# 16I0260


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# Technical Report

prepared for:

**Langan Engineering & Environmental Services (NYC)**
21 Penn Plaza, 360 West 31st Street
New York NY, 10001
**Attention: Albert Tashji**

Report Date: 10/04/2016
**Client Project ID: 170301202 450 Union Street**
York Project (SDG) No.: 16I0260

CT Cert. No. PH-0723 New Jersey Cert. No. CT-005 New York Cert. No. 10854 PA Cert. No. 68-04440

120 RESEARCH DRIVE STRATFORD, CT 06615 (203) 325-1371 FAX (203) 357-0166

Report Date: 10/04/2016
Client Project ID: 170301202 450 Union Street
York Project (SDG) No.: 16I0260

**Langan Engineering & Environmental Services (NYC)**
21 Penn Plaza, 360 West 31st Street
New York NY, 10001
Attention: Albert Tashji

## Purpose and Results

This report contains the analytical data for the sample(s) identified on the attached chain-of-custody received in our laboratory on September 08, 2016 and listed below. The project was identified as your project: **170301202 450 Union Street**.

The analyses were conducted utilizing appropriate EPA, Standard Methods, and ASTM methods as detailed in the data summary tables.

All samples were received in proper condition meeting the customary acceptance requirements for environmental samples except those indicated under the Notes section of this report.

All analyses met the method and laboratory standard operating procedure requirements except as indicated by any data flags, the meaning of which are explained in the attachment to this report, and case narrative if applicable.

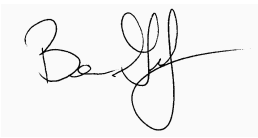
The results of the analyses, which are all reported on dry weight basis (soils) unless otherwise noted, are detailed in the following pages.

Please contact Client Services at 203.325.1371 with any questions regarding this report.

| York Sample ID | Client Sample ID | Matrix | Date Collected | Date Received |
|---|---|---|---|---|
| 16I0260-01 | V01_0-1.5 | Soil | 09/07/2016 | 09/08/2016 |

## General Notes for York Project (SDG) No.: 16I0260

1. The RLs and MDLs (Reporting Limit and Method Detection Limit respectively) reported are adjusted for any dilution necessary due to the levels of target and/or non-target analytes and matrix interference. The RL(REPORTING LIMIT) is based upon the lowest standard utilized for the calibration where applicable.
2. Samples are retained for a period of thirty days after submittal of report, unless other arrangements are made.
3. York's liability for the above data is limited to the dollar value paid to York for the referenced project.
4. This report shall not be reproduced without the written approval of York Analytical Laboratories, Inc.
5. All samples were received in proper condition for analysis with proper documentation, unless otherwise noted.
6. All analyses conducted met method or Laboratory SOP requirements. See the Qualifiers and/or Narrative sections for further information.
7. It is noted that no analyses reported herein were subcontracted to another laboratory, unless noted in the report.
8. This report reflects results that relate only to the samples submitted on the attached chain-of-custody form(s) received by York.

**Approved By:** 

**Date:** 10/04/2016

Benjamin Gulizia
Laboratory Director

## Sample Information

**Client Sample ID:** V01_0-1.5 **York Sample ID:** 16I0260-01

| York Project (SDG) No. | Client Project ID | Matrix | Collection Date/Time | Date Received |
|---|---|---|---|---|
| 16I0260 | 170301202 450 Union Street | Soil | September 7, 2016 1:00 pm | 09/08/2016 |

**Volatile Organics, NJDEP/TCL/Part 375 List**

**Log-in Notes:**

**Sample Notes:**

Sample Prepared by Method: EPA 5035A

| CAS No. | Parameter | Result | Flag | Units | Reported to LOD/MDL | LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 630-20-6 | 1,1,1,2-Tetrachloroethane | ND | | mg/kg dry | 0.0024 | 0.0048 | 1 | EPA 8260C | 09/14/2016 08:26 | 09/14/2016 13:25 | SS |
| | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP | | | |
| 71-55-6 | 1,1,1-Trichloroethane | ND | | mg/kg dry | 0.0024 | 0.0048 | 1 | EPA 8260C | 09/14/2016 08:26 | 09/14/2016 13:25 | SS |
| | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | | |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | ND | | mg/kg dry | 0.0024 | 0.0048 | 1 | EPA 8260C | 09/14/2016 08:26 | 09/14/2016 13:25 | SS |
| | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | | |
| 76-13-1 | 1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113) | ND | | mg/kg dry | 0.0024 | 0.0048 | 1 | EPA 8260C | 09/14/2016 08:26 | 09/14/2016 13:25 | SS |
| | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP | | | |
| 79-00-5 | 1,1,2-Trichloroethane | ND | | mg/kg dry | 0.0024 | 0.0048 | 1 | EPA 8260C | 09/14/2016 08:26 | 09/14/2016 13:25 | SS |
| | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | | |
| 75-34-3 | 1,1-Dichloroethane | ND | | mg/kg dry | 0.0024 | 0.0048 | 1 | EPA 8260C | 09/14/2016 08:26 | 09/14/2016 13:25 | SS |
| | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | | |
| 75-35-4 | 1,1-Dichloroethylene | ND | | mg/kg dry | 0.0024 | 0.0048 | 1 | EPA 8260C | 09/14/2016 08:26 | 09/14/2016 13:25 | SS |
| | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | | |
| 87-61-6 | 1,2,3-Trichlorobenzene | ND | | mg/kg dry | 0.0024 | 0.0048 | 1 | EPA 8260C | 09/14/2016 08:26 | 09/14/2016 13:25 | SS |
| | | | | | | | Certifications: | NELAC-NY10854,NJDEP | | | |
| 120-82-1 | 1,2,4-Trichlorobenzene | ND | | mg/kg dry | 0.0024 | 0.0048 | 1 | EPA 8260C | 09/14/2016 08:26 | 09/14/2016 13:25 | SS |
| | | | | | | | Certifications: | NELAC-NY10854,NJDEP | | | |
| 95-63-6 | 1,2,4-Trimethylbenzene | ND | | mg/kg dry | 0.0024 | 0.0048 | 1 | EPA 8260C | 09/14/2016 08:26 | 09/14/2016 13:25 | SS |
| | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP | | | |
| 96-12-8 | 1,2-Dibromo-3-chloropropane | ND | | mg/kg dry | 0.0024 | 0.0048 | 1 | EPA 8260C | 09/14/2016 08:26 | 09/14/2016 13:25 | SS |
| | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP | | | |
| 106-93-4 | 1,2-Dibromoethane | ND | | mg/kg dry | 0.0024 | 0.0048 | 1 | EPA 8260C | 09/14/2016 08:26 | 09/14/2016 13:25 | SS |
| | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP | | | |
| 95-50-1 | 1,2-Dichlorobenzene | ND | | mg/kg dry | 0.0024 | 0.0048 | 1 | EPA 8260C | 09/14/2016 08:26 | 09/14/2016 13:25 | SS |
| | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | | |
| 107-06-2 | 1,2-Dichloroethane | ND | | mg/kg dry | 0.0024 | 0.0048 | 1 | EPA 8260C | 09/14/2016 08:26 | 09/14/2016 13:25 | SS |
| | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | | |
| 78-87-5 | 1,2-Dichloropropane | ND | | mg/kg dry | 0.0024 | 0.0048 | 1 | EPA 8260C | 09/14/2016 08:26 | 09/14/2016 13:25 | SS |
| | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP | | | |
| 108-67-8 | 1,3,5-Trimethylbenzene | ND | | mg/kg dry | 0.0024 | 0.0048 | 1 | EPA 8260C | 09/14/2016 08:26 | 09/14/2016 13:25 | SS |
| | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP | | | |
| 541-73-1 | 1,3-Dichlorobenzene | ND | | mg/kg dry | 0.0024 | 0.0048 | 1 | EPA 8260C | 09/14/2016 08:26 | 09/14/2016 13:25 | SS |
| | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | | |
| 106-46-7 | 1,4-Dichlorobenzene | ND | | mg/kg dry | 0.0024 | 0.0048 | 1 | EPA 8260C | 09/14/2016 08:26 | 09/14/2016 13:25 | SS |
| | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | | |
| 123-91-1 | 1,4-Dioxane | ND | | mg/kg dry | 0.048 | 0.097 | 1 | EPA 8260C | 09/14/2016 08:26 | 09/14/2016 13:25 | SS |
| | | | | | | | Certifications: | NELAC-NY10854,NJDEP | | | |
| 78-93-3 | 2-Butanone | ND | | mg/kg dry | 0.0024 | 0.0048 | 1 | EPA 8260C | 09/14/2016 08:26 | 09/14/2016 13:25 | SS |
| | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP | | | |
| 591-78-6 | 2-Hexanone | ND | | mg/kg dry | 0.0024 | 0.0048 | 1 | EPA 8260C | 09/14/2016 08:26 | 09/14/2016 13:25 | SS |
| | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP | | | |
| 108-10-1 | 4-Methyl-2-pentanone | ND | | mg/kg dry | 0.0024 | 0.0048 | 1 | EPA 8260C | 09/14/2016 08:26 | 09/14/2016 13:25 | SS |
| | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP | | | |
| 67-64-1 | Acetone | ND | | mg/kg dry | 0.0048 | 0.0097 | 1 | EPA 8260C | 09/14/2016 08:26 | 09/14/2016 13:25 | SS |
| | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP | | | |

# Sample Information

**Client Sample ID:** **V01_0-1.5** **York Sample ID:** **16I0260-01**

| York Project (SDG) No. | Client Project ID | Matrix | Collection Date/Time | Date Received |
|---|---|---|---|---|
| 16I0260 | 170301202 450 Union Street | Soil | September 7, 2016 1:00 pm | 09/08/2016 |

## Volatile Organics, NJDEP/TCL/Part 375 List

**Log-in Notes:**

**Sample Notes:**

Sample Prepared by Method: EPA 5035A

| CAS No. | Parameter | Result | Flag | Units | Reported to LOD/MDL | LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 107-02-8 | Acrolein | ND | | mg/kg dry | 0.0048 | 0.0097 | 1 | EPA 8260C | 09/14/2016 08:26 | 09/14/2016 13:25 | SS |
| | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP | | | |
| 107-13-1 | Acrylonitrile | ND | | mg/kg dry | 0.0024 | 0.0048 | 1 | EPA 8260C | 09/14/2016 08:26 | 09/14/2016 13:25 | SS |
| | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP | | | |
| 71-43-2 | Benzene | ND | | mg/kg dry | 0.0024 | 0.0048 | 1 | EPA 8260C | 09/14/2016 08:26 | 09/14/2016 13:25 | SS |
| | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | | |
| 74-97-5 | Bromochloromethane | ND | | mg/kg dry | 0.0024 | 0.0048 | 1 | EPA 8260C | 09/14/2016 08:26 | 09/14/2016 13:25 | SS |
| | | | | | | | Certifications: | NELAC-NY10854,NJDEP | | | |
| 75-27-4 | Bromodichloromethane | ND | | mg/kg dry | 0.0024 | 0.0048 | 1 | EPA 8260C | 09/14/2016 08:26 | 09/14/2016 13:25 | SS |
| | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | | |
| 75-25-2 | Bromoform | ND | | mg/kg dry | 0.0024 | 0.0048 | 1 | EPA 8260C | 09/14/2016 08:26 | 09/14/2016 13:25 | SS |
| | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | | |
| 74-83-9 | Bromomethane | ND | | mg/kg dry | 0.0024 | 0.0048 | 1 | EPA 8260C | 09/14/2016 08:26 | 09/14/2016 13:25 | SS |
| | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | | |
| 75-15-0 | Carbon disulfide | ND | | mg/kg dry | 0.0024 | 0.0048 | 1 | EPA 8260C | 09/14/2016 08:26 | 09/14/2016 13:25 | SS |
| | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP | | | |
| 56-23-5 | Carbon tetrachloride | ND | | mg/kg dry | 0.0024 | 0.0048 | 1 | EPA 8260C | 09/14/2016 08:26 | 09/14/2016 13:25 | SS |
| | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | | |
| 108-90-7 | Chlorobenzene | ND | | mg/kg dry | 0.0024 | 0.0048 | 1 | EPA 8260C | 09/14/2016 08:26 | 09/14/2016 13:25 | SS |
| | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | | |
| 75-00-3 | Chloroethane | ND | | mg/kg dry | 0.0024 | 0.0048 | 1 | EPA 8260C | 09/14/2016 08:26 | 09/14/2016 13:25 | SS |
| | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | | |
| 67-66-3 | Chloroform | ND | | mg/kg dry | 0.0024 | 0.0048 | 1 | EPA 8260C | 09/14/2016 08:26 | 09/14/2016 13:25 | SS |
| | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | | |
| 74-87-3 | Chloromethane | ND | | mg/kg dry | 0.0024 | 0.0048 | 1 | EPA 8260C | 09/14/2016 08:26 | 09/14/2016 13:25 | SS |
| | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | | |
| 156-59-2 | cis-1,2-Dichloroethylene | ND | | mg/kg dry | 0.0024 | 0.0048 | 1 | EPA 8260C | 09/14/2016 08:26 | 09/14/2016 13:25 | SS |
| | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP | | | |
| 10061-01-5 | cis-1,3-Dichloropropylene | ND | | mg/kg dry | 0.0024 | 0.0048 | 1 | EPA 8260C | 09/14/2016 08:26 | 09/14/2016 13:25 | SS |
| | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | | |
| 110-82-7 | Cyclohexane | ND | | mg/kg dry | 0.0024 | 0.0048 | 1 | EPA 8260C | 09/14/2016 08:26 | 09/14/2016 13:25 | SS |
| | | | | | | | Certifications: | NELAC-NY10854,NJDEP | | | |
| 124-48-1 | Dibromochloromethane | ND | | mg/kg dry | 0.0024 | 0.0048 | 1 | EPA 8260C | 09/14/2016 08:26 | 09/14/2016 13:25 | SS |
| | | | | | | | Certifications: | NELAC-NY10854,NJDEP,PADEP | | | |
| 74-95-3 | Dibromomethane | ND | | mg/kg dry | 0.0024 | 0.0048 | 1 | EPA 8260C | 09/14/2016 08:26 | 09/14/2016 13:25 | SS |
| | | | | | | | Certifications: | NELAC-NY10854,NJDEP | | | |
| 75-71-8 | Dichlorodifluoromethane | ND | | mg/kg dry | 0.0024 | 0.0048 | 1 | EPA 8260C | 09/14/2016 08:26 | 09/14/2016 13:25 | SS |
| | | | | | | | Certifications: | NELAC-NY10854,NJDEP | | | |
| 100-41-4 | Ethyl Benzene | ND | | mg/kg dry | 0.0024 | 0.0048 | 1 | EPA 8260C | 09/14/2016 08:26 | 09/14/2016 13:25 | SS |
| | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | | |
| 87-68-3 | Hexachlorobutadiene | ND | | mg/kg dry | 0.0024 | 0.0048 | 1 | EPA 8260C | 09/14/2016 08:26 | 09/14/2016 13:25 | SS |
| | | | | | | | Certifications: | NELAC-NY10854,NJDEP | | | |
| 98-82-8 | Isopropylbenzene | ND | | mg/kg dry | 0.0024 | 0.0048 | 1 | EPA 8260C | 09/14/2016 08:26 | 09/14/2016 13:25 | SS |
| | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP | | | |
| 79-20-9 | Methyl acetate | ND | | mg/kg dry | 0.0024 | 0.0048 | 1 | EPA 8260C | 09/14/2016 08:26 | 09/14/2016 13:25 | SS |
| | | | | | | | Certifications: | NELAC-NY10854,NJDEP | | | |
| 1634-04-4 | Methyl tert-butyl ether (MTBE) | ND | | mg/kg dry | 0.0024 | 0.0048 | 1 | EPA 8260C | 09/14/2016 08:26 | 09/14/2016 13:25 | SS |
| | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP | | | |

## Sample Information

**Client Sample ID:** V01_0-1.5 **York Sample ID:** 16I0260-01

| York Project (SDG) No. | Client Project ID | Matrix | Collection Date/Time | Date Received |
|---|---|---|---|---|
| 16I0260 | 170301202 450 Union Street | Soil | September 7, 2016 1:00 pm | 09/08/2016 |

**Volatile Organics, NJDEP/TCL/Part 375 List**

**Log-in Notes:**

**Sample Notes:**

Sample Prepared by Method: EPA 5035A

| CAS No. | Parameter | Result | Flag | Units | Reported to LOD/MDL | LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 108-87-2 | Methylcyclohexane | ND | | mg/kg dry | 0.0024 | 0.0048 | 1 | EPA 8260C | 09/14/2016 08:26 | 09/14/2016 13:25 | SS |
| | | | | | | | Certifications: | NELAC-NY10854,NJDEP | | | |
| 75-09-2 | Methylene chloride | ND | | mg/kg dry | 0.0048 | 0.0097 | 1 | EPA 8260C | 09/14/2016 08:26 | 09/14/2016 13:25 | SS |
| | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | | |
| 104-51-8 | n-Butylbenzene | ND | | mg/kg dry | 0.0024 | 0.0048 | 1 | EPA 8260C | 09/14/2016 08:26 | 09/14/2016 13:25 | SS |
| | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP | | | |
| 103-65-1 | n-Propylbenzene | ND | | mg/kg dry | 0.0024 | 0.0048 | 1 | EPA 8260C | 09/14/2016 08:26 | 09/14/2016 13:25 | SS |
| | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP | | | |
| 95-47-6 | o-Xylene | ND | | mg/kg dry | 0.0024 | 0.0048 | 1 | EPA 8260C | 09/14/2016 08:26 | 09/14/2016 13:25 | SS |
| | | | | | | | Certifications: | CTDOH,NELAC-NY10854 | | | |
| 179601-23-1 | p- & m- Xylenes | ND | | mg/kg dry | 0.0048 | 0.0097 | 1 | EPA 8260C | 09/14/2016 08:26 | 09/14/2016 13:25 | SS |
| | | | | | | | Certifications: | CTDOH,NELAC-NY10854 | | | |
| 99-87-6 | p-Isopropyltoluene | ND | | mg/kg dry | 0.0024 | 0.0048 | 1 | EPA 8260C | 09/14/2016 08:26 | 09/14/2016 13:25 | SS |
| | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP | | | |
| 135-98-8 | sec-Butylbenzene | ND | | mg/kg dry | 0.0024 | 0.0048 | 1 | EPA 8260C | 09/14/2016 08:26 | 09/14/2016 13:25 | SS |
| | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP | | | |
| 100-42-5 | Styrene | ND | | mg/kg dry | 0.0024 | 0.0048 | 1 | EPA 8260C | 09/14/2016 08:26 | 09/14/2016 13:25 | SS |
| | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP | | | |
| 75-65-0 | tert-Butyl alcohol (TBA) | ND | | mg/kg dry | 0.0024 | 0.0048 | 1 | EPA 8260C | 09/14/2016 08:26 | 09/14/2016 13:25 | SS |
| | | | | | | | Certifications: | NELAC-NY10854,NJDEP | | | |
| 98-06-6 | tert-Butylbenzene | ND | | mg/kg dry | 0.0024 | 0.0048 | 1 | EPA 8260C | 09/14/2016 08:26 | 09/14/2016 13:25 | SS |
| | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP | | | |
| 127-18-4 | Tetrachloroethylene | ND | | mg/kg dry | 0.0024 | 0.0048 | 1 | EPA 8260C | 09/14/2016 08:26 | 09/14/2016 13:25 | SS |
| | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | | |
| 108-88-3 | Toluene | ND | | mg/kg dry | 0.0024 | 0.0048 | 1 | EPA 8260C | 09/14/2016 08:26 | 09/14/2016 13:25 | SS |
| | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | | |
| 156-60-5 | trans-1,2-Dichloroethylene | ND | | mg/kg dry | 0.0024 | 0.0048 | 1 | EPA 8260C | 09/14/2016 08:26 | 09/14/2016 13:25 | SS |
| | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP | | | |
| 10061-02-6 | trans-1,3-Dichloropropylene | ND | | mg/kg dry | 0.0024 | 0.0048 | 1 | EPA 8260C | 09/14/2016 08:26 | 09/14/2016 13:25 | SS |
| | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | | |
| 79-01-6 | Trichloroethylene | ND | | mg/kg dry | 0.0024 | 0.0048 | 1 | EPA 8260C | 09/14/2016 08:26 | 09/14/2016 13:25 | SS |
| | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | | |
| 75-69-4 | Trichlorofluoromethane | ND | | mg/kg dry | 0.0024 | 0.0048 | 1 | EPA 8260C | 09/14/2016 08:26 | 09/14/2016 13:25 | SS |
| | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | | |
| 75-01-4 | Vinyl Chloride | ND | | mg/kg dry | 0.0024 | 0.0048 | 1 | EPA 8260C | 09/14/2016 08:26 | 09/14/2016 13:25 | SS |
| | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | | |
| 1330-20-7 | Xylenes, Total | ND | | mg/kg dry | 0.0073 | 0.015 | 1 | EPA 8260C | 09/14/2016 08:26 | 09/14/2016 13:25 | SS |
| | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | | |

| | Surrogate Recoveries | Result | Acceptance Range |
|---|---|---|---|
| 17060-07-0 | *Surrogate: 1,2-Dichloroethane-d4* | *93.3 %* | *77-125* |
| 2037-26-5 | *Surrogate: Toluene-d8* | *99.7 %* | *85-120* |
| 460-00-4 | *Surrogate: p-Bromofluorobenzene* | *97.7 %* | *76-130* |

## Sample Information

**Client Sample ID:** V01_0-1.5 **York Sample ID:** 16I0260-01

| York Project (SDG) No. | Client Project ID | Matrix | Collection Date/Time | Date Received |
|---|---|---|---|---|
| 16I0260 | 170301202 450 Union Street | Soil | September 7, 2016 1:00 pm | 09/08/2016 |

**Semi-Volatiles, NJDEP/TCL/Part 375 List** **Log-in Notes:** **Sample Notes:**

Sample Prepared by Method: EPA 3550C

| CAS No. | Parameter | Result | Flag | Units | Reported to LOD/MDL | LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 92-52-4 | 1,1'-Biphenyl | ND | | mg/kg dry | 0.0433 | 0.0864 | 2 | EPA 8270D | 09/14/2016 11:54 | 09/15/2016 13:36 | KH |
| | | | | | | | Certifications: | NELAC-NY10854,NJDEP,PADEP | | | |
| 95-94-3 | 1,2,4,5-Tetrachlorobenzene | ND | | mg/kg dry | 0.0864 | 0.173 | 2 | EPA 8270D | 09/14/2016 11:54 | 09/15/2016 13:36 | KH |
| | | | | | | | Certifications: | NELAC-NY10854,NJDEP,PADEP | | | |
| 120-82-1 | 1,2,4-Trichlorobenzene | ND | | mg/kg dry | 0.0433 | 0.0864 | 2 | EPA 8270D | 09/14/2016 11:54 | 09/15/2016 13:36 | KH |
| | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | | |
| 95-50-1 | 1,2-Dichlorobenzene | ND | | mg/kg dry | 0.0433 | 0.0864 | 2 | EPA 8270D | 09/14/2016 11:54 | 09/15/2016 13:36 | KH |
| | | | | | | | Certifications: | NELAC-NY10854,PADEP | | | |
| 122-66-7 | 1,2-Diphenylhydrazine (as Azobenzene) | ND | | mg/kg dry | 0.0433 | 0.0864 | 2 | EPA 8270D | 09/14/2016 11:54 | 09/15/2016 13:36 | KH |
| | | | | | | | Certifications: | NELAC-NY10854,NJDEP,PADEP | | | |
| 541-73-1 | 1,3-Dichlorobenzene | ND | | mg/kg dry | 0.0433 | 0.0864 | 2 | EPA 8270D | 09/14/2016 11:54 | 09/15/2016 13:36 | KH |
| | | | | | | | Certifications: | NELAC-NY10854,PADEP | | | |
| 106-46-7 | 1,4-Dichlorobenzene | ND | | mg/kg dry | 0.0433 | 0.0864 | 2 | EPA 8270D | 09/14/2016 11:54 | 09/15/2016 13:36 | KH |
| | | | | | | | Certifications: | NELAC-NY10854,PADEP | | | |
| 58-90-2 | 2,3,4,6-Tetrachlorophenol | ND | | mg/kg dry | 0.0864 | 0.173 | 2 | EPA 8270D | 09/14/2016 11:54 | 09/15/2016 13:36 | KH |
| | | | | | | | Certifications: | NELAC-NY10854,NJDEP,PADEP | | | |
| 95-95-4 | 2,4,5-Trichlorophenol | ND | | mg/kg dry | 0.0433 | 0.0864 | 2 | EPA 8270D | 09/14/2016 11:54 | 09/15/2016 13:36 | KH |
| | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | | |
| 88-06-2 | 2,4,6-Trichlorophenol | ND | | mg/kg dry | 0.0433 | 0.0864 | 2 | EPA 8270D | 09/14/2016 11:54 | 09/15/2016 13:36 | KH |
| | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | | |
| 120-83-2 | 2,4-Dichlorophenol | ND | | mg/kg dry | 0.0433 | 0.0864 | 2 | EPA 8270D | 09/14/2016 11:54 | 09/15/2016 13:36 | KH |
| | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | | |
| 105-67-9 | 2,4-Dimethylphenol | ND | | mg/kg dry | 0.0433 | 0.0864 | 2 | EPA 8270D | 09/14/2016 11:54 | 09/15/2016 13:36 | KH |
| | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | | |
| 51-28-5 | 2,4-Dinitrophenol | ND | | mg/kg dry | 0.0864 | 0.173 | 2 | EPA 8270D | 09/14/2016 11:54 | 09/15/2016 13:36 | KH |
| | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | | |
| 121-14-2 | 2,4-Dinitrotoluene | ND | | mg/kg dry | 0.0433 | 0.0864 | 2 | EPA 8270D | 09/14/2016 11:54 | 09/15/2016 13:36 | KH |
| | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | | |
| 606-20-2 | 2,6-Dinitrotoluene | ND | | mg/kg dry | 0.0433 | 0.0864 | 2 | EPA 8270D | 09/14/2016 11:54 | 09/15/2016 13:36 | KH |
| | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | | |
| 91-58-7 | 2-Chloronaphthalene | ND | | mg/kg dry | 0.0433 | 0.0864 | 2 | EPA 8270D | 09/14/2016 11:54 | 09/15/2016 13:36 | KH |
| | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | | |
| 95-57-8 | 2-Chlorophenol | ND | | mg/kg dry | 0.0433 | 0.0864 | 2 | EPA 8270D | 09/14/2016 11:54 | 09/15/2016 13:36 | KH |
| | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | | |
| 91-57-6 | 2-Methylnaphthalene | ND | | mg/kg dry | 0.0433 | 0.0864 | 2 | EPA 8270D | 09/14/2016 11:54 | 09/15/2016 13:36 | KH |
| | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | | |
| 95-48-7 | 2-Methylphenol | ND | | mg/kg dry | 0.0433 | 0.0864 | 2 | EPA 8270D | 09/14/2016 11:54 | 09/15/2016 13:36 | KH |
| | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | | |
| 88-74-4 | 2-Nitroaniline | ND | | mg/kg dry | 0.0864 | 0.173 | 2 | EPA 8270D | 09/14/2016 11:54 | 09/15/2016 13:36 | KH |
| | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | | |
| 88-75-5 | 2-Nitrophenol | ND | | mg/kg dry | 0.0433 | 0.0864 | 2 | EPA 8270D | 09/14/2016 11:54 | 09/15/2016 13:36 | KH |
| | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | | |
| 65794-96-9 | 3- & 4-Methylphenols | ND | | mg/kg dry | 0.0433 | 0.0864 | 2 | EPA 8270D | 09/14/2016 11:54 | 09/15/2016 13:36 | KH |
| | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | | |
| 91-94-1 | 3,3'-Dichlorobenzidine | ND | | mg/kg dry | 0.0433 | 0.0864 | 2 | EPA 8270D | 09/14/2016 11:54 | 09/15/2016 13:36 | KH |
| | | | | | | | Certifications: | NELAC-NY10854,NJDEP,PADEP | | | |
| 99-09-2 | 3-Nitroaniline | ND | | mg/kg dry | 0.0864 | 0.173 | 2 | EPA 8270D | 09/14/2016 11:54 | 09/15/2016 13:36 | KH |
| | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | | |

## Sample Information

**Client Sample ID:** V01_0-1.5 **York Sample ID:** 16I0260-01

| York Project (SDG) No. | Client Project ID | Matrix | Collection Date/Time | Date Received |
|---|---|---|---|---|
| 16I0260 | 170301202 450 Union Street | Soil | September 7, 2016 1:00 pm | 09/08/2016 |

**Semi-Volatiles, NJDEP/TCL/Part 375 List** **Log-in Notes:** **Sample Notes:**

Sample Prepared by Method: EPA 3550C

| CAS No. | Parameter | Result | Flag | Units | Reported to LOD/MDL | LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 534-52-1 | 4,6-Dinitro-2-methylphenol | ND | | mg/kg dry | 0.0864 | 0.173 | 2 | EPA 8270D | 09/14/2016 11:54 | 09/15/2016 13:36 | KH |
| | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | | |
| 101-55-3 | 4-Bromophenyl phenyl ether | ND | | mg/kg dry | 0.0433 | 0.0864 | 2 | EPA 8270D | 09/14/2016 11:54 | 09/15/2016 13:36 | KH |
| | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | | |
| 59-50-7 | 4-Chloro-3-methylphenol | ND | | mg/kg dry | 0.0433 | 0.0864 | 2 | EPA 8270D | 09/14/2016 11:54 | 09/15/2016 13:36 | KH |
| | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | | |
| 106-47-8 | 4-Chloroaniline | ND | | mg/kg dry | 0.0433 | 0.0864 | 2 | EPA 8270D | 09/14/2016 11:54 | 09/15/2016 13:36 | KH |
| | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | | |
| 7005-72-3 | 4-Chlorophenyl phenyl ether | ND | | mg/kg dry | 0.0433 | 0.0864 | 2 | EPA 8270D | 09/14/2016 11:54 | 09/15/2016 13:36 | KH |
| | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | | |
| 100-01-6 | 4-Nitroaniline | ND | | mg/kg dry | 0.0864 | 0.173 | 2 | EPA 8270D | 09/14/2016 11:54 | 09/15/2016 13:36 | KH |
| | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | | |
| 100-02-7 | 4-Nitrophenol | ND | | mg/kg dry | 0.0864 | 0.173 | 2 | EPA 8270D | 09/14/2016 11:54 | 09/15/2016 13:36 | KH |
| | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | | |
| 83-32-9 | Acenaphthene | ND | | mg/kg dry | 0.0433 | 0.0864 | 2 | EPA 8270D | 09/14/2016 11:54 | 09/15/2016 13:36 | KH |
| | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | | |
| 208-96-8 | Acenaphthylene | ND | | mg/kg dry | 0.0433 | 0.0864 | 2 | EPA 8270D | 09/14/2016 11:54 | 09/15/2016 13:36 | KH |
| | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | | |
| 98-86-2 | Acetophenone | ND | | mg/kg dry | 0.0433 | 0.0864 | 2 | EPA 8270D | 09/14/2016 11:54 | 09/15/2016 13:36 | KH |
| | | | | | | | Certifications: | NELAC-NY10854,NJDEP,PADEP | | | |
| 62-53-3 | Aniline | ND | | mg/kg dry | 0.173 | 0.346 | 2 | EPA 8270D | 09/14/2016 11:54 | 09/15/2016 13:36 | KH |
| | | | | | | | Certifications: | NELAC-NY10854,NJDEP,PADEP | | | |
| 120-12-7 | Anthracene | ND | | mg/kg dry | 0.0433 | 0.0864 | 2 | EPA 8270D | 09/14/2016 11:54 | 09/15/2016 13:36 | KH |
| | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | | |
| 1912-24-9 | Atrazine | ND | | mg/kg dry | 0.0433 | 0.0864 | 2 | EPA 8270D | 09/14/2016 11:54 | 09/15/2016 13:36 | KH |
| | | | | | | | Certifications: | NELAC-NY10854,NJDEP,PADEP | | | |
| 100-52-7 | Benzaldehyde | ND | | mg/kg dry | 0.0433 | 0.0864 | 2 | EPA 8270D | 09/14/2016 11:54 | 09/15/2016 13:36 | KH |
| | | | | | | | Certifications: | NELAC-NY10854,NJDEP,PADEP | | | |
| 92-87-5 | Benzidine | ND | | mg/kg dry | 0.173 | 0.346 | 2 | EPA 8270D | 09/14/2016 11:54 | 09/15/2016 13:36 | KH |
| | | | | | | | Certifications: | CTDOH,NELAC-NY10854,PADEP | | | |
| 56-55-3 | **Benzo(a)anthracene** | **0.130** | | mg/kg dry | 0.0433 | 0.0864 | 2 | EPA 8270D | 09/14/2016 11:54 | 09/15/2016 13:36 | KH |
| | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | | |
| 50-32-8 | **Benzo(a)pyrene** | **0.126** | | mg/kg dry | 0.0433 | 0.0864 | 2 | EPA 8270D | 09/14/2016 11:54 | 09/15/2016 13:36 | KH |
| | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | | |
| 205-99-2 | **Benzo(b)fluoranthene** | **0.0918** | | mg/kg dry | 0.0433 | 0.0864 | 2 | EPA 8270D | 09/14/2016 11:54 | 09/15/2016 13:36 | KH |
| | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | | |
| 191-24-2 | **Benzo(g,h,i)perylene** | **0.0835** | J | mg/kg dry | 0.0433 | 0.0864 | 2 | EPA 8270D | 09/14/2016 11:54 | 09/15/2016 13:36 | KH |
| | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | | |
| 207-08-9 | **Benzo(k)fluoranthene** | **0.119** | | mg/kg dry | 0.0433 | 0.0864 | 2 | EPA 8270D | 09/14/2016 11:54 | 09/15/2016 13:36 | KH |
| | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | | |
| 65-85-0 | Benzoic acid | ND | | mg/kg dry | 0.0433 | 0.0864 | 2 | EPA 8270D | 09/14/2016 11:54 | 09/15/2016 13:36 | KH |
| | | | | | | | Certifications: | NELAC-NY10854,NJDEP,PADEP | | | |
| 100-51-6 | Benzyl alcohol | ND | | mg/kg dry | 0.0433 | 0.0864 | 2 | EPA 8270D | 09/14/2016 11:54 | 09/15/2016 13:36 | KH |
| | | | | | | | Certifications: | NELAC-NY10854,NJDEP,PADEP | | | |
| 85-68-7 | Benzyl butyl phthalate | ND | | mg/kg dry | 0.0433 | 0.0864 | 2 | EPA 8270D | 09/14/2016 11:54 | 09/15/2016 13:36 | KH |
| | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | | |
| 111-91-1 | Bis(2-chloroethoxy)methane | ND | | mg/kg dry | 0.0433 | 0.0864 | 2 | EPA 8270D | 09/14/2016 11:54 | 09/15/2016 13:36 | KH |
| | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | | |

## Sample Information

**Client Sample ID:** V01_0-1.5 **York Sample ID:** 16I0260-01

| York Project (SDG) No. | Client Project ID | Matrix | Collection Date/Time | Date Received |
|---|---|---|---|---|
| 16I0260 | 170301202 450 Union Street | Soil | September 7, 2016 1:00 pm | 09/08/2016 |

**Semi-Volatiles, NJDEP/TCL/Part 375 List** **Log-in Notes:** **Sample Notes:**

Sample Prepared by Method: EPA 3550C

| CAS No. | Parameter | Result | Flag | Units | Reported to LOD/MDL | LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 111-44-4 | Bis(2-chloroethyl)ether | ND | | mg/kg dry | 0.0433 | 0.0864 | 2 | EPA 8270D | 09/14/2016 11:54 | 09/15/2016 13:36 | KH |
| | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | | |
| 108-60-1 | Bis(2-chloroisopropyl)ether | ND | | mg/kg dry | 0.0433 | 0.0864 | 2 | EPA 8270D | 09/14/2016 11:54 | 09/15/2016 13:36 | KH |
| | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | | |
| 117-81-7 | **Bis(2-ethylhexyl)phthalate** | **0.0525** | J | mg/kg dry | 0.0433 | 0.0864 | 2 | EPA 8270D | 09/14/2016 11:54 | 09/15/2016 13:36 | KH |
| | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | | |
| 105-60-2 | Caprolactam | ND | | mg/kg dry | 0.0864 | 0.173 | 2 | EPA 8270D | 09/14/2016 11:54 | 09/15/2016 13:36 | KH |
| | | | | | | | Certifications: | NELAC-NY10854,NJDEP,PADEP | | | |
| 86-74-8 | Carbazole | ND | | mg/kg dry | 0.0433 | 0.0864 | 2 | EPA 8270D | 09/14/2016 11:54 | 09/15/2016 13:36 | KH |
| | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | | |
| 218-01-9 | **Chrysene** | **0.159** | | mg/kg dry | 0.0433 | 0.0864 | 2 | EPA 8270D | 09/14/2016 11:54 | 09/15/2016 13:36 | KH |
| | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | | |
| 53-70-3 | Dibenzo(a,h)anthracene | ND | | mg/kg dry | 0.0433 | 0.0864 | 2 | EPA 8270D | 09/14/2016 11:54 | 09/15/2016 13:36 | KH |
| | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | | |
| 132-64-9 | Dibenzofuran | ND | | mg/kg dry | 0.0433 | 0.0864 | 2 | EPA 8270D | 09/14/2016 11:54 | 09/15/2016 13:36 | KH |
| | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | | |
| 84-66-2 | Diethyl phthalate | ND | | mg/kg dry | 0.0433 | 0.0864 | 2 | EPA 8270D | 09/14/2016 11:54 | 09/15/2016 13:36 | KH |
| | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | | |
| 131-11-3 | Dimethyl phthalate | ND | | mg/kg dry | 0.0433 | 0.0864 | 2 | EPA 8270D | 09/14/2016 11:54 | 09/15/2016 13:36 | KH |
| | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | | |
| 84-74-2 | Di-n-butyl phthalate | ND | | mg/kg dry | 0.0433 | 0.0864 | 2 | EPA 8270D | 09/14/2016 11:54 | 09/15/2016 13:36 | KH |
| | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | | |
| 117-84-0 | Di-n-octyl phthalate | ND | | mg/kg dry | 0.0433 | 0.0864 | 2 | EPA 8270D | 09/14/2016 11:54 | 09/15/2016 13:36 | KH |
| | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | | |
| 206-44-0 | **Fluoranthene** | **0.244** | | mg/kg dry | 0.0433 | 0.0864 | 2 | EPA 8270D | 09/14/2016 11:54 | 09/15/2016 13:36 | KH |
| | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | | |
| 86-73-7 | Fluorene | ND | | mg/kg dry | 0.0433 | 0.0864 | 2 | EPA 8270D | 09/14/2016 11:54 | 09/15/2016 13:36 | KH |
| | | | | | | | Certifications: | NELAC-NY10854,NJDEP,PADEP | | | |
| 118-74-1 | Hexachlorobenzene | ND | | mg/kg dry | 0.0433 | 0.0864 | 2 | EPA 8270D | 09/14/2016 11:54 | 09/15/2016 13:36 | KH |
| | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | | |
| 87-68-3 | Hexachlorobutadiene | ND | | mg/kg dry | 0.0433 | 0.0864 | 2 | EPA 8270D | 09/14/2016 11:54 | 09/15/2016 13:36 | KH |
| | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | | |
| 77-47-4 | Hexachlorocyclopentadiene | ND | | mg/kg dry | 0.0433 | 0.0864 | 2 | EPA 8270D | 09/14/2016 11:54 | 09/15/2016 13:36 | KH |
| | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | | |
| 67-72-1 | Hexachloroethane | ND | | mg/kg dry | 0.0433 | 0.0864 | 2 | EPA 8270D | 09/14/2016 11:54 | 09/15/2016 13:36 | KH |
| | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | | |
| 193-39-5 | **Indeno(1,2,3-cd)pyrene** | **0.0677** | J | mg/kg dry | 0.0433 | 0.0864 | 2 | EPA 8270D | 09/14/2016 11:54 | 09/15/2016 13:36 | KH |
| | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | | |
| 78-59-1 | Isophorone | ND | | mg/kg dry | 0.0433 | 0.0864 | 2 | EPA 8270D | 09/14/2016 11:54 | 09/15/2016 13:36 | KH |
| | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | | |
| 91-20-3 | Naphthalene | ND | | mg/kg dry | 0.0433 | 0.0864 | 2 | EPA 8270D | 09/14/2016 11:54 | 09/15/2016 13:36 | KH |
| | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | | |
| 98-95-3 | Nitrobenzene | ND | | mg/kg dry | 0.0433 | 0.0864 | 2 | EPA 8270D | 09/14/2016 11:54 | 09/15/2016 13:36 | KH |
| | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | | |
| 62-75-9 | N-Nitrosodimethylamine | ND | | mg/kg dry | 0.0433 | 0.0864 | 2 | EPA 8270D | 09/14/2016 11:54 | 09/15/2016 13:36 | KH |
| | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | | |
| 621-64-7 | N-nitroso-di-n-propylamine | ND | | mg/kg dry | 0.0433 | 0.0864 | 2 | EPA 8270D | 09/14/2016 11:54 | 09/15/2016 13:36 | KH |
| | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | | |

## Sample Information

**Client Sample ID:** V01_0-1.5 **York Sample ID:** 16I0260-01

| York Project (SDG) No. | Client Project ID | Matrix | Collection Date/Time | Date Received |
|---|---|---|---|---|
| 16I0260 | 170301202 450 Union Street | Soil | September 7, 2016 1:00 pm | 09/08/2016 |

### Semi-Volatiles, NJDEP/TCL/Part 375 List

**Log-in Notes:**

**Sample Notes:**

Sample Prepared by Method: EPA 3550C

| CAS No. | Parameter | Result | Flag | Units | Reported to LOD/MDL | LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 86-30-6 | N-Nitrosodiphenylamine | ND | | mg/kg dry | 0.0433 | 0.0864 | 2 | EPA 8270D | 09/14/2016 11:54 | 09/15/2016 13:36 | KH |
| | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | | |
| 87-86-5 | Pentachlorophenol | ND | | mg/kg dry | 0.0433 | 0.0864 | 2 | EPA 8270D | 09/14/2016 11:54 | 09/15/2016 13:36 | KH |
| | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | | |
| 85-01-8 | **Phenanthrene** | **0.153** | | mg/kg dry | 0.0433 | 0.0864 | 2 | EPA 8270D | 09/14/2016 11:54 | 09/15/2016 13:36 | KH |
| | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | | |
| 108-95-2 | Phenol | ND | | mg/kg dry | 0.0433 | 0.0864 | 2 | EPA 8270D | 09/14/2016 11:54 | 09/15/2016 13:36 | KH |
| | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | | |
| 129-00-0 | **Pyrene** | **0.251** | | mg/kg dry | 0.0433 | 0.0864 | 2 | EPA 8270D | 09/14/2016 11:54 | 09/15/2016 13:36 | KH |
| | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | | |
| 110-86-1 | Pyridine | ND | | mg/kg dry | 0.173 | 0.346 | 2 | EPA 8270D | 09/14/2016 11:54 | 09/15/2016 13:36 | KH |
| | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | | |

| | Surrogate Recoveries | Result | Acceptance Range |
|---|---|---|---|
| 367-12-4 | *Surrogate: 2-Fluorophenol* | *37.1 %* | *20-108* |
| 4165-62-2 | *Surrogate: Phenol-d5* | *42.4 %* | *23-114* |
| 4165-60-0 | *Surrogate: Nitrobenzene-d5* | *39.4 %* | *22-108* |
| 321-60-8 | *Surrogate: 2-Fluorobiphenyl* | *32.4 %* | *21-113* |
| 118-79-6 | *Surrogate: 2,4,6-Tribromophenol* | *46.0 %* | *19-110* |
| 1718-51-0 | *Surrogate: Terphenyl-d14* | *36.3 %* | *24-116* |

### Pesticides, NJDEP/TCL/Part 375 List

**Log-in Notes:**

**Sample Notes:**

Sample Prepared by Method: EPA 3550C

| CAS No. | Parameter | Result | Flag | Units | LOD/MDL | Reported to LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 72-54-8 | 4,4'-DDD | ND | | mg/kg dry | 0.00171 | 0.00171 | 5 | EPA 8081B | 09/12/2016 08:21 | 09/12/2016 18:56 | AMC |
| | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | | |
| 72-55-9 | 4,4'-DDE | ND | | mg/kg dry | 0.00171 | 0.00171 | 5 | EPA 8081B | 09/12/2016 08:21 | 09/12/2016 18:56 | AMC |
| | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | | |
| 50-29-3 | 4,4'-DDT | ND | | mg/kg dry | 0.00171 | 0.00171 | 5 | EPA 8081B | 09/12/2016 08:21 | 09/12/2016 18:56 | AMC |
| | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | | |
| 309-00-2 | Aldrin | ND | | mg/kg dry | 0.00171 | 0.00171 | 5 | EPA 8081B | 09/12/2016 08:21 | 09/12/2016 18:56 | AMC |
| | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | | |
| 319-84-6 | alpha-BHC | ND | | mg/kg dry | 0.00171 | 0.00171 | 5 | EPA 8081B | 09/12/2016 08:21 | 09/12/2016 18:56 | AMC |
| | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | | |
| 5103-71-9 | alpha-Chlordane | ND | | mg/kg dry | 0.00171 | 0.00171 | 5 | EPA 8081B | 09/12/2016 08:21 | 09/12/2016 18:56 | AMC |
| | | | | | | | Certifications: | NELAC-NY10854,NJDEP | | | |
| 319-85-7 | beta-BHC | ND | | mg/kg dry | 0.00171 | 0.00171 | 5 | EPA 8081B | 09/12/2016 08:21 | 09/12/2016 18:56 | AMC |
| | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | | |
| 57-74-9 | Chlordane, total | ND | | mg/kg dry | 0.0684 | 0.0684 | 5 | EPA 8081B | 09/12/2016 08:21 | 09/12/2016 18:56 | AMC |
| | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | | |
| 319-86-8 | delta-BHC | ND | | mg/kg dry | 0.00171 | 0.00171 | 5 | EPA 8081B | 09/12/2016 08:21 | 09/12/2016 18:56 | AMC |
| | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | | |
| 60-57-1 | Dieldrin | ND | | mg/kg dry | 0.00171 | 0.00171 | 5 | EPA 8081B | 09/12/2016 08:21 | 09/12/2016 18:56 | AMC |
| | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | | |
| 959-98-8 | Endosulfan I | ND | | mg/kg dry | 0.00171 | 0.00171 | 5 | EPA 8081B | 09/12/2016 08:21 | 09/12/2016 18:56 | AMC |
| | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | | |

## Sample Information

**Client Sample ID:** V01_0-1.5 **York Sample ID:** 16I0260-01

| York Project (SDG) No. | Client Project ID | Matrix | Collection Date/Time | Date Received |
|---|---|---|---|---|
| 16I0260 | 170301202 450 Union Street | Soil | September 7, 2016 1:00 pm | 09/08/2016 |

