

Concentration Units: ug/L

| Analyte        | RL   | ICB 180-141946/8-A<br>05/18/2015 14:48 |   | CCB 180-141946/11-A<br>05/18/2015 14:54 |   | CCB 180-141946/11-A<br>05/18/2015 15:17 |   | CCB 180-141946/11-A<br>05/18/2015 18:00 |   |
|----------------|------|--|---|---|---|---|---|---|---|
|                |      | Found                                  | C | Found                                   | C | Found                                   | C | Found                                   | C |
| <b>Mercury</b> | 0.20 | ND                                     |   | ND                                      |   | ND                                      |   | ND                                      |   |

Italicized analytes were not requested for this sequence.

3-IN  
INSTRUMENT BLANKS  
METALS

Lab Name: TestAmerica Pittsburgh Job No.: 180-43791-1

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

Concentration Units: ug/L

| Analyte        | RL   | CCB 180-141946/11-A<br>05/18/2015 18:23 |   | CCB 180-141946/11-A<br>05/18/2015 18:43 |   | Found | C | Found | C |
|----------------|------|---|---|---|---|-------|---|-------|---|
|                |      | Found                                   | C | Found                                   | C |       |   |       |   |
| <b>Mercury</b> | 0.20 | ND                                      |   | ND                                      |   |       |   |       |   |

Italicized analytes were not requested for this sequence.

3-IN  
METHOD BLANK  
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Pittsburgh

Job No.: 180-43791-1

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

Concentration Units: ug/L

Lab Sample ID: MB 180-140872/1-A

Instrument Code: M

Batch No.: 142313

| CAS No.   | Analyte   | Concentration | C | Q | Method |
|-----------|-----------|---------------|---|---|--------|
| 7440-38-2 | Arsenic   | ND            |   |   | 6020A  |
| 7440-43-9 | Cadmium   | ND            |   |   | 6020A  |
| 7440-47-3 | Chromium  | ND            |   |   | 6020A  |
| 7439-92-1 | Lead      | ND            |   |   | 6020A  |
| 7782-49-2 | Selenium  | ND            |   |   | 6020A  |
| 7440-22-4 | Silver    | ND            |   |   | 6020A  |
| 7440-41-7 | Beryllium | ND            |   |   | 6020A  |
| 7440-28-0 | Thallium  | ND            |   |   | 6020A  |
| 7440-36-0 | Antimony  | ND            |   |   | 6020A  |
| 7440-02-0 | Nickel    | ND            |   |   | 6020A  |
| 7440-66-6 | Zinc      | ND            |   |   | 6020A  |
| 7440-50-8 | Copper    | ND            |   |   | 6020A  |

3-IN  
METHOD BLANK  
METALS

Lab Name: TestAmerica Pittsburgh Job No.: 180-43791-1  
SDG No.: \_\_\_\_\_  
Concentration Units: ug/L Lab Sample ID: MB 180-141919/1-A  
Instrument Code: K Batch No.: 142020

| CAS No.   | Analyte | Concentration | C | Q | Method |
|-----------|---------|---------------|---|---|--------|
| 7439-97-6 | Mercury | ND            |   |   | 7470A  |



4A-IN  
INTERFERENCE CHECK STANDARD  
METALS

Lab Name: TestAmerica Pittsburgh

Job No.: 180-43791-1

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

Lab Sample ID: ICSA 180-142313/8

Instrument ID: M

Lab File ID: M50519A.xml

ICS Source: MICSAX\_00067

Concentration Units: ug/L

| Analyte           | True<br>Solution A | Found<br>Solution A | Percent<br>Recovery |
|-------------------|--------------------|---------------------|---------------------|
| <b>Antimony</b>   |                    | <b>0.0640</b>       |                     |
| <b>Arsenic</b>    |                    | <b>0.149</b>        |                     |
| <b>Beryllium</b>  |                    | <b>-0.0010</b>      |                     |
| <b>Cadmium</b>    |                    | <b>0.250</b>        |                     |
| <b>Chromium</b>   |                    | <b>0.403</b>        |                     |
| <b>Copper</b>     |                    | <b>1.19</b>         |                     |
| <b>Lead</b>       |                    | <b>0.207</b>        |                     |
| <b>Nickel</b>     |                    | <b>-0.491</b>       |                     |
| <b>Selenium</b>   |                    | <b>-0.120</b>       |                     |
| <b>Silver</b>     |                    | <b>0.229</b>        |                     |
| <b>Thallium</b>   |                    | <b>0.0160</b>       |                     |
| <b>Zinc</b>       |                    | <b>2.31</b>         |                     |
| <i>Aluminum</i>   | <i>100000</i>      | <i>89190</i>        | <i>89</i>           |
| <i>Barium</i>     |                    | <i>0.119</i>        |                     |
| <i>Boron</i>      |                    | <i>0.819</i>        |                     |
| <i>Calcium</i>    | <i>100000</i>      | <i>92680</i>        | <i>93</i>           |
| <i>Cobalt</i>     |                    | <i>0.0680</i>       |                     |
| <i>Iron</i>       | <i>100000</i>      | <i>93220</i>        | <i>93</i>           |
| <i>Magnesium</i>  | <i>100000</i>      | <i>89480</i>        | <i>89</i>           |
| <i>Manganese</i>  |                    | <i>0.392</i>        |                     |
| <i>Molybdenum</i> | <i>2000</i>        | <i>2064</i>         | <i>103</i>          |
| <i>Potassium</i>  | <i>100000</i>      | <i>90960</i>        | <i>91</i>           |
| <i>Silicon</i>    |                    | <i>170</i>          |                     |
| <i>Sodium</i>     | <i>100000</i>      | <i>89750</i>        | <i>90</i>           |
| <i>Strontium</i>  |                    | <i>0.605</i>        |                     |
| <i>Tin</i>        |                    | <i>0.144</i>        |                     |
| <i>Titanium</i>   | <i>2000</i>        | <i>1855</i>         | <i>93</i>           |
| <i>Vanadium</i>   |                    | <i>-0.290</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.: 180-43791-1

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

Lab Sample ID: ICSAB 180-142313/9

Instrument ID: M

Lab File ID: M50519A.xml

ICS Source: MICSABX\_00071

Concentration Units: ug/L

| Analyte           | True          | Found        | Percent Recovery |
|-------------------|---------------|--------------|------------------|
|                   | Solution AB   | Solution AB  |                  |
| <b>Antimony</b>   | <b>20.0</b>   | <b>19.6</b>  | <b>98</b>        |
| <b>Arsenic</b>    | <b>20.0</b>   | <b>20.8</b>  | <b>104</b>       |
| <b>Beryllium</b>  | <b>20.0</b>   | <b>18.6</b>  | <b>93</b>        |
| <b>Cadmium</b>    | <b>20.0</b>   | <b>20.1</b>  | <b>101</b>       |
| <b>Chromium</b>   | <b>20.0</b>   | <b>19.4</b>  | <b>97</b>        |
| <b>Copper</b>     | <b>20.0</b>   | <b>20.1</b>  | <b>101</b>       |
| <b>Lead</b>       | <b>20.0</b>   | <b>19.4</b>  | <b>97</b>        |
| <b>Nickel</b>     | <b>20.0</b>   | <b>18.4</b>  | <b>92</b>        |
| <b>Selenium</b>   | <b>50.0</b>   | <b>52.4</b>  | <b>105</b>       |
| <b>Silver</b>     | <b>20.0</b>   | <b>19.3</b>  | <b>96</b>        |
| <b>Thallium</b>   | <b>20.0</b>   | <b>19.2</b>  | <b>96</b>        |
| <b>Zinc</b>       | <b>25.0</b>   | <b>23.0</b>  | <b>92</b>        |
| <i>Aluminum</i>   | <i>100000</i> | <i>91433</i> | <i>91</i>        |
| <i>Barium</i>     | <i>20.0</i>   | <i>19.6</i>  | <i>98</i>        |
| <i>Boron</i>      | <i>50.0</i>   | <i>46.5</i>  | <i>93</i>        |
| <i>Calcium</i>    | <i>100000</i> | <i>96663</i> | <i>97</i>        |
| <i>Cobalt</i>     | <i>20.0</i>   | <i>19.2</i>  | <i>96</i>        |
| <i>Iron</i>       | <i>100000</i> | <i>97497</i> | <i>97</i>        |
| <i>Magnesium</i>  | <i>100000</i> | <i>93610</i> | <i>94</i>        |
| <i>Manganese</i>  | <i>22.5</i>   | <i>19.2</i>  | <i>85</i>        |
| <i>Molybdenum</i> | <i>2000</i>   | <i>2217</i>  | <i>111</i>       |
| <i>Potassium</i>  | <i>100000</i> | <i>94863</i> | <i>95</i>        |
| <i>Silicon</i>    | <i>500</i>    | <i>530</i>   | <i>106</i>       |
| <i>Sodium</i>     | <i>100000</i> | <i>92480</i> | <i>92</i>        |
| <i>Strontium</i>  | <i>25.0</i>   | <i>20.4</i>  | <i>81</i>        |
| <i>Tin</i>        | <i>100</i>    | <i>98.7</i>  | <i>99</i>        |
| <i>Titanium</i>   | <i>2000</i>   | <i>1922</i>  | <i>96</i>        |
| <i>Vanadium</i>   | <i>20.0</i>   | <i>18.6</i>  | <i>93</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 180-140872/2-A

Lab Name: TestAmerica Pittsburgh

Job No.: 180-43791-1

Sample Matrix: Water

LCS Source: MTAPITTICPMS\_00020

| Analyte   | Water (ug/L) |       |   |    |        |     |   |        |
|-----------|--------------|-------|---|----|--------|-----|---|--------|
|           | True         | Found | C | %R | Limits |     | Q | Method |
| Arsenic   | 40.0         | 36.5  |   | 91 | 80     | 120 |   | 6020A  |
| Cadmium   | 50.0         | 44.4  |   | 89 | 80     | 120 |   | 6020A  |
| Chromium  | 200          | 189   |   | 95 | 80     | 120 |   | 6020A  |
| Lead      | 20.0         | 19.1  |   | 96 | 80     | 120 |   | 6020A  |
| Selenium  | 10.0         | 9.73  |   | 97 | 80     | 120 |   | 6020A  |
| Silver    | 50.0         | 43.7  |   | 87 | 80     | 120 |   | 6020A  |
| Beryllium | 50.0         | 45.6  |   | 91 | 80     | 120 |   | 6020A  |
| Thallium  | 50.0         | 47.0  |   | 94 | 80     | 120 |   | 6020A  |
| Antimony  | 500          | 445   |   | 89 | 80     | 120 |   | 6020A  |
| Nickel    | 500          | 471   |   | 94 | 80     | 120 |   | 6020A  |
| Zinc      | 500          | 445   |   | 89 | 80     | 120 |   | 6020A  |
| Copper    | 250          | 235   |   | 94 | 80     | 120 |   | 6020A  |

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

FORM VIIA - IN

7D-IN  
 LAB CONTROL SAMPLE DUPLICATE  
 METALS - TOTAL RECOVERABLE

Lab ID: LCSD 180-140872/3-A

Lab Name: TestAmerica Pittsburgh

Job No.: 180-43791-1

Sample Matrix: Water

LCS Source: MTAPITTCPMS\_00020

| Analyte   | (SDR) C | Spike Added | %R | Control Limit %R | RPD | RPD Limit | Q | Method |
|-----------|---------|-------------|----|------------------|-----|-----------|---|--------|
| Arsenic   | 36.0    | 40.0        | 90 | 80-120           | 1   | 20        |   | 6020A  |
| Cadmium   | 44.7    | 50.0        | 89 | 80-120           | 1   | 20        |   | 6020A  |
| Chromium  | 188     | 200         | 94 | 80-120           | 1   | 20        |   | 6020A  |
| Lead      | 19.2    | 20.0        | 96 | 80-120           | 0   | 20        |   | 6020A  |
| Selenium  | 9.35    | 10.0        | 94 | 80-120           | 4   | 20        |   | 6020A  |
| Silver    | 43.3    | 50.0        | 87 | 80-120           | 1   | 20        |   | 6020A  |
| Beryllium | 45.7    | 50.0        | 91 | 80-120           | 0   | 20        |   | 6020A  |
| Thallium  | 47.5    | 50.0        | 95 | 80-120           | 1   | 20        |   | 6020A  |
| Antimony  | 441     | 500         | 88 | 80-120           | 1   | 20        |   | 6020A  |
| Nickel    | 463     | 500         | 93 | 80-120           | 2   | 20        |   | 6020A  |
| Zinc      | 451     | 500         | 90 | 80-120           | 1   | 20        |   | 6020A  |
| Copper    | 234     | 250         | 94 | 80-120           | 0   | 20        |   | 6020A  |

SDR = Spike Duplicate Results

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

FORM VIID - IN

7A-IN  
LAB CONTROL SAMPLE  
METALS

Lab ID: LCS 180-141919/2-A

Lab Name: TestAmerica Pittsburgh

Job No.: 180-43791-1

Sample Matrix: Water

LCS Source: MHgworkingCal\_01049

| Analyte | Water (ug/L) |       |   |     |        |     |   |        |
|---------|--------------|-------|---|-----|--------|-----|---|--------|
|         | True         | Found | C | %R  | Limits |     | Q | Method |
| Mercury | 2.50         | 2.66  |   | 107 | 80     | 120 |   | 7470A  |

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

FORM VIIA - IN

9-IN  
DETECTION LIMITS  
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Pittsburgh

Job Number: 180-43791-1

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

Matrix: Water

Instrument ID: M

Method: 6020A

MDL Date: 01/23/2010 18:33

Prep Method: 3005A

| Analyte   | Wavelength/<br>Mass | RL<br>(ug/L) | MDL<br>(ug/L) |
|-----------|---------------------|--------------|---------------|
| Antimony  | 121                 | 2            | 0.0187        |
| Arsenic   | 75                  | 1            | 0.2908        |
| Beryllium | 9                   | 1            | 0.0367        |
| Cadmium   | 111                 | 1            | 0.1144        |
| Chromium  | 52                  | 2            | 0.5433        |
| Copper    | 65                  | 2            | 0.2443        |
| Lead      | 208                 | 1            | 0.0192        |
| Nickel    | 60                  | 1            | 0.1749        |
| Selenium  | 82                  | 5            | 0.4216        |
| Silver    | 107                 | 1            | 0.0362        |
| Thallium  | 205                 | 1            | 0.0152        |
| Zinc      | 66                  | 5            | 0.9609        |

9-IN  
 CALIBRATION BLANK DETECTION LIMITS  
 METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Pittsburgh

Job Number: 180-43791-1

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

Matrix: Water

Instrument ID: M

Method: 6020A

XMDL Date: 01/23/2010 18:33

| Analyte   | Wavelength/<br>Mass | XRL<br>(ug/L) | XMDL<br>(ug/L) |
|-----------|---------------------|---------------|----------------|
| Antimony  | 121                 | 2             | 0.0187         |
| Arsenic   | 75                  | 1             | 0.2908         |
| Beryllium | 9                   | 1             | 0.0367         |
| Cadmium   | 111                 | 1             | 0.1144         |
| Chromium  | 52                  | 2             | 0.5433         |
| Copper    | 65                  | 2             | 0.2443         |
| Lead      | 208                 | 1             | 0.0192         |
| Nickel    | 60                  | 1             | 0.1749         |
| Selenium  | 82                  | 5             | 0.4216         |
| Silver    | 107                 | 1             | 0.0362         |
| Thallium  | 205                 | 1             | 0.0152         |
| Zinc      | 66                  | 5             | 0.9609         |

9-IN  
DETECTION LIMITS  
METALS

Lab Name: TestAmerica Pittsburgh

Job Number: 180-43791-1

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

Matrix: Water

Instrument ID: K

Method: 7470A

MDL Date: 03/13/2015 17:33

Prep Method: 7470A

| Analyte | Wavelength/<br>Mass | RL<br>(ug/L) | MDL<br>(ug/L) |
|---------|---------------------|--------------|---------------|
| Mercury | 253.7               | 0.2          | 0.0778        |



9-IN  
CALIBRATION BLANK DETECTION LIMITS  
METALS

Lab Name: TestAmerica Pittsburgh Job Number: 180-43791-1  
SDG Number: \_\_\_\_\_  
Matrix: Water Instrument ID: K  
Method: 7470A XMDL Date: 01/23/2010 12:30

| Analyte | Wavelength/<br>Mass | XRL<br>(ug/L) | XMDL<br>(ug/L) |
|---------|---------------------|---------------|----------------|
| Mercury | 253.7               | 0.2           | 0.0384         |

11-IN  
LINEAR RANGES  
METALS

Lab Name: TestAmerica Pittsburgh

Job No: 180-43791-1

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

Instrument ID: M

Date: 03/14/2011 22:35

| Analyte   | Integ.<br>Time<br>(Sec.) | Concentration<br>(ug/L) | Method |
|-----------|--------------------------|-------------------------|--------|
| Arsenic   |                          | 4500                    | 6020A  |
| Cadmium   |                          | 13500                   | 6020A  |
| Chromium  |                          | 13500                   | 6020A  |
| Lead      |                          | 20000                   | 6020A  |
| Selenium  |                          | 4500                    | 6020A  |
| Silver    |                          | 2500                    | 6020A  |
| Beryllium |                          | 9000                    | 6020A  |
| Thallium  |                          | 13500                   | 6020A  |
| Antimony  |                          | 13500                   | 6020A  |
| Nickel    |                          | 13500                   | 6020A  |
| Zinc      |                          | 25000                   | 6020A  |
| Copper    |                          | 20000                   | 6020A  |

12-IN  
PREPARATION LOG  
METALS

Lab Name: TestAmerica Pittsburgh

Job No.: 180-43791-1

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

Prep Method: 3005A

| Lab Sample ID       | Preparation Date | Prep Batch | Initial Weight | Initial Volume (mL) | Final Volume (mL) |
|---------------------|------------------|------------|----------------|---------------------|-------------------|
| MB 180-140872/1-A   | 05/07/2015 10:58 | 140872     |                | 50                  | 50                |
| LCS 180-140872/2-A  | 05/07/2015 10:58 | 140872     |                | 50                  | 50                |
| LCSD 180-140872/3-A | 05/07/2015 10:58 | 140872     |                | 50                  | 50                |
| 180-43791-1         | 05/07/2015 10:58 | 140872     |                | 50                  | 50                |
| 180-43791-2         | 05/07/2015 10:58 | 140872     |                | 50                  | 50                |
| 180-43791-3         | 05/07/2015 10:58 | 140872     |                | 50                  | 50                |
| 180-43791-4         | 05/07/2015 10:58 | 140872     |                | 50                  | 50                |

12-IN  
PREPARATION LOG  
METALS

Lab Name: TestAmerica Pittsburgh

Job No.: 180-43791-1

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

Prep Method: 7470A

| Lab Sample ID      | Preparation Date | Prep Batch | Initial Weight | Initial Volume (mL) | Final Volume (mL) |
|--------------------|------------------|------------|----------------|---------------------|-------------------|
| MB 180-141919/1-A  | 05/18/2015 06:25 | 141919     |                | 50                  | 50                |
| LCS 180-141919/2-A | 05/18/2015 06:25 | 141919     |                | 50                  | 50                |
| 180-43791-1        | 05/18/2015 06:25 | 141919     |                | 50                  | 50                |
| 180-43791-2        | 05/18/2015 06:25 | 141919     |                | 50                  | 50                |
| 180-43791-3        | 05/18/2015 06:25 | 141919     |                | 50                  | 50                |
| 180-43791-4        | 05/18/2015 06:25 | 141919     |                | 50                  | 50                |

13-IN  
ANALYSIS RUN LOG  
METALS

Lab Name: TestAmerica Pittsburgh

Job No.: 180-43791-1

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

Instrument ID: M

Analysis Method: 6020A

Start Date: 05/19/2015 14:38

End Date: 05/20/2015 05:41

| Lab Sample Id        | D/F | Type | Time  | Analytes |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |  |  |
|----------------------|-----|------|-------|----------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--|--|
|                      |     |      |       | A        | A | B | C | C | C | N | P | S | S | T | Z |   |   |   |   |   |   |   |   |   |   |  |  |
| ITUNE 180-142313/1   |     |      | 14:38 |          |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |  |  |
| STD1 180-142313/2 IC |     |      | 21:46 | X        | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X |  |  |
| STD2 180-142313/3 IC |     |      | 21:51 | X        | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X |  |  |
| STD3 180-142313/4 IC |     | 1    | 21:54 | X        | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X |  |  |
| ICV 180-142313/5     |     | 1    | 21:58 | X        | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X |  |  |
| ICB 180-142313/6     |     | 1    | 22:05 | X        | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X |  |  |
| CRI 180-142313/7     |     | 1    | 22:08 | X        | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X |  |  |
| ICSA 180-142313/8    |     | 1    | 22:12 | X        | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X |  |  |
| ICSAB 180-142313/9   |     | 1    | 22:16 | X        | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X |  |  |
| CCV 180-142313/10    |     | 1    | 22:22 | X        | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X |  |  |
| CCB1 180-142313/11   |     | 1    | 22:29 | X        | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X |  |  |
| ZZZZZZ               |     |      | 22:33 |          |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |  |  |
| ZZZZZZ               |     |      | 22:37 |          |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |  |  |
| ZZZZZZ               |     |      | 22:41 |          |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |  |  |
| ZZZZZZ               |     |      | 22:48 |          |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |  |  |
| ZZZZZZ               |     |      | 22:51 |          |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |  |  |
| ZZZZZZ               |     |      | 22:55 |          |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |  |  |
| ZZZZZZ               |     |      | 22:59 |          |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |  |  |
| ZZZZZZ               |     |      | 23:03 |          |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |  |  |
| ZZZZZZ               |     |      | 23:07 |          |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |  |  |
| ZZZZZZ               |     |      | 23:11 |          |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |  |  |
| CCV 180-142313/22    |     | 1    | 23:18 | X        | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X |  |  |
| CCB2 180-142313/23   |     | 1    | 23:24 | X        | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X |  |  |
| ZZZZZZ               |     |      | 23:28 |          |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |  |  |
| ZZZZZZ               |     |      | 23:32 |          |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |  |  |
| ZZZZZZ               |     |      | 23:36 |          |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |  |  |
| ZZZZZZ               |     |      | 23:40 |          |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |  |  |
| ZZZZZZ               |     |      | 23:43 |          |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |  |  |
| ZZZZZZ               |     |      | 23:47 |          |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |  |  |
| ZZZZZZ               |     |      | 23:51 |          |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |  |  |
| MB 180-140872/1-A    |     | 1 R  | 23:58 | X        | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X |  |  |
| LCS 180-140872/2-A   |     | 1 R  | 00:02 | X        | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X |  |  |
| LCSD 180-140872/3-A  |     | 1 R  | 00:06 | X        | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X |  |  |
| CCV 180-142313/34    |     | 1    | 00:13 | X        | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X |  |  |
| CCB3 180-142313/35   |     | 1    | 00:20 | X        | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X |  |  |
| 180-43791-1          |     | 1 R  | 00:24 | X        | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X |  |  |
| 180-43791-2          |     | 1 R  | 00:27 | X        | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X |  |  |
| 180-43791-3          |     | 1 R  | 00:31 | X        | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X |  |  |
| 180-43791-4          |     | 1 R  | 00:35 | X        | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X |  |  |
| ZZZZZZ               |     |      | 00:39 |          |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |  |  |
| ZZZZZZ               |     |      | 00:46 |          |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |  |  |
| ZZZZZZ               |     |      | 00:50 |          |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |  |  |

13-IN  
ANALYSIS RUN LOG  
METALS

Lab Name: TestAmerica Pittsburgh Job No.: 180-43791-1

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

Instrument ID: M Analysis Method: 6020A

Start Date: 05/19/2015 14:38 End Date: 05/20/2015 05:41

| Lab Sample Id      | D/F | Type | Time  | Analytes |        |        |        |        |        |        |        |        |        |        |        |   |   |   |   |   |   |   |  |
|--------------------|-----|------|-------|----------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|---|---|---|---|---|---|---|--|
|                    |     |      |       | A<br>g   | A<br>s | B<br>e | C<br>d | C<br>r | C<br>u | N<br>i | P<br>b | S<br>b | S<br>e | T<br>l | Z<br>n |   |   |   |   |   |   |   |  |
| ZZZZZZ             |     |      | 00:54 |          |        |        |        |        |        |        |        |        |        |        |        |   |   |   |   |   |   |   |  |
| ZZZZZZ             |     |      | 00:58 |          |        |        |        |        |        |        |        |        |        |        |        |   |   |   |   |   |   |   |  |
| ZZZZZZ             |     |      | 01:01 |          |        |        |        |        |        |        |        |        |        |        |        |   |   |   |   |   |   |   |  |
| CCV 180-142313/46  | 1   |      | 01:05 | X        | X      | X      | X      | X      | X      | X      | X      | X      | X      | X      | X      | X | X | X | X | X | X | X |  |
| CCB4 180-142313/47 | 1   |      | 01:12 | X        | X      | X      | X      | X      | X      | X      | X      | X      | X      | X      | X      | X | X | X | X | X | X | X |  |
| ZZZZZZ             |     |      | 01:16 |          |        |        |        |        |        |        |        |        |        |        |        |   |   |   |   |   |   |   |  |
| ZZZZZZ             |     |      | 01:20 |          |        |        |        |        |        |        |        |        |        |        |        |   |   |   |   |   |   |   |  |
| ZZZZZZ             |     |      | 01:23 |          |        |        |        |        |        |        |        |        |        |        |        |   |   |   |   |   |   |   |  |
| ZZZZZZ             |     |      | 01:27 |          |        |        |        |        |        |        |        |        |        |        |        |   |   |   |   |   |   |   |  |
| ZZZZZZ             |     |      | 01:31 |          |        |        |        |        |        |        |        |        |        |        |        |   |   |   |   |   |   |   |  |
| ZZZZZZ             |     |      | 01:35 |          |        |        |        |        |        |        |        |        |        |        |        |   |   |   |   |   |   |   |  |
| ZZZZZZ             |     |      | 01:39 |          |        |        |        |        |        |        |        |        |        |        |        |   |   |   |   |   |   |   |  |
| ZZZZZZ             |     |      | 01:42 |          |        |        |        |        |        |        |        |        |        |        |        |   |   |   |   |   |   |   |  |
| ZZZZZZ             |     |      | 01:46 |          |        |        |        |        |        |        |        |        |        |        |        |   |   |   |   |   |   |   |  |
| ZZZZZZ             |     |      | 01:50 |          |        |        |        |        |        |        |        |        |        |        |        |   |   |   |   |   |   |   |  |
| CCV 180-142313/58  | 1   |      | 01:54 | X        | X      | X      | X      | X      | X      | X      | X      | X      | X      | X      | X      | X | X | X | X | X | X | X |  |
| CCB5 180-142313/59 | 1   |      | 02:01 | X        | X      | X      | X      | X      | X      | X      | X      | X      | X      | X      | X      | X | X | X | X | X | X | X |  |
| ZZZZZZ             |     |      | 02:04 |          |        |        |        |        |        |        |        |        |        |        |        |   |   |   |   |   |   |   |  |
| ZZZZZZ             |     |      | 02:08 |          |        |        |        |        |        |        |        |        |        |        |        |   |   |   |   |   |   |   |  |
| ZZZZZZ             |     |      | 02:12 |          |        |        |        |        |        |        |        |        |        |        |        |   |   |   |   |   |   |   |  |
| ZZZZZZ             |     |      | 02:16 |          |        |        |        |        |        |        |        |        |        |        |        |   |   |   |   |   |   |   |  |
| ZZZZZZ             |     |      | 02:20 |          |        |        |        |        |        |        |        |        |        |        |        |   |   |   |   |   |   |   |  |
| ZZZZZZ             |     |      | 02:24 |          |        |        |        |        |        |        |        |        |        |        |        |   |   |   |   |   |   |   |  |
| ZZZZZZ             |     |      | 02:27 |          |        |        |        |        |        |        |        |        |        |        |        |   |   |   |   |   |   |   |  |
| ZZZZZZ             |     |      | 02:31 |          |        |        |        |        |        |        |        |        |        |        |        |   |   |   |   |   |   |   |  |
| ZZZZZZ             |     |      | 02:35 |          |        |        |        |        |        |        |        |        |        |        |        |   |   |   |   |   |   |   |  |
| ZZZZZZ             |     |      | 02:39 |          |        |        |        |        |        |        |        |        |        |        |        |   |   |   |   |   |   |   |  |
| CCV 180-142313/70  |     |      | 02:46 |          |        |        |        |        |        |        |        |        |        |        |        |   |   |   |   |   |   |   |  |
| CCB6 180-142313/71 |     |      | 02:52 |          |        |        |        |        |        |        |        |        |        |        |        |   |   |   |   |   |   |   |  |
| ZZZZZZ             |     |      | 02:56 |          |        |        |        |        |        |        |        |        |        |        |        |   |   |   |   |   |   |   |  |
| ZZZZZZ             |     |      | 03:00 |          |        |        |        |        |        |        |        |        |        |        |        |   |   |   |   |   |   |   |  |
| ZZZZZZ             |     |      | 03:04 |          |        |        |        |        |        |        |        |        |        |        |        |   |   |   |   |   |   |   |  |
| ZZZZZZ             |     |      | 03:08 |          |        |        |        |        |        |        |        |        |        |        |        |   |   |   |   |   |   |   |  |
| ZZZZZZ             |     |      | 03:11 |          |        |        |        |        |        |        |        |        |        |        |        |   |   |   |   |   |   |   |  |
| ZZZZZZ             |     |      | 03:15 |          |        |        |        |        |        |        |        |        |        |        |        |   |   |   |   |   |   |   |  |
| ZZZZZZ             |     |      | 03:19 |          |        |        |        |        |        |        |        |        |        |        |        |   |   |   |   |   |   |   |  |
| ZZZZZZ             |     |      | 03:23 |          |        |        |        |        |        |        |        |        |        |        |        |   |   |   |   |   |   |   |  |
| ZZZZZZ             |     |      | 03:27 |          |        |        |        |        |        |        |        |        |        |        |        |   |   |   |   |   |   |   |  |
| ZZZZZZ             |     |      | 03:31 |          |        |        |        |        |        |        |        |        |        |        |        |   |   |   |   |   |   |   |  |
| CCV 180-142313/82  |     |      | 03:34 |          |        |        |        |        |        |        |        |        |        |        |        |   |   |   |   |   |   |   |  |
| CCB7 180-142313/83 |     |      | 03:41 |          |        |        |        |        |        |        |        |        |        |        |        |   |   |   |   |   |   |   |  |
| ZZZZZZ             |     |      | 03:45 |          |        |        |        |        |        |        |        |        |        |        |        |   |   |   |   |   |   |   |  |

13-IN  
ANALYSIS RUN LOG  
METALS

Lab Name: TestAmerica Pittsburgh Job No.: 180-43791-1

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

Instrument ID: M Analysis Method: 6020A

Start Date: 05/19/2015 14:38 End Date: 05/20/2015 05:41

| Lab Sample Id        | D/F | Type | Time  | Analytes |        |        |        |        |        |        |        |        |        |        |        |   |  |  |  |  |  |  |  |  |  |  |  |  |  |
|----------------------|-----|------|-------|----------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|---|--|--|--|--|--|--|--|--|--|--|--|--|--|
|                      |     |      |       | A<br>g   | A<br>s | B<br>e | C<br>d | C<br>r | C<br>u | N<br>i | P<br>b | S<br>b | S<br>e | T<br>l | Z<br>n |   |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ZZZZZZ               |     |      | 03:49 |          |        |        |        |        |        |        |        |        |        |        |        |   |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ZZZZZZ               |     |      | 03:53 |          |        |        |        |        |        |        |        |        |        |        |        |   |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ZZZZZZ               |     |      | 03:57 |          |        |        |        |        |        |        |        |        |        |        |        |   |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ZZZZZZ               |     |      | 04:00 |          |        |        |        |        |        |        |        |        |        |        |        |   |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ZZZZZZ               |     |      | 04:04 |          |        |        |        |        |        |        |        |        |        |        |        |   |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ZZZZZZ               |     |      | 04:08 |          |        |        |        |        |        |        |        |        |        |        |        |   |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ZZZZZZ               |     |      | 04:12 |          |        |        |        |        |        |        |        |        |        |        |        |   |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ZZZZZZ               |     |      | 04:16 |          |        |        |        |        |        |        |        |        |        |        |        |   |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ZZZZZZ               |     |      | 04:20 |          |        |        |        |        |        |        |        |        |        |        |        |   |  |  |  |  |  |  |  |  |  |  |  |  |  |
| CCV 180-142313/94    |     |      | 04:24 |          |        |        |        |        |        |        |        |        |        |        |        |   |  |  |  |  |  |  |  |  |  |  |  |  |  |
| CCB8 180-142313/95   |     |      | 04:30 |          |        |        |        |        |        |        |        |        |        |        |        |   |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ZZZZZZ               |     |      | 04:34 |          |        |        |        |        |        |        |        |        |        |        |        |   |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ZZZZZZ               |     |      | 04:38 |          |        |        |        |        |        |        |        |        |        |        |        |   |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ZZZZZZ               |     |      | 04:42 |          |        |        |        |        |        |        |        |        |        |        |        |   |  |  |  |  |  |  |  |  |  |  |  |  |  |
| CRI 180-142313/99    |     | 1    | 04:49 | X        | X      | X      | X      | X      | X      | X      | X      | X      | X      | X      | X      | X |  |  |  |  |  |  |  |  |  |  |  |  |  |
| CRI 180-142313/100   |     |      | 04:53 |          |        |        |        |        |        |        |        |        |        |        |        |   |  |  |  |  |  |  |  |  |  |  |  |  |  |
| CCV 180-142313/101   |     |      | 04:57 |          |        |        |        |        |        |        |        |        |        |        |        |   |  |  |  |  |  |  |  |  |  |  |  |  |  |
| CCB9 180-142313/102  |     |      | 05:04 |          |        |        |        |        |        |        |        |        |        |        |        |   |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ZZZZZZ               |     |      | 05:08 |          |        |        |        |        |        |        |        |        |        |        |        |   |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ZZZZZZ               |     |      | 05:11 |          |        |        |        |        |        |        |        |        |        |        |        |   |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ZZZZZZ               |     |      | 05:15 |          |        |        |        |        |        |        |        |        |        |        |        |   |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ZZZZZZ               |     |      | 05:19 |          |        |        |        |        |        |        |        |        |        |        |        |   |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ZZZZZZ               |     |      | 05:23 |          |        |        |        |        |        |        |        |        |        |        |        |   |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ZZZZZZ               |     |      | 05:27 |          |        |        |        |        |        |        |        |        |        |        |        |   |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ZZZZZZ               |     |      | 05:30 |          |        |        |        |        |        |        |        |        |        |        |        |   |  |  |  |  |  |  |  |  |  |  |  |  |  |
| CCV 180-142313/110   |     |      | 05:34 |          |        |        |        |        |        |        |        |        |        |        |        |   |  |  |  |  |  |  |  |  |  |  |  |  |  |
| CCB10 180-142313/111 |     |      | 05:41 |          |        |        |        |        |        |        |        |        |        |        |        |   |  |  |  |  |  |  |  |  |  |  |  |  |  |

Prep Types: \_\_\_\_\_  
R = Total Recoverable

13-IN  
ANALYSIS RUN LOG  
METALS

Lab Name: TestAmerica Pittsburgh Job No.: 180-43791-1

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

Instrument ID: K Analysis Method: 7470A

Start Date: 05/18/2015 14:34 End Date: 05/18/2015 18:43

| Lab Sample Id       | D/F | Type | Time  | Hg | Analytes |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|---------------------|-----|------|-------|----|----------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
|                     |     |      |       |    |          |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| IC 180-141946/1-A   |     |      | 14:34 | X  |          |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| IC 180-141946/2-A   |     |      | 14:36 | X  |          |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| IC 180-141946/3-A   |     |      | 14:38 | X  |          |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| IC 180-141946/4-A   |     |      | 14:40 | X  |          |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ZZZZZZ              |     |      | 14:42 |    |          |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| IC 180-141946/6-A   |     |      | 14:44 | X  |          |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ICV 180-141946/7-A  | 1   |      | 14:46 | X  |          |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ICB 180-141946/8-A  | 1   |      | 14:48 | X  |          |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| CRA 180-141946/9-A  | 1   |      | 14:50 | X  |          |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| CCV 180-141946/10-A | 1   |      | 14:52 | X  |          |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| CCB 180-141946/11-A | 1   |      | 14:54 | X  |          |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| MB 180-141919/1-A   | 1   | T    | 14:56 | X  |          |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| LCS 180-141919/2-A  | 1   | T    | 14:58 | X  |          |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ZZZZZZ              |     |      | 15:00 |    |          |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ZZZZZZ              |     |      | 15:02 |    |          |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ZZZZZZ              |     |      | 15:03 |    |          |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ZZZZZZ              |     |      | 15:05 |    |          |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ZZZZZZ              |     |      | 15:07 |    |          |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ZZZZZZ              |     |      | 15:09 |    |          |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ZZZZZZ              |     |      | 15:11 |    |          |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ZZZZZZ              |     |      | 15:13 |    |          |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| CCV 180-141946/10-A | 1   |      | 15:15 | X  |          |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| CCB 180-141946/11-A | 1   |      | 15:17 | X  |          |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ZZZZZZ              |     |      | 15:19 |    |          |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ZZZZZZ              |     |      | 15:21 |    |          |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ZZZZZZ              |     |      | 15:23 |    |          |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ZZZZZZ              |     |      | 15:25 |    |          |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ZZZZZZ              |     |      | 15:27 |    |          |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ZZZZZZ              |     |      | 15:29 |    |          |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ZZZZZZ              |     |      | 15:31 |    |          |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ZZZZZZ              |     |      | 15:33 |    |          |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ZZZZZZ              |     |      | 15:35 |    |          |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ZZZZZZ              |     |      | 15:37 |    |          |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| CCV 180-141946/10-A |     |      | 15:39 |    |          |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| CCB 180-141946/11-A |     |      | 15:40 |    |          |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ZZZZZZ              |     |      | 15:42 |    |          |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ZZZZZZ              |     |      | 15:44 |    |          |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ZZZZZZ              |     |      | 15:46 |    |          |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ZZZZZZ              |     |      | 15:48 |    |          |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ZZZZZZ              |     |      | 15:50 |    |          |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ZZZZZZ              |     |      | 15:52 |    |          |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ZZZZZZ              |     |      | 15:54 |    |          |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |



13-IN  
ANALYSIS RUN LOG  
METALS

Lab Name: TestAmerica Pittsburgh Job No.: 180-43791-1

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

Instrument ID: K Analysis Method: 7470A

Start Date: 05/18/2015 14:34 End Date: 05/18/2015 18:43

| Lab Sample Id       | D/F | Type | Time  | Analytes |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|---------------------|-----|------|-------|----------|---|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
|                     |     |      |       | H        | g |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ZZZZZZ              |     |      | 15:56 |          |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ZZZZZZ              |     |      | 15:58 |          |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ZZZZZZ              |     |      | 16:00 |          |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| CCV 180-141946/10-A |     |      | 16:02 |          |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| CCB 180-141946/11-A |     |      | 16:03 |          |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ZZZZZZ              |     |      | 16:06 |          |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ZZZZZZ              |     |      | 16:08 |          |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ZZZZZZ              |     |      | 16:09 |          |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ZZZZZZ              |     |      | 16:11 |          |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ZZZZZZ              |     |      | 16:13 |          |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ZZZZZZ              |     |      | 16:15 |          |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ZZZZZZ              |     |      | 16:17 |          |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ZZZZZZ              |     |      | 16:19 |          |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ZZZZZZ              |     |      | 16:21 |          |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ZZZZZZ              |     |      | 16:23 |          |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| CCV 180-141946/10-A |     |      | 16:25 |          |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| CCB 180-141946/11-A |     |      | 16:27 |          |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ZZZZZZ              |     |      | 16:29 |          |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ZZZZZZ              |     |      | 16:31 |          |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ZZZZZZ              |     |      | 16:32 |          |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ZZZZZZ              |     |      | 16:34 |          |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ZZZZZZ              |     |      | 16:36 |          |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ZZZZZZ              |     |      | 16:38 |          |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ZZZZZZ              |     |      | 16:40 |          |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ZZZZZZ              |     |      | 16:42 |          |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ZZZZZZ              |     |      | 16:44 |          |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ZZZZZZ              |     |      | 16:46 |          |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| CCV 180-141946/10-A |     |      | 16:48 |          |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| CCB 180-141946/11-A |     |      | 16:50 |          |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ZZZZZZ              |     |      | 16:52 |          |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ZZZZZZ              |     |      | 16:54 |          |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ZZZZZZ              |     |      | 16:56 |          |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ZZZZZZ              |     |      | 16:57 |          |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ZZZZZZ              |     |      | 16:59 |          |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ZZZZZZ              |     |      | 17:01 |          |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ZZZZZZ              |     |      | 17:03 |          |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ZZZZZZ              |     |      | 17:05 |          |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ZZZZZZ              |     |      | 17:07 |          |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ZZZZZZ              |     |      | 17:09 |          |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| CCV 180-141946/10-A |     |      | 17:11 |          |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| CCB 180-141946/11-A |     |      | 17:13 |          |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ZZZZZZ              |     |      | 17:15 |          |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

13-IN  
ANALYSIS RUN LOG  
METALS

Lab Name: TestAmerica Pittsburgh Job No.: 180-43791-1

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

Instrument ID: K Analysis Method: 7470A

Start Date: 05/18/2015 14:34 End Date: 05/18/2015 18:43

| Lab Sample Id       | D/F | Type | Time    | Analytes |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|---------------------|-----|------|---------|----------|---|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
|                     |     |      |         | H        | g |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ZZZZZZ              |     |      | 17:17   |          |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ZZZZZZ              |     |      | 17:19   |          |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ZZZZZZ              |     |      | 17:21   |          |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ZZZZZZ              |     |      | 17:23   |          |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ZZZZZZ              |     |      | 17:25   |          |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ZZZZZZ              |     |      | 17:27   |          |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ZZZZZZ              |     |      | 17:28   |          |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ZZZZZZ              |     |      | 17:30   |          |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ZZZZZZ              |     |      | 17:32   |          |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| CCV 180-141946/10-A |     |      | 17:34   |          |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| CCB 180-141946/11-A |     |      | 17:37   |          |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ZZZZZZ              |     |      | 17:39   |          |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ZZZZZZ              |     |      | 17:41   |          |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ZZZZZZ              |     |      | 17:42   |          |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ZZZZZZ              |     |      | 17:44   |          |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ZZZZZZ              |     |      | 17:46   |          |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ZZZZZZ              |     |      | 17:48   |          |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ZZZZZZ              |     |      | 17:50   |          |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ZZZZZZ              |     |      | 17:52   |          |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ZZZZZZ              |     |      | 17:54   |          |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ZZZZZZ              |     |      | 17:56   |          |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| CCV 180-141946/10-A |     | 1    | 17:58   | X        |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| CCB 180-141946/11-A |     | 1    | 18:00   | X        |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ZZZZZZ              |     |      | 18:02   |          |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ZZZZZZ              |     |      | 18:04   |          |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ZZZZZZ              |     |      | 18:06   |          |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ZZZZZZ              |     |      | 18:07   |          |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ZZZZZZ              |     |      | 18:10   |          |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ZZZZZZ              |     |      | 18:12   |          |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ZZZZZZ              |     |      | 18:13   |          |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ZZZZZZ              |     |      | 18:15   |          |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 180-43791-1         |     | 1    | T 18:17 | X        |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 180-43791-2         |     | 1    | T 18:19 | X        |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| CCV 180-141946/10-A |     | 1    | 18:21   | X        |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| CCB 180-141946/11-A |     | 1    | 18:23   | X        |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 180-43791-3         |     | 1    | T 18:25 | X        |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 180-43791-4         |     | 1    | T 18:27 | X        |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ZZZZZZ              |     |      | 18:29   |          |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ZZZZZZ              |     |      | 18:31   |          |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ZZZZZZ              |     |      | 18:33   |          |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ZZZZZZ              |     |      | 18:36   |          |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ZZZZZZ              |     |      | 18:37   |          |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

13-IN  
ANALYSIS RUN LOG  
METALS

Lab Name: TestAmerica Pittsburgh Job No.: 180-43791-1

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

Instrument ID: K Analysis Method: 7470A

Start Date: 05/18/2015 14:34 End Date: 05/18/2015 18:43

| Lab Sample Id       | D/F | Type | Time  | Analytes |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|---------------------|-----|------|-------|----------|---|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
|                     |     |      |       | H        | g |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ZZZZZZ              |     |      | 18:39 |          |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| CCV 180-141946/10-A | 1   |      | 18:41 | X        |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| CCB 180-141946/11-A | 1   |      | 18:43 | X        |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

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

15-IN  
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY  
METALS

Lab Name: TestAmerica Pittsburgh Job No.: 180-43791-1

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

ICP-MS Instrument ID: M Start Date: 05/19/2015 End Date: 05/20/2015

| Lab Sample ID       | Time  | Internal Standards %RI For: |   |               |   |                 |   |                   |   |               |   |
|---------------------|-------|-----------------------------|---|---------------|---|-----------------|---|-------------------|---|---------------|---|
|                     |       | Element<br>Li-6             | Q | Element<br>Sc | Q | Element<br>Y-89 | Q | Element<br>Rh-103 | Q | Element<br>In | Q |
| STD3 180-142313/4 I | 21:54 | 100                         |   | 95            |   | 92              |   | 93                |   | 90            |   |
| ICV 180-142313/5    | 21:58 | 96                          |   | 95            |   | 93              |   | 90                |   | 90            |   |
| ICB 180-142313/6    | 22:05 | 107                         |   | 106           |   | 102             |   | 104               |   | 102           |   |
| CRI 180-142313/7    | 22:08 | 109                         |   | 109           |   | 107             |   | 101               |   | 99            |   |
| ICSA 180-142313/8   | 22:12 | 82                          |   | 85            |   | 86              |   | 80                |   | 83            |   |
| ICSAB 180-142313/9  | 22:16 | 71                          |   | 75            |   | 77              |   | 76                |   | 80            |   |
| CCV 180-142313/10   | 22:22 | 74                          |   | 80            |   | 83              |   | 79                |   | 76            |   |
| CCB1 180-142313/11  | 22:29 | 84                          |   | 88            |   | 91              |   | 92                |   | 93            |   |
| CCV 180-142313/22   | 23:18 | 89                          |   | 88            |   | 89              |   | 87                |   | 79            |   |
| CCB2 180-142313/23  | 23:24 | 97                          |   | 94            |   | 94              |   | 95                |   | 95            |   |
| MB 180-140872/1-A   | 23:58 | 87                          |   | 80            |   | 84              |   | 86                |   | 86            |   |
| LCS 180-140872/2-A  | 00:02 | 63                          |   | 58            |   | 69              |   | 71                |   | 75            |   |
| LCSD 180-140872/3-A | 00:06 | 59                          |   | 54            |   | 66              |   | 70                |   | 73            |   |
| CCV 180-142313/34   | 00:13 | 87                          |   | 81            |   | 85              |   | 83                |   | 77            |   |
| CCB3 180-142313/35  | 00:20 | 103                         |   | 95            |   | 92              |   | 95                |   | 93            |   |
| 180-43791-1         | 00:24 | 86                          |   | 70            |   | 76              |   | 79                |   | 80            |   |
| 180-43791-2         | 00:27 | 82                          |   | 68            |   | 75              |   | 78                |   | 80            |   |
| 180-43791-3         | 00:31 | 77                          |   | 65            |   | 73              |   | 75                |   | 77            |   |
| 180-43791-4         | 00:35 | 75                          |   | 62            |   | 70              |   | 74                |   | 76            |   |
| CCV 180-142313/46   | 01:05 | 74                          |   | 71            |   | 76              |   | 74                |   | 71            |   |
| CCB4 180-142313/47  | 01:12 | 93                          |   | 86            |   | 85              |   | 88                |   | 87            |   |
| CCV 180-142313/58   | 01:54 | 76                          |   | 72            |   | 77              |   | 77                |   | 72            |   |
| CCB5 180-142313/59  | 02:01 | 95                          |   | 85            |   | 84              |   | 87                |   | 86            |   |
| CRI 180-142313/99   | 04:49 | 120                         |   | 109           |   | 95              |   | 97                |   | 93            |   |

15-IN  
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY  
METALS

Lab Name: TestAmerica Pittsburgh Job No.: 180-43791-1

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

ICP-MS Instrument ID: M Start Date: 05/19/2015 End Date: 05/20/2015

| Lab Sample ID       | Time  | Internal Standards %RI For: |   |            |   |            |   |         |   |         |   |
|---------------------|-------|-----------------------------|---|------------|---|------------|---|---------|---|---------|---|
|                     |       | Element Tb                  | Q | Element Ho | Q | Element Bi | Q | Element | Q | Element | Q |
| STD3 180-142313/4 I | 21:54 | 90                          |   | 88         |   | 88         |   |         |   |         |   |
| ICV 180-142313/5    | 21:58 | 92                          |   | 90         |   | 89         |   |         |   |         |   |
| ICB 180-142313/6    | 22:05 | 101                         |   | 101        |   | 106        |   |         |   |         |   |
| CRI 180-142313/7    | 22:08 | 99                          |   | 98         |   | 103        |   |         |   |         |   |
| ICSA 180-142313/8   | 22:12 | 90                          |   | 90         |   | 98         |   |         |   |         |   |
| ICSAB 180-142313/9  | 22:16 | 91                          |   | 90         |   | 92         |   |         |   |         |   |
| CCV 180-142313/10   | 22:22 | 90                          |   | 94         |   | 90         |   |         |   |         |   |
| CCB1 180-142313/11  | 22:29 | 96                          |   | 95         |   | 96         |   |         |   |         |   |
| CCV 180-142313/22   | 23:18 | 96                          |   | 96         |   | 94         |   |         |   |         |   |
| CCB2 180-142313/23  | 23:24 | 97                          |   | 96         |   | 99         |   |         |   |         |   |
| MB 180-140872/1-A   | 23:58 | 93                          |   | 93         |   | 104        |   |         |   |         |   |
| LCS 180-140872/2-A  | 00:02 | 88                          |   | 89         |   | 86         |   |         |   |         |   |
| LCSD 180-140872/3-A | 00:06 | 88                          |   | 88         |   | 85         |   |         |   |         |   |
| CCV 180-142313/34   | 00:13 | 89                          |   | 93         |   | 90         |   |         |   |         |   |
| CCB3 180-142313/35  | 00:20 | 96                          |   | 94         |   | 99         |   |         |   |         |   |
| 180-43791-1         | 00:24 | 89                          |   | 90         |   | 93         |   |         |   |         |   |
| 180-43791-2         | 00:27 | 91                          |   | 91         |   | 93         |   |         |   |         |   |
| 180-43791-3         | 00:31 | 89                          |   | 90         |   | 93         |   |         |   |         |   |
| 180-43791-4         | 00:35 | 88                          |   | 89         |   | 92         |   |         |   |         |   |
| CCV 180-142313/46   | 01:05 | 86                          |   | 87         |   | 87         |   |         |   |         |   |
| CCB4 180-142313/47  | 01:12 | 92                          |   | 92         |   | 99         |   |         |   |         |   |
| CCV 180-142313/58   | 01:54 | 84                          |   | 84         |   | 90         |   |         |   |         |   |
| CCB5 180-142313/59  | 02:01 | 91                          |   | 91         |   | 99         |   |         |   |         |   |
| CRI 180-142313/99   | 04:49 | 93                          |   | 92         |   | 98         |   |         |   |         |   |

## Dilution Corrected Concentrations

STD1 1565410 INT STD 5/19/2015 9:46:48 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    | 21:47:07 | 101.368% | -0.031 | 0.249  | -0.079   | 0.000  | -0.148   | 0.025    | -0.020   |
| 2    | 21:47:27 | 98.888%  | 0.006  | -0.068 | -0.005   | 0.000  | 0.055    | -0.093   | 0.106    |
| 3    | 21:47:46 | 99.744%  | 0.024  | -0.181 | 0.084    | 0.000  | 0.093    | 0.068    | -0.086   |
| X    |          | 100.000% | 0.000  | -0.000 | -0.000   | 0.000  | -0.000   | -0.000   | -0.000   |
| σ    |          | 1.260%   | 0.028  | 0.223  | 0.081    | 0.000  | 0.129    | 0.083    | 0.098    |
| %RSD |          | 1.260    | 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    | 21:47:07 | -0.363   | 2.155  | 0.000  | 0.549    | -2.226 | -0.363   | 100.469% | -0.023   |
| 2    | 21:47:27 | 0.174    | -1.042 | 0.000  | 0.220    | 1.148  | 0.624    | 99.227%  | -0.021   |
| 3    | 21:47:46 | 0.190    | -1.113 | 0.000  | -0.769   | 1.077  | -0.261   | 100.303% | 0.044    |
| X    |          | 0.000    | -0.000 | 0.000  | -0.000   | -0.000 | -0.000   | 100.000% | 0.000    |
| σ    |          | 0.315    | 1.866  | 0.000  | 0.686    | 1.928  | 0.543    | 0.674%   | 0.039    |
| %RSD |          | 0.000    | 0.000  | 0.000  | 0.000    | 0.000  | 0.000    | 0.674    | 0.000    |
| Run  | Time     | 51V      | 52Cr   | 55Mn   | 56Fe     | 57Fe   | 59Co     | 60Ni     | 63Cu     |
|      |          | ppb      | ppb    | ppb    | ppb      | ppb    | ppb      | ppb      | ppb      |
| 1    | 21:47:07 | -0.013   | -0.013 | 0.001  | 0.955    | -0.156 | -0.000   | 0.008    | -0.009   |
| 2    | 21:47:27 | 0.004    | 0.016  | -0.009 | 0.376    | 0.038  | 0.000    | 0.003    | 0.005    |
| 3    | 21:47:46 | 0.008    | -0.003 | 0.008  | -1.331   | 0.118  | -0.000   | -0.011   | 0.004    |
| X    |          | -0.000   | 0.000  | -0.000 | 0.000    | -0.000 | -0.000   | -0.000   | -0.000   |
| σ    |          | 0.011    | 0.015  | 0.009  | 1.188    | 0.141  | 0.000    | 0.010    | 0.008    |
| %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    | 21:47:07 | -0.023   | 0.016  | -0.023 | -0.046   | 0.102  | 0.169    | 0.000    | 0.002    |
| 2    | 21:47:27 | -0.023   | -0.031 | -0.049 | -0.026   | -0.142 | -0.221   | 0.000    | 0.001    |
| 3    | 21:47:46 | 0.046    | 0.014  | 0.072  | 0.072    | 0.040  | 0.053    | 0.000    | -0.002   |
| X    |          | 0.000    | -0.000 | 0.000  | 0.000    | 0.000  | -0.000   | 0.000    | 0.000    |
| σ    |          | 0.040    | 0.027  | 0.064  | 0.063    | 0.127  | 0.200    | 0.000    | 0.002    |
| %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    | 21:47:07 | 99.135%  | -0.019 | -0.018 | 99.603%  | 0.003  | 0.001    | -0.025   | -0.018   |
| 2    | 21:47:27 | 100.274% | 0.013  | 0.009  | 100.104% | 0.003  | 0.000    | -0.011   | -0.005   |
| 3    | 21:47:46 | 100.590% | 0.005  | 0.009  | 100.293% | -0.006 | -0.001   | 0.036    | 0.023    |
| X    |          | 100.000% | -0.000 | 0.000  | 100.000% | -0.000 | -0.000   | -0.000   | -0.000   |
| σ    |          | 0.765%   | 0.017  | 0.015  | 0.357%   | 0.005  | 0.001    | 0.032    | 0.021    |
| %RSD |          | 0.765    | 0.000  | 0.000  | 0.357    | 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    | 21:47:07 | 99.477%  | -0.075 | -0.022 | 0.005    | -0.006 | -0.004   | 98.693%  | 98.546%  |
| 2    | 21:47:27 | 99.670%  | 0.022  | 0.022  | -0.001   | 0.001  | -0.001   | 100.215% | 100.327% |
| 3    | 21:47:46 | 100.853% | 0.053  | -0.000 | -0.004   | 0.005  | 0.005    | 101.092% | 101.127% |
| X    |          | 100.000% | -0.000 | -0.000 | 0.000    | -0.000 | -0.000   | 100.000% | 100.000% |
| σ    |          | 0.745%   | 0.067  | 0.022  | 0.004    | 0.006  | 0.005    | 1.214%   | 1.321%   |
| %RSD |          | 0.745    | 0.000  | 0.000  | 0.000    | 0.000  | 0.000    | 1.214    | 1.321    |
| Run  | Time     | 203Tl    | 205Tl  | 206Pb  | 207Pb    | 208Pb  | 209Bi    |          |          |
|      |          | ppb      | ppb    | ppb    | ppb      | ppb    | ppb      |          |          |
| 1    | 21:47:07 | -0.002   | 0.000  | 0.000  | 0.002    | 0.000  | 98.898%  |          |          |
| 2    | 21:47:27 | 0.002    | -0.000 | 0.002  | -0.005   | -0.002 | 100.005% |          |          |
| 3    | 21:47:46 | 0.000    | -0.000 | -0.002 | 0.002    | 0.002  | 101.096% |          |          |
| X    |          | -0.000   | 0.000  | -0.000 | 0.000    | 0.000  | 100.000% |          |          |
| σ    |          | 0.002    | 0.000  | 0.002  | 0.004    | 0.002  | 1.099%   |          |          |
| %RSD |          | 0.000    | 0.000  | 0.000  | 0.000    | 0.000  | 1.099    |          |          |

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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    | 21:51:11 | 100.474% | 197.800 | 0.579    | 0.643      | 0.000      | 100400.000 | 99780.000  | 99250.000  |
| 2    | 21:51:31 | 101.025% | 201.800 | 0.684    | 0.573      | 0.000      | 98920.000  | 99560.000  | 98230.000  |
| 3    | 21:51:50 | 97.694%  | 200.500 | 0.495    | 0.624      | 0.000      | 100700.000 | 100700.000 | 102500.000 |
| X    |          | 99.731%  | 200.000 | 0.586    | 0.613      | 0.000      | 100000.000 | 100000.000 | 100000.000 |
| σ    |          | 1.786%   | 2.051   | 0.095    | 0.036      | 0.000      | 949.600    | 575.500    | 2247.000   |
| %RSD |          | 1.790    | 1.026   | 16.140   | 5.925      | 0.000      | 0.950      | 0.576      | 2.247      |
| Run  | Time     | 27Al     | 28Si    | 37Cl     | 39K        | 43Ca       | 44Ca       | 45Sc       | 47Ti       |
|      |          | ppb      | ppb     | ppb      | ppb        | ppb        | ppb        | ppb        | ppb        |
| 1    | 21:51:11 | 995.000  | 22.070  | 0.000    | 99740.000  | 98770.000  | 98020.000  | 102.838%   | -0.044     |
| 2    | 21:51:31 | 985.300  | 32.770  | 0.000    | 98890.000  | 99060.000  | 99070.000  | 101.462%   | 0.176      |
| 3    | 21:51:50 | 1020.000 | 46.500  | 0.000    | 101400.000 | 102200.000 | 102900.000 | 99.704%    | 0.183      |
| X    |          | 1000.000 | 33.780  | 0.000    | 100000.000 | 100000.000 | 100000.000 | 101.335%   | 0.105      |
| σ    |          | 17.760   | 12.250  | 0.000    | 1256.000   | 1889.000   | 2572.000   | 1.571%     | 0.129      |
| %RSD |          | 1.776    | 36.250  | 0.000    | 1.256      | 1.889      | 2.572      | 1.550      | 123.200    |
| Run  | Time     | 51V      | 52Cr    | 55Mn     | 56Fe       | 57Fe       | 59Co       | 60Ni       | 63Cu       |
|      |          | ppb      | ppb     | ppb      | ppb        | ppb        | ppb        | ppb        | ppb        |
| 1    | 21:51:11 | 197.200  | 196.400 | 990.900  | 49400.000  | 48910.000  | 196.200    | 197.900    | 197.200    |
| 2    | 21:51:31 | 198.600  | 199.300 | 999.100  | 49880.000  | 50340.000  | 202.300    | 201.600    | 200.700    |
| 3    | 21:51:50 | 204.100  | 204.200 | 1010.000 | 50720.000  | 50750.000  | 201.500    | 200.500    | 202.100    |
| X    |          | 200.000  | 200.000 | 1000.000 | 50000.000  | 50000.000  | 200.000    | 200.000    | 200.000    |
| σ    |          | 3.645    | 3.956   | 9.564    | 667.300    | 964.300    | 3.315      | 1.928      | 2.500      |
| %RSD |          | 1.822    | 1.978   | 0.956    | 1.335      | 1.929      | 1.657      | 0.964      | 1.250      |
| Run  | Time     | 65Cu     | 66Zn    | 68Zn     | 75As       | 78Se       | 82Se       | 83Kr       | 88Sr       |
|      |          | ppb      | ppb     | ppb      | ppb        | ppb        | ppb        | ppb        | ppb        |
| 1    | 21:51:11 | 197.300  | 197.300 | 198.300  | 198.000    | 201.600    | 200.900    | 0.000      | 198.100    |
| 2    | 21:51:31 | 200.300  | 201.200 | 200.200  | 201.000    | 199.300    | 198.800    | 0.000      | 200.900    |
| 3    | 21:51:50 | 202.400  | 201.500 | 201.500  | 201.000    | 199.100    | 200.200    | 0.000      | 200.900    |
| X    |          | 200.000  | 200.000 | 200.000  | 200.000    | 200.000    | 200.000    | 0.000      | 200.000    |
| σ    |          | 2.581    | 2.360   | 1.576    | 1.765      | 1.424      | 1.068      | 0.000      | 1.614      |
| %RSD |          | 1.291    | 1.180   | 0.788    | 0.882      | 0.712      | 0.534      | 0.000      | 0.807      |
| Run  | Time     | 89Y      | 95Mo    | 98Mo     | 103Rh      | 107Ag      | 109Ag      | 111Cd      | 114Cd      |
|      |          | ppb      | ppb     | ppb      | ppb        | ppb        | ppb        | ppb        | ppb        |
| 1    | 21:51:11 | 97.652%  | 0.058   | 0.077    | 92.814%    | 199.400    | 198.400    | 198.700    | 199.000    |
| 2    | 21:51:31 | 98.173%  | 0.074   | 0.113    | 92.362%    | 201.400    | 201.600    | 199.700    | 200.300    |
| 3    | 21:51:50 | 97.789%  | 0.125   | 0.139    | 92.308%    | 199.300    | 200.000    | 201.600    | 200.700    |
| X    |          | 97.872%  | 0.086   | 0.110    | 92.495%    | 200.000    | 200.000    | 200.000    | 200.000    |
| σ    |          | 0.270%   | 0.035   | 0.031    | 0.278%     | 1.182      | 1.611      | 1.488      | 0.884      |
| %RSD |          | 0.276    | 40.380  | 28.270   | 0.300      | 0.591      | 0.806      | 0.744      | 0.442      |
| Run  | Time     | 115In    | 118Sn   | 121Sb    | 123Sb      | 135Ba      | 137Ba      | 159Tb      | 165Ho      |
|      |          | ppb      | ppb     | ppb      | ppb        | ppb        | ppb        | ppb        | ppb        |
| 1    | 21:51:11 | 93.592%  | -0.095  | 0.156    | 0.170      | 198.900    | 197.800    | 95.228%    | 94.022%    |
| 2    | 21:51:31 | 93.232%  | 0.073   | 0.161    | 0.166      | 201.100    | 201.100    | 95.782%    | 94.841%    |
| 3    | 21:51:50 | 93.613%  | 0.111   | 0.160    | 0.213      | 200.100    | 201.100    | 95.408%    | 94.173%    |
| X    |          | 93.479%  | 0.030   | 0.159    | 0.183      | 200.000    | 200.000    | 95.473%    | 94.345%    |
| σ    |          | 0.214%   | 0.110   | 0.003    | 0.026      | 1.109      | 1.914      | 0.283%     | 0.436%     |
| %RSD |          | 0.229    | 364.400 | 1.781    | 14.230     | 0.555      | 0.957      | 0.296      | 0.462      |
| Run  | Time     | 203TI    | 205TI   | 206Pb    | 207Pb      | 208Pb      | 209Bi      |            |            |
|      |          | ppb      | ppb     | ppb      | ppb        | ppb        | ppb        |            |            |
| 1    | 21:51:11 | 195.200  | 195.200 | 195.500  | 195.100    | 194.500    | 97.730%    |            |            |
| 2    | 21:51:31 | 199.500  | 199.800 | 199.200  | 199.400    | 199.800    | 95.553%    |            |            |
| 3    | 21:51:50 | 205.300  | 205.000 | 205.300  | 205.400    | 205.600    | 93.460%    |            |            |
| X    |          | 200.000  | 200.000 | 200.000  | 200.000    | 200.000    | 95.581%    |            |            |
| σ    |          | 5.027    | 4.912   | 4.969    | 5.178      | 5.551      | 2.135%     |            |            |
| %RSD |          | 2.513    | 2.456   | 2.485    | 2.589      | 2.776      | 2.234      |            |            |

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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    | 21:54:48 | 104.513% | 0.215     | 195.100 | 192.900 | 0.000  | 48.670  | 31.940   | 32.970  |
| 2    | 21:55:07 | 97.941%  | 0.100     | 200.100 | 199.100 | 0.000  | 44.320  | 30.110   | 27.190  |
| 3    | 21:55:26 | 96.350%  | 0.160     | 204.700 | 208.100 | 0.000  | 41.220  | 26.090   | 26.630  |
| x    |          | 99.601%  | 0.159     | 200.000 | 200.000 | 0.000  | 44.730  | 29.380   | 28.930  |
| σ    |          | 4.327%   | 0.057     | 4.802   | 7.665   | 0.000  | 3.742   | 2.993    | 3.508   |
| %RSD |          | 4.345    | 36.220    | 2.401   | 3.833   | 0.000  | 8.365   | 10.190   | 12.120  |
| Run  | Time     | 27Al     | 28Si      | 37Cl    | 39K     | 43Ca   | 44Ca    | 45Sc     | 47Ti    |
|      |          | ppb      | ppb       | ppb     | ppb     | ppb    | ppb     | ppb      | ppb     |
| 1    | 21:54:48 | 59.710   | 9736.000  | 0.000   | 34.410  | 80.110 | 113.100 | 100.119% | 196.000 |
| 2    | 21:55:07 | 64.990   | 10180.000 | 0.000   | 32.990  | 58.790 | 105.600 | 94.911%  | 200.300 |
| 3    | 21:55:26 | 66.820   | 10080.000 | 0.000   | 30.900  | 57.660 | 111.600 | 91.295%  | 203.700 |
| x    |          | 63.840   | 10000.000 | 0.000   | 32.770  | 65.520 | 110.100 | 95.442%  | 200.000 |
| σ    |          | 3.693    | 234.700   | 0.000   | 1.765   | 12.650 | 3.997   | 4.436%   | 3.901   |
| %RSD |          | 5.785    | 2.347     | 0.000   | 5.387   | 19.310 | 3.630   | 4.648    | 1.950   |
| Run  | Time     | 51V      | 52Cr      | 55Mn    | 56Fe    | 57Fe   | 59Co    | 60Ni     | 63Cu    |
|      |          | ppb      | ppb       | ppb     | ppb     | ppb    | ppb     | ppb      | ppb     |
| 1    | 21:54:48 | 0.147    | 0.088     | 0.521   | 38.560  | 41.940 | 0.080   | 0.313    | 0.419   |
| 2    | 21:55:07 | 0.164    | 0.085     | 0.512   | 33.970  | 36.990 | 0.059   | 0.302    | 0.442   |
| 3    | 21:55:26 | 0.131    | 0.077     | 0.500   | 33.200  | 36.100 | 0.044   | 0.219    | 0.491   |
| x    |          | 0.147    | 0.083     | 0.511   | 35.240  | 38.340 | 0.061   | 0.278    | 0.451   |
| σ    |          | 0.017    | 0.006     | 0.011   | 2.901   | 3.143  | 0.018   | 0.051    | 0.037   |
| %RSD |          | 11.410   | 7.225     | 2.091   | 8.230   | 8.198  | 29.130  | 18.530   | 8.183   |
| Run  | Time     | 65Cu     | 66Zn      | 68Zn    | 75As    | 78Se   | 82Se    | 83Kr     | 88Sr    |
|      |          | ppb      | ppb       | ppb     | ppb     | ppb    | ppb     | ppb      | ppb     |
| 1    | 21:54:48 | 0.480    | 5.265     | 5.265   | 0.875   | 2.830  | 2.946   | 0.000    | 0.161   |
| 2    | 21:55:07 | 0.409    | 5.067     | 5.495   | 1.327   | 4.563  | 4.245   | 0.000    | 0.164   |
| 3    | 21:55:26 | 0.546    | 5.430     | 5.025   | 1.490   | 5.027  | 4.592   | 0.000    | 0.169   |
| x    |          | 0.478    | 5.254     | 5.262   | 1.231   | 4.140  | 3.928   | 0.000    | 0.164   |
| σ    |          | 0.069    | 0.182     | 0.235   | 0.319   | 1.158  | 0.868   | 0.000    | 0.004   |
| %RSD |          | 14.360   | 3.465     | 4.460   | 25.920  | 27.970 | 22.100  | 0.000    | 2.423   |
| Run  | Time     | 89Y      | 95Mo      | 98Mo    | 103Rh   | 107Ag  | 109Ag   | 111Cd    | 114Cd   |
|      |          | ppb      | ppb       | ppb     | ppb     | ppb    | ppb     | ppb      | ppb     |
| 1    | 21:54:48 | 92.872%  | 197.800   | 197.400 | 93.282% | 0.153  | 0.136   | 0.107    | -0.346  |
| 2    | 21:55:07 | 91.999%  | 200.000   | 202.200 | 92.079% | 0.144  | 0.150   | 0.097    | -0.300  |
| 3    | 21:55:26 | 92.147%  | 202.200   | 200.400 | 92.144% | 0.134  | 0.154   | 0.059    | -0.386  |
| x    |          | 92.340%  | 200.000   | 200.000 | 92.501% | 0.144  | 0.146   | 0.088    | -0.344  |
| σ    |          | 0.467%   | 2.223     | 2.444   | 0.677%  | 0.009  | 0.009   | 0.026    | 0.043   |
| %RSD |          | 0.506    | 1.111     | 1.222   | 0.731   | 6.560  | 6.432   | 29.200   | 12.510  |
| Run  | Time     | 115In    | 118Sn     | 121Sb   | 123Sb   | 135Ba  | 137Ba   | 159Tb    | 165Ho   |
|      |          | ppb      | ppb       | ppb     | ppb     | ppb    | ppb     | ppb      | ppb     |
| 1    | 21:54:48 | 90.274%  | 196.500   | 195.400 | 196.100 | 0.252  | 0.405   | 89.249%  | 87.213% |
| 2    | 21:55:07 | 89.282%  | 201.800   | 202.100 | 201.800 | 0.265  | 0.354   | 90.498%  | 88.635% |
| 3    | 21:55:26 | 89.733%  | 201.700   | 202.500 | 202.200 | 0.230  | 0.433   | 90.505%  | 88.413% |
| x    |          | 89.763%  | 200.000   | 200.000 | 200.000 | 0.249  | 0.397   | 90.084%  | 88.087% |
| σ    |          | 0.497%   | 3.040     | 3.997   | 3.410   | 0.018  | 0.040   | 0.723%   | 0.765%  |
| %RSD |          | 0.554    | 1.520     | 1.998   | 1.705   | 7.220  | 9.989   | 0.802    | 0.869   |
| Run  | Time     | 203Tl    | 205Tl     | 206Pb   | 207Pb   | 208Pb  | 209Bi   |          |         |
|      |          | ppb      | ppb       | ppb     | ppb     | ppb    | ppb     |          |         |
| 1    | 21:54:48 | 0.093    | 0.089     | 0.161   | 0.140   | 0.157  | 88.371% |          |         |
| 2    | 21:55:07 | 0.087    | 0.099     | 0.185   | 0.192   | 0.179  | 87.418% |          |         |
| 3    | 21:55:26 | 0.095    | 0.095     | 0.200   | 0.182   | 0.191  | 87.517% |          |         |
| x    |          | 0.092    | 0.094     | 0.182   | 0.171   | 0.176  | 87.769% |          |         |
| σ    |          | 0.004    | 0.005     | 0.019   | 0.028   | 0.017  | 0.524%  |          |         |
| %RSD |          | 4.104    | 5.704     | 10.700  | 16.060  | 9.697  | 0.597   |          |         |



ICV 1578172 5/19/2015 9:58:24 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    | 21:58:24 | 97.403% | 77.620   | 89.100   | 74.110    | 0.000     | 36170.000 | 36550.000 | 37590.000 |
| 2    | 21:58:44 | 96.210% | 73.810   | 86.780   | 79.290    | 0.000     | 37930.000 | 37760.000 | 38250.000 |
| 3    | 21:59:03 | 95.643% | 77.520   | 83.100   | 79.400    | 0.000     | 37860.000 | 38420.000 | 39400.000 |
| X    |          | 96.419% | 95.394%  | 107.907% | 97.002%   | 0.000     | 93.300%   | 93.938%   | 96.033%   |
| σ    |          | 0.899%  | n/a      | n/a      | n/a       | 0.000     | n/a       | n/a       | n/a       |
| %RSD |          | 0.932   | 2.848    | 3.507    | 3.893     | 0.000     | 2.666     | 2.512     | 2.384     |
| Run  | Time     | 27Al    | 28Si     | 37Cl     | 39K       | 43Ca      | 44Ca      | 45Sc      | 47Ti      |
|      |          | ppb     | ppb      | ppb      | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 21:58:24 | 389.500 | 4236.000 | 0.000    | 37750.000 | 36700.000 | 36890.000 | 97.325%   | 75.340    |
| 2    | 21:58:44 | 397.500 | 4400.000 | 0.000    | 38120.000 | 37960.000 | 38250.000 | 95.055%   | 75.740    |
| 3    | 21:59:03 | 401.800 | 4383.000 | 0.000    | 38910.000 | 39290.000 | 38610.000 | 92.742%   | 77.450    |
| X    |          | 99.071% | 108.485% | 0.000    | 95.650%   | 94.959%   | 94.790%   | 95.041%   | 95.223%   |
| σ    |          | n/a     | n/a      | 0.000    | n/a       | n/a       | n/a       | 2.292%    | n/a       |
| %RSD |          | 1.581   | 2.073    | 0.000    | 1.556     | 3.406     | 2.388     | 2.411     | 1.469     |
| Run  | Time     | 51V     | 52Cr     | 55Mn     | 56Fe      | 57Fe      | 59Co      | 60Ni      | 63Cu      |
|      |          | ppb     | ppb      | ppb      | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 21:58:24 | 72.810  | 75.430   | 364.800  | 18510.000 | 18620.000 | 74.740    | 74.770    | 76.580    |
| 2    | 21:58:44 | 75.750  | 77.600   | 374.000  | 19000.000 | 19120.000 | 77.330    | 76.150    | 78.640    |
| 3    | 21:59:03 | 78.100  | 78.140   | 383.100  | 19830.000 | 19750.000 | 79.790    | 80.780    | 80.870    |
| X    |          | 94.441% | 96.322%  | 93.494%  | 95.560%   | 95.820%   | 96.609%   | 96.540%   | 98.369%   |
| σ    |          | n/a     | n/a      | n/a      | n/a       | n/a       | n/a       | n/a       | n/a       |
| %RSD |          | 3.505   | 1.863    | 2.454    | 3.494     | 2.952     | 3.271     | 4.074     | 2.730     |
| Run  | Time     | 65Cu    | 66Zn     | 68Zn     | 75As      | 78Se      | 82Se      | 83Kr      | 88Sr      |
|      |          | ppb     | ppb      | ppb      | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 21:58:24 | 76.990  | 77.590   | 77.170   | 77.690    | 80.230    | 78.530    | 0.000     | 74.770    |
| 2    | 21:58:44 | 79.030  | 79.860   | 79.670   | 79.970    | 80.150    | 79.520    | 0.000     | 76.240    |
| 3    | 21:59:03 | 79.720  | 79.880   | 79.180   | 78.960    | 78.260    | 79.120    | 0.000     | 76.540    |
| X    |          | 98.226% | 98.886%  | 98.341%  | 98.593%   | 99.435%   | 98.821%   | 0.000     | 94.813%   |
| σ    |          | n/a     | n/a      | n/a      | n/a       | n/a       | n/a       | 0.000     | n/a       |
| %RSD |          | 1.808   | 1.666    | 1.679    | 1.452     | 1.403     | 0.628     | 0.000     | 1.248     |
| Run  | Time     | 89Y     | 95Mo     | 98Mo     | 103Rh     | 107Ag     | 109Ag     | 111Cd     | 114Cd     |
|      |          | ppb     | ppb      | ppb      | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 21:58:24 | 92.625% | 78.700   | 78.840   | 89.510%   | 74.010    | 74.480    | 75.430    | 74.850    |
| 2    | 21:58:44 | 93.525% | 82.220   | 81.910   | 90.468%   | 76.670    | 76.290    | 76.390    | 76.780    |
| 3    | 21:59:03 | 94.156% | 81.590   | 82.490   | 90.536%   | 75.800    | 77.070    | 76.670    | 76.080    |
| X    |          | 93.435% | 101.049% | 101.352% | 90.171%   | 94.365%   | 94.931%   | 95.204%   | 94.880%   |
| σ    |          | 0.770%  | n/a      | n/a      | 0.574%    | n/a       | n/a       | n/a       | n/a       |
| %RSD |          | 0.824   | 2.324    | 2.424    | 0.637     | 1.798     | 1.749     | 0.850     | 1.288     |
| Run  | Time     | 115In   | 118Sn    | 121Sb    | 123Sb     | 135Ba     | 137Ba     | 159Tb     | 165Ho     |
|      |          | ppb     | ppb      | ppb      | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 21:58:24 | 89.565% | 74.820   | 74.890   | 75.090    | 76.250    | 76.920    | 89.480%   | 88.190%   |
| 2    | 21:58:44 | 90.072% | 77.980   | 77.330   | 76.680    | 77.150    | 77.200    | 91.653%   | 90.416%   |
| 3    | 21:59:03 | 91.498% | 77.370   | 77.080   | 77.850    | 77.770    | 77.080    | 93.400%   | 91.503%   |
| X    |          | 90.378% | 95.902%  | 95.542%  | 95.674%   | 96.318%   | 96.332%   | 91.511%   | 90.036%   |
| σ    |          | 1.003%  | n/a      | n/a      | n/a       | n/a       | n/a       | 1.964%    | 1.689%    |
| %RSD |          | 1.109   | 2.182    | 1.755    | 1.808     | 0.996     | 0.185     | 2.146     | 1.876     |
| Run  | Time     | 203Tl   | 205Tl    | 206Pb    | 207Pb     | 208Pb     | 209Bi     |           |           |
|      |          | ppb     | ppb      | ppb      | ppb       | ppb       | ppb       |           |           |
| 1    | 21:58:24 | 75.820  | 78.490   | 74.690   | 72.570    | 73.620    | 87.179%   |           |           |
| 2    | 21:58:44 | 78.600  | 81.810   | 78.120   | 74.930    | 76.170    | 89.210%   |           |           |
| 3    | 21:59:03 | 80.290  | 83.100   | 79.630   | 76.560    | 78.010    | 89.421%   |           |           |
| X    |          | 97.795% | 101.418% | 96.850%  | 93.355%   | 94.915%   | 88.603%   |           |           |
| σ    |          | n/a     | n/a      | n/a      | n/a       | n/a       | 1.238%    |           |           |
| %RSD |          | 2.889   | 2.933    | 3.270    | 2.689     | 2.903     | 1.397     |           |           |

ICB 5/19/2015 10:05:14 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    | 22:05:14 | 109.772% | -0.031  | -0.201   | 0.319    | 0.000   | 3.361    | 1.874    | 1.841    |
| 2    | 22:05:33 | 106.903% | -0.031  | -0.093   | 0.037    | 0.000   | 2.783    | 0.999    | 1.187    |
| 3    | 22:05:52 | 103.762% | 0.005   | 0.339    | 0.287    | 0.000   | 2.676    | 0.957    | 0.551    |
| x    |          | 106.812% | -0.019  | 0.015    | 0.214    | 0.000   | 2.940    | 1.277    | 1.193    |
| σ    |          | 3.006%   | 0.020   | 0.285    | 0.155    | 0.000   | 0.369    | 0.518    | 0.645    |
| %RSD |          | 2.814    | 107.600 | 1886.000 | 72.150   | 0.000   | 12.540   | 40.580   | 54.050   |
| Run  | Time     | 27Al     | 28Si    | 37Cl     | 39K      | 43Ca    | 44Ca     | 45Sc     | 47Ti     |
|      |          | ppb      | ppb     | ppb      | ppb      | ppb     | ppb      | ppb      | ppb      |
| 1    | 22:05:14 | -0.587   | -80.560 | 0.000    | 2.189    | 8.255   | 1.928    | 107.906% | -0.179   |
| 2    | 22:05:33 | -0.609   | -76.450 | 0.000    | 0.403    | 0.664   | 2.079    | 106.986% | -0.115   |
| 3    | 22:05:52 | -0.630   | -74.780 | 0.000    | 1.960    | 2.423   | 2.459    | 104.103% | -0.079   |
| x    |          | -0.609   | -77.260 | 0.000    | 1.517    | 3.781   | 2.155    | 106.332% | -0.125   |
| σ    |          | 0.021    | 2.971   | 0.000    | 0.972    | 3.973   | 0.274    | 1.984%   | 0.050    |
| %RSD |          | 3.528    | 3.846   | 0.000    | 64.020   | 105.100 | 12.700   | 1.866    | 40.550   |
| Run  | Time     | 51V      | 52Cr    | 55Mn     | 56Fe     | 57Fe    | 59Co     | 60Ni     | 63Cu     |
|      |          | ppb      | ppb     | ppb      | ppb      | ppb     | ppb      | ppb      | ppb      |
| 1    | 22:05:14 | 0.020    | -0.004  | 0.003    | 0.953    | 2.953   | 0.007    | -0.008   | -0.007   |
| 2    | 22:05:33 | -0.004   | -0.030  | 0.022    | 1.557    | 3.187   | 0.004    | 0.010    | 0.042    |
| 3    | 22:05:52 | 0.007    | -0.017  | -0.001   | 2.387    | 2.384   | 0.007    | -0.007   | 0.046    |
| x    |          | 0.008    | -0.017  | 0.008    | 1.632    | 2.841   | 0.006    | -0.001   | 0.027    |
| σ    |          | 0.012    | 0.013   | 0.012    | 0.720    | 0.413   | 0.002    | 0.010    | 0.029    |
| %RSD |          | 154.800  | 77.300  | 152.500  | 44.120   | 14.530  | 33.690   | 701.700  | 108.600  |
| Run  | Time     | 65Cu     | 66Zn    | 68Zn     | 75As     | 78Se    | 82Se     | 83Kr     | 88Sr     |
|      |          | ppb      | ppb     | ppb      | ppb      | ppb     | ppb      | ppb      | ppb      |
| 1    | 22:05:14 | -0.013   | 4.014   | 4.144    | 0.114    | 0.210   | 0.321    | 0.000    | 0.004    |
| 2    | 22:05:33 | -0.039   | 3.919   | 3.880    | 0.117    | 0.003   | 0.197    | 0.000    | 0.002    |
| 3    | 22:05:52 | 0.008    | 3.994   | 4.253    | 0.220    | 0.769   | 0.492    | 0.000    | 0.004    |
| x    |          | -0.015   | 3.976   | 4.092    | 0.150    | 0.327   | 0.337    | 0.000    | 0.004    |
| σ    |          | 0.023    | 0.050   | 0.191    | 0.061    | 0.396   | 0.148    | 0.000    | 0.001    |
| %RSD |          | 157.700  | 1.260   | 4.677    | 40.440   | 121.100 | 44.030   | 0.000    | 39.010   |
| Run  | Time     | 89Y      | 95Mo    | 98Mo     | 103Rh    | 107Ag   | 109Ag    | 111Cd    | 114Cd    |
|      |          | ppb      | ppb     | ppb      | ppb      | ppb     | ppb      | ppb      | ppb      |
| 1    | 22:05:14 | 101.916% | 0.596   | 0.579    | 103.651% | 0.014   | 0.005    | 0.041    | 0.022    |
| 2    | 22:05:33 | 102.181% | 0.944   | 0.802    | 103.252% | 0.007   | 0.017    | 0.088    | 0.056    |
| 3    | 22:05:52 | 102.122% | 1.047   | 0.996    | 103.827% | 0.004   | 0.011    | 0.035    | 0.027    |
| x    |          | 102.073% | 0.862   | 0.792    | 103.577% | 0.008   | 0.011    | 0.055    | 0.035    |
| σ    |          | 0.139%   | 0.236   | 0.209    | 0.295%   | 0.005   | 0.006    | 0.029    | 0.019    |
| %RSD |          | 0.136    | 27.410  | 26.370   | 0.285    | 59.490  | 52.230   | 53.230   | 53.160   |
| Run  | Time     | 115In    | 118Sn   | 121Sb    | 123Sb    | 135Ba   | 137Ba    | 159Tb    | 165Ho    |
|      |          | ppb      | ppb     | ppb      | ppb      | ppb     | ppb      | ppb      | ppb      |
| 1    | 22:05:14 | 101.847% | -0.232  | -0.062   | -0.058   | -0.007  | 0.005    | 99.855%  | 99.115%  |
| 2    | 22:05:33 | 101.176% | -0.115  | -0.053   | -0.045   | -0.007  | 0.014    | 101.562% | 100.717% |
| 3    | 22:05:52 | 103.124% | -0.066  | -0.044   | -0.043   | -0.011  | 0.011    | 102.408% | 101.706% |
| x    |          | 102.049% | -0.137  | -0.053   | -0.048   | -0.008  | 0.010    | 101.275% | 100.513% |
| σ    |          | 0.990%   | 0.085   | 0.009    | 0.008    | 0.002   | 0.005    | 1.300%   | 1.308%   |
| %RSD |          | 0.970    | 62.090  | 17.420   | 16.460   | 29.210  | 44.480   | 1.284    | 1.301    |
| Run  | Time     | 203Tl    | 205Tl   | 206Pb    | 207Pb    | 208Pb   | 209Bi    |          |          |
|      |          | ppb      | ppb     | ppb      | ppb      | ppb     | ppb      |          |          |
| 1    | 22:05:14 | 0.013    | 0.012   | 0.002    | 0.010    | 0.005   | 106.510% |          |          |
| 2    | 22:05:33 | 0.012    | 0.012   | 0.013    | 0.003    | 0.006   | 105.963% |          |          |
| 3    | 22:05:52 | 0.015    | 0.013   | -0.003   | 0.004    | 0.002   | 105.663% |          |          |
| x    |          | 0.013    | 0.013   | 0.004    | 0.006    | 0.004   | 106.045% |          |          |
| σ    |          | 0.001    | 0.001   | 0.008    | 0.004    | 0.002   | 0.429%   |          |          |
| %RSD |          | 11.160   | 6.042   | 192.300  | 72.410   | 44.820  | 0.405    |          |          |

CRI 1554040 5/19/2015 10:08:53 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    | 22:08:53 | 115.451% | 0.939    | 17.240   | 17.380   | 0.000   | 411.700  | 426.200  | 438.300 |
| 2    | 22:09:13 | 108.692% | 0.710    | 20.390   | 16.890   | 0.000   | 436.700  | 443.600  | 446.900 |
| 3    | 22:09:32 | 102.552% | 1.055    | 21.550   | 18.630   | 0.000   | 463.500  | 475.700  | 460.400 |
| X    |          | 108.899% | 90.134%  | 98.618%  | 88.156%  | 0.000   | 87.465%  | 89.702%  | 89.710% |
| σ    |          | 6.452%   | n/a      | n/a      | n/a      | 0.000   | n/a      | n/a      | n/a     |
| %RSD |          | 5.925    | 19.460   | 11.310   | 5.083    | 0.000   | 5.921    | 5.598    | 2.482   |
| Run  | Time     | 27Al     | 28Si     | 37Cl     | 39K      | 43Ca    | 44Ca     | 45Sc     | 47Ti    |
|      |          | ppb      | ppb      | ppb      | ppb      | ppb     | ppb      | ppb      | ppb     |
| 1    | 22:08:53 | 32.040   | 361.500  | 0.000    | 431.000  | 449.800 | 415.000  | 111.200% | 4.223   |
| 2    | 22:09:13 | 33.560   | 396.900  | 0.000    | 444.100  | 438.400 | 431.400  | 108.288% | 4.151   |
| 3    | 22:09:32 | 34.150   | 432.400  | 0.000    | 460.800  | 539.300 | 426.800  | 106.034% | 4.626   |
| X    |          | 110.838% | 79.387%  | 0.000    | 89.054%  | 95.170% | 84.881%  | 108.508% | 86.661% |
| σ    |          | n/a      | n/a      | 0.000    | n/a      | n/a     | n/a      | 2.590%   | n/a     |
| %RSD |          | 3.276    | 8.939    | 0.000    | 3.353    | 11.610  | 1.993    | 2.387    | 5.904   |
| Run  | Time     | 51V      | 52Cr     | 55Mn     | 56Fe     | 57Fe    | 59Co     | 60Ni     | 63Cu    |
|      |          | ppb      | ppb      | ppb      | ppb      | ppb     | ppb      | ppb      | ppb     |
| 1    | 22:08:53 | 0.814    | 1.767    | 4.210    | 41.880   | 48.850  | 0.454    | 0.928    | 1.855   |
| 2    | 22:09:13 | 0.921    | 1.928    | 4.292    | 43.470   | 47.020  | 0.460    | 1.069    | 2.035   |
| 3    | 22:09:32 | 0.880    | 1.834    | 4.354    | 46.420   | 48.040  | 0.475    | 1.069    | 1.977   |
| X    |          | 87.147%  | 92.153%  | 85.706%  | 87.850%  | 95.939% | 92.631%  | 102.229% | 97.784% |
| σ    |          | n/a      | n/a      | n/a      | n/a      | n/a     | n/a      | n/a      | n/a     |
| %RSD |          | 6.172    | 4.399    | 1.675    | 5.247    | 1.921   | 2.387    | 7.967    | 4.709   |
| Run  | Time     | 65Cu     | 66Zn     | 68Zn     | 75As     | 78Se    | 82Se     | 83Kr     | 88Sr    |
|      |          | ppb      | ppb      | ppb      | ppb      | ppb     | ppb      | ppb      | ppb     |
| 1    | 22:08:53 | 1.971    | 6.067    | 5.557    | 1.063    | 4.062   | 4.645    | 0.000    | 4.278   |
| 2    | 22:09:13 | 2.058    | 6.173    | 6.247    | 1.032    | 4.146   | 4.276    | 0.000    | 4.285   |
| 3    | 22:09:32 | 1.985    | 5.941    | 6.464    | 1.034    | 4.224   | 4.810    | 0.000    | 4.368   |
| X    |          | 100.230% | 121.201% | 121.792% | 104.310% | 82.881% | 91.543%  | 0.000    | 86.209% |
| σ    |          | n/a      | n/a      | n/a      | n/a      | n/a     | n/a      | 0.000    | n/a     |
| %RSD |          | 2.314    | 1.920    | 7.775    | 1.669    | 1.950   | 5.971    | 0.000    | 1.158   |
| Run  | Time     | 89Y      | 95Mo     | 98Mo     | 103Rh    | 107Ag   | 109Ag    | 111Cd    | 114Cd   |
|      |          | ppb      | ppb      | ppb      | ppb      | ppb     | ppb      | ppb      | ppb     |
| 1    | 22:08:53 | 108.189% | 4.581    | 4.460    | 102.177% | 0.927   | 0.905    | 0.989    | 0.926   |
| 2    | 22:09:13 | 107.127% | 4.899    | 4.809    | 100.721% | 0.944   | 0.905    | 0.996    | 0.956   |
| 3    | 22:09:32 | 106.252% | 4.853    | 4.862    | 100.921% | 0.954   | 0.913    | 0.973    | 0.953   |
| X    |          | 107.189% | 95.551%  | 94.206%  | 101.273% | 94.153% | 90.783%  | 98.622%  | 94.510% |
| σ    |          | 0.970%   | n/a      | n/a      | 0.789%   | n/a     | n/a      | n/a      | n/a     |
| %RSD |          | 0.905    | 3.603    | 4.641    | 0.779    | 1.426   | 0.537    | 1.192    | 1.754   |
| Run  | Time     | 115In    | 118Sn    | 121Sb    | 123Sb    | 135Ba   | 137Ba    | 159Tb    | 165Ho   |
|      |          | ppb      | ppb      | ppb      | ppb      | ppb     | ppb      | ppb      | ppb     |
| 1    | 22:08:53 | 99.588%  | 4.251    | 1.680    | 1.775    | 9.111   | 9.052    | 98.774%  | 97.674% |
| 2    | 22:09:13 | 99.186%  | 4.165    | 1.662    | 1.770    | 9.327   | 8.978    | 99.464%  | 98.972% |
| 3    | 22:09:32 | 99.188%  | 4.428    | 1.668    | 1.757    | 8.981   | 9.281    | 99.051%  | 97.840% |
| X    |          | 99.321%  | 85.627%  | 83.492%  | 88.362%  | 91.400% | 91.033%  | 99.096%  | 98.162% |
| σ    |          | 0.232%   | n/a      | n/a      | n/a      | n/a     | n/a      | 0.348%   | 0.706%  |
| %RSD |          | 0.233    | 3.140    | 0.568    | 0.525    | 1.911   | 1.734    | 0.351    | 0.720   |
| Run  | Time     | 203Tl    | 205Tl    | 206Pb    | 207Pb    | 208Pb   | 209Bi    |          |         |
|      |          | ppb      | ppb      | ppb      | ppb      | ppb     | ppb      |          |         |
| 1    | 22:08:53 | 0.899    | 0.897    | 0.911    | 0.886    | 0.898   | 104.577% |          |         |
| 2    | 22:09:13 | 0.892    | 0.942    | 0.950    | 0.958    | 0.942   | 103.278% |          |         |
| 3    | 22:09:32 | 0.892    | 0.913    | 0.926    | 0.946    | 0.941   | 102.458% |          |         |
| X    |          | 89.448%  | 91.732%  | 92.894%  | 92.997%  | 92.716% | 103.438% |          |         |
| σ    |          | n/a      | n/a      | n/a      | n/a      | n/a     | 1.069%   |          |         |
| %RSD |          | 0.416    | 2.473    | 2.143    | 4.141    | 2.689   | 1.033    |          |         |

ICSA 1578047 5/19/2015 10:12:33 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    | 22:12:33 | 86.978%   | -0.010   | 0.480    | 0.660     | 0.000     | 88440.000 | 88970.000 | 88300.000 |
| 2    | 22:12:52 | 81.763%   | -0.008   | 1.070    | 0.803     | 0.000     | 90320.000 | 90280.000 | 88410.000 |
| 3    | 22:13:11 | 78.364%   | 0.016    | 0.853    | 0.993     | 0.000     | 90500.000 | 91660.000 | 91730.000 |
| X    |          | 82.368%   | -0.001   | 0.801    | 0.819     | 0.000     | 89750.000 | 90300.000 | 89480.000 |
| σ    |          | 4.339%    | 0.014    | 0.298    | 0.167     | 0.000     | 1139.000  | 1345.000  | 1952.000  |
| %RSD |          | 5.267     | 2033.000 | 37.260   | 20.400    | 0.000     | 1.269     | 1.489     | 2.182     |
| Run  | Time     | 27Al      | 28Si     | 37Cl     | 39K       | 43Ca      | 44Ca      | 45Sc      | 47Ti      |
|      |          | ppb       | ppb      | ppb      | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 22:12:33 | 87210.000 | 135.700  | 0.000    | 87900.000 | 88620.000 | 89880.000 | 88.669%   | 1808.000  |
| 2    | 22:12:52 | 89240.000 | 174.600  | 0.000    | 91320.000 | 91190.000 | 92930.000 | 84.050%   | 1867.000  |
| 3    | 22:13:11 | 91130.000 | 198.400  | 0.000    | 93650.000 | 95600.000 | 95240.000 | 81.817%   | 1889.000  |
| X    |          | 89190.000 | 169.600  | 0.000    | 90960.000 | 91800.000 | 92680.000 | 84.845%   | 1855.000  |
| σ    |          | 1959.000  | 31.660   | 0.000    | 2891.000  | 3526.000  | 2690.000  | 3.494%    | 41.610    |
| %RSD |          | 2.197     | 18.670   | 0.000    | 3.178     | 3.841     | 2.902     | 4.119     | 2.243     |
| Run  | Time     | 51V       | 52Cr     | 55Mn     | 56Fe      | 57Fe      | 59Co      | 60Ni      | 63Cu      |
|      |          | ppb       | ppb      | ppb      | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 22:12:33 | -0.183    | 0.372    | 0.397    | 92050.000 | 91850.000 | 0.063     | -0.500    | 1.236     |
| 2    | 22:12:52 | -0.384    | 0.389    | 0.377    | 93950.000 | 94890.000 | 0.070     | -0.498    | 1.193     |
| 3    | 22:13:11 | -0.304    | 0.449    | 0.400    | 93680.000 | 94470.000 | 0.071     | -0.474    | 1.191     |
| X    |          | -0.290    | 0.403    | 0.392    | 93220.000 | 93740.000 | 0.068     | -0.491    | 1.207     |
| σ    |          | 0.101     | 0.040    | 0.013    | 1025.000  | 1650.000  | 0.004     | 0.015     | 0.025     |
| %RSD |          | 34.850    | 10.020   | 3.216    | 1.100     | 1.760     | 6.425     | 3.007     | 2.068     |
| Run  | Time     | 65Cu      | 66Zn     | 68Zn     | 75As      | 78Se      | 82Se      | 83Kr      | 88Sr      |
|      |          | ppb       | ppb      | ppb      | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 22:12:33 | 1.326     | 2.415    | 1.499    | 0.144     | -0.323    | 0.278     | 0.000     | 0.596     |
| 2    | 22:12:52 | 1.108     | 2.327    | 1.835    | 0.186     | -0.244    | 0.333     | 0.000     | 0.610     |
| 3    | 22:13:11 | 1.148     | 2.198    | 1.831    | 0.118     | 0.208     | 0.270     | 0.000     | 0.610     |
| X    |          | 1.194     | 2.313    | 1.722    | 0.149     | -0.120    | 0.294     | 0.000     | 0.605     |
| σ    |          | 0.116     | 0.109    | 0.193    | 0.034     | 0.287     | 0.034     | 0.000     | 0.008     |
| %RSD |          | 9.695     | 4.712    | 11.200   | 23.060    | 239.700   | 11.600    | 0.000     | 1.393     |
| Run  | Time     | 89Y       | 95Mo     | 98Mo     | 103Rh     | 107Ag     | 109Ag     | 111Cd     | 114Cd     |
|      |          | ppb       | ppb      | ppb      | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 22:12:33 | 86.597%   | 1966.000 | 2037.000 | 81.346%   | 0.215     | 0.216     | 0.275     | 0.150     |
| 2    | 22:12:52 | 86.116%   | 1985.000 | 2069.000 | 80.333%   | 0.242     | 0.262     | 0.262     | 0.259     |
| 3    | 22:13:11 | 84.344%   | 2010.000 | 2084.000 | 79.204%   | 0.230     | 0.259     | 0.214     | 0.175     |
| X    |          | 85.686%   | 1987.000 | 2064.000 | 80.294%   | 0.229     | 0.246     | 0.250     | 0.195     |
| σ    |          | 1.186%    | 22.190   | 24.170   | 1.072%    | 0.013     | 0.026     | 0.032     | 0.057     |
| %RSD |          | 1.385     | 1.117    | 1.171    | 1.335     | 5.846     | 10.610    | 12.820    | 29.290    |
| Run  | Time     | 115In     | 118Sn    | 121Sb    | 123Sb     | 135Ba     | 137Ba     | 159Tb     | 165Ho     |
|      |          | ppb       | ppb      | ppb      | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 22:12:33 | 82.450%   | 0.036    | 0.031    | 0.044     | 0.116     | 0.115     | 88.178%   | 88.279%   |
| 2    | 22:12:52 | 83.068%   | 0.154    | 0.072    | 0.104     | 0.101     | 0.132     | 89.841%   | 90.162%   |
| 3    | 22:13:11 | 82.817%   | 0.241    | 0.089    | 0.137     | 0.100     | 0.110     | 91.071%   | 90.182%   |
| X    |          | 82.778%   | 0.144    | 0.064    | 0.095     | 0.106     | 0.119     | 89.697%   | 89.541%   |
| σ    |          | 0.311%    | 0.103    | 0.030    | 0.047     | 0.009     | 0.011     | 1.452%    | 1.093%    |
| %RSD |          | 0.376     | 71.840   | 46.550   | 49.600    | 8.530     | 9.393     | 1.619     | 1.221     |
| Run  | Time     | 203Tl     | 205Tl    | 206Pb    | 207Pb     | 208Pb     | 209Bi     |           |           |
|      |          | ppb       | ppb      | ppb      | ppb       | ppb       | ppb       |           |           |
| 1    | 22:12:33 | 0.014     | 0.014    | 0.200    | 0.200     | 0.189     | 107.088%  |           |           |
| 2    | 22:12:52 | 0.017     | 0.017    | 0.214    | 0.235     | 0.216     | 96.496%   |           |           |
| 3    | 22:13:11 | 0.016     | 0.017    | 0.237    | 0.209     | 0.215     | 91.346%   |           |           |
| X    |          | 0.015     | 0.016    | 0.217    | 0.215     | 0.207     | 98.310%   |           |           |
| σ    |          | 0.002     | 0.002    | 0.019    | 0.018     | 0.015     | 8.027%    |           |           |
| %RSD |          | 11.300    | 12.080   | 8.692    | 8.480     | 7.370     | 8.165     |           |           |

IC SAB 1578158 5/19/2015 10:16:11 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    | 22:16:11 | 71.217%   | 18.190   | 51.290   | 47.510     | 0.000     | 93310.000 | 94980.000 | 94760.000 |
| 2    | 22:16:30 | 72.405%   | 19.190   | 45.660   | 46.380     | 0.000     | 90830.000 | 89340.000 | 92500.000 |
| 3    | 22:16:50 | 68.754%   | 18.410   | 47.870   | 45.640     | 0.000     | 93300.000 | 93560.000 | 93570.000 |
| x    |          | 70.792%   | 92.973%  | 96.554%  | 93.017%    | 0.000     | 92.479%   | 92.627%   | 93.610%   |
| σ    |          | 1.862%    | n/a      | n/a      | n/a        | 0.000     | n/a       | n/a       | n/a       |
| %RSD |          | 2.630     | 2.840    | 5.876    | 2.024      | 0.000     | 1.544     | 3.165     | 1.205     |
| Run  | Time     | 27Al      | 28Si     | 37Cl     | 39K        | 43Ca      | 44Ca      | 45Sc      | 47Ti      |
|      |          | ppb       | ppb      | ppb      | ppb        | ppb       | ppb       | ppb       | ppb       |
| 1    | 22:16:11 | 91630.000 | 559.000  | 0.000    | 95050.000  | 95140.000 | 94590.000 | 78.449%   | 1886.000  |
| 2    | 22:16:30 | 89970.000 | 538.100  | 0.000    | 93290.000  | 96320.000 | 96070.000 | 74.261%   | 1930.000  |
| 3    | 22:16:50 | 92700.000 | 491.600  | 0.000    | 96250.000  | 98350.000 | 99330.000 | 71.718%   | 1949.000  |
| x    |          | 91.435%   | 105.921% | 0.000    | 94.865%    | 96.603%   | 96.667%   | 74.810%   | 96.079%   |
| σ    |          | n/a       | n/a      | 0.000    | n/a        | n/a       | n/a       | 3.399%    | n/a       |
| %RSD |          | 1.502     | 6.512    | 0.000    | 1.566      | 1.684     | 2.509     | 4.543     | 1.686     |
| Run  | Time     | 51V       | 52Cr     | 55Mn     | 56Fe       | 57Fe      | 59Co      | 60Ni      | 63Cu      |
|      |          | ppb       | ppb      | ppb      | ppb        | ppb       | ppb       | ppb       | ppb       |
| 1    | 22:16:11 | 18.530    | 19.010   | 18.690   | 95950.000  | 96810.000 | 18.750    | 18.190    | 20.140    |
| 2    | 22:16:30 | 18.410    | 19.500   | 19.240   | 95640.000  | 98330.000 | 19.170    | 18.290    | 20.260    |
| 3    | 22:16:50 | 18.970    | 19.790   | 19.730   | 100900.000 | 99300.000 | 19.730    | 18.700    | 20.680    |
| x    |          | 93.190%   | 97.172%  | 83.556%  | 97.486%    | 98.150%   | 96.073%   | 91.971%   | 101.799%  |
| σ    |          | n/a       | n/a      | n/a      | n/a        | n/a       | n/a       | n/a       | n/a       |
| %RSD |          | 1.559     | 2.010    | 2.701    | 3.014      | 1.280     | 2.571     | 1.471     | 1.401     |
| Run  | Time     | 65Cu      | 66Zn     | 68Zn     | 75As       | 78Se      | 82Se      | 83Kr      | 88Sr      |
|      |          | ppb       | ppb      | ppb      | ppb        | ppb       | ppb       | ppb       | ppb       |
| 1    | 22:16:11 | 19.930    | 22.910   | 22.420   | 20.330     | 52.530    | 53.920    | 0.000     | 20.120    |
| 2    | 22:16:30 | 20.350    | 23.080   | 21.750   | 21.220     | 52.330    | 52.920    | 0.000     | 20.690    |
| 3    | 22:16:50 | 20.030    | 23.020   | 22.560   | 20.970     | 52.400    | 52.220    | 0.000     | 20.260    |
| x    |          | 100.527%  | 92.014%  | 88.967%  | 104.197%   | 104.841%  | 106.040%  | 0.000     | 101.779%  |
| σ    |          | n/a       | n/a      | n/a      | n/a        | n/a       | n/a       | 0.000     | n/a       |
| %RSD |          | 1.096     | 0.378    | 1.954    | 2.208      | 0.196     | 1.608     | 0.000     | 1.448     |
| Run  | Time     | 89Y       | 95Mo     | 98Mo     | 103Rh      | 107Ag     | 109Ag     | 111Cd     | 114Cd     |
|      |          | ppb       | ppb      | ppb      | ppb        | ppb       | ppb       | ppb       | ppb       |
| 1    | 22:16:11 | 78.297%   | 2121.000 | 2184.000 | 77.030%    | 19.040    | 18.860    | 19.950    | 19.320    |
| 2    | 22:16:30 | 76.846%   | 2173.000 | 2234.000 | 75.137%    | 19.420    | 19.090    | 20.430    | 19.690    |
| 3    | 22:16:50 | 76.498%   | 2152.000 | 2232.000 | 75.006%    | 19.350    | 19.350    | 20.030    | 19.460    |
| x    |          | 77.214%   | 107.436% | 110.821% | 75.724%    | 96.342%   | 95.500%   | 100.674%  | 97.466%   |
| σ    |          | 0.954%    | n/a      | n/a      | 1.132%     | n/a       | n/a       | n/a       | n/a       |
| %RSD |          | 1.236     | 1.224    | 1.285    | 1.495      | 1.052     | 1.275     | 1.289     | 0.960     |
| Run  | Time     | 115In     | 118Sn    | 121Sb    | 123Sb      | 135Ba     | 137Ba     | 159Tb     | 165Ho     |
|      |          | ppb       | ppb      | ppb      | ppb        | ppb       | ppb       | ppb       | ppb       |
| 1    | 22:16:11 | 79.986%   | 98.070   | 19.160   | 19.200     | 18.870    | 19.180    | 88.955%   | 88.186%   |
| 2    | 22:16:30 | 79.371%   | 99.270   | 19.810   | 20.070     | 19.530    | 20.240    | 90.488%   | 90.455%   |
| 3    | 22:16:50 | 80.617%   | 98.890   | 19.700   | 19.750     | 19.570    | 19.440    | 92.257%   | 92.257%   |
| x    |          | 79.991%   | 98.741%  | 97.782%  | 98.363%    | 96.619%   | 98.096%   | 90.567%   | 90.299%   |
| σ    |          | 0.623%    | n/a      | n/a      | n/a        | n/a       | n/a       | 1.653%    | 2.040%    |
| %RSD |          | 0.778     | 0.623    | 1.792    | 2.239      | 2.036     | 2.804     | 1.825     | 2.259     |
| Run  | Time     | 203Tl     | 205Tl    | 206Pb    | 207Pb      | 208Pb     | 209Bi     |           |           |
|      |          | ppb       | ppb      | ppb      | ppb        | ppb       | ppb       |           |           |
| 1    | 22:16:11 | 17.320    | 17.810   | 17.980   | 17.770     | 17.880    | 95.092%   |           |           |
| 2    | 22:16:30 | 18.640    | 19.430   | 19.880   | 19.920     | 19.750    | 90.593%   |           |           |
| 3    | 22:16:50 | 19.750    | 20.440   | 20.400   | 20.720     | 20.560    | 89.401%   |           |           |
| x    |          | 92.867%   | 96.117%  | 97.103%  | 97.353%    | 96.993%   | 91.695%   |           |           |
| σ    |          | n/a       | n/a      | n/a      | n/a        | n/a       | 3.001%    |           |           |
| %RSD |          | 6.543     | 6.895    | 6.548    | 7.839      | 7.097     | 3.273     |           |           |

CCV 1558997 5/19/2015 10:22:59 PM QC Status: PASS (Initial: FAIL)

User Pre-dilution: 1.000

| Run  | Time     | 6Li     | 9Be      | 10B      | 11B       | 13C       | 23Na      | 25Mg      | 26Mg      |
|------|----------|---------|----------|----------|-----------|-----------|-----------|-----------|-----------|
|      |          | ppb     | ppb      | ppb      | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 22:22:59 | 75.271% | 100.600  | 105.600  | 96.680    | 0.000     | 48050.000 | 47290.000 | 47410.000 |
| 2    | 22:23:19 | 74.748% | 100.600  | 102.100  | 95.740    | 0.000     | 47310.000 | 45900.000 | 45950.000 |
| 3    | 22:23:38 | 72.188% | 102.500  | 107.800  | 103.000   | 0.000     | 50000.000 | 49710.000 | 49160.000 |
| x    |          | 74.069% | 101.246% | 105.162% | 98.479%   | 0.000     | 96.907%   | 95.266%   | 95.017%   |
| σ    |          | 1.650%  | n/a      | n/a      | n/a       | 0.000     | n/a       | n/a       | n/a       |
| %RSD |          | 2.227   | 1.093    | 2.707    | 4.020     | 0.000     | 2.865     | 4.042     | 3.386     |
| Run  | Time     | 27Al    | 28Si     | 37Cl     | 39K       | 43Ca      | 44Ca      | 45Sc      | 47Ti      |
|      |          | ppb     | ppb      | ppb      | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 22:22:59 | 448.700 | 4277.000 | 0.000    | 46840.000 | 46520.000 | 46190.000 | 83.693%   | 93.150    |
| 2    | 22:23:19 | 453.200 | 4476.000 | 0.000    | 47210.000 | 47300.000 | 46540.000 | 80.284%   | 95.360    |
| 3    | 22:23:38 | 477.600 | 4530.000 | 0.000    | 49430.000 | 49560.000 | 47910.000 | 77.131%   | 98.580    |
| x    |          | 91.965% | 88.553%  | 0.000    | 95.653%   | 95.579%   | 93.760%   | 80.369%   | 95.697%   |
| σ    |          | n/a     | n/a      | 0.000    | n/a       | n/a       | n/a       | 3.282%    | n/a       |
| %RSD |          | 3.382   | 3.007    | 0.000    | 2.936     | 3.304     | 1.947     | 4.083     | 2.850     |
| Run  | Time     | 51V     | 52Cr     | 55Mn     | 56Fe      | 57Fe      | 59Co      | 60Ni      | 63Cu      |
|      |          | ppb     | ppb      | ppb      | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 22:22:59 | 90.910  | 92.600   | 461.900  | 23770.000 | 23060.000 | 92.820    | 96.000    | 96.520    |
| 2    | 22:23:19 | 94.060  | 95.860   | 474.500  | 23940.000 | 24070.000 | 95.540    | 96.330    | 96.720    |
| 3    | 22:23:38 | 96.930  | 96.080   | 480.000  | 24370.000 | 24450.000 | 93.430    | 95.050    | 97.520    |
| x    |          | 93.968% | 94.849%  | 94.429%  | 96.110%   | 95.447%   | 93.929%   | 95.795%   | 96.918%   |
| σ    |          | n/a     | n/a      | n/a      | n/a       | n/a       | n/a       | n/a       | n/a       |
| %RSD |          | 3.202   | 2.055    | 1.967    | 1.287     | 3.008     | 1.518     | 0.693     | 0.548     |
| Run  | Time     | 65Cu    | 66Zn     | 68Zn     | 75As      | 78Se      | 82Se      | 83Kr      | 88Sr      |
|      |          | ppb     | ppb      | ppb      | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 22:22:59 | 94.970  | 92.600   | 91.660   | 94.450    | 99.010    | 97.500    | 0.000     | 93.800    |
| 2    | 22:23:19 | 97.040  | 94.760   | 92.150   | 96.140    | 98.110    | 97.000    | 0.000     | 95.740    |
| 3    | 22:23:38 | 96.930  | 93.930   | 94.950   | 96.310    | 99.190    | 95.940    | 0.000     | 94.690    |
| x    |          | 96.315% | 93.762%  | 92.922%  | 95.632%   | 98.771%   | 96.813%   | 0.000     | 94.744%   |
| σ    |          | n/a     | n/a      | n/a      | n/a       | n/a       | n/a       | 0.000     | n/a       |
| %RSD |          | 1.207   | 1.159    | 1.912    | 1.072     | 0.589     | 0.823     | 0.000     | 1.024     |
| Run  | Time     | 89Y     | 95Mo     | 98Mo     | 103Rh     | 107Ag     | 109Ag     | 111Cd     | 114Cd     |
|      |          | ppb     | ppb      | ppb      | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 22:22:59 | 82.334% | 99.520   | 101.700  | 78.915%   | 97.260    | 98.560    | 100.900   | 102.500   |
| 2    | 22:23:19 | 82.415% | 104.700  | 106.600  | 78.991%   | 100.100   | 100.300   | 103.100   | 103.900   |
| 3    | 22:23:38 | 83.179% | 105.900  | 108.100  | 79.203%   | 99.220    | 100.900   | 102.300   | 103.700   |
| x    |          | 82.643% | 103.366% | 105.503% | 79.036%   | 98.849%   | 99.919%   | 102.104%  | 103.344%  |
| σ    |          | 0.466%  | n/a      | n/a      | 0.150%    | n/a       | n/a       | n/a       | n/a       |
| %RSD |          | 0.564   | 3.279    | 3.185    | 0.189     | 1.454     | 1.223     | 1.078     | 0.738     |
| Run  | Time     | 115In   | 118Sn    | 121Sb    | 123Sb     | 135Ba     | 137Ba     | 159Tb     | 165Ho     |
|      |          | ppb     | ppb      | ppb      | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 22:22:59 | 75.813% | 98.150   | 90.860   | 90.260    | 95.760    | 96.070    | 89.114%   | 92.173%   |
| 2    | 22:23:19 | 76.250% | 101.100  | 91.800   | 91.170    | 99.590    | 98.720    | 89.659%   | 93.345%   |
| 3    | 22:23:38 | 76.285% | 101.600  | 92.820   | 92.140    | 98.720    | 98.950    | 90.129%   | 95.141%   |
| x    |          | 76.116% | 100.273% | 91.825%  | 91.192%   | 98.024%   | 97.914%   | 89.634%   | 93.553%   |
| σ    |          | 0.263%  | n/a      | n/a      | n/a       | n/a       | n/a       | 0.508%    | 1.495%    |
| %RSD |          | 0.346   | 1.850    | 1.064    | 1.030     | 2.046     | 1.632     | 0.567     | 1.598     |
| Run  | Time     | 203Tl   | 205Tl    | 206Pb    | 207Pb     | 208Pb     | 209Bi     |           |           |
|      |          | ppb     | ppb      | ppb      | ppb       | ppb       | ppb       |           |           |
| 1    | 22:22:59 | 93.650  | 97.990   | 94.640   | 93.450    | 93.550    | 90.086%   |           |           |
| 2    | 22:23:19 | 96.870  | 100.400  | 97.050   | 96.860    | 96.860    | 89.484%   |           |           |
| 3    | 22:23:38 | 98.440  | 103.100  | 98.820   | 98.610    | 98.970    | 88.937%   |           |           |
| x    |          | 96.318% | 100.497% | 96.835%  | 96.306%   | 96.461%   | 89.502%   |           |           |
| σ    |          | n/a     | n/a      | n/a      | n/a       | n/a       | 0.574%    |           |           |
| %RSD |          | 2.533   | 2.546    | 2.167    | 2.723     | 2.833     | 0.642     |           |           |

CCB1 5/19/2015 10:29:40 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    | 22:29:59 | 86.064%  | -0.009  | 0.361   | 0.248   | 0.000   | 8.766   | 2.765   | 2.901   |
| 2    | 22:30:18 | 83.202%  | -0.009  | 0.649   | 0.186   | 0.000   | 7.781   | 2.381   | 2.010   |
| 3    | 22:30:37 | 83.268%  | 0.035   | 0.517   | 0.564   | 0.000   | 6.773   | 1.607   | 1.800   |
| X    |          | 84.178%  | 0.006   | 0.509   | 0.333   | 0.000   | 7.773   | 2.251   | 2.237   |
| σ    |          | 1.633%   | 0.025   | 0.144   | 0.203   | 0.000   | 0.997   | 0.590   | 0.584   |
| %RSD |          | 1.940    | 454.700 | 28.340  | 61.000  | 0.000   | 12.820  | 26.210  | 26.130  |
| Run  | Time     | 27Al     | 28Si    | 37Cl    | 39K     | 43Ca    | 44Ca    | 45Sc    | 47Ti    |
|      |          | ppb      | ppb     | ppb     | ppb     | ppb     | ppb     | ppb     | ppb     |
| 1    | 22:29:59 | 0.633    | -44.410 | 0.000   | 8.227   | -3.657  | 3.968   | 89.186% | 0.059   |
| 2    | 22:30:18 | 0.091    | -42.660 | 0.000   | 7.724   | 4.037   | 0.639   | 86.687% | 0.086   |
| 3    | 22:30:37 | -0.208   | -44.470 | 0.000   | 5.850   | 2.078   | 1.756   | 87.271% | 0.162   |
| X    |          | 0.172    | -43.850 | 0.000   | 7.267   | 0.819   | 2.121   | 87.715% | 0.102   |
| σ    |          | 0.427    | 1.026   | 0.000   | 1.253   | 3.999   | 1.694   | 1.307%  | 0.053   |
| %RSD |          | 248.400  | 2.340   | 0.000   | 17.240  | 488.000 | 79.870  | 1.490   | 52.100  |
| Run  | Time     | 51V      | 52Cr    | 55Mn    | 56Fe    | 57Fe    | 59Co    | 60Ni    | 63Cu    |
|      |          | ppb      | ppb     | ppb     | ppb     | ppb     | ppb     | ppb     | ppb     |
| 1    | 22:29:59 | -0.001   | -0.037  | 0.004   | 6.218   | 8.166   | 0.006   | 0.017   | -0.002  |
| 2    | 22:30:18 | -0.003   | -0.039  | 0.007   | 7.925   | 7.921   | 0.004   | -0.014  | 0.007   |
| 3    | 22:30:37 | 0.018    | -0.000  | 0.008   | 5.289   | 9.799   | 0.000   | 0.018   | 0.019   |
| X    |          | 0.005    | -0.025  | 0.006   | 6.477   | 8.629   | 0.003   | 0.007   | 0.008   |
| σ    |          | 0.012    | 0.022   | 0.002   | 1.337   | 1.021   | 0.003   | 0.018   | 0.010   |
| %RSD |          | 248.800  | 85.130  | 31.880  | 20.640  | 11.830  | 82.530  | 254.200 | 130.100 |
| Run  | Time     | 65Cu     | 66Zn    | 68Zn    | 75As    | 78Se    | 82Se    | 83Kr    | 88Sr    |
|      |          | ppb      | ppb     | ppb     | ppb     | ppb     | ppb     | ppb     | ppb     |
| 1    | 22:29:59 | -0.030   | 4.132   | 3.921   | 0.094   | 0.576   | 0.385   | 0.000   | 0.007   |
| 2    | 22:30:18 | 0.011    | 4.041   | 4.144   | 0.187   | 0.677   | 0.738   | 0.000   | 0.002   |
| 3    | 22:30:37 | 0.019    | 4.114   | 4.322   | 0.218   | 0.515   | 0.519   | 0.000   | 0.003   |
| X    |          | 0.000    | 4.096   | 4.129   | 0.166   | 0.589   | 0.547   | 0.000   | 0.004   |
| σ    |          | 0.026    | 0.048   | 0.201   | 0.064   | 0.082   | 0.178   | 0.000   | 0.003   |
| %RSD |          | 9658.000 | 1.175   | 4.868   | 38.730  | 13.840  | 32.500  | 0.000   | 64.660  |
| Run  | Time     | 89Y      | 95Mo    | 98Mo    | 103Rh   | 107Ag   | 109Ag   | 111Cd   | 114Cd   |
|      |          | ppb      | ppb     | ppb     | ppb     | ppb     | ppb     | ppb     | ppb     |
| 1    | 22:29:59 | 91.545%  | 3.191   | 3.127   | 92.441% | -0.011  | -0.005  | 0.016   | 0.017   |
| 2    | 22:30:18 | 90.546%  | 4.063   | 4.073   | 91.688% | -0.002  | 0.001   | -0.029  | -0.017  |
| 3    | 22:30:37 | 91.318%  | 4.290   | 4.463   | 91.988% | -0.002  | -0.005  | -0.044  | -0.031  |
| X    |          | 91.137%  | 3.848   | 3.888   | 92.039% | -0.005  | -0.003  | -0.019  | -0.010  |
| σ    |          | 0.524%   | 0.580   | 0.687   | 0.379%  | 0.005   | 0.003   | 0.031   | 0.025   |
| %RSD |          | 0.575    | 15.080  | 17.670  | 0.412   | 101.100 | 105.200 | 163.200 | 241.200 |
| Run  | Time     | 115In    | 118Sn   | 121Sb   | 123Sb   | 135Ba   | 137Ba   | 159Tb   | 165Ho   |
|      |          | ppb      | ppb     | ppb     | ppb     | ppb     | ppb     | ppb     | ppb     |
| 1    | 22:29:59 | 92.020%  | -0.148  | 0.570   | 0.564   | -0.009  | 0.004   | 93.530% | 93.302% |
| 2    | 22:30:18 | 92.567%  | -0.046  | 0.575   | 0.592   | -0.014  | 0.011   | 96.203% | 94.450% |
| 3    | 22:30:37 | 92.791%  | -0.067  | 0.599   | 0.622   | -0.010  | 0.011   | 98.180% | 95.859% |
| X    |          | 92.460%  | -0.087  | 0.581   | 0.593   | -0.011  | 0.008   | 95.971% | 94.537% |
| σ    |          | 0.397%   | 0.054   | 0.015   | 0.029   | 0.002   | 0.004   | 2.334%  | 1.280%  |
| %RSD |          | 0.429    | 62.170  | 2.634   | 4.894   | 21.970  | 46.680  | 2.432   | 1.354   |
| Run  | Time     | 203Tl    | 205Tl   | 206Pb   | 207Pb   | 208Pb   | 209Bi   |         |         |
|      |          | ppb      | ppb     | ppb     | ppb     | ppb     | ppb     |         |         |
| 1    | 22:29:59 | 0.029    | 0.025   | 0.004   | 0.000   | 0.002   | 95.437% |         |         |
| 2    | 22:30:18 | 0.032    | 0.028   | -0.001  | 0.000   | 0.004   | 95.866% |         |         |
| 3    | 22:30:37 | 0.022    | 0.035   | -0.001  | 0.000   | 0.001   | 96.218% |         |         |
| X    |          | 0.027    | 0.029   | 0.001   | 0.000   | 0.002   | 95.841% |         |         |
| σ    |          | 0.005    | 0.005   | 0.003   | 0.000   | 0.001   | 0.391%  |         |         |
| %RSD |          | 18.680   | 17.910  | 604.200 | 25.540  | 68.540  | 0.408   |         |         |

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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    | 22:33:48 | 87.362%   | 0.011    | 0.227   | 0.243   | 0.000   | 8.632    | 2.123    | 1.950    |
| 2    | 22:34:08 | 84.264%   | -0.031   | 0.894   | 0.447   | 0.000   | 7.632    | 1.254    | 1.218    |
| 3    | 22:34:27 | 84.431%   | 0.013    | 0.118   | 0.207   | 0.000   | 7.839    | 1.278    | 0.797    |
| X    |          | 85.353%   | -0.002   | 0.413   | 0.299   | 0.000   | 8.034    | 1.552    | 1.322    |
| σ    |          | 1.742%    | 0.025    | 0.420   | 0.129   | 0.000   | 0.528    | 0.495    | 0.584    |
| %RSD |          | 2.041     | 1086.000 | 101.700 | 43.260  | 0.000   | 6.573    | 31.900   | 44.150   |
| Run  | Time     | 27Al      | 28Si     | 37Cl    | 39K     | 43Ca    | 44Ca     | 45Sc     | 47Ti     |
|      |          | ppb       | ppb      | ppb     | ppb     | ppb     | ppb      | ppb      | ppb      |
| 1    | 22:33:48 | -0.230    | -72.950  | 0.000   | 10.990  | 3.971   | 0.815    | 87.091%  | -0.168   |
| 2    | 22:34:08 | -0.699    | -73.660  | 0.000   | 7.238   | -3.638  | 1.670    | 88.349%  | -0.092   |
| 3    | 22:34:27 | -0.722    | -78.860  | 0.000   | 8.108   | 8.051   | 1.696    | 85.309%  | -0.067   |
| X    |          | -0.550    | -75.160  | 0.000   | 8.779   | 2.794   | 1.394    | 86.916%  | -0.109   |
| σ    |          | 0.277     | 3.226    | 0.000   | 1.965   | 5.933   | 0.501    | 1.528%   | 0.052    |
| %RSD |          | 50.390    | 4.292    | 0.000   | 22.380  | 212.300 | 35.980   | 1.758    | 48.000   |
| Run  | Time     | 51V       | 52Cr     | 55Mn    | 56Fe    | 57Fe    | 59Co     | 60Ni     | 63Cu     |
|      |          | ppb       | ppb      | ppb     | ppb     | ppb     | ppb      | ppb      | ppb      |
| 1    | 22:33:48 | 0.003     | -0.010   | 0.028   | 16.160  | 18.880  | 0.003    | -0.008   | -0.008   |
| 2    | 22:34:08 | -0.011    | -0.065   | 0.033   | 12.520  | 16.430  | -0.002   | -0.003   | -0.001   |
| 3    | 22:34:27 | 0.008     | -0.008   | 0.045   | 13.400  | 15.520  | -0.001   | 0.013    | -0.000   |
| X    |          | -0.000    | -0.028   | 0.035   | 14.030  | 16.940  | 0.000    | 0.000    | -0.003   |
| σ    |          | 0.009     | 0.032    | 0.009   | 1.901   | 1.735   | 0.002    | 0.011    | 0.004    |
| %RSD |          | 16740.000 | 116.300  | 24.860  | 13.550  | 10.240  | 7029.000 | 2275.000 | 142.400  |
| Run  | Time     | 65Cu      | 66Zn     | 68Zn    | 75As    | 78Se    | 82Se     | 83Kr     | 88Sr     |
|      |          | ppb       | ppb      | ppb     | ppb     | ppb     | ppb      | ppb      | ppb      |
| 1    | 22:33:48 | -0.032    | 0.144    | 0.048   | 0.012   | 0.456   | -0.027   | 0.000    | 0.001    |
| 2    | 22:34:08 | 0.027     | 0.045    | 0.133   | -0.099  | 0.019   | 0.094    | 0.000    | 0.001    |
| 3    | 22:34:27 | 0.004     | 0.107    | 0.118   | 0.032   | 0.156   | 0.295    | 0.000    | 0.004    |
| X    |          | -0.000    | 0.099    | 0.100   | -0.018  | 0.210   | 0.121    | 0.000    | 0.002    |
| σ    |          | 0.030     | 0.050    | 0.046   | 0.070   | 0.223   | 0.162    | 0.000    | 0.002    |
| %RSD |          | 8871.000  | 50.640   | 45.780  | 386.300 | 106.400 | 134.600  | 0.000    | 113.300  |
| Run  | Time     | 89Y       | 95Mo     | 98Mo    | 103Rh   | 107Ag   | 109Ag    | 111Cd    | 114Cd    |
|      |          | ppb       | ppb      | ppb     | ppb     | ppb     | ppb      | ppb      | ppb      |
| 1    | 22:33:48 | 90.429%   | 1.528    | 1.645   | 91.416% | -0.009  | -0.008   | -0.000   | -0.001   |
| 2    | 22:34:08 | 90.500%   | 1.969    | 2.011   | 90.960% | -0.006  | -0.004   | 0.014    | 0.014    |
| 3    | 22:34:27 | 90.196%   | 2.131    | 2.255   | 91.791% | -0.009  | -0.000   | -0.036   | -0.015   |
| X    |          | 90.375%   | 1.876    | 1.970   | 91.389% | -0.008  | -0.004   | -0.007   | -0.001   |
| σ    |          | 0.159%    | 0.312    | 0.307   | 0.417%  | 0.002   | 0.004    | 0.026    | 0.015    |
| %RSD |          | 0.176     | 16.630   | 15.570  | 0.456   | 19.490  | 92.230   | 357.800  | 1512.000 |
| Run  | Time     | 115In     | 118Sn    | 121Sb   | 123Sb   | 135Ba   | 137Ba    | 159Tb    | 165Ho    |
|      |          | ppb       | ppb      | ppb     | ppb     | ppb     | ppb      | ppb      | ppb      |
| 1    | 22:33:48 | 92.574%   | -0.248   | 0.223   | 0.291   | -0.018  | 0.006    | 94.808%  | 93.989%  |
| 2    | 22:34:08 | 92.313%   | -0.218   | 0.299   | 0.332   | -0.001  | 0.004    | 97.103%  | 95.545%  |
| 3    | 22:34:27 | 93.046%   | -0.187   | 0.313   | 0.298   | -0.010  | 0.001    | 98.124%  | 96.618%  |
| X    |          | 92.644%   | -0.217   | 0.278   | 0.307   | -0.010  | 0.004    | 96.679%  | 95.384%  |
| σ    |          | 0.372%    | 0.030    | 0.049   | 0.022   | 0.008   | 0.002    | 1.698%   | 1.322%   |
| %RSD |          | 0.401     | 14.010   | 17.460  | 7.222   | 84.960  | 67.700   | 1.757    | 1.386    |
| Run  | Time     | 203Tl     | 205Tl    | 206Pb   | 207Pb   | 208Pb   | 209Bi    |          |          |
|      |          | ppb       | ppb      | ppb     | ppb     | ppb     | ppb      |          |          |
| 1    | 22:33:48 | 0.020     | 0.018    | 0.033   | 0.030   | 0.035   | 97.791%  |          |          |
| 2    | 22:34:08 | 0.016     | 0.015    | 0.032   | 0.039   | 0.033   | 98.511%  |          |          |
| 3    | 22:34:27 | 0.020     | 0.023    | 0.035   | 0.040   | 0.038   | 97.321%  |          |          |
| X    |          | 0.018     | 0.019    | 0.033   | 0.036   | 0.035   | 97.875%  |          |          |
| σ    |          | 0.002     | 0.004    | 0.001   | 0.006   | 0.003   | 0.600%   |          |          |
| %RSD |          | 11.930    | 21.260   | 4.322   | 16.250  | 7.561   | 0.613    |          |          |



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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    | 22:37:35 | 87.393%  | 52.290   | 991.400  | 975.400   | 0.000     | 49130.000 | 48000.000 | 47450.000 |
| 2    | 22:37:55 | 84.247%  | 49.660   | 1050.000 | 973.600   | 0.000     | 49030.000 | 48610.000 | 48670.000 |
| 3    | 22:38:14 | 79.384%  | 52.610   | 1067.000 | 1029.000  | 0.000     | 50810.000 | 49350.000 | 49560.000 |
| X    |          | 83.675%  | 51.520   | 1036.000 | 992.500   | 0.000     | 49660.000 | 48660.000 | 48560.000 |
| σ    |          | 4.035%   | 1.617    | 39.820   | 31.300    | 0.000     | 1002.000  | 676.600   | 1060.000  |
| %RSD |          | 4.822    | 3.139    | 3.842    | 3.153     | 0.000     | 2.018     | 1.391     | 2.184     |
| Run  | Time     | 27Al     | 28Si     | 37Cl     | 39K       | 43Ca      | 44Ca      | 45Sc      | 47Ti      |
|      |          | ppb      | ppb      | ppb      | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 22:37:35 | 1901.000 | 9263.000 | 0.000    | 48540.000 | 48210.000 | 47390.000 | 99.322%   | 995.200   |
| 2    | 22:37:55 | 1860.000 | 9046.000 | 0.000    | 48920.000 | 49510.000 | 47870.000 | 94.280%   | 976.900   |
| 3    | 22:38:14 | 1949.000 | 9684.000 | 0.000    | 49250.000 | 50600.000 | 48590.000 | 92.389%   | 972.600   |
| X    |          | 1903.000 | 9331.000 | 0.000    | 48900.000 | 49440.000 | 47950.000 | 95.330%   | 981.600   |
| σ    |          | 44.870   | 324.600  | 0.000    | 354.000   | 1196.000  | 602.600   | 3.584%    | 11.970    |
| %RSD |          | 2.357    | 3.479    | 0.000    | 0.724     | 2.420     | 1.257     | 3.759     | 1.219     |
| Run  | Time     | 51V      | 52Cr     | 55Mn     | 56Fe      | 57Fe      | 59Co      | 60Ni      | 63Cu      |
|      |          | ppb      | ppb      | ppb      | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 22:37:35 | 487.500  | 192.600  | 479.700  | 1123.000  | 1218.000  | 494.000   | 486.700   | 243.500   |
| 2    | 22:37:55 | 491.000  | 195.100  | 490.600  | 1156.000  | 1277.000  | 494.100   | 503.600   | 257.600   |
| 3    | 22:38:14 | 486.500  | 195.400  | 481.800  | 1138.000  | 1238.000  | 496.900   | 496.200   | 255.800   |
| X    |          | 488.400  | 194.400  | 484.100  | 1139.000  | 1245.000  | 495.000   | 495.500   | 252.300   |
| σ    |          | 2.397    | 1.537    | 5.773    | 16.740    | 29.860    | 1.664     | 8.504     | 7.696     |
| %RSD |          | 0.491    | 0.791    | 1.193    | 1.470     | 2.399     | 0.336     | 1.716     | 3.050     |
| Run  | Time     | 65Cu     | 66Zn     | 68Zn     | 75As      | 78Se      | 82Se      | 83Kr      | 88Sr      |
|      |          | ppb      | ppb      | ppb      | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 22:37:35 | 250.000  | 483.100  | 484.200  | 41.050    | 9.283     | 11.120    | 0.000     | 1099.000  |
| 2    | 22:37:55 | 255.600  | 485.900  | 491.200  | 40.620    | 9.474     | 11.090    | 0.000     | 1099.000  |
| 3    | 22:38:14 | 259.400  | 490.600  | 492.100  | 41.130    | 9.791     | 10.860    | 0.000     | 1092.000  |
| X    |          | 255.000  | 486.500  | 489.200  | 40.940    | 9.516     | 11.020    | 0.000     | 1097.000  |
| σ    |          | 4.737    | 3.790    | 4.291    | 0.275     | 0.257     | 0.143     | 0.000     | 3.933     |
| %RSD |          | 1.857    | 0.779    | 0.877    | 0.673     | 2.698     | 1.297     | 0.000     | 0.358     |
| Run  | Time     | 89Y      | 95Mo     | 98Mo     | 103Rh     | 107Ag     | 109Ag     | 111Cd     | 114Cd     |
|      |          | ppb      | ppb      | ppb      | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 22:37:35 | 92.323%  | 1148.000 | 1167.000 | 90.198%   | 54.300    | 53.950    | 54.530    | 45.730    |
| 2    | 22:37:55 | 92.249%  | 1154.000 | 1176.000 | 89.064%   | 54.160    | 54.450    | 55.540    | 46.470    |
| 3    | 22:38:14 | 92.919%  | 1174.000 | 1192.000 | 89.059%   | 54.390    | 54.650    | 55.430    | 46.400    |
| X    |          | 92.497%  | 1159.000 | 1178.000 | 89.441%   | 54.280    | 54.350    | 55.160    | 46.200    |
| σ    |          | 0.367%   | 13.260   | 12.410   | 0.656%    | 0.117     | 0.361     | 0.556     | 0.405     |
| %RSD |          | 0.397    | 1.145    | 1.053    | 0.734     | 0.216     | 0.665     | 1.008     | 0.876     |
| Run  | Time     | 115In    | 118Sn    | 121Sb    | 123Sb     | 135Ba     | 137Ba     | 159Tb     | 165Ho     |
|      |          | ppb      | ppb      | ppb      | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 22:37:35 | 92.354%  | 2296.000 | 564.400  | 565.200   | 2135.000  | 2173.000  | 102.966%  | 103.077%  |
| 2    | 22:37:55 | 92.560%  | 2284.000 | 561.100  | 566.700   | 2121.000  | 2171.000  | 103.633%  | 104.031%  |
| 3    | 22:38:14 | 91.941%  | 2303.000 | 566.700  | 572.200   | 2146.000  | 2186.000  | 104.679%  | 105.098%  |
| X    |          | 92.285%  | 2295.000 | 564.100  | 568.000   | 2134.000  | 2176.000  | 103.759%  | 104.068%  |
| σ    |          | 0.315%   | 9.475    | 2.823    | 3.665     | 12.680    | 8.149     | 0.863%    | 1.011%    |
| %RSD |          | 0.341    | 0.413    | 0.500    | 0.645     | 0.594     | 0.374     | 0.832     | 0.972     |
| Run  | Time     | 203Tl    | 205Tl    | 206Pb    | 207Pb     | 208Pb     | 209Bi     |           |           |
|      |          | ppb      | ppb      | ppb      | ppb       | ppb       | ppb       |           |           |
| 1    | 22:37:35 | 49.570   | 50.840   | 20.550   | 20.680    | 20.560    | 108.228%  |           |           |
| 2    | 22:37:55 | 52.610   | 54.900   | 21.840   | 21.880    | 21.950    | 105.006%  |           |           |
| 3    | 22:38:14 | 54.580   | 56.610   | 22.880   | 22.640    | 22.850    | 101.536%  |           |           |
| X    |          | 52.250   | 54.120   | 21.760   | 21.730    | 21.790    | 104.923%  |           |           |
| σ    |          | 2.521    | 2.963    | 1.168    | 0.986     | 1.156     | 3.347%    |           |           |
| %RSD |          | 4.825    | 5.475    | 5.368    | 4.537     | 5.307     | 3.190     |           |           |

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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    | 22:41:23 | 66.935%  | 48.550   | 1013.000 | 923.700   | 0.000     | 47630.000 | 47550.000 | 48130.000 |
| 2    | 22:41:42 | 68.302%  | 47.890   | 911.700  | 917.700   | 0.000     | 46610.000 | 45690.000 | 46480.000 |
| 3    | 22:42:01 | 66.850%  | 47.890   | 940.000  | 927.500   | 0.000     | 48120.000 | 47160.000 | 47940.000 |
| X    |          | 67.362%  | 48.110   | 954.900  | 922.900   | 0.000     | 47450.000 | 46800.000 | 47520.000 |
| σ    |          | 0.815%   | 0.381    | 52.320   | 4.947     | 0.000     | 772.600   | 980.900   | 903.600   |
| %RSD |          | 1.210    | 0.793    | 5.478    | 0.536     | 0.000     | 1.628     | 2.096     | 1.902     |
| Run  | Time     | 27Al     | 28Si     | 37Cl     | 39K       | 43Ca      | 44Ca      | 45Sc      | 47Ti      |
|      |          | ppb      | ppb      | ppb      | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 22:41:23 | 1802.000 | 9130.000 | 0.000    | 50040.000 | 49350.000 | 47870.000 | 70.209%   | 982.600   |
| 2    | 22:41:42 | 1747.000 | 9125.000 | 0.000    | 48640.000 | 49210.000 | 48410.000 | 68.150%   | 986.400   |
| 3    | 22:42:01 | 1791.000 | 9116.000 | 0.000    | 49570.000 | 51420.000 | 49540.000 | 66.785%   | 985.700   |
| X    |          | 1780.000 | 9124.000 | 0.000    | 49420.000 | 49990.000 | 48610.000 | 68.381%   | 984.900   |
| σ    |          | 28.740   | 6.840    | 0.000    | 715.500   | 1239.000  | 848.500   | 1.724%    | 1.989     |
| %RSD |          | 1.615    | 0.075    | 0.000    | 1.448     | 2.478     | 1.746     | 2.521     | 0.202     |
| Run  | Time     | 51V      | 52Cr     | 55Mn     | 56Fe      | 57Fe      | 59Co      | 60Ni      | 63Cu      |
|      |          | ppb      | ppb      | ppb      | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 22:41:23 | 471.000  | 187.500  | 458.700  | 945.300   | 1040.000  | 472.000   | 481.800   | 243.900   |
| 2    | 22:41:42 | 479.400  | 192.400  | 473.700  | 973.000   | 1057.000  | 483.100   | 489.800   | 244.700   |
| 3    | 22:42:01 | 482.400  | 190.500  | 463.800  | 951.300   | 1067.000  | 476.700   | 480.900   | 247.400   |
| X    |          | 477.600  | 190.100  | 465.400  | 956.500   | 1055.000  | 477.200   | 484.200   | 245.300   |
| σ    |          | 5.936    | 2.497    | 7.647    | 14.580    | 13.740    | 5.574     | 4.880     | 1.817     |
| %RSD |          | 1.243    | 1.313    | 1.643    | 1.524     | 1.302     | 1.168     | 1.008     | 0.741     |
| Run  | Time     | 65Cu     | 66Zn     | 68Zn     | 75As      | 78Se      | 82Se      | 83Kr      | 88Sr      |
|      |          | ppb      | ppb      | ppb      | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 22:41:23 | 240.500  | 456.900  | 453.900  | 36.180    | 11.120    | 9.996     | 0.000     | 949.400   |
| 2    | 22:41:42 | 243.600  | 462.900  | 461.800  | 36.810    | 10.960    | 9.494     | 0.000     | 941.600   |
| 3    | 22:42:01 | 249.200  | 466.400  | 463.100  | 37.370    | 11.600    | 10.370    | 0.000     | 940.900   |
| X    |          | 244.400  | 462.100  | 459.600  | 36.790    | 11.230    | 9.954     | 0.000     | 944.000   |
| σ    |          | 4.406    | 4.827    | 4.959    | 0.597     | 0.331     | 0.440     | 0.000     | 4.727     |
| %RSD |          | 1.803    | 1.045    | 1.079    | 1.624     | 2.945     | 4.421     | 0.000     | 0.501     |
| Run  | Time     | 89Y      | 95Mo     | 98Mo     | 103Rh     | 107Ag     | 109Ag     | 111Cd     | 114Cd     |
|      |          | ppb      | ppb      | ppb      | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 22:41:23 | 75.624%  | 979.300  | 998.400  | 72.869%   | 47.690    | 47.790    | 48.380    | 41.380    |
| 2    | 22:41:42 | 75.252%  | 1002.000 | 1017.000 | 72.235%   | 47.980    | 48.240    | 48.780    | 41.550    |
| 3    | 22:42:01 | 74.648%  | 1005.000 | 1026.000 | 72.688%   | 47.710    | 47.760    | 49.250    | 41.780    |
| X    |          | 75.175%  | 995.600  | 1014.000 | 72.597%   | 47.800    | 47.930    | 48.800    | 41.570    |
| σ    |          | 0.493%   | 14.170   | 14.100   | 0.327%    | 0.165     | 0.271     | 0.436     | 0.201     |
| %RSD |          | 0.655    | 1.423    | 1.391    | 0.450     | 0.344     | 0.566     | 0.894     | 0.484     |
| Run  | Time     | 115In    | 118Sn    | 121Sb    | 123Sb     | 135Ba     | 137Ba     | 159Tb     | 165Ho     |
|      |          | ppb      | ppb      | ppb      | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 22:41:23 | 73.356%  | 2011.000 | 497.900  | 501.400   | 1903.000  | 1868.000  | 81.625%   | 81.516%   |
| 2    | 22:41:42 | 73.688%  | 2017.000 | 499.700  | 500.600   | 1905.000  | 1874.000  | 81.889%   | 82.409%   |
| 3    | 22:42:01 | 74.149%  | 2009.000 | 496.900  | 499.000   | 1898.000  | 1874.000  | 82.211%   | 82.512%   |
| X    |          | 73.731%  | 2013.000 | 498.100  | 500.300   | 1902.000  | 1872.000  | 81.908%   | 82.146%   |
| σ    |          | 0.398%   | 4.009    | 1.408    | 1.210     | 3.741     | 3.583     | 0.294%    | 0.548%    |
| %RSD |          | 0.540    | 0.199    | 0.283    | 0.242     | 0.197     | 0.191     | 0.359     | 0.667     |
| Run  | Time     | 203Tl    | 205Tl    | 206Pb    | 207Pb     | 208Pb     | 209Bi     |           |           |
|      |          | ppb      | ppb      | ppb      | ppb       | ppb       | ppb       |           |           |
| 1    | 22:41:23 | 46.030   | 47.980   | 19.370   | 18.990    | 19.220    | 82.316%   |           |           |
| 2    | 22:41:42 | 47.500   | 49.380   | 20.050   | 20.080    | 19.960    | 81.656%   |           |           |
| 3    | 22:42:01 | 48.500   | 50.560   | 20.520   | 19.920    | 20.300    | 81.015%   |           |           |
| X    |          | 47.340   | 49.310   | 19.980   | 19.660    | 19.830    | 81.662%   |           |           |
| σ    |          | 1.243    | 1.291    | 0.578    | 0.593     | 0.548     | 0.651%    |           |           |
| %RSD |          | 2.625    | 2.619    | 2.892    | 3.013     | 2.766     | 0.797     |           |           |

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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    | 22:48:28 | 87.332% | 0.053    | 78.720  | 80.660    | 0.000     | 39290.000 | 5203.000 | 5284.000 |
| 2    | 22:48:48 | 87.082% | 0.011    | 80.740  | 77.960    | 0.000     | 36770.000 | 4986.000 | 5192.000 |
| 3    | 22:49:07 | 82.836% | 0.035    | 82.350  | 81.110    | 0.000     | 39080.000 | 5154.000 | 5215.000 |
| X    |          | 85.750% | 0.033    | 80.600  | 79.910    | 0.000     | 38380.000 | 5114.000 | 5230.000 |
| σ    |          | 2.527%  | 0.021    | 1.820   | 1.701     | 0.000     | 1398.000  | 113.900  | 47.580   |
| %RSD |          | 2.947   | 63.060   | 2.258   | 2.129     | 0.000     | 3.642     | 2.226    | 0.910    |
| Run  | Time     | 27Al    | 28Si     | 37Cl    | 39K       | 43Ca      | 44Ca      | 45Sc     | 47Ti     |
|      |          | ppb     | ppb      | ppb     | ppb       | ppb       | ppb       | ppb      | ppb      |
| 1    | 22:48:28 | 192.800 | 5199.000 | 0.000   | 66520.000 | 51320.000 | 51170.000 | 88.455%  | 3.186    |
| 2    | 22:48:48 | 214.900 | 5059.000 | 0.000   | 64560.000 | 50360.000 | 50770.000 | 89.217%  | 3.599    |
| 3    | 22:49:07 | 187.400 | 5410.000 | 0.000   | 67140.000 | 52270.000 | 51300.000 | 85.243%  | 3.412    |
| X    |          | 198.400 | 5223.000 | 0.000   | 66070.000 | 51320.000 | 51080.000 | 87.638%  | 3.399    |
| σ    |          | 14.600  | 176.600  | 0.000   | 1348.000  | 952.100   | 275.700   | 2.109%   | 0.207    |
| %RSD |          | 7.362   | 3.381    | 0.000   | 2.041     | 1.855     | 0.540     | 2.407    | 6.083    |
| Run  | Time     | 51V     | 52Cr     | 55Mn    | 56Fe      | 57Fe      | 59Co      | 60Ni     | 63Cu     |
|      |          | ppb     | ppb      | ppb     | ppb       | ppb       | ppb       | ppb      | ppb      |
| 1    | 22:48:28 | 3.289   | 0.385    | 85.810  | 628.200   | 716.000   | 0.452     | 3.411    | 3.749    |
| 2    | 22:48:48 | 3.327   | 0.323    | 85.410  | 613.300   | 717.900   | 0.444     | 3.097    | 3.655    |
| 3    | 22:49:07 | 3.267   | 0.311    | 88.300  | 625.300   | 720.900   | 0.477     | 3.273    | 3.924    |
| X    |          | 3.295   | 0.339    | 86.510  | 622.300   | 718.300   | 0.457     | 3.260    | 3.776    |
| σ    |          | 0.030   | 0.040    | 1.563   | 7.903     | 2.496     | 0.017     | 0.157    | 0.137    |
| %RSD |          | 0.915   | 11.770   | 1.807   | 1.270     | 0.347     | 3.749     | 4.820    | 3.615    |
| Run  | Time     | 65Cu    | 66Zn     | 68Zn    | 75As      | 78Se      | 82Se      | 83Kr     | 88Sr     |
|      |          | ppb     | ppb      | ppb     | ppb       | ppb       | ppb       | ppb      | ppb      |
| 1    | 22:48:28 | 3.653   | 146.400  | 148.800 | 2.529     | 0.493     | 0.692     | 0.000    | 354.000  |
| 2    | 22:48:48 | 3.769   | 146.200  | 143.500 | 2.540     | 0.061     | 0.788     | 0.000    | 352.400  |
| 3    | 22:49:07 | 3.697   | 147.300  | 149.400 | 2.397     | 0.140     | 0.525     | 0.000    | 352.100  |
| X    |          | 3.706   | 146.600  | 147.200 | 2.488     | 0.232     | 0.668     | 0.000    | 352.800  |
| σ    |          | 0.059   | 0.612    | 3.262   | 0.079     | 0.230     | 0.133     | 0.000    | 1.046    |
| %RSD |          | 1.580   | 0.418    | 2.216   | 3.191     | 99.480    | 19.890    | 0.000    | 0.297    |
| Run  | Time     | 89Y     | 95Mo     | 98Mo    | 103Rh     | 107Ag     | 109Ag     | 111Cd    | 114Cd    |
|      |          | ppb     | ppb      | ppb     | ppb       | ppb       | ppb       | ppb      | ppb      |
| 1    | 22:48:28 | 90.912% | 13.570   | 13.310  | 89.673%   | -0.005    | -0.002    | 0.023    | 0.034    |
| 2    | 22:48:48 | 89.113% | 15.080   | 15.180  | 87.234%   | -0.009    | -0.004    | 0.066    | 0.044    |
| 3    | 22:49:07 | 88.732% | 15.080   | 15.450  | 86.501%   | -0.005    | 0.004     | 0.065    | 0.052    |
| X    |          | 89.586% | 14.580   | 14.640  | 87.802%   | -0.006    | -0.001    | 0.051    | 0.043    |
| σ    |          | 1.164%  | 0.869    | 1.164   | 1.661%    | 0.002     | 0.004     | 0.024    | 0.009    |
| %RSD |          | 1.300   | 5.960    | 7.947   | 1.891     | 35.600    | 483.600   | 47.520   | 21.550   |
| Run  | Time     | 115In   | 118Sn    | 121Sb   | 123Sb     | 135Ba     | 137Ba     | 159Tb    | 165Ho    |
|      |          | ppb     | ppb      | ppb     | ppb       | ppb       | ppb       | ppb      | ppb      |
| 1    | 22:48:28 | 89.708% | 2.268    | 0.301   | 0.340     | 71.420    | 70.690    | 96.414%  | 95.973%  |
| 2    | 22:48:48 | 90.332% | 2.690    | 0.364   | 0.405     | 71.790    | 70.490    | 96.814%  | 96.817%  |
| 3    | 22:49:07 | 89.931% | 2.589    | 0.348   | 0.376     | 70.920    | 71.120    | 97.526%  | 97.077%  |
| X    |          | 89.990% | 2.516    | 0.338   | 0.373     | 71.370    | 70.770    | 96.918%  | 96.622%  |
| σ    |          | 0.316%  | 0.220    | 0.033   | 0.033     | 0.438     | 0.319     | 0.563%   | 0.577%   |
| %RSD |          | 0.351   | 8.755    | 9.748   | 8.746     | 0.613     | 0.451     | 0.581    | 0.597    |
| Run  | Time     | 203Tl   | 205Tl    | 206Pb   | 207Pb     | 208Pb     | 209Bi     |          |          |
|      |          | ppb     | ppb      | ppb     | ppb       | ppb       | ppb       |          |          |
| 1    | 22:48:28 | 0.158   | 0.194    | 0.515   | 0.495     | 0.504     | 109.097%  |          |          |
| 2    | 22:48:48 | 0.162   | 0.180    | 0.562   | 0.489     | 0.529     | 103.317%  |          |          |
| 3    | 22:49:07 | 0.155   | 0.158    | 0.597   | 0.534     | 0.558     | 100.375%  |          |          |
| X    |          | 0.158   | 0.177    | 0.558   | 0.506     | 0.530     | 104.263%  |          |          |
| σ    |          | 0.004   | 0.018    | 0.041   | 0.025     | 0.027     | 4.437%    |          |          |
| %RSD |          | 2.221   | 10.170   | 7.354   | 4.891     | 5.114     | 4.256     |          |          |

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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    | 22:52:16 | 84.666% | -0.009   | 83.090 | 82.890    | 0.000     | 40800.000 | 5325.000 | 5394.000 |
| 2    | 22:52:35 | 79.372% | -0.008   | 85.180 | 83.490    | 0.000     | 40710.000 | 5353.000 | 5508.000 |
| 3    | 22:52:54 | 80.621% | -0.008   | 92.980 | 85.200    | 0.000     | 40700.000 | 5468.000 | 5474.000 |
| X    |          | 81.553% | -0.008   | 87.080 | 83.860    | 0.000     | 40740.000 | 5382.000 | 5459.000 |
| σ    |          | 2.767%  | 0.001    | 5.212  | 1.195     | 0.000     | 55.060    | 75.850   | 58.570   |
| %RSD |          | 3.393   | 9.082    | 5.984  | 1.425     | 0.000     | 0.135     | 1.409    | 1.073    |
| Run  | Time     | 27Al    | 28Si     | 37Cl   | 39K       | 43Ca      | 44Ca      | 45Sc     | 47Ti     |
|      |          | ppb     | ppb      | ppb    | ppb       | ppb       | ppb       | ppb      | ppb      |
| 1    | 22:52:16 | 20.290  | 5182.000 | 0.000  | 67390.000 | 50890.000 | 51270.000 | 85.020%  | 1.731    |
| 2    | 22:52:35 | 19.660  | 5148.000 | 0.000  | 68200.000 | 52130.000 | 51940.000 | 82.586%  | 2.012    |
| 3    | 22:52:54 | 22.090  | 5065.000 | 0.000  | 69280.000 | 55320.000 | 53150.000 | 76.665%  | 1.428    |
| X    |          | 20.680  | 5131.000 | 0.000  | 68290.000 | 52780.000 | 52120.000 | 81.424%  | 1.724    |
| σ    |          | 1.261   | 60.330   | 0.000  | 951.600   | 2285.000  | 951.200   | 4.297%   | 0.292    |
| %RSD |          | 6.101   | 1.176    | 0.000  | 1.393     | 4.330     | 1.825     | 5.277    | 16.970   |
| Run  | Time     | 51V     | 52Cr     | 55Mn   | 56Fe      | 57Fe      | 59Co      | 60Ni     | 63Cu     |
|      |          | ppb     | ppb      | ppb    | ppb       | ppb       | ppb       | ppb      | ppb      |
| 1    | 22:52:16 | 2.374   | 0.265    | 26.840 | 62.730    | 169.900   | 0.452     | 2.924    | 4.684    |
| 2    | 22:52:35 | 2.415   | 0.259    | 27.310 | 63.460    | 168.900   | 0.478     | 2.928    | 4.700    |
| 3    | 22:52:54 | 2.627   | 0.238    | 28.300 | 68.480    | 165.200   | 0.472     | 3.167    | 5.012    |
| X    |          | 2.472   | 0.254    | 27.480 | 64.890    | 168.000   | 0.468     | 3.006    | 4.798    |
| σ    |          | 0.136   | 0.014    | 0.747  | 3.128     | 2.521     | 0.014     | 0.139    | 0.185    |
| %RSD |          | 5.505   | 5.451    | 2.716  | 4.821     | 1.501     | 2.910     | 4.636    | 3.855    |
| Run  | Time     | 65Cu    | 66Zn     | 68Zn   | 75As      | 78Se      | 82Se      | 83Kr     | 88Sr     |
|      |          | ppb     | ppb      | ppb    | ppb       | ppb       | ppb       | ppb      | ppb      |
| 1    | 22:52:16 | 4.484   | 44.200   | 45.290 | 2.095     | 0.284     | 0.886     | 0.000    | 350.600  |
| 2    | 22:52:35 | 4.730   | 45.080   | 44.060 | 2.278     | 0.523     | 0.782     | 0.000    | 355.500  |
| 3    | 22:52:54 | 4.645   | 46.860   | 45.860 | 2.323     | 0.379     | 0.436     | 0.000    | 364.200  |
| X    |          | 4.620   | 45.380   | 45.070 | 2.232     | 0.395     | 0.702     | 0.000    | 356.800  |
| σ    |          | 0.125   | 1.350    | 0.916  | 0.121     | 0.120     | 0.235     | 0.000    | 6.903    |
| %RSD |          | 2.713   | 2.976    | 2.034  | 5.402     | 30.370    | 33.580    | 0.000    | 1.935    |
| Run  | Time     | 89Y     | 95Mo     | 98Mo   | 103Rh     | 107Ag     | 109Ag     | 111Cd    | 114Cd    |
|      |          | ppb     | ppb      | ppb    | ppb       | ppb       | ppb       | ppb      | ppb      |
| 1    | 22:52:16 | 85.294% | 5.704    | 5.643  | 84.770%   | 0.037     | 0.036     | 0.046    | 0.041    |
| 2    | 22:52:35 | 84.496% | 6.729    | 6.791  | 83.396%   | 0.038     | 0.036     | -0.012   | -0.016   |
| 3    | 22:52:54 | 84.574% | 7.229    | 7.213  | 83.929%   | 0.034     | 0.038     | -0.018   | 0.015    |
| X    |          | 84.788% | 6.554    | 6.549  | 84.032%   | 0.036     | 0.037     | 0.005    | 0.013    |
| σ    |          | 0.440%  | 0.777    | 0.812  | 0.693%    | 0.002     | 0.001     | 0.035    | 0.029    |
| %RSD |          | 0.519   | 11.860   | 12.410 | 0.825     | 4.528     | 3.387     | 716.000  | 219.700  |
| Run  | Time     | 115In   | 118Sn    | 121Sb  | 123Sb     | 135Ba     | 137Ba     | 159Tb    | 165Ho    |
|      |          | ppb     | ppb      | ppb    | ppb       | ppb       | ppb       | ppb      | ppb      |
| 1    | 22:52:16 | 85.307% | 1.063    | 0.512  | 0.541     | 64.460    | 64.400    | 91.810%  | 91.067%  |
| 2    | 22:52:35 | 86.015% | 1.285    | 0.506  | 0.494     | 64.800    | 65.010    | 93.438%  | 92.223%  |
| 3    | 22:52:54 | 86.434% | 1.301    | 0.541  | 0.576     | 66.330    | 65.790    | 93.377%  | 93.249%  |
| X    |          | 85.919% | 1.216    | 0.520  | 0.537     | 65.200    | 65.070    | 92.875%  | 92.180%  |
| σ    |          | 0.570%  | 0.133    | 0.019  | 0.041     | 0.995     | 0.697     | 0.923%   | 1.092%   |
| %RSD |          | 0.663   | 10.940   | 3.674  | 7.655     | 1.527     | 1.071     | 0.994    | 1.184    |
| Run  | Time     | 203Tl   | 205Tl    | 206Pb  | 207Pb     | 208Pb     | 209Bi     |          |          |
|      |          | ppb     | ppb      | ppb    | ppb       | ppb       | ppb       |          |          |
| 1    | 22:52:16 | 0.053   | 0.052    | 0.065  | 0.066     | 0.076     | 100.171%  |          |          |
| 2    | 22:52:35 | 0.045   | 0.070    | 0.099  | 0.092     | 0.092     | 96.408%   |          |          |
| 3    | 22:52:54 | 0.063   | 0.070    | 0.083  | 0.072     | 0.089     | 93.942%   |          |          |
| X    |          | 0.054   | 0.064    | 0.082  | 0.077     | 0.085     | 96.840%   |          |          |
| σ    |          | 0.009   | 0.010    | 0.017  | 0.013     | 0.008     | 3.137%    |          |          |
| %RSD |          | 16.090  | 16.020   | 21.010 | 17.420    | 9.818     | 3.239     |          |          |

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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    | 22:56:04 | 84.754%  | 0.142    | 93.070  | 101.100  | 0.000     | 39110.000 | 2990.000 | 3021.000 |
| 2    | 22:56:23 | 83.366%  | 0.013    | 104.800 | 99.920   | 0.000     | 38560.000 | 2985.000 | 3056.000 |
| 3    | 22:56:42 | 79.415%  | 0.061    | 105.400 | 99.070   | 0.000     | 39160.000 | 3062.000 | 3034.000 |
| X    |          | 82.512%  | 0.072    | 101.100 | 100.000  | 0.000     | 38940.000 | 3012.000 | 3037.000 |
| σ    |          | 2.770%   | 0.065    | 6.945   | 1.025    | 0.000     | 335.600   | 42.940   | 17.880   |
| %RSD |          | 3.357    | 90.160   | 6.871   | 1.025    | 0.000     | 0.862     | 1.426    | 0.589    |
| Run  | Time     | 27Al     | 28Si     | 37Cl    | 39K      | 43Ca      | 44Ca      | 45Sc     | 47Ti     |
|      |          | ppb      | ppb      | ppb     | ppb      | ppb       | ppb       | ppb      | ppb      |
| 1    | 22:56:04 | 1350.000 | 4368.000 | 0.000   | 3904.000 | 23880.000 | 22540.000 | 83.045%  | 9.330    |
| 2    | 22:56:23 | 1383.000 | 4359.000 | 0.000   | 3777.000 | 23710.000 | 22840.000 | 82.747%  | 3.480    |
| 3    | 22:56:42 | 1324.000 | 4245.000 | 0.000   | 4004.000 | 25210.000 | 23180.000 | 80.073%  | 4.042    |
| X    |          | 1352.000 | 4324.000 | 0.000   | 3895.000 | 24270.000 | 22850.000 | 81.955%  | 5.618    |
| σ    |          | 29.410   | 68.600   | 0.000   | 113.700  | 821.000   | 316.600   | 1.636%   | 3.227    |
| %RSD |          | 2.175    | 1.587    | 0.000   | 2.918    | 3.383     | 1.385     | 1.997    | 57.450   |
| Run  | Time     | 51V      | 52Cr     | 55Mn    | 56Fe     | 57Fe      | 59Co      | 60Ni     | 63Cu     |
|      |          | ppb      | ppb      | ppb     | ppb      | ppb       | ppb       | ppb      | ppb      |
| 1    | 22:56:04 | 15.740   | 1.551    | 31.200  | 292.600  | 345.900   | 0.433     | 1.123    | 3.643    |
| 2    | 22:56:23 | 15.000   | 1.487    | 30.720  | 289.700  | 359.100   | 0.423     | 1.064    | 3.737    |
| 3    | 22:56:42 | 16.250   | 1.590    | 31.930  | 300.100  | 358.500   | 0.452     | 1.052    | 3.868    |
| X    |          | 15.660   | 1.543    | 31.280  | 294.100  | 354.500   | 0.436     | 1.080    | 3.750    |
| σ    |          | 0.628    | 0.052    | 0.606   | 5.373    | 7.441     | 0.015     | 0.038    | 0.113    |
| %RSD |          | 4.012    | 3.373    | 1.936   | 1.827    | 2.099     | 3.349     | 3.550    | 3.009    |
| Run  | Time     | 65Cu     | 66Zn     | 68Zn    | 75As     | 78Se      | 82Se      | 83Kr     | 88Sr     |
|      |          | ppb      | ppb      | ppb     | ppb      | ppb       | ppb       | ppb      | ppb      |
| 1    | 22:56:04 | 3.612    | 14.190   | 13.360  | 3.925    | 0.205     | 0.294     | 0.000    | 112.400  |
| 2    | 22:56:23 | 3.972    | 13.620   | 13.770  | 3.877    | -0.032    | 0.231     | 0.000    | 112.200  |
| 3    | 22:56:42 | 3.708    | 13.840   | 14.940  | 3.989    | 0.107     | 0.466     | 0.000    | 113.200  |
| X    |          | 3.764    | 13.880   | 14.020  | 3.930    | 0.093     | 0.330     | 0.000    | 112.600  |
| σ    |          | 0.186    | 0.289    | 0.823   | 0.056    | 0.119     | 0.122     | 0.000    | 0.501    |
| %RSD |          | 4.948    | 2.083    | 5.866   | 1.428    | 127.300   | 36.780    | 0.000    | 0.445    |
| Run  | Time     | 89Y      | 95Mo     | 98Mo    | 103Rh    | 107Ag     | 109Ag     | 111Cd    | 114Cd    |
|      |          | ppb      | ppb      | ppb     | ppb      | ppb       | ppb       | ppb      | ppb      |
| 1    | 22:56:04 | 85.657%  | 6.149    | 6.184   | 85.256%  | -0.012    | -0.008    | 0.129    | 0.135    |
| 2    | 22:56:23 | 86.619%  | 6.801    | 6.431   | 86.155%  | -0.002    | -0.009    | 0.065    | 0.069    |
| 3    | 22:56:42 | 86.830%  | 6.567    | 6.852   | 85.993%  | -0.004    | -0.003    | 0.064    | 0.100    |
| X    |          | 86.369%  | 6.506    | 6.489   | 85.802%  | -0.006    | -0.007    | 0.086    | 0.102    |
| σ    |          | 0.626%   | 0.330    | 0.338   | 0.479%   | 0.005     | 0.003     | 0.037    | 0.033    |
| %RSD |          | 0.724    | 5.073    | 5.203   | 0.559    | 86.410    | 48.620    | 43.160   | 32.510   |
| Run  | Time     | 115In    | 118Sn    | 121Sb   | 123Sb    | 135Ba     | 137Ba     | 159Tb    | 165Ho    |
|      |          | ppb      | ppb      | ppb     | ppb      | ppb       | ppb       | ppb      | ppb      |
| 1    | 22:56:04 | 88.387%  | 0.337    | 0.147   | 0.158    | 51.830    | 51.420    | 95.272%  | 94.887%  |
| 2    | 22:56:23 | 88.553%  | 0.382    | 0.174   | 0.182    | 53.370    | 52.850    | 95.899%  | 96.374%  |
| 3    | 22:56:42 | 88.693%  | 0.445    | 0.172   | 0.178    | 53.070    | 51.750    | 96.523%  | 97.002%  |
| X    |          | 88.544%  | 0.388    | 0.164   | 0.172    | 52.760    | 52.010    | 95.898%  | 96.088%  |
| σ    |          | 0.153%   | 0.054    | 0.015   | 0.013    | 0.816     | 0.746     | 0.626%   | 1.086%   |
| %RSD |          | 0.173    | 14.050   | 9.013   | 7.403    | 1.547     | 1.435     | 0.652    | 1.131    |
| Run  | Time     | 203Tl    | 205Tl    | 206Pb   | 207Pb    | 208Pb     | 209Bi     |          |          |
|      |          | ppb      | ppb      | ppb     | ppb      | ppb       | ppb       |          |          |
| 1    | 22:56:04 | 0.029    | 0.032    | 1.185   | 1.061    | 1.102     | 102.708%  |          |          |
| 2    | 22:56:23 | 0.036    | 0.036    | 1.246   | 1.099    | 1.145     | 100.925%  |          |          |
| 3    | 22:56:42 | 0.029    | 0.039    | 1.189   | 1.065    | 1.131     | 99.874%   |          |          |
| X    |          | 0.031    | 0.036    | 1.207   | 1.075    | 1.126     | 101.169%  |          |          |
| σ    |          | 0.004    | 0.004    | 0.034   | 0.021    | 0.022     | 1.433%    |          |          |
| %RSD |          | 11.960   | 10.540   | 2.795   | 1.947    | 1.935     | 1.416     |          |          |

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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    | 22:59:52 | 85.819% | -0.009   | 366.200 | 360.700   | 0.000     | 141200.000 | 16340.000 | 16550.000 |
| 2    | 23:00:13 | 82.396% | -0.008   | 361.900 | 366.600   | 0.000     | 142600.000 | 16540.000 | 16500.000 |
| 3    | 23:00:32 | 82.475% | -0.008   | 365.600 | 362.700   | 0.000     | 137400.000 | 16160.000 | 16420.000 |
| X    |          | 83.563% | -0.009   | 364.500 | 363.300   | 0.000     | 140400.000 | 16350.000 | 16490.000 |
| σ    |          | 1.954%  | 0.000    | 2.343   | 2.986     | 0.000     | 2716.000   | 189.000   | 64.400    |
| %RSD |          | 2.338   | 5.671    | 0.643   | 0.822     | 0.000     | 1.935      | 1.156     | 0.391     |
| Run  | Time     | 27Al    | 28Si     | 37Cl    | 39K       | 43Ca      | 44Ca       | 45Sc      | 47Ti      |
|      |          | ppb     | ppb      | ppb     | ppb       | ppb       | ppb        | ppb       | ppb       |
| 1    | 22:59:52 | 5.846   | 4642.000 | 0.000   | 13610.000 | 97630.000 | 96990.000  | 84.918%   | 7.227     |
| 2    | 23:00:13 | 45.470  | 4666.000 | 0.000   | 13860.000 | 97700.000 | 97860.000  | 82.635%   | 12.810    |
| 3    | 23:00:32 | 44.860  | 4442.000 | 0.000   | 13670.000 | 99750.000 | 100800.000 | 82.007%   | 7.604     |
| X    |          | 32.060  | 4583.000 | 0.000   | 13710.000 | 98360.000 | 98540.000  | 83.187%   | 9.216     |
| σ    |          | 22.700  | 123.300  | 0.000   | 131.000   | 1203.000  | 1988.000   | 1.532%    | 3.123     |
| %RSD |          | 70.820  | 2.690    | 0.000   | 0.956     | 1.223     | 2.017      | 1.842     | 33.890    |
| Run  | Time     | 51V     | 52Cr     | 55Mn    | 56Fe      | 57Fe      | 59Co       | 60Ni      | 63Cu      |
|      |          | ppb     | ppb      | ppb     | ppb       | ppb       | ppb        | ppb       | ppb       |
| 1    | 22:59:52 | 3.521   | 0.977    | 18.740  | 130.400   | 319.200   | 0.487      | 3.455     | 4.015     |
| 2    | 23:00:13 | 3.426   | 1.040    | 19.090  | 129.200   | 316.400   | 0.507      | 3.102     | 3.940     |
| 3    | 23:00:32 | 4.009   | 1.028    | 19.240  | 132.400   | 318.600   | 0.572      | 3.396     | 4.118     |
| X    |          | 3.652   | 1.015    | 19.020  | 130.700   | 318.100   | 0.522      | 3.318     | 4.024     |
| σ    |          | 0.313   | 0.034    | 0.258   | 1.617     | 1.458     | 0.045      | 0.189     | 0.089     |
| %RSD |          | 8.571   | 3.316    | 1.355   | 1.238     | 0.458     | 8.555      | 5.697     | 2.219     |
| Run  | Time     | 65Cu    | 66Zn     | 68Zn    | 75As      | 78Se      | 82Se       | 83Kr      | 88Sr      |
|      |          | ppb     | ppb      | ppb     | ppb       | ppb       | ppb        | ppb       | ppb       |
| 1    | 22:59:52 | 3.326   | 32.230   | 31.810  | 1.507     | -0.067    | 0.410      | 0.000     | 1116.000  |
| 2    | 23:00:13 | 3.142   | 31.430   | 31.290  | 1.267     | 0.200     | 0.146      | 0.000     | 1113.000  |
| 3    | 23:00:32 | 3.232   | 31.690   | 32.350  | 1.419     | 0.211     | 0.602      | 0.000     | 1113.000  |
| X    |          | 3.233   | 31.780   | 31.820  | 1.398     | 0.114     | 0.386      | 0.000     | 1114.000  |
| σ    |          | 0.092   | 0.405    | 0.529   | 0.121     | 0.157     | 0.229      | 0.000     | 1.703     |
| %RSD |          | 2.843   | 1.275    | 1.662   | 8.672     | 137.600   | 59.220     | 0.000     | 0.153     |
| Run  | Time     | 89Y     | 95Mo     | 98Mo    | 103Rh     | 107Ag     | 109Ag      | 111Cd     | 114Cd     |
|      |          | ppb     | ppb      | ppb     | ppb       | ppb       | ppb        | ppb       | ppb       |
| 1    | 22:59:52 | 86.177% | 4.568    | 4.616   | 86.382%   | -0.009    | -0.008     | 0.057     | 0.046     |
| 2    | 23:00:13 | 86.845% | 5.029    | 5.096   | 85.703%   | -0.007    | -0.011     | -0.001    | -0.006    |
| 3    | 23:00:32 | 86.160% | 5.187    | 5.128   | 84.622%   | -0.018    | -0.004     | -0.044    | -0.026    |
| X    |          | 86.394% | 4.928    | 4.947   | 85.569%   | -0.011    | -0.008     | 0.004     | 0.005     |
| σ    |          | 0.391%  | 0.322    | 0.287   | 0.888%    | 0.006     | 0.004      | 0.051     | 0.037     |
| %RSD |          | 0.453   | 6.526    | 5.800   | 1.037     | 52.870    | 48.740     | 1289.000  | 799.200   |
| Run  | Time     | 115In   | 118Sn    | 121Sb   | 123Sb     | 135Ba     | 137Ba      | 159Tb     | 165Ho     |
|      |          | ppb     | ppb      | ppb     | ppb       | ppb       | ppb        | ppb       | ppb       |
| 1    | 22:59:52 | 86.379% | 0.164    | 0.925   | 0.815     | 41.790    | 40.570     | 92.691%   | 93.179%   |
| 2    | 23:00:13 | 87.513% | 0.317    | 0.857   | 0.891     | 40.060    | 40.490     | 95.028%   | 93.917%   |
| 3    | 23:00:32 | 87.684% | 0.324    | 0.886   | 0.984     | 40.340    | 40.220     | 95.586%   | 95.400%   |
| X    |          | 87.192% | 0.268    | 0.889   | 0.896     | 40.730    | 40.430     | 94.435%   | 94.165%   |
| σ    |          | 0.709%  | 0.090    | 0.034   | 0.085     | 0.928     | 0.185      | 1.536%    | 1.131%    |
| %RSD |          | 0.813   | 33.690   | 3.855   | 9.437     | 2.278     | 0.457      | 1.626     | 1.201     |
| Run  | Time     | 203Tl   | 205Tl    | 206Pb   | 207Pb     | 208Pb     | 209Bi      |           |           |
|      |          | ppb     | ppb      | ppb     | ppb       | ppb       | ppb        |           |           |
| 1    | 22:59:52 | 0.015   | 0.017    | 0.147   | 0.138     | 0.140     | 97.221%    |           |           |
| 2    | 23:00:13 | 0.020   | 0.022    | 0.160   | 0.147     | 0.148     | 94.814%    |           |           |
| 3    | 23:00:32 | 0.018   | 0.022    | 0.165   | 0.147     | 0.157     | 93.177%    |           |           |
| X    |          | 0.018   | 0.020    | 0.157   | 0.144     | 0.148     | 95.071%    |           |           |
| σ    |          | 0.003   | 0.003    | 0.009   | 0.005     | 0.008     | 2.034%     |           |           |
| %RSD |          | 15.140  | 14.390   | 5.990   | 3.581     | 5.660     | 2.139      |           |           |

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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    | 23:03:42 | 87.628% | 0.011    | 11.500  | 11.290  | 0.000   | 56470.000 | 178.900 | 180.500 |
| 2    | 23:04:02 | 91.899% | -0.031   | 11.040  | 10.390  | 0.000   | 54960.000 | 168.300 | 174.400 |
| 3    | 23:04:22 | 84.499% | 0.034    | 11.020  | 9.238   | 0.000   | 56090.000 | 172.400 | 174.500 |
| X    |          | 88.008% | 0.005    | 11.190  | 10.310  | 0.000   | 55840.000 | 173.200 | 176.400 |
| σ    |          | 3.715%  | 0.033    | 0.272   | 1.030   | 0.000   | 781.500   | 5.365   | 3.499   |
| %RSD |          | 4.221   | 668.200  | 2.427   | 9.991   | 0.000   | 1.400     | 3.097   | 1.983   |
| Run  | Time     | 27Al    | 28Si     | 37Cl    | 39K     | 43Ca    | 44Ca      | 45Sc    | 47Ti    |
|      |          | ppb     | ppb      | ppb     | ppb     | ppb     | ppb       | ppb     | ppb     |
| 1    | 23:03:42 | 1.437   | -129.800 | 0.000   | 144.900 | 809.500 | 827.000   | 86.523% | 0.029   |
| 2    | 23:04:02 | 1.023   | -134.300 | 0.000   | 141.000 | 857.300 | 804.100   | 84.293% | 0.015   |
| 3    | 23:04:22 | 0.883   | -129.800 | 0.000   | 137.400 | 926.300 | 810.800   | 84.032% | 0.177   |
| X    |          | 1.115   | -131.300 | 0.000   | 141.100 | 864.400 | 814.000   | 84.949% | 0.074   |
| σ    |          | 0.288   | 2.619    | 0.000   | 3.746   | 58.760  | 11.790    | 1.369%  | 0.090   |
| %RSD |          | 25.860  | 1.994    | 0.000   | 2.655   | 6.798   | 1.448     | 1.612   | 122.000 |
| Run  | Time     | 51V     | 52Cr     | 55Mn    | 56Fe    | 57Fe    | 59Co      | 60Ni    | 63Cu    |
|      |          | ppb     | ppb      | ppb     | ppb     | ppb     | ppb       | ppb     | ppb     |
| 1    | 23:03:42 | 0.101   | 0.090    | 23.760  | 210.900 | 211.600 | 0.394     | 1.480   | 0.564   |
| 2    | 23:04:02 | 0.040   | 0.028    | 24.710  | 212.100 | 224.300 | 0.377     | 1.440   | 0.509   |
| 3    | 23:04:22 | 0.021   | 0.035    | 24.050  | 208.000 | 215.200 | 0.453     | 1.498   | 0.535   |
| X    |          | 0.054   | 0.051    | 24.170  | 210.300 | 217.000 | 0.408     | 1.473   | 0.536   |
| σ    |          | 0.042   | 0.034    | 0.487   | 2.088   | 6.543   | 0.040     | 0.029   | 0.028   |
| %RSD |          | 78.450  | 66.410   | 2.014   | 0.993   | 3.015   | 9.846     | 1.992   | 5.128   |
| Run  | Time     | 65Cu    | 66Zn     | 68Zn    | 75As    | 78Se    | 82Se      | 83Kr    | 88Sr    |
|      |          | ppb     | ppb      | ppb     | ppb     | ppb     | ppb       | ppb     | ppb     |
| 1    | 23:03:42 | 0.130   | 2.094    | 2.257   | 0.856   | 22.040  | 22.470    | 0.000   | 4.540   |
| 2    | 23:04:02 | 0.257   | 2.173    | 2.083   | 1.072   | 22.310  | 23.730    | 0.000   | 4.588   |
| 3    | 23:04:22 | 0.099   | 2.222    | 2.278   | 0.608   | 21.670  | 22.650    | 0.000   | 4.427   |
| X    |          | 0.162   | 2.163    | 2.206   | 0.845   | 22.010  | 22.950    | 0.000   | 4.518   |
| σ    |          | 0.084   | 0.065    | 0.108   | 0.232   | 0.317   | 0.681     | 0.000   | 0.083   |
| %RSD |          | 51.910  | 2.999    | 4.872   | 27.440  | 1.442   | 2.966     | 0.000   | 1.826   |
| Run  | Time     | 89Y     | 95Mo     | 98Mo    | 103Rh   | 107Ag   | 109Ag     | 111Cd   | 114Cd   |
|      |          | ppb     | ppb      | ppb     | ppb     | ppb     | ppb       | ppb     | ppb     |
| 1    | 23:03:42 | 87.072% | 1.150    | 1.127   | 88.175% | -0.023  | -0.014    | -0.032  | -0.014  |
| 2    | 23:04:02 | 86.104% | 1.318    | 1.418   | 86.831% | -0.019  | -0.017    | -0.050  | -0.035  |
| 3    | 23:04:22 | 86.089% | 1.470    | 1.439   | 86.724% | -0.016  | -0.001    | 0.004   | -0.004  |
| X    |          | 86.422% | 1.312    | 1.328   | 87.243% | -0.019  | -0.011    | -0.026  | -0.018  |
| σ    |          | 0.563%  | 0.160    | 0.175   | 0.809%  | 0.004   | 0.008     | 0.028   | 0.016   |
| %RSD |          | 0.651   | 12.190   | 13.150  | 0.927   | 18.390  | 76.780    | 107.000 | 88.130  |
| Run  | Time     | 115In   | 118Sn    | 121Sb   | 123Sb   | 135Ba   | 137Ba     | 159Tb   | 165Ho   |
|      |          | ppb     | ppb      | ppb     | ppb     | ppb     | ppb       | ppb     | ppb     |
| 1    | 23:03:42 | 88.635% | -0.021   | -0.024  | 0.005   | 0.767   | 0.732     | 94.393% | 94.359% |
| 2    | 23:04:02 | 88.104% | 0.019    | -0.016  | -0.001  | 0.837   | 0.792     | 95.846% | 95.424% |
| 3    | 23:04:22 | 88.971% | 0.121    | 0.005   | 0.009   | 0.848   | 0.783     | 96.390% | 96.017% |
| X    |          | 88.570% | 0.040    | -0.012  | 0.004   | 0.817   | 0.769     | 95.543% | 95.266% |
| σ    |          | 0.437%  | 0.073    | 0.015   | 0.005   | 0.044   | 0.032     | 1.032%  | 0.840%  |
| %RSD |          | 0.493   | 183.700  | 124.900 | 129.500 | 5.346   | 4.226     | 1.081   | 0.882   |
| Run  | Time     | 203Tl   | 205Tl    | 206Pb   | 207Pb   | 208Pb   | 209Bi     |         |         |
|      |          | ppb     | ppb      | ppb     | ppb     | ppb     | ppb       |         |         |
| 1    | 23:03:42 | 0.034   | 0.031    | 0.005   | 0.014   | 0.011   | 97.940%   |         |         |
| 2    | 23:04:02 | 0.032   | 0.032    | 0.016   | 0.023   | 0.018   | 96.529%   |         |         |
| 3    | 23:04:22 | 0.034   | 0.034    | 0.013   | 0.010   | 0.018   | 95.897%   |         |         |
| X    |          | 0.034   | 0.032    | 0.011   | 0.016   | 0.016   | 96.789%   |         |         |
| σ    |          | 0.002   | 0.002    | 0.006   | 0.006   | 0.004   | 1.046%    |         |         |
| %RSD |          | 4.481   | 5.122    | 50.160  | 40.430  | 27.380  | 1.081     |         |         |

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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    | 23:07:32 | 88.136% | -0.010   | 11.090 | 10.080  | 0.000    | 56800.000 | 176.500 | 177.700 |
| 2    | 23:07:51 | 87.761% | 0.053    | 10.260 | 9.729   | 0.000    | 55680.000 | 166.100 | 169.700 |
| 3    | 23:08:11 | 85.351% | 0.034    | 10.940 | 10.260  | 0.000    | 55280.000 | 168.300 | 171.300 |
| X    |          | 87.083% | 0.026    | 10.760 | 10.020  | 0.000    | 55920.000 | 170.300 | 172.900 |
| σ    |          | 1.511%  | 0.032    | 0.442  | 0.272   | 0.000    | 785.600   | 5.454   | 4.219   |
| %RSD |          | 1.736   | 125.600  | 4.104  | 2.710   | 0.000    | 1.405     | 3.202   | 2.440   |
| Run  | Time     | 27Al    | 28Si     | 37Cl   | 39K     | 43Ca     | 44Ca      | 45Sc    | 47Ti    |
|      |          | ppb     | ppb      | ppb    | ppb     | ppb      | ppb       | ppb     | ppb     |
| 1    | 23:07:32 | 85.210  | -126.900 | 0.000  | 128.300 | 1579.000 | 1465.000  | 84.609% | -0.006  |
| 2    | 23:07:51 | 82.700  | -125.800 | 0.000  | 124.100 | 1665.000 | 1446.000  | 84.400% | -0.025  |
| 3    | 23:08:11 | 84.670  | -127.500 | 0.000  | 125.200 | 1629.000 | 1422.000  | 82.982% | 0.101   |
| X    |          | 84.190  | -126.800 | 0.000  | 125.900 | 1625.000 | 1445.000  | 83.997% | 0.023   |
| σ    |          | 1.322   | 0.868    | 0.000  | 2.185   | 43.270   | 21.570    | 0.885%  | 0.068   |
| %RSD |          | 1.570   | 0.685    | 0.000  | 1.736   | 2.663    | 1.493     | 1.054   | 291.500 |
| Run  | Time     | 51V     | 52Cr     | 55Mn   | 56Fe    | 57Fe     | 59Co      | 60Ni    | 63Cu    |
|      |          | ppb     | ppb      | ppb    | ppb     | ppb      | ppb       | ppb     | ppb     |
| 1    | 23:07:32 | 0.025   | 0.068    | 23.480 | 183.200 | 192.700  | 0.533     | 0.708   | 0.569   |
| 2    | 23:07:51 | -0.069  | 0.063    | 22.810 | 175.900 | 188.000  | 0.465     | 0.684   | 0.548   |
| 3    | 23:08:11 | -0.009  | 0.105    | 23.890 | 182.600 | 194.900  | 0.496     | 0.767   | 0.576   |
| X    |          | -0.017  | 0.079    | 23.390 | 180.600 | 191.900  | 0.498     | 0.720   | 0.565   |
| σ    |          | 0.048   | 0.023    | 0.548  | 4.079   | 3.555    | 0.034     | 0.043   | 0.014   |
| %RSD |          | 274.800 | 29.690   | 2.345  | 2.259   | 1.853    | 6.879     | 5.953   | 2.568   |
| Run  | Time     | 65Cu    | 66Zn     | 68Zn   | 75As    | 78Se     | 82Se      | 83Kr    | 88Sr    |
|      |          | ppb     | ppb      | ppb    | ppb     | ppb      | ppb       | ppb     | ppb     |
| 1    | 23:07:32 | 0.185   | 2.474    | 2.879  | 0.565   | 9.777    | 10.740    | 0.000   | 5.362   |
| 2    | 23:07:51 | 0.246   | 2.548    | 2.743  | 0.515   | 9.540    | 10.300    | 0.000   | 5.366   |
| 3    | 23:08:11 | 0.247   | 2.680    | 2.710  | 0.605   | 9.196    | 11.050    | 0.000   | 5.185   |
| X    |          | 0.226   | 2.567    | 2.777  | 0.562   | 9.505    | 10.700    | 0.000   | 5.304   |
| σ    |          | 0.036   | 0.104    | 0.090  | 0.045   | 0.292    | 0.376     | 0.000   | 0.103   |
| %RSD |          | 15.830  | 4.059    | 3.231  | 8.030   | 3.076    | 3.515     | 0.000   | 1.947   |
| Run  | Time     | 89Y     | 95Mo     | 98Mo   | 103Rh   | 107Ag    | 109Ag     | 111Cd   | 114Cd   |
|      |          | ppb     | ppb      | ppb    | ppb     | ppb      | ppb       | ppb     | ppb     |
| 1    | 23:07:32 | 85.690% | 0.859    | 0.780  | 86.509% | -0.014   | -0.014    | -0.020  | -0.017  |
| 2    | 23:07:51 | 84.804% | 1.145    | 1.033  | 85.938% | -0.023   | -0.010    | -0.042  | -0.033  |
| 3    | 23:08:11 | 85.862% | 1.131    | 1.202  | 85.866% | -0.017   | -0.018    | -0.005  | -0.007  |
| X    |          | 85.452% | 1.045    | 1.005  | 86.104% | -0.018   | -0.014    | -0.022  | -0.019  |
| σ    |          | 0.568%  | 0.161    | 0.212  | 0.353%  | 0.004    | 0.004     | 0.019   | 0.013   |
| %RSD |          | 0.664   | 15.400   | 21.120 | 0.410   | 24.930   | 29.150    | 84.640  | 67.930  |
| Run  | Time     | 115In   | 118Sn    | 121Sb  | 123Sb   | 135Ba    | 137Ba     | 159Tb   | 165Ho   |
|      |          | ppb     | ppb      | ppb    | ppb     | ppb      | ppb       | ppb     | ppb     |
| 1    | 23:07:32 | 86.452% | -0.076   | -0.011 | -0.019  | 0.646    | 0.617     | 93.722% | 93.270% |
| 2    | 23:07:51 | 87.586% | 0.015    | -0.010 | -0.007  | 0.689    | 0.644     | 94.812% | 94.753% |
| 3    | 23:08:11 | 88.509% | -0.032   | -0.011 | 0.004   | 0.567    | 0.654     | 95.830% | 94.998% |
| X    |          | 87.515% | -0.031   | -0.011 | -0.007  | 0.634    | 0.638     | 94.788% | 94.341% |
| σ    |          | 1.030%  | 0.046    | 0.000  | 0.012   | 0.062    | 0.019     | 1.054%  | 0.935%  |
| %RSD |          | 1.177   | 147.600  | 4.401  | 162.900 | 9.811    | 2.976     | 1.112   | 0.991   |
| Run  | Time     | 203Tl   | 205Tl    | 206Pb  | 207Pb   | 208Pb    | 209Bi     |         |         |
|      |          | ppb     | ppb      | ppb    | ppb     | ppb      | ppb       |         |         |
| 1    | 23:07:32 | 0.025   | 0.020    | 0.064  | 0.076   | 0.064    | 100.514%  |         |         |
| 2    | 23:07:51 | 0.018   | 0.022    | 0.089  | 0.070   | 0.071    | 97.458%   |         |         |
| 3    | 23:08:11 | 0.019   | 0.023    | 0.077  | 0.062   | 0.072    | 96.429%   |         |         |
| X    |          | 0.021   | 0.022    | 0.076  | 0.069   | 0.069    | 98.134%   |         |         |
| σ    |          | 0.004   | 0.001    | 0.013  | 0.007   | 0.004    | 2.125%    |         |         |
| %RSD |          | 18.510  | 6.904    | 16.520 | 10.450  | 6.316    | 2.165     |         |         |



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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    | 23:11:22 | 92.470% | -0.011   | 2.567  | 2.793   | 0.000   | 11190.000 | 34.090  | 35.130  |
| 2    | 23:11:41 | 92.827% | 0.029    | 3.629  | 2.914   | 0.000   | 10740.000 | 33.250  | 34.900  |
| 3    | 23:12:01 | 89.562% | -0.031   | 2.546  | 2.596   | 0.000   | 11130.000 | 36.610  | 37.050  |
| X    |          | 91.619% | -0.004   | 2.914  | 2.767   | 0.000   | 11020.000 | 34.650  | 35.690  |
| σ    |          | 1.791%  | 0.030    | 0.620  | 0.161   | 0.000   | 246.200   | 1.749   | 1.179   |
| %RSD |          | 1.955   | 701.300  | 21.270 | 5.801   | 0.000   | 2.234     | 5.049   | 3.302   |
| Run  | Time     | 27Al    | 28Si     | 37Cl   | 39K     | 43Ca    | 44Ca      | 45Sc    | 47Ti    |
|      |          | ppb     | ppb      | ppb    | ppb     | ppb     | ppb       | ppb     | ppb     |
| 1    | 23:11:22 | 16.240  | -175.200 | 0.000  | 27.870  | 371.600 | 341.200   | 91.534% | 0.015   |
| 2    | 23:11:41 | 16.270  | -175.200 | 0.000  | 25.720  | 398.900 | 337.700   | 89.729% | -0.075  |
| 3    | 23:12:01 | 15.760  | -178.600 | 0.000  | 28.220  | 410.900 | 345.900   | 87.169% | -0.051  |
| X    |          | 16.090  | -176.300 | 0.000  | 27.270  | 393.800 | 341.600   | 89.477% | -0.037  |
| σ    |          | 0.287   | 1.948    | 0.000  | 1.353   | 20.180  | 4.132     | 2.194%  | 0.047   |
| %RSD |          | 1.787   | 1.105    | 0.000  | 4.962   | 5.123   | 1.209     | 2.451   | 125.700 |
| Run  | Time     | 51V     | 52Cr     | 55Mn   | 56Fe    | 57Fe    | 59Co      | 60Ni    | 63Cu    |
|      |          | ppb     | ppb      | ppb    | ppb     | ppb     | ppb       | ppb     | ppb     |
| 1    | 23:11:22 | -0.070  | 0.020    | 4.521  | 36.360  | 38.310  | 0.091     | 0.206   | 0.074   |
| 2    | 23:11:41 | 0.055   | 0.037    | 4.596  | 35.780  | 39.770  | 0.112     | 0.127   | 0.117   |
| 3    | 23:12:01 | 0.093   | 0.030    | 4.639  | 37.410  | 42.070  | 0.090     | 0.140   | 0.122   |
| X    |          | 0.026   | 0.029    | 4.585  | 36.520  | 40.050  | 0.098     | 0.158   | 0.104   |
| σ    |          | 0.085   | 0.009    | 0.060  | 0.827   | 1.896   | 0.012     | 0.043   | 0.026   |
| %RSD |          | 330.200 | 30.200   | 1.302  | 2.264   | 4.733   | 12.390    | 26.940  | 25.410  |
| Run  | Time     | 65Cu    | 66Zn     | 68Zn   | 75As    | 78Se    | 82Se      | 83Kr    | 88Sr    |
|      |          | ppb     | ppb      | ppb    | ppb     | ppb     | ppb       | ppb     | ppb     |
| 1    | 23:11:22 | 0.063   | 0.846    | 0.762  | 0.052   | 1.764   | 2.109     | 0.000   | 1.039   |
| 2    | 23:11:41 | 0.006   | 0.800    | 0.906  | -0.011  | 1.754   | 1.789     | 0.000   | 1.087   |
| 3    | 23:12:01 | 0.003   | 0.776    | 0.729  | 0.021   | 1.878   | 2.081     | 0.000   | 1.124   |
| X    |          | 0.024   | 0.807    | 0.799  | 0.021   | 1.799   | 1.993     | 0.000   | 1.084   |
| σ    |          | 0.034   | 0.035    | 0.094  | 0.032   | 0.069   | 0.177     | 0.000   | 0.043   |
| %RSD |          | 143.300 | 4.387    | 11.810 | 151.500 | 3.844   | 8.891     | 0.000   | 3.956   |
| Run  | Time     | 89Y     | 95Mo     | 98Mo   | 103Rh   | 107Ag   | 109Ag     | 111Cd   | 114Cd   |
|      |          | ppb     | ppb      | ppb    | ppb     | ppb     | ppb       | ppb     | ppb     |
| 1    | 23:11:22 | 90.138% | 0.780    | 0.719  | 92.527% | -0.027  | -0.019    | -0.010  | -0.002  |
| 2    | 23:11:41 | 89.211% | 1.007    | 0.967  | 90.567% | -0.024  | -0.017    | -0.008  | -0.004  |
| 3    | 23:12:01 | 89.900% | 1.036    | 1.016  | 92.068% | -0.021  | -0.017    | -0.028  | -0.019  |
| X    |          | 89.750% | 0.941    | 0.901  | 91.721% | -0.024  | -0.018    | -0.015  | -0.008  |
| σ    |          | 0.481%  | 0.140    | 0.159  | 1.025%  | 0.003   | 0.001     | 0.011   | 0.010   |
| %RSD |          | 0.536   | 14.850   | 17.670 | 1.118   | 11.930  | 5.512     | 68.570  | 114.500 |
| Run  | Time     | 115In   | 118Sn    | 121Sb  | 123Sb   | 135Ba   | 137Ba     | 159Tb   | 165Ho   |
|      |          | ppb     | ppb      | ppb    | ppb     | ppb     | ppb       | ppb     | ppb     |
| 1    | 23:11:22 | 90.470% | -0.180   | -0.047 | -0.028  | 0.087   | 0.152     | 95.927% | 94.931% |
| 2    | 23:11:41 | 91.818% | -0.068   | -0.045 | -0.011  | 0.124   | 0.117     | 96.548% | 97.228% |
| 3    | 23:12:01 | 92.504% | -0.032   | -0.028 | -0.024  | 0.159   | 0.126     | 97.892% | 98.502% |
| X    |          | 91.597% | -0.093   | -0.040 | -0.021  | 0.123   | 0.132     | 96.789% | 96.887% |
| σ    |          | 1.035%  | 0.078    | 0.011  | 0.009   | 0.036   | 0.018     | 1.004%  | 1.809%  |
| %RSD |          | 1.130   | 83.190   | 27.000 | 43.000  | 29.120  | 13.860    | 1.038   | 1.867   |
| Run  | Time     | 203Tl   | 205Tl    | 206Pb  | 207Pb   | 208Pb   | 209Bi     |         |         |
|      |          | ppb     | ppb      | ppb    | ppb     | ppb     | ppb       |         |         |
| 1    | 23:11:22 | 0.021   | 0.020    | 0.004  | 0.014   | 0.011   | 103.591%  |         |         |
| 2    | 23:11:41 | 0.017   | 0.020    | 0.016  | 0.015   | 0.014   | 102.288%  |         |         |
| 3    | 23:12:01 | 0.026   | 0.015    | 0.011  | 0.014   | 0.014   | 100.835%  |         |         |
| X    |          | 0.021   | 0.018    | 0.010  | 0.015   | 0.013   | 102.238%  |         |         |
| σ    |          | 0.005   | 0.003    | 0.006  | 0.000   | 0.002   | 1.379%    |         |         |
| %RSD |          | 22.190  | 15.340   | 56.850 | 1.438   | 13.150  | 1.348     |         |         |

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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    | 23:18:09 | 90.469% | 97.020   | 102.500  | 94.200    | 0.000     | 46370.000 | 46230.000 | 46580.000 |
| 2    | 23:18:29 | 88.154% | 100.900  | 99.620   | 97.680    | 0.000     | 47330.000 | 47900.000 | 47470.000 |
| 3    | 23:18:48 | 89.086% | 98.670   | 101.500  | 93.510    | 0.000     | 46550.000 | 46000.000 | 46860.000 |
| X    |          | 89.236% | 98.868%  | 101.223% | 95.129%   | 0.000     | 93.501%   | 93.423%   | 93.943%   |
| σ    |          | 1.165%  | n/a      | n/a      | n/a       | 0.000     | n/a       | n/a       | n/a       |
| %RSD |          | 1.305   | 1.979    | 1.467    | 2.346     | 0.000     | 1.094     | 2.224     | 0.972     |
| Run  | Time     | 27Al    | 28Si     | 37Cl     | 39K       | 43Ca      | 44Ca      | 45Sc      | 47Ti      |
|      |          | ppb     | ppb      | ppb      | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 23:18:09 | 451.700 | 4255.000 | 0.000    | 48230.000 | 47950.000 | 47070.000 | 88.067%   | 95.530    |
| 2    | 23:18:29 | 459.200 | 4419.000 | 0.000    | 49630.000 | 49420.000 | 47990.000 | 86.993%   | 95.620    |
| 3    | 23:18:48 | 454.100 | 4446.000 | 0.000    | 48700.000 | 48830.000 | 48560.000 | 88.089%   | 95.630    |
| X    |          | 90.999% | 87.466%  | 0.000    | 97.703%   | 97.471%   | 95.742%   | 87.717%   | 95.593%   |
| σ    |          | n/a     | n/a      | 0.000    | n/a       | n/a       | n/a       | 0.626%    | n/a       |
| %RSD |          | 0.839   | 2.367    | 0.000    | 1.465     | 1.517     | 1.573     | 0.714     | 0.061     |
| Run  | Time     | 51V     | 52Cr     | 55Mn     | 56Fe      | 57Fe      | 59Co      | 60Ni      | 63Cu      |
|      |          | ppb     | ppb      | ppb      | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 23:18:09 | 93.610  | 95.040   | 467.000  | 24150.000 | 24320.000 | 95.490    | 96.520    | 100.100   |
| 2    | 23:18:29 | 96.990  | 99.010   | 488.700  | 25060.000 | 24620.000 | 96.630    | 99.470    | 98.180    |
| 3    | 23:18:48 | 97.380  | 97.210   | 470.600  | 24290.000 | 23860.000 | 97.200    | 96.410    | 97.270    |
| X    |          | 95.991% | 97.087%  | 95.083%  | 98.005%   | 97.073%   | 96.439%   | 97.466%   | 98.511%   |
| σ    |          | n/a     | n/a      | n/a      | n/a       | n/a       | n/a       | n/a       | n/a       |
| %RSD |          | 2.161   | 2.049    | 2.449    | 1.986     | 1.561     | 0.902     | 1.784     | 1.453     |
| Run  | Time     | 65Cu    | 66Zn     | 68Zn     | 75As      | 78Se      | 82Se      | 83Kr      | 88Sr      |
|      |          | ppb     | ppb      | ppb      | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 23:18:09 | 97.550  | 91.490   | 92.310   | 95.300    | 98.780    | 96.240    | 0.000     | 94.250    |
| 2    | 23:18:29 | 99.030  | 92.800   | 92.220   | 96.610    | 97.870    | 95.870    | 0.000     | 94.750    |
| 3    | 23:18:48 | 99.580  | 92.610   | 91.700   | 96.140    | 98.680    | 97.070    | 0.000     | 94.070    |
| X    |          | 98.718% | 92.298%  | 92.075%  | 96.015%   | 98.447%   | 96.395%   | 0.000     | 94.353%   |
| σ    |          | n/a     | n/a      | n/a      | n/a       | n/a       | n/a       | 0.000     | n/a       |
| %RSD |          | 1.060   | 0.766    | 0.360    | 0.688     | 0.508     | 0.639     | 0.000     | 0.374     |
| Run  | Time     | 89Y     | 95Mo     | 98Mo     | 103Rh     | 107Ag     | 109Ag     | 111Cd     | 114Cd     |
|      |          | ppb     | ppb      | ppb      | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 23:18:09 | 87.895% | 90.050   | 91.950   | 86.904%   | 95.700    | 98.200    | 101.900   | 104.000   |
| 2    | 23:18:29 | 88.676% | 92.580   | 93.320   | 87.170%   | 97.790    | 99.020    | 100.900   | 103.200   |
| 3    | 23:18:48 | 89.591% | 93.570   | 94.180   | 87.743%   | 97.480    | 99.750    | 102.200   | 104.300   |
| X    |          | 88.721% | 92.063%  | 93.150%  | 87.272%   | 96.993%   | 98.991%   | 101.657%  | 103.834%  |
| σ    |          | 0.849%  | n/a      | n/a      | 0.429%    | n/a       | n/a       | n/a       | n/a       |
| %RSD |          | 0.957   | 1.971    | 1.208    | 0.492     | 1.163     | 0.779     | 0.633     | 0.546     |
| Run  | Time     | 115In   | 118Sn    | 121Sb    | 123Sb     | 135Ba     | 137Ba     | 159Tb     | 165Ho     |
|      |          | ppb     | ppb      | ppb      | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 23:18:09 | 78.053% | 100.300  | 91.350   | 90.570    | 96.660    | 95.970    | 94.766%   | 94.613%   |
| 2    | 23:18:29 | 79.923% | 101.600  | 91.710   | 91.480    | 97.730    | 97.230    | 96.509%   | 96.438%   |
| 3    | 23:18:48 | 80.245% | 101.600  | 91.560   | 91.850    | 98.070    | 97.170    | 97.666%   | 97.815%   |
| X    |          | 79.407% | 101.190% | 91.541%  | 91.302%   | 97.486%   | 96.791%   | 96.314%   | 96.289%   |
| σ    |          | 1.184%  | n/a      | n/a      | n/a       | n/a       | n/a       | 1.460%    | 1.606%    |
| %RSD |          | 1.491   | 0.732    | 0.195    | 0.723     | 0.757     | 0.731     | 1.516     | 1.668     |
| Run  | Time     | 203Tl   | 205Tl    | 206Pb    | 207Pb     | 208Pb     | 209Bi     |           |           |
|      |          | ppb     | ppb      | ppb      | ppb       | ppb       | ppb       |           |           |
| 1    | 23:18:09 | 92.490  | 95.690   | 92.810   | 92.910    | 92.550    | 93.772%   |           |           |
| 2    | 23:18:29 | 93.730  | 97.430   | 95.190   | 94.480    | 94.690    | 94.603%   |           |           |
| 3    | 23:18:48 | 96.260  | 100.200  | 96.720   | 96.460    | 96.590    | 93.022%   |           |           |
| X    |          | 94.159% | 97.780%  | 94.906%  | 94.619%   | 94.609%   | 93.799%   |           |           |
| σ    |          | n/a     | n/a      | n/a      | n/a       | n/a       | 0.791%    |           |           |
| %RSD |          | 2.042   | 2.342    | 2.074    | 1.878     | 2.139     | 0.843     |           |           |

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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    | 23:25:09 | 99.213% | 0.006    | 0.376   | 0.755   | 0.000   | 6.702   | 2.509   | 2.203    |
| 2    | 23:25:28 | 95.279% | 0.085    | 0.521   | 0.770   | 0.000   | 5.217   | 2.103   | 1.373    |
| 3    | 23:25:47 | 95.408% | 0.008    | 0.983   | 0.772   | 0.000   | 4.813   | 1.694   | 1.556    |
| X    |          | 96.634% | 0.033    | 0.627   | 0.766   | 0.000   | 5.577   | 2.102   | 1.711    |
| σ    |          | 2.235%  | 0.045    | 0.317   | 0.009   | 0.000   | 0.995   | 0.407   | 0.436    |
| %RSD |          | 2.313   | 136.100  | 50.560  | 1.207   | 0.000   | 17.840  | 19.380  | 25.490   |
| Run  | Time     | 27Al    | 28Si     | 37Cl    | 39K     | 43Ca    | 44Ca    | 45Sc    | 47Ti     |
|      |          | ppb     | ppb      | ppb     | ppb     | ppb     | ppb     | ppb     | ppb      |
| 1    | 23:25:09 | 0.370   | -144.400 | 0.000   | 12.720  | 1.424   | 1.164   | 95.061% | -0.173   |
| 2    | 23:25:28 | 0.150   | -147.500 | 0.000   | 10.480  | 1.484   | 2.282   | 94.403% | 0.080    |
| 3    | 23:25:47 | 0.134   | -163.900 | 0.000   | 9.890   | 3.418   | 2.149   | 92.340% | -0.098   |
| X    |          | 0.218   | -152.000 | 0.000   | 11.030  | 2.109   | 1.865   | 93.935% | -0.064   |
| σ    |          | 0.132   | 10.480   | 0.000   | 1.492   | 1.134   | 0.611   | 1.420%  | 0.130    |
| %RSD |          | 60.570  | 6.898    | 0.000   | 13.530  | 53.800  | 32.730  | 1.511   | 203.600  |
| Run  | Time     | 51V     | 52Cr     | 55Mn    | 56Fe    | 57Fe    | 59Co    | 60Ni    | 63Cu     |
|      |          | ppb     | ppb      | ppb     | ppb     | ppb     | ppb     | ppb     | ppb      |
| 1    | 23:25:09 | -0.009  | 0.004    | 0.004   | 3.556   | 4.988   | 0.007   | -0.010  | 0.025    |
| 2    | 23:25:28 | -0.011  | -0.026   | 0.000   | 2.987   | 4.488   | 0.005   | 0.000   | -0.008   |
| 3    | 23:25:47 | 0.036   | -0.014   | 0.015   | 3.237   | 6.404   | 0.000   | -0.004  | -0.027   |
| X    |          | 0.006   | -0.012   | 0.006   | 3.260   | 5.293   | 0.004   | -0.005  | -0.003   |
| σ    |          | 0.027   | 0.015    | 0.008   | 0.285   | 0.994   | 0.004   | 0.005   | 0.026    |
| %RSD |          | 468.900 | 127.600  | 119.500 | 8.744   | 18.780  | 85.210  | 106.100 | 757.800  |
| Run  | Time     | 65Cu    | 66Zn     | 68Zn    | 75As    | 78Se    | 82Se    | 83Kr    | 88Sr     |
|      |          | ppb     | ppb      | ppb     | ppb     | ppb     | ppb     | ppb     | ppb      |
| 1    | 23:25:09 | -0.013  | 4.493    | 4.317   | 0.055   | 0.291   | 0.336   | 0.000   | 0.016    |
| 2    | 23:25:28 | -0.046  | 4.389    | 4.542   | 0.121   | 0.578   | 0.379   | 0.000   | 0.006    |
| 3    | 23:25:47 | -0.061  | 4.368    | 4.068   | 0.118   | 0.448   | 0.169   | 0.000   | 0.003    |
| X    |          | -0.040  | 4.416    | 4.309   | 0.098   | 0.439   | 0.295   | 0.000   | 0.008    |
| σ    |          | 0.025   | 0.067    | 0.237   | 0.037   | 0.143   | 0.111   | 0.000   | 0.007    |
| %RSD |          | 61.200  | 1.515    | 5.493   | 38.030  | 32.710  | 37.570  | 0.000   | 80.020   |
| Run  | Time     | 89Y     | 95Mo     | 98Mo    | 103Rh   | 107Ag   | 109Ag   | 111Cd   | 114Cd    |
|      |          | ppb     | ppb      | ppb     | ppb     | ppb     | ppb     | ppb     | ppb      |
| 1    | 23:25:09 | 93.540% | 1.256    | 1.176   | 95.155% | -0.014  | -0.009  | -0.013  | -0.004   |
| 2    | 23:25:28 | 93.766% | 1.386    | 1.417   | 95.283% | -0.021  | -0.009  | 0.019   | 0.012    |
| 3    | 23:25:47 | 93.116% | 1.635    | 1.576   | 94.339% | -0.013  | -0.016  | 0.004   | -0.007   |
| X    |          | 93.474% | 1.426    | 1.390   | 94.925% | -0.016  | -0.011  | 0.003   | 0.000    |
| σ    |          | 0.330%  | 0.193    | 0.201   | 0.512%  | 0.005   | 0.004   | 0.016   | 0.010    |
| %RSD |          | 0.353   | 13.510   | 14.480  | 0.539   | 29.420  | 36.240  | 455.400 | 8139.000 |
| Run  | Time     | 115In   | 118Sn    | 121Sb   | 123Sb   | 135Ba   | 137Ba   | 159Tb   | 165Ho    |
|      |          | ppb     | ppb      | ppb     | ppb     | ppb     | ppb     | ppb     | ppb      |
| 1    | 23:25:09 | 93.909% | -0.075   | 0.524   | 0.590   | -0.010  | 0.011   | 95.121% | 94.319%  |
| 2    | 23:25:28 | 95.879% | -0.054   | 0.581   | 0.630   | -0.002  | 0.013   | 97.081% | 96.239%  |
| 3    | 23:25:47 | 95.572% | 0.016    | 0.624   | 0.648   | 0.002   | 0.010   | 98.885% | 97.866%  |
| X    |          | 95.120% | -0.038   | 0.576   | 0.623   | -0.003  | 0.011   | 97.029% | 96.141%  |
| σ    |          | 1.060%  | 0.048    | 0.050   | 0.030   | 0.006   | 0.001   | 1.883%  | 1.776%   |
| %RSD |          | 1.114   | 126.800  | 8.702   | 4.827   | 189.100 | 11.520  | 1.940   | 1.847    |
| Run  | Time     | 203Tl   | 205Tl    | 206Pb   | 207Pb   | 208Pb   | 209Bi   |         |          |
|      |          | ppb     | ppb      | ppb     | ppb     | ppb     | ppb     |         |          |
| 1    | 23:25:09 | 0.024   | 0.028    | -0.001  | -0.000  | 0.001   | 98.716% |         |          |
| 2    | 23:25:28 | 0.023   | 0.021    | 0.000   | 0.005   | 0.002   | 98.759% |         |          |
| 3    | 23:25:47 | 0.025   | 0.030    | -0.003  | -0.008  | -0.004  | 98.822% |         |          |
| X    |          | 0.024   | 0.026    | -0.001  | -0.001  | -0.001  | 98.765% |         |          |
| σ    |          | 0.001   | 0.005    | 0.002   | 0.007   | 0.003   | 0.053%  |         |          |
| %RSD |          | 2.323   | 19.030   | 134.700 | 496.000 | 584.700 | 0.054   |         |          |

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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    | 23:28:59 | 84.571% | 0.078    | 462.000  | 489.500  | 0.000      | 432900.000 | 19370.000 | 19880.000 |
| 2    | 23:29:18 | 82.665% | 0.125    | 501.200  | 489.300  | 0.000      | 450800.000 | 20350.000 | 20470.000 |
| 3    | 23:29:38 | 82.852% | 0.103    | 503.600  | 499.200  | 0.000      | 445300.000 | 20490.000 | 20780.000 |
| X    |          | 83.362% | 0.102    | 488.900  | 492.700  | 0.000      | 443000.000 | 20070.000 | 20380.000 |
| σ    |          | 1.051%  | 0.024    | 23.350   | 5.681    | 0.000      | 9204.000   | 613.400   | 460.000   |
| %RSD |          | 1.260   | 23.110   | 4.776    | 1.153    | 0.000      | 2.078      | 3.056     | 2.257     |
| Run  | Time     | 27Al    | 28Si     | 37Cl     | 39K      | 43Ca       | 44Ca       | 45Sc      | 47Ti      |
|      |          | ppb     | ppb      | ppb      | ppb      | ppb        | ppb        | ppb       | ppb       |
| 1    | 23:28:59 | 164.500 | 9414.000 | 0.000    | 3655.000 | 102800.000 | 104600.000 | 79.440%   | 2.179     |
| 2    | 23:29:18 | 168.900 | 9191.000 | 0.000    | 3741.000 | 106100.000 | 107600.000 | 76.763%   | 2.656     |
| 3    | 23:29:38 | 119.000 | 9220.000 | 0.000    | 3772.000 | 110100.000 | 109600.000 | 74.788%   | 2.661     |
| X    |          | 150.800 | 9275.000 | 0.000    | 3723.000 | 106300.000 | 107300.000 | 76.997%   | 2.499     |
| σ    |          | 27.650  | 121.300  | 0.000    | 60.550   | 3664.000   | 2485.000   | 2.335%    | 0.277     |
| %RSD |          | 18.340  | 1.308    | 0.000    | 1.626    | 3.446      | 2.317      | 3.032     | 11.070    |
| Run  | Time     | 51V     | 52Cr     | 55Mn     | 56Fe     | 57Fe       | 59Co       | 60Ni      | 63Cu      |
|      |          | ppb     | ppb      | ppb      | ppb      | ppb        | ppb        | ppb       | ppb       |
| 1    | 23:28:59 | 4.873   | 0.310    | 2919.000 | 1960.000 | 2105.000   | 8.171      | 9.464     | 3.599     |
| 2    | 23:29:18 | 4.759   | 0.353    | 3001.000 | 2057.000 | 2203.000   | 8.387      | 10.170    | 4.040     |
| 3    | 23:29:38 | 4.880   | 0.300    | 3023.000 | 2067.000 | 2233.000   | 8.487      | 10.480    | 3.979     |
| X    |          | 4.837   | 0.321    | 2981.000 | 2028.000 | 2180.000   | 8.348      | 10.040    | 3.872     |
| σ    |          | 0.068   | 0.028    | 55.060   | 59.180   | 67.200     | 0.161      | 0.520     | 0.239     |
| %RSD |          | 1.404   | 8.747    | 1.847    | 2.918    | 3.082      | 1.932      | 5.184     | 6.166     |
| Run  | Time     | 65Cu    | 66Zn     | 68Zn     | 75As     | 78Se       | 82Se       | 83Kr      | 88Sr      |
|      |          | ppb     | ppb      | ppb      | ppb      | ppb        | ppb        | ppb       | ppb       |
| 1    | 23:28:59 | 1.276   | 8.919    | 8.679    | 9.696    | -0.509     | 2.224      | 0.000     | 1209.000  |
| 2    | 23:29:18 | 1.285   | 8.560    | 8.952    | 9.694    | 0.292      | 2.102      | 0.000     | 1227.000  |
| 3    | 23:29:38 | 1.363   | 8.769    | 9.290    | 10.060   | -0.051     | 1.964      | 0.000     | 1219.000  |
| X    |          | 1.308   | 8.749    | 8.974    | 9.816    | -0.090     | 2.097      | 0.000     | 1218.000  |
| σ    |          | 0.048   | 0.180    | 0.306    | 0.209    | 0.402      | 0.131      | 0.000     | 9.185     |
| %RSD |          | 3.671   | 2.061    | 3.408    | 2.129    | 448.400    | 6.226      | 0.000     | 0.754     |
| Run  | Time     | 89Y     | 95Mo     | 98Mo     | 103Rh    | 107Ag      | 109Ag      | 111Cd     | 114Cd     |
|      |          | ppb     | ppb      | ppb      | ppb      | ppb        | ppb        | ppb       | ppb       |
| 1    | 23:28:59 | 87.253% | 0.970    | 0.785    | 79.413%  | -0.008     | -0.005     | 0.031     | 0.031     |
| 2    | 23:29:18 | 87.135% | 0.977    | 1.079    | 79.412%  | 0.001      | -0.002     | 0.085     | 0.078     |
| 3    | 23:29:38 | 87.329% | 0.994    | 1.070    | 79.798%  | 0.002      | 0.003      | 0.057     | 0.036     |
| X    |          | 87.239% | 0.980    | 0.978    | 79.541%  | -0.002     | -0.001     | 0.058     | 0.049     |
| σ    |          | 0.098%  | 0.012    | 0.167    | 0.223%   | 0.006      | 0.004      | 0.027     | 0.026     |
| %RSD |          | 0.113   | 1.268    | 17.090   | 0.280    | 360.400    | 258.500    | 46.790    | 52.790    |
| Run  | Time     | 115In   | 118Sn    | 121Sb    | 123Sb    | 135Ba      | 137Ba      | 159Tb     | 165Ho     |
|      |          | ppb     | ppb      | ppb      | ppb      | ppb        | ppb        | ppb       | ppb       |
| 1    | 23:28:59 | 82.228% | -0.195   | 0.512    | 0.549    | 70.930     | 71.140     | 92.843%   | 93.225%   |
| 2    | 23:29:18 | 82.967% | -0.112   | 0.522    | 0.571    | 71.310     | 72.090     | 94.142%   | 94.627%   |
| 3    | 23:29:38 | 82.830% | -0.049   | 0.572    | 0.516    | 72.470     | 72.130     | 94.471%   | 95.139%   |
| X    |          | 82.675% | -0.119   | 0.535    | 0.545    | 71.570     | 71.790     | 93.819%   | 94.330%   |
| σ    |          | 0.393%  | 0.073    | 0.032    | 0.028    | 0.804      | 0.559      | 0.861%    | 0.991%    |
| %RSD |          | 0.476   | 61.790   | 6.062    | 5.072    | 1.124      | 0.778      | 0.918     | 1.050     |
| Run  | Time     | 203Tl   | 205Tl    | 206Pb    | 207Pb    | 208Pb      | 209Bi      |           |           |
|      |          | ppb     | ppb      | ppb      | ppb      | ppb        | ppb        |           |           |
| 1    | 23:28:59 | 0.020   | 0.025    | 0.463    | 0.468    | 0.466      | 110.730%   |           |           |
| 2    | 23:29:18 | 0.031   | 0.021    | 0.551    | 0.498    | 0.504      | 104.782%   |           |           |
| 3    | 23:29:38 | 0.021   | 0.028    | 0.581    | 0.532    | 0.547      | 101.169%   |           |           |
| X    |          | 0.024   | 0.025    | 0.532    | 0.499    | 0.506      | 105.561%   |           |           |
| σ    |          | 0.006   | 0.004    | 0.061    | 0.032    | 0.041      | 4.828%     |           |           |
| %RSD |          | 24.490  | 15.560   | 11.520   | 6.485    | 8.033      | 4.574      |           |           |

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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    | 23:32:47 | 88.635% | -0.010   | 151.200 | 143.200  | 0.000     | 19170.000 | 1598.000 | 1619.000 |
| 2    | 23:33:06 | 91.230% | 0.030    | 137.400 | 133.800  | 0.000     | 18760.000 | 1559.000 | 1607.000 |
| 3    | 23:33:25 | 87.356% | -0.010   | 136.600 | 139.300  | 0.000     | 19490.000 | 1607.000 | 1601.000 |
| X    |          | 89.074% | 0.003    | 141.800 | 138.800  | 0.000     | 19140.000 | 1588.000 | 1609.000 |
| σ    |          | 1.974%  | 0.023    | 8.220   | 4.736    | 0.000     | 364.600   | 25.610   | 9.315    |
| %RSD |          | 2.216   | 694.100  | 5.798   | 3.413    | 0.000     | 1.905     | 1.613    | 0.579    |
| Run  | Time     | 27Al    | 28Si     | 37Cl    | 39K      | 43Ca      | 44Ca      | 45Sc     | 47Ti     |
|      |          | ppb     | ppb      | ppb     | ppb      | ppb       | ppb       | ppb      | ppb      |
| 1    | 23:32:47 | 40.330  | 1383.000 | 0.000   | 7416.000 | 10030.000 | 9088.000  | 90.295%  | 0.977    |
| 2    | 23:33:06 | 39.230  | 1421.000 | 0.000   | 7514.000 | 9801.000  | 9109.000  | 89.090%  | 0.898    |
| 3    | 23:33:25 | 40.570  | 1361.000 | 0.000   | 7508.000 | 9654.000  | 9026.000  | 86.295%  | 0.893    |
| X    |          | 40.040  | 1389.000 | 0.000   | 7480.000 | 9827.000  | 9074.000  | 88.560%  | 0.923    |
| σ    |          | 0.717   | 30.470   | 0.000   | 54.850   | 187.400   | 43.150    | 2.052%   | 0.047    |
| %RSD |          | 1.791   | 2.194    | 0.000   | 0.733    | 1.907     | 0.476     | 2.317    | 5.129    |
| Run  | Time     | 51V     | 52Cr     | 55Mn    | 56Fe     | 57Fe      | 59Co      | 60Ni     | 63Cu     |
|      |          | ppb     | ppb      | ppb     | ppb      | ppb       | ppb       | ppb      | ppb      |
| 1    | 23:32:47 | 0.413   | 0.298    | 193.200 | 1517.000 | 1561.000  | 0.308     | 1.028    | 1.919    |
| 2    | 23:33:06 | 0.579   | 0.362    | 199.200 | 1553.000 | 1577.000  | 0.300     | 1.130    | 1.777    |
| 3    | 23:33:25 | 0.741   | 0.375    | 197.500 | 1528.000 | 1559.000  | 0.302     | 1.245    | 1.794    |
| X    |          | 0.577   | 0.345    | 196.600 | 1533.000 | 1565.000  | 0.304     | 1.134    | 1.830    |
| σ    |          | 0.164   | 0.042    | 3.054   | 18.350   | 9.950     | 0.004     | 0.109    | 0.078    |
| %RSD |          | 28.440  | 12.030   | 1.553   | 1.197    | 0.636     | 1.353     | 9.584    | 4.242    |
| Run  | Time     | 65Cu    | 66Zn     | 68Zn    | 75As     | 78Se      | 82Se      | 83Kr     | 88Sr     |
|      |          | ppb     | ppb      | ppb     | ppb      | ppb       | ppb       | ppb      | ppb      |
| 1    | 23:32:47 | 1.731   | 20.370   | 21.160  | 0.939    | -0.334    | -0.171    | 0.000    | 53.340   |
| 2    | 23:33:06 | 1.703   | 21.330   | 20.650  | 0.951    | -0.209    | 0.193     | 0.000    | 53.700   |
| 3    | 23:33:25 | 1.634   | 20.510   | 22.290  | 0.976    | 0.082     | 0.247     | 0.000    | 53.970   |
| X    |          | 1.689   | 20.730   | 21.370  | 0.955    | -0.154    | 0.090     | 0.000    | 53.670   |
| σ    |          | 0.050   | 0.517    | 0.838   | 0.019    | 0.214     | 0.228     | 0.000    | 0.318    |
| %RSD |          | 2.959   | 2.493    | 3.922   | 1.946    | 138.800   | 253.300   | 0.000    | 0.593    |
| Run  | Time     | 89Y     | 95Mo     | 98Mo    | 103Rh    | 107Ag     | 109Ag     | 111Cd    | 114Cd    |
|      |          | ppb     | ppb      | ppb     | ppb      | ppb       | ppb       | ppb      | ppb      |
| 1    | 23:32:47 | 90.149% | 9.960    | 9.859   | 90.156%  | -0.011    | -0.003    | 0.043    | 0.034    |
| 2    | 23:33:06 | 89.949% | 9.888    | 10.060  | 89.719%  | -0.016    | -0.010    | -0.031   | -0.016   |
| 3    | 23:33:25 | 90.016% | 9.750    | 10.420  | 89.930%  | -0.018    | -0.018    | 0.023    | 0.023    |
| X    |          | 90.038% | 9.866    | 10.110  | 89.935%  | -0.015    | -0.010    | 0.012    | 0.014    |
| σ    |          | 0.102%  | 0.107    | 0.282   | 0.219%   | 0.003     | 0.007     | 0.038    | 0.026    |
| %RSD |          | 0.113   | 1.081    | 2.785   | 0.243    | 23.440    | 70.720    | 323.800  | 192.600  |
| Run  | Time     | 115In   | 118Sn    | 121Sb   | 123Sb    | 135Ba     | 137Ba     | 159Tb    | 165Ho    |
|      |          | ppb     | ppb      | ppb     | ppb      | ppb       | ppb       | ppb      | ppb      |
| 1    | 23:32:47 | 91.577% | -0.244   | 0.328   | 0.346    | 49.260    | 48.270    | 97.072%  | 97.609%  |
| 2    | 23:33:06 | 91.173% | -0.219   | 0.352   | 0.380    | 49.380    | 48.870    | 98.901%  | 99.068%  |
| 3    | 23:33:25 | 91.238% | -0.138   | 0.353   | 0.339    | 49.490    | 49.220    | 99.058%  | 99.378%  |
| X    |          | 91.330% | -0.200   | 0.344   | 0.355    | 49.380    | 48.790    | 98.344%  | 98.685%  |
| σ    |          | 0.217%  | 0.055    | 0.014   | 0.022    | 0.114     | 0.483     | 1.104%   | 0.944%   |
| %RSD |          | 0.237   | 27.630   | 4.012   | 6.186    | 0.231     | 0.990     | 1.123    | 0.957    |
| Run  | Time     | 203Tl   | 205Tl    | 206Pb   | 207Pb    | 208Pb     | 209Bi     |          |          |
|      |          | ppb     | ppb      | ppb     | ppb      | ppb       | ppb       |          |          |
| 1    | 23:32:47 | 0.006   | 0.008    | 0.309   | 0.268    | 0.289     | 108.020%  |          |          |
| 2    | 23:33:06 | 0.007   | 0.009    | 0.318   | 0.270    | 0.292     | 104.414%  |          |          |
| 3    | 23:33:25 | 0.012   | 0.009    | 0.349   | 0.332    | 0.314     | 102.414%  |          |          |
| X    |          | 0.008   | 0.009    | 0.325   | 0.290    | 0.298     | 104.949%  |          |          |
| σ    |          | 0.003   | 0.001    | 0.021   | 0.036    | 0.014     | 2.841%    |          |          |
| %RSD |          | 34.970  | 5.858    | 6.501   | 12.540   | 4.526     | 2.707     |          |          |

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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   | 23:36:33 | 83.606% | 0.035    | 1174.000 | 1155.000  | 0.000     | 169900.000 | 2338.000 | 2341.000 |        |
| 2   | 23:36:52 | 83.489% | 0.035    | 1158.000 | 1177.000  | 0.000     | 166100.000 | 2271.000 | 2310.000 |        |
| 3   | 23:37:12 | 80.129% | 0.152    | 1217.000 | 1189.000  | 0.000     | 165600.000 | 2336.000 | 2360.000 |        |
| X   |          | 82.408% | 0.074    | 1183.000 | 1174.000  | 0.000     | 167200.000 | 2315.000 | 2337.000 |        |
|     |          | σ       | 1.975%   | 0.068    | 30.210    | 17.150    | 0.000      | 2323.000 | 38.360   | 25.430 |
|     |          | %RSD    | 2.396    | 91.280   | 2.553     | 1.461     | 0.000      | 1.389    | 1.657    | 1.088  |
| Run | Time     | 27Al    | 28Si     | 37Cl     | 39K       | 43Ca      | 44Ca       | 45Sc     | 47Ti     |        |
|     |          | ppb     | ppb      | ppb      | ppb       | ppb       | ppb        | ppb      | ppb      |        |
| 1   | 23:36:33 | 283.100 | 2158.000 | 0.000    | 13370.000 | 14670.000 | 13510.000  | 82.588%  | 2.442    |        |
| 2   | 23:36:52 | 285.600 | 2080.000 | 0.000    | 12900.000 | 14480.000 | 13220.000  | 83.594%  | 3.061    |        |
| 3   | 23:37:12 | 281.400 | 2032.000 | 0.000    | 13380.000 | 14880.000 | 13840.000  | 78.710%  | 2.933    |        |
| X   |          | 283.400 | 2090.000 | 0.000    | 13220.000 | 14680.000 | 13530.000  | 81.631%  | 2.812    |        |
|     |          | σ       | 2.110    | 63.220   | 0.000     | 275.800   | 197.300    | 310.000  | 2.579%   | 0.326  |
|     |          | %RSD    | 0.745    | 3.025    | 0.000     | 2.086     | 1.344      | 2.292    | 3.159    | 11.610 |
| Run | Time     | 51V     | 52Cr     | 55Mn     | 56Fe      | 57Fe      | 59Co       | 60Ni     | 63Cu     |        |
|     |          | ppb     | ppb      | ppb      | ppb       | ppb       | ppb        | ppb      | ppb      |        |
| 1   | 23:36:33 | 1.588   | 0.318    | 178.400  | 344.500   | 376.800   | 0.305      | 1.088    | 3.961    |        |
| 2   | 23:36:52 | 1.598   | 0.278    | 175.200  | 327.800   | 379.200   | 0.340      | 1.089    | 3.864    |        |
| 3   | 23:37:12 | 1.334   | 0.365    | 178.400  | 334.900   | 377.200   | 0.336      | 1.324    | 3.993    |        |
| X   |          | 1.506   | 0.320    | 177.300  | 335.800   | 377.700   | 0.327      | 1.167    | 3.939    |        |
|     |          | σ       | 0.150    | 0.043    | 1.853     | 8.357     | 1.294      | 0.019    | 0.136    | 0.067  |
|     |          | %RSD    | 9.933    | 13.570   | 1.045     | 2.489     | 0.343      | 5.811    | 11.680   | 1.704  |
| Run | Time     | 65Cu    | 66Zn     | 68Zn     | 75As      | 78Se      | 82Se       | 83Kr     | 88Sr     |        |
|     |          | ppb     | ppb      | ppb      | ppb       | ppb       | ppb        | ppb      | ppb      |        |
| 1   | 23:36:33 | 2.927   | 11.500   | 11.770   | 1.145     | -0.016    | 0.266      | 0.000    | 93.760   |        |
| 2   | 23:36:52 | 2.875   | 11.310   | 12.010   | 1.127     | -0.640    | 0.538      | 0.000    | 93.770   |        |
| 3   | 23:37:12 | 3.001   | 12.140   | 12.160   | 1.095     | 0.116     | 0.242      | 0.000    | 93.720   |        |
| X   |          | 2.934   | 11.650   | 11.980   | 1.122     | -0.180    | 0.349      | 0.000    | 93.750   |        |
|     |          | σ       | 0.064    | 0.436    | 0.194     | 0.025     | 0.404      | 0.164    | 0.000    | 0.024  |
|     |          | %RSD    | 2.165    | 3.745    | 1.615     | 2.264     | 224.100    | 47.090   | 0.000    | 0.026  |
| Run | Time     | 89Y     | 95Mo     | 98Mo     | 103Rh     | 107Ag     | 109Ag      | 111Cd    | 114Cd    |        |
|     |          | ppb     | ppb      | ppb      | ppb       | ppb       | ppb        | ppb      | ppb      |        |
| 1   | 23:36:33 | 85.448% | 2.038    | 1.948    | 85.355%   | -0.017    | -0.010     | 0.011    | 0.035    |        |
| 2   | 23:36:52 | 85.703% | 2.024    | 2.032    | 84.929%   | -0.018    | -0.012     | 0.024    | 0.024    |        |
| 3   | 23:37:12 | 85.689% | 2.091    | 2.135    | 85.535%   | -0.016    | -0.009     | -0.006   | 0.004    |        |
| X   |          | 85.613% | 2.051    | 2.038    | 85.273%   | -0.017    | -0.010     | 0.010    | 0.021    |        |
|     |          | σ       | 0.143%   | 0.035    | 0.094     | 0.311%    | 0.001      | 0.001    | 0.015    | 0.016  |
|     |          | %RSD    | 0.167    | 1.728    | 4.599     | 0.365     | 7.655      | 12.970   | 158.600  | 75.610 |
| Run | Time     | 115In   | 118Sn    | 121Sb    | 123Sb     | 135Ba     | 137Ba      | 159Tb    | 165Ho    |        |
|     |          | ppb     | ppb      | ppb      | ppb       | ppb       | ppb        | ppb      | ppb      |        |
| 1   | 23:36:33 | 87.240% | -0.243   | 0.380    | 0.396     | 54.190    | 53.970     | 94.182%  | 93.043%  |        |
| 2   | 23:36:52 | 87.811% | -0.147   | 0.407    | 0.467     | 55.150    | 54.690     | 95.803%  | 95.699%  |        |
| 3   | 23:37:12 | 88.037% | -0.133   | 0.425    | 0.510     | 54.770    | 55.050     | 95.909%  | 95.205%  |        |
| X   |          | 87.696% | -0.175   | 0.404    | 0.458     | 54.700    | 54.570     | 95.298%  | 94.649%  |        |
|     |          | σ       | 0.411%   | 0.060    | 0.023     | 0.058     | 0.484      | 0.549    | 0.968%   | 1.412% |
|     |          | %RSD    | 0.469    | 34.250   | 5.597     | 12.650    | 0.885      | 1.007    | 1.016    | 1.492  |
| Run | Time     | 203Tl   | 205Tl    | 206Pb    | 207Pb     | 208Pb     | 209Bi      |          |          |        |
|     |          | ppb     | ppb      | ppb      | ppb       | ppb       | ppb        |          |          |        |
| 1   | 23:36:33 | 0.004   | 0.007    | 0.916    | 0.908     | 0.929     | 99.660%    |          |          |        |
| 2   | 23:36:52 | 0.010   | 0.011    | 1.045    | 0.975     | 1.000     | 96.040%    |          |          |        |
| 3   | 23:37:12 | 0.008   | 0.011    | 1.017    | 0.941     | 0.976     | 94.838%    |          |          |        |
| X   |          | 0.007   | 0.010    | 0.993    | 0.942     | 0.969     | 96.846%    |          |          |        |
|     |          | σ       | 0.003    | 0.002    | 0.068     | 0.034     | 0.036      | 2.510%   |          |        |
|     |          | %RSD    | 41.530   | 23.980   | 6.853     | 3.566     | 3.715      | 2.591    |          |        |

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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    | 23:40:20 | 86.770% | 0.076    | 41.460  | 39.820   | 0.000     | 8436.000  | 1526.000 | 1569.000 |
| 2    | 23:40:40 | 84.084% | -0.009   | 39.290  | 39.470   | 0.000     | 8400.000  | 1530.000 | 1589.000 |
| 3    | 23:40:59 | 79.951% | 0.061    | 39.440  | 41.460   | 0.000     | 8864.000  | 1603.000 | 1629.000 |
| X    |          | 83.602% | 0.043    | 40.060  | 40.250   | 0.000     | 8567.000  | 1553.000 | 1595.000 |
| σ    |          | 3.435%  | 0.045    | 1.211   | 1.062    | 0.000     | 258.000   | 43.590   | 30.360   |
| %RSD |          | 4.109   | 105.700  | 3.022   | 2.640    | 0.000     | 3.011     | 2.807    | 1.903    |
| Run  | Time     | 27Al    | 28Si     | 37Cl    | 39K      | 43Ca      | 44Ca      | 45Sc     | 47Ti     |
|      |          | ppb     | ppb      | ppb     | ppb      | ppb       | ppb       | ppb      | ppb      |
| 1    | 23:40:20 | 18.820  | 3151.000 | 0.000   | 2470.000 | 37160.000 | 36270.000 | 79.105%  | 0.309    |
| 2    | 23:40:40 | 19.040  | 3141.000 | 0.000   | 2414.000 | 37090.000 | 36300.000 | 78.126%  | 0.359    |
| 3    | 23:40:59 | 18.690  | 3155.000 | 0.000   | 2520.000 | 38310.000 | 36890.000 | 73.636%  | 0.394    |
| X    |          | 18.850  | 3149.000 | 0.000   | 2468.000 | 37520.000 | 36490.000 | 76.956%  | 0.354    |
| σ    |          | 0.177   | 7.346    | 0.000   | 52.720   | 685.700   | 351.000   | 2.916%   | 0.042    |
| %RSD |          | 0.937   | 0.233    | 0.000   | 2.136    | 1.827     | 0.962     | 3.790    | 11.970   |
| Run  | Time     | 51V     | 52Cr     | 55Mn    | 56Fe     | 57Fe      | 59Co      | 60Ni     | 63Cu     |
|      |          | ppb     | ppb      | ppb     | ppb      | ppb       | ppb       | ppb      | ppb      |
| 1    | 23:40:20 | 0.401   | 0.127    | 594.800 | 134.000  | 218.900   | 0.405     | 0.327    | 0.618    |
| 2    | 23:40:40 | 0.148   | 0.113    | 586.800 | 134.000  | 217.900   | 0.435     | 0.337    | 0.696    |
| 3    | 23:40:59 | 0.402   | 0.059    | 609.900 | 137.000  | 215.900   | 0.399     | 0.401    | 0.721    |
| X    |          | 0.317   | 0.100    | 597.200 | 135.000  | 217.600   | 0.413     | 0.355    | 0.678    |
| σ    |          | 0.146   | 0.036    | 11.710  | 1.756    | 1.522     | 0.019     | 0.040    | 0.053    |
| %RSD |          | 46.230  | 35.740   | 1.961   | 1.301    | 0.700     | 4.673     | 11.290   | 7.880    |
| Run  | Time     | 65Cu    | 66Zn     | 68Zn    | 75As     | 78Se      | 82Se      | 83Kr     | 88Sr     |
|      |          | ppb     | ppb      | ppb     | ppb      | ppb       | ppb       | ppb      | ppb      |
| 1    | 23:40:20 | 0.527   | 2.442    | 2.544   | 0.605    | -0.413    | 0.340     | 0.000    | 281.600  |
| 2    | 23:40:40 | 0.542   | 2.560    | 2.451   | 0.679    | -0.634    | -0.097    | 0.000    | 281.400  |
| 3    | 23:40:59 | 0.607   | 2.367    | 2.532   | 0.711    | -0.575    | 0.275     | 0.000    | 284.100  |
| X    |          | 0.559   | 2.456    | 2.509   | 0.665    | -0.541    | 0.173     | 0.000    | 282.400  |
| σ    |          | 0.043   | 0.097    | 0.051   | 0.054    | 0.114     | 0.236     | 0.000    | 1.502    |
| %RSD |          | 7.667   | 3.966    | 2.018   | 8.161    | 21.120    | 136.600   | 0.000    | 0.532    |
| Run  | Time     | 89Y     | 95Mo     | 98Mo    | 103Rh    | 107Ag     | 109Ag     | 111Cd    | 114Cd    |
|      |          | ppb     | ppb      | ppb     | ppb      | ppb       | ppb       | ppb      | ppb      |
| 1    | 23:40:20 | 82.754% | 0.589    | 0.550   | 83.282%  | -0.024    | -0.016    | 0.056    | 0.054    |
| 2    | 23:40:40 | 82.444% | 0.786    | 0.694   | 83.001%  | -0.018    | -0.019    | 0.010    | 0.027    |
| 3    | 23:40:59 | 81.684% | 0.776    | 0.707   | 82.793%  | -0.024    | -0.019    | 0.016    | 0.007    |
| X    |          | 82.294% | 0.717    | 0.651   | 83.025%  | -0.022    | -0.018    | 0.028    | 0.029    |
| σ    |          | 0.551%  | 0.111    | 0.087   | 0.246%   | 0.003     | 0.002     | 0.025    | 0.024    |
| %RSD |          | 0.669   | 15.500   | 13.390  | 0.296    | 15.580    | 8.871     | 91.110   | 81.450   |
| Run  | Time     | 115In   | 118Sn    | 121Sb   | 123Sb    | 135Ba     | 137Ba     | 159Tb    | 165Ho    |
|      |          | ppb     | ppb      | ppb     | ppb      | ppb       | ppb       | ppb      | ppb      |
| 1    | 23:40:20 | 85.238% | -0.322   | 0.123   | 0.114    | 62.760    | 62.080    | 91.152%  | 91.874%  |
| 2    | 23:40:40 | 85.058% | -0.251   | 0.148   | 0.169    | 63.460    | 63.280    | 92.349%  | 93.078%  |
| 3    | 23:40:59 | 85.097% | -0.253   | 0.189   | 0.184    | 63.070    | 62.420    | 93.672%  | 93.522%  |
| X    |          | 85.131% | -0.275   | 0.153   | 0.156    | 63.100    | 62.590    | 92.391%  | 92.825%  |
| σ    |          | 0.095%  | 0.040    | 0.034   | 0.037    | 0.350     | 0.616     | 1.260%   | 0.853%   |
| %RSD |          | 0.111   | 14.580   | 22.030  | 23.630   | 0.555     | 0.983     | 1.364    | 0.918    |
| Run  | Time     | 203Tl   | 205Tl    | 206Pb   | 207Pb    | 208Pb     | 209Bi     |          |          |
|      |          | ppb     | ppb      | ppb     | ppb      | ppb       | ppb       |          |          |
| 1    | 23:40:20 | 0.006   | 0.006    | 0.097   | 0.098    | 0.085     | 100.920%  |          |          |
| 2    | 23:40:40 | 0.005   | 0.008    | 0.107   | 0.078    | 0.095     | 98.410%   |          |          |
| 3    | 23:40:59 | 0.005   | 0.008    | 0.104   | 0.093    | 0.095     | 97.160%   |          |          |
| X    |          | 0.005   | 0.007    | 0.103   | 0.090    | 0.092     | 98.830%   |          |          |
| σ    |          | 0.001   | 0.001    | 0.005   | 0.010    | 0.006     | 1.915%    |          |          |
| %RSD |          | 10.120  | 13.750   | 4.832   | 11.630   | 6.080     | 1.937     |          |          |

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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    | 23:44:07 | 87.476% | -0.010   | 8.958   | 10.640   | 0.000   | 28.010   | 2.121   | 1.962    |
| 2    | 23:44:27 | 88.577% | -0.031   | 9.012   | 10.310   | 0.000   | 25.430   | 1.998   | 1.717    |
| 3    | 23:44:46 | 86.382% | -0.031   | 9.362   | 9.991    | 0.000   | 23.050   | 1.288   | 1.391    |
| X    |          | 87.478% | -0.024   | 9.111   | 10.310   | 0.000   | 25.490   | 1.802   | 1.690    |
| σ    |          | 1.098%  | 0.012    | 0.219   | 0.323    | 0.000   | 2.482    | 0.450   | 0.287    |
| %RSD |          | 1.255   | 51.410   | 2.406   | 3.136    | 0.000   | 9.736    | 24.970  | 16.960   |
| Run  | Time     | 27Al    | 28Si     | 37Cl    | 39K      | 43Ca    | 44Ca     | 45Sc    | 47Ti     |
|      |          | ppb     | ppb      | ppb     | ppb      | ppb     | ppb      | ppb     | ppb      |
| 1    | 23:44:07 | 0.196   | -235.000 | 0.000   | 6.499    | 53.850  | 56.370   | 80.373% | -0.163   |
| 2    | 23:44:27 | 0.375   | -237.800 | 0.000   | 6.543    | 59.800  | 59.760   | 77.932% | -0.053   |
| 3    | 23:44:46 | 0.075   | -240.700 | 0.000   | 6.160    | 51.910  | 58.330   | 77.269% | -0.117   |
| X    |          | 0.215   | -237.800 | 0.000   | 6.401    | 55.190  | 58.150   | 78.524% | -0.111   |
| σ    |          | 0.151   | 2.855    | 0.000   | 0.210    | 4.114   | 1.703    | 1.634%  | 0.055    |
| %RSD |          | 70.180  | 1.200    | 0.000   | 3.278    | 7.455   | 2.928    | 2.081   | 50.040   |
| Run  | Time     | 51V     | 52Cr     | 55Mn    | 56Fe     | 57Fe    | 59Co     | 60Ni    | 63Cu     |
|      |          | ppb     | ppb      | ppb     | ppb      | ppb     | ppb      | ppb     | ppb      |
| 1    | 23:44:07 | 0.019   | 0.424    | 0.091   | 11.820   | 15.020  | 0.003    | 0.010   | 0.025    |
| 2    | 23:44:27 | -0.074  | 0.432    | 0.083   | 14.030   | 13.790  | 0.002    | 0.016   | 0.018    |
| 3    | 23:44:46 | 0.146   | 0.432    | 0.093   | 12.920   | 12.900  | -0.002   | 0.022   | -0.001   |
| X    |          | 0.030   | 0.429    | 0.089   | 12.920   | 13.900  | 0.001    | 0.016   | 0.014    |
| σ    |          | 0.110   | 0.004    | 0.005   | 1.105    | 1.061   | 0.003    | 0.006   | 0.013    |
| %RSD |          | 363.700 | 1.028    | 5.707   | 8.554    | 7.633   | 226.500  | 39.250  | 92.790   |
| Run  | Time     | 65Cu    | 66Zn     | 68Zn    | 75As     | 78Se    | 82Se     | 83Kr    | 88Sr     |
|      |          | ppb     | ppb      | ppb     | ppb      | ppb     | ppb      | ppb     | ppb      |
| 1    | 23:44:07 | 0.044   | 1.409    | 1.130   | -0.072   | -0.176  | -0.021   | 0.000   | 0.065    |
| 2    | 23:44:27 | 0.024   | 1.377    | 1.546   | -0.065   | -0.689  | 0.201    | 0.000   | 0.080    |
| 3    | 23:44:46 | -0.005  | 1.423    | 1.332   | 0.113    | -0.049  | 0.030    | 0.000   | 0.054    |
| X    |          | 0.021   | 1.403    | 1.336   | -0.008   | -0.305  | 0.070    | 0.000   | 0.067    |
| σ    |          | 0.025   | 0.024    | 0.208   | 0.105    | 0.338   | 0.116    | 0.000   | 0.013    |
| %RSD |          | 117.800 | 1.707    | 15.590  | 1275.000 | 111.000 | 165.700  | 0.000   | 19.440   |
| Run  | Time     | 89Y     | 95Mo     | 98Mo    | 103Rh    | 107Ag   | 109Ag    | 111Cd   | 114Cd    |
|      |          | ppb     | ppb      | ppb     | ppb      | ppb     | ppb      | ppb     | ppb      |
| 1    | 23:44:07 | 85.152% | 0.275    | 0.294   | 88.909%  | -0.023  | -0.016   | 0.021   | 0.022    |
| 2    | 23:44:27 | 84.255% | 0.367    | 0.339   | 87.866%  | -0.021  | -0.019   | -0.040  | -0.025   |
| 3    | 23:44:46 | 85.762% | 0.374    | 0.357   | 87.892%  | -0.024  | -0.021   | 0.008   | 0.010    |
| X    |          | 85.056% | 0.338    | 0.330   | 88.222%  | -0.023  | -0.019   | -0.004  | 0.002    |
| σ    |          | 0.758%  | 0.055    | 0.032   | 0.595%   | 0.001   | 0.003    | 0.032   | 0.024    |
| %RSD |          | 0.892   | 16.330   | 9.835   | 0.675    | 5.803   | 14.370   | 815.000 | 1102.000 |
| Run  | Time     | 115In   | 118Sn    | 121Sb   | 123Sb    | 135Ba   | 137Ba    | 159Tb   | 165Ho    |
|      |          | ppb     | ppb      | ppb     | ppb      | ppb     | ppb      | ppb     | ppb      |
| 1    | 23:44:07 | 87.902% | -0.345   | 0.016   | 0.038    | 0.325   | 0.320    | 93.243% | 93.435%  |
| 2    | 23:44:27 | 88.109% | -0.285   | 0.049   | 0.054    | 0.274   | 0.317    | 94.758% | 94.701%  |
| 3    | 23:44:46 | 88.231% | -0.311   | 0.061   | 0.062    | 0.308   | 0.314    | 94.919% | 94.939%  |
| X    |          | 88.081% | -0.314   | 0.042   | 0.051    | 0.302   | 0.317    | 94.307% | 94.359%  |
| σ    |          | 0.167%  | 0.030    | 0.023   | 0.012    | 0.026   | 0.003    | 0.925%  | 0.809%   |
| %RSD |          | 0.189   | 9.532    | 55.710  | 23.450   | 8.463   | 0.928    | 0.980   | 0.857    |
| Run  | Time     | 203Tl   | 205Tl    | 206Pb   | 207Pb    | 208Pb   | 209Bi    |         |          |
|      |          | ppb     | ppb      | ppb     | ppb      | ppb     | ppb      |         |          |
| 1    | 23:44:07 | -0.002  | 0.004    | -0.006  | 0.000    | -0.001  | 104.017% |         |          |
| 2    | 23:44:27 | 0.002   | 0.003    | 0.008   | -0.001   | 0.003   | 101.894% |         |          |
| 3    | 23:44:46 | 0.006   | 0.004    | 0.012   | 0.004    | 0.010   | 99.399%  |         |          |
| X    |          | 0.002   | 0.004    | 0.005   | 0.001    | 0.004   | 101.770% |         |          |
| σ    |          | 0.004   | 0.000    | 0.009   | 0.002    | 0.006   | 2.312%   |         |          |
| %RSD |          | 167.300 | 12.480   | 198.700 | 224.600  | 150.700 | 2.271    |         |          |



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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    | 23:47:55 | 85.708% | 0.055    | 42.600 | 42.010   | 0.000     | 112200.000 | 6396.000 | 6566.000 |
| 2    | 23:48:14 | 82.283% | -0.008   | 42.910 | 38.720   | 0.000     | 110800.000 | 6425.000 | 6622.000 |
| 3    | 23:48:33 | 83.257% | -0.009   | 38.010 | 40.590   | 0.000     | 111600.000 | 6296.000 | 6535.000 |
| X    |          | 83.749% | 0.013    | 41.170 | 40.440   | 0.000     | 111600.000 | 6372.000 | 6574.000 |
| σ    |          | 1.765%  | 0.037    | 2.741  | 1.649    | 0.000     | 728.500    | 68.040   | 44.260   |
| %RSD |          | 2.107   | 288.800  | 6.659  | 4.078    | 0.000     | 0.653      | 1.068    | 0.673    |
| Run  | Time     | 27Al    | 28Si     | 37Cl   | 39K      | 43Ca      | 44Ca       | 45Sc     | 47Ti     |
|      |          | ppb     | ppb      | ppb    | ppb      | ppb       | ppb        | ppb      | ppb      |
| 1    | 23:47:55 | 73.440  | 1087.000 | 0.000  | 1682.000 | 26450.000 | 24450.000  | 80.732%  | 0.382    |
| 2    | 23:48:14 | 73.000  | 1060.000 | 0.000  | 1645.000 | 26420.000 | 24550.000  | 79.822%  | 0.326    |
| 3    | 23:48:33 | 73.070  | 1032.000 | 0.000  | 1643.000 | 27010.000 | 25030.000  | 78.782%  | 0.203    |
| X    |          | 73.170  | 1060.000 | 0.000  | 1657.000 | 26630.000 | 24670.000  | 79.779%  | 0.304    |
| σ    |          | 0.236   | 27.790   | 0.000  | 22.140   | 328.000   | 309.500    | 0.976%   | 0.091    |
| %RSD |          | 0.323   | 2.622    | 0.000  | 1.337    | 1.232     | 1.254      | 1.223    | 30.090   |
| Run  | Time     | 51V     | 52Cr     | 55Mn   | 56Fe     | 57Fe      | 59Co       | 60Ni     | 63Cu     |
|      |          | ppb     | ppb      | ppb    | ppb      | ppb       | ppb        | ppb      | ppb      |
| 1    | 23:47:55 | -0.101  | 0.448    | 54.220 | 141.000  | 196.700   | 0.303      | 1.929    | 2.350    |
| 2    | 23:48:14 | 0.224   | 0.351    | 55.300 | 140.800  | 204.200   | 0.332      | 2.082    | 2.156    |
| 3    | 23:48:33 | 0.027   | 0.366    | 54.780 | 140.300  | 195.200   | 0.296      | 2.237    | 2.244    |
| X    |          | 0.050   | 0.388    | 54.770 | 140.700  | 198.700   | 0.310      | 2.083    | 2.250    |
| σ    |          | 0.164   | 0.053    | 0.536  | 0.367    | 4.824     | 0.019      | 0.154    | 0.097    |
| %RSD |          | 326.500 | 13.550   | 0.979  | 0.261    | 2.428     | 6.129      | 7.377    | 4.321    |
| Run  | Time     | 65Cu    | 66Zn     | 68Zn   | 75As     | 78Se      | 82Se       | 83Kr     | 88Sr     |
|      |          | ppb     | ppb      | ppb    | ppb      | ppb       | ppb        | ppb      | ppb      |
| 1    | 23:47:55 | 1.832   | 5.787    | 5.437  | 1.914    | 29.630    | 35.630     | 0.000    | 141.300  |
| 2    | 23:48:14 | 1.745   | 5.863    | 5.650  | 2.155    | 28.370    | 33.750     | 0.000    | 143.900  |
| 3    | 23:48:33 | 1.566   | 5.854    | 5.677  | 1.920    | 29.880    | 34.590     | 0.000    | 141.800  |
| X    |          | 1.714   | 5.835    | 5.588  | 1.996    | 29.300    | 34.660     | 0.000    | 142.300  |
| σ    |          | 0.135   | 0.041    | 0.131  | 0.138    | 0.809     | 0.940      | 0.000    | 1.423    |
| %RSD |          | 7.897   | 0.710    | 2.351  | 6.903    | 2.763     | 2.714      | 0.000    | 1.000    |
| Run  | Time     | 89Y     | 95Mo     | 98Mo   | 103Rh    | 107Ag     | 109Ag      | 111Cd    | 114Cd    |
|      |          | ppb     | ppb      | ppb    | ppb      | ppb       | ppb        | ppb      | ppb      |
| 1    | 23:47:55 | 84.463% | 19.130   | 19.110 | 83.824%  | -0.021    | -0.020     | 0.076    | 0.057    |
| 2    | 23:48:14 | 83.503% | 19.960   | 19.810 | 84.164%  | -0.019    | -0.017     | -0.028   | 0.010    |
| 3    | 23:48:33 | 84.180% | 19.110   | 19.690 | 83.352%  | -0.026    | -0.012     | 0.042    | 0.050    |
| X    |          | 84.049% | 19.400   | 19.540 | 83.780%  | -0.022    | -0.016     | 0.030    | 0.039    |
| σ    |          | 0.493%  | 0.484    | 0.376  | 0.408%   | 0.004     | 0.004      | 0.053    | 0.025    |
| %RSD |          | 0.587   | 2.497    | 1.926  | 0.487    | 16.710    | 26.240     | 176.100  | 64.110   |
| Run  | Time     | 115In   | 118Sn    | 121Sb  | 123Sb    | 135Ba     | 137Ba      | 159Tb    | 165Ho    |
|      |          | ppb     | ppb      | ppb    | ppb      | ppb       | ppb        | ppb      | ppb      |
| 1    | 23:47:55 | 85.571% | -0.297   | 0.134  | 0.124    | 37.880    | 38.570     | 93.391%  | 93.246%  |
| 2    | 23:48:14 | 86.339% | -0.255   | 0.138  | 0.097    | 38.140    | 38.180     | 95.141%  | 94.541%  |
| 3    | 23:48:33 | 85.975% | -0.257   | 0.146  | 0.160    | 38.540    | 38.300     | 95.342%  | 95.944%  |
| X    |          | 85.962% | -0.270   | 0.139  | 0.127    | 38.190    | 38.350     | 94.624%  | 94.577%  |
| σ    |          | 0.384%  | 0.024    | 0.006  | 0.032    | 0.331     | 0.202      | 1.073%   | 1.350%   |
| %RSD |          | 0.447   | 8.791    | 4.331  | 25.010   | 0.868     | 0.526      | 1.134    | 1.427    |
| Run  | Time     | 203Tl   | 205Tl    | 206Pb  | 207Pb    | 208Pb     | 209Bi      |          |          |
|      |          | ppb     | ppb      | ppb    | ppb      | ppb       | ppb        |          |          |
| 1    | 23:47:55 | 0.011   | 0.009    | 0.233  | 0.200    | 0.198     | 103.030%   |          |          |
| 2    | 23:48:14 | 0.007   | 0.011    | 0.217  | 0.217    | 0.212     | 100.462%   |          |          |
| 3    | 23:48:33 | 0.011   | 0.015    | 0.191  | 0.207    | 0.212     | 98.965%    |          |          |
| X    |          | 0.010   | 0.012    | 0.214  | 0.208    | 0.207     | 100.819%   |          |          |
| σ    |          | 0.002   | 0.003    | 0.021  | 0.009    | 0.008     | 2.056%     |          |          |
| %RSD |          | 22.170  | 24.600   | 9.855  | 4.150    | 3.910     | 2.039      |          |          |