### Pesticides, NJDEP/TCL/Part 375 List

**Log-in Notes:**

**Sample Notes:**

Sample Prepared by Method: EPA 3550C

| CAS No. | Parameter | Result | Flag | Units | LOD/MDL | Reported to LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 33213-65-9 | Endosulfan II | ND | | mg/kg dry | 0.00171 | 0.00171 | 5 | EPA 8081B | 09/12/2016 08:21 | 09/12/2016 18:56 | AMC |
| | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | | |
| 1031-07-8 | Endosulfan sulfate | ND | | mg/kg dry | 0.00171 | 0.00171 | 5 | EPA 8081B | 09/12/2016 08:21 | 09/12/2016 18:56 | AMC |
| | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | | |
| 72-20-8 | Endrin | ND | | mg/kg dry | 0.00171 | 0.00171 | 5 | EPA 8081B | 09/12/2016 08:21 | 09/12/2016 18:56 | AMC |
| | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | | |
| 7421-93-4 | Endrin aldehyde | ND | | mg/kg dry | 0.00171 | 0.00171 | 5 | EPA 8081B | 09/12/2016 08:21 | 09/12/2016 18:56 | AMC |
| | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | | |
| 53494-70-5 | Endrin ketone | ND | | mg/kg dry | 0.00171 | 0.00171 | 5 | EPA 8081B | 09/12/2016 08:21 | 09/12/2016 18:56 | AMC |
| | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | | |
| 58-89-9 | gamma-BHC (Lindane) | ND | | mg/kg dry | 0.00171 | 0.00171 | 5 | EPA 8081B | 09/12/2016 08:21 | 09/12/2016 18:56 | AMC |
| | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | | |
| 5566-34-7 | gamma-Chlordane | ND | | mg/kg dry | 0.00171 | 0.00171 | 5 | EPA 8081B | 09/12/2016 08:21 | 09/12/2016 18:56 | AMC |
| | | | | | | | Certifications: | NELAC-NY10854,NJDEP | | | |
| 76-44-8 | Heptachlor | ND | | mg/kg dry | 0.00171 | 0.00171 | 5 | EPA 8081B | 09/12/2016 08:21 | 09/12/2016 18:56 | AMC |
| | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | | |
| 1024-57-3 | Heptachlor epoxide | ND | | mg/kg dry | 0.00171 | 0.00171 | 5 | EPA 8081B | 09/12/2016 08:21 | 09/12/2016 18:56 | AMC |
| | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | | |
| 72-43-5 | Methoxychlor | ND | | mg/kg dry | 0.00171 | 0.00171 | 5 | EPA 8081B | 09/12/2016 08:21 | 09/12/2016 18:56 | AMC |
| | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | | |
| 8001-35-2 | Toxaphene | ND | | mg/kg dry | 0.171 | 0.171 | 5 | EPA 8081B | 09/12/2016 08:21 | 09/12/2016 18:56 | AMC |
| | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | | |
| | * Chlordane, total (alpha, gamma) | ND | | mg/kg dry | 0.00171 | 0.00171 | 5 | EPA 8081B | 09/12/2016 08:21 | 09/12/2016 18:56 | AMC |
| | | | | | | | Certifications: | | | | |

| | Surrogate Recoveries | Result | Acceptance Range |
|---|---|---|---|
| 2051-24-3 | *Surrogate: Decachlorobiphenyl* | *63.6 %* | *30-150* |
| 877-09-8 | *Surrogate: Tetrachloro-m-xylene* | *69.7 %* | *30-150* |

### Polychlorinated Biphenyls (PCB)

**Log-in Notes:**

**Sample Notes:**

Sample Prepared by Method: EPA 3550C

| CAS No. | Parameter | Result | Flag | Units | LOD/MDL | Reported to LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 12674-11-2 | Aroclor 1016 | ND | | mg/kg dry | 0.0173 | 0.0173 | 1 | EPA 8082A | 09/12/2016 08:21 | 09/12/2016 18:29 | AMC |
| | | | | | | | Certifications: | NELAC-NY10854,CTDOH,NJDEP,PADEP | | | |
| 11104-28-2 | Aroclor 1221 | ND | | mg/kg dry | 0.0173 | 0.0173 | 1 | EPA 8082A | 09/12/2016 08:21 | 09/12/2016 18:29 | AMC |
| | | | | | | | Certifications: | NELAC-NY10854,CTDOH,NJDEP,PADEP | | | |
| 11141-16-5 | Aroclor 1232 | ND | | mg/kg dry | 0.0173 | 0.0173 | 1 | EPA 8082A | 09/12/2016 08:21 | 09/12/2016 18:29 | AMC |
| | | | | | | | Certifications: | NELAC-NY10854,CTDOH,NJDEP,PADEP | | | |
| 53469-21-9 | Aroclor 1242 | ND | | mg/kg dry | 0.0173 | 0.0173 | 1 | EPA 8082A | 09/12/2016 08:21 | 09/12/2016 18:29 | AMC |
| | | | | | | | Certifications: | NELAC-NY10854,CTDOH,NJDEP,PADEP | | | |
| 12672-29-6 | Aroclor 1248 | ND | | mg/kg dry | 0.0173 | 0.0173 | 1 | EPA 8082A | 09/12/2016 08:21 | 09/12/2016 18:29 | AMC |
| | | | | | | | Certifications: | NELAC-NY10854,CTDOH,NJDEP,PADEP | | | |
| 11097-69-1 | Aroclor 1254 | ND | | mg/kg dry | 0.0173 | 0.0173 | 1 | EPA 8082A | 09/12/2016 08:21 | 09/12/2016 18:29 | AMC |
| | | | | | | | Certifications: | NELAC-NY10854,CTDOH,NJDEP,PADEP | | | |
| 11096-82-5 | Aroclor 1260 | ND | | mg/kg dry | 0.0173 | 0.0173 | 1 | EPA 8082A | 09/12/2016 08:21 | 09/12/2016 18:29 | AMC |
| | | | | | | | Certifications: | NELAC-NY10854,CTDOH,NJDEP,PADEP | | | |

# Sample Information

**Client Sample ID:** V01_0-1.5 **York Sample ID:** 16I0260-01

| York Project (SDG) No. | Client Project ID | Matrix | Collection Date/Time | Date Received |
|---|---|---|---|---|
| 16I0260 | 170301202 450 Union Street | Soil | September 7, 2016 1:00 pm | 09/08/2016 |

## Polychlorinated Biphenyls (PCB)

**Log-in Notes:** **Sample Notes:**

Sample Prepared by Method: EPA 3550C

| CAS No. | Parameter | Result | Flag | Units | LOD/MDL | Reported to LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1336-36-3 | * Total PCBs | ND | | mg/kg dry | 0.0173 | 0.0173 | 1 | EPA 8082A | 09/12/2016 08:21 | 09/12/2016 18:29 | AMC |
| | | | | | | | Certifications: | | | | |

| | Surrogate Recoveries | Result | Acceptance Range |
|---|---|---|---|
| 877-09-8 | *Surrogate: Tetrachloro-m-xylene* | *61.0 %* | *30-140* |
| 2051-24-3 | *Surrogate: Decachlorobiphenyl* | *57.0 %* | *30-140* |

## Herbicides, NJDEP/TCL/Part 375 List

**Log-in Notes:** **Sample Notes:**

Sample Prepared by Method: EPA 3550B/8151A

| CAS No. | Parameter | Result | Flag | Units | LOD/MDL | Reported to LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 93-76-5 | 2,4,5-T | ND | | mg/kg dry | 0.0207 | 0.0207 | 1 | EPA 8151A | 09/13/2016 07:14 | 09/13/2016 13:18 | AMC |
| | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | | |
| 93-72-1 | 2,4,5-TP (Silvex) | ND | | mg/kg dry | 0.0207 | 0.0207 | 1 | EPA 8151A | 09/13/2016 07:14 | 09/13/2016 13:18 | AMC |
| | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | | |
| 94-75-7 | 2,4-D | ND | | mg/kg dry | 0.0207 | 0.0207 | 1 | EPA 8151A | 09/13/2016 07:14 | 09/13/2016 13:18 | AMC |
| | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | | |

| | Surrogate Recoveries | Result | Acceptance Range |
|---|---|---|---|
| 19719-28-9 | *Surrogate: 2,4-Dichlorophenylacetic acid (I* | *105 %* | *30-150* |

## Metals, Target Analyte

**Log-in Notes:** **Sample Notes:**

Sample Prepared by Method: EPA 3050B

| CAS No. | Parameter | Result | Flag | Units | LOD/MDL | Reported to LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 7429-90-5 | **Aluminum** | **2840** | | mg/kg dry | 5.18 | 5.18 | 1 | EPA 6010C | 09/12/2016 10:18 | 09/13/2016 00:10 | KV |
| | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | | |
| 7440-36-0 | Antimony | ND | U | mg/kg dry | 0.518 | 0.518 | 1 | EPA 6010C | 09/12/2016 10:18 | 09/13/2016 00:10 | KV |
| | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | | |
| 7440-38-2 | **Arsenic** | **3.80** | | mg/kg dry | 1.04 | 1.04 | 1 | EPA 6010C | 09/12/2016 10:18 | 09/13/2016 00:10 | KV |
| | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | | |
| 7440-39-3 | **Barium** | **29.5** | | mg/kg dry | 1.04 | 1.04 | 1 | EPA 6010C | 09/12/2016 10:18 | 09/13/2016 00:10 | KV |
| | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | | |
| 7440-41-7 | **Beryllium** | **0.605** | | mg/kg dry | 0.104 | 0.104 | 1 | EPA 6010C | 09/12/2016 10:18 | 09/13/2016 00:10 | KV |
| | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | | |
| 7440-43-9 | Cadmium | ND | U | mg/kg dry | 0.311 | 0.311 | 1 | EPA 6010C | 09/12/2016 10:18 | 09/13/2016 00:10 | KV |
| | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | | |
| 7440-70-2 | **Calcium** | **1400** | B | mg/kg dry | 0.518 | 5.18 | 1 | EPA 6010C | 09/12/2016 10:18 | 09/13/2016 00:10 | KV |
| | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | | |
| 7440-47-3 | **Chromium** | **2.18** | | mg/kg dry | 0.518 | 0.518 | 1 | EPA 6010C | 09/12/2016 10:18 | 09/13/2016 00:10 | KV |
| | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | | |
| 7440-48-4 | **Cobalt** | **3.16** | | mg/kg dry | 0.518 | 0.518 | 1 | EPA 6010C | 09/12/2016 10:18 | 09/13/2016 00:10 | KV |
| | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | | |
| 7440-50-8 | **Copper** | **17.5** | | mg/kg dry | 0.518 | 0.518 | 1 | EPA 6010C | 09/12/2016 10:18 | 09/13/2016 00:10 | KV |
| | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | | |
| 7439-89-6 | **Iron** | **8390** | | mg/kg dry | 2.07 | 2.07 | 1 | EPA 6010C | 09/12/2016 10:18 | 09/13/2016 00:10 | KV |
| | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | | |

## Sample Information

**Client Sample ID:** V01_0-1.5 **York Sample ID:** 16I0260-01

| York Project (SDG) No. | Client Project ID | Matrix | Collection Date/Time | Date Received |
|---|---|---|---|---|
| 16I0260 | 170301202 450 Union Street | Soil | September 7, 2016 1:00 pm | 09/08/2016 |

### Metals, Target Analyte

**Log-in Notes:** **Sample Notes:**

Sample Prepared by Method: EPA 3050B

| CAS No. | Parameter | Result | Flag | Units | LOD/MDL | Reported to LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 7439-92-1 | **Lead** | **23.7** | B | mg/kg dry | 0.311 | 0.311 | 1 | EPA 6010C | 09/12/2016 10:18 | 09/13/2016 00:10 | KV |
| | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | | |
| 7439-95-4 | **Magnesium** | **1770** | | mg/kg dry | 5.18 | 5.18 | 1 | EPA 6010C | 09/12/2016 10:18 | 09/13/2016 00:10 | KV |
| | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | | |
| 7439-96-5 | **Manganese** | **224** | | mg/kg dry | 0.518 | 0.518 | 1 | EPA 6010C | 09/12/2016 10:18 | 09/13/2016 00:10 | KV |
| | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | | |
| 7440-02-0 | **Nickel** | **2.83** | | mg/kg dry | 0.518 | 0.518 | 1 | EPA 6010C | 09/12/2016 10:18 | 09/13/2016 00:10 | KV |
| | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | | |
| 7440-09-7 | **Potassium** | **1970** | | mg/kg dry | 5.18 | 5.18 | 1 | EPA 6010C | 09/12/2016 10:18 | 09/13/2016 00:10 | KV |
| | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | | |
| 7782-49-2 | Selenium | ND | U | mg/kg dry | 1.04 | 1.04 | 1 | EPA 6010C | 09/12/2016 10:18 | 09/13/2016 00:10 | KV |
| | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | | |
| 7440-22-4 | Silver | ND | U | mg/kg dry | 0.518 | 0.518 | 1 | EPA 6010C | 09/12/2016 10:18 | 09/13/2016 00:10 | KV |
| | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | | |
| 7440-23-5 | **Sodium** | **122** | | mg/kg dry | 10.4 | 10.4 | 1 | EPA 6010C | 09/12/2016 10:18 | 09/13/2016 00:10 | KV |
| | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP | | | |
| 7440-28-0 | Thallium | ND | U | mg/kg dry | 1.04 | 1.04 | 1 | EPA 6010C | 09/12/2016 10:18 | 09/13/2016 00:10 | KV |
| | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | | |
| 7440-62-2 | **Vanadium** | **7.85** | | mg/kg dry | 1.04 | 1.04 | 1 | EPA 6010C | 09/12/2016 10:18 | 09/13/2016 00:10 | KV |
| | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | | |
| 7440-66-6 | **Zinc** | **75.1** | | mg/kg dry | 1.04 | 1.04 | 1 | EPA 6010C | 09/12/2016 10:18 | 09/13/2016 00:10 | KV |
| | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | | |

### Mercury by 7473

**Log-in Notes:** **Sample Notes:**

Sample Prepared by Method: EPA 7473 soil

| CAS No. | Parameter | Result | Flag | Units | LOD/MDL | Reported to LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 7439-97-6 | Mercury | ND | | mg/kg dry | 0.0311 | 0.0311 | 1 | EPA 7473 | 09/13/2016 06:21 | 09/13/2016 16:37 | ALD |
| | | | | | | | Certifications: | CTDOH,NJDEP,NELAC-NY10854,PADEP | | | |

### Total Solids

**Log-in Notes:** **Sample Notes:**

Sample Prepared by Method: % Solids Prep

| CAS No. | Parameter | Result | Flag | Units | LOD/MDL | Reported to LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|---|---|---|---|---|---|---|---|---|---|---|---|
| solids | *** % Solids** | **96.6** | | % | 0.100 | 0.100 | 1 | SM 2540G | 09/14/2016 09:17 | 09/14/2016 16:45 | LAB |
| | | | | | | | Certifications: | CTDOH | | | |

### Chromium, Hexavalent

**Log-in Notes:** **Sample Notes:**

Sample Prepared by Method: EPA SW846-3060

| CAS No. | Parameter | Result | Flag | Units | LOD/MDL | Reported to LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 18540-29-9 | Chromium, Hexavalent | ND | U | mg/kg dry | 0.362 | 0.518 | 1 | EPA 7196A | 09/09/2016 07:50 | 09/09/2016 15:13 | LAB |
| | | | | | | | Certifications: | NJDEP,CTDOH,NELAC-NY10854,PADEP | | | |

## Sample Information

**Client Sample ID:** V01_0-1.5 **York Sample ID:** 16I0260-01

| York Project (SDG) No. | Client Project ID | Matrix | Collection Date/Time | Date Received |
|---|---|---|---|---|
| 16I0260 | 170301202 450 Union Street | Soil | September 7, 2016 1:00 pm | 09/08/2016 |

### Chromium, Trivalent

**Log-in Notes:** **Sample Notes:**

Sample Prepared by Method: Analysis Preparation

| CAS No. | Parameter | Result | Flag | Units | LOD/MDL | Reported to LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 16065-83-1 | * **Chromium, Trivalent** | **2.18** | | mg/kg | 0.250 | 0.500 | 1 | Calculation | 09/15/2016 12:18 | 09/15/2016 14:24 | PAM |

Certifications:

### Cyanide, Total

**Log-in Notes:** **Sample Notes:**

Sample Prepared by Method: Analysis Preparation Soil

| CAS No. | Parameter | Result | Flag | Units | LOD/MDL | Reported to LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 57-12-5 | Cyanide, total | ND | U | mg/kg dry | 0.518 | 0.518 | 1 | EPA 9014/9010C | 09/09/2016 07:53 | 09/09/2016 13:16 | AD |

Certifications: NELAC-NY10854,CTDOH,NJDEP,PADEP

# Case Narrative

Client: Langan Engineering & Environmental Services (NYC)
Client Project ID: 170301202 450 Union Street
Prepared for: Albert Tashji

## Introduction

This Case Narrative applies only to the samples submitted to our laboratory on **9/8/2016 6:45:00 PM** as detailed on the chain-of-custody form.

The 1 sample(s) were received intact. Chain-of-custody was maintained from receipt through analysis in the laboratory.

## Methodology

All preparation and analyses were conducted according to the appropriate EPA methods detailed in the report.

## Sample and Analysis Qualifiers

**V01_0-1.5 Soil No Qualifiers**

## QC Sample Non-Conformances

Any QC sample non-conformances (CCV,LCS, DUP, MS) are detailed in the data package and in the attached tables.

No other problems were encountered during analysis.

## York Project/SDG no.: 16I0260 Statement

We certify that these data are in compliance with SOP requirements both technically and for completeness for other than the conditions stated above. Release of the data contained in the hard copy report and any electronic deliverables has been authorized by the Laboratory Manager as verified by the signature on this laboratory report.

Approved by: *Ben Gulizia*
Laboratory Director

Date: October 4, 2016

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York Analytical Laboratories, Inc.

## Formulae Used for Sample Calculations

## VOLATILE ORGANICS

**1. Volatiles in Air-ppbv**

Cx (ppbv) = Compound concentration, ppbv (parts per billion by volume)

$$Cx = \frac{(Ax)(Cis)(DF)}{(Ais)(RRF)}$$

**2. Volatiles in Air-ug/m3**

Cx (ug/m3)= Compound concentration in ug/m3

$$Cx\ (ug/m3) = \frac{(ppbv \times Molecular\ wt.)}{(24.040)}$$

**3. Volatile Organics (water and soil), ug/L or ug/kG**

**Soils/Waters**

$$Cx = \frac{(Ax)(IS)(DF)}{(Ais)(RRF)(V)(\%solids)}$$

**Medium Level Soils**

$$Cx = \frac{(Ax)(IS)(VT)(1000)(DF)}{(Ais)(RRF)(VA)(V)(\%solids)}$$

**4. Semi-Volatiles (waters and soils)**

$$Cx = \frac{(Ax)(IS)(VE)(DF)}{(Ais)(RRF)(Volume\ injected,\ uL)(V)(\%solids)}$$

**5. Pesticides/PCB (waters and soils), DRO, CTETPH**

$$Cx = \frac{(Ax)(VE)(DF)}{(CF)(Volume\ injected,\ uL)(V)(\%solids)}$$

WHERE:

Cx = concentration of analyte as ug/L or ug/kG
Ax = Area of the characteristic ion for the compound to be measured, counts.
Ais = Area of the characteristic ion for the specific internal standard, counts.
IS = Concentration of the internal standard spiking mixture, ng
RRF= Mean relative response factor from the initial calibration.
DF = Dilution factor calculated as described in section 2. If no dilution is performed, DF= 1
V= Volume for liquids in ml, weight for soils/solids in grams.
VA= volume of MeOH aliquot for medium level soils
VE= final volume of concentrated extract
VT= volume of MeOH for volatiles medium level soils
CF= calibration factor for external calibration used in GC pest/pcb
Cis = Concentration of the internal standard spiking mixture, ppbv

# Non-Conformance Data Summary

| | | | |
|---|---|---|---|
| Laboratory: | York Analytical Laboratories, Inc. | Client: | Langan Engineering & Environmental Services ( |
| Project: | 170301202 450 Union Street | Lab Project No: | 16I0260 |
| Laboratory Sample ID(s): | 16I0260-01 | Sampling Date(s): | 09/07/2016 |
| Review Date(s): | 12/30/1899 - 10/04/2016 | Laboratory Reviewer(s): | MS |

## QC Sample Nonconformances

**Batch ID:** BI60561 **Affected Samples:** **See Batch Summary** **Semi-Volatiles**

| QC Sample ID | Analyte - CAS No. | Result | Type of QC Nonconformance | %REC | %REC Limits | Bias | RPD | RPD Limit | Bias | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| BI60561-BS1 | 2,3,4,6-Tetrachlorophenol - 58-90-2 | 2.33 mg/kg we | LCS | 140 | 30-130 | High Bias | | | | |
| BI60561-BS1 | Phenol - 108-95-2 | 0.0497 mg/kg | LCS | 2.98 | 15-123 | Low Bias | | | | |
| BI60561-BS1 | Pyridine - 110-86-1 | 0.123 mg/kg w | LCS | 7.38 | 10-92 | Low Bias | | | | |
| BI60561-BSD1 | 2,3,4,6-Tetrachlorophenol - 58-90-2 | 2.84 mg/kg we | LCS Dup | 171 | 30-130 | High Bias | 19.9 | 30 | | |
| BI60561-BSD1 | 4-Nitroaniline - 100-01-6 | 1.22 mg/kg we | LCS Dup | 73.1 | 14-125 | | 200 | 30 | Non-dir. | |
| BI60561-BSD1 | Acetophenone - 98-86-2 | 0.0277 mg/kg | LCS Dup | 1.66 | 28-105 | Low Bias | 200 | 30 | Non-dir. | |
| BI60561-BSD1 | Benzoic acid - 65-85-0 | 0.0240 mg/kg | LCS Dup | 1.44 | 10-116 | Low Bias | 200 | 30 | Non-dir. | |
| BI60561-BSD1 | Caprolactam - 105-60-2 | 0.266 mg/kg w | LCS Dup | 16.0 | 10-123 | | 38.7 | 30 | Non-dir. | |
| BI60561-BSD1 | Dibenzofuran - 132-64-9 | 1.19 mg/kg we | LCS Dup | 71.4 | 23-123 | | 200 | 30 | Non-dir. | |
| BI60561-BSD1 | Hexachlorocyclopentadiene - 77-47-4 | 0.637 mg/kg w | LCS Dup | 38.2 | 10-134 | | 43.4 | 30 | Non-dir. | |
| BI60561-BSD1 | N-Nitrosodimethylamine - 62-75-9 | 0.765 mg/kg w | LCS Dup | 45.9 | 10-124 | | 32.2 | 30 | Non-dir. | |
| BI60561-BSD1 | Pyridine - 110-86-1 | 0.369 mg/kg w | LCS Dup | 22.1 | 10-92 | | 100 | 30 | Non-dir. | |

**Batch ID:** BI60400 **Affected Samples:** **See Batch Summary** **Metals**

| QC Sample ID | Analyte - CAS No. | Result | Type of QC Nonconformance | %REC | %REC Limits | Bias | RPD | RPD Limit | Bias | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| BI60400-SRM1 | Thallium - 7440-28-0 | 173 mg/kg wet | Reference | 66.8 | 69.5-130.5 | Low Bias | | | | |

**Batch ID:** Y6I1304 **Affected Samples:** **See Batch Summary**

| QC Sample ID | Analyte - CAS No. | Result | Type of QC Nonconformance | %REC | %REC Limits | Bias | RPD | RPD Limit | Bias | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| Y6I1304-CRL1 | Antimony - 7440-36-0 | 0.015 ug/mL | Instrument RL Check | 147 | 70-130 | High Bias | | | | |
| Y6I1304-CRL1 | Nickel - 7440-02-0 | 0.003 ug/mL | Instrument RL Check | 56.2 | 70-130 | Low Bias | | | | |
| Y6I1304-CRL1 | Thallium - 7440-28-0 | 0.003 ug/mL | Instrument RL Check | 34.3 | 70-130 | Low Bias | | | | |
| Y6I1304-CRL1 | Zinc - 7440-66-6 | 0.0001 ug/mL | Instrument RL Check | 2.77 | 70-130 | Low Bias | | | | |
| Y6I1304-CRL2 | Sodium - 7440-23-5 | 0.082 ug/mL | Instrument RL Check | 41.2 | 70-130 | Low Bias | | | | |

# Analytical Batch Summary

**Batch ID:** BI60315 **Preparation Method:** Analysis Preparation Soil **Prepared By:** AD

| YORK Sample ID | Client Sample ID | Preparation Date |
|---|---|---|
| 16I0260-01 | V01_0-1.5 | 09/09/16 |
| BI60315-BLK1 | Blank | 09/09/16 |
| BI60315-SRM1 | Reference | 09/09/16 |

**Batch ID:** BI60331 **Preparation Method:** EPA SW846-3060 **Prepared By:** LAB

| YORK Sample ID | Client Sample ID | Preparation Date |
|---|---|---|
| 16I0260-01 | V01_0-1.5 | 09/09/16 |
| BI60331-BLK1 | Blank | 09/09/16 |
| BI60331-SRM1 | Reference | 09/09/16 |

**Batch ID:** BI60374 **Preparation Method:** EPA 3550C **Prepared By:** TB

| YORK Sample ID | Client Sample ID | Preparation Date |
|---|---|---|
| 16I0260-01 | V01_0-1.5 | 09/12/16 |
| 16I0260-01 | V01_0-1.5 | 09/12/16 |
| BI60374-BLK1 | Blank | 09/12/16 |
| BI60374-BLK2 | Blank | 09/12/16 |
| BI60374-BS1 | LCS | 09/12/16 |
| BI60374-BS2 | LCS | 09/12/16 |

**Batch ID:** BI60400 **Preparation Method:** EPA 3050B **Prepared By:** ALD

| YORK Sample ID | Client Sample ID | Preparation Date |
|---|---|---|
| 16I0260-01 | V01_0-1.5 | 09/12/16 |
| BI60400-BLK1 | Blank | 09/12/16 |
| BI60400-SRM1 | Reference | 09/12/16 |

**Batch ID:** BI60438 **Preparation Method:** EPA 7473 soil **Prepared By:** ALD

| YORK Sample ID | Client Sample ID | Preparation Date |
|---|---|---|
| 16I0260-01 | V01_0-1.5 | 09/13/16 |
| BI60438-BLK1 | Blank | 09/13/16 |
| BI60438-SRM1 | Reference | 09/13/16 |

**Batch ID:** BI60441 **Preparation Method:** EPA 3550B/8151A **Prepared By:** CM

| YORK Sample ID | Client Sample ID | Preparation Date |
|---|---|---|
| 16I0260-01 | V01_0-1.5 | 09/13/16 |
| BI60441-BLK1 | Blank | 09/13/16 |
| BI60441-BS1 | LCS | 09/13/16 |
| BI60441-BSD1 | LCS Dup | 09/13/16 |

| | | |
|---|---|---|
| BI60441-MS1 | Matrix Spike | 09/13/16 |

**Batch ID:** BI60530 **Preparation Method:** EPA 5035A **Prepared By:** OW

| YORK Sample ID | Client Sample ID | Preparation Date |
|---|---|---|
| 16I0260-01 | V01_0-1.5 | 09/14/16 |
| BI60530-BLK1 | Blank | 09/14/16 |
| BI60530-BLK2 | Blank | 09/14/16 |
| BI60530-BS1 | LCS | 09/14/16 |
| BI60530-BSD1 | LCS Dup | 09/14/16 |

**Batch ID:** BI60541 **Preparation Method:** % Solids Prep **Prepared By:** LAB

| YORK Sample ID | Client Sample ID | Preparation Date |
|---|---|---|
| 16I0260-01 | V01_0-1.5 | 09/14/16 |

**Batch ID:** BI60561 **Preparation Method:** EPA 3550C **Prepared By:** MRW

| YORK Sample ID | Client Sample ID | Preparation Date |
|---|---|---|
| 16I0260-01 | V01_0-1.5 | 09/14/16 |
| BI60561-BLK1 | Blank | 09/14/16 |
| BI60561-BS1 | LCS | 09/14/16 |
| BI60561-BSD1 | LCS Dup | 09/14/16 |

**Batch ID:** BI60647 **Preparation Method:** Analysis Preparation **Prepared By:** PAM

| YORK Sample ID | Client Sample ID | Preparation Date |
|---|---|---|
| 16I0260-01 | V01_0-1.5 | 09/15/16 |

## Volatile Organic Compounds by GC/MS - Quality Control Data

## York Analytical Laboratories, Inc.

| Analyte | Result | Reporting Limit | Units | Spike Level | Source* Result | %REC | %REC Limits | Flag | RPD | RPD Limit | Flag |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Batch BI60530 - EPA 5035A** | | | | | | | | | | | |
| **Blank (BI60530-BLK1)** | | | | | | | | | Prepared & Analyzed: 09/14/2016 | | |
| 1,1,1,2-Tetrachloroethane | ND | 0.0050 | mg/kg wet | | | | | | | | |
| 1,1,1-Trichloroethane | ND | 0.0050 | " | | | | | | | | |
| 1,1,2,2-Tetrachloroethane | ND | 0.0050 | " | | | | | | | | |
| 1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113) | ND | 0.0050 | " | | | | | | | | |
| 1,1,2-Trichloroethane | ND | 0.0050 | " | | | | | | | | |
| 1,1-Dichloroethane | ND | 0.0050 | " | | | | | | | | |
| 1,1-Dichloroethylene | ND | 0.0050 | " | | | | | | | | |
| 1,2,3-Trichlorobenzene | ND | 0.0050 | " | | | | | | | | |
| 1,2,4-Trichlorobenzene | ND | 0.0050 | " | | | | | | | | |
| 1,2,4-Trimethylbenzene | ND | 0.0050 | " | | | | | | | | |
| 1,2-Dibromo-3-chloropropane | ND | 0.0050 | " | | | | | | | | |
| 1,2-Dibromoethane | ND | 0.0050 | " | | | | | | | | |
| 1,2-Dichlorobenzene | ND | 0.0050 | " | | | | | | | | |
| 1,2-Dichloroethane | ND | 0.0050 | " | | | | | | | | |
| 1,2-Dichloropropane | ND | 0.0050 | " | | | | | | | | |
| 1,3,5-Trimethylbenzene | ND | 0.0050 | " | | | | | | | | |
| 1,3-Dichlorobenzene | ND | 0.0050 | " | | | | | | | | |
| 1,4-Dichlorobenzene | ND | 0.0050 | " | | | | | | | | |
| 1,4-Dioxane | ND | 0.10 | " | | | | | | | | |
| 2-Butanone | ND | 0.0050 | " | | | | | | | | |
| 2-Hexanone | ND | 0.0050 | " | | | | | | | | |
| 4-Methyl-2-pentanone | ND | 0.0050 | " | | | | | | | | |
| Acetone | ND | 0.010 | " | | | | | | | | |
| Acrolein | ND | 0.010 | " | | | | | | | | |
| Acrylonitrile | ND | 0.0050 | " | | | | | | | | |
| Benzene | ND | 0.0050 | " | | | | | | | | |
| Bromochloromethane | ND | 0.0050 | " | | | | | | | | |
| Bromodichloromethane | ND | 0.0050 | " | | | | | | | | |
| Bromoform | ND | 0.0050 | " | | | | | | | | |
| Bromomethane | ND | 0.0050 | " | | | | | | | | |
| Carbon disulfide | ND | 0.0050 | " | | | | | | | | |
| Carbon tetrachloride | ND | 0.0050 | " | | | | | | | | |
| Chlorobenzene | ND | 0.0050 | " | | | | | | | | |
| Chloroethane | ND | 0.0050 | " | | | | | | | | |
| Chloroform | ND | 0.0050 | " | | | | | | | | |
| Chloromethane | ND | 0.0050 | " | | | | | | | | |
| cis-1,2-Dichloroethylene | ND | 0.0050 | " | | | | | | | | |
| cis-1,3-Dichloropropylene | ND | 0.0050 | " | | | | | | | | |
| Cyclohexane | ND | 0.0050 | " | | | | | | | | |
| Dibromochloromethane | ND | 0.0050 | " | | | | | | | | |
| Dibromomethane | ND | 0.0050 | " | | | | | | | | |
| Dichlorodifluoromethane | ND | 0.0050 | " | | | | | | | | |
| Ethyl Benzene | ND | 0.0050 | " | | | | | | | | |
| Hexachlorobutadiene | ND | 0.0050 | " | | | | | | | | |
| Isopropylbenzene | ND | 0.0050 | " | | | | | | | | |
| Methyl acetate | ND | 0.0050 | " | | | | | | | | |
| Methyl tert-butyl ether (MTBE) | ND | 0.0050 | " | | | | | | | | |
| Methylcyclohexane | ND | 0.0050 | " | | | | | | | | |
| Methylene chloride | ND | 0.010 | " | | | | | | | | |
| n-Butylbenzene | ND | 0.0050 | " | | | | | | | | |

## Volatile Organic Compounds by GC/MS - Quality Control Data

## York Analytical Laboratories, Inc.

| Analyte | Result | Reporting Limit | Units | Spike Level | Source* Result | %REC | %REC Limits | Flag | RPD | RPD Limit | Flag |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Batch BI60530 - EPA 5035A** | | | | | | | | | | | |
| **Blank (BI60530-BLK1)** | | | | | | | | Prepared & Analyzed: 09/14/2016 | | | |
| n-Propylbenzene | ND | 0.0050 | mg/kg wet | | | | | | | | |
| o-Xylene | ND | 0.0050 | " | | | | | | | | |
| p- & m- Xylenes | ND | 0.010 | " | | | | | | | | |
| p-Isopropyltoluene | ND | 0.0050 | " | | | | | | | | |
| sec-Butylbenzene | ND | 0.0050 | " | | | | | | | | |
| Styrene | ND | 0.0050 | " | | | | | | | | |
| tert-Butyl alcohol (TBA) | ND | 0.0050 | " | | | | | | | | |
| tert-Butylbenzene | ND | 0.0050 | " | | | | | | | | |
| Tetrachloroethylene | ND | 0.0050 | " | | | | | | | | |
| Toluene | ND | 0.0050 | " | | | | | | | | |
| trans-1,2-Dichloroethylene | ND | 0.0050 | " | | | | | | | | |
| trans-1,3-Dichloropropylene | ND | 0.0050 | " | | | | | | | | |
| Trichloroethylene | ND | 0.0050 | " | | | | | | | | |
| Trichlorofluoromethane | ND | 0.0050 | " | | | | | | | | |
| Vinyl Chloride | ND | 0.0050 | " | | | | | | | | |
| Xylenes, Total | ND | 0.015 | " | | | | | | | | |
| *Surrogate: 1,2-Dichloroethane-d4* | *46.8* | | *ug/L* | *50.0* | | *93.7* | *77-125* | | | | |
| *Surrogate: Toluene-d8* | *48.9* | | *"* | *50.0* | | *97.7* | *85-120* | | | | |
| *Surrogate: p-Bromofluorobenzene* | *50.6* | | *"* | *50.0* | | *101* | *76-130* | | | | |
| **Blank (BI60530-BLK2)** | | | | | | | | Prepared & Analyzed: 09/14/2016 | | | |
| 1,1,1,2-Tetrachloroethane | ND | 0.0050 | mg/kg wet | | | | | | | | |
| 1,1,1-Trichloroethane | ND | 0.0050 | " | | | | | | | | |
| 1,1,2,2-Tetrachloroethane | ND | 0.0050 | " | | | | | | | | |
| 1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113) | ND | 0.0050 | " | | | | | | | | |
| 1,1,2-Trichloroethane | ND | 0.0050 | " | | | | | | | | |
| 1,1-Dichloroethane | ND | 0.0050 | " | | | | | | | | |
| 1,1-Dichloroethylene | ND | 0.0050 | " | | | | | | | | |
| 1,2,3-Trichlorobenzene | ND | 0.0050 | " | | | | | | | | |
| 1,2,4-Trichlorobenzene | ND | 0.0050 | " | | | | | | | | |
| 1,2,4-Trimethylbenzene | ND | 0.0050 | " | | | | | | | | |
| 1,2-Dibromo-3-chloropropane | ND | 0.0050 | " | | | | | | | | |
| 1,2-Dibromoethane | ND | 0.0050 | " | | | | | | | | |
| 1,2-Dichlorobenzene | ND | 0.0050 | " | | | | | | | | |
| 1,2-Dichloroethane | ND | 0.0050 | " | | | | | | | | |
| 1,2-Dichloropropane | ND | 0.0050 | " | | | | | | | | |
| 1,3,5-Trimethylbenzene | ND | 0.0050 | " | | | | | | | | |
| 1,3-Dichlorobenzene | ND | 0.0050 | " | | | | | | | | |
| 1,4-Dichlorobenzene | ND | 0.0050 | " | | | | | | | | |
| 1,4-Dioxane | ND | 0.10 | " | | | | | | | | |
| 2-Butanone | ND | 0.0050 | " | | | | | | | | |
| 2-Hexanone | ND | 0.0050 | " | | | | | | | | |
| 4-Methyl-2-pentanone | ND | 0.0050 | " | | | | | | | | |
| Acetone | ND | 0.010 | " | | | | | | | | |
| Acrolein | ND | 0.010 | " | | | | | | | | |
| Acrylonitrile | ND | 0.0050 | " | | | | | | | | |
| Benzene | ND | 0.0050 | " | | | | | | | | |
| Bromochloromethane | ND | 0.0050 | " | | | | | | | | |
| Bromodichloromethane | ND | 0.0050 | " | | | | | | | | |
| Bromoform | ND | 0.0050 | " | | | | | | | | |
| Bromomethane | ND | 0.0050 | " | | | | | | | | |
| Carbon disulfide | ND | 0.0050 | " | | | | | | | | |

## Volatile Organic Compounds by GC/MS - Quality Control Data

## York Analytical Laboratories, Inc.

| Analyte | Result | Reporting Limit | Units | Spike Level | Source* Result | %REC | %REC Limits | Flag | RPD | RPD Limit | Flag |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Batch BI60530 - EPA 5035A** | | | | | | | | | | | |
| **Blank (BI60530-BLK2)** | | | | | | | | | | | |
| Prepared & Analyzed: 09/14/2016 | | | | | | | | | | | |
| Carbon tetrachloride | ND | 0.0050 | mg/kg wet | | | | | | | | |
| Chlorobenzene | ND | 0.0050 | " | | | | | | | | |
| Chloroethane | ND | 0.0050 | " | | | | | | | | |
| Chloroform | ND | 0.0050 | " | | | | | | | | |
| Chloromethane | ND | 0.0050 | " | | | | | | | | |
| cis-1,2-Dichloroethylene | ND | 0.0050 | " | | | | | | | | |
| cis-1,3-Dichloropropylene | ND | 0.0050 | " | | | | | | | | |
| Cyclohexane | ND | 0.0050 | " | | | | | | | | |
| Dibromochloromethane | ND | 0.0050 | " | | | | | | | | |
| Dibromomethane | ND | 0.0050 | " | | | | | | | | |
| Dichlorodifluoromethane | ND | 0.0050 | " | | | | | | | | |
| Ethyl Benzene | ND | 0.0050 | " | | | | | | | | |
| Hexachlorobutadiene | ND | 0.0050 | " | | | | | | | | |
| Isopropylbenzene | ND | 0.0050 | " | | | | | | | | |
| Methyl acetate | ND | 0.0050 | " | | | | | | | | |
| Methyl tert-butyl ether (MTBE) | ND | 0.0050 | " | | | | | | | | |
| Methylcyclohexane | ND | 0.0050 | " | | | | | | | | |
| Methylene chloride | ND | 0.010 | " | | | | | | | | |
| n-Butylbenzene | ND | 0.0050 | " | | | | | | | | |
| n-Propylbenzene | ND | 0.0050 | " | | | | | | | | |
| o-Xylene | ND | 0.0050 | " | | | | | | | | |
| p- & m- Xylenes | ND | 0.010 | " | | | | | | | | |
| p-Isopropyltoluene | ND | 0.0050 | " | | | | | | | | |
| sec-Butylbenzene | ND | 0.0050 | " | | | | | | | | |
| Styrene | ND | 0.0050 | " | | | | | | | | |
| tert-Butyl alcohol (TBA) | ND | 0.0050 | " | | | | | | | | |
| tert-Butylbenzene | ND | 0.0050 | " | | | | | | | | |
| Tetrachloroethylene | ND | 0.0050 | " | | | | | | | | |
| Toluene | ND | 0.0050 | " | | | | | | | | |
| trans-1,2-Dichloroethylene | ND | 0.0050 | " | | | | | | | | |
| trans-1,3-Dichloropropylene | ND | 0.0050 | " | | | | | | | | |
| Trichloroethylene | ND | 0.0050 | " | | | | | | | | |
| Trichlorofluoromethane | ND | 0.0050 | " | | | | | | | | |
| Vinyl Chloride | ND | 0.0050 | " | | | | | | | | |
| Xylenes, Total | ND | 0.015 | " | | | | | | | | |
| *Surrogate: 1,2-Dichloroethane-d4* | *46.5* | | *ug/L* | *50.0* | | *92.9* | *77-125* | | | | |
| *Surrogate: Toluene-d8* | *46.8* | | *"* | *50.0* | | *93.6* | *85-120* | | | | |
| *Surrogate: p-Bromofluorobenzene* | *51.3* | | *"* | *50.0* | | *103* | *76-130* | | | | |

## Volatile Organic Compounds by GC/MS - Quality Control Data

## York Analytical Laboratories, Inc.

| Analyte | Result | Reporting Limit | Units | Spike Level | Source* Result | %REC | %REC Limits | Flag | RPD | RPD Limit | Flag |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Batch BI60530 - EPA 5035A** | | | | | | | | | | | |
| **LCS (BI60530-BS1)** | | | | | | | | Prepared & Analyzed: 09/14/2016 | | | |
| 1,1,1,2-Tetrachloroethane | 51 | | ug/L | 50.0 | | 103 | 75-129 | | | | |
| 1,1,1-Trichloroethane | 58 | | " | 50.0 | | 117 | 71-137 | | | | |
| 1,1,2,2-Tetrachloroethane | 53 | | " | 50.0 | | 107 | 79-129 | | | | |
| 1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113) | 53 | | " | 50.0 | | 105 | 58-146 | | | | |
| 1,1,2-Trichloroethane | 57 | | " | 50.0 | | 113 | 83-123 | | | | |
| 1,1-Dichloroethane | 60 | | " | 50.0 | | 121 | 75-130 | | | | |
| 1,1-Dichloroethylene | 53 | | " | 50.0 | | 106 | 64-137 | | | | |
| 1,2,3-Trichlorobenzene | 56 | | " | 50.0 | | 113 | 81-140 | | | | |
| 1,2,4-Trichlorobenzene | 54 | | " | 50.0 | | 108 | 80-141 | | | | |
| 1,2,4-Trimethylbenzene | 56 | | " | 50.0 | | 112 | 84-125 | | | | |
| 1,2-Dibromo-3-chloropropane | 47 | | " | 50.0 | | 94.3 | 74-142 | | | | |
| 1,2-Dibromoethane | 55 | | " | 50.0 | | 110 | 86-123 | | | | |
| 1,2-Dichlorobenzene | 51 | | " | 50.0 | | 103 | 85-122 | | | | |
| 1,2-Dichloroethane | 53 | | " | 50.0 | | 106 | 71-133 | | | | |
| 1,2-Dichloropropane | 58 | | " | 50.0 | | 116 | 81-122 | | | | |
| 1,3,5-Trimethylbenzene | 56 | | " | 50.0 | | 111 | 82-126 | | | | |
| 1,3-Dichlorobenzene | 51 | | " | 50.0 | | 103 | 84-124 | | | | |
| 1,4-Dichlorobenzene | 51 | | " | 50.0 | | 102 | 84-124 | | | | |
| 1,4-Dioxane | 950 | | " | 1000 | | 94.5 | 10-228 | | | | |
| 2-Butanone | 52 | | " | 50.0 | | 105 | 58-147 | | | | |
| 2-Hexanone | 50 | | " | 50.0 | | 99.4 | 70-139 | | | | |
| 4-Methyl-2-pentanone | 49 | | " | 50.0 | | 98.6 | 72-132 | | | | |
| Acetone | 48 | | " | 50.0 | | 96.9 | 36-155 | | | | |
| Acrolein | 58 | | " | 50.0 | | 115 | 10-238 | | | | |
| Acrylonitrile | 53 | | " | 50.0 | | 106 | 66-141 | | | | |
| Benzene | 62 | | " | 50.0 | | 123 | 77-127 | | | | |
| Bromochloromethane | 58 | | " | 50.0 | | 117 | 74-129 | | | | |
| Bromodichloromethane | 57 | | " | 50.0 | | 114 | 81-124 | | | | |
| Bromoform | 57 | | " | 50.0 | | 114 | 80-136 | | | | |
| Bromomethane | 52 | | " | 50.0 | | 105 | 32-177 | | | | |
| Carbon disulfide | 60 | | " | 50.0 | | 119 | 10-136 | | | | |
| Carbon tetrachloride | 57 | | " | 50.0 | | 115 | 66-143 | | | | |
| Chlorobenzene | 55 | | " | 50.0 | | 110 | 86-120 | | | | |
| Chloroethane | 53 | | " | 50.0 | | 105 | 51-142 | | | | |
| Chloroform | 60 | | " | 50.0 | | 119 | 76-131 | | | | |
| Chloromethane | 61 | | " | 50.0 | | 122 | 49-132 | | | | |
| cis-1,2-Dichloroethylene | 59 | | " | 50.0 | | 119 | 74-132 | | | | |
| cis-1,3-Dichloropropylene | 57 | | " | 50.0 | | 114 | 81-129 | | | | |
| Cyclohexane | 62 | | " | 50.0 | | 125 | 70-130 | | | | |
| Dibromochloromethane | 52 | | " | 50.0 | | 104 | 10-200 | | | | |
| Dibromomethane | 55 | | " | 50.0 | | 110 | 83-124 | | | | |
| Dichlorodifluoromethane | 47 | | " | 50.0 | | 94.4 | 28-158 | | | | |
| Ethyl Benzene | 55 | | " | 50.0 | | 110 | 84-125 | | | | |
| Hexachlorobutadiene | 54 | | " | 50.0 | | 108 | 83-133 | | | | |
| Isopropylbenzene | 53 | | " | 50.0 | | 106 | 81-127 | | | | |
| Methyl acetate | 50 | | " | 50.0 | | 100 | 41-143 | | | | |
| Methyl tert-butyl ether (MTBE) | 48 | | " | 50.0 | | 95.7 | 74-131 | | | | |
| Methylcyclohexane | 60 | | " | 50.0 | | 120 | 70-130 | | | | |
| Methylene chloride | 51 | | " | 50.0 | | 101 | 57-141 | | | | |
| n-Butylbenzene | 56 | | " | 50.0 | | 112 | 80-130 | | | | |
| n-Propylbenzene | 54 | | " | 50.0 | | 108 | 74-136 | | | | |

## Volatile Organic Compounds by GC/MS - Quality Control Data

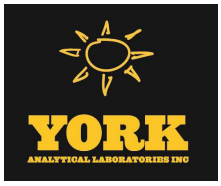
## York Analytical Laboratories, Inc.