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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    | 23:51:42 | 86.053% | 0.033    | 44.770 | 42.180   | 0.000     | 113700.000 | 6568.000 | 6786.000 |
| 2    | 23:52:02 | 83.946% | -0.009   | 44.100 | 41.850   | 0.000     | 118700.000 | 7012.000 | 6974.000 |
| 3    | 23:52:21 | 82.873% | 0.081    | 43.440 | 41.720   | 0.000     | 116000.000 | 6841.000 | 6855.000 |
| X    |          | 84.291% | 0.035    | 44.100 | 41.920   | 0.000     | 116200.000 | 6807.000 | 6871.000 |
| σ    |          | 1.617%  | 0.045    | 0.668  | 0.235    | 0.000     | 2491.000   | 223.900  | 94.820   |
| %RSD |          | 1.919   | 127.200  | 1.516  | 0.560    | 0.000     | 2.145      | 3.289    | 1.380    |
| Run  | Time     | 27Al    | 28Si     | 37Cl   | 39K      | 43Ca      | 44Ca       | 45Sc     | 47Ti     |
|      |          | ppb     | ppb      | ppb    | ppb      | ppb       | ppb        | ppb      | ppb      |
| 1    | 23:51:42 | 56.400  | 1113.000 | 0.000  | 1720.000 | 26940.000 | 25580.000  | 80.356%  | 0.132    |
| 2    | 23:52:02 | 57.210  | 1119.000 | 0.000  | 1799.000 | 28480.000 | 26420.000  | 75.847%  | 0.019    |
| 3    | 23:52:21 | 57.160  | 1125.000 | 0.000  | 1725.000 | 27610.000 | 26550.000  | 75.355%  | 0.043    |
| X    |          | 56.930  | 1119.000 | 0.000  | 1748.000 | 27680.000 | 26180.000  | 77.186%  | 0.065    |
| σ    |          | 0.456   | 5.975    | 0.000  | 44.200   | 771.000   | 526.800    | 2.756%   | 0.060    |
| %RSD |          | 0.801   | 0.534    | 0.000  | 2.529    | 2.786     | 2.012      | 3.571    | 92.210   |
| Run  | Time     | 51V     | 52Cr     | 55Mn   | 56Fe     | 57Fe      | 59Co       | 60Ni     | 63Cu     |
|      |          | ppb     | ppb      | ppb    | ppb      | ppb       | ppb        | ppb      | ppb      |
| 1    | 23:51:42 | -0.087  | 0.336    | 41.270 | 85.040   | 147.400   | 0.201      | 1.832    | 1.924    |
| 2    | 23:52:02 | -0.022  | 0.376    | 42.590 | 87.580   | 147.500   | 0.236      | 2.033    | 2.147    |
| 3    | 23:52:21 | -0.140  | 0.398    | 41.720 | 88.260   | 146.500   | 0.202      | 1.921    | 1.990    |
| X    |          | -0.083  | 0.370    | 41.860 | 86.960   | 147.100   | 0.213      | 1.929    | 2.020    |
| σ    |          | 0.059   | 0.031    | 0.671  | 1.698    | 0.559     | 0.020      | 0.101    | 0.115    |
| %RSD |          | 71.200  | 8.430    | 1.603  | 1.953    | 0.380     | 9.371      | 5.223    | 5.687    |
| Run  | Time     | 65Cu    | 66Zn     | 68Zn   | 75As     | 78Se      | 82Se       | 83Kr     | 88Sr     |
|      |          | ppb     | ppb      | ppb    | ppb      | ppb       | ppb        | ppb      | ppb      |
| 1    | 23:51:42 | 1.305   | 4.727    | 4.892  | 1.480    | 33.310    | 37.620     | 0.000    | 149.800  |
| 2    | 23:52:02 | 1.433   | 4.906    | 5.007  | 2.548    | 32.410    | 37.630     | 0.000    | 151.200  |
| 3    | 23:52:21 | 1.197   | 4.992    | 5.161  | 2.328    | 33.880    | 38.240     | 0.000    | 151.400  |
| X    |          | 1.312   | 4.875    | 5.020  | 2.119    | 33.200    | 37.830     | 0.000    | 150.800  |
| σ    |          | 0.118   | 0.135    | 0.135  | 0.564    | 0.739     | 0.352      | 0.000    | 0.886    |
| %RSD |          | 8.991   | 2.769    | 2.692  | 26.610   | 2.227     | 0.931      | 0.000    | 0.588    |
| Run  | Time     | 89Y     | 95Mo     | 98Mo   | 103Rh    | 107Ag     | 109Ag      | 111Cd    | 114Cd    |
|      |          | ppb     | ppb      | ppb    | ppb      | ppb       | ppb        | ppb      | ppb      |
| 1    | 23:51:42 | 83.231% | 21.480   | 21.660 | 83.420%  | -0.018    | -0.019     | -0.003   | 0.028    |
| 2    | 23:52:02 | 82.962% | 22.070   | 22.360 | 83.243%  | -0.020    | -0.012     | 0.038    | 0.054    |
| 3    | 23:52:21 | 82.319% | 22.860   | 22.010 | 82.972%  | -0.016    | -0.013     | 0.002    | 0.017    |
| X    |          | 82.837% | 22.140   | 22.010 | 83.212%  | -0.018    | -0.015     | 0.012    | 0.033    |
| σ    |          | 0.469%  | 0.690    | 0.354  | 0.226%   | 0.002     | 0.003      | 0.022    | 0.019    |
| %RSD |          | 0.566   | 3.116    | 1.608  | 0.271    | 9.760     | 23.520     | 182.100  | 57.510   |
| Run  | Time     | 115In   | 118Sn    | 121Sb  | 123Sb    | 135Ba     | 137Ba      | 159Tb    | 165Ho    |
|      |          | ppb     | ppb      | ppb    | ppb      | ppb       | ppb        | ppb      | ppb      |
| 1    | 23:51:42 | 84.220% | -0.267   | 0.112  | 0.120    | 40.430    | 40.740     | 92.675%  | 92.659%  |
| 2    | 23:52:02 | 84.648% | -0.262   | 0.120  | 0.134    | 40.880    | 41.230     | 93.532%  | 93.753%  |
| 3    | 23:52:21 | 86.519% | -0.214   | 0.160  | 0.159    | 40.720    | 40.310     | 94.783%  | 95.573%  |
| X    |          | 85.129% | -0.248   | 0.130  | 0.138    | 40.680    | 40.760     | 93.663%  | 93.995%  |
| σ    |          | 1.223%  | 0.029    | 0.026  | 0.020    | 0.227     | 0.461      | 1.060%   | 1.472%   |
| %RSD |          | 1.436   | 11.720   | 19.680 | 14.200   | 0.559     | 1.130      | 1.132    | 1.566    |
| Run  | Time     | 203Tl   | 205Tl    | 206Pb  | 207Pb    | 208Pb     | 209Bi      |          |          |
|      |          | ppb     | ppb      | ppb    | ppb      | ppb       | ppb        |          |          |
| 1    | 23:51:42 | 0.008   | 0.012    | 0.075  | 0.081    | 0.071     | 102.546%   |          |          |
| 2    | 23:52:02 | 0.009   | 0.009    | 0.091  | 0.065    | 0.086     | 98.417%    |          |          |
| 3    | 23:52:21 | 0.006   | 0.011    | 0.095  | 0.070    | 0.089     | 97.634%    |          |          |
| X    |          | 0.008   | 0.010    | 0.087  | 0.072    | 0.082     | 99.532%    |          |          |
| σ    |          | 0.002   | 0.001    | 0.010  | 0.008    | 0.009     | 2.639%     |          |          |
| %RSD |          | 21.160  | 11.260   | 11.940 | 11.120   | 11.540    | 2.651      |          |          |

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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    | 23:58:58 | 88.284% | -0.031   | 0.477    | 0.764   | 0.000   | 18.100   | 0.755   | 0.643   |
| 2    | 23:59:17 | 86.576% | 0.097    | 0.494    | 0.678   | 0.000   | 14.560   | 0.627   | 0.514   |
| 3    | 23:59:36 | 86.589% | 0.012    | 0.623    | 0.626   | 0.000   | 13.080   | 0.137   | 0.246   |
| X    |          | 87.150% | 0.026    | 0.531    | 0.689   | 0.000   | 15.250   | 0.506   | 0.468   |
| σ    |          | 0.982%  | 0.065    | 0.080    | 0.069   | 0.000   | 2.581    | 0.326   | 0.202   |
| %RSD |          | 1.127   | 249.200  | 14.990   | 10.070  | 0.000   | 16.930   | 64.420  | 43.230  |
| Run  | Time     | 27Al    | 28Si     | 37Cl     | 39K     | 43Ca    | 44Ca     | 45Sc    | 47Ti    |
|      |          | ppb     | ppb      | ppb      | ppb     | ppb     | ppb      | ppb     | ppb     |
| 1    | 23:58:58 | -1.166  | -260.000 | 0.000    | 2.903   | -3.475  | 3.097    | 80.688% | -0.184  |
| 2    | 23:59:17 | -1.125  | -262.200 | 0.000    | 3.210   | 0.712   | 1.056    | 79.284% | -0.141  |
| 3    | 23:59:36 | -1.206  | -262.500 | 0.000    | 2.652   | -1.332  | 0.059    | 78.667% | -0.140  |
| X    |          | -1.166  | -261.600 | 0.000    | 2.921   | -1.365  | 1.404    | 79.546% | -0.155  |
| σ    |          | 0.041   | 1.329    | 0.000    | 0.280   | 2.093   | 1.549    | 1.036%  | 0.025   |
| %RSD |          | 3.482   | 0.508    | 0.000    | 9.572   | 153.300 | 110.300  | 1.302   | 16.300  |
| Run  | Time     | 51V     | 52Cr     | 55Mn     | 56Fe    | 57Fe    | 59Co     | 60Ni    | 63Cu    |
|      |          | ppb     | ppb      | ppb      | ppb     | ppb     | ppb      | ppb     | ppb     |
| 1    | 23:58:58 | -0.082  | 0.052    | -0.004   | 0.211   | 1.631   | -0.001   | -0.007  | -0.000  |
| 2    | 23:59:17 | -0.447  | 0.024    | 0.016    | -1.879  | 1.674   | -0.001   | -0.006  | -0.036  |
| 3    | 23:59:36 | -0.098  | 0.021    | -0.015   | -0.637  | 0.351   | 0.001    | 0.023   | -0.038  |
| X    |          | -0.209  | 0.032    | -0.001   | -0.768  | 1.219   | -0.000   | 0.003   | -0.025  |
| σ    |          | 0.206   | 0.018    | 0.016    | 1.051   | 0.752   | 0.001    | 0.017   | 0.021   |
| %RSD |          | 98.670  | 54.370   | 1359.000 | 136.800 | 61.680  | 678.300  | 526.300 | 86.120  |
| Run  | Time     | 65Cu    | 66Zn     | 68Zn     | 75As    | 78Se    | 82Se     | 83Kr    | 88Sr    |
|      |          | ppb     | ppb      | ppb      | ppb     | ppb     | ppb      | ppb     | ppb     |
| 1    | 23:58:58 | -0.007  | 0.428    | 0.448    | -0.111  | -0.416  | 0.164    | 0.000   | 0.009   |
| 2    | 23:59:17 | -0.000  | 0.521    | 0.518    | -0.211  | -0.326  | -0.071   | 0.000   | 0.009   |
| 3    | 23:59:36 | -0.019  | 0.514    | 0.505    | -0.002  | -0.435  | 0.070    | 0.000   | 0.010   |
| X    |          | -0.009  | 0.488    | 0.490    | -0.108  | -0.392  | 0.054    | 0.000   | 0.009   |
| σ    |          | 0.010   | 0.052    | 0.037    | 0.105   | 0.058   | 0.119    | 0.000   | 0.001   |
| %RSD |          | 111.100 | 10.620   | 7.619    | 96.700  | 14.790  | 218.900  | 0.000   | 9.270   |
| Run  | Time     | 89Y     | 95Mo     | 98Mo     | 103Rh   | 107Ag   | 109Ag    | 111Cd   | 114Cd   |
|      |          | ppb     | ppb      | ppb      | ppb     | ppb     | ppb      | ppb     | ppb     |
| 1    | 23:58:58 | 83.840% | 0.444    | 0.453    | 86.028% | -0.023  | -0.021   | -0.020  | -0.006  |
| 2    | 23:59:17 | 82.847% | 0.735    | 0.627    | 85.841% | -0.011  | -0.021   | 0.039   | 0.028   |
| 3    | 23:59:36 | 83.839% | 0.696    | 0.582    | 86.669% | -0.025  | -0.020   | 0.023   | 0.011   |
| X    |          | 83.509% | 0.625    | 0.554    | 86.180% | -0.019  | -0.021   | 0.014   | 0.011   |
| σ    |          | 0.573%  | 0.158    | 0.090    | 0.434%  | 0.008   | 0.000    | 0.030   | 0.017   |
| %RSD |          | 0.687   | 25.320   | 16.280   | 0.504   | 39.890  | 2.162    | 211.800 | 157.500 |
| Run  | Time     | 115In   | 118Sn    | 121Sb    | 123Sb   | 135Ba   | 137Ba    | 159Tb   | 165Ho   |
|      |          | ppb     | ppb      | ppb      | ppb     | ppb     | ppb      | ppb     | ppb     |
| 1    | 23:58:58 | 85.361% | -0.322   | -0.026   | -0.007  | 0.005   | 0.025    | 91.601% | 91.656% |
| 2    | 23:59:17 | 85.780% | -0.305   | 0.017    | 0.040   | -0.004  | 0.015    | 91.481% | 91.943% |
| 3    | 23:59:36 | 87.831% | -0.288   | -0.011   | 0.021   | 0.034   | 0.031    | 94.396% | 94.522% |
| X    |          | 86.324% | -0.305   | -0.007   | 0.018   | 0.011   | 0.023    | 92.493% | 92.707% |
| σ    |          | 1.322%  | 0.017    | 0.022    | 0.024   | 0.020   | 0.008    | 1.650%  | 1.579%  |
| %RSD |          | 1.531   | 5.563    | 320.200  | 133.200 | 176.800 | 35.630   | 1.783   | 1.703   |
| Run  | Time     | 203Tl   | 205Tl    | 206Pb    | 207Pb   | 208Pb   | 209Bi    |         |         |
|      |          | ppb     | ppb      | ppb      | ppb     | ppb     | ppb      |         |         |
| 1    | 23:58:58 | 0.002   | 0.002    | -0.006   | -0.008  | -0.005  | 107.571% |         |         |
| 2    | 23:59:17 | 0.007   | 0.005    | -0.011   | -0.000  | -0.004  | 102.360% |         |         |
| 3    | 23:59:36 | 0.003   | 0.003    | -0.008   | -0.006  | -0.004  | 101.436% |         |         |
| X    |          | 0.004   | 0.003    | -0.008   | -0.004  | -0.005  | 103.789% |         |         |
| σ    |          | 0.003   | 0.001    | 0.003    | 0.004   | 0.001   | 3.307%   |         |         |
| %RSD |          | 72.810  | 40.430   | 34.040   | 88.170  | 16.490  | 3.187    |         |         |

LCS 180-140872/2-A 5/20/2015 12:02:26 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    | 00:02:45 | 65.567%  | 46.730   | 969.700  | 922.700   | 0.000     | 43940.000 | 41630.000 | 41520.000 |
| 2    | 00:03:05 | 60.417%  | 46.890   | 966.400  | 921.600   | 0.000     | 42650.000 | 42570.000 | 43420.000 |
| 3    | 00:03:24 | 62.213%  | 43.270   | 977.200  | 953.800   | 0.000     | 42560.000 | 42540.000 | 42370.000 |
| X    |          | 62.732%  | 45.630   | 971.100  | 932.700   | 0.000     | 43050.000 | 42250.000 | 42440.000 |
| σ    |          | 2.614%   | 2.041    | 5.507    | 18.280    | 0.000     | 771.900   | 535.000   | 954.100   |
| %RSD |          | 4.167    | 4.473    | 0.567    | 1.960     | 0.000     | 1.793     | 1.266     | 2.248     |
| Run  | Time     | 27Al     | 28Si     | 37Cl     | 39K       | 43Ca      | 44Ca      | 45Sc      | 47Ti      |
|      |          | ppb      | ppb      | ppb      | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 00:02:45 | 1589.000 | 7903.000 | 0.000    | 45520.000 | 48200.000 | 46950.000 | 59.921%   | 974.400   |
| 2    | 00:03:05 | 1668.000 | 7661.000 | 0.000    | 46490.000 | 49120.000 | 46650.000 | 57.618%   | 958.700   |
| 3    | 00:03:24 | 1654.000 | 7856.000 | 0.000    | 45980.000 | 47940.000 | 45870.000 | 56.183%   | 964.200   |
| X    |          | 1637.000 | 7807.000 | 0.000    | 45990.000 | 48420.000 | 46490.000 | 57.907%   | 965.800   |
| σ    |          | 42.470   | 128.300  | 0.000    | 484.100   | 622.600   | 554.600   | 1.886%    | 7.939     |
| %RSD |          | 2.594    | 1.643    | 0.000    | 1.053     | 1.286     | 1.193     | 3.257     | 0.822     |
| Run  | Time     | 51V      | 52Cr     | 55Mn     | 56Fe      | 57Fe      | 59Co      | 60Ni      | 63Cu      |
|      |          | ppb      | ppb      | ppb      | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 00:02:45 | 482.900  | 190.400  | 460.100  | 931.100   | 1021.000  | 465.100   | 465.400   | 233.700   |
| 2    | 00:03:05 | 476.600  | 186.600  | 451.500  | 903.500   | 995.300   | 457.100   | 466.500   | 234.500   |
| 3    | 00:03:24 | 476.700  | 190.700  | 465.200  | 931.200   | 1051.000  | 481.300   | 480.800   | 240.500   |
| X    |          | 478.700  | 189.200  | 458.900  | 921.900   | 1023.000  | 467.800   | 470.900   | 236.200   |
| σ    |          | 3.583    | 2.326    | 6.903    | 15.940    | 28.090    | 12.360    | 8.579     | 3.719     |
| %RSD |          | 0.748    | 1.229    | 1.504    | 1.729     | 2.747     | 2.641     | 1.822     | 1.574     |
| Run  | Time     | 65Cu     | 66Zn     | 68Zn     | 75As      | 78Se      | 82Se      | 83Kr      | 88Sr      |
|      |          | ppb      | ppb      | ppb      | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 00:02:45 | 232.800  | 443.100  | 439.400  | 36.370    | 9.718     | 9.291     | 0.000     | 911.000   |
| 2    | 00:03:05 | 232.400  | 444.500  | 452.300  | 36.360    | 9.527     | 10.500    | 0.000     | 902.700   |
| 3    | 00:03:24 | 239.100  | 447.600  | 446.600  | 36.620    | 9.936     | 10.290    | 0.000     | 899.000   |
| X    |          | 234.800  | 445.100  | 446.100  | 36.450    | 9.727     | 10.030    | 0.000     | 904.300   |
| σ    |          | 3.759    | 2.307    | 6.465    | 0.148     | 0.205     | 0.645     | 0.000     | 6.145     |
| %RSD |          | 1.601    | 0.518    | 1.449    | 0.405     | 2.103     | 6.433     | 0.000     | 0.680     |
| Run  | Time     | 89Y      | 95Mo     | 98Mo     | 103Rh     | 107Ag     | 109Ag     | 111Cd     | 114Cd     |
|      |          | ppb      | ppb      | ppb      | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 00:02:45 | 68.558%  | 984.100  | 995.400  | 70.703%   | 43.630    | 44.330    | 44.230    | 37.990    |
| 2    | 00:03:05 | 68.184%  | 977.500  | 992.800  | 71.310%   | 44.020    | 43.800    | 43.220    | 37.190    |
| 3    | 00:03:24 | 68.804%  | 994.400  | 1004.000 | 70.459%   | 43.480    | 44.340    | 45.800    | 37.960    |
| X    |          | 68.515%  | 985.300  | 997.400  | 70.824%   | 43.710    | 44.160    | 44.410    | 37.710    |
| σ    |          | 0.312%   | 8.541    | 5.861    | 0.438%    | 0.277     | 0.310     | 1.298     | 0.451     |
| %RSD |          | 0.455    | 0.867    | 0.588    | 0.618     | 0.633     | 0.702     | 2.922     | 1.195     |
| Run  | Time     | 115In    | 118Sn    | 121Sb    | 123Sb     | 135Ba     | 137Ba     | 159Tb     | 165Ho     |
|      |          | ppb      | ppb      | ppb      | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 00:02:45 | 74.986%  | 1787.000 | 442.700  | 444.400   | 1695.000  | 1700.000  | 86.780%   | 87.729%   |
| 2    | 00:03:05 | 75.637%  | 1774.000 | 444.100  | 444.000   | 1677.000  | 1690.000  | 88.136%   | 89.386%   |
| 3    | 00:03:24 | 74.546%  | 1795.000 | 448.900  | 451.300   | 1712.000  | 1713.000  | 88.474%   | 90.641%   |
| X    |          | 75.056%  | 1785.000 | 445.200  | 446.600   | 1695.000  | 1701.000  | 87.797%   | 89.252%   |
| σ    |          | 0.549%   | 10.530   | 3.284    | 4.130     | 17.710    | 11.680    | 0.896%    | 1.461%    |
| %RSD |          | 0.732    | 0.590    | 0.738    | 0.925     | 1.045     | 0.686     | 1.021     | 1.636     |
| Run  | Time     | 203Tl    | 205Tl    | 206Pb    | 207Pb     | 208Pb     | 209Bi     |           |           |
|      |          | ppb      | ppb      | ppb      | ppb       | ppb       | ppb       |           |           |
| 1    | 00:02:45 | 43.740   | 46.000   | 18.790   | 18.920    | 18.690    | 85.985%   |           |           |
| 2    | 00:03:05 | 45.320   | 47.020   | 18.870   | 19.260    | 19.210    | 85.949%   |           |           |
| 3    | 00:03:24 | 45.750   | 47.990   | 19.170   | 19.430    | 19.400    | 87.004%   |           |           |
| X    |          | 44.940   | 47.000   | 18.940   | 19.200    | 19.100    | 86.312%   |           |           |
| σ    |          | 1.058    | 0.994    | 0.201    | 0.262     | 0.368     | 0.599%    |           |           |
| %RSD |          | 2.355    | 2.116    | 1.062    | 1.364     | 1.924     | 0.694     |           |           |

LCSD 180-140872/3-A 5/20/2015 12:06:15 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    | 00:06:34 | 59.951%  | 47.030   | 985.500  | 958.400   | 0.000     | 44130.000 | 43280.000 | 43370.000 |
| 2    | 00:06:53 | 59.830%  | 44.420   | 949.600  | 934.300   | 0.000     | 41820.000 | 40960.000 | 43070.000 |
| 3    | 00:07:12 | 58.000%  | 45.640   | 941.700  | 909.600   | 0.000     | 43190.000 | 42480.000 | 41880.000 |
| X    |          | 59.260%  | 45.700   | 958.900  | 934.100   | 0.000     | 43050.000 | 42240.000 | 42770.000 |
| σ    |          | 1.093%   | 1.303    | 23.370   | 24.410    | 0.000     | 1163.000  | 1181.000  | 786.200   |
| %RSD |          | 1.845    | 2.851    | 2.437    | 2.613     | 0.000     | 2.703     | 2.795     | 1.838     |
| Run  | Time     | 27Al     | 28Si     | 37Cl     | 39K       | 43Ca      | 44Ca      | 45Sc      | 47Ti      |
|      |          | ppb      | ppb      | ppb      | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 00:06:34 | 1672.000 | 7894.000 | 0.000    | 45770.000 | 46710.000 | 46480.000 | 55.523%   | 951.300   |
| 2    | 00:06:53 | 1662.000 | 7753.000 | 0.000    | 44810.000 | 47490.000 | 44840.000 | 54.357%   | 942.700   |
| 3    | 00:07:12 | 1638.000 | 7987.000 | 0.000    | 46220.000 | 48040.000 | 44650.000 | 52.584%   | 931.600   |
| X    |          | 1657.000 | 7878.000 | 0.000    | 45600.000 | 47410.000 | 45320.000 | 54.155%   | 941.800   |
| σ    |          | 17.350   | 118.000  | 0.000    | 718.900   | 667.900   | 1009.000  | 1.480%    | 9.876     |
| %RSD |          | 1.047    | 1.498    | 0.000    | 1.576     | 1.409     | 2.227     | 2.732     | 1.049     |
| Run  | Time     | 51V      | 52Cr     | 55Mn     | 56Fe      | 57Fe      | 59Co      | 60Ni      | 63Cu      |
|      |          | ppb      | ppb      | ppb      | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 00:06:34 | 469.900  | 187.800  | 451.000  | 903.100   | 998.600   | 453.300   | 459.600   | 231.700   |
| 2    | 00:06:53 | 452.800  | 185.600  | 458.400  | 904.800   | 1033.000  | 472.900   | 466.300   | 235.700   |
| 3    | 00:07:12 | 469.000  | 189.300  | 454.200  | 908.200   | 1001.000  | 458.400   | 462.400   | 230.800   |
| X    |          | 463.900  | 187.600  | 454.500  | 905.300   | 1011.000  | 461.500   | 462.700   | 232.700   |
| σ    |          | 9.649    | 1.869    | 3.731    | 2.621     | 19.320    | 10.130    | 3.378     | 2.596     |
| %RSD |          | 2.080    | 0.996    | 0.821    | 0.289     | 1.911     | 2.195     | 0.730     | 1.116     |
| Run  | Time     | 65Cu     | 66Zn     | 68Zn     | 75As      | 78Se      | 82Se      | 83Kr      | 88Sr      |
|      |          | ppb      | ppb      | ppb      | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 00:06:34 | 233.200  | 444.100  | 444.500  | 35.920    | 9.500     | 10.450    | 0.000     | 903.500   |
| 2    | 00:06:53 | 239.200  | 457.900  | 452.100  | 36.010    | 8.925     | 10.260    | 0.000     | 901.800   |
| 3    | 00:07:12 | 230.900  | 452.100  | 452.500  | 36.090    | 9.633     | 9.287     | 0.000     | 907.600   |
| X    |          | 234.400  | 451.400  | 449.700  | 36.010    | 9.353     | 9.998     | 0.000     | 904.300   |
| σ    |          | 4.289    | 6.929    | 4.478    | 0.084     | 0.376     | 0.623     | 0.000     | 2.972     |
| %RSD |          | 1.830    | 1.535    | 0.996    | 0.232     | 4.022     | 6.231     | 0.000     | 0.329     |
| Run  | Time     | 89Y      | 95Mo     | 98Mo     | 103Rh     | 107Ag     | 109Ag     | 111Cd     | 114Cd     |
|      |          | ppb      | ppb      | ppb      | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 00:06:34 | 67.281%  | 972.400  | 981.600  | 70.820%   | 43.120    | 43.660    | 44.880    | 37.320    |
| 2    | 00:06:53 | 66.200%  | 986.100  | 991.100  | 68.769%   | 43.590    | 43.940    | 44.640    | 38.650    |
| 3    | 00:07:12 | 65.751%  | 983.500  | 1004.000 | 68.932%   | 43.280    | 43.490    | 44.500    | 38.470    |
| X    |          | 66.411%  | 980.700  | 992.100  | 69.507%   | 43.330    | 43.700    | 44.670    | 38.150    |
| σ    |          | 0.786%   | 7.224    | 11.130   | 1.140%    | 0.235     | 0.225     | 0.195     | 0.723     |
| %RSD |          | 1.184    | 0.737    | 1.122    | 1.640     | 0.543     | 0.514     | 0.436     | 1.894     |
| Run  | Time     | 115In    | 118Sn    | 121Sb    | 123Sb     | 135Ba     | 137Ba     | 159Tb     | 165Ho     |
|      |          | ppb      | ppb      | ppb      | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 00:06:34 | 73.527%  | 1760.000 | 436.900  | 437.500   | 1664.000  | 1676.000  | 86.353%   | 87.199%   |
| 2    | 00:06:53 | 72.851%  | 1788.000 | 445.700  | 446.000   | 1691.000  | 1698.000  | 87.747%   | 88.485%   |
| 3    | 00:07:12 | 73.242%  | 1764.000 | 440.800  | 441.300   | 1675.000  | 1688.000  | 88.850%   | 89.011%   |
| X    |          | 73.207%  | 1770.000 | 441.100  | 441.600   | 1677.000  | 1687.000  | 87.650%   | 88.232%   |
| σ    |          | 0.339%   | 14.930   | 4.436    | 4.293     | 13.830    | 10.960    | 1.251%    | 0.932%    |
| %RSD |          | 0.464    | 0.844    | 1.006    | 0.972     | 0.825     | 0.649     | 1.428     | 1.056     |
| Run  | Time     | 203Tl    | 205Tl    | 206Pb    | 207Pb     | 208Pb     | 209Bi     |           |           |
|      |          | ppb      | ppb      | ppb      | ppb       | ppb       | ppb       |           |           |
| 1    | 00:06:34 | 44.260   | 46.340   | 19.040   | 18.940    | 18.970    | 84.763%   |           |           |
| 2    | 00:06:53 | 46.030   | 48.120   | 19.510   | 19.240    | 19.310    | 84.831%   |           |           |
| 3    | 00:07:12 | 45.880   | 48.060   | 19.410   | 19.170    | 19.270    | 85.559%   |           |           |
| X    |          | 45.390   | 47.510   | 19.320   | 19.110    | 19.180    | 85.051%   |           |           |
| σ    |          | 0.982    | 1.008    | 0.247    | 0.156     | 0.189     | 0.441%    |           |           |
| %RSD |          | 2.164    | 2.122    | 1.280    | 0.816     | 0.983     | 0.519     |           |           |

CCV 1558997 5/20/2015 12:13:20 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    | 00:13:20 | 89.457%  | 98.800   | 103.200  | 96.390    | 0.000     | 47370.000 | 45970.000 | 46590.000 |
| 2    | 00:13:39 | 86.852%  | 97.300   | 101.800  | 98.900    | 0.000     | 48020.000 | 47280.000 | 48160.000 |
| 3    | 00:13:59 | 86.003%  | 95.520   | 101.700  | 99.690    | 0.000     | 46850.000 | 45820.000 | 46160.000 |
| X    |          | 87.437%  | 97.206%  | 102.265% | 98.327%   | 0.000     | 94.825%   | 92.713%   | 93.946%   |
| σ    |          | 1.800%   | n/a      | n/a      | n/a       | 0.000     | n/a       | n/a       | n/a       |
| %RSD |          | 2.059    | 1.687    | 0.824    | 1.750     | 0.000     | 1.243     | 1.739     | 2.245     |
| Run  | Time     | 27Al     | 28Si     | 37Cl     | 39K       | 43Ca      | 44Ca      | 45Sc      | 47Ti      |
|      |          | ppb      | ppb      | ppb      | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 00:13:20 | 459.900  | 4309.000 | 0.000    | 48640.000 | 48190.000 | 46710.000 | 82.264%   | 96.530    |
| 2    | 00:13:39 | 469.200  | 4244.000 | 0.000    | 50070.000 | 50640.000 | 49680.000 | 79.401%   | 96.540    |
| 3    | 00:13:59 | 458.200  | 4263.000 | 0.000    | 48620.000 | 49200.000 | 48730.000 | 80.965%   | 98.050    |
| X    |          | 92.487%  | 85.442%  | 0.000    | 98.215%   | 98.685%   | 96.749%   | 80.877%   | 97.042%   |
| σ    |          | n/a      | n/a      | 0.000    | n/a       | n/a       | n/a       | 1.434%    | n/a       |
| %RSD |          | 1.273    | 0.779    | 0.000    | 1.691     | 2.490     | 3.136     | 1.773     | 0.904     |
| Run  | Time     | 51V      | 52Cr     | 55Mn     | 56Fe      | 57Fe      | 59Co      | 60Ni      | 63Cu      |
|      |          | ppb      | ppb      | ppb      | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 00:13:20 | 93.600   | 95.560   | 469.300  | 24170.000 | 23360.000 | 96.550    | 98.020    | 97.920    |
| 2    | 00:13:39 | 97.230   | 99.130   | 473.400  | 25270.000 | 25600.000 | 99.550    | 100.900   | 102.600   |
| 3    | 00:13:59 | 97.570   | 97.990   | 487.400  | 25080.000 | 25220.000 | 98.860    | 99.480    | 99.360    |
| X    |          | 96.134%  | 97.561%  | 95.343%  | 99.369%   | 98.910%   | 98.320%   | 99.478%   | 99.945%   |
| σ    |          | n/a      | n/a      | n/a      | n/a       | n/a       | n/a       | n/a       | n/a       |
| %RSD |          | 2.286    | 1.873    | 1.985    | 2.369     | 4.844     | 1.598     | 1.467     | 2.378     |
| Run  | Time     | 65Cu     | 66Zn     | 68Zn     | 75As      | 78Se      | 82Se      | 83Kr      | 88Sr      |
|      |          | ppb      | ppb      | ppb      | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 00:13:20 | 99.380   | 95.030   | 94.490   | 95.970    | 98.120    | 95.450    | 0.000     | 92.730    |
| 2    | 00:13:39 | 103.700  | 96.360   | 97.760   | 99.490    | 100.300   | 97.830    | 0.000     | 94.760    |
| 3    | 00:13:59 | 99.940   | 96.930   | 97.170   | 97.130    | 97.870    | 98.390    | 0.000     | 94.740    |
| X    |          | 100.999% | 96.110%  | 96.475%  | 97.529%   | 98.751%   | 97.220%   | 0.000     | 94.079%   |
| σ    |          | n/a      | n/a      | n/a      | n/a       | n/a       | n/a       | 0.000     | n/a       |
| %RSD |          | 2.313    | 1.014    | 1.807    | 1.842     | 1.329     | 1.606     | 0.000     | 1.241     |
| Run  | Time     | 89Y      | 95Mo     | 98Mo     | 103Rh     | 107Ag     | 109Ag     | 111Cd     | 114Cd     |
|      |          | ppb      | ppb      | ppb      | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 00:13:20 | 84.555%  | 93.600   | 93.260   | 83.259%   | 96.830    | 98.110    | 101.100   | 103.600   |
| 2    | 00:13:39 | 84.242%  | 95.050   | 95.830   | 83.025%   | 97.270    | 99.140    | 102.200   | 103.500   |
| 3    | 00:13:59 | 84.933%  | 96.810   | 98.050   | 83.336%   | 98.700    | 99.700    | 102.000   | 104.300   |
| X    |          | 84.577%  | 95.151%  | 95.713%  | 83.207%   | 97.600%   | 98.983%   | 101.789%  | 103.793%  |
| σ    |          | 0.346%   | n/a      | n/a      | 0.162%    | n/a       | n/a       | n/a       | n/a       |
| %RSD |          | 0.409    | 1.693    | 2.507    | 0.195     | 1.006     | 0.815     | 0.603     | 0.385     |
| Run  | Time     | 115In    | 118Sn    | 121Sb    | 123Sb     | 135Ba     | 137Ba     | 159Tb     | 165Ho     |
|      |          | ppb      | ppb      | ppb      | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 00:13:20 | 76.261%  | 99.770   | 91.480   | 91.250    | 98.140    | 98.170    | 87.276%   | 91.551%   |
| 2    | 00:13:39 | 76.712%  | 101.800  | 92.890   | 92.740    | 99.820    | 98.970    | 88.767%   | 92.801%   |
| 3    | 00:13:59 | 77.453%  | 101.400  | 93.030   | 92.060    | 99.520    | 98.870    | 90.348%   | 94.318%   |
| X    |          | 76.809%  | 100.978% | 92.465%  | 92.017%   | 99.161%   | 98.669%   | 88.797%   | 92.890%   |
| σ    |          | 0.602%   | n/a      | n/a      | n/a       | n/a       | n/a       | 1.537%    | 1.386%    |
| %RSD |          | 0.784    | 1.061    | 0.930    | 0.812     | 0.901     | 0.442     | 1.730     | 1.492     |
| Run  | Time     | 203Tl    | 205Tl    | 206Pb    | 207Pb     | 208Pb     | 209Bi     |           |           |
|      |          | ppb      | ppb      | ppb      | ppb       | ppb       | ppb       |           |           |
| 1    | 00:13:20 | 93.680   | 97.390   | 93.600   | 92.690    | 93.330    | 90.330%   |           |           |
| 2    | 00:13:39 | 96.200   | 100.200  | 96.350   | 95.990    | 96.380    | 90.421%   |           |           |
| 3    | 00:13:59 | 97.560   | 101.900  | 98.260   | 97.700    | 97.990    | 90.455%   |           |           |
| X    |          | 95.814%  | 99.809%  | 96.072%  | 95.460%   | 95.902%   | 90.402%   |           |           |
| σ    |          | n/a      | n/a      | n/a      | n/a       | n/a       | 0.064%    |           |           |
| %RSD |          | 2.058    | 2.271    | 2.435    | 2.670     | 2.467     | 0.071     |           |           |

CCB3 5/20/2015 12:20:20 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    | 00:20:39 | 104.707% | 0.004    | 0.866    | 1.535   | 0.000   | 4.958   | 3.777   | 3.136   |
| 2    | 00:20:58 | 101.745% | -0.013   | 1.991    | 1.050   | 0.000   | 3.232   | 2.788   | 2.106   |
| 3    | 00:21:18 | 101.939% | -0.031   | 0.469    | 1.298   | 0.000   | 2.922   | 2.422   | 1.761   |
| X    |          | 102.797% | -0.013   | 1.109    | 1.294   | 0.000   | 3.704   | 2.996   | 2.334   |
| σ    |          | 1.657%   | 0.018    | 0.790    | 0.243   | 0.000   | 1.097   | 0.701   | 0.715   |
| %RSD |          | 1.612    | 136.100  | 71.250   | 18.740  | 0.000   | 29.610  | 23.390  | 30.630  |
| Run  | Time     | 27Al     | 28Si     | 37Cl     | 39K     | 43Ca    | 44Ca    | 45Sc    | 47Ti    |
|      |          | ppb      | ppb      | ppb      | ppb     | ppb     | ppb     | ppb     | ppb     |
| 1    | 00:20:39 | 0.154    | -284.400 | 0.000    | 8.587   | 9.723   | 2.520   | 97.237% | -0.104  |
| 2    | 00:20:58 | 0.033    | -282.800 | 0.000    | 8.471   | -1.996  | 2.531   | 93.568% | -0.008  |
| 3    | 00:21:18 | 0.032    | -285.100 | 0.000    | 8.031   | 1.578   | 1.119   | 92.761% | -0.080  |
| X    |          | 0.073    | -284.100 | 0.000    | 8.363   | 3.102   | 2.057   | 94.522% | -0.064  |
| σ    |          | 0.070    | 1.147    | 0.000    | 0.293   | 6.006   | 0.812   | 2.386%  | 0.050   |
| %RSD |          | 96.170   | 0.404    | 0.000    | 3.504   | 193.600 | 39.480  | 2.524   | 77.550  |
| Run  | Time     | 51V      | 52Cr     | 55Mn     | 56Fe    | 57Fe    | 59Co    | 60Ni    | 63Cu    |
|      |          | ppb      | ppb      | ppb      | ppb     | ppb     | ppb     | ppb     | ppb     |
| 1    | 00:20:39 | 0.028    | -0.018   | 0.015    | 0.102   | 4.200   | 0.010   | -0.000  | -0.017  |
| 2    | 00:20:58 | -0.027   | -0.053   | 0.034    | 0.334   | 5.874   | 0.011   | 0.011   | -0.013  |
| 3    | 00:21:18 | -0.052   | -0.012   | 0.021    | 2.375   | 6.639   | 0.003   | 0.006   | -0.005  |
| X    |          | -0.017   | -0.028   | 0.023    | 0.937   | 5.571   | 0.008   | 0.005   | -0.012  |
| σ    |          | 0.041    | 0.022    | 0.010    | 1.251   | 1.247   | 0.004   | 0.005   | 0.006   |
| %RSD |          | 244.100  | 80.660   | 41.840   | 133.400 | 22.390  | 50.580  | 103.400 | 55.110  |
| Run  | Time     | 65Cu     | 66Zn     | 68Zn     | 75As    | 78Se    | 82Se    | 83Kr    | 88Sr    |
|      |          | ppb      | ppb      | ppb      | ppb     | ppb     | ppb     | ppb     | ppb     |
| 1    | 00:20:39 | -0.042   | 3.917    | 4.124    | 0.023   | 0.348   | 0.185   | 0.000   | 0.033   |
| 2    | 00:20:58 | -0.041   | 4.479    | 4.256    | 0.106   | 0.293   | 0.276   | 0.000   | 0.020   |
| 3    | 00:21:18 | 0.006    | 3.937    | 4.312    | 0.064   | 0.161   | 0.271   | 0.000   | 0.017   |
| X    |          | -0.026   | 4.111    | 4.231    | 0.065   | 0.267   | 0.244   | 0.000   | 0.023   |
| σ    |          | 0.027    | 0.319    | 0.097    | 0.041   | 0.096   | 0.051   | 0.000   | 0.009   |
| %RSD |          | 105.400  | 7.753    | 2.281    | 64.040  | 35.940  | 20.900  | 0.000   | 36.890  |
| Run  | Time     | 89Y      | 95Mo     | 98Mo     | 103Rh   | 107Ag   | 109Ag   | 111Cd   | 114Cd   |
|      |          | ppb      | ppb      | ppb      | ppb     | ppb     | ppb     | ppb     | ppb     |
| 1    | 00:20:39 | 92.181%  | 1.336    | 1.358    | 95.790% | -0.023  | -0.015  | 0.016   | 0.018   |
| 2    | 00:20:58 | 91.834%  | 1.624    | 1.732    | 94.117% | -0.013  | -0.013  | 0.023   | 0.022   |
| 3    | 00:21:18 | 92.289%  | 1.707    | 1.842    | 94.227% | -0.012  | -0.010  | 0.013   | -0.000  |
| X    |          | 92.101%  | 1.556    | 1.644    | 94.711% | -0.016  | -0.013  | 0.017   | 0.013   |
| σ    |          | 0.238%   | 0.195    | 0.254    | 0.936%  | 0.006   | 0.003   | 0.005   | 0.012   |
| %RSD |          | 0.258    | 12.510   | 15.420   | 0.988   | 36.740  | 20.940  | 27.730  | 91.260  |
| Run  | Time     | 115In    | 118Sn    | 121Sb    | 123Sb   | 135Ba   | 137Ba   | 159Tb   | 165Ho   |
|      |          | ppb      | ppb      | ppb      | ppb     | ppb     | ppb     | ppb     | ppb     |
| 1    | 00:20:39 | 93.767%  | -0.074   | 0.505    | 0.503   | 0.028   | 0.082   | 94.489% | 93.489% |
| 2    | 00:20:58 | 92.109%  | -0.043   | 0.563    | 0.572   | 0.007   | 0.023   | 95.271% | 93.755% |
| 3    | 00:21:18 | 92.677%  | 0.002    | 0.587    | 0.559   | 0.036   | 0.027   | 96.930% | 96.103% |
| X    |          | 92.851%  | -0.038   | 0.552    | 0.545   | 0.024   | 0.044   | 95.563% | 94.449% |
| σ    |          | 0.843%   | 0.038    | 0.042    | 0.036   | 0.015   | 0.033   | 1.247%  | 1.439%  |
| %RSD |          | 0.907    | 100.000  | 7.613    | 6.671   | 62.690  | 74.920  | 1.304   | 1.523   |
| Run  | Time     | 203Tl    | 205Tl    | 206Pb    | 207Pb   | 208Pb   | 209Bi   |         |         |
|      |          | ppb      | ppb      | ppb      | ppb     | ppb     | ppb     |         |         |
| 1    | 00:20:39 | 0.052    | 0.060    | -0.002   | -0.003  | 0.001   | 99.863% |         |         |
| 2    | 00:20:58 | 0.062    | 0.065    | -0.001   | 0.004   | 0.004   | 98.784% |         |         |
| 3    | 00:21:18 | 0.051    | 0.059    | 0.004    | -0.003  | -0.001  | 98.529% |         |         |
| X    |          | 0.055    | 0.061    | 0.000    | -0.001  | 0.001   | 99.059% |         |         |
| σ    |          | 0.006    | 0.003    | 0.003    | 0.004   | 0.002   | 0.708%  |         |         |
| %RSD |          | 11.220   | 5.067    | 1106.000 | 689.300 | 180.400 | 0.715   |         |         |

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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    | 00:24:30 | 88.788% | -0.031   | 10.970 | 12.110  | 0.000    | 77.010  | 14.100  | 14.410    |
| 2    | 00:24:49 | 86.349% | -0.009   | 11.310 | 11.650  | 0.000    | 71.710  | 13.200  | 12.760    |
| 3    | 00:25:08 | 81.480% | -0.008   | 11.830 | 11.880  | 0.000    | 74.200  | 14.770  | 13.700    |
| X    |          | 85.539% | -0.016   | 11.370 | 11.880  | 0.000    | 74.310  | 14.020  | 13.620    |
| σ    |          | 3.721%  | 0.013    | 0.433  | 0.230   | 0.000    | 2.653   | 0.786   | 0.826     |
| %RSD |          | 4.350   | 80.880   | 3.811  | 1.931   | 0.000    | 3.570   | 5.606   | 6.062     |
| Run  | Time     | 27Al    | 28Si     | 37Cl   | 39K     | 43Ca     | 44Ca    | 45Sc    | 47Ti      |
|      |          | ppb     | ppb      | ppb    | ppb     | ppb      | ppb     | ppb     | ppb       |
| 1    | 00:24:30 | 8.678   | -233.500 | 0.000  | 16.610  | 105.200  | 72.250  | 72.448% | 0.171     |
| 2    | 00:24:49 | 9.156   | -232.400 | 0.000  | 12.190  | 72.300   | 84.480  | 69.358% | 0.359     |
| 3    | 00:25:08 | 9.240   | -232.600 | 0.000  | 13.450  | 57.620   | 83.580  | 67.437% | 0.225     |
| X    |          | 9.024   | -232.800 | 0.000  | 14.080  | 78.370   | 80.100  | 69.748% | 0.252     |
| σ    |          | 0.303   | 0.604    | 0.000  | 2.276   | 24.350   | 6.819   | 2.528%  | 0.097     |
| %RSD |          | 3.358   | 0.259    | 0.000  | 16.160  | 31.070   | 8.512   | 3.625   | 38.420    |
| Run  | Time     | 51V     | 52Cr     | 55Mn   | 56Fe    | 57Fe     | 59Co    | 60Ni    | 63Cu      |
|      |          | ppb     | ppb      | ppb    | ppb     | ppb      | ppb     | ppb     | ppb       |
| 1    | 00:24:30 | -0.337  | 1.225    | 0.505  | 12.490  | 17.400   | 0.035   | 1.842   | 0.727     |
| 2    | 00:24:49 | -1.067  | 1.346    | 0.582  | 13.330  | 17.910   | 0.023   | 1.919   | 0.762     |
| 3    | 00:25:08 | -1.814  | 1.342    | 0.604  | 14.830  | 22.030   | 0.034   | 1.886   | 0.798     |
| X    |          | -1.073  | 1.304    | 0.564  | 13.550  | 19.110   | 0.031   | 1.882   | 0.762     |
| σ    |          | 0.739   | 0.068    | 0.052  | 1.184   | 2.536    | 0.006   | 0.038   | 0.036     |
| %RSD |          | 68.880  | 5.247    | 9.244  | 8.738   | 13.270   | 20.570  | 2.030   | 4.675     |
| Run  | Time     | 65Cu    | 66Zn     | 68Zn   | 75As    | 78Se     | 82Se    | 83Kr    | 88Sr      |
|      |          | ppb     | ppb      | ppb    | ppb     | ppb      | ppb     | ppb     | ppb       |
| 1    | 00:24:30 | 0.785   | 8.518    | 8.256  | -0.173  | -0.333   | 0.333   | 0.000   | 0.142     |
| 2    | 00:24:49 | 0.851   | 8.999    | 8.487  | 0.575   | -0.129   | 0.140   | 0.000   | 0.134     |
| 3    | 00:25:08 | 0.705   | 8.498    | 8.572  | 0.136   | -0.499   | 0.229   | 0.000   | 0.132     |
| X    |          | 0.780   | 8.672    | 8.438  | 0.179   | -0.320   | 0.234   | 0.000   | 0.136     |
| σ    |          | 0.073   | 0.284    | 0.163  | 0.376   | 0.185    | 0.097   | 0.000   | 0.005     |
| %RSD |          | 9.379   | 3.274    | 1.936  | 209.600 | 57.800   | 41.410  | 0.000   | 3.625     |
| Run  | Time     | 89Y     | 95Mo     | 98Mo   | 103Rh   | 107Ag    | 109Ag   | 111Cd   | 114Cd     |
|      |          | ppb     | ppb      | ppb    | ppb     | ppb      | ppb     | ppb     | ppb       |
| 1    | 00:24:30 | 75.672% | 1.473    | 1.524  | 79.512% | -0.009   | -0.003  | 0.017   | 0.010     |
| 2    | 00:24:49 | 75.628% | 1.927    | 1.976  | 78.145% | 0.014    | 0.006   | -0.007  | -0.007    |
| 3    | 00:25:08 | 75.265% | 2.016    | 1.884  | 79.187% | -0.003   | -0.006  | -0.039  | -0.003    |
| X    |          | 75.522% | 1.805    | 1.795  | 78.948% | 0.001    | -0.001  | -0.010  | 0.000     |
| σ    |          | 0.224%  | 0.292    | 0.239  | 0.714%  | 0.012    | 0.006   | 0.028   | 0.009     |
| %RSD |          | 0.296   | 16.160   | 13.310 | 0.904   | 1958.000 | 657.200 | 296.400 | 12470.000 |
| Run  | Time     | 115In   | 118Sn    | 121Sb  | 123Sb   | 135Ba    | 137Ba   | 159Tb   | 165Ho     |
|      |          | ppb     | ppb      | ppb    | ppb     | ppb      | ppb     | ppb     | ppb       |
| 1    | 00:24:30 | 79.161% | 1.194    | 2.326  | 2.246   | 0.157    | 0.193   | 88.136% | 88.998%   |
| 2    | 00:24:49 | 79.587% | 1.338    | 2.220  | 2.175   | 0.160    | 0.159   | 89.125% | 89.562%   |
| 3    | 00:25:08 | 80.876% | 1.347    | 1.931  | 2.005   | 0.171    | 0.182   | 90.733% | 92.205%   |
| X    |          | 79.875% | 1.293    | 2.159  | 2.142   | 0.163    | 0.178   | 89.332% | 90.255%   |
| σ    |          | 0.893%  | 0.086    | 0.205  | 0.124   | 0.007    | 0.017   | 1.311%  | 1.712%    |
| %RSD |          | 1.118   | 6.641    | 9.485  | 5.770   | 4.509    | 9.640   | 1.467   | 1.897     |
| Run  | Time     | 203Tl   | 205Tl    | 206Pb  | 207Pb   | 208Pb    | 209Bi   |         |           |
|      |          | ppb     | ppb      | ppb    | ppb     | ppb      | ppb     |         |           |
| 1    | 00:24:30 | 0.069   | 0.069    | 0.406  | 0.375   | 0.379    | 92.450% |         |           |
| 2    | 00:24:49 | 0.061   | 0.069    | 0.389  | 0.401   | 0.391    | 92.480% |         |           |
| 3    | 00:25:08 | 0.060   | 0.061    | 0.408  | 0.349   | 0.394    | 93.122% |         |           |
| X    |          | 0.063   | 0.067    | 0.401  | 0.375   | 0.388    | 92.684% |         |           |
| σ    |          | 0.005   | 0.004    | 0.010  | 0.026   | 0.008    | 0.380%  |         |           |
| %RSD |          | 7.347   | 6.710    | 2.543  | 6.992   | 1.982    | 0.410   |         |           |



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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   | 00:28:18 | 80.593% | -0.008   | 19.770 | 18.590  | 0.000   | 85.240  | 11.800  | 11.480  |
| 2   | 00:28:38 | 81.536% | 0.015    | 18.150 | 17.310  | 0.000   | 79.760  | 9.385   | 11.550  |
| 3   | 00:28:57 | 82.618% | 0.014    | 16.330 | 17.310  | 0.000   | 81.600  | 8.278   | 9.818   |
|     | X        | 81.582% | 0.007    | 18.080 | 17.740  | 0.000   | 82.200  | 9.821   | 10.950  |
|     | σ        | 1.013%  | 0.013    | 1.726  | 0.740   | 0.000   | 2.786   | 1.801   | 0.980   |
|     | %RSD     | 1.242   | 178.800  | 9.543  | 4.173   | 0.000   | 3.390   | 18.340  | 8.948   |
| Run | Time     | 27Al    | 28Si     | 37Cl   | 39K     | 43Ca    | 44Ca    | 45Sc    | 47Ti    |
|     |          | ppb     | ppb      | ppb    | ppb     | ppb     | ppb     | ppb     | ppb     |
| 1   | 00:28:18 | 11.940  | -206.400 | 0.000  | 14.360  | 97.870  | 66.880  | 69.836% | -0.081  |
| 2   | 00:28:38 | 11.410  | -206.000 | 0.000  | 12.480  | 69.960  | 77.440  | 67.257% | 0.025   |
| 3   | 00:28:57 | 11.640  | -214.300 | 0.000  | 13.940  | 68.190  | 75.360  | 66.584% | 0.103   |
|     | X        | 11.670  | -208.900 | 0.000  | 13.590  | 78.670  | 73.230  | 67.892% | 0.016   |
|     | σ        | 0.267   | 4.691    | 0.000  | 0.983   | 16.650  | 5.590   | 1.716%  | 0.092   |
|     | %RSD     | 2.286   | 2.245    | 0.000  | 7.233   | 21.170  | 7.634   | 2.528   | 581.900 |
| Run | Time     | 51V     | 52Cr     | 55Mn   | 56Fe    | 57Fe    | 59Co    | 60Ni    | 63Cu    |
|     |          | ppb     | ppb      | ppb    | ppb     | ppb     | ppb     | ppb     | ppb     |
| 1   | 00:28:18 | -0.486  | 1.336    | 0.610  | 14.160  | 21.490  | 0.043   | 1.923   | 0.637   |
| 2   | 00:28:38 | -1.347  | 1.487    | 0.563  | 13.820  | 22.740  | 0.038   | 2.089   | 0.623   |
| 3   | 00:28:57 | -0.426  | 1.342    | 0.623  | 15.200  | 20.540  | 0.024   | 2.074   | 0.596   |
|     | X        | -0.753  | 1.388    | 0.599  | 14.390  | 21.590  | 0.035   | 2.028   | 0.619   |
|     | σ        | 0.515   | 0.085    | 0.031  | 0.718   | 1.106   | 0.010   | 0.092   | 0.021   |
|     | %RSD     | 68.430  | 6.147    | 5.208  | 4.987   | 5.125   | 27.660  | 4.534   | 3.333   |
| Run | Time     | 65Cu    | 66Zn     | 68Zn   | 75As    | 78Se    | 82Se    | 83Kr    | 88Sr    |
|     |          | ppb     | ppb      | ppb    | ppb     | ppb     | ppb     | ppb     | ppb     |
| 1   | 00:28:18 | 0.667   | 7.988    | 7.180  | 0.115   | -0.504  | -0.026  | 0.000   | 0.136   |
| 2   | 00:28:38 | 0.682   | 7.696    | 8.022  | 0.443   | -1.055  | 0.223   | 0.000   | 0.130   |
| 3   | 00:28:57 | 0.608   | 7.496    | 7.911  | -0.378  | -0.770  | 0.048   | 0.000   | 0.143   |
|     | X        | 0.652   | 7.727    | 7.704  | 0.060   | -0.776  | 0.082   | 0.000   | 0.137   |
|     | σ        | 0.039   | 0.248    | 0.457  | 0.413   | 0.275   | 0.128   | 0.000   | 0.006   |
|     | %RSD     | 6.015   | 3.205    | 5.933  | 688.600 | 35.450  | 156.900 | 0.000   | 4.568   |
| Run | Time     | 89Y     | 95Mo     | 98Mo   | 103Rh   | 107Ag   | 109Ag   | 111Cd   | 114Cd   |
|     |          | ppb     | ppb      | ppb    | ppb     | ppb     | ppb     | ppb     | ppb     |
| 1   | 00:28:18 | 74.038% | 0.849    | 0.804  | 77.211% | -0.010  | -0.008  | -0.001  | 0.022   |
| 2   | 00:28:38 | 74.583% | 1.254    | 1.092  | 78.056% | -0.011  | -0.002  | 0.011   | 0.005   |
| 3   | 00:28:57 | 74.901% | 1.254    | 1.159  | 77.959% | 0.004   | -0.010  | -0.052  | -0.046  |
|     | X        | 74.507% | 1.119    | 1.018  | 77.742% | -0.006  | -0.007  | -0.014  | -0.006  |
|     | σ        | 0.437%  | 0.234    | 0.189  | 0.462%  | 0.008   | 0.004   | 0.034   | 0.036   |
|     | %RSD     | 0.586   | 20.920   | 18.530 | 0.594   | 144.600 | 60.460  | 238.200 | 558.500 |
| Run | Time     | 115In   | 118Sn    | 121Sb  | 123Sb   | 135Ba   | 137Ba   | 159Tb   | 165Ho   |
|     |          | ppb     | ppb      | ppb    | ppb     | ppb     | ppb     | ppb     | ppb     |
| 1   | 00:28:18 | 79.062% | 0.451    | 0.687  | 0.671   | 0.218   | 0.293   | 88.871% | 89.525% |
| 2   | 00:28:38 | 79.084% | 0.704    | 0.705  | 0.753   | 0.308   | 0.250   | 91.022% | 91.388% |
| 3   | 00:28:57 | 80.733% | 0.654    | 0.699  | 0.651   | 0.230   | 0.280   | 91.872% | 92.651% |
|     | X        | 79.626% | 0.603    | 0.697  | 0.692   | 0.252   | 0.275   | 90.589% | 91.188% |
|     | σ        | 0.959%  | 0.134    | 0.009  | 0.054   | 0.049   | 0.022   | 1.547%  | 1.572%  |
|     | %RSD     | 1.204   | 22.250   | 1.294  | 7.826   | 19.530  | 8.017   | 1.707   | 1.724   |
| Run | Time     | 203Tl   | 205Tl    | 206Pb  | 207Pb   | 208Pb   | 209Bi   |         |         |
|     |          | ppb     | ppb      | ppb    | ppb     | ppb     | ppb     |         |         |
| 1   | 00:28:18 | 0.030   | 0.032    | 0.321  | 0.292   | 0.306   | 92.651% |         |         |
| 2   | 00:28:38 | 0.036   | 0.032    | 0.316  | 0.375   | 0.330   | 92.785% |         |         |
| 3   | 00:28:57 | 0.030   | 0.037    | 0.289  | 0.324   | 0.311   | 94.576% |         |         |
|     | X        | 0.032   | 0.034    | 0.309  | 0.330   | 0.316   | 93.337% |         |         |
|     | σ        | 0.003   | 0.002    | 0.017  | 0.041   | 0.012   | 1.075%  |         |         |
|     | %RSD     | 10.750  | 7.142    | 5.594  | 12.570  | 3.953   | 1.151   |         |         |

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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    | 00:32:08 | 77.170% | -0.007   | 28.240 | 26.130  | 0.000   | 3413.000 | 512.600 | 524.400 |
| 2    | 00:32:27 | 77.559% | -0.007   | 30.260 | 26.190  | 0.000   | 3263.000 | 512.200 | 522.200 |
| 3    | 00:32:46 | 74.971% | -0.031   | 25.420 | 27.310  | 0.000   | 3411.000 | 499.800 | 530.000 |
| X    |          | 76.567% | -0.015   | 27.970 | 26.540  | 0.000   | 3362.000 | 508.200 | 525.500 |
| σ    |          | 1.396%  | 0.014    | 2.429  | 0.663   | 0.000   | 86.130   | 7.297   | 3.993   |
| %RSD |          | 1.823   | 94.250   | 8.684  | 2.498   | 0.000   | 2.562    | 1.436   | 0.760   |
| Run  | Time     | 27Al    | 28Si     | 37Cl   | 39K     | 43Ca    | 44Ca     | 45Sc    | 47Ti    |
|      |          | ppb     | ppb      | ppb    | ppb     | ppb     | ppb      | ppb     | ppb     |
| 1    | 00:32:08 | 14.650  | -109.400 | 0.000  | 197.300 | 944.000 | 872.300  | 65.623% | 0.237   |
| 2    | 00:32:27 | 15.290  | -114.400 | 0.000  | 182.500 | 961.200 | 880.900  | 65.806% | 0.185   |
| 3    | 00:32:46 | 14.450  | -113.300 | 0.000  | 191.900 | 913.800 | 916.900  | 62.365% | 0.315   |
| X    |          | 14.800  | -112.400 | 0.000  | 190.500 | 939.700 | 890.000  | 64.598% | 0.246   |
| σ    |          | 0.441   | 2.616    | 0.000  | 7.493   | 23.970  | 23.640   | 1.936%  | 0.066   |
| %RSD |          | 2.981   | 2.328    | 0.000  | 3.933   | 2.551   | 2.656    | 2.997   | 26.680  |
| Run  | Time     | 51V     | 52Cr     | 55Mn   | 56Fe    | 57Fe    | 59Co     | 60Ni    | 63Cu    |
|      |          | ppb     | ppb      | ppb    | ppb     | ppb     | ppb      | ppb     | ppb     |
| 1    | 00:32:08 | -1.291  | 1.076    | 3.067  | 138.300 | 150.300 | 0.092    | 2.311   | 2.344   |
| 2    | 00:32:27 | -0.156  | 1.131    | 2.928  | 133.300 | 148.700 | 0.091    | 2.064   | 2.237   |
| 3    | 00:32:46 | -0.509  | 1.039    | 3.025  | 140.100 | 155.000 | 0.082    | 2.256   | 2.229   |
| X    |          | -0.652  | 1.082    | 3.007  | 137.300 | 151.400 | 0.088    | 2.210   | 2.270   |
| σ    |          | 0.581   | 0.046    | 0.072  | 3.502   | 3.301   | 0.006    | 0.130   | 0.064   |
| %RSD |          | 89.070  | 4.280    | 2.378  | 2.552   | 2.181   | 6.306    | 5.859   | 2.823   |
| Run  | Time     | 65Cu    | 66Zn     | 68Zn   | 75As    | 78Se    | 82Se     | 83Kr    | 88Sr    |
|      |          | ppb     | ppb      | ppb    | ppb     | ppb     | ppb      | ppb     | ppb     |
| 1    | 00:32:08 | 2.234   | 29.120   | 29.800 | 0.038   | -0.867  | 0.147    | 0.000   | 4.667   |
| 2    | 00:32:27 | 2.142   | 29.230   | 28.880 | -0.394  | -1.074  | 0.024    | 0.000   | 4.571   |
| 3    | 00:32:46 | 2.323   | 29.280   | 29.200 | -0.223  | -1.081  | 0.377    | 0.000   | 4.708   |
| X    |          | 2.233   | 29.210   | 29.300 | -0.193  | -1.007  | 0.183    | 0.000   | 4.648   |
| σ    |          | 0.091   | 0.079    | 0.465  | 0.217   | 0.122   | 0.180    | 0.000   | 0.070   |
| %RSD |          | 4.059   | 0.269    | 1.586  | 112.700 | 12.070  | 98.340   | 0.000   | 1.510   |
| Run  | Time     | 89Y     | 95Mo     | 98Mo   | 103Rh   | 107Ag   | 109Ag    | 111Cd   | 114Cd   |
|      |          | ppb     | ppb      | ppb    | ppb     | ppb     | ppb      | ppb     | ppb     |
| 1    | 00:32:08 | 72.670% | 0.691    | 0.663  | 76.314% | -0.014  | -0.013   | 0.016   | 0.029   |
| 2    | 00:32:27 | 72.976% | 0.961    | 0.899  | 74.853% | -0.008  | -0.010   | 0.014   | 0.006   |
| 3    | 00:32:46 | 71.741% | 0.954    | 0.980  | 74.332% | -0.011  | -0.007   | -0.051  | -0.003  |
| X    |          | 72.462% | 0.869    | 0.847  | 75.166% | -0.011  | -0.010   | -0.007  | 0.010   |
| σ    |          | 0.643%  | 0.154    | 0.165  | 1.028%  | 0.003   | 0.003    | 0.038   | 0.017   |
| %RSD |          | 0.887   | 17.740   | 19.460 | 1.367   | 28.780  | 32.940   | 522.800 | 159.200 |
| Run  | Time     | 115In   | 118Sn    | 121Sb  | 123Sb   | 135Ba   | 137Ba    | 159Tb   | 165Ho   |
|      |          | ppb     | ppb      | ppb    | ppb     | ppb     | ppb      | ppb     | ppb     |
| 1    | 00:32:08 | 77.233% | 0.564    | 0.389  | 0.376   | 1.491   | 1.335    | 88.429% | 88.728% |
| 2    | 00:32:27 | 77.426% | 0.687    | 0.463  | 0.460   | 1.513   | 1.413    | 89.653% | 90.371% |
| 3    | 00:32:46 | 77.393% | 0.679    | 0.419  | 0.440   | 1.393   | 1.419    | 89.977% | 91.317% |
| X    |          | 77.351% | 0.643    | 0.424  | 0.425   | 1.466   | 1.389    | 89.353% | 90.139% |
| σ    |          | 0.103%  | 0.069    | 0.037  | 0.044   | 0.064   | 0.047    | 0.817%  | 1.310%  |
| %RSD |          | 0.134   | 10.680   | 8.712  | 10.290  | 4.365   | 3.388    | 0.914   | 1.453   |
| Run  | Time     | 203Tl   | 205Tl    | 206Pb  | 207Pb   | 208Pb   | 209Bi    |         |         |
|      |          | ppb     | ppb      | ppb    | ppb     | ppb     | ppb      |         |         |
| 1    | 00:32:08 | 0.024   | 0.024    | 0.441  | 0.376   | 0.388   | 92.222%  |         |         |
| 2    | 00:32:27 | 0.019   | 0.025    | 0.426  | 0.388   | 0.395   | 92.082%  |         |         |
| 3    | 00:32:46 | 0.027   | 0.023    | 0.384  | 0.348   | 0.374   | 93.256%  |         |         |
| X    |          | 0.023   | 0.024    | 0.417  | 0.371   | 0.386   | 92.520%  |         |         |
| σ    |          | 0.004   | 0.001    | 0.030  | 0.020   | 0.011   | 0.641%   |         |         |
| %RSD |          | 17.100  | 4.904    | 7.114  | 5.451   | 2.874   | 0.693    |         |         |

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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    | 00:35:56 | 79.421% | -0.007   | 22.500 | 23.220  | 0.000   | 3346.000 | 504.200 | 518.000 |
| 2    | 00:36:15 | 72.221% | 0.021    | 21.090 | 22.430  | 0.000   | 3408.000 | 505.100 | 506.600 |
| 3    | 00:36:34 | 72.509% | 0.046    | 23.810 | 24.110  | 0.000   | 3236.000 | 466.400 | 488.500 |
| X    |          | 74.717% | 0.020    | 22.470 | 23.250  | 0.000   | 3330.000 | 491.900 | 504.400 |
| σ    |          | 4.076%  | 0.027    | 1.361  | 0.842   | 0.000   | 87.340   | 22.110  | 14.890  |
| %RSD |          | 5.456   | 134.300  | 6.056  | 3.620   | 0.000   | 2.623    | 4.495   | 2.952   |
| Run  | Time     | 27Al    | 28Si     | 37Cl   | 39K     | 43Ca    | 44Ca     | 45Sc    | 47Ti    |
|      |          | ppb     | ppb      | ppb    | ppb     | ppb     | ppb      | ppb     | ppb     |
| 1    | 00:35:56 | 14.340  | -124.700 | 0.000  | 187.600 | 958.400 | 864.600  | 64.338% | 0.010   |
| 2    | 00:36:15 | 13.960  | -124.200 | 0.000  | 181.800 | 863.300 | 872.700  | 61.134% | 0.133   |
| 3    | 00:36:34 | 13.890  | -130.700 | 0.000  | 178.200 | 915.600 | 846.800  | 60.660% | 0.219   |
| X    |          | 14.060  | -126.500 | 0.000  | 182.600 | 912.400 | 861.400  | 62.044% | 0.121   |
| σ    |          | 0.244   | 3.620    | 0.000  | 4.737   | 47.620  | 13.230   | 2.001%  | 0.105   |
| %RSD |          | 1.736   | 2.861    | 0.000  | 2.595   | 5.219   | 1.536    | 3.224   | 87.070  |
| Run  | Time     | 51V     | 52Cr     | 55Mn   | 56Fe    | 57Fe    | 59Co     | 60Ni    | 63Cu    |
|      |          | ppb     | ppb      | ppb    | ppb     | ppb     | ppb      | ppb     | ppb     |
| 1    | 00:35:56 | -0.081  | 1.037    | 3.037  | 135.300 | 146.500 | 0.053    | 0.344   | 2.884   |
| 2    | 00:36:15 | 0.140   | 0.924    | 3.067  | 139.100 | 152.200 | 0.043    | 0.318   | 3.056   |
| 3    | 00:36:34 | -0.503  | 1.049    | 2.963  | 138.900 | 145.100 | 0.049    | 0.395   | 3.077   |
| X    |          | -0.148  | 1.003    | 3.022  | 137.800 | 147.900 | 0.049    | 0.352   | 3.005   |
| σ    |          | 0.327   | 0.069    | 0.053  | 2.122   | 3.752   | 0.005    | 0.039   | 0.106   |
| %RSD |          | 220.600 | 6.899    | 1.763  | 1.541   | 2.536   | 10.280   | 11.170  | 3.512   |
| Run  | Time     | 65Cu    | 66Zn     | 68Zn   | 75As    | 78Se    | 82Se     | 83Kr    | 88Sr    |
|      |          | ppb     | ppb      | ppb    | ppb     | ppb     | ppb      | ppb     | ppb     |
| 1    | 00:35:56 | 3.403   | 28.660   | 29.940 | 0.131   | -0.665  | 0.094    | 0.000   | 4.552   |
| 2    | 00:36:15 | 3.120   | 30.200   | 30.780 | 0.287   | -1.059  | 0.070    | 0.000   | 4.618   |
| 3    | 00:36:34 | 3.123   | 29.550   | 28.710 | -0.274  | -1.125  | 0.224    | 0.000   | 4.688   |
| X    |          | 3.215   | 29.470   | 29.810 | 0.048   | -0.950  | 0.129    | 0.000   | 4.619   |
| σ    |          | 0.162   | 0.772    | 1.042  | 0.289   | 0.249   | 0.083    | 0.000   | 0.068   |
| %RSD |          | 5.049   | 2.619    | 3.494  | 605.300 | 26.160  | 63.900   | 0.000   | 1.475   |
| Run  | Time     | 89Y     | 95Mo     | 98Mo   | 103Rh   | 107Ag   | 109Ag    | 111Cd   | 114Cd   |
|      |          | ppb     | ppb      | ppb    | ppb     | ppb     | ppb      | ppb     | ppb     |
| 1    | 00:35:56 | 71.429% | 0.564    | 0.579  | 74.769% | -0.005  | -0.006   | -0.032  | 0.015   |
| 2    | 00:36:15 | 70.078% | 0.645    | 0.763  | 73.853% | -0.013  | -0.010   | -0.052  | -0.022  |
| 3    | 00:36:34 | 68.566% | 0.830    | 0.739  | 72.372% | -0.016  | 0.009    | 0.026   | -0.016  |
| X    |          | 70.024% | 0.680    | 0.693  | 73.664% | -0.012  | -0.003   | -0.019  | -0.008  |
| σ    |          | 1.432%  | 0.136    | 0.100  | 1.210%  | 0.006   | 0.010    | 0.040   | 0.020   |
| %RSD |          | 2.046   | 20.020   | 14.460 | 1.642   | 48.160  | 381.500  | 206.700 | 247.800 |
| Run  | Time     | 115In   | 118Sn    | 121Sb  | 123Sb   | 135Ba   | 137Ba    | 159Tb   | 165Ho   |
|      |          | ppb     | ppb      | ppb    | ppb     | ppb     | ppb      | ppb     | ppb     |
| 1    | 00:35:56 | 75.713% | 0.438    | 0.268  | 0.292   | 1.411   | 1.443    | 87.896% | 87.963% |
| 2    | 00:36:15 | 75.967% | 0.656    | 0.271  | 0.334   | 1.282   | 1.380    | 87.961% | 88.911% |
| 3    | 00:36:34 | 75.899% | 0.684    | 0.268  | 0.344   | 1.291   | 1.313    | 88.210% | 88.956% |
| X    |          | 75.859% | 0.593    | 0.269  | 0.324   | 1.328   | 1.379    | 88.022% | 88.610% |
| σ    |          | 0.132%  | 0.135    | 0.002  | 0.028   | 0.072   | 0.065    | 0.166%  | 0.561%  |
| %RSD |          | 0.173   | 22.790   | 0.572  | 8.503   | 5.420   | 4.720    | 0.189   | 0.633   |
| Run  | Time     | 203Tl   | 205Tl    | 206Pb  | 207Pb   | 208Pb   | 209Bi    |         |         |
|      |          | ppb     | ppb      | ppb    | ppb     | ppb     | ppb      |         |         |
| 1    | 00:35:56 | 0.016   | 0.021    | 0.423  | 0.378   | 0.393   | 91.504%  |         |         |
| 2    | 00:36:15 | 0.025   | 0.023    | 0.421  | 0.398   | 0.391   | 91.586%  |         |         |
| 3    | 00:36:34 | 0.028   | 0.025    | 0.355  | 0.371   | 0.384   | 92.571%  |         |         |
| X    |          | 0.023   | 0.023    | 0.400  | 0.382   | 0.389   | 91.887%  |         |         |
| σ    |          | 0.006   | 0.002    | 0.039  | 0.014   | 0.005   | 0.594%   |         |         |
| %RSD |          | 26.880  | 9.138    | 9.640  | 3.758   | 1.231   | 0.646    |         |         |

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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    | 00:39:42 | 71.566% | 0.021    | 21.570  | 23.960  | 0.000   | 195.700 | 191.600 | 191.800 |
| 2    | 00:40:02 | 69.217% | -0.004   | 23.640  | 23.680  | 0.000   | 195.100 | 192.300 | 204.800 |
| 3    | 00:40:21 | 71.213% | 0.021    | 21.650  | 20.990  | 0.000   | 183.300 | 173.000 | 185.800 |
| X    |          | 70.665% | 0.013    | 22.290  | 22.880  | 0.000   | 191.300 | 185.600 | 194.100 |
| σ    |          | 1.267%  | 0.014    | 1.169   | 1.642   | 0.000   | 6.970   | 10.930  | 9.694   |
| %RSD |          | 1.793   | 112.600  | 5.245   | 7.178   | 0.000   | 3.643   | 5.891   | 4.994   |
| Run  | Time     | 27Al    | 28Si     | 37Cl    | 39K     | 43Ca    | 44Ca    | 45Sc    | 47Ti    |
|      |          | ppb     | ppb      | ppb     | ppb     | ppb     | ppb     | ppb     | ppb     |
| 1    | 00:39:42 | 90.680  | -144.800 | 0.000   | 70.080  | 717.500 | 639.600 | 61.248% | 1.924   |
| 2    | 00:40:02 | 95.180  | -138.400 | 0.000   | 73.810  | 645.900 | 663.100 | 58.635% | 1.470   |
| 3    | 00:40:21 | 90.370  | -150.600 | 0.000   | 64.920  | 695.000 | 650.900 | 61.605% | 1.393   |
| X    |          | 92.080  | -144.600 | 0.000   | 69.610  | 686.200 | 651.200 | 60.496% | 1.595   |
| σ    |          | 2.692   | 6.095    | 0.000   | 4.464   | 36.600  | 11.730  | 1.622%  | 0.287   |
| %RSD |          | 2.924   | 4.216    | 0.000   | 6.413   | 5.334   | 1.801   | 2.681   | 17.990  |
| Run  | Time     | 51V     | 52Cr     | 55Mn    | 56Fe    | 57Fe    | 59Co    | 60Ni    | 63Cu    |
|      |          | ppb     | ppb      | ppb     | ppb     | ppb     | ppb     | ppb     | ppb     |
| 1    | 00:39:42 | 1.280   | 7.756    | 25.980  | 308.100 | 332.800 | 0.311   | 7.714   | 4.423   |
| 2    | 00:40:02 | 1.029   | 7.925    | 26.530  | 313.300 | 334.400 | 0.308   | 7.392   | 4.583   |
| 3    | 00:40:21 | -0.650  | 7.811    | 25.140  | 295.700 | 316.800 | 0.299   | 7.468   | 4.580   |
| X    |          | 0.553   | 7.831    | 25.890  | 305.700 | 328.000 | 0.306   | 7.525   | 4.529   |
| σ    |          | 1.050   | 0.086    | 0.702   | 9.031   | 9.715   | 0.006   | 0.168   | 0.092   |
| %RSD |          | 189.900 | 1.096    | 2.711   | 2.954   | 2.962   | 1.948   | 2.232   | 2.023   |
| Run  | Time     | 65Cu    | 66Zn     | 68Zn    | 75As    | 78Se    | 82Se    | 83Kr    | 88Sr    |
|      |          | ppb     | ppb      | ppb     | ppb     | ppb     | ppb     | ppb     | ppb     |
| 1    | 00:39:42 | 4.480   | 19.460   | 19.890  | 0.060   | -0.589  | 0.008   | 0.000   | 3.541   |
| 2    | 00:40:02 | 4.344   | 20.730   | 20.150  | -0.082  | -0.775  | -0.162  | 0.000   | 3.695   |
| 3    | 00:40:21 | 3.975   | 20.380   | 19.730  | -0.168  | -0.726  | -0.131  | 0.000   | 3.585   |
| X    |          | 4.266   | 20.190   | 19.930  | -0.063  | -0.697  | -0.095  | 0.000   | 3.607   |
| σ    |          | 0.261   | 0.653    | 0.215   | 0.115   | 0.097   | 0.091   | 0.000   | 0.080   |
| %RSD |          | 6.122   | 3.235    | 1.077   | 181.600 | 13.880  | 95.720  | 0.000   | 2.207   |
| Run  | Time     | 89Y     | 95Mo     | 98Mo    | 103Rh   | 107Ag   | 109Ag   | 111Cd   | 114Cd   |
|      |          | ppb     | ppb      | ppb     | ppb     | ppb     | ppb     | ppb     | ppb     |
| 1    | 00:39:42 | 70.052% | 0.446    | 0.474   | 72.565% | -0.015  | -0.020  | 0.005   | 0.013   |
| 2    | 00:40:02 | 69.755% | 0.685    | 0.518   | 71.685% | -0.023  | -0.011  | 0.040   | 0.038   |
| 3    | 00:40:21 | 68.280% | 0.671    | 0.635   | 71.278% | -0.021  | -0.012  | -0.002  | 0.012   |
| X    |          | 69.362% | 0.601    | 0.542   | 71.842% | -0.020  | -0.014  | 0.015   | 0.021   |
| σ    |          | 0.949%  | 0.134    | 0.084   | 0.658%  | 0.004   | 0.005   | 0.022   | 0.015   |
| %RSD |          | 1.368   | 22.370   | 15.440  | 0.916   | 21.540  | 32.680  | 152.900 | 69.580  |
| Run  | Time     | 115In   | 118Sn    | 121Sb   | 123Sb   | 135Ba   | 137Ba   | 159Tb   | 165Ho   |
|      |          | ppb     | ppb      | ppb     | ppb     | ppb     | ppb     | ppb     | ppb     |
| 1    | 00:39:42 | 74.811% | 0.058    | 1.516   | 1.474   | 4.452   | 4.476   | 87.275% | 87.685% |
| 2    | 00:40:02 | 75.341% | 0.217    | 1.517   | 1.508   | 4.439   | 4.484   | 87.710% | 88.599% |
| 3    | 00:40:21 | 74.997% | 0.165    | 1.519   | 1.520   | 4.417   | 4.560   | 88.140% | 89.861% |
| X    |          | 75.050% | 0.147    | 1.517   | 1.500   | 4.436   | 4.506   | 87.708% | 88.715% |
| σ    |          | 0.269%  | 0.081    | 0.002   | 0.024   | 0.017   | 0.046   | 0.432%  | 1.093%  |
| %RSD |          | 0.358   | 55.330   | 0.106   | 1.602   | 0.392   | 1.025   | 0.493   | 1.232   |
| Run  | Time     | 203Tl   | 205Tl    | 206Pb   | 207Pb   | 208Pb   | 209Bi   |         |         |
|      |          | ppb     | ppb      | ppb     | ppb     | ppb     | ppb     |         |         |
| 1    | 00:39:42 | 0.018   | 0.019    | 497.300 | 460.800 | 479.900 | 89.102% |         |         |
| 2    | 00:40:02 | 0.012   | 0.019    | 502.500 | 461.000 | 482.300 | 90.539% |         |         |
| 3    | 00:40:21 | 0.016   | 0.019    | 503.700 | 466.000 | 484.300 | 91.522% |         |         |
| X    |          | 0.015   | 0.019    | 501.200 | 462.600 | 482.200 | 90.388% |         |         |
| σ    |          | 0.003   | 0.000    | 3.392   | 2.928   | 2.245   | 1.217%  |         |         |
| %RSD |          | 18.250  | 0.989    | 0.677   | 0.633   | 0.466   | 1.347   |         |         |

MB 180-141167/1-A 5/20/2015 12:46:38 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    | 00:46:57 | 83.953% | -0.009   | 1.042   | 0.295   | 0.000   | 0.075    | 0.434    | 0.142   |
| 2    | 00:47:18 | 89.369% | -0.010   | 0.969   | 0.525   | 0.000   | -0.169   | 0.279    | 0.117   |
| 3    | 00:47:37 | 85.443% | 0.077    | 0.247   | 0.611   | 0.000   | -0.331   | 0.490    | 0.230   |
| X    |          | 86.255% | 0.019    | 0.752   | 0.477   | 0.000   | -0.142   | 0.401    | 0.163   |
| σ    |          | 2.798%  | 0.050    | 0.439   | 0.164   | 0.000   | 0.204    | 0.109    | 0.060   |
| %RSD |          | 3.243   | 256.800  | 58.360  | 34.290  | 0.000   | 144.300  | 27.250   | 36.490  |
| Run  | Time     | 27Al    | 28Si     | 37Cl    | 39K     | 43Ca    | 44Ca     | 45Sc     | 47Ti    |
|      |          | ppb     | ppb      | ppb     | ppb     | ppb     | ppb      | ppb      | ppb     |
| 1    | 00:46:57 | 0.585   | -297.900 | 0.000   | 2.006   | -3.474  | 3.654    | 80.877%  | -0.205  |
| 2    | 00:47:18 | 0.256   | -298.800 | 0.000   | 2.749   | -5.513  | 2.899    | 78.095%  | -0.226  |
| 3    | 00:47:37 | 0.484   | -299.200 | 0.000   | 0.078   | 0.799   | 1.262    | 78.178%  | -0.140  |
| X    |          | 0.442   | -298.600 | 0.000   | 1.611   | -2.729  | 2.605    | 79.050%  | -0.190  |
| σ    |          | 0.169   | 0.645    | 0.000   | 1.378   | 3.221   | 1.223    | 1.583%   | 0.045   |
| %RSD |          | 38.180  | 0.216    | 0.000   | 85.560  | 118.000 | 46.930   | 2.003    | 23.800  |
| Run  | Time     | 51V     | 52Cr     | 55Mn    | 56Fe    | 57Fe    | 59Co     | 60Ni     | 63Cu    |
|      |          | ppb     | ppb      | ppb     | ppb     | ppb     | ppb      | ppb      | ppb     |
| 1    | 00:46:57 | -0.223  | 0.028    | 0.013   | -2.362  | 0.494   | -0.000   | 0.017    | -0.028  |
| 2    | 00:47:18 | -0.057  | 0.050    | -0.006  | -3.437  | 1.228   | 0.003    | 0.012    | -0.010  |
| 3    | 00:47:37 | 0.029   | 0.033    | 0.001   | -3.796  | 1.081   | 0.005    | -0.024   | -0.029  |
| X    |          | -0.084  | 0.037    | 0.002   | -3.198  | 0.934   | 0.002    | 0.002    | -0.022  |
| σ    |          | 0.128   | 0.011    | 0.009   | 0.746   | 0.389   | 0.003    | 0.022    | 0.011   |
| %RSD |          | 153.200 | 30.820   | 375.400 | 23.330  | 41.600  | 107.400  | 1243.000 | 47.020  |
| Run  | Time     | 65Cu    | 66Zn     | 68Zn    | 75As    | 78Se    | 82Se     | 83Kr     | 88Sr    |
|      |          | ppb     | ppb      | ppb     | ppb     | ppb     | ppb      | ppb      | ppb     |
| 1    | 00:46:57 | -0.038  | 0.325    | 0.299   | 0.047   | -0.686  | -0.056   | 0.000    | 0.006   |
| 2    | 00:47:18 | -0.037  | 0.200    | 0.486   | -0.173  | -0.800  | -0.013   | 0.000    | 0.006   |
| 3    | 00:47:37 | -0.046  | 0.240    | 0.234   | -0.256  | -0.181  | -0.191   | 0.000    | 0.006   |
| X    |          | -0.040  | 0.255    | 0.340   | -0.127  | -0.556  | -0.087   | 0.000    | 0.006   |
| σ    |          | 0.005   | 0.064    | 0.131   | 0.157   | 0.329   | 0.093    | 0.000    | 0.000   |
| %RSD |          | 12.770  | 24.930   | 38.450  | 123.400 | 59.280  | 107.000  | 0.000    | 6.833   |
| Run  | Time     | 89Y     | 95Mo     | 98Mo    | 103Rh   | 107Ag   | 109Ag    | 111Cd    | 114Cd   |
|      |          | ppb     | ppb      | ppb     | ppb     | ppb     | ppb      | ppb      | ppb     |
| 1    | 00:46:57 | 78.872% | 0.121    | 0.129   | 81.782% | -0.020  | -0.019   | 0.006    | 0.004   |
| 2    | 00:47:18 | 80.128% | 0.210    | 0.139   | 82.785% | -0.023  | -0.024   | 0.002    | -0.000  |
| 3    | 00:47:37 | 78.845% | 0.278    | 0.207   | 81.429% | -0.027  | -0.022   | -0.020   | -0.013  |
| X    |          | 79.282% | 0.203    | 0.158   | 81.999% | -0.023  | -0.022   | -0.004   | -0.003  |
| σ    |          | 0.733%  | 0.079    | 0.043   | 0.703%  | 0.004   | 0.003    | 0.014    | 0.009   |
| %RSD |          | 0.925   | 38.940   | 26.960  | 0.858   | 15.780  | 13.350   | 325.300  | 283.500 |
| Run  | Time     | 115In   | 118Sn    | 121Sb   | 123Sb   | 135Ba   | 137Ba    | 159Tb    | 165Ho   |
|      |          | ppb     | ppb      | ppb     | ppb     | ppb     | ppb      | ppb      | ppb     |
| 1    | 00:46:57 | 82.780% | -0.411   | -0.093  | -0.080  | 0.010   | 0.023    | 89.483%  | 90.106% |
| 2    | 00:47:18 | 82.832% | -0.355   | -0.082  | -0.078  | 0.010   | 0.010    | 91.016%  | 91.358% |
| 3    | 00:47:37 | 83.438% | -0.296   | -0.091  | -0.075  | 0.032   | 0.010    | 91.665%  | 91.881% |
| X    |          | 83.017% | -0.354   | -0.089  | -0.078  | 0.017   | 0.014    | 90.721%  | 91.115% |
| σ    |          | 0.366%  | 0.058    | 0.006   | 0.003   | 0.013   | 0.008    | 1.120%   | 0.912%  |
| %RSD |          | 0.441   | 16.260   | 6.812   | 3.352   | 74.840  | 53.680   | 1.235    | 1.001   |
| Run  | Time     | 203Tl   | 205Tl    | 206Pb   | 207Pb   | 208Pb   | 209Bi    |          |         |
|      |          | ppb     | ppb      | ppb     | ppb     | ppb     | ppb      |          |         |
| 1    | 00:46:57 | 0.003   | 0.004    | 0.005   | 0.006   | 0.009   | 107.538% |          |         |
| 2    | 00:47:18 | 0.005   | 0.005    | 0.008   | 0.004   | 0.008   | 101.283% |          |         |
| 3    | 00:47:37 | 0.003   | 0.008    | 0.002   | 0.003   | 0.001   | 99.085%  |          |         |
| X    |          | 0.004   | 0.006    | 0.005   | 0.004   | 0.006   | 102.635% |          |         |
| σ    |          | 0.001   | 0.002    | 0.003   | 0.001   | 0.004   | 4.386%   |          |         |
| %RSD |          | 30.040  | 36.840   | 62.490  | 32.120  | 67.750  | 4.273    |          |         |

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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    | 00:50:46 | 56.769%  | 46.720   | 1007.000 | 989.800   | 0.000     | 45190.000 | 43980.000 | 44090.000 |
| 2    | 00:51:05 | 55.116%  | 46.720   | 1015.000 | 965.600   | 0.000     | 43280.000 | 43200.000 | 43990.000 |
| 3    | 00:51:24 | 54.568%  | 49.960   | 979.000  | 933.600   | 0.000     | 43890.000 | 44160.000 | 43980.000 |
| X    |          | 55.484%  | 47.800   | 1000.000 | 963.000   | 0.000     | 44120.000 | 43780.000 | 44020.000 |
| σ    |          | 1.146%   | 1.869    | 18.900   | 28.180    | 0.000     | 979.100   | 512.300   | 61.320    |
| %RSD |          | 2.066    | 3.910    | 1.890    | 2.926     | 0.000     | 2.219     | 1.170     | 0.139     |
| Run  | Time     | 27Al     | 28Si     | 37Cl     | 39K       | 43Ca      | 44Ca      | 45Sc      | 47Ti      |
|      |          | ppb      | ppb      | ppb      | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 00:50:46 | 1676.000 | 8306.000 | 0.000    | 47710.000 | 48600.000 | 46960.000 | 55.178%   | 968.000   |
| 2    | 00:51:05 | 1715.000 | 7899.000 | 0.000    | 47380.000 | 50090.000 | 48130.000 | 52.206%   | 974.000   |
| 3    | 00:51:24 | 1684.000 | 7901.000 | 0.000    | 47540.000 | 51030.000 | 47450.000 | 50.788%   | 995.600   |
| X    |          | 1692.000 | 8035.000 | 0.000    | 47540.000 | 49900.000 | 47510.000 | 52.724%   | 979.200   |
| σ    |          | 20.620   | 234.700  | 0.000    | 162.200   | 1226.000  | 590.300   | 2.241%    | 14.540    |
| %RSD |          | 1.219    | 2.921    | 0.000    | 0.341     | 2.457     | 1.242     | 4.250     | 1.484     |
| Run  | Time     | 51V      | 52Cr     | 55Mn     | 56Fe      | 57Fe      | 59Co      | 60Ni      | 63Cu      |
|      |          | ppb      | ppb      | ppb      | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 00:50:46 | 477.500  | 192.200  | 474.400  | 926.900   | 1014.000  | 466.200   | 458.100   | 227.200   |
| 2    | 00:51:05 | 491.800  | 196.400  | 478.500  | 953.400   | 1077.000  | 473.000   | 467.100   | 235.900   |
| 3    | 00:51:24 | 497.800  | 197.800  | 493.600  | 981.100   | 1083.000  | 484.700   | 486.200   | 243.100   |
| X    |          | 489.000  | 195.500  | 482.200  | 953.800   | 1058.000  | 474.700   | 470.500   | 235.400   |
| σ    |          | 10.390   | 2.943    | 10.120   | 27.120    | 38.450    | 9.374     | 14.300    | 7.984     |
| %RSD |          | 2.125    | 1.505    | 2.099    | 2.844     | 3.635     | 1.975     | 3.040     | 3.392     |
| Run  | Time     | 65Cu     | 66Zn     | 68Zn     | 75As      | 78Se      | 82Se      | 83Kr      | 88Sr      |
|      |          | ppb      | ppb      | ppb      | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 00:50:46 | 235.700  | 451.100  | 447.600  | 36.680    | 8.506     | 10.090    | 0.000     | 933.800   |
| 2    | 00:51:05 | 232.700  | 462.400  | 460.000  | 36.900    | 9.505     | 10.090    | 0.000     | 935.200   |
| 3    | 00:51:24 | 242.700  | 471.500  | 473.100  | 35.950    | 9.357     | 9.817     | 0.000     | 945.400   |
| X    |          | 237.000  | 461.700  | 460.200  | 36.510    | 9.123     | 10.000    | 0.000     | 938.100   |
| σ    |          | 5.118    | 10.240   | 12.740   | 0.494     | 0.539     | 0.158     | 0.000     | 6.337     |
| %RSD |          | 2.159    | 2.217    | 2.769    | 1.353     | 5.910     | 1.581     | 0.000     | 0.675     |
| Run  | Time     | 89Y      | 95Mo     | 98Mo     | 103Rh     | 107Ag     | 109Ag     | 111Cd     | 114Cd     |
|      |          | ppb      | ppb      | ppb      | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 00:50:46 | 63.918%  | 1017.000 | 1035.000 | 64.416%   | 46.630    | 46.310    | 47.180    | 40.530    |
| 2    | 00:51:05 | 63.636%  | 1010.000 | 1040.000 | 63.299%   | 46.840    | 46.840    | 48.520    | 41.480    |
| 3    | 00:51:24 | 62.599%  | 1012.000 | 1042.000 | 63.073%   | 46.500    | 46.940    | 47.410    | 40.250    |
| X    |          | 63.384%  | 1013.000 | 1039.000 | 63.596%   | 46.650    | 46.700    | 47.700    | 40.750    |
| σ    |          | 0.694%   | 3.211    | 3.338    | 0.719%    | 0.171     | 0.337     | 0.715     | 0.644     |
| %RSD |          | 1.096    | 0.317    | 0.321    | 1.131     | 0.367     | 0.721     | 1.499     | 1.580     |
| Run  | Time     | 115In    | 118Sn    | 121Sb    | 123Sb     | 135Ba     | 137Ba     | 159Tb     | 165Ho     |
|      |          | ppb      | ppb      | ppb      | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 00:50:46 | 67.448%  | 1906.000 | 469.500  | 468.500   | 1769.000  | 1762.000  | 85.734%   | 87.271%   |
| 2    | 00:51:05 | 66.999%  | 1911.000 | 472.500  | 473.100   | 1774.000  | 1786.000  | 86.318%   | 87.716%   |
| 3    | 00:51:24 | 67.003%  | 1907.000 | 473.500  | 475.400   | 1775.000  | 1775.000  | 87.103%   | 89.168%   |
| X    |          | 67.150%  | 1908.000 | 471.800  | 472.300   | 1773.000  | 1774.000  | 86.385%   | 88.052%   |
| σ    |          | 0.258%   | 2.576    | 2.065    | 3.496     | 3.610     | 11.970    | 0.687%    | 0.992%    |
| %RSD |          | 0.384    | 0.135    | 0.438    | 0.740     | 0.204     | 0.674     | 0.795     | 1.127     |
| Run  | Time     | 203Tl    | 205Tl    | 206Pb    | 207Pb     | 208Pb     | 209Bi     |           |           |
|      |          | ppb      | ppb      | ppb      | ppb       | ppb       | ppb       |           |           |
| 1    | 00:50:46 | 47.580   | 49.700   | 20.480   | 20.630    | 20.540    | 81.591%   |           |           |
| 2    | 00:51:05 | 48.420   | 50.740   | 20.450   | 20.400    | 20.530    | 81.968%   |           |           |
| 3    | 00:51:24 | 49.090   | 51.380   | 20.690   | 20.720    | 20.600    | 83.420%   |           |           |
| X    |          | 48.360   | 50.610   | 20.540   | 20.580    | 20.560    | 82.326%   |           |           |
| σ    |          | 0.759    | 0.847    | 0.131    | 0.166     | 0.035     | 0.966%    |           |           |
| %RSD |          | 1.569    | 1.673    | 0.638    | 0.807     | 0.169     | 1.173     |           |           |

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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    | 00:54:32 | 72.124% | 0.021    | 3.646  | 3.326    | 0.000    | 3452.000 | 620.500 | 643.300 |
| 2    | 00:54:52 | 67.123% | -0.003   | 2.923  | 3.255    | 0.000    | 3361.000 | 620.600 | 651.200 |
| 3    | 00:55:11 | 64.131% | 0.027    | 3.591  | 4.132    | 0.000    | 3545.000 | 657.400 | 662.900 |
| X    |          | 67.793% | 0.015    | 3.387  | 3.571    | 0.000    | 3453.000 | 632.800 | 652.500 |
| σ    |          | 4.038%  | 0.016    | 0.402  | 0.487    | 0.000    | 91.680   | 21.280  | 9.887   |
| %RSD |          | 5.957   | 106.200  | 11.880 | 13.650   | 0.000    | 2.655    | 3.362   | 1.515   |
| Run  | Time     | 27Al    | 28Si     | 37Cl   | 39K      | 43Ca     | 44Ca     | 45Sc    | 47Ti    |
|      |          | ppb     | ppb      | ppb    | ppb      | ppb      | ppb      | ppb     | ppb     |
| 1    | 00:54:32 | 97.680  | 5013.000 | 0.000  | 1161.000 | 3403.000 | 3205.000 | 58.543% | 4.274   |
| 2    | 00:54:52 | 97.120  | 4894.000 | 0.000  | 1108.000 | 3384.000 | 3199.000 | 57.351% | 3.275   |
| 3    | 00:55:11 | 22.070  | 5027.000 | 0.000  | 1139.000 | 3398.000 | 3280.000 | 55.813% | 3.188   |
| X    |          | 72.290  | 4978.000 | 0.000  | 1136.000 | 3395.000 | 3228.000 | 57.236% | 3.579   |
| σ    |          | 43.490  | 73.140   | 0.000  | 26.310   | 9.724    | 45.170   | 1.369%  | 0.604   |
| %RSD |          | 60.160  | 1.469    | 0.000  | 2.316    | 0.286    | 1.399    | 2.391   | 16.860  |
| Run  | Time     | 51V     | 52Cr     | 55Mn   | 56Fe     | 57Fe     | 59Co     | 60Ni    | 63Cu    |
|      |          | ppb     | ppb      | ppb    | ppb      | ppb      | ppb      | ppb     | ppb     |
| 1    | 00:54:32 | -0.530  | 0.816    | 28.900 | 248.400  | 265.000  | 0.177    | 0.078   | 0.352   |
| 2    | 00:54:52 | -1.020  | 0.666    | 28.450 | 242.900  | 265.100  | 0.147    | 0.081   | 0.261   |
| 3    | 00:55:11 | -0.331  | 0.778    | 28.930 | 250.500  | 268.200  | 0.152    | 0.053   | 0.301   |
| X    |          | -0.627  | 0.753    | 28.760 | 247.300  | 266.100  | 0.158    | 0.071   | 0.305   |
| σ    |          | 0.354   | 0.078    | 0.271  | 3.890    | 1.846    | 0.016    | 0.016   | 0.045   |
| %RSD |          | 56.550  | 10.360   | 0.943  | 1.573    | 0.694    | 10.230   | 22.110  | 14.860  |
| Run  | Time     | 65Cu    | 66Zn     | 68Zn   | 75As     | 78Se     | 82Se     | 83Kr    | 88Sr    |
|      |          | ppb     | ppb      | ppb    | ppb      | ppb      | ppb      | ppb     | ppb     |
| 1    | 00:54:32 | 0.361   | 4.216    | 4.216  | 0.064    | -0.695   | -0.089   | 0.000   | 30.710  |
| 2    | 00:54:52 | 0.304   | 3.725    | 4.171  | 0.001    | -1.316   | 0.195    | 0.000   | 30.990  |
| 3    | 00:55:11 | 0.306   | 3.669    | 3.871  | -0.266   | -1.236   | 0.066    | 0.000   | 31.160  |
| X    |          | 0.324   | 3.870    | 4.086  | -0.067   | -1.082   | 0.057    | 0.000   | 30.950  |
| σ    |          | 0.033   | 0.301    | 0.187  | 0.175    | 0.338    | 0.142    | 0.000   | 0.226   |
| %RSD |          | 10.070  | 7.767    | 4.586  | 260.900  | 31.250   | 248.900  | 0.000   | 0.731   |
| Run  | Time     | 89Y     | 95Mo     | 98Mo   | 103Rh    | 107Ag    | 109Ag    | 111Cd   | 114Cd   |
|      |          | ppb     | ppb      | ppb    | ppb      | ppb      | ppb      | ppb     | ppb     |
| 1    | 00:54:32 | 66.370% | 6.283    | 6.141  | 69.076%  | -0.012   | -0.013   | -0.047  | -0.047  |
| 2    | 00:54:52 | 66.486% | 6.361    | 6.566  | 68.066%  | -0.022   | -0.015   | -0.060  | -0.061  |
| 3    | 00:55:11 | 65.610% | 5.834    | 5.696  | 68.993%  | -0.019   | -0.008   | 0.023   | 0.011   |
| X    |          | 66.155% | 6.159    | 6.134  | 68.712%  | -0.017   | -0.012   | -0.028  | -0.032  |
| σ    |          | 0.475%  | 0.285    | 0.435  | 0.560%   | 0.005    | 0.003    | 0.044   | 0.038   |
| %RSD |          | 0.719   | 4.622    | 7.094  | 0.816    | 28.490   | 28.210   | 157.500 | 119.000 |
| Run  | Time     | 115In   | 118Sn    | 121Sb  | 123Sb    | 135Ba    | 137Ba    | 159Tb   | 165Ho   |
|      |          | ppb     | ppb      | ppb    | ppb      | ppb      | ppb      | ppb     | ppb     |
| 1    | 00:54:32 | 71.014% | 1.402    | 0.152  | 0.167    | 28.390   | 28.240   | 85.165% | 85.998% |
| 2    | 00:54:52 | 71.432% | 1.338    | 0.119  | 0.118    | 28.470   | 28.310   | 85.892% | 86.520% |
| 3    | 00:55:11 | 71.867% | 1.275    | 0.156  | 0.133    | 28.260   | 27.880   | 86.104% | 87.651% |
| X    |          | 71.438% | 1.338    | 0.142  | 0.139    | 28.370   | 28.140   | 85.720% | 86.723% |
| σ    |          | 0.427%  | 0.063    | 0.020  | 0.025    | 0.104    | 0.235    | 0.492%  | 0.845%  |
| %RSD |          | 0.597   | 4.742    | 14.150 | 17.970   | 0.367    | 0.835    | 0.574   | 0.974   |
| Run  | Time     | 203Tl   | 205Tl    | 206Pb  | 207Pb    | 208Pb    | 209Bi    |         |         |
|      |          | ppb     | ppb      | ppb    | ppb      | ppb      | ppb      |         |         |
| 1    | 00:54:32 | 0.420   | 0.424    | 0.234  | 0.215    | 0.222    | 87.797%  |         |         |
| 2    | 00:54:52 | 0.318   | 0.315    | 0.226  | 0.220    | 0.221    | 88.522%  |         |         |
| 3    | 00:55:11 | 0.246   | 0.267    | 0.236  | 0.190    | 0.214    | 90.507%  |         |         |
| X    |          | 0.328   | 0.336    | 0.232  | 0.208    | 0.219    | 88.942%  |         |         |
| σ    |          | 0.088   | 0.080    | 0.005  | 0.016    | 0.004    | 1.403%   |         |         |
| %RSD |          | 26.670  | 23.990   | 2.308  | 7.782    | 1.863    | 1.577    |         |         |

180-43898-I-2-A 5/20/2015 12:58:00 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    | 00:58:20 | 66.906% | 0.025    | 10.870  | 9.744    | 0.000    | 3415.000 | 1012.000 | 1044.000 |
| 2    | 00:58:39 | 68.870% | -0.031   | 12.940  | 10.730   | 0.000    | 3440.000 | 1005.000 | 1035.000 |
| 3    | 00:58:58 | 62.192% | 0.029    | 12.300  | 11.850   | 0.000    | 3503.000 | 1039.000 | 1064.000 |
| X    |          | 65.989% | 0.008    | 12.040  | 10.780   | 0.000    | 3453.000 | 1019.000 | 1048.000 |
| σ    |          | 3.432%  | 0.033    | 1.059   | 1.053    | 0.000    | 45.480   | 17.710   | 14.590   |
| %RSD |          | 5.201   | 439.300  | 8.801   | 9.771    | 0.000    | 1.317    | 1.739    | 1.393    |
| Run  | Time     | 27Al    | 28Si     | 37Cl    | 39K      | 43Ca     | 44Ca     | 45Sc     | 47Ti     |
|      |          | ppb     | ppb      | ppb     | ppb      | ppb      | ppb      | ppb      | ppb      |
| 1    | 00:58:20 | 100.100 | 4155.000 | 0.000   | 1305.000 | 5596.000 | 5141.000 | 60.147%  | 4.213    |
| 2    | 00:58:39 | 26.030  | 4091.000 | 0.000   | 1303.000 | 5713.000 | 5162.000 | 56.729%  | 5.007    |
| 3    | 00:58:58 | 95.570  | 4221.000 | 0.000   | 1353.000 | 5736.000 | 5383.000 | 54.394%  | 3.985    |
| X    |          | 73.900  | 4156.000 | 0.000   | 1321.000 | 5682.000 | 5229.000 | 57.090%  | 4.402    |
| σ    |          | 41.520  | 64.590   | 0.000   | 28.420   | 75.340   | 134.100  | 2.893%   | 0.536    |
| %RSD |          | 56.190  | 1.554    | 0.000   | 2.152    | 1.326    | 2.564    | 5.068    | 12.190   |
| Run  | Time     | 51V     | 52Cr     | 55Mn    | 56Fe     | 57Fe     | 59Co     | 60Ni     | 63Cu     |
|      |          | ppb     | ppb      | ppb     | ppb      | ppb      | ppb      | ppb      | ppb      |
| 1    | 00:58:20 | -0.452  | 0.717    | 145.000 | 248.100  | 280.400  | 0.171    | 0.081    | 0.285    |
| 2    | 00:58:39 | -0.919  | 0.697    | 151.800 | 250.800  | 282.100  | 0.146    | 0.088    | 0.333    |
| 3    | 00:58:58 | -0.273  | 0.716    | 151.800 | 266.000  | 296.900  | 0.180    | 0.006    | 0.372    |
| X    |          | -0.548  | 0.710    | 149.500 | 254.900  | 286.500  | 0.166    | 0.058    | 0.330    |
| σ    |          | 0.334   | 0.011    | 3.935   | 9.657    | 9.097    | 0.018    | 0.046    | 0.043    |
| %RSD |          | 60.830  | 1.585    | 2.632   | 3.788    | 3.176    | 10.610   | 78.090   | 13.160   |
| Run  | Time     | 65Cu    | 66Zn     | 68Zn    | 75As     | 78Se     | 82Se     | 83Kr     | 88Sr     |
|      |          | ppb     | ppb      | ppb     | ppb      | ppb      | ppb      | ppb      | ppb      |
| 1    | 00:58:20 | 0.345   | 2.204    | 2.074   | 0.403    | -1.634   | -0.045   | 0.000    | 36.190   |
| 2    | 00:58:39 | 0.224   | 2.280    | 2.145   | -0.140   | -0.928   | -0.059   | 0.000    | 36.660   |
| 3    | 00:58:58 | 0.227   | 2.302    | 2.024   | -0.003   | -0.789   | -0.197   | 0.000    | 37.190   |
| X    |          | 0.265   | 2.262    | 2.081   | 0.086    | -1.117   | -0.100   | 0.000    | 36.680   |
| σ    |          | 0.069   | 0.051    | 0.061   | 0.282    | 0.453    | 0.084    | 0.000    | 0.499    |
| %RSD |          | 26.080  | 2.260    | 2.912   | 326.500  | 40.570   | 83.490   | 0.000    | 1.361    |
| Run  | Time     | 89Y     | 95Mo     | 98Mo    | 103Rh    | 107Ag    | 109Ag    | 111Cd    | 114Cd    |
|      |          | ppb     | ppb      | ppb     | ppb      | ppb      | ppb      | ppb      | ppb      |
| 1    | 00:58:20 | 67.199% | 1.299    | 1.315   | 69.143%  | -0.020   | -0.022   | -0.019   | -0.017   |
| 2    | 00:58:39 | 66.312% | 1.559    | 1.698   | 69.473%  | -0.027   | -0.016   | -0.011   | -0.003   |
| 3    | 00:58:58 | 65.909% | 1.864    | 1.919   | 68.542%  | -0.021   | -0.015   | -0.082   | -0.061   |
| X    |          | 66.473% | 1.574    | 1.644   | 69.052%  | -0.022   | -0.017   | -0.037   | -0.027   |
| σ    |          | 0.660%  | 0.283    | 0.305   | 0.472%   | 0.004    | 0.004    | 0.039    | 0.030    |
| %RSD |          | 0.993   | 17.970   | 18.580  | 0.683    | 18.350   | 20.380   | 104.300  | 112.900  |
| Run  | Time     | 115In   | 118Sn    | 121Sb   | 123Sb    | 135Ba    | 137Ba    | 159Tb    | 165Ho    |
|      |          | ppb     | ppb      | ppb     | ppb      | ppb      | ppb      | ppb      | ppb      |
| 1    | 00:58:20 | 71.786% | 0.129    | 0.015   | 0.059    | 26.770   | 26.860   | 85.636%  | 86.928%  |
| 2    | 00:58:39 | 72.477% | 0.219    | 0.050   | 0.070    | 27.420   | 27.110   | 86.735%  | 88.745%  |
| 3    | 00:58:58 | 72.280% | 0.283    | 0.050   | 0.047    | 27.390   | 27.380   | 87.417%  | 88.616%  |
| X    |          | 72.181% | 0.210    | 0.038   | 0.059    | 27.200   | 27.110   | 86.596%  | 88.096%  |
| σ    |          | 0.356%  | 0.078    | 0.020   | 0.011    | 0.366    | 0.261    | 0.899%   | 1.014%   |
| %RSD |          | 0.493   | 36.890   | 52.730  | 19.500   | 1.347    | 0.964    | 1.038    | 1.151    |
| Run  | Time     | 203Tl   | 205Tl    | 206Pb   | 207Pb    | 208Pb    | 209Bi    |          |          |
|      |          | ppb     | ppb      | ppb     | ppb      | ppb      | ppb      |          |          |
| 1    | 00:58:20 | 0.065   | 0.075    | 0.132   | 0.143    | 0.137    | 89.055%  |          |          |
| 2    | 00:58:39 | 0.082   | 0.072    | 0.146   | 0.106    | 0.132    | 91.276%  |          |          |
| 3    | 00:58:58 | 0.076   | 0.078    | 0.134   | 0.127    | 0.134    | 93.505%  |          |          |
| X    |          | 0.074   | 0.075    | 0.137   | 0.126    | 0.134    | 91.279%  |          |          |
| σ    |          | 0.009   | 0.003    | 0.008   | 0.019    | 0.003    | 2.225%   |          |          |
| %RSD |          | 11.710  | 3.922    | 5.493   | 14.920   | 1.952    | 2.438    |          |          |



180-43898-I-4-A 5/20/2015 1:01:48 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   | 01:02:08 | 67.647%  | -0.031   | 11.820 | 9.172    | 0.000    | 5708.000 | 1239.000 | 1288.000 |          |
| 2   | 01:02:27 | 66.599%  | -0.031   | 10.700 | 9.081    | 0.000    | 5666.000 | 1297.000 | 1278.000 |          |
| 3   | 01:02:46 | 64.062%  | -0.031   | 10.010 | 9.323    | 0.000    | 5497.000 | 1240.000 | 1252.000 |          |
| X   |          | 66.103%  | -0.031   | 10.850 | 9.192    | 0.000    | 5623.000 | 1258.000 | 1273.000 |          |
|     |          | $\sigma$ | 0.000    | 0.910  | 0.123    | 0.000    | 111.700  | 33.240   | 19.030   |          |
|     |          | %RSD     | 2.789    | 0.000  | 8.390    | 1.332    | 0.000    | 1.986    | 2.641    | 1.495    |
| Run | Time     | 27Al     | 28Si     | 37Cl   | 39K      | 43Ca     | 44Ca     | 45Sc     | 47Ti     |          |
|     |          | ppb      | ppb      | ppb    | ppb      | ppb      | ppb      | ppb      | ppb      |          |
| 1   | 01:02:08 | 83.320   | 3788.000 | 0.000  | 1611.000 | 7223.000 | 6716.000 | 57.201%  | 3.785    |          |
| 2   | 01:02:27 | 83.700   | 3775.000 | 0.000  | 1587.000 | 7174.000 | 6839.000 | 54.801%  | 3.372    |          |
| 3   | 01:02:46 | 82.120   | 3699.000 | 0.000  | 1573.000 | 7395.000 | 6796.000 | 56.251%  | 3.554    |          |
| X   |          | 83.050   | 3754.000 | 0.000  | 1591.000 | 7264.000 | 6784.000 | 56.084%  | 3.570    |          |
|     |          | $\sigma$ | 0.825    | 48.140 | 0.000    | 19.230   | 116.200  | 62.150   | 1.208%   | 0.207    |
|     |          | %RSD     | 0.993    | 1.282  | 0.000    | 1.209    | 1.599    | 0.916    | 2.155    | 5.805    |
| Run | Time     | 51V      | 52Cr     | 55Mn   | 56Fe     | 57Fe     | 59Co     | 60Ni     | 63Cu     |          |
|     |          | ppb      | ppb      | ppb    | ppb      | ppb      | ppb      | ppb      | ppb      |          |
| 1   | 01:02:08 | -1.061   | 0.791    | 78.090 | 209.100  | 240.500  | 0.111    | 0.016    | 0.523    |          |
| 2   | 01:02:27 | 0.643    | 0.791    | 79.620 | 220.500  | 249.000  | 0.113    | 0.022    | 0.533    |          |
| 3   | 01:02:46 | 0.358    | 0.822    | 80.930 | 214.900  | 239.900  | 0.153    | 0.080    | 0.430    |          |
| X   |          | -0.020   | 0.801    | 79.550 | 214.800  | 243.100  | 0.126    | 0.039    | 0.495    |          |
|     |          | $\sigma$ | 0.913    | 0.018  | 1.424    | 5.720    | 5.123    | 0.024    | 0.035    | 0.057    |
|     |          | %RSD     | 4576.000 | 2.239  | 1.790    | 2.663    | 2.107    | 18.980   | 89.570   | 11.440   |
| Run | Time     | 65Cu     | 66Zn     | 68Zn   | 75As     | 78Se     | 82Se     | 83Kr     | 88Sr     |          |
|     |          | ppb      | ppb      | ppb    | ppb      | ppb      | ppb      | ppb      | ppb      |          |
| 1   | 01:02:08 | 0.475    | 2.961    | 2.608  | -0.022   | -1.605   | -0.106   | 0.000    | 42.580   |          |
| 2   | 01:02:27 | 0.500    | 2.821    | 2.477  | -0.370   | -1.398   | 0.314    | 0.000    | 42.510   |          |
| 3   | 01:02:46 | 0.351    | 2.465    | 2.747  | 0.050    | -1.401   | 0.076    | 0.000    | 42.330   |          |
| X   |          | 0.442    | 2.749    | 2.611  | -0.114   | -1.468   | 0.095    | 0.000    | 42.470   |          |
|     |          | $\sigma$ | 0.080    | 0.255  | 0.135    | 0.225    | 0.119    | 0.211    | 0.000    | 0.132    |
|     |          | %RSD     | 18.040   | 9.290  | 5.181    | 196.700  | 8.083    | 223.000  | 0.000    | 0.310    |
| Run | Time     | 89Y      | 95Mo     | 98Mo   | 103Rh    | 107Ag    | 109Ag    | 111Cd    | 114Cd    |          |
|     |          | ppb      | ppb      | ppb    | ppb      | ppb      | ppb      | ppb      | ppb      |          |
| 1   | 01:02:08 | 66.413%  | 0.938    | 0.911  | 68.858%  | -0.022   | -0.018   | 0.037    | 0.025    |          |
| 2   | 01:02:27 | 65.582%  | 1.316    | 1.205  | 68.143%  | -0.024   | -0.018   | 0.009    | 0.015    |          |
| 3   | 01:02:46 | 64.960%  | 1.359    | 1.214  | 67.211%  | -0.014   | -0.017   | -0.061   | -0.045   |          |
| X   |          | 65.652%  | 1.204    | 1.110  | 68.071%  | -0.020   | -0.018   | -0.005   | -0.002   |          |
|     |          | $\sigma$ | 0.729%   | 0.232  | 0.173    | 0.826%   | 0.005    | 0.001    | 0.051    | 0.038    |
|     |          | %RSD     | 1.111    | 19.240 | 15.570   | 1.213    | 26.890   | 4.272    | 1007.000 | 2461.000 |
| Run | Time     | 115In    | 118Sn    | 121Sb  | 123Sb    | 135Ba    | 137Ba    | 159Tb    | 165Ho    |          |
|     |          | ppb      | ppb      | ppb    | ppb      | ppb      | ppb      | ppb      | ppb      |          |
| 1   | 01:02:08 | 72.202%  | 0.124    | 0.045  | 0.075    | 34.490   | 34.300   | 84.646%  | 85.886%  |          |
| 2   | 01:02:27 | 72.101%  | 0.210    | 0.059  | 0.074    | 33.920   | 34.650   | 85.586%  | 87.048%  |          |
| 3   | 01:02:46 | 71.015%  | 0.214    | 0.050  | 0.072    | 35.390   | 35.340   | 86.206%  | 87.759%  |          |
| X   |          | 71.773%  | 0.183    | 0.051  | 0.074    | 34.600   | 34.760   | 85.479%  | 86.898%  |          |
|     |          | $\sigma$ | 0.658%   | 0.051  | 0.007    | 0.002    | 0.744    | 0.528    | 0.785%   | 0.946%   |
|     |          | %RSD     | 0.917    | 27.860 | 13.950   | 2.034    | 2.149    | 1.519    | 0.919    | 1.088    |
| Run | Time     | 203Tl    | 205Tl    | 206Pb  | 207Pb    | 208Pb    | 209Bi    |          |          |          |
|     |          | ppb      | ppb      | ppb    | ppb      | ppb      | ppb      |          |          |          |
| 1   | 01:02:08 | 0.060    | 0.050    | 0.150  | 0.142    | 0.144    | 89.007%  |          |          |          |
| 2   | 01:02:27 | 0.047    | 0.062    | 0.141  | 0.116    | 0.135    | 90.595%  |          |          |          |
| 3   | 01:02:46 | 0.053    | 0.069    | 0.140  | 0.121    | 0.133    | 90.821%  |          |          |          |
| X   |          | 0.053    | 0.060    | 0.144  | 0.126    | 0.137    | 90.141%  |          |          |          |
|     |          | $\sigma$ | 0.007    | 0.009  | 0.005    | 0.014    | 0.006    | 0.989%   |          |          |
|     |          | %RSD     | 12.590   | 15.260 | 3.782    | 10.880   | 4.527    | 1.097    |          |          |

CCV 1558997 5/20/2015 1:05:44 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    | 01:05:44 | 78.432% | 97.900   | 94.010   | 92.180    | 0.000     | 45610.000 | 44580.000 | 45350.000 |
| 2    | 01:06:04 | 73.247% | 93.630   | 101.100  | 97.630    | 0.000     | 46510.000 | 45710.000 | 45570.000 |
| 3    | 01:06:24 | 71.668% | 99.340   | 103.200  | 98.480    | 0.000     | 48750.000 | 47320.000 | 48020.000 |
| X    |          | 74.449% | 96.956%  | 99.428%  | 96.096%   | 0.000     | 93.909%   | 91.737%   | 92.621%   |
| σ    |          | 3.539%  | n/a      | n/a      | n/a       | 0.000     | n/a       | n/a       | n/a       |
| %RSD |          | 4.753   | 3.064    | 4.838    | 3.559     | 0.000     | 3.438     | 3.000     | 3.198     |
| Run  | Time     | 27Al    | 28Si     | 37Cl     | 39K       | 43Ca      | 44Ca      | 45Sc      | 47Ti      |
|      |          | ppb     | ppb      | ppb      | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 01:05:44 | 443.300 | 4007.000 | 0.000    | 46220.000 | 47290.000 | 46290.000 | 71.775%   | 93.340    |
| 2    | 01:06:04 | 454.000 | 4059.000 | 0.000    | 47900.000 | 48870.000 | 48370.000 | 70.398%   | 98.800    |
| 3    | 01:06:24 | 478.100 | 4293.000 | 0.000    | 50140.000 | 50570.000 | 48730.000 | 70.424%   | 101.500   |
| X    |          | 91.689% | 82.395%  | 0.000    | 96.178%   | 97.823%   | 95.600%   | 70.866%   | 97.879%   |
| σ    |          | n/a     | n/a      | 0.000    | n/a       | n/a       | n/a       | 0.787%    | n/a       |
| %RSD |          | 3.895   | 3.686    | 0.000    | 4.086     | 3.361     | 2.759     | 1.111     | 4.246     |
| Run  | Time     | 51V     | 52Cr     | 55Mn     | 56Fe      | 57Fe      | 59Co      | 60Ni      | 63Cu      |
|      |          | ppb     | ppb      | ppb      | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 01:05:44 | 92.720  | 96.510   | 473.900  | 24710.000 | 25020.000 | 98.150    | 98.250    | 97.540    |
| 2    | 01:06:04 | 96.800  | 98.250   | 487.200  | 25500.000 | 25190.000 | 98.230    | 98.090    | 99.130    |
| 3    | 01:06:24 | 96.830  | 98.490   | 490.100  | 24610.000 | 24810.000 | 96.750    | 98.030    | 97.210    |
| X    |          | 95.451% | 97.748%  | 96.749%  | 99.762%   | 100.027%  | 97.711%   | 98.126%   | 97.960%   |
| σ    |          | n/a     | n/a      | n/a      | n/a       | n/a       | n/a       | n/a       | n/a       |
| %RSD |          | 2.476   | 1.105    | 1.790    | 1.964     | 0.750     | 0.851     | 0.115     | 1.048     |
| Run  | Time     | 65Cu    | 66Zn     | 68Zn     | 75As      | 78Se      | 82Se      | 83Kr      | 88Sr      |
|      |          | ppb     | ppb      | ppb      | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 01:05:44 | 98.140  | 94.070   | 92.960   | 96.460    | 99.480    | 95.300    | 0.000     | 93.940    |
| 2    | 01:06:04 | 98.810  | 95.970   | 94.920   | 97.160    | 97.560    | 98.400    | 0.000     | 95.970    |
| 3    | 01:06:24 | 98.250  | 97.170   | 96.850   | 97.060    | 98.000    | 97.200    | 0.000     | 96.170    |
| X    |          | 98.401% | 95.736%  | 94.913%  | 96.894%   | 98.348%   | 96.968%   | 0.000     | 95.358%   |
| σ    |          | n/a     | n/a      | n/a      | n/a       | n/a       | n/a       | 0.000     | n/a       |
| %RSD |          | 0.369   | 1.632    | 2.051    | 0.391     | 1.025     | 1.609     | 0.000     | 1.295     |
| Run  | Time     | 89Y     | 95Mo     | 98Mo     | 103Rh     | 107Ag     | 109Ag     | 111Cd     | 114Cd     |
|      |          | ppb     | ppb      | ppb      | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 01:05:44 | 75.942% | 90.310   | 91.700   | 74.063%   | 97.730    | 98.630    | 100.800   | 102.400   |
| 2    | 01:06:04 | 76.020% | 91.530   | 95.080   | 74.400%   | 99.210    | 101.100   | 104.900   | 104.300   |
| 3    | 01:06:24 | 76.118% | 94.730   | 95.310   | 74.873%   | 99.250    | 100.300   | 102.700   | 104.800   |
| X    |          | 76.027% | 92.189%  | 94.031%  | 74.445%   | 98.731%   | 100.019%  | 102.790%  | 103.821%  |
| σ    |          | 0.088%  | n/a      | n/a      | 0.407%    | n/a       | n/a       | n/a       | n/a       |
| %RSD |          | 0.116   | 2.475    | 2.150    | 0.546     | 0.875     | 1.258     | 2.016     | 1.203     |
| Run  | Time     | 115In   | 118Sn    | 121Sb    | 123Sb     | 135Ba     | 137Ba     | 159Tb     | 165Ho     |
|      |          | ppb     | ppb      | ppb      | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 01:05:44 | 70.951% | 99.490   | 91.220   | 90.750    | 98.170    | 97.060    | 85.010%   | 85.293%   |
| 2    | 01:06:04 | 71.195% | 101.600  | 92.210   | 92.390    | 98.220    | 98.780    | 85.989%   | 86.380%   |
| 3    | 01:06:24 | 72.155% | 101.300  | 92.840   | 92.020    | 98.950    | 99.410    | 87.218%   | 87.905%   |
| X    |          | 71.433% | 100.816% | 92.090%  | 91.720%   | 98.447%   | 98.419%   | 86.072%   | 86.526%   |
| σ    |          | 0.637%  | n/a      | n/a      | n/a       | n/a       | n/a       | 1.106%    | 1.312%    |
| %RSD |          | 0.891   | 1.145    | 0.887    | 0.943     | 0.444     | 1.235     | 1.285     | 1.516     |
| Run  | Time     | 203Tl   | 205Tl    | 206Pb    | 207Pb     | 208Pb     | 209Bi     |           |           |
|      |          | ppb     | ppb      | ppb      | ppb       | ppb       | ppb       |           |           |
| 1    | 01:05:44 | 97.270  | 102.000  | 98.590   | 97.820    | 98.100    | 86.600%   |           |           |
| 2    | 01:06:04 | 99.880  | 104.500  | 101.400  | 100.700   | 100.900   | 86.676%   |           |           |
| 3    | 01:06:24 | 100.200 | 104.900  | 102.000  | 101.600   | 101.800   | 87.632%   |           |           |
| X    |          | 99.129% | 103.808% | 100.638% | 100.037%  | 100.280%  | 86.970%   |           |           |
| σ    |          | n/a     | n/a      | n/a      | n/a       | n/a       | 0.575%    |           |           |
| %RSD |          | 1.637   | 1.523    | 1.786    | 1.970     | 1.937     | 0.661     |           |           |

CCB4 5/20/2015 1:12:26 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    | 01:12:45 | 94.373% | -0.011   | 0.654   | 0.621   | 0.000   | 1.839   | 2.125   | 2.633   |
| 2    | 01:13:04 | 92.268% | -0.011   | 0.078   | 0.615   | 0.000   | 1.828   | 3.114   | 2.055   |
| 3    | 01:13:24 | 92.570% | 0.009    | 0.676   | 0.888   | 0.000   | 1.310   | 2.046   | 2.297   |
| X    |          | 93.070% | -0.004   | 0.469   | 0.708   | 0.000   | 1.659   | 2.428   | 2.328   |
| σ    |          | 1.138%  | 0.012    | 0.339   | 0.156   | 0.000   | 0.302   | 0.595   | 0.290   |
| %RSD |          | 1.223   | 273.600  | 72.250  | 22.060  | 0.000   | 18.210  | 24.520  | 12.470  |
| Run  | Time     | 27Al    | 28Si     | 37Cl    | 39K     | 43Ca    | 44Ca    | 45Sc    | 47Ti    |
|      |          | ppb     | ppb      | ppb     | ppb     | ppb     | ppb     | ppb     | ppb     |
| 1    | 01:12:45 | 0.073   | -301.100 | 0.000   | 5.292   | 0.168   | 2.710   | 86.895% | -0.089  |
| 2    | 01:13:04 | 0.164   | -300.200 | 0.000   | 4.166   | -1.705  | 1.060   | 86.484% | -0.207  |
| 3    | 01:13:24 | -0.087  | -300.300 | 0.000   | 4.349   | 6.183   | 2.840   | 84.368% | -0.126  |
| X    |          | 0.050   | -300.600 | 0.000   | 4.602   | 1.549   | 2.203   | 85.916% | -0.141  |
| σ    |          | 0.127   | 0.460    | 0.000   | 0.604   | 4.121   | 0.992   | 1.356%  | 0.060   |
| %RSD |          | 252.900 | 0.153    | 0.000   | 13.130  | 266.100 | 45.040  | 1.579   | 42.700  |
| Run  | Time     | 51V     | 52Cr     | 55Mn    | 56Fe    | 57Fe    | 59Co    | 60Ni    | 63Cu    |
|      |          | ppb     | ppb      | ppb     | ppb     | ppb     | ppb     | ppb     | ppb     |
| 1    | 01:12:45 | 0.023   | -0.041   | 0.048   | -1.329  | 5.696   | 0.006   | 0.003   | -0.005  |
| 2    | 01:13:04 | -0.014  | -0.054   | 0.023   | -2.140  | 4.257   | 0.002   | 0.019   | -0.007  |
| 3    | 01:13:24 | 0.051   | -0.019   | 0.038   | -1.790  | 4.274   | 0.008   | -0.008  | -0.026  |
| X    |          | 0.020   | -0.038   | 0.036   | -1.753  | 4.742   | 0.005   | 0.005   | -0.013  |
| σ    |          | 0.032   | 0.018    | 0.013   | 0.407   | 0.826   | 0.003   | 0.014   | 0.011   |
| %RSD |          | 161.200 | 46.750   | 35.020  | 23.230  | 17.420  | 60.220  | 276.300 | 90.160  |
| Run  | Time     | 65Cu    | 66Zn     | 68Zn    | 75As    | 78Se    | 82Se    | 83Kr    | 88Sr    |
|      |          | ppb     | ppb      | ppb     | ppb     | ppb     | ppb     | ppb     | ppb     |
| 1    | 01:12:45 | -0.043  | 4.567    | 4.380   | 0.048   | -0.558  | 0.315   | 0.000   | 0.018   |
| 2    | 01:13:04 | -0.011  | 4.287    | 4.555   | 0.109   | -0.314  | 0.310   | 0.000   | 0.008   |
| 3    | 01:13:24 | -0.029  | 4.360    | 4.261   | 0.150   | -0.128  | 0.264   | 0.000   | 0.011   |
| X    |          | -0.028  | 4.405    | 4.399   | 0.102   | -0.333  | 0.297   | 0.000   | 0.012   |
| σ    |          | 0.016   | 0.145    | 0.148   | 0.051   | 0.216   | 0.028   | 0.000   | 0.005   |
| %RSD |          | 58.360  | 3.304    | 3.361   | 50.040  | 64.640  | 9.444   | 0.000   | 41.120  |
| Run  | Time     | 89Y     | 95Mo     | 98Mo    | 103Rh   | 107Ag   | 109Ag   | 111Cd   | 114Cd   |
|      |          | ppb     | ppb      | ppb     | ppb     | ppb     | ppb     | ppb     | ppb     |
| 1    | 01:12:45 | 84.678% | 1.050    | 0.964   | 87.820% | -0.015  | -0.004  | 0.042   | 0.041   |
| 2    | 01:13:04 | 84.044% | 1.198    | 1.084   | 87.436% | -0.017  | -0.016  | 0.013   | 0.006   |
| 3    | 01:13:24 | 85.217% | 1.219    | 1.115   | 88.418% | -0.015  | -0.018  | 0.050   | 0.039   |
| X    |          | 84.646% | 1.156    | 1.054   | 87.891% | -0.016  | -0.012  | 0.035   | 0.028   |
| σ    |          | 0.587%  | 0.092    | 0.080   | 0.495%  | 0.001   | 0.007   | 0.020   | 0.020   |
| %RSD |          | 0.694   | 7.998    | 7.599   | 0.563   | 5.968   | 59.330  | 55.450  | 69.760  |
| Run  | Time     | 115In   | 118Sn    | 121Sb   | 123Sb   | 135Ba   | 137Ba   | 159Tb   | 165Ho   |
|      |          | ppb     | ppb      | ppb     | ppb     | ppb     | ppb     | ppb     | ppb     |
| 1    | 01:12:45 | 86.731% | -0.235   | 0.500   | 0.478   | 0.026   | 0.019   | 91.340% | 91.150% |
| 2    | 01:13:04 | 87.076% | -0.189   | 0.493   | 0.562   | 0.022   | 0.037   | 92.509% | 92.024% |
| 3    | 01:13:24 | 87.686% | -0.220   | 0.467   | 0.574   | -0.000  | 0.014   | 92.161% | 91.788% |
| X    |          | 87.164% | -0.215   | 0.486   | 0.538   | 0.016   | 0.023   | 92.003% | 91.654% |
| σ    |          | 0.484%  | 0.023    | 0.017   | 0.053   | 0.014   | 0.012   | 0.600%  | 0.452%  |
| %RSD |          | 0.555   | 10.850   | 3.577   | 9.761   | 89.600  | 50.100  | 0.652   | 0.493   |
| Run  | Time     | 203Tl   | 205Tl    | 206Pb   | 207Pb   | 208Pb   | 209Bi   |         |         |
|      |          | ppb     | ppb      | ppb     | ppb     | ppb     | ppb     |         |         |
| 1    | 01:12:45 | 0.041   | 0.039    | -0.003  | 0.002   | 0.002   | 98.351% |         |         |
| 2    | 01:13:04 | 0.047   | 0.048    | 0.008   | 0.002   | 0.002   | 98.090% |         |         |
| 3    | 01:13:24 | 0.040   | 0.035    | 0.004   | 0.007   | 0.005   | 98.913% |         |         |
| X    |          | 0.043   | 0.040    | 0.003   | 0.004   | 0.003   | 98.451% |         |         |
| σ    |          | 0.003   | 0.007    | 0.005   | 0.003   | 0.001   | 0.421%  |         |         |
| %RSD |          | 8.018   | 16.080   | 165.200 | 69.100  | 45.730  | 0.427   |         |         |

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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   | 01:16:35 | 73.462%  | -0.005   | 11.320  | 10.780   | 0.000    | 3394.000 | 1027.000 | 1054.000 |
| 2   | 01:16:55 | 70.386%  | 0.049    | 9.963   | 10.090   | 0.000    | 3608.000 | 1077.000 | 1078.000 |
| 3   | 01:17:14 | 67.135%  | 0.025    | 11.060  | 10.960   | 0.000    | 3397.000 | 1020.000 | 1056.000 |
|     | X        | 70.328%  | 0.023    | 10.780  | 10.610   | 0.000    | 3466.000 | 1041.000 | 1062.000 |
|     | σ        | 3.164%   | 0.027    | 0.723   | 0.461    | 0.000    | 122.600  | 30.920   | 13.140   |
|     | %RSD     | 4.499    | 119.700  | 6.701   | 4.343    | 0.000    | 3.536    | 2.969    | 1.237    |
| Run | Time     | 27Al     | 28Si     | 37Cl    | 39K      | 43Ca     | 44Ca     | 45Sc     | 47Ti     |
|     |          | ppb      | ppb      | ppb     | ppb      | ppb      | ppb      | ppb      | ppb      |
| 1   | 01:16:35 | 83.700   | 4019.000 | 0.000   | 1320.000 | 5743.000 | 5305.000 | 61.294%  | 5.013    |
| 2   | 01:16:55 | 87.670   | 3994.000 | 0.000   | 1401.000 | 5829.000 | 5486.000 | 57.204%  | 4.640    |
| 3   | 01:17:14 | 90.600   | 4165.000 | 0.000   | 1350.000 | 5477.000 | 5336.000 | 57.380%  | 4.422    |
|     | X        | 87.320   | 4059.000 | 0.000   | 1357.000 | 5683.000 | 5376.000 | 58.626%  | 4.692    |
|     | σ        | 3.464    | 92.550   | 0.000   | 41.230   | 183.200  | 97.080   | 2.312%   | 0.299    |
|     | %RSD     | 3.967    | 2.280    | 0.000   | 3.038    | 3.224    | 1.806    | 3.944    | 6.370    |
| Run | Time     | 51V      | 52Cr     | 55Mn    | 56Fe     | 57Fe     | 59Co     | 60Ni     | 63Cu     |
|     |          | ppb      | ppb      | ppb     | ppb      | ppb      | ppb      | ppb      | ppb      |
| 1   | 01:16:35 | -0.290   | 0.585    | 119.300 | 252.200  | 284.300  | 0.153    | 0.142    | 0.337    |
| 2   | 01:16:55 | -0.041   | 0.663    | 125.500 | 259.300  | 280.000  | 0.165    | 0.062    | 0.360    |
| 3   | 01:17:14 | 0.305    | 0.633    | 118.700 | 240.400  | 265.100  | 0.149    | 0.051    | 0.365    |
|     | X        | -0.009   | 0.627    | 121.200 | 250.600  | 276.400  | 0.155    | 0.085    | 0.354    |
|     | σ        | 0.298    | 0.039    | 3.768   | 9.519    | 10.090   | 0.008    | 0.050    | 0.015    |
|     | %RSD     | 3458.000 | 6.297    | 3.111   | 3.798    | 3.649    | 5.392    | 58.590   | 4.251    |
| Run | Time     | 65Cu     | 66Zn     | 68Zn    | 75As     | 78Se     | 82Se     | 83Kr     | 88Sr     |
|     |          | ppb      | ppb      | ppb     | ppb      | ppb      | ppb      | ppb      | ppb      |
| 1   | 01:16:35 | 0.338    | 2.633    | 2.432   | -0.278   | -1.086   | 0.187    | 0.000    | 36.570   |
| 2   | 01:16:55 | 0.335    | 2.761    | 2.834   | 0.223    | -0.986   | 0.277    | 0.000    | 37.300   |
| 3   | 01:17:14 | 0.172    | 2.753    | 2.938   | 0.195    | -1.101   | 0.559    | 0.000    | 36.170   |
|     | X        | 0.282    | 2.715    | 2.735   | 0.047    | -1.057   | 0.341    | 0.000    | 36.680   |
|     | σ        | 0.095    | 0.072    | 0.267   | 0.281    | 0.062    | 0.194    | 0.000    | 0.574    |
|     | %RSD     | 33.650   | 2.645    | 9.759   | 600.100  | 5.901    | 56.940   | 0.000    | 1.563    |
| Run | Time     | 89Y      | 95Mo     | 98Mo    | 103Rh    | 107Ag    | 109Ag    | 111Cd    | 114Cd    |
|     |          | ppb      | ppb      | ppb     | ppb      | ppb      | ppb      | ppb      | ppb      |
| 1   | 01:16:35 | 68.135%  | 0.894    | 0.808   | 69.915%  | -0.005   | -0.001   | -0.070   | -0.046   |
| 2   | 01:16:55 | 66.762%  | 1.037    | 0.994   | 68.585%  | -0.003   | -0.004   | -0.091   | -0.076   |
| 3   | 01:17:14 | 65.733%  | 1.233    | 1.057   | 67.899%  | -0.004   | -0.009   | -0.034   | -0.047   |
|     | X        | 66.877%  | 1.055    | 0.953   | 68.800%  | -0.004   | -0.004   | -0.065   | -0.056   |
|     | σ        | 1.205%   | 0.170    | 0.130   | 1.025%   | 0.001    | 0.004    | 0.029    | 0.017    |
|     | %RSD     | 1.802    | 16.140   | 13.610  | 1.490    | 29.660   | 95.130   | 44.620   | 30.590   |
| Run | Time     | 115In    | 118Sn    | 121Sb   | 123Sb    | 135Ba    | 137Ba    | 159Tb    | 165Ho    |
|     |          | ppb      | ppb      | ppb     | ppb      | ppb      | ppb      | ppb      | ppb      |
| 1   | 01:16:35 | 78.073%  | 0.109    | 1.923   | 2.033    | 26.730   | 27.210   | 84.013%  | 85.379%  |
| 2   | 01:16:55 | 79.098%  | 0.141    | 1.916   | 1.924    | 26.180   | 26.270   | 85.368%  | 86.464%  |
| 3   | 01:17:14 | 78.222%  | 0.167    | 1.841   | 1.792    | 26.790   | 26.730   | 85.865%  | 87.805%  |
|     | X        | 78.464%  | 0.139    | 1.893   | 1.916    | 26.570   | 26.740   | 85.082%  | 86.549%  |
|     | σ        | 0.554%   | 0.029    | 0.045   | 0.121    | 0.334    | 0.472    | 0.958%   | 1.215%   |
|     | %RSD     | 0.706    | 20.620   | 2.403   | 6.289    | 1.257    | 1.767    | 1.126    | 1.404    |
| Run | Time     | 203Tl    | 205Tl    | 206Pb   | 207Pb    | 208Pb    | 209Bi    |          |          |
|     |          | ppb      | ppb      | ppb     | ppb      | ppb      | ppb      |          |          |
| 1   | 01:16:35 | 0.028    | 0.035    | 0.105   | 0.096    | 0.107    | 91.337%  |          |          |
| 2   | 01:16:55 | 0.040    | 0.038    | 0.118   | 0.114    | 0.118    | 90.902%  |          |          |
| 3   | 01:17:14 | 0.038    | 0.039    | 0.116   | 0.130    | 0.120    | 91.640%  |          |          |
|     | X        | 0.035    | 0.037    | 0.113   | 0.113    | 0.115    | 91.293%  |          |          |
|     | σ        | 0.006    | 0.002    | 0.007   | 0.017    | 0.007    | 0.371%   |          |          |
|     | %RSD     | 17.510   | 5.408    | 6.439   | 15.250   | 6.015    | 0.407    |          |          |

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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    | 01:20:27 | 89.275% | -0.031  | 0.996  | 1.896   | 0.000    | 703.700  | 213.000 | 216.700 |
| 2    | 01:20:46 | 86.327% | -0.009  | 1.567  | 2.215   | 0.000    | 710.500  | 208.600 | 219.400 |
| 3    | 01:21:06 | 80.694% | 0.016   | 2.387  | 2.571   | 0.000    | 734.100  | 219.000 | 221.400 |
| X    |          | 85.432% | -0.008  | 1.650  | 2.227   | 0.000    | 716.100  | 213.600 | 219.200 |
| σ    |          | 4.360%  | 0.023   | 0.699  | 0.338   | 0.000    | 15.950   | 5.221   | 2.316   |
| %RSD |          | 5.104   | 288.400 | 42.370 | 15.160  | 0.000    | 2.227    | 2.444   | 1.057   |
| Run  | Time     | 27Al    | 28Si    | 37Cl   | 39K     | 43Ca     | 44Ca     | 45Sc    | 47Ti    |
|      |          | ppb     | ppb     | ppb    | ppb     | ppb      | ppb      | ppb     | ppb     |
| 1    | 01:20:27 | 28.260  | 605.800 | 0.000  | 277.800 | 1160.000 | 1074.000 | 67.198% | 0.681   |
| 2    | 01:20:46 | 28.160  | 621.900 | 0.000  | 283.200 | 1166.000 | 1087.000 | 65.340% | 1.198   |
| 3    | 01:21:06 | 31.550  | 650.500 | 0.000  | 281.500 | 1041.000 | 1105.000 | 64.513% | 0.665   |
| X    |          | 29.320  | 626.100 | 0.000  | 280.900 | 1122.000 | 1089.000 | 65.684% | 0.848   |
| σ    |          | 1.925   | 22.610  | 0.000  | 2.766   | 70.150   | 15.380   | 1.375%  | 0.303   |
| %RSD |          | 6.566   | 3.612   | 0.000  | 0.985   | 6.250    | 1.413    | 2.093   | 35.700  |
| Run  | Time     | 51V     | 52Cr    | 55Mn   | 56Fe    | 57Fe     | 59Co     | 60Ni    | 63Cu    |
|      |          | ppb     | ppb     | ppb    | ppb     | ppb      | ppb      | ppb     | ppb     |
| 1    | 01:20:27 | 0.009   | 0.160   | 24.850 | 48.200  | 55.130   | 0.032    | 0.080   | 0.085   |
| 2    | 01:20:46 | 0.236   | 0.169   | 24.800 | 47.040  | 58.270   | 0.029    | 0.020   | 0.054   |
| 3    | 01:21:06 | 0.085   | 0.133   | 24.590 | 44.890  | 55.320   | 0.037    | 0.015   | 0.096   |
| X    |          | 0.110   | 0.154   | 24.750 | 46.710  | 56.240   | 0.033    | 0.038   | 0.078   |
| σ    |          | 0.116   | 0.019   | 0.140  | 1.677   | 1.763    | 0.004    | 0.036   | 0.022   |
| %RSD |          | 104.900 | 12.220  | 0.567  | 3.590   | 3.134    | 12.400   | 94.340  | 27.830  |
| Run  | Time     | 65Cu    | 66Zn    | 68Zn   | 75As    | 78Se     | 82Se     | 83Kr    | 88Sr    |
|      |          | ppb     | ppb     | ppb    | ppb     | ppb      | ppb      | ppb     | ppb     |
| 1    | 01:20:27 | 0.032   | 1.942   | 1.954  | 0.334   | -0.395   | -0.082   | 0.000   | 7.621   |
| 2    | 01:20:46 | 0.137   | 1.829   | 1.809  | 0.025   | -0.791   | -0.085   | 0.000   | 7.644   |
| 3    | 01:21:06 | 0.088   | 1.798   | 2.253  | 0.057   | -0.929   | 0.100    | 0.000   | 7.682   |
| X    |          | 0.086   | 1.856   | 2.005  | 0.139   | -0.705   | -0.023   | 0.000   | 7.649   |
| σ    |          | 0.052   | 0.076   | 0.226  | 0.170   | 0.277    | 0.106    | 0.000   | 0.031   |
| %RSD |          | 60.950  | 4.093   | 11.290 | 122.900 | 39.330   | 467.000  | 0.000   | 0.403   |
| Run  | Time     | 89Y     | 95Mo    | 98Mo   | 103Rh   | 107Ag    | 109Ag    | 111Cd   | 114Cd   |
|      |          | ppb     | ppb     | ppb    | ppb     | ppb      | ppb      | ppb     | ppb     |
| 1    | 01:20:27 | 70.590% | 0.393   | 0.356  | 76.608% | -0.022   | -0.021   | -0.002  | 0.007   |
| 2    | 01:20:46 | 71.177% | 0.527   | 0.443  | 76.971% | -0.017   | -0.022   | -0.015  | -0.013  |
| 3    | 01:21:06 | 69.924% | 0.489   | 0.491  | 75.773% | -0.015   | -0.014   | 0.000   | -0.005  |
| X    |          | 70.564% | 0.470   | 0.430  | 76.451% | -0.018   | -0.019   | -0.005  | -0.004  |
| σ    |          | 0.627%  | 0.069   | 0.068  | 0.614%  | 0.004    | 0.004    | 0.008   | 0.010   |
| %RSD |          | 0.889   | 14.630  | 15.920 | 0.803   | 20.270   | 23.600   | 148.300 | 264.000 |
| Run  | Time     | 115In   | 118Sn   | 121Sb  | 123Sb   | 135Ba    | 137Ba    | 159Tb   | 165Ho   |
|      |          | ppb     | ppb     | ppb    | ppb     | ppb      | ppb      | ppb     | ppb     |
| 1    | 01:20:27 | 77.206% | -0.338  | 0.085  | 0.064   | 5.807    | 5.630    | 86.743% | 87.103% |
| 2    | 01:20:46 | 77.347% | -0.295  | 0.105  | 0.101   | 5.619    | 5.615    | 87.406% | 88.478% |
| 3    | 01:21:06 | 77.259% | -0.282  | 0.082  | 0.056   | 5.410    | 5.526    | 88.047% | 88.968% |
| X    |          | 77.271% | -0.305  | 0.091  | 0.073   | 5.612    | 5.590    | 87.399% | 88.183% |
| σ    |          | 0.071%  | 0.029   | 0.013  | 0.024   | 0.199    | 0.056    | 0.652%  | 0.967%  |
| %RSD |          | 0.092   | 9.470   | 14.110 | 32.680  | 3.545    | 1.004    | 0.746   | 1.096   |
| Run  | Time     | 203Tl   | 205Tl   | 206Pb  | 207Pb   | 208Pb    | 209Bi    |         |         |
|      |          | ppb     | ppb     | ppb    | ppb     | ppb      | ppb      |         |         |
| 1    | 01:20:27 | 0.009   | 0.012   | 0.026  | 0.017   | 0.020    | 95.308%  |         |         |
| 2    | 01:20:46 | 0.015   | 0.020   | 0.029  | 0.019   | 0.021    | 93.774%  |         |         |
| 3    | 01:21:06 | 0.012   | 0.014   | 0.034  | 0.023   | 0.029    | 93.312%  |         |         |
| X    |          | 0.012   | 0.015   | 0.030  | 0.020   | 0.023    | 94.131%  |         |         |
| σ    |          | 0.003   | 0.004   | 0.004  | 0.003   | 0.005    | 1.045%   |         |         |
| %RSD |          | 27.270  | 24.630  | 13.980 | 13.260  | 20.440   | 1.110    |         |         |

180-43898-I-3-B MS 5/20/2015 1:23:56 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    | 01:24:16 | 57.030%  | 42.180    | 977.400 | 947.100   | 0.000     | 43120.000 | 40970.000 | 42160.000 |
| 2    | 01:24:35 | 57.651%  | 42.670    | 898.300 | 879.200   | 0.000     | 44310.000 | 40610.000 | 40350.000 |
| 3    | 01:24:54 | 54.140%  | 42.210    | 922.900 | 904.600   | 0.000     | 43020.000 | 39790.000 | 41000.000 |
| X    |          | 56.273%  | 42.350    | 932.900 | 910.300   | 0.000     | 43480.000 | 40450.000 | 41170.000 |
| σ    |          | 1.874%   | 0.275     | 40.510  | 34.280    | 0.000     | 715.200   | 605.800   | 916.300   |
| %RSD |          | 3.330    | 0.649     | 4.342   | 3.766     | 0.000     | 1.645     | 1.498     | 2.226     |
| Run  | Time     | 27Al     | 28Si      | 37Cl    | 39K       | 43Ca      | 44Ca      | 45Sc      | 47Ti      |
|      |          | ppb      | ppb       | ppb     | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 01:24:16 | 1748.000 | 12090.000 | 0.000   | 45760.000 | 51930.000 | 50780.000 | 54.656%   | 890.500   |
| 2    | 01:24:35 | 1725.000 | 12270.000 | 0.000   | 45110.000 | 51980.000 | 49400.000 | 51.576%   | 923.900   |
| 3    | 01:24:54 | 1752.000 | 11900.000 | 0.000   | 45140.000 | 52380.000 | 49730.000 | 51.212%   | 903.000   |
| X    |          | 1742.000 | 12090.000 | 0.000   | 45340.000 | 52100.000 | 49970.000 | 52.481%   | 905.800   |
| σ    |          | 14.440   | 184.800   | 0.000   | 364.400   | 248.200   | 722.100   | 1.892%    | 16.880    |
| %RSD |          | 0.829    | 1.529     | 0.000   | 0.804     | 0.476     | 1.445     | 3.605     | 1.864     |
| Run  | Time     | 51V      | 52Cr      | 55Mn    | 56Fe      | 57Fe      | 59Co      | 60Ni      | 63Cu      |
|      |          | ppb      | ppb       | ppb     | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 01:24:16 | 461.900  | 184.300   | 568.500 | 1161.000  | -493.500  | 447.700   | 434.200   | 224.800   |
| 2    | 01:24:35 | 458.100  | 182.800   | 591.100 | 1165.000  | 1244.000  | 457.600   | 455.300   | 227.100   |
| 3    | 01:24:54 | 461.200  | 183.200   | 579.300 | 1172.000  | 1292.000  | 461.900   | 447.700   | 230.600   |
| X    |          | 460.400  | 183.400   | 579.600 | 1166.000  | 680.600   | 455.700   | 445.700   | 227.500   |
| σ    |          | 2.010    | 0.782     | 11.340  | 6.035     | 1017.000  | 7.286     | 10.660    | 2.921     |
| %RSD |          | 0.437    | 0.426     | 1.956   | 0.518     | 149.400   | 1.599     | 2.392     | 1.284     |
| Run  | Time     | 65Cu     | 66Zn      | 68Zn    | 75As      | 78Se      | 82Se      | 83Kr      | 88Sr      |
|      |          | ppb      | ppb       | ppb     | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 01:24:16 | 226.700  | 439.700   | 434.300 | 35.300    | 8.560     | 10.330    | 0.000     | 964.800   |
| 2    | 01:24:35 | 224.100  | 455.300   | 447.900 | 34.420    | 8.647     | 8.769     | 0.000     | 958.700   |
| 3    | 01:24:54 | 230.600  | 449.700   | 446.800 | 35.830    | 8.917     | 9.598     | 0.000     | 958.100   |
| X    |          | 227.100  | 448.200   | 443.000 | 35.180    | 8.708     | 9.567     | 0.000     | 960.500   |
| σ    |          | 3.292    | 7.863     | 7.564   | 0.714     | 0.187     | 0.783     | 0.000     | 3.743     |
| %RSD |          | 1.449    | 1.754     | 1.707   | 2.029     | 2.141     | 8.187     | 0.000     | 0.390     |
| Run  | Time     | 89Y      | 95Mo      | 98Mo    | 103Rh     | 107Ag     | 109Ag     | 111Cd     | 114Cd     |
|      |          | ppb      | ppb       | ppb     | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 01:24:16 | 61.844%  | 956.600   | 965.900 | 65.163%   | 43.570    | 44.320    | 44.910    | 37.900    |
| 2    | 01:24:35 | 61.349%  | 976.400   | 987.300 | 64.399%   | 43.920    | 44.220    | 45.820    | 38.460    |
| 3    | 01:24:54 | 60.771%  | 980.100   | 986.100 | 63.799%   | 44.010    | 43.720    | 44.660    | 37.700    |
| X    |          | 61.321%  | 971.000   | 979.800 | 64.454%   | 43.830    | 44.090    | 45.130    | 38.020    |
| σ    |          | 0.537%   | 12.650    | 12.020  | 0.684%    | 0.234     | 0.319     | 0.611     | 0.393     |
| %RSD |          | 0.876    | 1.303     | 1.227   | 1.061     | 0.535     | 0.724     | 1.354     | 1.035     |
| Run  | Time     | 115In    | 118Sn     | 121Sb   | 123Sb     | 135Ba     | 137Ba     | 159Tb     | 165Ho     |
|      |          | ppb      | ppb       | ppb     | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 01:24:16 | 67.918%  | 1802.000  | 439.500 | 440.200   | 1713.000  | 1722.000  | 83.840%   | 85.337%   |
| 2    | 01:24:35 | 68.277%  | 1789.000  | 441.500 | 442.400   | 1724.000  | 1728.000  | 84.122%   | 86.355%   |
| 3    | 01:24:54 | 67.855%  | 1794.000  | 444.400 | 446.500   | 1733.000  | 1735.000  | 85.470%   | 87.209%   |
| X    |          | 68.016%  | 1795.000  | 441.800 | 443.000   | 1723.000  | 1728.000  | 84.478%   | 86.300%   |
| σ    |          | 0.228%   | 6.800     | 2.482   | 3.168     | 9.871     | 6.322     | 0.871%    | 0.937%    |
| %RSD |          | 0.335    | 0.379     | 0.562   | 0.715     | 0.573     | 0.366     | 1.031     | 1.086     |
| Run  | Time     | 203Tl    | 205Tl     | 206Pb   | 207Pb     | 208Pb     | 209Bi     |           |           |
|      |          | ppb      | ppb       | ppb     | ppb       | ppb       | ppb       |           |           |
| 1    | 01:24:16 | 45.410   | 47.180    | 19.250  | 19.200    | 19.150    | 83.406%   |           |           |
| 2    | 01:24:35 | 45.700   | 47.960    | 19.560  | 19.380    | 19.520    | 84.421%   |           |           |
| 3    | 01:24:54 | 45.640   | 47.890    | 19.300  | 19.260    | 19.390    | 86.185%   |           |           |
| X    |          | 45.590   | 47.680    | 19.370  | 19.280    | 19.360    | 84.671%   |           |           |
| σ    |          | 0.152    | 0.429     | 0.168   | 0.087     | 0.187     | 1.407%    |           |           |
| %RSD |          | 0.334    | 0.899     | 0.869   | 0.453     | 0.966     | 1.661     |           |           |

180-43898-I-3-C MSD 5/20/2015 1:27:45 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    | 01:28:04 | 61.126%  | 41.180    | 927.700 | 898.000   | 0.000     | 44960.000 | 42000.000 | 42130.000 |
| 2    | 01:28:23 | 57.131%  | 41.640    | 924.400 | 911.500   | 0.000     | 44650.000 | 41890.000 | 42650.000 |
| 3    | 01:28:42 | 57.003%  | 41.800    | 889.500 | 889.600   | 0.000     | 43440.000 | 40310.000 | 42170.000 |
| X    |          | 58.420%  | 41.540    | 913.900 | 899.700   | 0.000     | 44350.000 | 41400.000 | 42320.000 |
| σ    |          | 2.345%   | 0.324     | 21.180  | 11.040    | 0.000     | 801.600   | 946.000   | 289.300   |
| %RSD |          | 4.013    | 0.781     | 2.317   | 1.228     | 0.000     | 1.808     | 2.285     | 0.684     |
| Run  | Time     | 27Al     | 28Si      | 37Cl    | 39K       | 43Ca      | 44Ca      | 45Sc      | 47Ti      |
|      |          | ppb      | ppb       | ppb     | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 01:28:04 | 1686.000 | 12110.000 | 0.000   | 45860.000 | 51950.000 | 49490.000 | 54.229%   | 885.800   |
| 2    | 01:28:23 | 1735.000 | 12360.000 | 0.000   | 44760.000 | 51910.000 | 48210.000 | 52.926%   | 873.800   |
| 3    | 01:28:42 | 1769.000 | 12370.000 | 0.000   | 44370.000 | 50730.000 | 48930.000 | 53.281%   | 896.700   |
| X    |          | 1730.000 | 12280.000 | 0.000   | 45000.000 | 51530.000 | 48880.000 | 53.479%   | 885.400   |
| σ    |          | 41.840   | 146.800   | 0.000   | 770.900   | 693.600   | 640.400   | 0.674%    | 11.430    |
| %RSD |          | 2.418    | 1.196     | 0.000   | 1.713     | 1.346     | 1.310     | 1.260     | 1.291     |
| Run  | Time     | 51V      | 52Cr      | 55Mn    | 56Fe      | 57Fe      | 59Co      | 60Ni      | 63Cu      |
|      |          | ppb      | ppb       | ppb     | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 01:28:04 | 439.400  | 175.300   | 562.600 | 1142.000  | 1233.000  | 433.400   | 435.600   | 218.600   |
| 2    | 01:28:23 | 426.100  | 177.100   | 550.000 | 1126.000  | 1261.000  | 441.300   | 429.800   | 222.100   |
| 3    | 01:28:42 | 423.400  | 174.500   | 553.000 | 1101.000  | -588.900  | 437.700   | 428.000   | 217.800   |
| X    |          | 429.600  | 175.600   | 555.200 | 1123.000  | 635.000   | 437.500   | 431.100   | 219.500   |
| σ    |          | 8.556    | 1.322     | 6.582   | 20.670    | 1060.000  | 3.945     | 3.992     | 2.281     |
| %RSD |          | 1.992    | 0.753     | 1.185   | 1.840     | 166.900   | 0.902     | 0.926     | 1.039     |
| Run  | Time     | 65Cu     | 66Zn      | 68Zn    | 75As      | 78Se      | 82Se      | 83Kr      | 88Sr      |
|      |          | ppb      | ppb       | ppb     | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 01:28:04 | 213.200  | 427.500   | 437.000 | 34.480    | 8.106     | 9.062     | 0.000     | 936.600   |
| 2    | 01:28:23 | 225.000  | 434.000   | 427.200 | 35.610    | 8.584     | 9.586     | 0.000     | 932.700   |
| 3    | 01:28:42 | 223.000  | 430.300   | 428.400 | 35.180    | 9.013     | 9.842     | 0.000     | 924.800   |
| X    |          | 220.400  | 430.600   | 430.900 | 35.090    | 8.568     | 9.497     | 0.000     | 931.400   |
| σ    |          | 6.313    | 3.251     | 5.366   | 0.568     | 0.454     | 0.397     | 0.000     | 6.023     |
| %RSD |          | 2.864    | 0.755     | 1.245   | 1.620     | 5.295     | 4.183     | 0.000     | 0.647     |
| Run  | Time     | 89Y      | 95Mo      | 98Mo    | 103Rh     | 107Ag     | 109Ag     | 111Cd     | 114Cd     |
|      |          | ppb      | ppb       | ppb     | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 01:28:04 | 62.771%  | 946.900   | 962.700 | 67.029%   | 42.050    | 42.190    | 42.270    | 36.360    |
| 2    | 01:28:23 | 62.650%  | 965.500   | 977.800 | 65.147%   | 42.930    | 43.040    | 43.560    | 36.030    |
| 3    | 01:28:42 | 62.385%  | 972.900   | 976.500 | 66.132%   | 42.810    | 42.520    | 44.210    | 37.090    |
| X    |          | 62.602%  | 961.800   | 972.300 | 66.103%   | 42.600    | 42.580    | 43.350    | 36.490    |
| σ    |          | 0.197%   | 13.360    | 8.358   | 0.941%    | 0.476     | 0.429     | 0.985     | 0.539     |
| %RSD |          | 0.315    | 1.390     | 0.860   | 1.424     | 1.118     | 1.008     | 2.273     | 1.478     |
| Run  | Time     | 115In    | 118Sn     | 121Sb   | 123Sb     | 135Ba     | 137Ba     | 159Tb     | 165Ho     |
|      |          | ppb      | ppb       | ppb     | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 01:28:04 | 70.117%  | 1761.000  | 431.600 | 432.200   | 1646.000  | 1651.000  | 86.269%   | 87.389%   |
| 2    | 01:28:23 | 69.813%  | 1771.000  | 434.600 | 437.700   | 1668.000  | 1667.000  | 87.000%   | 88.842%   |
| 3    | 01:28:42 | 70.576%  | 1764.000  | 434.500 | 435.000   | 1658.000  | 1664.000  | 86.987%   | 89.241%   |
| X    |          | 70.168%  | 1765.000  | 433.600 | 435.000   | 1657.000  | 1661.000  | 86.752%   | 88.491%   |
| σ    |          | 0.384%   | 5.346     | 1.698   | 2.781     | 11.250    | 8.497     | 0.418%    | 0.975%    |
| %RSD |          | 0.547    | 0.303     | 0.392   | 0.639     | 0.678     | 0.512     | 0.482     | 1.102     |
| Run  | Time     | 203Tl    | 205Tl     | 206Pb   | 207Pb     | 208Pb     | 209Bi     |           |           |
|      |          | ppb      | ppb       | ppb     | ppb       | ppb       | ppb       |           |           |
| 1    | 01:28:04 | 44.460   | 46.520    | 18.800  | 18.910    | 18.880    | 85.342%   |           |           |
| 2    | 01:28:23 | 44.790   | 47.000    | 19.160  | 19.000    | 19.060    | 86.062%   |           |           |
| 3    | 01:28:42 | 45.290   | 47.160    | 18.740  | 18.760    | 18.770    | 87.974%   |           |           |
| X    |          | 44.840   | 46.890    | 18.900  | 18.890    | 18.910    | 86.459%   |           |           |
| σ    |          | 0.417    | 0.334     | 0.226   | 0.121     | 0.147     | 1.360%    |           |           |
| %RSD |          | 0.930    | 0.713     | 1.196   | 0.638     | 0.776     | 1.573     |           |           |

180-43898-I-3-A PDS 5/20/2015 1:31:34 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    | 01:31:53 | 58.804%  | 44.220    | 957.800  | 951.400   | 0.000     | 45950.000 | 41660.000 | 42470.000 |
| 2    | 01:32:12 | 58.063%  | 43.850    | 912.900  | 886.800   | 0.000     | 44920.000 | 40850.000 | 40450.000 |
| 3    | 01:32:31 | 55.565%  | 43.700    | 929.700  | 902.200   | 0.000     | 44440.000 | 41340.000 | 41950.000 |
| X    |          | 57.477%  | 43.920    | 933.400  | 913.500   | 0.000     | 45100.000 | 41280.000 | 41620.000 |
| σ    |          | 1.697%   | 0.267     | 22.690   | 33.710    | 0.000     | 773.200   | 410.800   | 1049.000  |
| %RSD |          | 2.953    | 0.609     | 2.431    | 3.690     | 0.000     | 1.714     | 0.995     | 2.521     |
| Run  | Time     | 27Al     | 28Si      | 37Cl     | 39K       | 43Ca      | 44Ca      | 45Sc      | 47Ti      |
|      |          | ppb      | ppb       | ppb      | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 01:31:53 | 1754.000 | 13180.000 | 0.000    | 45870.000 | 51820.000 | 50210.000 | 53.926%   | 1005.000  |
| 2    | 01:32:12 | 1646.000 | 12500.000 | 0.000    | 45490.000 | 51370.000 | 49530.000 | 51.706%   | 981.300   |
| 3    | 01:32:31 | 1719.000 | 12960.000 | 0.000    | 45770.000 | 51670.000 | 50690.000 | 52.564%   | 976.700   |
| X    |          | 1706.000 | 12880.000 | 0.000    | 45710.000 | 51620.000 | 50140.000 | 52.732%   | 987.500   |
| σ    |          | 55.130   | 346.800   | 0.000    | 196.100   | 226.000   | 579.300   | 1.119%    | 14.960    |
| %RSD |          | 3.231    | 2.692     | 0.000    | 0.429     | 0.438     | 1.155     | 2.123     | 1.515     |
| Run  | Time     | 51V      | 52Cr      | 55Mn     | 56Fe      | 57Fe      | 59Co      | 60Ni      | 63Cu      |
|      |          | ppb      | ppb       | ppb      | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 01:31:53 | 463.800  | 186.600   | 595.600  | 1217.000  | 1313.000  | 477.800   | 465.200   | 232.900   |
| 2    | 01:32:12 | 464.500  | 183.100   | 605.400  | 1220.000  | 1283.000  | 472.200   | 479.000   | 235.100   |
| 3    | 01:32:31 | 476.900  | 187.100   | 588.200  | 1181.000  | 1283.000  | 457.200   | 463.200   | 231.600   |
| X    |          | 468.400  | 185.600   | 596.400  | 1206.000  | 1293.000  | 469.100   | 469.100   | 233.200   |
| σ    |          | 7.326    | 2.181     | 8.634    | 22.150    | 17.220    | 10.640    | 8.575     | 1.738     |
| %RSD |          | 1.564    | 1.175     | 1.448    | 1.837     | 1.332     | 2.269     | 1.828     | 0.745     |
| Run  | Time     | 65Cu     | 66Zn      | 68Zn     | 75As      | 78Se      | 82Se      | 83Kr      | 88Sr      |
|      |          | ppb      | ppb       | ppb      | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 01:31:53 | 238.400  | 467.800   | 461.000  | 37.400    | 9.532     | 11.330    | 0.000     | 997.000   |
| 2    | 01:32:12 | 234.800  | 462.200   | 462.400  | 36.200    | 8.983     | 9.234     | 0.000     | 989.700   |
| 3    | 01:32:31 | 228.800  | 456.800   | 460.200  | 36.810    | 8.764     | 11.560    | 0.000     | 990.300   |
| X    |          | 234.000  | 462.300   | 461.200  | 36.800    | 9.093     | 10.710    | 0.000     | 992.300   |
| σ    |          | 4.843    | 5.524     | 1.134    | 0.599     | 0.396     | 1.282     | 0.000     | 4.064     |
| %RSD |          | 2.069    | 1.195     | 0.246    | 1.629     | 4.352     | 11.970    | 0.000     | 0.410     |
| Run  | Time     | 89Y      | 95Mo      | 98Mo     | 103Rh     | 107Ag     | 109Ag     | 111Cd     | 114Cd     |
|      |          | ppb      | ppb       | ppb      | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 01:31:53 | 61.195%  | 1055.000  | 1065.000 | 63.684%   | 41.980    | 41.860    | 47.460    | 38.740    |
| 2    | 01:32:12 | 60.854%  | 1059.000  | 1078.000 | 63.382%   | 41.660    | 42.190    | 47.760    | 39.260    |
| 3    | 01:32:31 | 60.079%  | 1049.000  | 1074.000 | 62.783%   | 41.210    | 42.210    | 46.660    | 38.930    |
| X    |          | 60.709%  | 1054.000  | 1073.000 | 63.283%   | 41.620    | 42.090    | 47.290    | 38.980    |
| σ    |          | 0.572%   | 5.235     | 6.761    | 0.458%    | 0.387     | 0.196     | 0.565     | 0.263     |
| %RSD |          | 0.942    | 0.497     | 0.630    | 0.724     | 0.929     | 0.466     | 1.195     | 0.673     |
| Run  | Time     | 115In    | 118Sn     | 121Sb    | 123Sb     | 135Ba     | 137Ba     | 159Tb     | 165Ho     |
|      |          | ppb      | ppb       | ppb      | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 01:31:53 | 65.937%  | 1971.000  | 470.700  | 470.300   | 1758.000  | 1767.000  | 85.442%   | 87.103%   |
| 2    | 01:32:12 | 66.034%  | 1989.000  | 475.400  | 474.000   | 1757.000  | 1769.000  | 86.745%   | 87.582%   |
| 3    | 01:32:31 | 66.692%  | 1971.000  | 470.600  | 470.700   | 1761.000  | 1764.000  | 86.788%   | 89.027%   |
| X    |          | 66.221%  | 1977.000  | 472.200  | 471.700   | 1759.000  | 1767.000  | 86.325%   | 87.904%   |
| σ    |          | 0.411%   | 10.330    | 2.731    | 2.005     | 1.843     | 2.240     | 0.765%    | 1.001%    |
| %RSD |          | 0.620    | 0.523     | 0.578    | 0.425     | 0.105     | 0.127     | 0.886     | 1.139     |
| Run  | Time     | 203Tl    | 205Tl     | 206Pb    | 207Pb     | 208Pb     | 209Bi     |           |           |
|      |          | ppb      | ppb       | ppb      | ppb       | ppb       | ppb       |           |           |
| 1    | 01:31:53 | 47.250   | 49.440    | 19.270   | 18.940    | 19.210    | 85.336%   |           |           |
| 2    | 01:32:12 | 47.650   | 49.980    | 19.500   | 19.790    | 19.550    | 85.856%   |           |           |
| 3    | 01:32:31 | 47.130   | 49.560    | 19.270   | 19.290    | 19.360    | 87.967%   |           |           |
| X    |          | 47.340   | 49.660    | 19.350   | 19.340    | 19.370    | 86.386%   |           |           |
| σ    |          | 0.276    | 0.285     | 0.134    | 0.425     | 0.174     | 1.393%    |           |           |
| %RSD |          | 0.583    | 0.574     | 0.694    | 2.199     | 0.898     | 1.613     |           |           |



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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    | 01:35:41 | 70.860% | 0.022    | 19.580  | 19.140   | 0.000    | 3469.000 | 1285.000 | 1276.000 |
| 2    | 01:36:00 | 65.399% | -0.002   | 18.520  | 16.730   | 0.000    | 3357.000 | 1235.000 | 1248.000 |
| 3    | 01:36:19 | 61.395% | -0.001   | 19.890  | 19.750   | 0.000    | 3584.000 | 1304.000 | 1324.000 |
| X    |          | 65.885% | 0.006    | 19.330  | 18.540   | 0.000    | 3470.000 | 1275.000 | 1283.000 |
| σ    |          | 4.751%  | 0.014    | 0.719   | 1.596    | 0.000    | 113.300  | 35.740   | 38.720   |
| %RSD |          | 7.212   | 213.100  | 3.718   | 8.607    | 0.000    | 3.265    | 2.804    | 3.018    |
| Run  | Time     | 27Al    | 28Si     | 37Cl    | 39K      | 43Ca     | 44Ca     | 45Sc     | 47Ti     |
|      |          | ppb     | ppb      | ppb     | ppb      | ppb      | ppb      | ppb      | ppb      |
| 1    | 01:35:41 | 133.000 | 3465.000 | 0.000   | 1300.000 | 6458.000 | 5915.000 | 57.123%  | 4.054    |
| 2    | 01:36:00 | 124.700 | 3269.000 | 0.000   | 1265.000 | 6515.000 | 6059.000 | 56.304%  | 4.598    |
| 3    | 01:36:19 | 131.300 | 3402.000 | 0.000   | 1387.000 | 6491.000 | 6145.000 | 53.875%  | 4.277    |
| X    |          | 129.700 | 3379.000 | 0.000   | 1317.000 | 6488.000 | 6039.000 | 55.768%  | 4.310    |
| σ    |          | 4.409   | 99.910   | 0.000   | 62.860   | 28.720   | 116.200  | 1.689%   | 0.273    |
| %RSD |          | 3.400   | 2.957    | 0.000   | 4.772    | 0.443    | 1.924    | 3.029    | 6.343    |
| Run  | Time     | 51V     | 52Cr     | 55Mn    | 56Fe     | 57Fe     | 59Co     | 60Ni     | 63Cu     |
|      |          | ppb     | ppb      | ppb     | ppb      | ppb      | ppb      | ppb      | ppb      |
| 1    | 01:35:41 | 0.113   | 0.698    | 602.900 | 1142.000 | 1203.000 | 1.734    | 0.233    | 0.498    |
| 2    | 01:36:00 | -0.333  | 0.653    | 603.500 | 1153.000 | 1210.000 | 1.668    | 0.136    | 0.437    |
| 3    | 01:36:19 | -0.020  | 0.812    | 618.200 | 1176.000 | 1176.000 | 1.696    | 0.145    | 0.409    |
| X    |          | -0.080  | 0.722    | 608.200 | 1157.000 | 1196.000 | 1.700    | 0.171    | 0.448    |
| σ    |          | 0.229   | 0.082    | 8.696   | 16.980   | 18.180   | 0.033    | 0.053    | 0.045    |
| %RSD |          | 285.700 | 11.360   | 1.430   | 1.467    | 1.519    | 1.934    | 31.180   | 10.100   |
| Run  | Time     | 65Cu    | 66Zn     | 68Zn    | 75As     | 78Se     | 82Se     | 83Kr     | 88Sr     |
|      |          | ppb     | ppb      | ppb     | ppb      | ppb      | ppb      | ppb      | ppb      |
| 1    | 01:35:41 | 0.485   | 3.318    | 3.142   | -0.184   | -1.382   | 0.285    | 0.000    | 43.460   |
| 2    | 01:36:00 | 0.420   | 2.929    | 3.424   | 0.303    | -1.050   | 0.041    | 0.000    | 43.930   |
| 3    | 01:36:19 | 0.350   | 3.187    | 3.224   | 0.359    | -1.117   | 0.310    | 0.000    | 44.050   |
| X    |          | 0.418   | 3.144    | 3.263   | 0.159    | -1.183   | 0.212    | 0.000    | 43.810   |
| σ    |          | 0.067   | 0.198    | 0.145   | 0.298    | 0.176    | 0.148    | 0.000    | 0.314    |
| %RSD |          | 16.100  | 6.294    | 4.446   | 187.100  | 14.870   | 70.030   | 0.000    | 0.716    |
| Run  | Time     | 89Y     | 95Mo     | 98Mo    | 103Rh    | 107Ag    | 109Ag    | 111Cd    | 114Cd    |
|      |          | ppb     | ppb      | ppb     | ppb      | ppb      | ppb      | ppb      | ppb      |
| 1    | 01:35:41 | 67.429% | 7.757    | 7.780   | 69.539%  | -0.012   | -0.013   | -0.056   | -0.053   |
| 2    | 01:36:00 | 65.644% | 8.391    | 8.759   | 67.837%  | -0.012   | -0.014   | 0.009    | 0.026    |
| 3    | 01:36:19 | 64.968% | 8.079    | 7.854   | 67.508%  | -0.008   | -0.015   | -0.037   | -0.034   |
| X    |          | 66.014% | 8.076    | 8.131   | 68.295%  | -0.011   | -0.014   | -0.028   | -0.020   |
| σ    |          | 1.272%  | 0.317    | 0.545   | 1.090%   | 0.002    | 0.001    | 0.033    | 0.042    |
| %RSD |          | 1.926   | 3.925    | 6.704   | 1.596    | 19.310   | 7.203    | 118.300  | 204.400  |
| Run  | Time     | 115In   | 118Sn    | 121Sb   | 123Sb    | 135Ba    | 137Ba    | 159Tb    | 165Ho    |
|      |          | ppb     | ppb      | ppb     | ppb      | ppb      | ppb      | ppb      | ppb      |
| 1    | 01:35:41 | 71.944% | 1.658    | 5.406   | 5.506    | 50.990   | 51.330   | 85.051%  | 86.749%  |
| 2    | 01:36:00 | 71.193% | 1.651    | 5.018   | 5.192    | 52.750   | 52.180   | 85.783%  | 86.941%  |
| 3    | 01:36:19 | 71.355% | 1.435    | 4.307   | 4.322    | 51.750   | 52.370   | 85.882%  | 87.431%  |
| X    |          | 71.497% | 1.581    | 4.910   | 5.007    | 51.830   | 51.960   | 85.572%  | 87.040%  |
| σ    |          | 0.395%  | 0.127    | 0.557   | 0.613    | 0.883    | 0.558    | 0.454%   | 0.352%   |
| %RSD |          | 0.553   | 8.003    | 11.350  | 12.250   | 1.703    | 1.074    | 0.530    | 0.405    |
| Run  | Time     | 203Tl   | 205Tl    | 206Pb   | 207Pb    | 208Pb    | 209Bi    |          |          |
|      |          | ppb     | ppb      | ppb     | ppb      | ppb      | ppb      |          |          |
| 1    | 01:35:41 | 0.191   | 0.189    | 0.322   | 0.328    | 0.330    | 89.848%  |          |          |
| 2    | 01:36:00 | 0.172   | 0.192    | 0.322   | 0.340    | 0.325    | 90.110%  |          |          |
| 3    | 01:36:19 | 0.165   | 0.166    | 0.372   | 0.316    | 0.332    | 93.446%  |          |          |
| X    |          | 0.176   | 0.182    | 0.339   | 0.328    | 0.329    | 91.135%  |          |          |
| σ    |          | 0.014   | 0.014    | 0.029   | 0.012    | 0.004    | 2.006%   |          |          |
| %RSD |          | 7.687   | 7.783    | 8.426   | 3.726    | 1.173    | 2.201    |          |          |

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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    | 01:39:27 | 66.932% | 0.108    | 7.945  | 7.680    | 0.000    | 7066.000 | 910.000 | 923.900 |
| 2    | 01:39:47 | 63.307% | -0.031   | 8.055  | 8.741    | 0.000    | 7140.000 | 924.000 | 939.900 |
| 3    | 01:40:06 | 62.344% | -0.031   | 8.031  | 9.437    | 0.000    | 7000.000 | 925.700 | 934.200 |
| X    |          | 64.194% | 0.016    | 8.011  | 8.620    | 0.000    | 7069.000 | 919.900 | 932.700 |
| σ    |          | 2.420%  | 0.080    | 0.058  | 0.884    | 0.000    | 69.940   | 8.615   | 8.146   |
| %RSD |          | 3.769   | 514.900  | 0.722  | 10.260   | 0.000    | 0.990    | 0.937   | 0.873   |
| Run  | Time     | 27Al    | 28Si     | 37Cl   | 39K      | 43Ca     | 44Ca     | 45Sc    | 47Ti    |
|      |          | ppb     | ppb      | ppb    | ppb      | ppb      | ppb      | ppb     | ppb     |
| 1    | 01:39:27 | 86.120  | 3459.000 | 0.000  | 1173.000 | 4738.000 | 4479.000 | 56.452% | 2.615   |
| 2    | 01:39:47 | 90.390  | 3601.000 | 0.000  | 1199.000 | 4699.000 | 4491.000 | 54.204% | 3.632   |
| 3    | 01:40:06 | 16.020  | 3560.000 | 0.000  | 1206.000 | 4705.000 | 4563.000 | 52.095% | 3.364   |
| X    |          | 64.180  | 3540.000 | 0.000  | 1193.000 | 4714.000 | 4511.000 | 54.250% | 3.203   |
| σ    |          | 41.760  | 73.030   | 0.000  | 17.440   | 21.230   | 45.300   | 2.179%  | 0.527   |
| %RSD |          | 65.060  | 2.063    | 0.000  | 1.462    | 0.450    | 1.004    | 4.016   | 16.450  |
| Run  | Time     | 51V     | 52Cr     | 55Mn   | 56Fe     | 57Fe     | 59Co     | 60Ni    | 63Cu    |
|      |          | ppb     | ppb      | ppb    | ppb      | ppb      | ppb      | ppb     | ppb     |
| 1    | 01:39:27 | 0.455   | 0.780    | 29.730 | 208.900  | 220.100  | 0.128    | 0.132   | 0.342   |
| 2    | 01:39:47 | 0.501   | 0.934    | 29.460 | 201.800  | 218.900  | 0.141    | 0.075   | 0.359   |
| 3    | 01:40:06 | 0.218   | 0.841    | 30.480 | 203.000  | 238.700  | 0.138    | 0.072   | 0.340   |
| X    |          | 0.391   | 0.852    | 29.890 | 204.500  | 225.900  | 0.136    | 0.093   | 0.347   |
| σ    |          | 0.152   | 0.078    | 0.528  | 3.837    | 11.130   | 0.007    | 0.034   | 0.010   |
| %RSD |          | 38.740  | 9.129    | 1.768  | 1.876    | 4.928    | 5.081    | 36.720  | 3.010   |
| Run  | Time     | 65Cu    | 66Zn     | 68Zn   | 75As     | 78Se     | 82Se     | 83Kr    | 88Sr    |
|      |          | ppb     | ppb      | ppb    | ppb      | ppb      | ppb      | ppb     | ppb     |
| 1    | 01:39:27 | 0.281   | 2.468    | 2.151  | -0.045   | -1.130   | 0.016    | 0.000   | 32.370  |
| 2    | 01:39:47 | 0.266   | 2.547    | 2.428  | 0.021    | -1.061   | 0.063    | 0.000   | 32.270  |
| 3    | 01:40:06 | 0.263   | 2.206    | 2.512  | 0.391    | -1.266   | 0.022    | 0.000   | 32.810  |
| X    |          | 0.270   | 2.407    | 2.364  | 0.122    | -1.152   | 0.034    | 0.000   | 32.480  |
| σ    |          | 0.009   | 0.179    | 0.189  | 0.235    | 0.104    | 0.025    | 0.000   | 0.289   |
| %RSD |          | 3.467   | 7.422    | 7.995  | 192.100  | 9.022    | 75.200   | 0.000   | 0.891   |
| Run  | Time     | 89Y     | 95Mo     | 98Mo   | 103Rh    | 107Ag    | 109Ag    | 111Cd   | 114Cd   |
|      |          | ppb     | ppb      | ppb    | ppb      | ppb      | ppb      | ppb     | ppb     |
| 1    | 01:39:27 | 64.519% | 1.944    | 1.945  | 67.419%  | -0.023   | -0.017   | -0.021  | -0.014  |
| 2    | 01:39:47 | 63.777% | 2.296    | 2.526  | 66.715%  | -0.023   | -0.017   | -0.013  | -0.013  |
| 3    | 01:40:06 | 62.844% | 2.680    | 2.519  | 66.449%  | -0.022   | -0.012   | -0.035  | -0.022  |
| X    |          | 63.713% | 2.307    | 2.330  | 66.861%  | -0.023   | -0.015   | -0.023  | -0.016  |
| σ    |          | 0.839%  | 0.368    | 0.334  | 0.502%   | 0.000    | 0.003    | 0.011   | 0.005   |
| %RSD |          | 1.317   | 15.960   | 14.320 | 0.750    | 0.231    | 17.770   | 48.130  | 28.770  |
| Run  | Time     | 115In   | 118Sn    | 121Sb  | 123Sb    | 135Ba    | 137Ba    | 159Tb   | 165Ho   |
|      |          | ppb     | ppb      | ppb    | ppb      | ppb      | ppb      | ppb     | ppb     |
| 1    | 01:39:27 | 69.917% | 0.345    | 1.268  | 1.335    | 26.560   | 27.530   | 82.637% | 84.032% |
| 2    | 01:39:47 | 70.372% | 0.439    | 1.265  | 1.310    | 27.110   | 27.180   | 84.150% | 85.404% |
| 3    | 01:40:06 | 69.799% | 0.419    | 1.147  | 1.135    | 26.970   | 27.640   | 85.212% | 86.843% |
| X    |          | 70.029% | 0.401    | 1.227  | 1.260    | 26.880   | 27.450   | 84.000% | 85.426% |
| σ    |          | 0.303%  | 0.049    | 0.069  | 0.109    | 0.288    | 0.236    | 1.294%  | 1.406%  |
| %RSD |          | 0.432   | 12.300   | 5.607  | 8.657    | 1.070    | 0.860    | 1.541   | 1.646   |
| Run  | Time     | 203Tl   | 205Tl    | 206Pb  | 207Pb    | 208Pb    | 209Bi    |         |         |
|      |          | ppb     | ppb      | ppb    | ppb      | ppb      | ppb      |         |         |
| 1    | 01:39:27 | 0.076   | 0.070    | 0.118  | 0.155    | 0.126    | 89.799%  |         |         |
| 2    | 01:39:47 | 0.077   | 0.083    | 0.122  | 0.147    | 0.120    | 90.153%  |         |         |
| 3    | 01:40:06 | 0.071   | 0.075    | 0.118  | 0.119    | 0.119    | 90.418%  |         |         |
| X    |          | 0.075   | 0.076    | 0.119  | 0.140    | 0.122    | 90.123%  |         |         |
| σ    |          | 0.003   | 0.006    | 0.002  | 0.019    | 0.004    | 0.310%   |         |         |
| %RSD |          | 4.022   | 8.457    | 1.766  | 13.500   | 3.164    | 0.344    |         |         |

180-43898-I-7-A 5/20/2015 1:42:55 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    | 01:43:14 | 65.385% | 0.026    | 16.560  | 12.890   | 0.000    | 3519.000 | 1025.000 | 1030.000 |
| 2    | 01:43:34 | 63.303% | 0.057    | 12.620  | 10.930   | 0.000    | 3347.000 | 978.500  | 1016.000 |
| 3    | 01:43:53 | 61.814% | -0.001   | 11.320  | 11.130   | 0.000    | 3378.000 | 976.400  | 1013.000 |
| X    |          | 63.501% | 0.028    | 13.500  | 11.650   | 0.000    | 3415.000 | 993.300  | 1019.000 |
| σ    |          | 1.794%  | 0.029    | 2.729   | 1.080    | 0.000    | 91.680   | 27.350   | 8.984    |
| %RSD |          | 2.825   | 105.000  | 20.210  | 9.274    | 0.000    | 2.685    | 2.754    | 0.881    |
| Run  | Time     | 27Al    | 28Si     | 37Cl    | 39K      | 43Ca     | 44Ca     | 45Sc     | 47Ti     |
|      |          | ppb     | ppb      | ppb     | ppb      | ppb      | ppb      | ppb      | ppb      |
| 1    | 01:43:14 | 101.600 | 4025.000 | 0.000   | 1346.000 | 5604.000 | 5119.000 | 53.834%  | 3.623    |
| 2    | 01:43:34 | 100.000 | 4063.000 | 0.000   | 1295.000 | 5448.000 | 5082.000 | 54.642%  | 4.156    |
| 3    | 01:43:53 | 98.130  | 3985.000 | 0.000   | 1334.000 | 5552.000 | 5053.000 | 53.012%  | 3.907    |
| X    |          | 99.910  | 4025.000 | 0.000   | 1325.000 | 5534.000 | 5084.000 | 53.829%  | 3.895    |
| σ    |          | 1.725   | 38.990   | 0.000   | 26.800   | 79.310   | 33.330   | 0.815%   | 0.267    |
| %RSD |          | 1.727   | 0.969    | 0.000   | 2.022    | 1.433    | 0.656    | 1.514    | 6.840    |
| Run  | Time     | 51V     | 52Cr     | 55Mn    | 56Fe     | 57Fe     | 59Co     | 60Ni     | 63Cu     |
|      |          | ppb     | ppb      | ppb     | ppb      | ppb      | ppb      | ppb      | ppb      |
| 1    | 01:43:14 | -0.015  | 0.738    | 150.400 | 259.700  | 284.700  | 0.167    | 0.090    | 0.215    |
| 2    | 01:43:34 | -0.167  | 0.729    | 143.900 | 248.900  | 284.700  | 0.182    | 0.089    | 0.274    |
| 3    | 01:43:53 | -0.272  | 0.660    | 146.200 | 252.100  | 279.800  | 0.168    | 0.011    | 0.248    |
| X    |          | -0.151  | 0.709    | 146.800 | 253.600  | 283.100  | 0.172    | 0.063    | 0.246    |
| σ    |          | 0.129   | 0.042    | 3.288   | 5.544    | 2.839    | 0.009    | 0.046    | 0.030    |
| %RSD |          | 85.580  | 5.983    | 2.240   | 2.186    | 1.003    | 5.015    | 72.190   | 12.050   |
| Run  | Time     | 65Cu    | 66Zn     | 68Zn    | 75As     | 78Se     | 82Se     | 83Kr     | 88Sr     |
|      |          | ppb     | ppb      | ppb     | ppb      | ppb      | ppb      | ppb      | ppb      |
| 1    | 01:43:14 | 0.364   | 2.601    | 3.189   | -0.020   | -1.407   | 0.022    | 0.000    | 35.590   |
| 2    | 01:43:34 | 0.275   | 2.464    | 2.644   | -0.016   | -1.456   | -0.131   | 0.000    | 35.190   |
| 3    | 01:43:53 | 0.266   | 2.868    | 2.725   | -0.026   | -1.512   | -0.080   | 0.000    | 35.510   |
| X    |          | 0.301   | 2.644    | 2.853   | -0.021   | -1.458   | -0.063   | 0.000    | 35.430   |
| σ    |          | 0.054   | 0.205    | 0.294   | 0.005    | 0.052    | 0.078    | 0.000    | 0.210    |
| %RSD |          | 17.960  | 7.760    | 10.300  | 23.980   | 3.596    | 124.000  | 0.000    | 0.593    |
| Run  | Time     | 89Y     | 95Mo     | 98Mo    | 103Rh    | 107Ag    | 109Ag    | 111Cd    | 114Cd    |
|      |          | ppb     | ppb      | ppb     | ppb      | ppb      | ppb      | ppb      | ppb      |
| 1    | 01:43:14 | 64.881% | 1.029    | 1.072   | 68.150%  | -0.022   | -0.020   | -0.010   | -0.002   |
| 2    | 01:43:34 | 64.485% | 1.214    | 1.334   | 67.453%  | -0.020   | -0.021   | 0.038    | 0.030    |
| 3    | 01:43:53 | 63.142% | 1.411    | 1.305   | 66.677%  | -0.023   | -0.017   | -0.040   | -0.019   |
| X    |          | 64.169% | 1.218    | 1.237   | 67.427%  | -0.022   | -0.019   | -0.004   | 0.003    |
| σ    |          | 0.912%  | 0.191    | 0.144   | 0.737%   | 0.001    | 0.002    | 0.039    | 0.025    |
| %RSD |          | 1.421   | 15.710   | 11.640  | 1.093    | 4.899    | 12.410   | 969.800  | 862.700  |
| Run  | Time     | 115In   | 118Sn    | 121Sb   | 123Sb    | 135Ba    | 137Ba    | 159Tb    | 165Ho    |
|      |          | ppb     | ppb      | ppb     | ppb      | ppb      | ppb      | ppb      | ppb      |
| 1    | 01:43:14 | 70.447% | 0.361    | 0.456   | 0.460    | 26.990   | 26.270   | 84.771%  | 85.865%  |
| 2    | 01:43:34 | 71.033% | 0.398    | 0.518   | 0.541    | 26.150   | 26.060   | 86.332%  | 87.575%  |
| 3    | 01:43:53 | 70.508% | 0.365    | 0.506   | 0.450    | 27.400   | 26.360   | 86.415%  | 88.443%  |
| X    |          | 70.663% | 0.375    | 0.493   | 0.483    | 26.840   | 26.230   | 85.839%  | 87.294%  |
| σ    |          | 0.322%  | 0.020    | 0.033   | 0.050    | 0.638    | 0.155    | 0.926%   | 1.311%   |
| %RSD |          | 0.456   | 5.360    | 6.646   | 10.430   | 2.376    | 0.589    | 1.079    | 1.502    |
| Run  | Time     | 203Tl   | 205Tl    | 206Pb   | 207Pb    | 208Pb    | 209Bi    |          |          |
|      |          | ppb     | ppb      | ppb     | ppb      | ppb      | ppb      |          |          |
| 1    | 01:43:14 | 0.051   | 0.047    | 0.155   | 0.136    | 0.148    | 92.839%  |          |          |
| 2    | 01:43:34 | 0.048   | 0.054    | 0.164   | 0.170    | 0.171    | 93.023%  |          |          |
| 3    | 01:43:53 | 0.044   | 0.059    | 0.165   | 0.139    | 0.156    | 93.058%  |          |          |
| X    |          | 0.048   | 0.053    | 0.161   | 0.148    | 0.158    | 92.973%  |          |          |
| σ    |          | 0.003   | 0.006    | 0.006   | 0.019    | 0.011    | 0.118%   |          |          |
| %RSD |          | 7.021   | 11.560   | 3.495   | 12.950   | 7.160    | 0.127    |          |          |

180-43898-I-8-A 5/20/2015 1:46:42 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    | 01:47:02 | 70.214% | -0.031   | 1.197   | 1.326    | 0.000   | 13.890  | 2.572   | 1.906   |
| 2    | 01:47:21 | 64.874% | 0.027    | 1.665   | 1.987    | 0.000   | 14.980  | 1.244   | 1.633   |
| 3    | 01:47:40 | 67.044% | 0.081    | 1.111   | 1.376    | 0.000   | 12.940  | 1.523   | 1.381   |
| x    |          | 67.377% | 0.026    | 1.324   | 1.563    | 0.000   | 13.940  | 1.779   | 1.640   |
| σ    |          | 2.685%  | 0.056    | 0.298   | 0.368    | 0.000   | 1.024   | 0.700   | 0.263   |
| %RSD |          | 3.985   | 218.300  | 22.520  | 23.540   | 0.000   | 7.350   | 39.350  | 16.010  |
| Run  | Time     | 27Al    | 28Si     | 37Cl    | 39K      | 43Ca    | 44Ca    | 45Sc    | 47Ti    |
|      |          | ppb     | ppb      | ppb     | ppb      | ppb     | ppb     | ppb     | ppb     |
| 1    | 01:47:02 | 1.510   | -293.500 | 0.000   | 1.285    | 23.000  | 26.330  | 57.392% | 0.156   |
| 2    | 01:47:21 | 1.047   | -293.300 | 0.000   | 1.425    | -2.534  | 26.720  | 55.018% | 0.019   |
| 3    | 01:47:40 | 0.810   | -292.800 | 0.000   | -0.706   | 19.100  | 24.380  | 53.134% | -0.100  |
| x    |          | 1.122   | -293.200 | 0.000   | 0.668    | 13.190  | 25.810  | 55.181% | 0.025   |
| σ    |          | 0.356   | 0.341    | 0.000   | 1.192    | 13.760  | 1.254   | 2.134%  | 0.128   |
| %RSD |          | 31.720  | 0.116    | 0.000   | 178.500  | 104.300 | 4.858   | 3.867   | 508.900 |
| Run  | Time     | 51V     | 52Cr     | 55Mn    | 56Fe     | 57Fe    | 59Co    | 60Ni    | 63Cu    |
|      |          | ppb     | ppb      | ppb     | ppb      | ppb     | ppb     | ppb     | ppb     |
| 1    | 01:47:02 | -1.369  | 0.780    | 0.124   | -4.760   | 0.952   | 0.017   | 0.025   | 0.030   |
| 2    | 01:47:21 | 0.195   | 0.715    | 0.080   | -3.926   | 2.007   | 0.002   | 0.019   | 0.117   |
| 3    | 01:47:40 | -0.964  | 0.732    | 0.070   | -4.353   | 2.362   | 0.002   | 0.028   | 0.040   |
| x    |          | -0.713  | 0.742    | 0.092   | -4.347   | 1.774   | 0.007   | 0.024   | 0.062   |
| σ    |          | 0.811   | 0.034    | 0.029   | 0.417    | 0.734   | 0.008   | 0.005   | 0.047   |
| %RSD |          | 113.900 | 4.526    | 31.220  | 9.598    | 41.370  | 119.100 | 19.870  | 75.970  |
| Run  | Time     | 65Cu    | 66Zn     | 68Zn    | 75As     | 78Se    | 82Se    | 83Kr    | 88Sr    |
|      |          | ppb     | ppb      | ppb     | ppb      | ppb     | ppb     | ppb     | ppb     |
| 1    | 01:47:02 | 0.040   | 2.346    | 2.146   | -0.468   | -1.456  | -0.174  | 0.000   | 0.061   |
| 2    | 01:47:21 | 0.154   | 2.208    | 2.045   | 0.249    | -1.826  | -0.344  | 0.000   | 0.057   |
| 3    | 01:47:40 | 0.060   | 2.420    | 2.053   | 0.181    | -1.435  | -0.064  | 0.000   | 0.052   |
| x    |          | 0.085   | 2.325    | 2.081   | -0.013   | -1.572  | -0.194  | 0.000   | 0.057   |
| σ    |          | 0.061   | 0.107    | 0.056   | 0.396    | 0.220   | 0.141   | 0.000   | 0.004   |
| %RSD |          | 72.060  | 4.614    | 2.707   | 3064.000 | 13.990  | 72.600  | 0.000   | 7.635   |
| Run  | Time     | 89Y     | 95Mo     | 98Mo    | 103Rh    | 107Ag   | 109Ag   | 111Cd   | 114Cd   |
|      |          | ppb     | ppb      | ppb     | ppb      | ppb     | ppb     | ppb     | ppb     |
| 1    | 01:47:02 | 65.117% | 0.773    | 0.814   | 69.434%  | -0.022  | -0.023  | 0.019   | 0.008   |
| 2    | 01:47:21 | 65.267% | 0.891    | 0.921   | 69.629%  | -0.023  | -0.019  | -0.019  | -0.013  |
| 3    | 01:47:40 | 64.903% | 1.061    | 1.037   | 68.353%  | -0.025  | -0.023  | -0.086  | -0.058  |
| x    |          | 65.096% | 0.909    | 0.924   | 69.139%  | -0.023  | -0.021  | -0.029  | -0.021  |
| σ    |          | 0.183%  | 0.145    | 0.112   | 0.687%   | 0.002   | 0.002   | 0.053   | 0.033   |
| %RSD |          | 0.280   | 15.930   | 12.100  | 0.994    | 7.021   | 8.821   | 186.600 | 158.700 |
| Run  | Time     | 115In   | 118Sn    | 121Sb   | 123Sb    | 135Ba   | 137Ba   | 159Tb   | 165Ho   |
|      |          | ppb     | ppb      | ppb     | ppb      | ppb     | ppb     | ppb     | ppb     |
| 1    | 01:47:02 | 70.361% | -0.040   | 0.276   | 0.244    | 0.096   | 0.050   | 84.206% | 84.989% |
| 2    | 01:47:21 | 71.337% | 0.030    | 0.290   | 0.295    | 0.024   | 0.050   | 84.609% | 86.494% |
| 3    | 01:47:40 | 71.317% | 0.090    | 0.327   | 0.299    | 0.054   | 0.038   | 85.656% | 86.250% |
| x    |          | 71.005% | 0.026    | 0.298   | 0.279    | 0.058   | 0.046   | 84.824% | 85.911% |
| σ    |          | 0.558%  | 0.065    | 0.026   | 0.031    | 0.036   | 0.007   | 0.748%  | 0.808%  |
| %RSD |          | 0.786   | 247.100  | 8.782   | 11.020   | 62.860  | 15.230  | 0.882   | 0.940   |
| Run  | Time     | 203Tl   | 205Tl    | 206Pb   | 207Pb    | 208Pb   | 209Bi   |         |         |
|      |          | ppb     | ppb      | ppb     | ppb      | ppb     | ppb     |         |         |
| 1    | 01:47:02 | 0.044   | 0.030    | 0.011   | 0.005    | 0.008   | 90.017% |         |         |
| 2    | 01:47:21 | 0.032   | 0.036    | 0.009   | 0.011    | 0.010   | 91.515% |         |         |
| 3    | 01:47:40 | 0.042   | 0.038    | -0.001  | 0.015    | 0.007   | 91.940% |         |         |
| x    |          | 0.039   | 0.035    | 0.006   | 0.011    | 0.008   | 91.157% |         |         |
| σ    |          | 0.006   | 0.004    | 0.006   | 0.005    | 0.002   | 1.010%  |         |         |
| %RSD |          | 16.130  | 11.880   | 102.700 | 46.940   | 20.580  | 1.108   |         |         |

180-43344-D-9-A SD@50 5/20/2015 1:50:30 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    | 01:50:49 | 78.837% | 0.040    | 41.660 | 47.420   | 0.000    | 114100.000 | 13090.000 | 13020.000 |
| 2    | 01:51:08 | 73.162% | -0.006   | 47.750 | 48.810   | 0.000    | 117700.000 | 13510.000 | 13650.000 |
| 3    | 01:51:28 | 74.509% | -0.006   | 50.200 | 49.230   | 0.000    | 115700.000 | 13440.000 | 13600.000 |
| X    |          | 75.503% | 0.009    | 46.540 | 48.490   | 0.000    | 115800.000 | 13350.000 | 13420.000 |
| σ    |          | 2.965%  | 0.026    | 4.398  | 0.950    | 0.000    | 1784.000   | 226.000   | 349.800   |
| %RSD |          | 3.927   | 280.900  | 9.452  | 1.960    | 0.000    | 1.540      | 1.693     | 2.606     |
| Run  | Time     | 27Al    | 28Si     | 37Cl   | 39K      | 43Ca     | 44Ca       | 45Sc      | 47Ti      |
|      |          | ppb     | ppb      | ppb    | ppb      | ppb      | ppb        | ppb       | ppb       |
| 1    | 01:50:49 | 22.180  | -240.800 | 0.000  | 4498.000 | 4984.000 | 4680.000   | 70.924%   | 0.681     |
| 2    | 01:51:08 | 22.930  | -241.400 | 0.000  | 4590.000 | 5089.000 | 4810.000   | 70.359%   | 0.785     |
| 3    | 01:51:28 | 23.120  | -240.600 | 0.000  | 4536.000 | 5389.000 | 4852.000   | 70.750%   | 0.419     |
| X    |          | 22.740  | -241.000 | 0.000  | 4542.000 | 5154.000 | 4781.000   | 70.677%   | 0.628     |
| σ    |          | 0.497   | 0.430    | 0.000  | 46.210   | 210.400  | 89.610     | 0.289%    | 0.188     |
| %RSD |          | 2.185   | 0.178    | 0.000  | 1.018    | 4.081    | 1.874      | 0.410     | 29.970    |
| Run  | Time     | 51V     | 52Cr     | 55Mn   | 56Fe     | 57Fe     | 59Co       | 60Ni      | 63Cu      |
|      |          | ppb     | ppb      | ppb    | ppb      | ppb      | ppb        | ppb       | ppb       |
| 1    | 01:50:49 | 0.037   | 0.093    | 10.830 | 18.660   | 32.790   | 0.013      | 0.115     | 7.100     |
| 2    | 01:51:08 | 0.022   | 0.032    | 10.730 | 19.620   | 34.180   | 0.020      | 0.096     | 7.408     |
| 3    | 01:51:28 | 0.090   | 0.015    | 10.530 | 17.440   | 33.340   | 0.016      | 0.052     | 6.839     |
| X    |          | 0.050   | 0.047    | 10.700 | 18.570   | 33.440   | 0.017      | 0.087     | 7.115     |
| σ    |          | 0.036   | 0.041    | 0.152  | 1.093    | 0.699    | 0.004      | 0.032     | 0.285     |
| %RSD |          | 71.210  | 87.440   | 1.417  | 5.883    | 2.089    | 21.270     | 36.730    | 4.001     |
| Run  | Time     | 65Cu    | 66Zn     | 68Zn   | 75As     | 78Se     | 82Se       | 83Kr      | 88Sr      |
|      |          | ppb     | ppb      | ppb    | ppb      | ppb      | ppb        | ppb       | ppb       |
| 1    | 01:50:49 | 5.954   | 4.681    | 4.759  | 0.048    | -0.499   | 0.291      | 0.000     | 77.890    |
| 2    | 01:51:08 | 6.636   | 4.672    | 4.889  | 0.075    | -0.407   | 0.512      | 0.000     | 79.970    |
| 3    | 01:51:28 | 6.240   | 4.741    | 4.459  | 0.268    | -0.939   | 0.868      | 0.000     | 77.930    |
| X    |          | 6.276   | 4.698    | 4.702  | 0.130    | -0.615   | 0.557      | 0.000     | 78.600    |
| σ    |          | 0.342   | 0.037    | 0.221  | 0.120    | 0.284    | 0.291      | 0.000     | 1.191     |
| %RSD |          | 5.456   | 0.798    | 4.694  | 92.290   | 46.180   | 52.220     | 0.000     | 1.515     |
| Run  | Time     | 89Y     | 95Mo     | 98Mo   | 103Rh    | 107Ag    | 109Ag      | 111Cd     | 114Cd     |
|      |          | ppb     | ppb      | ppb    | ppb      | ppb      | ppb        | ppb       | ppb       |
| 1    | 01:50:49 | 75.214% | 0.889    | 0.731  | 77.846%  | -0.023   | -0.023     | 0.015     | 0.011     |
| 2    | 01:51:08 | 74.712% | 0.883    | 0.903  | 77.341%  | -0.028   | -0.020     | -0.036    | -0.026    |
| 3    | 01:51:28 | 77.067% | 0.878    | 0.978  | 78.569%  | -0.025   | -0.017     | -0.046    | -0.024    |
| X    |          | 75.664% | 0.883    | 0.871  | 77.918%  | -0.025   | -0.020     | -0.022    | -0.013    |
| σ    |          | 1.241%  | 0.006    | 0.127  | 0.617%   | 0.002    | 0.003      | 0.033     | 0.020     |
| %RSD |          | 1.640   | 0.637    | 14.560 | 0.792    | 9.610    | 14.360     | 146.400   | 158.200   |
| Run  | Time     | 115In   | 118Sn    | 121Sb  | 123Sb    | 135Ba    | 137Ba      | 159Tb     | 165Ho     |
|      |          | ppb     | ppb      | ppb    | ppb      | ppb      | ppb        | ppb       | ppb       |
| 1    | 01:50:49 | 79.177% | -0.328   | -0.052 | -0.025   | 0.375    | 0.360      | 90.129%   | 91.154%   |
| 2    | 01:51:08 | 79.509% | -0.279   | -0.043 | -0.023   | 0.337    | 0.349      | 89.825%   | 91.698%   |
| 3    | 01:51:28 | 80.892% | -0.306   | -0.067 | -0.028   | 0.265    | 0.359      | 92.531%   | 93.350%   |
| X    |          | 79.859% | -0.304   | -0.054 | -0.025   | 0.326    | 0.356      | 90.828%   | 92.067%   |
| σ    |          | 0.909%  | 0.025    | 0.012  | 0.002    | 0.056    | 0.006      | 1.482%    | 1.144%    |
| %RSD |          | 1.139   | 8.089    | 21.940 | 8.317    | 17.090   | 1.689      | 1.632     | 1.242     |
| Run  | Time     | 203Tl   | 205Tl    | 206Pb  | 207Pb    | 208Pb    | 209Bi      |           |           |
|      |          | ppb     | ppb      | ppb    | ppb      | ppb      | ppb        |           |           |
| 1    | 01:50:49 | 0.023   | 0.025    | 0.031  | 0.029    | 0.037    | 96.197%    |           |           |
| 2    | 01:51:08 | 0.028   | 0.032    | 0.037  | 0.042    | 0.043    | 94.540%    |           |           |
| 3    | 01:51:28 | 0.023   | 0.033    | 0.049  | 0.054    | 0.046    | 93.079%    |           |           |
| X    |          | 0.025   | 0.030    | 0.039  | 0.042    | 0.042    | 94.605%    |           |           |
| σ    |          | 0.003   | 0.005    | 0.009  | 0.012    | 0.004    | 1.560%     |           |           |
| %RSD |          | 11.010  | 15.550   | 22.670 | 29.890   | 10.530   | 1.649      |           |           |

CCV 1558997 5/20/2015 1:54:26 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    | 01:54:26 | 79.387% | 93.910   | 98.890  | 96.990    | 0.000     | 46630.000 | 45830.000 | 46690.000 |
| 2    | 01:54:45 | 75.530% | 99.320   | 96.230  | 97.110    | 0.000     | 48560.000 | 46490.000 | 46170.000 |
| 3    | 01:55:04 | 74.156% | 106.600  | 102.300 | 97.080    | 0.000     | 47520.000 | 47100.000 | 47710.000 |
| X    |          | 76.358% | 99.940%  | 99.140% | 97.059%   | 0.000     | 95.136%   | 92.949%   | 93.715%   |
| σ    |          | 2.712%  | n/a      | n/a     | n/a       | 0.000     | n/a       | n/a       | n/a       |
| %RSD |          | 3.551   | 6.367    | 3.066   | 0.060     | 0.000     | 2.029     | 1.367     | 1.670     |
| Run  | Time     | 27Al    | 28Si     | 37Cl    | 39K       | 43Ca      | 44Ca      | 45Sc      | 47Ti      |
|      |          | ppb     | ppb      | ppb     | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 01:54:26 | 445.900 | 4063.000 | 0.000   | 46840.000 | 47840.000 | 47640.000 | 74.445%   | 93.220    |
| 2    | 01:54:45 | 457.700 | 4248.000 | 0.000   | 48710.000 | 48810.000 | 48740.000 | 71.662%   | 96.280    |
| 3    | 01:55:04 | 455.300 | 4087.000 | 0.000   | 50240.000 | 51000.000 | 49540.000 | 70.600%   | 94.850    |
| X    |          | 90.594% | 82.650%  | 0.000   | 97.201%   | 98.432%   | 97.284%   | 72.236%   | 94.781%   |
| σ    |          | n/a     | n/a      | 0.000   | n/a       | n/a       | n/a       | 1.986%    | n/a       |
| %RSD |          | 1.376   | 2.432    | 0.000   | 3.505     | 3.293     | 1.959     | 2.749     | 1.617     |
| Run  | Time     | 51V     | 52Cr     | 55Mn    | 56Fe      | 57Fe      | 59Co      | 60Ni      | 63Cu      |
|      |          | ppb     | ppb      | ppb     | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 01:54:26 | 95.170  | 95.700   | 458.700 | 24660.000 | 24430.000 | 95.050    | 96.200    | 97.930    |
| 2    | 01:54:45 | 97.140  | 99.410   | 494.000 | 25430.000 | 25590.000 | 99.140    | 99.900    | 100.200   |
| 3    | 01:55:04 | 96.740  | 98.930   | 479.700 | 25460.000 | 25370.000 | 96.250    | 97.940    | 99.500    |
| X    |          | 96.349% | 98.011%  | 95.495% | 100.748%  | 100.518%  | 96.813%   | 98.013%   | 99.212%   |
| σ    |          | n/a     | n/a      | n/a     | n/a       | n/a       | n/a       | n/a       | n/a       |
| %RSD |          | 1.080   | 2.060    | 3.717   | 1.799     | 2.440     | 2.169     | 1.892     | 1.172     |
| Run  | Time     | 65Cu    | 66Zn     | 68Zn    | 75As      | 78Se      | 82Se      | 83Kr      | 88Sr      |
|      |          | ppb     | ppb      | ppb     | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 01:54:26 | 97.440  | 93.940   | 95.050  | 95.860    | 95.470    | 94.460    | 0.000     | 93.590    |
| 2    | 01:54:45 | 100.200 | 96.110   | 96.500  | 96.560    | 97.140    | 97.420    | 0.000     | 95.500    |
| 3    | 01:55:04 | 97.180  | 94.890   | 95.280  | 95.900    | 98.450    | 95.640    | 0.000     | 95.400    |
| X    |          | 98.273% | 94.978%  | 95.608% | 96.105%   | 97.019%   | 95.841%   | 0.000     | 94.834%   |
| σ    |          | n/a     | n/a      | n/a     | n/a       | n/a       | n/a       | 0.000     | n/a       |
| %RSD |          | 1.703   | 1.146    | 0.818   | 0.412     | 1.535     | 1.556     | 0.000     | 1.134     |
| Run  | Time     | 89Y     | 95Mo     | 98Mo    | 103Rh     | 107Ag     | 109Ag     | 111Cd     | 114Cd     |
|      |          | ppb     | ppb      | ppb     | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 01:54:26 | 77.565% | 90.410   | 89.960  | 76.959%   | 96.140    | 98.160    | 99.900    | 102.600   |
| 2    | 01:54:45 | 75.904% | 92.240   | 92.620  | 76.649%   | 98.000    | 99.100    | 102.100   | 104.700   |
| 3    | 01:55:04 | 76.516% | 92.290   | 92.740  | 77.517%   | 97.420    | 98.970    | 101.400   | 105.000   |
| X    |          | 76.661% | 91.648%  | 91.772% | 77.042%   | 97.187%   | 98.742%   | 101.116%  | 104.092%  |
| σ    |          | 0.840%  | n/a      | n/a     | 0.440%    | n/a       | n/a       | n/a       | n/a       |
| %RSD |          | 1.096   | 1.166    | 1.713   | 0.570     | 0.983     | 0.517     | 1.093     | 1.263     |
| Run  | Time     | 115In   | 118Sn    | 121Sb   | 123Sb     | 135Ba     | 137Ba     | 159Tb     | 165Ho     |
|      |          | ppb     | ppb      | ppb     | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 01:54:26 | 71.055% | 100.000  | 92.230  | 92.840    | 99.400    | 98.150    | 82.461%   | 83.648%   |
| 2    | 01:54:45 | 71.374% | 101.400  | 92.930  | 93.110    | 101.300   | 99.020    | 84.092%   | 84.162%   |
| 3    | 01:55:04 | 72.404% | 101.800  | 93.050  | 92.310    | 101.300   | 99.160    | 84.890%   | 85.054%   |
| X    |          | 71.611% | 101.053% | 92.739% | 92.754%   | 100.654%  | 98.778%   | 83.814%   | 84.288%   |
| σ    |          | 0.705%  | n/a      | n/a     | n/a       | n/a       | n/a       | 1.238%    | 0.711%    |
| %RSD |          | 0.984   | 0.919    | 0.475   | 0.438     | 1.082     | 0.552     | 1.477     | 0.844     |
| Run  | Time     | 203Tl   | 205Tl    | 206Pb   | 207Pb     | 208Pb     | 209Bi     |           |           |
|      |          | ppb     | ppb      | ppb     | ppb       | ppb       | ppb       |           |           |
| 1    | 01:54:26 | 94.580  | 98.590   | 94.860  | 94.720    | 94.640    | 90.238%   |           |           |
| 2    | 01:54:45 | 96.740  | 100.700  | 96.810  | 97.840    | 97.240    | 89.776%   |           |           |
| 3    | 01:55:04 | 98.670  | 103.200  | 99.570  | 99.330    | 99.170    | 89.307%   |           |           |
| X    |          | 96.665% | 100.844% | 97.076% | 97.297%   | 97.015%   | 89.774%   |           |           |
| σ    |          | n/a     | n/a      | n/a     | n/a       | n/a       | 0.465%    |           |           |
| %RSD |          | 2.115   | 2.299    | 2.438   | 2.417     | 2.343     | 0.518     |           |           |

CCB5 5/20/2015 2:01:06 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    | 02:01:26 | 95.818% | -0.011   | 1.332   | 0.895   | 0.000  | 3.741   | 2.807   | 2.561   |
| 2    | 02:01:45 | 95.758% | 0.027    | 1.340   | 0.877   | 0.000  | 3.057   | 2.500   | 2.499   |
| 3    | 02:02:04 | 93.370% | -0.031   | 0.431   | 0.757   | 0.000  | 2.792   | 2.736   | 2.473   |
| X    |          | 94.982% | -0.005   | 1.034   | 0.844   | 0.000  | 3.196   | 2.681   | 2.511   |
| σ    |          | 1.396%  | 0.029    | 0.522   | 0.075   | 0.000  | 0.490   | 0.161   | 0.046   |
| %RSD |          | 1.470   | 594.500  | 50.510  | 8.883   | 0.000  | 15.320  | 6.007   | 1.817   |
| Run  | Time     | 27Al    | 28Si     | 37Cl    | 39K     | 43Ca   | 44Ca    | 45Sc    | 47Ti    |
|      |          | ppb     | ppb      | ppb     | ppb     | ppb    | ppb     | ppb     | ppb     |
| 1    | 02:01:26 | 0.039   | -303.100 | 0.000   | 3.483   | 5.746  | 3.161   | 87.660% | -0.149  |
| 2    | 02:01:45 | -0.076  | -302.400 | 0.000   | 5.107   | 2.236  | 2.902   | 84.782% | -0.166  |
| 3    | 02:02:04 | -0.179  | -302.600 | 0.000   | 5.446   | 8.228  | 1.808   | 83.719% | -0.105  |
| X    |          | -0.072  | -302.700 | 0.000   | 4.679   | 5.403  | 2.624   | 85.387% | -0.140  |
| σ    |          | 0.109   | 0.354    | 0.000   | 1.049   | 3.011  | 0.718   | 2.039%  | 0.032   |
| %RSD |          | 150.600 | 0.117    | 0.000   | 22.420  | 55.720 | 27.360  | 2.388   | 22.690  |
| Run  | Time     | 51V     | 52Cr     | 55Mn    | 56Fe    | 57Fe   | 59Co    | 60Ni    | 63Cu    |
|      |          | ppb     | ppb      | ppb     | ppb     | ppb    | ppb     | ppb     | ppb     |
| 1    | 02:01:26 | -0.006  | -0.048   | 0.056   | -1.897  | 3.537  | 0.014   | -0.003  | 0.001   |
| 2    | 02:01:45 | -0.033  | -0.059   | 0.028   | -0.989  | 5.353  | 0.006   | 0.025   | -0.035  |
| 3    | 02:02:04 | 0.018   | -0.039   | 0.038   | -1.158  | 6.088  | 0.003   | 0.009   | -0.043  |
| X    |          | -0.007  | -0.049   | 0.041   | -1.348  | 4.993  | 0.008   | 0.011   | -0.025  |
| σ    |          | 0.025   | 0.010    | 0.014   | 0.483   | 1.313  | 0.006   | 0.014   | 0.024   |
| %RSD |          | 360.500 | 20.970   | 34.790  | 35.820  | 26.300 | 73.710  | 130.900 | 92.490  |
| Run  | Time     | 65Cu    | 66Zn     | 68Zn    | 75As    | 78Se   | 82Se    | 83Kr    | 88Sr    |
|      |          | ppb     | ppb      | ppb     | ppb     | ppb    | ppb     | ppb     | ppb     |
| 1    | 02:01:26 | -0.075  | 4.441    | 4.404   | -0.055  | -0.503 | 0.016   | 0.000   | 0.020   |
| 2    | 02:01:45 | -0.006  | 4.663    | 4.023   | 0.128   | -0.570 | 0.241   | 0.000   | 0.016   |
| 3    | 02:02:04 | -0.023  | 4.354    | 4.448   | 0.194   | -0.190 | 0.712   | 0.000   | 0.016   |
| X    |          | -0.034  | 4.486    | 4.292   | 0.089   | -0.421 | 0.323   | 0.000   | 0.017   |
| σ    |          | 0.036   | 0.159    | 0.234   | 0.129   | 0.203  | 0.355   | 0.000   | 0.002   |
| %RSD |          | 104.800 | 3.549    | 5.448   | 144.700 | 48.130 | 109.800 | 0.000   | 13.860  |
| Run  | Time     | 89Y     | 95Mo     | 98Mo    | 103Rh   | 107Ag  | 109Ag   | 111Cd   | 114Cd   |
|      |          | ppb     | ppb      | ppb     | ppb     | ppb    | ppb     | ppb     | ppb     |
| 1    | 02:01:26 | 83.475% | 1.006    | 0.929   | 87.282% | -0.014 | -0.015  | 0.041   | 0.037   |
| 2    | 02:01:45 | 84.520% | 1.195    | 1.105   | 87.778% | -0.014 | -0.011  | -0.034  | -0.018  |
| 3    | 02:02:04 | 83.624% | 1.180    | 1.297   | 86.240% | -0.007 | -0.008  | 0.026   | 0.013   |
| X    |          | 83.873% | 1.127    | 1.110   | 87.100% | -0.012 | -0.011  | 0.011   | 0.011   |
| σ    |          | 0.565%  | 0.105    | 0.184   | 0.785%  | 0.004  | 0.003   | 0.040   | 0.028   |
| %RSD |          | 0.674   | 9.299    | 16.560  | 0.901   | 35.030 | 28.370  | 363.500 | 260.500 |
| Run  | Time     | 115In   | 118Sn    | 121Sb   | 123Sb   | 135Ba  | 137Ba   | 159Tb   | 165Ho   |
|      |          | ppb     | ppb      | ppb     | ppb     | ppb    | ppb     | ppb     | ppb     |
| 1    | 02:01:26 | 85.078% | -0.251   | 0.525   | 0.487   | 0.023  | 0.028   | 90.014% | 90.484% |
| 2    | 02:01:45 | 86.282% | -0.180   | 0.594   | 0.605   | 0.009  | 0.022   | 90.972% | 91.341% |
| 3    | 02:02:04 | 85.843% | -0.200   | 0.624   | 0.607   | 0.013  | 0.009   | 91.822% | 91.307% |
| X    |          | 85.734% | -0.210   | 0.581   | 0.566   | 0.015  | 0.020   | 90.936% | 91.044% |
| σ    |          | 0.609%  | 0.036    | 0.050   | 0.069   | 0.007  | 0.009   | 0.905%  | 0.485%  |
| %RSD |          | 0.711   | 17.290   | 8.650   | 12.180  | 47.360 | 47.150  | 0.995   | 0.533   |
| Run  | Time     | 203Tl   | 205Tl    | 206Pb   | 207Pb   | 208Pb  | 209Bi   |         |         |
|      |          | ppb     | ppb      | ppb     | ppb     | ppb    | ppb     |         |         |
| 1    | 02:01:26 | 0.032   | 0.039    | -0.003  | -0.000  | 0.003  | 99.392% |         |         |
| 2    | 02:01:45 | 0.030   | 0.035    | 0.009   | -0.000  | 0.004  | 98.577% |         |         |
| 3    | 02:02:04 | 0.033   | 0.040    | 0.007   | -0.004  | 0.003  | 98.744% |         |         |
| X    |          | 0.032   | 0.038    | 0.005   | -0.002  | 0.003  | 98.905% |         |         |
| σ    |          | 0.002   | 0.003    | 0.006   | 0.002   | 0.001  | 0.431%  |         |         |
| %RSD |          | 4.783   | 7.165    | 138.900 | 147.500 | 19.420 | 0.435   |         |         |

180-43344-D-9-A@10 5/20/2015 2:04:56 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    | 02:05:16 | 79.790% | -0.031  | 242.600 | 249.100   | 0.000     | 593800.000 | 71430.000 | 72700.000 |
| 2    | 02:05:35 | 80.993% | 0.015   | 243.900 | 234.900   | 0.000     | 585600.000 | 70350.000 | 69730.000 |
| 3    | 02:05:54 | 79.971% | -0.031  | 254.000 | 246.000   | 0.000     | 600700.000 | 72740.000 | 72330.000 |
| X    |          | 80.251% | -0.016  | 246.800 | 243.300   | 0.000     | 593400.000 | 71510.000 | 71590.000 |
| σ    |          | 0.648%  | 0.026   | 6.235   | 7.428     | 0.000     | 7576.000   | 1199.000  | 1620.000  |
| %RSD |          | 0.808   | 168.700 | 2.526   | 3.053     | 0.000     | 1.277      | 1.676     | 2.263     |
| Run  | Time     | 27Al    | 28Si    | 37Cl    | 39K       | 43Ca      | 44Ca       | 45Sc      | 47Ti      |
|      |          | ppb     | ppb     | ppb     | ppb       | ppb       | ppb        | ppb       | ppb       |
| 1    | 02:05:16 | 73.660  | -96.810 | 0.000   | 23480.000 | 25850.000 | 23780.000  | 77.331%   | 3.640     |
| 2    | 02:05:35 | 71.210  | 11.030  | 0.000   | 22800.000 | 25540.000 | 23890.000  | 76.294%   | 4.244     |
| 3    | 02:05:54 | 73.230  | 17.590  | 0.000   | 23500.000 | 26010.000 | 24370.000  | 75.988%   | 4.036     |
| X    |          | 72.700  | -22.730 | 0.000   | 23260.000 | 25800.000 | 24010.000  | 76.538%   | 3.973     |
| σ    |          | 1.304   | 64.230  | 0.000   | 399.300   | 234.800   | 310.900    | 0.704%    | 0.307     |
| %RSD |          | 1.794   | 282.600 | 0.000   | 1.717     | 0.910     | 1.295      | 0.920     | 7.724     |
| Run  | Time     | 51V     | 52Cr    | 55Mn    | 56Fe      | 57Fe      | 59Co       | 60Ni      | 63Cu      |
|      |          | ppb     | ppb     | ppb     | ppb       | ppb       | ppb        | ppb       | ppb       |
| 1    | 02:05:16 | 0.179   | 0.217   | 52.260  | 107.300   | 169.200   | 0.069      | 0.287     | 3.623     |
| 2    | 02:05:35 | 0.184   | 0.231   | 53.260  | 108.900   | 172.400   | 0.069      | 0.296     | 3.718     |
| 3    | 02:05:54 | 0.416   | 0.246   | 53.430  | 110.500   | 175.900   | 0.059      | 0.201     | 3.476     |
| X    |          | 0.260   | 0.231   | 52.980  | 108.900   | 172.500   | 0.065      | 0.261     | 3.606     |
| σ    |          | 0.136   | 0.014   | 0.629   | 1.629     | 3.315     | 0.006      | 0.052     | 0.122     |
| %RSD |          | 52.230  | 6.243   | 1.187   | 1.496     | 1.922     | 8.870      | 20.050    | 3.374     |
| Run  | Time     | 65Cu    | 66Zn    | 68Zn    | 75As      | 78Se      | 82Se       | 83Kr      | 88Sr      |
|      |          | ppb     | ppb     | ppb     | ppb       | ppb       | ppb        | ppb       | ppb       |
| 1    | 02:05:16 | 0.387   | 2.221   | 2.317   | 1.208     | -0.901    | 3.711      | 0.000     | 391.000   |
| 2    | 02:05:35 | 0.398   | 2.255   | 2.351   | 0.955     | 0.004     | 3.850      | 0.000     | 397.100   |
| 3    | 02:05:54 | 0.357   | 2.080   | 1.895   | 0.819     | -0.122    | 3.066      | 0.000     | 394.400   |
| X    |          | 0.381   | 2.185   | 2.187   | 0.994     | -0.339    | 3.542      | 0.000     | 394.200   |
| σ    |          | 0.021   | 0.093   | 0.254   | 0.197     | 0.490     | 0.418      | 0.000     | 3.091     |
| %RSD |          | 5.520   | 4.242   | 11.610  | 19.860    | 144.400   | 11.800     | 0.000     | 0.784     |
| Run  | Time     | 89Y     | 95Mo    | 98Mo    | 103Rh     | 107Ag     | 109Ag      | 111Cd     | 114Cd     |
|      |          | ppb     | ppb     | ppb     | ppb       | ppb       | ppb        | ppb       | ppb       |
| 1    | 02:05:16 | 76.726% | 2.345   | 2.532   | 75.797%   | -0.017    | -0.002     | 0.022     | 0.025     |
| 2    | 02:05:35 | 77.681% | 2.549   | 2.649   | 76.349%   | -0.010    | 0.003      | 0.007     | 0.021     |
| 3    | 02:05:54 | 78.216% | 2.598   | 2.605   | 77.126%   | -0.011    | -0.002     | 0.011     | -0.004    |
| X    |          | 77.541% | 2.497   | 2.595   | 76.424%   | -0.013    | -0.000     | 0.013     | 0.014     |
| σ    |          | 0.755%  | 0.134   | 0.059   | 0.668%    | 0.004     | 0.003      | 0.008     | 0.016     |
| %RSD |          | 0.974   | 5.367   | 2.272   | 0.874     | 28.520    | 739.800    | 57.640    | 114.900   |
| Run  | Time     | 115In   | 118Sn   | 121Sb   | 123Sb     | 135Ba     | 137Ba      | 159Tb     | 165Ho     |
|      |          | ppb     | ppb     | ppb     | ppb       | ppb       | ppb        | ppb       | ppb       |
| 1    | 02:05:16 | 76.569% | -0.215  | 0.741   | 0.780     | 1.449     | 1.503      | 85.894%   | 85.805%   |
| 2    | 02:05:35 | 77.619% | -0.225  | 0.793   | 0.776     | 1.629     | 1.641      | 87.883%   | 87.737%   |
| 3    | 02:05:54 | 79.411% | -0.184  | 0.801   | 0.716     | 1.507     | 1.510      | 88.046%   | 88.998%   |
| X    |          | 77.866% | -0.208  | 0.778   | 0.757     | 1.528     | 1.551      | 87.274%   | 87.513%   |
| σ    |          | 1.437%  | 0.022   | 0.032   | 0.036     | 0.092     | 0.078      | 1.198%    | 1.608%    |
| %RSD |          | 1.845   | 10.460  | 4.174   | 4.726     | 5.996     | 5.013      | 1.373     | 1.838     |
| Run  | Time     | 203Tl   | 205Tl   | 206Pb   | 207Pb     | 208Pb     | 209Bi      |           |           |
|      |          | ppb     | ppb     | ppb     | ppb       | ppb       | ppb        |           |           |
| 1    | 02:05:16 | 0.017   | 0.020   | 0.208   | 0.213     | 0.204     | 96.600%    |           |           |
| 2    | 02:05:35 | 0.021   | 0.020   | 0.252   | 0.242     | 0.225     | 91.283%    |           |           |
| 3    | 02:05:54 | 0.016   | 0.029   | 0.229   | 0.228     | 0.226     | 88.876%    |           |           |
| X    |          | 0.018   | 0.023   | 0.230   | 0.228     | 0.218     | 92.253%    |           |           |
| σ    |          | 0.002   | 0.005   | 0.022   | 0.014     | 0.012     | 3.953%     |           |           |
| %RSD |          | 13.830  | 22.820  | 9.521   | 6.271     | 5.653     | 4.285      |           |           |



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5/20/2015 2:08:44 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    | 02:09:03 | 84.767% | 0.056    | 233.600 | 243.800   | 0.000     | 587100.000 | 70910.000 | 70240.000 |
| 2    | 02:09:23 | 84.736% | -0.031   | 260.400 | 250.100   | 0.000     | 583200.000 | 72540.000 | 73330.000 |
| 3    | 02:09:42 | 82.143% | -0.008   | 254.700 | 239.600   | 0.000     | 591800.000 | 71980.000 | 73370.000 |
| X    |          | 83.882% | 0.006    | 249.600 | 244.500   | 0.000     | 587400.000 | 71810.000 | 72310.000 |
| σ    |          | 1.506%  | 0.045    | 14.090  | 5.289     | 0.000     | 4318.000   | 827.300   | 1795.000  |
| %RSD |          | 1.796   | 791.800  | 5.647   | 2.163     | 0.000     | 0.735      | 1.152     | 2.483     |
| Run  | Time     | 27Al    | 28Si     | 37Cl    | 39K       | 43Ca      | 44Ca       | 45Sc      | 47Ti      |
|      |          | ppb     | ppb      | ppb     | ppb       | ppb       | ppb        | ppb       | ppb       |
| 1    | 02:09:03 | 1.448   | -177.600 | 0.000   | 23350.000 | 25430.000 | 24050.000  | 80.463%   | 0.006     |
| 2    | 02:09:23 | 1.401   | -177.000 | 0.000   | 23490.000 | 26320.000 | 24150.000  | 80.948%   | -0.079    |
| 3    | 02:09:42 | 1.384   | -175.000 | 0.000   | 23500.000 | 26780.000 | 24790.000  | 78.133%   | -0.009    |
| X    |          | 1.411   | -176.500 | 0.000   | 23440.000 | 26180.000 | 24330.000  | 79.848%   | -0.028    |
| σ    |          | 0.033   | 1.326    | 0.000   | 85.420    | 688.600   | 405.100    | 1.505%    | 0.046     |
| %RSD |          | 2.344   | 0.751    | 0.000   | 0.364     | 2.631     | 1.665      | 1.885     | 164.600   |
| Run  | Time     | 51V     | 52Cr     | 55Mn    | 56Fe      | 57Fe      | 59Co       | 60Ni      | 63Cu      |
|      |          | ppb     | ppb      | ppb     | ppb       | ppb       | ppb        | ppb       | ppb       |
| 1    | 02:09:03 | 0.042   | 0.029    | 52.470  | 1.485     | 58.480    | 0.042      | 0.158     | 3.531     |
| 2    | 02:09:23 | 0.078   | 0.045    | 51.540  | -0.169    | 58.220    | 0.052      | 0.087     | 3.539     |
| 3    | 02:09:42 | 0.186   | 0.060    | 52.920  | 1.562     | 58.090    | 0.029      | 0.084     | 3.690     |
| X    |          | 0.102   | 0.045    | 52.310  | 0.959     | 58.260    | 0.041      | 0.110     | 3.587     |
| σ    |          | 0.075   | 0.015    | 0.702   | 0.978     | 0.198     | 0.011      | 0.042     | 0.090     |
| %RSD |          | 73.560  | 34.330   | 1.342   | 102.000   | 0.340     | 27.190     | 38.160    | 2.497     |
| Run  | Time     | 65Cu    | 66Zn     | 68Zn    | 75As      | 78Se      | 82Se       | 83Kr      | 88Sr      |
|      |          | ppb     | ppb      | ppb     | ppb       | ppb       | ppb        | ppb       | ppb       |
| 1    | 02:09:03 | 0.174   | 3.002    | 3.263   | 0.811     | -0.406    | 3.638      | 0.000     | 413.100   |
| 2    | 02:09:23 | 0.172   | 2.859    | 2.774   | 0.725     | 0.016     | 3.523      | 0.000     | 409.400   |
| 3    | 02:09:42 | 0.231   | 3.052    | 2.956   | 0.639     | -0.474    | 3.278      | 0.000     | 418.100   |
| X    |          | 0.192   | 2.971    | 2.998   | 0.725     | -0.288    | 3.480      | 0.000     | 413.500   |
| σ    |          | 0.034   | 0.100    | 0.247   | 0.086     | 0.266     | 0.184      | 0.000     | 4.335     |
| %RSD |          | 17.550  | 3.371    | 8.235   | 11.870    | 92.260    | 5.288      | 0.000     | 1.048     |
| Run  | Time     | 89Y     | 95Mo     | 98Mo    | 103Rh     | 107Ag     | 109Ag      | 111Cd     | 114Cd     |
|      |          | ppb     | ppb      | ppb     | ppb       | ppb       | ppb        | ppb       | ppb       |
| 1    | 02:09:03 | 80.108% | 2.366    | 2.440   | 78.402%   | -0.021    | -0.025     | -0.020    | -0.018    |
| 2    | 02:09:23 | 80.887% | 2.352    | 2.555   | 78.623%   | -0.022    | -0.016     | 0.047     | 0.025     |
| 3    | 02:09:42 | 80.772% | 2.341    | 2.539   | 79.336%   | -0.019    | -0.020     | 0.016     | 0.012     |
| X    |          | 80.589% | 2.353    | 2.511   | 78.787%   | -0.021    | -0.020     | 0.014     | 0.006     |
| σ    |          | 0.420%  | 0.012    | 0.062   | 0.488%    | 0.001     | 0.004      | 0.033     | 0.022     |
| %RSD |          | 0.522   | 0.513    | 2.482   | 0.619     | 6.551     | 21.810     | 233.000   | 355.300   |
| Run  | Time     | 115In   | 118Sn    | 121Sb   | 123Sb     | 135Ba     | 137Ba      | 159Tb     | 165Ho     |
|      |          | ppb     | ppb      | ppb     | ppb       | ppb       | ppb        | ppb       | ppb       |
| 1    | 02:09:03 | 79.841% | -0.318   | 0.470   | 0.508     | 1.282     | 1.205      | 88.053%   | 87.723%   |
| 2    | 02:09:23 | 81.678% | -0.281   | 0.547   | 0.583     | 1.141     | 1.157      | 89.535%   | 89.329%   |
| 3    | 02:09:42 | 82.858% | -0.285   | 0.516   | 0.542     | 1.062     | 1.062      | 90.584%   | 91.175%   |
| X    |          | 81.459% | -0.295   | 0.511   | 0.544     | 1.162     | 1.141      | 89.391%   | 89.409%   |
| σ    |          | 1.520%  | 0.020    | 0.039   | 0.038     | 0.111     | 0.073      | 1.272%    | 1.727%    |
| %RSD |          | 1.866   | 6.882    | 7.565   | 6.938     | 9.581     | 6.356      | 1.422     | 1.932     |
| Run  | Time     | 203Tl   | 205Tl    | 206Pb   | 207Pb     | 208Pb     | 209Bi      |           |           |
|      |          | ppb     | ppb      | ppb     | ppb       | ppb       | ppb        |           |           |
| 1    | 02:09:03 | 0.007   | 0.016    | 0.022   | 0.016     | 0.015     | 89.277%    |           |           |
| 2    | 02:09:23 | 0.009   | 0.014    | 0.018   | 0.020     | 0.015     | 87.117%    |           |           |
| 3    | 02:09:42 | 0.014   | 0.016    | 0.018   | 0.005     | 0.015     | 87.411%    |           |           |
| X    |          | 0.010   | 0.015    | 0.019   | 0.014     | 0.015     | 87.935%    |           |           |
| σ    |          | 0.004   | 0.001    | 0.002   | 0.008     | 0.000     | 1.172%     |           |           |
| %RSD |          | 38.940  | 6.816    | 11.300  | 55.810    | 2.047     | 1.333      |           |           |

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5/20/2015 2:12:33 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    | 02:12:52 | 83.729% | 0.013    | 267.900 | 267.500   | 0.000     | 616300.000 | 74370.000 | 75050.000 |
| 2    | 02:13:12 | 84.958% | -0.009   | 267.000 | 262.000   | 0.000     | 603000.000 | 74260.000 | 76150.000 |
| 3    | 02:13:31 | 84.039% | -0.031   | 252.200 | 258.700   | 0.000     | 607300.000 | 74980.000 | 78000.000 |
| X    |          | 84.242% | -0.009   | 262.400 | 262.700   | 0.000     | 608900.000 | 74540.000 | 76400.000 |
| σ    |          | 0.639%  | 0.022    | 8.789   | 4.446     | 0.000     | 6818.000   | 387.900   | 1493.000  |
| %RSD |          | 0.759   | 243.700  | 3.350   | 1.692     | 0.000     | 1.120      | 0.520     | 1.955     |
| Run  | Time     | 27Al    | 28Si     | 37Cl    | 39K       | 43Ca      | 44Ca       | 45Sc      | 47Ti      |
|      |          | ppb     | ppb      | ppb     | ppb       | ppb       | ppb        | ppb       | ppb       |
| 1    | 02:12:52 | 13.320  | -139.300 | 0.000   | 24170.000 | 25930.000 | 24390.000  | 86.136%   | 0.583     |
| 2    | 02:13:12 | 13.540  | -135.500 | 0.000   | 24500.000 | 26300.000 | 24850.000  | 84.537%   | 0.738     |
| 3    | 02:13:31 | 14.100  | -137.400 | 0.000   | 24670.000 | 26610.000 | 25250.000  | 82.896%   | 0.408     |
| X    |          | 13.650  | -137.400 | 0.000   | 24450.000 | 26280.000 | 24830.000  | 84.523%   | 0.577     |
| σ    |          | 0.399   | 1.884    | 0.000   | 256.600   | 342.000   | 434.300    | 1.620%    | 0.165     |
| %RSD |          | 2.920   | 1.371    | 0.000   | 1.049     | 1.301     | 1.749      | 1.916     | 28.630    |
| Run  | Time     | 51V     | 52Cr     | 55Mn    | 56Fe      | 57Fe      | 59Co       | 60Ni      | 63Cu      |
|      |          | ppb     | ppb      | ppb     | ppb       | ppb       | ppb        | ppb       | ppb       |
| 1    | 02:12:52 | 0.073   | 0.109    | 34.770  | 21.990    | 84.490    | 0.083      | 0.064     | 3.666     |
| 2    | 02:13:12 | -0.163  | 0.096    | 35.070  | 21.490    | 81.610    | 0.075      | 0.187     | 3.756     |
| 3    | 02:13:31 | 0.232   | 0.112    | 35.560  | 23.030    | 75.540    | 0.068      | 0.147     | 3.812     |
| X    |          | 0.048   | 0.106    | 35.130  | 22.170    | 80.550    | 0.075      | 0.132     | 3.745     |
| σ    |          | 0.199   | 0.008    | 0.397   | 0.787     | 4.572     | 0.007      | 0.063     | 0.074     |
| %RSD |          | 418.700 | 7.863    | 1.131   | 3.548     | 5.676     | 9.837      | 47.360    | 1.970     |
| Run  | Time     | 65Cu    | 66Zn     | 68Zn    | 75As      | 78Se      | 82Se       | 83Kr      | 88Sr      |
|      |          | ppb     | ppb      | ppb     | ppb       | ppb       | ppb        | ppb       | ppb       |
| 1    | 02:12:52 | 0.287   | 1.936    | 1.579   | 0.750     | -0.834    | 3.656      | 0.000     | 437.700   |
| 2    | 02:13:12 | 0.353   | 1.700    | 1.828   | 0.821     | -0.619    | 3.905      | 0.000     | 437.200   |
| 3    | 02:13:31 | 0.274   | 2.057    | 1.868   | 1.056     | -0.399    | 3.655      | 0.000     | 437.400   |
| X    |          | 0.304   | 1.898    | 1.759   | 0.876     | -0.617    | 3.739      | 0.000     | 437.400   |
| σ    |          | 0.042   | 0.182    | 0.157   | 0.160     | 0.218     | 0.144      | 0.000     | 0.263     |
| %RSD |          | 13.870  | 9.570    | 8.902   | 18.270    | 35.250    | 3.849      | 0.000     | 0.060     |
| Run  | Time     | 89Y     | 95Mo     | 98Mo    | 103Rh     | 107Ag     | 109Ag      | 111Cd     | 114Cd     |
|      |          | ppb     | ppb      | ppb     | ppb       | ppb       | ppb        | ppb       | ppb       |
| 1    | 02:12:52 | 82.696% | 2.814    | 2.898   | 80.124%   | -0.021    | -0.018     | -0.024    | -0.013    |
| 2    | 02:13:12 | 83.993% | 2.972    | 3.077   | 81.197%   | -0.020    | -0.011     | -0.010    | -0.001    |
| 3    | 02:13:31 | 84.288% | 2.832    | 3.022   | 81.065%   | -0.021    | -0.015     | -0.005    | 0.002     |
| X    |          | 83.659% | 2.872    | 2.999   | 80.796%   | -0.021    | -0.015     | -0.013    | -0.004    |
| σ    |          | 0.847%  | 0.087    | 0.091   | 0.585%    | 0.001     | 0.003      | 0.010     | 0.008     |
| %RSD |          | 1.012   | 3.019    | 3.048   | 0.724     | 4.091     | 22.360     | 76.170    | 214.000   |
| Run  | Time     | 115In   | 118Sn    | 121Sb   | 123Sb     | 135Ba     | 137Ba      | 159Tb     | 165Ho     |
|      |          | ppb     | ppb      | ppb     | ppb       | ppb       | ppb        | ppb       | ppb       |
| 1    | 02:12:52 | 82.467% | -0.381   | 0.299   | 0.299     | 1.473     | 1.458      | 89.591%   | 89.997%   |
| 2    | 02:13:12 | 83.997% | -0.347   | 0.343   | 0.337     | 1.519     | 1.395      | 90.999%   | 92.162%   |
| 3    | 02:13:31 | 83.987% | -0.348   | 0.326   | 0.386     | 1.279     | 1.425      | 92.742%   | 93.431%   |
| X    |          | 83.484% | -0.359   | 0.323   | 0.341     | 1.424     | 1.426      | 91.111%   | 91.863%   |
| σ    |          | 0.881%  | 0.019    | 0.022   | 0.043     | 0.127     | 0.032      | 1.578%    | 1.736%    |
| %RSD |          | 1.055   | 5.428    | 6.848   | 12.750    | 8.933     | 2.214      | 1.732     | 1.890     |
| Run  | Time     | 203Tl   | 205Tl    | 206Pb   | 207Pb     | 208Pb     | 209Bi      |           |           |
|      |          | ppb     | ppb      | ppb     | ppb       | ppb       | ppb        |           |           |
| 1    | 02:12:52 | 0.007   | 0.009    | 0.069   | 0.061     | 0.075     | 94.401%    |           |           |
| 2    | 02:13:12 | 0.009   | 0.012    | 0.064   | 0.068     | 0.065     | 91.258%    |           |           |
| 3    | 02:13:31 | 0.004   | 0.011    | 0.083   | 0.069     | 0.071     | 89.539%    |           |           |
| X    |          | 0.007   | 0.011    | 0.072   | 0.066     | 0.071     | 91.733%    |           |           |
| σ    |          | 0.003   | 0.002    | 0.010   | 0.004     | 0.005     | 2.465%     |           |           |
| %RSD |          | 38.560  | 15.820   | 14.070  | 6.445     | 6.995     | 2.688      |           |           |

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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    | 02:16:40 | 90.477%  | 0.010    | 253.100 | 257.200   | 0.000     | 619300.000 | 74530.000 | 74710.000 |
| 2    | 02:17:00 | 88.685%  | -0.010   | 253.900 | 257.300   | 0.000     | 588200.000 | 72830.000 | 74530.000 |
| 3    | 02:17:19 | 84.296%  | -0.009   | 272.500 | 272.900   | 0.000     | 625800.000 | 76620.000 | 76960.000 |
| X    |          | 87.819%  | -0.003   | 259.900 | 262.500   | 0.000     | 611100.000 | 74660.000 | 75400.000 |
| σ    |          | 3.180%   | 0.011    | 10.990  | 9.029     | 0.000     | 20110.000  | 1899.000  | 1353.000  |
| %RSD |          | 3.621    | 371.900  | 4.230   | 3.440     | 0.000     | 3.291      | 2.544     | 1.794     |
| Run  | Time     | 27Al     | 28Si     | 37Cl    | 39K       | 43Ca      | 44Ca       | 45Sc      | 47Ti      |
|      |          | ppb      | ppb      | ppb     | ppb       | ppb       | ppb        | ppb       | ppb       |
| 1    | 02:16:40 | -0.085   | -181.000 | 0.000   | 24470.000 | 26500.000 | 24270.000  | 86.737%   | -0.109    |
| 2    | 02:17:00 | -0.066   | -184.000 | 0.000   | 24130.000 | 26430.000 | 24540.000  | 86.818%   | -0.050    |
| 3    | 02:17:19 | -0.044   | -173.500 | 0.000   | 25200.000 | 26340.000 | 25050.000  | 83.615%   | -0.105    |
| X    |          | -0.065   | -179.500 | 0.000   | 24600.000 | 26430.000 | 24620.000  | 85.723%   | -0.088    |
| σ    |          | 0.021    | 5.404    | 0.000   | 547.500   | 79.740    | 394.500    | 1.826%    | 0.033     |
| %RSD |          | 31.510   | 3.011    | 0.000   | 2.225     | 0.302     | 1.602      | 2.130     | 37.120    |
| Run  | Time     | 51V      | 52Cr     | 55Mn    | 56Fe      | 57Fe      | 59Co       | 60Ni      | 63Cu      |
|      |          | ppb      | ppb      | ppb     | ppb       | ppb       | ppb        | ppb       | ppb       |
| 1    | 02:16:40 | 0.279    | 0.048    | 34.520  | 2.280     | 56.150    | 0.086      | 0.112     | 3.764     |
| 2    | 02:17:00 | -0.002   | 0.083    | 34.710  | 3.175     | 61.940    | 0.070      | 0.117     | 3.746     |
| 3    | 02:17:19 | -0.344   | 0.079    | 35.720  | 3.371     | 61.020    | 0.077      | 0.257     | 3.813     |
| X    |          | -0.023   | 0.070    | 34.980  | 2.942     | 59.710    | 0.078      | 0.162     | 3.774     |
| σ    |          | 0.312    | 0.019    | 0.647   | 0.582     | 3.114     | 0.008      | 0.082     | 0.034     |
| %RSD |          | 1378.000 | 27.130   | 1.849   | 19.770    | 5.215     | 10.620     | 50.550    | 0.913     |
| Run  | Time     | 65Cu     | 66Zn     | 68Zn    | 75As      | 78Se      | 82Se       | 83Kr      | 88Sr      |
|      |          | ppb      | ppb      | ppb     | ppb       | ppb       | ppb        | ppb       | ppb       |
| 1    | 02:16:40 | 0.217    | 1.067    | 0.853   | 0.867     | -0.063    | 2.594      | 0.000     | 434.600   |
| 2    | 02:17:00 | 0.152    | 1.033    | 0.968   | 1.041     | -0.229    | 2.490      | 0.000     | 430.900   |
| 3    | 02:17:19 | 0.193    | 1.051    | 0.896   | 0.220     | 0.008     | 2.548      | 0.000     | 430.000   |
| X    |          | 0.188    | 1.050    | 0.906   | 0.709     | -0.095    | 2.544      | 0.000     | 431.800   |
| σ    |          | 0.033    | 0.017    | 0.058   | 0.433     | 0.122     | 0.052      | 0.000     | 2.425     |
| %RSD |          | 17.540   | 1.591    | 6.420   | 60.980    | 128.600   | 2.048      | 0.000     | 0.562     |
| Run  | Time     | 89Y      | 95Mo     | 98Mo    | 103Rh     | 107Ag     | 109Ag      | 111Cd     | 114Cd     |
|      |          | ppb      | ppb      | ppb     | ppb       | ppb       | ppb        | ppb       | ppb       |
| 1    | 02:16:40 | 85.084%  | 2.907    | 2.883   | 82.912%   | -0.026    | -0.024     | 0.041     | 0.028     |
| 2    | 02:17:00 | 86.493%  | 2.992    | 2.989   | 83.430%   | -0.025    | -0.018     | 0.044     | 0.035     |
| 3    | 02:17:19 | 84.724%  | 2.923    | 3.043   | 82.730%   | -0.022    | -0.023     | -0.005    | -0.010    |
| X    |          | 85.434%  | 2.941    | 2.972   | 83.024%   | -0.024    | -0.022     | 0.027     | 0.018     |
| σ    |          | 0.935%   | 0.045    | 0.081   | 0.364%    | 0.002     | 0.003      | 0.027     | 0.024     |
| %RSD |          | 1.095    | 1.540    | 2.742   | 0.438     | 9.781     | 15.380     | 101.600   | 136.700   |
| Run  | Time     | 115In    | 118Sn    | 121Sb   | 123Sb     | 135Ba     | 137Ba      | 159Tb     | 165Ho     |
|      |          | ppb      | ppb      | ppb     | ppb       | ppb       | ppb        | ppb       | ppb       |
| 1    | 02:16:40 | 84.480%  | -0.393   | 0.235   | 0.241     | 1.398     | 1.328      | 91.604%   | 91.108%   |
| 2    | 02:17:00 | 85.287%  | -0.365   | 0.287   | 0.287     | 1.288     | 1.334      | 93.030%   | 93.852%   |
| 3    | 02:17:19 | 85.767%  | -0.336   | 0.283   | 0.276     | 1.513     | 1.361      | 94.243%   | 94.118%   |
| X    |          | 85.178%  | -0.365   | 0.269   | 0.268     | 1.400     | 1.341      | 92.959%   | 93.026%   |
| σ    |          | 0.650%   | 0.028    | 0.029   | 0.024     | 0.112     | 0.018      | 1.321%    | 1.666%    |
| %RSD |          | 0.763    | 7.782    | 10.790  | 8.933     | 8.028     | 1.341      | 1.421     | 1.791     |
| Run  | Time     | 203Tl    | 205Tl    | 206Pb   | 207Pb     | 208Pb     | 209Bi      |           |           |
|      |          | ppb      | ppb      | ppb     | ppb       | ppb       | ppb        |           |           |
| 1    | 02:16:40 | 0.011    | 0.008    | -0.005  | -0.003    | -0.003    | 96.406%    |           |           |
| 2    | 02:17:00 | 0.011    | 0.007    | -0.006  | -0.005    | -0.004    | 92.186%    |           |           |
| 3    | 02:17:19 | 0.006    | 0.008    | -0.004  | -0.005    | -0.004    | 90.762%    |           |           |
| X    |          | 0.009    | 0.008    | -0.005  | -0.004    | -0.004    | 93.118%    |           |           |
| σ    |          | 0.003    | 0.001    | 0.001   | 0.001     | 0.001     | 2.935%     |           |           |
| %RSD |          | 34.250   | 6.484    | 18.330  | 23.840    | 20.080    | 3.152      |           |           |

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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    | 02:20:30 | 89.635% | -0.031  | 264.900 | 256.300   | 0.000     | 597700.000 | 73680.000 | 74220.000 |
| 2    | 02:20:49 | 89.869% | 0.031   | 272.900 | 268.300   | 0.000     | 598200.000 | 75370.000 | 77420.000 |
| 3    | 02:21:08 | 88.852% | 0.073   | 275.000 | 268.600   | 0.000     | 609000.000 | 75940.000 | 74970.000 |
| X    |          | 89.452% | 0.024   | 270.900 | 264.400   | 0.000     | 601600.000 | 75000.000 | 75540.000 |
| σ    |          | 0.533%  | 0.052   | 5.335   | 7.022     | 0.000     | 6377.000   | 1177.000  | 1676.000  |
| %RSD |          | 0.595   | 214.700 | 1.969   | 2.656     | 0.000     | 1.060      | 1.569     | 2.218     |
| Run  | Time     | 27Al    | 28Si    | 37Cl    | 39K       | 43Ca      | 44Ca       | 45Sc      | 47Ti      |
|      |          | ppb     | ppb     | ppb     | ppb       | ppb       | ppb        | ppb       | ppb       |
| 1    | 02:20:30 | 125.300 | 171.200 | 0.000   | 24040.000 | 27710.000 | 26050.000  | 89.551%   | 7.184     |
| 2    | 02:20:49 | 127.900 | 168.400 | 0.000   | 24100.000 | 28740.000 | 26500.000  | 86.669%   | 6.728     |
| 3    | 02:21:08 | 129.000 | 180.900 | 0.000   | 24580.000 | 29490.000 | 26780.000  | 84.354%   | 7.433     |
| X    |          | 127.400 | 173.500 | 0.000   | 24240.000 | 28650.000 | 26440.000  | 86.858%   | 7.115     |
| σ    |          | 1.912   | 6.562   | 0.000   | 294.900   | 892.200   | 367.500    | 2.604%    | 0.357     |
| %RSD |          | 1.501   | 3.782   | 0.000   | 1.217     | 3.114     | 1.390      | 2.998     | 5.025     |
| Run  | Time     | 51V     | 52Cr    | 55Mn    | 56Fe      | 57Fe      | 59Co       | 60Ni      | 63Cu      |
|      |          | ppb     | ppb     | ppb     | ppb       | ppb       | ppb        | ppb       | ppb       |
| 1    | 02:20:30 | 0.379   | 0.413   | 77.440  | 224.900   | 296.900   | 0.104      | 0.160     | 3.914     |
| 2    | 02:20:49 | 0.177   | 0.444   | 77.650  | 226.400   | 289.600   | 0.090      | 0.269     | 4.189     |
| 3    | 02:21:08 | 0.282   | 0.434   | 80.060  | 234.000   | 299.300   | 0.079      | 0.230     | 4.190     |
| X    |          | 0.279   | 0.430   | 78.380  | 228.400   | 295.300   | 0.091      | 0.220     | 4.098     |
| σ    |          | 0.101   | 0.016   | 1.457   | 4.873     | 5.042     | 0.013      | 0.055     | 0.159     |
| %RSD |          | 36.130  | 3.719   | 1.859   | 2.133     | 1.707     | 13.780     | 25.050    | 3.882     |
| Run  | Time     | 65Cu    | 66Zn    | 68Zn    | 75As      | 78Se      | 82Se       | 83Kr      | 88Sr      |
|      |          | ppb     | ppb     | ppb     | ppb       | ppb       | ppb        | ppb       | ppb       |
| 1    | 02:20:30 | 0.502   | 2.805   | 3.143   | 0.913     | -0.070    | 2.538      | 0.000     | 449.300   |
| 2    | 02:20:49 | 0.530   | 3.252   | 3.018   | 0.968     | -0.274    | 2.535      | 0.000     | 446.800   |
| 3    | 02:21:08 | 0.558   | 3.259   | 3.038   | 1.014     | -0.481    | 2.843      | 0.000     | 448.000   |
| X    |          | 0.530   | 3.105   | 3.067   | 0.965     | -0.275    | 2.639      | 0.000     | 448.000   |
| σ    |          | 0.028   | 0.260   | 0.067   | 0.051     | 0.206     | 0.177      | 0.000     | 1.274     |
| %RSD |          | 5.302   | 8.374   | 2.193   | 5.237     | 74.850    | 6.693      | 0.000     | 0.284     |
| Run  | Time     | 89Y     | 95Mo    | 98Mo    | 103Rh     | 107Ag     | 109Ag      | 111Cd     | 114Cd     |
|      |          | ppb     | ppb     | ppb     | ppb       | ppb       | ppb        | ppb       | ppb       |
| 1    | 02:20:30 | 85.576% | 2.450   | 2.487   | 82.961%   | -0.018    | -0.014     | 0.007     | 0.015     |
| 2    | 02:20:49 | 87.024% | 2.616   | 2.645   | 84.087%   | -0.020    | -0.006     | 0.029     | 0.027     |
| 3    | 02:21:08 | 87.058% | 2.539   | 2.536   | 84.142%   | -0.015    | -0.013     | 0.089     | 0.072     |
| X    |          | 86.553% | 2.535   | 2.556   | 83.730%   | -0.018    | -0.011     | 0.042     | 0.038     |
| σ    |          | 0.846%  | 0.083   | 0.081   | 0.667%    | 0.003     | 0.004      | 0.042     | 0.030     |
| %RSD |          | 0.977   | 3.286   | 3.149   | 0.796     | 15.470    | 39.760     | 100.400   | 78.830    |
| Run  | Time     | 115In   | 118Sn   | 121Sb   | 123Sb     | 135Ba     | 137Ba      | 159Tb     | 165Ho     |
|      |          | ppb     | ppb     | ppb     | ppb       | ppb       | ppb        | ppb       | ppb       |
| 1    | 02:20:30 | 84.935% | -0.385  | 0.172   | 0.169     | 1.928     | 1.856      | 92.060%   | 92.233%   |
| 2    | 02:20:49 | 86.071% | -0.361  | 0.189   | 0.210     | 1.885     | 1.901      | 93.333%   | 93.267%   |
| 3    | 02:21:08 | 85.595% | -0.324  | 0.198   | 0.217     | 1.907     | 1.963      | 93.979%   | 94.222%   |
| X    |          | 85.534% | -0.357  | 0.186   | 0.199     | 1.907     | 1.907      | 93.124%   | 93.241%   |
| σ    |          | 0.570%  | 0.030   | 0.013   | 0.026     | 0.022     | 0.053      | 0.976%    | 0.995%    |
| %RSD |          | 0.667   | 8.550   | 7.189   | 13.030    | 1.145     | 2.800      | 1.048     | 1.067     |
| Run  | Time     | 203Tl   | 205Tl   | 206Pb   | 207Pb     | 208Pb     | 209Bi      |           |           |
|      |          | ppb     | ppb     | ppb     | ppb       | ppb       | ppb        |           |           |
| 1    | 02:20:30 | 0.011   | 0.008   | 0.342   | 0.300     | 0.315     | 95.480%    |           |           |
| 2    | 02:20:49 | 0.009   | 0.010   | 0.360   | 0.310     | 0.351     | 91.655%    |           |           |
| 3    | 02:21:08 | 0.005   | 0.010   | 0.352   | 0.333     | 0.351     | 90.449%    |           |           |
| X    |          | 0.008   | 0.009   | 0.351   | 0.314     | 0.339     | 92.528%    |           |           |
| σ    |          | 0.003   | 0.001   | 0.009   | 0.017     | 0.021     | 2.626%     |           |           |
| %RSD |          | 37.800  | 15.050  | 2.675   | 5.474     | 6.143     | 2.838      |           |           |