| Analyte | Result | Reporting Limit | Units | Spike Level | Source* Result | %REC | %REC Limits | Flag | RPD | RPD Limit | Flag |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Batch BI60530 - EPA 5035A** | | | | | | | | | | | |
| **LCS (BI60530-BS1)** | | | | | | | Prepared & Analyzed: 09/14/2016 | | | | |
| o-Xylene | 55 | | ug/L | 50.0 | | 110 | 83-123 | | | | |
| p- & m- Xylenes | 110 | | " | 100 | | 111 | 82-128 | | | | |
| p-Isopropyltoluene | 55 | | " | 50.0 | | 110 | 85-125 | | | | |
| sec-Butylbenzene | 51 | | " | 50.0 | | 102 | 83-125 | | | | |
| Styrene | 61 | | " | 50.0 | | 122 | 86-126 | | | | |
| tert-Butyl alcohol (TBA) | 46 | | " | 50.0 | | 91.8 | 70-130 | | | | |
| tert-Butylbenzene | 50 | | " | 50.0 | | 99.3 | 80-127 | | | | |
| Tetrachloroethylene | 55 | | " | 50.0 | | 110 | 80-129 | | | | |
| Toluene | 58 | | " | 50.0 | | 116 | 85-121 | | | | |
| trans-1,2-Dichloroethylene | 48 | | " | 50.0 | | 95.4 | 72-132 | | | | |
| trans-1,3-Dichloropropylene | 54 | | " | 50.0 | | 109 | 78-132 | | | | |
| Trichloroethylene | 56 | | " | 50.0 | | 112 | 84-123 | | | | |
| Trichlorofluoromethane | 47 | | " | 50.0 | | 94.7 | 62-140 | | | | |
| Vinyl Chloride | 49 | | " | 50.0 | | 98.1 | 52-130 | | | | |
| *Surrogate: 1,2-Dichloroethane-d4* | *45.2* | | *"* | *50.0* | | *90.5* | *77-125* | | | | |
| *Surrogate: Toluene-d8* | *51.6* | | *"* | *50.0* | | *103* | *85-120* | | | | |
| *Surrogate: p-Bromofluorobenzene* | *52.2* | | *"* | *50.0* | | *104* | *76-130* | | | | |
| **LCS Dup (BI60530-BSD1)** | | | | | | | Prepared & Analyzed: 09/14/2016 | | | | |
| 1,1,1,2-Tetrachloroethane | 54 | | ug/L | 50.0 | | 109 | 75-129 | | 5.66 | 30 | |
| 1,1,1-Trichloroethane | 58 | | " | 50.0 | | 116 | 71-137 | | 0.533 | 30 | |
| 1,1,2,2-Tetrachloroethane | 52 | | " | 50.0 | | 104 | 79-129 | | 2.20 | 30 | |
| 1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113) | 53 | | " | 50.0 | | 107 | 58-146 | | 1.44 | 30 | |
| 1,1,2-Trichloroethane | 57 | | " | 50.0 | | 114 | 83-123 | | 0.737 | 30 | |
| 1,1-Dichloroethane | 60 | | " | 50.0 | | 120 | 75-130 | | 0.482 | 30 | |
| 1,1-Dichloroethylene | 54 | | " | 50.0 | | 108 | 64-137 | | 1.70 | 30 | |
| 1,2,3-Trichlorobenzene | 59 | | " | 50.0 | | 117 | 81-140 | | 3.96 | 30 | |
| 1,2,4-Trichlorobenzene | 55 | | " | 50.0 | | 110 | 80-141 | | 2.53 | 30 | |
| 1,2,4-Trimethylbenzene | 58 | | " | 50.0 | | 115 | 84-125 | | 2.89 | 30 | |
| 1,2-Dibromo-3-chloropropane | 49 | | " | 50.0 | | 98.5 | 74-142 | | 4.32 | 30 | |
| 1,2-Dibromoethane | 53 | | " | 50.0 | | 106 | 86-123 | | 3.53 | 30 | |
| 1,2-Dichlorobenzene | 54 | | " | 50.0 | | 108 | 85-122 | | 4.60 | 30 | |
| 1,2-Dichloroethane | 54 | | " | 50.0 | | 108 | 71-133 | | 1.59 | 30 | |
| 1,2-Dichloropropane | 57 | | " | 50.0 | | 114 | 81-122 | | 1.61 | 30 | |
| 1,3,5-Trimethylbenzene | 55 | | " | 50.0 | | 110 | 82-126 | | 0.830 | 30 | |
| 1,3-Dichlorobenzene | 53 | | " | 50.0 | | 106 | 84-124 | | 2.92 | 30 | |
| 1,4-Dichlorobenzene | 52 | | " | 50.0 | | 104 | 84-124 | | 1.13 | 30 | |
| 1,4-Dioxane | 880 | | " | 1000 | | 87.6 | 10-228 | | 7.54 | 30 | |
| 2-Butanone | 53 | | " | 50.0 | | 106 | 58-147 | | 1.36 | 30 | |
| 2-Hexanone | 50 | | " | 50.0 | | 99.9 | 70-139 | | 0.542 | 30 | |
| 4-Methyl-2-pentanone | 49 | | " | 50.0 | | 97.9 | 72-132 | | 0.712 | 30 | |
| Acetone | 48 | | " | 50.0 | | 96.2 | 36-155 | | 0.705 | 30 | |
| Acrolein | 53 | | " | 50.0 | | 107 | 10-238 | | 7.57 | 30 | |
| Acrylonitrile | 49 | | " | 50.0 | | 97.4 | 66-141 | | 8.72 | 30 | |
| Benzene | 62 | | " | 50.0 | | 124 | 77-127 | | 1.02 | 30 | |
| Bromochloromethane | 59 | | " | 50.0 | | 118 | 74-129 | | 1.04 | 30 | |
| Bromodichloromethane | 58 | | " | 50.0 | | 117 | 81-124 | | 2.46 | 30 | |
| Bromoform | 58 | | " | 50.0 | | 115 | 80-136 | | 1.68 | 30 | |
| Bromomethane | 52 | | " | 50.0 | | 104 | 32-177 | | 0.632 | 30 | |
| Carbon disulfide | 59 | | " | 50.0 | | 118 | 10-136 | | 0.573 | 30 | |
| Carbon tetrachloride | 57 | | " | 50.0 | | 113 | 66-143 | | 1.00 | 30 | |
| Chlorobenzene | 55 | | " | 50.0 | | 110 | 86-120 | | 0.00 | 30 | |

## Volatile Organic Compounds by GC/MS - Quality Control Data

## York Analytical Laboratories, Inc.

| Analyte | Result | Reporting Limit | Units | Spike Level | Source* Result | %REC | %REC Limits | Flag | RPD | RPD Limit | Flag |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Batch BI60530 - EPA 5035A** | | | | | | | | | | | |
| **LCS Dup (BI60530-BSD1)** | | | | | | | Prepared & Analyzed: 09/14/2016 | | | | |
| Chloroethane | 52 | | ug/L | 50.0 | | 104 | 51-142 | | 1.11 | 30 | |
| Chloroform | 59 | | " | 50.0 | | 118 | 76-131 | | 0.993 | 30 | |
| Chloromethane | 60 | | " | 50.0 | | 119 | 49-132 | | 2.83 | 30 | |
| cis-1,2-Dichloroethylene | 61 | | " | 50.0 | | 122 | 74-132 | | 2.51 | 30 | |
| cis-1,3-Dichloropropylene | 58 | | " | 50.0 | | 115 | 81-129 | | 1.05 | 30 | |
| Cyclohexane | 63 | | " | 50.0 | | 125 | 70-130 | | 0.288 | 30 | |
| Dibromochloromethane | 55 | | " | 50.0 | | 109 | 10-200 | | 4.36 | 30 | |
| Dibromomethane | 54 | | " | 50.0 | | 109 | 83-124 | | 1.19 | 30 | |
| Dichlorodifluoromethane | 48 | | " | 50.0 | | 96.8 | 28-158 | | 2.47 | 30 | |
| Ethyl Benzene | 61 | | " | 50.0 | | 121 | 84-125 | | 9.24 | 30 | |
| Hexachlorobutadiene | 58 | | " | 50.0 | | 116 | 83-133 | | 6.78 | 30 | |
| Isopropylbenzene | 55 | | " | 50.0 | | 110 | 81-127 | | 3.34 | 30 | |
| Methyl acetate | 63 | | " | 50.0 | | 127 | 41-143 | | 23.0 | 30 | |
| Methyl tert-butyl ether (MTBE) | 56 | | " | 50.0 | | 113 | 74-131 | | 16.6 | 30 | |
| Methylcyclohexane | 58 | | " | 50.0 | | 116 | 70-130 | | 2.80 | 30 | |
| Methylene chloride | 49 | | " | 50.0 | | 98.6 | 57-141 | | 2.52 | 30 | |
| n-Butylbenzene | 59 | | " | 50.0 | | 118 | 80-130 | | 4.68 | 30 | |
| n-Propylbenzene | 55 | | " | 50.0 | | 109 | 74-136 | | 0.716 | 30 | |
| o-Xylene | 55 | | " | 50.0 | | 111 | 83-123 | | 0.725 | 30 | |
| p- & m- Xylenes | 120 | | " | 100 | | 118 | 82-128 | | 6.16 | 30 | |
| p-Isopropyltoluene | 56 | | " | 50.0 | | 112 | 85-125 | | 2.38 | 30 | |
| sec-Butylbenzene | 53 | | " | 50.0 | | 105 | 83-125 | | 2.85 | 30 | |
| Styrene | 62 | | " | 50.0 | | 123 | 86-126 | | 0.537 | 30 | |
| tert-Butyl alcohol (TBA) | 45 | | " | 50.0 | | 90.0 | 70-130 | | 1.91 | 30 | |
| tert-Butylbenzene | 50 | | " | 50.0 | | 100 | 80-127 | | 1.08 | 30 | |
| Tetrachloroethylene | 58 | | " | 50.0 | | 117 | 80-129 | | 5.81 | 30 | |
| Toluene | 58 | | " | 50.0 | | 117 | 85-121 | | 0.790 | 30 | |
| trans-1,2-Dichloroethylene | 60 | | " | 50.0 | | 120 | 72-132 | | 22.7 | 30 | |
| trans-1,3-Dichloropropylene | 57 | | " | 50.0 | | 114 | 78-132 | | 4.87 | 30 | |
| Trichloroethylene | 56 | | " | 50.0 | | 111 | 84-123 | | 0.305 | 30 | |
| Trichlorofluoromethane | 48 | | " | 50.0 | | 95.8 | 62-140 | | 1.15 | 30 | |
| Vinyl Chloride | 49 | | " | 50.0 | | 98.8 | 52-130 | | 0.711 | 30 | |
| *Surrogate: 1,2-Dichloroethane-d4* | *45.5* | | *"* | *50.0* | | *91.0* | *77-125* | | | | |
| *Surrogate: Toluene-d8* | *53.8* | | *"* | *50.0* | | *108* | *85-120* | | | | |
| *Surrogate: p-Bromofluorobenzene* | *50.8* | | *"* | *50.0* | | *102* | *76-130* | | | | |




## Semivolatile Organic Compounds by GC/MS - Quality Control Data

## York Analytical Laboratories, Inc.

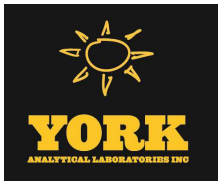
| Analyte | Result | Reporting Limit | Units | Spike Level | Source* Result | %REC | %REC Limits | Flag | RPD | RPD Limit | Flag |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Batch BI60561 - EPA 3550C** | | | | | | | | | | | |
| **Blank (BI60561-BLK1)** | | | | | | | | | | | |
| 1,1'-Biphenyl | ND | 0.0417 | mg/kg wet | | | | | | | | |
| 1,2,4,5-Tetrachlorobenzene | ND | 0.0833 | " | | | | | | | | |
| 1,2,4-Trichlorobenzene | ND | 0.0417 | " | | | | | | | | |
| 1,2-Dichlorobenzene | ND | 0.0417 | " | | | | | | | | |
| 1,2-Diphenylhydrazine (as Azobenzene) | ND | 0.0417 | " | | | | | | | | |
| 1,3-Dichlorobenzene | ND | 0.0417 | " | | | | | | | | |
| 1,4-Dichlorobenzene | ND | 0.0417 | " | | | | | | | | |
| 2,3,4,6-Tetrachlorophenol | ND | 0.0833 | " | | | | | | | | |
| 2,4,5-Trichlorophenol | ND | 0.0417 | " | | | | | | | | |
| 2,4,6-Trichlorophenol | ND | 0.0417 | " | | | | | | | | |
| 2,4-Dichlorophenol | ND | 0.0417 | " | | | | | | | | |
| 2,4-Dimethylphenol | ND | 0.0417 | " | | | | | | | | |
| 2,4-Dinitrophenol | ND | 0.0833 | " | | | | | | | | |
| 2,4-Dinitrotoluene | ND | 0.0417 | " | | | | | | | | |
| 2,6-Dinitrotoluene | ND | 0.0417 | " | | | | | | | | |
| 2-Chloronaphthalene | ND | 0.0417 | " | | | | | | | | |
| 2-Chlorophenol | ND | 0.0417 | " | | | | | | | | |
| 2-Methylnaphthalene | ND | 0.0417 | " | | | | | | | | |
| 2-Methylphenol | ND | 0.0417 | " | | | | | | | | |
| 2-Nitroaniline | ND | 0.0833 | " | | | | | | | | |
| 2-Nitrophenol | ND | 0.0417 | " | | | | | | | | |
| 3- & 4-Methylphenols | ND | 0.0417 | " | | | | | | | | |
| 3,3'-Dichlorobenzidine | ND | 0.0417 | " | | | | | | | | |
| 3-Nitroaniline | ND | 0.0833 | " | | | | | | | | |
| 4,6-Dinitro-2-methylphenol | ND | 0.0833 | " | | | | | | | | |
| 4-Bromophenyl phenyl ether | ND | 0.0417 | " | | | | | | | | |
| 4-Chloro-3-methylphenol | ND | 0.0417 | " | | | | | | | | |
| 4-Chloroaniline | ND | 0.0417 | " | | | | | | | | |
| 4-Chlorophenyl phenyl ether | ND | 0.0417 | " | | | | | | | | |
| 4-Nitroaniline | ND | 0.0833 | " | | | | | | | | |
| 4-Nitrophenol | ND | 0.0833 | " | | | | | | | | |
| Acenaphthene | ND | 0.0417 | " | | | | | | | | |
| Acenaphthylene | ND | 0.0417 | " | | | | | | | | |
| Acetophenone | ND | 0.0417 | " | | | | | | | | |
| Aniline | ND | 0.167 | " | | | | | | | | |
| Anthracene | ND | 0.0417 | " | | | | | | | | |
| Atrazine | ND | 0.0417 | " | | | | | | | | |
| Benzaldehyde | ND | 0.0417 | " | | | | | | | | |
| Benzidine | ND | 0.167 | " | | | | | | | | |
| Benzo(a)anthracene | ND | 0.0417 | " | | | | | | | | |
| Benzo(a)pyrene | ND | 0.0417 | " | | | | | | | | |
| Benzo(b)fluoranthene | ND | 0.0417 | " | | | | | | | | |
| Benzo(g,h,i)perylene | ND | 0.0417 | " | | | | | | | | |
| Benzo(k)fluoranthene | ND | 0.0417 | " | | | | | | | | |
| Benzoic acid | ND | 0.0417 | " | | | | | | | | |
| Benzyl alcohol | ND | 0.0417 | " | | | | | | | | |
| Benzyl butyl phthalate | ND | 0.0417 | " | | | | | | | | |
| Bis(2-chloroethoxy)methane | ND | 0.0417 | " | | | | | | | | |
| Bis(2-chloroethyl)ether | ND | 0.0417 | " | | | | | | | | |
| Bis(2-chloroisopropyl)ether | ND | 0.0417 | " | | | | | | | | |
| Bis(2-ethylhexyl)phthalate | ND | 0.0417 | " | | | | | | | | |

Prepared: 09/14/2016 Analyzed: 09/15/2016

## Semivolatile Organic Compounds by GC/MS - Quality Control Data

## York Analytical Laboratories, Inc.

| Analyte | Result | Reporting Limit | Units | Spike Level | Source* Result | %REC | %REC Limits | Flag | RPD | RPD Limit | Flag |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Batch BI60561 - EPA 3550C** | | | | | | | | | | | |
| **Blank (BI60561-BLK1)** | | | | | | | | | | | |
| Prepared: 09/14/2016 Analyzed: 09/15/2016 | | | | | | | | | | | |
| Caprolactam | ND | 0.0833 | mg/kg wet | | | | | | | | |
| Carbazole | ND | 0.0417 | " | | | | | | | | |
| Chrysene | ND | 0.0417 | " | | | | | | | | |
| Dibenzo(a,h)anthracene | ND | 0.0417 | " | | | | | | | | |
| Dibenzofuran | ND | 0.0417 | " | | | | | | | | |
| Diethyl phthalate | ND | 0.0417 | " | | | | | | | | |
| Dimethyl phthalate | ND | 0.0417 | " | | | | | | | | |
| Di-n-butyl phthalate | ND | 0.0417 | " | | | | | | | | |
| Di-n-octyl phthalate | ND | 0.0417 | " | | | | | | | | |
| Fluoranthene | ND | 0.0417 | " | | | | | | | | |
| Fluorene | ND | 0.0417 | " | | | | | | | | |
| Hexachlorobenzene | ND | 0.0417 | " | | | | | | | | |
| Hexachlorobutadiene | ND | 0.0417 | " | | | | | | | | |
| Hexachlorocyclopentadiene | ND | 0.0417 | " | | | | | | | | |
| Hexachloroethane | ND | 0.0417 | " | | | | | | | | |
| Indeno(1,2,3-cd)pyrene | ND | 0.0417 | " | | | | | | | | |
| Isophorone | ND | 0.0417 | " | | | | | | | | |
| Naphthalene | ND | 0.0417 | " | | | | | | | | |
| Nitrobenzene | ND | 0.0417 | " | | | | | | | | |
| N-Nitrosodimethylamine | ND | 0.0417 | " | | | | | | | | |
| N-nitroso-di-n-propylamine | ND | 0.0417 | " | | | | | | | | |
| N-Nitrosodiphenylamine | ND | 0.0417 | " | | | | | | | | |
| Pentachlorophenol | ND | 0.0417 | " | | | | | | | | |
| Phenanthrene | ND | 0.0417 | " | | | | | | | | |
| Phenol | ND | 0.0417 | " | | | | | | | | |
| Pyrene | ND | 0.0417 | " | | | | | | | | |
| Pyridine | ND | 0.167 | " | | | | | | | | |
| *Surrogate: 2-Fluorophenol* | *1.22* | | " | *2.51* | | *48.7* | *20-108* | | | | |
| *Surrogate: Phenol-d5* | *1.28* | | " | *2.52* | | *50.9* | *23-114* | | | | |
| *Surrogate: Nitrobenzene-d5* | *0.791* | | " | *1.67* | | *47.3* | *22-108* | | | | |
| *Surrogate: 2-Fluorobiphenyl* | *0.761* | | " | *1.67* | | *45.6* | *21-113* | | | | |
| *Surrogate: 2,4,6-Tribromophenol* | *1.12* | | " | *2.50* | | *44.9* | *19-110* | | | | |
| *Surrogate: Terphenyl-d14* | *0.636* | | " | *1.68* | | *37.8* | *24-116* | | | | |




## Semivolatile Organic Compounds by GC/MS - Quality Control Data

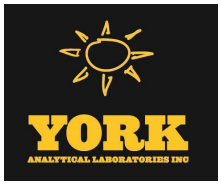
## York Analytical Laboratories, Inc.

| Analyte | Result | Reporting Limit | Units | Spike Level | Source* Result | %REC | %REC Limits | Flag | RPD | RPD Limit | Flag |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Batch BI60561 - EPA 3550C** | | | | | | | | | | | |
| **LCS (BI60561-BS1)** | | | | | | | | Prepared: 09/14/2016 Analyzed: 09/15/2016 | | | |
| 1,1'-Biphenyl | 0.927 | 0.0417 | mg/kg wet | 1.67 | | 55.6 | 22-103 | | | | |
| 1,2,4,5-Tetrachlorobenzene | 0.872 | 0.0833 | " | 1.67 | | 52.3 | 10-144 | | | | |
| 1,2,4-Trichlorobenzene | 0.824 | 0.0417 | " | 1.67 | | 49.4 | 23-130 | | | | |
| 1,2-Dichlorobenzene | 0.832 | 0.0417 | " | 1.67 | | 49.9 | 26-113 | | | | |
| 1,2-Diphenylhydrazine (as Azobenzene) | 1.18 | 0.0417 | " | 1.67 | | 70.6 | 10-140 | | | | |
| 1,3-Dichlorobenzene | 0.817 | 0.0417 | " | 1.67 | | 49.0 | 32-113 | | | | |
| 1,4-Dichlorobenzene | 0.808 | 0.0417 | " | 1.67 | | 48.5 | 28-111 | | | | |
| 2,3,4,6-Tetrachlorophenol | 2.33 | 0.0833 | " | 1.67 | | 140 | 30-130 | High Bias | | | |
| 2,4,5-Trichlorophenol | 0.911 | 0.0417 | " | 1.67 | | 54.6 | 14-138 | | | | |
| 2,4,6-Trichlorophenol | 1.08 | 0.0417 | " | 1.67 | | 64.5 | 27-122 | | | | |
| 2,4-Dichlorophenol | 0.948 | 0.0417 | " | 1.67 | | 56.9 | 23-133 | | | | |
| 2,4-Dimethylphenol | 0.947 | 0.0417 | " | 1.67 | | 56.8 | 15-131 | | | | |
| 2,4-Dinitrophenol | 0.862 | 0.0833 | " | 1.67 | | 51.7 | 10-149 | | | | |
| 2,4-Dinitrotoluene | 1.02 | 0.0417 | " | 1.67 | | 61.1 | 30-123 | | | | |
| 2,6-Dinitrotoluene | 0.968 | 0.0417 | " | 1.67 | | 58.1 | 30-125 | | | | |
| 2-Chloronaphthalene | 0.894 | 0.0417 | " | 1.67 | | 53.6 | 22-115 | | | | |
| 2-Chlorophenol | 0.888 | 0.0417 | " | 1.67 | | 53.3 | 25-121 | | | | |
| 2-Methylnaphthalene | 1.02 | 0.0417 | " | 1.67 | | 61.3 | 16-127 | | | | |
| 2-Methylphenol | 0.853 | 0.0417 | " | 1.67 | | 51.2 | 10-146 | | | | |
| 2-Nitroaniline | 0.940 | 0.0833 | " | 1.67 | | 56.4 | 24-126 | | | | |
| 2-Nitrophenol | 0.817 | 0.0417 | " | 1.67 | | 49.0 | 17-129 | | | | |
| 3- & 4-Methylphenols | ND | 0.0417 | " | 1.67 | | | 20-109 | Low Bias | | | |
| 3,3'-Dichlorobenzidine | 1.02 | 0.0417 | " | 1.67 | | 61.3 | 10-147 | | | | |
| 3-Nitroaniline | 0.923 | 0.0833 | " | 1.67 | | 55.4 | 23-123 | | | | |
| 4,6-Dinitro-2-methylphenol | 1.11 | 0.0833 | " | 1.67 | | 66.4 | 10-149 | | | | |
| 4-Bromophenyl phenyl ether | 0.935 | 0.0417 | " | 1.67 | | 56.1 | 30-138 | | | | |
| 4-Chloro-3-methylphenol | 0.997 | 0.0417 | " | 1.67 | | 59.8 | 16-138 | | | | |
| 4-Chloroaniline | 0.720 | 0.0417 | " | 1.67 | | 43.2 | 10-117 | | | | |
| 4-Chlorophenyl phenyl ether | 0.987 | 0.0417 | " | 1.67 | | 59.2 | 18-132 | | | | |
| 4-Nitroaniline | ND | 0.0833 | " | 1.67 | | | 14-125 | Low Bias | | | |
| 4-Nitrophenol | 0.974 | 0.0833 | " | 1.67 | | 58.4 | 10-136 | | | | |
| Acenaphthene | 0.996 | 0.0417 | " | 1.67 | | 59.8 | 17-124 | | | | |
| Acenaphthylene | 0.920 | 0.0417 | " | 1.67 | | 55.2 | 16-124 | | | | |
| Acetophenone | ND | 0.0417 | " | 1.67 | | | 28-105 | Low Bias | | | |
| Aniline | 0.793 | 0.167 | " | 1.67 | | 47.6 | 10-111 | | | | |
| Anthracene | 1.03 | 0.0417 | " | 1.67 | | 61.7 | 24-124 | | | | |
| Atrazine | 1.04 | 0.0417 | " | 1.67 | | 62.4 | 22-120 | | | | |
| Benzaldehyde | 0.931 | 0.0417 | " | 1.67 | | 55.9 | 21-100 | | | | |
| Benzo(a)anthracene | 1.17 | 0.0417 | " | 1.67 | | 69.9 | 25-134 | | | | |
| Benzo(a)pyrene | 0.913 | 0.0417 | " | 1.67 | | 54.8 | 29-144 | | | | |
| Benzo(b)fluoranthene | 0.854 | 0.0417 | " | 1.67 | | 51.3 | 20-151 | | | | |
| Benzo(g,h,i)perylene | 0.962 | 0.0417 | " | 1.67 | | 57.7 | 10-153 | | | | |
| Benzo(k)fluoranthene | 0.863 | 0.0417 | " | 1.67 | | 51.8 | 10-148 | | | | |
| Benzoic acid | ND | 0.0417 | " | 1.67 | | | 10-116 | Low Bias | | | |
| Benzyl alcohol | 0.991 | 0.0417 | " | 1.67 | | 59.4 | 17-128 | | | | |
| Benzyl butyl phthalate | 1.06 | 0.0417 | " | 1.67 | | 63.4 | 10-132 | | | | |
| Bis(2-chloroethoxy)methane | 0.913 | 0.0417 | " | 1.67 | | 54.8 | 10-129 | | | | |
| Bis(2-chloroethyl)ether | 0.932 | 0.0417 | " | 1.67 | | 55.9 | 14-125 | | | | |
| Bis(2-chloroisopropyl)ether | 1.05 | 0.0417 | " | 1.67 | | 63.1 | 14-122 | | | | |
| Bis(2-ethylhexyl)phthalate | 1.24 | 0.0417 | " | 1.67 | | 74.6 | 10-141 | | | | |
| Caprolactam | 0.180 | 0.0833 | " | 1.67 | | 10.8 | 10-123 | | | | |

## Semivolatile Organic Compounds by GC/MS - Quality Control Data

## York Analytical Laboratories, Inc.

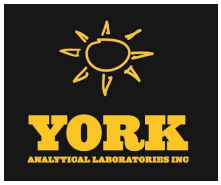
| Analyte | Result | Reporting Limit | Units | Spike Level | Source* Result | %REC | %REC Limits | Flag | RPD | RPD Limit | Flag |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Batch BI60561 - EPA 3550C** | | | | | | | | | | | |
| **LCS (BI60561-BS1)** | | | | | | | | Prepared: 09/14/2016 Analyzed: 09/15/2016 | | | |
| Carbazole | 0.978 | 0.0417 | mg/kg wet | 1.67 | | 58.7 | 31-120 | | | | |
| Chrysene | 0.949 | 0.0417 | " | 1.67 | | 57.0 | 24-116 | | | | |
| Dibenzo(a,h)anthracene | 1.15 | 0.0417 | " | 1.67 | | 68.8 | 17-147 | | | | |
| Dibenzofuran | ND | 0.0417 | " | 1.67 | | | 23-123 | Low Bias | | | |
| Diethyl phthalate | 1.03 | 0.0417 | " | 1.67 | | 61.8 | 23-122 | | | | |
| Dimethyl phthalate | 0.944 | 0.0417 | " | 1.67 | | 56.6 | 28-127 | | | | |
| Di-n-butyl phthalate | 1.04 | 0.0417 | " | 1.67 | | 62.2 | 19-123 | | | | |
| Di-n-octyl phthalate | 0.988 | 0.0417 | " | 1.67 | | 59.3 | 10-132 | | | | |
| Fluoranthene | 1.06 | 0.0417 | " | 1.67 | | 63.8 | 36-125 | | | | |
| Fluorene | 1.00 | 0.0417 | " | 1.67 | | 60.3 | 16-130 | | | | |
| Hexachlorobenzene | 1.11 | 0.0417 | " | 1.67 | | 66.7 | 10-129 | | | | |
| Hexachlorobutadiene | 0.902 | 0.0417 | " | 1.67 | | 54.1 | 22-153 | | | | |
| Hexachlorocyclopentadiene | 0.410 | 0.0417 | " | 1.67 | | 24.6 | 10-134 | | | | |
| Hexachloroethane | 0.906 | 0.0417 | " | 1.67 | | 54.4 | 20-112 | | | | |
| Indeno(1,2,3-cd)pyrene | 1.13 | 0.0417 | " | 1.67 | | 68.0 | 10-155 | | | | |
| Isophorone | 0.888 | 0.0417 | " | 1.67 | | 53.3 | 14-131 | | | | |
| Naphthalene | 0.939 | 0.0417 | " | 1.67 | | 56.4 | 20-121 | | | | |
| Nitrobenzene | 0.910 | 0.0417 | " | 1.67 | | 54.6 | 20-121 | | | | |
| N-Nitrosodimethylamine | 0.553 | 0.0417 | " | 1.67 | | 33.2 | 10-124 | | | | |
| N-nitroso-di-n-propylamine | 0.994 | 0.0417 | " | 1.67 | | 59.6 | 21-119 | | | | |
| N-Nitrosodiphenylamine | 1.34 | 0.0417 | " | 1.67 | | 80.1 | 10-163 | | | | |
| Pentachlorophenol | 0.848 | 0.0417 | " | 1.67 | | 50.9 | 10-143 | | | | |
| Phenanthrene | 1.07 | 0.0417 | " | 1.67 | | 64.1 | 24-123 | | | | |
| Phenol | 0.0497 | 0.0417 | " | 1.67 | | 2.98 | 15-123 | Low Bias | | | |
| Pyrene | 1.06 | 0.0417 | " | 1.67 | | 63.9 | 24-132 | | | | |
| Pyridine | 0.123 | 0.167 | " | 1.67 | | 7.38 | 10-92 | Low Bias | | | |
| *Surrogate: 2-Fluorophenol* | *1.32* | | " | *2.51* | | *52.7* | *20-108* | | | | |
| *Surrogate: Phenol-d5* | *1.53* | | " | *2.52* | | *60.7* | *23-114* | | | | |
| *Surrogate: Nitrobenzene-d5* | *0.991* | | " | *1.67* | | *59.2* | *22-108* | | | | |
| *Surrogate: 2-Fluorobiphenyl* | *0.958* | | " | *1.67* | | *57.5* | *21-113* | | | | |
| *Surrogate: 2,4,6-Tribromophenol* | *1.62* | | " | *2.50* | | *64.7* | *30-130* | | | | |
| *Surrogate: Terphenyl-d14* | *0.811* | | " | *1.68* | | *48.2* | *24-116* | | | | |




## Semivolatile Organic Compounds by GC/MS - Quality Control Data

## York Analytical Laboratories, Inc.

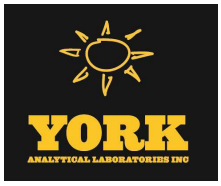
| Analyte | Result | Reporting Limit | Units | Spike Level | Source* Result | %REC | %REC Limits | Flag | RPD | RPD Limit | Flag |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Batch BI60561 - EPA 3550C** | | | | | | | | | | | |
| **LCS Dup (BI60561-BSD1)** | | | | | | | | Prepared: 09/14/2016 Analyzed: 09/15/2016 | | | |
| 1,1'-Biphenyl | 1.14 | 0.0417 | mg/kg wet | 1.67 | | 68.4 | 22-103 | | 20.7 | 30 | |
| 1,2,4,5-Tetrachlorobenzene | 1.08 | 0.0833 | " | 1.67 | | 64.6 | 10-144 | | 21.0 | 30 | |
| 1,2,4-Trichlorobenzene | 0.995 | 0.0417 | " | 1.67 | | 59.7 | 23-130 | | 18.9 | 30 | |
| 1,2-Dichlorobenzene | 1.01 | 0.0417 | " | 1.67 | | 60.4 | 26-113 | | 19.1 | 30 | |
| 1,2-Diphenylhydrazine (as Azobenzene) | 1.53 | 0.0417 | " | 1.67 | | 91.5 | 10-140 | | 25.8 | 30 | |
| 1,3-Dichlorobenzene | 0.995 | 0.0417 | " | 1.67 | | 59.7 | 32-113 | | 19.7 | 30 | |
| 1,4-Dichlorobenzene | 0.933 | 0.0417 | " | 1.67 | | 56.0 | 28-111 | | 14.3 | 30 | |
| 2,3,4,6-Tetrachlorophenol | 2.84 | 0.0833 | " | 1.67 | | 171 | 30-130 | High Bias | 19.9 | 30 | |
| 2,4,5-Trichlorophenol | 1.16 | 0.0417 | " | 1.67 | | 69.3 | 14-138 | | 23.7 | 30 | |
| 2,4,6-Trichlorophenol | 1.34 | 0.0417 | " | 1.67 | | 80.4 | 27-122 | | 22.0 | 30 | |
| 2,4-Dichlorophenol | 1.17 | 0.0417 | " | 1.67 | | 70.1 | 23-133 | | 20.8 | 30 | |
| 2,4-Dimethylphenol | 1.19 | 0.0417 | " | 1.67 | | 71.1 | 15-131 | | 22.4 | 30 | |
| 2,4-Dinitrophenol | 0.927 | 0.0833 | " | 1.67 | | 55.6 | 10-149 | | 7.30 | 30 | |
| 2,4-Dinitrotoluene | 1.24 | 0.0417 | " | 1.67 | | 74.4 | 30-123 | | 19.6 | 30 | |
| 2,6-Dinitrotoluene | 1.25 | 0.0417 | " | 1.67 | | 74.8 | 30-125 | | 25.2 | 30 | |
| 2-Chloronaphthalene | 1.13 | 0.0417 | " | 1.67 | | 67.8 | 22-115 | | 23.3 | 30 | |
| 2-Chlorophenol | 1.07 | 0.0417 | " | 1.67 | | 64.1 | 25-121 | | 18.5 | 30 | |
| 2-Methylnaphthalene | 1.21 | 0.0417 | " | 1.67 | | 72.5 | 16-127 | | 16.7 | 30 | |
| 2-Methylphenol | 1.04 | 0.0417 | " | 1.67 | | 62.7 | 10-146 | | 20.2 | 30 | |
| 2-Nitroaniline | 1.16 | 0.0833 | " | 1.67 | | 69.4 | 24-126 | | 20.7 | 30 | |
| 2-Nitrophenol | 1.01 | 0.0417 | " | 1.67 | | 60.6 | 17-129 | | 21.1 | 30 | |
| 3- & 4-Methylphenols | ND | 0.0417 | " | 1.67 | | | 20-109 | Low Bias | | 30 | |
| 3,3'-Dichlorobenzidine | 1.26 | 0.0417 | " | 1.67 | | 75.9 | 10-147 | | 21.3 | 30 | |
| 3-Nitroaniline | 1.10 | 0.0833 | " | 1.67 | | 65.8 | 23-123 | | 17.3 | 30 | |
| 4,6-Dinitro-2-methylphenol | 1.40 | 0.0833 | " | 1.67 | | 83.7 | 10-149 | | 23.1 | 30 | |
| 4-Bromophenyl phenyl ether | 1.18 | 0.0417 | " | 1.67 | | 70.7 | 30-138 | | 23.0 | 30 | |
| 4-Chloro-3-methylphenol | 1.21 | 0.0417 | " | 1.67 | | 72.4 | 16-138 | | 19.0 | 30 | |
| 4-Chloroaniline | 0.898 | 0.0417 | " | 1.67 | | 53.9 | 10-117 | | 22.0 | 30 | |
| 4-Chlorophenyl phenyl ether | 1.24 | 0.0417 | " | 1.67 | | 74.5 | 18-132 | | 22.8 | 30 | |
| 4-Nitroaniline | 1.22 | 0.0833 | " | 1.67 | | 73.1 | 14-125 | | 200 | 30 | Non-dir. |
| 4-Nitrophenol | 1.22 | 0.0833 | " | 1.67 | | 72.9 | 10-136 | | 22.1 | 30 | |
| Acenaphthene | 1.25 | 0.0417 | " | 1.67 | | 74.7 | 17-124 | | 22.2 | 30 | |
| Acenaphthylene | 1.15 | 0.0417 | " | 1.67 | | 68.9 | 16-124 | | 22.1 | 30 | |
| Acetophenone | 0.0277 | 0.0417 | " | 1.67 | | 1.66 | 28-105 | Low Bias | 200 | 30 | Non-dir. |
| Aniline | 0.963 | 0.167 | " | 1.67 | | 57.8 | 10-111 | | 19.4 | 30 | |
| Anthracene | 1.29 | 0.0417 | " | 1.67 | | 77.6 | 24-124 | | 22.8 | 30 | |
| Atrazine | 1.27 | 0.0417 | " | 1.67 | | 76.0 | 22-120 | | 19.6 | 30 | |
| Benzaldehyde | 0.993 | 0.0417 | " | 1.67 | | 59.6 | 21-100 | | 6.41 | 30 | |
| Benzo(a)anthracene | 1.43 | 0.0417 | " | 1.67 | | 85.7 | 25-134 | | 20.3 | 30 | |
| Benzo(a)pyrene | 1.06 | 0.0417 | " | 1.67 | | 63.9 | 29-144 | | 15.4 | 30 | |
| Benzo(b)fluoranthene | 1.03 | 0.0417 | " | 1.67 | | 61.7 | 20-151 | | 18.5 | 30 | |
| Benzo(g,h,i)perylene | 1.28 | 0.0417 | " | 1.67 | | 76.9 | 10-153 | | 28.4 | 30 | |
| Benzo(k)fluoranthene | 1.04 | 0.0417 | " | 1.67 | | 62.4 | 10-148 | | 18.5 | 30 | |
| Benzoic acid | 0.0240 | 0.0417 | " | 1.67 | | 1.44 | 10-116 | Low Bias | 200 | 30 | Non-dir. |
| Benzyl alcohol | 1.21 | 0.0417 | " | 1.67 | | 72.4 | 17-128 | | 19.7 | 30 | |
| Benzyl butyl phthalate | 1.26 | 0.0417 | " | 1.67 | | 75.4 | 10-132 | | 17.2 | 30 | |
| Bis(2-chloroethoxy)methane | 1.11 | 0.0417 | " | 1.67 | | 66.3 | 10-129 | | 19.1 | 30 | |
| Bis(2-chloroethyl)ether | 1.07 | 0.0417 | " | 1.67 | | 64.4 | 14-125 | | 14.1 | 30 | |
| Bis(2-chloroisopropyl)ether | 1.25 | 0.0417 | " | 1.67 | | 75.0 | 14-122 | | 17.2 | 30 | |
| Bis(2-ethylhexyl)phthalate | 1.52 | 0.0417 | " | 1.67 | | 91.3 | 10-141 | | 20.1 | 30 | |
| Caprolactam | 0.266 | 0.0833 | " | 1.67 | | 16.0 | 10-123 | | 38.7 | 30 | Non-dir. |




## Semivolatile Organic Compounds by GC/MS - Quality Control Data

## York Analytical Laboratories, Inc.

| Analyte | Result | Reporting Limit | Units | Spike Level | Source* Result | %REC | %REC Limits | Flag | RPD | RPD Limit | Flag |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Batch BI60561 - EPA 3550C** | | | | | | | | | | | |
| **LCS Dup (BI60561-BSD1)** | | | | | | | | Prepared: 09/14/2016 Analyzed: 09/15/2016 | | | |
| Carbazole | 1.20 | 0.0417 | mg/kg wet | 1.67 | | 72.2 | 31-120 | | 20.7 | 30 | |
| Chrysene | 1.15 | 0.0417 | " | 1.67 | | 68.9 | 24-116 | | 18.9 | 30 | |
| Dibenzo(a,h)anthracene | 1.46 | 0.0417 | " | 1.67 | | 87.7 | 17-147 | | 24.1 | 30 | |
| Dibenzofuran | 1.19 | 0.0417 | " | 1.67 | | 71.4 | 23-123 | | 200 | 30 | Non-dir. |
| Diethyl phthalate | 1.24 | 0.0417 | " | 1.67 | | 74.5 | 23-122 | | 18.6 | 30 | |
| Dimethyl phthalate | 1.16 | 0.0417 | " | 1.67 | | 69.6 | 28-127 | | 20.5 | 30 | |
| Di-n-butyl phthalate | 1.28 | 0.0417 | " | 1.67 | | 76.8 | 19-123 | | 21.1 | 30 | |
| Di-n-octyl phthalate | 1.20 | 0.0417 | " | 1.67 | | 71.8 | 10-132 | | 19.1 | 30 | |
| Fluoranthene | 1.30 | 0.0417 | " | 1.67 | | 78.2 | 36-125 | | 20.3 | 30 | |
| Fluorene | 1.27 | 0.0417 | " | 1.67 | | 76.0 | 16-130 | | 23.0 | 30 | |
| Hexachlorobenzene | 1.42 | 0.0417 | " | 1.67 | | 85.1 | 10-129 | | 24.2 | 30 | |
| Hexachlorobutadiene | 1.07 | 0.0417 | " | 1.67 | | 64.2 | 22-153 | | 17.1 | 30 | |
| Hexachlorocyclopentadiene | 0.637 | 0.0417 | " | 1.67 | | 38.2 | 10-134 | | 43.4 | 30 | Non-dir. |
| Hexachloroethane | 1.10 | 0.0417 | " | 1.67 | | 65.9 | 20-112 | | 19.2 | 30 | |
| Indeno(1,2,3-cd)pyrene | 1.43 | 0.0417 | " | 1.67 | | 86.1 | 10-155 | | 23.4 | 30 | |
| Isophorone | 1.08 | 0.0417 | " | 1.67 | | 65.1 | 14-131 | | 19.9 | 30 | |
| Naphthalene | 1.14 | 0.0417 | " | 1.67 | | 68.4 | 20-121 | | 19.3 | 30 | |
| Nitrobenzene | 1.11 | 0.0417 | " | 1.67 | | 66.6 | 20-121 | | 19.8 | 30 | |
| N-Nitrosodimethylamine | 0.765 | 0.0417 | " | 1.67 | | 45.9 | 10-124 | | 32.2 | 30 | Non-dir. |
| N-nitroso-di-n-propylamine | 1.21 | 0.0417 | " | 1.67 | | 72.8 | 21-119 | | 19.9 | 30 | |
| N-Nitrosodiphenylamine | 1.73 | 0.0417 | " | 1.67 | | 104 | 10-163 | | 25.9 | 30 | |
| Pentachlorophenol | 1.05 | 0.0417 | " | 1.67 | | 62.8 | 10-143 | | 21.0 | 30 | |
| Phenanthrene | 1.34 | 0.0417 | " | 1.67 | | 80.3 | 24-123 | | 22.4 | 30 | |
| Phenol | ND | 0.0417 | " | 1.67 | | | 15-123 | Low Bias | | 30 | |
| Pyrene | 1.29 | 0.0417 | " | 1.67 | | 77.6 | 24-132 | | 19.5 | 30 | |
| Pyridine | 0.369 | 0.167 | " | 1.67 | | 22.1 | 10-92 | | 100 | 30 | Non-dir. |
| *Surrogate: 2-Fluorophenol* | *1.60* | | " | *2.51* | | *63.8* | *20-108* | | | | |
| *Surrogate: Phenol-d5* | *1.90* | | " | *2.52* | | *75.4* | *23-114* | | | | |
| *Surrogate: Nitrobenzene-d5* | *1.23* | | " | *1.67* | | *73.2* | *22-108* | | | | |
| *Surrogate: 2-Fluorobiphenyl* | *1.20* | | " | *1.67* | | *71.7* | *21-113* | | | | |
| *Surrogate: 2,4,6-Tribromophenol* | *2.07* | | " | *2.50* | | *82.9* | *30-130* | | | | |
| *Surrogate: Terphenyl-d14* | *0.973* | | " | *1.68* | | *57.8* | *24-116* | | | | |




## Organochlorine Pesticides by GC/ECD - Quality Control Data

## York Analytical Laboratories, Inc.

| Analyte | Result | Reporting Limit | Units | Spike Level | Source* Result | %REC | %REC Limits | Flag | RPD | RPD Limit | Flag |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Batch BI60374 - EPA 3550C** | | | | | | | | | | | |
| **Blank (BI60374-BLK1)** | | | | | | | | Prepared & Analyzed: 09/12/2016 | | | |
| 4,4'-DDD | ND | 0.000330 | mg/kg wet | | | | | | | | |
| 4,4'-DDE | ND | 0.000330 | " | | | | | | | | |
| 4,4'-DDT | ND | 0.000330 | " | | | | | | | | |
| Aldrin | ND | 0.000330 | " | | | | | | | | |
| alpha-BHC | ND | 0.000330 | " | | | | | | | | |
| alpha-Chlordane | ND | 0.000330 | " | | | | | | | | |
| beta-BHC | ND | 0.000330 | " | | | | | | | | |
| Chlordane, total | ND | 0.0132 | " | | | | | | | | |
| delta-BHC | ND | 0.000330 | " | | | | | | | | |
| Dieldrin | ND | 0.000330 | " | | | | | | | | |
| Endosulfan I | ND | 0.000330 | " | | | | | | | | |
| Endosulfan II | ND | 0.000330 | " | | | | | | | | |
| Endosulfan sulfate | ND | 0.000330 | " | | | | | | | | |
| Endrin | ND | 0.000330 | " | | | | | | | | |
| Endrin aldehyde | ND | 0.000330 | " | | | | | | | | |
| Endrin ketone | ND | 0.000330 | " | | | | | | | | |
| gamma-BHC (Lindane) | ND | 0.000330 | " | | | | | | | | |
| gamma-Chlordane | ND | 0.000330 | " | | | | | | | | |
| Heptachlor | ND | 0.000330 | " | | | | | | | | |
| Heptachlor epoxide | ND | 0.000330 | " | | | | | | | | |
| Methoxychlor | ND | 0.000330 | " | | | | | | | | |
| Toxaphene | ND | 0.0330 | " | | | | | | | | |
| Chlordane, total (alpha, gamma) | ND | 0.000330 | " | | | | | | | | |
| *Surrogate: Decachlorobiphenyl* | *0.0547* | | *"* | *0.0667* | | *82.1* | *30-150* | | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0560* | | *"* | *0.0667* | | *84.0* | *30-150* | | | | |
| **LCS (BI60374-BS1)** | | | | | | | | Prepared & Analyzed: 09/12/2016 | | | |
| 4,4'-DDD | 0.0377 | 0.000330 | mg/kg wet | 0.0333 | | 113 | 40-140 | | | | |
| 4,4'-DDE | 0.0324 | 0.000330 | " | 0.0333 | | 97.3 | 40-140 | | | | |
| 4,4'-DDT | 0.0318 | 0.000330 | " | 0.0333 | | 95.3 | 40-140 | | | | |
| Aldrin | 0.0324 | 0.000330 | " | 0.0333 | | 97.1 | 40-140 | | | | |
| alpha-BHC | 0.0344 | 0.000330 | " | 0.0333 | | 103 | 40-140 | | | | |
| alpha-Chlordane | 0.0293 | 0.000330 | " | 0.0333 | | 87.9 | 40-140 | | | | |
| beta-BHC | 0.0332 | 0.000330 | " | 0.0333 | | 99.5 | 40-140 | | | | |
| delta-BHC | 0.0348 | 0.000330 | " | 0.0333 | | 104 | 40-140 | | | | |
| Dieldrin | 0.0305 | 0.000330 | " | 0.0333 | | 91.6 | 40-140 | | | | |
| Endosulfan I | 0.0320 | 0.000330 | " | 0.0333 | | 96.1 | 40-140 | | | | |
| Endosulfan II | 0.0277 | 0.000330 | " | 0.0333 | | 83.2 | 40-140 | | | | |
| Endosulfan sulfate | 0.0287 | 0.000330 | " | 0.0333 | | 86.1 | 40-140 | | | | |
| Endrin | 0.0302 | 0.000330 | " | 0.0333 | | 90.5 | 40-140 | | | | |
| Endrin aldehyde | 0.0235 | 0.000330 | " | 0.0333 | | 70.6 | 40-140 | | | | |
| Endrin ketone | 0.0254 | 0.000330 | " | 0.0333 | | 76.3 | 40-140 | | | | |
| gamma-BHC (Lindane) | 0.0337 | 0.000330 | " | 0.0333 | | 101 | 40-140 | | | | |
| gamma-Chlordane | 0.0299 | 0.000330 | " | 0.0333 | | 89.7 | 40-140 | | | | |
| Heptachlor | 0.0315 | 0.000330 | " | 0.0333 | | 94.4 | 40-140 | | | | |
| Heptachlor epoxide | 0.0300 | 0.000330 | " | 0.0333 | | 90.0 | 40-140 | | | | |
| Methoxychlor | 0.0314 | 0.000330 | " | 0.0333 | | 94.3 | 40-140 | | | | |
| *Surrogate: Decachlorobiphenyl* | *0.0421* | | *"* | *0.0667* | | *63.1* | *30-150* | | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0577* | | *"* | *0.0667* | | *86.5* | *30-150* | | | | |

## Organochlorine Pesticides by GC/ECD - Quality Control Data

## York Analytical Laboratories, Inc.

| Analyte | Result | Reporting Limit | Units | Spike Level | Source* Result | %REC | %REC Limits | Flag | RPD | RPD Limit | Flag |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Batch Y6I1309 - BH60884** | | | | | | | | | | | |
| **Performance Mix (Y6I1309-PEM1)** | | | | | | | Prepared & Analyzed: 09/12/2016 | | | | |
| 4,4'-DDD | 0.00 | | ng/mL | 0.00 | | | 0-200 | | | | |
| 4,4'-DDD [2C] | 0.00 | | " | 0.00 | | | 0-200 | | | | |
| 4,4'-DDE | 1.16 | | " | 0.00 | | | 0-200 | | | | |
| 4,4'-DDE [2C] | 0.807 | | " | 0.00 | | | 0-200 | | | | |
| 4,4'-DDT | 185 | | " | 200 | | 92.6 | 0-200 | | | | |
| 4,4'-DDT [2C] | 171 | | " | 200 | | 85.6 | 0-200 | | | | |
| Endrin | 104 | | " | 100 | | 104 | 0-200 | | | | |
| Endrin [2C] | 105 | | " | 100 | | 105 | 0-200 | | | | |
| Endrin aldehyde | 0.770 | | " | 0.00 | | | 0-200 | | | | |
| Endrin aldehyde [2C] | 0.330 | | " | 0.00 | | | 0-200 | | | | |
| Endrin ketone | 1.40 | | " | 0.00 | | | 0-200 | | | | |
| Endrin ketone [2C] | 0.937 | | " | 0.00 | | | 0-200 | | | | |
| **Performance Mix (Y6I1309-PEM2)** | | | | | | | Prepared & Analyzed: 09/12/2016 | | | | |
| 4,4'-DDD | 0.00 | | ng/mL | 0.00 | | | 0-200 | | | | |
| 4,4'-DDE | 1.31 | | " | 0.00 | | | 0-200 | | | | |
| 4,4'-DDT | 159 | | " | 200 | | 79.5 | 0-200 | | | | |
| Endrin | 93.7 | | " | 100 | | 93.7 | 0-200 | | | | |
| Endrin aldehyde | 0.883 | | " | 0.00 | | | 0-200 | | | | |
| Endrin ketone | 2.05 | | " | 0.00 | | | 0-200 | | | | |