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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    | 02:24:19 | 90.947% | -0.031  | 247.500  | 271.600   | 0.000     | 599300.000 | 74850.000 | 75990.000 |
| 2    | 02:24:38 | 90.641% | -0.010  | 273.500  | 270.300   | 0.000     | 597500.000 | 73560.000 | 75280.000 |
| 3    | 02:24:57 | 88.190% | -0.010  | 266.600  | 267.900   | 0.000     | 594700.000 | 73150.000 | 74370.000 |
| X    |          | 89.926% | -0.017  | 262.500  | 269.900   | 0.000     | 597200.000 | 73860.000 | 75210.000 |
| σ    |          | 1.511%  | 0.012   | 13.490   | 1.868     | 0.000     | 2314.000   | 887.900   | 809.900   |
| %RSD |          | 1.680   | 69.400  | 5.140    | 0.692     | 0.000     | 0.388      | 1.202     | 1.077     |
| Run  | Time     | 27Al    | 28Si    | 37Cl     | 39K       | 43Ca      | 44Ca       | 45Sc      | 47Ti      |
|      |          | ppb     | ppb     | ppb      | ppb       | ppb       | ppb        | ppb       | ppb       |
| 1    | 02:24:19 | -0.744  | -96.950 | 0.000    | 23840.000 | 28090.000 | 26250.000  | 91.598%   | 0.052     |
| 2    | 02:24:38 | -0.837  | -92.520 | 0.000    | 24220.000 | 28050.000 | 26280.000  | 90.700%   | -0.020    |
| 3    | 02:24:57 | -0.756  | -95.670 | 0.000    | 24010.000 | 28400.000 | 26440.000  | 88.674%   | -0.092    |
| X    |          | -0.779  | -95.040 | 0.000    | 24020.000 | 28180.000 | 26330.000  | 90.324%   | -0.020    |
| σ    |          | 0.050   | 2.280   | 0.000    | 192.900   | 192.000   | 102.300    | 1.498%    | 0.072     |
| %RSD |          | 6.469   | 2.399   | 0.000    | 0.803     | 0.681     | 0.389      | 1.658     | 362.100   |
| Run  | Time     | 51V     | 52Cr    | 55Mn     | 56Fe      | 57Fe      | 59Co       | 60Ni      | 63Cu      |
|      |          | ppb     | ppb     | ppb      | ppb       | ppb       | ppb        | ppb       | ppb       |
| 1    | 02:24:19 | 0.037   | 0.038   | 73.310   | 8.545     | 69.560    | 0.036      | 0.103     | 3.739     |
| 2    | 02:24:38 | 0.136   | 0.081   | 74.280   | 7.516     | 64.950    | 0.036      | 0.004     | 3.691     |
| 3    | 02:24:57 | 0.012   | 0.133   | 75.180   | 9.796     | 68.240    | 0.042      | 0.087     | 3.749     |
| X    |          | 0.062   | 0.084   | 74.250   | 8.619     | 67.580    | 0.038      | 0.065     | 3.726     |
| σ    |          | 0.066   | 0.047   | 0.932    | 1.142     | 2.375     | 0.003      | 0.053     | 0.031     |
| %RSD |          | 106.000 | 56.570  | 1.255    | 13.250    | 3.514     | 8.936      | 82.470    | 0.836     |
| Run  | Time     | 65Cu    | 66Zn    | 68Zn     | 75As      | 78Se      | 82Se       | 83Kr      | 88Sr      |
|      |          | ppb     | ppb     | ppb      | ppb       | ppb       | ppb        | ppb       | ppb       |
| 1    | 02:24:19 | 0.174   | 0.885   | 0.638    | 0.574     | -0.244    | 4.214      | 0.000     | 443.200   |
| 2    | 02:24:38 | 0.192   | 0.948   | 0.808    | 1.050     | -0.019    | 4.279      | 0.000     | 440.300   |
| 3    | 02:24:57 | 0.214   | 0.918   | 0.845    | 0.662     | 0.003     | 4.002      | 0.000     | 443.700   |
| X    |          | 0.194   | 0.917   | 0.764    | 0.762     | -0.087    | 4.165      | 0.000     | 442.400   |
| σ    |          | 0.020   | 0.032   | 0.110    | 0.253     | 0.137     | 0.145      | 0.000     | 1.865     |
| %RSD |          | 10.560  | 3.467   | 14.460   | 33.210    | 157.200   | 3.487      | 0.000     | 0.422     |
| Run  | Time     | 89Y     | 95Mo    | 98Mo     | 103Rh     | 107Ag     | 109Ag      | 111Cd     | 114Cd     |
|      |          | ppb     | ppb     | ppb      | ppb       | ppb       | ppb        | ppb       | ppb       |
| 1    | 02:24:19 | 87.293% | 2.343   | 2.499    | 84.682%   | -0.025    | -0.025     | 0.032     | 0.019     |
| 2    | 02:24:38 | 87.426% | 2.598   | 2.618    | 84.708%   | -0.025    | -0.019     | 0.091     | 0.059     |
| 3    | 02:24:57 | 86.992% | 2.628   | 2.602    | 84.154%   | -0.025    | -0.025     | 0.096     | 0.058     |
| X    |          | 87.237% | 2.523   | 2.573    | 84.515%   | -0.025    | -0.023     | 0.073     | 0.045     |
| σ    |          | 0.222%  | 0.156   | 0.065    | 0.313%    | 0.000     | 0.003      | 0.036     | 0.023     |
| %RSD |          | 0.255   | 6.189   | 2.511    | 0.370     | 0.062     | 15.010     | 49.180    | 50.470    |
| Run  | Time     | 115In   | 118Sn   | 121Sb    | 123Sb     | 135Ba     | 137Ba      | 159Tb     | 165Ho     |
|      |          | ppb     | ppb     | ppb      | ppb       | ppb       | ppb        | ppb       | ppb       |
| 1    | 02:24:19 | 85.559% | -0.404  | 0.150    | 0.201     | 1.368     | 1.367      | 92.604%   | 92.284%   |
| 2    | 02:24:38 | 86.642% | -0.392  | 0.178    | 0.188     | 1.279     | 1.172      | 94.087%   | 93.895%   |
| 3    | 02:24:57 | 87.003% | -0.357  | 0.156    | 0.190     | 1.198     | 1.232      | 95.567%   | 95.327%   |
| X    |          | 86.401% | -0.384  | 0.161    | 0.193     | 1.282     | 1.257      | 94.086%   | 93.835%   |
| σ    |          | 0.752%  | 0.024   | 0.015    | 0.007     | 0.085     | 0.100      | 1.481%    | 1.522%    |
| %RSD |          | 0.870   | 6.343   | 9.285    | 3.693     | 6.626     | 7.949      | 1.575     | 1.622     |
| Run  | Time     | 203Tl   | 205Tl   | 206Pb    | 207Pb     | 208Pb     | 209Bi      |           |           |
|      |          | ppb     | ppb     | ppb      | ppb       | ppb       | ppb        |           |           |
| 1    | 02:24:19 | 0.010   | 0.007   | -0.003   | 0.002     | 0.001     | 95.138%    |           |           |
| 2    | 02:24:38 | 0.008   | 0.006   | 0.004    | 0.014     | 0.005     | 91.938%    |           |           |
| 3    | 02:24:57 | 0.004   | 0.005   | -0.001   | 0.003     | 0.002     | 90.297%    |           |           |
| X    |          | 0.007   | 0.006   | -0.000   | 0.007     | 0.003     | 92.457%    |           |           |
| σ    |          | 0.003   | 0.001   | 0.004    | 0.007     | 0.002     | 2.462%     |           |           |
| %RSD |          | 42.280  | 18.890  | 1750.000 | 99.960    | 76.850    | 2.663      |           |           |

180-43344-D-15-A@10

5/20/2015 2:27:48 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    | 02:28:08 | 90.503% | -0.010  | 288.000 | 288.100   | 0.000     | 572500.000 | 71930.000 | 72400.000 |
| 2    | 02:28:27 | 90.662% | -0.010  | 291.800 | 292.900   | 0.000     | 573100.000 | 72720.000 | 72670.000 |
| 3    | 02:28:46 | 90.234% | -0.010  | 294.500 | 283.800   | 0.000     | 573700.000 | 72940.000 | 73590.000 |
| X    |          | 90.466% | -0.010  | 291.400 | 288.300   | 0.000     | 573100.000 | 72530.000 | 72890.000 |
| σ    |          | 0.216%  | 0.000   | 3.269   | 4.555     | 0.000     | 615.700    | 530.800   | 624.900   |
| %RSD |          | 0.239   | 0.904   | 1.122   | 1.580     | 0.000     | 0.107      | 0.732     | 0.857     |
| Run  | Time     | 27Al    | 28Si    | 37Cl    | 39K       | 43Ca      | 44Ca       | 45Sc      | 47Ti      |
|      |          | ppb     | ppb     | ppb     | ppb       | ppb       | ppb        | ppb       | ppb       |
| 1    | 02:28:08 | 290.600 | 635.500 | 0.000   | 23440.000 | 35920.000 | 35130.000  | 91.528%   | 15.950    |
| 2    | 02:28:27 | 291.800 | 607.000 | 0.000   | 23510.000 | 36750.000 | 36480.000  | 88.747%   | 16.510    |
| 3    | 02:28:46 | 296.000 | 607.500 | 0.000   | 24020.000 | 38510.000 | 37000.000  | 85.191%   | 16.740    |
| X    |          | 292.800 | 616.700 | 0.000   | 23650.000 | 37060.000 | 36200.000  | 88.489%   | 16.400    |
| σ    |          | 2.792   | 16.330  | 0.000   | 318.500   | 1322.000  | 963.800    | 3.176%    | 0.404     |
| %RSD |          | 0.954   | 2.648   | 0.000   | 1.346     | 3.568     | 2.662      | 3.589     | 2.466     |
| Run  | Time     | 51V     | 52Cr    | 55Mn    | 56Fe      | 57Fe      | 59Co       | 60Ni      | 63Cu      |
|      |          | ppb     | ppb     | ppb     | ppb       | ppb       | ppb        | ppb       | ppb       |
| 1    | 02:28:08 | 1.244   | 0.978   | 56.300  | 502.200   | 592.400   | 0.255      | 0.505     | 4.054     |
| 2    | 02:28:27 | 1.035   | 0.950   | 58.180  | 522.000   | 602.500   | 0.270      | 0.687     | 4.474     |
| 3    | 02:28:46 | 1.039   | 1.056   | 59.530  | 527.900   | 618.500   | 0.248      | 0.524     | 4.520     |
| X    |          | 1.106   | 0.995   | 58.000  | 517.400   | 604.500   | 0.258      | 0.572     | 4.349     |
| σ    |          | 0.120   | 0.055   | 1.625   | 13.460    | 13.120    | 0.011      | 0.100     | 0.257     |
| %RSD |          | 10.800  | 5.524   | 2.802   | 2.601     | 2.171     | 4.391      | 17.440    | 5.907     |
| Run  | Time     | 65Cu    | 66Zn    | 68Zn    | 75As      | 78Se      | 82Se       | 83Kr      | 88Sr      |
|      |          | ppb     | ppb     | ppb     | ppb       | ppb       | ppb        | ppb       | ppb       |
| 1    | 02:28:08 | 0.976   | 4.827   | 4.522   | 0.873     | -0.497    | 2.537      | 0.000     | 502.100   |
| 2    | 02:28:27 | 0.954   | 5.403   | 4.389   | 0.713     | 0.245     | 2.693      | 0.000     | 507.200   |
| 3    | 02:28:46 | 0.848   | 4.798   | 5.061   | 0.838     | -0.212    | 3.234      | 0.000     | 505.700   |
| X    |          | 0.926   | 5.009   | 4.657   | 0.808     | -0.155    | 2.822      | 0.000     | 505.000   |
| σ    |          | 0.068   | 0.342   | 0.356   | 0.084     | 0.374     | 0.366      | 0.000     | 2.601     |
| %RSD |          | 7.383   | 6.819   | 7.638   | 10.420    | 241.800   | 12.960     | 0.000     | 0.515     |
| Run  | Time     | 89Y     | 95Mo    | 98Mo    | 103Rh     | 107Ag     | 109Ag      | 111Cd     | 114Cd     |
|      |          | ppb     | ppb     | ppb     | ppb       | ppb       | ppb        | ppb       | ppb       |
| 1    | 02:28:08 | 87.364% | 1.342   | 1.485   | 83.858%   | -0.014    | -0.014     | 0.098     | 0.067     |
| 2    | 02:28:27 | 87.535% | 1.445   | 1.516   | 83.983%   | -0.024    | -0.018     | 0.057     | 0.041     |
| 3    | 02:28:46 | 87.563% | 1.433   | 1.387   | 84.642%   | -0.016    | -0.010     | 0.075     | 0.030     |
| X    |          | 87.488% | 1.407   | 1.462   | 84.161%   | -0.018    | -0.014     | 0.076     | 0.046     |
| σ    |          | 0.108%  | 0.056   | 0.067   | 0.421%    | 0.005     | 0.004      | 0.021     | 0.019     |
| %RSD |          | 0.123   | 4.004   | 4.611   | 0.500     | 29.510    | 28.900     | 27.150    | 41.350    |
| Run  | Time     | 115In   | 118Sn   | 121Sb   | 123Sb     | 135Ba     | 137Ba      | 159Tb     | 165Ho     |
|      |          | ppb     | ppb     | ppb     | ppb       | ppb       | ppb        | ppb       | ppb       |
| 1    | 02:28:08 | 86.093% | -0.328  | 0.045   | 0.064     | 3.524     | 3.561      | 93.609%   | 93.467%   |
| 2    | 02:28:27 | 86.526% | -0.327  | 0.063   | 0.074     | 3.706     | 3.674      | 95.147%   | 95.169%   |
| 3    | 02:28:46 | 86.897% | -0.108  | 0.052   | 0.066     | 3.634     | 3.759      | 95.819%   | 96.253%   |
| X    |          | 86.506% | -0.254  | 0.054   | 0.068     | 3.621     | 3.665      | 94.858%   | 94.963%   |
| σ    |          | 0.402%  | 0.127   | 0.009   | 0.005     | 0.092     | 0.099      | 1.133%    | 1.404%    |
| %RSD |          | 0.465   | 49.810  | 17.240  | 7.422     | 2.529     | 2.713      | 1.194     | 1.479     |
| Run  | Time     | 203Tl   | 205Tl   | 206Pb   | 207Pb     | 208Pb     | 209Bi      |           |           |
|      |          | ppb     | ppb     | ppb     | ppb       | ppb       | ppb        |           |           |
| 1    | 02:28:08 | 0.006   | 0.007   | 0.944   | 0.846     | 0.910     | 97.223%    |           |           |
| 2    | 02:28:27 | 0.007   | 0.013   | 1.060   | 0.958     | 0.997     | 92.196%    |           |           |
| 3    | 02:28:46 | 0.009   | 0.009   | 1.047   | 0.918     | 1.006     | 91.536%    |           |           |
| X    |          | 0.007   | 0.010   | 1.017   | 0.907     | 0.971     | 93.652%    |           |           |
| σ    |          | 0.001   | 0.003   | 0.064   | 0.057     | 0.053     | 3.110%     |           |           |
| %RSD |          | 17.430  | 31.230  | 6.283   | 6.258     | 5.462     | 3.321      |           |           |

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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    | 02:31:55 | 92.290% | 0.009   | 307.300 | 301.600   | 0.000     | 606600.000 | 76960.000 | 76410.000 |
| 2    | 02:32:15 | 93.025% | -0.011  | 308.000 | 296.600   | 0.000     | 583700.000 | 75540.000 | 75770.000 |
| 3    | 02:32:34 | 92.834% | -0.031  | 297.000 | 298.400   | 0.000     | 577000.000 | 73510.000 | 74710.000 |
| X    |          | 92.716% | -0.011  | 304.100 | 298.900   | 0.000     | 589100.000 | 75340.000 | 75630.000 |
| σ    |          | 0.381%  | 0.020   | 6.146   | 2.496     | 0.000     | 15500.000  | 1731.000  | 858.400   |
| %RSD |          | 0.411   | 181.700 | 2.021   | 0.835     | 0.000     | 2.631      | 2.297     | 1.135     |
| Run  | Time     | 27Al    | 28Si    | 37Cl    | 39K       | 43Ca      | 44Ca       | 45Sc      | 47Ti      |
|      |          | ppb     | ppb     | ppb     | ppb       | ppb       | ppb        | ppb       | ppb       |
| 1    | 02:31:55 | -0.301  | -13.250 | 0.000   | 24430.000 | 37500.000 | 36120.000  | 93.289%   | -0.135    |
| 2    | 02:32:15 | 0.014   | -19.880 | 0.000   | 24420.000 | 37720.000 | 37050.000  | 92.622%   | -0.061    |
| 3    | 02:32:34 | -0.322  | -21.920 | 0.000   | 24350.000 | 37950.000 | 37210.000  | 89.643%   | -0.094    |
| X    |          | -0.203  | -18.350 | 0.000   | 24400.000 | 37720.000 | 36790.000  | 91.851%   | -0.097    |
| σ    |          | 0.188   | 4.535   | 0.000   | 43.050    | 228.300   | 591.300    | 1.941%    | 0.037     |
| %RSD |          | 92.590  | 24.710  | 0.000   | 0.176     | 0.605     | 1.607      | 2.114     | 38.380    |
| Run  | Time     | 51V     | 52Cr    | 55Mn    | 56Fe      | 57Fe      | 59Co       | 60Ni      | 63Cu      |
|      |          | ppb     | ppb     | ppb     | ppb       | ppb       | ppb        | ppb       | ppb       |
| 1    | 02:31:55 | -0.094  | 0.074   | 51.060  | 10.610    | 86.500    | 0.086      | 0.144     | 3.956     |
| 2    | 02:32:15 | -0.133  | 0.088   | 51.210  | 10.550    | 88.650    | 0.095      | 0.120     | 4.038     |
| 3    | 02:32:34 | -0.085  | 0.112   | 51.680  | 11.010    | 90.650    | 0.104      | 0.175     | 3.920     |
| X    |          | -0.104  | 0.091   | 51.320  | 10.730    | 88.600    | 0.095      | 0.146     | 3.972     |
| σ    |          | 0.025   | 0.019   | 0.329   | 0.250     | 2.074     | 0.009      | 0.028     | 0.060     |
| %RSD |          | 24.250  | 21.110  | 0.641   | 2.326     | 2.341     | 9.390      | 19.120    | 1.520     |
| Run  | Time     | 65Cu    | 66Zn    | 68Zn    | 75As      | 78Se      | 82Se       | 83Kr      | 88Sr      |
|      |          | ppb     | ppb     | ppb     | ppb       | ppb       | ppb        | ppb       | ppb       |
| 1    | 02:31:55 | 0.712   | 1.370   | 1.132   | 0.719     | -0.191    | 3.080      | 0.000     | 513.500   |
| 2    | 02:32:15 | 0.552   | 1.413   | 1.292   | 0.888     | -0.546    | 2.864      | 0.000     | 511.600   |
| 3    | 02:32:34 | 0.686   | 1.536   | 1.241   | 0.523     | 0.445     | 2.792      | 0.000     | 514.500   |
| X    |          | 0.650   | 1.440   | 1.222   | 0.710     | -0.097    | 2.912      | 0.000     | 513.200   |
| σ    |          | 0.086   | 0.086   | 0.082   | 0.183     | 0.502     | 0.150      | 0.000     | 1.439     |
| %RSD |          | 13.180  | 5.994   | 6.709   | 25.740    | 517.200   | 5.153      | 0.000     | 0.281     |
| Run  | Time     | 89Y     | 95Mo    | 98Mo    | 103Rh     | 107Ag     | 109Ag      | 111Cd     | 114Cd     |
|      |          | ppb     | ppb     | ppb     | ppb       | ppb       | ppb        | ppb       | ppb       |
| 1    | 02:31:55 | 89.618% | 1.559   | 1.514   | 87.198%   | -0.027    | -0.023     | 0.045     | 0.040     |
| 2    | 02:32:15 | 90.090% | 1.631   | 1.603   | 87.142%   | -0.024    | -0.023     | 0.036     | 0.022     |
| 3    | 02:32:34 | 89.697% | 1.751   | 1.582   | 87.123%   | -0.022    | -0.019     | 0.061     | 0.042     |
| X    |          | 89.802% | 1.647   | 1.566   | 87.154%   | -0.024    | -0.022     | 0.048     | 0.035     |
| σ    |          | 0.253%  | 0.097   | 0.047   | 0.039%    | 0.002     | 0.002      | 0.013     | 0.011     |
| %RSD |          | 0.281   | 5.917   | 2.974   | 0.045     | 8.877     | 9.318      | 26.430    | 31.130    |
| Run  | Time     | 115In   | 118Sn   | 121Sb   | 123Sb     | 135Ba     | 137Ba      | 159Tb     | 165Ho     |
|      |          | ppb     | ppb     | ppb     | ppb       | ppb       | ppb        | ppb       | ppb       |
| 1    | 02:31:55 | 87.585% | -0.416  | 0.040   | 0.073     | 2.549     | 2.460      | 94.677%   | 94.185%   |
| 2    | 02:32:15 | 87.905% | -0.373  | 0.068   | 0.062     | 2.373     | 2.343      | 95.673%   | 95.698%   |
| 3    | 02:32:34 | 89.527% | -0.367  | 0.029   | 0.052     | 2.347     | 2.425      | 96.593%   | 97.085%   |
| X    |          | 88.339% | -0.385  | 0.046   | 0.062     | 2.423     | 2.409      | 95.648%   | 95.656%   |
| σ    |          | 1.041%  | 0.027   | 0.020   | 0.011     | 0.110     | 0.060      | 0.958%    | 1.451%    |
| %RSD |          | 1.179   | 6.965   | 43.550  | 16.960    | 4.524     | 2.493      | 1.002     | 1.516     |
| Run  | Time     | 203Tl   | 205Tl   | 206Pb   | 207Pb     | 208Pb     | 209Bi      |           |           |
|      |          | ppb     | ppb     | ppb     | ppb       | ppb       | ppb        |           |           |
| 1    | 02:31:55 | -0.000  | 0.005   | 0.002   | 0.000     | 0.003     | 96.031%    |           |           |
| 2    | 02:32:15 | 0.004   | 0.005   | 0.003   | -0.003    | 0.003     | 92.491%    |           |           |
| 3    | 02:32:34 | 0.004   | 0.007   | 0.003   | -0.004    | 0.002     | 91.825%    |           |           |
| X    |          | 0.003   | 0.005   | 0.003   | -0.002    | 0.003     | 93.449%    |           |           |
| σ    |          | 0.002   | 0.001   | 0.001   | 0.002     | 0.000     | 2.261%     |           |           |
| %RSD |          | 94.870  | 19.830  | 31.610  | 101.200   | 15.360    | 2.420      |           |           |

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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    | 02:35:42 | 93.490% | 0.028    | 272.000 | 263.800   | 0.000     | 616800.000 | 77540.000 | 78050.000 |
| 2    | 02:36:02 | 93.441% | 0.048    | 265.000 | 266.900   | 0.000     | 619500.000 | 76370.000 | 76750.000 |
| 3    | 02:36:21 | 94.280% | 0.047    | 254.600 | 259.700   | 0.000     | 629500.000 | 78320.000 | 76960.000 |
| X    |          | 93.737% | 0.041    | 263.900 | 263.500   | 0.000     | 621900.000 | 77410.000 | 77250.000 |
| σ    |          | 0.471%  | 0.011    | 8.751   | 3.572     | 0.000     | 6705.000   | 983.600   | 697.400   |
| %RSD |          | 0.502   | 27.460   | 3.316   | 1.356     | 0.000     | 1.078      | 1.271     | 0.903     |
| Run  | Time     | 27Al    | 28Si     | 37Cl    | 39K       | 43Ca      | 44Ca       | 45Sc      | 47Ti      |
|      |          | ppb     | ppb      | ppb     | ppb       | ppb       | ppb        | ppb       | ppb       |
| 1    | 02:35:42 | 46.000  | -103.200 | 0.000   | 24270.000 | 28060.000 | 26050.000  | 94.968%   | 0.974     |
| 2    | 02:36:02 | 45.410  | -108.400 | 0.000   | 24440.000 | 28440.000 | 27880.000  | 93.136%   | 1.142     |
| 3    | 02:36:21 | 46.230  | -103.200 | 0.000   | 24910.000 | 29170.000 | 27870.000  | 90.107%   | 0.885     |
| X    |          | 45.880  | -104.900 | 0.000   | 24540.000 | 28560.000 | 27270.000  | 92.737%   | 1.000     |
| σ    |          | 0.426   | 2.964    | 0.000   | 334.200   | 566.700   | 1056.000   | 2.455%    | 0.130     |
| %RSD |          | 0.928   | 2.824    | 0.000   | 1.362     | 1.985     | 3.873      | 2.647     | 13.030    |
| Run  | Time     | 51V     | 52Cr     | 55Mn    | 56Fe      | 57Fe      | 59Co       | 60Ni      | 63Cu      |
|      |          | ppb     | ppb      | ppb     | ppb       | ppb       | ppb        | ppb       | ppb       |
| 1    | 02:35:42 | 0.256   | 0.197    | 52.650  | 49.930    | 102.900   | 0.059      | 0.143     | 4.062     |
| 2    | 02:36:02 | 0.071   | 0.090    | 53.610  | 51.810    | 108.300   | 0.067      | 0.195     | 4.034     |
| 3    | 02:36:21 | 0.041   | 0.161    | 54.520  | 51.190    | 108.000   | 0.078      | 0.152     | 4.182     |
| X    |          | 0.122   | 0.149    | 53.590  | 50.980    | 106.400   | 0.068      | 0.163     | 4.092     |
| σ    |          | 0.117   | 0.055    | 0.936   | 0.961     | 3.027     | 0.009      | 0.028     | 0.079     |
| %RSD |          | 95.280  | 36.500   | 1.746   | 1.886     | 2.845     | 13.600     | 17.280    | 1.921     |
| Run  | Time     | 65Cu    | 66Zn     | 68Zn    | 75As      | 78Se      | 82Se       | 83Kr      | 88Sr      |
|      |          | ppb     | ppb      | ppb     | ppb       | ppb       | ppb        | ppb       | ppb       |
| 1    | 02:35:42 | 0.376   | 1.893    | 1.965   | 0.877     | -0.452    | 3.528      | 0.000     | 416.500   |
| 2    | 02:36:02 | 0.418   | 2.011    | 1.826   | 0.858     | -0.181    | 3.035      | 0.000     | 417.200   |
| 3    | 02:36:21 | 0.328   | 2.243    | 1.794   | 0.764     | -0.579    | 3.057      | 0.000     | 420.100   |
| X    |          | 0.374   | 2.049    | 1.862   | 0.833     | -0.404    | 3.207      | 0.000     | 417.900   |
| σ    |          | 0.045   | 0.178    | 0.091   | 0.061     | 0.203     | 0.279      | 0.000     | 1.930     |
| %RSD |          | 12.000  | 8.678    | 4.902   | 7.291     | 50.370    | 8.693      | 0.000     | 0.462     |
| Run  | Time     | 89Y     | 95Mo     | 98Mo    | 103Rh     | 107Ag     | 109Ag      | 111Cd     | 114Cd     |
|      |          | ppb     | ppb      | ppb     | ppb       | ppb       | ppb        | ppb       | ppb       |
| 1    | 02:35:42 | 90.392% | 1.978    | 2.039   | 87.148%   | -0.026    | -0.017     | 0.073     | 0.051     |
| 2    | 02:36:02 | 92.220% | 1.986    | 2.079   | 87.863%   | -0.021    | -0.018     | 0.006     | 0.010     |
| 3    | 02:36:21 | 91.143% | 1.979    | 2.096   | 88.287%   | -0.021    | -0.014     | 0.032     | 0.023     |
| X    |          | 91.252% | 1.981    | 2.071   | 87.766%   | -0.023    | -0.016     | 0.037     | 0.028     |
| σ    |          | 0.919%  | 0.005    | 0.030   | 0.576%    | 0.003     | 0.002      | 0.034     | 0.021     |
| %RSD |          | 1.007   | 0.231    | 1.425   | 0.656     | 11.950    | 12.130     | 91.330    | 74.660    |
| Run  | Time     | 115In   | 118Sn    | 121Sb   | 123Sb     | 135Ba     | 137Ba      | 159Tb     | 165Ho     |
|      |          | ppb     | ppb      | ppb     | ppb       | ppb       | ppb        | ppb       | ppb       |
| 1    | 02:35:42 | 88.188% | -0.363   | 0.082   | 0.094     | 1.070     | 1.203      | 93.657%   | 93.392%   |
| 2    | 02:36:02 | 89.649% | -0.355   | 0.080   | 0.104     | 1.119     | 1.100      | 96.318%   | 95.548%   |
| 3    | 02:36:21 | 89.494% | -0.386   | 0.085   | 0.123     | 1.122     | 1.169      | 96.641%   | 96.369%   |
| X    |          | 89.110% | -0.368   | 0.083   | 0.107     | 1.104     | 1.157      | 95.539%   | 95.103%   |
| σ    |          | 0.802%  | 0.016    | 0.003   | 0.015     | 0.029     | 0.053      | 1.637%    | 1.538%    |
| %RSD |          | 0.900   | 4.314    | 3.142   | 13.710    | 2.643     | 4.545      | 1.714     | 1.617     |
| Run  | Time     | 203Tl   | 205Tl    | 206Pb   | 207Pb     | 208Pb     | 209Bi      |           |           |
|      |          | ppb     | ppb      | ppb     | ppb       | ppb       | ppb        |           |           |
| 1    | 02:35:42 | 0.005   | 0.004    | 0.086   | 0.103     | 0.095     | 94.691%    |           |           |
| 2    | 02:36:02 | 0.008   | 0.005    | 0.113   | 0.109     | 0.108     | 92.460%    |           |           |
| 3    | 02:36:21 | 0.005   | 0.006    | 0.111   | 0.094     | 0.110     | 91.296%    |           |           |
| X    |          | 0.006   | 0.005    | 0.103   | 0.102     | 0.104     | 92.816%    |           |           |
| σ    |          | 0.002   | 0.001    | 0.015   | 0.008     | 0.008     | 1.725%     |           |           |
| %RSD |          | 27.090  | 21.590   | 14.200  | 7.422     | 7.540     | 1.859      |           |           |



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5/20/2015 2:39:10 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    | 02:39:29 | 93.393% | -0.011   | 276.200 | 264.500   | 0.000     | 633900.000 | 78430.000 | 77770.000 |
| 2    | 02:39:48 | 92.255% | -0.011   | 279.800 | 272.400   | 0.000     | 603300.000 | 75810.000 | 77460.000 |
| 3    | 02:40:08 | 93.350% | 0.009    | 268.600 | 264.200   | 0.000     | 621200.000 | 77600.000 | 77950.000 |
| X    |          | 92.999% | -0.004   | 274.900 | 267.000   | 0.000     | 619500.000 | 77280.000 | 77730.000 |
| σ    |          | 0.645%  | 0.011    | 5.740   | 4.639     | 0.000     | 15330.000  | 1340.000  | 246.900   |
| %RSD |          | 0.694   | 253.800  | 2.088   | 1.737     | 0.000     | 2.475      | 1.734     | 0.318     |
| Run  | Time     | 27Al    | 28Si     | 37Cl    | 39K       | 43Ca      | 44Ca       | 45Sc      | 47Ti      |
|      |          | ppb     | ppb      | ppb     | ppb       | ppb       | ppb        | ppb       | ppb       |
| 1    | 02:39:29 | 3.640   | -162.100 | 0.000   | 24740.000 | 28270.000 | 27460.000  | 96.756%   | -0.173    |
| 2    | 02:39:48 | 3.431   | -164.200 | 0.000   | 24900.000 | 28470.000 | 28150.000  | 94.949%   | -0.173    |
| 3    | 02:40:08 | 3.325   | -164.400 | 0.000   | 25320.000 | 29470.000 | 28760.000  | 90.841%   | -0.096    |
| X    |          | 3.465   | -163.600 | 0.000   | 24990.000 | 28740.000 | 28120.000  | 94.182%   | -0.147    |
| σ    |          | 0.160   | 1.295    | 0.000   | 301.100   | 641.600   | 646.100    | 3.031%    | 0.045     |
| %RSD |          | 4.620   | 0.792    | 0.000   | 1.205     | 2.233     | 2.297      | 3.218     | 30.400    |
| Run  | Time     | 51V     | 52Cr     | 55Mn    | 56Fe      | 57Fe      | 59Co       | 60Ni      | 63Cu      |
|      |          | ppb     | ppb      | ppb     | ppb       | ppb       | ppb        | ppb       | ppb       |
| 1    | 02:39:29 | -0.096  | 0.115    | 54.260  | 9.829     | 69.210    | 0.067      | 0.231     | 3.862     |
| 2    | 02:39:48 | 0.137   | 0.081    | 55.090  | 9.802     | 71.260    | 0.073      | 0.172     | 3.946     |
| 3    | 02:40:08 | -0.289  | 0.073    | 55.980  | 11.510    | 70.810    | 0.075      | 0.170     | 4.281     |
| X    |          | -0.083  | 0.089    | 55.110  | 10.380    | 70.430    | 0.071      | 0.191     | 4.029     |
| σ    |          | 0.213   | 0.022    | 0.858   | 0.976     | 1.078     | 0.004      | 0.035     | 0.222     |
| %RSD |          | 257.100 | 25.030   | 1.556   | 9.405     | 1.531     | 5.834      | 18.120    | 5.510     |
| Run  | Time     | 65Cu    | 66Zn     | 68Zn    | 75As      | 78Se      | 82Se       | 83Kr      | 88Sr      |
|      |          | ppb     | ppb      | ppb     | ppb       | ppb       | ppb        | ppb       | ppb       |
| 1    | 02:39:29 | 0.264   | 1.176    | 0.876   | 0.714     | 0.441     | 2.722      | 0.000     | 429.000   |
| 2    | 02:39:48 | 0.298   | 1.088    | 0.916   | 0.614     | -0.114    | 2.798      | 0.000     | 424.000   |
| 3    | 02:40:08 | 0.275   | 1.002    | 0.910   | 0.803     | 0.256     | 2.743      | 0.000     | 429.000   |
| X    |          | 0.279   | 1.089    | 0.901   | 0.711     | 0.194     | 2.754      | 0.000     | 427.300   |
| σ    |          | 0.017   | 0.087    | 0.021   | 0.095     | 0.283     | 0.039      | 0.000     | 2.876     |
| %RSD |          | 6.232   | 7.993    | 2.356   | 13.330    | 145.600   | 1.426      | 0.000     | 0.673     |
| Run  | Time     | 89Y     | 95Mo     | 98Mo    | 103Rh     | 107Ag     | 109Ag      | 111Cd     | 114Cd     |
|      |          | ppb     | ppb      | ppb     | ppb       | ppb       | ppb        | ppb       | ppb       |
| 1    | 02:39:29 | 90.236% | 2.046    | 2.056   | 87.334%   | -0.023    | -0.022     | 0.033     | 0.024     |
| 2    | 02:39:48 | 91.746% | 2.221    | 2.151   | 88.605%   | -0.026    | -0.023     | 0.049     | 0.037     |
| 3    | 02:40:08 | 91.554% | 2.011    | 2.208   | 88.706%   | -0.024    | -0.020     | -0.001    | -0.002    |
| X    |          | 91.179% | 2.092    | 2.138   | 88.215%   | -0.024    | -0.022     | 0.027     | 0.020     |
| σ    |          | 0.822%  | 0.113    | 0.077   | 0.765%    | 0.001     | 0.001      | 0.025     | 0.020     |
| %RSD |          | 0.901   | 5.381    | 3.594   | 0.867     | 5.593     | 6.036      | 93.300    | 102.900   |
| Run  | Time     | 115In   | 118Sn    | 121Sb   | 123Sb     | 135Ba     | 137Ba      | 159Tb     | 165Ho     |
|      |          | ppb     | ppb      | ppb     | ppb       | ppb       | ppb        | ppb       | ppb       |
| 1    | 02:39:29 | 88.662% | -0.396   | 0.100   | 0.096     | 0.967     | 0.961      | 93.948%   | 93.976%   |
| 2    | 02:39:48 | 90.243% | -0.375   | 0.104   | 0.092     | 0.993     | 0.898      | 96.180%   | 95.658%   |
| 3    | 02:40:08 | 90.807% | -0.373   | 0.056   | 0.116     | 0.901     | 0.852      | 97.299%   | 95.744%   |
| X    |          | 89.904% | -0.381   | 0.087   | 0.101     | 0.954     | 0.903      | 95.809%   | 95.126%   |
| σ    |          | 1.112%  | 0.013    | 0.027   | 0.013     | 0.047     | 0.055      | 1.706%    | 0.996%    |
| %RSD |          | 1.237   | 3.408    | 30.630  | 13.000    | 4.978     | 6.043      | 1.781     | 1.047     |
| Run  | Time     | 203Tl   | 205Tl    | 206Pb   | 207Pb     | 208Pb     | 209Bi      |           |           |
|      |          | ppb     | ppb      | ppb     | ppb       | ppb       | ppb        |           |           |
| 1    | 02:39:29 | 0.005   | 0.004    | -0.002  | -0.001    | -0.002    | 95.968%    |           |           |
| 2    | 02:39:48 | 0.007   | 0.003    | 0.006   | 0.003     | 0.005     | 92.652%    |           |           |
| 3    | 02:40:08 | 0.004   | 0.007    | 0.008   | -0.002    | 0.003     | 90.317%    |           |           |
| X    |          | 0.006   | 0.005    | 0.004   | -0.000    | 0.002     | 92.979%    |           |           |
| σ    |          | 0.001   | 0.002    | 0.005   | 0.003     | 0.004     | 2.839%     |           |           |
| %RSD |          | 21.470  | 46.300   | 135.100 | 1953.000  | 161.700   | 3.054      |           |           |

CCV 1558997 5/20/2015 2:46:14 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    | 02:46:14 | 91.954%  | 103.300  | 102.700  | 101.900   | 0.000     | 48790.000 | 48330.000 | 48820.000 |
| 2    | 02:46:34 | 86.122%  | 110.500  | 109.800  | 102.700   | 0.000     | 49710.000 | 50580.000 | 50970.000 |
| 3    | 02:46:53 | 86.064%  | 105.500  | 111.500  | 105.500   | 0.000     | 50060.000 | 49780.000 | 49280.000 |
| X    |          | 88.047%  | 106.434% | 108.005% | 103.369%  | 0.000     | 99.040%   | 99.124%   | 99.374%   |
| σ    |          | 3.384%   | n/a      | n/a      | n/a       | 0.000     | n/a       | n/a       | n/a       |
| %RSD |          | 3.843    | 3.442    | 4.293    | 1.786     | 0.000     | 1.325     | 2.302     | 2.277     |
| Run  | Time     | 27Al     | 28Si     | 37Cl     | 39K       | 43Ca      | 44Ca      | 45Sc      | 47Ti      |
|      |          | ppb      | ppb      | ppb      | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 02:46:14 | 476.100  | 4421.000 | 0.000    | 49600.000 | 49360.000 | 47640.000 | 88.926%   | 93.430    |
| 2    | 02:46:34 | 494.000  | 4515.000 | 0.000    | 50670.000 | 51140.000 | 49080.000 | 87.917%   | 96.320    |
| 3    | 02:46:53 | 489.500  | 4598.000 | 0.000    | 50850.000 | 51130.000 | 48830.000 | 84.744%   | 101.400   |
| X    |          | 97.304%  | 90.223%  | 0.000    | 100.744%  | 101.092%  | 97.030%   | 87.196%   | 97.065%   |
| σ    |          | n/a      | n/a      | 0.000    | n/a       | n/a       | n/a       | 2.182%    | n/a       |
| %RSD |          | 1.911    | 1.971    | 0.000    | 1.340     | 2.032     | 1.584     | 2.503     | 4.185     |
| Run  | Time     | 51V      | 52Cr     | 55Mn     | 56Fe      | 57Fe      | 59Co      | 60Ni      | 63Cu      |
|      |          | ppb      | ppb      | ppb      | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 02:46:14 | 97.730   | 97.140   | 467.400  | 24370.000 | 24550.000 | 96.720    | 97.070    | 101.100   |
| 2    | 02:46:34 | 100.400  | 98.270   | 479.100  | 24440.000 | 24820.000 | 97.840    | 98.330    | 100.100   |
| 3    | 02:46:53 | 100.100  | 99.810   | 497.300  | 25180.000 | 25430.000 | 100.600   | 102.900   | 103.500   |
| X    |          | 99.379%  | 98.408%  | 96.247%  | 98.661%   | 99.733%   | 98.381%   | 99.448%   | 101.570%  |
| σ    |          | n/a      | n/a      | n/a      | n/a       | n/a       | n/a       | n/a       | n/a       |
| %RSD |          | 1.449    | 1.359    | 3.129    | 1.829     | 1.796     | 2.020     | 3.112     | 1.680     |
| Run  | Time     | 65Cu     | 66Zn     | 68Zn     | 75As      | 78Se      | 82Se      | 83Kr      | 88Sr      |
|      |          | ppb      | ppb      | ppb      | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 02:46:14 | 100.700  | 97.040   | 95.110   | 98.650    | 101.900   | 99.620    | 0.000     | 96.200    |
| 2    | 02:46:34 | 99.800   | 96.410   | 97.210   | 98.660    | 99.330    | 100.200   | 0.000     | 96.610    |
| 3    | 02:46:53 | 101.800  | 99.050   | 98.780   | 98.580    | 99.760    | 100.200   | 0.000     | 96.740    |
| X    |          | 100.787% | 97.500%  | 97.032%  | 98.627%   | 100.334%  | 99.983%   | 0.000     | 96.515%   |
| σ    |          | n/a      | n/a      | n/a      | n/a       | n/a       | n/a       | 0.000     | n/a       |
| %RSD |          | 1.015    | 1.415    | 1.897    | 0.042     | 1.379     | 0.314     | 0.000     | 0.291     |
| Run  | Time     | 89Y      | 95Mo     | 98Mo     | 103Rh     | 107Ag     | 109Ag     | 111Cd     | 114Cd     |
|      |          | ppb      | ppb      | ppb      | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 02:46:14 | 86.512%  | 90.750   | 92.960   | 83.400%   | 98.930    | 99.520    | 101.000   | 102.200   |
| 2    | 02:46:34 | 86.460%  | 94.490   | 93.890   | 83.178%   | 100.800   | 101.500   | 101.400   | 103.400   |
| 3    | 02:46:53 | 86.062%  | 94.660   | 95.190   | 83.147%   | 99.310    | 101.900   | 99.660    | 103.000   |
| X    |          | 86.345%  | 93.300%  | 94.012%  | 83.242%   | 99.695%   | 100.952%  | 100.706%  | 102.871%  |
| σ    |          | 0.246%   | n/a      | n/a      | 0.138%    | n/a       | n/a       | n/a       | n/a       |
| %RSD |          | 0.285    | 2.368    | 1.191    | 0.166     | 1.012     | 1.243     | 0.924     | 0.619     |
| Run  | Time     | 115In    | 118Sn    | 121Sb    | 123Sb     | 135Ba     | 137Ba     | 159Tb     | 165Ho     |
|      |          | ppb      | ppb      | ppb      | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 02:46:14 | 79.741%  | 98.260   | 90.210   | 90.140    | 97.750    | 97.040    | 88.199%   | 88.325%   |
| 2    | 02:46:34 | 80.413%  | 99.270   | 90.090   | 89.510    | 97.200    | 97.350    | 90.545%   | 89.790%   |
| 3    | 02:46:53 | 80.220%  | 100.200  | 92.020   | 90.480    | 99.660    | 98.440    | 91.363%   | 90.944%   |
| X    |          | 80.125%  | 99.245%  | 90.777%  | 90.048%   | 98.202%   | 97.611%   | 90.036%   | 89.686%   |
| σ    |          | 0.346%   | n/a      | n/a      | n/a       | n/a       | n/a       | 1.642%    | 1.313%    |
| %RSD |          | 0.432    | 0.981    | 1.192    | 0.546     | 1.316     | 0.752     | 1.824     | 1.464     |
| Run  | Time     | 203Tl    | 205Tl    | 206Pb    | 207Pb     | 208Pb     | 209Bi     |           |           |
|      |          | ppb      | ppb      | ppb      | ppb       | ppb       | ppb       |           |           |
| 1    | 02:46:14 | 94.620   | 98.840   | 95.350   | 94.940    | 94.950    | 92.442%   |           |           |
| 2    | 02:46:34 | 97.820   | 102.100  | 98.210   | 97.860    | 97.760    | 91.881%   |           |           |
| 3    | 02:46:53 | 99.000   | 103.100  | 99.760   | 98.750    | 99.390    | 91.761%   |           |           |
| X    |          | 97.150%  | 101.362% | 97.776%  | 97.181%   | 97.363%   | 92.028%   |           |           |
| σ    |          | n/a      | n/a      | n/a      | n/a       | n/a       | 0.363%    |           |           |
| %RSD |          | 2.333    | 2.213    | 2.290    | 2.053     | 2.307     | 0.395     |           |           |

CCB6 5/20/2015 2:52:55 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    | 02:53:15 | 107.015% | -0.013   | 2.073   | 1.193   | 0.000    | 34.880  | 4.678    | 5.155   |
| 2    | 02:53:34 | 107.788% | -0.031   | 1.652   | 1.699   | 0.000    | 27.500  | 3.528    | 4.060   |
| 3    | 02:53:54 | 113.362% | -0.014   | 0.878   | 1.251   | 0.000    | 24.920  | 3.240    | 3.083   |
| X    |          | 109.388% | -0.019   | 1.535   | 1.381   | 0.000    | 29.100  | 3.815    | 4.099   |
| σ    |          | 3.463%   | 0.010    | 0.606   | 0.277   | 0.000    | 5.168   | 0.761    | 1.036   |
| %RSD |          | 3.166    | 49.700   | 39.500  | 20.040  | 0.000    | 17.760  | 19.950   | 25.280  |
| Run  | Time     | 27Al     | 28Si     | 37Cl    | 39K     | 43Ca     | 44Ca    | 45Sc     | 47Ti    |
|      |          | ppb      | ppb      | ppb     | ppb     | ppb      | ppb     | ppb      | ppb     |
| 1    | 02:53:15 | -0.009   | -303.600 | 0.000   | 12.830  | -5.513   | 2.966   | 100.881% | -0.176  |
| 2    | 02:53:34 | 0.272    | -303.300 | 0.000   | 11.980  | 1.141    | 3.403   | 98.897%  | -0.209  |
| 3    | 02:53:54 | 0.271    | -302.800 | 0.000   | 11.260  | 2.938    | 1.675   | 97.031%  | -0.104  |
| X    |          | 0.178    | -303.200 | 0.000   | 12.020  | -0.478   | 2.682   | 98.936%  | -0.163  |
| σ    |          | 0.162    | 0.398    | 0.000   | 0.790   | 4.452    | 0.898   | 1.925%   | 0.054   |
| %RSD |          | 90.930   | 0.131    | 0.000   | 6.571   | 931.100  | 33.510  | 1.946    | 33.090  |
| Run  | Time     | 51V      | 52Cr     | 55Mn    | 56Fe    | 57Fe     | 59Co    | 60Ni     | 63Cu    |
|      |          | ppb      | ppb      | ppb     | ppb     | ppb      | ppb     | ppb      | ppb     |
| 1    | 02:53:15 | -0.022   | -0.061   | 0.012   | 1.947   | 4.943    | 0.001   | 0.023    | 0.002   |
| 2    | 02:53:34 | -0.027   | -0.033   | 0.026   | 3.493   | 7.642    | 0.000   | 0.014    | 0.000   |
| 3    | 02:53:54 | -0.010   | -0.052   | 0.022   | 2.111   | 4.826    | 0.011   | 0.004    | -0.001  |
| X    |          | -0.020   | -0.049   | 0.020   | 2.517   | 5.804    | 0.004   | 0.014    | 0.000   |
| σ    |          | 0.009    | 0.014    | 0.007   | 0.849   | 1.593    | 0.006   | 0.009    | 0.001   |
| %RSD |          | 43.330   | 28.900   | 35.320  | 33.730  | 27.450   | 150.000 | 68.060   | 278.100 |
| Run  | Time     | 65Cu     | 66Zn     | 68Zn    | 75As    | 78Se     | 82Se    | 83Kr     | 88Sr    |
|      |          | ppb      | ppb      | ppb     | ppb     | ppb      | ppb     | ppb      | ppb     |
| 1    | 02:53:15 | 0.004    | 4.502    | 4.561   | 0.045   | 0.112    | 0.361   | 0.000    | 0.022   |
| 2    | 02:53:34 | -0.028   | 4.866    | 4.990   | 0.046   | -0.196   | 0.301   | 0.000    | 0.021   |
| 3    | 02:53:54 | -0.015   | 4.884    | 4.810   | 0.055   | 0.137    | 0.239   | 0.000    | 0.015   |
| X    |          | -0.013   | 4.751    | 4.787   | 0.049   | 0.017    | 0.300   | 0.000    | 0.019   |
| σ    |          | 0.016    | 0.215    | 0.216   | 0.006   | 0.185    | 0.061   | 0.000    | 0.004   |
| %RSD |          | 121.700  | 4.532    | 4.502   | 11.690  | 1078.000 | 20.150  | 0.000    | 20.230  |
| Run  | Time     | 89Y      | 95Mo     | 98Mo    | 103Rh   | 107Ag    | 109Ag   | 111Cd    | 114Cd   |
|      |          | ppb      | ppb      | ppb     | ppb     | ppb      | ppb     | ppb      | ppb     |
| 1    | 02:53:15 | 92.863%  | 0.745    | 0.821   | 94.257% | -0.020   | -0.009  | 0.048    | 0.037   |
| 2    | 02:53:34 | 94.140%  | 0.998    | 1.022   | 94.615% | -0.024   | -0.013  | -0.031   | -0.019  |
| 3    | 02:53:54 | 94.646%  | 1.010    | 1.080   | 95.925% | -0.019   | -0.017  | 0.062    | 0.050   |
| X    |          | 93.883%  | 0.918    | 0.974   | 94.932% | -0.021   | -0.013  | 0.026    | 0.022   |
| σ    |          | 0.919%   | 0.150    | 0.136   | 0.878%  | 0.002    | 0.004   | 0.050    | 0.036   |
| %RSD |          | 0.979    | 16.300   | 13.960  | 0.925   | 11.410   | 32.720  | 189.900  | 162.300 |
| Run  | Time     | 115In    | 118Sn    | 121Sb   | 123Sb   | 135Ba    | 137Ba   | 159Tb    | 165Ho   |
|      |          | ppb      | ppb      | ppb     | ppb     | ppb      | ppb     | ppb      | ppb     |
| 1    | 02:53:15 | 91.828%  | -0.283   | 0.591   | 0.581   | 0.008    | 0.028   | 92.974%  | 92.104% |
| 2    | 02:53:34 | 92.241%  | -0.249   | 0.636   | 0.607   | -0.005   | 0.013   | 94.861%  | 93.916% |
| 3    | 02:53:54 | 93.054%  | -0.196   | 0.606   | 0.631   | -0.005   | 0.020   | 95.059%  | 94.164% |
| X    |          | 92.374%  | -0.242   | 0.611   | 0.606   | -0.001   | 0.021   | 94.298%  | 93.394% |
| σ    |          | 0.624%   | 0.044    | 0.023   | 0.025   | 0.007    | 0.007   | 1.151%   | 1.125%  |
| %RSD |          | 0.675    | 18.080   | 3.754   | 4.142   | 671.300  | 35.880  | 1.221    | 1.204   |
| Run  | Time     | 203Tl    | 205Tl    | 206Pb   | 207Pb   | 208Pb    | 209Bi   |          |         |
|      |          | ppb      | ppb      | ppb     | ppb     | ppb      | ppb     |          |         |
| 1    | 02:53:15 | 0.021    | 0.028    | -0.004  | 0.007   | 0.002    | 97.582% |          |         |
| 2    | 02:53:34 | 0.032    | 0.027    | -0.002  | 0.001   | 0.002    | 96.947% |          |         |
| 3    | 02:53:54 | 0.029    | 0.030    | 0.003   | 0.003   | 0.005    | 97.033% |          |         |
| X    |          | 0.028    | 0.028    | -0.001  | 0.004   | 0.003    | 97.187% |          |         |
| σ    |          | 0.006    | 0.002    | 0.004   | 0.003   | 0.002    | 0.345%  |          |         |
| %RSD |          | 20.260   | 6.400    | 452.600 | 76.850  | 49.120   | 0.355   |          |         |

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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    | 02:57:05 | 93.809% | -0.011  | 300.400 | 286.800   | 0.000     | 628500.000 | 78800.000 | 78170.000 |
| 2    | 02:57:25 | 95.672% | -0.011  | 309.100 | 294.300   | 0.000     | 617000.000 | 77130.000 | 77950.000 |
| 3    | 02:57:44 | 94.269% | -0.011  | 286.200 | 288.400   | 0.000     | 622600.000 | 76460.000 | 77280.000 |
| X    |          | 94.583% | -0.011  | 298.600 | 289.900   | 0.000     | 622700.000 | 77460.000 | 77800.000 |
| σ    |          | 0.971%  | 0.000   | 11.530  | 3.960     | 0.000     | 5718.000   | 1208.000  | 463.800   |
| %RSD |          | 1.026   | 1.582   | 3.861   | 1.366     | 0.000     | 0.918      | 1.560     | 0.596     |
| Run  | Time     | 27Al    | 28Si    | 37Cl    | 39K       | 43Ca      | 44Ca       | 45Sc      | 47Ti      |
|      |          | ppb     | ppb     | ppb     | ppb       | ppb       | ppb        | ppb       | ppb       |
| 1    | 02:57:05 | 226.200 | 513.300 | 0.000   | 25940.000 | 28920.000 | 28180.000  | 92.556%   | 14.300    |
| 2    | 02:57:25 | 230.800 | 512.000 | 0.000   | 25570.000 | 28800.000 | 28160.000  | 91.929%   | 13.470    |
| 3    | 02:57:44 | 223.300 | 491.200 | 0.000   | 25730.000 | 28770.000 | 26950.000  | 91.888%   | 12.750    |
| X    |          | 226.800 | 505.500 | 0.000   | 25750.000 | 28830.000 | 27760.000  | 92.124%   | 13.510    |
| σ    |          | 3.791   | 12.400  | 0.000   | 189.600   | 81.990    | 703.700    | 0.374%    | 0.775     |
| %RSD |          | 1.672   | 2.454   | 0.000   | 0.737     | 0.284     | 2.535      | 0.406     | 5.737     |
| Run  | Time     | 51V     | 52Cr    | 55Mn    | 56Fe      | 57Fe      | 59Co       | 60Ni      | 63Cu      |
|      |          | ppb     | ppb     | ppb     | ppb       | ppb       | ppb        | ppb       | ppb       |
| 1    | 02:57:05 | 0.752   | 0.778   | 37.650  | 410.700   | 488.100   | 0.164      | 0.430     | 4.313     |
| 2    | 02:57:25 | 1.023   | 0.781   | 37.520  | 409.500   | 497.500   | 0.166      | 0.514     | 4.287     |
| 3    | 02:57:44 | 0.752   | 0.796   | 37.420  | 412.800   | 489.600   | 0.152      | 0.517     | 4.364     |
| X    |          | 0.843   | 0.785   | 37.530  | 411.000   | 491.700   | 0.161      | 0.487     | 4.322     |
| σ    |          | 0.156   | 0.010   | 0.119   | 1.670     | 5.054     | 0.008      | 0.049     | 0.039     |
| %RSD |          | 18.530  | 1.287   | 0.317   | 0.406     | 1.028     | 4.958      | 10.110    | 0.903     |
| Run  | Time     | 65Cu    | 66Zn    | 68Zn    | 75As      | 78Se      | 82Se       | 83Kr      | 88Sr      |
|      |          | ppb     | ppb     | ppb     | ppb       | ppb       | ppb        | ppb       | ppb       |
| 1    | 02:57:05 | 0.600   | 7.135   | 7.211   | 1.577     | 0.395     | 5.569      | 0.000     | 486.300   |
| 2    | 02:57:25 | 0.693   | 7.169   | 7.252   | 1.483     | 0.340     | 5.140      | 0.000     | 482.600   |
| 3    | 02:57:44 | 0.663   | 7.297   | 6.787   | 1.261     | -0.002    | 5.126      | 0.000     | 482.000   |
| X    |          | 0.652   | 7.200   | 7.083   | 1.440     | 0.245     | 5.278      | 0.000     | 483.600   |
| σ    |          | 0.048   | 0.085   | 0.258   | 0.162     | 0.215     | 0.252      | 0.000     | 2.320     |
| %RSD |          | 7.332   | 1.186   | 3.640   | 11.240    | 87.960    | 4.774      | 0.000     | 0.480     |
| Run  | Time     | 89Y     | 95Mo    | 98Mo    | 103Rh     | 107Ag     | 109Ag      | 111Cd     | 114Cd     |
|      |          | ppb     | ppb     | ppb     | ppb       | ppb       | ppb        | ppb       | ppb       |
| 1    | 02:57:05 | 88.797% | 2.446   | 2.356   | 86.570%   | -0.014    | 0.002      | 0.084     | 0.053     |
| 2    | 02:57:25 | 90.519% | 2.517   | 2.624   | 87.456%   | -0.004    | -0.002     | 0.036     | 0.028     |
| 3    | 02:57:44 | 91.778% | 2.548   | 2.527   | 87.996%   | -0.011    | -0.002     | 0.071     | 0.059     |
| X    |          | 90.365% | 2.504   | 2.502   | 87.341%   | -0.010    | -0.000     | 0.064     | 0.047     |
| σ    |          | 1.497%  | 0.053   | 0.136   | 0.720%    | 0.005     | 0.002      | 0.025     | 0.016     |
| %RSD |          | 1.656   | 2.102   | 5.426   | 0.824     | 52.550    | 386.700    | 38.710    | 35.070    |
| Run  | Time     | 115In   | 118Sn   | 121Sb   | 123Sb     | 135Ba     | 137Ba      | 159Tb     | 165Ho     |
|      |          | ppb     | ppb     | ppb     | ppb       | ppb       | ppb        | ppb       | ppb       |
| 1    | 02:57:05 | 86.321% | -0.297  | 0.543   | 0.537     | 2.856     | 2.716      | 91.821%   | 92.314%   |
| 2    | 02:57:25 | 88.593% | -0.258  | 0.563   | 0.589     | 2.747     | 2.828      | 94.652%   | 94.012%   |
| 3    | 02:57:44 | 89.135% | -0.216  | 0.574   | 0.583     | 2.609     | 2.671      | 95.772%   | 95.473%   |
| X    |          | 88.016% | -0.257  | 0.560   | 0.570     | 2.737     | 2.738      | 94.082%   | 93.933%   |
| σ    |          | 1.493%  | 0.041   | 0.016   | 0.029     | 0.124     | 0.081      | 2.036%    | 1.581%    |
| %RSD |          | 1.696   | 15.800  | 2.790   | 5.006     | 4.534     | 2.969      | 2.164     | 1.684     |
| Run  | Time     | 203Tl   | 205Tl   | 206Pb   | 207Pb     | 208Pb     | 209Bi      |           |           |
|      |          | ppb     | ppb     | ppb     | ppb       | ppb       | ppb        |           |           |
| 1    | 02:57:05 | 0.014   | 0.015   | 0.491   | 0.416     | 0.471     | 99.581%    |           |           |
| 2    | 02:57:25 | 0.015   | 0.018   | 0.555   | 0.476     | 0.509     | 94.291%    |           |           |
| 3    | 02:57:44 | 0.021   | 0.012   | 0.516   | 0.470     | 0.494     | 92.663%    |           |           |
| X    |          | 0.017   | 0.015   | 0.521   | 0.454     | 0.491     | 95.512%    |           |           |
| σ    |          | 0.004   | 0.003   | 0.032   | 0.033     | 0.019     | 3.617%     |           |           |
| %RSD |          | 21.250  | 21.030  | 6.231   | 7.226     | 3.933     | 3.787      |           |           |

180-43344-D-20-A@10

5/20/2015 3:00:33 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   | 03:00:52 | 101.002% | 0.006   | 278.000 | 277.100   | 0.000     | 595500.000 | 72840.000 | 74020.000 |         |
| 2   | 03:01:12 | 100.177% | 0.006   | 294.200 | 293.000   | 0.000     | 612300.000 | 75070.000 | 74530.000 |         |
| 3   | 03:01:31 | 98.217%  | 0.007   | 277.500 | 283.900   | 0.000     | 607700.000 | 74390.000 | 75020.000 |         |
| X   |          | 99.798%  | 0.006   | 283.200 | 284.700   | 0.000     | 605200.000 | 74100.000 | 74520.000 |         |
|     |          | σ        | 1.431%  | 0.001   | 9.511     | 8.003     | 0.000      | 8714.000  | 1143.000  | 495.800 |
|     |          | %RSD     | 1.433   | 8.820   | 3.358     | 2.812     | 0.000      | 1.440     | 1.542     | 0.665   |
| Run | Time     | 27Al     | 28Si    | 37Cl    | 39K       | 43Ca      | 44Ca       | 45Sc      | 47Ti      |         |
|     |          | ppb      | ppb     | ppb     | ppb       | ppb       | ppb        | ppb       | ppb       |         |
| 1   | 03:00:52 | -0.239   | -33.240 | 0.000   | 24470.000 | 27600.000 | 26870.000  | 100.745%  | -0.142    |         |
| 2   | 03:01:12 | -0.220   | -35.580 | 0.000   | 24660.000 | 27720.000 | 27350.000  | 101.759%  | 0.008     |         |
| 3   | 03:01:31 | -0.346   | -38.080 | 0.000   | 25300.000 | 28150.000 | 27850.000  | 98.450%   | -0.140    |         |
| X   |          | -0.269   | -35.630 | 0.000   | 24810.000 | 27820.000 | 27360.000  | 100.318%  | -0.091    |         |
|     |          | σ        | 0.068   | 2.421   | 0.000     | 435.500   | 289.400    | 489.300   | 1.695%    | 0.086   |
|     |          | %RSD     | 25.180  | 6.794   | 0.000     | 1.755     | 1.040      | 1.789     | 1.690     | 94.140  |
| Run | Time     | 51V      | 52Cr    | 55Mn    | 56Fe      | 57Fe      | 59Co       | 60Ni      | 63Cu      |         |
|     |          | ppb      | ppb     | ppb     | ppb       | ppb       | ppb        | ppb       | ppb       |         |
| 1   | 03:00:52 | 0.241    | 0.075   | 31.650  | 12.650    | 71.300    | 0.054      | 0.134     | 3.837     |         |
| 2   | 03:01:12 | 0.041    | 0.085   | 31.410  | 11.550    | 66.780    | 0.043      | 0.049     | 3.869     |         |
| 3   | 03:01:31 | -0.100   | 0.077   | 32.350  | 13.870    | 70.260    | 0.053      | 0.161     | 3.930     |         |
| X   |          | 0.061    | 0.079   | 31.800  | 12.690    | 69.450    | 0.050      | 0.115     | 3.879     |         |
|     |          | σ        | 0.172   | 0.005   | 0.488     | 1.160     | 2.365      | 0.006     | 0.059     | 0.047   |
|     |          | %RSD     | 281.500 | 6.763   | 1.535     | 9.141     | 3.405      | 11.340    | 51.100    | 1.219   |
| Run | Time     | 65Cu     | 66Zn    | 68Zn    | 75As      | 78Se      | 82Se       | 83Kr      | 88Sr      |         |
|     |          | ppb      | ppb     | ppb     | ppb       | ppb       | ppb        | ppb       | ppb       |         |
| 1   | 03:00:52 | 0.172    | 0.987   | 0.690   | 1.123     | 0.156     | 5.419      | 0.000     | 472.300   |         |
| 2   | 03:01:12 | 0.224    | 0.876   | 0.831   | 0.885     | 0.009     | 4.868      | 0.000     | 469.400   |         |
| 3   | 03:01:31 | 0.298    | 0.902   | 0.762   | 1.043     | 0.508     | 4.997      | 0.000     | 471.700   |         |
| X   |          | 0.231    | 0.922   | 0.761   | 1.017     | 0.224     | 5.095      | 0.000     | 471.100   |         |
|     |          | σ        | 0.064   | 0.058   | 0.070     | 0.121     | 0.256      | 0.288     | 0.000     | 1.544   |
|     |          | %RSD     | 27.470  | 6.276   | 9.241     | 11.930    | 114.400    | 5.656     | 0.000     | 0.328   |
| Run | Time     | 89Y      | 95Mo    | 98Mo    | 103Rh     | 107Ag     | 109Ag      | 111Cd     | 114Cd     |         |
|     |          | ppb      | ppb     | ppb     | ppb       | ppb       | ppb        | ppb       | ppb       |         |
| 1   | 03:00:52 | 95.259%  | 2.360   | 2.299   | 92.223%   | -0.024    | -0.021     | 0.045     | 0.028     |         |
| 2   | 03:01:12 | 95.806%  | 2.386   | 2.332   | 93.249%   | -0.028    | -0.018     | 0.061     | 0.035     |         |
| 3   | 03:01:31 | 95.628%  | 2.382   | 2.323   | 93.084%   | -0.020    | -0.020     | 0.053     | 0.033     |         |
| X   |          | 95.564%  | 2.376   | 2.318   | 92.852%   | -0.024    | -0.019     | 0.053     | 0.032     |         |
|     |          | σ        | 0.279%  | 0.014   | 0.017     | 0.551%    | 0.004      | 0.001     | 0.008     | 0.004   |
|     |          | %RSD     | 0.292   | 0.580   | 0.737     | 0.593     | 17.020     | 6.433     | 14.850    | 11.400  |
| Run | Time     | 115In    | 118Sn   | 121Sb   | 123Sb     | 135Ba     | 137Ba      | 159Tb     | 165Ho     |         |
|     |          | ppb      | ppb     | ppb     | ppb       | ppb       | ppb        | ppb       | ppb       |         |
| 1   | 03:00:52 | 91.905%  | -0.358  | 0.346   | 0.393     | 1.759     | 1.610      | 96.610%   | 95.583%   |         |
| 2   | 03:01:12 | 92.955%  | -0.382  | 0.356   | 0.408     | 1.815     | 1.702      | 98.021%   | 97.433%   |         |
| 3   | 03:01:31 | 94.102%  | -0.344  | 0.390   | 0.406     | 1.559     | 1.784      | 98.866%   | 98.142%   |         |
| X   |          | 92.987%  | -0.361  | 0.364   | 0.402     | 1.711     | 1.699      | 97.832%   | 97.053%   |         |
|     |          | σ        | 1.099%  | 0.019   | 0.023     | 0.008     | 0.134      | 0.087     | 1.140%    | 1.321%  |
|     |          | %RSD     | 1.182   | 5.313   | 6.297     | 1.923     | 7.846      | 5.105     | 1.165     | 1.362   |
| Run | Time     | 203Tl    | 205Tl   | 206Pb   | 207Pb     | 208Pb     | 209Bi      |           |           |         |
|     |          | ppb      | ppb     | ppb     | ppb       | ppb       | ppb        |           |           |         |
| 1   | 03:00:52 | 0.004    | 0.006   | 0.002   | 0.006     | 0.004     | 96.684%    |           |           |         |
| 2   | 03:01:12 | 0.004    | 0.010   | 0.010   | 0.009     | 0.010     | 93.438%    |           |           |         |
| 3   | 03:01:31 | 0.004    | 0.007   | 0.009   | 0.004     | 0.008     | 92.284%    |           |           |         |
| X   |          | 0.004    | 0.008   | 0.007   | 0.006     | 0.007     | 94.135%    |           |           |         |
|     |          | σ        | 0.000   | 0.002   | 0.004     | 0.003     | 2.281%     |           |           |         |
|     |          | %RSD     | 3.677   | 23.150  | 59.000    | 44.910    | 38.440     | 2.424     |           |         |

180-43344-D-21-A@10

5/20/2015 3:04:21 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    | 03:04:40 | 102.082% | -0.013  | 327.500 | 308.700   | 0.000     | 618400.000 | 78050.000 | 77820.000 |
| 2    | 03:05:00 | 100.309% | 0.006   | 302.500 | 310.900   | 0.000     | 620900.000 | 77670.000 | 78170.000 |
| 3    | 03:05:19 | 99.941%  | 0.024   | 311.200 | 300.900   | 0.000     | 623700.000 | 77660.000 | 77420.000 |
| X    |          | 100.778% | 0.006   | 313.700 | 306.800   | 0.000     | 621000.000 | 77800.000 | 77800.000 |
| σ    |          | 1.145%   | 0.019   | 12.680  | 5.234     | 0.000     | 2657.000   | 222.900   | 374.500   |
| %RSD |          | 1.136    | 319.000 | 4.040   | 1.706     | 0.000     | 0.428      | 0.286     | 0.481     |
| Run  | Time     | 27Al     | 28Si    | 37Cl    | 39K       | 43Ca      | 44Ca       | 45Sc      | 47Ti      |
|      |          | ppb      | ppb     | ppb     | ppb       | ppb       | ppb        | ppb       | ppb       |
| 1    | 03:04:40 | 8.936    | -10.120 | 0.000   | 25820.000 | 31190.000 | 30250.000  | 101.461%  | 0.109     |
| 2    | 03:05:00 | 7.310    | -9.247  | 0.000   | 26470.000 | 30930.000 | 30360.000  | 99.021%   | 0.169     |
| 3    | 03:05:19 | 6.691    | -7.691  | 0.000   | 26280.000 | 31590.000 | 30810.000  | 98.887%   | 0.203     |
| X    |          | 7.646    | -9.018  | 0.000   | 26190.000 | 31230.000 | 30470.000  | 99.790%   | 0.160     |
| σ    |          | 1.160    | 1.229   | 0.000   | 336.400   | 330.300   | 301.000    | 1.449%    | 0.048     |
| %RSD |          | 15.170   | 13.630  | 0.000   | 1.284     | 1.058     | 0.988      | 1.452     | 29.720    |
| Run  | Time     | 51V      | 52Cr    | 55Mn    | 56Fe      | 57Fe      | 59Co       | 60Ni      | 63Cu      |
|      |          | ppb      | ppb     | ppb     | ppb       | ppb       | ppb        | ppb       | ppb       |
| 1    | 03:04:40 | 0.108    | 0.088   | 33.700  | 86.940    | 156.600   | 0.091      | 0.168     | 3.942     |
| 2    | 03:05:00 | 0.079    | 0.074   | 34.870  | 86.360    | 150.700   | 0.077      | 0.249     | 4.180     |
| 3    | 03:05:19 | -0.078   | 0.130   | 34.140  | 88.210    | 156.000   | 0.082      | 0.167     | 4.227     |
| X    |          | 0.036    | 0.097   | 34.240  | 87.170    | 154.400   | 0.084      | 0.195     | 4.116     |
| σ    |          | 0.100    | 0.029   | 0.594   | 0.946     | 3.224     | 0.007      | 0.047     | 0.153     |
| %RSD |          | 275.100  | 30.000  | 1.735   | 1.085     | 2.087     | 8.170      | 24.250    | 3.711     |
| Run  | Time     | 65Cu     | 66Zn    | 68Zn    | 75As      | 78Se      | 82Se       | 83Kr      | 88Sr      |
|      |          | ppb      | ppb     | ppb     | ppb       | ppb       | ppb        | ppb       | ppb       |
| 1    | 03:04:40 | 0.270    | 1.772   | 1.612   | 1.430     | 0.300     | 5.670      | 0.000     | 492.700   |
| 2    | 03:05:00 | 0.295    | 2.000   | 1.756   | 1.134     | 0.344     | 5.419      | 0.000     | 494.200   |
| 3    | 03:05:19 | 0.335    | 1.926   | 1.709   | 1.426     | -0.033    | 5.527      | 0.000     | 493.500   |
| X    |          | 0.300    | 1.899   | 1.693   | 1.330     | 0.203     | 5.539      | 0.000     | 493.500   |
| σ    |          | 0.033    | 0.117   | 0.073   | 0.170     | 0.206     | 0.126      | 0.000     | 0.786     |
| %RSD |          | 10.900   | 6.144   | 4.336   | 12.780    | 101.400   | 2.278      | 0.000     | 0.159     |
| Run  | Time     | 89Y      | 95Mo    | 98Mo    | 103Rh     | 107Ag     | 109Ag      | 111Cd     | 114Cd     |
|      |          | ppb      | ppb     | ppb     | ppb       | ppb       | ppb        | ppb       | ppb       |
| 1    | 03:04:40 | 96.487%  | 2.263   | 2.206   | 93.130%   | -0.021    | -0.020     | 0.028     | 0.024     |
| 2    | 03:05:00 | 96.536%  | 2.223   | 2.328   | 93.100%   | -0.025    | -0.021     | 0.023     | 0.023     |
| 3    | 03:05:19 | 96.441%  | 2.324   | 2.354   | 93.007%   | -0.025    | -0.025     | 0.003     | 0.011     |
| X    |          | 96.488%  | 2.270   | 2.296   | 93.079%   | -0.024    | -0.022     | 0.018     | 0.019     |
| σ    |          | 0.048%   | 0.051   | 0.079   | 0.064%    | 0.002     | 0.003      | 0.013     | 0.007     |
| %RSD |          | 0.049    | 2.224   | 3.431   | 0.069     | 9.886     | 11.710     | 74.230    | 38.340    |
| Run  | Time     | 115In    | 118Sn   | 121Sb   | 123Sb     | 135Ba     | 137Ba      | 159Tb     | 165Ho     |
|      |          | ppb      | ppb     | ppb     | ppb       | ppb       | ppb        | ppb       | ppb       |
| 1    | 03:04:40 | 92.669%  | -0.366  | 0.247   | 0.263     | 1.736     | 1.853      | 96.383%   | 96.500%   |
| 2    | 03:05:00 | 93.685%  | -0.360  | 0.263   | 0.300     | 1.826     | 1.620      | 98.130%   | 97.629%   |
| 3    | 03:05:19 | 93.539%  | -0.352  | 0.274   | 0.278     | 1.721     | 1.760      | 99.777%   | 98.950%   |
| X    |          | 93.298%  | -0.359  | 0.261   | 0.280     | 1.761     | 1.744      | 98.097%   | 97.693%   |
| σ    |          | 0.549%   | 0.007   | 0.013   | 0.019     | 0.057     | 0.118      | 1.697%    | 1.226%    |
| %RSD |          | 0.589    | 1.882   | 5.134   | 6.640     | 3.232     | 6.748      | 1.730     | 1.255     |
| Run  | Time     | 203Tl    | 205Tl   | 206Pb   | 207Pb     | 208Pb     | 209Bi      |           |           |
|      |          | ppb      | ppb     | ppb     | ppb       | ppb       | ppb        |           |           |
| 1    | 03:04:40 | 0.001    | 0.005   | 0.041   | 0.042     | 0.041     | 97.842%    |           |           |
| 2    | 03:05:00 | 0.006    | 0.005   | 0.032   | 0.048     | 0.037     | 93.886%    |           |           |
| 3    | 03:05:19 | -0.000   | 0.004   | 0.040   | 0.044     | 0.041     | 92.341%    |           |           |
| X    |          | 0.002    | 0.005   | 0.038   | 0.044     | 0.040     | 94.690%    |           |           |
| σ    |          | 0.003    | 0.001   | 0.005   | 0.003     | 0.002     | 2.837%     |           |           |
| %RSD |          | 129.200  | 20.320  | 12.700  | 6.843     | 5.446     | 2.996      |           |           |

180-43344-D-22-A@10

5/20/2015 3:08:09 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    | 03:08:28 | 101.904% | -0.013  | 316.000 | 321.400   | 0.000     | 647900.000 | 81290.000 | 80610.000 |
| 2    | 03:08:47 | 101.649% | 0.005   | 332.200 | 315.500   | 0.000     | 636100.000 | 80720.000 | 80560.000 |
| 3    | 03:09:06 | 98.726%  | -0.031  | 311.400 | 320.200   | 0.000     | 648400.000 | 81220.000 | 81040.000 |
| X    |          | 100.759% | -0.013  | 319.800 | 319.000   | 0.000     | 644200.000 | 81080.000 | 80740.000 |
| σ    |          | 1.766%   | 0.018   | 10.960  | 3.097     | 0.000     | 6977.000   | 312.400   | 261.100   |
| %RSD |          | 1.753    | 142.200 | 3.426   | 0.971     | 0.000     | 1.083      | 0.385     | 0.323     |
| Run  | Time     | 27Al     | 28Si    | 37Cl    | 39K       | 43Ca      | 44Ca       | 45Sc      | 47Ti      |
|      |          | ppb      | ppb     | ppb     | ppb       | ppb       | ppb        | ppb       | ppb       |
| 1    | 03:08:28 | 9.450    | -27.400 | 0.000   | 26410.000 | 31470.000 | 30720.000  | 102.307%  | -0.076    |
| 2    | 03:08:47 | 9.747    | -25.060 | 0.000   | 26330.000 | 31910.000 | 31490.000  | 100.339%  | -0.141    |
| 3    | 03:09:06 | 10.100   | -19.940 | 0.000   | 26840.000 | 32070.000 | 31520.000  | 99.418%   | -0.158    |
| X    |          | 9.767    | -24.130 | 0.000   | 26530.000 | 31820.000 | 31240.000  | 100.688%  | -0.125    |
| σ    |          | 0.327    | 3.815   | 0.000   | 276.100   | 312.700   | 452.400    | 1.476%    | 0.043     |
| %RSD |          | 3.350    | 15.810  | 0.000   | 1.041     | 0.983     | 1.448      | 1.466     | 34.370    |
| Run  | Time     | 51V      | 52Cr    | 55Mn    | 56Fe      | 57Fe      | 59Co       | 60Ni      | 63Cu      |
|      |          | ppb      | ppb     | ppb     | ppb       | ppb       | ppb        | ppb       | ppb       |
| 1    | 03:08:28 | -0.137   | 0.069   | 31.830  | 19.950    | 84.630    | 0.061      | 0.171     | 3.985     |
| 2    | 03:08:47 | 0.105    | 0.063   | 32.050  | 20.160    | 86.020    | 0.074      | 0.203     | 4.178     |
| 3    | 03:09:06 | -0.085   | 0.100   | 32.850  | 20.400    | 79.600    | 0.066      | 0.183     | 4.244     |
| X    |          | -0.039   | 0.078   | 32.240  | 20.170    | 83.410    | 0.067      | 0.186     | 4.136     |
| σ    |          | 0.127    | 0.020   | 0.538   | 0.229     | 3.376     | 0.006      | 0.016     | 0.135     |
| %RSD |          | 326.100  | 25.660  | 1.670   | 1.133     | 4.047     | 9.545      | 8.773     | 3.258     |
| Run  | Time     | 65Cu     | 66Zn    | 68Zn    | 75As      | 78Se      | 82Se       | 83Kr      | 88Sr      |
|      |          | ppb      | ppb     | ppb     | ppb       | ppb       | ppb        | ppb       | ppb       |
| 1    | 03:08:28 | 0.208    | 0.903   | 1.149   | 1.326     | 0.135     | 6.272      | 0.000     | 504.300   |
| 2    | 03:08:47 | 0.274    | 1.077   | 0.966   | 1.371     | 0.372     | 6.665      | 0.000     | 504.500   |
| 3    | 03:09:06 | 0.201    | 0.929   | 0.948   | 1.300     | 0.405     | 6.126      | 0.000     | 501.100   |
| X    |          | 0.227    | 0.970   | 1.021   | 1.332     | 0.304     | 6.354      | 0.000     | 503.300   |
| σ    |          | 0.040    | 0.094   | 0.112   | 0.036     | 0.147     | 0.279      | 0.000     | 1.919     |
| %RSD |          | 17.710   | 9.674   | 10.920  | 2.689     | 48.510    | 4.387      | 0.000     | 0.381     |
| Run  | Time     | 89Y      | 95Mo    | 98Mo    | 103Rh     | 107Ag     | 109Ag      | 111Cd     | 114Cd     |
|      |          | ppb      | ppb     | ppb     | ppb       | ppb       | ppb        | ppb       | ppb       |
| 1    | 03:08:28 | 95.546%  | 2.103   | 2.286   | 92.417%   | -0.027    | -0.019     | -0.001    | 0.002     |
| 2    | 03:08:47 | 95.873%  | 2.337   | 2.298   | 93.006%   | -0.024    | -0.024     | 0.006     | 0.004     |
| 3    | 03:09:06 | 95.837%  | 2.298   | 2.365   | 92.982%   | -0.025    | -0.020     | 0.020     | 0.017     |
| X    |          | 95.752%  | 2.246   | 2.316   | 92.802%   | -0.025    | -0.021     | 0.009     | 0.008     |
| σ    |          | 0.179%   | 0.125   | 0.042   | 0.333%    | 0.002     | 0.003      | 0.011     | 0.008     |
| %RSD |          | 0.187    | 5.585   | 1.834   | 0.359     | 6.396     | 13.050     | 122.200   | 112.300   |
| Run  | Time     | 115In    | 118Sn   | 121Sb   | 123Sb     | 135Ba     | 137Ba      | 159Tb     | 165Ho     |
|      |          | ppb      | ppb     | ppb     | ppb       | ppb       | ppb        | ppb       | ppb       |
| 1    | 03:08:28 | 91.885%  | -0.393  | 0.164   | 0.183     | 1.746     | 1.777      | 95.740%   | 95.329%   |
| 2    | 03:08:47 | 92.449%  | -0.368  | 0.213   | 0.202     | 1.546     | 1.817      | 97.208%   | 97.023%   |
| 3    | 03:09:06 | 93.677%  | -0.376  | 0.216   | 0.221     | 1.699     | 1.680      | 98.722%   | 98.385%   |
| X    |          | 92.671%  | -0.379  | 0.198   | 0.202     | 1.663     | 1.758      | 97.223%   | 96.912%   |
| σ    |          | 0.916%   | 0.013   | 0.029   | 0.019     | 0.105     | 0.071      | 1.491%    | 1.531%    |
| %RSD |          | 0.989    | 3.406   | 14.920  | 9.443     | 6.287     | 4.018      | 1.534     | 1.580     |
| Run  | Time     | 203Tl    | 205Tl   | 206Pb   | 207Pb     | 208Pb     | 209Bi      |           |           |
|      |          | ppb      | ppb     | ppb     | ppb       | ppb       | ppb        |           |           |
| 1    | 03:08:28 | 0.003    | 0.004   | -0.004  | 0.000     | -0.003    | 97.303%    |           |           |
| 2    | 03:08:47 | 0.004    | 0.002   | -0.008  | -0.008    | -0.003    | 93.734%    |           |           |
| 3    | 03:09:06 | 0.004    | 0.004   | 0.003   | -0.004    | -0.003    | 91.420%    |           |           |
| X    |          | 0.004    | 0.004   | -0.003  | -0.004    | -0.003    | 94.153%    |           |           |
| σ    |          | 0.000    | 0.001   | 0.005   | 0.004     | 0.000     | 2.964%     |           |           |
| %RSD |          | 11.250   | 35.500  | 183.800 | 101.100   | 10.770    | 3.148      |           |           |

180-43344-D-23-A@10

5/20/2015 3:11:56 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    | 03:12:15 | 100.163% | 0.006   | 303.500 | 279.800   | 0.000     | 637400.000 | 77200.000 | 76700.000 |
| 2    | 03:12:36 | 98.720%  | -0.031  | 294.000 | 287.400   | 0.000     | 632600.000 | 78220.000 | 78290.000 |
| 3    | 03:12:55 | 97.244%  | 0.007   | 280.300 | 272.700   | 0.000     | 643400.000 | 78330.000 | 79000.000 |
| X    |          | 98.709%  | -0.006  | 292.600 | 280.000   | 0.000     | 637800.000 | 77910.000 | 77990.000 |
| σ    |          | 1.460%   | 0.021   | 11.660  | 7.357     | 0.000     | 5428.000   | 625.500   | 1178.000  |
| %RSD |          | 1.479    | 358.200 | 3.985   | 2.627     | 0.000     | 0.851      | 0.803     | 1.510     |
| Run  | Time     | 27Al     | 28Si    | 37Cl    | 39K       | 43Ca      | 44Ca       | 45Sc      | 47Ti      |
|      |          | ppb      | ppb     | ppb     | ppb       | ppb       | ppb        | ppb       | ppb       |
| 1    | 03:12:15 | 32.620   | 84.860  | 0.000   | 25610.000 | 26300.000 | 24550.000  | 101.976%  | 1.243     |
| 2    | 03:12:36 | 32.890   | 89.520  | 0.000   | 26000.000 | 26740.000 | 26250.000  | 99.947%   | 1.254     |
| 3    | 03:12:55 | 33.240   | 88.820  | 0.000   | 26150.000 | 27220.000 | 24950.000  | 98.178%   | 1.626     |
| X    |          | 32.910   | 87.740  | 0.000   | 25920.000 | 26750.000 | 25250.000  | 100.034%  | 1.374     |
| σ    |          | 0.312    | 2.513   | 0.000   | 277.900   | 462.000   | 886.200    | 1.900%    | 0.218     |
| %RSD |          | 0.949    | 2.865   | 0.000   | 1.072     | 1.727     | 3.510      | 1.900     | 15.850    |
| Run  | Time     | 51V      | 52Cr    | 55Mn    | 56Fe      | 57Fe      | 59Co       | 60Ni      | 63Cu      |
|      |          | ppb      | ppb     | ppb     | ppb       | ppb       | ppb        | ppb       | ppb       |
| 1    | 03:12:15 | 0.447    | 0.180   | 18.790  | 104.700   | 164.800   | 0.069      | 0.186     | 4.270     |
| 2    | 03:12:36 | 0.666    | 0.151   | 18.710  | 106.400   | 154.500   | 0.053      | 0.132     | 4.287     |
| 3    | 03:12:55 | 0.719    | 0.168   | 19.380  | 106.700   | 166.800   | 0.048      | 0.125     | 4.266     |
| X    |          | 0.611    | 0.167   | 18.960  | 105.900   | 162.000   | 0.057      | 0.148     | 4.274     |
| σ    |          | 0.145    | 0.015   | 0.362   | 1.076     | 6.581     | 0.011      | 0.033     | 0.011     |
| %RSD |          | 23.690   | 8.780   | 1.910   | 1.016     | 4.061     | 19.890     | 22.600    | 0.256     |
| Run  | Time     | 65Cu     | 66Zn    | 68Zn    | 75As      | 78Se      | 82Se       | 83Kr      | 88Sr      |
|      |          | ppb      | ppb     | ppb     | ppb       | ppb       | ppb        | ppb       | ppb       |
| 1    | 03:12:15 | 0.439    | 1.136   | 0.874   | 1.176     | 0.590     | 6.254      | 0.000     | 479.200   |
| 2    | 03:12:36 | 0.277    | 1.075   | 1.023   | 1.826     | 0.509     | 5.707      | 0.000     | 477.500   |
| 3    | 03:12:55 | 0.345    | 1.061   | 0.956   | 1.542     | 0.562     | 4.936      | 0.000     | 480.000   |
| X    |          | 0.354    | 1.090   | 0.951   | 1.515     | 0.553     | 5.632      | 0.000     | 478.900   |
| σ    |          | 0.081    | 0.040   | 0.075   | 0.326     | 0.041     | 0.662      | 0.000     | 1.249     |
| %RSD |          | 23.020   | 3.653   | 7.884   | 21.540    | 7.391     | 11.760     | 0.000     | 0.261     |
| Run  | Time     | 89Y      | 95Mo    | 98Mo    | 103Rh     | 107Ag     | 109Ag      | 111Cd     | 114Cd     |
|      |          | ppb      | ppb     | ppb     | ppb       | ppb       | ppb        | ppb       | ppb       |
| 1    | 03:12:15 | 95.448%  | 2.483   | 2.276   | 92.866%   | -0.023    | -0.020     | 0.052     | 0.044     |
| 2    | 03:12:36 | 96.623%  | 2.466   | 2.477   | 93.077%   | -0.021    | -0.016     | 0.010     | 0.013     |
| 3    | 03:12:55 | 96.261%  | 2.405   | 2.560   | 93.048%   | -0.024    | -0.024     | 0.025     | 0.021     |
| X    |          | 96.111%  | 2.452   | 2.438   | 92.997%   | -0.023    | -0.020     | 0.029     | 0.026     |
| σ    |          | 0.602%   | 0.041   | 0.146   | 0.114%    | 0.001     | 0.004      | 0.022     | 0.016     |
| %RSD |          | 0.626    | 1.672   | 5.991   | 0.123     | 5.569     | 18.960     | 73.530    | 61.090    |
| Run  | Time     | 115In    | 118Sn   | 121Sb   | 123Sb     | 135Ba     | 137Ba      | 159Tb     | 165Ho     |
|      |          | ppb      | ppb     | ppb     | ppb       | ppb       | ppb        | ppb       | ppb       |
| 1    | 03:12:15 | 92.728%  | -0.417  | 0.186   | 0.199     | 1.882     | 1.696      | 97.598%   | 95.441%   |
| 2    | 03:12:36 | 93.374%  | -0.375  | 0.195   | 0.237     | 1.797     | 1.844      | 98.581%   | 97.903%   |
| 3    | 03:12:55 | 94.769%  | -0.363  | 0.215   | 0.201     | 1.781     | 1.990      | 99.254%   | 98.758%   |
| X    |          | 93.624%  | -0.385  | 0.199   | 0.213     | 1.820     | 1.843      | 98.478%   | 97.367%   |
| σ    |          | 1.043%   | 0.029   | 0.015   | 0.021     | 0.055     | 0.147      | 0.833%    | 1.722%    |
| %RSD |          | 1.114    | 7.402   | 7.543   | 10.090    | 2.998     | 7.982      | 0.846     | 1.769     |
| Run  | Time     | 203Tl    | 205Tl   | 206Pb   | 207Pb     | 208Pb     | 209Bi      |           |           |
|      |          | ppb      | ppb     | ppb     | ppb       | ppb       | ppb        |           |           |
| 1    | 03:12:15 | 0.002    | 0.003   | 0.187   | 0.176     | 0.181     | 95.649%    |           |           |
| 2    | 03:12:36 | 0.002    | 0.005   | 0.199   | 0.179     | 0.189     | 92.540%    |           |           |
| 3    | 03:12:55 | 0.004    | 0.006   | 0.191   | 0.180     | 0.193     | 90.860%    |           |           |
| X    |          | 0.003    | 0.005   | 0.193   | 0.178     | 0.188     | 93.017%    |           |           |
| σ    |          | 0.001    | 0.002   | 0.006   | 0.002     | 0.006     | 2.430%     |           |           |
| %RSD |          | 30.080   | 33.120  | 3.107   | 1.290     | 3.082     | 2.612      |           |           |



180-43344-D-24-A@10

5/20/2015 3:15:46 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    | 03:16:05 | 104.420% | 0.004   | 277.200 | 284.500   | 0.000     | 633000.000 | 78480.000 | 76240.000 |
| 2    | 03:16:24 | 101.789% | 0.005   | 269.600 | 280.500   | 0.000     | 627200.000 | 76310.000 | 76230.000 |
| 3    | 03:16:44 | 99.764%  | -0.031  | 283.100 | 280.600   | 0.000     | 639400.000 | 78550.000 | 77880.000 |
| X    |          | 101.991% | -0.007  | 276.600 | 281.900   | 0.000     | 633200.000 | 77780.000 | 76780.000 |
| σ    |          | 2.335%   | 0.021   | 6.764   | 2.252     | 0.000     | 6096.000   | 1277.000  | 949.900   |
| %RSD |          | 2.289    | 292.900 | 2.445   | 0.799     | 0.000     | 0.963      | 1.641     | 1.237     |
| Run  | Time     | 27Al     | 28Si    | 37Cl    | 39K       | 43Ca      | 44Ca       | 45Sc      | 47Ti      |
|      |          | ppb      | ppb     | ppb     | ppb       | ppb       | ppb        | ppb       | ppb       |
| 1    | 03:16:05 | -0.919   | 25.680  | 0.000   | 25800.000 | 26060.000 | 25890.000  | 103.312%  | -0.094    |
| 2    | 03:16:24 | -0.876   | 27.280  | 0.000   | 25280.000 | 26080.000 | 24240.000  | 102.456%  | -0.044    |
| 3    | 03:16:44 | -0.920   | 27.130  | 0.000   | 25690.000 | 26660.000 | 24810.000  | 100.474%  | -0.006    |
| X    |          | -0.905   | 26.700  | 0.000   | 25590.000 | 26270.000 | 24980.000  | 102.081%  | -0.048    |
| σ    |          | 0.025    | 0.882   | 0.000   | 272.700   | 337.700   | 838.300    | 1.455%    | 0.044     |
| %RSD |          | 2.738    | 3.304   | 0.000   | 1.066     | 1.285     | 3.356      | 1.426     | 91.810    |
| Run  | Time     | 51V      | 52Cr    | 55Mn    | 56Fe      | 57Fe      | 59Co       | 60Ni      | 63Cu      |
|      |          | ppb      | ppb     | ppb     | ppb       | ppb       | ppb        | ppb       | ppb       |
| 1    | 03:16:05 | 0.379    | 0.095   | 17.670  | 15.200    | 61.990    | 0.028      | 0.089     | 4.103     |
| 2    | 03:16:24 | 0.275    | 0.118   | 17.920  | 15.040    | 64.620    | 0.032      | 0.119     | 4.280     |
| 3    | 03:16:44 | 0.247    | 0.097   | 18.240  | 14.790    | 67.280    | 0.031      | 0.093     | 4.409     |
| X    |          | 0.300    | 0.103   | 17.940  | 15.010    | 64.630    | 0.030      | 0.100     | 4.264     |
| σ    |          | 0.070    | 0.013   | 0.287   | 0.206     | 2.641     | 0.002      | 0.016     | 0.154     |
| %RSD |          | 23.310   | 12.440  | 1.602   | 1.370     | 4.086     | 6.574      | 16.350    | 3.604     |
| Run  | Time     | 65Cu     | 66Zn    | 68Zn    | 75As      | 78Se      | 82Se       | 83Kr      | 88Sr      |
|      |          | ppb      | ppb     | ppb     | ppb       | ppb       | ppb        | ppb       | ppb       |
| 1    | 03:16:05 | 0.249    | 0.594   | 0.556   | 1.237     | 0.229     | 6.310      | 0.000     | 475.900   |
| 2    | 03:16:24 | 0.302    | 0.681   | 0.584   | 1.603     | -0.248    | 6.105      | 0.000     | 478.800   |
| 3    | 03:16:44 | 0.360    | 0.629   | 0.667   | 1.253     | 0.171     | 5.680      | 0.000     | 476.800   |
| X    |          | 0.304    | 0.635   | 0.602   | 1.364     | 0.051     | 6.031      | 0.000     | 477.200   |
| σ    |          | 0.055    | 0.044   | 0.058   | 0.207     | 0.260     | 0.321      | 0.000     | 1.534     |
| %RSD |          | 18.150   | 6.904   | 9.602   | 15.140    | 514.500   | 5.329      | 0.000     | 0.322     |
| Run  | Time     | 89Y      | 95Mo    | 98Mo    | 103Rh     | 107Ag     | 109Ag      | 111Cd     | 114Cd     |
|      |          | ppb      | ppb     | ppb     | ppb       | ppb       | ppb        | ppb       | ppb       |
| 1    | 03:16:05 | 97.383%  | 2.674   | 2.611   | 94.227%   | -0.024    | -0.025     | 0.079     | 0.054     |
| 2    | 03:16:24 | 98.700%  | 2.609   | 2.631   | 94.195%   | -0.022    | -0.024     | 0.096     | 0.063     |
| 3    | 03:16:44 | 97.673%  | 2.603   | 2.616   | 94.747%   | -0.028    | -0.020     | -0.031    | -0.019    |
| X    |          | 97.919%  | 2.629   | 2.619   | 94.390%   | -0.025    | -0.023     | 0.048     | 0.032     |
| σ    |          | 0.692%   | 0.039   | 0.010   | 0.310%    | 0.003     | 0.003      | 0.069     | 0.045     |
| %RSD |          | 0.707    | 1.499   | 0.391   | 0.328     | 11.920    | 11.330     | 144.200   | 139.300   |
| Run  | Time     | 115In    | 118Sn   | 121Sb   | 123Sb     | 135Ba     | 137Ba      | 159Tb     | 165Ho     |
|      |          | ppb      | ppb     | ppb     | ppb       | ppb       | ppb        | ppb       | ppb       |
| 1    | 03:16:05 | 94.044%  | -0.426  | 0.150   | 0.168     | 1.821     | 1.695      | 97.323%   | 97.420%   |
| 2    | 03:16:24 | 94.459%  | -0.401  | 0.150   | 0.193     | 1.727     | 1.630      | 98.795%   | 98.819%   |
| 3    | 03:16:44 | 96.471%  | -0.382  | 0.172   | 0.182     | 1.840     | 1.783      | 101.525%  | 100.987%  |
| X    |          | 94.991%  | -0.403  | 0.157   | 0.181     | 1.796     | 1.703      | 99.214%   | 99.075%   |
| σ    |          | 1.298%   | 0.022   | 0.013   | 0.012     | 0.061     | 0.077      | 2.132%    | 1.797%    |
| %RSD |          | 1.367    | 5.465   | 8.129   | 6.752     | 3.375     | 4.503      | 2.149     | 1.814     |
| Run  | Time     | 203Tl    | 205Tl   | 206Pb   | 207Pb     | 208Pb     | 209Bi      |           |           |
|      |          | ppb      | ppb     | ppb     | ppb       | ppb       | ppb        |           |           |
| 1    | 03:16:05 | 0.002    | 0.002   | 0.001   | -0.001    | 0.001     | 93.994%    |           |           |
| 2    | 03:16:24 | 0.001    | 0.002   | 0.000   | 0.004     | 0.005     | 92.490%    |           |           |
| 3    | 03:16:44 | 0.002    | 0.004   | 0.010   | 0.008     | 0.006     | 91.373%    |           |           |
| X    |          | 0.002    | 0.003   | 0.004   | 0.004     | 0.004     | 92.619%    |           |           |
| σ    |          | 0.001    | 0.001   | 0.005   | 0.005     | 0.002     | 1.315%     |           |           |
| %RSD |          | 37.460   | 50.870  | 137.600 | 125.500   | 58.970    | 1.420      |           |           |

180-43344-D-9-A@50 5/20/2015 3:19:35 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    | 03:19:54 | 121.674% | -0.000   | 53.030 | 48.040   | 0.000    | 112700.000 | 13390.000 | 13340.000 |
| 2    | 03:20:13 | 116.868% | -0.015   | 49.890 | 50.770   | 0.000    | 118200.000 | 13760.000 | 13690.000 |
| 3    | 03:20:32 | 112.332% | 0.002    | 47.520 | 52.970   | 0.000    | 116400.000 | 13810.000 | 13880.000 |
| X    |          | 116.958% | -0.004   | 50.140 | 50.590   | 0.000    | 115800.000 | 13650.000 | 13640.000 |
| σ    |          | 4.672%   | 0.009    | 2.764  | 2.473    | 0.000    | 2833.000   | 229.500   | 276.900   |
| %RSD |          | 3.994    | 206.100  | 5.512  | 4.888    | 0.000    | 2.447      | 1.681     | 2.031     |
| Run  | Time     | 27Al     | 28Si     | 37Cl   | 39K      | 43Ca     | 44Ca       | 45Sc      | 47Ti      |
|      |          | ppb      | ppb      | ppb    | ppb      | ppb      | ppb        | ppb       | ppb       |
| 1    | 03:19:54 | 13.870   | -244.500 | 0.000  | 4328.000 | 4847.000 | 4461.000   | 112.516%  | 0.471     |
| 2    | 03:20:13 | 14.340   | -240.800 | 0.000  | 4446.000 | 4832.000 | 4520.000   | 112.759%  | 0.484     |
| 3    | 03:20:32 | 14.240   | -240.400 | 0.000  | 4513.000 | 4936.000 | 4657.000   | 108.132%  | 0.497     |
| X    |          | 14.150   | -241.900 | 0.000  | 4429.000 | 4871.000 | 4546.000   | 111.135%  | 0.484     |
| σ    |          | 0.247    | 2.263    | 0.000  | 93.360   | 56.180   | 100.900    | 2.604%    | 0.013     |
| %RSD |          | 1.743    | 0.936    | 0.000  | 2.108    | 1.153    | 2.219      | 2.343     | 2.771     |
| Run  | Time     | 51V      | 52Cr     | 55Mn   | 56Fe     | 57Fe     | 59Co       | 60Ni      | 63Cu      |
|      |          | ppb      | ppb      | ppb    | ppb      | ppb      | ppb        | ppb       | ppb       |
| 1    | 03:19:54 | 0.005    | 0.087    | 9.834  | 31.100   | 35.820   | 0.016      | 0.089     | 1.208     |
| 2    | 03:20:13 | 0.064    | 0.072    | 10.040 | 30.480   | 36.150   | 0.020      | 0.038     | 1.260     |
| 3    | 03:20:32 | 0.101    | 0.078    | 10.230 | 31.800   | 33.890   | 0.020      | 0.054     | 1.317     |
| X    |          | 0.057    | 0.079    | 10.040 | 31.130   | 35.290   | 0.019      | 0.060     | 1.262     |
| σ    |          | 0.048    | 0.008    | 0.199  | 0.662    | 1.217    | 0.003      | 0.026     | 0.055     |
| %RSD |          | 84.820   | 9.575    | 1.987  | 2.128    | 3.449    | 13.310     | 43.450    | 4.344     |
| Run  | Time     | 65Cu     | 66Zn     | 68Zn   | 75As     | 78Se     | 82Se       | 83Kr      | 88Sr      |
|      |          | ppb      | ppb      | ppb    | ppb      | ppb      | ppb        | ppb       | ppb       |
| 1    | 03:19:54 | 0.537    | 2.507    | 2.847  | 0.091    | 0.104    | 0.555      | 0.000     | 74.310    |
| 2    | 03:20:13 | 0.565    | 2.720    | 2.996  | 0.164    | 0.710    | 0.168      | 0.000     | 74.300    |
| 3    | 03:20:32 | 0.536    | 2.760    | 2.700  | 0.032    | 0.493    | 0.579      | 0.000     | 75.110    |
| X    |          | 0.546    | 2.662    | 2.848  | 0.096    | 0.436    | 0.434      | 0.000     | 74.570    |
| σ    |          | 0.017    | 0.136    | 0.148  | 0.066    | 0.307    | 0.231      | 0.000     | 0.464     |
| %RSD |          | 3.023    | 5.098    | 5.195  | 69.300   | 70.510   | 53.110     | 0.000     | 0.622     |
| Run  | Time     | 89Y      | 95Mo     | 98Mo   | 103Rh    | 107Ag    | 109Ag      | 111Cd     | 114Cd     |
|      |          | ppb      | ppb      | ppb    | ppb      | ppb      | ppb        | ppb       | ppb       |
| 1    | 03:19:54 | 103.534% | 0.494    | 0.452  | 102.117% | -0.023   | -0.024     | 0.039     | 0.025     |
| 2    | 03:20:13 | 103.427% | 0.564    | 0.544  | 102.565% | -0.027   | -0.019     | 0.016     | 0.021     |
| 3    | 03:20:32 | 103.649% | 0.615    | 0.543  | 102.346% | -0.026   | -0.020     | 0.022     | 0.018     |
| X    |          | 103.537% | 0.558    | 0.513  | 102.343% | -0.025   | -0.021     | 0.026     | 0.021     |
| σ    |          | 0.111%   | 0.061    | 0.053  | 0.224%   | 0.002    | 0.002      | 0.012     | 0.003     |
| %RSD |          | 0.107    | 10.900   | 10.270 | 0.219    | 9.081    | 11.810     | 45.710    | 16.230    |
| Run  | Time     | 115In    | 118Sn    | 121Sb  | 123Sb    | 135Ba    | 137Ba      | 159Tb     | 165Ho     |
|      |          | ppb      | ppb      | ppb    | ppb      | ppb      | ppb        | ppb       | ppb       |
| 1    | 03:19:54 | 99.770%  | -0.409   | 0.014  | 0.012    | 0.269    | 0.302      | 101.831%  | 101.116%  |
| 2    | 03:20:13 | 101.107% | -0.403   | 0.015  | 0.032    | 0.298    | 0.316      | 101.571%  | 101.185%  |
| 3    | 03:20:32 | 101.170% | -0.406   | -0.001 | 0.018    | 0.345    | 0.258      | 103.633%  | 102.641%  |
| X    |          | 100.682% | -0.406   | 0.009  | 0.021    | 0.304    | 0.292      | 102.345%  | 101.647%  |
| σ    |          | 0.791%   | 0.003    | 0.009  | 0.010    | 0.038    | 0.030      | 1.123%    | 0.861%    |
| %RSD |          | 0.785    | 0.745    | 91.440 | 48.590   | 12.570   | 10.350     | 1.097     | 0.848     |
| Run  | Time     | 203Tl    | 205Tl    | 206Pb  | 207Pb    | 208Pb    | 209Bi      |           |           |
|      |          | ppb      | ppb      | ppb    | ppb      | ppb      | ppb        |           |           |
| 1    | 03:19:54 | 0.004    | 0.003    | 0.066  | 0.071    | 0.068    | 100.462%   |           |           |
| 2    | 03:20:13 | 0.006    | 0.002    | 0.072  | 0.080    | 0.074    | 99.767%    |           |           |
| 3    | 03:20:32 | 0.004    | 0.001    | 0.072  | 0.077    | 0.077    | 99.352%    |           |           |
| X    |          | 0.004    | 0.002    | 0.070  | 0.076    | 0.073    | 99.860%    |           |           |
| σ    |          | 0.001    | 0.001    | 0.003  | 0.004    | 0.004    | 0.561%     |           |           |
| %RSD |          | 30.330   | 36.600   | 4.871  | 5.793    | 6.037    | 0.562      |           |           |

180-43344-D-9-A SD@250

5/20/2015 3:23:23 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    | 03:23:43 | 113.837% | 0.018    | 10.360 | 11.490   | 0.000    | 23560.000 | 2770.000 | 2758.000 |
| 2    | 03:24:02 | 116.488% | -0.015   | 12.340 | 11.650   | 0.000    | 23010.000 | 2662.000 | 2708.000 |
| 3    | 03:24:21 | 113.519% | 0.002    | 11.600 | 10.890   | 0.000    | 22660.000 | 2676.000 | 2700.000 |
| X    |          | 114.615% | 0.002    | 11.430 | 11.350   | 0.000    | 23080.000 | 2703.000 | 2722.000 |
| σ    |          | 1.630%   | 0.016    | 1.002  | 0.402    | 0.000    | 453.800   | 58.880   | 31.430   |
| %RSD |          | 1.422    | 1030.000 | 8.765  | 3.544    | 0.000    | 1.967     | 2.178    | 1.154    |
| Run  | Time     | 27Al     | 28Si     | 37Cl   | 39K      | 43Ca     | 44Ca      | 45Sc     | 47Ti     |
|      |          | ppb      | ppb      | ppb    | ppb      | ppb      | ppb       | ppb      | ppb      |
| 1    | 03:23:43 | 2.302    | -290.900 | 0.000  | 867.600  | 988.900  | 898.700   | 107.198% | -0.067   |
| 2    | 03:24:02 | 2.164    | -291.200 | 0.000  | 858.400  | 970.100  | 913.000   | 105.877% | 0.015    |
| 3    | 03:24:21 | 2.206    | -291.300 | 0.000  | 874.000  | 1096.000 | 904.700   | 103.374% | -0.045   |
| X    |          | 2.224    | -291.100 | 0.000  | 866.700  | 1018.000 | 905.500   | 105.483% | -0.033   |
| σ    |          | 0.071    | 0.228    | 0.000  | 7.856    | 67.730   | 7.155     | 1.942%   | 0.043    |
| %RSD |          | 3.175    | 0.078    | 0.000  | 0.906    | 6.652    | 0.790     | 1.841    | 130.600  |
| Run  | Time     | 51V      | 52Cr     | 55Mn   | 56Fe     | 57Fe     | 59Co      | 60Ni     | 63Cu     |
|      |          | ppb      | ppb      | ppb    | ppb      | ppb      | ppb       | ppb      | ppb      |
| 1    | 03:23:43 | -0.012   | -0.013   | 2.019  | 8.968    | 7.773    | 0.007     | 0.004    | 0.169    |
| 2    | 03:24:02 | -0.002   | -0.012   | 1.991  | 8.917    | 10.480   | 0.003     | 0.022    | 0.117    |
| 3    | 03:24:21 | -0.008   | 0.003    | 2.079  | 9.971    | 8.849    | 0.003     | 0.040    | 0.198    |
| X    |          | -0.007   | -0.007   | 2.029  | 9.286    | 9.035    | 0.004     | 0.022    | 0.161    |
| σ    |          | 0.005    | 0.009    | 0.045  | 0.594    | 1.365    | 0.003     | 0.018    | 0.041    |
| %RSD |          | 74.450   | 119.100  | 2.221  | 6.402    | 15.100   | 62.010    | 82.740   | 25.210   |
| Run  | Time     | 65Cu     | 66Zn     | 68Zn   | 75As     | 78Se     | 82Se      | 83Kr     | 88Sr     |
|      |          | ppb      | ppb      | ppb    | ppb      | ppb      | ppb       | ppb      | ppb      |
| 1    | 03:23:43 | 0.008    | 0.703    | 0.883  | -0.139   | -0.174   | -0.096    | 0.000    | 15.090   |
| 2    | 03:24:02 | 0.015    | 0.838    | 0.860  | -0.027   | -0.125   | 0.245     | 0.000    | 14.940   |
| 3    | 03:24:21 | 0.032    | 0.715    | 0.768  | 0.005    | -0.014   | 0.329     | 0.000    | 14.980   |
| X    |          | 0.018    | 0.752    | 0.837  | -0.054   | -0.104   | 0.160     | 0.000    | 15.000   |
| σ    |          | 0.012    | 0.075    | 0.061  | 0.076    | 0.082    | 0.225     | 0.000    | 0.076    |
| %RSD |          | 68.250   | 9.933    | 7.267  | 141.700  | 78.440   | 141.000   | 0.000    | 0.505    |
| Run  | Time     | 89Y      | 95Mo     | 98Mo   | 103Rh    | 107Ag    | 109Ag     | 111Cd    | 114Cd    |
|      |          | ppb      | ppb      | ppb    | ppb      | ppb      | ppb       | ppb      | ppb      |
| 1    | 03:23:43 | 98.900%  | 0.158    | 0.157  | 100.290% | -0.027   | -0.027    | 0.011    | 0.012    |
| 2    | 03:24:02 | 99.795%  | 0.237    | 0.243  | 100.179% | -0.030   | -0.020    | 0.024    | 0.011    |
| 3    | 03:24:21 | 100.221% | 0.304    | 0.206  | 100.144% | -0.026   | -0.021    | 0.082    | 0.056    |
| X    |          | 99.639%  | 0.233    | 0.202  | 100.204% | -0.028   | -0.023    | 0.039    | 0.026    |
| σ    |          | 0.674%   | 0.073    | 0.043  | 0.077%   | 0.002    | 0.004     | 0.038    | 0.026    |
| %RSD |          | 0.676    | 31.380   | 21.320 | 0.076    | 5.719    | 16.990    | 97.930   | 97.660   |
| Run  | Time     | 115In    | 118Sn    | 121Sb  | 123Sb    | 135Ba    | 137Ba     | 159Tb    | 165Ho    |
|      |          | ppb      | ppb      | ppb    | ppb      | ppb      | ppb       | ppb      | ppb      |
| 1    | 03:23:43 | 98.024%  | -0.415   | -0.029 | -0.006   | 0.053    | 0.065     | 98.523%  | 97.508%  |
| 2    | 03:24:02 | 98.283%  | -0.286   | -0.000 | 0.003    | 0.049    | 0.066     | 99.924%  | 99.603%  |
| 3    | 03:24:21 | 97.924%  | -0.412   | -0.018 | 0.005    | 0.037    | 0.053     | 100.169% | 100.041% |
| X    |          | 98.077%  | -0.371   | -0.016 | 0.000    | 0.047    | 0.061     | 99.539%  | 99.051%  |
| σ    |          | 0.185%   | 0.073    | 0.015  | 0.006    | 0.008    | 0.007     | 0.888%   | 1.354%   |
| %RSD |          | 0.189    | 19.770   | 92.740 | 1392.000 | 18.110   | 12.020    | 0.892    | 1.367    |
| Run  | Time     | 203Tl    | 205Tl    | 206Pb  | 207Pb    | 208Pb    | 209Bi     |          |          |
|      |          | ppb      | ppb      | ppb    | ppb      | ppb      | ppb       |          |          |
| 1    | 03:23:43 | 0.002    | 0.004    | 0.013  | 0.020    | 0.018    | 102.344%  |          |          |
| 2    | 03:24:02 | 0.003    | 0.005    | 0.011  | 0.010    | 0.020    | 100.714%  |          |          |
| 3    | 03:24:21 | 0.006    | 0.003    | 0.006  | 0.011    | 0.012    | 100.562%  |          |          |
| X    |          | 0.004    | 0.004    | 0.010  | 0.013    | 0.017    | 101.207%  |          |          |
| σ    |          | 0.002    | 0.001    | 0.004  | 0.006    | 0.004    | 0.988%    |          |          |
| %RSD |          | 49.400   | 20.250   | 38.640 | 43.520   | 23.010   | 0.976     |          |          |

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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    | 03:27:31 | 107.705% | 0.003    | 53.010   | 51.810   | 0.000    | 120900.000 | 14070.000 | 14360.000 |
| 2    | 03:27:51 | 109.285% | 0.020    | 54.270   | 50.310   | 0.000    | 117200.000 | 13650.000 | 13920.000 |
| 3    | 03:28:10 | 106.643% | 0.004    | 54.930   | 51.860   | 0.000    | 120900.000 | 14430.000 | 14750.000 |
| X    |          | 107.878% | 0.009    | 54.070   | 51.330   | 0.000    | 119700.000 | 14050.000 | 14340.000 |
| σ    |          | 1.330%   | 0.009    | 0.977    | 0.885    | 0.000    | 2109.000   | 392.800   | 416.900   |
| %RSD |          | 1.233    | 103.100  | 1.807    | 1.723    | 0.000    | 1.762      | 2.795     | 2.907     |
| Run  | Time     | 27Al     | 28Si     | 37Cl     | 39K      | 43Ca     | 44Ca       | 45Sc      | 47Ti      |
|      |          | ppb      | ppb      | ppb      | ppb      | ppb      | ppb        | ppb       | ppb       |
| 1    | 03:27:31 | 0.657    | -277.200 | 0.000    | 4563.000 | 4979.000 | 4547.000   | 100.816%  | -0.108    |
| 2    | 03:27:51 | 0.613    | -277.100 | 0.000    | 4574.000 | 5178.000 | 4644.000   | 98.651%   | -0.226    |
| 3    | 03:28:10 | 0.591    | -276.700 | 0.000    | 4678.000 | 5353.000 | 4823.000   | 97.423%   | -0.087    |
| X    |          | 0.620    | -277.000 | 0.000    | 4605.000 | 5170.000 | 4671.000   | 98.963%   | -0.140    |
| σ    |          | 0.034    | 0.262    | 0.000    | 63.570   | 187.200  | 139.900    | 1.718%    | 0.075     |
| %RSD |          | 5.469    | 0.095    | 0.000    | 1.381    | 3.621    | 2.994      | 1.736     | 53.570    |
| Run  | Time     | 51V      | 52Cr     | 55Mn     | 56Fe     | 57Fe     | 59Co       | 60Ni      | 63Cu      |
|      |          | ppb      | ppb      | ppb      | ppb      | ppb      | ppb        | ppb       | ppb       |
| 1    | 03:27:31 | -0.082   | 0.037    | 9.949    | 3.960    | 12.750   | 0.013      | 0.040     | 0.685     |
| 2    | 03:27:51 | -0.063   | -0.029   | 10.190   | 4.698    | 14.440   | 0.007      | 0.050     | 0.740     |
| 3    | 03:28:10 | 0.029    | 0.133    | 10.280   | 4.732    | 15.230   | 0.008      | 0.049     | 0.739     |
| X    |          | -0.039   | 0.047    | 10.140   | 4.463    | 14.140   | 0.009      | 0.046     | 0.721     |
| σ    |          | 0.059    | 0.082    | 0.172    | 0.436    | 1.270    | 0.003      | 0.005     | 0.032     |
| %RSD |          | 153.300  | 174.800  | 1.700    | 9.774    | 8.983    | 32.830     | 11.220    | 4.410     |
| Run  | Time     | 65Cu     | 66Zn     | 68Zn     | 75As     | 78Se     | 82Se       | 83Kr      | 88Sr      |
|      |          | ppb      | ppb      | ppb      | ppb      | ppb      | ppb        | ppb       | ppb       |
| 1    | 03:27:31 | 0.042    | 21.050   | 21.240   | 0.056    | -0.080   | 0.796      | 0.000     | 76.470    |
| 2    | 03:27:51 | 0.040    | 21.120   | 20.970   | 0.101    | -0.197   | 0.649      | 0.000     | 76.760    |
| 3    | 03:28:10 | 0.025    | 20.910   | 21.730   | 0.195    | -0.395   | 1.165      | 0.000     | 77.200    |
| X    |          | 0.036    | 21.030   | 21.310   | 0.117    | -0.224   | 0.870      | 0.000     | 76.810    |
| σ    |          | 0.010    | 0.105    | 0.387    | 0.071    | 0.159    | 0.265      | 0.000     | 0.367     |
| %RSD |          | 26.620   | 0.499    | 1.818    | 60.350   | 70.960   | 30.490     | 0.000     | 0.478     |
| Run  | Time     | 89Y      | 95Mo     | 98Mo     | 103Rh    | 107Ag    | 109Ag      | 111Cd     | 114Cd     |
|      |          | ppb      | ppb      | ppb      | ppb      | ppb      | ppb        | ppb       | ppb       |
| 1    | 03:27:31 | 94.202%  | 0.446    | 0.486    | 93.917%  | -0.027   | -0.020     | 0.066     | 0.052     |
| 2    | 03:27:51 | 94.548%  | 0.523    | 0.501    | 94.424%  | -0.023   | -0.025     | 0.022     | 0.024     |
| 3    | 03:28:10 | 94.799%  | 0.507    | 0.450    | 95.108%  | -0.026   | -0.022     | 0.025     | 0.022     |
| X    |          | 94.517%  | 0.492    | 0.479    | 94.483%  | -0.025   | -0.022     | 0.038     | 0.033     |
| σ    |          | 0.299%   | 0.041    | 0.026    | 0.598%   | 0.002    | 0.003      | 0.025     | 0.017     |
| %RSD |          | 0.317    | 8.304    | 5.530    | 0.633    | 8.402    | 11.710     | 65.700    | 50.580    |
| Run  | Time     | 115In    | 118Sn    | 121Sb    | 123Sb    | 135Ba    | 137Ba      | 159Tb     | 165Ho     |
|      |          | ppb      | ppb      | ppb      | ppb      | ppb      | ppb        | ppb       | ppb       |
| 1    | 03:27:31 | 91.721%  | -0.413   | -0.004   | 0.019    | 0.239    | 0.217      | 94.588%   | 93.480%   |
| 2    | 03:27:51 | 92.852%  | -0.427   | -0.002   | 0.010    | 0.197    | 0.225      | 96.551%   | 95.263%   |
| 3    | 03:28:10 | 93.727%  | -0.411   | 0.014    | -0.001   | 0.178    | 0.232      | 98.244%   | 97.103%   |
| X    |          | 92.767%  | -0.417   | 0.002    | 0.009    | 0.205    | 0.225      | 96.461%   | 95.282%   |
| σ    |          | 1.006%   | 0.008    | 0.010    | 0.010    | 0.031    | 0.007      | 1.830%    | 1.812%    |
| %RSD |          | 1.084    | 2.016    | 420.800  | 108.000  | 15.120   | 3.207      | 1.897     | 1.901     |
| Run  | Time     | 203Tl    | 205Tl    | 206Pb    | 207Pb    | 208Pb    | 209Bi      |           |           |
|      |          | ppb      | ppb      | ppb      | ppb      | ppb      | ppb        |           |           |
| 1    | 03:27:31 | 0.003    | 0.003    | -0.000   | -0.001   | 0.001    | 104.069%   |           |           |
| 2    | 03:27:51 | 0.004    | 0.003    | -0.003   | -0.003   | -0.000   | 102.498%   |           |           |
| 3    | 03:28:10 | 0.002    | 0.005    | 0.004    | 0.008    | 0.004    | 99.983%    |           |           |
| X    |          | 0.003    | 0.004    | 0.000    | 0.001    | 0.002    | 102.183%   |           |           |
| σ    |          | 0.001    | 0.001    | 0.004    | 0.005    | 0.002    | 2.061%     |           |           |
| %RSD |          | 28.650   | 22.930   | 3171.000 | 439.400  | 131.500  | 2.017      |           |           |

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5/20/2015 3:31:00 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    | 03:31:20 | 108.551% | -0.031   | 53.740 | 55.660   | 0.000    | 124000.000 | 14670.000 | 14880.000 |
| 2    | 03:31:39 | 105.606% | 0.004    | 52.980 | 52.440   | 0.000    | 127200.000 | 15030.000 | 14950.000 |
| 3    | 03:31:58 | 107.521% | 0.004    | 60.000 | 52.220   | 0.000    | 125400.000 | 14700.000 | 14640.000 |
| X    |          | 107.226% | -0.008   | 55.570 | 53.440   | 0.000    | 125500.000 | 14800.000 | 14820.000 |
| σ    |          | 1.494%   | 0.020    | 3.854  | 1.926    | 0.000    | 1633.000   | 198.900   | 164.400   |
| %RSD |          | 1.394    | 260.200  | 6.935  | 3.605    | 0.000    | 1.301      | 1.344     | 1.109     |
| Run  | Time     | 27Al     | 28Si     | 37Cl   | 39K      | 43Ca     | 44Ca       | 45Sc      | 47Ti      |
|      |          | ppb      | ppb      | ppb    | ppb      | ppb      | ppb        | ppb       | ppb       |
| 1    | 03:31:20 | 9.646    | -271.300 | 0.000  | 4788.000 | 5157.000 | 4671.000   | 101.170%  | 0.060     |
| 2    | 03:31:39 | 9.371    | -270.200 | 0.000  | 4888.000 | 5130.000 | 4681.000   | 99.697%   | -0.022    |
| 3    | 03:31:58 | 9.832    | -270.100 | 0.000  | 4905.000 | 5255.000 | 4724.000   | 100.373%  | -0.006    |
| X    |          | 9.617    | -270.600 | 0.000  | 4860.000 | 5181.000 | 4692.000   | 100.413%  | 0.011     |
| σ    |          | 0.232    | 0.692    | 0.000  | 63.460   | 66.110   | 27.870     | 0.737%    | 0.043     |
| %RSD |          | 2.412    | 0.256    | 0.000  | 1.306    | 1.276    | 0.594      | 0.734     | 399.600   |
| Run  | Time     | 51V      | 52Cr     | 55Mn   | 56Fe     | 57Fe     | 59Co       | 60Ni      | 63Cu      |
|      |          | ppb      | ppb      | ppb    | ppb      | ppb      | ppb        | ppb       | ppb       |
| 1    | 03:31:20 | 0.018    | -0.004   | 6.936  | 8.126    | 20.310   | 0.022      | 0.095     | 0.745     |
| 2    | 03:31:39 | -0.063   | 0.014    | 6.874  | 8.559    | 16.730   | 0.017      | 0.021     | 0.724     |
| 3    | 03:31:58 | -0.027   | -0.005   | 7.000  | 8.347    | 19.420   | 0.017      | 0.051     | 0.774     |
| X    |          | -0.024   | 0.002    | 6.937  | 8.344    | 18.820   | 0.019      | 0.056     | 0.748     |
| σ    |          | 0.041    | 0.010    | 0.063  | 0.216    | 1.861    | 0.003      | 0.037     | 0.025     |
| %RSD |          | 172.100  | 590.800  | 0.914  | 2.592    | 9.887    | 15.270     | 66.880    | 3.410     |
| Run  | Time     | 65Cu     | 66Zn     | 68Zn   | 75As     | 78Se     | 82Se       | 83Kr      | 88Sr      |
|      |          | ppb      | ppb      | ppb    | ppb      | ppb      | ppb        | ppb       | ppb       |
| 1    | 03:31:20 | 0.070    | 0.634    | 0.630  | 0.067    | -0.704   | 0.517      | 0.000     | 81.610    |
| 2    | 03:31:39 | 0.054    | 0.775    | 0.513  | -0.073   | -0.293   | 0.484      | 0.000     | 82.190    |
| 3    | 03:31:58 | 0.077    | 0.634    | 0.582  | 0.045    | -0.259   | 0.171      | 0.000     | 81.710    |
| X    |          | 0.067    | 0.681    | 0.575  | 0.013    | -0.419   | 0.391      | 0.000     | 81.840    |
| σ    |          | 0.012    | 0.081    | 0.059  | 0.075    | 0.248    | 0.191      | 0.000     | 0.312     |
| %RSD |          | 17.270   | 11.960   | 10.210 | 571.000  | 59.220   | 48.940     | 0.000     | 0.381     |
| Run  | Time     | 89Y      | 95Mo     | 98Mo   | 103Rh    | 107Ag    | 109Ag      | 111Cd     | 114Cd     |
|      |          | ppb      | ppb      | ppb    | ppb      | ppb      | ppb        | ppb       | ppb       |
| 1    | 03:31:20 | 94.141%  | 0.531    | 0.562  | 94.112%  | -0.029   | -0.024     | 0.056     | 0.039     |
| 2    | 03:31:39 | 95.427%  | 0.659    | 0.567  | 94.752%  | -0.029   | -0.020     | -0.010    | -0.002    |
| 3    | 03:31:58 | 95.827%  | 0.523    | 0.576  | 95.534%  | -0.021   | -0.022     | 0.067     | 0.050     |
| X    |          | 95.131%  | 0.571    | 0.568  | 94.799%  | -0.026   | -0.022     | 0.038     | 0.029     |
| σ    |          | 0.881%   | 0.076    | 0.008  | 0.712%   | 0.005    | 0.002      | 0.042     | 0.028     |
| %RSD |          | 0.926    | 13.360   | 1.321  | 0.752    | 18.450   | 9.539      | 109.900   | 95.750    |
| Run  | Time     | 115In    | 118Sn    | 121Sb  | 123Sb    | 135Ba    | 137Ba      | 159Tb     | 165Ho     |
|      |          | ppb      | ppb      | ppb    | ppb      | ppb      | ppb        | ppb       | ppb       |
| 1    | 03:31:20 | 91.699%  | -0.454   | -0.018 | -0.002   | 0.254    | 0.266      | 95.549%   | 95.518%   |
| 2    | 03:31:39 | 92.718%  | -0.419   | -0.009 | 0.002    | 0.238    | 0.276      | 97.214%   | 96.696%   |
| 3    | 03:31:58 | 93.703%  | -0.414   | -0.009 | 0.023    | 0.247    | 0.263      | 98.772%   | 98.134%   |
| X    |          | 92.707%  | -0.429   | -0.012 | 0.008    | 0.246    | 0.269      | 97.178%   | 96.782%   |
| σ    |          | 1.002%   | 0.022    | 0.005  | 0.014    | 0.008    | 0.007      | 1.612%    | 1.310%    |
| %RSD |          | 1.081    | 5.105    | 42.570 | 174.200  | 3.288    | 2.553      | 1.658     | 1.354     |
| Run  | Time     | 203Tl    | 205Tl    | 206Pb  | 207Pb    | 208Pb    | 209Bi      |           |           |
|      |          | ppb      | ppb      | ppb    | ppb      | ppb      | ppb        |           |           |
| 1    | 03:31:20 | 0.000    | 0.001    | 0.017  | 0.006    | 0.011    | 104.823%   |           |           |
| 2    | 03:31:39 | 0.000    | 0.001    | 0.001  | 0.008    | 0.009    | 103.193%   |           |           |
| 3    | 03:31:58 | -0.002   | 0.002    | 0.009  | 0.009    | 0.012    | 101.103%   |           |           |
| X    |          | -0.001   | 0.001    | 0.009  | 0.008    | 0.011    | 103.040%   |           |           |
| σ    |          | 0.001    | 0.001    | 0.008  | 0.002    | 0.001    | 1.864%     |           |           |
| %RSD |          | 197.200  | 78.700   | 89.240 | 23.400   | 12.960   | 1.809      |           |           |

CCV 1558997 5/20/2015 3:34:56 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    | 03:34:56 | 91.723%  | 107.600  | 107.500  | 106.700   | 0.000     | 50020.000 | 49630.000 | 49170.000 |
| 2    | 03:35:15 | 93.213%  | 101.000  | 104.300  | 105.300   | 0.000     | 50320.000 | 49490.000 | 50410.000 |
| 3    | 03:35:34 | 92.021%  | 102.000  | 98.430   | 98.730    | 0.000     | 48840.000 | 48070.000 | 48090.000 |
| X    |          | 92.319%  | 103.542% | 103.429% | 103.593%  | 0.000     | 99.451%   | 98.127%   | 98.450%   |
| σ    |          | 0.788%   | n/a      | n/a      | n/a       | 0.000     | n/a       | n/a       | n/a       |
| %RSD |          | 0.854    | 3.459    | 4.463    | 4.123     | 0.000     | 1.578     | 1.764     | 2.357     |
| Run  | Time     | 27Al     | 28Si     | 37Cl     | 39K       | 43Ca      | 44Ca      | 45Sc      | 47Ti      |
|      |          | ppb      | ppb      | ppb      | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 03:34:56 | 475.300  | 4486.000 | 0.000    | 49360.000 | 47410.000 | 46910.000 | 91.837%   | 96.000    |
| 2    | 03:35:15 | 482.000  | 4485.000 | 0.000    | 50850.000 | 50740.000 | 49310.000 | 86.357%   | 101.300   |
| 3    | 03:35:34 | 468.900  | 4426.000 | 0.000    | 49460.000 | 49160.000 | 48520.000 | 87.439%   | 96.960    |
| X    |          | 95.084%  | 89.310%  | 0.000    | 99.783%   | 98.210%   | 96.491%   | 88.544%   | 98.076%   |
| σ    |          | n/a      | n/a      | 0.000    | n/a       | n/a       | n/a       | 2.902%    | n/a       |
| %RSD |          | 1.379    | 0.773    | 0.000    | 1.670     | 3.398     | 2.536     | 3.278     | 2.859     |
| Run  | Time     | 51V      | 52Cr     | 55Mn     | 56Fe      | 57Fe      | 59Co      | 60Ni      | 63Cu      |
|      |          | ppb      | ppb      | ppb      | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 03:34:56 | 94.920   | 93.440   | 468.600  | 24340.000 | 24080.000 | 96.570    | 97.220    | 100.300   |
| 2    | 03:35:15 | 99.990   | 98.700   | 481.200  | 25520.000 | 25370.000 | 100.500   | 102.800   | 103.600   |
| 3    | 03:35:34 | 95.330   | 96.770   | 480.200  | 25010.000 | 25080.000 | 99.080    | 99.830    | 100.100   |
| X    |          | 96.748%  | 96.304%  | 95.327%  | 99.817%   | 99.383%   | 98.720%   | 99.954%   | 101.361%  |
| σ    |          | n/a      | n/a      | n/a      | n/a       | n/a       | n/a       | n/a       | n/a       |
| %RSD |          | 2.911    | 2.761    | 1.468    | 2.381     | 2.732     | 2.016     | 2.799     | 1.926     |
| Run  | Time     | 65Cu     | 66Zn     | 68Zn     | 75As      | 78Se      | 82Se      | 83Kr      | 88Sr      |
|      |          | ppb      | ppb      | ppb      | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 03:34:56 | 98.750   | 95.490   | 95.380   | 99.430    | 101.100   | 102.500   | 0.000     | 96.000    |
| 2    | 03:35:15 | 104.100  | 96.890   | 95.660   | 100.400   | 101.400   | 99.600    | 0.000     | 96.780    |
| 3    | 03:35:34 | 102.400  | 98.510   | 95.890   | 99.670    | 101.200   | 100.500   | 0.000     | 97.130    |
| X    |          | 101.723% | 96.964%  | 95.642%  | 99.821%   | 101.207%  | 100.865%  | 0.000     | 96.637%   |
| σ    |          | n/a      | n/a      | n/a      | n/a       | n/a       | n/a       | 0.000     | n/a       |
| %RSD |          | 2.666    | 1.555    | 0.269    | 0.489     | 0.152     | 1.485     | 0.000     | 0.602     |
| Run  | Time     | 89Y      | 95Mo     | 98Mo     | 103Rh     | 107Ag     | 109Ag     | 111Cd     | 114Cd     |
|      |          | ppb      | ppb      | ppb      | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 03:34:56 | 84.511%  | 90.420   | 91.260   | 83.315%   | 98.950    | 101.500   | 101.600   | 103.700   |
| 2    | 03:35:15 | 86.544%  | 91.020   | 92.250   | 84.649%   | 100.300   | 101.100   | 102.600   | 105.100   |
| 3    | 03:35:34 | 85.302%  | 93.770   | 94.410   | 83.273%   | 101.200   | 102.400   | 104.500   | 105.900   |
| X    |          | 85.452%  | 91.734%  | 92.640%  | 83.746%   | 100.140%  | 101.683%  | 102.890%  | 104.899%  |
| σ    |          | 1.025%   | n/a      | n/a      | 0.783%    | n/a       | n/a       | n/a       | n/a       |
| %RSD |          | 1.199    | 1.947    | 1.736    | 0.935     | 1.110     | 0.653     | 1.406     | 1.054     |
| Run  | Time     | 115In    | 118Sn    | 121Sb    | 123Sb     | 135Ba     | 137Ba     | 159Tb     | 165Ho     |
|      |          | ppb      | ppb      | ppb      | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 03:34:56 | 76.438%  | 100.900  | 91.790   | 91.730    | 97.180    | 97.560    | 87.758%   | 87.030%   |
| 2    | 03:35:15 | 77.266%  | 101.500  | 93.560   | 93.320    | 100.200   | 99.570    | 88.894%   | 88.435%   |
| 3    | 03:35:34 | 76.793%  | 102.300  | 93.370   | 92.970    | 100.200   | 99.140    | 90.292%   | 89.575%   |
| X    |          | 76.833%  | 101.573% | 92.906%  | 92.671%   | 99.202%   | 98.758%   | 88.981%   | 88.347%   |
| σ    |          | 0.415%   | n/a      | n/a      | n/a       | n/a       | n/a       | 1.269%    | 1.274%    |
| %RSD |          | 0.541    | 0.663    | 1.049    | 0.904     | 1.764     | 1.072     | 1.426     | 1.443     |
| Run  | Time     | 203Tl    | 205Tl    | 206Pb    | 207Pb     | 208Pb     | 209Bi     |           |           |
|      |          | ppb      | ppb      | ppb      | ppb       | ppb       | ppb       |           |           |
| 1    | 03:34:56 | 92.460   | 95.950   | 92.650   | 92.900    | 92.710    | 93.306%   |           |           |
| 2    | 03:35:15 | 97.410   | 101.000  | 97.560   | 96.630    | 96.610    | 91.587%   |           |           |
| 3    | 03:35:34 | 96.560   | 100.200  | 97.050   | 97.190    | 97.390    | 92.869%   |           |           |
| X    |          | 95.476%  | 99.058%  | 95.752%  | 95.576%   | 95.570%   | 92.587%   |           |           |
| σ    |          | n/a      | n/a      | n/a      | n/a       | n/a       | 0.893%    |           |           |
| %RSD |          | 2.772    | 2.739    | 2.822    | 2.443     | 2.621     | 0.965     |           |           |

CCB7 5/20/2015 3:41:57 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        | 03:42:16 | 114.387% | 0.050    | 0.956   | 0.763   | 0.000   | 30.400  | 4.725    | 4.574   |
| 2        | 03:42:35 | 111.855% | -0.014   | 0.788   | 0.745   | 0.000   | 25.520  | 4.170    | 3.955   |
| 3        | 03:42:54 | 113.590% | -0.031   | 1.260   | 1.035   | 0.000   | 23.080  | 3.002    | 3.237   |
| x        |          | 113.278% | 0.002    | 1.001   | 0.848   | 0.000   | 26.330  | 3.966    | 3.922   |
| $\sigma$ |          | 1.294%   | 0.043    | 0.239   | 0.163   | 0.000   | 3.731   | 0.879    | 0.669   |
| %RSD     |          | 1.143    | 2497.000 | 23.910  | 19.200  | 0.000   | 14.170  | 22.180   | 17.060  |
| Run      | Time     | 27Al     | 28Si     | 37Cl    | 39K     | 43Ca    | 44Ca    | 45Sc     | 47Ti    |
|          |          | ppb      | ppb      | ppb     | ppb     | ppb     | ppb     | ppb      | ppb     |
| 1        | 03:42:16 | 0.187    | -303.300 | 0.000   | 11.280  | 2.445   | 4.093   | 103.281% | -0.177  |
| 2        | 03:42:35 | 0.076    | -302.600 | 0.000   | 11.000  | 2.571   | 1.633   | 101.714% | -0.159  |
| 3        | 03:42:54 | 0.125    | -302.600 | 0.000   | 9.733   | 4.189   | 2.176   | 101.626% | -0.176  |
| x        |          | 0.129    | -302.800 | 0.000   | 10.670  | 3.068   | 2.634   | 102.207% | -0.171  |
| $\sigma$ |          | 0.055    | 0.414    | 0.000   | 0.825   | 0.972   | 1.292   | 0.931%   | 0.010   |
| %RSD     |          | 42.860   | 0.137    | 0.000   | 7.726   | 31.690  | 49.050  | 0.911    | 5.797   |
| Run      | Time     | 51V      | 52Cr     | 55Mn    | 56Fe    | 57Fe    | 59Co    | 60Ni     | 63Cu    |
|          |          | ppb      | ppb      | ppb     | ppb     | ppb     | ppb     | ppb      | ppb     |
| 1        | 03:42:16 | 0.006    | -0.043   | 0.013   | 1.282   | 5.897   | 0.012   | -0.020   | -0.024  |
| 2        | 03:42:35 | 0.027    | -0.032   | 0.028   | 0.888   | 5.594   | 0.004   | -0.025   | -0.001  |
| 3        | 03:42:54 | -0.010   | -0.031   | 0.028   | 1.049   | 5.575   | 0.006   | 0.022    | -0.011  |
| x        |          | 0.008    | -0.035   | 0.023   | 1.073   | 5.689   | 0.007   | -0.008   | -0.012  |
| $\sigma$ |          | 0.018    | 0.007    | 0.008   | 0.198   | 0.180   | 0.004   | 0.026    | 0.011   |
| %RSD     |          | 235.500  | 19.890   | 36.970  | 18.450  | 3.170   | 55.610  | 334.900  | 91.450  |
| Run      | Time     | 65Cu     | 66Zn     | 68Zn    | 75As    | 78Se    | 82Se    | 83Kr     | 88Sr    |
|          |          | ppb      | ppb      | ppb     | ppb     | ppb     | ppb     | ppb      | ppb     |
| 1        | 03:42:16 | 0.024    | 4.373    | 4.255   | 0.114   | -0.642  | 0.519   | 0.000    | 0.021   |
| 2        | 03:42:35 | 0.042    | 4.631    | 4.784   | 0.067   | 0.278   | 0.310   | 0.000    | 0.014   |
| 3        | 03:42:54 | -0.030   | 4.563    | 4.903   | 0.167   | 0.056   | 0.467   | 0.000    | 0.013   |
| x        |          | 0.012    | 4.522    | 4.647   | 0.116   | -0.103  | 0.432   | 0.000    | 0.016   |
| $\sigma$ |          | 0.037    | 0.134    | 0.345   | 0.050   | 0.480   | 0.109   | 0.000    | 0.005   |
| %RSD     |          | 308.000  | 2.953    | 7.426   | 42.960  | 467.700 | 25.130  | 0.000    | 28.340  |
| Run      | Time     | 89Y      | 95Mo     | 98Mo    | 103Rh   | 107Ag   | 109Ag   | 111Cd    | 114Cd   |
|          |          | ppb      | ppb      | ppb     | ppb     | ppb     | ppb     | ppb      | ppb     |
| 1        | 03:42:16 | 95.375%  | 0.629    | 0.638   | 96.524% | -0.014  | -0.012  | 0.040    | 0.042   |
| 2        | 03:42:35 | 94.049%  | 0.923    | 0.889   | 97.175% | -0.018  | -0.009  | -0.036   | -0.003  |
| 3        | 03:42:54 | 95.279%  | 0.946    | 0.984   | 96.894% | -0.006  | -0.013  | 0.055    | 0.039   |
| x        |          | 94.901%  | 0.833    | 0.837   | 96.865% | -0.013  | -0.011  | 0.020    | 0.026   |
| $\sigma$ |          | 0.739%   | 0.176    | 0.179   | 0.326%  | 0.006   | 0.002   | 0.049    | 0.025   |
| %RSD     |          | 0.779    | 21.190   | 21.360  | 0.337   | 50.540  | 14.780  | 250.200  | 95.380  |
| Run      | Time     | 115In    | 118Sn    | 121Sb   | 123Sb   | 135Ba   | 137Ba   | 159Tb    | 165Ho   |
|          |          | ppb      | ppb      | ppb     | ppb     | ppb     | ppb     | ppb      | ppb     |
| 1        | 03:42:16 | 93.605%  | -0.344   | 0.539   | 0.586   | -0.001  | 0.013   | 93.089%  | 92.457% |
| 2        | 03:42:35 | 94.333%  | -0.285   | 0.596   | 0.615   | -0.022  | 0.027   | 93.951%  | 93.065% |
| 3        | 03:42:54 | 93.854%  | -0.279   | 0.616   | 0.644   | 0.003   | 0.008   | 96.460%  | 95.328% |
| x        |          | 93.931%  | -0.303   | 0.584   | 0.615   | -0.007  | 0.016   | 94.500%  | 93.617% |
| $\sigma$ |          | 0.370%   | 0.036    | 0.040   | 0.029   | 0.013   | 0.010   | 1.751%   | 1.513%  |
| %RSD     |          | 0.394    | 11.940   | 6.816   | 4.716   | 192.400 | 60.640  | 1.853    | 1.616   |
| Run      | Time     | 203Tl    | 205Tl    | 206Pb   | 207Pb   | 208Pb   | 209Bi   |          |         |
|          |          | ppb      | ppb      | ppb     | ppb     | ppb     | ppb     |          |         |
| 1        | 03:42:16 | 0.019    | 0.019    | -0.006  | 0.002   | -0.001  | 98.752% |          |         |
| 2        | 03:42:35 | 0.024    | 0.028    | 0.001   | 0.009   | 0.004   | 98.406% |          |         |
| 3        | 03:42:54 | 0.021    | 0.022    | 0.008   | 0.001   | 0.001   | 98.466% |          |         |
| x        |          | 0.021    | 0.023    | 0.001   | 0.004   | 0.001   | 98.542% |          |         |
| $\sigma$ |          | 0.002    | 0.004    | 0.007   | 0.004   | 0.003   | 0.185%  |          |         |
| %RSD     |          | 9.952    | 19.280   | 769.400 | 97.150  | 220.100 | 0.187   |          |         |

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5/20/2015 3:45:47 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        | 03:46:06 | 107.581% | 0.021    | 54.310   | 51.730   | 0.000    | 123200.000 | 14560.000 | 14830.000 |
| 2        | 03:46:26 | 105.536% | -0.031   | 54.980   | 50.440   | 0.000    | 123700.000 | 14730.000 | 14930.000 |
| 3        | 03:46:45 | 105.354% | 0.022    | 56.350   | 50.640   | 0.000    | 122600.000 | 14450.000 | 14760.000 |
| X        |          | 106.157% | 0.004    | 55.210   | 50.940   | 0.000    | 123200.000 | 14580.000 | 14840.000 |
| $\sigma$ |          | 1.236%   | 0.030    | 1.039    | 0.694    | 0.000    | 507.500    | 141.800   | 84.880    |
| %RSD     |          | 1.165    | 767.500  | 1.882    | 1.362    | 0.000    | 0.412      | 0.973     | 0.572     |
| Run      | Time     | 27Al     | 28Si     | 37Cl     | 39K      | 43Ca     | 44Ca       | 45Sc      | 47Ti      |
|          |          | ppb      | ppb      | ppb      | ppb      | ppb      | ppb        | ppb       | ppb       |
| 1        | 03:46:06 | -1.129   | -278.800 | 0.000    | 4849.000 | 5172.000 | 4694.000   | 100.567%  | -0.192    |
| 2        | 03:46:26 | -1.059   | -278.700 | 0.000    | 4842.000 | 5123.000 | 4701.000   | 99.839%   | -0.175    |
| 3        | 03:46:45 | -1.132   | -277.900 | 0.000    | 4816.000 | 5149.000 | 4670.000   | 97.778%   | -0.174    |
| X        |          | -1.107   | -278.500 | 0.000    | 4836.000 | 5148.000 | 4689.000   | 99.395%   | -0.181    |
| $\sigma$ |          | 0.041    | 0.505    | 0.000    | 16.990   | 24.320   | 16.060     | 1.446%    | 0.010     |
| %RSD     |          | 3.731    | 0.181    | 0.000    | 0.351    | 0.472    | 0.342      | 1.455     | 5.697     |
| Run      | Time     | 51V      | 52Cr     | 55Mn     | 56Fe     | 57Fe     | 59Co       | 60Ni      | 63Cu      |
|          |          | ppb      | ppb      | ppb      | ppb      | ppb      | ppb        | ppb       | ppb       |
| 1        | 03:46:06 | 0.031    | 0.005    | 6.622    | 1.327    | 16.290   | 0.018      | 0.048     | 0.744     |
| 2        | 03:46:26 | 0.042    | -0.021   | 6.794    | 1.649    | 14.200   | 0.018      | 0.088     | 0.739     |
| 3        | 03:46:45 | -0.080   | -0.014   | 6.693    | 1.365    | 16.260   | 0.024      | 0.027     | 0.742     |
| X        |          | -0.002   | -0.010   | 6.703    | 1.447    | 15.580   | 0.020      | 0.054     | 0.742     |
| $\sigma$ |          | 0.068    | 0.013    | 0.087    | 0.176    | 1.194    | 0.003      | 0.031     | 0.002     |
| %RSD     |          | 2991.000 | 131.200  | 1.291    | 12.150   | 7.665    | 15.630     | 56.450    | 0.318     |
| Run      | Time     | 65Cu     | 66Zn     | 68Zn     | 75As     | 78Se     | 82Se       | 83Kr      | 88Sr      |
|          |          | ppb      | ppb      | ppb      | ppb      | ppb      | ppb        | ppb       | ppb       |
| 1        | 03:46:06 | 0.039    | 0.489    | 0.485    | 0.030    | 0.424    | 0.396      | 0.000     | 79.360    |
| 2        | 03:46:26 | 0.080    | 0.623    | 0.503    | 0.189    | -0.010   | 0.544      | 0.000     | 80.330    |
| 3        | 03:46:45 | 0.105    | 0.640    | 0.487    | 0.119    | 0.175    | 0.940      | 0.000     | 79.970    |
| X        |          | 0.075    | 0.584    | 0.492    | 0.112    | 0.196    | 0.626      | 0.000     | 79.890    |
| $\sigma$ |          | 0.033    | 0.083    | 0.010    | 0.080    | 0.218    | 0.281      | 0.000     | 0.488     |
| %RSD     |          | 44.590   | 14.200   | 1.953    | 70.910   | 110.900  | 44.920     | 0.000     | 0.611     |
| Run      | Time     | 89Y      | 95Mo     | 98Mo     | 103Rh    | 107Ag    | 109Ag      | 111Cd     | 114Cd     |
|          |          | ppb      | ppb      | ppb      | ppb      | ppb      | ppb        | ppb       | ppb       |
| 1        | 03:46:06 | 93.516%  | 0.910    | 0.780    | 94.431%  | -0.016   | -0.014     | 0.030     | 0.018     |
| 2        | 03:46:26 | 93.653%  | 0.921    | 0.957    | 95.332%  | -0.023   | -0.012     | 0.008     | 0.016     |
| 3        | 03:46:45 | 94.211%  | 0.983    | 0.933    | 94.312%  | -0.017   | -0.014     | 0.026     | 0.017     |
| X        |          | 93.793%  | 0.938    | 0.890    | 94.692%  | -0.019   | -0.013     | 0.021     | 0.017     |
| $\sigma$ |          | 0.369%   | 0.040    | 0.096    | 0.558%   | 0.004    | 0.001      | 0.012     | 0.001     |
| %RSD     |          | 0.393    | 4.232    | 10.800   | 0.589    | 20.870   | 10.650     | 54.430    | 7.574     |
| Run      | Time     | 115In    | 118Sn    | 121Sb    | 123Sb    | 135Ba    | 137Ba      | 159Tb     | 165Ho     |
|          |          | ppb      | ppb      | ppb      | ppb      | ppb      | ppb        | ppb       | ppb       |
| 1        | 03:46:06 | 91.121%  | -0.344   | 0.452    | 0.441    | 0.275    | 0.311      | 93.712%   | 93.361%   |
| 2        | 03:46:26 | 92.397%  | -0.335   | 0.483    | 0.478    | 0.299    | 0.289      | 95.221%   | 95.362%   |
| 3        | 03:46:45 | 93.240%  | -0.346   | 0.445    | 0.478    | 0.349    | 0.318      | 97.013%   | 96.186%   |
| X        |          | 92.253%  | -0.342   | 0.460    | 0.466    | 0.308    | 0.306      | 95.316%   | 94.970%   |
| $\sigma$ |          | 1.067%   | 0.006    | 0.020    | 0.022    | 0.038    | 0.015      | 1.652%    | 1.453%    |
| %RSD     |          | 1.156    | 1.783    | 4.408    | 4.622    | 12.270   | 4.885      | 1.734     | 1.530     |
| Run      | Time     | 203Tl    | 205Tl    | 206Pb    | 207Pb    | 208Pb    | 209Bi      |           |           |
|          |          | ppb      | ppb      | ppb      | ppb      | ppb      | ppb        |           |           |
| 1        | 03:46:06 | 0.011    | 0.010    | -0.008   | 0.002    | -0.002   | 106.520%   |           |           |
| 2        | 03:46:26 | 0.008    | 0.010    | -0.001   | -0.000   | -0.000   | 103.984%   |           |           |
| 3        | 03:46:45 | 0.010    | 0.012    | 0.007    | -0.005   | 0.001    | 102.090%   |           |           |
| X        |          | 0.010    | 0.011    | -0.000   | -0.001   | -0.001   | 104.198%   |           |           |
| $\sigma$ |          | 0.002    | 0.001    | 0.007    | 0.004    | 0.001    | 2.222%     |           |           |
| %RSD     |          | 16.280   | 10.650   | 1491.000 | 327.700  | 212.600  | 2.133      |           |           |



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5/20/2015 3:49:34 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    | 03:49:54 | 107.215% | 0.004    | 54.660 | 55.320   | 0.000    | 125600.000 | 15050.000 | 15250.000 |
| 2    | 03:50:13 | 107.791% | -0.031   | 60.460 | 54.240   | 0.000    | 124700.000 | 14900.000 | 15110.000 |
| 3    | 03:50:32 | 107.848% | 0.038    | 50.390 | 54.940   | 0.000    | 126000.000 | 14550.000 | 14810.000 |
| X    |          | 107.618% | 0.004    | 55.170 | 54.830   | 0.000    | 125400.000 | 14830.000 | 15060.000 |
| σ    |          | 0.350%   | 0.034    | 5.052  | 0.549    | 0.000    | 669.000    | 258.400   | 224.200   |
| %RSD |          | 0.325    | 964.400  | 9.158  | 1.002    | 0.000    | 0.533      | 1.742     | 1.489     |
| Run  | Time     | 27Al     | 28Si     | 37Cl   | 39K      | 43Ca     | 44Ca       | 45Sc      | 47Ti      |
|      |          | ppb      | ppb      | ppb    | ppb      | ppb      | ppb        | ppb       | ppb       |
| 1    | 03:49:54 | 23.940   | -204.200 | 0.000  | 4947.000 | 5696.000 | 5126.000   | 100.888%  | 1.176     |
| 2    | 03:50:13 | 23.570   | -206.700 | 0.000  | 5018.000 | 5780.000 | 5212.000   | 99.137%   | 1.078     |
| 3    | 03:50:32 | 23.950   | -205.300 | 0.000  | 4896.000 | 5749.000 | 5230.000   | 98.856%   | 1.614     |
| X    |          | 23.820   | -205.400 | 0.000  | 4954.000 | 5741.000 | 5189.000   | 99.627%   | 1.289     |
| σ    |          | 0.216    | 1.282    | 0.000  | 61.300   | 42.650   | 55.710     | 1.101%    | 0.286     |
| %RSD |          | 0.906    | 0.624    | 0.000  | 1.237    | 0.743    | 1.073      | 1.105     | 22.170    |
| Run  | Time     | 51V      | 52Cr     | 55Mn   | 56Fe     | 57Fe     | 59Co       | 60Ni      | 63Cu      |
|      |          | ppb      | ppb      | ppb    | ppb      | ppb      | ppb        | ppb       | ppb       |
| 1    | 03:49:54 | 0.009    | 0.053    | 15.990 | 47.100   | 61.020   | 0.028      | 0.023     | 0.788     |
| 2    | 03:50:13 | 0.019    | 0.054    | 15.740 | 46.310   | 61.900   | 0.022      | 0.071     | 0.812     |
| 3    | 03:50:32 | 0.089    | 0.075    | 16.050 | 46.180   | 63.640   | 0.019      | 0.076     | 0.768     |
| X    |          | 0.039    | 0.061    | 15.930 | 46.530   | 62.190   | 0.023      | 0.057     | 0.789     |
| σ    |          | 0.044    | 0.013    | 0.164  | 0.498    | 1.330    | 0.005      | 0.029     | 0.022     |
| %RSD |          | 112.000  | 20.830   | 1.026  | 1.071    | 2.138    | 19.440     | 51.920    | 2.770     |
| Run  | Time     | 65Cu     | 66Zn     | 68Zn   | 75As     | 78Se     | 82Se       | 83Kr      | 88Sr      |
|      |          | ppb      | ppb      | ppb    | ppb      | ppb      | ppb        | ppb       | ppb       |
| 1    | 03:49:54 | 0.114    | 2.047    | 1.887  | 0.367    | -0.284   | 0.645      | 0.000     | 85.420    |
| 2    | 03:50:13 | 0.154    | 1.916    | 1.848  | 0.207    | -0.168   | 0.649      | 0.000     | 85.270    |
| 3    | 03:50:32 | 0.135    | 2.136    | 2.039  | 0.143    | -0.086   | 0.427      | 0.000     | 85.370    |
| X    |          | 0.134    | 2.033    | 1.924  | 0.239    | -0.179   | 0.574      | 0.000     | 85.350    |
| σ    |          | 0.020    | 0.111    | 0.101  | 0.115    | 0.100    | 0.127      | 0.000     | 0.074     |
| %RSD |          | 14.860   | 5.440    | 5.247  | 48.100   | 55.610   | 22.140     | 0.000     | 0.087     |
| Run  | Time     | 89Y      | 95Mo     | 98Mo   | 103Rh    | 107Ag    | 109Ag      | 111Cd     | 114Cd     |
|      |          | ppb      | ppb      | ppb    | ppb      | ppb      | ppb        | ppb       | ppb       |
| 1    | 03:49:54 | 93.624%  | 0.557    | 0.556  | 94.886%  | -0.026   | -0.021     | 0.004     | 0.006     |
| 2    | 03:50:13 | 95.316%  | 0.702    | 0.614  | 96.258%  | -0.018   | -0.020     | 0.038     | 0.037     |
| 3    | 03:50:32 | 95.515%  | 0.838    | 0.776  | 95.314%  | -0.025   | -0.017     | 0.046     | 0.025     |
| X    |          | 94.818%  | 0.699    | 0.649  | 95.486%  | -0.023   | -0.020     | 0.030     | 0.023     |
| σ    |          | 1.039%   | 0.141    | 0.114  | 0.702%   | 0.004    | 0.002      | 0.022     | 0.016     |
| %RSD |          | 1.096    | 20.100   | 17.570 | 0.735    | 18.680   | 10.390     | 74.890    | 69.290    |
| Run  | Time     | 115In    | 118Sn    | 121Sb  | 123Sb    | 135Ba    | 137Ba      | 159Tb     | 165Ho     |
|      |          | ppb      | ppb      | ppb    | ppb      | ppb      | ppb        | ppb       | ppb       |
| 1    | 03:49:54 | 92.093%  | -0.393   | 0.279  | 0.335    | 0.292    | 0.408      | 94.622%   | 93.615%   |
| 2    | 03:50:13 | 93.197%  | -0.364   | 0.311  | 0.342    | 0.398    | 0.358      | 97.132%   | 96.021%   |
| 3    | 03:50:32 | 94.138%  | -0.368   | 0.318  | 0.291    | 0.369    | 0.335      | 98.328%   | 98.470%   |
| X    |          | 93.143%  | -0.375   | 0.302  | 0.323    | 0.353    | 0.367      | 96.694%   | 96.035%   |
| σ    |          | 1.024%   | 0.016    | 0.021  | 0.028    | 0.055    | 0.037      | 1.891%    | 2.427%    |
| %RSD |          | 1.099    | 4.167    | 6.979  | 8.648    | 15.430   | 10.130     | 1.956     | 2.528     |
| Run  | Time     | 203Tl    | 205Tl    | 206Pb  | 207Pb    | 208Pb    | 209Bi      |           |           |
|      |          | ppb      | ppb      | ppb    | ppb      | ppb      | ppb        |           |           |
| 1    | 03:49:54 | 0.005    | 0.003    | 0.066  | 0.065    | 0.067    | 101.596%   |           |           |
| 2    | 03:50:13 | 0.001    | 0.005    | 0.071  | 0.077    | 0.072    | 99.540%    |           |           |
| 3    | 03:50:32 | 0.001    | 0.005    | 0.074  | 0.079    | 0.073    | 98.934%    |           |           |
| X    |          | 0.002    | 0.004    | 0.070  | 0.074    | 0.071    | 100.023%   |           |           |
| σ    |          | 0.003    | 0.001    | 0.004  | 0.008    | 0.003    | 1.396%     |           |           |
| %RSD |          | 111.900  | 22.620   | 5.622  | 10.370   | 4.317    | 1.395      |           |           |

180-43344-D-14-A@50

5/20/2015 3:53:22 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    | 03:53:41 | 110.345% | -0.014   | 62.110  | 57.600   | 0.000    | 129900.000 | 15460.000 | 15780.000 |
| 2    | 03:54:01 | 109.589% | 0.036    | 55.850  | 55.620   | 0.000    | 127500.000 | 15510.000 | 15770.000 |
| 3    | 03:54:20 | 106.147% | 0.056    | 58.240  | 57.040   | 0.000    | 131200.000 | 15710.000 | 15750.000 |
| X    |          | 108.694% | 0.026    | 58.730  | 56.760   | 0.000    | 129500.000 | 15560.000 | 15770.000 |
| σ    |          | 2.238%   | 0.036    | 3.154   | 1.019    | 0.000    | 1896.000   | 130.100   | 14.240    |
| %RSD |          | 2.059    | 138.000  | 5.371   | 1.795    | 0.000    | 1.464      | 0.837     | 0.090     |
| Run  | Time     | 27Al     | 28Si     | 37Cl    | 39K      | 43Ca     | 44Ca       | 45Sc      | 47Ti      |
|      |          | ppb      | ppb      | ppb     | ppb      | ppb      | ppb        | ppb       | ppb       |
| 1    | 03:53:41 | -1.080   | -261.900 | 0.000   | 4961.000 | 5669.000 | 5234.000   | 102.270%  | -0.160    |
| 2    | 03:54:01 | -1.147   | -260.800 | 0.000   | 5016.000 | 5723.000 | 5316.000   | 101.985%  | -0.160    |
| 3    | 03:54:20 | -1.110   | -260.200 | 0.000   | 5085.000 | 6085.000 | 5437.000   | 99.693%   | -0.107    |
| X    |          | -1.112   | -261.000 | 0.000   | 5020.000 | 5826.000 | 5329.000   | 101.316%  | -0.142    |
| σ    |          | 0.033    | 0.878    | 0.000   | 61.900   | 225.900  | 102.200    | 1.413%    | 0.030     |
| %RSD |          | 2.990    | 0.337    | 0.000   | 1.233    | 3.877    | 1.919      | 1.395     | 21.410    |
| Run  | Time     | 51V      | 52Cr     | 55Mn    | 56Fe     | 57Fe     | 59Co       | 60Ni      | 63Cu      |
|      |          | ppb      | ppb      | ppb     | ppb      | ppb      | ppb        | ppb       | ppb       |
| 1    | 03:53:41 | -0.120   | 0.094    | 15.110  | 8.733    | 23.230   | 0.012      | 0.021     | 0.704     |
| 2    | 03:54:01 | 0.046    | 0.076    | 15.340  | 8.259    | 23.230   | 0.010      | 0.053     | 0.706     |
| 3    | 03:54:20 | 0.040    | 0.121    | 15.870  | 10.230   | 23.080   | 0.011      | 0.075     | 0.774     |
| X    |          | -0.011   | 0.097    | 15.440  | 9.075    | 23.180   | 0.011      | 0.050     | 0.728     |
| σ    |          | 0.094    | 0.022    | 0.390   | 1.030    | 0.089    | 0.001      | 0.027     | 0.040     |
| %RSD |          | 842.700  | 23.010   | 2.524   | 11.350   | 0.386    | 9.268      | 54.230    | 5.523     |
| Run  | Time     | 65Cu     | 66Zn     | 68Zn    | 75As     | 78Se     | 82Se       | 83Kr      | 88Sr      |
|      |          | ppb      | ppb      | ppb     | ppb      | ppb      | ppb        | ppb       | ppb       |
| 1    | 03:53:41 | 0.056    | 0.648    | 0.519   | 0.037    | -0.565   | 0.397      | 0.000     | 87.710    |
| 2    | 03:54:01 | -0.007   | 0.500    | 0.569   | 0.337    | -0.593   | 1.113      | 0.000     | 87.870    |
| 3    | 03:54:20 | 0.037    | 0.416    | 0.620   | 0.169    | -0.187   | 0.997      | 0.000     | 87.590    |
| X    |          | 0.029    | 0.521    | 0.569   | 0.181    | -0.448   | 0.836      | 0.000     | 87.720    |
| σ    |          | 0.032    | 0.117    | 0.051   | 0.150    | 0.227    | 0.384      | 0.000     | 0.140     |
| %RSD |          | 112.000  | 22.530   | 8.911   | 83.020   | 50.640   | 45.960     | 0.000     | 0.160     |
| Run  | Time     | 89Y      | 95Mo     | 98Mo    | 103Rh    | 107Ag    | 109Ag      | 111Cd     | 114Cd     |
|      |          | ppb      | ppb      | ppb     | ppb      | ppb      | ppb        | ppb       | ppb       |
| 1    | 03:53:41 | 94.971%  | 0.568    | 0.625   | 96.573%  | -0.021   | -0.021     | 0.125     | 0.089     |
| 2    | 03:54:01 | 96.336%  | 0.590    | 0.669   | 97.023%  | -0.023   | -0.020     | 0.050     | 0.036     |
| 3    | 03:54:20 | 96.751%  | 0.689    | 0.655   | 97.051%  | -0.024   | -0.022     | 0.038     | 0.027     |
| X    |          | 96.019%  | 0.616    | 0.649   | 96.883%  | -0.023   | -0.021     | 0.071     | 0.051     |
| σ    |          | 0.931%   | 0.065    | 0.023   | 0.269%   | 0.002    | 0.001      | 0.047     | 0.033     |
| %RSD |          | 0.970    | 10.500   | 3.494   | 0.277    | 7.514    | 4.005      | 66.650    | 65.400    |
| Run  | Time     | 115In    | 118Sn    | 121Sb   | 123Sb    | 135Ba    | 137Ba      | 159Tb     | 165Ho     |
|      |          | ppb      | ppb      | ppb     | ppb      | ppb      | ppb        | ppb       | ppb       |
| 1    | 03:53:41 | 92.808%  | -0.423   | 0.200   | 0.227    | 0.245    | 0.311      | 94.819%   | 94.320%   |
| 2    | 03:54:01 | 93.746%  | -0.367   | 0.206   | 0.210    | 0.250    | 0.210      | 96.380%   | 95.912%   |
| 3    | 03:54:20 | 94.325%  | -0.391   | 0.185   | 0.216    | 0.260    | 0.319      | 97.013%   | 97.136%   |
| X    |          | 93.626%  | -0.394   | 0.197   | 0.218    | 0.252    | 0.280      | 96.071%   | 95.790%   |
| σ    |          | 0.766%   | 0.028    | 0.011   | 0.009    | 0.008    | 0.060      | 1.130%    | 1.412%    |
| %RSD |          | 0.818    | 7.070    | 5.442   | 3.990    | 3.127    | 21.580     | 1.176     | 1.474     |
| Run  | Time     | 203Tl    | 205Tl    | 206Pb   | 207Pb    | 208Pb    | 209Bi      |           |           |
|      |          | ppb      | ppb      | ppb     | ppb      | ppb      | ppb        |           |           |
| 1    | 03:53:41 | 0.002    | 0.003    | 0.004   | -0.003   | -0.001   | 104.978%   |           |           |
| 2    | 03:54:01 | 0.002    | 0.003    | -0.006  | -0.000   | -0.001   | 102.384%   |           |           |
| 3    | 03:54:20 | 0.004    | 0.005    | -0.002  | -0.006   | 0.001    | 101.468%   |           |           |
| X    |          | 0.003    | 0.003    | -0.002  | -0.003   | 0.000    | 102.943%   |           |           |
| σ    |          | 0.001    | 0.001    | 0.005   | 0.003    | 0.001    | 1.821%     |           |           |
| %RSD |          | 45.120   | 30.530   | 330.000 | 97.870   | 5782.000 | 1.769      |           |           |

180-43344-D-15-A@50

5/20/2015 3:57:10 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    | 03:57:30 | 111.528% | 0.002    | 54.870 | 58.140   | 0.000    | 121000.000 | 14980.000 | 15230.000 |
| 2    | 03:57:49 | 105.322% | -0.031   | 63.380 | 62.370   | 0.000    | 118700.000 | 14540.000 | 14940.000 |
| 3    | 03:58:08 | 105.326% | 0.004    | 57.520 | 59.320   | 0.000    | 123300.000 | 15090.000 | 15480.000 |
| X    |          | 107.392% | -0.008   | 58.590 | 59.940   | 0.000    | 121000.000 | 14870.000 | 15220.000 |
| σ    |          | 3.582%   | 0.020    | 4.353  | 2.183    | 0.000    | 2293.000   | 290.900   | 268.500   |
| %RSD |          | 3.335    | 244.800  | 7.430  | 3.642    | 0.000    | 1.895      | 1.956     | 1.764     |
| Run  | Time     | 27Al     | 28Si     | 37Cl   | 39K      | 43Ca     | 44Ca       | 45Sc      | 47Ti      |
|      |          | ppb      | ppb      | ppb    | ppb      | ppb      | ppb        | ppb       | ppb       |
| 1    | 03:57:30 | 69.400   | -112.100 | 0.000  | 4854.000 | 7211.000 | 6722.000   | 102.246%  | 2.974     |
| 2    | 03:57:49 | 67.820   | -119.600 | 0.000  | 4872.000 | 7446.000 | 6746.000   | 99.560%   | 3.055     |
| 3    | 03:58:08 | 70.360   | -112.600 | 0.000  | 4930.000 | 7674.000 | 6899.000   | 99.426%   | 3.399     |
| X    |          | 69.190   | -114.800 | 0.000  | 4886.000 | 7444.000 | 6789.000   | 100.411%  | 3.143     |
| σ    |          | 1.282    | 4.169    | 0.000  | 39.790   | 231.400  | 96.010     | 1.591%    | 0.226     |
| %RSD |          | 1.853    | 3.633    | 0.000  | 0.814    | 3.109    | 1.414      | 1.584     | 7.197     |
| Run  | Time     | 51V      | 52Cr     | 55Mn   | 56Fe     | 57Fe     | 59Co       | 60Ni      | 63Cu      |
|      |          | ppb      | ppb      | ppb    | ppb      | ppb      | ppb        | ppb       | ppb       |
| 1    | 03:57:30 | 0.191    | 0.208    | 11.340 | 103.600  | 127.300  | 0.062      | 0.144     | 0.887     |
| 2    | 03:57:49 | 0.157    | 0.179    | 11.600 | 106.200  | 128.400  | 0.058      | 0.146     | 0.853     |
| 3    | 03:58:08 | 0.133    | 0.148    | 11.580 | 104.800  | 129.500  | 0.050      | 0.115     | 0.839     |
| X    |          | 0.160    | 0.179    | 11.510 | 104.800  | 128.400  | 0.057      | 0.135     | 0.859     |
| σ    |          | 0.029    | 0.030    | 0.145  | 1.330    | 1.099    | 0.006      | 0.017     | 0.025     |
| %RSD |          | 18.110   | 16.720   | 1.259  | 1.269    | 0.856    | 10.870     | 12.940    | 2.871     |
| Run  | Time     | 65Cu     | 66Zn     | 68Zn   | 75As     | 78Se     | 82Se       | 83Kr      | 88Sr      |
|      |          | ppb      | ppb      | ppb    | ppb      | ppb      | ppb        | ppb       | ppb       |
| 1    | 03:57:30 | 0.127    | 1.460    | 1.563  | 0.178    | -0.265   | 0.428      | 0.000     | 96.390    |
| 2    | 03:57:49 | 0.181    | 1.507    | 1.568  | 0.262    | -0.195   | 0.687      | 0.000     | 96.430    |
| 3    | 03:58:08 | 0.223    | 1.510    | 1.618  | 0.134    | 0.011    | 0.600      | 0.000     | 95.520    |
| X    |          | 0.177    | 1.492    | 1.583  | 0.191    | -0.150   | 0.572      | 0.000     | 96.110    |
| σ    |          | 0.048    | 0.028    | 0.030  | 0.065    | 0.144    | 0.132      | 0.000     | 0.512     |
| %RSD |          | 27.310   | 1.883    | 1.926  | 33.840   | 96.020   | 23.040     | 0.000     | 0.533     |
| Run  | Time     | 89Y      | 95Mo     | 98Mo   | 103Rh    | 107Ag    | 109Ag      | 111Cd     | 114Cd     |
|      |          | ppb      | ppb      | ppb    | ppb      | ppb      | ppb        | ppb       | ppb       |
| 1    | 03:57:30 | 94.850%  | 0.352    | 0.339  | 95.715%  | -0.025   | -0.020     | -0.011    | 0.002     |
| 2    | 03:57:49 | 95.529%  | 0.410    | 0.433  | 95.852%  | -0.022   | -0.020     | 0.090     | 0.065     |
| 3    | 03:58:08 | 96.370%  | 0.395    | 0.428  | 95.718%  | -0.018   | -0.020     | 0.060     | 0.037     |
| X    |          | 95.583%  | 0.386    | 0.400  | 95.762%  | -0.022   | -0.020     | 0.046     | 0.035     |
| σ    |          | 0.761%   | 0.030    | 0.053  | 0.078%   | 0.004    | 0.000      | 0.052     | 0.032     |
| %RSD |          | 0.796    | 7.838    | 13.240 | 0.081    | 16.290   | 0.190      | 111.200   | 90.950    |
| Run  | Time     | 115In    | 118Sn    | 121Sb  | 123Sb    | 135Ba    | 137Ba      | 159Tb     | 165Ho     |
|      |          | ppb      | ppb      | ppb    | ppb      | ppb      | ppb        | ppb       | ppb       |
| 1    | 03:57:30 | 92.349%  | -0.415   | 0.151  | 0.130    | 0.656    | 0.615      | 96.043%   | 95.084%   |
| 2    | 03:57:49 | 93.713%  | -0.397   | 0.153  | 0.173    | 0.661    | 0.740      | 96.633%   | 96.494%   |
| 3    | 03:58:08 | 93.746%  | -0.371   | 0.173  | 0.159    | 0.707    | 0.706      | 97.733%   | 96.786%   |
| X    |          | 93.269%  | -0.395   | 0.159  | 0.154    | 0.675    | 0.687      | 96.803%   | 96.121%   |
| σ    |          | 0.797%   | 0.022    | 0.013  | 0.022    | 0.028    | 0.064      | 0.858%    | 0.910%    |
| %RSD |          | 0.854    | 5.616    | 7.881  | 14.360   | 4.132    | 9.385      | 0.886     | 0.947     |
| Run  | Time     | 203Tl    | 205Tl    | 206Pb  | 207Pb    | 208Pb    | 209Bi      |           |           |
|      |          | ppb      | ppb      | ppb    | ppb      | ppb      | ppb        |           |           |
| 1    | 03:57:30 | -0.001   | 0.005    | 0.181  | 0.173    | 0.173    | 104.112%   |           |           |
| 2    | 03:57:49 | 0.005    | 0.004    | 0.204  | 0.190    | 0.186    | 100.946%   |           |           |
| 3    | 03:58:08 | -0.000   | 0.005    | 0.192  | 0.187    | 0.195    | 99.501%    |           |           |
| X    |          | 0.001    | 0.005    | 0.192  | 0.183    | 0.185    | 101.520%   |           |           |
| σ    |          | 0.004    | 0.001    | 0.011  | 0.009    | 0.011    | 2.358%     |           |           |
| %RSD |          | 264.100  | 11.470   | 5.878  | 4.919    | 5.774    | 2.323      |           |           |

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5/20/2015 4:00:58 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    | 04:01:17 | 110.859% | 0.003    | 57.850 | 56.210   | 0.000    | 117900.000 | 14350.000 | 14490.000 |
| 2    | 04:01:36 | 105.781% | -0.013   | 59.600 | 59.700   | 0.000    | 127100.000 | 15660.000 | 15490.000 |
| 3    | 04:01:56 | 104.956% | 0.004    | 59.460 | 60.690   | 0.000    | 122900.000 | 15040.000 | 15420.000 |
| X    |          | 107.199% | -0.002   | 58.970 | 58.870   | 0.000    | 122600.000 | 15020.000 | 15130.000 |
| σ    |          | 3.197%   | 0.010    | 0.973  | 2.354    | 0.000    | 4611.000   | 657.300   | 557.500   |
| %RSD |          | 2.982    | 446.900  | 1.649  | 4.000    | 0.000    | 3.761      | 4.377     | 3.684     |
| Run  | Time     | 27Al     | 28Si     | 37Cl   | 39K      | 43Ca     | 44Ca       | 45Sc      | 47Ti      |
|      |          | ppb      | ppb      | ppb    | ppb      | ppb      | ppb        | ppb       | ppb       |
| 1    | 04:01:17 | -0.609   | -249.400 | 0.000  | 4752.000 | 7045.000 | 6608.000   | 103.942%  | -0.210    |
| 2    | 04:01:36 | -0.550   | -246.800 | 0.000  | 4968.000 | 7893.000 | 6842.000   | 100.837%  | -0.193    |
| 3    | 04:01:56 | -0.412   | -244.100 | 0.000  | 4925.000 | 7314.000 | 6853.000   | 101.395%  | -0.176    |
| X    |          | -0.524   | -246.800 | 0.000  | 4882.000 | 7417.000 | 6768.000   | 102.058%  | -0.193    |
| σ    |          | 0.101    | 2.666    | 0.000  | 114.400  | 433.300  | 138.700    | 1.656%    | 0.017     |
| %RSD |          | 19.350   | 1.080    | 0.000  | 2.344    | 5.842    | 2.050      | 1.622     | 8.804     |
| Run  | Time     | 51V      | 52Cr     | 55Mn   | 56Fe     | 57Fe     | 59Co       | 60Ni      | 63Cu      |
|      |          | ppb      | ppb      | ppb    | ppb      | ppb      | ppb        | ppb       | ppb       |
| 1    | 04:01:17 | -0.033   | -0.023   | 10.050 | 2.542    | 20.300   | 0.017      | 0.045     | 0.752     |
| 2    | 04:01:36 | 0.020    | -0.022   | 10.520 | 4.267    | 20.350   | 0.017      | 0.040     | 0.786     |
| 3    | 04:01:56 | -0.034   | -0.004   | 10.290 | 2.502    | 19.040   | 0.031      | 0.036     | 0.802     |
| X    |          | -0.016   | -0.016   | 10.290 | 3.104    | 19.900   | 0.021      | 0.040     | 0.780     |
| σ    |          | 0.031    | 0.010    | 0.237  | 1.008    | 0.744    | 0.008      | 0.005     | 0.026     |
| %RSD |          | 195.100  | 64.090   | 2.305  | 32.460   | 3.738    | 37.380     | 11.800    | 3.294     |
| Run  | Time     | 65Cu     | 66Zn     | 68Zn   | 75As     | 78Se     | 82Se       | 83Kr      | 88Sr      |
|      |          | ppb      | ppb      | ppb    | ppb      | ppb      | ppb        | ppb       | ppb       |
| 1    | 04:01:17 | 0.055    | 0.725    | 0.751  | -0.028   | -0.299   | 0.259      | 0.000     | 96.660    |
| 2    | 04:01:36 | 0.133    | 0.762    | 0.766  | 0.039    | -0.112   | 0.227      | 0.000     | 98.780    |
| 3    | 04:01:56 | 0.110    | 0.750    | 0.803  | 0.068    | -0.181   | 0.302      | 0.000     | 97.410    |
| X    |          | 0.099    | 0.746    | 0.773  | 0.027    | -0.198   | 0.263      | 0.000     | 97.610    |
| σ    |          | 0.040    | 0.019    | 0.027  | 0.049    | 0.094    | 0.038      | 0.000     | 1.076     |
| %RSD |          | 40.500   | 2.539    | 3.475  | 185.500  | 47.750   | 14.310     | 0.000     | 1.103     |
| Run  | Time     | 89Y      | 95Mo     | 98Mo   | 103Rh    | 107Ag    | 109Ag      | 111Cd     | 114Cd     |
|      |          | ppb      | ppb      | ppb    | ppb      | ppb      | ppb        | ppb       | ppb       |
| 1    | 04:01:17 | 95.155%  | 0.352    | 0.323  | 95.422%  | -0.027   | -0.024     | 0.052     | 0.034     |
| 2    | 04:01:36 | 94.830%  | 0.416    | 0.407  | 96.405%  | -0.026   | -0.016     | 0.031     | 0.018     |
| 3    | 04:01:56 | 96.571%  | 0.413    | 0.423  | 96.710%  | -0.024   | -0.022     | 0.001     | -0.001    |
| X    |          | 95.519%  | 0.394    | 0.384  | 96.179%  | -0.026   | -0.021     | 0.028     | 0.017     |
| σ    |          | 0.926%   | 0.036    | 0.053  | 0.673%   | 0.002    | 0.004      | 0.026     | 0.018     |
| %RSD |          | 0.969    | 9.248    | 13.900 | 0.700    | 6.188    | 21.030     | 91.980    | 104.400   |
| Run  | Time     | 115In    | 118Sn    | 121Sb  | 123Sb    | 135Ba    | 137Ba      | 159Tb     | 165Ho     |
|      |          | ppb      | ppb      | ppb    | ppb      | ppb      | ppb        | ppb       | ppb       |
| 1    | 04:01:17 | 92.191%  | -0.410   | 0.059  | 0.076    | 0.488    | 0.517      | 95.005%   | 94.502%   |
| 2    | 04:01:36 | 93.204%  | -0.392   | 0.079  | 0.123    | 0.452    | 0.459      | 97.039%   | 96.320%   |
| 3    | 04:01:56 | 94.920%  | -0.387   | 0.111  | 0.075    | 0.464    | 0.502      | 96.661%   | 97.134%   |
| X    |          | 93.438%  | -0.396   | 0.083  | 0.091    | 0.468    | 0.493      | 96.235%   | 95.985%   |
| σ    |          | 1.380%   | 0.012    | 0.026  | 0.027    | 0.019    | 0.030      | 1.082%    | 1.347%    |
| %RSD |          | 1.476    | 3.089    | 31.440 | 29.920   | 3.988    | 6.086      | 1.124     | 1.404     |
| Run  | Time     | 203Tl    | 205Tl    | 206Pb  | 207Pb    | 208Pb    | 209Bi      |           |           |
|      |          | ppb      | ppb      | ppb    | ppb      | ppb      | ppb        |           |           |
| 1    | 04:01:17 | -0.001   | 0.002    | 0.028  | 0.018    | 0.021    | 105.246%   |           |           |
| 2    | 04:01:36 | -0.000   | 0.002    | 0.020  | 0.020    | 0.022    | 102.541%   |           |           |
| 3    | 04:01:56 | 0.002    | 0.002    | 0.005  | 0.018    | 0.016    | 102.247%   |           |           |
| X    |          | 0.000    | 0.002    | 0.017  | 0.019    | 0.019    | 103.345%   |           |           |
| σ    |          | 0.002    | 0.000    | 0.012  | 0.001    | 0.003    | 1.653%     |           |           |
| %RSD |          | 597.600  | 3.304    | 67.860 | 6.286    | 17.280   | 1.599      |           |           |

180-43344-D-17-A@50

5/20/2015 4:04:46 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    | 04:05:06 | 111.422% | -0.014   | 48.320 | 50.470   | 0.000    | 118700.000 | 14280.000 | 14390.000 |
| 2    | 04:05:26 | 109.123% | 0.003    | 52.700 | 52.490   | 0.000    | 121700.000 | 14610.000 | 14600.000 |
| 3    | 04:05:45 | 107.092% | 0.004    | 50.450 | 50.640   | 0.000    | 124700.000 | 14770.000 | 14400.000 |
| X    |          | 109.213% | -0.002   | 50.490 | 51.200   | 0.000    | 121700.000 | 14550.000 | 14460.000 |
| σ    |          | 2.166%   | 0.010    | 2.190  | 1.121    | 0.000    | 2983.000   | 251.100   | 119.500   |
| %RSD |          | 1.984    | 413.000  | 4.337  | 2.189    | 0.000    | 2.451      | 1.725     | 0.826     |
| Run  | Time     | 27Al     | 28Si     | 37Cl   | 39K      | 43Ca     | 44Ca       | 45Sc      | 47Ti      |
|      |          | ppb      | ppb      | ppb    | ppb      | ppb      | ppb        | ppb       | ppb       |
| 1    | 04:05:06 | 8.158    | -265.900 | 0.000  | 4690.000 | 5236.000 | 4936.000   | 101.185%  | -0.024    |
| 2    | 04:05:26 | 8.700    | -263.700 | 0.000  | 4752.000 | 5385.000 | 5043.000   | 100.782%  | 0.010     |
| 3    | 04:05:45 | 8.362    | -264.100 | 0.000  | 4744.000 | 5389.000 | 5008.000   | 99.836%   | -0.090    |
| X    |          | 8.407    | -264.600 | 0.000  | 4729.000 | 5337.000 | 4996.000   | 100.601%  | -0.035    |
| σ    |          | 0.274    | 1.168    | 0.000  | 33.930   | 87.500   | 54.890     | 0.692%    | 0.051     |
| %RSD |          | 3.256    | 0.441    | 0.000  | 0.718    | 1.640    | 1.099      | 0.688     | 146.300   |
| Run  | Time     | 51V      | 52Cr     | 55Mn   | 56Fe     | 57Fe     | 59Co       | 60Ni      | 63Cu      |
|      |          | ppb      | ppb      | ppb    | ppb      | ppb      | ppb        | ppb       | ppb       |
| 1    | 04:05:06 | 0.046    | 0.017    | 10.490 | 12.590   | 22.510   | 0.013      | 0.060     | 0.743     |
| 2    | 04:05:26 | 0.053    | 0.007    | 10.500 | 10.830   | 22.430   | 0.016      | 0.064     | 0.798     |
| 3    | 04:05:45 | -0.069   | 0.015    | 10.580 | 12.510   | 24.350   | 0.021      | 0.060     | 0.770     |
| X    |          | 0.010    | 0.013    | 10.530 | 11.980   | 23.100   | 0.017      | 0.061     | 0.770     |
| σ    |          | 0.069    | 0.005    | 0.051  | 0.993    | 1.081    | 0.004      | 0.002     | 0.028     |
| %RSD |          | 666.200  | 40.710   | 0.485  | 8.291    | 4.678    | 24.520     | 3.364     | 3.574     |
| Run  | Time     | 65Cu     | 66Zn     | 68Zn   | 75As     | 78Se     | 82Se       | 83Kr      | 88Sr      |
|      |          | ppb      | ppb      | ppb    | ppb      | ppb      | ppb        | ppb       | ppb       |
| 1    | 04:05:06 | 0.093    | 2.247    | 1.974  | 0.123    | -0.320   | 0.442      | 0.000     | 76.650    |
| 2    | 04:05:26 | 0.092    | 2.292    | 2.295  | 0.135    | -0.019   | 0.433      | 0.000     | 77.360    |
| 3    | 04:05:45 | 0.085    | 2.369    | 2.171  | 0.124    | -0.278   | 0.237      | 0.000     | 77.820    |
| X    |          | 0.090    | 2.303    | 2.147  | 0.127    | -0.206   | 0.371      | 0.000     | 77.280    |
| σ    |          | 0.004    | 0.062    | 0.162  | 0.007    | 0.163    | 0.115      | 0.000     | 0.586     |
| %RSD |          | 4.828    | 2.682    | 7.533  | 5.184    | 79.370   | 31.140     | 0.000     | 0.759     |
| Run  | Time     | 89Y      | 95Mo     | 98Mo   | 103Rh    | 107Ag    | 109Ag      | 111Cd     | 114Cd     |
|      |          | ppb      | ppb      | ppb    | ppb      | ppb      | ppb        | ppb       | ppb       |
| 1    | 04:05:06 | 95.116%  | 0.386    | 0.435  | 95.568%  | -0.029   | -0.014     | 0.053     | 0.035     |
| 2    | 04:05:26 | 95.715%  | 0.516    | 0.479  | 96.170%  | -0.027   | -0.016     | 0.004     | 0.004     |
| 3    | 04:05:45 | 96.329%  | 0.421    | 0.413  | 97.010%  | -0.020   | -0.024     | 0.081     | 0.057     |
| X    |          | 95.720%  | 0.441    | 0.442  | 96.249%  | -0.025   | -0.018     | 0.046     | 0.032     |
| σ    |          | 0.607%   | 0.068    | 0.034  | 0.724%   | 0.005    | 0.005      | 0.039     | 0.027     |
| %RSD |          | 0.634    | 15.330   | 7.604  | 0.753    | 19.150   | 29.920     | 85.330    | 84.520    |
| Run  | Time     | 115In    | 118Sn    | 121Sb  | 123Sb    | 135Ba    | 137Ba      | 159Tb     | 165Ho     |
|      |          | ppb      | ppb      | ppb    | ppb      | ppb      | ppb        | ppb       | ppb       |
| 1    | 04:05:06 | 92.478%  | -0.438   | 0.034  | 0.062    | 0.283    | 0.252      | 94.714%   | 94.128%   |
| 2    | 04:05:26 | 93.641%  | -0.389   | 0.039  | 0.071    | 0.265    | 0.240      | 97.369%   | 96.878%   |
| 3    | 04:05:45 | 94.976%  | -0.426   | 0.055  | 0.095    | 0.237    | 0.269      | 98.217%   | 97.931%   |
| X    |          | 93.698%  | -0.418   | 0.042  | 0.076    | 0.262    | 0.254      | 96.767%   | 96.312%   |
| σ    |          | 1.250%   | 0.026    | 0.011  | 0.017    | 0.023    | 0.015      | 1.827%    | 1.963%    |
| %RSD |          | 1.334    | 6.161    | 26.040 | 22.560   | 8.808    | 5.855      | 1.888     | 2.039     |
| Run  | Time     | 203Tl    | 205Tl    | 206Pb  | 207Pb    | 208Pb    | 209Bi      |           |           |
|      |          | ppb      | ppb      | ppb    | ppb      | ppb      | ppb        |           |           |
| 1    | 04:05:06 | -0.002   | 0.003    | 0.025  | 0.031    | 0.029    | 105.024%   |           |           |
| 2    | 04:05:26 | 0.004    | 0.000    | 0.027  | 0.028    | 0.027    | 103.294%   |           |           |
| 3    | 04:05:45 | 0.000    | 0.003    | 0.023  | 0.028    | 0.026    | 101.205%   |           |           |
| X    |          | 0.001    | 0.002    | 0.025  | 0.029    | 0.028    | 103.175%   |           |           |
| σ    |          | 0.003    | 0.001    | 0.002  | 0.002    | 0.001    | 1.912%     |           |           |
| %RSD |          | 377.500  | 78.390   | 8.516  | 5.435    | 4.834    | 1.853      |           |           |

180-43344-D-18-A@50

5/20/2015 4:08:36 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    | 04:08:55 | 112.235% | 0.002    | 52.130 | 52.540   | 0.000    | 128500.000 | 15150.000 | 15160.000 |
| 2    | 04:09:14 | 104.923% | -0.013   | 55.410 | 53.360   | 0.000    | 130200.000 | 15480.000 | 15310.000 |
| 3    | 04:09:33 | 111.074% | 0.002    | 53.540 | 52.230   | 0.000    | 125500.000 | 15270.000 | 15140.000 |
| X    |          | 109.410% | -0.003   | 53.690 | 52.710   | 0.000    | 128100.000 | 15300.000 | 15200.000 |
| σ    |          | 3.930%   | 0.009    | 1.646  | 0.581    | 0.000    | 2406.000   | 168.300   | 94.990    |
| %RSD |          | 3.592    | 314.100  | 3.066  | 1.101    | 0.000    | 1.878      | 1.100     | 0.625     |
| Run  | Time     | 27Al     | 28Si     | 37Cl   | 39K      | 43Ca     | 44Ca       | 45Sc      | 47Ti      |
|      |          | ppb      | ppb      | ppb    | ppb      | ppb      | ppb        | ppb       | ppb       |
| 1    | 04:08:55 | -1.105   | -274.600 | 0.000  | 4929.000 | 5579.000 | 5087.000   | 103.396%  | -0.177    |
| 2    | 04:09:14 | -1.145   | -275.100 | 0.000  | 5045.000 | 5698.000 | 5200.000   | 101.105%  | -0.159    |
| 3    | 04:09:33 | -1.124   | -275.100 | 0.000  | 4981.000 | 5851.000 | 5241.000   | 102.773%  | -0.177    |
| X    |          | -1.125   | -274.900 | 0.000  | 4985.000 | 5709.000 | 5176.000   | 102.425%  | -0.171    |
| σ    |          | 0.020    | 0.288    | 0.000  | 57.850   | 136.700  | 79.530     | 1.184%    | 0.010     |
| %RSD |          | 1.798    | 0.105    | 0.000  | 1.160    | 2.395    | 1.537      | 1.156     | 5.999     |
| Run  | Time     | 51V      | 52Cr     | 55Mn   | 56Fe     | 57Fe     | 59Co       | 60Ni      | 63Cu      |
|      |          | ppb      | ppb      | ppb    | ppb      | ppb      | ppb        | ppb       | ppb       |
| 1    | 04:08:55 | 0.009    | 0.030    | 10.800 | 3.239    | 14.750   | 0.010      | 0.044     | 0.717     |
| 2    | 04:09:14 | -0.014   | -0.009   | 11.140 | 3.477    | 15.280   | 0.008      | -0.006    | 0.688     |
| 3    | 04:09:33 | -0.114   | 0.002    | 11.020 | 2.969    | 14.100   | 0.013      | -0.018    | 0.770     |
| X    |          | -0.040   | 0.008    | 10.980 | 3.228    | 14.710   | 0.010      | 0.007     | 0.725     |
| σ    |          | 0.066    | 0.020    | 0.175  | 0.254    | 0.594    | 0.002      | 0.033     | 0.042     |
| %RSD |          | 166.200  | 267.600  | 1.591  | 7.880    | 4.040    | 23.650     | 501.600   | 5.764     |
| Run  | Time     | 65Cu     | 66Zn     | 68Zn   | 75As     | 78Se     | 82Se       | 83Kr      | 88Sr      |
|      |          | ppb      | ppb      | ppb    | ppb      | ppb      | ppb        | ppb       | ppb       |
| 1    | 04:08:55 | 0.012    | 4.001    | 3.554  | 0.160    | -0.205   | 0.614      | 0.000     | 81.260    |
| 2    | 04:09:14 | 0.013    | 3.974    | 4.051  | 0.074    | -0.233   | 0.433      | 0.000     | 81.430    |
| 3    | 04:09:33 | -0.019   | 4.172    | 3.820  | 0.119    | -0.159   | 0.591      | 0.000     | 80.850    |
| X    |          | 0.002    | 4.049    | 3.808  | 0.117    | -0.199   | 0.546      | 0.000     | 81.180    |
| σ    |          | 0.018    | 0.107    | 0.249  | 0.043    | 0.037    | 0.098      | 0.000     | 0.298     |
| %RSD |          | 978.600  | 2.647    | 6.524  | 36.610   | 18.740   | 18.050     | 0.000     | 0.367     |
| Run  | Time     | 89Y      | 95Mo     | 98Mo   | 103Rh    | 107Ag    | 109Ag      | 111Cd     | 114Cd     |
|      |          | ppb      | ppb      | ppb    | ppb      | ppb      | ppb        | ppb       | ppb       |
| 1    | 04:08:55 | 95.741%  | 0.463    | 0.414  | 96.573%  | -0.025   | -0.020     | 0.014     | 0.019     |
| 2    | 04:09:14 | 96.571%  | 0.505    | 0.489  | 97.461%  | -0.029   | -0.022     | -0.020    | -0.010    |
| 3    | 04:09:33 | 97.166%  | 0.400    | 0.420  | 97.110%  | -0.029   | -0.023     | 0.007     | 0.010     |
| X    |          | 96.493%  | 0.456    | 0.441  | 97.048%  | -0.028   | -0.022     | 0.000     | 0.006     |
| σ    |          | 0.715%   | 0.053    | 0.042  | 0.447%   | 0.003    | 0.002      | 0.018     | 0.015     |
| %RSD |          | 0.741    | 11.570   | 9.459  | 0.461    | 9.328    | 7.813      | 6823.000  | 232.300   |
| Run  | Time     | 115In    | 118Sn    | 121Sb  | 123Sb    | 135Ba    | 137Ba      | 159Tb     | 165Ho     |
|      |          | ppb      | ppb      | ppb    | ppb      | ppb      | ppb        | ppb       | ppb       |
| 1    | 04:08:55 | 93.304%  | -0.438   | 0.041  | 0.026    | 0.155    | 0.149      | 97.423%   | 95.825%   |
| 2    | 04:09:14 | 94.562%  | -0.430   | 0.032  | 0.049    | 0.129    | 0.136      | 97.368%   | 96.994%   |
| 3    | 04:09:33 | 95.908%  | -0.429   | 0.025  | 0.053    | 0.151    | 0.171      | 98.786%   | 97.567%   |
| X    |          | 94.591%  | -0.432   | 0.033  | 0.043    | 0.145    | 0.152      | 97.859%   | 96.795%   |
| σ    |          | 1.302%   | 0.005    | 0.008  | 0.015    | 0.014    | 0.018      | 0.803%    | 0.888%    |
| %RSD |          | 1.377    | 1.121    | 26.050 | 33.970   | 9.608    | 11.550     | 0.821     | 0.917     |
| Run  | Time     | 203Tl    | 205Tl    | 206Pb  | 207Pb    | 208Pb    | 209Bi      |           |           |
|      |          | ppb      | ppb      | ppb    | ppb      | ppb      | ppb        |           |           |
| 1    | 04:08:55 | -0.001   | -0.001   | -0.007 | -0.007   | -0.003   | 104.890%   |           |           |
| 2    | 04:09:14 | -0.001   | 0.001    | -0.009 | -0.012   | -0.006   | 103.795%   |           |           |
| 3    | 04:09:33 | 0.004    | 0.001    | -0.002 | -0.006   | -0.005   | 102.402%   |           |           |
| X    |          | 0.000    | 0.001    | -0.006 | -0.008   | -0.005   | 103.696%   |           |           |
| σ    |          | 0.003    | 0.001    | 0.004  | 0.003    | 0.002    | 1.247%     |           |           |
| %RSD |          | 545.700  | 183.100  | 61.770 | 37.290   | 29.710   | 1.203      |           |           |

180-43344-D-19-A@50

5/20/2015 4:12:24 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    | 04:12:46 | 111.694% | -0.014   | 57.100 | 56.150   | 0.000    | 121600.000 | 14540.000 | 14560.000 |
| 2    | 04:13:05 | 112.670% | 0.002    | 54.170 | 56.770   | 0.000    | 122100.000 | 14520.000 | 14380.000 |
| 3    | 04:13:24 | 109.807% | -0.014   | 53.970 | 59.020   | 0.000    | 126800.000 | 14970.000 | 15110.000 |
| X    |          | 111.391% | -0.009   | 55.080 | 57.310   | 0.000    | 123500.000 | 14680.000 | 14680.000 |
| σ    |          | 1.455%   | 0.009    | 1.753  | 1.511    | 0.000    | 2867.000   | 254.600   | 379.300   |
| %RSD |          | 1.307    | 107.200  | 3.182  | 2.637    | 0.000    | 2.322      | 1.734     | 2.584     |
| Run  | Time     | 27Al     | 28Si     | 37Cl   | 39K      | 43Ca     | 44Ca       | 45Sc      | 47Ti      |
|      |          | ppb      | ppb      | ppb    | ppb      | ppb      | ppb        | ppb       | ppb       |
| 1    | 04:12:46 | 42.380   | -149.700 | 0.000  | 4795.000 | 5228.000 | 4973.000   | 105.063%  | 2.079     |
| 2    | 04:13:05 | 42.810   | -149.600 | 0.000  | 4963.000 | 5419.000 | 5040.000   | 102.300%  | 2.155     |
| 3    | 04:13:24 | 43.280   | -146.300 | 0.000  | 5082.000 | 5688.000 | 5181.000   | 99.848%   | 2.107     |
| X    |          | 42.830   | -148.500 | 0.000  | 4946.000 | 5445.000 | 5065.000   | 102.404%  | 2.114     |
| σ    |          | 0.447    | 1.936    | 0.000  | 144.400  | 230.800  | 106.300    | 2.609%    | 0.038     |
| %RSD |          | 1.044    | 1.304    | 0.000  | 2.920    | 4.239    | 2.100      | 2.548     | 1.811     |
| Run  | Time     | 51V      | 52Cr     | 55Mn   | 56Fe     | 57Fe     | 59Co       | 60Ni      | 63Cu      |
|      |          | ppb      | ppb      | ppb    | ppb      | ppb      | ppb        | ppb       | ppb       |
| 1    | 04:12:46 | 0.052    | 0.166    | 7.183  | 77.630   | 93.600   | 0.029      | 0.093     | 0.789     |
| 2    | 04:13:05 | 0.253    | 0.134    | 7.344  | 82.320   | 96.150   | 0.024      | 0.122     | 0.851     |
| 3    | 04:13:24 | 0.208    | 0.135    | 7.423  | 80.620   | 97.110   | 0.028      | 0.070     | 0.776     |
| X    |          | 0.171    | 0.145    | 7.317  | 80.190   | 95.620   | 0.027      | 0.095     | 0.805     |
| σ    |          | 0.105    | 0.018    | 0.123  | 2.372    | 1.810    | 0.003      | 0.026     | 0.040     |
| %RSD |          | 61.570   | 12.610   | 1.676  | 2.958    | 1.893    | 10.570     | 27.250    | 5.001     |
| Run  | Time     | 65Cu     | 66Zn     | 68Zn   | 75As     | 78Se     | 82Se       | 83Kr      | 88Sr      |
|      |          | ppb      | ppb      | ppb    | ppb      | ppb      | ppb        | ppb       | ppb       |
| 1    | 04:12:46 | 0.119    | 0.883    | 0.732  | 0.339    | 0.023    | 0.906      | 0.000     | 88.660    |
| 2    | 04:13:05 | 0.110    | 0.999    | 0.923  | 0.088    | -0.145   | 0.636      | 0.000     | 90.920    |
| 3    | 04:13:24 | 0.116    | 1.027    | 1.015  | 0.146    | -0.111   | 0.855      | 0.000     | 89.400    |
| X    |          | 0.115    | 0.970    | 0.890  | 0.191    | -0.077   | 0.799      | 0.000     | 89.660    |
| σ    |          | 0.004    | 0.076    | 0.144  | 0.131    | 0.089    | 0.143      | 0.000     | 1.155     |
| %RSD |          | 3.752    | 7.864    | 16.230 | 68.780   | 114.500  | 17.930     | 0.000     | 1.288     |
| Run  | Time     | 89Y      | 95Mo     | 98Mo   | 103Rh    | 107Ag    | 109Ag      | 111Cd     | 114Cd     |
|      |          | ppb      | ppb      | ppb    | ppb      | ppb      | ppb        | ppb       | ppb       |
| 1    | 04:12:46 | 95.352%  | 0.418    | 0.457  | 96.123%  | -0.024   | -0.025     | 0.042     | 0.032     |
| 2    | 04:13:05 | 95.472%  | 0.538    | 0.512  | 96.213%  | -0.029   | -0.021     | 0.031     | 0.029     |
| 3    | 04:13:24 | 96.589%  | 0.538    | 0.456  | 96.740%  | -0.021   | -0.019     | 0.079     | 0.061     |
| X    |          | 95.804%  | 0.498    | 0.475  | 96.358%  | -0.024   | -0.022     | 0.051     | 0.041     |
| σ    |          | 0.682%   | 0.069    | 0.032  | 0.333%   | 0.004    | 0.003      | 0.025     | 0.017     |
| %RSD |          | 0.712    | 13.900   | 6.785  | 0.346    | 16.260   | 13.640     | 50.280    | 42.770    |
| Run  | Time     | 115In    | 118Sn    | 121Sb  | 123Sb    | 135Ba    | 137Ba      | 159Tb     | 165Ho     |
|      |          | ppb      | ppb      | ppb    | ppb      | ppb      | ppb        | ppb       | ppb       |
| 1    | 04:12:46 | 93.062%  | -0.427   | 0.023  | 0.023    | 0.591    | 0.560      | 94.601%   | 94.530%   |
| 2    | 04:13:05 | 93.358%  | -0.400   | 0.013  | 0.013    | 0.600    | 0.487      | 96.755%   | 96.260%   |
| 3    | 04:13:24 | 94.304%  | -0.417   | 0.026  | 0.026    | 0.552    | 0.577      | 98.102%   | 97.236%   |
| X    |          | 93.574%  | -0.415   | 0.021  | 0.021    | 0.581    | 0.541      | 96.486%   | 96.009%   |
| σ    |          | 0.649%   | 0.014    | 0.007  | 0.007    | 0.025    | 0.048      | 1.766%    | 1.371%    |
| %RSD |          | 0.693    | 3.261    | 33.560 | 32.500   | 4.382    | 8.780      | 1.830     | 1.428     |
| Run  | Time     | 203Tl    | 205Tl    | 206Pb  | 207Pb    | 208Pb    | 209Bi      |           |           |
|      |          | ppb      | ppb      | ppb    | ppb      | ppb      | ppb        |           |           |
| 1    | 04:12:46 | 0.000    | 0.002    | 0.100  | 0.082    | 0.092    | 105.590%   |           |           |
| 2    | 04:13:05 | 0.001    | 0.003    | 0.098  | 0.077    | 0.096    | 102.849%   |           |           |
| 3    | 04:13:24 | 0.002    | 0.000    | 0.113  | 0.087    | 0.101    | 101.029%   |           |           |
| X    |          | 0.001    | 0.002    | 0.104  | 0.082    | 0.096    | 103.156%   |           |           |
| σ    |          | 0.001    | 0.002    | 0.008  | 0.005    | 0.004    | 2.296%     |           |           |
| %RSD |          | 88.010   | 81.540   | 7.486  | 5.851    | 4.325    | 2.226      |           |           |

180-43344-D-20-A@50

5/20/2015 4:16:15 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    | 04:16:35 | 108.614% | 0.020    | 58.810 | 60.100   | 0.000    | 127900.000 | 14920.000 | 15040.000 |
| 2    | 04:16:54 | 104.925% | 0.004    | 56.880 | 62.130   | 0.000    | 129300.000 | 15170.000 | 15320.000 |
| 3    | 04:17:13 | 110.244% | 0.003    | 59.850 | 56.790   | 0.000    | 125300.000 | 14490.000 | 14900.000 |
| X    |          | 107.928% | 0.009    | 58.510 | 59.670   | 0.000    | 127500.000 | 14860.000 | 15090.000 |
| σ    |          | 2.725%   | 0.010    | 1.507  | 2.696    | 0.000    | 2077.000   | 345.500   | 212.900   |
| %RSD |          | 2.525    | 105.900  | 2.576  | 4.519    | 0.000    | 1.629      | 2.325     | 1.412     |
| Run  | Time     | 27Al     | 28Si     | 37Cl   | 39K      | 43Ca     | 44Ca       | 45Sc      | 47Ti      |
|      |          | ppb      | ppb      | ppb    | ppb      | ppb      | ppb        | ppb       | ppb       |
| 1    | 04:16:35 | 0.822    | -249.600 | 0.000  | 5038.000 | 5453.000 | 5007.000   | 102.581%  | -0.226    |
| 2    | 04:16:54 | 0.632    | -248.400 | 0.000  | 5055.000 | 5734.000 | 5100.000   | 101.053%  | -0.176    |
| 3    | 04:17:13 | 0.773    | -249.100 | 0.000  | 4985.000 | 5566.000 | 5192.000   | 100.753%  | -0.226    |
| X    |          | 0.742    | -249.000 | 0.000  | 5026.000 | 5584.000 | 5100.000   | 101.462%  | -0.209    |
| σ    |          | 0.099    | 0.595    | 0.000  | 36.320   | 141.300  | 92.900     | 0.980%    | 0.029     |
| %RSD |          | 13.280   | 0.239    | 0.000  | 0.723    | 2.531    | 1.822      | 0.966     | 13.930    |
| Run  | Time     | 51V      | 52Cr     | 55Mn   | 56Fe     | 57Fe     | 59Co       | 60Ni      | 63Cu      |
|      |          | ppb      | ppb      | ppb    | ppb      | ppb      | ppb        | ppb       | ppb       |
| 1    | 04:16:35 | 0.015    | -0.016   | 6.381  | 2.294    | 15.520   | 0.016      | 0.080     | 0.660     |
| 2    | 04:16:54 | 0.044    | -0.017   | 6.446  | 2.846    | 13.980   | 0.015      | 0.046     | 0.673     |
| 3    | 04:17:13 | -0.028   | 0.022    | 6.573  | 2.705    | 17.640   | 0.011      | 0.052     | 0.689     |
| X    |          | 0.010    | -0.004   | 6.467  | 2.615    | 15.710   | 0.014      | 0.059     | 0.674     |
| σ    |          | 0.036    | 0.023    | 0.097  | 0.287    | 1.837    | 0.003      | 0.018     | 0.015     |
| %RSD |          | 348.300  | 608.900  | 1.506  | 10.970   | 11.690   | 18.470     | 30.790    | 2.178     |
| Run  | Time     | 65Cu     | 66Zn     | 68Zn   | 75As     | 78Se     | 82Se       | 83Kr      | 88Sr      |
|      |          | ppb      | ppb      | ppb    | ppb      | ppb      | ppb        | ppb       | ppb       |
| 1    | 04:16:35 | 0.084    | 1.830    | 1.458  | 0.150    | -0.371   | 1.044      | 0.000     | 89.170    |
| 2    | 04:16:54 | -0.002   | 1.841    | 1.702  | 0.227    | -0.103   | 0.913      | 0.000     | 89.990    |
| 3    | 04:17:13 | 0.058    | 1.814    | 1.765  | 0.227    | 0.078    | 0.911      | 0.000     | 89.710    |
| X    |          | 0.047    | 1.828    | 1.642  | 0.201    | -0.132   | 0.956      | 0.000     | 89.630    |
| σ    |          | 0.044    | 0.014    | 0.162  | 0.044    | 0.226    | 0.076      | 0.000     | 0.419     |
| %RSD |          | 94.010   | 0.752    | 9.887  | 21.920   | 171.700  | 7.937      | 0.000     | 0.468     |
| Run  | Time     | 89Y      | 95Mo     | 98Mo   | 103Rh    | 107Ag    | 109Ag      | 111Cd     | 114Cd     |
|      |          | ppb      | ppb      | ppb    | ppb      | ppb      | ppb        | ppb       | ppb       |
| 1    | 04:16:35 | 94.058%  | 0.382    | 0.427  | 95.183%  | -0.025   | -0.023     | -0.003    | -0.001    |
| 2    | 04:16:54 | 94.920%  | 0.443    | 0.508  | 95.146%  | -0.022   | -0.025     | 0.009     | 0.013     |
| 3    | 04:17:13 | 95.067%  | 0.457    | 0.489  | 95.511%  | -0.029   | -0.023     | 0.018     | 0.016     |
| X    |          | 94.682%  | 0.427    | 0.475  | 95.280%  | -0.026   | -0.024     | 0.008     | 0.009     |
| σ    |          | 0.545%   | 0.040    | 0.043  | 0.201%   | 0.004    | 0.001      | 0.011     | 0.009     |
| %RSD |          | 0.576    | 9.380    | 8.978  | 0.211    | 14.220   | 4.080      | 133.600   | 92.770    |
| Run  | Time     | 115In    | 118Sn    | 121Sb  | 123Sb    | 135Ba    | 137Ba      | 159Tb     | 165Ho     |
|      |          | ppb      | ppb      | ppb    | ppb      | ppb      | ppb        | ppb       | ppb       |
| 1    | 04:16:35 | 90.405%  | -0.453   | 0.001  | 0.015    | 0.318    | 0.348      | 93.822%   | 93.008%   |
| 2    | 04:16:54 | 92.283%  | -0.439   | 0.016  | 0.017    | 0.345    | 0.422      | 95.622%   | 94.989%   |
| 3    | 04:17:13 | 93.598%  | -0.425   | 0.013  | 0.032    | 0.290    | 0.380      | 97.228%   | 96.396%   |
| X    |          | 92.095%  | -0.439   | 0.010  | 0.021    | 0.318    | 0.384      | 95.557%   | 94.798%   |
| σ    |          | 1.605%   | 0.014    | 0.008  | 0.009    | 0.027    | 0.037      | 1.704%    | 1.702%    |
| %RSD |          | 1.743    | 3.140    | 75.920 | 43.220   | 8.633    | 9.651      | 1.783     | 1.795     |
| Run  | Time     | 203Tl    | 205Tl    | 206Pb  | 207Pb    | 208Pb    | 209Bi      |           |           |
|      |          | ppb      | ppb      | ppb    | ppb      | ppb      | ppb        |           |           |
| 1    | 04:16:35 | 0.004    | 0.001    | -0.004 | -0.005   | -0.003   | 102.756%   |           |           |
| 2    | 04:16:54 | 0.000    | 0.003    | -0.002 | -0.002   | -0.003   | 101.370%   |           |           |
| 3    | 04:17:13 | 0.004    | 0.001    | -0.000 | -0.006   | -0.004   | 100.713%   |           |           |
| X    |          | 0.002    | 0.002    | -0.002 | -0.004   | -0.003   | 101.613%   |           |           |
| σ    |          | 0.002    | 0.001    | 0.002  | 0.002    | 0.000    | 1.043%     |           |           |
| %RSD |          | 80.200   | 38.670   | 90.830 | 43.980   | 9.299    | 1.026      |           |           |



180-43344-D-21-A@50

5/20/2015 4:20:04 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    | 04:20:23 | 107.412% | 0.055    | 62.970  | 63.280   | 0.000    | 130800.000 | 15710.000 | 15710.000 |
| 2    | 04:20:44 | 104.475% | -0.013   | 64.390  | 68.140   | 0.000    | 127700.000 | 15320.000 | 15850.000 |
| 3    | 04:21:03 | 107.984% | -0.031   | 64.310  | 61.830   | 0.000    | 125300.000 | 15090.000 | 15050.000 |
| X    |          | 106.624% | 0.004    | 63.890  | 64.420   | 0.000    | 127900.000 | 15370.000 | 15540.000 |
| σ    |          | 1.883%   | 0.045    | 0.800   | 3.307    | 0.000    | 2767.000   | 315.900   | 426.900   |
| %RSD |          | 1.766    | 1209.000 | 1.252   | 5.133    | 0.000    | 2.163      | 2.055     | 2.748     |
| Run  | Time     | 27Al     | 28Si     | 37Cl    | 39K      | 43Ca     | 44Ca       | 45Sc      | 47Ti      |
|      |          | ppb      | ppb      | ppb     | ppb      | ppb      | ppb        | ppb       | ppb       |
| 1    | 04:20:23 | 0.282    | -246.000 | 0.000   | 5183.000 | 6127.000 | 5527.000   | 99.816%   | -0.107    |
| 2    | 04:20:44 | 0.310    | -245.600 | 0.000   | 5224.000 | 6125.000 | 5612.000   | 100.646%  | -0.176    |
| 3    | 04:21:03 | 0.402    | -245.200 | 0.000   | 5135.000 | 5880.000 | 5641.000   | 99.767%   | -0.090    |
| X    |          | 0.331    | -245.600 | 0.000   | 5181.000 | 6044.000 | 5593.000   | 100.076%  | -0.124    |
| σ    |          | 0.063    | 0.434    | 0.000   | 44.400   | 141.900  | 58.850     | 0.494%    | 0.045     |
| %RSD |          | 19.040   | 0.177    | 0.000   | 0.857    | 2.348    | 1.052      | 0.494     | 36.580    |
| Run  | Time     | 51V      | 52Cr     | 55Mn    | 56Fe     | 57Fe     | 59Co       | 60Ni      | 63Cu      |
|      |          | ppb      | ppb      | ppb     | ppb      | ppb      | ppb        | ppb       | ppb       |
| 1    | 04:20:23 | -0.011   | -0.004   | 6.793   | 20.740   | 35.330   | 0.011      | 0.048     | 0.755     |
| 2    | 04:20:44 | 0.001    | -0.016   | 6.804   | 21.050   | 36.710   | 0.008      | 0.042     | 0.756     |
| 3    | 04:21:03 | -0.065   | 0.003    | 7.026   | 20.790   | 37.810   | 0.009      | 0.041     | 0.764     |
| X    |          | -0.025   | -0.006   | 6.874   | 20.860   | 36.620   | 0.009      | 0.043     | 0.758     |
| σ    |          | 0.035    | 0.009    | 0.132   | 0.167    | 1.242    | 0.002      | 0.004     | 0.005     |
| %RSD |          | 142.300  | 168.500  | 1.912   | 0.803    | 3.392    | 16.800     | 8.649     | 0.635     |
| Run  | Time     | 65Cu     | 66Zn     | 68Zn    | 75As     | 78Se     | 82Se       | 83Kr      | 88Sr      |
|      |          | ppb      | ppb      | ppb     | ppb      | ppb      | ppb        | ppb       | ppb       |
| 1    | 04:20:23 | 0.004    | 0.758    | 0.829   | 0.039    | -0.325   | 1.016      | 0.000     | 92.970    |
| 2    | 04:20:44 | 0.059    | 0.778    | 0.714   | 0.175    | -0.044   | 0.863      | 0.000     | 91.920    |
| 3    | 04:21:03 | 0.127    | 0.688    | 0.857   | 0.254    | -0.498   | 1.223      | 0.000     | 92.410    |
| X    |          | 0.063    | 0.741    | 0.800   | 0.156    | -0.289   | 1.034      | 0.000     | 92.430    |
| σ    |          | 0.061    | 0.048    | 0.076   | 0.109    | 0.229    | 0.181      | 0.000     | 0.523     |
| %RSD |          | 97.000   | 6.424    | 9.442   | 69.920   | 79.250   | 17.490     | 0.000     | 0.566     |
| Run  | Time     | 89Y      | 95Mo     | 98Mo    | 103Rh    | 107Ag    | 109Ag      | 111Cd     | 114Cd     |
|      |          | ppb      | ppb      | ppb     | ppb      | ppb      | ppb        | ppb       | ppb       |
| 1    | 04:20:23 | 93.102%  | 0.445    | 0.413   | 94.544%  | -0.024   | -0.021     | 0.063     | 0.050     |
| 2    | 04:20:44 | 93.869%  | 0.405    | 0.412   | 94.453%  | -0.023   | -0.022     | -0.050    | -0.034    |
| 3    | 04:21:03 | 94.417%  | 0.495    | 0.438   | 95.099%  | -0.028   | -0.022     | 0.039     | 0.025     |
| X    |          | 93.796%  | 0.449    | 0.421   | 94.698%  | -0.025   | -0.022     | 0.017     | 0.014     |
| σ    |          | 0.661%   | 0.045    | 0.014   | 0.350%   | 0.003    | 0.001      | 0.060     | 0.043     |
| %RSD |          | 0.704    | 10.030   | 3.415   | 0.369    | 10.670   | 2.390      | 346.700   | 308.600   |
| Run  | Time     | 115In    | 118Sn    | 121Sb   | 123Sb    | 135Ba    | 137Ba      | 159Tb     | 165Ho     |
|      |          | ppb      | ppb      | ppb     | ppb      | ppb      | ppb        | ppb       | ppb       |
| 1    | 04:20:23 | 90.082%  | -0.461   | -0.016  | -0.005   | 0.345    | 0.313      | 93.431%   | 92.642%   |
| 2    | 04:20:44 | 91.110%  | -0.421   | -0.026  | 0.009    | 0.323    | 0.316      | 94.973%   | 94.366%   |
| 3    | 04:21:03 | 92.317%  | -0.402   | -0.007  | 0.017    | 0.374    | 0.346      | 95.527%   | 95.251%   |
| X    |          | 91.170%  | -0.428   | -0.016  | 0.007    | 0.348    | 0.325      | 94.644%   | 94.086%   |
| σ    |          | 1.119%   | 0.030    | 0.009   | 0.011    | 0.025    | 0.018      | 1.086%    | 1.327%    |
| %RSD |          | 1.227    | 7.061    | 57.550  | 164.100  | 7.337    | 5.630      | 1.147     | 1.411     |
| Run  | Time     | 203Tl    | 205Tl    | 206Pb   | 207Pb    | 208Pb    | 209Bi      |           |           |
|      |          | ppb      | ppb      | ppb     | ppb      | ppb      | ppb        |           |           |
| 1    | 04:20:23 | 0.000    | 0.001    | 0.001   | -0.000   | 0.004    | 103.130%   |           |           |
| 2    | 04:20:44 | 0.003    | 0.001    | -0.001  | 0.002    | 0.005    | 100.596%   |           |           |
| 3    | 04:21:03 | 0.003    | 0.003    | 0.007   | -0.001   | 0.004    | 98.939%    |           |           |
| X    |          | 0.002    | 0.002    | 0.002   | 0.000    | 0.004    | 100.889%   |           |           |
| σ    |          | 0.001    | 0.001    | 0.004   | 0.001    | 0.001    | 2.111%     |           |           |
| %RSD |          | 79.790   | 68.420   | 172.800 | 1024.000 | 12.370   | 2.093      |           |           |

CCV 1558997 5/20/2015 4:24:02 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    | 04:24:02 | 97.088% | 104.400  | 107.900  | 102.600   | 0.000     | 48730.000 | 48230.000 | 48990.000 |
| 2    | 04:24:21 | 94.644% | 105.600  | 104.200  | 101.700   | 0.000     | 51300.000 | 50310.000 | 50240.000 |
| 3    | 04:24:40 | 94.047% | 101.800  | 107.400  | 102.900   | 0.000     | 50400.000 | 49980.000 | 49960.000 |
| x    |          | 95.260% | 103.927% | 106.498% | 102.401%  | 0.000     | 100.290%  | 99.006%   | 99.456%   |
| σ    |          | 1.611%  | n/a      | n/a      | n/a       | 0.000     | n/a       | n/a       | n/a       |
| %RSD |          | 1.691   | 1.874    | 1.882    | 0.581     | 0.000     | 2.599     | 2.259     | 1.315     |
| Run  | Time     | 27Al    | 28Si     | 37Cl     | 39K       | 43Ca      | 44Ca      | 45Sc      | 47Ti      |
|      |          | ppb     | ppb      | ppb      | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 04:24:02 | 467.600 | 4356.000 | 0.000    | 48780.000 | 47720.000 | 47880.000 | 93.400%   | 90.350    |
| 2    | 04:24:21 | 487.100 | 4525.000 | 0.000    | 51260.000 | 50010.000 | 49460.000 | 90.840%   | 99.050    |
| 3    | 04:24:40 | 498.800 | 4675.000 | 0.000    | 50900.000 | 50210.000 | 49350.000 | 91.554%   | 96.880    |
| x    |          | 96.899% | 90.369%  | 0.000    | 100.630%  | 98.625%   | 97.795%   | 91.931%   | 95.427%   |
| σ    |          | n/a     | n/a      | 0.000    | n/a       | n/a       | n/a       | 1.321%    | n/a       |
| %RSD |          | 3.262   | 3.537    | 0.000    | 2.661     | 2.802     | 1.806     | 1.437     | 4.745     |
| Run  | Time     | 51V     | 52Cr     | 55Mn     | 56Fe      | 57Fe      | 59Co      | 60Ni      | 63Cu      |
|      |          | ppb     | ppb      | ppb      | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 04:24:02 | 93.320  | 94.960   | 462.300  | 24750.000 | 24310.000 | 95.850    | 97.000    | 99.340    |
| 2    | 04:24:21 | 98.050  | 97.670   | 478.200  | 24900.000 | 24590.000 | 97.900    | 99.930    | 100.500   |
| 3    | 04:24:40 | 97.880  | 99.490   | 477.200  | 24960.000 | 24720.000 | 98.020    | 99.420    | 99.050    |
| x    |          | 96.414% | 97.374%  | 94.521%  | 99.479%   | 98.168%   | 97.255%   | 98.785%   | 99.617%   |
| σ    |          | n/a     | n/a      | n/a      | n/a       | n/a       | n/a       | n/a       | n/a       |
| %RSD |          | 2.781   | 2.340    | 1.883    | 0.448     | 0.852     | 1.249     | 1.586     | 0.747     |
| Run  | Time     | 65Cu    | 66Zn     | 68Zn     | 75As      | 78Se      | 82Se      | 83Kr      | 88Sr      |
|      |          | ppb     | ppb      | ppb      | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 04:24:02 | 98.470  | 92.350   | 92.240   | 97.090    | 99.060    | 97.480    | 0.000     | 93.830    |
| 2    | 04:24:21 | 99.890  | 95.900   | 95.520   | 99.320    | 100.500   | 97.330    | 0.000     | 96.010    |
| 3    | 04:24:40 | 101.000 | 95.560   | 94.280   | 99.090    | 101.200   | 98.490    | 0.000     | 95.100    |
| x    |          | 99.800% | 94.603%  | 94.015%  | 98.498%   | 100.253%  | 97.767%   | 0.000     | 94.982%   |
| σ    |          | n/a     | n/a      | n/a      | n/a       | n/a       | n/a       | 0.000     | n/a       |
| %RSD |          | 1.292   | 2.066    | 1.760    | 1.245     | 1.101     | 0.648     | 0.000     | 1.152     |
| Run  | Time     | 89Y     | 95Mo     | 98Mo     | 103Rh     | 107Ag     | 109Ag     | 111Cd     | 114Cd     |
|      |          | ppb     | ppb      | ppb      | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 04:24:02 | 88.870% | 88.360   | 87.930   | 88.865%   | 94.720    | 96.290    | 97.080    | 100.900   |
| 2    | 04:24:21 | 88.013% | 89.850   | 90.180   | 88.501%   | 97.110    | 98.620    | 99.280    | 101.800   |
| 3    | 04:24:40 | 89.135% | 90.300   | 91.200   | 88.773%   | 97.480    | 98.970    | 101.300   | 101.400   |
| x    |          | 88.673% | 89.503%  | 89.769%  | 88.713%   | 96.436%   | 97.958%   | 99.211%   | 101.371%  |
| σ    |          | 0.586%  | n/a      | n/a      | 0.189%    | n/a       | n/a       | n/a       | n/a       |
| %RSD |          | 0.661   | 1.135    | 1.866    | 0.214     | 1.552     | 1.485     | 2.117     | 0.460     |
| Run  | Time     | 115In   | 118Sn    | 121Sb    | 123Sb     | 135Ba     | 137Ba     | 159Tb     | 165Ho     |
|      |          | ppb     | ppb      | ppb      | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 04:24:02 | 79.740% | 97.760   | 89.280   | 89.430    | 96.580    | 96.810    | 87.423%   | 87.129%   |
| 2    | 04:24:21 | 80.348% | 98.910   | 90.910   | 90.290    | 99.700    | 98.620    | 88.049%   | 87.568%   |
| 3    | 04:24:40 | 80.957% | 99.220   | 90.700   | 90.870    | 99.280    | 98.030    | 90.032%   | 89.947%   |
| x    |          | 80.348% | 98.632%  | 90.297%  | 90.197%   | 98.518%   | 97.816%   | 88.501%   | 88.215%   |
| σ    |          | 0.609%  | n/a      | n/a      | n/a       | n/a       | n/a       | 1.362%    | 1.516%    |
| %RSD |          | 0.758   | 0.777    | 0.981    | 0.800     | 1.715     | 0.943     | 1.539     | 1.719     |
| Run  | Time     | 203Tl   | 205Tl    | 206Pb    | 207Pb     | 208Pb     | 209Bi     |           |           |
|      |          | ppb     | ppb      | ppb      | ppb       | ppb       | ppb       |           |           |
| 1    | 04:24:02 | 92.220  | 95.560   | 92.170   | 91.790    | 91.650    | 92.789%   |           |           |
| 2    | 04:24:21 | 94.990  | 99.380   | 95.570   | 95.500    | 95.410    | 92.189%   |           |           |
| 3    | 04:24:40 | 97.350  | 101.300  | 97.160   | 98.010    | 97.520    | 91.650%   |           |           |
| x    |          | 94.853% | 98.748%  | 94.966%  | 95.099%   | 94.862%   | 92.209%   |           |           |
| σ    |          | n/a     | n/a      | n/a      | n/a       | n/a       | 0.570%    |           |           |
| %RSD |          | 2.710   | 2.960    | 2.688    | 3.292     | 3.133     | 0.618     |           |           |

CCBB 5/20/2015 4:30:43 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    | 04:31:02 | 113.821% | 0.002    | 0.470   | 0.519    | 0.000    | 23.400  | 5.109    | 4.798   |
| 2    | 04:31:21 | 114.011% | -0.015   | 0.472   | 0.602    | 0.000    | 20.020  | 4.307    | 3.726   |
| 3    | 04:31:40 | 112.546% | -0.014   | 0.975   | 0.329    | 0.000    | 19.440  | 3.248    | 3.917   |
| x    |          | 113.459% | -0.009   | 0.639   | 0.483    | 0.000    | 20.950  | 4.222    | 4.147   |
| σ    |          | 0.797%   | 0.009    | 0.291   | 0.140    | 0.000    | 2.138   | 0.933    | 0.572   |
| %RSD |          | 0.702    | 101.700  | 45.550  | 28.950   | 0.000    | 10.200  | 22.100   | 13.780  |
| Run  | Time     | 27Al     | 28Si     | 37Cl    | 39K      | 43Ca     | 44Ca    | 45Sc     | 47Ti    |
|      |          | ppb      | ppb      | ppb     | ppb      | ppb      | ppb     | ppb      | ppb     |
| 1    | 04:31:02 | 0.464    | -303.000 | 0.000   | 13.420   | 5.053    | 3.344   | 109.233% | -0.148  |
| 2    | 04:31:21 | 0.446    | -302.600 | 0.000   | 12.360   | -0.834   | 3.467   | 105.513% | -0.113  |
| 3    | 04:31:40 | 0.261    | -301.800 | 0.000   | 12.730   | 8.781    | 2.833   | 103.602% | -0.111  |
| x    |          | 0.390    | -302.500 | 0.000   | 12.840   | 4.333    | 3.214   | 106.116% | -0.124  |
| σ    |          | 0.113    | 0.597    | 0.000   | 0.535    | 4.847    | 0.336   | 2.864%   | 0.021   |
| %RSD |          | 28.860   | 0.197    | 0.000   | 4.171    | 111.900  | 10.460  | 2.699    | 16.710  |
| Run  | Time     | 51V      | 52Cr     | 55Mn    | 56Fe     | 57Fe     | 59Co    | 60Ni     | 63Cu    |
|      |          | ppb      | ppb      | ppb     | ppb      | ppb      | ppb     | ppb      | ppb     |
| 1    | 04:31:02 | 0.003    | -0.025   | 0.040   | 2.808    | 6.568    | 0.004   | 0.001    | -0.011  |
| 2    | 04:31:21 | 0.006    | -0.025   | 0.001   | 3.829    | 7.144    | 0.005   | 0.007    | -0.046  |
| 3    | 04:31:40 | -0.022   | -0.031   | 0.023   | 3.628    | 6.648    | 0.005   | 0.016    | 0.007   |
| x    |          | -0.004   | -0.027   | 0.021   | 3.422    | 6.787    | 0.004   | 0.008    | -0.017  |
| σ    |          | 0.016    | 0.004    | 0.019   | 0.541    | 0.312    | 0.001   | 0.008    | 0.027   |
| %RSD |          | 372.100  | 13.120   | 90.540  | 15.800   | 4.599    | 15.540  | 93.080   | 159.600 |
| Run  | Time     | 65Cu     | 66Zn     | 68Zn    | 75As     | 78Se     | 82Se    | 83Kr     | 88Sr    |
|      |          | ppb      | ppb      | ppb     | ppb      | ppb      | ppb     | ppb      | ppb     |
| 1    | 04:31:02 | -0.045   | 4.922    | 4.720   | 0.001    | 0.229    | 0.256   | 0.000    | 0.014   |
| 2    | 04:31:21 | -0.029   | 4.946    | 4.896   | 0.046    | 0.282    | 0.084   | 0.000    | 0.011   |
| 3    | 04:31:40 | -0.055   | 4.877    | 4.941   | 0.060    | 0.527    | 0.552   | 0.000    | 0.013   |
| x    |          | -0.043   | 4.915    | 4.852   | 0.036    | 0.346    | 0.297   | 0.000    | 0.012   |
| σ    |          | 0.013    | 0.035    | 0.117   | 0.031    | 0.159    | 0.237   | 0.000    | 0.002   |
| %RSD |          | 30.300   | 0.711    | 2.404   | 85.820   | 45.830   | 79.730  | 0.000    | 13.800  |
| Run  | Time     | 89Y      | 95Mo     | 98Mo    | 103Rh    | 107Ag    | 109Ag   | 111Cd    | 114Cd   |
|      |          | ppb      | ppb      | ppb     | ppb      | ppb      | ppb     | ppb      | ppb     |
| 1    | 04:31:02 | 98.502%  | 0.730    | 0.785   | 100.606% | -0.017   | -0.007  | 0.060    | 0.043   |
| 2    | 04:31:21 | 98.279%  | 0.935    | 0.869   | 100.432% | -0.019   | -0.019  | 0.035    | 0.023   |
| 3    | 04:31:40 | 97.589%  | 1.000    | 0.962   | 99.740%  | -0.019   | -0.013  | 0.019    | 0.021   |
| x    |          | 98.124%  | 0.888    | 0.872   | 100.259% | -0.018   | -0.013  | 0.038    | 0.029   |
| σ    |          | 0.476%   | 0.141    | 0.089   | 0.458%   | 0.001    | 0.006   | 0.020    | 0.012   |
| %RSD |          | 0.485    | 15.870   | 10.160  | 0.457    | 4.805    | 45.530  | 53.630   | 40.590  |
| Run  | Time     | 115In    | 118Sn    | 121Sb   | 123Sb    | 135Ba    | 137Ba   | 159Tb    | 165Ho   |
|      |          | ppb      | ppb      | ppb     | ppb      | ppb      | ppb     | ppb      | ppb     |
| 1    | 04:31:02 | 94.954%  | -0.317   | 0.574   | 0.538    | -0.010   | 0.006   | 95.135%  | 92.881% |
| 2    | 04:31:21 | 95.476%  | -0.288   | 0.603   | 0.610    | 0.015    | 0.018   | 94.371%  | 93.850% |
| 3    | 04:31:40 | 95.575%  | -0.294   | 0.607   | 0.649    | -0.002   | 0.013   | 94.635%  | 93.552% |
| x    |          | 95.335%  | -0.299   | 0.595   | 0.599    | 0.001    | 0.012   | 94.713%  | 93.427% |
| σ    |          | 0.334%   | 0.015    | 0.018   | 0.057    | 0.013    | 0.006   | 0.388%   | 0.496%  |
| %RSD |          | 0.350    | 5.147    | 3.056   | 9.463    | 1056.000 | 48.550  | 0.409    | 0.531   |
| Run  | Time     | 203Tl    | 205Tl    | 206Pb   | 207Pb    | 208Pb    | 209Bi   |          |         |
|      |          | ppb      | ppb      | ppb     | ppb      | ppb      | ppb     |          |         |
| 1    | 04:31:02 | 0.015    | 0.019    | -0.001  | 0.004    | 0.003    | 99.910% |          |         |
| 2    | 04:31:21 | 0.019    | 0.018    | 0.005   | -0.002   | 0.003    | 99.286% |          |         |
| 3    | 04:31:40 | 0.018    | 0.022    | 0.007   | 0.001    | 0.005    | 98.340% |          |         |
| x    |          | 0.017    | 0.020    | 0.004   | 0.001    | 0.004    | 99.179% |          |         |
| σ    |          | 0.002    | 0.002    | 0.004   | 0.003    | 0.001    | 0.791%  |          |         |
| %RSD |          | 12.330   | 9.737    | 105.900 | 357.800  | 29.610   | 0.797   |          |         |

180-43344-D-22-A@50

5/20/2015 4:34:34 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   | 04:34:53 | 113.484% | 0.002    | 66.700  | 69.240   | 0.000    | 136200.000 | 16690.000 | 17030.000 |         |
| 2   | 04:35:13 | 115.258% | -0.015   | 64.680  | 65.870   | 0.000    | 134700.000 | 16200.000 | 16400.000 |         |
| 3   | 04:35:32 | 110.991% | -0.031   | 71.220  | 68.620   | 0.000    | 140300.000 | 16650.000 | 16480.000 |         |
| X   |          | 113.244% | -0.015   | 67.530  | 67.910   | 0.000    | 137100.000 | 16520.000 | 16630.000 |         |
|     |          | $\sigma$ | 2.144%   | 0.016   | 3.353    | 1.791    | 0.000      | 2911.000  | 270.100   | 343.600 |
|     |          | %RSD     | 1.893    | 111.400 | 4.965    | 2.638    | 0.000      | 2.123     | 1.635     | 2.066   |
| Run | Time     | 27Al     | 28Si     | 37Cl    | 39K      | 43Ca     | 44Ca       | 45Sc      | 47Ti      |         |
|     |          | ppb      | ppb      | ppb     | ppb      | ppb      | ppb        | ppb       | ppb       |         |
| 1   | 04:34:53 | -0.508   | -245.300 | 0.000   | 5522.000 | 6528.000 | 5878.000   | 106.792%  | -0.210    |         |
| 2   | 04:35:13 | -0.761   | -248.000 | 0.000   | 5395.000 | 6578.000 | 5862.000   | 106.003%  | -0.162    |         |
| 3   | 04:35:32 | -0.727   | -246.100 | 0.000   | 5586.000 | 6703.000 | 6024.000   | 102.616%  | -0.143    |         |
| X   |          | -0.665   | -246.500 | 0.000   | 5501.000 | 6603.000 | 5922.000   | 105.137%  | -0.172    |         |
|     |          | $\sigma$ | 0.138    | 1.378   | 0.000    | 97.190   | 90.160     | 89.460    | 2.219%    | 0.035   |
|     |          | %RSD     | 20.660   | 0.559   | 0.000    | 1.767    | 1.365      | 1.511     | 2.110     | 20.100  |
| Run | Time     | 51V      | 52Cr     | 55Mn    | 56Fe     | 57Fe     | 59Co       | 60Ni      | 63Cu      |         |
|     |          | ppb      | ppb      | ppb     | ppb      | ppb      | ppb        | ppb       | ppb       |         |
| 1   | 04:34:53 | -0.086   | -0.019   | 6.556   | 3.716    | 19.760   | 0.010      | 0.079     | 0.771     |         |
| 2   | 04:35:13 | -0.080   | -0.019   | 6.769   | 4.344    | 19.120   | 0.013      | 0.021     | 0.774     |         |
| 3   | 04:35:32 | 0.020    | -0.022   | 6.973   | 5.903    | 19.140   | 0.018      | 0.018     | 0.899     |         |
| X   |          | -0.049   | -0.020   | 6.766   | 4.654    | 19.340   | 0.014      | 0.039     | 0.815     |         |
|     |          | $\sigma$ | 0.059    | 0.002   | 0.209    | 1.126    | 0.362      | 0.004     | 0.035     | 0.073   |
|     |          | %RSD     | 121.700  | 7.603   | 3.085    | 24.190   | 1.870      | 29.120    | 88.380    | 9.018   |
| Run | Time     | 65Cu     | 66Zn     | 68Zn    | 75As     | 78Se     | 82Se       | 83Kr      | 88Sr      |         |
|     |          | ppb      | ppb      | ppb     | ppb      | ppb      | ppb        | ppb       | ppb       |         |
| 1   | 04:34:53 | -0.014   | 4.501    | 4.575   | 0.251    | -0.080   | 1.112      | 0.000     | 97.460    |         |
| 2   | 04:35:13 | 0.013    | 4.435    | 4.782   | 0.303    | 0.732    | 0.882      | 0.000     | 97.640    |         |
| 3   | 04:35:32 | 0.038    | 4.611    | 4.542   | 0.169    | 0.197    | 1.507      | 0.000     | 98.590    |         |
| X   |          | 0.012    | 4.515    | 4.633   | 0.241    | 0.283    | 1.167      | 0.000     | 97.900    |         |
|     |          | $\sigma$ | 0.026    | 0.089   | 0.130    | 0.068    | 0.413      | 0.316     | 0.000     | 0.610   |
|     |          | %RSD     | 206.800  | 1.969   | 2.812    | 28.180   | 145.900    | 27.070    | 0.000     | 0.623   |
| Run | Time     | 89Y      | 95Mo     | 98Mo    | 103Rh    | 107Ag    | 109Ag      | 111Cd     | 114Cd     |         |
|     |          | ppb      | ppb      | ppb     | ppb      | ppb      | ppb        | ppb       | ppb       |         |
| 1   | 04:34:53 | 96.891%  | 0.675    | 0.720   | 97.229%  | -0.016   | -0.018     | 0.096     | 0.075     |         |
| 2   | 04:35:13 | 97.083%  | 0.794    | 0.884   | 97.653%  | -0.020   | -0.014     | 0.008     | 0.002     |         |
| 3   | 04:35:32 | 98.314%  | 0.861    | 0.865   | 98.459%  | -0.015   | -0.013     | -0.002    | -0.001    |         |
| X   |          | 97.429%  | 0.777    | 0.823   | 97.780%  | -0.017   | -0.015     | 0.034     | 0.025     |         |
|     |          | $\sigma$ | 0.772%   | 0.094   | 0.090    | 0.625%   | 0.003      | 0.003     | 0.054     | 0.043   |
|     |          | %RSD     | 0.792    | 12.140  | 10.920   | 0.639    | 16.450     | 20.160    | 158.600   | 168.400 |
| Run | Time     | 115In    | 118Sn    | 121Sb   | 123Sb    | 135Ba    | 137Ba      | 159Tb     | 165Ho     |         |
|     |          | ppb      | ppb      | ppb     | ppb      | ppb      | ppb        | ppb       | ppb       |         |
| 1   | 04:34:53 | 93.392%  | -0.354   | 0.443   | 0.464    | 0.303    | 0.355      | 94.533%   | 93.319%   |         |
| 2   | 04:35:13 | 94.330%  | -0.358   | 0.440   | 0.463    | 0.334    | 0.389      | 94.360%   | 93.996%   |         |
| 3   | 04:35:32 | 95.242%  | -0.316   | 0.450   | 0.503    | 0.335    | 0.408      | 97.608%   | 96.217%   |         |
| X   |          | 94.321%  | -0.342   | 0.444   | 0.477    | 0.324    | 0.384      | 95.500%   | 94.511%   |         |
|     |          | $\sigma$ | 0.925%   | 0.023   | 0.005    | 0.023    | 0.019      | 0.027     | 1.828%    | 1.516%  |
|     |          | %RSD     | 0.980    | 6.784   | 1.215    | 4.751    | 5.719      | 7.017     | 1.914     | 1.604   |
| Run | Time     | 203Tl    | 205Tl    | 206Pb   | 207Pb    | 208Pb    | 209Bi      |           |           |         |
|     |          | ppb      | ppb      | ppb     | ppb      | ppb      | ppb        |           |           |         |
| 1   | 04:34:53 | 0.009    | 0.007    | -0.007  | 0.001    | -0.000   | 109.963%   |           |           |         |
| 2   | 04:35:13 | 0.012    | 0.010    | -0.004  | -0.002   | -0.003   | 106.445%   |           |           |         |
| 3   | 04:35:32 | 0.005    | 0.011    | -0.006  | -0.004   | -0.001   | 103.068%   |           |           |         |
| X   |          | 0.009    | 0.009    | -0.006  | -0.002   | -0.001   | 106.492%   |           |           |         |
|     |          | $\sigma$ | 0.004    | 0.002   | 0.002    | 0.001    | 3.448%     |           |           |         |
|     |          | %RSD     | 40.330   | 24.710  | 28.590   | 140.400  | 99.600     |           |           |         |

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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    | 04:38:42 | 114.716% | 0.017    | 110.400 | 108.000   | 0.000     | 253400.000 | 30680.000 | 30970.000 |
| 2    | 04:39:01 | 111.881% | -0.031   | 114.100 | 117.000   | 0.000     | 262000.000 | 31590.000 | 31880.000 |
| 3    | 04:39:20 | 110.408% | -0.014   | 110.600 | 110.900   | 0.000     | 257300.000 | 30950.000 | 31320.000 |
| X    |          | 112.335% | -0.009   | 111.700 | 112.000   | 0.000     | 257500.000 | 31070.000 | 31390.000 |
| σ    |          | 2.190%   | 0.024    | 2.041   | 4.604     | 0.000     | 4304.000   | 466.100   | 456.400   |
| %RSD |          | 1.949    | 268.400  | 1.827   | 4.111     | 0.000     | 1.671      | 1.500     | 1.454     |
| Run  | Time     | 27Al     | 28Si     | 37Cl    | 39K       | 43Ca      | 44Ca       | 45Sc      | 47Ti      |
|      |          | ppb      | ppb      | ppb     | ppb       | ppb       | ppb        | ppb       | ppb       |
| 1    | 04:38:42 | 12.830   | -153.000 | 0.000   | 10170.000 | 10250.000 | 9462.000   | 107.809%  | 0.375     |
| 2    | 04:39:01 | 13.490   | -146.800 | 0.000   | 10490.000 | 10450.000 | 9722.000   | 105.826%  | 0.595     |
| 3    | 04:39:20 | 14.060   | -146.100 | 0.000   | 10210.000 | 10440.000 | 9743.000   | 105.978%  | 0.448     |
| X    |          | 13.460   | -148.600 | 0.000   | 10290.000 | 10380.000 | 9642.000   | 106.538%  | 0.473     |
| σ    |          | 0.614    | 3.813    | 0.000   | 173.300   | 112.000   | 156.300    | 1.103%    | 0.112     |
| %RSD |          | 4.561    | 2.565    | 0.000   | 1.684     | 1.079     | 1.621      | 1.036     | 23.660    |
| Run  | Time     | 51V      | 52Cr     | 55Mn    | 56Fe      | 57Fe      | 59Co       | 60Ni      | 63Cu      |
|      |          | ppb      | ppb      | ppb     | ppb       | ppb       | ppb        | ppb       | ppb       |
| 1    | 04:38:42 | 0.385    | 0.039    | 7.684   | 40.430    | 71.690    | 0.016      | 0.316     | 1.480     |
| 2    | 04:39:01 | 0.287    | 0.038    | 7.701   | 41.510    | 68.000    | 0.023      | 0.332     | 1.507     |
| 3    | 04:39:20 | 0.148    | 0.052    | 7.529   | 40.910    | 65.920    | 0.022      | 0.347     | 1.695     |
| X    |          | 0.273    | 0.043    | 7.638   | 40.950    | 68.540    | 0.020      | 0.332     | 1.560     |
| σ    |          | 0.119    | 0.008    | 0.095   | 0.544     | 2.922     | 0.004      | 0.016     | 0.117     |
| %RSD |          | 43.650   | 18.900   | 1.239   | 1.328     | 4.264     | 18.180     | 4.714     | 7.502     |
| Run  | Time     | 65Cu     | 66Zn     | 68Zn    | 75As      | 78Se      | 82Se       | 83Kr      | 88Sr      |
|      |          | ppb      | ppb      | ppb     | ppb       | ppb       | ppb        | ppb       | ppb       |
| 1    | 04:38:42 | 0.057    | 0.664    | 0.747   | 0.640     | 0.387     | 2.232      | 0.000     | 179.700   |
| 2    | 04:39:01 | 0.058    | 0.672    | 0.721   | 0.622     | 0.165     | 2.290      | 0.000     | 181.100   |
| 3    | 04:39:20 | 0.113    | 0.745    | 0.749   | 0.553     | 0.294     | 2.385      | 0.000     | 179.400   |
| X    |          | 0.076    | 0.694    | 0.739   | 0.605     | 0.282     | 2.302      | 0.000     | 180.100   |
| σ    |          | 0.032    | 0.044    | 0.015   | 0.046     | 0.112     | 0.077      | 0.000     | 0.914     |
| %RSD |          | 41.680   | 6.413    | 2.081   | 7.551     | 39.690    | 3.340      | 0.000     | 0.507     |
| Run  | Time     | 89Y      | 95Mo     | 98Mo    | 103Rh     | 107Ag     | 109Ag      | 111Cd     | 114Cd     |
|      |          | ppb      | ppb      | ppb     | ppb       | ppb       | ppb        | ppb       | ppb       |
| 1    | 04:38:42 | 96.945%  | 1.013    | 1.022   | 96.376%   | -0.022    | -0.012     | 0.045     | 0.034     |
| 2    | 04:39:01 | 98.111%  | 1.118    | 1.196   | 97.944%   | -0.018    | -0.017     | 0.055     | 0.042     |
| 3    | 04:39:20 | 99.958%  | 1.117    | 1.093   | 98.252%   | -0.019    | -0.023     | 0.003     | 0.011     |
| X    |          | 98.338%  | 1.083    | 1.104   | 97.524%   | -0.020    | -0.017     | 0.035     | 0.029     |
| σ    |          | 1.519%   | 0.060    | 0.088   | 1.006%    | 0.002     | 0.005      | 0.027     | 0.016     |
| %RSD |          | 1.545    | 5.567    | 7.953   | 1.031     | 12.350    | 29.140     | 79.450    | 55.570    |
| Run  | Time     | 115In    | 118Sn    | 121Sb   | 123Sb     | 135Ba     | 137Ba      | 159Tb     | 165Ho     |
|      |          | ppb      | ppb      | ppb     | ppb       | ppb       | ppb        | ppb       | ppb       |
| 1    | 04:38:42 | 93.229%  | -0.389   | 0.331   | 0.363     | 0.679     | 0.744      | 94.266%   | 93.823%   |
| 2    | 04:39:01 | 94.632%  | -0.353   | 0.378   | 0.309     | 0.769     | 0.788      | 96.488%   | 96.108%   |
| 3    | 04:39:20 | 95.356%  | -0.347   | 0.354   | 0.366     | 0.735     | 0.728      | 98.098%   | 96.945%   |
| X    |          | 94.406%  | -0.363   | 0.354   | 0.346     | 0.728     | 0.753      | 96.284%   | 95.625%   |
| σ    |          | 1.081%   | 0.023    | 0.024   | 0.032     | 0.045     | 0.031      | 1.924%    | 1.616%    |
| %RSD |          | 1.145    | 6.239    | 6.701   | 9.318     | 6.210     | 4.143      | 1.998     | 1.690     |
| Run  | Time     | 203Tl    | 205Tl    | 206Pb   | 207Pb     | 208Pb     | 209Bi      |           |           |
|      |          | ppb      | ppb      | ppb     | ppb       | ppb       | ppb        |           |           |
| 1    | 04:38:42 | 0.006    | 0.003    | 0.057   | 0.051     | 0.060     | 106.091%   |           |           |
| 2    | 04:39:01 | 0.008    | 0.009    | 0.062   | 0.063     | 0.063     | 101.346%   |           |           |
| 3    | 04:39:20 | 0.004    | 0.006    | 0.071   | 0.086     | 0.067     | 98.996%    |           |           |
| X    |          | 0.006    | 0.006    | 0.063   | 0.067     | 0.063     | 102.144%   |           |           |
| σ    |          | 0.002    | 0.003    | 0.007   | 0.018     | 0.004     | 3.614%     |           |           |
| %RSD |          | 28.400   | 48.360   | 11.310  | 26.970    | 5.879     | 3.538      |           |           |

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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   | 04:42:29 | 118.508% | -0.031   | 62.320  | 54.880   | 0.000    | 127400.000 | 15230.000 | 15480.000 |        |
| 2   | 04:42:48 | 116.439% | -0.031   | 57.040  | 56.530   | 0.000    | 130400.000 | 15340.000 | 15510.000 |        |
| 3   | 04:43:08 | 114.752% | 0.001    | 61.080  | 55.890   | 0.000    | 130000.000 | 15410.000 | 15540.000 |        |
| X   |          | 116.567% | -0.020   | 60.150  | 55.770   | 0.000    | 129300.000 | 15330.000 | 15510.000 |        |
|     |          | σ        | 1.881%   | 0.019   | 2.762    | 0.832    | 0.000      | 1648.000  | 88.920    | 29.000 |
|     |          | %RSD     | 1.614    | 92.610  | 4.593    | 1.492    | 0.000      | 1.275     | 0.580     | 0.187  |
| Run | Time     | 27Al     | 28Si     | 37Cl    | 39K      | 43Ca     | 44Ca       | 45Sc      | 47Ti      |        |
|     |          | ppb      | ppb      | ppb     | ppb      | ppb      | ppb        | ppb       | ppb       |        |
| 1   | 04:42:29 | -0.496   | -237.500 | 0.000   | 5104.000 | 5210.000 | 4832.000   | 109.117%  | -0.117    |        |
| 2   | 04:42:48 | -0.528   | -236.700 | 0.000   | 5184.000 | 5367.000 | 4847.000   | 107.771%  | -0.132    |        |
| 3   | 04:43:08 | -0.553   | -237.400 | 0.000   | 5217.000 | 5261.000 | 4872.000   | 107.497%  | -0.163    |        |
| X   |          | -0.525   | -237.200 | 0.000   | 5168.000 | 5279.000 | 4851.000   | 108.129%  | -0.137    |        |
|     |          | σ        | 0.029    | 0.441   | 0.000    | 58.210   | 80.030     | 20.530    | 0.867%    | 0.024  |
|     |          | %RSD     | 5.489    | 0.186   | 0.000    | 1.126    | 1.516      | 0.423     | 0.802     | 17.130 |
| Run | Time     | 51V      | 52Cr     | 55Mn    | 56Fe     | 57Fe     | 59Co       | 60Ni      | 63Cu      |        |
|     |          | ppb      | ppb      | ppb     | ppb      | ppb      | ppb        | ppb       | ppb       |        |
| 1   | 04:42:29 | 0.069    | 0.030    | 3.648   | 7.224    | 17.510   | 0.006      | 0.020     | 0.851     |        |
| 2   | 04:42:48 | 0.035    | -0.006   | 3.664   | 6.347    | 18.300   | 0.004      | -0.012    | 0.813     |        |
| 3   | 04:43:08 | 0.001    | 0.012    | 3.694   | 6.575    | 18.210   | 0.006      | 0.069     | 0.933     |        |
| X   |          | 0.035    | 0.012    | 3.669   | 6.715    | 18.000   | 0.005      | 0.025     | 0.866     |        |
|     |          | σ        | 0.034    | 0.018   | 0.024    | 0.455    | 0.429      | 0.002     | 0.041     | 0.061  |
|     |          | %RSD     | 98.390   | 147.800 | 0.641    | 6.775    | 2.384      | 29.540    | 160.400   | 7.076  |
| Run | Time     | 65Cu     | 66Zn     | 68Zn    | 75As     | 78Se     | 82Se       | 83Kr      | 88Sr      |        |
|     |          | ppb      | ppb      | ppb     | ppb      | ppb      | ppb        | ppb       | ppb       |        |
| 1   | 04:42:29 | 0.064    | 1.000    | 0.978   | 0.266    | -0.141   | 1.298      | 0.000     | 89.980    |        |
| 2   | 04:42:48 | 0.058    | 0.757    | 0.686   | 0.386    | 0.035    | 1.183      | 0.000     | 90.290    |        |
| 3   | 04:43:08 | 0.043    | 0.948    | 0.908   | 0.078    | -0.050   | 0.800      | 0.000     | 91.090    |        |
| X   |          | 0.055    | 0.902    | 0.858   | 0.243    | -0.052   | 1.094      | 0.000     | 90.450    |        |
|     |          | σ        | 0.011    | 0.128   | 0.153    | 0.155    | 0.088      | 0.261     | 0.000     | 0.572  |
|     |          | %RSD     | 19.700   | 14.220  | 17.810   | 63.790   | 170.100    | 23.870    | 0.000     | 0.633  |
| Run | Time     | 89Y      | 95Mo     | 98Mo    | 103Rh    | 107Ag    | 109Ag      | 111Cd     | 114Cd     |        |
|     |          | ppb      | ppb      | ppb     | ppb      | ppb      | ppb        | ppb       | ppb       |        |
| 1   | 04:42:29 | 100.729% | 0.559    | 0.595   | 100.031% | -0.023   | -0.022     | 0.050     | 0.030     |        |
| 2   | 04:42:48 | 101.165% | 0.711    | 0.654   | 101.029% | -0.026   | -0.024     | 0.037     | 0.023     |        |
| 3   | 04:43:08 | 101.173% | 0.716    | 0.671   | 101.071% | -0.027   | -0.017     | 0.023     | 0.016     |        |
| X   |          | 101.022% | 0.662    | 0.640   | 100.710% | -0.025   | -0.021     | 0.037     | 0.023     |        |
|     |          | σ        | 0.254%   | 0.089   | 0.040    | 0.589%   | 0.002      | 0.004     | 0.013     | 0.007  |
|     |          | %RSD     | 0.252    | 13.490  | 6.297    | 0.585    | 8.373      | 17.030    | 36.110    | 31.110 |
| Run | Time     | 115In    | 118Sn    | 121Sb   | 123Sb    | 135Ba    | 137Ba      | 159Tb     | 165Ho     |        |
|     |          | ppb      | ppb      | ppb     | ppb      | ppb      | ppb        | ppb       | ppb       |        |
| 1   | 04:42:29 | 95.332%  | -0.424   | 0.222   | 0.202    | 0.272    | 0.306      | 96.496%   | 94.806%   |        |
| 2   | 04:42:48 | 96.978%  | -0.392   | 0.235   | 0.238    | 0.311    | 0.353      | 98.069%   | 97.551%   |        |
| 3   | 04:43:08 | 97.888%  | -0.389   | 0.160   | 0.228    | 0.343    | 0.352      | 99.088%   | 97.557%   |        |
| X   |          | 96.733%  | -0.401   | 0.205   | 0.223    | 0.309    | 0.337      | 97.884%   | 96.638%   |        |
|     |          | σ        | 1.296%   | 0.020   | 0.040    | 0.019    | 0.036      | 0.027     | 1.306%    | 1.587% |
|     |          | %RSD     | 1.339    | 4.878   | 19.460   | 8.569    | 11.650     | 8.018     | 1.334     | 1.642  |
| Run | Time     | 203Tl    | 205Tl    | 206Pb   | 207Pb    | 208Pb    | 209Bi      |           |           |        |
|     |          | ppb      | ppb      | ppb     | ppb      | ppb      | ppb        |           |           |        |
| 1   | 04:42:29 | 0.001    | 0.002    | 0.001   | -0.000   | -0.002   | 103.732%   |           |           |        |
| 2   | 04:42:48 | 0.004    | 0.004    | -0.009  | -0.003   | -0.003   | 101.739%   |           |           |        |
| 3   | 04:43:08 | 0.004    | 0.001    | 0.002   | 0.004    | -0.000   | 100.124%   |           |           |        |
| X   |          | 0.003    | 0.002    | -0.002  | 0.000    | -0.002   | 101.865%   |           |           |        |
|     |          | σ        | 0.002    | 0.002   | 0.006    | 0.004    | 0.002      | 1.808%    |           |        |
|     |          | %RSD     | 64.700   | 67.490  | 299.800  | 1790.000 | 90.290     | 1.774     |           |        |

CRI 1554040 5/20/2015 4:49:46 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    | 04:50:05 | 121.553% | 0.863    | 21.440   | 19.380   | 0.000   | 445.800 | 437.000  | 440.100 |
| 2    | 04:50:25 | 119.304% | 0.897    | 18.550   | 19.230   | 0.000   | 463.700 | 456.300  | 455.500 |
| 3    | 04:50:44 | 118.197% | 0.703    | 19.110   | 18.510   | 0.000   | 454.600 | 452.700  | 440.600 |
| X    |          | 119.685% | 82.115%  | 98.503%  | 95.213%  | 0.000   | 90.937% | 89.738%  | 89.080% |
| σ    |          | 1.710%   | n/a      | n/a      | n/a      | 0.000   | n/a     | n/a      | n/a     |
| %RSD |          | 1.429    | 12.620   | 7.760    | 2.451    | 0.000   | 1.967   | 2.282    | 1.959   |
| Run  | Time     | 27Al     | 28Si     | 37Cl     | 39K      | 43Ca    | 44Ca    | 45Sc     | 47Ti    |
|      |          | ppb      | ppb      | ppb      | ppb      | ppb     | ppb     | ppb      | ppb     |
| 1    | 04:50:05 | 33.700   | 124.900  | 0.000    | 429.200  | 422.000 | 407.100 | 112.011% | 4.402   |
| 2    | 04:50:25 | 35.220   | 125.000  | 0.000    | 449.300  | 427.800 | 417.100 | 107.767% | 4.656   |
| 3    | 04:50:44 | 33.890   | 126.500  | 0.000    | 449.600  | 410.300 | 421.800 | 106.343% | 4.156   |
| X    |          | 114.241% | 25.094%  | 0.000    | 88.546%  | 84.008% | 83.065% | 108.707% | 88.100% |
| σ    |          | n/a      | n/a      | 0.000    | n/a      | n/a     | n/a     | 2.949%   | n/a     |
| %RSD |          | 2.409    | 0.731    | 0.000    | 2.638    | 2.120   | 1.804   | 2.712    | 5.678   |
| Run  | Time     | 51V      | 52Cr     | 55Mn     | 56Fe     | 57Fe    | 59Co    | 60Ni     | 63Cu    |
|      |          | ppb      | ppb      | ppb      | ppb      | ppb     | ppb     | ppb      | ppb     |
| 1    | 04:50:05 | 0.785    | 1.750    | 4.357    | 40.200   | 52.170  | 0.475   | 0.870    | 2.040   |
| 2    | 04:50:25 | 0.804    | 1.779    | 4.489    | 42.210   | 47.050  | 0.474   | 0.922    | 1.966   |
| 3    | 04:50:44 | 1.039    | 1.815    | 4.538    | 43.240   | 48.530  | 0.512   | 0.971    | 1.912   |
| X    |          | 87.613%  | 89.074%  | 89.228%  | 83.768%  | 98.504% | 97.395% | 92.139%  | 98.636% |
| σ    |          | n/a      | n/a      | n/a      | n/a      | n/a     | n/a     | n/a      | n/a     |
| %RSD |          | 16.110   | 1.817    | 2.095    | 3.685    | 5.356   | 4.533   | 5.480    | 3.265   |
| Run  | Time     | 65Cu     | 66Zn     | 68Zn     | 75As     | 78Se    | 82Se    | 83Kr     | 88Sr    |
|      |          | ppb      | ppb      | ppb      | ppb      | ppb     | ppb     | ppb      | ppb     |
| 1    | 04:50:05 | 1.995    | 7.187    | 7.278    | 1.033    | 3.849   | 4.739   | 0.000    | 4.625   |
| 2    | 04:50:25 | 1.814    | 7.610    | 7.562    | 1.028    | 3.617   | 4.759   | 0.000    | 4.728   |
| 3    | 04:50:44 | 2.121    | 7.596    | 7.571    | 1.021    | 4.274   | 4.866   | 0.000    | 4.611   |
| X    |          | 98.814%  | 149.288% | 149.406% | 102.745% | 78.272% | 95.762% | 0.000    | 93.087% |
| σ    |          | n/a      | n/a      | n/a      | n/a      | n/a     | n/a     | 0.000    | n/a     |
| %RSD |          | 7.808    | 3.222    | 2.228    | 0.573    | 8.515   | 1.420   | 0.000    | 1.374   |
| Run  | Time     | 89Y      | 95Mo     | 98Mo     | 103Rh    | 107Ag   | 109Ag   | 111Cd    | 114Cd   |
|      |          | ppb      | ppb      | ppb      | ppb      | ppb     | ppb     | ppb      | ppb     |
| 1    | 04:50:05 | 95.797%  | 4.444    | 4.349    | 97.139%  | 1.003   | 0.983   | 0.992    | 0.995   |
| 2    | 04:50:25 | 94.992%  | 4.280    | 4.277    | 97.249%  | 0.925   | 0.961   | 0.856    | 0.909   |
| 3    | 04:50:44 | 95.118%  | 4.310    | 4.329    | 96.997%  | 0.952   | 0.970   | 0.982    | 0.967   |
| X    |          | 95.302%  | 86.893%  | 86.368%  | 97.128%  | 96.020% | 97.129% | 94.331%  | 95.690% |
| σ    |          | 0.433%   | n/a      | n/a      | 0.127%   | n/a     | n/a     | n/a      | n/a     |
| %RSD |          | 0.455    | 2.003    | 0.855    | 0.130    | 4.109   | 1.127   | 8.019    | 4.587   |
| Run  | Time     | 115In    | 118Sn    | 121Sb    | 123Sb    | 135Ba   | 137Ba   | 159Tb    | 165Ho   |
|      |          | ppb      | ppb      | ppb      | ppb      | ppb     | ppb     | ppb      | ppb     |
| 1    | 04:50:05 | 92.569%  | 4.292    | 1.835    | 1.918    | 9.461   | 9.400   | 91.517%  | 91.214% |
| 2    | 04:50:25 | 92.813%  | 3.954    | 1.984    | 1.935    | 9.204   | 9.120   | 92.848%  | 91.878% |
| 3    | 04:50:44 | 93.006%  | 3.954    | 1.928    | 1.956    | 9.510   | 9.230   | 93.292%  | 92.835% |
| X    |          | 92.796%  | 81.333%  | 95.783%  | 96.809%  | 93.919% | 92.501% | 92.553%  | 91.976% |
| σ    |          | 0.219%   | n/a      | n/a      | n/a      | n/a     | n/a     | 0.924%   | 0.815%  |
| %RSD |          | 0.236    | 4.807    | 3.929    | 0.973    | 1.749   | 1.524   | 0.998    | 0.886   |
| Run  | Time     | 203Tl    | 205Tl    | 206Pb    | 207Pb    | 208Pb   | 209Bi   |          |         |
|      |          | ppb      | ppb      | ppb      | ppb      | ppb     | ppb     |          |         |
| 1    | 04:50:05 | 0.936    | 0.891    | 0.895    | 0.880    | 0.895   | 98.525% |          |         |
| 2    | 04:50:25 | 0.930    | 0.944    | 0.937    | 0.966    | 0.928   | 97.726% |          |         |
| 3    | 04:50:44 | 0.944    | 0.976    | 0.933    | 0.970    | 0.935   | 97.734% |          |         |
| X    |          | 93.666%  | 93.710%  | 92.157%  | 93.868%  | 91.906% | 97.995% |          |         |
| σ    |          | n/a      | n/a      | n/a      | n/a      | n/a     | 0.459%  |          |         |
| %RSD |          | 0.760    | 4.563    | 2.510    | 5.409    | 2.338   | 0.469   |          |         |