## Polychlorinated Biphenyls by GC/ECD - Quality Control Data

## York Analytical Laboratories, Inc.

| Analyte | Result | Reporting Limit | Units | Spike Level | Source* Result | %REC | %REC Limits | Flag | RPD | RPD Limit | Flag |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Batch BI60374 - EPA 3550C** | | | | | | | | | | | |
| **Blank (BI60374-BLK2)** | | | | | | | | Prepared & Analyzed: 09/12/2016 | | | |
| Aroclor 1016 | ND | 0.0167 | mg/kg wet | | | | | | | | |
| Aroclor 1221 | ND | 0.0167 | " | | | | | | | | |
| Aroclor 1232 | ND | 0.0167 | " | | | | | | | | |
| Aroclor 1242 | ND | 0.0167 | " | | | | | | | | |
| Aroclor 1248 | ND | 0.0167 | " | | | | | | | | |
| Aroclor 1254 | ND | 0.0167 | " | | | | | | | | |
| Aroclor 1260 | ND | 0.0167 | " | | | | | | | | |
| Total PCBs | ND | 0.0167 | " | | | | | | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0587* | | *"* | *0.0667* | | *88.0* | *30-140* | | | | |
| *Surrogate: Decachlorobiphenyl* | *0.0550* | | *"* | *0.0667* | | *82.5* | *30-140* | | | | |
| **LCS (BI60374-BS2)** | | | | | | | | Prepared & Analyzed: 09/12/2016 | | | |
| Aroclor 1016 | 0.260 | 0.0167 | mg/kg wet | 0.333 | | 77.9 | 40-130 | | | | |
| Aroclor 1260 | 0.231 | 0.0167 | " | 0.333 | | 69.2 | 40-130 | | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0513* | | *"* | *0.0667* | | *77.0* | *30-140* | | | | |
| *Surrogate: Decachlorobiphenyl* | *0.0477* | | *"* | *0.0667* | | *71.5* | *30-140* | | | | |

## Chlorinated Herbicides by GC/ECD - Quality Control Data

## York Analytical Laboratories, Inc.

| Analyte | Result | Reporting Limit | Units | Spike Level | Source* Result | %REC | %REC Limits | Flag | RPD | RPD Limit | Flag |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Batch BI60441 - EPA 3550B/8151A** | | | | | | | | | | | |
| **Blank (BI60441-BLK1)** | | | | | | | | Prepared & Analyzed: 09/13/2016 | | | |
| 2,4,5-T | ND | 0.0200 | mg/kg wet | | | | | | | | |
| 2,4,5-TP (Silvex) | ND | 0.0200 | " | | | | | | | | |
| 2,4-D | ND | 0.0200 | " | | | | | | | | |
| *Surrogate: 2,4-Dichlorophenylacetic acid (DCAA)* | *0.671* | | *"* | *0.500* | | *134* | *30-150* | | | | |
| **LCS (BI60441-BS1)** | | | | | | | | Prepared & Analyzed: 09/13/2016 | | | |
| 2,4,5-T | 0.126 | 0.0200 | mg/kg wet | 0.160 | | 78.8 | 40-140 | | | | |
| 2,4,5-TP (Silvex) | 0.108 | 0.0200 | " | 0.160 | | 67.5 | 40-140 | | | | |
| 2,4-D | 0.152 | 0.0200 | " | 0.160 | | 95.0 | 40-140 | | | | |
| *Surrogate: 2,4-Dichlorophenylacetic acid (DCAA)* | *0.440* | | *"* | *0.500* | | *88.0* | *30-150* | | | | |
| **LCS Dup (BI60441-BSD1)** | | | | | | | | Prepared & Analyzed: 09/13/2016 | | | |
| 2,4,5-T | 0.129 | 0.0200 | mg/kg wet | 0.160 | | 80.6 | 40-140 | | 2.35 | 30 | |
| 2,4,5-TP (Silvex) | 0.115 | 0.0200 | " | 0.160 | | 71.9 | 40-140 | | 6.28 | 30 | |
| 2,4-D | 0.164 | 0.0200 | " | 0.160 | | 102 | 40-140 | | 7.59 | 30 | |
| *Surrogate: 2,4-Dichlorophenylacetic acid (DCAA)* | *0.458* | | *"* | *0.500* | | *91.6* | *30-150* | | | | |
| **Matrix Spike (BI60441-MS1)** | *Source sample: 16I0260-01 (V01_0-1.5) | | | | | | | Prepared & Analyzed: 09/13/2016 | | | |
| 2,4,5-T | 0.133 | 0.0207 | mg/kg dry | 0.166 | ND | 80.0 | 30-150 | | | | |
| 2,4,5-TP (Silvex) | 0.123 | 0.0207 | " | 0.166 | ND | 74.4 | 30-150 | | | | |
| 2,4-D | 0.125 | 0.0207 | " | 0.166 | ND | 75.6 | 30-150 | | | | |
| *Surrogate: 2,4-Dichlorophenylacetic acid (DCAA)* | *0.369* | | *"* | *0.518* | | *71.2* | *30-150* | | | | |

## Metals by ICP - Quality Control Data

## York Analytical Laboratories, Inc.

| Analyte | Result | Reporting Limit | Units | Spike Level | Source* Result | %REC | %REC Limits | Flag | RPD | RPD Limit | Flag |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Batch BI60400 - EPA 3050B** | | | | | | | | | | | |
| **Blank (BI60400-BLK1)** | | | | | | | | | | | Prepared & Analyzed: 09/12/2016 |
| Aluminum | ND | 5.00 | mg/kg wet | | | | | | | | |
| Antimony | ND | 0.500 | " | | | | | | | | |
| Arsenic | ND | 1.00 | " | | | | | | | | |
| Barium | ND | 1.00 | " | | | | | | | | |
| Beryllium | ND | 0.100 | " | | | | | | | | |
| Cadmium | ND | 0.300 | " | | | | | | | | |
| Calcium | 5.43 | 5.00 | " | | | | | | | | |
| Chromium | ND | 0.500 | " | | | | | | | | |
| Cobalt | ND | 0.500 | " | | | | | | | | |
| Copper | ND | 0.500 | " | | | | | | | | |
| Iron | ND | 2.00 | " | | | | | | | | |
| Lead | 0.361 | 0.300 | " | | | | | | | | |
| Magnesium | ND | 5.00 | " | | | | | | | | |
| Manganese | ND | 0.500 | " | | | | | | | | |
| Nickel | ND | 0.500 | " | | | | | | | | |
| Potassium | ND | 5.00 | " | | | | | | | | |
| Selenium | ND | 1.00 | " | | | | | | | | |
| Silver | ND | 0.500 | " | | | | | | | | |
| Sodium | ND | 10.0 | " | | | | | | | | |
| Thallium | ND | 1.00 | " | | | | | | | | |
| Vanadium | ND | 1.00 | " | | | | | | | | |
| Zinc | ND | 1.00 | " | | | | | | | | |
| **Reference (BI60400-SRM1)** | | | | | | | | | | | Prepared & Analyzed: 09/12/2016 |
| Aluminum | 8300 | 5.00 | mg/kg wet | 8740 | | 95.0 | 41.6-157.9 | | | | |
| Antimony | 86.3 | 0.500 | " | 108 | | 79.9 | 22.9-254.6 | | | | |
| Arsenic | 130 | 1.00 | " | 151 | | 86.0 | 70.9-129.8 | | | | |
| Barium | 226 | 1.00 | " | 262 | | 86.4 | 73.7-126.3 | | | | |
| Beryllium | 115 | 0.100 | " | 133 | | 86.7 | 75.1-124.8 | | | | |
| Cadmium | 126 | 0.300 | " | 152 | | 82.9 | 73-126.3 | | | | |
| Calcium | 5880 | 5.00 | " | 6400 | | 91.9 | 73.9-125.9 | | | | |
| Chromium | 104 | 0.500 | " | 117 | | 88.8 | 69.6-129.9 | | | | |
| Cobalt | 63.3 | 0.500 | " | 68.7 | | 92.2 | 74.4-125.8 | | | | |
| Copper | 63.5 | 0.500 | " | 68.6 | | 92.6 | 73.2-129.2 | | | | |
| Iron | 12500 | 2.00 | " | 12300 | | 101 | 30.5-169.9 | | | | |
| Lead | 211 | 0.300 | " | 254 | | 83.0 | 75.5-124.8 | | | | |
| Magnesium | 3240 | 5.00 | " | 3600 | | 89.9 | 68.3-131.6 | | | | |
| Manganese | 478 | 0.500 | " | 563 | | 84.9 | 77.4-122.5 | | | | |
| Nickel | 282 | 0.500 | " | 315 | | 89.6 | 74.3-126.6 | | | | |
| Potassium | 2770 | 5.00 | " | 3040 | | 91.1 | 62.5-137.2 | | | | |
| Selenium | 146 | 1.00 | " | 162 | | 90.1 | 67.3-132.1 | | | | |
| Silver | 36.0 | 0.500 | " | 44.3 | | 81.3 | 66.4-133.8 | | | | |
| Sodium | 645 | 10.0 | " | 746 | | 86.5 | 56.8-143.4 | | | | |
| Thallium | 173 | 1.00 | " | 259 | | 66.8 | 69.5-130.5 | Low Bias | | | |
| Vanadium | 104 | 1.00 | " | 116 | | 89.8 | 59.7-139.7 | | | | |
| Zinc | 264 | 1.00 | " | 306 | | 86.3 | 69-131.5 | | | | |

## Mercury by EPA 7000/200 Series Methods - Quality Control Data

## York Analytical Laboratories, Inc.

| Analyte | Result | Reporting Limit | Units | Spike Level | Source* Result | %REC | %REC Limits | Flag | RPD | RPD Limit | Flag |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Batch BI60438 - EPA 7473 soil** | | | | | | | | | | | |
| **Blank (BI60438-BLK1)** | | | | | | | | | Prepared & Analyzed: 09/13/2016 | | |
| Mercury | ND | 0.0300 | mg/kg wet | | | | | | | | |
| **Reference (BI60438-SRM1)** | | | | | | | | | Prepared & Analyzed: 09/13/2016 | | |
| Mercury | 6.3472 | | mg/kg | 5.76 | | 110 | 71.2-129 | | | | |

## Wet Chemistry Parameters - Quality Control Data

## York Analytical Laboratories, Inc.

| Analyte | Result | Reporting Limit | Units | Spike Level | Source* Result | %REC | %REC Limits | Flag | RPD | RPD Limit | Flag |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Batch BI60315 - Analysis Preparation Soil** | | | | | | | | | | | |
| **Blank (BI60315-BLK1)** | | | | | | | | | Prepared & Analyzed: 09/09/2016 | | |
| Cyanide, total | ND | 0.500 | mg/kg wet | | | | | | | | |
| **Reference (BI60315-SRM1)** | | | | | | | | | Prepared & Analyzed: 09/09/2016 | | |
| Cyanide, total | 54.0 | | ug/mL | 53.9 | | 100 | 37.5-163.7 | | | | |
| **Batch BI60331 - EPA SW846-3060** | | | | | | | | | | | |
| **Blank (BI60331-BLK1)** | | | | | | | | | Prepared & Analyzed: 09/09/2016 | | |
| Chromium, Hexavalent | ND | 0.500 | mg/kg wet | | | | | | | | |
| **Reference (BI60331-SRM1)** | | | | | | | | | Prepared & Analyzed: 09/09/2016 | | |
| Chromium, Hexavalent | 77.6 | | mg/L | 108 | | 71.9 | 29.8-206 | | | | |

## Volatile Analysis Sample Containers

| Lab ID | Client Sample ID | Volatile Sample Container |
|---|---|---|
| 16I0260-01 | V01_0-1.5 | 40mL Vial with Stir Bar-Cool 4° C |

## Notes and Definitions

| | |
|---|---|
| U | Analyte included in the analysis, but not detected |
| QL-02 | This LCS analyte is outside Laboratory Recovery limits due the analyte behavior using the referenced method. The reference method has certain limitations with respect to analytes of this nature. |
| J | Detected below the Reporting Limit but greater than or equal to the Method Detection Limit (MDL/LOD) or in the case of a TIC, the result is an estimated concentration. |
| B | Analyte is found in the associated analysis batch blank. For volatiles, methylene chloride and acetone are common lab contaminants. |

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| | |
|---|---|
| * | Analyte is not certified or the state of the samples origination does not offer certification for the Analyte. |
| ND | NOT DETECTED - the analyte is not detected at the Reported to level (LOQ/RL or LOD/MDL) |
| RL | REPORTING LIMIT - the minimum reportable value based upon the lowest point in the analyte calibration curve. |
| LOQ | LIMIT OF QUANTITATION - the minimum concentration of a target analyte that can be reported within a specified degree of confidence. This is the lowest point in an analyte calibration curve that has been subjected to all steps of the processing/analysis and verified to meet defined criteria. This is based upon NELAC 2009 Standards and applies to all analyses. |
| LOD | LIMIT OF DETECTION - a verified estimate of the minimum concentration of a substance in a given matrix that an analytical process can reliably detect. This is based upon NELAC 2009 Standards and applies to all analyses conducted under the auspices of EPA SW-846. |
| MDL | METHOD DETECTION LIMIT - a statistically derived estimate of the minimum amount of a substance an analytical system can reliably detect with a 99% confidence that the concentration of the substance is greater than zero. This is based upon 40 CFR Part 136 Appendix B and applies only to EPA 600 and 200 series methods. |
| Reported to | This indicates that the data for a particular analysis is reported to either the LOD/MDL, or the LOQ/RL. In cases where the "Reported to" is located above the LOD/MDL, any value between this and the LOQ represents an estimated value which is "J" flagged accordingly. This applies to volatile and semi-volatile target compounds only. |
| NR | Not reported |
| RPD | Relative Percent Difference |
| Wet | The data has been reported on an as-received (wet weight) basis |
| Low Bias | Low Bias flag indicates that the recovery of the flagged analyte is below the laboratory or regulatory lower control limit. The data user should take note that this analyte may be biased low but should evaluate multiple lines of evidence including the LCS and site-specific MS/MSD data to draw bias conclusions. In cases where no site-specific MS/MSD was requested, only the LCS data can be used to evaluate such bias. |
| High Bias | High Bias flag indicates that the recovery of the flagged analyte is above the laboratory or regulatory upper control limit. The data user should take note that this analyte may be biased high but should evaluate multiple lines of evidence including the LCS and site-specific MS/MSD data to draw bias conclusions. In cases where no site-specific MS/MSD was requested, only the LCS data can be used to evaluate such bias. |
| Non-Dir. | Non-dir. flag (Non-Directional Bias ) indicates that the Relative Percent Difference (RPD) (a measure of precision) among the MS and MSD data is outside the laboratory or regulatory control limit. This alerts the data user where the MS and MSD are from site-specific samples that the RPD is high due to either non-homogeneous distribution of target analyte between the MS/MSD or indicates poor reproducibility for other reasons. |

If EPA SW-846 method 8270 is included herein it is noted that the target compound N-nitrosodiphenylamine (NDPA) decomposes in the gas chromatographic inlet and cannot be separated from diphenylamine (DPA). These results could actually represent 100% DPA, 100% NDPA or some combination of the two.
For this reason, York reports the combined result for n-nitrosodiphenylamine and diphenylamine for either of these compounds as a combined concentration as Diphenylamine.

If Total PCBs are detected and the target aroclors reported are "Not detected", the Total PCB value is reported due to the presence of either or both Aroclors 1262 and 1268 which are non-target aroclors for some regulatory lists.

2-chloroethylvinyl ether readily breaks down under acidic conditions. Samples that are acid preserved, including standards will exhibit breakdown. The data user should take note.

Certification for pH is no longer offered by NYDOH ELAP.

Semi-Volatile and Volatile analyses are reported down to the LOD/MDL, with values between the LOD/MDL and the LOQ being "J" flagged as estimated results.

For analyses by EPA SW-846-8270D, the Limit of Quantitation (LOQ) reported for benzidine is based upon the lowest standard used for calibration and is not a verified LOQ due to this compound's propensity for oxidative losses during extraction/concentration procedures and non-reproducible chromatographic performance.

# Laboratory Chain-of-Custody Record

**York Project (SDG) No.: 16I0260**

**Samples Received:** 09/08/2016 18:45 **By:** Joseph C. Eigenberg **Logged In:** 09/08/2016 17:50 **By:** Paul Grace

**Sample Conditions:**

- [X] Custody Seals
- [X] Containers Intact
- [X] COC/Labels Agree
- [X] Preservation Confirmed
- [X] Cooler Temperature Confirmed
- [X] COC Complete
- [X] Chain of Custody Form Received
- [X] Appropriate Sample Volumes Received
- [X] Appropriate Sample Containers Submitted
- [X] Samples Submitted within Holding Times
- [ ] Corrective Action Form Required

## Preparation Chain-of-Custody

| Sample ID | Reason Prep | Prep Start Date | Prep End Date | Prep Analyst |
|---|---|---|---|---|
| 16I0260-01 | % Solids Prep | 09/14/2016 9:17 | 09/14/2016 9:17 | Laura A. Bryant |
| 16I0260-01 | Analysis Preparation | 09/15/2016 12:18 | 09/15/2016 12:18 | Philip Murphy |
| 16I0260-01 | Analysis Preparation Soil | 09/09/2016 7:53 | 09/09/2016 7:53 | Anthony DeCarlo |
| 16I0260-01 | EPA 3050B | 09/12/2016 10:18 | 09/12/2016 10:18 | Amanda DeBiase |
| 16I0260-01 | EPA 3550B/8151A | 09/13/2016 7:14 | 09/13/2016 7:14 | Courtney Mezes |
| 16I0260-01 | EPA 3550C | 09/14/2016 11:54 | 09/14/2016 11:54 | Melanie R. Wieler |
| 16I0260-01 | EPA 3550C | 09/12/2016 8:21 | 09/12/2016 8:21 | Tonesha Boyd |
| 16I0260-01 | EPA 3550C | 09/12/2016 8:21 | 09/12/2016 8:21 | Tonesha Boyd |
| 16I0260-01 | EPA 5035A | 09/14/2016 8:26 | 09/14/2016 8:26 | Olivia Watson |
| 16I0260-01 | EPA 7473 soil | 09/13/2016 6:21 | 09/13/2016 6:21 | Amanda DeBiase |
| 16I0260-01 | EPA SW846-3060 | 09/09/2016 7:50 | 09/09/2016 7:50 | Laura A. Bryant |

## Analysis Chain-of-Custody

| Sample ID | Reason Analysis | Analysis Start Date | Analysis End Date | Analyst |
|---|---|---|---|---|
| 16I0260-01 | Chromium, Hexavalent | 09/09/2016 7:50 | 09/09/2016 15:13 | Laura A. Bryant |
| 16I0260-01 | Chromium, Trivalent | 09/15/2016 12:18 | 09/15/2016 14:24 | Philip Murphy |
| 16I0260-01 | Cyanide, Total | 09/09/2016 7:53 | 09/09/2016 13:16 | Anthony DeCarlo |
| 16I0260-01 | Herbicides, NJDEP/TCL/Part 375 List | 09/13/2016 7:14 | 09/13/2016 13:18 | Amanda M Caminiti |
| 16I0260-01 | Mercury by 7473 | 09/13/2016 6:21 | 09/13/2016 16:37 | Amanda DeBiase |
| 16I0260-01 | Metals, Target Analyte | 09/12/2016 10:18 | 09/13/2016 0:10 | Kassandra Velez |
| 16I0260-01 | Pesticides, NJDEP/TCL/Part 375 List | 09/12/2016 8:21 | 09/12/2016 18:56 | Amanda M Caminiti |
| 16I0260-01 | Polychlorinated Biphenyls (PCB) | 09/12/2016 8:21 | 09/12/2016 18:29 | Amanda M Caminiti |
| 16I0260-01 | Semi-Volatiles, NJDEP/TCL/Part 375 | 09/14/2016 11:54 | 09/15/2016 13:36 | Kimberly Holbrook |
| 16I0260-01 | Total Solids | 09/14/2016 9:17 | 09/14/2016 16:45 | Laura A. Bryant |

# Analysis Chain-of-Custody

| Sample ID | Reason Analysis | Analysis Start Date | Analysis End Date | Analyst |
|---|---|---|---|---|
| 16I0260-01 | Volatile Organics, NJDEP/TCL/Part 3 | 09/14/2016 8:26 | 09/14/2016 13:25 | Steve Swift |

YORK ANALYTICAL LABORATORIES
120 RESEARCH DR.
STRATFORD, CT 06615
(203) 325-1371
FAX (203) 357-0166

# Field Chain-of-Custody Record



**NOTE:** York's Std. Terms & Conditions are listed on the back side of this document. This document serves as your written authorization to York to proceed with the analyses requested and your signature binds you to York's Std. Terms & Conditions.

**York Project No.** 16I0260

## YOUR Information

Company: Langan
Address: 360 W31st St New York, NY 10001
Phone No. 212-479-5400
Contact Person: atashji@langan.com
E-Mail Address: Albert Toshji

## Report To:

Company:
Address: SAME
Phone No.
Attention:
E-Mail Address:

## Invoice To:

Company:
Address: SAME
Phone No.
Attention:
E-Mail Address:

## YOUR Project ID

450 Union Street

## Purchase Order No.

170301202

Samples from: CT ___ NY X NJ ___

## Turn-Around Time

- RUSH - Same Day ☐
- RUSH - Next Day ☐
- RUSH - Two Day ☐
- RUSH - Three Day ☐
- RUSH - Four Day ☐
- Standard(5-7 Days) ☒

## Report Type

- Summary Report X
- Summary w/ QA Summary
- CT RCP Package
- CTRCP DQA/DUE Pkg
- NY ASP A Package
- NY ASP B Package X
- NJDEP Red. Deliv.

***Electronic Data Deliverables (EDD)***

- Simple Excel
- NYSDEC EQuIS X
- EQuIS (std)
- EZ-EDD (EQuIS)
- NJDEP SRP HazSite EDD
- GIS/KEY (std)
- Other
- **York Regulatory Comparison Excel Spreadsheet**

Compare to the following Regs. (please fill in):

***Print Clearly and Legibly. All Information must be complete. Samples will NOT be logged in and the turn-around time clock will not begin until any questions by York are resolved.***

Samples Collected/Authorized By (Signature)

Andrea Scher
Name (printed)

**Matrix Codes**

S - soil
Other - specify(oil, etc.)
WW - wastewater
GW - groundwater
DW - drinking water
Air-A - ambient air
Air-SV - soil vapor

| Volatiles | | Semi-Vols. | Pest/PCB/Herb | Metals | Misc. Org. | Full Lists | Misc. |
|---|---|---|---|---|---|---|---|
| 8260 full | TICs | 8270 or 625 | 8082PCB | RCRA8 | TPH GRO | Pri.Poll. | Corrosivity |
| 624 | Site Spec. | STARS list | 8081Pest | PP13 list | TPH DRO | TCL Organics | Reactivity |
| STARS list | Nassau Co. | BN Only | 8151Herb | TAL | CT ETPH | TAL Met/CN | Ignitability |
| BTEX | Suffolk Co. | Acids Only | CT RCP | CT15 list | NY 310-13 | Full TCLP | Flash Point |
| MTBE | Ketones | PAH list | App. IX | TAGM list | TPH 1664 | Full App. IX | Sieve Anal. |
| TCL list | Oxygenates | TAGM list | Site Spec. | NJDEP list | Air TO14A | Part 360-Routine | Heterotrophs |
| TAGM list | TCLP list | CT RCP list | SPLP or TCLP | Total | Air TO15 | Part 360-Baseline | TOX |
| CT RCP list | 524.2 | TCL list | TCLP Pest | Dissolved | Air STARS | Part 360-Expanded No Dioxin/Furans | BTU/lb. |
| Arom. only | 502.2 | NJDEP list | TCLP Herb | SPLP or TCLP | Air VPH | Part 360-Expanded Full List | Aquatic Tox. |
| Halog.only | NJDEP list | App. IX | Chlordane | Indiv. Metals | Air TICs | NYCDEP Sewer | TOC |
| App.IX list | SPLP or TCLP | TCLP BNA | 608 Pest | LIST Below | Methane | NYSDEC Sewer | Asbestos |
| 8021B list | | SPLP or TCLP | 608 PCB | | Helium | TAGM | Silica |

| Sample Identification | Date/Time Sampled | Sample Matrix | Choose Analyses Needed from the Menu Above and Enter Below | Container Description(s) |
|---|---|---|---|---|
| V01-0-1.5 | 13:00 9/7/16 | S | Part 375/TCL VOC, SVOC, pesticides, PCB, Part 375/TAL metals | |

**Comments**

**Preservation** Check those Applicable

4°C X Frozen ___ HCl ___ MeOH ___ $HNO_3$ ___ $H_2SO_4$ ___ NaOH ___
ZnAc ___ Ascorbic Acid ___ Other ___

Special Instructions

Field Filtered ☐
Lab to Filter ☐

| Samples Relinquished By | Date/Time | Samples Received By | Date/Time |
|---|---|---|---|
| | 9/8/16 15:00 | | 9/8/16 15:10 |
| Samples Relinquished By | Date/Time | Samples Received in LAB by | Date/Time |
| | | | 9/8/16 1845 |

**Temperature on Receipt** 4.6 °C

York Analytical Laboratories, Inc.
SDG: 16I0260
CLASS: VOA
METHOD: EPA 8260C

# DATA PACKAGE COVER PAGE

## EPA 8260C

Laboratory: York Analytical Laboratories, Inc. SDG: 16I0260

Client: Langan Engineering & Environmental Services (NYC) Project: 170301202 450 Union Street

| Client Sample Id: | Lab Sample Id: |
|---|---|
| V01_0-1.5 | 16I0260-01 |

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in computer-readable data submitted on diskette has been autorized by the Laboratory Manager or the Manager's designee, as verified by the following signatures.

Signature:

Name: Benjamin Gulizia

Date: 9/30/2016

Title: Laboratory Director

# FORM II SURROGATE STANDARD RECOVERY AND RT SUMMARY

## EPA 8260C

| | | | |
|---|---|---|---|
| Laboratory: | York Analytical Laboratories, Inc. | SDG: | 16I0260 |
| Client: | Langan Engineering & Environmental Services (NYC) | Project: | 170301202 450 Union Street |
| Sequence: | Y6I1422 | Instrument: | VOA No. 5 |
| Matrix: | Soil | Calibration: | YH60024 |

| Surrogate Compound | Spike Level ug/L | % Recovery | Recovery Limits | RT | Calibration Mean RT | RT Diff | RT Diff Limit | Q |
|---|---|---|---|---|---|---|---|---|
| **LCS (BI60530-BS1 )** | | | Lab File ID: V5387477.D | | Analyzed: 09/14/16 09:28 | | | |
| 1,2-Dichloroethane-d4 | 50.0 | 90.5 | 77 - 125 | 5.51 | | | | |
| Toluene-d8 | 50.0 | 103 | 85 - 120 | 7.31 | | | | |
| p-Bromofluorobenzene | 50.0 | 104 | 76 - 130 | 10.08 | | | | |
| **LCS Dup (BI60530-BSD1 )** | | | Lab File ID: V5387478.D | | Analyzed: 09/14/16 10:02 | | | |
| 1,2-Dichloroethane-d4 | 50.0 | 91.0 | 77 - 125 | 5.51 | | | | |
| Toluene-d8 | 50.0 | 108 | 85 - 120 | 7.31 | | | | |
| p-Bromofluorobenzene | 50.0 | 102 | 76 - 130 | 10.08 | | | | |
| **Blank (BI60530-BLK1 )** | | | Lab File ID: V5387480.D | | Analyzed: 09/14/16 11:10 | | | |
| 1,2-Dichloroethane-d4 | 50.0 | 93.7 | 77 - 125 | 5.51 | | | | |
| Toluene-d8 | 50.0 | 97.7 | 85 - 120 | 7.31 | | | | |
| p-Bromofluorobenzene | 50.0 | 101 | 76 - 130 | 10.08 | | | | |
| **Blank (BI60530-BLK2 )** | | | Lab File ID: V5387481.D | | Analyzed: 09/14/16 11:44 | | | |
| 1,2-Dichloroethane-d4 | 50.0 | 92.9 | 77 - 125 | 5.51 | | | | |
| Toluene-d8 | 50.0 | 93.6 | 85 - 120 | 7.31 | | | | |
| p-Bromofluorobenzene | 50.0 | 103 | 76 - 130 | 10.08 | | | | |
| **V01_0-1.5 (16I0260-01 )** | | | Lab File ID: V5387484.D | | Analyzed: 09/14/16 13:25 | | | |
| 1,2-Dichloroethane-d4 | 50.0 | 93.3 | 77 - 125 | 5.52 | | | | |
| Toluene-d8 | 50.0 | 99.7 | 85 - 120 | 7.31 | | | | |
| p-Bromofluorobenzene | 50.0 | 97.7 | 76 - 130 | 10.08 | | | | |

# FORM III LCS / LCS DUPLICATE RECOVERY

## EPA 8260C

Laboratory: York Analytical Laboratories, Inc. SDG: 16I0260

Client: Langan Engineering & Environmental Services (NYC) Project: 170301202 450 Union Street

Matrix: Soil

Batch: BI60530 Laboratory ID: BI60530-BS1

Preparation: EPA 5035A Initial/Final: 5 g / 5 ml

| COMPOUND | SPIKE ADDED (ug/L) | LCS CONCENTRATION (ug/L) | LCS % REC. # | QC LIMITS REC. |
|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 50.0 | 51 | 103 | 75 - 129 |
| 1,1,1-Trichloroethane | 50.0 | 58 | 117 | 71 - 137 |
| 1,1,2,2-Tetrachloroethane | 50.0 | 53 | 107 | 79 - 129 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113) | 50.0 | 53 | 105 | 58 - 146 |
| 1,1,2-Trichloroethane | 50.0 | 57 | 113 | 83 - 123 |
| 1,1-Dichloroethane | 50.0 | 60 | 121 | 75 - 130 |
| 1,1-Dichloroethylene | 50.0 | 53 | 106 | 64 - 137 |
| 1,2,3-Trichlorobenzene | 50.0 | 56 | 113 | 81 - 140 |
| 1,2,4-Trichlorobenzene | 50.0 | 54 | 108 | 80 - 141 |
| 1,2,4-Trimethylbenzene | 50.0 | 56 | 112 | 84 - 125 |
| 1,2-Dibromo-3-chloropropane | 50.0 | 47 | 94.3 | 74 - 142 |
| 1,2-Dibromoethane | 50.0 | 55 | 110 | 86 - 123 |
| 1,2-Dichlorobenzene | 50.0 | 51 | 103 | 85 - 122 |
| 1,2-Dichloroethane | 50.0 | 53 | 106 | 71 - 133 |
| 1,2-Dichloropropane | 50.0 | 58 | 116 | 81 - 122 |
| 1,3,5-Trimethylbenzene | 50.0 | 56 | 111 | 82 - 126 |
| 1,3-Dichlorobenzene | 50.0 | 51 | 103 | 84 - 124 |
| 1,4-Dichlorobenzene | 50.0 | 51 | 102 | 84 - 124 |
| 1,4-Dioxane | 1000 | 950 | 94.5 | 10 - 228 |
| 2-Butanone | 50.0 | 52 | 105 | 58 - 147 |
| 2-Hexanone | 50.0 | 50 | 99.4 | 70 - 139 |
| 4-Methyl-2-pentanone | 50.0 | 49 | 98.6 | 72 - 132 |
| Acetone | 50.0 | 48 | 96.9 | 36 - 155 |
| Acrolein | 50.0 | 58 | 115 | 10 - 238 |
| Acrylonitrile | 50.0 | 53 | 106 | 66 - 141 |
| Benzene | 50.0 | 62 | 123 | 77 - 127 |
| Bromochloromethane | 50.0 | 58 | 117 | 74 - 129 |
| Bromodichloromethane | 50.0 | 57 | 114 | 81 - 124 |
| Bromoform | 50.0 | 57 | 114 | 80 - 136 |
| Bromomethane | 50.0 | 52 | 105 | 32 - 177 |

# FORM III LCS / LCS DUPLICATE RECOVERY

## EPA 8260C

Laboratory: York Analytical Laboratories, Inc. SDG: 16I0260

Client: Langan Engineering & Environmental Services (NYC) Project: 170301202 450 Union Street

Matrix: Soil

Batch: BI60530 Laboratory ID: BI60530-BS1

Preparation: EPA 5035A Initial/Final: 5 g / 5 ml

| COMPOUND | SPIKE ADDED (ug/L) | LCS CONCENTRATION (ug/L) | LCS % REC. # | QC LIMITS REC. |
|---|---|---|---|---|
| Carbon disulfide | 50.0 | 60 | 119 | 10 - 136 |
| Carbon tetrachloride | 50.0 | 57 | 115 | 66 - 143 |
| Chlorobenzene | 50.0 | 55 | 110 | 86 - 120 |
| Chloroethane | 50.0 | 53 | 105 | 51 - 142 |
| Chloroform | 50.0 | 60 | 119 | 76 - 131 |
| Chloromethane | 50.0 | 61 | 122 | 49 - 132 |
| cis-1,2-Dichloroethylene | 50.0 | 59 | 119 | 74 - 132 |
| cis-1,3-Dichloropropylene | 50.0 | 57 | 114 | 81 - 129 |
| Cyclohexane | 50.0 | 62 | 125 | 70 - 130 |
| Dibromochloromethane | 50.0 | 52 | 104 | 10 - 200 |
| Dibromomethane | 50.0 | 55 | 110 | 83 - 124 |
| Dichlorodifluoromethane | 50.0 | 47 | 94.4 | 28 - 158 |
| Ethyl Benzene | 50.0 | 55 | 110 | 84 - 125 |
| Hexachlorobutadiene | 50.0 | 54 | 108 | 83 - 133 |
| Isopropylbenzene | 50.0 | 53 | 106 | 81 - 127 |
| Methyl acetate | 50.0 | 50 | 100 | 41 - 143 |
| Methyl tert-butyl ether (MTBE) | 50.0 | 48 | 95.7 | 74 - 131 |
| Methylcyclohexane | 50.0 | 60 | 120 | 70 - 130 |
| Methylene chloride | 50.0 | 51 | 101 | 57 - 141 |
| n-Butylbenzene | 50.0 | 56 | 112 | 80 - 130 |
| n-Propylbenzene | 50.0 | 54 | 108 | 74 - 136 |
| o-Xylene | 50.0 | 55 | 110 | 83 - 123 |
| p- & m- Xylenes | 100 | 110 | 111 | 82 - 128 |
| p-Isopropyltoluene | 50.0 | 55 | 110 | 85 - 125 |
| sec-Butylbenzene | 50.0 | 51 | 102 | 83 - 125 |
| Styrene | 50.0 | 61 | 122 | 86 - 126 |
| tert-Butyl alcohol (TBA) | 50.0 | 46 | 91.8 | 70 - 130 |
| tert-Butylbenzene | 50.0 | 50 | 99.3 | 80 - 127 |
| Tetrachloroethylene | 50.0 | 55 | 110 | 80 - 129 |
| Toluene | 50.0 | 58 | 116 | 85 - 121 |

# FORM III LCS / LCS DUPLICATE RECOVERY

## EPA 8260C

| | | | |
|---|---|---|---|
| Laboratory: | York Analytical Laboratories, Inc. | SDG: | 16I0260 |
| Client: | Langan Engineering & Environmental Services (NYC) | Project: | 170301202 450 Union Street |
| Matrix: | Soil | | |
| Batch: | BI60530 | Laboratory ID: | BI60530-BS1 |
| Preparation: | EPA 5035A | Initial/Final: | 5 g / 5 ml |

| COMPOUND | SPIKE ADDED (ug/L) | LCS CONCENTRATION (ug/L) | LCS % REC. # | QC LIMITS REC. |
|---|---|---|---|---|
| trans-1,2-Dichloroethylene | 50.0 | 48 | 95.4 | 72 - 132 |
| trans-1,3-Dichloropropylene | 50.0 | 54 | 109 | 78 - 132 |
| Trichloroethylene | 50.0 | 56 | 112 | 84 - 123 |
| Trichlorofluoromethane | 50.0 | 47 | 94.7 | 62 - 140 |
| Vinyl Chloride | 50.0 | 49 | 98.1 | 52 - 130 |

# Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

# FORM III LCS / LCS DUPLICATE RECOVERY

## EPA 8260C

Laboratory: York Analytical Laboratories, Inc. SDG: 16I0260

Client: Langan Engineering & Environmental Services (NYC) Project: 170301202 450 Union Street

Matrix: Soil

Batch: BI60530 Laboratory ID: BI60530-BSD1

Preparation: EPA 5035A Initial/Final: 5 g / 5 ml

| COMPOUND | SPIKE ADDED (ug/L) | LCSD CONCENTRATION (ug/L) | LCSD % REC. # | % RPD # | QC LIMITS RPD | QC LIMITS REC. |
|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 50.0 | 54 | 109 | 5.66 | 30 | 75 - 129 |
| 1,1,1-Trichloroethane | 50.0 | 58 | 116 | 0.533 | 30 | 71 - 137 |
| 1,1,2,2-Tetrachloroethane | 50.0 | 52 | 104 | 2.20 | 30 | 79 - 129 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane ( | 50.0 | 53 | 107 | 1.44 | 30 | 58 - 146 |
| 1,1,2-Trichloroethane | 50.0 | 57 | 114 | 0.737 | 30 | 83 - 123 |
| 1,1-Dichloroethane | 50.0 | 60 | 120 | 0.482 | 30 | 75 - 130 |
| 1,1-Dichloroethylene | 50.0 | 54 | 108 | 1.70 | 30 | 64 - 137 |
| 1,2,3-Trichlorobenzene | 50.0 | 59 | 117 | 3.96 | 30 | 81 - 140 |
| 1,2,4-Trichlorobenzene | 50.0 | 55 | 110 | 2.53 | 30 | 80 - 141 |
| 1,2,4-Trimethylbenzene | 50.0 | 58 | 115 | 2.89 | 30 | 84 - 125 |
| 1,2-Dibromo-3-chloropropane | 50.0 | 49 | 98.5 | 4.32 | 30 | 74 - 142 |
| 1,2-Dibromoethane | 50.0 | 53 | 106 | 3.53 | 30 | 86 - 123 |
| 1,2-Dichlorobenzene | 50.0 | 54 | 108 | 4.60 | 30 | 85 - 122 |
| 1,2-Dichloroethane | 50.0 | 54 | 108 | 1.59 | 30 | 71 - 133 |
| 1,2-Dichloropropane | 50.0 | 57 | 114 | 1.61 | 30 | 81 - 122 |
| 1,3,5-Trimethylbenzene | 50.0 | 55 | 110 | 0.830 | 30 | 82 - 126 |
| 1,3-Dichlorobenzene | 50.0 | 53 | 106 | 2.92 | 30 | 84 - 124 |
| 1,4-Dichlorobenzene | 50.0 | 52 | 104 | 1.13 | 30 | 84 - 124 |
| 1,4-Dioxane | 1000 | 880 | 87.6 | 7.54 | 30 | 10 - 228 |
| 2-Butanone | 50.0 | 53 | 106 | 1.36 | 30 | 58 - 147 |
| 2-Hexanone | 50.0 | 50 | 99.9 | 0.542 | 30 | 70 - 139 |
| 4-Methyl-2-pentanone | 50.0 | 49 | 97.9 | 0.712 | 30 | 72 - 132 |
| Acetone | 50.0 | 48 | 96.2 | 0.705 | 30 | 36 - 155 |
| Acrolein | 50.0 | 53 | 107 | 7.57 | 30 | 10 - 238 |
| Acrylonitrile | 50.0 | 49 | 97.4 | 8.72 | 30 | 66 - 141 |
| Benzene | 50.0 | 62 | 124 | 1.02 | 30 | 77 - 127 |
| Bromochloromethane | 50.0 | 59 | 118 | 1.04 | 30 | 74 - 129 |
| Bromodichloromethane | 50.0 | 58 | 117 | 2.46 | 30 | 81 - 124 |
| Bromoform | 50.0 | 58 | 115 | 1.68 | 30 | 80 - 136 |
| Bromomethane | 50.0 | 52 | 104 | 0.632 | 30 | 32 - 177 |

# FORM III LCS / LCS DUPLICATE RECOVERY

## EPA 8260C

Laboratory: York Analytical Laboratories, Inc. SDG: 16I0260

Client: Langan Engineering & Environmental Services (NYC) Project: 170301202 450 Union Street

Matrix: Soil

Batch: BI60530 Laboratory ID: BI60530-BSD1

Preparation: EPA 5035A Initial/Final: 5 g / 5 ml

| COMPOUND | SPIKE ADDED (ug/L) | LCSD CONCENTRATION (ug/L) | LCSD % REC. # | % RPD # | QC LIMITS RPD | QC LIMITS REC. |
|---|---|---|---|---|---|---|
| Carbon disulfide | 50.0 | 59 | 118 | 0.573 | 30 | 10 - 136 |
| Carbon tetrachloride | 50.0 | 57 | 113 | 1.00 | 30 | 66 - 143 |
| Chlorobenzene | 50.0 | 55 | 110 | 0.00 | 30 | 86 - 120 |
| Chloroethane | 50.0 | 52 | 104 | 1.11 | 30 | 51 - 142 |
| Chloroform | 50.0 | 59 | 118 | 0.993 | 30 | 76 - 131 |
| Chloromethane | 50.0 | 60 | 119 | 2.83 | 30 | 49 - 132 |
| cis-1,2-Dichloroethylene | 50.0 | 61 | 122 | 2.51 | 30 | 74 - 132 |
| cis-1,3-Dichloropropylene | 50.0 | 58 | 115 | 1.05 | 30 | 81 - 129 |
| Cyclohexane | 50.0 | 63 | 125 | 0.288 | 30 | 70 - 130 |
| Dibromochloromethane | 50.0 | 55 | 109 | 4.36 | 30 | 10 - 200 |
| Dibromomethane | 50.0 | 54 | 109 | 1.19 | 30 | 83 - 124 |
| Dichlorodifluoromethane | 50.0 | 48 | 96.8 | 2.47 | 30 | 28 - 158 |
| Ethyl Benzene | 50.0 | 61 | 121 | 9.24 | 30 | 84 - 125 |
| Hexachlorobutadiene | 50.0 | 58 | 116 | 6.78 | 30 | 83 - 133 |
| Isopropylbenzene | 50.0 | 55 | 110 | 3.34 | 30 | 81 - 127 |
| Methyl acetate | 50.0 | 63 | 127 | 23.0 | 30 | 41 - 143 |
| Methyl tert-butyl ether (MTBE) | 50.0 | 56 | 113 | 16.6 | 30 | 74 - 131 |
| Methylcyclohexane | 50.0 | 58 | 116 | 2.80 | 30 | 70 - 130 |
| Methylene chloride | 50.0 | 49 | 98.6 | 2.52 | 30 | 57 - 141 |
| n-Butylbenzene | 50.0 | 59 | 118 | 4.68 | 30 | 80 - 130 |
| n-Propylbenzene | 50.0 | 55 | 109 | 0.716 | 30 | 74 - 136 |
| o-Xylene | 50.0 | 55 | 111 | 0.725 | 30 | 83 - 123 |
| p- & m- Xylenes | 100 | 120 | 118 | 6.16 | 30 | 82 - 128 |
| p-Isopropyltoluene | 50.0 | 56 | 112 | 2.38 | 30 | 85 - 125 |
| sec-Butylbenzene | 50.0 | 53 | 105 | 2.85 | 30 | 83 - 125 |
| Styrene | 50.0 | 62 | 123 | 0.537 | 30 | 86 - 126 |
| tert-Butyl alcohol (TBA) | 50.0 | 45 | 90.0 | 1.91 | 30 | 70 - 130 |
| tert-Butylbenzene | 50.0 | 50 | 100 | 1.08 | 30 | 80 - 127 |
| Tetrachloroethylene | 50.0 | 58 | 117 | 5.81 | 30 | 80 - 129 |
| Toluene | 50.0 | 58 | 117 | 0.790 | 30 | 85 - 121 |

# FORM III LCS / LCS DUPLICATE RECOVERY

## EPA 8260C

| | | | |
|---|---|---|---|
| Laboratory: | York Analytical Laboratories, Inc. | SDG: | 16I0260 |
| Client: | Langan Engineering & Environmental Services (NYC) | Project: | 170301202 450 Union Street |
| Matrix: | Soil | | |
| Batch: | BI60530 | Laboratory ID: | BI60530-BSD1 |
| Preparation: | EPA 5035A | Initial/Final: | 5 g / 5 ml |

| COMPOUND | SPIKE ADDED (ug/L) | LCSD CONCENTRATION (ug/L) | LCSD % REC. # | % RPD # | QC LIMITS RPD | QC LIMITS REC. |
|---|---|---|---|---|---|---|
| trans-1,2-Dichloroethylene | 50.0 | 60 | 120 | 22.7 | 30 | 72 - 132 |
| trans-1,3-Dichloropropylene | 50.0 | 57 | 114 | 4.87 | 30 | 78 - 132 |
| Trichloroethylene | 50.0 | 56 | 111 | 0.305 | 30 | 84 - 123 |
| Trichlorofluoromethane | 50.0 | 48 | 95.8 | 1.15 | 30 | 62 - 140 |
| Vinyl Chloride | 50.0 | 49 | 98.8 | 0.711 | 30 | 52 - 130 |

# Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

**FORM I**

# METHOD BLANK DATA SHEET

## EPA 8260C

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | York Analytical Laboratories, Inc. | | | SDG: | 16I0260 |
| Client: | Langan Engineering & Environmental Services (NYC) | | | Project: | 170301202 450 Union Street |
| Matrix: | Soil | Laboratory ID: | BI60530-BLK1 | File ID: | V5387480.D |
| Prepared: | 09/14/16 08:26 | Preparation: | EPA 5035A | Initial/Final: | 5 g / 5 ml |
| Analyzed: | 09/14/16 11:10 | Instrument: | VOA No. 5 | | |
| Batch: | BI60530 | Sequence: | Y6I1422 | Calibration: | YH60024 |

| CAS NO. | COMPOUND | CONC. (mg/kg wet) | Q |
|---|---|---|---|
| 630-20-6 | 1,1,1,2-Tetrachloroethane | 0.0050 | U |
| 71-55-6 | 1,1,1-Trichloroethane | 0.0050 | U |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 0.0050 | U |
| 76-13-1 | 1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113) | 0.0050 | U |
| 79-00-5 | 1,1,2-Trichloroethane | 0.0050 | U |
| 75-34-3 | 1,1-Dichloroethane | 0.0050 | U |
| 75-35-4 | 1,1-Dichloroethylene | 0.0050 | U |
| 87-61-6 | 1,2,3-Trichlorobenzene | 0.0050 | U |
| 120-82-1 | 1,2,4-Trichlorobenzene | 0.0050 | U |
| 95-63-6 | 1,2,4-Trimethylbenzene | 0.0050 | U |
| 96-12-8 | 1,2-Dibromo-3-chloropropane | 0.0050 | U |
| 106-93-4 | 1,2-Dibromoethane | 0.0050 | U |
| 95-50-1 | 1,2-Dichlorobenzene | 0.0050 | U |
| 107-06-2 | 1,2-Dichloroethane | 0.0050 | U |
| 78-87-5 | 1,2-Dichloropropane | 0.0050 | U |
| 108-67-8 | 1,3,5-Trimethylbenzene | 0.0050 | U |
| 541-73-1 | 1,3-Dichlorobenzene | 0.0050 | U |
| 106-46-7 | 1,4-Dichlorobenzene | 0.0050 | U |
| 123-91-1 | 1,4-Dioxane | 0.10 | U |
| 78-93-3 | 2-Butanone | 0.0050 | U |
| 591-78-6 | 2-Hexanone | 0.0050 | U |
| 108-10-1 | 4-Methyl-2-pentanone | 0.0050 | U |
| 67-64-1 | Acetone | 0.010 | U |
| 107-02-8 | Acrolein | 0.010 | U |
| 107-13-1 | Acrylonitrile | 0.0050 | U |
| 71-43-2 | Benzene | 0.0050 | U |
| 74-97-5 | Bromochloromethane | 0.0050 | U |
| 75-27-4 | Bromodichloromethane | 0.0050 | U |
| 75-25-2 | Bromoform | 0.0050 | U |
| 74-83-9 | Bromomethane | 0.0050 | U |

**FORM I**

# METHOD BLANK DATA SHEET

## EPA 8260C

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | York Analytical Laboratories, Inc. | | | SDG: | 16I0260 |
| Client: | Langan Engineering & Environmental Services (NYC) | | | Project: | 170301202 450 Union Street |
| Matrix: | Soil | Laboratory ID: | BI60530-BLK1 | File ID: | V5387480.D |
| Prepared: | 09/14/16 08:26 | Preparation: | EPA 5035A | Initial/Final: | 5 g / 5 ml |
| Analyzed: | 09/14/16 11:10 | Instrument: | VOA No. 5 | | |
| Batch: | BI60530 | Sequence: | Y6I1422 | Calibration: | YH60024 |

| CAS NO. | COMPOUND | CONC. (mg/kg wet) | Q |
|---|---|---|---|
| 75-15-0 | Carbon disulfide | 0.0050 | U |
| 56-23-5 | Carbon tetrachloride | 0.0050 | U |
| 108-90-7 | Chlorobenzene | 0.0050 | U |
| 75-00-3 | Chloroethane | 0.0050 | U |
| 67-66-3 | Chloroform | 0.0050 | U |
| 74-87-3 | Chloromethane | 0.0050 | U |
| 156-59-2 | cis-1,2-Dichloroethylene | 0.0050 | U |
| 10061-01-5 | cis-1,3-Dichloropropylene | 0.0050 | U |
| 110-82-7 | Cyclohexane | 0.0050 | U |
| 124-48-1 | Dibromochloromethane | 0.0050 | U |
| 74-95-3 | Dibromomethane | 0.0050 | U |
| 75-71-8 | Dichlorodifluoromethane | 0.0050 | U |
| 100-41-4 | Ethyl Benzene | 0.0050 | U |
| 87-68-3 | Hexachlorobutadiene | 0.0050 | U |
| 98-82-8 | Isopropylbenzene | 0.0050 | U |
| 79-20-9 | Methyl acetate | 0.0050 | U |
| 1634-04-4 | Methyl tert-butyl ether (MTBE) | 0.0050 | U |
| 108-87-2 | Methylcyclohexane | 0.0050 | U |
| 75-09-2 | Methylene chloride | 0.010 | U |
| 104-51-8 | n-Butylbenzene | 0.0050 | U |
| 103-65-1 | n-Propylbenzene | 0.0050 | U |
| 95-47-6 | o-Xylene | 0.0050 | U |
| 179601-23-1 | p- & m- Xylenes | 0.010 | U |
| 99-87-6 | p-Isopropyltoluene | 0.0050 | U |
| 135-98-8 | sec-Butylbenzene | 0.0050 | U |
| 100-42-5 | Styrene | 0.0050 | U |
| 75-65-0 | tert-Butyl alcohol (TBA) | 0.0050 | U |
| 98-06-6 | tert-Butylbenzene | 0.0050 | U |
| 127-18-4 | Tetrachloroethylene | 0.0050 | U |
| 108-88-3 | Toluene | 0.0050 | U |

**FORM I**

# METHOD BLANK DATA SHEET

## EPA 8260C

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | York Analytical Laboratories, Inc. | | | SDG: | 16I0260 |
| Client: | Langan Engineering & Environmental Services (NYC) | | | Project: | 170301202 450 Union Street |
| Matrix: | Soil | Laboratory ID: | BI60530-BLK1 | File ID: | V5387480.D |
| Prepared: | 09/14/16 08:26 | Preparation: | EPA 5035A | Initial/Final: | 5 g / 5 ml |
| Analyzed: | 09/14/16 11:10 | Instrument: | VOA No. 5 | | |
| Batch: | BI60530 | Sequence: | Y6I1422 | Calibration: | YH60024 |

| CAS NO. | COMPOUND | CONC. (mg/kg wet) | Q |
|---|---|---|---|
| 156-60-5 | trans-1,2-Dichloroethylene | 0.0050 | U |
| 10061-02-6 | trans-1,3-Dichloropropylene | 0.0050 | U |
| 79-01-6 | Trichloroethylene | 0.0050 | U |
| 75-69-4 | Trichlorofluoromethane | 0.0050 | U |
| 75-01-4 | Vinyl Chloride | 0.0050 | U |
| 1330-20-7 | Xylenes, Total | 0.015 | U |

| SYSTEM MONITORING COMPOUND | ADDED (ug/L) | CONC (ug/L) | % REC | QC LIMITS | Q |
|---|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 50.0 | 46.8 | 93.7 | 77 - 125 | |
| Toluene-d8 | 50.0 | 48.9 | 97.7 | 85 - 120 | |
| p-Bromofluorobenzene | 50.0 | 50.6 | 101 | 76 - 130 | |

**FORM I**

# METHOD BLANK DATA SHEET

## EPA 8260C

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | York Analytical Laboratories, Inc. | | | SDG: | 16I0260 |
| Client: | Langan Engineering & Environmental Services (NYC) | | | Project: | 170301202 450 Union Street |
| Matrix: | Soil | Laboratory ID: | BI60530-BLK2 | File ID: | V5387481.D |
| Prepared: | 09/14/16 08:26 | Preparation: | EPA 5035A | Initial/Final: | 5 g / 5 ml |
| Analyzed: | 09/14/16 11:44 | Instrument: | VOA No. 5 | | |
| Batch: | BI60530 | Sequence: | Y6I1422 | Calibration: | YH60024 |

| CAS NO. | COMPOUND | CONC. (mg/kg wet) | Q |
|---|---|---|---|
| 630-20-6 | 1,1,1,2-Tetrachloroethane | 0.0050 | U |
| 71-55-6 | 1,1,1-Trichloroethane | 0.0050 | U |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 0.0050 | U |
| 76-13-1 | 1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113) | 0.0050 | U |
| 79-00-5 | 1,1,2-Trichloroethane | 0.0050 | U |
| 75-34-3 | 1,1-Dichloroethane | 0.0050 | U |
| 75-35-4 | 1,1-Dichloroethylene | 0.0050 | U |
| 87-61-6 | 1,2,3-Trichlorobenzene | 0.0050 | U |
| 120-82-1 | 1,2,4-Trichlorobenzene | 0.0050 | U |
| 95-63-6 | 1,2,4-Trimethylbenzene | 0.0050 | U |
| 96-12-8 | 1,2-Dibromo-3-chloropropane | 0.0050 | U |
| 106-93-4 | 1,2-Dibromoethane | 0.0050 | U |
| 95-50-1 | 1,2-Dichlorobenzene | 0.0050 | U |
| 107-06-2 | 1,2-Dichloroethane | 0.0050 | U |
| 78-87-5 | 1,2-Dichloropropane | 0.0050 | U |
| 108-67-8 | 1,3,5-Trimethylbenzene | 0.0050 | U |
| 541-73-1 | 1,3-Dichlorobenzene | 0.0050 | U |
| 106-46-7 | 1,4-Dichlorobenzene | 0.0050 | U |
| 123-91-1 | 1,4-Dioxane | 0.10 | U |
| 78-93-3 | 2-Butanone | 0.0050 | U |
| 591-78-6 | 2-Hexanone | 0.0050 | U |
| 108-10-1 | 4-Methyl-2-pentanone | 0.0050 | U |
| 67-64-1 | Acetone | 0.010 | U |
| 107-02-8 | Acrolein | 0.010 | U |
| 107-13-1 | Acrylonitrile | 0.0050 | U |
| 71-43-2 | Benzene | 0.0050 | U |
| 74-97-5 | Bromochloromethane | 0.0050 | U |
| 75-27-4 | Bromodichloromethane | 0.0050 | U |
| 75-25-2 | Bromoform | 0.0050 | U |
| 74-83-9 | Bromomethane | 0.0050 | U |

**FORM I**

# METHOD BLANK DATA SHEET

## EPA 8260C

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | York Analytical Laboratories, Inc. | | | SDG: | 16I0260 |
| Client: | Langan Engineering & Environmental Services (NYC) | | | Project: | 170301202 450 Union Street |
| Matrix: | Soil | Laboratory ID: | BI60530-BLK2 | File ID: | V5387481.D |
| Prepared: | 09/14/16 08:26 | Preparation: | EPA 5035A | Initial/Final: | 5 g / 5 ml |
| Analyzed: | 09/14/16 11:44 | Instrument: | VOA No. 5 | | |
| Batch: | BI60530 | Sequence: | Y6I1422 | Calibration: | YH60024 |

| CAS NO. | COMPOUND | CONC. (mg/kg wet) | Q |
|---|---|---|---|
| 75-15-0 | Carbon disulfide | 0.0050 | U |
| 56-23-5 | Carbon tetrachloride | 0.0050 | U |
| 108-90-7 | Chlorobenzene | 0.0050 | U |
| 75-00-3 | Chloroethane | 0.0050 | U |
| 67-66-3 | Chloroform | 0.0050 | U |
| 74-87-3 | Chloromethane | 0.0050 | U |
| 156-59-2 | cis-1,2-Dichloroethylene | 0.0050 | U |
| 10061-01-5 | cis-1,3-Dichloropropylene | 0.0050 | U |
| 110-82-7 | Cyclohexane | 0.0050 | U |
| 124-48-1 | Dibromochloromethane | 0.0050 | U |
| 74-95-3 | Dibromomethane | 0.0050 | U |
| 75-71-8 | Dichlorodifluoromethane | 0.0050 | U |
| 100-41-4 | Ethyl Benzene | 0.0050 | U |
| 87-68-3 | Hexachlorobutadiene | 0.0050 | U |
| 98-82-8 | Isopropylbenzene | 0.0050 | U |
| 79-20-9 | Methyl acetate | 0.0050 | U |
| 1634-04-4 | Methyl tert-butyl ether (MTBE) | 0.0050 | U |
| 108-87-2 | Methylcyclohexane | 0.0050 | U |
| 75-09-2 | Methylene chloride | 0.010 | U |
| 104-51-8 | n-Butylbenzene | 0.0050 | U |
| 103-65-1 | n-Propylbenzene | 0.0050 | U |
| 95-47-6 | o-Xylene | 0.0050 | U |
| 179601-23-1 | p- & m- Xylenes | 0.010 | U |
| 99-87-6 | p-Isopropyltoluene | 0.0050 | U |
| 135-98-8 | sec-Butylbenzene | 0.0050 | U |
| 100-42-5 | Styrene | 0.0050 | U |
| 75-65-0 | tert-Butyl alcohol (TBA) | 0.0050 | U |
| 98-06-6 | tert-Butylbenzene | 0.0050 | U |
| 127-18-4 | Tetrachloroethylene | 0.0050 | U |
| 108-88-3 | Toluene | 0.0050 | U |

**FORM I**

# METHOD BLANK DATA SHEET

## EPA 8260C

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | York Analytical Laboratories, Inc. | | | SDG: | 16I0260 |
| Client: | Langan Engineering & Environmental Services (NYC) | | | Project: | 170301202 450 Union Street |
| Matrix: | Soil | Laboratory ID: | BI60530-BLK2 | File ID: | V5387481.D |
| Prepared: | 09/14/16 08:26 | Preparation: | EPA 5035A | Initial/Final: | 5 g / 5 ml |
| Analyzed: | 09/14/16 11:44 | Instrument: | VOA No. 5 | | |
| Batch: | BI60530 | Sequence: | Y6I1422 | Calibration: | YH60024 |

| CAS NO. | COMPOUND | CONC. (mg/kg wet) | Q |
|---|---|---|---|
| 156-60-5 | trans-1,2-Dichloroethylene | 0.0050 | U |
| 10061-02-6 | trans-1,3-Dichloropropylene | 0.0050 | U |
| 79-01-6 | Trichloroethylene | 0.0050 | U |
| 75-69-4 | Trichlorofluoromethane | 0.0050 | U |
| 75-01-4 | Vinyl Chloride | 0.0050 | U |
| 1330-20-7 | Xylenes, Total | 0.015 | U |

| SYSTEM MONITORING COMPOUND | ADDED (ug/L) | CONC (ug/L) | % REC | QC LIMITS | Q |
|---|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 50.0 | 46.5 | 92.9 | 77 - 125 | |
| Toluene-d8 | 50.0 | 46.8 | 93.6 | 85 - 120 | |
| p-Bromofluorobenzene | 50.0 | 51.3 | 103 | 76 - 130 | |

**FORM IV** **PREPARATION BATCH SUMMARY**

**EPA 8260C**

Laboratory: York Analytical Laboratories, Inc. SDG: 16I0260

Client: Langan Engineering & Environmental Services (NYC) Project: 170301202 450 Union Street

Batch: BI60530 Batch Matrix: Soil Preparation: EPA 5035A

| SAMPLE NAME | LAB SAMPLE ID | LAB FILE ID | DATE PREPARED | OBSERVATIONS |
|---|---|---|---|---|
| V01_0-1.5 | 16I0260-01 | V5387484.D | 09/14/16 08:26 | From BI60388 by OW on 09/14/2016 |
| Blank | BI60530-BLK1 | V5387480.D | 09/14/16 08:26 | |
| Blank | BI60530-BLK2 | V5387481.D | 09/14/16 08:26 | Added 9/14/2016 by SS |
| LCS | BI60530-BS1 | V5387477.D | 09/14/16 08:26 | |
| LCS Dup | BI60530-BSD1 | V5387478.D | 09/14/16 08:26 | |

**Form 5A**

# Volatile Organic Instrument Performance Check

**Bromofluorobenzene (BFB)**

Lab Name: York Analytical Laboratories, Inc. SDG: 16I0260
Client: Langan Engineering & Environmental Services (NYC) Project: 170301202 450 Union Street
Lab File ID: V5387145.D BFB Injection Date: 08/25/16
Instrument ID: VOA No. 5 BFB InjectionTime: 14:14
Calibration: V5C00162 Sequence: QBV5082516A

| m/e | Ion Abundance Criteria | % Relative Abundance | | |
|---|---|---|---|---|
| 50 | 15.0-40.0% of mass 95 | 23.0 | | |
| 75 | 30.0-60.0% of mass 95 | 57.2 | | |
| 95 | Base peak, 100% relative abundance | 100.0 | | |
| 96 | 5.0-9.0% of mass 95 | 7.6 | | |
| 173 | Less than 2.0% of mass 174 | 0.0 | 87.5 | **1** |
| 174 | 50.0-100.0% of mass 95 | 87.5 | | |
| 175 | 5.0-9.0% of mass 174 | 7.9 | 87.5 | **1** |
| 176 | 95.0-101.0% of mass 174 | 99.3 | 87.5 | **1** |
| 177 | 5.0-9.0% of mass 176 | 6.7 | 99.3 | **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 |
|---|---|---|---|---|---|
| 1 | | 5 ppb VOA CALIBRATION STD | V5387149.D | 08/25/16 | 17:05 |
| 2 | | 10 ppb VOA CALIBRATION STD | V5387150.D | 08/25/16 | 17:38 |
| 3 | | 20 ppb VOA CALIBRATION STD | V5387151.D | 08/25/16 | 18:12 |
| 4 | | 50 ppb VOA CALIBRATION STD | V5387152.D | 08/25/16 | 18:46 |
| 5 | | 100 ppb VOA CALIBRATION STD | V5387153.D | 08/25/16 | 19:20 |
| 6 | | 200 ppb VOA CALIBRATION STD | V5387154.D | 08/25/16 | 19:54 |
| 7 | | ICV | V5387156.D | 08/25/16 | 21:01 |
| 8 | | | | | |
| 9 | | | | | |
| 10 | | | | | |
| 11 | | | | | |
| 12 | | | | | |
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| 14 | | | | | |
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| 18 | | | | | |
| 19 | | | | | |
| 20 | | | | | |
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| 22 | | | | | |

**Form 5A**

# Volatile Organic Instrument Performance Check

**Bromofluorobenzene (BFB)**

Lab Name: York Analytical Laboratories, Inc.
Client: Langan Engineering & Environmental Services (NYC)
Lab File ID: V5387475.D
Instrument ID: VOA No. 5
Calibration: V5C00162

SDG: 16I0260
Project: 170301202 450 Union Street
BFB Injection Date: 09/14/16
BFB InjectionTime: 08:18
Sequence: QBV5091416A

| m/e | Ion Abundance Criteria | % Relative Abundance | |
|---|---|---|---|
| 50 | 15.0-40.0% of mass 95 | 20.4 | |
| 75 | 30.0-60.0% of mass 95 | 54.3 | |
| 95 | Base peak, 100% relative abundance | 100.0 | |
| 96 | 5.0-9.0% of mass 95 | 6.8 | |
| 173 | Less than 2.0% of mass 174 | 0.0 | 88.5 **1** |
| 174 | 50.0-100.0% of mass 95 | 88.5 | |
| 175 | 5.0-9.0% of mass 174 | 7.8 | 88.5 **1** |
| 176 | 95.0-101.0% of mass 174 | 97.1 | 88.5 **1** |
| 177 | 5.0-9.0% of mass 176 | 6.5 | 97.1 **2** |

**1- Value is % mass 174** **2-Value is % mass 176**

This check applies to the following samples, MS, MSD, blanks and standards

| | Client Sample ID | Lab Sample ID | Lab File ID | Date Analyzed | Time Analyzed |
|---|---|---|---|---|---|
| 1 | | 50ppb VOA CAL CHECK | V5387476.D | 09/14/16 | 08:52 |
| 2 | | BI60530-BS1 | V5387477.D | 9/14/2016 | 9:28 |
| 3 | | BI60530-BSD1 | V5387478.D | 9/14/2016 | 10:02 |
| 4 | | BI60530-BLK1 | V5387480.D | 9/14/2016 | 11:10 |
| 5 | | BI60530-BLK2 | V5387481.D | 9/14/2016 | 11:44 |
| 6 | V01_0-1.5 | 16I0260-01 | V5387484.D | 9/14/2016 | 13:25 |
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| 22 | | | | | |

**Form 8A**

# Volatile Internal Standard Area and RT Summary

Lab Name: York Analytical Laboratories, Inc
Client: Langan Engineering & Environmental Services (NYC)
Sequence: QBV5091416A
Calibration: V5C00162
Lab File ID: V5387476.D

SDG: 16I0260
Project: 170301202 450 Union Street
Instrument ID: VOA No. 5
Injection Date: 09/14/16
InjectionTime: 08:52

| | IS 1 (FBZ) | | IS 2 (CBZ) | | IS 3 (DCB) | |
|---|---|---|---|---|---|---|
| | Area | RT | Area | RT | Area | RT |
| 12 Hour Std | 123156 | 5.79 | 426764 | 8.81 | 162270 | 11.79 |
| Upper Limit | 246312 | 6.29 | 853528 | 9.31 | 324540 | 12.29 |
| Lower Limit | 61578 | 5.29 | 213382 | 8.31 | 81135 | 11.29 |
| **Client Sample ID** | | | | | | |
| BI60530-BS1 | 130420 | 5.79 | 447038 | 8.82 | 165781 | 11.79 |
| BI60530-BSD1 | 127235 | 5.79 | 428449 | 8.82 | 162563 | 11.79 |
| BI60530-BLK1 | 131095 | 5.79 | 469258 | 8.82 | 180325 | 11.79 |
| BI60530-BLK2 | 123367 | 5.79 | 461323 | 8.82 | 170128 | 11.79 |
| V01_0-1.5 | 127313 | 5.79 | 474455 | 8.82 | 186081 | 11.79 |
| | | | | | | |
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| | | | | | | |

IS 1 (FBZ) = Fluorobenzene
IS 2 (CBZ) = Chlorobenzene-d5
IS 3 (DCB) = 1,2-Dichlorobenzene-d4

Area Upper Limit +100% of internal standard area
Area Lower Limit -50% of internal standard area
RT Upper Limit +0.50 minutes of internal standard RT
RT Upper Limit -0.50 minutes of internal standard RT

* = Values outside of QC limits

Form VIII-VOA

# METHOD DETECTION AND REPORTING LIMITS

## EPA 8260C

**Laboratory:** York Analytical Laboratories, Inc. **SDG:** 16I0260

**Client:** Langan Engineering & Environmental Services (NYC) **Project:** 170301202 450 Union Street

**Matrix:** Soil **Instrument:** VOA No. 5

| Analyte | LOD | LOQ | Units |
|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 0.0025 | 0.0050 | mg/kg |
| | 0.20 | 0.50 | ug/L |
| 1,1,1-Trichloroethane | 0.20 | 0.50 | ug/L |
| | 0.0025 | 0.0050 | mg/kg |
| 1,1,2,2-Tetrachloroethane | 0.0025 | 0.0050 | mg/kg |
| | 0.20 | 0.50 | ug/L |
| 1,1,2-Trichloro-1,2,2-trifluoroethane (Fr | 0.0025 | 0.0050 | mg/kg |
| | 0.20 | 0.50 | ug/L |
| 1,1,2-Trichloroethane | 0.20 | 0.50 | ug/L |
| | 0.0025 | 0.0050 | mg/kg |
| 1,1-Dichloroethane | 0.0025 | 0.0050 | mg/kg |
| | 0.20 | 0.50 | ug/L |
| 1,1-Dichloroethylene | 0.0025 | 0.0050 | mg/kg |
| | 0.20 | 0.50 | ug/L |
| 1,2,3-Trichlorobenzene | 0.0025 | 0.0050 | mg/kg |
| | 0.20 | 0.50 | ug/L |
| 1,2,3-Trichloropropane | 0.20 | 0.50 | ug/L |
| 1,2,4-Trichlorobenzene | 0.0025 | 0.0050 | mg/kg |
| | 0.20 | 0.50 | ug/L |
| 1,2,4-Trimethylbenzene | 0.0025 | 0.0050 | mg/kg |
| | 0.20 | 0.50 | ug/L |
| 1,2-Dibromo-3-chloropropane | 0.0025 | 0.0050 | mg/kg |
| | 0.20 | 0.50 | ug/L |
| 1,2-Dibromoethane | 0.0025 | 0.0050 | mg/kg |
| | 0.20 | 0.50 | ug/L |
| 1,2-Dichlorobenzene | 0.0025 | 0.0050 | mg/kg |
| | 0.20 | 0.50 | ug/L |
| 1,2-Dichloroethane | 0.0025 | 0.0050 | mg/kg |
| | 0.20 | 0.50 | ug/L |
| 1,2-Dichloropropane | 0.0025 | 0.0050 | mg/kg |
| | 0.20 | 0.50 | ug/L |
| 1,3,5-Trimethylbenzene | 0.0025 | 0.0050 | mg/kg |
| | 0.20 | 0.50 | ug/L |
| 1,3-Dichlorobenzene | 0.0025 | 0.0050 | mg/kg |
| | 0.20 | 0.50 | ug/L |
| 1,4-Dichlorobenzene | 0.0025 | 0.0050 | mg/kg |
| | 0.20 | 0.50 | ug/L |

# METHOD DETECTION AND REPORTING LIMITS

## EPA 8260C

**Laboratory:** York Analytical Laboratories, Inc. **SDG:** 16I0260

**Client:** Langan Engineering & Environmental Services (NYC) **Project:** 170301202 450 Union Street

**Matrix:** Soil **Instrument:** VOA No. 5

| Analyte | LOD | LOQ | Units |
|---|---|---|---|
| 1,4-Dioxane | 0.050 | 0.10 | mg/kg |
| | 40 | 80 | ug/L |
| 2-Butanone | 0.20 | 0.50 | ug/L |
| | 0.0025 | 0.0050 | mg/kg |
| 2-Hexanone | 0.20 | 0.50 | ug/L |
| | 0.0025 | 0.0050 | mg/kg |
| 4-Methyl-2-pentanone | 0.0025 | 0.0050 | mg/kg |
| | 0.20 | 0.50 | ug/L |
| Acetone | 1.0 | 2.0 | ug/L |
| | 0.0050 | 0.010 | mg/kg |
| Acrolein | 0.20 | 0.50 | ug/L |
| | 0.0050 | 0.010 | mg/kg |
| Acrylonitrile | 0.0025 | 0.0050 | mg/kg |
| | 0.20 | 0.50 | ug/L |
| Benzene | 0.20 | 0.50 | ug/L |
| | 0.0025 | 0.0050 | mg/kg |
| Bromochloromethane | 0.0025 | 0.0050 | mg/kg |
| | 0.20 | 0.50 | ug/L |
| Bromodichloromethane | 0.0025 | 0.0050 | mg/kg |
| | 0.20 | 0.50 | ug/L |
| Bromoform | 0.20 | 0.50 | ug/L |
| | 0.0025 | 0.0050 | mg/kg |
| Bromomethane | 0.20 | 0.50 | ug/L |
| | 0.0025 | 0.0050 | mg/kg |
| Carbon disulfide | 0.20 | 0.50 | ug/L |
| | 0.0025 | 0.0050 | mg/kg |
| Carbon tetrachloride | 0.20 | 0.50 | ug/L |
| | 0.0025 | 0.0050 | mg/kg |
| Chlorobenzene | 0.0025 | 0.0050 | mg/kg |
| | 0.20 | 0.50 | ug/L |
| Chloroethane | 0.20 | 0.50 | ug/L |
| | 0.0025 | 0.0050 | mg/kg |
| Chloroform | 0.20 | 0.50 | ug/L |
| | 0.0025 | 0.0050 | mg/kg |
| Chloromethane | 0.20 | 0.50 | ug/L |
| | 0.0025 | 0.0050 | mg/kg |
| cis-1,2-Dichloroethylene | 0.20 | 0.50 | ug/L |

# METHOD DETECTION AND REPORTING LIMITS

## EPA 8260C

**Laboratory:** York Analytical Laboratories, Inc. **SDG:** 16I0260

**Client:** Langan Engineering & Environmental Services (NYC) **Project:** 170301202 450 Union Street

**Matrix:** Soil **Instrument:** VOA No. 5

| Analyte | LOD | LOQ | Units |
|---|---|---|---|
| cis-1,2-Dichloroethylene | 0.0025 | 0.0050 | mg/kg |
| cis-1,3-Dichloropropylene | 0.0025 | 0.0050 | mg/kg |
| | 0.20 | 0.50 | ug/L |
| Cyclohexane | 0.20 | 0.50 | ug/L |
| | 0.0025 | 0.0050 | mg/kg |
| Dibromochloromethane | 0.20 | 0.50 | ug/L |
| | 0.0025 | 0.0050 | mg/kg |
| Dibromomethane | 0.20 | 0.50 | ug/L |
| | 0.0025 | 0.0050 | mg/kg |
| Dichlorodifluoromethane | 0.0025 | 0.0050 | mg/kg |
| | 0.20 | 0.50 | ug/L |
| Ethyl Benzene | 0.0025 | 0.0050 | mg/kg |
| | 0.20 | 0.50 | ug/L |
| Hexachlorobutadiene | 0.0025 | 0.0050 | mg/kg |
| | 0.20 | 0.50 | ug/L |
| Isopropylbenzene | 0.0025 | 0.0050 | mg/kg |
| | 0.20 | 0.50 | ug/L |
| Methyl acetate | 0.0025 | 0.0050 | mg/kg |
| | 0.20 | 0.50 | ug/L |
| Methyl tert-butyl ether (MTBE) | 0.20 | 0.50 | ug/L |
| | 0.0025 | 0.0050 | mg/kg |
| Methylcyclohexane | 0.20 | 0.50 | ug/L |
| | 0.0025 | 0.0050 | mg/kg |
| Methylene chloride | 0.0050 | 0.010 | mg/kg |
| | 1.0 | 2.0 | ug/L |
| n-Butylbenzene | 0.0025 | 0.0050 | mg/kg |
| | 0.20 | 0.50 | ug/L |
| n-Propylbenzene | 0.0025 | 0.0050 | mg/kg |
| | 0.20 | 0.50 | ug/L |
| o-Xylene | 0.20 | 0.50 | ug/L |
| | 0.0025 | 0.0050 | mg/kg |
| p- & m- Xylenes | 0.50 | 1.0 | ug/L |
| | 0.0050 | 0.010 | mg/kg |
| p-Isopropyltoluene | 0.20 | 0.50 | ug/L |
| | 0.0025 | 0.0050 | mg/kg |
| sec-Butylbenzene | 0.0025 | 0.0050 | mg/kg |
| | 0.20 | 0.50 | ug/L |

# METHOD DETECTION AND REPORTING LIMITS

## EPA 8260C

**Laboratory:** York Analytical Laboratories, Inc. **SDG:** 16I0260

**Client:** Langan Engineering & Environmental Services (NYC) **Project:** 170301202 450 Union Street

**Matrix:** Soil **Instrument:** VOA No. 5

| Analyte | LOD | LOQ | Units |
|---|---|---|---|
| Styrene | 0.0025 | 0.0050 | mg/kg |
| | 0.20 | 0.50 | ug/L |
| tert-Butyl alcohol (TBA) | 0.0025 | 0.0050 | mg/kg |
| | 0.50 | 1.0 | ug/L |
| tert-Butylbenzene | 0.0025 | 0.0050 | mg/kg |
| | 0.20 | 0.50 | ug/L |
| Tetrachloroethylene | 0.0025 | 0.0050 | mg/kg |
| | 0.20 | 0.50 | ug/L |
| Toluene | 0.0025 | 0.0050 | mg/kg |
| | 0.20 | 0.50 | ug/L |
| trans-1,2-Dichloroethylene | 0.0025 | 0.0050 | mg/kg |
| | 0.20 | 0.50 | ug/L |
| trans-1,3-Dichloropropylene | 0.0025 | 0.0050 | mg/kg |
| | 0.20 | 0.50 | ug/L |
| Trichloroethylene | 0.0025 | 0.0050 | mg/kg |
| | 0.20 | 0.50 | ug/L |
| Trichlorofluoromethane | 0.20 | 0.50 | ug/L |
| | 0.0025 | 0.0050 | mg/kg |
| Vinyl Chloride | 0.0025 | 0.0050 | mg/kg |
| | 0.20 | 0.50 | ug/L |
| Xylenes, Total | 0.0075 | 0.015 | mg/kg |

# HOLDING TIME SUMMARY

## EPA 8260C

Laboratory: York Analytical Laboratories, Inc. SDG: 16I0260

Client: Langan Engineering & Environmental Services (NYC) Project: 170301202 450 Union Street

| Sample Name | Date Collected | Date Received | Date Prepared | Days to Prep | Max Days to Prep | Date Analyzed | Days to Analysis | Max Days to Analysis | Q |
|---|---|---|---|---|---|---|---|---|---|
| V01_0-1.5 | 09/07/16 13:00 | 09/08/16 18:45 | 09/14/16 08:26 | 6.81 | 14.00 | 09/14/16 13:25 | 7.02 | 14.00 | |

**FORM I**

# ORGANIC ANALYSIS DATA SHEET

## EPA 8260C

**V01_0-1.5**

Laboratory: York Analytical Laboratories, Inc. SDG: 16I0260

Client: Langan Engineering & Environmental Services (NYC) Project: 170301202 450 Union Street

Matrix: Soil Laboratory ID: 16I0260-01 File ID: V5387484.D

Sampled: 09/07/16 13:00 Prepared: 09/14/16 08:26 Analyzed: 09/14/16 13:25

Solids: 96.56 Preparation: EPA 5035A Initial/Final: 5.34 g / 5 ml

Batch: BI60530 Sequence: Y6I1422 Calibration: YH60024 Instrument: VOA No. 5

| CAS NO. | COMPOUND | DILUTION | CONC. (mg/kg dry) | Q |
|---|---|---|---|---|
| 630-20-6 | 1,1,1,2-Tetrachloroethane | 1 | 0.0048 | U |
| 71-55-6 | 1,1,1-Trichloroethane | 1 | 0.0048 | U |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 1 | 0.0048 | U |
| 76-13-1 | 1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113) | 1 | 0.0048 | U |
| 79-00-5 | 1,1,2-Trichloroethane | 1 | 0.0048 | U |
| 75-34-3 | 1,1-Dichloroethane | 1 | 0.0048 | U |
| 75-35-4 | 1,1-Dichloroethylene | 1 | 0.0048 | U |
| 87-61-6 | 1,2,3-Trichlorobenzene | 1 | 0.0048 | U |
| 120-82-1 | 1,2,4-Trichlorobenzene | 1 | 0.0048 | U |
| 95-63-6 | 1,2,4-Trimethylbenzene | 1 | 0.0048 | U |
| 96-12-8 | 1,2-Dibromo-3-chloropropane | 1 | 0.0048 | U |
| 106-93-4 | 1,2-Dibromoethane | 1 | 0.0048 | U |
| 95-50-1 | 1,2-Dichlorobenzene | 1 | 0.0048 | U |
| 107-06-2 | 1,2-Dichloroethane | 1 | 0.0048 | U |
| 78-87-5 | 1,2-Dichloropropane | 1 | 0.0048 | U |
| 108-67-8 | 1,3,5-Trimethylbenzene | 1 | 0.0048 | U |
| 541-73-1 | 1,3-Dichlorobenzene | 1 | 0.0048 | U |
| 106-46-7 | 1,4-Dichlorobenzene | 1 | 0.0048 | U |
| 123-91-1 | 1,4-Dioxane | 1 | 0.097 | U |
| 78-93-3 | 2-Butanone | 1 | 0.0048 | U |
| 591-78-6 | 2-Hexanone | 1 | 0.0048 | U |
| 108-10-1 | 4-Methyl-2-pentanone | 1 | 0.0048 | U |
| 67-64-1 | Acetone | 1 | 0.0097 | U |
| 107-02-8 | Acrolein | 1 | 0.0097 | U |
| 107-13-1 | Acrylonitrile | 1 | 0.0048 | U |
| 71-43-2 | Benzene | 1 | 0.0048 | U |
| 74-97-5 | Bromochloromethane | 1 | 0.0048 | U |
| 75-27-4 | Bromodichloromethane | 1 | 0.0048 | U |
| 75-25-2 | Bromoform | 1 | 0.0048 | U |
| 74-83-9 | Bromomethane | 1 | 0.0048 | U |
| 75-15-0 | Carbon disulfide | 1 | 0.0048 | U |
| 56-23-5 | Carbon tetrachloride | 1 | 0.0048 | U |
| 108-90-7 | Chlorobenzene | 1 | 0.0048 | U |
| 75-00-3 | Chloroethane | 1 | 0.0048 | U |
| 67-66-3 | Chloroform | 1 | 0.0048 | U |
| 74-87-3 | Chloromethane | 1 | 0.0048 | U |
| 156-59-2 | cis-1,2-Dichloroethylene | 1 | 0.0048 | U |
| 10061-01-5 | cis-1,3-Dichloropropylene | 1 | 0.0048 | U |
| 110-82-7 | Cyclohexane | 1 | 0.0048 | U |
| 124-48-1 | Dibromochloromethane | 1 | 0.0048 | U |

**FORM I**

# ORGANIC ANALYSIS DATA SHEET

## EPA 8260C

V01_0-1.5

Laboratory: York Analytical Laboratories, Inc. SDG: 16I0260

Client: Langan Engineering & Environmental Services (NYC) Project: 170301202 450 Union Street

Matrix: Soil Laboratory ID: 16I0260-01 File ID: V5387484.D

Sampled: 09/07/16 13:00 Prepared: 09/14/16 08:26 Analyzed: 09/14/16 13:25

Solids: 96.56 Preparation: EPA 5035A Initial/Final: 5.34 g / 5 ml

Batch: BI60530 Sequence: Y6I1422 Calibration: YH60024 Instrument: VOA No. 5

| CAS NO. | COMPOUND | DILUTION | CONC. (mg/kg dry) | Q |
|---|---|---|---|---|
| 74-95-3 | Dibromomethane | 1 | 0.0048 | U |
| 75-71-8 | Dichlorodifluoromethane | 1 | 0.0048 | U |
| 100-41-4 | Ethyl Benzene | 1 | 0.0048 | U |
| 87-68-3 | Hexachlorobutadiene | 1 | 0.0048 | U |
| 98-82-8 | Isopropylbenzene | 1 | 0.0048 | U |
| 79-20-9 | Methyl acetate | 1 | 0.0048 | U |
| 1634-04-4 | Methyl tert-butyl ether (MTBE) | 1 | 0.0048 | U |
| 108-87-2 | Methylcyclohexane | 1 | 0.0048 | U |
| 75-09-2 | Methylene chloride | 1 | 0.0097 | U |
| 104-51-8 | n-Butylbenzene | 1 | 0.0048 | U |
| 103-65-1 | n-Propylbenzene | 1 | 0.0048 | U |
| 95-47-6 | o-Xylene | 1 | 0.0048 | U |
| 179601-23-1 | p- & m- Xylenes | 1 | 0.0097 | U |
| 99-87-6 | p-Isopropyltoluene | 1 | 0.0048 | U |
| 135-98-8 | sec-Butylbenzene | 1 | 0.0048 | U |
| 100-42-5 | Styrene | 1 | 0.0048 | U |
| 75-65-0 | tert-Butyl alcohol (TBA) | 1 | 0.0048 | U |
| 98-06-6 | tert-Butylbenzene | 1 | 0.0048 | U |
| 127-18-4 | Tetrachloroethylene | 1 | 0.0048 | U |
| 108-88-3 | Toluene | 1 | 0.0048 | U |
| 156-60-5 | trans-1,2-Dichloroethylene | 1 | 0.0048 | U |
| 10061-02-6 | trans-1,3-Dichloropropylene | 1 | 0.0048 | U |
| 79-01-6 | Trichloroethylene | 1 | 0.0048 | U |
| 75-69-4 | Trichlorofluoromethane | 1 | 0.0048 | U |
| 75-01-4 | Vinyl Chloride | 1 | 0.0048 | U |
| 1330-20-7 | Xylenes, Total | 1 | 0.015 | U |

| SYSTEM MONITORING COMPOUND | ADDED (ug/L) | CONC (ug/L) | % REC | QC LIMITS | Q |
|---|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 50.0 | 46.6 | 93.3 | 77 - 125 | |
| Toluene-d8 | 50.0 | 49.8 | 99.7 | 85 - 120 | |
| p-Bromofluorobenzene | 50.0 | 48.8 | 97.7 | 76 - 130 | |

* Values outside of QC limits

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\V5091416\V5387484.D Vial: 10
Acq On : 14 Sep 2016 1:25 pm Operator: SS
Sample : 16I0260-01 Inst : VOA No. 5
Misc : QBV5091416A RE NJDEP/TCL/375 5.34g C Multiplr: 1.00
MS Integration Params: RTEINT1.P
Quant Time: Sep 15 13:43 2016 Quant Results File: V5C00162.RES

Quant Method : C:\HPCHEM\1\METHODS\V5C00162.M (RTE Integrator)
Title : VOCs BY GC/MS EPA SW846-8260
Last Update : Fri Aug 26 09:47:09 2016
Response via : Initial Calibration
DataAcq Meth : V5C0001A

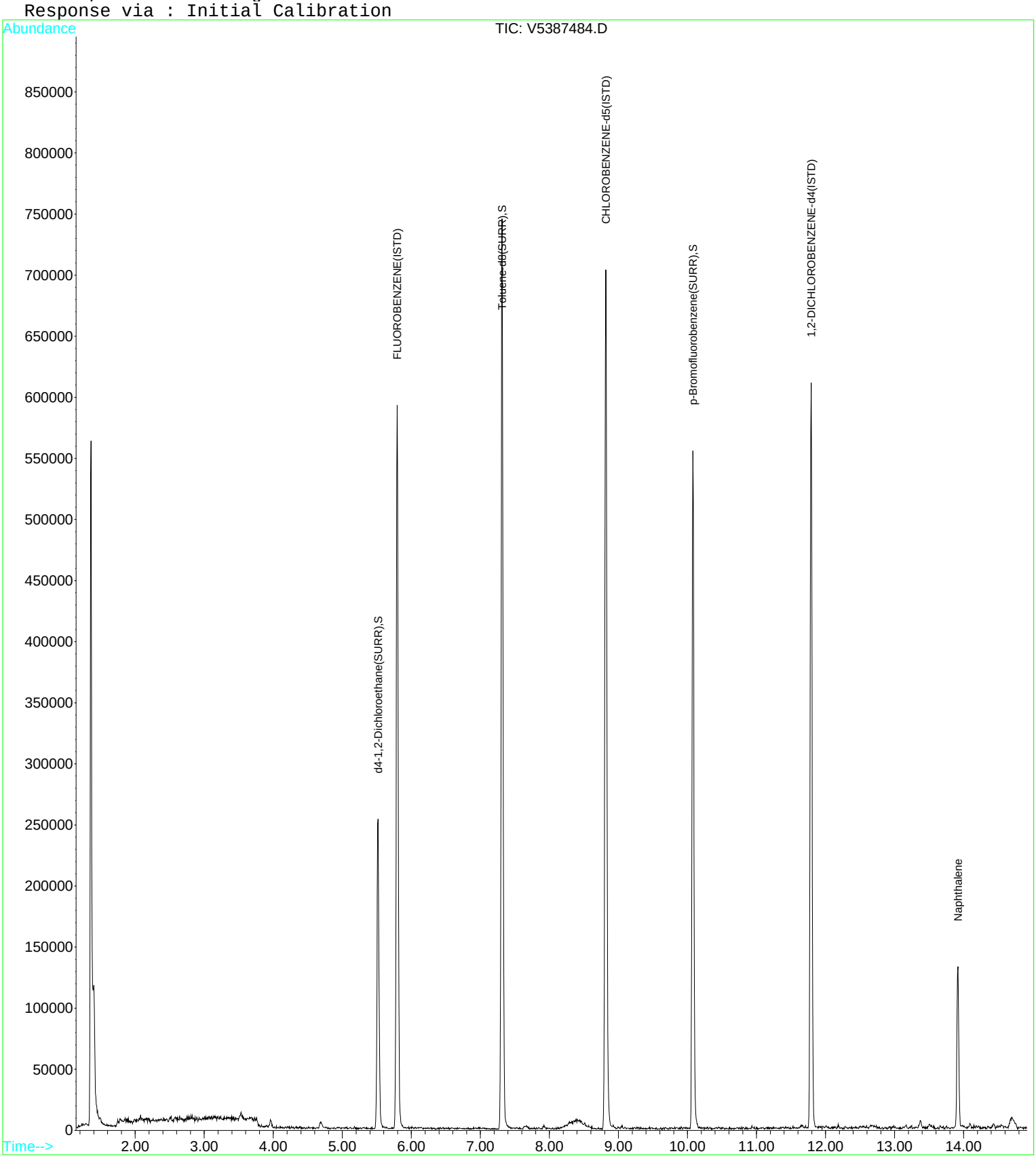
| Internal Standards | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| 1) FLUOROBENZENE(ISTD) | 5.79 | 70 | 127313 | 50.00 | ppb | | 0.00 |
| 36) CHLOROBENZENE-d5(ISTD) | 8.82 | 117 | 474455 | 50.00 | ppb | | 0.00 |
| 62) 1,2-DICHLOROBENZENE-d4(IST | 11.79 | 152 | 186081 | 50.00 | ppb | | 0.00 |
| **System Monitoring Compounds** | | | | | | | |
| 32) d4-1,2-Dichloroethane(SURR | 5.52 | 65 | 193995 | 46.64 | ppb | | 0.00 |
| Spiked Amount 50.000 | Range 64 - 122 | | Recovery = 93.28% | | | | |
| 47) Toluene-d8(SURR) | 7.31 | 98 | 496148 | 49.83 | ppb | | 0.00 |
| Spiked Amount 50.000 | Range 83 - 114 | | Recovery = 99.66% | | | | |
| 64) p-Bromofluorobenzene(SURR) | 10.08 | 174 | 180994 | 48.84 | ppb | | 0.00 |
| Spiked Amount 50.000 | Range 71 - 126 | | Recovery = 97.68% | | | | |
| **Target Compounds** | | | | | | | Qvalue |
| 8) Ethanol | 2.71 | 45 | 620 | Below Cal | | | 100 |
| 11) Acrolein | 2.99 | 56 | 431 | Below Cal | # | | 10 |
| 13) Methyl Acetate | 3.43 | 43 | 1922 | Below Cal | # | | 89 |
| 87) Naphthalene | 13.92 | 128 | 118867 | 15.17 | ppb | # | 100 |

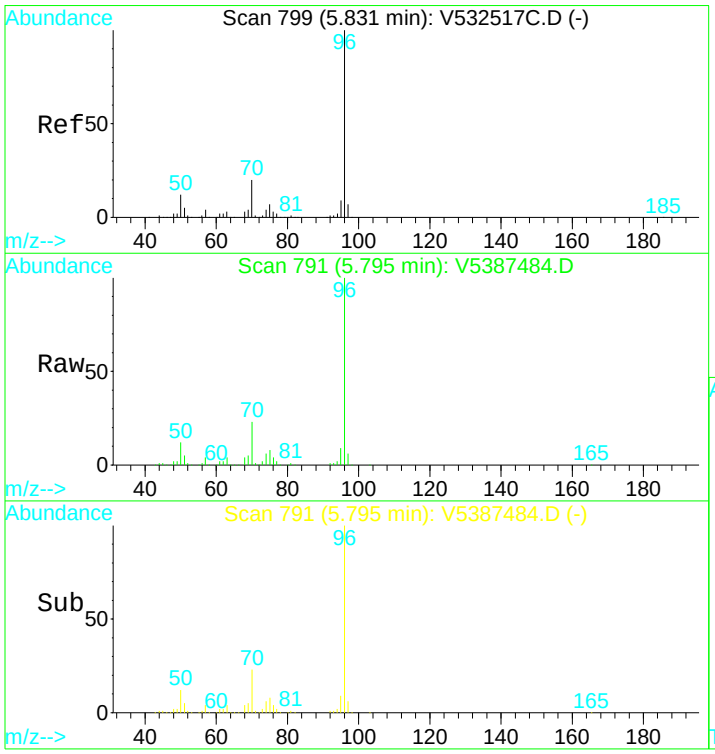
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\V5091416\V5387484.D Vial: 10
Acq On : 14 Sep 2016 1:25 pm Operator: SS
Sample : 16I0260-01 Inst : VOA No. 5
Misc : QBV5091416A RE NJDEP/TCL/375 5.34g C Multiplr: 1.00
MS Integration Params: RTEINT1.P
Quant Time: Sep 15 13:43 2016 Quant Results File: V5C00162.RES

Method : C:\HPCHEM\1\METHODS\V5C00162.M (RTE Integrator)
Title : VOCs BY GC/MS EPA SW846-8260
Last Update : Fri Aug 26 09:47:09 2016
Response via : Initial Calibration