CRI 1554040 5/20/2015 4:53:37 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    | 04:53:56 | 113.885% | 0.802    | 23.450   | 20.160  | 0.000   | 436.600 | 425.000  | 432.700 |
| 2    | 04:54:15 | 117.517% | 1.043    | 17.880   | 18.600  | 0.000   | 422.800 | 421.500  | 422.800 |
| 3    | 04:54:34 | 116.279% | 0.850    | 20.230   | 19.020  | 0.000   | 410.900 | 404.400  | 419.700 |
| x    |          | 115.893% | 89.838%  | 102.610% | 96.296% | 0.000   | 84.683% | 83.395%  | 85.016% |
| σ    |          | 1.846%   | n/a      | n/a      | n/a     | 0.000   | n/a     | n/a      | n/a     |
| %RSD |          | 1.593    | 14.240   | 13.630   | 4.180   | 0.000   | 3.036   | 2.652    | 1.601   |
| Run  | Time     | 27Al     | 28Si     | 37Cl     | 39K     | 43Ca    | 44Ca    | 45Sc     | 47Ti    |
|      |          | ppb      | ppb      | ppb      | ppb     | ppb     | ppb     | ppb      | ppb     |
| 1    | 04:53:56 | 32.660   | 103.500  | 0.000    | 393.300 | 400.200 | 366.900 | 119.644% | 3.624   |
| 2    | 04:54:15 | 32.130   | 96.950   | 0.000    | 395.200 | 381.900 | 363.200 | 117.720% | 3.352   |
| 3    | 04:54:34 | 31.310   | 95.900   | 0.000    | 388.400 | 414.900 | 361.400 | 117.162% | 3.398   |
| x    |          | 106.774% | 19.758%  | 0.000    | 78.456% | 79.803% | 72.767% | 118.175% | 69.163% |
| σ    |          | n/a      | n/a      | 0.000    | n/a     | n/a     | n/a     | 1.302%   | n/a     |
| %RSD |          | 2.118    | 4.173    | 0.000    | 0.900   | 4.144   | 0.771   | 1.102    | 4.210   |
| Run  | Time     | 51V      | 52Cr     | 55Mn     | 56Fe    | 57Fe    | 59Co    | 60Ni     | 63Cu    |
|      |          | ppb      | ppb      | ppb      | ppb     | ppb     | ppb     | ppb      | ppb     |
| 1    | 04:53:56 | 0.720    | 1.446    | 3.732    | 29.190  | 40.900  | 0.406   | 0.785    | 1.747   |
| 2    | 04:54:15 | 0.696    | 1.593    | 3.864    | 29.680  | 41.290  | 0.427   | 0.929    | 1.709   |
| 3    | 04:54:34 | 0.731    | 1.551    | 3.779    | 29.700  | 42.390  | 0.379   | 0.838    | 1.724   |
| x    |          | 71.562%  | 76.493%  | 75.837%  | 59.049% | 83.048% | 80.804% | 85.062%  | 86.335% |
| σ    |          | n/a      | n/a      | n/a      | n/a     | n/a     | n/a     | n/a      | n/a     |
| %RSD |          | 2.507    | 4.961    | 1.770    | 0.981   | 1.868   | 5.909   | 8.529    | 1.098   |
| Run  | Time     | 65Cu     | 66Zn     | 68Zn     | 75As    | 78Se    | 82Se    | 83Kr     | 88Sr    |
|      |          | ppb      | ppb      | ppb      | ppb     | ppb     | ppb     | ppb      | ppb     |
| 1    | 04:53:56 | 1.683    | 6.351    | 6.187    | 0.708   | 2.078   | 3.366   | 0.000    | 3.689   |
| 2    | 04:54:15 | 1.685    | 6.299    | 6.097    | 0.686   | 2.350   | 3.662   | 0.000    | 3.787   |
| 3    | 04:54:34 | 1.797    | 6.407    | 6.524    | 0.685   | 2.647   | 3.570   | 0.000    | 3.688   |
| x    |          | 86.099%  | 127.043% | 125.390% | 69.295% | 47.165% | 70.656% | 0.000    | 74.426% |
| σ    |          | n/a      | n/a      | n/a      | n/a     | n/a     | n/a     | 0.000    | n/a     |
| %RSD |          | 3.789    | 0.847    | 3.594    | 1.896   | 12.080  | 4.282   | 0.000    | 1.524   |
| Run  | Time     | 89Y      | 95Mo     | 98Mo     | 103Rh   | 107Ag   | 109Ag   | 111Cd    | 114Cd   |
|      |          | ppb      | ppb      | ppb      | ppb     | ppb     | ppb     | ppb      | ppb     |
| 1    | 04:53:56 | 116.784% | 4.197    | 4.135    | 94.695% | 0.945   | 0.969   | 0.887    | 0.902   |
| 2    | 04:54:15 | 116.903% | 3.772    | 4.107    | 94.371% | 0.920   | 0.981   | 0.866    | 0.950   |
| 3    | 04:54:34 | 116.236% | 4.153    | 4.156    | 94.460% | 0.954   | 0.890   | 1.092    | 0.942   |
| x    |          | 116.641% | 80.815%  | 82.656%  | 94.509% | 93.969% | 94.653% | 94.870%  | 93.119% |
| σ    |          | 0.356%   | n/a      | n/a      | 0.167%  | n/a     | n/a     | n/a      | n/a     |
| %RSD |          | 0.305    | 5.778    | 0.606    | 0.177   | 1.916   | 5.247   | 13.150   | 2.705   |
| Run  | Time     | 115In    | 118Sn    | 121Sb    | 123Sb   | 135Ba   | 137Ba   | 159Tb    | 165Ho   |
|      |          | ppb      | ppb      | ppb      | ppb     | ppb     | ppb     | ppb      | ppb     |
| 1    | 04:53:56 | 89.992%  | 4.221    | 1.810    | 1.915   | 9.237   | 9.383   | 89.196%  | 88.491% |
| 2    | 04:54:15 | 90.238%  | 4.016    | 1.904    | 1.900   | 9.284   | 9.510   | 90.402%  | 89.463% |
| 3    | 04:54:34 | 91.259%  | 4.122    | 1.886    | 1.946   | 9.723   | 9.625   | 91.441%  | 90.690% |
| x    |          | 90.496%  | 82.397%  | 93.352%  | 96.010% | 94.145% | 95.059% | 90.346%  | 89.548% |
| σ    |          | 0.672%   | n/a      | n/a      | n/a     | n/a     | n/a     | 1.124%   | 1.102%  |
| %RSD |          | 0.742    | 2.488    | 2.678    | 1.242   | 2.849   | 1.277   | 1.244    | 1.230   |
| Run  | Time     | 203Tl    | 205Tl    | 206Pb    | 207Pb   | 208Pb   | 209Bi   |          |         |
|      |          | ppb      | ppb      | ppb      | ppb     | ppb     | ppb     |          |         |
| 1    | 04:53:56 | 0.913    | 0.962    | 0.899    | 0.915   | 0.909   | 97.387% |          |         |
| 2    | 04:54:15 | 0.944    | 0.955    | 0.934    | 0.894   | 0.936   | 96.333% |          |         |
| 3    | 04:54:34 | 0.961    | 0.959    | 0.960    | 0.947   | 0.950   | 95.343% |          |         |
| x    |          | 93.948%  | 95.859%  | 93.104%  | 91.844% | 93.177% | 96.354% |          |         |
| σ    |          | n/a      | n/a      | n/a      | n/a     | n/a     | 1.022%  |          |         |
| %RSD |          | 2.563    | 0.362    | 3.327    | 2.913   | 2.232   | 1.061   |          |         |



CCV 1558997 5/20/2015 4:57:34 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    | 04:57:34 | 109.243% | 100.500  | 101.000  | 96.690    | 0.000     | 48470.000 | 47970.000 | 49010.000 |
| 2    | 04:57:53 | 108.203% | 105.500  | 105.600  | 102.600   | 0.000     | 50020.000 | 49690.000 | 49540.000 |
| 3    | 04:58:12 | 107.835% | 100.300  | 104.100  | 99.320    | 0.000     | 48420.000 | 48780.000 | 49040.000 |
| X    |          | 108.427% | 102.098% | 103.573% | 99.518%   | 0.000     | 97.942%   | 97.629%   | 98.397%   |
| σ    |          | 0.730%   | n/a      | n/a      | n/a       | 0.000     | n/a       | n/a       | n/a       |
| %RSD |          | 0.673    | 2.860    | 2.254    | 2.951     | 0.000     | 1.848     | 1.766     | 0.597     |
| Run  | Time     | 27Al     | 28Si     | 37Cl     | 39K       | 43Ca      | 44Ca      | 45Sc      | 47Ti      |
|      |          | ppb      | ppb      | ppb      | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 04:57:34 | 470.700  | 4453.000 | 0.000    | 48360.000 | 47830.000 | 48290.000 | 96.580%   | 93.870    |
| 2    | 04:57:53 | 471.300  | 4507.000 | 0.000    | 50050.000 | 48420.000 | 48630.000 | 96.386%   | 98.690    |
| 3    | 04:58:12 | 464.300  | 4551.000 | 0.000    | 50730.000 | 49180.000 | 49070.000 | 96.999%   | 97.250    |
| X    |          | 93.754%  | 90.076%  | 0.000    | 99.431%   | 96.954%   | 97.328%   | 96.655%   | 96.604%   |
| σ    |          | n/a      | n/a      | 0.000    | n/a       | n/a       | n/a       | 0.313%    | n/a       |
| %RSD |          | 0.828    | 1.086    | 0.000    | 2.457     | 1.403     | 0.805     | 0.324     | 2.562     |
| Run  | Time     | 51V      | 52Cr     | 55Mn     | 56Fe      | 57Fe      | 59Co      | 60Ni      | 63Cu      |
|      |          | ppb      | ppb      | ppb      | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 04:57:34 | 94.270   | 97.140   | 467.400  | 24620.000 | 24360.000 | 97.340    | 97.360    | 100.300   |
| 2    | 04:57:53 | 96.260   | 96.960   | 474.700  | 25070.000 | 24790.000 | 98.720    | 99.310    | 101.600   |
| 3    | 04:58:12 | 96.270   | 98.260   | 485.200  | 25130.000 | 24930.000 | 98.550    | 100.800   | 101.600   |
| X    |          | 95.600%  | 97.454%  | 95.157%  | 99.761%   | 98.778%   | 98.201%   | 99.162%   | 101.177%  |
| σ    |          | n/a      | n/a      | n/a      | n/a       | n/a       | n/a       | n/a       | n/a       |
| %RSD |          | 1.201    | 0.726    | 1.876    | 1.107     | 1.196     | 0.768     | 1.749     | 0.712     |
| Run  | Time     | 65Cu     | 66Zn     | 68Zn     | 75As      | 78Se      | 82Se      | 83Kr      | 88Sr      |
|      |          | ppb      | ppb      | ppb      | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 04:57:34 | 100.100  | 96.680   | 94.660   | 98.960    | 101.700   | 102.200   | 0.000     | 94.690    |
| 2    | 04:57:53 | 101.300  | 96.040   | 97.590   | 99.220    | 97.770    | 96.340    | 0.000     | 95.610    |
| 3    | 04:58:12 | 101.300  | 96.460   | 96.210   | 98.870    | 101.100   | 97.510    | 0.000     | 95.600    |
| X    |          | 100.909% | 96.393%  | 96.153%  | 99.019%   | 100.162%  | 98.696%   | 0.000     | 95.301%   |
| σ    |          | n/a      | n/a      | n/a      | n/a       | n/a       | n/a       | 0.000     | n/a       |
| %RSD |          | 0.657    | 0.341    | 1.529    | 0.186     | 2.093     | 3.162     | 0.000     | 0.557     |
| Run  | Time     | 89Y      | 95Mo     | 98Mo     | 103Rh     | 107Ag     | 109Ag     | 111Cd     | 114Cd     |
|      |          | ppb      | ppb      | ppb      | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 04:57:34 | 89.016%  | 91.190   | 91.370   | 85.254%   | 98.220    | 100.000   | 101.300   | 102.200   |
| 2    | 04:57:53 | 89.353%  | 91.360   | 92.890   | 86.422%   | 99.720    | 101.600   | 102.400   | 104.900   |
| 3    | 04:58:12 | 90.443%  | 93.360   | 94.100   | 86.839%   | 99.840    | 101.200   | 101.900   | 105.000   |
| X    |          | 89.604%  | 91.969%  | 92.787%  | 86.172%   | 99.260%   | 100.939%  | 101.860%  | 104.042%  |
| σ    |          | 0.746%   | n/a      | n/a      | 0.822%    | n/a       | n/a       | n/a       | n/a       |
| %RSD |          | 0.833    | 1.309    | 1.472    | 0.953     | 0.906     | 0.839     | 0.538     | 1.499     |
| Run  | Time     | 115In    | 118Sn    | 121Sb    | 123Sb     | 135Ba     | 137Ba     | 159Tb     | 165Ho     |
|      |          | ppb      | ppb      | ppb      | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 04:57:34 | 76.622%  | 100.300  | 92.990   | 92.660    | 99.500    | 98.680    | 84.722%   | 83.664%   |
| 2    | 04:57:53 | 76.979%  | 101.700  | 93.470   | 93.440    | 100.300   | 99.760    | 85.498%   | 84.894%   |
| 3    | 04:58:12 | 78.529%  | 100.500  | 93.410   | 92.360    | 100.700   | 99.540    | 87.712%   | 86.693%   |
| X    |          | 77.376%  | 100.874% | 93.292%  | 92.819%   | 100.175%  | 99.325%   | 85.977%   | 85.084%   |
| σ    |          | 1.014%   | n/a      | n/a      | n/a       | n/a       | n/a       | 1.552%    | 1.524%    |
| %RSD |          | 1.310    | 0.750    | 0.280    | 0.602     | 0.611     | 0.575     | 1.805     | 1.791     |
| Run  | Time     | 203Tl    | 205Tl    | 206Pb    | 207Pb     | 208Pb     | 209Bi     |           |           |
|      |          | ppb      | ppb      | ppb      | ppb       | ppb       | ppb       |           |           |
| 1    | 04:57:34 | 90.130   | 93.140   | 89.780   | 89.180    | 88.690    | 91.484%   |           |           |
| 2    | 04:57:53 | 92.440   | 96.260   | 93.120   | 92.690    | 92.410    | 91.337%   |           |           |
| 3    | 04:58:12 | 94.060   | 97.970   | 94.110   | 93.820    | 93.840    | 91.207%   |           |           |
| X    |          | 92.211%  | 95.793%  | 92.336%  | 91.894%   | 91.643%   | 91.343%   |           |           |
| σ    |          | n/a      | n/a      | n/a      | n/a       | n/a       | 0.139%    |           |           |
| %RSD |          | 2.138    | 2.555    | 2.460    | 2.633     | 2.900     | 0.152     |           |           |

CCB9 5/20/2015 5:04:15 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    | 05:04:34 | 110.403% | 0.019    | 0.789   | 0.333    | 0.000   | 19.980  | 4.828    | 5.419   |
| 2    | 05:04:53 | 107.449% | 0.037    | 0.006   | 0.495    | 0.000   | 18.410  | 4.379    | 4.196   |
| 3    | 05:05:12 | 111.219% | 0.002    | 0.685   | 0.494    | 0.000   | 17.090  | 4.045    | 4.551   |
| X    |          | 109.690% | 0.019    | 0.493   | 0.441    | 0.000   | 18.490  | 4.417    | 4.722   |
| σ    |          | 1.983%   | 0.017    | 0.425   | 0.093    | 0.000   | 1.449   | 0.393    | 0.629   |
| %RSD |          | 1.808    | 89.730   | 86.250  | 21.160   | 0.000   | 7.834   | 8.904    | 13.330  |
| Run  | Time     | 27Al     | 28Si     | 37Cl    | 39K      | 43Ca    | 44Ca    | 45Sc     | 47Ti    |
|      |          | ppb      | ppb      | ppb     | ppb      | ppb     | ppb     | ppb      | ppb     |
| 1    | 05:04:34 | 0.382    | -301.400 | 0.000   | 14.420   | -2.566  | 4.188   | 112.221% | -0.150  |
| 2    | 05:04:53 | 0.423    | -300.700 | 0.000   | 14.180   | 0.384   | 2.961   | 112.332% | -0.181  |
| 3    | 05:05:12 | 0.434    | -300.300 | 0.000   | 14.490   | 12.470  | 3.605   | 110.227% | -0.165  |
| X    |          | 0.413    | -300.800 | 0.000   | 14.360   | 3.428   | 3.585   | 111.593% | -0.165  |
| σ    |          | 0.027    | 0.580    | 0.000   | 0.165    | 7.965   | 0.614   | 1.184%   | 0.015   |
| %RSD |          | 6.645    | 0.193    | 0.000   | 1.149    | 232.400 | 17.120  | 1.061    | 9.234   |
| Run  | Time     | 51V      | 52Cr     | 55Mn    | 56Fe     | 57Fe    | 59Co    | 60Ni     | 63Cu    |
|      |          | ppb      | ppb      | ppb     | ppb      | ppb     | ppb     | ppb      | ppb     |
| 1    | 05:04:34 | 0.020    | 0.003    | 0.022   | 1.843    | 5.280   | 0.005   | 0.001    | -0.005  |
| 2    | 05:04:53 | -0.012   | -0.048   | 0.014   | 2.890    | 5.890   | 0.005   | 0.009    | 0.001   |
| 3    | 05:05:12 | -0.010   | -0.060   | 0.029   | 1.930    | 5.549   | 0.009   | -0.008   | -0.013  |
| X    |          | -0.001   | -0.035   | 0.022   | 2.221    | 5.573   | 0.007   | 0.001    | -0.006  |
| σ    |          | 0.018    | 0.033    | 0.007   | 0.581    | 0.306   | 0.002   | 0.009    | 0.007   |
| %RSD |          | 2301.000 | 94.590   | 33.340  | 26.150   | 5.488   | 33.150  | 1073.000 | 124.900 |
| Run  | Time     | 65Cu     | 66Zn     | 68Zn    | 75As     | 78Se    | 82Se    | 83Kr     | 88Sr    |
|      |          | ppb      | ppb      | ppb     | ppb      | ppb     | ppb     | ppb      | ppb     |
| 1    | 05:04:34 | -0.010   | 4.706    | 4.669   | 0.049    | 0.288   | 0.318   | 0.000    | 0.013   |
| 2    | 05:04:53 | -0.003   | 4.718    | 4.829   | 0.069    | 0.552   | 0.072   | 0.000    | 0.020   |
| 3    | 05:05:12 | -0.025   | 4.828    | 4.984   | 0.087    | 0.150   | -0.026  | 0.000    | 0.012   |
| X    |          | -0.013   | 4.751    | 4.827   | 0.068    | 0.330   | 0.121   | 0.000    | 0.015   |
| σ    |          | 0.011    | 0.068    | 0.157   | 0.019    | 0.204   | 0.177   | 0.000    | 0.004   |
| %RSD |          | 86.670   | 1.424    | 3.256   | 28.320   | 61.930  | 146.200 | 0.000    | 28.120  |
| Run  | Time     | 89Y      | 95Mo     | 98Mo    | 103Rh    | 107Ag   | 109Ag   | 111Cd    | 114Cd   |
|      |          | ppb      | ppb      | ppb     | ppb      | ppb     | ppb     | ppb      | ppb     |
| 1    | 05:04:34 | 99.505%  | 0.716    | 0.743   | 101.965% | -0.016  | -0.011  | 0.034    | 0.043   |
| 2    | 05:04:53 | 99.275%  | 0.929    | 0.881   | 101.552% | -0.014  | -0.012  | 0.032    | 0.035   |
| 3    | 05:05:12 | 100.849% | 0.940    | 0.957   | 102.016% | -0.020  | -0.019  | 0.041    | 0.037   |
| X    |          | 99.876%  | 0.861    | 0.860   | 101.845% | -0.017  | -0.014  | 0.036    | 0.039   |
| σ    |          | 0.850%   | 0.126    | 0.109   | 0.254%   | 0.003   | 0.004   | 0.005    | 0.004   |
| %RSD |          | 0.851    | 14.680   | 12.640  | 0.250    | 16.760  | 30.670  | 13.060   | 10.880  |
| Run  | Time     | 115In    | 118Sn    | 121Sb   | 123Sb    | 135Ba   | 137Ba   | 159Tb    | 165Ho   |
|      |          | ppb      | ppb      | ppb     | ppb      | ppb     | ppb     | ppb      | ppb     |
| 1    | 05:04:34 | 94.846%  | -0.327   | 0.562   | 0.598    | -0.014  | 0.011   | 91.297%  | 90.523% |
| 2    | 05:04:53 | 95.177%  | -0.284   | 0.639   | 0.662    | 0.007   | 0.004   | 93.065%  | 92.120% |
| 3    | 05:05:12 | 95.785%  | -0.252   | 0.629   | 0.678    | 0.015   | 0.018   | 93.609%  | 92.559% |
| X    |          | 95.269%  | -0.288   | 0.610   | 0.646    | 0.003   | 0.011   | 92.657%  | 91.734% |
| σ    |          | 0.476%   | 0.037    | 0.042   | 0.042    | 0.015   | 0.007   | 1.209%   | 1.071%  |
| %RSD |          | 0.500    | 12.940   | 6.867   | 6.523    | 542.000 | 64.940  | 1.304    | 1.168   |
| Run  | Time     | 203Tl    | 205Tl    | 206Pb   | 207Pb    | 208Pb   | 209Bi   |          |         |
|      |          | ppb      | ppb      | ppb     | ppb      | ppb     | ppb     |          |         |
| 1    | 05:04:34 | 0.019    | 0.021    | 0.004   | -0.003   | -0.000  | 98.952% |          |         |
| 2    | 05:04:53 | 0.025    | 0.021    | -0.002  | -0.002   | -0.000  | 99.302% |          |         |
| 3    | 05:05:12 | 0.016    | 0.019    | 0.004   | -0.000   | 0.003   | 98.399% |          |         |
| X    |          | 0.020    | 0.020    | 0.002   | -0.002   | 0.001   | 98.885% |          |         |
| σ    |          | 0.004    | 0.001    | 0.004   | 0.001    | 0.002   | 0.455%  |          |         |
| %RSD |          | 22.570   | 5.697    | 165.800 | 82.570   | 188.800 | 0.460   |          |         |

PB 180-141971/1-C 5/20/2015 5:08:05 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    | 05:08:24 | 118.817% | -0.031   | 0.166   | 0.562   | 0.000  | 83.630   | 1.796   | 2.047   |
| 2    | 05:08:44 | 113.098% | 0.084    | 0.784   | 0.518   | 0.000  | 83.590   | 2.010   | 1.945   |
| 3    | 05:09:03 | 114.610% | -0.031   | 0.573   | 0.567   | 0.000  | 77.990   | 1.515   | 1.863   |
| X    |          | 115.508% | 0.008    | 0.507   | 0.549   | 0.000  | 81.740   | 1.774   | 1.952   |
| σ    |          | 2.964%   | 0.066    | 0.314   | 0.027   | 0.000  | 3.243    | 0.249   | 0.092   |
| %RSD |          | 2.566    | 872.700  | 61.890  | 4.935   | 0.000  | 3.967    | 14.020  | 4.728   |
| Run  | Time     | 27Al     | 28Si     | 37Cl    | 39K     | 43Ca   | 44Ca     | 45Sc    | 47Ti    |
|      |          | ppb      | ppb      | ppb     | ppb     | ppb    | ppb      | ppb     | ppb     |
| 1    | 05:08:24 | 0.168    | -302.700 | 0.000   | 51.490  | 6.297  | 4.678    | 97.002% | -0.121  |
| 2    | 05:08:44 | 0.334    | -301.200 | 0.000   | 50.200  | 3.016  | 6.773    | 96.110% | -0.102  |
| 3    | 05:09:03 | 0.217    | -302.100 | 0.000   | 47.600  | 4.557  | 8.447    | 97.691% | -0.157  |
| X    |          | 0.240    | -302.000 | 0.000   | 49.760  | 4.624  | 6.632    | 96.934% | -0.127  |
| σ    |          | 0.085    | 0.751    | 0.000   | 1.978   | 1.642  | 1.888    | 0.793%  | 0.028   |
| %RSD |          | 35.540   | 0.249    | 0.000   | 3.975   | 35.510 | 28.470   | 0.818   | 21.780  |
| Run  | Time     | 51V      | 52Cr     | 55Mn    | 56Fe    | 57Fe   | 59Co     | 60Ni    | 63Cu    |
|      |          | ppb      | ppb      | ppb     | ppb     | ppb    | ppb      | ppb     | ppb     |
| 1    | 05:08:24 | 0.025    | 0.023    | 0.011   | 1.451   | 1.952  | 0.000    | 1.263   | 2.391   |
| 2    | 05:08:44 | -0.053   | 0.020    | -0.006  | 1.609   | 3.161  | 0.000    | 1.241   | 2.326   |
| 3    | 05:09:03 | -0.012   | 0.055    | 0.010   | 0.866   | 2.974  | 0.004    | 0.985   | 2.260   |
| X    |          | -0.013   | 0.033    | 0.005   | 1.309   | 2.696  | 0.002    | 1.163   | 2.326   |
| σ    |          | 0.039    | 0.020    | 0.010   | 0.391   | 0.651  | 0.002    | 0.155   | 0.066   |
| %RSD |          | 288.000  | 60.490   | 192.700 | 29.880  | 24.140 | 153.900  | 13.300  | 2.818   |
| Run  | Time     | 65Cu     | 66Zn     | 68Zn    | 75As    | 78Se   | 82Se     | 83Kr    | 88Sr    |
|      |          | ppb      | ppb      | ppb     | ppb     | ppb    | ppb      | ppb     | ppb     |
| 1    | 05:08:24 | 2.305    | 2.919    | 2.897   | -0.047  | -0.295 | 0.135    | 0.000   | 0.010   |
| 2    | 05:08:44 | 2.420    | 2.725    | 2.909   | 0.001   | -0.349 | 0.167    | 0.000   | 0.017   |
| 3    | 05:09:03 | 2.412    | 3.037    | 2.891   | -0.030  | -0.247 | 0.061    | 0.000   | 0.011   |
| X    |          | 2.379    | 2.894    | 2.899   | -0.025  | -0.297 | 0.121    | 0.000   | 0.013   |
| σ    |          | 0.064    | 0.158    | 0.009   | 0.024   | 0.051  | 0.055    | 0.000   | 0.004   |
| %RSD |          | 2.693    | 5.445    | 0.322   | 97.990  | 17.210 | 45.160   | 0.000   | 31.150  |
| Run  | Time     | 89Y      | 95Mo     | 98Mo    | 103Rh   | 107Ag  | 109Ag    | 111Cd   | 114Cd   |
|      |          | ppb      | ppb      | ppb     | ppb     | ppb    | ppb      | ppb     | ppb     |
| 1    | 05:08:24 | 90.399%  | 0.315    | 0.273   | 93.027% | -0.021 | -0.009   | -0.004  | 0.003   |
| 2    | 05:08:44 | 90.451%  | 0.356    | 0.416   | 93.177% | -0.016 | -0.009   | 0.040   | 0.043   |
| 3    | 05:09:03 | 91.247%  | 0.452    | 0.443   | 93.328% | -0.022 | -0.006   | 0.049   | 0.039   |
| X    |          | 90.699%  | 0.374    | 0.377   | 93.178% | -0.020 | -0.008   | 0.029   | 0.028   |
| σ    |          | 0.475%   | 0.070    | 0.092   | 0.151%  | 0.003  | 0.002    | 0.029   | 0.022   |
| %RSD |          | 0.524    | 18.690   | 24.280  | 0.162   | 15.880 | 23.970   | 99.680  | 78.770  |
| Run  | Time     | 115In    | 118Sn    | 121Sb   | 123Sb   | 135Ba  | 137Ba    | 159Tb   | 165Ho   |
|      |          | ppb      | ppb      | ppb     | ppb     | ppb    | ppb      | ppb     | ppb     |
| 1    | 05:08:24 | 87.043%  | 0.105    | 0.387   | 0.406   | 0.036  | 0.015    | 88.589% | 87.822% |
| 2    | 05:08:44 | 88.700%  | 0.101    | 0.394   | 0.426   | 0.017  | 0.004    | 89.973% | 89.861% |
| 3    | 05:09:03 | 88.705%  | 0.078    | 0.371   | 0.342   | 0.004  | 0.031    | 91.682% | 90.475% |
| X    |          | 88.150%  | 0.095    | 0.384   | 0.391   | 0.019  | 0.017    | 90.082% | 89.386% |
| σ    |          | 0.958%   | 0.014    | 0.012   | 0.044   | 0.016  | 0.014    | 1.549%  | 1.389%  |
| %RSD |          | 1.087    | 15.030   | 3.075   | 11.280  | 84.190 | 81.250   | 1.720   | 1.554   |
| Run  | Time     | 203Tl    | 205Tl    | 206Pb   | 207Pb   | 208Pb  | 209Bi    |         |         |
|      |          | ppb      | ppb      | ppb     | ppb     | ppb    | ppb      |         |         |
| 1    | 05:08:24 | 0.004    | 0.004    | 0.005   | 0.007   | 0.004  | 111.367% |         |         |
| 2    | 05:08:44 | 0.010    | 0.004    | 0.008   | 0.011   | 0.008  | 104.631% |         |         |
| 3    | 05:09:03 | 0.004    | 0.005    | 0.003   | 0.011   | 0.008  | 100.862% |         |         |
| X    |          | 0.006    | 0.004    | 0.005   | 0.010   | 0.007  | 105.620% |         |         |
| σ    |          | 0.003    | 0.001    | 0.002   | 0.002   | 0.002  | 5.322%   |         |         |
| %RSD |          | 51.720   | 19.130   | 47.640  | 24.590  | 30.160 | 5.039    |         |         |

MB 180-142042/1-A 5/20/2015 5:11:53 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    | 05:12:12 | 115.870% | 0.001    | 0.467  | 0.459    | 0.000   | 29.940   | 1.962   | 1.622   |
| 2    | 05:12:31 | 117.022% | 0.017    | 1.130  | 0.394    | 0.000   | 27.280   | 2.002   | 1.267   |
| 3    | 05:12:50 | 114.242% | -0.014   | 0.088  | 0.489    | 0.000   | 26.200   | 1.633   | 1.458   |
| X    |          | 115.711% | 0.001    | 0.562  | 0.447    | 0.000   | 27.800   | 1.866   | 1.449   |
| σ    |          | 1.397%   | 0.016    | 0.528  | 0.049    | 0.000   | 1.926    | 0.202   | 0.178   |
| %RSD |          | 1.207    | 1209.000 | 93.960 | 10.850   | 0.000   | 6.928    | 10.840  | 12.280  |
| Run  | Time     | 27Al     | 28Si     | 37Cl   | 39K      | 43Ca    | 44Ca     | 45Sc    | 47Ti    |
|      |          | ppb      | ppb      | ppb    | ppb      | ppb     | ppb      | ppb     | ppb     |
| 1    | 05:12:12 | 0.353    | -302.700 | 0.000  | 12.620   | 4.529   | 4.684    | 97.931% | -0.192  |
| 2    | 05:12:31 | 0.062    | -302.400 | 0.000  | 11.120   | -2.137  | 5.903    | 97.004% | -0.156  |
| 3    | 05:12:50 | -0.046   | -301.700 | 0.000  | 11.700   | 2.884   | 4.902    | 97.647% | -0.157  |
| X    |          | 0.123    | -302.200 | 0.000  | 11.810   | 1.759   | 5.163    | 97.527% | -0.168  |
| σ    |          | 0.206    | 0.513    | 0.000  | 0.754    | 3.472   | 0.650    | 0.475%  | 0.020   |
| %RSD |          | 168.400  | 0.170    | 0.000  | 6.380    | 197.400 | 12.590   | 0.487   | 12.090  |
| Run  | Time     | 51V      | 52Cr     | 55Mn   | 56Fe     | 57Fe    | 59Co     | 60Ni    | 63Cu    |
|      |          | ppb      | ppb      | ppb    | ppb      | ppb     | ppb      | ppb     | ppb     |
| 1    | 05:12:12 | -0.014   | 0.068    | 0.072  | 2.309    | 5.026   | 0.002    | 0.083   | 0.054   |
| 2    | 05:12:31 | -0.045   | 0.033    | 0.070  | 3.065    | 3.127   | 0.003    | 0.059   | 0.061   |
| 3    | 05:12:50 | -0.013   | 0.060    | 0.038  | 1.766    | 2.735   | 0.000    | 0.049   | 0.069   |
| X    |          | -0.024   | 0.054    | 0.060  | 2.380    | 3.630   | 0.002    | 0.064   | 0.061   |
| σ    |          | 0.018    | 0.018    | 0.019  | 0.652    | 1.225   | 0.002    | 0.018   | 0.008   |
| %RSD |          | 75.790   | 34.290   | 31.850 | 27.410   | 33.760  | 84.430   | 28.000  | 12.260  |
| Run  | Time     | 65Cu     | 66Zn     | 68Zn   | 75As     | 78Se    | 82Se     | 83Kr    | 88Sr    |
|      |          | ppb      | ppb      | ppb    | ppb      | ppb     | ppb      | ppb     | ppb     |
| 1    | 05:12:12 | 0.054    | 1.188    | 1.233  | 0.102    | -0.691  | 0.014    | 0.000   | 0.019   |
| 2    | 05:12:31 | 0.028    | 1.257    | 1.084  | 0.120    | -0.183  | 0.086    | 0.000   | 0.012   |
| 3    | 05:12:50 | 0.077    | 1.268    | 1.179  | -0.186   | -0.063  | -0.082   | 0.000   | 0.014   |
| X    |          | 0.053    | 1.238    | 1.165  | 0.012    | -0.312  | 0.006    | 0.000   | 0.015   |
| σ    |          | 0.024    | 0.043    | 0.075  | 0.172    | 0.334   | 0.084    | 0.000   | 0.004   |
| %RSD |          | 46.060   | 3.497    | 6.460  | 1426.000 | 106.800 | 1338.000 | 0.000   | 23.470  |
| Run  | Time     | 89Y      | 95Mo     | 98Mo   | 103Rh    | 107Ag   | 109Ag    | 111Cd   | 114Cd   |
|      |          | ppb      | ppb      | ppb    | ppb      | ppb     | ppb      | ppb     | ppb     |
| 1    | 05:12:12 | 88.931%  | 0.231    | 0.157  | 92.753%  | -0.024  | -0.023   | 0.091   | 0.068   |
| 2    | 05:12:31 | 90.630%  | 0.272    | 0.242  | 93.787%  | -0.017  | -0.019   | 0.069   | 0.050   |
| 3    | 05:12:50 | 90.440%  | 0.282    | 0.219  | 93.145%  | -0.019  | -0.017   | 0.036   | 0.027   |
| X    |          | 90.001%  | 0.262    | 0.206  | 93.228%  | -0.020  | -0.020   | 0.065   | 0.048   |
| σ    |          | 0.931%   | 0.027    | 0.044  | 0.522%   | 0.004   | 0.003    | 0.028   | 0.021   |
| %RSD |          | 1.034    | 10.360   | 21.310 | 0.560    | 18.590  | 15.790   | 42.480  | 43.290  |
| Run  | Time     | 115In    | 118Sn    | 121Sb  | 123Sb    | 135Ba   | 137Ba    | 159Tb   | 165Ho   |
|      |          | ppb      | ppb      | ppb    | ppb      | ppb     | ppb      | ppb     | ppb     |
| 1    | 05:12:12 | 87.373%  | -0.414   | 0.266  | 0.253    | 0.000   | 0.020    | 87.976% | 87.331% |
| 2    | 05:12:31 | 87.753%  | -0.375   | 0.258  | 0.308    | -0.018  | 0.010    | 89.130% | 87.398% |
| 3    | 05:12:50 | 88.549%  | -0.362   | 0.245  | 0.213    | 0.031   | 0.004    | 89.688% | 88.786% |
| X    |          | 87.892%  | -0.384   | 0.256  | 0.258    | 0.004   | 0.011    | 88.931% | 87.838% |
| σ    |          | 0.600%   | 0.027    | 0.011  | 0.047    | 0.024   | 0.008    | 0.873%  | 0.821%  |
| %RSD |          | 0.683    | 7.040    | 4.111  | 18.360   | 561.100 | 70.130   | 0.981   | 0.935   |
| Run  | Time     | 203Tl    | 205Tl    | 206Pb  | 207Pb    | 208Pb   | 209Bi    |         |         |
|      |          | ppb      | ppb      | ppb    | ppb      | ppb     | ppb      |         |         |
| 1    | 05:12:12 | 0.000    | 0.002    | 0.275  | 0.236    | 0.251   | 99.325%  |         |         |
| 2    | 05:12:31 | 0.005    | 0.004    | 0.288  | 0.250    | 0.268   | 96.634%  |         |         |
| 3    | 05:12:50 | 0.004    | 0.003    | 0.264  | 0.276    | 0.270   | 95.275%  |         |         |
| X    |          | 0.003    | 0.003    | 0.276  | 0.254    | 0.263   | 97.078%  |         |         |
| σ    |          | 0.002    | 0.001    | 0.012  | 0.020    | 0.011   | 2.061%   |         |         |
| %RSD |          | 78.350   | 28.490   | 4.412  | 7.916    | 4.048   | 2.123    |         |         |

LCS 180-142042/2-A 5/20/2015 5:15:40 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    | 05:15:59 | 94.401%  | 50.780   | 1021.000 | 957.900   | 0.000     | 47320.000 | 46210.000 | 46940.000 |
| 2    | 05:16:18 | 94.284%  | 50.180   | 1006.000 | 989.500   | 0.000     | 48310.000 | 46230.000 | 47110.000 |
| 3    | 05:16:38 | 91.524%  | 49.090   | 971.500  | 943.800   | 0.000     | 46670.000 | 45840.000 | 45780.000 |
| X    |          | 93.403%  | 50.020   | 999.600  | 963.700   | 0.000     | 47430.000 | 46100.000 | 46610.000 |
| σ    |          | 1.629%   | 0.859    | 25.530   | 23.410    | 0.000     | 824.100   | 218.100   | 723.200   |
| %RSD |          | 1.744    | 1.717    | 2.554    | 2.429     | 0.000     | 1.737     | 0.473     | 1.552     |
| Run  | Time     | 27Al     | 28Si     | 37Cl     | 39K       | 43Ca      | 44Ca      | 45Sc      | 47Ti      |
|      |          | ppb      | ppb      | ppb      | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 05:15:59 | 1850.000 | 8942.000 | 0.000    | 47430.000 | 47160.000 | 46130.000 | 90.185%   | 924.000   |
| 2    | 05:16:18 | 1874.000 | 9011.000 | 0.000    | 48040.000 | 47120.000 | 46630.000 | 88.948%   | 931.200   |
| 3    | 05:16:38 | 1795.000 | 8744.000 | 0.000    | 47140.000 | 46420.000 | 46420.000 | 87.870%   | 933.800   |
| X    |          | 1840.000 | 8899.000 | 0.000    | 47540.000 | 46900.000 | 46390.000 | 89.001%   | 929.600   |
| σ    |          | 41.000   | 138.400  | 0.000    | 459.500   | 419.000   | 253.300   | 1.158%    | 5.086     |
| %RSD |          | 2.228    | 1.555    | 0.000    | 0.967     | 0.893     | 0.546     | 1.302     | 0.547     |
| Run  | Time     | 51V      | 52Cr     | 55Mn     | 56Fe      | 57Fe      | 59Co      | 60Ni      | 63Cu      |
|      |          | ppb      | ppb      | ppb      | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 05:15:59 | 466.700  | 183.500  | 446.900  | 948.500   | 1043.000  | 464.400   | 467.000   | 241.500   |
| 2    | 05:16:18 | 477.200  | 185.800  | 454.500  | 940.000   | 1055.000  | 474.100   | 472.100   | 243.200   |
| 3    | 05:16:38 | 467.700  | 184.200  | 453.400  | 945.200   | 1023.000  | 467.700   | 470.200   | 235.700   |
| X    |          | 470.600  | 184.500  | 451.600  | 944.600   | 1041.000  | 468.700   | 469.800   | 240.200   |
| σ    |          | 5.801    | 1.169    | 4.115    | 4.302     | 16.100    | 4.935     | 2.590     | 3.920     |
| %RSD |          | 1.233    | 0.633    | 0.911    | 0.455     | 1.547     | 1.053     | 0.551     | 1.632     |
| Run  | Time     | 65Cu     | 66Zn     | 68Zn     | 75As      | 78Se      | 82Se      | 83Kr      | 88Sr      |
|      |          | ppb      | ppb      | ppb      | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 05:15:59 | 244.400  | 458.800  | 458.700  | 37.120    | 9.801     | 9.861     | 0.000     | 987.500   |
| 2    | 05:16:18 | 244.200  | 463.700  | 459.900  | 37.500    | 9.866     | 9.485     | 0.000     | 978.700   |
| 3    | 05:16:38 | 240.900  | 456.800  | 456.100  | 36.690    | 9.499     | 9.480     | 0.000     | 986.800   |
| X    |          | 243.200  | 459.800  | 458.200  | 37.110    | 9.722     | 9.609     | 0.000     | 984.400   |
| σ    |          | 1.963    | 3.501    | 1.951    | 0.407     | 0.196     | 0.219     | 0.000     | 4.923     |
| %RSD |          | 0.807    | 0.761    | 0.426    | 1.097     | 2.015     | 2.276     | 0.000     | 0.500     |
| Run  | Time     | 89Y      | 95Mo     | 98Mo     | 103Rh     | 107Ag     | 109Ag     | 111Cd     | 114Cd     |
|      |          | ppb      | ppb      | ppb      | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 05:15:59 | 83.020%  | 904.100  | 903.700  | 83.341%   | 46.260    | 46.300    | 46.610    | 38.800    |
| 2    | 05:16:18 | 84.058%  | 925.100  | 925.700  | 83.464%   | 46.320    | 46.270    | 47.370    | 39.280    |
| 3    | 05:16:38 | 83.682%  | 932.400  | 944.100  | 83.250%   | 46.250    | 46.300    | 47.510    | 39.230    |
| X    |          | 83.587%  | 920.600  | 924.500  | 83.352%   | 46.270    | 46.290    | 47.160    | 39.100    |
| σ    |          | 0.525%   | 14.690   | 20.230   | 0.107%    | 0.037     | 0.019     | 0.482     | 0.269     |
| %RSD |          | 0.628    | 1.596    | 2.189    | 0.128     | 0.079     | 0.042     | 1.021     | 0.689     |
| Run  | Time     | 115In    | 118Sn    | 121Sb    | 123Sb     | 135Ba     | 137Ba     | 159Tb     | 165Ho     |
|      |          | ppb      | ppb      | ppb      | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 05:15:59 | 80.301%  | 1937.000 | 464.900  | 466.700   | 1835.000  | 1858.000  | 84.772%   | 85.723%   |
| 2    | 05:16:18 | 82.065%  | 1921.000 | 465.200  | 465.700   | 1840.000  | 1851.000  | 86.253%   | 86.378%   |
| 3    | 05:16:38 | 83.375%  | 1911.000 | 462.700  | 462.300   | 1824.000  | 1849.000  | 86.644%   | 87.847%   |
| X    |          | 81.914%  | 1923.000 | 464.300  | 464.900   | 1833.000  | 1853.000  | 85.890%   | 86.649%   |
| σ    |          | 1.543%   | 13.050   | 1.392    | 2.316     | 8.404     | 5.205     | 0.987%    | 1.088%    |
| %RSD |          | 1.883    | 0.679    | 0.300    | 0.498     | 0.459     | 0.281     | 1.149     | 1.255     |
| Run  | Time     | 203Tl    | 205Tl    | 206Pb    | 207Pb     | 208Pb     | 209Bi     |           |           |
|      |          | ppb      | ppb      | ppb      | ppb       | ppb       | ppb       |           |           |
| 1    | 05:15:59 | 40.220   | 41.400   | 17.550   | 17.410    | 17.450    | 90.548%   |           |           |
| 2    | 05:16:18 | 42.020   | 43.920   | 18.100   | 18.330    | 18.220    | 89.587%   |           |           |
| 3    | 05:16:38 | 43.550   | 45.340   | 18.570   | 18.780    | 18.680    | 87.507%   |           |           |
| X    |          | 41.930   | 43.560   | 18.070   | 18.170    | 18.120    | 89.214%   |           |           |
| σ    |          | 1.669    | 1.994    | 0.510    | 0.702     | 0.622     | 1.555%    |           |           |
| %RSD |          | 3.981    | 4.577    | 2.824    | 3.862     | 3.433     | 1.743     |           |           |

LCSD 180-142042/3-A 5/20/2015 5:19:28 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    | 05:19:47 | 91.966%  | 49.650   | 953.600  | 950.700   | 0.000     | 46870.000 | 45460.000 | 45650.000 |
| 2    | 05:20:06 | 85.556%  | 51.430   | 1030.000 | 970.000   | 0.000     | 48350.000 | 46880.000 | 47310.000 |
| 3    | 05:20:26 | 88.070%  | 51.690   | 998.300  | 935.400   | 0.000     | 47390.000 | 47350.000 | 47430.000 |
| x    |          | 88.531%  | 50.920   | 994.000  | 952.100   | 0.000     | 47540.000 | 46560.000 | 46790.000 |
| σ    |          | 3.230%   | 1.109    | 38.420   | 17.340    | 0.000     | 748.300   | 981.300   | 993.000   |
| %RSD |          | 3.648    | 2.178    | 3.866    | 1.821     | 0.000     | 1.574     | 2.107     | 2.122     |
| Run  | Time     | 27Al     | 28Si     | 37Cl     | 39K       | 43Ca      | 44Ca      | 45Sc      | 47Ti      |
|      |          | ppb      | ppb      | ppb      | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 05:19:47 | 1765.000 | 8590.000 | 0.000    | 46090.000 | 45500.000 | 45770.000 | 89.593%   | 895.100   |
| 2    | 05:20:06 | 1791.000 | 8608.000 | 0.000    | 47830.000 | 47450.000 | 47080.000 | 86.441%   | 914.200   |
| 3    | 05:20:26 | 1788.000 | 8551.000 | 0.000    | 47790.000 | 46990.000 | 46370.000 | 83.076%   | 908.200   |
| x    |          | 1781.000 | 8583.000 | 0.000    | 47240.000 | 46650.000 | 46410.000 | 86.370%   | 905.800   |
| σ    |          | 14.080   | 29.030   | 0.000    | 993.500   | 1020.000  | 652.200   | 3.259%    | 9.783     |
| %RSD |          | 0.790    | 0.338    | 0.000    | 2.103     | 2.187     | 1.405     | 3.773     | 1.080     |
| Run  | Time     | 51V      | 52Cr     | 55Mn     | 56Fe      | 57Fe      | 59Co      | 60Ni      | 63Cu      |
|      |          | ppb      | ppb      | ppb      | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 05:19:47 | 454.400  | 181.900  | 440.100  | 924.600   | 1000.000  | 457.600   | 460.400   | 233.900   |
| 2    | 05:20:06 | 467.200  | 183.000  | 446.300  | 932.300   | 1012.000  | 460.100   | 461.400   | 236.200   |
| 3    | 05:20:26 | 467.300  | 185.500  | 463.100  | 953.100   | 1039.000  | 467.700   | 468.100   | 235.400   |
| x    |          | 463.000  | 183.500  | 449.800  | 936.700   | 1017.000  | 461.800   | 463.300   | 235.200   |
| σ    |          | 7.415    | 1.885    | 11.940   | 14.740    | 19.800    | 5.218     | 4.170     | 1.169     |
| %RSD |          | 1.602    | 1.027    | 2.654    | 1.574     | 1.947     | 1.130     | 0.900     | 0.497     |
| Run  | Time     | 65Cu     | 66Zn     | 68Zn     | 75As      | 78Se      | 82Se      | 83Kr      | 88Sr      |
|      |          | ppb      | ppb      | ppb      | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 05:19:47 | 235.900  | 449.700  | 449.500  | 36.520    | 9.468     | 9.297     | 0.000     | 972.100   |
| 2    | 05:20:06 | 232.900  | 445.700  | 448.700  | 37.040    | 9.506     | 10.180    | 0.000     | 964.000   |
| 3    | 05:20:26 | 238.600  | 458.500  | 461.000  | 36.240    | 9.756     | 9.926     | 0.000     | 969.200   |
| x    |          | 235.800  | 451.300  | 453.100  | 36.600    | 9.577     | 9.801     | 0.000     | 968.400   |
| σ    |          | 2.841    | 6.569    | 6.854    | 0.404     | 0.157     | 0.455     | 0.000     | 4.096     |
| %RSD |          | 1.205    | 1.456    | 1.513    | 1.102     | 1.636     | 4.644     | 0.000     | 0.423     |
| Run  | Time     | 89Y      | 95Mo     | 98Mo     | 103Rh     | 107Ag     | 109Ag     | 111Cd     | 114Cd     |
|      |          | ppb      | ppb      | ppb      | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 05:19:47 | 82.631%  | 917.000  | 918.900  | 82.872%   | 45.170    | 45.010    | 46.130    | 38.120    |
| 2    | 05:20:06 | 82.485%  | 917.700  | 927.900  | 82.878%   | 44.910    | 44.810    | 46.630    | 37.770    |
| 3    | 05:20:26 | 81.493%  | 939.500  | 948.600  | 82.438%   | 44.810    | 45.590    | 46.240    | 38.640    |
| x    |          | 82.203%  | 924.700  | 931.800  | 82.730%   | 44.970    | 45.140    | 46.330    | 38.180    |
| σ    |          | 0.619%   | 12.780   | 15.210   | 0.252%    | 0.185     | 0.405     | 0.266     | 0.441     |
| %RSD |          | 0.754    | 1.382    | 1.633    | 0.305     | 0.410     | 0.898     | 0.574     | 1.156     |
| Run  | Time     | 115In    | 118Sn    | 121Sb    | 123Sb     | 135Ba     | 137Ba     | 159Tb     | 165Ho     |
|      |          | ppb      | ppb      | ppb      | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 05:19:47 | 80.915%  | 1888.000 | 452.600  | 454.100   | 1794.000  | 1822.000  | 86.393%   | 85.222%   |
| 2    | 05:20:06 | 81.480%  | 1897.000 | 452.500  | 455.200   | 1797.000  | 1820.000  | 87.386%   | 86.786%   |
| 3    | 05:20:26 | 81.787%  | 1880.000 | 455.300  | 457.400   | 1793.000  | 1818.000  | 88.640%   | 87.889%   |
| x    |          | 81.394%  | 1889.000 | 453.500  | 455.600   | 1795.000  | 1820.000  | 87.473%   | 86.632%   |
| σ    |          | 0.443%   | 8.286    | 1.564    | 1.690     | 2.377     | 2.178     | 1.126%    | 1.340%    |
| %RSD |          | 0.544    | 0.439    | 0.345    | 0.371     | 0.132     | 0.120     | 1.287     | 1.547     |
| Run  | Time     | 203Tl    | 205Tl    | 206Pb    | 207Pb     | 208Pb     | 209Bi     |           |           |
|      |          | ppb      | ppb      | ppb      | ppb       | ppb       | ppb       |           |           |
| 1    | 05:19:47 | 39.420   | 40.850   | 17.230   | 17.000    | 17.060    | 93.248%   |           |           |
| 2    | 05:20:06 | 41.830   | 43.020   | 17.560   | 17.930    | 17.730    | 91.139%   |           |           |
| 3    | 05:20:26 | 43.150   | 44.710   | 18.110   | 18.570    | 18.290    | 89.306%   |           |           |
| x    |          | 41.470   | 42.860   | 17.640   | 17.830    | 17.690    | 91.231%   |           |           |
| σ    |          | 1.890    | 1.933    | 0.443    | 0.788     | 0.618     | 1.972%    |           |           |
| %RSD |          | 4.559    | 4.511    | 2.514    | 4.417     | 3.495     | 2.162     |           |           |

180-44113-B-3-B 5/20/2015 5:23:16 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   | 05:23:36 | 111.536% | -0.014   | 10.920  | 11.490  | 0.000   | 58640.000 | 142.700 | 145.000  |        |
| 2   | 05:23:55 | 108.310% | -0.014   | 13.990  | 10.910  | 0.000   | 57560.000 | 146.100 | 140.900  |        |
| 3   | 05:24:14 | 110.262% | 0.003    | 11.550  | 12.960  | 0.000   | 58480.000 | 138.700 | 144.400  |        |
| X   |          | 110.036% | -0.008   | 12.150  | 11.790  | 0.000   | 58230.000 | 142.500 | 143.400  |        |
|     |          | σ        | 1.625%   | 0.010   | 1.624   | 1.058   | 0.000     | 582.900 | 3.680    | 2.252  |
|     |          | %RSD     | 1.477    | 118.000 | 13.360  | 8.976   | 0.000     | 1.001   | 2.582    | 1.570  |
| Run | Time     | 27Al     | 28Si     | 37Cl    | 39K     | 43Ca    | 44Ca      | 45Sc    | 47Ti     |        |
|     |          | ppb      | ppb      | ppb     | ppb     | ppb     | ppb       | ppb     | ppb      |        |
| 1   | 05:23:36 | 3.065    | -246.100 | 0.000   | 150.900 | 715.000 | 651.700   | 94.196% | 0.496    |        |
| 2   | 05:23:55 | 3.068    | -246.100 | 0.000   | 145.000 | 741.200 | 642.200   | 94.079% | 0.262    |        |
| 3   | 05:24:14 | 3.018    | -246.200 | 0.000   | 142.600 | 665.900 | 644.900   | 93.530% | 0.482    |        |
| X   |          | 3.051    | -246.100 | 0.000   | 146.200 | 707.300 | 646.300   | 93.935% | 0.414    |        |
|     |          | σ        | 0.028    | 0.072   | 0.000   | 4.290   | 38.230    | 4.902   | 0.355%   | 0.131  |
|     |          | %RSD     | 0.918    | 0.029   | 0.000   | 2.935   | 5.404     | 0.758   | 0.378    | 31.780 |
| Run | Time     | 51V      | 52Cr     | 55Mn    | 56Fe    | 57Fe    | 59Co      | 60Ni    | 63Cu     |        |
|     |          | ppb      | ppb      | ppb     | ppb     | ppb     | ppb       | ppb     | ppb      |        |
| 1   | 05:23:36 | 0.189    | 0.172    | 0.811   | 13.690  | 15.900  | 0.462     | 3.777   | 3.101    |        |
| 2   | 05:23:55 | 0.186    | 0.168    | 0.790   | 11.810  | 12.960  | 0.453     | 3.982   | 3.277    |        |
| 3   | 05:24:14 | -0.020   | 0.121    | 0.760   | 10.610  | 13.470  | 0.403     | 3.756   | 3.154    |        |
| X   |          | 0.118    | 0.154    | 0.787   | 12.040  | 14.110  | 0.440     | 3.838   | 3.177    |        |
|     |          | σ        | 0.120    | 0.029   | 0.026   | 1.549   | 1.574     | 0.032   | 0.125    | 0.090  |
|     |          | %RSD     | 101.100  | 18.710  | 3.257   | 12.870  | 11.160    | 7.218   | 3.245    | 2.841  |
| Run | Time     | 65Cu     | 66Zn     | 68Zn    | 75As    | 78Se    | 82Se      | 83Kr    | 88Sr     |        |
|     |          | ppb      | ppb      | ppb     | ppb     | ppb     | ppb       | ppb     | ppb      |        |
| 1   | 05:23:36 | 2.870    | 2.997    | 3.083   | 0.932   | 24.860  | 25.350    | 0.000   | 3.741    |        |
| 2   | 05:23:55 | 2.893    | 3.010    | 2.768   | 0.599   | 24.700  | 23.870    | 0.000   | 3.563    |        |
| 3   | 05:24:14 | 2.855    | 2.995    | 2.823   | 0.666   | 23.920  | 24.440    | 0.000   | 3.593    |        |
| X   |          | 2.873    | 3.001    | 2.891   | 0.732   | 24.490  | 24.550    | 0.000   | 3.632    |        |
|     |          | σ        | 0.019    | 0.008   | 0.168   | 0.176   | 0.505     | 0.746   | 0.000    | 0.095  |
|     |          | %RSD     | 0.663    | 0.275   | 5.823   | 24.050  | 2.061     | 3.036   | 0.000    | 2.627  |
| Run | Time     | 89Y      | 95Mo     | 98Mo    | 103Rh   | 107Ag   | 109Ag     | 111Cd   | 114Cd    |        |
|     |          | ppb      | ppb      | ppb     | ppb     | ppb     | ppb       | ppb     | ppb      |        |
| 1   | 05:23:36 | 89.878%  | 17.400   | 17.370  | 92.695% | -0.016  | -0.013    | 0.000   | -0.018   |        |
| 2   | 05:23:55 | 89.856%  | 18.250   | 18.590  | 92.406% | -0.015  | -0.009    | 0.023   | -0.024   |        |
| 3   | 05:24:14 | 91.575%  | 18.160   | 17.640  | 93.263% | -0.016  | -0.006    | -0.030  | -0.022   |        |
| X   |          | 90.436%  | 17.940   | 17.870  | 92.788% | -0.016  | -0.009    | -0.002  | -0.021   |        |
|     |          | σ        | 0.986%   | 0.466   | 0.640   | 0.436%  | 0.001     | 0.004   | 0.027    | 0.003  |
|     |          | %RSD     | 1.090    | 2.595   | 3.580   | 0.470   | 3.284     | 39.840  | 1169.000 | 12.210 |
| Run | Time     | 115In    | 118Sn    | 121Sb   | 123Sb   | 135Ba   | 137Ba     | 159Tb   | 165Ho    |        |
|     |          | ppb      | ppb      | ppb     | ppb     | ppb     | ppb       | ppb     | ppb      |        |
| 1   | 05:23:36 | 87.823%  | 5.062    | 0.096   | 0.103   | 0.369   | 0.420     | 90.285% | 88.873%  |        |
| 2   | 05:23:55 | 88.821%  | 5.126    | 0.135   | 0.122   | 0.321   | 0.376     | 91.330% | 90.696%  |        |
| 3   | 05:24:14 | 89.366%  | 4.957    | 0.112   | 0.134   | 0.369   | 0.308     | 92.889% | 92.698%  |        |
| X   |          | 88.670%  | 5.048    | 0.115   | 0.120   | 0.353   | 0.368     | 91.501% | 90.756%  |        |
|     |          | σ        | 0.782%   | 0.085   | 0.020   | 0.016   | 0.028     | 0.057   | 1.311%   | 1.913% |
|     |          | %RSD     | 0.882    | 1.691   | 17.160  | 12.960  | 7.827     | 15.400  | 1.432    | 2.108  |
| Run | Time     | 203Tl    | 205Tl    | 206Pb   | 207Pb   | 208Pb   | 209Bi     |         |          |        |
|     |          | ppb      | ppb      | ppb     | ppb     | ppb     | ppb       |         |          |        |
| 1   | 05:23:36 | 1.184    | 1.242    | 0.012   | 0.005   | 0.008   | 97.027%   |         |          |        |
| 2   | 05:23:55 | 0.946    | 0.968    | 0.006   | 0.011   | 0.010   | 95.331%   |         |          |        |
| 3   | 05:24:14 | 0.714    | 0.776    | 0.009   | 0.005   | 0.005   | 95.576%   |         |          |        |
| X   |          | 0.948    | 0.995    | 0.009   | 0.007   | 0.008   | 95.978%   |         |          |        |
|     |          | σ        | 0.235    | 0.234   | 0.003   | 0.004   | 0.002     | 0.917%  |          |        |
|     |          | %RSD     | 24.770   | 23.550  | 32.390  | 53.540  | 29.830    | 0.955   |          |        |

180-44113-B-4-B 5/20/2015 5:27:05 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    | 05:27:25 | 113.293% | 0.019    | 10.660 | 10.560  | 0.000    | 57060.000 | 171.500 | 175.300 |
| 2    | 05:27:45 | 113.797% | 0.002    | 10.430 | 10.680  | 0.000    | 56940.000 | 176.000 | 174.800 |
| 3    | 05:28:04 | 111.736% | -0.014   | 11.200 | 9.509   | 0.000    | 56000.000 | 165.300 | 168.700 |
| X    |          | 112.942% | 0.002    | 10.760 | 10.250  | 0.000    | 56670.000 | 170.900 | 173.000 |
| σ    |          | 1.074%   | 0.016    | 0.392  | 0.646   | 0.000    | 579.000   | 5.403   | 3.673   |
| %RSD |          | 0.951    | 753.500  | 3.641  | 6.301   | 0.000    | 1.022     | 3.161   | 2.124   |
| Run  | Time     | 27Al     | 28Si     | 37Cl   | 39K     | 43Ca     | 44Ca      | 45Sc    | 47Ti    |
|      |          | ppb      | ppb      | ppb    | ppb     | ppb      | ppb       | ppb     | ppb     |
| 1    | 05:27:25 | 4.216    | -247.200 | 0.000  | 120.200 | 1481.000 | 1395.000  | 94.588% | 0.008   |
| 2    | 05:27:45 | 4.327    | -246.000 | 0.000  | 119.200 | 1377.000 | 1411.000  | 93.467% | 0.083   |
| 3    | 05:28:04 | 4.144    | -247.100 | 0.000  | 117.200 | 1450.000 | 1379.000  | 94.379% | 0.279   |
| X    |          | 4.229    | -246.800 | 0.000  | 118.900 | 1436.000 | 1395.000  | 94.145% | 0.123   |
| σ    |          | 0.092    | 0.688    | 0.000  | 1.519   | 53.520   | 16.300    | 0.596%  | 0.140   |
| %RSD |          | 2.178    | 0.279    | 0.000  | 1.277   | 3.727    | 1.168     | 0.633   | 113.700 |
| Run  | Time     | 51V      | 52Cr     | 55Mn   | 56Fe    | 57Fe     | 59Co      | 60Ni    | 63Cu    |
|      |          | ppb      | ppb      | ppb    | ppb     | ppb      | ppb       | ppb     | ppb     |
| 1    | 05:27:25 | 0.036    | 0.051    | 19.800 | 8.734   | 13.390   | 0.481     | 0.448   | 0.443   |
| 2    | 05:27:45 | -0.050   | 0.096    | 20.600 | 8.803   | 12.790   | 0.502     | 0.439   | 0.504   |
| 3    | 05:28:04 | 0.240    | 0.058    | 20.180 | 7.485   | 13.640   | 0.508     | 0.545   | 0.506   |
| X    |          | 0.076    | 0.068    | 20.190 | 8.341   | 13.270   | 0.497     | 0.477   | 0.484   |
| σ    |          | 0.149    | 0.024    | 0.398  | 0.742   | 0.439    | 0.014     | 0.059   | 0.036   |
| %RSD |          | 196.800  | 35.200   | 1.969  | 8.896   | 3.311    | 2.870     | 12.340  | 7.404   |
| Run  | Time     | 65Cu     | 66Zn     | 68Zn   | 75As    | 78Se     | 82Se      | 83Kr    | 88Sr    |
|      |          | ppb      | ppb      | ppb    | ppb     | ppb      | ppb       | ppb     | ppb     |
| 1    | 05:27:25 | 0.193    | 6.719    | 6.682  | 0.431   | 9.081    | 9.240     | 0.000   | 4.731   |
| 2    | 05:27:45 | 0.188    | 6.350    | 6.592  | 0.178   | 9.003    | 9.188     | 0.000   | 4.786   |
| 3    | 05:28:04 | 0.261    | 6.687    | 6.031  | 0.533   | 8.907    | 10.090    | 0.000   | 4.766   |
| X    |          | 0.214    | 6.585    | 6.435  | 0.381   | 8.997    | 9.506     | 0.000   | 4.761   |
| σ    |          | 0.041    | 0.204    | 0.353  | 0.183   | 0.087    | 0.506     | 0.000   | 0.028   |
| %RSD |          | 19.180   | 3.106    | 5.484  | 47.950  | 0.969    | 5.327     | 0.000   | 0.586   |
| Run  | Time     | 89Y      | 95Mo     | 98Mo   | 103Rh   | 107Ag    | 109Ag     | 111Cd   | 114Cd   |
|      |          | ppb      | ppb      | ppb    | ppb     | ppb      | ppb       | ppb     | ppb     |
| 1    | 05:27:25 | 90.488%  | 4.690    | 4.797  | 92.805% | -0.023   | -0.020    | 0.067   | 0.066   |
| 2    | 05:27:45 | 89.801%  | 6.055    | 5.711  | 91.593% | -0.024   | -0.019    | -0.003  | -0.010  |
| 3    | 05:28:04 | 89.919%  | 5.737    | 5.813  | 91.865% | -0.025   | -0.016    | 0.029   | 0.020   |
| X    |          | 90.070%  | 5.494    | 5.440  | 92.088% | -0.024   | -0.018    | 0.031   | 0.025   |
| σ    |          | 0.367%   | 0.714    | 0.560  | 0.636%  | 0.001    | 0.002     | 0.035   | 0.038   |
| %RSD |          | 0.408    | 13.000   | 10.280 | 0.691   | 5.122    | 10.900    | 113.400 | 151.800 |
| Run  | Time     | 115In    | 118Sn    | 121Sb  | 123Sb   | 135Ba    | 137Ba     | 159Tb   | 165Ho   |
|      |          | ppb      | ppb      | ppb    | ppb     | ppb      | ppb       | ppb     | ppb     |
| 1    | 05:27:25 | 88.820%  | 1.145    | 0.017  | 0.040   | 0.636    | 0.600     | 90.904% | 90.335% |
| 2    | 05:27:45 | 87.232%  | 1.582    | 0.032  | 0.045   | 0.578    | 0.508     | 91.855% | 91.826% |
| 3    | 05:28:04 | 88.545%  | 1.549    | 0.050  | 0.064   | 0.458    | 0.504     | 92.886% | 92.298% |
| X    |          | 88.199%  | 1.425    | 0.033  | 0.050   | 0.557    | 0.537     | 91.882% | 91.486% |
| σ    |          | 0.849%   | 0.243    | 0.017  | 0.013   | 0.091    | 0.055     | 0.991%  | 1.024%  |
| %RSD |          | 0.962    | 17.050   | 50.500 | 25.910  | 16.310   | 10.150    | 1.079   | 1.120   |
| Run  | Time     | 203Tl    | 205Tl    | 206Pb  | 207Pb   | 208Pb    | 209Bi     |         |         |
|      |          | ppb      | ppb      | ppb    | ppb     | ppb      | ppb       |         |         |
| 1    | 05:27:25 | 0.099    | 0.093    | 0.011  | 0.013   | 0.013    | 99.116%   |         |         |
| 2    | 05:27:45 | 0.088    | 0.097    | 0.007  | 0.011   | 0.013    | 96.835%   |         |         |
| 3    | 05:28:04 | 0.100    | 0.092    | 0.014  | 0.008   | 0.013    | 96.989%   |         |         |
| X    |          | 0.096    | 0.094    | 0.011  | 0.010   | 0.013    | 97.647%   |         |         |
| σ    |          | 0.007    | 0.003    | 0.003  | 0.003   | 0.000    | 1.275%    |         |         |
| %RSD |          | 6.936    | 3.089    | 32.440 | 24.920  | 1.652    | 1.306     |         |         |



180-44113-B-4-B SD@5

5/20/2015 5:30:55 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    | 05:31:15 | 112.558% | 0.002    | 3.054  | 2.915   | 0.000   | 11340.000 | 36.340  | 35.560  |
| 2    | 05:31:34 | 106.838% | -0.031   | 3.225  | 3.201   | 0.000   | 11170.000 | 34.380  | 34.000  |
| 3    | 05:31:53 | 106.748% | -0.031   | 3.953  | 2.923   | 0.000   | 11410.000 | 34.120  | 37.490  |
| x    |          | 108.714% | -0.020   | 3.411  | 3.013   | 0.000   | 11310.000 | 34.950  | 35.680  |
| σ    |          | 3.329%   | 0.019    | 0.477  | 0.163   | 0.000   | 123.800   | 1.215   | 1.750   |
| %RSD |          | 3.062    | 96.130   | 13.990 | 5.402   | 0.000   | 1.095     | 3.476   | 4.904   |
| Run  | Time     | 27Al     | 28Si     | 37Cl   | 39K     | 43Ca    | 44Ca      | 45Sc    | 47Ti    |
|      |          | ppb      | ppb      | ppb    | ppb     | ppb     | ppb       | ppb     | ppb     |
| 1    | 05:31:15 | 0.264    | -294.000 | 0.000  | 27.310  | 281.500 | 274.900   | 99.582% | 0.014   |
| 2    | 05:31:34 | 0.082    | -291.900 | 0.000  | 29.020  | 321.200 | 284.500   | 97.695% | -0.086  |
| 3    | 05:31:53 | 0.304    | -291.100 | 0.000  | 27.360  | 293.600 | 282.600   | 97.919% | 0.123   |
| x    |          | 0.217    | -292.300 | 0.000  | 27.900  | 298.700 | 280.700   | 98.399% | 0.017   |
| σ    |          | 0.118    | 1.515    | 0.000  | 0.974   | 20.330  | 5.110     | 1.031%  | 0.105   |
| %RSD |          | 54.560   | 0.518    | 0.000  | 3.490   | 6.807   | 1.821     | 1.048   | 626.000 |
| Run  | Time     | 51V      | 52Cr     | 55Mn   | 56Fe    | 57Fe    | 59Co      | 60Ni    | 63Cu    |
|      |          | ppb      | ppb      | ppb    | ppb     | ppb     | ppb       | ppb     | ppb     |
| 1    | 05:31:15 | -0.024   | -0.035   | 3.956  | 1.296   | 3.957   | 0.109     | 0.115   | 0.088   |
| 2    | 05:31:34 | 0.033    | -0.026   | 3.987  | 0.528   | 4.457   | 0.097     | 0.051   | 0.117   |
| 3    | 05:31:53 | -0.011   | -0.023   | 3.987  | 0.204   | 3.683   | 0.119     | 0.081   | 0.110   |
| x    |          | -0.000   | -0.028   | 3.977  | 0.676   | 4.032   | 0.108     | 0.082   | 0.105   |
| σ    |          | 0.030    | 0.006    | 0.018  | 0.561   | 0.392   | 0.011     | 0.032   | 0.015   |
| %RSD |          | 6279.000 | 22.500   | 0.443  | 82.980  | 9.733   | 10.120    | 38.550  | 14.050  |
| Run  | Time     | 65Cu     | 66Zn     | 68Zn   | 75As    | 78Se    | 82Se      | 83Kr    | 88Sr    |
|      |          | ppb      | ppb      | ppb    | ppb     | ppb     | ppb       | ppb     | ppb     |
| 1    | 05:31:15 | 0.046    | 6.980    | 7.094  | 0.041   | 1.719   | 1.750     | 0.000   | 1.029   |
| 2    | 05:31:34 | 0.048    | 7.324    | 6.760  | 0.050   | 1.707   | 1.829     | 0.000   | 1.011   |
| 3    | 05:31:53 | 0.068    | 6.757    | 6.955  | 0.153   | 1.743   | 1.825     | 0.000   | 1.086   |
| x    |          | 0.054    | 7.021    | 6.936  | 0.081   | 1.723   | 1.801     | 0.000   | 1.042   |
| σ    |          | 0.012    | 0.285    | 0.168  | 0.062   | 0.018   | 0.044     | 0.000   | 0.039   |
| %RSD |          | 22.740   | 4.064    | 2.420  | 76.440  | 1.073   | 2.466     | 0.000   | 3.760   |
| Run  | Time     | 89Y      | 95Mo     | 98Mo   | 103Rh   | 107Ag   | 109Ag     | 111Cd   | 114Cd   |
|      |          | ppb      | ppb      | ppb    | ppb     | ppb     | ppb       | ppb     | ppb     |
| 1    | 05:31:15 | 86.300%  | 2.967    | 2.960  | 95.132% | -0.024  | -0.018    | -0.008  | -0.013  |
| 2    | 05:31:34 | 86.601%  | 3.540    | 3.653  | 94.156% | -0.024  | -0.021    | -0.002  | 0.005   |
| 3    | 05:31:53 | 86.684%  | 4.020    | 3.995  | 94.605% | -0.026  | -0.024    | 0.003   | 0.000   |
| x    |          | 86.528%  | 3.509    | 3.536  | 94.631% | -0.025  | -0.021    | -0.002  | -0.003  |
| σ    |          | 0.202%   | 0.527    | 0.527  | 0.489%  | 0.001   | 0.003     | 0.005   | 0.009   |
| %RSD |          | 0.234    | 15.030   | 14.900 | 0.517   | 5.116   | 14.420    | 243.600 | 337.300 |
| Run  | Time     | 115In    | 118Sn    | 121Sb  | 123Sb   | 135Ba   | 137Ba     | 159Tb   | 165Ho   |
|      |          | ppb      | ppb      | ppb    | ppb     | ppb     | ppb       | ppb     | ppb     |
| 1    | 05:31:15 | 88.919%  | 0.719    | 0.026  | 0.028   | 0.400   | 0.354     | 91.128% | 90.085% |
| 2    | 05:31:34 | 89.579%  | 1.011    | 0.010  | 0.064   | 0.337   | 0.310     | 91.641% | 90.965% |
| 3    | 05:31:53 | 90.036%  | 1.060    | 0.043  | 0.046   | 0.296   | 0.330     | 92.102% | 91.994% |
| x    |          | 89.511%  | 0.930    | 0.026  | 0.046   | 0.344   | 0.331     | 91.624% | 91.015% |
| σ    |          | 0.562%   | 0.184    | 0.017  | 0.018   | 0.052   | 0.022     | 0.487%  | 0.955%  |
| %RSD |          | 0.627    | 19.790   | 62.950 | 39.520  | 15.200  | 6.684     | 0.531   | 1.050   |
| Run  | Time     | 203Tl    | 205Tl    | 206Pb  | 207Pb   | 208Pb   | 209Bi     |         |         |
|      |          | ppb      | ppb      | ppb    | ppb     | ppb     | ppb       |         |         |
| 1    | 05:31:15 | 0.069    | 0.076    | 0.018  | 0.030   | 0.021   | 102.926%  |         |         |
| 2    | 05:31:34 | 0.080    | 0.076    | 0.013  | 0.018   | 0.022   | 100.620%  |         |         |
| 3    | 05:31:53 | 0.089    | 0.080    | 0.020  | 0.020   | 0.022   | 99.337%   |         |         |
| x    |          | 0.079    | 0.077    | 0.017  | 0.022   | 0.021   | 100.961%  |         |         |
| σ    |          | 0.010    | 0.002    | 0.004  | 0.006   | 0.001   | 1.819%    |         |         |
| %RSD |          | 12.530   | 3.152    | 22.040 | 27.870  | 3.840   | 1.801     |         |         |

CCV 1558997 5/20/2015 5:34:44 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    | 05:35:04 | 108.427% | 99.650   | 103.600  | 98.710    | 0.000     | 49550.000 | 48870.000 | 49540.000 |
| 2    | 05:35:23 | 106.509% | 101.800  | 102.400  | 99.370    | 0.000     | 49880.000 | 49370.000 | 49960.000 |
| 3    | 05:35:42 | 106.321% | 102.700  | 105.200  | 99.830    | 0.000     | 50500.000 | 48420.000 | 48970.000 |
| x    |          | 107.086% | 101.382% | 103.733% | 99.305%   | 0.000     | 99.955%   | 97.774%   | 98.983%   |
| σ    |          | 1.166%   | n/a      | n/a      | n/a       | 0.000     | n/a       | n/a       | n/a       |
| %RSD |          | 1.089    | 1.559    | 1.381    | 0.565     | 0.000     | 0.961     | 0.970     | 1.008     |
| Run  | Time     | 27Al     | 28Si     | 37Cl     | 39K       | 43Ca      | 44Ca      | 45Sc      | 47Ti      |
|      |          | ppb      | ppb      | ppb      | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 05:35:04 | 471.800  | 4575.000 | 0.000    | 50430.000 | 48840.000 | 49410.000 | 93.199%   | 99.380    |
| 2    | 05:35:23 | 468.400  | 4475.000 | 0.000    | 50580.000 | 50090.000 | 50550.000 | 92.328%   | 99.450    |
| 3    | 05:35:42 | 473.700  | 4521.000 | 0.000    | 50920.000 | 49600.000 | 50670.000 | 92.601%   | 97.130    |
| x    |          | 94.260%  | 90.472%  | 0.000    | 101.285%  | 99.017%   | 100.420%  | 92.709%   | 98.654%   |
| σ    |          | n/a      | n/a      | 0.000    | n/a       | n/a       | n/a       | 0.445%    | n/a       |
| %RSD |          | 0.578    | 1.103    | 0.000    | 0.496     | 1.276     | 1.385     | 0.480     | 1.337     |
| Run  | Time     | 51V      | 52Cr     | 55Mn     | 56Fe      | 57Fe      | 59Co      | 60Ni      | 63Cu      |
|      |          | ppb      | ppb      | ppb      | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 05:35:04 | 96.900   | 98.110   | 482.300  | 25450.000 | 24980.000 | 99.750    | 101.400   | 102.400   |
| 2    | 05:35:23 | 101.800  | 101.800  | 489.200  | 26130.000 | 25520.000 | 102.000   | 104.100   | 104.200   |
| 3    | 05:35:42 | 99.080   | 99.720   | 497.800  | 25720.000 | 24890.000 | 99.820    | 99.510    | 101.800   |
| x    |          | 99.260%  | 99.885%  | 97.956%  | 103.077%  | 100.515%  | 100.525%  | 101.655%  | 102.801%  |
| σ    |          | n/a      | n/a      | n/a      | n/a       | n/a       | n/a       | n/a       | n/a       |
| %RSD |          | 2.476    | 1.860    | 1.580    | 1.327     | 1.364     | 1.270     | 2.254     | 1.208     |
| Run  | Time     | 65Cu     | 66Zn     | 68Zn     | 75As      | 78Se      | 82Se      | 83Kr      | 88Sr      |
|      |          | ppb      | ppb      | ppb      | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 05:35:04 | 103.300  | 98.980   | 97.500   | 100.900   | 101.700   | 101.100   | 0.000     | 97.270    |
| 2    | 05:35:23 | 103.100  | 98.710   | 97.260   | 100.800   | 102.000   | 100.400   | 0.000     | 97.400    |
| 3    | 05:35:42 | 102.300  | 96.760   | 97.340   | 100.700   | 104.700   | 101.800   | 0.000     | 96.990    |
| x    |          | 102.904% | 98.150%  | 97.369%  | 100.823%  | 102.787%  | 101.094%  | 0.000     | 97.219%   |
| σ    |          | n/a      | n/a      | n/a      | n/a       | n/a       | n/a       | 0.000     | n/a       |
| %RSD |          | 0.491    | 1.236    | 0.125    | 0.103     | 1.602     | 0.681     | 0.000     | 0.214     |
| Run  | Time     | 89Y      | 95Mo     | 98Mo     | 103Rh     | 107Ag     | 109Ag     | 111Cd     | 114Cd     |
|      |          | ppb      | ppb      | ppb      | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 05:35:04 | 86.717%  | 95.330   | 95.090   | 85.853%   | 99.350    | 101.300   | 103.700   | 105.400   |
| 2    | 05:35:23 | 87.328%  | 96.060   | 96.030   | 86.199%   | 99.490    | 101.500   | 102.300   | 105.600   |
| 3    | 05:35:42 | 88.215%  | 99.610   | 99.330   | 86.626%   | 99.230    | 102.100   | 103.000   | 105.800   |
| x    |          | 87.420%  | 96.999%  | 96.815%  | 86.226%   | 99.358%   | 101.634%  | 102.993%  | 105.600%  |
| σ    |          | 0.753%   | n/a      | n/a      | 0.387%    | n/a       | n/a       | n/a       | n/a       |
| %RSD |          | 0.862    | 2.361    | 2.300    | 0.449     | 0.128     | 0.376     | 0.701     | 0.194     |
| Run  | Time     | 115In    | 118Sn    | 121Sb    | 123Sb     | 135Ba     | 137Ba     | 159Tb     | 165Ho     |
|      |          | ppb      | ppb      | ppb      | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 05:35:04 | 75.571%  | 103.700  | 93.660   | 93.990    | 101.800   | 100.100   | 84.864%   | 84.072%   |
| 2    | 05:35:23 | 76.703%  | 103.800  | 93.500   | 94.000    | 100.600   | 101.300   | 85.851%   | 85.161%   |
| 3    | 05:35:42 | 77.703%  | 104.300  | 93.990   | 93.520    | 99.820    | 100.500   | 86.953%   | 86.346%   |
| x    |          | 76.659%  | 103.956% | 93.717%  | 93.839%   | 100.709%  | 100.619%  | 85.889%   | 85.193%   |
| σ    |          | 1.067%   | n/a      | n/a      | n/a       | n/a       | n/a       | 1.045%    | 1.137%    |
| %RSD |          | 1.392    | 0.329    | 0.265    | 0.290     | 0.972     | 0.603     | 1.216     | 1.335     |
| Run  | Time     | 203Tl    | 205Tl    | 206Pb    | 207Pb     | 208Pb     | 209Bi     |           |           |
|      |          | ppb      | ppb      | ppb      | ppb       | ppb       | ppb       |           |           |
| 1    | 05:35:04 | 90.310   | 94.320   | 91.430   | 90.850    | 90.390    | 91.973%   |           |           |
| 2    | 05:35:23 | 93.100   | 97.350   | 93.780   | 93.430    | 93.100    | 90.427%   |           |           |
| 3    | 05:35:42 | 94.590   | 99.230   | 95.330   | 94.810    | 94.710    | 90.466%   |           |           |
| x    |          | 92.667%  | 96.964%  | 93.513%  | 93.031%   | 92.730%   | 90.956%   |           |           |
| σ    |          | n/a      | n/a      | n/a      | n/a       | n/a       | 0.882%    |           |           |
| %RSD |          | 2.343    | 2.554    | 2.103    | 2.161     | 2.356     | 0.969     |           |           |

CCB10 5/20/2015 5:41:45 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   | 05:42:05 | 111.574% | 0.002    | 0.481  | 1.176    | 0.000   | 13.840  | 4.272    | 5.379   |
| 2   | 05:42:24 | 115.028% | -0.015   | 1.029  | 0.663    | 0.000   | 12.880  | 4.940    | 4.126   |
| 3   | 05:42:43 | 114.543% | 0.033    | 0.750  | 0.948    | 0.000   | 12.370  | 4.153    | 4.054   |
| x   |          | 113.715% | 0.007    | 0.753  | 0.929    | 0.000   | 13.030  | 4.455    | 4.520   |
|     |          | 1.870%   | 0.024    | 0.274  | 0.257    | 0.000   | 0.747   | 0.424    | 0.745   |
|     |          | 1.645    | 355.200  | 36.360 | 27.640   | 0.000   | 5.735   | 9.521    | 16.480  |
| Run | Time     | 27Al     | 28Si     | 37Cl   | 39K      | 43Ca    | 44Ca    | 45Sc     | 47Ti    |
|     |          | ppb      | ppb      | ppb    | ppb      | ppb     | ppb     | ppb      | ppb     |
| 1   | 05:42:05 | 0.473    | -299.700 | 0.000  | 15.840   | 1.677   | 4.514   | 115.078% | -0.078  |
| 2   | 05:42:24 | 0.600    | -299.100 | 0.000  | 13.970   | 5.952   | 1.548   | 115.293% | -0.152  |
| 3   | 05:42:43 | 0.601    | -299.400 | 0.000  | 15.770   | 1.822   | 1.469   | 112.521% | -0.166  |
| x   |          | 0.558    | -299.400 | 0.000  | 15.190   | 3.150   | 2.510   | 114.297% | -0.132  |
|     |          | 0.074    | 0.312    | 0.000  | 1.058    | 2.428   | 1.736   | 1.542%   | 0.047   |
|     |          | 13.250   | 0.104    | 0.000  | 6.962    | 77.060  | 69.130  | 1.349    | 35.910  |
| Run | Time     | 51V      | 52Cr     | 55Mn   | 56Fe     | 57Fe    | 59Co    | 60Ni     | 63Cu    |
|     |          | ppb      | ppb      | ppb    | ppb      | ppb     | ppb     | ppb      | ppb     |
| 1   | 05:42:05 | 0.013    | -0.036   | 0.035  | 2.876    | 6.753   | 0.011   | -0.008   | -0.010  |
| 2   | 05:42:24 | 0.034    | -0.031   | 0.032  | 1.940    | 6.070   | 0.010   | 0.009    | -0.027  |
| 3   | 05:42:43 | -0.027   | -0.026   | 0.033  | 3.502    | 6.646   | 0.007   | 0.001    | -0.023  |
| x   |          | 0.006    | -0.031   | 0.033  | 2.773    | 6.490   | 0.009   | 0.000    | -0.020  |
|     |          | 0.031    | 0.005    | 0.001  | 0.786    | 0.367   | 0.002   | 0.008    | 0.009   |
|     |          | 484.600  | 15.540   | 4.057  | 28.370   | 5.663   | 19.920  | 2699.000 | 46.600  |
| Run | Time     | 65Cu     | 66Zn     | 68Zn   | 75As     | 78Se    | 82Se    | 83Kr     | 88Sr    |
|     |          | ppb      | ppb      | ppb    | ppb      | ppb     | ppb     | ppb      | ppb     |
| 1   | 05:42:05 | -0.012   | 5.048    | 4.759  | -0.004   | 0.226   | 0.145   | 0.000    | 0.016   |
| 2   | 05:42:24 | -0.016   | 4.774    | 4.470  | 0.136    | -0.076  | 0.541   | 0.000    | 0.016   |
| 3   | 05:42:43 | -0.022   | 4.798    | 4.792  | 0.060    | 0.413   | 0.328   | 0.000    | 0.017   |
| x   |          | -0.017   | 4.873    | 4.673  | 0.064    | 0.188   | 0.338   | 0.000    | 0.016   |
|     |          | 0.005    | 0.152    | 0.177  | 0.070    | 0.247   | 0.198   | 0.000    | 0.001   |
|     |          | 30.730   | 3.117    | 3.789  | 108.900  | 131.500 | 58.580  | 0.000    | 4.002   |
| Run | Time     | 89Y      | 95Mo     | 98Mo   | 103Rh    | 107Ag   | 109Ag   | 111Cd    | 114Cd   |
|     |          | ppb      | ppb      | ppb    | ppb      | ppb     | ppb     | ppb      | ppb     |
| 1   | 05:42:05 | 99.597%  | 1.421    | 1.434  | 102.205% | -0.013  | -0.015  | 0.051    | 0.035   |
| 2   | 05:42:24 | 100.624% | 1.812    | 1.854  | 102.415% | -0.016  | -0.018  | 0.040    | 0.027   |
| 3   | 05:42:43 | 100.685% | 2.008    | 2.036  | 102.380% | -0.013  | -0.015  | 0.035    | 0.030   |
| x   |          | 100.302% | 1.747    | 1.775  | 102.334% | -0.014  | -0.016  | 0.042    | 0.030   |
|     |          | 0.611%   | 0.299    | 0.309  | 0.112%   | 0.002   | 0.002   | 0.008    | 0.004   |
|     |          | 0.609    | 17.110   | 17.410 | 0.110    | 13.100  | 10.690  | 19.960   | 13.390  |
| Run | Time     | 115In    | 118Sn    | 121Sb  | 123Sb    | 135Ba   | 137Ba   | 159Tb    | 165Ho   |
|     |          | ppb      | ppb      | ppb    | ppb      | ppb     | ppb     | ppb      | ppb     |
| 1   | 05:42:05 | 94.430%  | 0.068    | 0.589  | 0.575    | 0.003   | 0.018   | 91.404%  | 90.233% |
| 2   | 05:42:24 | 95.980%  | 0.135    | 0.696  | 0.656    | 0.023   | 0.034   | 92.830%  | 91.547% |
| 3   | 05:42:43 | 94.668%  | 0.142    | 0.685  | 0.720    | -0.001  | 0.018   | 94.095%  | 91.765% |
| x   |          | 95.026%  | 0.115    | 0.656  | 0.651    | 0.008   | 0.024   | 92.776%  | 91.182% |
|     |          | 0.835%   | 0.041    | 0.059  | 0.073    | 0.013   | 0.009   | 1.346%   | 0.829%  |
|     |          | 0.878    | 35.420   | 8.936  | 11.170   | 158.100 | 40.150  | 1.451    | 0.909   |
| Run | Time     | 203Tl    | 205Tl    | 206Pb  | 207Pb    | 208Pb   | 209Bi   |          |         |
|     |          | ppb      | ppb      | ppb    | ppb      | ppb     | ppb     |          |         |
| 1   | 05:42:05 | 0.046    | 0.057    | -0.001 | 0.001    | -0.000  | 99.019% |          |         |
| 2   | 05:42:24 | 0.051    | 0.060    | -0.003 | 0.005    | -0.001  | 98.482% |          |         |
| 3   | 05:42:43 | 0.050    | 0.064    | -0.010 | 0.001    | 0.001   | 97.749% |          |         |
| x   |          | 0.049    | 0.060    | -0.005 | 0.002    | -0.000  | 98.417% |          |         |
|     |          | 0.003    | 0.004    | 0.005  | 0.002    | 0.001   | 0.637%  |          |         |
|     |          | 6.041    | 6.443    | 96.310 | 91.280   | 292.600 | 0.648   |          |         |

## Performance Report

### Sample details

Sample name : ITUNE

Acquired at : 5/19/2015 2:38:49 PM

Report name : EPA ILMO5.2/6020A 2.1 [3/15/2013 11:49:53 AM]

### Mass Calibration verification

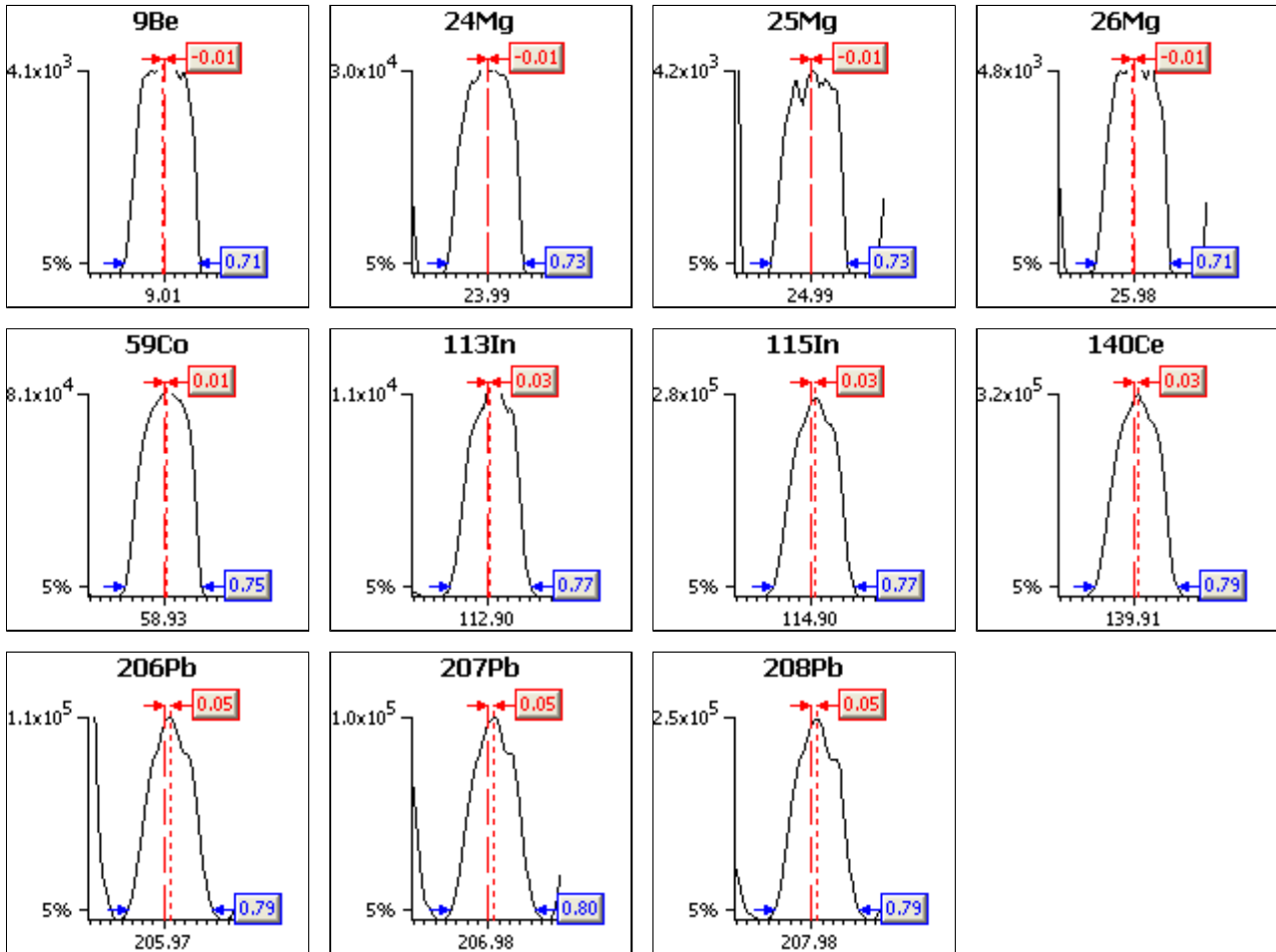
#### Acquisition parameters

Sweeps : 25

Dwell : 2.0 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       | 0.45       | 0.10       | 0.71       | -0.01      |
| <b>24Mg</b>  | 0.90       | 0.45       | 0.10       | 0.73       | -0.01      |
| <b>25Mg</b>  | 0.90       | 0.45       | 0.10       | 0.73       | -0.01      |
| <b>26Mg</b>  | 0.90       | 0.45       | 0.10       | 0.71       | -0.01      |
| <b>59Co</b>  | 0.90       | 0.45       | 0.10       | 0.75       | 0.01       |
| <b>113In</b> | 0.90       | 0.45       | 0.10       | 0.77       | 0.03       |
| <b>115In</b> | 0.90       | 0.45       | 0.10       | 0.77       | 0.03       |
| <b>140Ce</b> | 0.90       | 0.45       | 0.10       | 0.79       | 0.03       |
| <b>206Pb</b> | 0.90       | 0.45       | 0.10       | 0.79       | 0.05       |
| <b>207Pb</b> | 0.90       | 0.45       | 0.10       | 0.80       | 0.05       |
| <b>208Pb</b> | 0.90       | 0.45       | 0.10       | 0.79       | 0.05       |

**Sample details**

Sample name : ITUNE

Acquired at : 5/19/2015 2:38:49 PM

Report name : EPA ILM05.2/6020A 2.1 [3/15/2013 11:49:53 AM]

**Tune conditions**

| Major          |       | Minor         |        | Global              |     | Add. Gases |      |
|----------------|-------|---------------|--------|---------------------|-----|------------|------|
| Extraction     | -129  | Lens 2        | -32.2  | Standard resolution | n/a | He/H2      | 0.00 |
| Lens 1         | 0.3   | Lens 3        | -163.9 | High resolution     | n/a | He/NH3     | 0.00 |
| Focus          | 26.7  | Forward power | 1404   | Analogue Detector   | n/a |            |      |
| D1             | -42.4 | Horizontal    | 74     | PC Detector         | n/a |            |      |
| Pole Bias      | 3.0   | Vertical      | 405    |                     |     |            |      |
| Hexapole Bias  | -3.0  | D2            | -160   |                     |     |            |      |
| Nebuliser      | 0.89  | DA            | -80.0  |                     |     |            |      |
| Sampling Depth | 150   | Cool          | 13.0   |                     |     |            |      |
|                |       | Auxiliary     | 0.90   |                     |     |            |      |

**Sensitivity and stability results****Acquisition parameters**

Sweeps : 150

| Run                  | Time             | 5Bkg    | 9Be   | 24Mg   | 25Mg  | 26Mg  | 56Ar O  | 59Co   | 137Ba++ |
|----------------------|------------------|---------|-------|--------|-------|-------|---------|--------|---------|
| <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%   | -       |
|                      | <b>Countrate</b> | -       | >500  | >500   | >500  | >500  | -       | >5000  | -       |
| 1                    | 2:39:37 PM       | 0       | 4142  | 29853  | 4080  | 4870  | 243092  | 83960  | 1       |
| 2                    | 2:41:02 PM       | 0       | 4333  | 30271  | 4178  | 5008  | 241000  | 84579  | 1       |
| 3                    | 2:42:27 PM       | 0       | 4336  | 30462  | 4097  | 5046  | 244224  | 85166  | 3       |
| 4                    | 2:43:53 PM       | 0       | 4307  | 30318  | 4156  | 4986  | 245450  | 84993  | 3       |
| 5                    | 2:45:18 PM       | 0       | 4398  | 31040  | 4157  | 5060  | 248002  | 85874  | 3       |
| x                    |                  | 0       | 4303  | 30389  | 4134  | 4994  | 244354  | 84915  | 2       |
| σ                    |                  | 0.03    | 96.12 | 428.95 | 42.42 | 75.50 | 2615.54 | 709.50 | 1.01    |
| <b>%RSD</b>          |                  | 223.607 | 2.234 | 1.412  | 1.026 | 1.512 | 1.070   | 0.836  | 42.127  |

| Run                  | Time             | 138Ba++ | 101Bkg | 113In | 115In   | 138Ba | 140Ce   | 156Ce O | 206Pb   |
|----------------------|------------------|---------|--------|-------|---------|-------|---------|---------|---------|
| <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%    |
|                      | <b>Countrate</b> | -       | -      | >200  | >5000   | -     | >10000  | -       | >500    |
| 1                    | 2:39:37 PM       | 20      | 0      | 11604 | 269203  | 2480  | 328122  | 3288    | 115247  |
| 2                    | 2:41:02 PM       | 20      | 0      | 11677 | 275357  | 2433  | 335219  | 3299    | 118457  |
| 3                    | 2:42:27 PM       | 21      | 0      | 11759 | 276171  | 2524  | 334622  | 3306    | 119929  |
| 4                    | 2:43:53 PM       | 15      | 0      | 11864 | 275641  | 2548  | 334380  | 3280    | 119319  |
| 5                    | 2:45:18 PM       | 15      | 0      | 11748 | 274131  | 2443  | 331293  | 3309    | 116521  |
| x                    |                  | 18      | 0      | 11730 | 274101  | 2486  | 332727  | 3296    | 117895  |
| σ                    |                  | 2.91    | 0.09   | 97.01 | 2838.40 | 50.12 | 2991.43 | 12.41   | 1961.15 |
| <b>%RSD</b>          |                  | 16.063  | 70.711 | 0.827 | 1.036   | 2.016 | 0.899   | 0.376   | 1.663   |

| Run                  | Time             | 207Pb   | 208Pb   | 220Bkg |
|----------------------|------------------|---------|---------|--------|
| <b>Dwell (mSecs)</b> |                  | 0.0     | 0.0     | 0.0    |
| <b>Limits</b>        | <b>%RSD</b>      | 5.0%    | 5.0%    | -      |
|                      | <b>Countrate</b> | >500    | >500    | <2500  |
| 1                    | 2:39:37 PM       | 104377  | 248572  | 0      |
| 2                    | 2:41:02 PM       | 108121  | 256266  | 0      |
| 3                    | 2:42:27 PM       | 109375  | 258852  | 0      |
| 4                    | 2:43:53 PM       | 109422  | 258705  | 0      |
| 5                    | 2:45:18 PM       | 105891  | 252057  | 0      |
| x                    |                  | 107437  | 254890  | 0      |
| σ                    |                  | 2231.21 | 4474.70 | 0.04   |
| <b>%RSD</b>          |                  | 2.077   | 1.756   | 91.287 |

**Ratio results**

| Run                 | Time       | 156Ce O/140Ce |
|---------------------|------------|---------------|
| <b>Ratio limits</b> |            | <0.0500       |
| 1                   | 2:39:37 PM | 0             |
| 2                   | 2:41:02 PM | 0             |

|           |            |        |
|-----------|------------|--------|
| 3         | 2:42:27 PM | 0      |
| 4         | 2:43:53 PM | 0      |
| 5         | 2:45:18 PM | 0      |
| $\bar{x}$ |            | 0.0099 |
| $\sigma$  |            | 0.00   |
| %RSD      |            | 0.9327 |

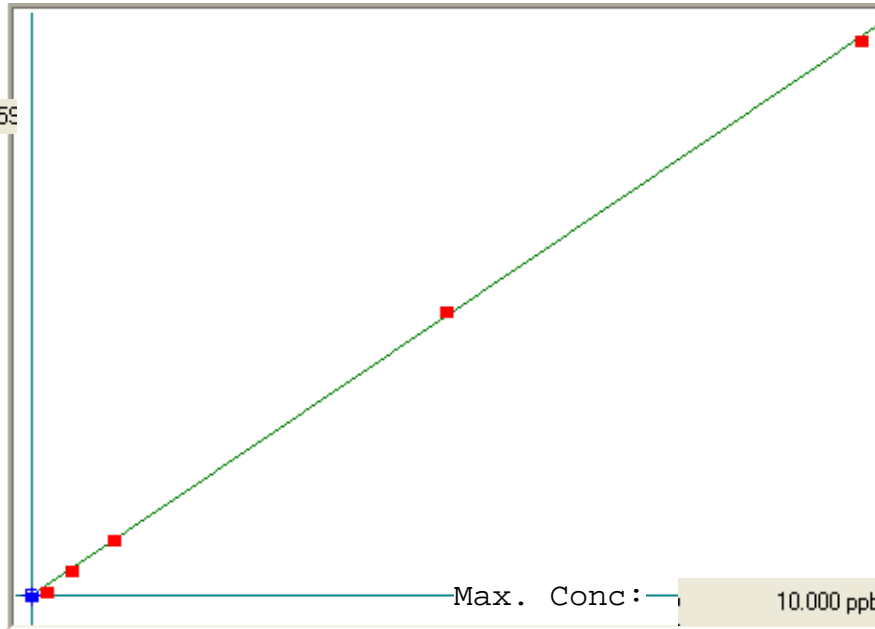
Result : The performance report passed.

METHG

Linear

μ Abs. :

41559



A= 0.0000e+000

B= 2.3888e-004

C= 1.1999e-002

Rho= 0.9998378

Accept = Accepted

Accepted  Date=

05/18/15 14:46

| Std ID  | Conc.  | Calc. | Dev.   | Mean  | SD or %RSD | Rep 1 | Rep 2 | Rep 3 | Rep 4 | Rep 5 |
|---------|--------|-------|--------|-------|------------|-------|-------|-------|-------|-------|
| blank   | 0.000  | 0.017 | 0.017  | 22    | 0.000      | 22    |       |       |       |       |
| .2ppb   | 0.200  | 0.110 | -0.090 | 411   | 0.0 %      | 411   |       |       |       |       |
| .5ppb   | 0.500  | 0.492 | -0.008 | 2011  | 0.0 %      | 2011  |       |       |       |       |
| 1.0ppb  | 1.000  | 1.026 | 0.026  | 4244  | 0.0 %      | 4244  |       |       |       |       |
| 5.0ppb  | 5.000  | 5.115 | 0.115  | 21361 | 0.0 %      | 21361 |       |       |       |       |
| 10.0ppb | 10.000 | 9.940 | -0.060 | 41559 | 0.0 %      | 41559 |       |       |       |       |

| <b>Rack</b> | <b>Cup</b> | <b>Sample ID</b>    |
|-------------|------------|---------------------|
| 1           | 1          | MB 180-141919/1-A   |
| 1           | 2          | LCS 180-141919/2-A  |
| 1           | 3          | 180-43344-D-9-B     |
| 1           | 4          | 180-43344-D-10-B    |
| 1           | 5          | 180-43344-D-11-B    |
| 1           | 6          | 180-43344-D-12-B    |
| 1           | 7          | 180-43344-D-13-B    |
| 1           | 8          | 180-43344-D-14-B    |
| 1           | 9          | 180-43344-D-15-B    |
| 1           | 10         | 180-43344-D-16-B    |
| 1           | 11         | 180-43344-D-17-B    |
| 1           | 12         | 180-43344-D-18-B    |
| 1           | 13         | 180-43344-D-19-B    |
| 1           | 14         | 180-43344-D-20-B    |
| 1           | 15         | 180-43344-D-21-B    |
| 1           | 16         | 180-43344-D-22-B    |
| 1           | 17         | 180-43344-D-23-B    |
| 1           | 18         | 180-43344-D-23-C MS |
| 1           | 19         | 180-43344-D-23-D MS |
| 1           | 20         | 180-43344-D-24-B    |
| 1           | 21         | 180-43791-H-1-B     |
| 1           | 22         | 180-43791-H-2-B     |
| 1           | 23         | 180-43791-E-3-B     |
| 1           | 24         | 180-43791-E-4-B     |
| 1           | 25         | MB 180-141918/1-A   |
| 1           | 26         | LCS 180-141918/2-A  |
| 1           | 27         | 680-111063-F-1-B    |
| 1           | 28         | 680-111063-F-1-C MS |
| 1           | 29         | 680-111063-F-1-D MS |
| 1           | 30         | 680-111063-G-1-B    |
| 1           | 31         | 680-111063-F-2-B    |
| 1           | 32         | 680-111063-G-2-B    |
| 1           | 33         | 680-111063-F-3-B    |
| 1           | 34         | 680-111063-G-3-B    |
| 1           | 35         | 680-111063-F-4-B    |
| 1           | 36         | 680-111063-G-4-B    |
| 1           | 37         | 680-112368-C-1-B    |
| 1           | 38         | 680-112368-C-2-B    |
| 1           | 39         | 680-112368-C-3-B    |
| 1           | 40         | 680-112368-C-4-B    |
| 1           | 41         | 680-112368-C-5-B    |



| <b>Rack</b> | <b>Cup</b> | <b>Sample ID</b>    |
|-------------|------------|---------------------|
| 1           | 42         | MB 180-141619/1-B   |
| 1           | 43         | LCS 180-141619/2-B  |
| 1           | 44         | 180-43698-B-9-L     |
| 1           | 45         | 180-43698-D-10-E    |
| 1           | 46         | 180-43698-C-11-J    |
| 1           | 47         | 180-43698-C-11-K MS |
| 1           | 48         | 180-43698-C-11-L MS |
| 1           | 49         | 180-43698-D-12-E    |
| 1           | 50         | MB 180-141915/1-A   |
| 1           | 51         | LCS 180-141915/2-A  |
| 1           | 52         | LCSD 180-141915/3-A |
| 1           | 53         | LB 180-141097/12-F  |
| 1           | 54         | 180-43902-A-55-H    |
| 1           | 55         | LB 180-141612/6-C   |
| 1           | 56         | 180-44011-B-1-C     |
| 1           | 57         | 180-44011-A-1-G MS  |
| 1           | 58         | 180-44011-A-1-H MSD |
| 1           | 59         | 180-44030-A-1-B     |
| 1           | 60         | 180-44032-A-2-C     |
| 2           | 1          | 180-44034-A-1-D     |
| 2           | 2          | 180-44037-A-1-D     |
| 2           | 3          | LB 180-141459/10-G  |
| 2           | 4          | 180-43957-C-1-C     |
| 2           | 5          | 180-43974-A-1-E     |
| 2           | 6          | 180-43975-A-1-F     |
| 2           | 7          | 180-43976-A-1-E     |
| 2           | 8          | 180-43988-E-1-R     |
| 2           | 9          | 180-43988-E-1-S MS  |
| 2           | 10         | 180-43988-E-1-T MSD |
| 2           | 11         | 180-43991-A-1-G     |
| 2           | 12         | 180-43992-A-1-G     |
| 2           | 13         | 180-43993-A-1-G     |
| 2           | 14         | 180-43994-A-1-G     |
| 2           | 18         | 180-43978-A-1-D     |
| 2           | 15         | MB 180-141916/1-A   |
| 2           | 16         | LCS 180-141916/2-A  |
| 2           | 17         | LCSD 180-141916/3-A |
| 2           | 19         | 180-43344-D-17-B    |
| 2           | 20         | 180-43344-D-18-B    |
| 2           | 21         | 180-43344-D-19-B    |
| 2           | 22         | 180-43344-D-20-B    |

| <b>Rack</b> | <b>Cup</b> | <b>Sample ID</b>    |
|-------------|------------|---------------------|
| 2           | 23         | 180-43344-D-21-B    |
| 2           | 24         | 180-43344-D-22-B    |
| 2           | 25         | 180-43344-D-23-B    |
| 2           | 26         | 180-43344-D-23-C MS |
| 2           | 27         | 180-43344-D-23-D MS |
| 2           | 28         | 180-43344-D-24-B    |
| 2           | 29         | 180-43791-H-1-B     |
| 2           | 30         | 180-43791-H-2-B     |
| 2           | 31         | 180-43791-E-3-B     |
| 2           | 32         | 180-43791-E-4-B     |
| 2           | 33         | MB 180-141918/1-A   |
| 2           | 34         | LCS 180-141918/2-A  |
| 2           | 35         | 680-111063-F-1-B    |
| 2           | 36         | 680-111063-F-1-C MS |
| 2           | 37         | 680-111063-F-1-D MS |
| 2           | 38         | 680-111063-G-1-B    |
| 2           | 39         |                     |
| 2           | 40         |                     |
| 2           | 41         |                     |
| 2           | 42         |                     |
| 2           | 43         |                     |
| 2           | 44         |                     |
| 2           | 45         |                     |
| 2           | 46         |                     |
| 2           | 47         |                     |
| 2           | 48         |                     |
| 2           | 49         |                     |
| 2           | 50         |                     |
| 2           | 51         |                     |
| 2           | 52         |                     |
| 2           | 53         |                     |
| 2           | 54         |                     |
| 2           | 55         |                     |
| 2           | 56         |                     |
| 2           | 57         |                     |
| 2           | 58         |                     |
| 2           | 59         |                     |
| 2           | 60         |                     |
| 3           | 1          |                     |
| 3           | 2          |                     |
| 3           | 3          |                     |

## R50518E

Method: METHG

Operator: Admin

Date of Analysis: 18 May 2015 14:25:44

| Seq ID | Type    | Sample ID                | Extended ID | Date                 | Conc.      | Units      | Std Conc | μ Abs. | Method | Chapter |
|--------|---------|--------------------------|-------------|----------------------|------------|------------|----------|--------|--------|---------|
| 2990   | Std     | blank - 1                |             | 18 May 2015 14:34:19 | -          | ppb        | 0.0000   | 22     | METHG  | R50518E |
| 2991   | Std     | .2ppb - 1                |             | 18 May 2015 14:36:12 | -          | ppb        | 0.2000   | 411    | METHG  | R50518E |
| 2992   | Std     | .5ppb - 1                |             | 18 May 2015 14:38:07 | -          | ppb        | 0.5000   | 2011   | METHG  | R50518E |
| 2993   | Std     | 1.0ppb - 1               |             | 18 May 2015 14:40:15 | -          | ppb        | 1.0000   | 4244   | METHG  | R50518E |
| 2994   | Std     | 5.0ppb - 1               |             | 18 May 2015 14:42:10 | -          | ppb        | 5.0000   | 21361  | METHG  | R50518E |
| 2995   | Std     | 10.0ppb - 1              |             | 18 May 2015 14:44:05 | -          | ppb        | 10.0000  | 41559  | METHG  | R50518E |
| 2996   | CK STND | ICV - 1                  |             | 18 May 2015 14:46:09 | 102.6%     | 2.5654 ppb |          | 10689  | METHG  | R50518E |
| 2997   | CK STND | ICB - 1                  |             | 18 May 2015 14:48:24 | -0.1175    | ppb        |          | -542   | METHG  | R50518E |
| 2998   | CK STND | CRA - 1                  |             | 18 May 2015 14:50:21 | 91.3%      | 0.1826 ppb |          | 714    | METHG  | R50518E |
| 2999   | CK STND | CCV - 1                  |             | 18 May 2015 14:52:15 | 102.0%     | 5.0975 ppb |          | 21289  | METHG  | R50518E |
| 3000   | CK STND | CCB - 1                  |             | 18 May 2015 14:54:08 | -0.1108    | ppb        |          | -514   | METHG  | R50518E |
| 3001   | SMPL    | MB 180-141919/1-A - 1    |             | 18 May 2015 14:56:17 | -0.1313    | ppb        |          | -600   | METHG  | R50518E |
| 3002   | SMPL    | LCS 180-141919/2-A - 1   |             | 18 May 2015 14:58:09 | 2.6645     | ppb        |          | 11104  | METHG  | R50518E |
| 3003   | SMPL    | 180-43344-D-9-B - 1      |             | 18 May 2015 15:00:05 | -0.1277    | ppb        |          | -585   | METHG  | R50518E |
| 3004   | SMPL    | 180-43344-D-10-B - 1     |             | 18 May 2015 15:02:03 | 0.0096     | ppb        |          | -10    | METHG  | R50518E |
| 3005   | SMPL    | 180-43344-D-11-B - 1     |             | 18 May 2015 15:03:57 | 0.0896     | ppb        |          | 325    | METHG  | R50518E |
| 3006   | SMPL    | 180-43344-D-12-B - 1     |             | 18 May 2015 15:05:50 | -0.0597    | ppb        |          | -300   | METHG  | R50518E |
| 3007   | SMPL    | 180-43344-D-13-B - 1     |             | 18 May 2015 15:07:44 | 0.0347     | ppb        |          | 95     | METHG  | R50518E |
| 3008   | SMPL    | 180-43344-D-14-B - 1     |             | 18 May 2015 15:09:39 | -0.0384    | ppb        |          | -211   | METHG  | R50518E |
| 3009   | SMPL    | 180-43344-D-15-B - 1     |             | 18 May 2015 15:11:41 | 0.0851     | ppb        |          | 306    | METHG  | R50518E |
| 3010   | SMPL    | 180-43344-D-16-B - 1     |             | 18 May 2015 15:13:36 | 0.0483     | ppb        |          | 152    | METHG  | R50518E |
| 3011   | CK STND | CCV - 1                  |             | 18 May 2015 15:15:34 | 104.1%     | 5.2050 ppb |          | 21739  | METHG  | R50518E |
| 3012   | CK STND | CCB - 1                  |             | 18 May 2015 15:17:28 | -0.1015    | ppb        |          | -475   | METHG  | R50518E |
| 3013   | SMPL    | 180-43344-D-17-B - 1     |             | 18 May 2015 15:19:42 | 0.0469     | ppb        |          | 146    | METHG  | R50518E |
| 3014   | SMPL    | 180-43344-D-18-B - 1     |             | 18 May 2015 15:21:44 | 0.0041     | ppb        |          | -33    | METHG  | R50518E |
| 3015   | SMPL    | 180-43344-D-19-B - 1     |             | 18 May 2015 15:23:37 | 0.0829     | ppb        |          | 297    | METHG  | R50518E |
| 3016   | SMPL    | 180-43344-D-20-B - 1     |             | 18 May 2015 15:25:30 | 0.0077     | ppb        |          | -18    | METHG  | R50518E |
| 3017   | SMPL    | 180-43344-D-21-B - 1     |             | 18 May 2015 15:27:34 | 0.1474     | ppb        |          | 567    | METHG  | R50518E |
| 3018   | SMPL    | 180-43344-D-22-B - 1     |             | 18 May 2015 15:29:26 | 0.0889     | ppb        |          | 322    | METHG  | R50518E |
| 3019   | SMPL    | 180-43344-D-23-B - 1     |             | 18 May 2015 15:31:24 | 0.0939     | ppb        |          | 343    | METHG  | R50518E |
| 3020   | SMPL    | 180-43344-D-23-C MS - 1  |             | 18 May 2015 15:33:18 | 0.9885     | ppb        |          | 4088   | METHG  | R50518E |
| 3021   | SMPL    | 180-43344-D-23-D MSD - 1 |             | 18 May 2015 15:35:09 | 0.9568     | ppb        |          | 3955   | METHG  | R50518E |
| 3022   | SMPL    | 180-43344-D-24-B - 1     |             | 18 May 2015 15:37:04 | -0.0628    | ppb        |          | -313   | METHG  | R50518E |
| 3023   | CK STND | CCV - 1                  |             | 18 May 2015 15:39:00 | 102.8%     | 5.1398 ppb |          | 21466  | METHG  | R50518E |
| 3024   | CK STND | CCB - 1                  |             | 18 May 2015 15:40:53 | (L)-0.2689 | ppb        |          | -1176  | METHG  | R50518E |
| 3025   | SMPL    | 180-43791-H-1-B - 1      |             | 18 May 2015 15:42:51 | 0.0564     | ppb        |          | 186    | METHG  | R50518E |
| 3026   | SMPL    | 180-43791-H-2-B - 1      |             | 18 May 2015 15:44:43 | -0.0229    | ppb        |          | -146   | METHG  | R50518E |
| 3027   | SMPL    | 180-43791-E-3-B - 1      |             | 18 May 2015 15:46:38 | 0.0151     | ppb        |          | 13     | METHG  | R50518E |
| 3028   | SMPL    | 180-43791-E-4-B - 1      |             | 18 May 2015 15:48:31 | -0.0288    | ppb        |          | -171   | METHG  | R50518E |
| 3029   | SMPL    | MB 180-141918/1-A - 1    |             | 18 May 2015 15:50:32 | 0.0507     | ppb        |          | 162    | METHG  | R50518E |
| 3030   | SMPL    | LCS 180-141918/2-A - 1   |             | 18 May 2015 15:52:25 | 2.7842     | ppb        |          | 11605  | METHG  | R50518E |
| 3031   | SMPL    | 680-111063-F-1-B - 1     |             | 18 May 2015 15:54:18 | -0.1091    | ppb        |          | -507   | METHG  | R50518E |
| 3032   | SMPL    | 680-111063-F-1-C MS - 1  |             | 18 May 2015 15:56:20 | 1.1412     | ppb        |          | 4727   | METHG  | R50518E |
| 3033   | SMPL    | 680-111063-F-1-D MSD - 1 |             | 18 May 2015 15:58:14 | 0.9919     | ppb        |          | 4102   | METHG  | R50518E |
| 3034   | SMPL    | 680-111063-G-1-B - 1     |             | 18 May 2015 16:00:09 | -0.0463    | ppb        |          | -244   | METHG  | R50518E |
| 3035   | CK STND | CCV - 1                  |             | 18 May 2015 16:02:03 | 103.0%     | 5.1496 ppb |          | 21507  | METHG  | R50518E |
| 3036   | CK STND | CCB - 1                  |             | 18 May 2015 16:03:59 | -0.0824    | ppb        |          | -395   | METHG  | R50518E |
| 3037   | SMPL    | 680-111063-F-2-B - 1     |             | 18 May 2015 16:06:11 | 0.0442     | ppb        |          | 135    | METHG  | R50518E |
| 3038   | SMPL    | 680-111063-G-2-B - 1     |             | 18 May 2015 16:08:03 | 0.0196     | ppb        |          | 32     | METHG  | R50518E |
| 3039   | SMPL    | 680-111063-F-3-B - 1     |             | 18 May 2015 16:09:55 | 0.0495     | ppb        |          | 157    | METHG  | R50518E |
| 3040   | SMPL    | 680-111063-G-3-B - 1     |             | 18 May 2015 16:11:48 | 0.0366     | ppb        |          | 103    | METHG  | R50518E |
| 3041   | SMPL    | 680-111063-F-4-B - 1     |             | 18 May 2015 16:13:46 | 0.0581     | ppb        |          | 193    | METHG  | R50518E |
| 3042   | SMPL    | 680-111063-G-4-B - 1     |             | 18 May 2015 16:15:40 | -0.0910    | ppb        |          | -431   | METHG  | R50518E |
| 3043   | SMPL    | 680-112368-C-1-B - 1     |             | 18 May 2015 16:17:34 | 0.0311     | ppb        |          | 80     | METHG  | R50518E |
| 3044   | SMPL    | 680-112368-C-2-B - 1     |             | 18 May 2015 16:19:26 | 0.0182     | ppb        |          | 26     | METHG  | R50518E |
| 3045   | SMPL    | 680-112368-C-3-B - 1     |             | 18 May 2015 16:21:18 | 0.0182     | ppb        |          | 26     | METHG  | R50518E |
| 3046   | SMPL    | 680-112368-C-4-B - 1     |             | 18 May 2015 16:23:13 | -0.0272    | ppb        |          | -164   | METHG  | R50518E |

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Method: METHG Operator: Admin Date of Analysis: 18 May 2015 14:25:44

| Seq ID | Type    | Sample ID                | Extended ID | Date                 | Conc.  | Units   | Std Conc | µ Abs. | Method | Chapter |
|--------|---------|--------------------------|-------------|----------------------|--------|---------|----------|--------|--------|---------|
| 3047   | CK STND | CCV - 1                  |             | 18 May 2015 16:25:06 | 103.4% | 5.1718  |          | 21600  | METHG  | R50518E |
| 3048   | CK STND | CCB - 1                  |             | 18 May 2015 16:27:00 |        | -0.0950 |          | -448   | METHG  | R50518E |
| 3049   | SMPL    | 680-112368-C-5-B - 1     |             | 18 May 2015 16:29:11 |        | 0.0335  |          | 90     | METHG  | R50518E |
| 3050   | SMPL    | MB 180-141619/1-B - 1    |             | 18 May 2015 16:31:03 |        | 0.0466  |          | 145    | METHG  | R50518E |
| 3051   | SMPL    | LCS 180-141619/2-B - 1   |             | 18 May 2015 16:32:56 |        | 2.8642  |          | 11940  | METHG  | R50518E |
| 3052   | SMPL    | 180-43698-B-9-L - 1      |             | 18 May 2015 16:34:49 |        | -0.0224 |          | -144   | METHG  | R50518E |
| 3053   | SMPL    | 180-43698-D-10-E - 1     |             | 18 May 2015 16:36:44 |        | 0.0462  |          | 143    | METHG  | R50518E |
| 3054   | SMPL    | 180-43698-C-11-J - 1     |             | 18 May 2015 16:38:39 |        | 0.0612  |          | 206    | METHG  | R50518E |
| 3055   | SMPL    | 180-43698-C-11-K MS - 1  |             | 18 May 2015 16:40:32 |        | 1.2093  |          | 5012   | METHG  | R50518E |
| 3056   | SMPL    | 180-43698-C-11-L MSD - 1 |             | 18 May 2015 16:42:27 |        | 1.1144  |          | 4615   | METHG  | R50518E |
| 3057   | SMPL    | 180-43698-D-12-E - 1     |             | 18 May 2015 16:44:23 |        | 0.0767  |          | 271    | METHG  | R50518E |
| 3058   | SMPL    | MB 180-141915/1-A - 1    |             | 18 May 2015 16:46:17 |        | -0.0441 |          | -235   | METHG  | R50518E |
| 3059   | CK STND | CCV - 1                  |             | 18 May 2015 16:48:10 | 103.8% | 5.1924  |          | 21686  | METHG  | R50518E |
| 3060   | CK STND | CCB - 1                  |             | 18 May 2015 16:50:02 |        | -0.0776 |          | -375   | METHG  | R50518E |
| 3061   | SMPL    | LCS 180-141915/2-A - 1   |             | 18 May 2015 16:52:07 |        | 2.9015  |          | 12096  | METHG  | R50518E |
| 3062   | SMPL    | LCS 180-141915/3-A - 1   |             | 18 May 2015 16:54:02 |        | 2.8597  |          | 11921  | METHG  | R50518E |
| 3063   | SMPL    | LB 180-141097/12-F - 1   |             | 18 May 2015 16:56:03 |        | -0.0217 |          | -141   | METHG  | R50518E |
| 3064   | SMPL    | 180-43902-A-55-H - 1     |             | 18 May 2015 16:57:58 |        | 0.0438  |          | 133    | METHG  | R50518E |
| 3065   | SMPL    | LB 180-141612/6-C - 1    |             | 18 May 2015 16:59:56 |        | -0.0599 |          | -301   | METHG  | R50518E |
| 3066   | SMPL    | 180-44011-B-1-C - 1      |             | 18 May 2015 17:01:49 |        | -0.0126 |          | -103   | METHG  | R50518E |
| 3067   | SMPL    | 180-44011-A-1-G MS - 1   |             | 18 May 2015 17:03:42 |        | 5.4795  |          | 22888  | METHG  | R50518E |
| 3068   | SMPL    | 180-44011-A-1-H MSD - 1  |             | 18 May 2015 17:05:34 |        | 5.5378  |          | 23132  | METHG  | R50518E |
| 3069   | SMPL    | 180-44030-A-1-B - 1      |             | 18 May 2015 17:07:37 |        | -0.1987 |          | -882   | METHG  | R50518E |
| 3070   | SMPL    | 180-44032-A-2-C - 1      |             | 18 May 2015 17:09:39 |        | -0.0298 |          | -175   | METHG  | R50518E |
| 3071   | CK STND | CCV - 1                  |             | 18 May 2015 17:11:32 | 104.0% | 5.1976  |          | 21708  | METHG  | R50518E |
| 3072   | CK STND | CCB - 1                  |             | 18 May 2015 17:13:27 |        | 0.0273  |          | 64     | METHG  | R50518E |
| 3073   | SMPL    | 180-44034-A-1-D - 1      |             | 18 May 2015 17:15:40 |        | 0.1009  |          | 372    | METHG  | R50518E |
| 3074   | SMPL    | 180-44037-A-1-D - 1      |             | 18 May 2015 17:17:34 |        | 0.0330  |          | 88     | METHG  | R50518E |
| 3075   | SMPL    | LB 180-141459/10-G - 1   |             | 18 May 2015 17:19:27 |        | 0.0060  |          | -25    | METHG  | R50518E |
| 3076   | SMPL    | 180-43957-C-1-C - 1      |             | 18 May 2015 17:21:20 |        | -0.0499 |          | -259   | METHG  | R50518E |
| 3077   | SMPL    | 180-43974-A-1-E - 1      |             | 18 May 2015 17:23:12 |        | 0.0507  |          | 162    | METHG  | R50518E |
| 3078   | SMPL    | 180-43975-A-1-F - 1      |             | 18 May 2015 17:25:08 |        | 0.0908  |          | 330    | METHG  | R50518E |
| 3079   | SMPL    | 180-43976-A-1-E - 1      |             | 18 May 2015 17:27:03 |        | 0.0187  |          | 28     | METHG  | R50518E |
| 3080   | SMPL    | 180-43988-E-1-R - 1      |             | 18 May 2015 17:28:56 |        | 0.0478  |          | 150    | METHG  | R50518E |
| 3081   | SMPL    | 180-43988-E-1-S MS - 1   |             | 18 May 2015 17:30:51 |        | 5.7222  |          | 23904  | METHG  | R50518E |
| 3082   | SMPL    | 180-43988-E-1-T MSD - 1  |             | 18 May 2015 17:32:44 |        | 5.9448  |          | 24836  | METHG  | R50518E |
| 3083   | CK STND | CCV - 1                  |             | 18 May 2015 17:34:55 | 101.5% | 5.0763  |          | 21200  | METHG  | R50518E |
| 3084   | CK STND | CCB - 1                  |             | 18 May 2015 17:37:03 |        | -0.0900 |          | -427   | METHG  | R50518E |
| 3085   | SMPL    | 180-43991-A-1-G - 1      |             | 18 May 2015 17:39:12 |        | -0.0296 |          | -174   | METHG  | R50518E |
| 3086   | SMPL    | 180-43992-A-1-G - 1      |             | 18 May 2015 17:41:05 |        | 0.0457  |          | 141    | METHG  | R50518E |
| 3087   | SMPL    | 180-43993-A-1-G - 1      |             | 18 May 2015 17:42:58 |        | 0.0115  |          | -2     | METHG  | R50518E |
| 3088   | SMPL    | 180-43994-A-1-G - 1      |             | 18 May 2015 17:44:51 |        | 0.0218  |          | 41     | METHG  | R50518E |
| 3089   | SMPL    | 180-43978-A-1-D - 1      |             | 18 May 2015 17:46:44 |        | 0.0600  |          | 201    | METHG  | R50518E |
| 3090   | SMPL    | MB 180-141916/1-A - 1    |             | 18 May 2015 17:48:37 |        | 0.0204  |          | 35     | METHG  | R50518E |
| 3091   | SMPL    | LCS 180-141916/2-A - 1   |             | 18 May 2015 17:50:32 |        | 2.6392  |          | 10998  | METHG  | R50518E |
| 3092   | SMPL    | LCS 180-141916/3-A - 1   |             | 18 May 2015 17:52:25 |        | 2.5902  |          | 10793  | METHG  | R50518E |
| 3093   | SMPL    | 180-43344-D-17-B - 1     |             | 18 May 2015 17:54:21 |        | -0.1638 |          | -736   | METHG  | R50518E |
| 3094   | SMPL    | 180-43344-D-18-B - 1     |             | 18 May 2015 17:56:17 |        | 0.0237  |          | 49     | METHG  | R50518E |
| 3095   | CK STND | CCV - 1                  |             | 18 May 2015 17:58:11 | 101.7% | 5.0863  |          | 21242  | METHG  | R50518E |
| 3096   | CK STND | CCB - 1                  |             | 18 May 2015 18:00:03 |        | -0.0386 |          | -212   | METHG  | R50518E |
| 3097   | SMPL    | 180-43344-D-19-B - 1     |             | 18 May 2015 18:02:14 |        | 0.0548  |          | 179    | METHG  | R50518E |
| 3098   | SMPL    | 180-43344-D-20-B - 1     |             | 18 May 2015 18:04:09 |        | -0.0016 |          | -57    | METHG  | R50518E |
| 3099   | SMPL    | 180-43344-D-21-B - 1     |             | 18 May 2015 18:06:02 |        | 0.0634  |          | 215    | METHG  | R50518E |
| 3100   | SMPL    | 180-43344-D-22-B - 1     |             | 18 May 2015 18:07:56 |        | 0.4062  |          | 1650   | METHG  | R50518E |
| 3101   | SMPL    | 180-43344-D-23-B - 1     |             | 18 May 2015 18:10:11 |        | 0.0395  |          | 115    | METHG  | R50518E |
| 3102   | SMPL    | 180-43344-D-23-C MS - 1  |             | 18 May 2015 18:12:04 |        | 1.1273  |          | 4669   | METHG  | R50518E |
| 3103   | SMPL    | 180-43344-D-23-D MSD - 1 |             | 18 May 2015 18:13:59 |        | 1.0619  |          | 4395   | METHG  | R50518E |

# R50518E

Method: METHG

Operator: Admin

Date of Analysis: 18 May 2015 14:25:44

| Seq ID | Type    | Sample ID                | Extended ID | Date                 | Conc.   | Units  | Std Conc | μ Abs | Method | Chapter |
|--------|---------|--------------------------|-------------|----------------------|---------|--------|----------|-------|--------|---------|
| 3104   | SMPL    | 180-43344-D-24-B - 1     |             | 18 May 2015 18:15:54 | -0.0317 | ppb    |          | -183  | METHG  | R50518E |
| 3105   | SMPL    | 180-43791-H-1-B - 1      |             | 18 May 2015 18:17:50 | 0.0268  | ppb    |          | 62    | METHG  | R50518E |
| 3106   | SMPL    | 180-43791-H-2-B - 1      |             | 18 May 2015 18:19:43 | 0.0118  | ppb    |          | -1    | METHG  | R50518E |
| 3107   | CK STND | CCV - 1                  |             | 18 May 2015 18:21:36 | 101.9%  | 5.0930 |          | 21270 | METHG  | R50518E |
| 3108   | CK STND | CCB - 1                  |             | 18 May 2015 18:23:28 | -0.1144 | ppb    |          | -529  | METHG  | R50518E |
| 3109   | SMPL    | 180-43791-E-3-B - 1      |             | 18 May 2015 18:25:37 | 0.0163  | ppb    |          | 18    | METHG  | R50518E |
| 3110   | SMPL    | 180-43791-E-4-B - 1      |             | 18 May 2015 18:27:33 | 0.0330  | ppb    |          | 88    | METHG  | R50518E |
| 3111   | SMPL    | MB 180-141918/1-A - 1    |             | 18 May 2015 18:29:26 | -0.0114 | ppb    |          | -98   | METHG  | R50518E |
| 3112   | SMPL    | LCS 180-141918/2-A - 1   |             | 18 May 2015 18:31:18 | 2.9294  | ppb    |          | 12213 | METHG  | R50518E |
| 3113   | SMPL    | 680-111063-F-1-B - 1     |             | 18 May 2015 18:33:11 | 0.3553  | ppb    |          | 1437  | METHG  | R50518E |
| 3114   | SMPL    | 680-111063-F-1-C MS - 1  |             | 18 May 2015 18:36:01 | 1.1307  | ppb    |          | 4683  | METHG  | R50518E |
| 3115   | SMPL    | 680-111063-F-1-D MSD - 1 |             | 18 May 2015 18:37:57 | 1.0208  | ppb    |          | 4223  | METHG  | R50518E |
| 3116   | SMPL    | 680-111063-G-1-B - 1     |             | 18 May 2015 18:39:53 | -0.0601 | ppb    |          | -302  | METHG  | R50518E |
| 3117   | CK STND | CCV - 1                  |             | 18 May 2015 18:41:48 | 103.5%  | 5.1737 |          | 21608 | METHG  | R50518E |
| 3118   | CK STND | CCB - 1                  |             | 18 May 2015 18:43:43 | -0.0690 | ppb    |          | -339  | METHG  | R50518E |

METALS BATCH WORKSHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-43791-1

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

Batch Number: 140872 Batch Start Date: 05/07/15 12:35 Batch Analyst: Baikadi, Ashwin

Batch Method: 3005A Batch End Date: 05/07/15 16:35

| Lab Sample ID        | Client Sample ID | Method Chain | Basis | InitialAmount | FinalAmount | MTAPITTCPPMS<br>00020 | MTAPITTMGA<br>00023 | MTAPITTMSC<br>00029 |  |
|----------------------|------------------|--------------|-------|---------------|-------------|-----------------------|---------------------|---------------------|--|
| MB 180-140872/1      |                  | 3005A, 6020A |       | 50 mL         | 50 mL       |                       |                     |                     |  |
| LCS<br>180-140872/2  |                  | 3005A, 6020A |       | 50 mL         | 50 mL       | 0.5 mL                | 0.5 mL              | 0.5 mL              |  |
| LCSD<br>180-140872/3 |                  | 3005A, 6020A |       | 50 mL         | 50 mL       | 0.5 mL                | 0.5 mL              | 0.5 mL              |  |
| 180-43791-H-1        | RB-CORE          | 3005A, 6020A | R     | 50 mL         | 50 mL       |                       |                     |                     |  |
| 180-43791-H-2        | FB-CORE          | 3005A, 6020A | R     | 50 mL         | 50 mL       |                       |                     |                     |  |
| 180-43791-E-3        | RB-PW            | 3005A, 6020A | R     | 50 mL         | 50 mL       |                       |                     |                     |  |
| 180-43791-E-4        | FB-PW            | 3005A, 6020A | R     | 50 mL         | 50 mL       |                       |                     |                     |  |

| Batch Notes                       |                  |
|-----------------------------------|------------------|
| Batch Comment                     | Metals B2        |
| First End time                    | 16:35            |
| Lot # of hydrochloric acid        | 2.5 ml 1533280   |
| Lot # of Nitric Acid              | 1.0 ml 1513887   |
| Hot Block ID number               | #3               |
| Oven, Bath or Block Temperature 1 | 95               |
| Pipette ID                        | L1201611U        |
| Person who witnessed spiking      | AB               |
| First Start time                  | 12:35            |
| ID number of the thermometer      | IP2-14 CF=0.0 A4 |
| Digestion Tube/Cup Lot #          | 1408268          |
| Uncorrected Temperature           | 95 Celsius       |

| Basis | Basis Description |
|-------|-------------------|
| R     | Total Recoverable |

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.