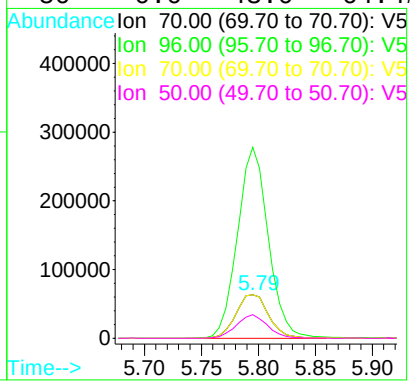


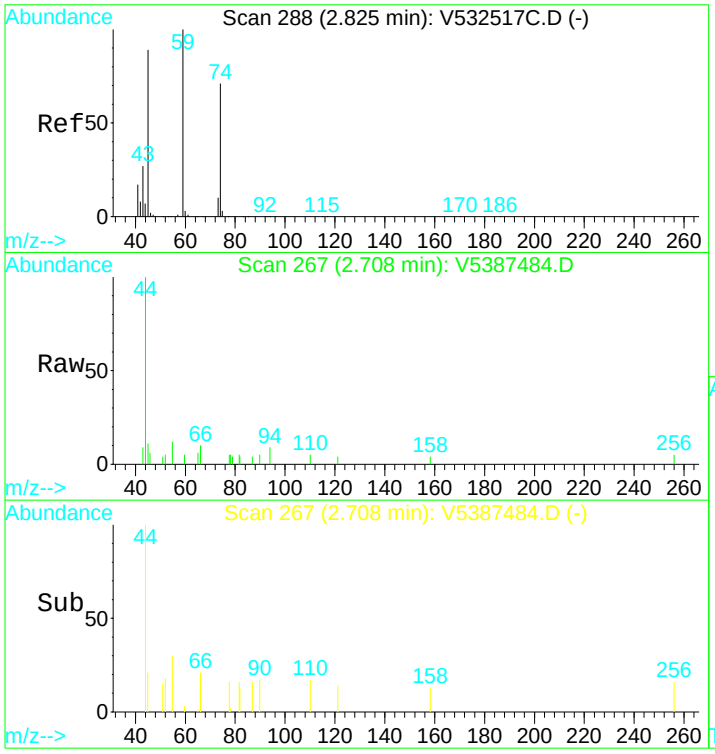



#1
FLUOROBENZENE(ISTD)
Concen: 50.00 ppb
RT: 5.79 min Scan# 791
Delta R.T. 0.00 min
Lab File: V5387484.D
Acq: 14 Sep 2016 1:25 pm

Tgt Ion: 70 Resp: 127313

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 70 | 100 | | |
| 96 | 410.8 | 0.0 | 0.0# |
| 70 | 100.0 | 80.0 | 120.0 |
| 50 | 0.0 | 43.0 | 64.4# |

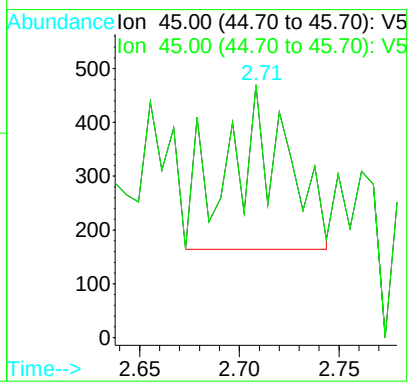


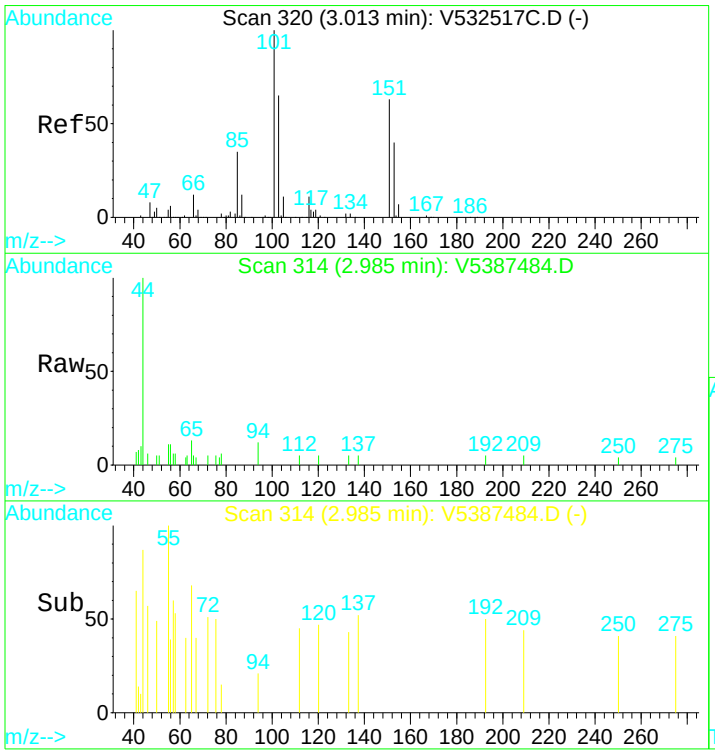




#8
Ethanol
Concen: Below Cal
RT: 2.71 min Scan# 267
Delta R.T. -0.06 min
Lab File: V5387484.D
Acq: 14 Sep 2016 1:25 pm

Tgt Ion: 45 Resp: 620

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 45 | 100 | | |
| 45 | 100.0 | 50.0 | 150.0 |

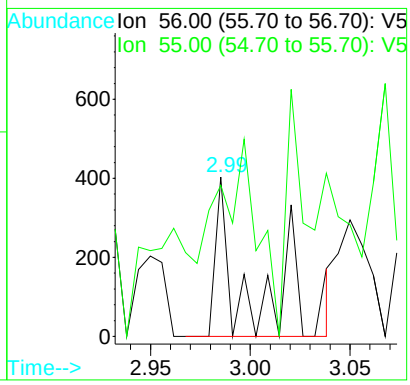


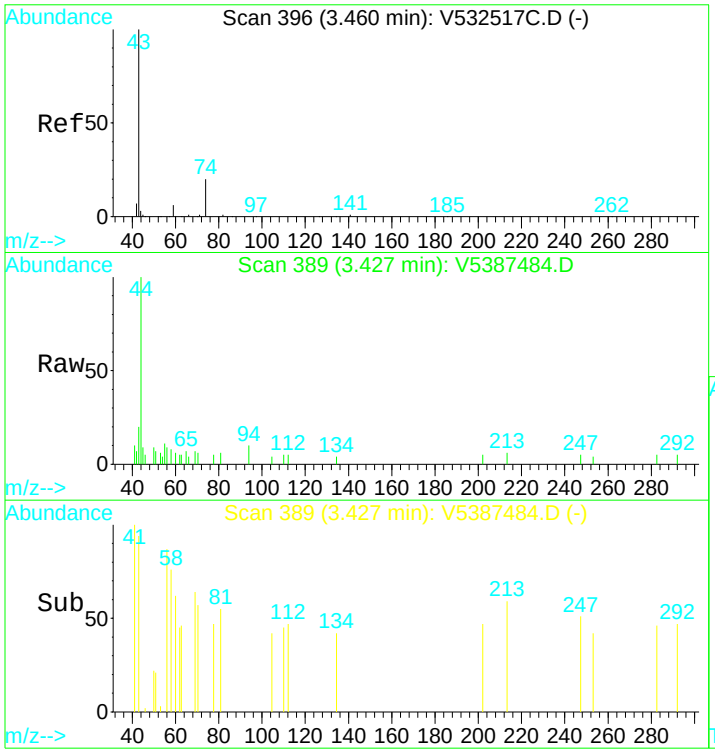



#11
Acrolein
Concen: Below Cal
RT: 2.99 min Scan# 314
Delta R.T. 0.01 min
Lab File: V5387484.D
Acq: 14 Sep 2016 1:25 pm

Tgt Ion: 56 Resp: 431

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 56 | 100 | | |
| 55 | 0.0 | 62.9 | 94.3# |

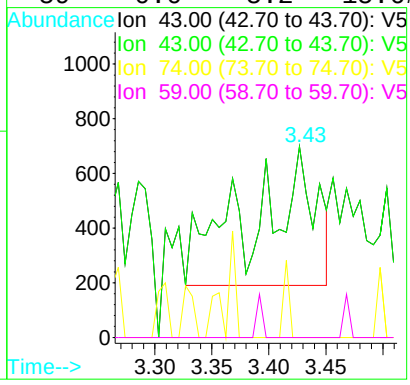


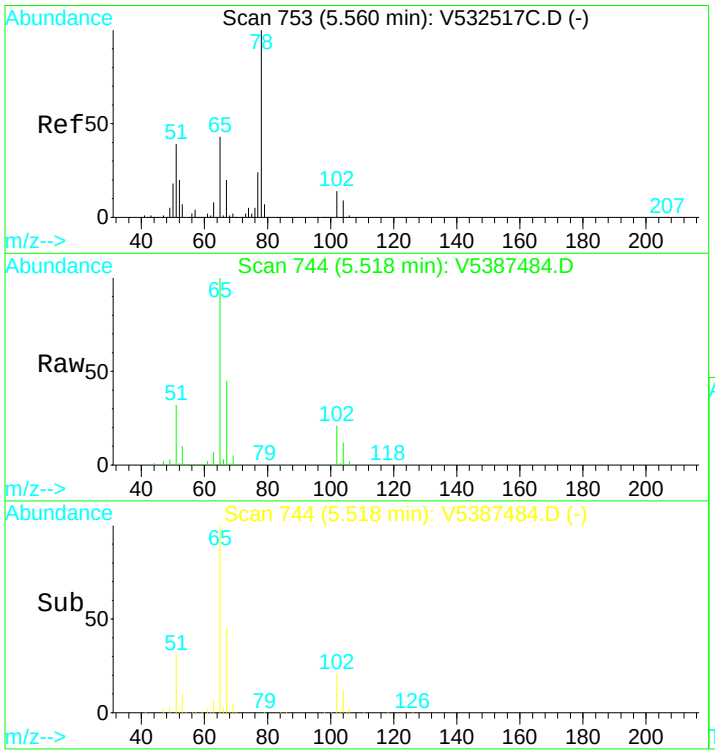




#13
Methyl Acetate
Concen: Below Cal
RT: 3.43 min Scan# 389
Delta R.T. 0.01 min
Lab File: V5387484.D
Acq: 14 Sep 2016 1:25 pm

Tgt Ion: 43 Resp: 1922

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 43 | 100.0 | 0.0 | 200.0 |
| 74 | 0.0 | 11.8 | 35.3# |
| 59 | 0.0 | 5.2 | 15.6# |

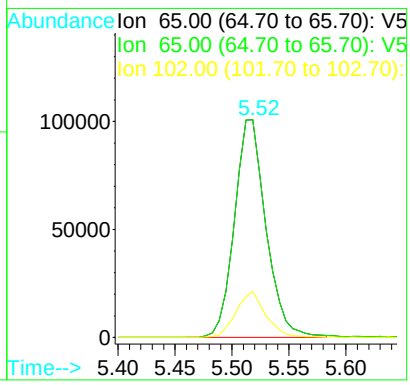


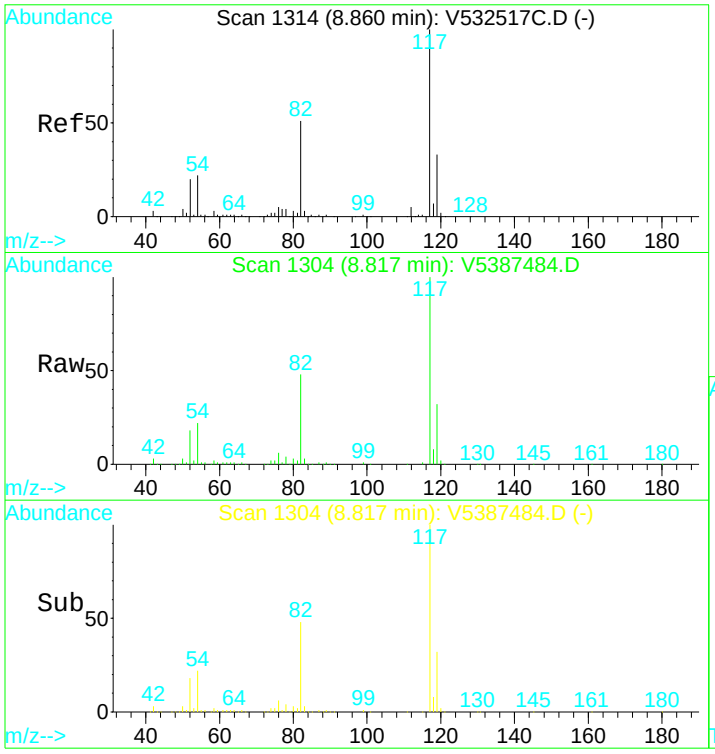



#32
d4-1,2-Dichloroethane(SURR)
Concen: N.D. ppb
RT: 5.52 min Scan# 744
Delta R.T. 0.00 min
Lab File: V5387484.D
Acq: 14 Sep 2016 1:25 pm

Tgt Ion: 65 Resp: 193995

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 65 | 100 | | |
| 65 | 100.0 | 80.0 | 120.0 |
| 102 | 20.0 | 0.0 | 0.0# |

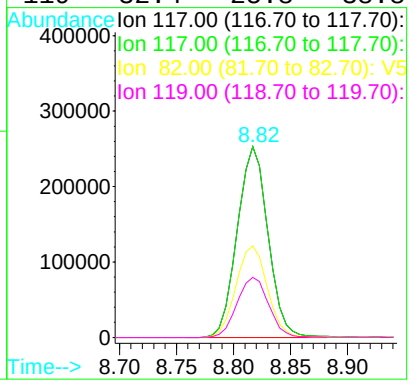


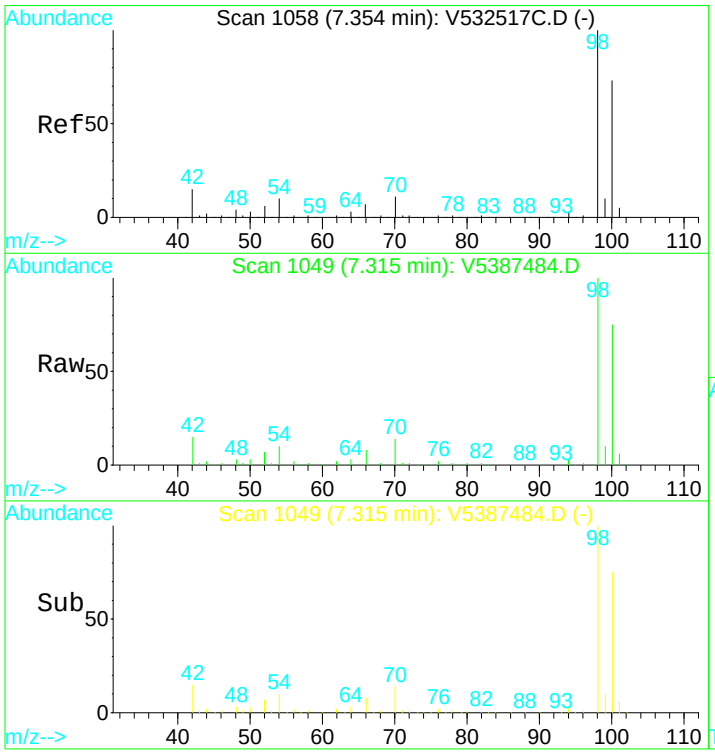




#36
CHLOROBENZENE-d5(ISTD)
Concen: 50.00 ppb
RT: 8.82 min Scan# 1304
Delta R.T. 0.00 min
Lab File: V5387484.D
Acq: 14 Sep 2016 1:25 pm

Tgt Ion:117 Resp: 474455

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 117 | 100 | | |
| 117 | 100.0 | 80.0 | 120.0 |
| 82 | 0.0 | 0.0 | 0.0 |
| 119 | 32.4 | 25.8 | 38.8 |

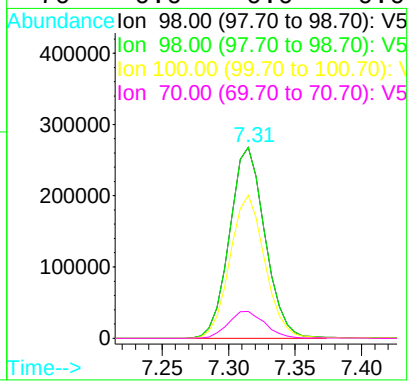


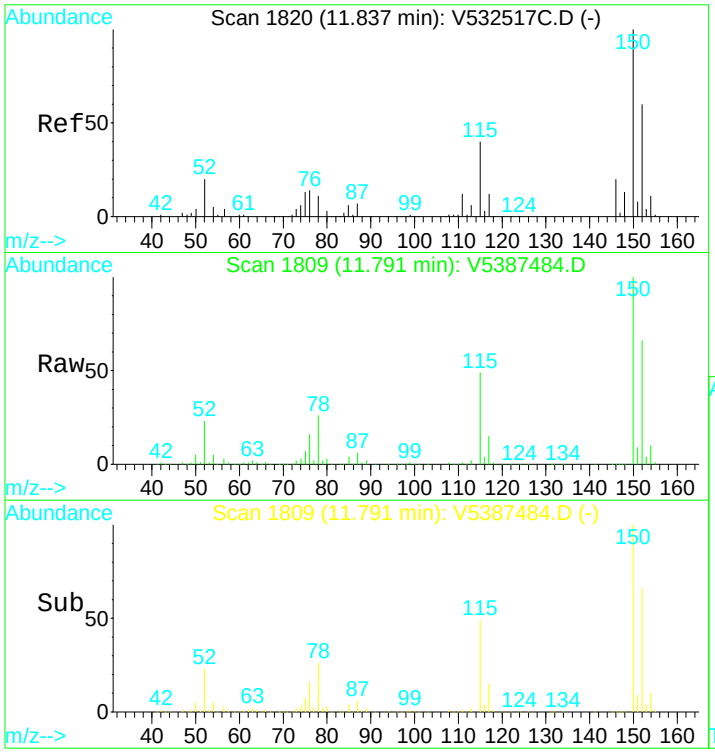



#47
Toluene-d8(SURR)
Concen:  Below ppb
RT: 7.31 min  Scan# 1049
Delta R.T.  0.00 min
Lab File:  V5387484.D
Acq: 14 Sep 2016  1:25 pm

Tgt Ion: 98 Resp:  496148

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 98 | 100 | | |
| 98 | 100.0 | 80.0 | 120.0 |
| 100 | 73.8 | 38.1 | 114.5 |
| 70 | 0.0 | 0.0 | 0.0 |

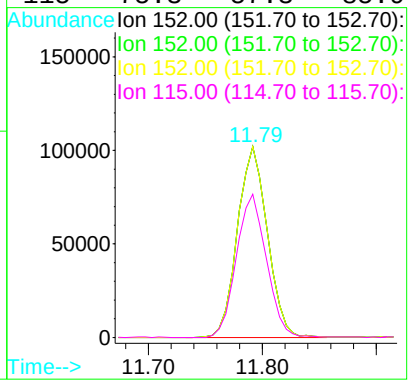


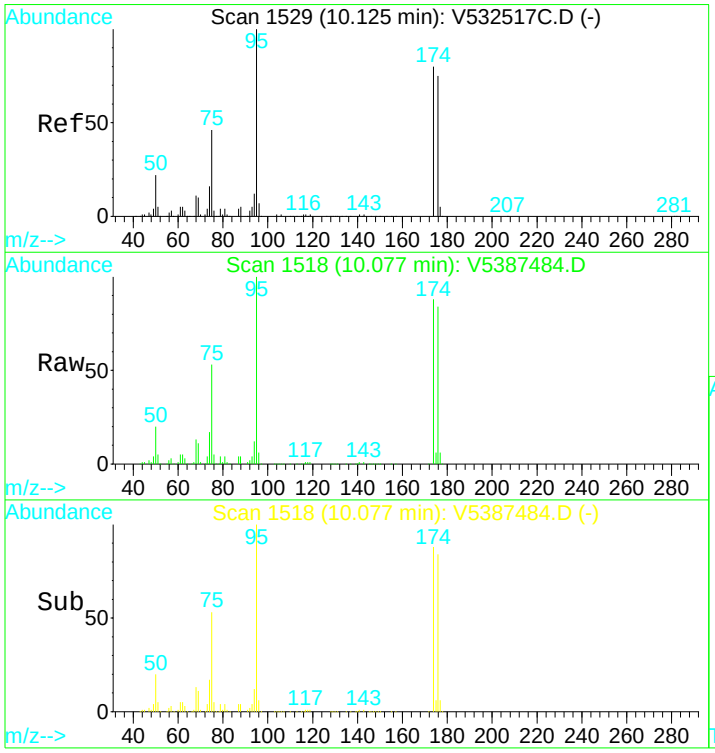




#62
1,2-DICHLOROBENZENE-d4(ISTD)
Concen:  50.00 ppb
RT: 11.79 min  Scan# 1809
Delta R.T.  0.00 min
Lab File:  V5387484.D
Acq: 14 Sep 2016  1:25 pm

Tgt Ion:152 Resp:  186081

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 152 | 100 | | |
| 152 | 100.0 | 80.0 | 120.0 |
| 152 | 100.0 | 80.0 | 120.0 |
| 115 | 75.3 | 57.3 | 85.9 |

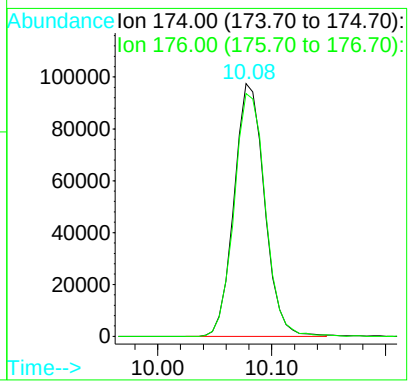


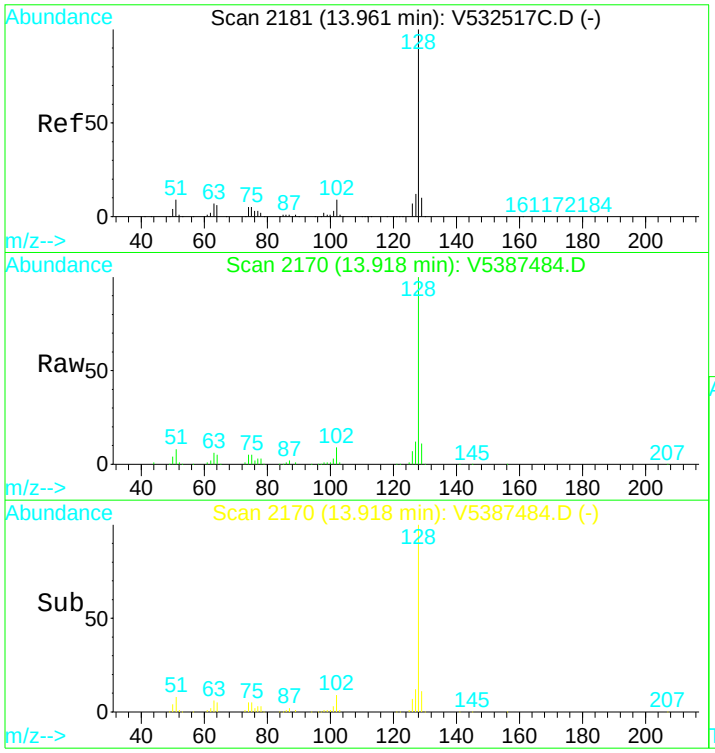



#64
p-Bromofluorobenzene(SURR)
Concen: N.D. ppb
RT: 10.08 min Scan# 1518
Delta R.T. -0.00 min
Lab File: V5387484.D
Acq: 14 Sep 2016 1:25 pm

Tgt Ion:174 Resp: 180994

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 174 | 100 | | |
| 176 | 98.4 | 80.8 | 121.2 |

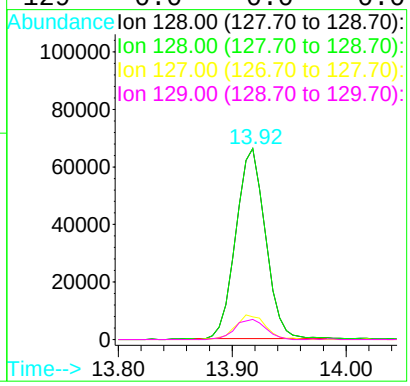



#87
Naphthalene
Concen: 15.17 ppb
RT: 13.92 min Scan# 2170
Delta R.T. 0.00 min
Lab File: V5387484.D
Acq: 14 Sep 2016 1:25 pm

Tgt Ion:128 Resp: 118867

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 128 | 100 | | |
| 128 | 100.0 | 80.0 | 120.0 |
| 127 | 13.2 | 0.0 | 0.0# |
| 129 | 0.0 | 0.0 | 0.0 |



Method : C:\HPCHEM\1\METHODS\V5C00162.M (RTE Integrator)
Title : VOCs BY GC/MS EPA SW846-8260
Last Update : Fri Aug 26 09:47:09 2016
Response via : Initial Calibration

Calibration Files
5 =V5387149.D 10 =V5387150.D 20 =V5387151.D
50 =V5387152.D 100 =V5387153.D 200 =V5387154.D

| | | Compound | 5 | 10 | 20 | 50 | 100 | 200 | Avg | %RSD |
|---|---|---|---|---|---|---|---|---|---|---|
| 1) | | FLUOROBENZENE(ISTD) | ----------ISTD---------- | | | | | | | |
| 2) | | Dichlorodifluoromet | 2.243 | 2.319 | 2.213 | 2.030 | 2.010 | 2.052 | 2.145 | 6.07 |
| 3) | P | Chloromethane | 1.365 | 1.514 | 1.303 | 1.274 | 1.280 | 1.426 | 1.360 | 6.98 |
| 4) | C | Vinyl Chloride | 1.683 | 1.855 | 1.782 | 1.667 | 1.659 | 1.663 | 1.718 | 4.75# |
| 5) | | Bromomethane | 1.010 | 1.113 | 0.984 | 0.896 | 0.949 | 0.996 | 0.991 | 7.29 |
| 6) | | Chloroethane | 1.015 | 1.045 | 0.970 | 0.959 | 0.949 | 0.964 | 0.984 | 3.84 |
| 7) | | Trichlorofluorometh | 2.934 | 3.086 | 2.968 | 2.783 | 2.771 | 2.950 | 2.915 | 4.11 |
| 8) | | Ethanol | 0.011 | 0.009 | 0.007 | 0.006 | 0.006 | 0.006 | 0.008# | 23.99 |
| 9) | | Freon-113 | 1.448 | 1.545 | 1.466 | 1.416 | 1.393 | 1.473 | 1.457 | 3.62 |
| 10) | C,M | 1,1-Dichloroethylen | 2.660 | 2.466 | 2.352 | 2.435 | 2.406 | 2.502 | 2.470 | 4.30# |
| 11) | | Acrolein | 0.149 | 0.135 | 0.109 | 0.088 | 0.082 | 0.089 | 0.108 | 25.57 |
| 12) | | Iodomethane | 1.632 | 1.777 | 1.887 | 2.031 | 2.147 | 2.232 | 1.951 | 11.70 |
| 13) | | Methyl Acetate | 1.490 | 1.187 | 0.820 | 0.662 | 0.640 | 0.696 | 0.916 | 37.86 |
| 14) | | tert-Butyl Alcohol | 0.154 | 0.140 | 0.137 | 0.146 | 0.128 | 0.151 | 0.142 | 6.76 |
| 15) | | trans-1,2-Dichloroe | 2.455 | 2.411 | 2.285 | 2.394 | 2.237 | 2.269 | 2.342 | 3.82 |
| 16) | | Carbon Disulfide | 3.738 | 3.698 | 3.650 | 3.543 | 3.897 | 3.959 | 3.747 | 4.15 |
| 17) | | Methylene Chloride | 1.708 | 1.529 | 1.444 | 1.488 | 1.480 | 1.515 | 1.527 | 6.12 |
| 18) | | Acrylonitrile | 0.291 | 0.335 | 0.297 | 0.264 | 0.302 | 0.301 | 0.299 | 7.61 |
| 19) | | tert-Butyl Methyl E | 3.828 | 3.660 | 3.637 | 4.055 | 3.866 | 3.812 | 3.810 | 3.99 |
| 20) | | Acetone | | 0.464 | 0.360 | 0.337 | 0.323 | 0.352 | 0.367 | 15.23 |
| 21) | P | 1,1-Dichloroethane | 2.699 | 2.605 | 2.544 | 2.533 | 2.580 | 2.591 | 2.592 | 2.28 |
| 22) | | Vinyl Acetate | 2.665 | 2.586 | 2.912 | 2.455 | 2.511 | 2.786 | 2.652 | 6.50 |
| 23) | | cis-1,2-Dichloroeth | 1.370 | 1.395 | 1.334 | 1.312 | 1.345 | 1.344 | 1.350 | 2.14 |
| 24) | | 2-Butanone | 0.119 | 0.127 | 0.128 | 0.130 | 0.130 | 0.130 | 0.127 | 3.25 |
| 25) | | 2,2-Dichloropropane | 2.762 | 2.477 | 2.595 | 2.499 | 2.548 | 2.689 | 2.595 | 4.29 |
| 26) | | Bromochloromethane | 1.070 | 0.969 | 0.968 | 1.030 | 0.953 | 1.058 | 1.008 | 5.06 |
| 27) | C | Chloroform | 2.646 | 2.531 | 2.494 | 2.557 | 2.483 | 2.712 | 2.571 | 3.52# |
| 28) | | Tetrahydrofuran | 0.127 | 0.129 | 0.117 | 0.125 | 0.121 | 0.131 | 0.125 | 4.09 |
| 29) | | 1,1-Dichloropropyle | 2.308 | 2.226 | 2.177 | 2.132 | 2.175 | 2.123 | 2.190 | 3.14 |
| 30) | | 1,1,1-Trichloroetha | 2.658 | 2.548 | 2.468 | 2.541 | 2.464 | 2.611 | 2.548 | 3.02 |
| 31) | | Cyclohexane | 2.209 | 2.457 | 2.197 | 2.215 | 2.041 | 2.067 | 2.198 | 6.73 |
| 32) | S | d4-1,2-Dichloroetha | 1.673 | 1.692 | 1.623 | 1.580 | 1.585 | 1.648 | 1.633 | 2.81 |
| 33) | | Carbon Tetrachlorid | 2.714 | 2.666 | 2.688 | 2.643 | 2.729 | 2.788 | 2.705 | 1.90 |
| 34) | | 1,2-Dichloroethane | 2.117 | 2.019 | 2.003 | 2.030 | 2.012 | 2.232 | 2.069 | 4.36 |
| 35) | M | Benzene | 4.656 | 4.631 | 4.497 | 4.426 | 4.346 | 4.469 | 4.504 | 2.66 |
| 36) | | CHLOROBENZENE-d5(ISTD | ----------ISTD---------- | | | | | | | |
| 37) | M | Trichloroethylene | 0.481 | 0.418 | 0.435 | 0.422 | 0.416 | 0.442 | 0.436 | 5.56 |
| 38) | | Methyl Cyclohexane | 0.632 | 0.625 | 0.639 | 0.616 | 0.576 | 0.631 | 0.620 | 3.70 |
| 39) | | Dibromomethane | 0.242 | 0.216 | 0.220 | 0.228 | 0.219 | 0.245 | 0.229 | 5.47 |
| 40) | | Methyl Methacrylate | 0.245 | 0.212 | 0.211 | 0.239 | 0.222 | 0.253 | 0.230 | 7.69 |
| 41) | | Bromodichloromethan | 0.543 | 0.519 | 0.519 | 0.569 | 0.553 | 0.617 | 0.553 | 6.63 |
| 42) | C | 1,2-Dichloropropane | 0.373 | 0.313 | 0.348 | 0.350 | 0.328 | 0.375 | 0.348 | 7.02# |
| 43) | | 1,4-Dioxane | 0.004 | 0.004 | 0.004 | 0.004 | 0.004 | 0.004 | 0.004# | 5.21 |
| 44) | | 2-Chloroethylvinyl | 0.194 | 0.196 | 0.197 | 0.200 | 0.194 | 0.216 | 0.199 | 4.29 |
| 45) | | cis-1,3-Dichloropro | 0.642 | 0.601 | 0.607 | 0.621 | 0.637 | 0.700 | 0.635 | 5.66 |
| 46) | | 2-Hexanone | 0.195 | 0.199 | 0.195 | 0.204 | 0.200 | 0.233 | 0.204 | 7.07 |
| 47) | S | Toluene-d8(SURR) | 1.105 | 1.027 | 1.045 | 1.008 | 1.023 | 1.087 | 1.049 | 3.70 |
| 48) | C,M | Toluene | 1.434 | 1.325 | 1.308 | 1.279 | 1.287 | 1.374 | 1.334 | 4.45# |
| 49) | | trans-1,3-Dichlorop | 0.572 | 0.547 | 0.573 | 0.563 | 0.597 | 0.658 | 0.585 | 6.74 |
| 50) | | 1,1,2-Trichloroetha | 0.213 | 0.204 | 0.208 | 0.211 | 0.212 | 0.228 | 0.213 | 3.97 |
| 51) | | 1,3-Dichloropropane | 0.526 | 0.500 | 0.502 | 0.494 | 0.505 | 0.538 | 0.511 | 3.41 |
| 52) | | Tetrachloroethylene | 0.553 | 0.504 | 0.515 | 0.495 | 0.483 | 0.515 | 0.511 | 4.69 |
| 53) | | 4-Methyl-2-Pentanon | 0.536 | 0.526 | 0.538 | 0.513 | 0.523 | 0.585 | 0.537 | 4.73 |
| 54) | | Dibromochloromethan | 0.435 | 0.399 | 0.426 | 0.427 | 0.433 | 0.484 | 0.434 | 6.39 |
| 55) | | 1,2-Dibromoethane | 0.331 | 0.304 | 0.323 | 0.323 | 0.311 | 0.344 | 0.323 | 4.46 |
| 56) | P,M | Chlorobenzene | 1.013 | 0.979 | 1.003 | 0.986 | 0.986 | 1.001 | 0.995 | 1.31 |
| 57) | C | Ethyl Benzene | 1.677 | 1.560 | 1.534 | 1.579 | 1.559 | 1.598 | 1.584 | 3.17# |
| 58) | | p- & m-Xylenes | 1.366 | 1.206 | 1.230 | 1.147 | 1.182 | 1.230 | 1.227 | 6.12 |
| 59) | | o-Xylene | 1.322 | 1.235 | 1.247 | 1.155 | 1.175 | 1.224 | 1.226 | 4.80 |

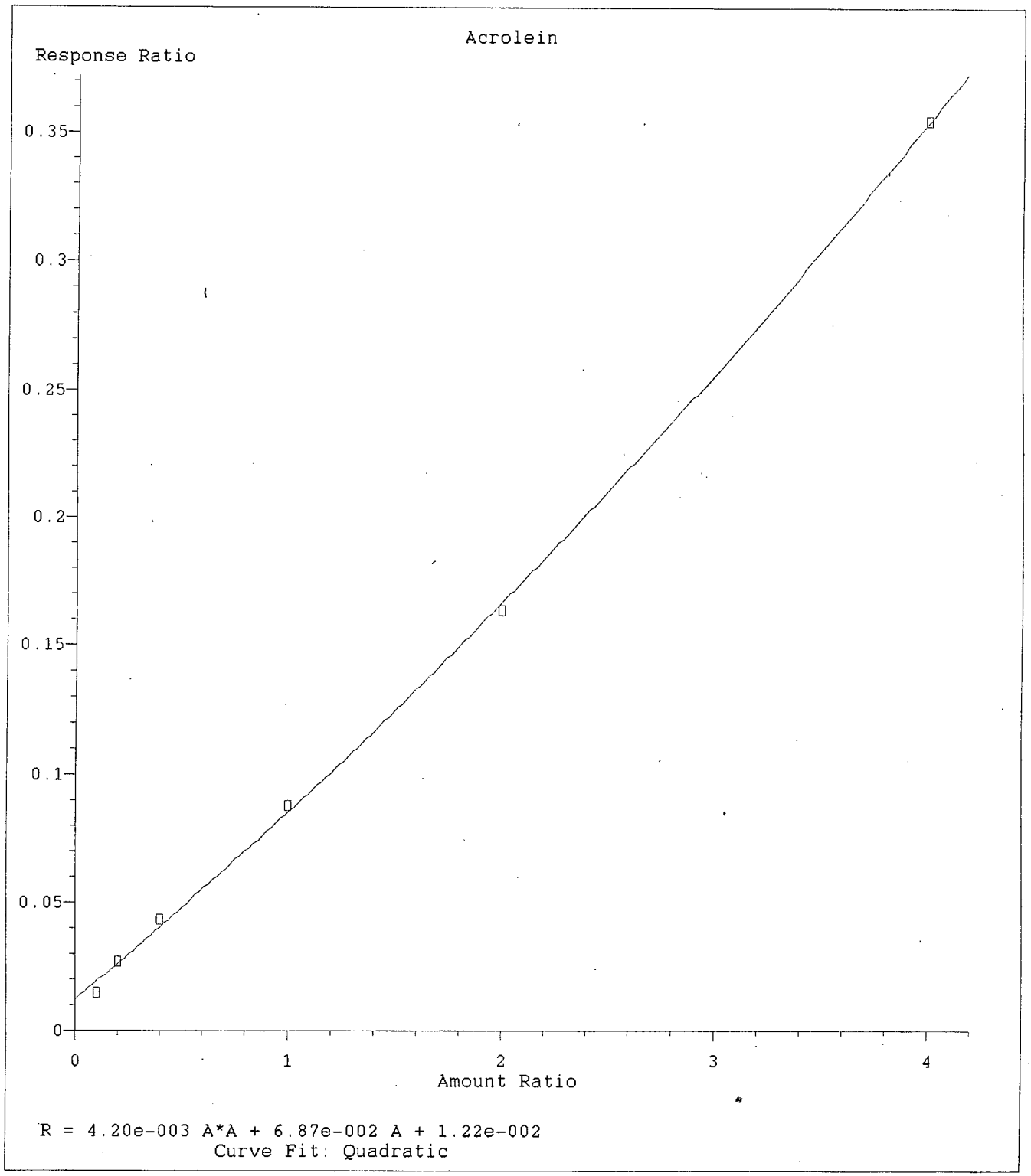
(#) = Out of Range

Method : C:\HPCHEM\1\METHODS\V5C00162.M (RTE Integrator)
Title : VOCs BY GC/MS EPA SW846-8260
Last Update : Fri Aug 26 09:47:09 2016
Response via : Initial Calibration

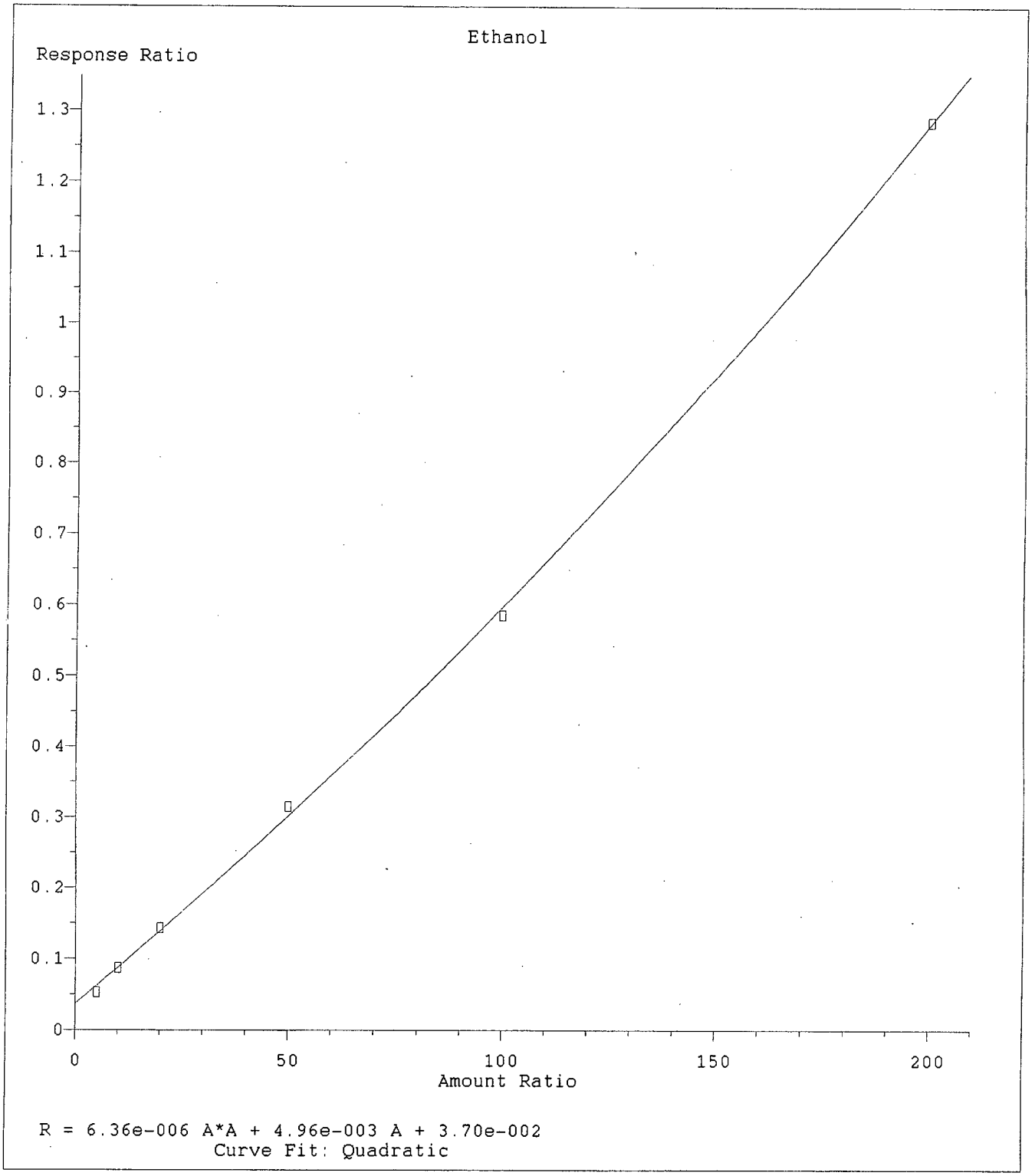
Calibration Files
5 =V5387149.D 10 =V5387150.D 20 =V5387151.D
50 =V5387152.D 100 =V5387153.D 200 =V5387154.D

| | | Compound | 5 | 10 | 20 | 50 | 100 | 200 | Avg | %RSD |
|---|---|---|---|---|---|---|---|---|---|---|
| 60) | | Styrene | 0.959 | 0.878 | 0.898 | 0.847 | 0.855 | 0.879 | 0.886 | 4.51 |
| 61) | | 1,1,1,2-Tetrachloro | 0.445 | 0.413 | 0.420 | 0.424 | 0.419 | 0.446 | 0.428 | 3.33 |
| 62) | | 1,2-DICHLOROBENZENE-d | ---------- | ISTD | ---------- | | | | | |
| 63) | p | Bromoform | 0.504 | 0.526 | 0.572 | 0.648 | 0.660 | 0.751 | 0.610 | 15.30 |
| 64) | S | p-Bromofluorobenzen | 0.957 | 0.955 | 0.986 | 0.996 | 1.032 | 1.049 | 0.996 | 3.86 |
| 65) | | p-Ethyltoulene | 3.443 | 3.418 | 3.662 | 3.654 | 3.658 | 3.788 | 3.604 | 3.99 |
| 66) | | p-Diethylbenzene | 2.091 | 2.386 | 2.339 | 2.441 | 2.282 | 2.408 | 2.324 | 5.47 |
| 67) | P | 1,1,2,2-Tetrachloro | 0.806 | 0.774 | 0.792 | 0.794 | 0.828 | 0.901 | 0.816 | 5.60 |
| 68) | | 1,2,3-Trichloroprop | 0.306 | 0.344 | 0.332 | 0.338 | 0.326 | 0.346 | 0.332 | 4.51 |
| 69) | | Isopropylbenzene | 4.385 | 4.482 | 4.517 | 4.715 | 4.595 | 4.858 | 4.592 | 3.73 |
| 70) | | 1,2-Dibromo-3-Chlor | 0.138 | 0.145 | 0.160 | 0.169 | 0.174 | 0.188 | 0.162 | 11.51 |
| 71) | | Bromobenzene | 1.510 | 1.607 | 1.576 | 1.620 | 1.658 | 1.772 | 1.624 | 5.42 |
| 72) | | trans-1,4-Dichloro- | 0.946 | 0.997 | 1.025 | 1.044 | 1.024 | 1.112 | 1.025 | 5.35 |
| 73) | | n-Propylbenzene | 5.063 | 4.833 | 5.000 | 5.190 | 4.965 | 5.191 | 5.040 | 2.75 |
| 74) | | 2-Chlorotoluene | 3.284 | 3.636 | 3.613 | 3.459 | 3.618 | 3.590 | 3.533 | 3.90 |
| 75) | | 4-Chlorotoluene | 3.494 | 2.974 | 3.048 | 3.441 | 3.194 | 3.582 | 3.289 | 7.66 |
| 76) | | tert-Butylbenzene | 3.623 | 3.421 | 3.423 | 3.804 | 3.660 | 3.825 | 3.626 | 4.87 |
| 77) | | 1,3,5-trimethylbenz | 3.445 | 3.418 | 3.573 | 3.654 | 3.584 | 3.789 | 3.577 | 3.83 |
| 78) | | 1,2,4-trimethylbenz | 3.390 | 3.248 | 3.364 | 3.400 | 3.415 | 3.615 | 3.405 | 3.49 |
| 79) | | sec-Butylbenzene | 4.710 | 4.524 | 4.703 | 4.713 | 4.693 | 4.774 | 4.686 | 1.80 |
| 80) | | 1,3-Dichlorobenzene | 1.989 | 1.941 | 1.948 | 2.019 | 1.973 | 1.973 | 1.974 | 1.43 |
| 81) | | 1,4-Dichlorobenzene | 2.024 | 1.848 | 2.019 | 2.068 | 1.948 | 2.064 | 1.995 | 4.21 |
| 82) | | 1,2-Dichlorobenzene | 1.717 | 1.692 | 1.735 | 1.741 | 1.690 | 1.785 | 1.727 | 2.06 |
| 83) | | p-Isopropyltoluene | 4.513 | 4.366 | 4.391 | 4.454 | 4.522 | 4.565 | 4.468 | 1.76 |
| 84) | | n-Butylbenzene | 4.014 | 4.029 | 3.995 | 4.224 | 4.070 | 4.327 | 4.110 | 3.27 |
| 85) | | 1,2,4,5-Tetramethyl | 3.205 | 3.422 | 3.562 | 3.497 | 3.694 | 3.751 | 3.522 | 5.60 |
| 86) | | 1,2,4-Trichlorobenz | 1.148 | 1.173 | 1.168 | 1.179 | 1.172 | 1.267 | 1.184 | 3.53 |
| 87) | | Naphthalene | 1.954 | 1.996 | 2.058 | 2.085 | 2.171 | 2.372 | 2.106 | 7.13 |
| 88) | | Hexachloro-1,3-Buta | 0.841 | 0.853 | 0.870 | 0.859 | 0.861 | 0.918 | 0.867 | 3.11 |
| 89) | | 1,2,3-Trichlorobenz | 0.894 | 0.894 | 0.922 | 0.936 | 0.926 | 0.998 | 0.928 | 4.12 |

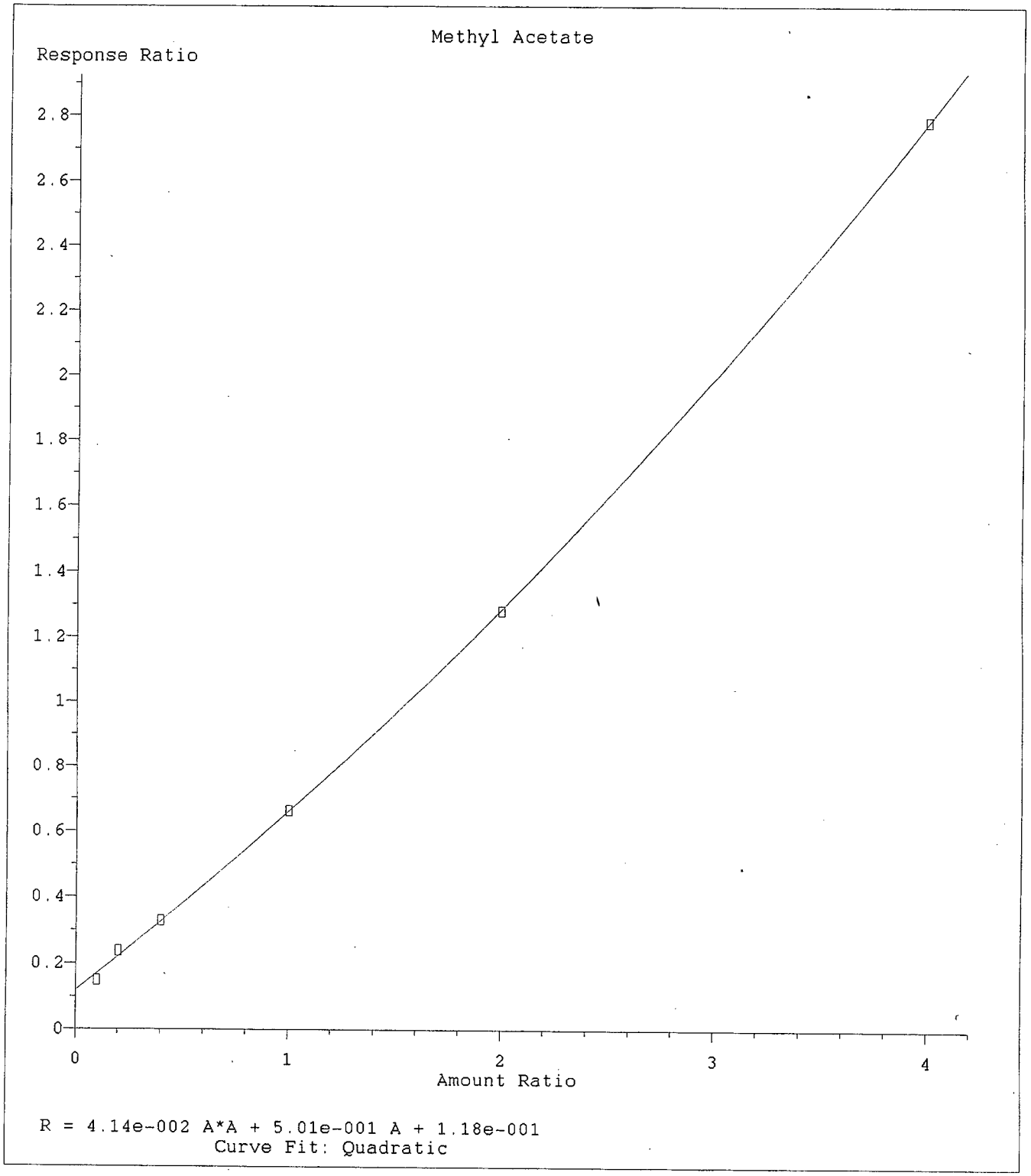
(#) = Out of Range




Method Name: C:\HPCHEM\1\METHODS\V5C00162.M
Calibration Table Last Updated: Fri Aug 26 09:47:09 2016




Method Name: C:\HPCHEM\1\METHODS\V5C00162.M
Calibration Table Last Updated: Fri Aug 26 09:47:09 2016




Method Name: C:\HPCHEM\1\METHODS\V5C00162.M
Calibration Table Last Updated: Fri Aug 26 09:47:09 2016

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\V5082516\V5387149.D Vial: 7
Acq On : 25 Aug 2016 5:05 pm Operator: SS
Sample : SEQ-CAL1 Inst : VOA No. 5
Misc : QBV5082516A 5PPB Multiplr: 1.00
MS Integration Params: RTEINT1.P
Quant Time: Aug 26 8:00 2016 Quant Results File: V5C00161.RES

Quant Method : C:\HPCHEM\1\METHODS\V5C00161.M (RTE Integrator)
Title : VOCs BY GC/MS EPA SW846-8260
Last Update : Wed Aug 24 09:49:53 2016
Response via : Initial Calibration
DataAcq Meth : V5C0001A

| Internal Standards | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| 1) FLUOROBENZENE(ISTD) | 5.79 | 70 | 87385 | 50.00 | ppb | | 0.00 |
| 36) CHLOROBENZENE-d5(ISTD) | 8.81 | 117 | 279642 | 50.00 | ppb | | 0.00 |
| 62) 1,2-DICHLOROBENZENE-d4(IST | 11.79 | 152 | 114331 | 50.00 | ppb | | 0.00 |
| **System Monitoring Compounds** | | | | | | | |
| 32) d4-1,2-Dichloroethane(SURR | 5.51 | 65 | 146231 | 52.71 | ppb | | 0.00 |
| Spiked Amount 50.000 | Range 64 - 122 | | Recovery = 105.42% | | | | |
| 47) Toluene-d8(SURR) | 7.31 | 98 | 309040 | 53.41 | ppb | | 0.00 |
| Spiked Amount 50.000 | Range 83 - 114 | | Recovery = 106.82% | | | | |
| 64) p-Bromofluorobenzene(SURR) | 10.07 | 174 | 109387 | 44.96 | ppb | | 0.00 |
| Spiked Amount 50.000 | Range 71 - 126 | | Recovery = 89.92% | | | | |
| **Target Compounds** | | | | | | | Qvalue |
| 2) Dichlorodifluoromethane | 1.52 | 85 | 19598 | 4.39 | ppb | | 100 |
| 3) Chloromethane | 1.71 | 50 | 11931 | 3.72 | ppb | | 100 |
| 4) Vinyl Chloride | 1.81 | 62 | 14704 | 4.02 | ppb | | 99 |
| 5) Bromomethane | 2.15 | 94 | 8823 | 4.26 | ppb | | 98 |
| 6) Chloroethane | 2.25 | 64 | 8871 | 3.99 | ppb | | 98 |
| 7) Trichlorofluoromethane | 2.49 | 101 | 25638 | 4.60 | ppb | | 98 |
| 8) Ethanol | 2.75 | 45 | 4611 | 323.27 | ppb | | 100 |
| 9) Freon-113 | 2.99 | 101 | 12649 | 4.16 | ppb | | 94 |
| 10) 1,1-Dichloroethylene | 3.02 | 61 | 23248 | 4.60 | ppb | | 98 |
| 11) Acrolein | 2.97 | 56 | 1298m | Below Cal | | | |
| 12) Iodomethane | 3.19 | 142 | 14257 | 4.27 | ppb | | 100 |
| 13) Methyl Acetate | 3.42 | 43 | 13022m | 5.19 | ppb | | |
| 14) tert-Butyl Alcohol (TBA) | 3.67 | 59 | 1343 | 4.67 | ppb | # | 91 |
| 15) trans-1,2-Dichloroethylene | 3.75 | 61 | 21455 | 4.15 | ppb | | 100 |
| 16) Carbon Disulfide | 3.24 | 76 | 32662 | 4.00 | ppb | | 100 |
| 17) Methylene Chloride | 3.52 | 49 | 14927 | 4.77 | ppb | # | 72 |
| 18) Acrylonitrile | 3.79 | 53 | 2544 | 3.92 | ppb | # | 87 |
| 19) tert-Butyl Methyl Ether (M | 3.74 | 73 | 33453 | 4.38 | ppb | | 98 |
| 20) Acetone | 3.12 | 43 | 6122 | 7.97 | ppb | | 99 |
| 21) 1,1-Dichloroethane | 4.18 | 63 | 23584 | 4.26 | ppb | | 99 |
| 22) Vinyl Acetate | 4.21 | 43 | 23286m | 2.82 | ppb | | |
| 23) cis-1,2-Dichloroethylene | 4.73 | 96 | 11976 | 4.25 | ppb | # | 68 |
| 24) 2-Butanone | 4.75 | 72 | 1041 | 3.78 | ppb | | 81 |
| 25) 2,2-Dichloropropane | 4.70 | 77 | 24133 | 4.66 | ppb | | 99 |
| 26) Bromochloromethane | 4.97 | 49 | 9352 | 3.94 | ppb | | 93 |
| 27) Chloroform | 5.03 | 83 | 23124 | 4.44 | ppb | | 99 |
| 28) Tetrahydrofuran | 5.01 | 71 | 1112 | 4.16 | ppb | # | 100 |
| 29) 1,1-Dichloropropylene | 5.32 | 75 | 20172 | 4.32 | ppb | | 99 |
| 30) 1,1,1-Trichloroethane | 5.17 | 97 | 23231 | 4.58 | ppb | # | 70 |
| 31) Cyclohexane | 5.19 | 56 | 19302 | 3.79 | ppb | # | 88 |
| 33) Carbon Tetrachloride | 5.31 | 117 | 23719 | 4.73 | ppb | | 100 |
| 34) 1,2-Dichloroethane | 5.58 | 62 | 18497 | 4.54 | ppb | | 97 |
| 35) Benzene | 5.53 | 78 | 40686 | 4.09 | ppb | # | 89 |
| 37) Trichloroethylene | 6.13 | 95 | 13450 | 5.55 | ppb | | 95 |
| 38) Methyl Cyclohexane | 6.27 | 83 | 17684 | 4.60 | ppb | # | 100 |
| 39) Dibromomethane | 6.52 | 93 | 6775 | 5.47 | ppb | | 98 |
| 40) Methyl Methacrylate | 6.45 | 69 | 6842 | 5.26 | ppb | | 100 |
| 41) Bromodichloromethane | 6.65 | 83 | 15187 | 5.00 | ppb | | 97 |
| 42) 1,2-Dichloropropane | 6.38 | 63 | 10443 | 4.88 | ppb | | 97 |
| 43) 1,4-Dioxane | 6.53 | 88 | 2445 | 109.65 | ppb | | 96 |
| 44) 2-Chloroethylvinyl ether | 6.92 | 63 | 5412 | 4.43 | ppb | | 100 |
| 45) cis-1,3-Dichloropropene | 7.07 | 75 | 17948 | 4.83 | ppb | | 99 |
| 46) 2-Hexanone | 8.05 | 43 | 5458 | 4.74 | ppb | | 97 |
| 48) Toluene | 7.38 | 91 | 40106 | 5.24 | ppb | | 99 |
| 49) trans-1,3-Dichloropropene | 7.64 | 75 | 15982 | 4.81 | ppb | | 100 |
| 50) 1,1,2-Trichloroethane | 7.83 | 83 | 5948 | 4.71 | ppb | # | 86 |

(#) = qualifier out of range (m) = manual integration
V5387149.D V5C00162.M Fri Aug 26 09:45:48 2016

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\V5082516\V5387149.D Vial: 7
Acq On : 25 Aug 2016 5:05 pm Operator: SS
Sample : SEQ-CAL1 Inst : VOA No. 5
Misc : QBV5082516A 5PPB Multiplr: 1.00
MS Integration Params: RTEINT1.P
Quant Time: Aug 26 8:00 2016 Quant Results File: V5C00161.RES

Quant Method : C:\HPCHEM\1\METHODS\V5C00161.M (RTE Integrator)
Title : VOCs BY GC/MS EPA SW846-8260
Last Update : Wed Aug 24 09:49:53 2016
Response via : Initial Calibration
DataAcq Meth : V5C0001A

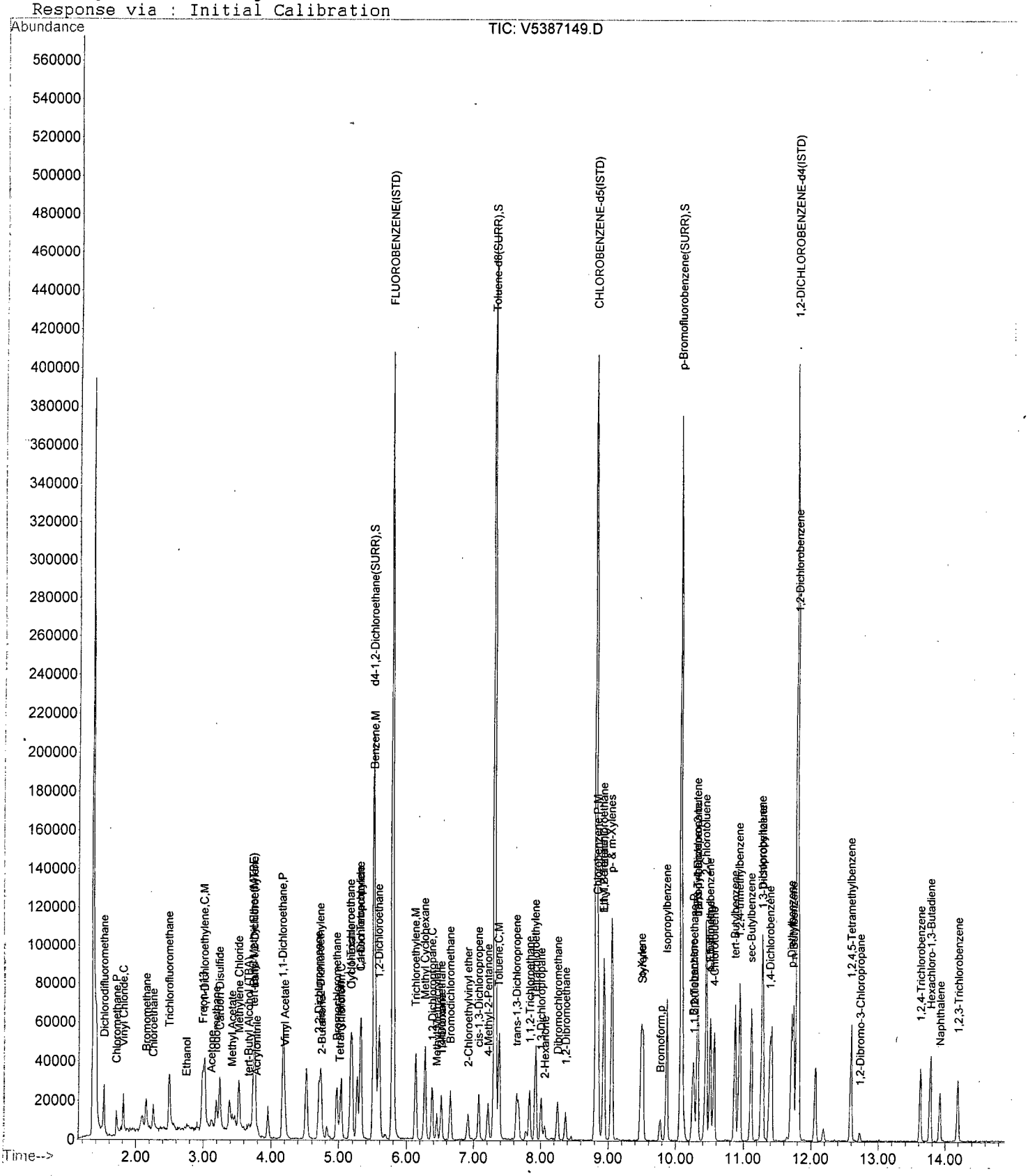
| Compound | R.T. | QIon | Response | Conc | Unit | | Qvalue |
|---|---|---|---|---|---|---|---|
| 51) 1,3-Dichloropropane | 8.00 | 76 | 14704 | 5.07 | ppb | # | 100 |
| 52) Tetrachloroethylene | 7.92 | 166 | 15466 | 5.67 | ppb | | 96 |
| 53) 4-Methyl-2-Pentanone | 7.21 | 43 | 14984 | 4.87 | ppb | | 100 |
| 54) Dibromochloromethane | 8.25 | 129 | 12173 | 5.77 | ppb | | 97 |
| 55) 1,2-Dibromoethane | 8.37 | 107 | 9270 | 4.97 | ppb | | 96 |
| 56) Chlorobenzene | 8.84 | 112 | 28339 | 4.85 | ppb | | 96 |
| 57) Ethyl Benzene | 8.92 | 91 | 46893 | 5.20 | ppb | | 99 |
| 58) p- & m-Xylenes | 9.04 | 91 | 76410 | 11.07 | ppb | | 100 |
| 59) o-Xylene | 9.48 | 91 | 36956 | 5.25 | ppb | | 99 |
| 60) Styrene | 9.50 | 104 | 26808 | 5.17 | ppb | # | 81 |
| 61) 1,1,1,2-Tetrachloroethane | 8.93 | 131 | 12448 | 5.93 | ppb | | 97 |
| 63) Bromoform | 9.77 | 173 | 5760 | 4.11 | ppb | # | 100 |
| 65) p-Ethyltoulene | 10.50 | 105 | 39369 | 4.87 | ppb | | 92 |
| 66) p-Diethylbenzene | 11.70 | 119 | 23908 | 4.74 | ppb | | 96 |
| 67) 1,1,2,2-Tetrachloroethane | 10.27 | 83 | 9215 | 4.75 | ppb | # | 98 |
| 68) 1,2,3-Trichloropropane | 10.31 | 110 | 3493 | 4.71 | ppb | | 92 |
| 69) Isopropylbenzene | 9.86 | 105 | 50135 | 4.74 | ppb | # | 99 |
| 70) 1,2-Dibromo-3-Chloropropan | 12.73 | 75 | 1579 | 4.44 | ppb | | 92 |
| 71) Bromobenzene | 10.25 | 77 | 17263 | 4.59 | ppb | | 96 |
| 72) trans-1,4-Dichloro-2-buten | 10.32 | 75 | 10810m | 4.53 | ppb | | |
| 73) n-Propylbenzene | 10.31 | 91 | 57888 | 5.05 | ppb | | 99 |
| 74) 2-Chlorotoluene | 10.44 | 91 | 37546 | 4.79 | ppb | | 98 |
| 75) 4-Chlorotoluene | 10.56 | 91 | 39942 | 5.52 | ppb | | 99 |
| 76) tert-Butylbenzene | 10.86 | 119 | 41420 | 5.51 | ppb | # | 91 |
| 77) 1,3,5-trimethylbenzene | 10.50 | 105 | 39385 | 4.80 | ppb | | 97 |
| 78) 1,2,4-trimethylbenzene | 10.93 | 105 | 38759 | 4.91 | ppb | | 98 |
| 79) sec-Butylbenzene | 11.11 | 105 | 53848 | 4.89 | ppb | # | 99 |
| 80) 1,3-Dichlorobenzene | 11.28 | 146 | 22736 | 5.66 | ppb | # | 99 |
| 81) 1,4-Dichlorobenzene | 11.38 | 146 | 23143 | 5.80 | ppb | # | 69 |
| 82) 1,2-Dichlorobenzene | 11.81 | 146 | 19632 | 5.59 | ppb | # | 98 |
| 83) p-Isopropyltoluene | 11.26 | 119 | 51600 | 5.40 | ppb | # | 92 |
| 84) n-Butylbenzene | 11.73 | 91 | 45898 | 4.93 | ppb | | 98 |
| 85) 1,2,4,5-Tetramethylbenzene | 12.59 | 119 | 36645 | 5.04 | ppb | | 98 |
| 86) 1,2,4-Trichlorobenzene | 13.62 | 180 | 13128 | 5.19 | ppb | | 98 |
| 87) Naphthalene | 13.92 | 128 | 22339 | 5.66 | ppb | # | 100 |
| 88) Hexachloro-1,3-Butadiene | 13.77 | 225 | 9611 | 5.33 | ppb | # | 68 |
| 89) 1,2,3-Trichlorobenzene | 14.19 | 182 | 10218 | 5.02 | ppb | # | 95 |

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\V5082516\V5387149.D Vial: 7
Acq On : 25 Aug 2016 5:05 pm Operator: SS
Sample : SEQ-CAL1 Inst : VOA No. 5
Misc : QBV5082516A 5PPB Multiplr: 1.00
MS Integration Params: RTEINT1.P
Quant Time: Aug 26 8:00 2016 Quant Results File: V5C00161.RES

Method : C:\HPCHEM\1\METHODS\V5C00162.M (RTE Integrator)
Title : VOCs BY GC/MS EPA SW846-8260
Last Update : Fri Aug 26 08:10:01 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\V5082516\V5387150.D Vial: 8
Acq On : 25 Aug 2016 5:38 pm Operator: SS
Sample : SEQ-CAL2 Inst : VOA No. 5
Misc : QBV5082516A 10PPB Multiplr: 1.00
MS Integration Params: RTEINT1.P
Quant Time: Aug 26 8:00 2016 Quant Results File: V5C00161.RES

Quant Method : C:\HPCHEM\1\METHODS\V5C00161.M (RTE Integrator)
Title : VOCs BY GC/MS EPA SW846-8260
Last Update : Wed Aug 24 09:49:53 2016
Response via : Initial Calibration
DataAcq Meth : V5C0001A

| Internal Standards | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| 1) FLUOROBENZENE(ISTD) | 5.79 | 70 | 87181 | 50.00 | ppb | | 0.00 |
| 36) CHLOROBENZENE-d5(ISTD) | 8.81 | 117 | 297435 | 50.00 | ppb | | 0.00 |
| 62) 1,2-DICHLOROBENZENE-d4(IST | 11.79 | 152 | 113369 | 50.00 | ppb | | 0.00 |
| **System Monitoring Compounds** | | | | | | | |
| 32) d4-1,2-Dichloroethane(SURR | 5.51 | 65 | 147501 | 53.29 | ppb | | 0.00 |
| Spiked Amount 50.000 | Range 64 - 122 | | Recovery = 106.58% | | | | |
| 47) Toluene-d8(SURR) | 7.31 | 98 | 305333 | 49.61 | ppb | | 0.00 |
| Spiked Amount 50.000 | Range 83 - 114 | | Recovery = 99.22% | | | | |
| 64) p-Bromofluorobenzene(SURR) | 10.08 | 174 | 108289 | 44.89 | ppb | | 0.00 |
| Spiked Amount 50.000 | Range 71 - 126 | | Recovery = 89.78% | | | | |
| **Target Compounds** | | | | | | | Qvalue |
| 2) Dichlorodifluoromethane | 1.52 | 85 | 40441 | 9.09 | ppb | | 99 |
| 3) Chloromethane | 1.71 | 50 | 26392 | 8.25 | ppb | | 100 |
| 4) Vinyl Chloride | 1.81 | 62 | 32345 | 8.86 | ppb | | 99 |
| 5) Bromomethane | 2.15 | 94 | 19401 | 9.40 | ppb | | 95 |
| 6) Chloroethane | 2.25 | 64 | 18218 | 8.21 | ppb | | 99 |
| 7) Trichlorofluoromethane | 2.50 | 101 | 53804 | 9.67 | ppb | | 98 |
| 8) Ethanol | 2.77 | 45 | 7590 | 533.36 | ppb | | 100 |
| 9) Freon-113 | 2.99 | 101 | 26939 | 8.87 | ppb | | 94 |
| 10) 1,1-Dichloroethylene | 3.02 | 61 | 42993 | 8.52 | ppb | # | 91 |
| 11) Acrolein | 2.97 | 56 | 2355 | Below Cal | | # | 58 |
| 12) Iodomethane | 3.19 | 142 | 30979 | 9.30 | ppb | | 98 |
| 13) Methyl Acetate | 3.42 | 43 | 20697m | 11.05 | ppb | | |
| 14) tert-Butyl Alcohol (TBA) | 3.67 | 59 | 2440 | 8.50 | ppb | | 97 |
| 15) trans-1,2-Dichloroethylene | 3.76 | 61 | 42035 | 8.15 | ppb | # | 90 |
| 16) Carbon Disulfide | 3.25 | 76 | 64479 | 7.92 | ppb | | 100 |
| 17) Methylene Chloride | 3.52 | 49 | 26659 | 8.54 | ppb | | 99 |
| 18) Acrylonitrile | 3.81 | 53 | 5842 | 9.02 | ppb | | 96 |
| 19) tert-Butyl Methyl Ether (M | 3.74 | 73 | 63815 | 8.37 | ppb | | 98 |
| 20) Acetone | 3.12 | 43 | 8090 | 10.55 | ppb | | 100 |
| 21) 1,1-Dichloroethane | 4.18 | 63 | 45414 | 8.22 | ppb | | 100 |
| 22) Vinyl Acetate | 4.21 | 43 | 45092m | 5.48 | ppb | | |
| 23) cis-1,2-Dichloroethylene | 4.73 | 96 | 24320 | 8.66 | ppb | # | 99 |
| 24) 2-Butanone | 4.77 | 72 | 2218 | 8.06 | ppb | | 82 |
| 25) 2,2-Dichloropropane | 4.70 | 77 | 43186 | 8.35 | ppb | | 100 |
| 26) Bromochloromethane | 4.97 | 49 | 16899 | 7.13 | ppb | # | 87 |
| 27) Chloroform | 5.04 | 83 | 44137 | 8.49 | ppb | | 98 |
| 28) Tetrahydrofuran | 5.00 | 71 | 2247 | 8.43 | ppb | # | 100 |
| 29) 1,1-Dichloropropylene | 5.32 | 75 | 38819 | 8.34 | ppb | | 100 |
| 30) 1,1,1-Trichloroethane | 5.17 | 97 | 44427 | 8.78 | ppb | | 99 |
| 31) Cyclohexane | 5.19 | 56 | 42844 | 8.43 | ppb | | 100 |
| 33) Carbon Tetrachloride | 5.31 | 117 | 46487 | 9.29 | ppb | | 100 |
| 34) 1,2-Dichloroethane | 5.59 | 62 | 35195 | 8.66 | ppb | | 100 |
| 35) Benzene | 5.53 | 78 | 80751 | 8.13 | ppb | # | 83 |
| 37) Trichloroethylene | 6.14 | 95 | 24890 | 9.66 | ppb | | 96 |
| 38) Methyl Cyclohexane | 6.27 | 83 | 37197 | 9.11 | ppb | # | 100 |
| 39) Dibromomethane | 6.52 | 93 | 12832 | 9.74 | ppb | | 97 |
| 40) Methyl Methacrylate | 6.45 | 69 | 12625 | 9.12 | ppb | | 100 |
| 41) Bromodichloromethane | 6.66 | 83 | 30861 | 9.55 | ppb | | 98 |
| 42) 1,2-Dichloropropane | 6.37 | 63 | 18634 | 8.19 | ppb | | 96 |
| 43) 1,4-Dioxane | 6.52 | 88 | 5087 | 214.49 | ppb | | 93 |
| 44) 2-Chloroethylvinyl ether | 6.92 | 63 | 11636 | 8.96 | ppb | | 98 |
| 45) cis-1,3-Dichloropropene | 7.07 | 75 | 35741 | 9.05 | ppb | | 100 |
| 46) 2-Hexanone | 8.05 | 43 | 11826 | 9.66 | ppb | | 99 |
| 48) Toluene | 7.38 | 91 | 78820 | 9.68 | ppb | | 100 |
| 49) trans-1,3-Dichloropropene | 7.63 | 75 | 32547 | 9.21 | ppb | | 100 |
| 50) 1,1,2-Trichloroethane | 7.84 | 83 | 12108 | 9.01 | ppb | # | 50 |

(#) = qualifier out of range (m) = manual integration
V5387150.D V5C00162.M Fri Aug 26 09:45:55 2016

Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\V5082516\V5387150.D Vial: 8
Acq On : 25 Aug 2016 5:38 pm Operator: SS
Sample : SEQ-CAL2 Inst : VOA No. 5
Misc : QBV5082516A 10PPB Multiplr: 1.00
MS Integration Params: RTEINT1.P
Quant Time: Aug 26 8:00 2016 Quant Results File: V5C00161.RES

Quant Method : C:\HPCHEM\1\METHODS\V5C00161.M (RTE Integrator)
Title : VOCs BY GC/MS EPA SW846-8260
Last Update : Wed Aug 24 09:49:53 2016
Response via : Initial Calibration
DataAcq Meth : V5C0001A

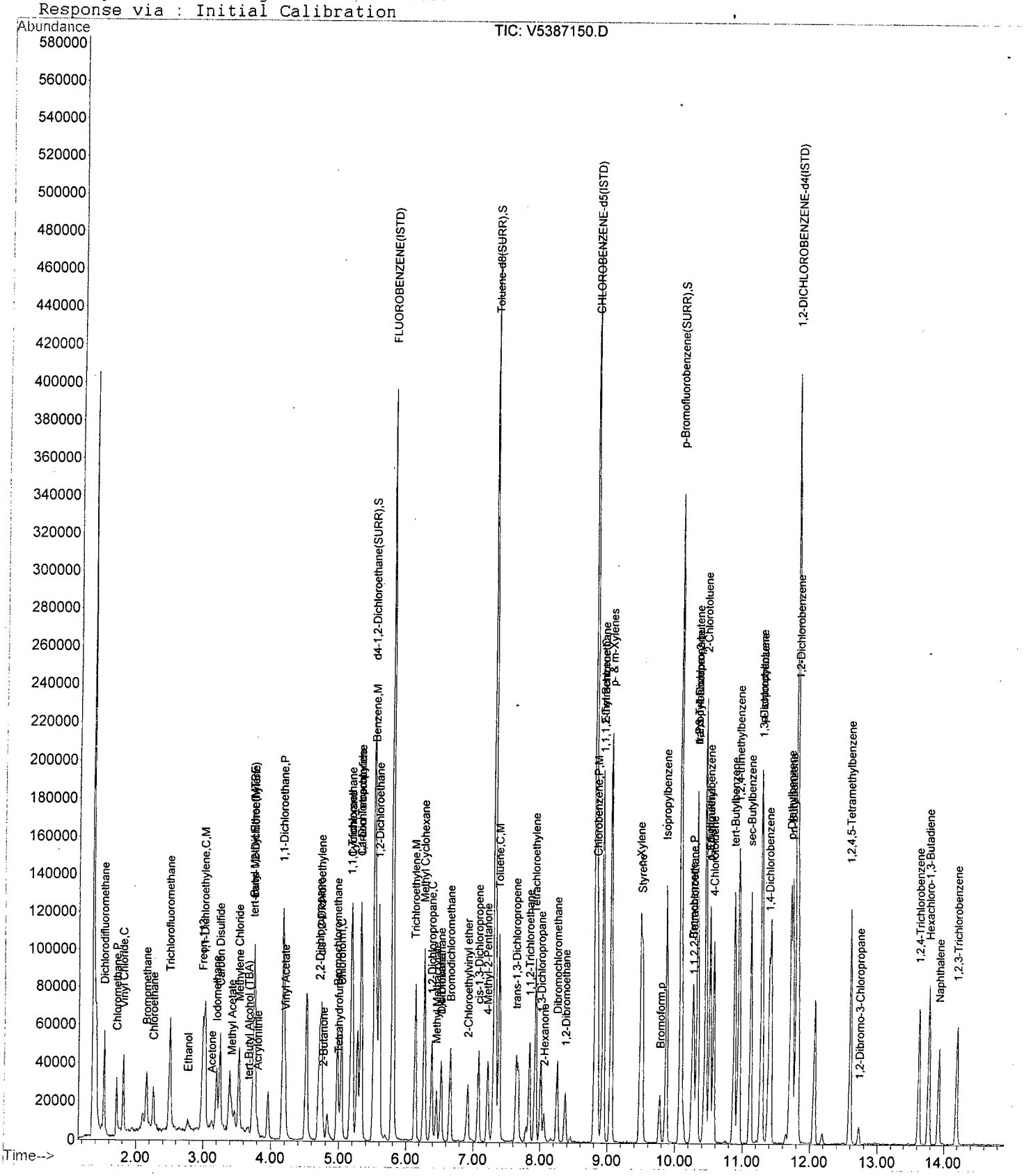
| Compound | R.T. | QIon | Response | Conc | Unit | | Qvalue |
|---|---|---|---|---|---|---|---|
| 51) 1,3-Dichloropropane | 8.00 | 76 | 29744 | 9.64 | ppb | # | 100 |
| 52) Tetrachloroethylene | 7.92 | 166 | 29971 | 10.33 | ppb | | 98 |
| 53) 4-Methyl-2-Pentanone | 7.21 | 43 | 31279 | 9.56 | ppb | | 100 |
| 54) Dibromochloromethane | 8.25 | 129 | 23727 | 10.57 | ppb | | 99 |
| 55) 1,2-Dibromoethane | 8.37 | 107 | 18081 | 9.12 | ppb | | 97 |
| 56) Chlorobenzene | 8.85 | 112 | 58238 | 9.37 | ppb | | 96 |
| 57) Ethyl Benzene | 8.92 | 91 | 92796 | 9.68 | ppb | | 99 |
| 58) p- & m-Xylenes | 9.05 | 91 | 143529 | 19.56 | ppb | | 99 |
| 59) o-Xylene | 9.48 | 91 | 73457 | 9.82 | ppb | | 99 |
| 60) Styrene | 9.51 | 104 | 52223 | 9.47 | ppb | | 99 |
| 61) 1,1,1,2-Tetrachloroethane | 8.94 | 131 | 24574 | 11.01 | ppb | | 98 |
| 63) Bromoform | 9.77 | 173 | 11925 | 8.58 | ppb | # | 100 |
| 65) p-Ethyltoulene | 10.51 | 105 | 77488 | 9.66 | ppb | | 94 |
| 66) p-Diethylbenzene | 11.70 | 119 | 54104 | 10.82 | ppb | | 90 |
| 67) 1,1,2,2-Tetrachloroethane | 10.27 | 83 | 17539 | 9.12 | ppb | # | 69 |
| 68) 1,2,3-Trichloropropane | 10.32 | 110 | 7808 | 10.61 | ppb | | 90 |
| 69) Isopropylbenzene | 9.86 | 105 | 101632 | 9.69 | ppb | # | 90 |
| 70) 1,2-Dibromo-3-Chloropropan | 12.72 | 75 | 3277 | 9.29 | ppb | | 99 |
| 71) Bromobenzene | 10.25 | 77 | 36437 | 9.78 | ppb | | 99 |
| 72) trans-1,4-Dichloro-2-buten | 10.32 | 75 | 22606m | 9.56 | ppb | | |
| 73) n-Propylbenzene | 10.32 | 91 | 109573 | 9.65 | ppb | | 99 |
| 74) 2-Chlorotoluene | 10.44 | 91 | 82440 | 10.60 | ppb | | 100 |
| 75) 4-Chlorotoluene | 10.56 | 91 | 67431 | 9.39 | ppb | | 98 |
| 76) tert-Butylbenzene | 10.86 | 119 | 77572 | 10.40 | ppb | # | 100 |
| 77) 1,3,5-trimethylbenzene | 10.51 | 105 | 77496 | 9.53 | ppb | # | 93 |
| 78) 1,2,4-trimethylbenzene | 10.93 | 105 | 73649 | 9.40 | ppb | | 97 |
| 79) sec-Butylbenzene | 11.11 | 105 | 102584 | 9.39 | ppb | # | 99 |
| 80) 1,3-Dichlorobenzene | 11.28 | 146 | 44005 | 11.05 | ppb | # | 100 |
| 81) 1,4-Dichlorobenzene | 11.38 | 146 | 41897 | 10.60 | ppb | # | 100 |
| 82) 1,2-Dichlorobenzene | 11.81 | 146 | 38361 | 11.01 | ppb | # | 99 |
| 83) p-Isopropyltoluene | 11.26 | 119 | 98984 | 10.45 | ppb | # | 92 |
| 84) n-Butylbenzene | 11.73 | 91 | 91352 | 9.89 | ppb | | 97 |
| 85) 1,2,4,5-Tetramethylbenzene | 12.59 | 119 | 77581 | 10.76 | ppb | | 98 |
| 86) 1,2,4-Trichlorobenzene | 13.62 | 180 | 26591 | 10.60 | ppb | | 97 |
| 87) Naphthalene | 13.91 | 128 | 45253 | 11.56 | ppb | # | 97 |
| 88) Hexachloro-1,3-Butadiene | 13.77 | 225 | 19336 | 10.82 | ppb | # | 68 |
| 89) 1,2,3-Trichlorobenzene | 14.19 | 182 | 20278 | 10.04 | ppb | | 98 |

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\V5082516\V5387150.D Vial: 8
Acq On : 25 Aug 2016 5:38 pm Operator: SS
Sample : SEQ-CAL2 Inst : VOA No. 5
Misc : QBV5082516A 10PPB Multiplr: 1.00
MS Integration Params: RTEINT1.P
Quant Time: Aug 26 8:00 2016 Quant Results File: V5C00161.RES

Method : C:\HPCHEM\1\METHODS\V5C00162.M (RTE Integrator)
Title : VOCs BY GC/MS EPA SW846-8260
Last Update : Fri Aug 26 08:10:01 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\V5082516\V5387151.D Vial: 9
Acq On : 25 Aug 2016 6:12 pm Operator: SS
Sample : SEQ-CAL3 Inst : VOA No. 5
Misc : QBV5082516A 20PPB Multiplr: 1.00
MS Integration Params: RTEINT1.P
Quant Time: Aug 26 8:05 2016 Quant Results File: V5C00161.RES

Quant Method : C:\HPCHEM\1\METHODS\V5C00161.M (RTE Integrator)
Title : VOCs BY GC/MS EPA SW846-8260
Last Update : Wed Aug 24 09:49:53 2016
Response via : Initial Calibration
DataAcq Meth : V5C0001A

| Internal Standards | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| 1) FLUOROBENZENE(ISTD) | 5.79 | 70 | 91697 | 50.00 | ppb | | 0.00 |
| 36) CHLOROBENZENE-d5(ISTD) | 8.81 | 117 | 305227 | 50.00 | ppb | | 0.00 |
| 62) 1,2-DICHLOROBENZENE-d4(IST | 11.79 | 152 | 116237 | 50.00 | ppb | | 0.00 |
| **System Monitoring Compounds** | | | | | | | |
| 32) d4-1,2-Dichloroethane(SURR | 5.51 | 65 | 148785 | 51.11 | ppb | | 0.00 |
| Spiked Amount 50.000 | Range 64 - 122 | | Recovery = 102.22% | | | | |
| 47) Toluene-d8(SURR) | 7.31 | 98 | 319110 | 50.52 | ppb | | 0.00 |
| Spiked Amount 50.000 | Range 83 - 114 | | Recovery = 101.04% | | | | |
| 64) p-Bromofluorobenzene(SURR) | 10.08 | 174 | 114611 | 46.34 | ppb | | 0.00 |
| Spiked Amount 50.000 | Range 71 - 126 | | Recovery = 92.68% | | | | |
| **Target Compounds** | | | | | | | Qvalue |
| 2) Dichlorodifluoromethane | 1.52 | 85 | 81178 | 17.35 | ppb | | 99 |
| 3) Chloromethane | 1.71 | 50 | 47804 | 14.20 | ppb | | 99 |
| 4) Vinyl Chloride | 1.81 | 62 | 65351 | 17.03 | ppb | | 100 |
| 5) Bromomethane | 2.15 | 94 | 36101 | 16.63 | ppb | | 97 |
| 6) Chloroethane | 2.25 | 64 | 35561 | 15.23 | ppb | | 99 |
| 7) Trichlorofluoromethane | 2.50 | 101 | 108846 | 18.59 | ppb | | 98 |
| 8) Ethanol | 2.77 | 45 | 13151 | 878.63 | ppb | | 100 |
| 9) Freon-113 | 3.00 | 101 | 53765 | 16.84 | ppb | | 93 |
| 10) 1,1-Dichloroethylene | 3.02 | 61 | 86281 | 16.26 | ppb | # | 83 |
| 11) Acrolein | 2.97 | 56 | 3980 | 5.46 | ppb | # | 63 |
| 12) Iodomethane | 3.20 | 142 | 69211 | 19.75 | ppb | | 98 |
| 13) Methyl Acetate | 3.42 | 43 | 30084 | 17.10 | ppb | | 98 |
| 14) tert-Butyl Alcohol (TBA) | 3.66 | 59 | 5010 | 16.59 | ppb | | 98 |
| 15) trans-1,2-Dichloroethylene | 3.76 | 61 | 83805 | 15.44 | ppb | | 99 |
| 16) Carbon Disulfide | 3.24 | 76 | 133860 | 15.63 | ppb | | 100 |
| 17) Methylene Chloride | 3.53 | 49 | 52960 | 16.13 | ppb | | 98 |
| 18) Acrylonitrile | 3.80 | 53 | 10902 | 16.00 | ppb | | 94 |
| 19) tert-Butyl Methyl Ether (M | 3.74 | 73 | 133408 | 16.63 | ppb | | 99 |
| 20) Acetone | 3.12 | 43 | 13210 | 16.38 | ppb | | 99 |
| 21) 1,1-Dichloroethane | 4.18 | 63 | 93301 | 16.06 | ppb | | 99 |
| 22) Vinyl Acetate | 4.21 | 43 | 106793m | 12.34 | ppb | | |
| 23) cis-1,2-Dichloroethylene | 4.73 | 96 | 48932 | 16.57 | ppb | # | 100 |
| 24) 2-Butanone | 4.76 | 72 | 4690 | 16.21 | ppb | | 84 |
| 25) 2,2-Dichloropropane | 4.70 | 77 | 95190 | 17.50 | ppb | | 100 |
| 26) Bromochloromethane | 4.97 | 49 | 35491 | 14.24 | ppb | # | 89 |
| 27) Chloroform | 5.04 | 83 | 91466 | 16.72 | ppb | | 98 |
| 28) Tetrahydrofuran | 5.00 | 71 | 4308 | 15.37 | ppb | # | 100 |
| 29) 1,1-Dichloropropylene | 5.32 | 75 | 79836 | 16.30 | ppb | | 100 |
| 30) 1,1,1-Trichloroethane | 5.17 | 97 | 90525 | 17.01 | ppb | | 100 |
| 31) Cyclohexane | 5.19 | 56 | 80597 | 15.08 | ppb | | 100 |
| 33) Carbon Tetrachloride | 5.32 | 117 | 98610 | 18.74 | ppb | | 100 |
| 34) 1,2-Dichloroethane | 5.59 | 62 | 73467 | 17.18 | ppb | | 100 |
| 35) Benzene | 5.53 | 78 | 164961 | 15.80 | ppb | # | 85 |
| 37) Trichloroethylene | 6.13 | 95 | 53063 | 20.07 | ppb | | 96 |
| 38) Methyl Cyclohexane | 6.27 | 83 | 77982 | 18.60 | ppb | # | 100 |
| 39) Dibromomethane | 6.52 | 93 | 26914 | 19.91 | ppb | | 98 |
| 40) Methyl Methacrylate | 6.45 | 69 | 25777 | 18.14 | ppb | | 99 |
| 41) Bromodichloromethane | 6.66 | 83 | 63349 | 19.11 | ppb | | 98 |
| 42) 1,2-Dichloropropane | 6.38 | 63 | 42455 | 18.19 | ppb | | 97 |
| 43) 1,4-Dioxane | 6.52 | 88 | 9742 | 400.28 | ppb | | 96 |
| 44) 2-Chloroethylvinyl ether | 6.92 | 63 | 24079 | 18.07 | ppb | | 99 |
| 45) cis-1,3-Dichloropropene | 7.08 | 75 | 74081 | 18.28 | ppb | # | 88 |
| 46) 2-Hexanone | 8.05 | 43 | 23765 | 18.92 | ppb | | 98 |
| 48) Toluene | 7.38 | 91 | 159672 | 19.11 | ppb | | 99 |
| 49) trans-1,3-Dichloropropene | 7.64 | 75 | 69967 | 19.30 | ppb | | 100 |
| 50) 1,1,2-Trichloroethane | 7.83 | 83 | 25401 | 18.42 | ppb | | 97 |

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\V5082516\V5387151.D Vial: 9
Acq On : 25 Aug 2016 6:12 pm Operator: SS
Sample : SEQ-CAL3 Inst : VOA No. 5
Misc : QBV5082516A 20PPB Multiplr: 1.00
MS Integration Params: RTEINT1.P
Quant Time: Aug 26 8:05 2016 Quant Results File: V5C00161.RES

Quant Method : C:\HPCHEM\1\METHODS\V5C00161.M (RTE Integrator)
Title : VOCs BY GC/MS EPA SW846-8260
Last Update : Wed Aug 24 09:49:53 2016
Response via : Initial Calibration
DataAcq Meth : V5C0001A

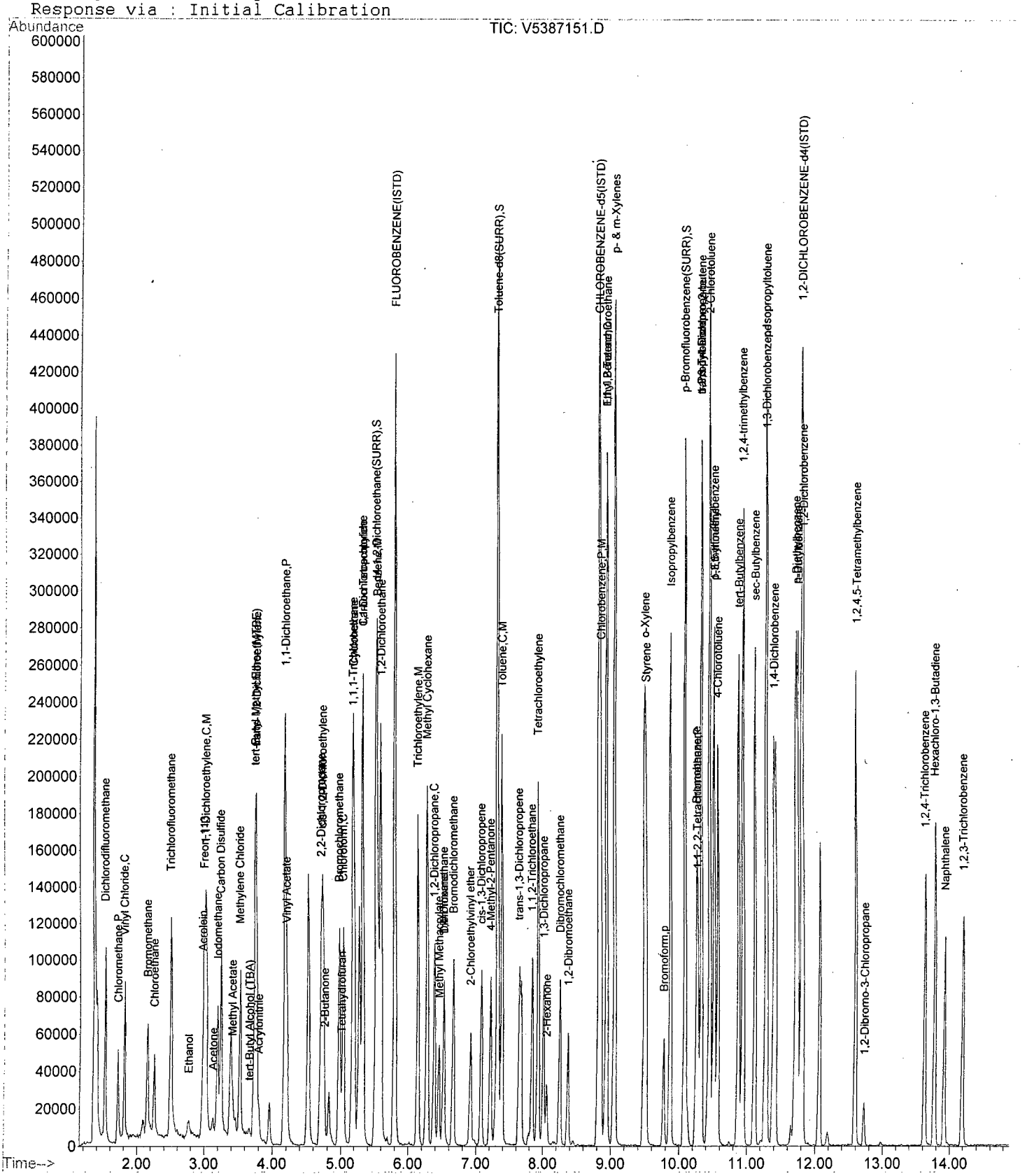
| Compound | R.T. | QIon | Response | Conc Unit | | Qvalue |
|---|---|---|---|---|---|---|
| 51) 1,3-Dichloropropane | 8.01 | 76 | 61316 | 19.38 ppb | # | 86 |
| 52) Tetrachloroethylene | 7.92 | 166 | 62875 | 21.11 ppb | # | 70 |
| 53) 4-Methyl-2-Pentanone | 7.21 | 43 | 65700 | 19.57 ppb | | 100 |
| 54) Dibromochloromethane | 8.24 | 129 | 51976 | 22.57 ppb | | 99 |
| 55) 1,2-Dibromoethane | 8.37 | 107 | 39443 | 19.39 ppb | | 99 |
| 56) Chlorobenzene | 8.84 | 112 | 122420 | 19.19 ppb | | 99 |
| 57) Ethyl Benzene | 8.93 | 91 | 187252 | 19.03 ppb | | 100 |
| 58) p- & m-Xylenes | 9.04 | 91 | 300328 | 39.88 ppb | | 98 |
| 59) o-Xylene | 9.48 | 91 | 152260 | 19.83 ppb | | 99 |
| 60) Styrene | 9.51 | 104 | 109637 | 19.38 ppb | | 100 |
| 61) 1,1,1,2-Tetrachloroethane | 8.93 | 131 | 51230 | 22.37 ppb | | 98 |
| 63) Bromoform | 9.77 | 173 | 26615 | 18.67 ppb | # | 100 |
| 65) p-Ethyltoulene | 10.51 | 105 | 170278 | 20.71 ppb | | 98 |
| 66) p-Diethylbenzene | 11.70 | 119 | 108734 | 21.20 ppb | | 91 |
| 67) 1,1,2,2-Tetrachloroethane | 10.27 | 83 | 36801 | 18.66 ppb | | 98 |
| 68) 1,2,3-Trichloropropane | 10.32 | 110 | 15455 | 20.49 ppb | | 97 |
| 69) Isopropylbenzene | 9.86 | 105 | 210023 | 19.53 ppb | # | 99 |
| 70) 1,2-Dibromo-3-Chloropropan | 12.73 | 75 | 7440 | 20.58 ppb | | 100 |
| 71) Bromobenzene | 10.25 | 77 | 73286 | 19.18 ppb | | 97 |
| 72) trans-1,4-Dichloro-2-buten | 10.32 | 75 | 47647m | 19.65 ppb | | |
| 73) n-Propylbenzene | 10.32 | 91 | 232477 | 19.96 ppb | | 99 |
| 74) 2-Chlorotoluene | 10.44 | 91 | 167996 | 21.07 ppb | | 100 |
| 75) 4-Chlorotoluene | 10.56 | 91 | 141703 | 19.25 ppb | | 97 |
| 76) tert-Butylbenzene | 10.87 | 119 | 159144 | 20.81 ppb | # | 91 |
| 77) 1,3,5-trimethylbenzene | 10.51 | 105 | 166118 | 19.93 ppb | | 97 |
| 78) 1,2,4-trimethylbenzene | 10.93 | 105 | 156431 | 19.48 ppb | | 99 |
| 79) sec-Butylbenzene | 11.11 | 105 | 218674 | 19.52 ppb | # | 99 |
| 80) 1,3-Dichlorobenzene | 11.28 | 146 | 90574 | 22.18 ppb | # | 100 |
| 81) 1,4-Dichlorobenzene | 11.38 | 146 | 93858 | 23.15 ppb | # | 100 |
| 82) 1,2-Dichlorobenzene | 11.81 | 146 | 80665 | 22.57 ppb | # | 99 |
| 83) p-Isopropyltoluene | 11.27 | 119 | 204152 | 21.02 ppb | # | 100 |
| 84) n-Butylbenzene | 11.73 | 91 | 185734 | 19.60 ppb | # | 86 |
| 85) 1,2,4,5-Tetramethylbenzene | 12.59 | 119 | 165637 | 22.41 ppb | | 98 |
| 86) 1,2,4-Trichlorobenzene | 13.62 | 180 | 54306 | 21.11 ppb | | 98 |
| 87) Naphthalene | 13.92 | 128 | 95706 | 23.85 ppb | # | 100 |
| 88) Hexachloro-1,3-Butadiene | 13.77 | 225 | 40450 | 22.07 ppb | # | 99 |
| 89) 1,2,3-Trichlorobenzene | 14.19 | 182 | 42850 | 20.69 ppb | | 99 |