METALS BATCH WORKSHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-43791-1

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

Batch Number: 141919 Batch Start Date: 05/18/15 08:55 Batch Analyst: Rosenbaum, Ron

Batch Method: 7470A Batch End Date: 05/18/15 10:55

| Lab Sample ID       | Client Sample ID | Method Chain | Basis | InitialAmount | FinalAmount | MHgworkingCal<br>01049 |  |  |  |
|---------------------|------------------|--------------|-------|---------------|-------------|------------------------|--|--|--|
| MB 180-141919/1     |                  | 7470A, 7470A |       | 50 mL         | 50 mL       |                        |  |  |  |
| LCS<br>180-141919/2 |                  | 7470A, 7470A |       | 50 mL         | 50 mL       | 1.25 mL                |  |  |  |
| 180-43791-H-1       | RB-CORE          | 7470A, 7470A | T     | 50 mL         | 50 mL       |                        |  |  |  |
| 180-43791-H-2       | FB-CORE          | 7470A, 7470A | T     | 50 mL         | 50 mL       |                        |  |  |  |
| 180-43791-E-3       | RB-PW            | 7470A, 7470A | T     | 50 mL         | 50 mL       |                        |  |  |  |
| 180-43791-E-4       | FB-PW            | 7470A, 7470A | T     | 50 mL         | 50 mL       |                        |  |  |  |

| Batch Notes                       |                              |
|-----------------------------------|------------------------------|
| Hydroxylamine Hydrochloride Lot   | 3ml 1573483 HG-DISP-C6       |
| Batch Comment                     | HG-DISP-05C4676              |
| Sulfuric Acid Lot Number          | 2.5ml 1541822 HG-DISP-7N8924 |
| Lot # of Nitric Acid              | 1.25ml1541821 HG-DISP-N1     |
| Hot Block ID number               | HB4                          |
| Potassium Persulfate Lot Number   | 4ml 1573484 HG-DISP-KS4      |
| Potassium Permanganate Lot Number | 7.5ml 1573482 HG-DISP-KMNO4  |
| Pipette ID                        | L1201611U                    |
| Stannous Chloride Lot Number      | 1568912                      |
| Person who witnessed spiking      | ERE                          |
| Temperature                       | 95C                          |
| ID number of the thermometer      | IP31-14 0.0 B1               |
| Digestion Tube/Cup Lot #          | ENV.EXPRES                   |

| 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.

METALS BATCH WORKSHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-43791-1

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

Batch Number: 141946 Batch Start Date: 05/18/15 08:55 Batch Analyst: Reichenbach, Emilie V

Batch Method: 7470A Batch End Date: 05/18/15 10:55

| Lab Sample ID        | Client Sample ID | Method Chain | Basis | InitialAmount | FinalAmount | MHgworkingCal<br>01049 | MHgWorkingicv<br>01017 |  |  |
|----------------------|------------------|--------------|-------|---------------|-------------|------------------------|------------------------|--|--|
| ICV<br>180-141946/7  |                  | 7470A, 7470A |       | 50 mL         | 50 mL       |                        | 1.25 mL                |  |  |
| ICB<br>180-141946/8  |                  | 7470A, 7470A |       | 50 mL         | 50 mL       |                        |                        |  |  |
| CRA<br>180-141946/9  |                  | 7470A, 7470A |       | 50 mL         | 50 mL       | 0.1 mL                 |                        |  |  |
| CCV<br>180-141946/10 |                  | 7470A, 7470A |       | 50 mL         | 50 mL       | 2.5 mL                 |                        |  |  |
| CCB<br>180-141946/11 |                  | 7470A, 7470A |       | 50 mL         | 50 mL       |                        |                        |  |  |

| Batch Notes                       |                              |
|-----------------------------------|------------------------------|
| Hydroxylamine Hydrochloride Lot   | 3ml 1573483 HG-DISP-C6       |
| Batch Comment                     | hg-disp-05c4676              |
| Sulfuric Acid Lot Number          | 2.5ml 1541822 HG-DISP-7N8924 |
| Lot # of Nitric Acid              | 1.25ml1541821 HG-DISP-N1     |
| Hot Block ID number               | HB1                          |
| Potassium Persulfate Lot Number   | 4ml 1573484 HG-DISP-KS4      |
| Potassium Permanganate Lot Number | 7.5ml 1573482 HG-DISP-KMNO4  |
| Pipette ID                        | L1201611U                    |
| Stannous Chloride Lot Number      | 1568912                      |
| Person who witnessed spiking      | ERE                          |
| Temperature                       | 95C                          |
| ID number of the thermometer      | IP30-14 0.0 B1               |
| Digestion Tube/Cup Lot #          | ENV.EXPR                     |

| Basis | Basis Description |
|-------|-------------------|
|       |                   |

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



# GENERAL CHEMISTRY

COVER PAGE  
GENERAL CHEMISTRY

Lab Name: TestAmerica Pittsburgh Job Number: 180-43791-1

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

Project: Sparrows Point Trust Offshore Investigat

| Client Sample ID | Lab Sample ID      |
|------------------|--------------------|
| <u>RB-CORE</u>   | <u>180-43791-1</u> |
| <u>FB-CORE</u>   | <u>180-43791-2</u> |
| <u>RB-PW</u>     | <u>180-43791-3</u> |
| <u>FB-PW</u>     | <u>180-43791-4</u> |

Comments:

COVER PAGE  
GENERAL CHEMISTRY

Lab Name: TestAmerica Nashville Job Number: 180-43791-1

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

Project: Sparrows Point Trust Offshore Investigat

| Client Sample ID | Lab Sample ID      |
|------------------|--------------------|
| <u>RB-CORE</u>   | <u>180-43791-1</u> |
| <u>FB-CORE</u>   | <u>180-43791-2</u> |

Comments:

1B-IN  
 INORGANIC ANALYSIS DATA SHEET  
 GENERAL CHEMISTRY

Client Sample ID: RB-CORE

Lab Sample ID: 180-43791-1

Lab Name: TestAmerica Pittsburgh

Job No.: 180-43791-1

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

Matrix: Water

Date Sampled: 05/05/2015 15:30

Reporting Basis: WET

Date Received: 05/06/2015 09:40

| CAS No. | Analyte        | Result | RL | MDL | Units | C | Q | DIL | Method |
|---------|----------------|--------|----|-----|-------|---|---|-----|--------|
| 57-12-5 | Cyanide, Total | ND     | 10 | 2.5 | ug/L  |   |   | 1   | 9014   |

1B-IN  
 INORGANIC ANALYSIS DATA SHEET  
 GENERAL CHEMISTRY

Client Sample ID: FB-CORE

Lab Sample ID: 180-43791-2

Lab Name: TestAmerica Pittsburgh

Job No.: 180-43791-1

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

Matrix: Water

Date Sampled: 05/05/2015 15:40

Reporting Basis: WET

Date Received: 05/06/2015 09:40

| CAS No. | Analyte        | Result | RL | MDL | Units | C | Q | DIL | Method |
|---------|----------------|--------|----|-----|-------|---|---|-----|--------|
| 57-12-5 | Cyanide, Total | ND     | 10 | 2.5 | ug/L  |   |   | 1   | 9014   |

1B-IN  
INORGANIC ANALYSIS DATA SHEET  
GENERAL CHEMISTRY

Client Sample ID: RB-PW

Lab Sample ID: 180-43791-3

Lab Name: TestAmerica Pittsburgh

Job No.: 180-43791-1

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

Matrix: Water

Date Sampled: 05/05/2015 16:00

Reporting Basis: WET

Date Received: 05/06/2015 09:40

| CAS No. | Analyte        | Result | RL | MDL | Units | C | Q | DIL | Method |
|---------|----------------|--------|----|-----|-------|---|---|-----|--------|
| 57-12-5 | Cyanide, Total | ND     | 10 | 2.5 | ug/L  |   |   | 1   | 9014   |

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

Client Sample ID: RB-PW

Lab Sample ID: 180-43791-3

Lab Name: TestAmerica Pittsburgh

Job No.: 180-43791-1

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

Matrix: Water

Date Sampled: 05/05/2015 16:00

Reporting Basis: WET

Date Received: 05/06/2015 09:40

| CAS No.   | Analyte                              | Result | RL  | MDL  | Units | C | Q | DIL | Method   |
|-----------|--------------------------------------|--------|-----|------|-------|---|---|-----|----------|
| 7440-44-0 | Dissolved Organic Carbon - Duplicate | 0.49   | 1.0 | 0.14 | mg/L  | J |   | 1   | SM 5310C |

1B-IN  
INORGANIC ANALYSIS DATA SHEET  
GENERAL CHEMISTRY

Client Sample ID: FB-PW

Lab Sample ID: 180-43791-4

Lab Name: TestAmerica Pittsburgh

Job No.: 180-43791-1

SDG ID.:

Matrix: Water

Date Sampled: 05/05/2015 16:10

Reporting Basis: WET

Date Received: 05/06/2015 09:40

| CAS No. | Analyte        | Result | RL | MDL | Units | C | Q | DIL | Method |
|---------|----------------|--------|----|-----|-------|---|---|-----|--------|
| 57-12-5 | Cyanide, Total | ND     | 10 | 2.5 | ug/L  |   |   | 1   | 9014   |



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

Client Sample ID: FB-PW

Lab Sample ID: 180-43791-4

Lab Name: TestAmerica Pittsburgh

Job No.: 180-43791-1

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

Matrix: Water

Date Sampled: 05/05/2015 16:10

Reporting Basis: WET

Date Received: 05/06/2015 09:40

| CAS No.   | Analyte                              | Result | RL  | MDL  | Units | C | Q | DIL | Method   |
|-----------|--------------------------------------|--------|-----|------|-------|---|---|-----|----------|
| 7440-44-0 | Dissolved Organic Carbon - Duplicate | 0.80   | 1.0 | 0.14 | mg/L  | J |   | 1   | SM 5310C |

1B-IN  
 INORGANIC ANALYSIS DATA SHEET  
 GENERAL CHEMISTRY

Client Sample ID: RB-CORE

Lab Sample ID: 180-43791-1

Lab Name: TestAmerica Nashville

Job No.: 180-43791-1

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

Matrix: Water

Date Sampled: 05/05/2015 15:30

Reporting Basis: WET

Date Received: 05/06/2015 09:40

| CAS No. | Analyte | Result | RL  | MDL | Units | C | Q | DIL | Method |
|---------|---------|--------|-----|-----|-------|---|---|-----|--------|
|         | HEM     | ND     | 4.6 | 1.6 | mg/L  |   |   | 1   | 1664B  |

1B-IN  
 INORGANIC ANALYSIS DATA SHEET  
 GENERAL CHEMISTRY

Client Sample ID: FB-CORE

Lab Sample ID: 180-43791-2

Lab Name: TestAmerica Nashville

Job No.: 180-43791-1

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

Matrix: Water

Date Sampled: 05/05/2015 15:40

Reporting Basis: WET

Date Received: 05/06/2015 09:40

| CAS No. | Analyte | Result | RL  | MDL | Units | C | Q | DIL | Method |
|---------|---------|--------|-----|-----|-------|---|---|-----|--------|
|         | HEM     | ND     | 4.7 | 1.7 | mg/L  |   |   | 1   | 1664B  |

2-IN  
 CALIBRATION QUALITY CONTROL  
 GENERAL CHEMISTRY

Lab Name: TestAmerica Pittsburgh Job No.: 180-43791-1  
 SDG No.: \_\_\_\_\_  
 Analyst: PGJ Batch Start Date: 05/15/2015  
 Reporting Units: ug/L Analytical Batch No.: 141746

| Sample Number | QC Type | Time  | Analyte        | Result | Spike Amount | (%) Recovery | Limits | Qual | Reagent         |
|---------------|---------|-------|----------------|--------|--------------|--------------|--------|------|-----------------|
| 9             | ICV     | 11:13 | Cyanide, Total | 213    | 200          | 106          | 90-110 |      | WCN0.2ICV_00340 |
| 10            | ICB     | 11:15 | Cyanide, Total | ND     |              |              |        |      |                 |
| 11            | CCV     | 11:17 | Cyanide, Total | 102    | 100          | 102          | 90-110 |      | WCN0.1L3_00052  |
| 12            | CCB     | 11:19 | Cyanide, Total | ND     |              |              |        |      |                 |
| 23            | CCV     | 11:43 | Cyanide, Total | 101    | 100          | 101          | 90-110 |      | WCN0.1L3_00052  |
| 24            | CCB     | 11:45 | Cyanide, Total | ND     |              |              |        |      |                 |
| 35            | CCV     | 12:09 | Cyanide, Total | 106    | 100          | 106          | 90-110 |      | WCN0.1L3_00052  |
| 36            | CCB     | 12:11 | Cyanide, Total | ND     |              |              |        |      |                 |
| 43            | CCV     | 12:24 | Cyanide, Total | 105    | 100          | 105          | 90-110 |      | WCN0.1L3_00052  |
| 44            | CCB     | 12:25 | Cyanide, Total | ND     |              |              |        |      |                 |

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

2-IN  
 CALIBRATION QUALITY CONTROL  
 GENERAL CHEMISTRY

Lab Name: TestAmerica Pittsburgh Job No.: 180-43791-1  
 SDG No.: \_\_\_\_\_  
 Analyst: CLL Batch Start Date: 05/11/2015  
 Reporting Units: mg/L Analytical Batch No.: 141151

| Sample Number | QC Type | Time  | Analyte                                 | Result | Spike Amount | (%) Recovery | Limits | Qual | Reagent                |
|---------------|---------|-------|---|--------|--------------|--------------|--------|------|------------------------|
| 2             | ICV     | 06:16 | Dissolved Organic Carbon<br>- Duplicate | 41.5   | 40.0         | 104          | 90-110 |      | ICV 40 PPM_00626       |
| 3             | ICB     | 06:35 | Dissolved Organic Carbon<br>- Duplicate | ND     |              |              |        |      |                        |
| 11            | CCV     | 09:07 | Dissolved Organic Carbon<br>- Duplicate | 9.33   | 10.0         | 93           | 90-110 |      | 10 PPM<br>TOC/CC_00493 |
| 12            | CCB     | 09:25 | Dissolved Organic Carbon<br>- Duplicate | ND     |              |              |        |      |                        |

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

3-IN  
METHOD BLANK  
GENERAL CHEMISTRY

Lab Name: TestAmerica Pittsburgh

Job No.: 180-43791-1

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

| Method  | Lab Sample ID     | Analyte                                 | Result | Qual | Units | RL  | Dil |
|---|-------------------|---|--------|------|-------|-----|-----|
| Batch ID: 141746 Date: 05/15/2015 11:28 Prep Batch: 141677 Date: 05/15/2015 08:15 |                   |   |        |      |       |     |     |
| 9014  | MB 180-141677/4-A | Cyanide, Total                          | ND     |      | ug/L  | 10  | 1   |
| Batch ID: 141151 Date: 05/11/2015 07:32   |                   |   |        |      |       |     |     |
| SM 5310C  | MB 180-141151/6   | Dissolved Organic Carbon<br>- Duplicate | ND     |      | mg/L  | 1.0 | 1   |

3-IN  
METHOD BLANK  
GENERAL CHEMISTRY

Lab Name: TestAmerica Nashville Job No.: 180-43791-1

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

| Method  | Lab Sample ID     | Analyte | Result | Qual | Units | RL  | Dil |
|---|-------------------|---------|--------|------|-------|-----|-----|
| Batch ID: 248554 Date: 05/15/2015 10:40 Prep Batch: 248553 Date: 05/15/2015 10:40 |                   |         |        |      |       |     |     |
| 1664B   | MB 490-248553/1-A | HEM     | ND     |      | mg/L  | 4.0 | 1   |

3-IN  
TCLP SPLPE LEACHATE BLANK  
GENERAL CHEMISTRY

Lab Name: TestAmerica Nashville Job No.: 180-43791-1

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

| Method  | Lab Sample ID     | Analyte | Result | Qual | Units | RL  | Dil |
|---|-------------------|---------|--------|------|-------|-----|-----|
| Batch ID: 248554 Date: 05/15/2015 10:40 Prep Batch: 248553 Date: 05/15/2015 10:40 |                   |         |        |      |       |     |     |
| 1664B   | LB 490-248553/2-A | HEM     | ND     |      | mg/L  | 4.0 | 1   |



7A-IN  
 LAB CONTROL SAMPLE  
 GENERAL CHEMISTRY

Lab Name: TestAmerica Pittsburgh Job No.: 180-43791-1

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

Matrix: Water

| Method  | Lab Sample ID         | Analyte                                 | Result | C | Unit | Spike Amount | Pct. Rec. | Limits | RPD | RPD Limit | Q |
|---|-----------------------|---|--------|---|------|--------------|-----------|--------|-----|-----------|---|
| Batch ID: 141746 Date: 05/15/2015 11:26 Prep Batch: 141677 Date: 05/15/2015 08:15 |                       |   |        |   |      |              |           |        |     |           |   |
| LCS Source: WCNLCS_00019  |                       |   |        |   |      |              |           |        |     |           |   |
| 9014  | LCS<br>180-141677/3-A | Cyanide, Total                          | 210    |   | ug/L | 200          | 105       | 85-115 |     |           |   |
| Batch ID: 141151 Date: 05/11/2015 06:54   |                       |   |        |   |      |              |           |        |     |           |   |
| LCS Source: LCS 20 PPM_00622  |                       |   |        |   |      |              |           |        |     |           |   |
| SM<br>5310C   | LCS<br>180-141151/4   | Dissolved Organic<br>Carbon - Duplicate | 19.1   |   | mg/L | 20.0         | 96        | 80-120 | 4   | 20        |   |

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

7A-IN  
 LAB CONTROL SAMPLE DUPLICATE  
 GENERAL CHEMISTRY

Lab Name: TestAmerica Pittsburgh Job No.: 180-43791-1  
 SDG No.: \_\_\_\_\_  
 Matrix: Water

| Method                                  | Lab Sample ID        | Analyte                                 | Result                        | C | Unit | Spike Amount | Pct. Rec. | Limits | RPD | RPD Limit | Q |
|---|----------------------|---|-------------------------------|---|------|--------------|-----------|--------|-----|-----------|---|
| Batch ID: 141151 Date: 05/11/2015 07:13 |                      |   | LCSD Source: LCS 20 PPM_00622 |   |      |              |           |        |     |           |   |
| SM<br>5310C                             | LCSD<br>180-141151/5 | Dissolved Organic<br>Carbon - Duplicate | 20.0                          |   | mg/L | 20.0         | 100       | 80-120 | 4   | 20        |   |

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

7A-IN  
 LOW LEVEL CONTROL SAMPLE  
 GENERAL CHEMISTRY

Lab Name: TestAmerica Pittsburgh Job No.: 180-43791-1  
 SDG No.: \_\_\_\_\_  
 Matrix: Water

| Method                                  | Lab Sample ID              | Analyte        | Result                                    | C | Unit | Spike Amount               | Pct. Rec. | Limits | RPD | RPD Limit | Q |
|---|----------------------------|----------------|---|---|------|----------------------------|-----------|--------|-----|-----------|---|
| Batch ID: 141746 Date: 05/15/2015 11:21 |                            |                | Prep Batch: 141677 Date: 05/15/2015 08:15 |   |      | LCS Source: WCN0.5L1_00501 |           |        |     |           |   |
| 9014                                    | LLCS<br>180-141677/1-<br>A | Cyanide, Total | 48.0                                      |   | ug/L | 50.0                       | 96        | 90-110 |     |           |   |

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

7A-IN  
HIGH LEVEL CONTROL SAMPLE  
GENERAL CHEMISTRY

Lab Name: TestAmerica Pittsburgh Job No.: 180-43791-1  
SDG No.: \_\_\_\_\_  
Matrix: Water

| Method                                  | Lab Sample ID              | Analyte        | Result                                    | C | Unit | Spike Amount              | Pct. Rec. | Limits | RPD | RPD Limit | Q |
|---|----------------------------|----------------|---|---|------|---------------------------|-----------|--------|-----|-----------|---|
| Batch ID: 141746 Date: 05/15/2015 11:24 |                            |                | Prep Batch: 141677 Date: 05/15/2015 08:15 |   |      | LCS Source: WCN10Pi_00487 |           |        |     |           |   |
| 9014                                    | HLCS<br>180-141677/2-<br>A | Cyanide, Total | 255                                       |   | ug/L | 250                       | 102       | 90-110 |     |           |   |

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

7A-IN  
 LAB CONTROL SAMPLE  
 GENERAL CHEMISTRY

Lab Name: TestAmerica Nashville Job No.: 180-43791-1  
 SDG No.: \_\_\_\_\_  
 Matrix: Water

| Method                                  | Lab Sample ID             | Analyte | Result                                    | C | Unit | Spike Amount                  | Pct. Rec. | Limits | RPD | RPD Limit | Q |
|---|---------------------------|---------|---|---|------|-------------------------------|-----------|--------|-----|-----------|---|
| Batch ID: 248554 Date: 05/15/2015 10:40 |                           |         | Prep Batch: 248553 Date: 05/15/2015 10:40 |   |      | LCS Source: OP_HEMspike_00022 |           |        |     |           |   |
| 1664B                                   | LCS<br>490-248553/3-<br>A | HEM     | 37.1                                      |   | mg/L | 41.7                          | 89        | 78-114 |     |           |   |

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: 180-43791-1

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

Matrix: Water

Instrument ID: SEAL2

Method: 9014

MDL Date: 10/15/2014 12:58

Prep Method: 9010C

| Analyte        | Wavelength/<br>Mass | RL<br>(ug/L) | MDL<br>(ug/L) |
|----------------|---------------------|--------------|---------------|
| Cyanide, Total |                     | 10           | 2.5           |

9-IN  
CALIBRATION BLANK DETECTION LIMITS  
GENERAL CHEMISTRY

Lab Name: TestAmerica Pittsburgh Job Number: 180-43791-1  
SDG Number: \_\_\_\_\_  
Matrix: Water Instrument ID: SEAL2  
Method: 9014 XMDL Date: 10/15/2014 12:59

| Analyte        | Wavelength/<br>Mass | XRL<br>(ug/L) | XMDL<br>(ug/L) |
|----------------|---------------------|---------------|----------------|
| Cyanide, Total |                     | 10            | 2.5            |

9-IN  
DETECTION LIMITS  
GENERAL CHEMISTRY - DISSOLVED

Lab Name: TestAmerica Pittsburgh

Job Number: 180-43791-1

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

Matrix: Water

Instrument ID: TOC1030

Method: SM 5310C

MDL Date: 01/31/2010 13:17

| Analyte                                 | Wavelength/<br>Mass | RL<br>(mg/L) | MDL<br>(mg/L) |
|---|---------------------|--------------|---------------|
| Dissolved Organic<br>Carbon - Duplicate |                     | 1            | 0.1401        |



9-IN  
CALIBRATION BLANK DETECTION LIMITS  
GENERAL CHEMISTRY - DISSOLVED

Lab Name: TestAmerica Pittsburgh Job Number: 180-43791-1  
SDG Number: \_\_\_\_\_  
Matrix: Water Instrument ID: TOC1030  
Method: SM 5310C XMDL Date: 01/31/2010 13:17

| Analyte                                 | Wavelength/<br>Mass | XRL<br>(mg/L) | XMDL<br>(mg/L) |
|---|---------------------|---------------|----------------|
| Dissolved Organic<br>Carbon - Duplicate |                     | 1             | 0.1401         |

9-IN  
DETECTION LIMITS  
GENERAL CHEMISTRY

Lab Name: TestAmerica Nashville

Job Number: 180-43791-1

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

Matrix: Water

Instrument ID: NOEQUIP

Method: 1664B

MDL Date: 01/26/2012 12:56

Prep Method: 1664B

| Analyte | Wavelength/<br>Mass | RL<br>(mg/L) | MDL<br>(mg/L) |
|---------|---------------------|--------------|---------------|
| HEM     |                     | 4            | 1.4           |

9-IN  
CALIBRATION BLANK DETECTION LIMITS  
GENERAL CHEMISTRY

Lab Name: TestAmerica Nashville Job Number: 180-43791-1  
SDG Number: \_\_\_\_\_  
Matrix: Water Instrument ID: NOEQUIP  
Method: 1664B XMDL Date: 01/26/2012 13:00

| Analyte | Wavelength/<br>Mass | XRL<br>(mg/L) | XMDL<br>(mg/L) |
|---------|---------------------|---------------|----------------|
| HEM     |                     | 4             | 1.4            |

12-IN  
PREPARATION LOG  
GENERAL CHEMISTRY

Lab Name: TestAmerica Pittsburgh

Job No.: 180-43791-1

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

Prep Method: 9010C

| Lab Sample ID       | Preparation Date | Prep Batch | Initial Weight | Initial Volume (mL) | Final Volume (mL) |
|---------------------|------------------|------------|----------------|---------------------|-------------------|
| LLCS 180-141677/1-A | 05/15/2015 08:15 | 141677     |                | 50                  | 50                |
| HLCS 180-141677/2-A | 05/15/2015 08:15 | 141677     |                | 50                  | 50                |
| LCS 180-141677/3-A  | 05/15/2015 08:15 | 141677     |                | 50                  | 50                |
| MB 180-141677/4-A   | 05/15/2015 08:15 | 141677     |                | 50                  | 50                |
| 180-43791-1         | 05/15/2015 08:15 | 141677     |                | 50                  | 50                |
| 180-43791-2         | 05/15/2015 08:15 | 141677     |                | 50                  | 50                |
| 180-43791-3         | 05/15/2015 08:15 | 141677     |                | 50                  | 50                |
| 180-43791-4         | 05/15/2015 08:15 | 141677     |                | 50                  | 50                |

12-IN  
PREPARATION LOG  
GENERAL CHEMISTRY

Lab Name: TestAmerica Nashville

Job No.: 180-43791-1

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

Prep Method: 1664B

| Lab Sample ID      | Preparation Date | Prep Batch | Initial Weight | Initial Volume (mL) | Final Volume (mL) |
|--------------------|------------------|------------|----------------|---------------------|-------------------|
| MB 490-248553/1-A  | 05/15/2015 10:40 | 248553     |                | 960                 | 960               |
| LB 490-248553/2-A  | 05/15/2015 10:40 | 248553     |                | 960                 | 960               |
| LCS 490-248553/3-A | 05/15/2015 10:40 | 248553     |                | 960                 | 960               |
| 180-43791-1        | 05/15/2015 10:40 | 248553     |                | 840                 | 960               |
| 180-43791-2        | 05/15/2015 10:40 | 248553     |                | 810                 | 960               |

13-IN  
ANALYSIS RUN LOG  
GENERAL CHEMISTRY

Lab Name: TestAmerica Pittsburgh Job No.: 180-43791-1

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

Instrument ID: SEAL2 Analysis Method: 9014

Start Date: 05/15/2015 10:56 End Date: 05/15/2015 12:25

| Lab Sample Id       | D/F | Type | Time  | Analytes |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|---------------------|-----|------|-------|----------|---|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
|                     |     |      |       | C        | N |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ZZZZZZ              |     |      | 10:56 |          |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ZZZZZZ              |     |      | 10:58 |          |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ZZZZZZ              |     |      | 11:00 |          |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ZZZZZZ              |     |      | 11:02 |          |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ZZZZZZ              |     |      | 11:04 |          |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ZZZZZZ              |     |      | 11:06 |          |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ZZZZZZ              |     |      | 11:09 |          |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ZZZZZZ              |     |      | 11:11 |          |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ICV 180-141746/9    | 1   |      | 11:13 | X        |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ICB 180-141746/10   | 1   |      | 11:15 | X        |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| CCV 180-141746/11   | 1   |      | 11:17 | X        |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| CCB 180-141746/12   | 1   |      | 11:19 | X        |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| LLCS 180-141677/1-A | 1   | T    | 11:21 | X        |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| HLCS 180-141677/2-A | 1   | T    | 11:24 | X        |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| LCS 180-141677/3-A  | 1   | T    | 11:26 | X        |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| MB 180-141677/4-A   | 1   | T    | 11:28 | X        |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ZZZZZZ              |     |      | 11:30 |          |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ZZZZZZ              |     |      | 11:32 |          |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ZZZZZZ              |     |      | 11:34 |          |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ZZZZZZ              |     |      | 11:36 |          |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ZZZZZZ              |     |      | 11:39 |          |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ZZZZZZ              |     |      | 11:41 |          |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| CCV 180-141746/23   | 1   |      | 11:43 | X        |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| CCB 180-141746/24   | 1   |      | 11:45 | X        |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ZZZZZZ              |     |      | 11:47 |          |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ZZZZZZ              |     |      | 11:49 |          |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ZZZZZZ              |     |      | 11:51 |          |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ZZZZZZ              |     |      | 11:54 |          |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ZZZZZZ              |     |      | 11:56 |          |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ZZZZZZ              |     |      | 11:58 |          |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 180-43791-1         | 1   | T    | 12:00 | X        |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 180-43791-2         | 1   | T    | 12:02 | X        |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 180-43791-3         | 1   | T    | 12:04 | X        |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 180-43791-4         | 1   | T    | 12:06 | X        |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| CCV 180-141746/35   | 1   |      | 12:09 | X        |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| CCB 180-141746/36   | 1   |      | 12:11 | X        |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ZZZZZZ              |     |      | 12:13 |          |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ZZZZZZ              |     |      | 12:15 |          |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ZZZZZZ              |     |      | 12:17 |          |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ZZZZZZ              |     |      | 12:19 |          |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ZZZZZZ              |     |      | 12:20 |          |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ZZZZZZ              |     |      | 12:22 |          |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

13-IN  
ANALYSIS RUN LOG  
GENERAL CHEMISTRY

Lab Name: TestAmerica Pittsburgh Job No.: 180-43791-1

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

Instrument ID: SEAL2 Analysis Method: 9014

Start Date: 05/15/2015 10:56 End Date: 05/15/2015 12:25

| Lab Sample Id     | D/F | T<br>y<br>p<br>e | Time  | Analytes |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|-------------------|-----|------------------|-------|----------|---|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
|                   |     |                  |       | C        | N |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| CCV 180-141746/43 | 1   |                  | 12:24 | X        |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| CCB 180-141746/44 | 1   |                  | 12:25 | X        |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

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

13-IN  
ANALYSIS RUN LOG  
GENERAL CHEMISTRY

Lab Name: TestAmerica Pittsburgh Job No.: 180-43791-1

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

Instrument ID: TOC1030 Analysis Method: SM 5310C

Start Date: 05/11/2015 05:57 End Date: 05/11/2015 09:25

| Lab Sample Id     | D/F | Type | Time  | Analytes |   |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|-------------------|-----|------|-------|----------|---|---|---|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
|                   |     |      |       | D        | O | C | D |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ZZZZZZ            |     |      | 05:57 |          |   |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ICV 180-141151/2  | 1   |      | 06:16 | X        |   |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ICB 180-141151/3  | 1   |      | 06:35 | X        |   |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| LCS 180-141151/4  | 1   | D    | 06:54 | X        |   |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| LCSD 180-141151/5 | 1   | D    | 07:13 | X        |   |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| MB 180-141151/6   | 1   | D    | 07:32 | X        |   |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ZZZZZZ            |     |      | 07:51 |          |   |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ZZZZZZ            |     |      | 08:10 |          |   |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 180-43791-3       | 1   | D    | 08:29 | X        |   |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 180-43791-4       | 1   | D    | 08:48 | X        |   |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| CCV 180-141151/11 | 1   |      | 09:07 | X        |   |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| CCB 180-141151/12 | 1   |      | 09:25 | X        |   |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

Prep Types: \_\_\_\_\_  
D = Dissolved



13-IN  
ANALYSIS RUN LOG  
GENERAL CHEMISTRY

Lab Name: TestAmerica Nashville Job No.: 180-43791-1  
 SDG No.: \_\_\_\_\_  
 Instrument ID: NOEQUIP Analysis Method: 1664B  
 Start Date: 05/15/2015 10:40 End Date: 05/15/2015 15:50

| Lab Sample Id      | D/F | T<br>y<br>p<br>e | Time  | H<br>E<br>M | Analytes |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|--------------------|-----|------------------|-------|-------------|----------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
|                    |     |                  |       |             |          |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| MB 490-248553/1-A  | 1   | T                | 10:40 | X           |          |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| LB 490-248553/2-A  | 1   | T                | 10:40 | X           |          |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| LCS 490-248553/3-A | 1   | T                | 10:40 | X           |          |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 180-43791-1        | 1   | T                | 10:40 | X           |          |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 180-43791-2        | 1   | T                | 10:40 | X           |          |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ZZZZZZ             |     |                  | 10:40 |             |          |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ZZZZZZ             |     |                  | 10:40 |             |          |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ZZZZZZ             |     |                  | 10:40 |             |          |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ZZZZZZ             |     |                  | 10:40 |             |          |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ZZZZZZ             |     |                  | 10:40 |             |          |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ZZZZZZ             |     |                  | 10:40 |             |          |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ZZZZZZ             |     |                  | 10:40 |             |          |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ZZZZZZ             |     |                  | 10:40 |             |          |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ZZZZZZ             |     |                  | 10:40 |             |          |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ZZZZZZ             |     |                  | 10:40 |             |          |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ZZZZZZ             |     |                  | 10:40 |             |          |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ZZZZZZ             |     |                  | 10:40 |             |          |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ZZZZZZ             |     |                  | 10:40 |             |          |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ZZZZZZ             |     |                  | 10:40 |             |          |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ZZZZZZ             |     |                  | 15:50 |             |          |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

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



# AQ2 Report

**Serial Number:** SEAL 2  
**Report Requested By:** Test America  
**Date & Time:** 05/15/2015 12:55:48  
**Tray Number:** 1  
**Tray Name:** 15.05.15 (08-30)

*A. Johnson 5/15/15*

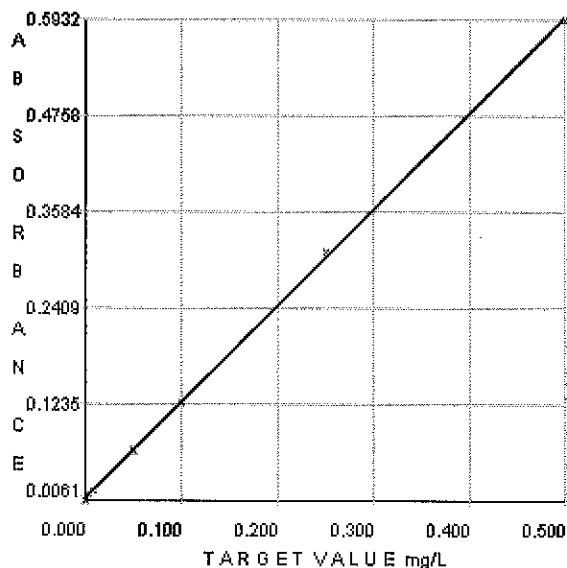
## CYANIDE

### Calibration Chart

| Type | Observed | Calculated | Target | % Error  |
|------|----------|------------|--------|----------|
| S1   | 0.0061   | -0.0011    | 0.0000 |          |
| S90  | 0.0127   | 0.0045     | 0.0050 | -9.0483  |
| S91  | 0.0176   | 0.0087     | 0.0100 | -12.9825 |
| S92  | 0.0663   | 0.0500     | 0.0500 | 0.0421   |
| S93  | 0.1255   | 0.1003     | 0.1000 | 0.2759   |
| S94  | 0.3080   | 0.2552     | 0.2500 | 2.0896   |
| S95  | 0.5932   | 0.4974     | 0.5000 | -0.5278  |
| S0   | 0.0059   | -0.0013    | 0.0000 |          |

**Polynomial Order:** 1  
**Correlation Coefficient:** 0.9999  
**Carryover:** -0.0  
**Date & Time:** 05/15/2015 11:11:09

### Calibration Graph



## Reagents

| Name           | Batch   | Prepared By  | Expiry Date         |
|----------------|---------|--------------|---------------------|
| CN - Phos Buff | 1390860 | Test America | 11/03/2015 21:00:00 |
| CN - Chl-T     | 1563254 | Test America | 05/21/2015 22:00:00 |
| CN - PyrBrbA   | 1428101 | Test America | 06/04/2015 22:00:00 |

| Cup Type | ID          | Result             | Units        | Raw Data | Test Dil. | Cup Dil. | User | Time/Date           |
|----------|-------------|--------------------|--------------|----------|-----------|----------|------|---------------------|
| S1       | STANDARD 1  | 0.0061             |              | 0.006056 |           |          |      | 05/15/2015 10:56:05 |
| S90      | STANDARD 90 | 0.0127             |              | 0.012745 |           |          |      | 05/15/2015 10:58:16 |
| S91      | STANDARD 91 | 0.0176             |              | 0.017638 |           |          |      | 05/15/2015 11:00:23 |
| S92      | STANDARD 92 | 0.0663             |              | 0.066309 |           |          |      | 05/15/2015 11:02:32 |
| S93      | STANDARD 93 | 0.1255             |              | 0.125505 |           |          |      | 05/15/2015 11:04:42 |
| S94      | STANDARD 94 | 0.3080             |              | 0.308021 |           |          |      | 05/15/2015 11:06:53 |
| S95      | STANDARD 95 | 0.5932             |              | 0.593238 |           |          |      | 05/15/2015 11:09:01 |
| S0       | STANDARD 0  | 0.0059             |              | 0.005876 |           |          |      | 05/15/2015 11:11:09 |
| 1        | C15         | ICV                | 0.2127 mg/L  | 0.257987 |           |          |      | 05/15/2015 11:13:17 |
| 2        | C17         | ICB                | -0.0009 mg/L | 0.006381 |           |          |      | 05/15/2015 11:15:25 |
|          | C11         | C C V              | 0.1022 mg/L  | 0.127720 |           |          |      | 05/15/2015 11:17:34 |
|          | C12         | C C B              | -0.0015 mg/L | 0.005655 |           |          |      | 05/15/2015 11:19:42 |
| 3        | U1          | LLCS 180-1416771-A | 0.0480 mg/L  | 0.063969 |           |          |      | 05/15/2015 11:21:51 |
| 4        | U2          | HLCS 180-1416772-A | 0.2545 mg/L  | 0.307210 |           |          |      | 05/15/2015 11:24:00 |
| 5        | U3          | LCS 180-1416773-A  | 0.2101 mg/L  | 0.254840 |           |          |      | 05/15/2015 11:26:08 |

|    |     |                     |         |      |          |                     |
|----|-----|---------------------|---------|------|----------|---------------------|
| 6  | U4  | MB 180-1416774-A    | -0.0008 | mg/L | 0.006413 | 05/15/2015 11:28:17 |
| 7  | U5  | 180-43690-H-2-A     | 0.0087  | mg/L | 0.017643 | 05/15/2015 11:30:28 |
| 8  | U6  | 180-43702-G-3-A     | -0.0009 | mg/L | 0.006310 | 05/15/2015 11:32:39 |
| 9  | U7  | 180-43702-G-4-A     | -0.0013 | mg/L | 0.005887 | 05/15/2015 11:34:48 |
| 10 | U8  | 180-43725-K-1-A     | 0.0002  | mg/L | 0.007647 | 05/15/2015 11:36:57 |
| 11 | U9  | 180-43725-K-2-A     | 0.0009  | mg/L | 0.008402 | 05/15/2015 11:39:06 |
| 12 | U10 | 180-43725-K-3-A     | 0.0030  | mg/L | 0.010881 | 05/15/2015 11:41:15 |
|    | C11 | C C V               | 0.1014  | mg/L | 0.126815 | 05/15/2015 11:43:24 |
|    | C12 | C C B               | -0.0015 | mg/L | 0.005570 | 05/15/2015 11:45:33 |
| 13 | U11 | 180-43766-H-1-A     | -0.0006 | mg/L | 0.006629 | 05/15/2015 11:47:41 |
| 14 | U12 | 180-43766-H-2-A     | 0.0182  | mg/L | 0.028790 | 05/15/2015 11:49:50 |
| 15 | U13 | 180-43766-H-3-A     | 0.0017  | mg/L | 0.009445 | 05/15/2015 11:51:58 |
| 16 | U14 | 180-43766-H-4-A     | -0.0006 | mg/L | 0.006693 | 05/15/2015 11:54:06 |
| 17 | U15 | 180-43766-H-5-A     | 0.0059  | mg/L | 0.014332 | 05/15/2015 11:56:16 |
| 18 | U16 | 180-43766-H-6-A     | -0.0000 | mg/L | 0.007374 | 05/15/2015 11:58:27 |
| 19 | U17 | 180-43791-G-1-A     | 0.0002  | mg/L | 0.007620 | 05/15/2015 12:00:35 |
| 20 | U18 | 180-43791-G-2-A     | -0.0002 | mg/L | 0.007113 | 05/15/2015 12:02:43 |
| 21 | U19 | 180-43791-D-3-A     | 0.0000  | mg/L | 0.007394 | 05/15/2015 12:04:51 |
| 22 | U20 | 180-43791-D-4-A     | 0.0001  | mg/L | 0.007559 | 05/15/2015 12:06:59 |
|    | C11 | C C V               | 0.1059  | mg/L | 0.132158 | 05/15/2015 12:09:07 |
|    | C12 | C C B               | -0.0014 | mg/L | 0.005691 | 05/15/2015 12:11:15 |
| 23 | U21 | 180-43799-L-1-A     | -0.0005 | mg/L | 0.006853 | 05/15/2015 12:13:28 |
| 24 | U22 | 680-112238-C-1-A    | -0.0009 | mg/L | 0.006297 | 05/15/2015 12:15:39 |
| 25 | U23 | 680-112238-C-1-B MS | 0.0980  | mg/L | 0.122780 | 05/15/2015 12:17:26 |
| 26 | U24 | 680-112238-C-1-C MS | 0.1093  | mg/L | 0.136167 | 05/15/2015 12:19:14 |
| 27 | U25 | 680-112238-C-2-A    | -0.0015 | mg/L | 0.005657 | 05/15/2015 12:20:53 |
| 28 | U26 | 680-112238-C-3-A    | 0.0001  | mg/L | 0.007487 | 05/15/2015 12:22:33 |
|    | C11 | C C V               | 0.1045  | mg/L | 0.130455 | 05/15/2015 12:24:12 |
|    | C12 | C C B               | -0.0009 | mg/L | 0.006290 | 05/15/2015 12:25:53 |





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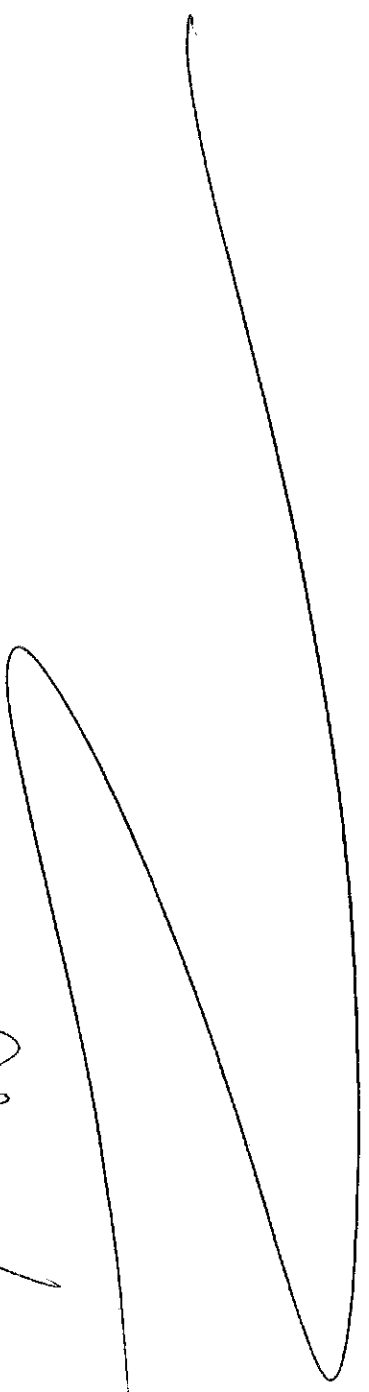
*Lab# 057115 Doc*  
*SMS310C720*

Date Prepared: 05/11/2015  
Date Approved:  
By:

*By: 141151*

Sample Results Summary

| Spl Vial # | Sample ID          | Num Rep | Act Rep | Method                                    | Type     | Dil | Cust ID  | Mode | Avg. Area (cts) | Avg. Mass (ug) | Avg. Conc (PPM) | Std. Dev | % RSD | Notes |
|------------|--------------------|---------|---------|---|----------|-----|----------|------|-----------------|----------------|-----------------|----------|-------|-------|
| 1          | 1 BLANK            | 2       | 2       | TOC JULY 2013 - Jul 18, 2013; 11-10-39 AM | Sample   | 1:1 | 00000000 | TOC  | 2.332           | 0.148          | 0.062           | 753      | 32.27 | Pass  |
| 2          | 2 ICBV 40 PPM      | 2       | 2       | TOC JULY 2013 - Jul 18, 2013; 11-10-39 AM | CHK      | 1:1 | 00000000 | TOC  | 274.339         | 99.610         | 41.504          | 104314   | 0.48  | Fail  |
| 3          | 3 ICB              | 2       | 2       | TOC JULY 2013 - Jul 18, 2013; 11-10-39 AM | Standard | 1:1 | 00000000 | TOC  | 1.524           | 0.000          | 0.000           | 102      | 6.70  | Fail  |
| 4          | 4 LCS 20 PPM       | 2       | 2       | TOC JULY 2013 - Jul 18, 2013; 11-10-39 AM | Standard | 1:1 | 00000000 | TOC  | 128.169         | 45.862         | 19.110          | 576      | 0.45  | Fail  |
| 5          | 5 LCSD 20 PPM      | 2       | 2       | TOC JULY 2013 - Jul 18, 2013; 11-10-39 AM | Standard | 1:1 | 00000000 | TOC  | 133.798         | 47.932         | 19.972          | 1001847  | 1.38  | Fail  |
| 6          | 6 MB               | 2       | 2       | TOC JULY 2013 - Jul 18, 2013; 11-10-39 AM | CHK      | 1:1 | 00000000 | TOC  | 1.339           | 0.000          | 0.000           | 1        | 0.08  | Fail  |
| 7          | 7 180-43776-c-1-a  | 2       | 2       | TOC JULY 2013 - Jul 18, 2013; 11-10-39 AM | Standard | 1:1 | 00000000 | TOC  | 33.613          | 11.603         | 4.834           | 1,619    | 4.82  | Pass  |
| 8          | 8 180-43776-c-2-a  | 2       | 2       | TOC JULY 2013 - Jul 18, 2013; 11-10-39 AM | Sample   | 1:1 | 00000000 | TOC  | 19.811          | 6.528          | 2.721           | 32       | 0.16  | Pass  |
| 9          | 9 180-43791-b-3-a  | 2       | 2       | TOC JULY 2013 - Jul 18, 2013; 11-10-39 AM | Sample   | 1:1 | 00000000 | TOC  | 5.249           | 1.173          | 0.489           | 189      | 3.60  | Pass  |
| 10         | 10 180-43791-b-4-a | 2       | 2       | TOC JULY 2013 - Jul 18, 2013; 11-10-39 AM | Sample   | 1:1 | 00000000 | TOC  | 7.274           | 1.918          | 0.799           | 39       | 0.54  | Pass  |
| 11         | 11 CCV 10 PPM      | 2       | 2       | TOC JULY 2013 - Jul 18, 2013; 11-10-39 AM | CHK      | 1:1 | 00000000 | TOC  | 64.365          | 22.400         | 9.334           | 1633     | 0.98  | Fail  |
| 12         | 12 CCB             | 2       | 2       | TOC JULY 2013 - Jul 18, 2013; 11-10-39 AM | Standard | 1:1 | 00000000 | TOC  | 1.129           | 0.000          | 0.000           | 162      | 14.35 | Fail  |





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Date Prepared: 05/11/2015 By: **TOC**  
 Date Approved: By:

Sample Results

Spl #: 1 Sample ID: BLANK Type: Sample Date: 05/11/2015 Status: Pass  
 Method: TOC JULY 2013 - Jul 18, 2013 Dilution 1 : 1 Customer ID: 000000000

| Rep #    | Time    | TIC Area (cts) | TIC Mass (ugC) | TIC Conc (PPM) | TOC Area (cts) | TOC Mass (ugC) | TOC Conc (PPM) |
|----------|---------|----------------|----------------|----------------|----------------|----------------|----------------|
| 1        | 6:57 am | -              | -              | -              | 2,865          | 0.297          | 0.124          |
| 2        | 6:05 am | -              | -              | -              | 1,800          | 0.000          | 0.000          |
| Avg.     |         | -              | -              | -              | 2,332          | 0.148          | 0.062          |
| Std.Dev. |         | 32.27          |                |                |                |                |                |
| % RSD.   |         | 32.27          |                |                |                |                |                |

Spl #: 2 Sample ID: ICV 40 PPM Type: Chk Standard Date: 05/11/2015 Status: Fail  
 Method: TOC JULY 2013 - Jul 18, 2013 Dilution 1 : 1 Customer ID: 000000000

| Rep #    | Time    | TIC Area (cts) | TIC Mass (ugC) | TIC Conc (PPM) | TOC Area (cts) | TOC Mass (ugC) | TOC Conc (PPM) |
|----------|---------|----------------|----------------|----------------|----------------|----------------|----------------|
| 1        | 6:16 am | -              | -              | -              | 273,410        | 99.269         | 41.361         |
| 2        | 6:26 am | -              | -              | -              | 275,268        | 99.952         | 41.647         |
| Avg.     |         | -              | -              | -              | 274,339        | 99.610         | 41.504         |
| Std.Dev. |         | 0.48           |                |                |                |                |                |
| % RSD.   |         | 0.48           |                |                |                |                |                |

Spl #: 3 Sample ID: ICB Type: Chk Standard Date: 05/11/2015 Status: Fail  
 Method: TOC JULY 2013 - Jul 18, 2013 Dilution 1 : 1 Customer ID: 000000000

| Rep #    | Time    | TIC Area (cts) | TIC Mass (ugC) | TIC Conc (PPM) | TOC Area (cts) | TOC Mass (ugC) | TOC Conc (PPM) |
|----------|---------|----------------|----------------|----------------|----------------|----------------|----------------|
| 1        | 6:35 am | -              | -              | -              | 1,596          | 0.000          | 0.000          |
| 2        | 6:43 am | -              | -              | -              | 1,452          | 0.000          | 0.000          |
| Avg.     |         | -              | -              | -              | 1,524          | 0.000          | 0.000          |
| Std.Dev. |         | 6.70           |                |                |                |                |                |
| % RSD.   |         | 6.70           |                |                |                |                |                |



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Date Prepared: 05/11/2015 By: **TOC**  
Date Approved: By:

Spl #: 4 Sample ID: LCS 20 PPM Type: Chk Standard Date: 05/11/2015 Status: Fail  
Vial #: 4 Method: TOC JULY 2013 - Jul 18, 2013 Dilution: 1 : 1 Customer ID: 00000000

| Rep # | Time    | TIC Area (cts) | TIC Mass (ugC) | TIC Conc (PPM) | TOC Area (cts) | TOC Mass (ugC) | TOC Conc (PPM) |
|-------|---------|----------------|----------------|----------------|----------------|----------------|----------------|
| 1     | 6:54 am | -              | -              | -              | 128,577        | 48.012         | 19.172         |
| 2     | 7:03 am | -              | -              | -              | 127,762        | 45.712         | 19.047         |

Avg: - - - 128,169 45.862 19.110  
Std.Dev. - - -  
% RSD. 0.45

Spl #: 5 Sample ID: LCSD 20 PPM Type: Chk Standard Date: 05/11/2015 Status: Fail  
Vial #: 5 Method: TOC JULY 2013 - Jul 18, 2013 Dilution: 1 : 1 Customer ID: 00000000

| Rep # | Time    | TIC Area (cts) | TIC Mass (ugC) | TIC Conc (PPM) | TOC Area (cts) | TOC Mass (ugC) | TOC Conc (PPM) |
|-------|---------|----------------|----------------|----------------|----------------|----------------|----------------|
| 1     | 7:13 am | -              | -              | -              | 132,492        | 47.451         | 19.771         |
| 2     | 7:23 am | -              | -              | -              | 135,104        | 48.412         | 20.172         |

Avg: - - - 133,798 47.932 19.972  
Std.Dev. - - -  
% RSD. 1.38

Spl #: 6 Sample ID: MIB Type: Chk Standard Date: 05/11/2015 Status: Fail  
Vial #: 6 Method: TOC JULY 2013 - Jul 18, 2013 Dilution: 1 : 1 Customer ID: 00000000

| Rep # | Time    | TIC Area (cts) | TIC Mass (ugC) | TIC Conc (PPM) | TOC Area (cts) | TOC Mass (ugC) | TOC Conc (PPM) |
|-------|---------|----------------|----------------|----------------|----------------|----------------|----------------|
| 1     | 7:32 am | -              | -              | -              | 1,339          | 0.000          | 0.000          |
| 2     | 7:40 am | -              | -              | -              | 1,340          | 0.000          | 0.000          |

Avg: - - - 1,339 0.000 0.000  
Std.Dev. - - -  
% RSD. 0.08



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Date Prepared: 05/11/2015 By: **TOC**  
Date Approved: By:

Spl #: 7 Sample ID: 180-43776-c-1-a Type: Sample Date: 05/11/2015 Status: Pass  
Vial #: 7 Method: TOC JULY 2013 - Jul 18, 2013 Dilution 1 : 1 Customer ID: 000000000

| Rep #    | Time    | TIC Area (cts) | TIC Mass (ugC) | TIC Conc (PPM) | TOC Area (cts) | TOC Mass (ugC) | TOC Conc (PPM) |
|----------|---------|----------------|----------------|----------------|----------------|----------------|----------------|
| 1        | 7:51 am | -              | -              | -              | 32,469         | 11.182         | 4.659          |
| 2        | 8:00 am | -              | -              | -              | 34,758         | 12.024         | 5.010          |
| Avg.     |         | -              | -              | -              | 33,613         | 11.603         | 4.834          |
| Std.Dev. |         | -              | -              | -              | -              | -              | -              |
| % RSD.   |         | -              | -              | -              | 4.82           | -              | -              |

Spl #: 8 Sample ID: 180-43776-c-2-a Type: Sample Date: 05/11/2015 Status: Pass  
Vial #: 8 Method: TOC JULY 2013 - Jul 18, 2013 Dilution 1 : 1 Customer ID: 000000000

| Rep #    | Time    | TIC Area (cts) | TIC Mass (ugC) | TIC Conc (PPM) | TOC Area (cts) | TOC Mass (ugC) | TOC Conc (PPM) |
|----------|---------|----------------|----------------|----------------|----------------|----------------|----------------|
| 1        | 8:10 am | -              | -              | -              | 19,789         | 6.520          | 2.717          |
| 2        | 8:19 am | -              | -              | -              | 19,834         | 6.537          | 2.724          |
| Avg.     |         | -              | -              | -              | 19,811         | 6.528          | 2.721          |
| Std.Dev. |         | -              | -              | -              | -              | -              | -              |
| % RSD.   |         | -              | -              | -              | 0.16           | -              | -              |

Spl #: 9 Sample ID: 180-43791-b-3-a Type: Sample Date: 05/11/2015 Status: Pass  
Vial #: 9 Method: TOC JULY 2013 - Jul 18, 2013 Dilution 1 : 1 Customer ID: 000000000

| Rep #    | Time    | TIC Area (cts) | TIC Mass (ugC) | TIC Conc (PPM) | TOC Area (cts) | TOC Mass (ugC) | TOC Conc (PPM) |
|----------|---------|----------------|----------------|----------------|----------------|----------------|----------------|
| 1        | 8:29 am | -              | -              | -              | 5,382          | 1.222          | 0.509          |
| 2        | 8:38 am | -              | -              | -              | 5,115          | 1.124          | 0.468          |
| Avg.     |         | -              | -              | -              | 5,249          | 1.173          | 0.489          |
| Std.Dev. |         | -              | -              | -              | -              | -              | -              |
| % RSD.   |         | -              | -              | -              | 3.60           | -              | -              |





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Date Prepared: 05/11/2015 By: **TOC**  
 Date Approved: By:

Spl #: 10 Sample ID: 180-43791-b-4-a Type: Sample Date: 05/11/2015 Status: Pass  
 Method: TOC JULY 2013 - Jul 18, 2013 Dilution: 1 : 1 Customer ID: 00000000

| Rep #    | Time    | TIC Area (cts) | TIC Mass (ugC) | TIC Conc (PPM) | TOC Area (cts) | TOC Mass (ugC) | TOC Conc (PPM) |
|----------|---------|----------------|----------------|----------------|----------------|----------------|----------------|
| 1        | 8:48 am | -              | -              | -              | 7.301          | 1.928          | 0.803          |
| 2        | 8:56 am | -              | -              | -              | 7.246          | 1.908          | 0.795          |
| Avg.     |         | -              | -              | -              | 7.274          | 1.918          | 0.799          |
| Std.Dev. |         | 0.54           |                |                |                |                |                |
| % RSD.   |         | 0.54           |                |                |                |                |                |

Spl #: 11 Sample ID: CCBV 10 PPM Type: CHK Standard Date: 05/11/2015 Status: Fail  
 Method: TOC JULY 2013 - Jul 18, 2013 Dilution: 1 : 1 Customer ID: 000000000

| Rep #    | Time    | TIC Area (cts) | TIC Mass (ugC) | TIC Conc (PPM) | TOC Area (cts) | TOC Mass (ugC) | TOC Conc (PPM) |
|----------|---------|----------------|----------------|----------------|----------------|----------------|----------------|
| 1        | 9:07 am | -              | -              | -              | 63.917         | 22.236         | 9.265          |
| 2        | 9:15 am | -              | -              | -              | 64.812         | 22.585         | 9.402          |
| Avg.     |         | -              | -              | -              | 64.365         | 22.400         | 9.334          |
| Std.Dev. |         | 0.98           |                |                |                |                |                |
| % RSD.   |         | 0.98           |                |                |                |                |                |

Spl #: 12 Sample ID: CCB Type: CHK Standard Date: 05/11/2015 Status: Fail  
 Method: TOC JULY 2013 - Jul 18, 2013 Dilution: 1 : 1 Customer ID: 000000000

| Rep #    | Time    | TIC Area (cts) | TIC Mass (ugC) | TIC Conc (PPM) | TOC Area (cts) | TOC Mass (ugC) | TOC Conc (PPM) |
|----------|---------|----------------|----------------|----------------|----------------|----------------|----------------|
| 1        | 9:25 am | -              | -              | -              | 1.244          | 0.000          | 0.000          |
| 2        | 9:33 am | -              | -              | -              | 1.015          | 0.000          | 0.000          |
| Avg.     |         | -              | -              | -              | 1.129          | 0.000          | 0.000          |
| Std.Dev. |         | 14.35          |                |                |                |                |                |
| % RSD.   |         | 14.35          |                |                |                |                |                |



OI Corporation  
 151 Graham Rd  
 College Station, TX  
 77845  
 USA

Date Prepared: 05/11/2015 By: **TOC**  
 Date Approved: By:

**Method Summary**

| Method Details   | Pre-Processing            | Times                    | Temp   |
|--|---------------------------|--------------------------|--------|
| Method Name: TOC JULY 2013 - Jul 18, 2013; 11-10-39 AM | Sample Dilution: Disabled | React                    | React  |
| Date Created: 07/18/2013                               | Dilution Mode: Automatic  | TIC 01:30                | TIC 70 |
| Time Created: 11:10                                    | Dilution Factor: 1 : 1    | TOC 01:30                | TOC 98 |
| Created By: toc  |                           |                          |        |
| Analysis Mode: NPOC Only                               | Outlier Removal Criteria  |                          |        |
| Sparging Mode: Internal                                | Enabled: No               |                          |        |
| Pre-Acid Volume (mL): 1.000                            | Additional Replicates: 1  |                          |        |
| Spurge Time (min:ss): 02:00                            | Max. % RSD: 10.00         |                          |        |
| Volumes  | Rinses                    |                          |        |
| Sample Volume (mL): 2.400                              | Rinse Volume (mL): 10.000 |                          |        |
| Acid Volume (mL): 1.000                                | Rinses Per Sample: 1      |                          |        |
| Persulfate Volume(mL): 1.500                           | Rinses Per Replicate: 0   |                          |        |
| Other  | Max. Std. Dev. 100        | Use Modified Oxidant: No |        |
| Sys/Pressure: 20.00                                    |                           |                          |        |

**Calibration Summary**

| Calibration Generation      | Calibration Pass/Fail Criteria |
|-----------------------------|--------------------------------|
| Generation Mode: Manual     | Parameter                      |
| # of Stds: 5                | RE (ugC/k-cts)                 |
| Dilution Factor: 10 : 1     | Yes                            |
| Dilution Volume (mL): 1.000 | Offset (area) (cts)            |
| Add Zero as Std #1: No      | Offset (mass) (ugC)            |
|                             | QC Blank(cts)                  |

| Calibration Mode            | Checks, QC's and Actions |
|-----------------------------|--------------------------|
| Primary Mode: TOC           | Type                     |
| User for ALL Modes: Enabled | Target (PPM)             |
|                             | Tolerance (+/- %)        |
|                             | 1st Failure              |
|                             | 2nd Failure              |

|        |        |       |          |          |
|--------|--------|-------|----------|----------|
| CK Std | n/a    | 10.00 | Continue | Continue |
| QC #1  | 40.000 | 10.00 | Continue | Continue |
| QC #2  | 20.000 | 20.00 | Continue | Continue |
| QC #3  | 25.000 | 10.00 | Continue | Continue |
| QC #4  | 0.000  | 10.00 | Continue | Continue |
| SST    | 0.000  | 15.00 | Continue | Continue |

**Calibration Details**

Calibration Mode: TOC  
Date Calibrated: 05/03/2015  
Time Calibrated: 1:03 pm  
Calibrated By: toc  
RF (ugC/k-cst): 0.3677  
R2: 0.9998  
R: 0.9999  
QC Blank(cst): 3.643  
Offset (cst): 3451  
Offset (ugC): -1.269  
Reagent Blank (cst): 2.058  
Units of Measure: PPM->mg/L C

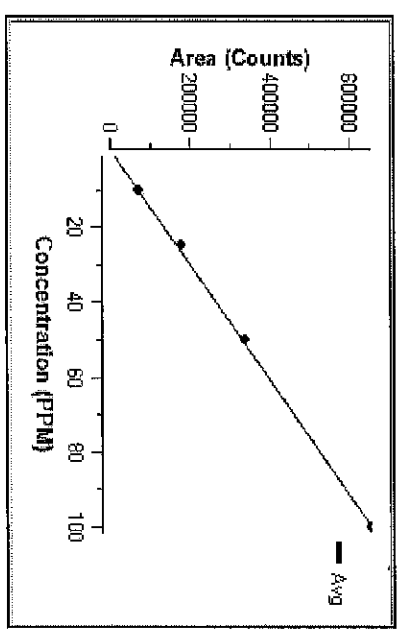
**Calibration Settings**

Stock Conc. For Dilutions: (PPM) 1,000,000  
# of Reagent Blanks: 3  
EFC Enabled: No  
Total Flowrate w/EFC: 100 ml/min  
Check Standards: Subtract RW  
Samples: Subtract RB  
Regression type: Weighted Linear  
weighting factor => 1 / mass

**Calculations:**

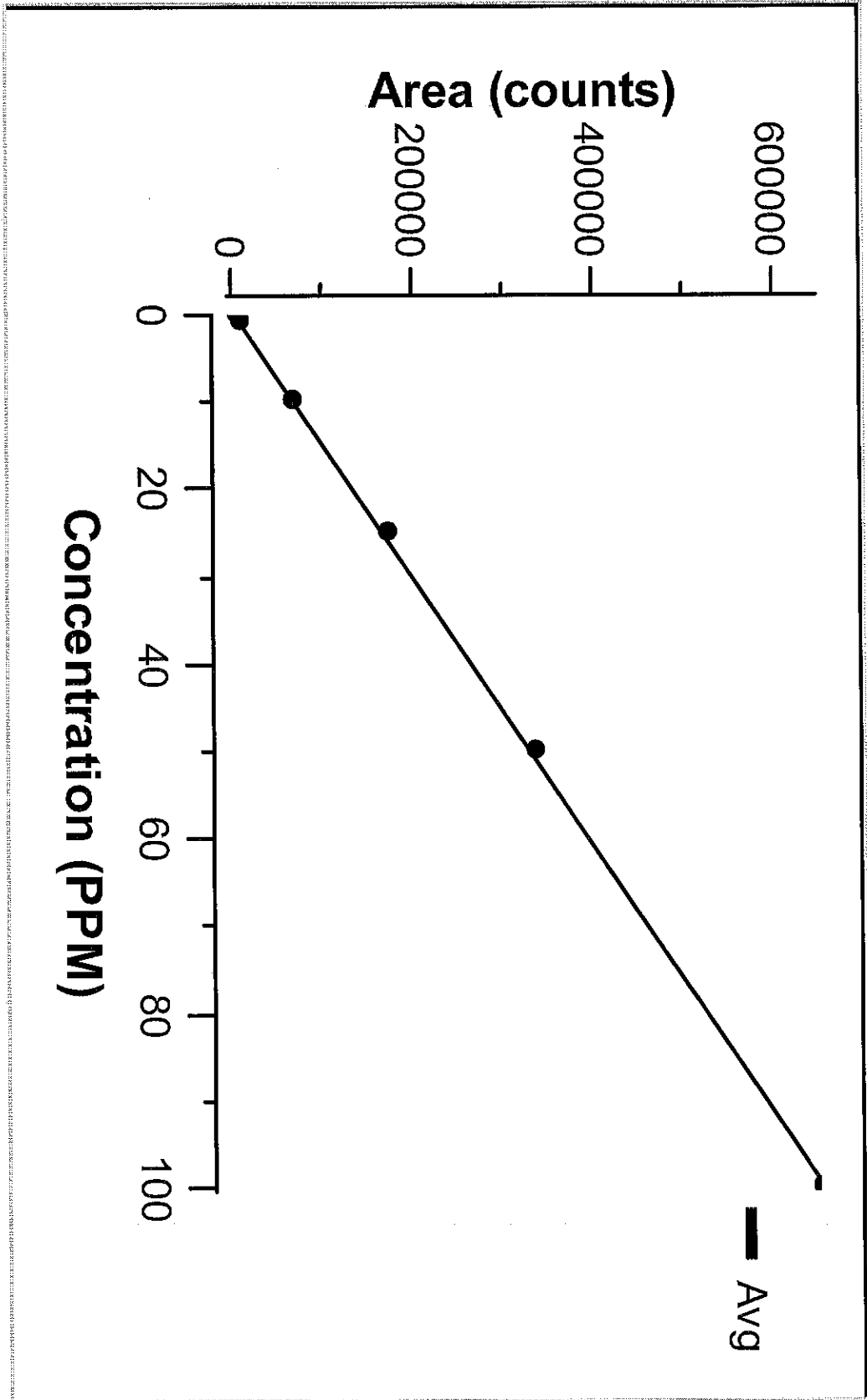
$$\text{Concentration} = \frac{RF \times \text{Area}}{\text{Volume}}$$

Samples: Area = Area Peak - Area Offset or Area = Area Peak - Average  
CHK Stds: Area = Area Peak - Area Offset or Area = Area Peak - Average  
QC Samples: Area = Area Peak - Area QCBank



$$y = m \times x + b$$

$$y \Rightarrow \text{Area} \quad m \Rightarrow \frac{1000}{RF \times \text{volume}} \quad b \Rightarrow 0$$



**Calibration - Quick View - TOC**

|              |                            |
|--------------|----------------------------|
| User ID: toc | Name: Total Organic Carbon |
| Title: Mr    | Dept: OIC-TOC              |

Revision: 40-TOC JULY 2013 - Jul 18, 2013; 11-10-39 AM  
 Modified By: toc  
 Date Created: 2013/07/18; 11:10 AM  
 Last Modified: 2015/05/03; 12:51 PM  
 Last Calibrated: 2015/05/03; 12:51 PM  
 RF(ugC/k-ct): 0.3677  
 R2: 0.9998  
 Reagent Blank(cts): 2.058  
 Offset Area(cts): 3.451  
 Offset Mass(ugC): -1.27

| Std # | Conc (PPM) | Volume (mL) | # Reps | Area    | Std. Dev | %RSD | Date Analysed       |
|-------|------------|-------------|--------|---------|----------|------|---------------------|
| RW    | 0.000      | 2.400       | 2      | 3,448   | 59       | 1.71 | 2015-05-03; 11:33AM |
| 1     | 1.000      | 2.400       | 2      | 9,950   | 199      | 2.00 | 2015-05-03; 11:51AM |
| 2     | 10.000     | 2.400       | 2      | 68,703  | 150      | 0.22 | 2015-05-03; 12:04PM |
| 3     | 25.000     | 2.400       | 2      | 171,189 | 863      | 0.50 | 2015-05-03; 12:18PM |
| 4     | 50.000     | 2.400       | 2      | 331,515 | 646      | 0.19 | 2015-05-03; 12:31PM |
| 5     | 100.000    | 2.400       | 2      | 650,148 | 931      | 0.14 | 2015-05-03; 12:45PM |



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 USA

Date Prepared: 05/04/2015 By: **TOC**  
 Date Approved: By:

Sample Results Summary

| Spl | Num | Rep | Method                                       | Type   | Dil   | Cust      | Mode | Avg. Area | Avg. Mass | Avg. Conc | Std. Dev | % RSD | Notes |
|-----|-----|-----|--|--------|-------|-----------|------|-----------|-----------|-----------|----------|-------|-------|
| #   | Act | Rep |  |        |       | ID        |      | (cts)     | (ug)      | (PPM)     |          |       |       |
| 1   | 2   | 2   | TOC JULY 2013 - Jul 18, 2013;<br>11-10-39 AM | Sample | 1 : 1 | 000000000 | TOC  | 6,431     | 0.000     | 0.000     | 176      | 2.73  | Pass  |
| 2   | 2   | 2   | TOC JULY 2013 - Jul 18, 2013;<br>11-10-39 AM | Std    | 1 : 1 | 000000000 | TOC  | 3,448     | 0.000     | 0.000     | 59       | 1.71  |       |
| 3   | 2   | 2   | TOC JULY 2013 - Jul 18, 2013;<br>11-10-39 AM | Std    | 1 : 1 | 000000000 | TOC  | 9,950     | 2,400     | 1,000     | 199      | 2.00  |       |
| 4   | 2   | 2   | TOC JULY 2013 - Jul 18, 2013;<br>11-10-39 AM | Std    | 1 : 1 | 000000000 | TOC  | 68,703    | 24,000    | 10,000    | 150      | 0.22  |       |
| 5   | 2   | 2   | TOC JULY 2013 - Jul 18, 2013;<br>11-10-39 AM | Std    | 1 : 1 | 000000000 | TOC  | 171,189   | 60,000    | 25,000    | 863      | 0.50  |       |
| 6   | 2   | 2   | TOC JULY 2013 - Jul 18, 2013;<br>11-10-39 AM | Std    | 1 : 1 | 000000000 | TOC  | 331,515   | 120,000   | 50,000    | 646      | 0.19  |       |
| 7   | 2   | 2   | TOC JULY 2013 - Jul 18, 2013;<br>11-10-39 AM | Std    | 1 : 1 | 000000000 | TOC  | 650,148   | 240,000   | 100,000   | 931      | 0.14  |       |
| 8   | 2   | 2   | TOC JULY 2013 - Jul 18, 2013;<br>11-10-39 AM | Std    | 1 : 1 | 000000000 | TOC  |           |           |           |          |       |       |

050315 TOC CLEAR



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 USA

Date Prepared: 05/04/2015 By: **TOC**  
 Date Approved: By:

Sample Results

Spl #: 1 Sample ID: BLANK Type: Sample Date: 05/03/2015 Status: Pass  
 Method: TOC JULY 2013 - Jul 18, 2013 Dilution 1 : 1 Customer ID: 00000000

| Rep #    | Time     | TIC Area (cts) | TIC Mass (ugC) | TIC Conc (PPM) | TOC Area (cts) | TOC Mass (ugC) | TOC Conc (PPM) |
|----------|----------|----------------|----------------|----------------|----------------|----------------|----------------|
| 1        | 10:44 am | -              | -              | -              | 6,555          | 0.000          | 0.000          |
| 2        | 10:51 am | -              | -              | -              | 6,307          | 0.000          | 0.000          |
| Avg.     |          | -              | -              | -              | 6,431          | 0.000          | 0.000          |
| Std.Dev. |          | 2.73           |                |                |                |                |                |
| % RSD.   |          | 1.71           |                |                |                |                |                |

Spl #: 3 Sample ID: TOC-RW Type: Std Date: 05/03/2015 Status:  
 Method: TOC JULY 2013 - Jul 18, 2013 Dilution 1 : 1 Customer ID: 00000000

| Rep #    | Time     | TIC Area (cts) | TIC Mass (ugC) | TIC Conc (PPM) | TOC Area (cts) | TOC Mass (ugC) | TOC Conc (PPM) |
|----------|----------|----------------|----------------|----------------|----------------|----------------|----------------|
| 1        | 11:33 am | -              | -              | -              | 3,406          | 0.000          | 0.000          |
| 2        | 11:40 am | -              | -              | -              | 3,489          | 0.000          | 0.000          |
| Avg.     |          | -              | -              | -              | 3,448          | 0.000          | 0.000          |
| Std.Dev. |          | 1.71           |                |                |                |                |                |
| % RSD.   |          | 1.71           |                |                |                |                |                |

Spl #: 4 Sample ID: TOC-Std#1-1.000 PPM Type: Std Date: 05/03/2015 Status:  
 Method: TOC JULY 2013 - Jul 18, 2013 Dilution 1 : 1 Customer ID: 00000000

| Rep #    | Time     | TIC Area (cts) | TIC Mass (ugC) | TIC Conc (PPM) | TOC Area (cts) | TOC Mass (ugC) | TOC Conc (PPM) |
|----------|----------|----------------|----------------|----------------|----------------|----------------|----------------|
| 1        | 11:51 am | -              | -              | -              | 10,090         | 2.400          | 1.000          |
| 2        | 11:57 am | -              | -              | -              | 9,809          | 2.400          | 1.000          |
| Avg.     |          | -              | -              | -              | 9,950          | 2.400          | 1.000          |
| Std.Dev. |          | 2.00           |                |                |                |                |                |
| % RSD.   |          | 2.00           |                |                |                |                |                |

Spl #: 5 Sample ID: TOC-Std#2-10,000 PPM Type: Std Date: 05/03/2015 Status:  
Vial #: 4 Method: TOC JULY 2013 - Jul 18, 2013 Dilution 1:1 Customer ID: 00000000

| Rep # | Time     | TIC Area (cts) | TIC Mass (ugC) | TIC Conc (PPM) | TOC Area (cts) | TOC Mass (ugC) | TOC Conc (PPM) |
|-------|----------|----------------|----------------|----------------|----------------|----------------|----------------|
| 1     | 12:04 pm | -              | -              | -              | 68,597         | 24.000         | 10.000         |
| 2     | 12:11 pm | -              | -              | -              | 68,809         | 24.000         | 10.000         |

Avg. 68,703 24.000 10.000  
Std.Dev. - - -  
% RSD. 0.22

Spl #: 6 Sample ID: TOC-Std#3-25,000 PPM Type: Std Date: 05/03/2015 Status:  
Vial #: 5 Method: TOC JULY 2013 - Jul 18, 2013 Dilution 1:1 Customer ID: 00000000

| Rep # | Time     | TIC Area (cts) | TIC Mass (ugC) | TIC Conc (PPM) | TOC Area (cts) | TOC Mass (ugC) | TOC Conc (PPM) |
|-------|----------|----------------|----------------|----------------|----------------|----------------|----------------|
| 1     | 12:18 pm | -              | -              | -              | 170,579        | 60.000         | 25.000         |
| 2     | 12:24 pm | -              | -              | -              | 171,799        | 60.000         | 25.000         |

Avg. 171,189 60.000 25.000  
Std.Dev. - - -  
% RSD. 0.50

Spl #: 7 Sample ID: TOC-Std#4-50,000 PPM Type: Std Date: 05/03/2015 Status:  
Vial #: 6 Method: TOC JULY 2013 - Jul 18, 2013 Dilution 1:1 Customer ID: 00000000

| Rep # | Time     | TIC Area (cts) | TIC Mass (ugC) | TIC Conc (PPM) | TOC Area (cts) | TOC Mass (ugC) | TOC Conc (PPM) |
|-------|----------|----------------|----------------|----------------|----------------|----------------|----------------|
| 1     | 12:31 pm | -              | -              | -              | 331,972        | 120.000        | 50.000         |
| 2     | 12:37 pm | -              | -              | -              | 331,058        | 120.000        | 50.000         |

Avg. 331,515 120.000 50.000  
Std.Dev. - - -  
% RSD. 0.19





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USA

Date Prepared: 05/04/2015 By:  
Date Approved: By:

TOC

Spl #: 8 Sample ID: TOC-Std#5-100.000 PPM Type: Std Date: 05/03/2015 Status:  
Vial #: 7 Method: TOC JULY 2013 - Jul 18, 2013 Dilution 1:1 Customer ID: 00000000

| Rep #    | Time     | TIC Area (cts) | TIC Mass (ugC) | TIC Conc (PPM) | TOC Area (cts) | TOC Mass (ugC) | TOC Conc (PPM) |      |
|----------|----------|----------------|----------------|----------------|----------------|----------------|----------------|------|
| 1        | 12:45 pm | -              | -              | -              | 649,489        | 240.000        | 100.000        |      |
| 2        | 12:51 pm | -              | -              | -              | 650,806        | 240.000        | 100.000        |      |
| Avg.     |          | -              | -              | -              | 650,148        | 240.000        | 100.000        |      |
| Std.Dev. |          |                |                |                |                |                |                | 0.14 |
| % RSD.   |          |                |                |                |                |                |                | 0.14 |



Denotes Excluded Replicates

Denotes First Failed Samples



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 USA

Date Prepared: 05/04/2015 By:  
 Date Approved: By:

TOC

**Method Summary**

**Method Details**

Method Name: TOC JULY 2013 - Jul 18,  
 2013; 11-10-39 AM  
 Date Created: 07/18/2013  
 Time Created: 11:10  
 Created By: toc

**Analysis Mode:** NPOC Only  
**Sparging Mode:** Internal  
**Pre-Acid Volume (mL):** 1.000  
**Sparge Time (mm:ss):** 02:00

**Volumes**  
**Sample Volume (mL):** 2.400  
**Acid Volume (mL):** 1.000  
**Persulfate Volume(mL):** 1.500

**Other**  
**SysPressure:** 20.00

**Pre-Processing**

**Sample Dilution:** Disabled  
**Dilution Mode:** Automatic  
**Dilution Factor:** 1 : 1

**Outlier Removal Criteria**  
**Enabled:** No  
**Additional Replicates:** 1  
**Max. % RSD:** 10.00

**Rinses**  
**Rinse Volume (mL):** 10.000  
**Rinses Per Sample:** 1  
**Rinses Per Replicate:** 0

**Max. Std. Dev.** 100 **Use Modified Oxidant:** No

**Calibration Summary**

**Calibration Generation**

**Generation Mode:** Manual  
**# of Stds:** 5  
**Dilution Factor:** 10 : 1  
**Dilution Volume (mL):** 1.000  
**Add Zero as Std #1:** No

**Calibration Pass/Fail Criteria**

| Parameter           | Enabled | Low    | High   | Failure  |
|---------------------|---------|--------|--------|----------|
| RE (ugC/K-cts)      | Yes     | 0.1000 | 0.3000 | Continue |
| Offset (area) (cts) | Yes     | 0.995  | 1.000  | Continue |
| Offset (mass) (ugC) | No      | -      | -      | -        |
| QC Blank(cts)       | No      | -      | -      | -        |

**Checks, QC's and Actions**

| Type   | Target (PPM) | Tolerance (+/- %) | 1st Failure | 2nd Failure |
|--------|--------------|-------------------|-------------|-------------|
| CK Std | n/a          | 10.00             | Continue    | Continue    |
| QC #1  | 40.000       | 10.00             | Continue    | Continue    |
| QC #2  | 20.000       | 20.00             | Continue    | Continue    |
| QC #3  | 25.000       | 10.00             | Continue    | Continue    |
| QC #4  | 0.000        | 10.00             | Continue    | Continue    |
| SST    | 0.000        | 15.00             | Continue    | Continue    |

**Calibration Mode**  
**Primary Mode:** TOC  
**User for ALL Modes:** Enabled

Denotes Excluded Replicates  
 Denotes First Failed Samples



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 College Station, TX  
 77845  
 USA

Date Prepared: 05/04/2015  
 Date Approved:

TOC

**Calibration Details**

Calibration Mode: TOC  
 Date Calibrated: 05/02/2015  
 Time Calibrated: 2:46 pm  
 Calibrated By: toc  
 RF (ugC/k-cts): 0.3720  
 R2: 0.9993  
 R: 0.9997  
 QC Blank(cts): 11,040  
 Offset (cts): 15758  
 Offset (ugC): -5.863  
 Reagent Blank (cts): 10,448  
 Units of Measure: PPM->mg/L C

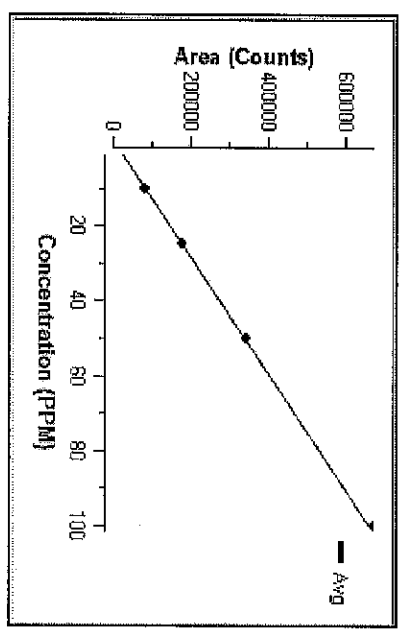
**Calibration Settings**

Stock Conc. For Dilutions: (PPM) 1,000.000  
 # of Reagent Blanks: No  
 EFC Enabled: 3  
 Total Flowrate w/EFC: 100 ml/min  
 Check Standards: Subtract RW  
 Samples: Subtract RB  
 Regression type: Weighted Linear  
 weighting factor => 1 / mass

**Calculations:**

$$\text{Concentration} = \frac{\text{RF} \times \text{Area}}{\text{Volume}}$$

Samples:  $\text{Area} = \text{Area}_{\text{Peak}} - \text{Area}_{\text{Offset}}$  or  $\text{Area} = \text{Area}_{\text{Peak}} - \text{Area}_{\text{RB}}$   
 CHK Stds:  $\text{Area} = \text{Area}_{\text{Peak}} - \text{Area}_{\text{Offset}}$  or  $\text{Area} = \text{Area}_{\text{Peak}} - \text{Area}_{\text{RW}}$   
 QC Samples:  $\text{Area} = \text{Area}_{\text{Peak}} - \text{Area}_{\text{QCBlank}}$



$$y = m \times x + b$$

$$y \Rightarrow \text{Area} \quad m \Rightarrow \frac{1000}{\text{RF} \times \text{volume}} \quad b \Rightarrow 0$$

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 USA

Date Prepared: 05/04/2015 By:  
 Date Approved: By:

**Calibration Details**

Calibration Mode: TOC  
 Date Calibrated: 05/03/2015  
 Time Calibrated: 12:51 pm  
 Calibrated By: toc  
 RF (ugC/k-ds): 0.3677  
 R2: 0.9998  
 R: 0.9999  
 QC Blank(cts): 0  
 Offset (cts): 3451  
 Offset (ugC): -1.269  
 Reagent Blank (cts): 2.058  
 Units of Measure: PPM->mg/L C

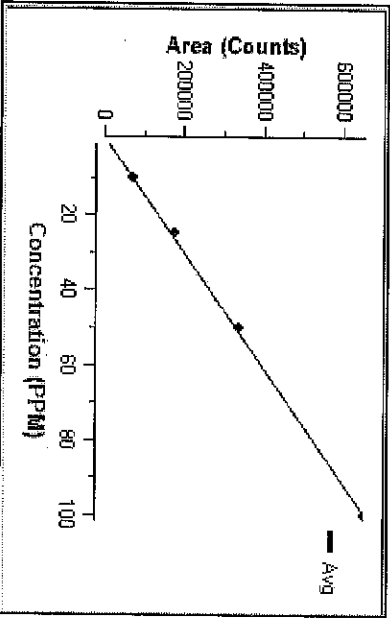
**Calibration Settings**

Stock Conc. For Dilutions: (PPM) 1,000,000  
 # of Reagent Blanks: 3  
 EFC Enabled: No  
 Total Flowrate w/EFC: 100 ml/min  
 Check Standards: Subtract RW  
 Samples: Subtract RB  
 Regression type: Weighted Linear  
 weighting factor => 1 / mass

**Calculations:**

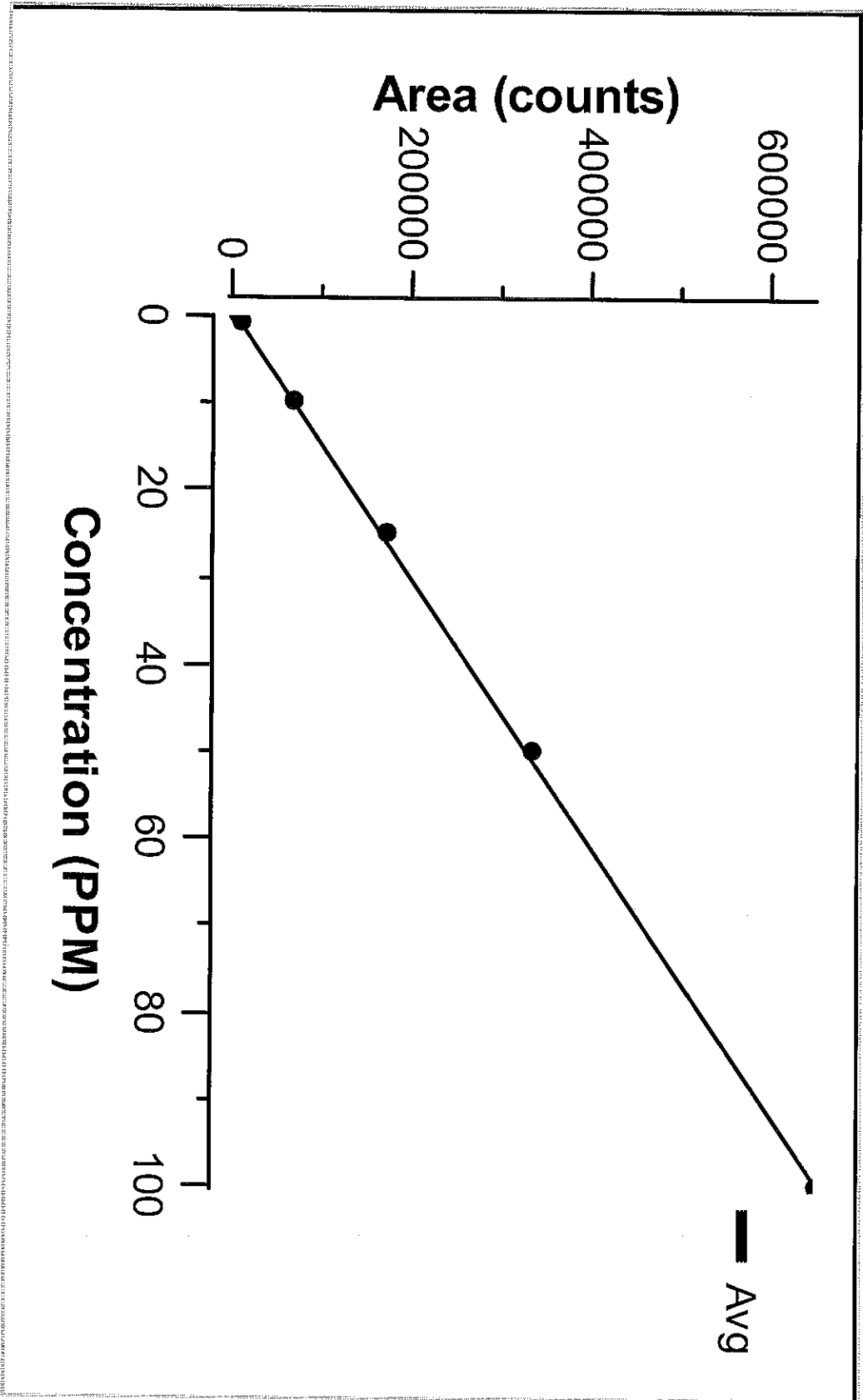
$$\text{Concentration} = \frac{RF \times \text{Area}}{\text{volume}}$$

Samples: Area = Area<sub>Peak</sub> - Area<sub>Offset</sub> or Area = Area<sub>Peak</sub> - Area<sub>RW</sub>  
 CHK Stds: Area = Area<sub>Peak</sub> - Area<sub>Offset</sub> or Area = Area<sub>Peak</sub> - Area<sub>RW</sub>  
 QC Samples: Area = Area<sub>Peak</sub> - Area<sub>QCBlank</sub>



$$y = m \times x + b$$

$$y \Rightarrow \text{Area} \quad m \Rightarrow \frac{1000}{RF \times \text{volume}} \quad b \Rightarrow 0$$



|             |                           |
|-------------|---------------------------|
| User ID:toc | Name:Total Organic Carbon |
| Title:Mr    | Dept:OIC-TOC              |

**Calibration - Quick View -TOC**

Revision: 40-TOC JULY 2013 - Jul 18, 2013; 11-10-39 AM  
 Modified By: toc  
 Date Created: 2013/07/18; 11:10 AM  
 Last Modified: 2015/05/03; 12:51 PM  
 Last Calibrated: 2015/05/03; 12:51 PM  
 RF(ugC/k-ct): 0.3677  
 R2: 0.9998  
 Reagent Blank(cts): 2.058  
 Offset Area(cts): 3,451  
 Offset Mass(ugC): -1.27

| Std # | Conc (PPM) | Volume (mL) | # Reps | Area    | Std. Dev | %RSD | Date Analysed       |
|-------|------------|-------------|--------|---------|----------|------|---------------------|
| RW    | 0.000      | 2.400       | 2      | 3,448   | 59       | 1.71 | 2015-05-03; 11:33AM |
| 1     | 1.000      | 2.400       | 2      | 9,950   | 199      | 2.00 | 2015-05-03; 11:51AM |
| 2     | 10.000     | 2.400       | 2      | 68,703  | 150      | 0.22 | 2015-05-03; 12:04PM |
| 3     | 25.000     | 2.400       | 2      | 171,189 | 863      | 0.50 | 2015-05-03; 12:18PM |
| 4     | 50.000     | 2.400       | 2      | 331,515 | 646      | 0.19 | 2015-05-03; 12:31PM |
| 5     | 100.000    | 2.400       | 2      | 650,148 | 931      | 0.14 | 2015-05-03; 12:45PM |

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-43791-1

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

Batch Number: 141677 Batch Start Date: 05/15/15 08:15 Batch Analyst: Johnson, Paul

Batch Method: 9010C Batch End Date: 05/15/15 09:45

| Lab Sample ID        | Client Sample ID | Method Chain | Basis | InitialAmount | FinalAmount | SulfideCheck | ChlorineCheck | WCN0.5Ll 00501 | WCN10Pi 00487 |
|----------------------|------------------|--------------|-------|---------------|-------------|--------------|---------------|----------------|---------------|
| LLCS<br>180-141677/1 |                  | 9010C, 9014  |       | 50 mL         | 50 mL       |              |               | 5 mL           |               |
| HLCS<br>180-141677/2 |                  | 9010C, 9014  |       | 50 mL         | 50 mL       |              |               |                | 1.25 mL       |
| LCS<br>180-141677/3  |                  | 9010C, 9014  |       | 50 mL         | 50 mL       |              |               |                |               |
| MB 180-141677/4      |                  | 9010C, 9014  |       | 50 mL         | 50 mL       |              |               |                |               |
| 180-43791-G-1        | RB-CORE          | 9010C, 9014  | T     | 50 mL         | 50 mL       | N            | N             |                |               |
| 180-43791-G-2        | FB-CORE          | 9010C, 9014  | T     | 50 mL         | 50 mL       | N            | N             |                |               |
| 180-43791-D-3        | RB-PW            | 9010C, 9014  | T     | 50 mL         | 50 mL       | N            | N             |                |               |
| 180-43791-D-4        | FB-PW            | 9010C, 9014  | T     | 50 mL         | 50 mL       | N            | N             |                |               |

| Lab Sample ID        | Client Sample ID | Method Chain | Basis | WCNLCS 00019 |  |  |  |  |  |
|----------------------|------------------|--------------|-------|--------------|--|--|--|--|--|
| LLCS<br>180-141677/1 |                  | 9010C, 9014  |       |              |  |  |  |  |  |
| HLCS<br>180-141677/2 |                  | 9010C, 9014  |       |              |  |  |  |  |  |
| LCS<br>180-141677/3  |                  | 9010C, 9014  |       | 1 mL         |  |  |  |  |  |
| MB 180-141677/4      |                  | 9010C, 9014  |       |              |  |  |  |  |  |
| 180-43791-G-1        | RB-CORE          | 9010C, 9014  | T     |              |  |  |  |  |  |
| 180-43791-G-2        | FB-CORE          | 9010C, 9014  | T     |              |  |  |  |  |  |
| 180-43791-D-3        | RB-PW            | 9010C, 9014  | T     |              |  |  |  |  |  |
| 180-43791-D-4        | FB-PW            | 9010C, 9014  | T     |              |  |  |  |  |  |

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.: 180-43791-1

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

Batch Number: 141677 Batch Start Date: 05/15/15 08:15 Batch Analyst: Johnson, Paul

Batch Method: 9010C Batch End Date: 05/15/15 09:45

| Batch Notes                        |               |
|------------------------------------|---------------|
| Distillation Temperature           | 150 Degrees C |
| KI-Starch Paper Lot #              | 1276531       |
| Lead Acetate Lot #                 | 1276537       |
| Magnesium Chloride Dispenser ID    | 42145         |
| Magnesium Chloride Lot Number      | 1508124       |
| NaOH Dispenser ID                  | 10J62292      |
| Sodium Hydroxide Reagent ID Number | 1427994       |
| Pipette ID                         | D1203165U     |
| Sulfamic Acid Reagent ID Number    | 955307        |
| Sulfuric Acid Dispenser ID         | 21014         |
| Sulfuric Acid Reagent ID Number    | 1549387       |

| 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 BATCH WORKSHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-43791-1

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

Batch Number: 141746 Batch Start Date: 05/15/15 10:56 Batch Analyst: Johnson, Paul

Batch Method: 9014 Batch End Date: \_\_\_\_\_

| Lab Sample ID          | Client Sample ID | Method Chain | Basis | InitialAmount | FinalAmount | WCN0.1L3 00052 | WCN0.2ICV 00340 |  |  |
|------------------------|------------------|--------------|-------|---------------|-------------|----------------|-----------------|--|--|
| ICV<br>180-141746/9    |                  | 9014         |       | 1.0 mL        | 1.0 mL      |                | 1 mL            |  |  |
| ICB<br>180-141746/10   |                  | 9014         |       | 1.0 mL        | 1.0 mL      |                |                 |  |  |
| CCV<br>180-141746/11   |                  | 9014         |       | 1.0 mL        | 1.0 mL      | 1 mL           |                 |  |  |
| CCB<br>180-141746/12   |                  | 9014         |       | 1.0 mL        | 1.0 mL      |                |                 |  |  |
| LLCS<br>180-141677/1-A |                  | 9014         |       | 1.0 mL        | 1.0 mL      |                |                 |  |  |
| HLCS<br>180-141677/2-A |                  | 9014         |       | 1.0 mL        | 1.0 mL      |                |                 |  |  |
| LCS<br>180-141677/3-A  |                  | 9014         |       | 1.0 mL        | 1.0 mL      |                |                 |  |  |
| MB<br>180-141677/4-A   |                  | 9014         |       | 1.0 mL        | 1.0 mL      |                |                 |  |  |
| CCV<br>180-141746/23   |                  | 9014         |       | 1.0 mL        | 1.0 mL      | 1 mL           |                 |  |  |
| CCB<br>180-141746/24   |                  | 9014         |       | 1.0 mL        | 1.0 mL      |                |                 |  |  |
| 180-43791-G-1-A        | RB-CORE          | 9014         | T     | 1.0 mL        | 1.0 mL      |                |                 |  |  |
| 180-43791-G-2-A        | FB-CORE          | 9014         | T     | 1.0 mL        | 1.0 mL      |                |                 |  |  |
| 180-43791-D-3-A        | RB-PW            | 9014         | T     | 1.0 mL        | 1.0 mL      |                |                 |  |  |
| 180-43791-D-4-A        | FB-PW            | 9014         | T     | 1.0 mL        | 1.0 mL      |                |                 |  |  |
| CCV<br>180-141746/35   |                  | 9014         |       | 1.0 mL        | 1.0 mL      | 1 mL           |                 |  |  |
| CCB<br>180-141746/36   |                  | 9014         |       | 1.0 mL        | 1.0 mL      |                |                 |  |  |
| CCV<br>180-141746/43   |                  | 9014         |       | 1.0 mL        | 1.0 mL      | 1 mL           |                 |  |  |
| CCB<br>180-141746/44   |                  | 9014         |       | 1.0 mL        | 1.0 mL      |                |                 |  |  |

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.: 180-43791-1

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

Batch Number: 141746 Batch Start Date: 05/15/15 10:56 Batch Analyst: Johnson, Paul

Batch Method: 9014 Batch End Date: \_\_\_\_\_

| Batch Notes                         |           |
|-------------------------------------|-----------|
| Buffer Reagent ID Number            | 1390860   |
| Chloramine-T Reagent ID Number      | 1563254   |
| NaOH Lot #                          | 1427994   |
| Pipette ID                          | D1203165U |
| Pyridine-Barbituric Acid Reagent ID | 1428101   |

| 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 BATCH WORKSHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-43791-1

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

Batch Number: 141151 Batch Start Date: 05/11/15 05:57 Batch Analyst: Loheyde, Cheryl

Batch Method: SM 5310C Batch End Date: \_\_\_\_\_

| Lab Sample ID        | Client Sample ID | Method Chain | Basis | InitialAmount | FinalAmount | Initial pH | 10 PPM TOC/CC<br>00493 | ICV 40 PPM<br>00626 | LCS 20 PPM<br>00622 |
|----------------------|------------------|--------------|-------|---------------|-------------|------------|------------------------|---------------------|---------------------|
| ICV<br>180-141151/2  |                  | SM 5310C     |       | 40 mL         | 40 mL       |            |                        | 40 mL               |                     |
| LCS<br>180-141151/4  |                  | SM 5310C     |       | 40 mL         | 40 mL       |            |                        |                     | 40 mL               |
| LCSD<br>180-141151/5 |                  | SM 5310C     |       | 40 mL         | 40 mL       |            |                        |                     | 40 mL               |
| 180-43791-B-3-A      | RB-PW            | SM 5310C     | D     |               |             | <2 SU      |                        |                     |                     |
| 180-43791-B-4-A      | FB-PW            | SM 5310C     | D     |               |             | <2 SU      |                        |                     |                     |
| CCV<br>180-141151/11 |                  | SM 5310C     |       | 40 mL         | 40 mL       |            | 40 mL                  |                     |                     |

| Batch Notes                         |                         |
|-------------------------------------|-------------------------|
| Batch Comment                       | PH STRIPS LOT# HC004149 |
| Lot # of Phosphoric Acid            | 1559513                 |
| Sodium Persulfate Reagent ID Number | 1559518                 |

| Basis | Basis Description |
|-------|-------------------|
| D     | Dissolved         |

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

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Nashville Job No.: 180-43791-1

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

Batch Number: 248553 Batch Start Date: 05/15/15 10:39 Batch Analyst: Dunn, Bradley

Batch Method: 1664B Batch End Date: \_\_\_\_\_

| Lab Sample ID       | Client Sample ID | Method Chain | Basis | Initial pH | Final pH | InitialAmount | FinalAmount | OP_HCL 00013 | OP_HEM Disks<br>00001 |
|---------------------|------------------|--------------|-------|------------|----------|---------------|-------------|--------------|-----------------------|
| MB 490-248553/1     |                  | 1664B, 1664B |       | 7 SU       | 2 SU     | 960 mL        | 960 mL      | 1 mL         | 1 Filter              |
| LB 490-248553/2     |                  | 1664B, 1664B |       | 7 SU       | 2 SU     | 960 mL        | 960 mL      | 1 mL         | 1 Filter              |
| LCS<br>490-248553/3 |                  | 1664B, 1664B |       | 7 SU       | 2 SU     | 960 mL        | 960 mL      | 1 mL         | 1 Filter              |
| 180-43791-D-1       | RB-CORE          | 1664B, 1664B | T     | 2 SU       | 2 SU     | 840 mL        | 960 mL      |              | 1 Filter              |
| 180-43791-C-2       | FB-CORE          | 1664B, 1664B | T     | 2 SU       | 2 SU     | 810 mL        | 960 mL      |              | 1 Filter              |

| Lab Sample ID       | Client Sample ID | Method Chain | Basis | OP_HEMspike_<br>00022 | OP_Hexane 00061 | OP_Methanol<br>00031 |  |  |  |
|---------------------|------------------|--------------|-------|-----------------------|-----------------|----------------------|--|--|--|
| MB 490-248553/1     |                  | 1664B, 1664B |       |                       | 40 mL           | 10 mL                |  |  |  |
| LB 490-248553/2     |                  | 1664B, 1664B |       |                       | 40 mL           | 10 mL                |  |  |  |
| LCS<br>490-248553/3 |                  | 1664B, 1664B |       | 4 mL                  | 40 mL           | 10 mL                |  |  |  |
| 180-43791-D-1       | RB-CORE          | 1664B, 1664B | T     |                       | 40 mL           | 10 mL                |  |  |  |
| 180-43791-C-2       | FB-CORE          | 1664B, 1664B | T     |                       | 40 mL           | 10 mL                |  |  |  |

| Batch Notes                   |        |
|-------------------------------|--------|
| Extraction Analyst            | BAD    |
| Nominal Amount Used           | 960 mL |
| Sufficient volume for MS/MSD? | Y      |

| 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 BATCH WORKSHEET

Lab Name: TestAmerica Nashville Job No.: 180-43791-1

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

Batch Number: 248554 Batch Start Date: 05/15/15 10:43 Batch Analyst: Dunn, Bradley

Batch Method: 1664B Batch End Date: \_\_\_\_\_

| Lab Sample ID         | Client Sample ID | Method Chain | Basis | FinalAmount | ReceiverTube | HEMWgt1  | HEMWgt2  | Residue  | Residue2 |
|-----------------------|------------------|--------------|-------|-------------|--------------|----------|----------|----------|----------|
| MB<br>490-248553/1-A  |                  | 1664B        |       | 960 mL      | 2.3116 g     | 2.3118 g | 2.3118 g | 0.0002 g | 0.0002 g |
| LB<br>490-248553/2-A  |                  | 1664B        |       | 960 mL      | 2.3912 g     | 2.3914 g | 2.3914 g | 0.0002 g | 0.0002 g |
| LCS<br>490-248553/3-A |                  | 1664B        |       | 960 mL      | 2.3444 g     | 2.3801 g | 2.3800 g | 0.0357 g | 0.0356 g |
| 180-43791-D-1-A       | RB-CORE          | 1664B        | T     | 960 mL      | 2.2951 g     | 2.2955 g | 2.2955 g | 0.0004 g | 0.0004 g |
| 180-43791-C-2-A       | FB-CORE          | 1664B        | T     | 960 mL      | 2.3759 g     | 2.3761 g | 2.3761 g | 0.0002 g | 0.0002 g |

| Lab Sample ID         | Client Sample ID | Method Chain | Basis | Weight2OK    | SGTRecTube | SGTWgt1  | SGTWgt2  | SGTResidue1 | SGTResidue2 |
|-----------------------|------------------|--------------|-------|--------------|------------|----------|----------|-------------|-------------|
| MB<br>490-248553/1-A  |                  | 1664B        |       | Pass 0.0005g | 2.3116 g   | 2.3119 g | 2.3119 g | 0.0003 g    | 0.0003 g    |
| LB<br>490-248553/2-A  |                  | 1664B        |       | Pass 0.0005g | 2.3912 g   | 2.3915 g | 2.3915 g | 0.0003 g    | 0.0003 g    |
| LCS<br>490-248553/3-A |                  | 1664B        |       | Pass 0.0005g | 2.3444 g   | 2.3589 g | 2.3588 g | 0.0145 g    | 0.0144 g    |
| 180-43791-D-1-A       | RB-CORE          | 1664B        | T     | Pass 0.0005g |            |          |          |             |             |
| 180-43791-C-2-A       | FB-CORE          | 1664B        | T     | Pass 0.0005g |            |          |          |             |             |

| Lab Sample ID         | Client Sample ID | Method Chain | Basis | SGTWeightOne%Diff | CalcMsg                            | OP_FilterPaper<br>00012 | OP_NaSO4 00037 | OP_SilicaGel<br>00019 |  |
|-----------------------|------------------|--------------|-------|-------------------|------------------------------------|-------------------------|----------------|-----------------------|--|
| MB<br>490-248553/1-A  |                  | 1664B        |       | Pass 0.0005g %    | OK                                 | 1 Filter                | 5 g            | 3 g                   |  |
| LB<br>490-248553/2-A  |                  | 1664B        |       | Pass 0.0005g %    | OK                                 | 1 Filter                | 5 g            | 3 g                   |  |
| LCS<br>490-248553/3-A |                  | 1664B        |       | Pass 0.0005g %    | OK                                 | 1 Filter                | 5 g            | 3 g                   |  |
| 180-43791-D-1-A       | RB-CORE          | 1664B        | T     |                   | HEM OK. SGT-HEM<br>not calculated. |                         | 5 g            |                       |  |
| 180-43791-C-2-A       | FB-CORE          | 1664B        | T     |                   | HEM OK. SGT-HEM<br>not calculated. |                         | 5 g            |                       |  |

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 Nashville Job No.: 180-43791-1

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

Batch Number: 248554 Batch Start Date: 05/15/15 10:43 Batch Analyst: Dunn, Bradley

Batch Method: 1664B Batch End Date: \_\_\_\_\_

| Batch Notes                       |                           |
|-----------------------------------|---------------------------|
| Balance ID                        | AG204                     |
| Batch Comment                     | Speed vap temp set to 40C |
| Perform Calculation (0=No, 1=Yes) | 1                         |
| Solvent                           | Hexane                    |

| 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.

# Subcontract Data

# Shipping and Receiving Documents



Client: EA Engineering Science, and Technology, Inc.  
 225 Schilling Circle, Suite 400  
 Hunt Valley, MD 21031  
 Phone: (860) 287-0745  
 TestAmerica Quote #: 15131.01, 0004

Project Manager: Frank Barranco  
 Phone: 410-329-5137  
 Field Contact: Morgan Gelnas  
 Phone: (860) 287-0745  
 TestAmerica Quote #: 15131.01, 0004

| Page    | 1    | of | I | Sample Identification |      | No. of Containers | Parameters/Method Numbers for Analysis |                                 |                          |                       |                               |                      |                                   |                                      |             |   | Chain of Custody Record |
|---------|------|----|---|-----------------------|------|-------------------|--|---------------------------------|--------------------------|-----------------------|-------------------------------|----------------------|-----------------------------------|--------------------------------------|-------------|---|-------------------------|
|         |      |    |   | Date                  | Time |                   | PPL VOCs (SW846 8260C)                 | PPL SVOCs/PAHs (SW846 8270D LL) | PPL Metals (SW846 6020A) | Mercury (SW846 7470A) | PCB Aroclors (SW846 8082A LL) | Cyanide (SW846 9014) | Oil and Grease (EPA Method 1644B) | Dissolved Organic Carbon (SM 5310 C) | Laboratory: | Remarks                                 |                         |
| 5/5/15  | 1530 | X  |   | RB-CORE               |      | 11                | X                                      | X                               | X                        | X                     | X                             | X                    | X                                 | X                                    | X           | SEE PROJECT SPECIFIC ANALYTE LIST       |                         |
| 5/5/15  | 1540 | X  |   | FB-CORE               |      | 11                | X                                      | X                               | X                        | X                     | X                             | X                    | X                                 | X                                    | X           | SVOCs (bis(2-ethylhexyl)phthalate only) |                         |
| 5/5/15  | 1600 | X  |   | RB-PW                 |      | 5                 | X                                      | X                               | X                        | X                     | X                             | X                    | X                                 | X                                    | X           | SVOCs (bis(2-ethylhexyl)phthalate only) |                         |
| 5/5/15  | 1610 | X  |   | FB-PW                 |      | 5                 | X                                      | X                               | X                        | X                     | X                             | X                    | X                                 | X                                    | X           | "                                       |                         |
| 4/23/15 | 1500 | X  |   | PW-F05-MS             |      | 6                 | X                                      | X                               | X                        | X                     | X                             | X                    | X                                 | X                                    | X           | "                                       |                         |
| 4/23/15 | 1500 | X  |   | PW-F05-MSD            |      | 6                 | X                                      | X                               | X                        | X                     | X                             | X                    | X                                 | X                                    | X           | "                                       |                         |



Sampled by: (Signature) *[Signature]* Date/Time 5/5/15 1700  
 Relinquished by: (Signature) *[Signature]* Date/Time 5/11/15 1300

Relinquished by: (Signature) *[Signature]*  
 Received by Laboratory: (Signature) *[Signature]* Date/Time 5-6-15 0111

SPARROWS POINT  
 O&OC  
 BLANKS

10:00 9:40

UPS CampusShip: View/Print Label

1. Ensure there are no other shipping or tracking labels attached to your package. Select the Print button on the print dialog box that appears. Note: If your browser does not support this function select Print from the File menu to print the label.

2. Fold the printed label at the solid line below. Place the label in not have a pouch, affix the folded label using clear plastic shipping



180-43791 Waybill

3. GETTING YOUR SHIPMENT TO UPS

UPS locations include the UPS Store®, UPS drop boxes, UPS ci retail outlets and UPS drivers.

Schedule a same day or future day Pickup to have a UPS driver pickup all your CampusShip packages.

Hand the package to any UPS driver in your area.

Take your package to any location of The UPS Store®, UPS Drop Box, UPS Customer Center, UPS Alliances (Office Depot® or Staples®) or Authorized Shipping Outlet near you. Items sent via UPS Return Services(SM) (including via Ground) are also accepted at Drop Boxes. To find the location nearest you, please visit the Resources area of CampusShip and select UPS Locations.

Customers with a Daily Pickup

Your driver will pickup your shipment(s) as usual.

FOLD HERE

|   |                                    |               |                           |   |  |   |
|---|------------------------------------|---------------|---------------------------|---|--|---|
| <p>MORGAN GELINAS<br/>4105847000<br/>EA ENG SCIENCE TECH<br/>225 SCHILLING CIRCLE<br/>HUNT VALLEY MD 21031</p> <p><b>SHIP TO:</b><br/>CARRIE GAMBER<br/>412-963-7058<br/>TEST AMERICA-PITTSBURGH<br/>RIDC PARK<br/>301 ALPHA DR.<br/>PITTSBURGH PA 15238-2907</p> | <p>50 LBS</p> <p>DWT: 18,15,15</p> | <p>1 OF 2</p> | <p><b>PA 152 9-22</b></p> | <p><b>UPS NEXT DAY AIR</b></p> <p>TRACKING #: 1Z 288 682 01 9334 0995</p> <p><b>1</b></p> | <p>Uncorrected temp<br/>Thermometer ID</p> <p>CF <u>0</u> Initials <u>DW</u></p> <p>PT-WI-SR-001 effective 7/28/13</p> | <p>BILLING: P/P</p> <p>Department Code: 2123<br/>Project Phase AND Task: 1513101_0004<br/>CS 17.2.07.</p> <p>YNTIES90 63.0A 04/2015</p> |
|---|------------------------------------|---------------|---------------------------|---|--|---|

UPS CampussShip: View/Print Label

1. Ensure there are no other shipping or tracking labels attached to your package. Select the Print button on the print dialog box that appears. Note: If your browser does not support this function select Print from the File menu to print the label.

2. Fold the printed label at the solid line below. Place the label in a UPS Shipping Pouch. If you do not have a pouch, affix the folded label using clear plastic shipping tape over the entire label.

3. GETTING YOUR SHIPMENT TO UPS  
 UPS locations include the UPS Store®, UPS drop boxes, UPS customer centers, authorized retail outlets and UPS drivers.  
 Schedule a same day or future day Pickup to have a UPS driver pickup all your CampussShip packages.  
 Hand the package to any UPS driver in your area.  
 Take your package to any location of The UPS Store®, UPS Drop Box, UPS Customer Center, UPS Alliances (Office Depot® or Staples®) or Authorized Shipping Outlet near you. Items sent via UPS Return Services(SM) (including via Ground) are also accepted at Drop Boxes. To find the location nearest you, please visit the Resources area of CampussShip and select UPS Locations.

Customers with a Daily Pickup  
Your driver will pickup your shipment(s) as usual.



|  |  |                    |
|--|--|--------------------|
| MORGAN GELINAS<br>4105847000<br>EA ENG SCIENCE TECH<br>225 SCHILLING CIRCLE<br>HUNT VALLEY MD 21081  |  | 50 LBS<br>DWT: 18, |
| SHIP TO:<br>CARRIE GAMBER<br>412-963-7058<br>TEST AMERICA-PITTSBURGH<br>RUDC PARK<br>301 ALPHA DR.<br>PITTSBURGH PA 15238-2907             |  |                    |
|  |  |                    |
| <b>PA 152 9-22</b>   |  |                    |
| <b>UPS NEXT DAY AIR 1</b>  |  |                    |
| TRACKING #: 1Z 288 682 01 9020 3406  |  |                    |
| Uncorrected temp <u>14</u> °C<br>Thermometer ID <u>6</u><br>CF <u>0</u> Initials <u>DW</u><br><small>PT-M-SR-001 effective 7/26/13</small> |  |                    |
| BILLING: P/P   |  |                    |
| Department Code: 2123<br>Project Phase AND Task: 1513101_0004<br><small>CS 17.2.07</small>   |  |                    |
| <small>WANTSEP0 63.0A.04.04.2015</small>   |  |                    |
|  |  |                    |

# Login Sample Receipt Checklist

Client: EA Engineering, Science, and Technology

Job Number: 180-43791-1

**Login Number: 43791**  
**List Number: 1**  
**Creator: Watson, Debbie**

**List Source: TestAmerica Pittsburgh**

| <b>Question</b>  | <b>Answer</b> | <b>Comment</b> |
|--|---------------|----------------|
| Radioactivity wasn't checked or is $\leq$ background as measured by a survey meter.      | True          |                |
| The cooler's custody seal, if present, is intact.  | True          |                |
| Sample custody seals, if present, are intact.  | True          |                |
| The cooler or samples do not appear to have been compromised or tampered with.           | True          |                |
| Samples were received on ice.  | True          |                |
| Cooler Temperature is acceptable.  | True          |                |
| Cooler Temperature is recorded.  | True          |                |
| COC is present.  | True          |                |
| COC is filled out in ink and legible.  | True          |                |
| COC is filled out with all pertinent information.  | True          |                |
| Is the Field Sampler's name present on COC?  | True          |                |
| There are no discrepancies between the containers received and the COC.                  | 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 $<6\text{mm}$ (1/4"). | True          |                |
| Multiphasic samples are not present.   | True          |                |
| Samples do not require splitting or compositing.   | True          |                |
| Residual Chlorine Checked.   | N/A           |                |

# Login Sample Receipt Checklist

Client: EA Engineering, Science, and Technology

Job Number: 180-43791-1

**Login Number: 43791**  
**List Number: 2**  
**Creator: McBride, Mike**

**List Source: TestAmerica Nashville**  
**List Creation: 05/12/15 12:30 PM**

| <b>Question</b>  | <b>Answer</b> | <b>Comment</b> |
|--|---------------|----------------|
| Radioactivity wasn't checked or is $\leq$ background as measured by a survey meter.      | True          |                |
| The cooler's custody seal, if present, is intact.  | N/A           |                |
| Sample custody seals, if present, are intact.  | N/A           |                |
| The cooler or samples do not appear to have been compromised or tampered with.           | True          |                |
| Samples were received on ice.  | True          |                |
| Cooler Temperature is acceptable.  | True          |                |
| Cooler Temperature is recorded.  | True          |                |
| COC is present.  | True          |                |
| COC is filled out in ink and legible.  | True          |                |
| COC is filled out with all pertinent information.  | True          |                |
| Is the Field Sampler's name present on COC?  | True          |                |
| There are no discrepancies between the containers received and the COC.                  | True          |                |
| Samples are received within Holding Time.  | True          |                |
| Sample containers have legible labels.   | True          |                |
| Containers are not broken or leaking.  | True          |                |
| Sample collection date/times are provided.   | True          |                |
| Appropriate sample containers are used.  | True          |                |
| Sample bottles are completely filled.  | True          |                |
| Sample Preservation Verified.  | N/A           |                |
| There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs         | True          |                |
| Containers requiring zero headspace have no headspace or bubble is $<6\text{mm}$ (1/4"). | True          |                |
| Multiphasic samples are not present.   | True          |                |
| Samples do not require splitting or compositing.   | True          |                |
| Residual Chlorine Checked.   | N/A           |                |

**TestAmerica Pittsburgh**

301 Alpha Drive RIDC Park  
Pittsburgh, PA 15238  
Phone (412) 963-7058 Fax (412) 963-2468

**Chain of Custody Record**



**TestAmerica**  
THE LEADER IN ENVIRONMENTAL TESTING

**Client Information (Sub Contract Lab)**

Client Contact:  
Shipping/Receiving

Company:  
TestAmerica Laboratories, Inc

Address:  
2960 Foster Creighton Drive,

City:  
Nashville

State, Zip:  
TN, 37204

Phone:  
615-726-0177(Tel) 615-726-3404(Fax)

Email:

Project Name:  
Sparrows Point Trust Offshore Investigat

Site:

Sampler:  
Gamber, Carrie L

Phone:  
carrie.gamber@testamericainc.com

Lab P/N:  
Gamber, Carrie L  
E-Mail:  
carrie.gamber@testamericainc.com

Carrier Tracking No(s):

COC No:  
180-198399-1

Page:  
Page 1 of 1

**Analysis Requested**

Job #:  
180-43791-1

Due Date Requested:  
5/22/2015

TAT Requested (days):

PO #:

WO #:

Project #:  
18013274

SSOW #:

**Sample Identification - Client ID (Lab ID)**

RB-CORE (180-43791-1)

FB-CORE (180-43791-2)

Sample Date

5/5/15

5/5/15

Sample Time

15:30 Eastern

15:40 Eastern

Sample Type (C=Comp, G=grab)

Matrix (Metallic, Semimetal, Organometal)

Water

Water

Field Filtered Sample (Yes or No)

Perform MS/MSD (Yes or No)

1664B/1664B\_SPE (MOD) Local Method

Total Number of containers:

Special Instructions/Note:

- A - HCL
- B - NaOH
- C - Zn Acetate
- D - Nitric Acid
- E - NaHSO4
- F - MeOH
- G - Amchlor
- H - Ascorbic Acid
- I - Ioe
- J - DI Water
- K - EDTA
- L - EDTA
- Other:
- M - Hexane
- N - None
- O - AsNaO2
- P - Na2O4S
- Q - Na2SO3
- R - Na2S2O3
- S - H2SO4
- T - TSP Dodecahydrate
- U - Acetone
- V - MCAA
- W - pH 4-5
- Z - other (specify)

**Possible Hazard Identification**

Unconfirmed

Deliverable Requested: I, II, III, IV, Other (specify)

Empty Kit Relinquished by:

Relinquished by:

Relinquished by:

Relinquished by:

Custody Seals Intact:  Yes  No

Custody Seal No.:

Date:

Time:

Method of Shipment:

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)  
 Return To Client  Disposal By Lab  Archive For \_\_\_\_\_ Months

Special Instructions/QC Requirements:

Date/Time:

Date/Time:

Date/Time:

Company

Company

Company

Received by:

Received by:

Received by:

Date/Time:

Date/Time:

Date/Time:

Company

Company

Company

Cooler Temperature(s) °C and Other Remarks: *4°C*

COOLER RECEIPT FORM

Cooler Received/Opened On 5/12/2015 @ 0830

1. Tracking # 7737 (last 4 digits, FedEx)

Courier: FedEx IR Gun ID 94660220

2. Temperature of rep. sample or temp blank when opened: 4.2 Degrees Celsius

3. If Item #2 temperature is 0°C or less, was the representative sample or temp blank frozen? YES NO NA

4. Were custody seals on outside of cooler? YES NO NA

If yes, how many and where: \_\_\_\_\_

5. Were the seals intact, signed, and dated correctly? YES...NO NA

6. Were custody papers inside cooler? YES NO NA

I certify that I opened the cooler and answered questions 1-6 (initial) MDM

7. Were custody seals on containers: YES NO and Intact YES...NO NA

Were these signed and dated correctly? YES...NO NA

8. Packing mat'l used? Bubblewrap Plastic bag Peanuts Vermiculite Foam Insert Paper Other None

9. Cooling process: Ice Ice-pack Ice (direct contact) Dry ice Other None

10. Did all containers arrive in good condition (unbroken)? YES...NO...NA

11. Were all container labels complete (#, date, signed, pres., etc)? YES...NO...NA

12. Did all container labels and tags agree with custody papers? YES...NO...NA

13a. Were VOA vials received? YES NO NA

b. Was there any observable headspace present in any VOA vial? YES...NO...NA

14. Was there a Trip Blank in this cooler? YES...NO NA If multiple coolers, sequence # \_\_\_\_\_

I certify that I unloaded the cooler and answered questions 7-14 (initial) MDM

15a. On pres'd bottles, did pH test strips suggest preservation reached the correct pH level? YES..NO NA

b. Did the bottle labels indicate that the correct preservatives were used YES...NO...NA

16. Was residual chlorine present? YES...NO...NA

I certify that I checked for chlorine and pH as per SOP and answered questions 15-16 (initial) MDM

17. Were custody papers properly filled out (ink, signed, etc)? YES...NO...NA

18. Did you sign the custody papers in the appropriate place? YES...NO...NA

19. Were correct containers used for the analysis requested? YES...NO...NA

20. Was sufficient amount of sample sent in each container? YES...NO...NA

I certify that I entered this project into LIMS and answered questions 17-20 (initial) MDM

I certify that I attached a label with the unique LIMS number to each container (initial) MDM

21. Were there Non-Conformance issues at login? YES...NO Was a NCM generated? YES...NO # \_\_\_\_\_

#6) The C.O.C. was received on 5/8. MDM

5-12-15  
MDM