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\V5082516\V5387151.D Vial: 9
Acq On : 25 Aug 2016 6:12 pm Operator: SS
Sample : SEQ-CAL3 Inst : VOA No. 5
Misc : QBV5082516A 20PPB Multiplr: 1.00
MS Integration Params: RTEINT1.P
Quant Time: Aug 26 8:05 2016 Quant Results File: V5C00161.RES

Method : C:\HPCHEM\1\METHODS\V5C00162.M (RTE Integrator)
Title : VOCs BY GC/MS EPA SW846-8260
Last Update : Fri Aug 26 08:10:01 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\V5082516\V5387152.D Vial: 10
Acq On : 25 Aug 2016 6:46 pm Operator: SS
Sample : SEQ-CAL4 Inst : VOA No. 5
Misc : QBV5082516A 50PPB Multiplr: 1.00
MS Integration Params: RTEINT1.P
Quant Time: Aug 26 8:07 2016 Quant Results File: V5C00161.RES

Quant Method : C:\HPCHEM\1\METHODS\V5C00161.M (RTE Integrator)
Title : VOCs BY GC/MS EPA SW846-8260
Last Update : Wed Aug 24 09:49:53 2016
Response via : Initial Calibration
DataAcq Meth : V5C0001A

| Internal Standards | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| 1) FLUOROBENZENE(ISTD) | 5.79 | 70 | 98580 | 50.00 | ppb | | 0.00 |
| 36) CHLOROBENZENE-d5(ISTD) | 8.81 | 117 | 320631 | 50.00 | ppb | | 0.00 |
| 62) 1,2-DICHLOROBENZENE-d4(IST | 11.79 | 152 | 113345 | 50.00 | ppb | | 0.00 |
| **System Monitoring Compounds** | | | | | | | |
| 32) d4-1,2-Dichloroethane(SURR | 5.51 | 65 | 155791 | 49.78 | ppb | | 0.00 |
| Spiked Amount 50.000 | Range 64 - 122 | | Recovery = 99.56% | | | | |
| 47) Toluene-d8(SURR) | 7.31 | 98 | 323039 | 48.69 | ppb | | 0.00 |
| Spiked Amount 50.000 | Range 83 - 114 | | Recovery = 97.38% | | | | |
| 64) p-Bromofluorobenzene(SURR) | 10.08 | 174 | 112922 | 46.82 | ppb | | 0.00 |
| Spiked Amount 50.000 | Range 71 - 126 | | Recovery = 93.64% | | | | |
| **Target Compounds** | | | | | | | Qvalue |
| 2) Dichlorodifluoromethane | 1.52 | 85 | 200092 | 39.77 | ppb | | 100 |
| 3) Chloromethane | 1.71 | 50 | 125593 | 34.70 | ppb | | 100 |
| 4) Vinyl Chloride | 1.81 | 62 | 164309 | 39.82 | ppb | | 100 |
| 5) Bromomethane | 2.15 | 94 | 88296 | 37.83 | ppb | | 98 |
| 6) Chloroethane | 2.26 | 64 | 94535 | 37.66 | ppb | | 100 |
| 7) Trichlorofluoromethane | 2.50 | 101 | 274317 | 43.58 | ppb | | 98 |
| 8) Ethanol | 2.76 | 45 | 31041 | 1929.08 | ppb | | 100 |
| 9) Freon-113 | 2.99 | 101 | 139586 | 40.67 | ppb | | 93 |
| 10) 1,1-Dichloroethylene | 3.02 | 61 | 240052 | 42.07 | ppb | | 99 |
| 11) Acrolein | 2.97 | 56 | 8673 | 79.97 | ppb | # | 80 |
| 12) Iodomethane | 3.19 | 142 | 200223 | 53.15 | ppb | | 98 |
| 13) Methyl Acetate | 3.42 | 43 | 65259 | 39.70 | ppb | | 100 |
| 14) tert-Butyl Alcohol (TBA) | 3.67 | 59 | 14406 | 44.37 | ppb | | 96 |
| 15) trans-1,2-Dichloroethylene | 3.76 | 61 | 236027 | 40.45 | ppb | | 99 |
| 16) Carbon Disulfide | 3.24 | 76 | 349230 | 37.94 | ppb | | 100 |
| 17) Methylene Chloride | 3.52 | 49 | 146687 | 41.55 | ppb | | 99 |
| 18) Acrylonitrile | 3.80 | 53 | 26057 | 35.57 | ppb | | 96 |
| 19) tert-Butyl Methyl Ether (M | 3.74 | 73 | 399694 | 46.35 | ppb | | 99 |
| 20) Acetone | 3.12 | 43 | 33260 | 38.36 | ppb | | 99 |
| 21) 1,1-Dichloroethane | 4.18 | 63 | 249748 | 40.00 | ppb | | 100 |
| 22) Vinyl Acetate | 4.21 | 43 | 242003m | 26.01 | ppb | | |
| 23) cis-1,2-Dichloroethylene | 4.73 | 96 | 129361 | 40.74 | ppb | # | 99 |
| 24) 2-Butanone | 4.76 | 72 | 12804 | 41.17 | ppb | | 93 |
| 25) 2,2-Dichloropropane | 4.70 | 77 | 246387 | 42.14 | ppb | | 100 |
| 26) Bromochloromethane | 4.97 | 49 | 101552 | 37.90 | ppb | | 92 |
| 27) Chloroform | 5.03 | 83 | 252110 | 42.87 | ppb | | 98 |
| 28) Tetrahydrofuran | 5.00 | 71 | 12283 | 40.77 | ppb | # | 100 |
| 29) 1,1-Dichloropropylene | 5.32 | 75 | 210138 | 39.92 | ppb | | 100 |
| 30) 1,1,1-Trichloroethane | 5.17 | 97 | 250494 | 43.78 | ppb | # | 97 |
| 31) Cyclohexane | 5.19 | 56 | 218323 | 37.99 | ppb | | 99 |
| 33) Carbon Tetrachloride | 5.31 | 117 | 260514 | 46.06 | ppb | | 100 |
| 34) 1,2-Dichloroethane | 5.59 | 62 | 200108 | 43.53 | ppb | | 100 |
| 35) Benzene | 5.53 | 78 | 436354 | 38.87 | ppb | | 97 |
| 37) Trichloroethylene | 6.13 | 95 | 135445 | 48.77 | ppb | | 96 |
| 38) Methyl Cyclohexane | 6.27 | 83 | 197475 | 44.85 | ppb | # | 100 |
| 39) Dibromomethane | 6.52 | 93 | 73214 | 51.57 | ppb | | 97 |
| 40) Methyl Methacrylate | 6.45 | 69 | 76571 | 51.30 | ppb | | 100 |
| 41) Bromodichloromethane | 6.66 | 83 | 182358 | 52.36 | ppb | | 98 |
| 42) 1,2-Dichloropropane | 6.37 | 63 | 112369 | 45.83 | ppb | | 98 |
| 43) 1,4-Dioxane | 6.52 | 88 | 25787 | 1008.63 | ppb | | 96 |
| 44) 2-Chloroethylvinyl ether | 6.92 | 63 | 64219 | 45.88 | ppb | | 99 |
| 45) cis-1,3-Dichloropropene | 7.08 | 75 | 199078 | 46.77 | ppb | | 100 |
| 46) 2-Hexanone | 8.05 | 43 | 65428 | 49.58 | ppb | | 99 |
| 48) Toluene | 7.38 | 91 | 410166 | 46.74 | ppb | | 99 |
| 49) trans-1,3-Dichloropropene | 7.64 | 75 | 180441 | 47.38 | ppb | | 100 |
| 50) 1,1,2-Trichloroethane | 7.84 | 83 | 67549 | 46.63 | ppb | | 99 |

(#) = qualifier out of range (m) = manual integration
V5387152.D V5C00162.M Fri Aug 26 09:46:10 2016

Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\V5082516\V5387152.D Vial: 10
Acq On : 25 Aug 2016 6:46 pm Operator: SS
Sample : SEQ-CAL4 Inst : VOA No. 5
Misc : QBV5082516A 50PPB Multiplr: 1.00
MS Integration Params: RTEINT1.P
Quant Time: Aug 26 8:07 2016 Quant Results File: V5C00161.RES

Quant Method : C:\HPCHEM\1\METHODS\V5C00161.M (RTE Integrator)
Title : VOCs BY GC/MS EPA SW846-8260
Last Update : Wed Aug 24 09:49:53 2016
Response via : Initial Calibration
DataAcq Meth : V5C0001A

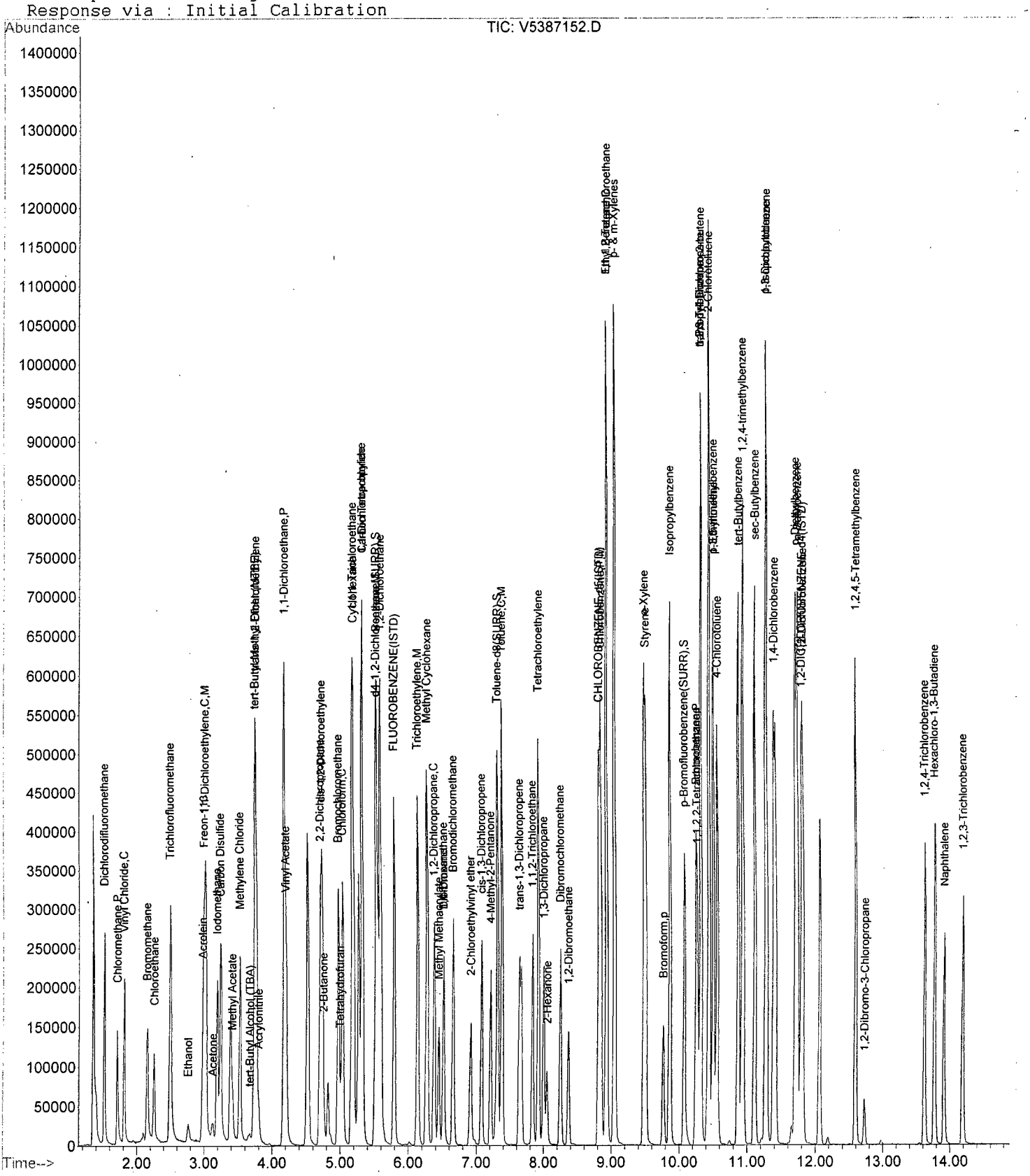
| Compound | R.T. | QIon | Response | Conc | Unit | | Qvalue |
|---|---|---|---|---|---|---|---|
| 51) 1,3-Dichloropropane | 8.01 | 76 | 158290 | 47.61 | ppb | # | 86 |
| 52) Tetrachloroethylene | 7.92 | 166 | 158805 | 50.76 | ppb | | 97 |
| 53) 4-Methyl-2-Pentanone | 7.21 | 43 | 164593 | 46.67 | ppb | | 100 |
| 54) Dibromochloromethane | 8.25 | 129 | 136991 | 56.63 | ppb | | 100 |
| 55) 1,2-Dibromoethane | 8.37 | 107 | 103687 | 48.52 | ppb | | 99 |
| 56) Chlorobenzene | 8.84 | 112 | 316047 | 47.15 | ppb | | 99 |
| 57) Ethyl Benzene | 8.93 | 91 | 506117 | 48.97 | ppb | | 100 |
| 58) p- & m-Xylenes | 9.04 | 91 | 735580 | 92.98 | ppb | | 99 |
| 59) o-Xylene | 9.49 | 91 | 370360 | 45.91 | ppb | | 99 |
| 60) Styrene | 9.51 | 104 | 271718 | 45.73 | ppb | | 99 |
| 61) 1,1,1,2-Tetrachloroethane | 8.93 | 131 | 136035 | 56.55 | ppb | | 97 |
| 63) Bromoform | 9.77 | 173 | 73401 | 52.80 | ppb | # | 100 |
| 65) p-Ethyltoulene | 10.50 | 105 | 414179 | 51.65 | ppb | | 96 |
| 66) p-Diethylbenzene | 11.70 | 119 | 276659 | 55.31 | ppb | | 91 |
| 67) 1,1,2,2-Tetrachloroethane | 10.27 | 83 | 89994 | 46.80 | ppb | # | 98 |
| 68) 1,2,3-Trichloropropane | 10.32 | 110 | 38273 | 52.04 | ppb | | 95 |
| 69) Isopropylbenzene | 9.87 | 105 | 534420 | 50.95 | ppb | # | 99 |
| 70) 1,2-Dibromo-3-Chloropropan | 12.72 | 75 | 19202 | 54.47 | ppb | | 97 |
| 71) Bromobenzene | 10.24 | 77 | 183620 | 49.28 | ppb | | 97 |
| 72) trans-1,4-Dichloro-2-buten | 10.32 | 75 | 118314m | 50.05 | ppb | | |
| 73) n-Propylbenzene | 10.32 | 91 | 588223 | 51.79 | ppb | | 99 |
| 74) 2-Chlorotoluene | 10.44 | 91 | 392023 | 50.42 | ppb | | 99 |
| 75) 4-Chlorotoluene | 10.56 | 91 | 389971 | 54.32 | ppb | | 99 |
| 76) tert-Butylbenzene | 10.87 | 119 | 431216 | 57.82 | ppb | # | 100 |
| 77) 1,3,5-trimethylbenzene | 10.50 | 105 | 414190 | 50.96 | ppb | | 98 |
| 78) 1,2,4-trimethylbenzene | 10.93 | 105 | 385426 | 49.22 | ppb | | 98 |
| 79) sec-Butylbenzene | 11.11 | 105 | 534240 | 48.89 | ppb | # | 99 |
| 80) 1,3-Dichlorobenzene | 11.28 | 146 | 228791 | 57.45 | ppb | # | 99 |
| 81) 1,4-Dichlorobenzene | 11.38 | 146 | 234422 | 59.30 | ppb | # | 100 |
| 82) 1,2-Dichlorobenzene | 11.81 | 146 | 197331 | 56.63 | ppb | # | 100 |
| 83) p-Isopropyltoluene | 11.27 | 119 | 504822 | 53.31 | ppb | # | 100 |
| 84) n-Butylbenzene | 11.73 | 91 | 478804 | 51.83 | ppb | | 98 |
| 85) 1,2,4,5-Tetramethylbenzene | 12.59 | 119 | 396403 | 55.01 | ppb | | 99 |
| 86) 1,2,4-Trichlorobenzene | 13.62 | 180 | 133601 | 53.26 | ppb | | 98 |
| 87) Naphthalene | 13.91 | 128 | 236359 | 60.41 | ppb | # | 97 |
| 88) Hexachloro-1,3-Butadiene | 13.77 | 225 | 97392 | 54.50 | ppb | # | 68 |
| 89) 1,2,3-Trichlorobenzene | 14.19 | 182 | 106090 | 52.54 | ppb | | 99 |

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\V5082516\V5387152.D Vial: 10
Acq On : 25 Aug 2016 6:46 pm Operator: SS
Sample : SEQ-CAL4 Inst : VOA No. 5
Misc : QBV5082516A 50PPB Multiplr: 1.00
MS Integration Params: RTEINT1.P
Quant Time: Aug 26 8:07 2016 Quant Results File: V5C00161.RES

Method : C:\HPCHEM\1\METHODS\V5C00162.M (RTE Integrator)
Title : VOCs BY GC/MS EPA SW846-8260
Last Update : Fri Aug 26 08:10:01 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\V5082516\V5387153.D Vial: 11
Acq On : 25 Aug 2016 7:20 pm Operator: SS
Sample : SEQ-CAL5 Inst : VOA No. 5
Misc : QBV5082516A 100PPB Multiplr: 1.00
MS Integration Params: RTEINT1.P
Quant Time: Aug 26 8:08 2016 Quant Results File: V5C00161.RES

Quant Method : C:\HPCHEM\1\METHODS\V5C00161.M (RTE Integrator)
Title : VOCs BY GC/MS EPA SW846-8260
Last Update : Wed Aug 24 09:49:53 2016
Response via : Initial Calibration
DataAcq Meth : V5C0001A

| Internal Standards | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| 1) FLUOROBENZENE(ISTD) | 5.79 | 70 | 99918 | 50.00 | ppb | | 0.00 |
| 36) CHLOROBENZENE-d5(ISTD) | 8.81 | 117 | 330913 | 50.00 | ppb | | 0.00 |
| 62) 1,2-DICHLOROBENZENE-d4(IST | 11.79 | 152 | 112989 | 50.00 | ppb | | 0.00 |
| **System Monitoring Compounds** | | | | | | | |
| 32) d4-1,2-Dichloroethane(SURR | 5.51 | 65 | 158346 | 49.92 | ppb | | 0.00 |
| Spiked Amount 50.000 | Range 64 - 122 | | Recovery = 99.84% | | | | |
| 47) Toluene-d8(SURR) | 7.31 | 98 | 338622 | 49.45 | ppb | | 0.00 |
| Spiked Amount 50.000 | Range 83 - 114 | | Recovery = 98.90% | | | | |
| 64) p-Bromofluorobenzene(SURR) | 10.08 | 174 | 116633 | 48.51 | ppb | | 0.00 |
| Spiked Amount 50.000 | Range 71 - 126 | | Recovery = 97.02% | | | | |
| **Target Compounds** | | | | | | | Qvalue |
| 2) Dichlorodifluoromethane | 1.52 | 85 | 401753 | 78.78 | ppb | | 100 |
| 3) Chloromethane | 1.71 | 50 | 255717 | 69.72 | ppb | | 100 |
| 4) Vinyl Chloride | 1.81 | 62 | 331452 | 79.25 | ppb | | 100 |
| 5) Bromomethane | 2.15 | 94 | 189654 | 80.16 | ppb | | 99 |
| 6) Chloroethane | 2.26 | 64 | 189644 | 74.53 | ppb | | 100 |
| 7) Trichlorofluoromethane | 2.50 | 101 | 553696 | 86.79 | ppb | | 98 |
| 8) Ethanol | 2.76 | 45 | 58497 | 3586.68 | ppb | | 100 |
| 9) Freon-113 | 2.99 | 101 | 278373 | 80.02 | ppb | | 93 |
| 10) 1,1-Dichloroethylene | 3.02 | 61 | 480875 | 83.15 | ppb | | 99 |
| 11) Acrolein | 2.97 | 56 | 16328 | 182.88 | ppb | | 93 |
| 12) Iodomethane | 3.20 | 142 | 428968 | 112.34 | ppb | | 99 |
| 13) Methyl Acetate | 3.42 | 43 | 127970 | 83.04 | ppb | | 100 |
| 14) tert-Butyl Alcohol (TBA) | 3.67 | 59 | 25526 | 77.56 | ppb | | 96 |
| 15) trans-1,2-Dichloroethylene | 3.76 | 61 | 447060 | 75.59 | ppb | | 99 |
| 16) Carbon Disulfide | 3.24 | 76 | 778779 | 83.46 | ppb | | 100 |
| 17) Methylene Chloride | 3.53 | 49 | 295704 | 82.63 | ppb | | 98 |
| 18) Acrylonitrile | 3.80 | 53 | 60427 | 81.39 | ppb | | 99 |
| 19) tert-Butyl Methyl Ether (M | 3.74 | 73 | 772490 | 88.39 | ppb | | 99 |
| 20) Acetone | 3.12 | 43 | 64474 | 73.37 | ppb | | 100 |
| 21) 1,1-Dichloroethane | 4.18 | 63 | 515496 | 81.45 | ppb | | 99 |
| 22) Vinyl Acetate | 4.21 | 43 | 501774m | 53.20 | ppb | | |
| 23) cis-1,2-Dichloroethylene | 4.73 | 96 | 268727 | 83.49 | ppb | # | 100 |
| 24) 2-Butanone | 4.76 | 72 | 25914 | 82.21 | ppb | | 94 |
| 25) 2,2-Dichloropropane | 4.70 | 77 | 509152 | 85.91 | ppb | | 100 |
| 26) Bromochloromethane | 4.97 | 49 | 190456 | 70.13 | ppb | # | 89 |
| 27) Chloroform | 5.03 | 83 | 496258 | 83.26 | ppb | | 98 |
| 28) Tetrahydrofuran | 5.00 | 71 | 24152 | 79.09 | ppb | # | 100 |
| 29) 1,1-Dichloropropylene | 5.32 | 75 | 434644 | 81.46 | ppb | | 99 |
| 30) 1,1,1-Trichloroethane | 5.17 | 97 | 492422 | 84.90 | ppb | | 100 |
| 31) Cyclohexane | 5.19 | 56 | 407887 | 70.03 | ppb | | 100 |
| 33) Carbon Tetrachloride | 5.32 | 117 | 545315 | 95.13 | ppb | | 100 |
| 34) 1,2-Dichloroethane | 5.59 | 62 | 401986 | 86.27 | ppb | # | 99 |
| 35) Benzene | 5.53 | 78 | 868416 | 76.32 | ppb | | 99 |
| 37) Trichloroethylene | 6.13 | 95 | 275624 | 96.17 | ppb | | 95 |
| 38) Methyl Cyclohexane | 6.27 | 83 | 381015 | 83.84 | ppb | # | 100 |
| 39) Dibromomethane | 6.52 | 93 | 145231 | 99.11 | ppb | | 97 |
| 40) Methyl Methacrylate | 6.45 | 69 | 146982 | 95.41 | ppb | | 99 |
| 41) Bromodichloromethane | 6.65 | 83 | 365675 | 101.72 | ppb | | 98 |
| 42) 1,2-Dichloropropane | 6.38 | 63 | 217071 | 85.78 | ppb | | 97 |
| 43) 1,4-Dioxane | 6.52 | 88 | 51954 | 1968.98 | ppb | | 95 |
| 44) 2-Chloroethylvinyl ether | 6.92 | 63 | 128103 | 88.68 | ppb | | 99 |
| 45) cis-1,3-Dichloropropene | 7.08 | 75 | 421657 | 95.98 | ppb | | 100 |
| 46) 2-Hexanone | 8.05 | 43 | 132525 | 97.31 | ppb | | 99 |
| 48) Toluene | 7.38 | 91 | 851483 | 94.01 | ppb | | 100 |
| 49) trans-1,3-Dichloropropene | 7.64 | 75 | 395049 | 100.51 | ppb | | 100 |
| 50) 1,1,2-Trichloroethane | 7.84 | 83 | 140168 | 93.75 | ppb | | 99 |

(#) = qualifier out of range (m) = manual integration
V5387153.D V5C00162.M Fri Aug 26 09:46:18 2016

Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\V5082516\V5387153.D Vial: 11
Acq On : 25 Aug 2016 7:20 pm Operator: SS
Sample : SEQ-CAL5 Inst : VOA No. 5
Misc : QBV5082516A 100PPB Multiplr: 1.00
MS Integration Params: RTEINT1.P
Quant Time: Aug 26 8:08 2016 Quant Results File: V5C00161.RES

Quant Method : C:\HPCHEM\1\METHODS\V5C00161.M (RTE Integrator)
Title : VOCs BY GC/MS EPA SW846-8260
Last Update : Wed Aug 24 09:49:53 2016
Response via : Initial Calibration
DataAcq Meth : V5C0001A

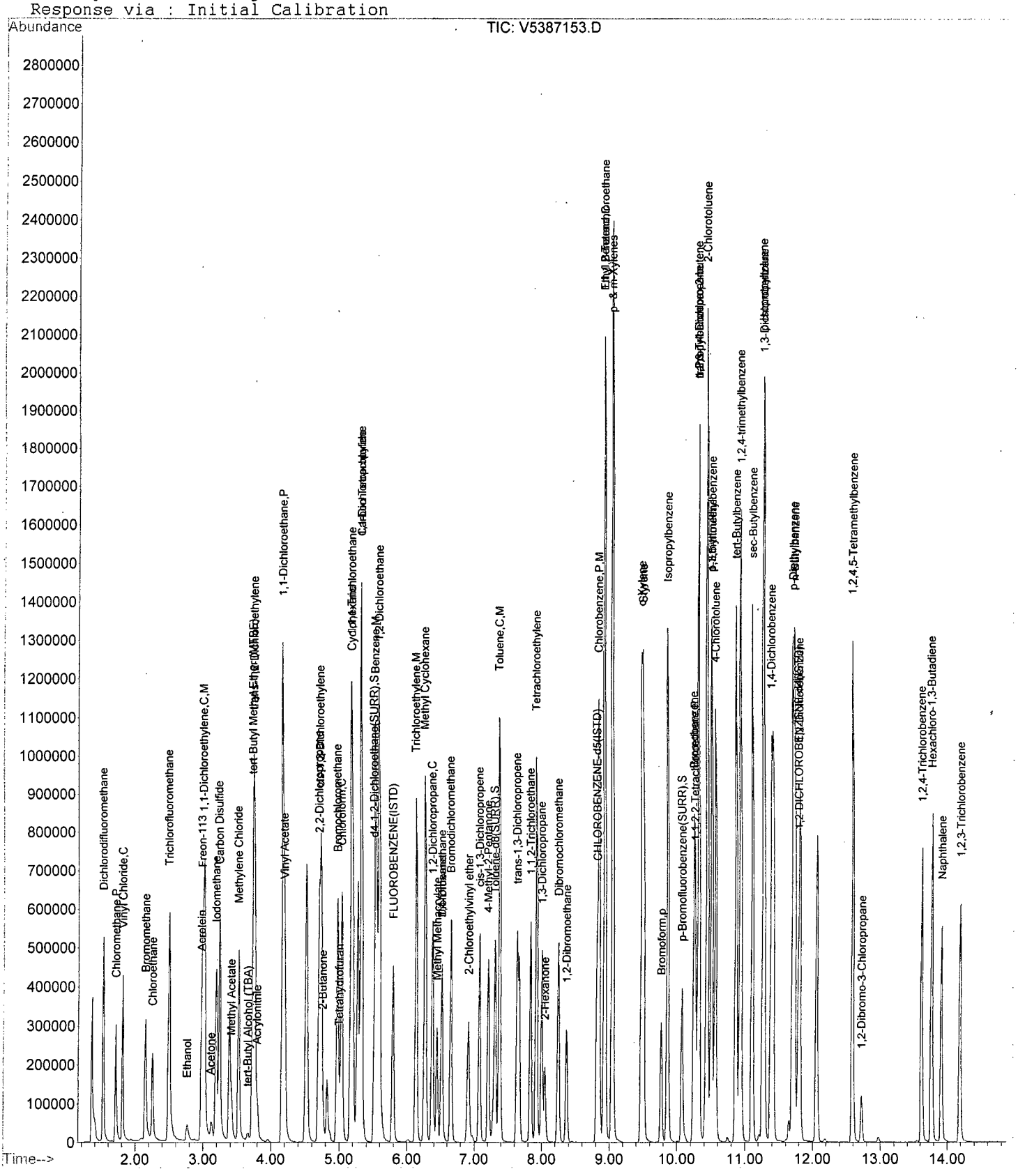
| | Compound | R.T. | QIon | Response | Conc | Unit | | Qvalue |
|---|---|---|---|---|---|---|---|---|
| 51) | 1,3-Dichloropropane | 8.00 | 76 | 333925 | 97.33 | ppb | # | 100 |
| 52) | Tetrachloroethylene | 7.93 | 166 | 319865 | 99.07 | ppb | | 97 |
| 53) | 4-Methyl-2-Pentanone | 7.21 | 43 | 346264 | 95.13 | ppb | | 100 |
| 54) | Dibromochloromethane | 8.25 | 129 | 286671 | 114.83 | ppb | | 99 |
| 55) | 1,2-Dibromoethane | 8.37 | 107 | 205725 | 93.28 | ppb | | 99 |
| 56) | Chlorobenzene | 8.84 | 112 | 652863 | 94.38 | ppb | | 99 |
| 57) | Ethyl Benzene | 8.93 | 91 | 1031555 | 96.71 | ppb | | 99 |
| 58) | p- & m-Xylenes | 9.05 | 91 | 1565215 | 191.71 | ppb | | 98 |
| 59) | o-Xylene | 9.48 | 91 | 777390 | 93.37 | ppb | | 99 |
| 60) | Styrene | 9.51 | 104 | 565916 | 92.29 | ppb | | 98 |
| 61) | 1,1,1,2-Tetrachloroethane | 8.93 | 131 | 277315 | 111.69 | ppb | | 97 |
| 63) | Bromoform | 9.77 | 173 | 149146 | 107.61 | ppb | # | 100 |
| 65) | p-Ethyltoulene | 10.51 | 105 | 826716 | 103.42 | ppb | # | 41 |
| 66) | p-Diethylbenzene | 11.70 | 119 | 515690 | 103.43 | ppb | | 93 |
| 67) | 1,1,2,2-Tetrachloroethane | 10.27 | 83 | 186998 | 97.55 | ppb | # | 98 |
| 68) | 1,2,3-Trichloropropane | 10.32 | 110 | 73581 | 100.36 | ppb | | 95 |
| 69) | Isopropylbenzene | 9.86 | 105 | 1038311 | 99.31 | ppb | # | 99 |
| 70) | 1,2-Dibromo-3-Chloropropan | 12.73 | 75 | 39317 | 111.89 | ppb | | 97 |
| 71) | Bromobenzene | 10.25 | 77 | 374784 | 100.91 | ppb | | 97 |
| 72) | trans-1,4-Dichloro-2-buten | 10.32 | 75 | 231451m | 98.22 | ppb | | |
| 73) | n-Propylbenzene | 10.32 | 91 | 1122010 | 99.10 | ppb | | 100 |
| 74) | 2-Chlorotoluene | 10.44 | 91 | 817684 | 105.50 | ppb | | 100 |
| 75) | 4-Chlorotoluene | 10.56 | 91 | 721840 | 100.87 | ppb | | 98 |
| 76) | tert-Butylbenzene | 10.86 | 119 | 827141 | 111.26 | ppb | # | 100 |
| 77) | 1,3,5-trimethylbenzene | 10.51 | 105 | 809801 | 99.95 | ppb | | 97 |
| 78) | 1,2,4-trimethylbenzene | 10.93 | 105 | 771677 | 98.85 | ppb | | 99 |
| 79) | sec-Butylbenzene | 11.11 | 105 | 1060545 | 97.37 | ppb | # | 99 |
| 80) | 1,3-Dichlorobenzene | 11.28 | 146 | 445904 | 112.32 | ppb | # | 100 |
| 81) | 1,4-Dichlorobenzene | 11.39 | 146 | 440269 | 111.73 | ppb | # | 100 |
| 82) | 1,2-Dichlorobenzene | 11.81 | 146 | 381913 | 109.94 | ppb | # | 100 |
| 83) | p-Isopropyltoluene | 11.27 | 119 | 1021963 | 108.26 | ppb | # | 92 |
| 84) | n-Butylbenzene | 11.74 | 91 | 919701 | 99.87 | ppb | | 98 |
| 85) | 1,2,4,5-Tetramethylbenzene | 12.59 | 119 | 834856 | 116.22 | ppb | | 99 |
| 86) | 1,2,4-Trichlorobenzene | 13.62 | 180 | 264826 | 105.91 | ppb | | 98 |
| 87) | Naphthalene | 13.92 | 128 | 490635 | 125.80 | ppb | # | 97 |
| 88) | Hexachloro-1,3-Butadiene | 13.77 | 225 | 194527 | 109.20 | ppb | # | 99 |
| 89) | 1,2,3-Trichlorobenzene | 14.19 | 182 | 209313 | 103.99 | ppb | | 99 |

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\V5082516\V5387153.D Vial: 11
Acq On : 25 Aug 2016 7:20 pm Operator: SS
Sample : SEQ-CAL5 Inst : VOA No. 5
Misc : QBV5082516A 100PPB Multiplr: 1.00
MS Integration Params: RTEINT1.P
Quant Time: Aug 26 8:08 2016 Quant Results File: V5C00161.RES

Method : C:\HPCHEM\1\METHODS\V5C00162.M (RTE Integrator)
Title : VOCs BY GC/MS EPA SW846-8260
Last Update : Fri Aug 26 08:10:01 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\V5082516\V5387154.D Vial: 12
Acq On : 25 Aug 2016 7:54 pm Operator: SS
Sample : SEQ-CAL6 Inst : VOA No. 5
Misc : QBV5082516A 200PPB Multiplr: 1.00
MS Integration Params: RTEINT1.P
Quant Time: Aug 26 8:09 2016 Quant Results File: V5C00161.RES

Quant Method : C:\HPCHEM\1\METHODS\V5C00161.M (RTE Integrator)
Title : VOCs BY GC/MS EPA SW846-8260
Last Update : Wed Aug 24 09:49:53 2016
Response via : Initial Calibration
DataAcq Meth : V5C0001A

| Internal Standards | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| 1) FLUOROBENZENE(ISTD) | 5.79 | 70 | 95288 | 50.00 | ppb | | 0.00 |
| 36) CHLOROBENZENE-d5(ISTD) | 8.81 | 117 | 301055 | 50.00 | ppb | | 0.00 |
| 62) 1,2-DICHLOROBENZENE-d4(IST | 11.79 | 152 | 104142 | 50.00 | ppb | | 0.00 |
| **System Monitoring Compounds** | | | | | | | |
| 32) d4-1,2-Dichloroethane(SURR | 5.52 | 65 | 157009 | 51.90 | ppb | | 0.00 |
| Spiked Amount 50.000 | Range 64 - 122 | | Recovery = 103.80% | | | | |
| 47) Toluene-d8(SURR) | 7.31 | 98 | 327373 | 52.55 | ppb | | 0.00 |
| Spiked Amount 50.000 | Range 83 - 114 | | Recovery = 105.10% | | | | |
| 64) p-Bromofluorobenzene(SURR) | 10.08 | 174 | 109213 | 49.28 | ppb | | 0.00 |
| Spiked Amount 50.000 | Range 71 - 126 | | Recovery = 98.56% | | | | |
| **Target Compounds** | | | | | | | Qvalue |
| 2) Dichlorodifluoromethane | 1.52 | 85 | 782065 | 160.81 | ppb | | 100 |
| 3) Chloromethane | 1.71 | 50 | 543440 | 155.36 | ppb | | 100 |
| 4) Vinyl Chloride | 1.81 | 62 | 633834 | 158.90 | ppb | | 100 |
| 5) Bromomethane | 2.15 | 94 | 379638 | 168.26 | ppb | | 100 |
| 6) Chloroethane | 2.25 | 64 | 367381 | 151.40 | ppb | | 99 |
| 7) Trichlorofluoromethane | 2.50 | 101 | 1124216 | 184.79 | ppb | | 97 |
| 8) Ethanol | 2.77 | 45 | 122485 | 7874.95 | ppb | | 100 |
| 9) Freon-113 | 2.99 | 101 | 561284 | 169.18 | ppb | | 94 |
| 10) 1,1-Dichloroethylene | 3.02 | 61 | 953482 | 172.88 | ppb | | 99 |
| 11) Acrolein | 2.97 | 56 | 33797 | 381.67 | ppb | | 94 |
| 12) Iodomethane | 3.20 | 142 | 850835 | 233.65 | ppb | | 98 |
| 13) Methyl Acetate | 3.42 | 43 | 265263 | 197.98 | ppb | | 100 |
| 14) tert-Butyl Alcohol (TBA) | 3.67 | 59 | 57390 | 182.85 | ppb | | 99 |
| 15) trans-1,2-Dichloroethylene | 3.76 | 61 | 864725 | 153.32 | ppb | | 99 |
| 16) Carbon Disulfide | 3.24 | 76 | 1508885 | 169.57 | ppb | | 100 |
| 17) Methylene Chloride | 3.52 | 49 | 577353 | 169.17 | ppb | | 99 |
| 18) Acrylonitrile | 3.80 | 53 | 114773 | 162.11 | ppb | | 97 |
| 19) tert-Butyl Methyl Ether (M | 3.74 | 73 | 1453023 | 174.33 | ppb | | 99 |
| 20) Acetone | 3.12 | 43 | 134176 | 160.11 | ppb | | 99 |
| 21) 1,1-Dichloroethane | 4.18 | 63 | 987605 | 163.63 | ppb | | 100 |
| 22) Vinyl Acetate | 4.21 | 43 | 1061787m | 118.04 | ppb | | |
| 23) cis-1,2-Dichloroethylene | 4.73 | 96 | 512119 | 166.84 | ppb | # | 100 |
| 24) 2-Butanone | 4.76 | 72 | 49457 | 164.53 | ppb | | 97 |
| 25) 2,2-Dichloropropane | 4.71 | 77 | 1024858 | 181.33 | ppb | | 100 |
| 26) Bromochloromethane | 4.97 | 49 | 403294 | 155.72 | ppb | | 92 |
| 27) Chloroform | 5.04 | 83 | 1033781 | 181.88 | ppb | | 99 |
| 28) Tetrahydrofuran | 5.00 | 71 | 49952 | 171.53 | ppb | # | 100 |
| 29) 1,1-Dichloropropylene | 5.33 | 75 | 809246 | 159.04 | ppb | | 99 |
| 30) 1,1,1-Trichloroethane | 5.17 | 97 | 995028 | 179.90 | ppb | | 100 |
| 31) Cyclohexane | 5.19 | 56 | 787934 | 141.86 | ppb | | 100 |
| 33) Carbon Tetrachloride | 5.32 | 117 | 1062499 | 194.36 | ppb | | 100 |
| 34) 1,2-Dichloroethane | 5.59 | 62 | 850909 | 191.48 | ppb | | 100 |
| 35) Benzene | 5.53 | 78 | 1703255 | 156.96 | ppb | | 99 |
| 37) Trichloroethylene | 6.13 | 95 | 532247 | 204.12 | ppb | | 96 |
| 38) Methyl Cyclohexane | 6.28 | 83 | 760014 | 183.82 | ppb | # | 100 |
| 39) Dibromomethane | 6.52 | 93 | 295381 | 221.57 | ppb | | 96 |
| 40) Methyl Methacrylate | 6.45 | 69 | 305068 | 217.66 | ppb | | 100 |
| 41) Bromodichloromethane | 6.66 | 83 | 742511 | 227.04 | ppb | | 98 |
| 42) 1,2-Dichloropropane | 6.38 | 63 | 451398 | 196.07 | ppb | | 96 |
| 43) 1,4-Dioxane | 6.52 | 88 | 106781 | 4448.21 | ppb | | 95 |
| 44) 2-Chloroethylvinyl ether | 6.92 | 63 | 260159 | 197.96 | ppb | | 99 |
| 45) cis-1,3-Dichloropropene | 7.08 | 75 | 843112 | 210.94 | ppb | | 99 |
| 46) 2-Hexanone | 8.05 | 43 | 280529 | 226.42 | ppb | | 99 |
| 48) Toluene | 7.38 | 91 | 1654326 | 200.76 | ppb | | 100 |
| 49) trans-1,3-Dichloropropene | 7.64 | 75 | 792874 | 221.74 | ppb | | 100 |
| 50) 1,1,2-Trichloroethane | 7.84 | 83 | 274985 | 202.17 | ppb | | 98 |

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\V5082516\V5387154.D Vial: 12
Acq On : 25 Aug 2016 7:54 pm Operator: SS
Sample : SEQ-CAL6 Inst : VOA No. 5
Misc : QBV5082516A 200PPB Multiplr: 1.00
MS Integration Params: RTEINT1.P
Quant Time: Aug 26 8:09 2016 Quant Results File: V5C00161.RES

Quant Method : C:\HPCHEM\1\METHODS\V5C00161.M (RTE Integrator)
Title : VOCs BY GC/MS EPA SW846-8260
Last Update : Wed Aug 24 09:49:53 2016
Response via : Initial Calibration
DataAcq Meth : V5C0001A

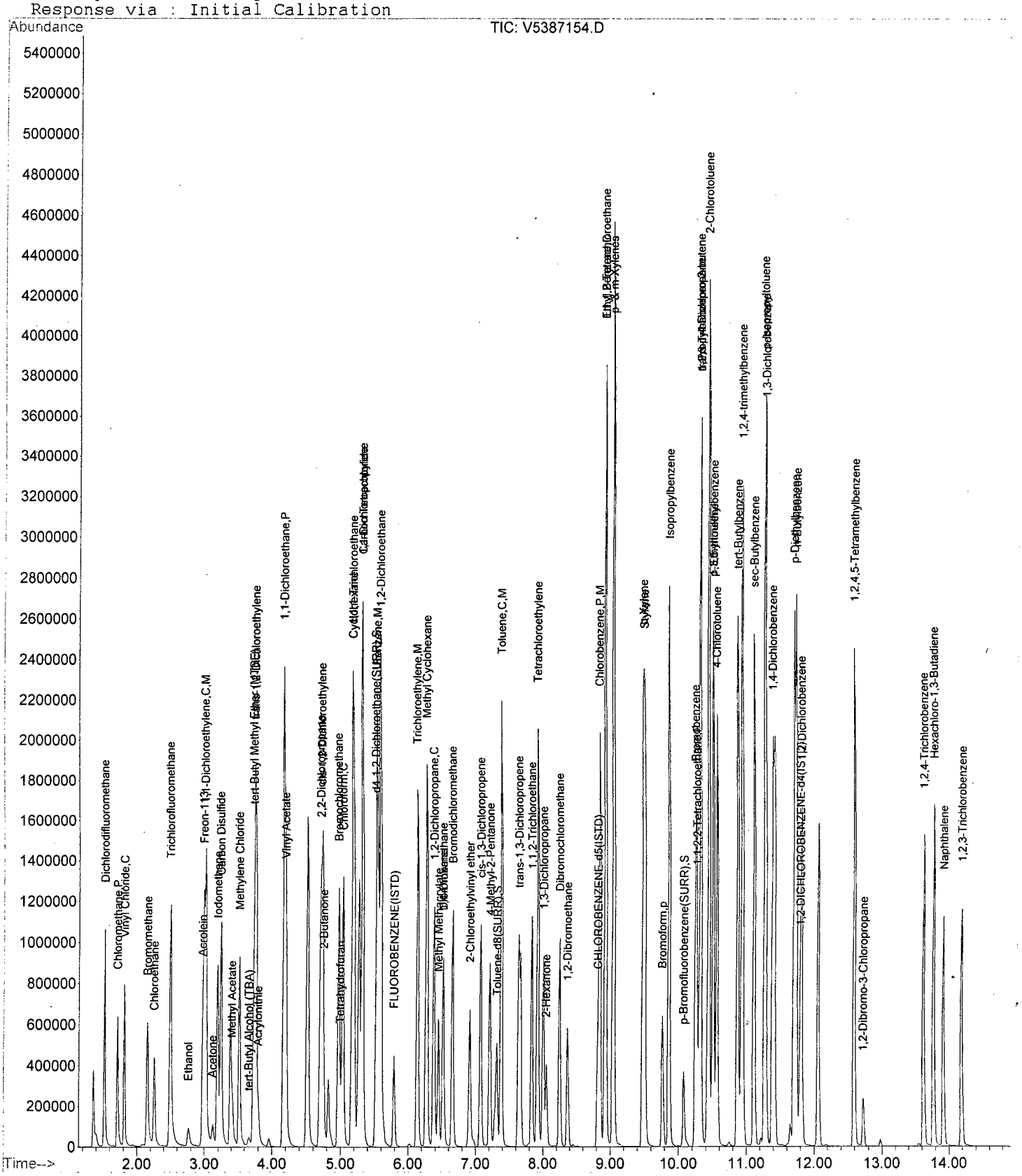
| Compound | R.T. | QIon | Response | Conc Unit | | Qvalue |
|---|---|---|---|---|---|---|
| 51) 1,3-Dichloropropane | 8.01 | 76 | 648457 | 207.74 ppb | # | 100 |
| 52) Tetrachloroethylene | 7.93 | 166 | 620300 | 211.18 ppb | | 97 |
| 53) 4-Methyl-2-Pentanone | 7.21 | 43 | 704934 | 212.87 ppb | | 100 |
| 54) Dibromochloromethane | 8.25 | 129 | 582735 | 256.57 ppb | | 99 |
| 55) 1,2-Dibromoethane | 8.37 | 107 | 414593 | 206.62 ppb | | 99 |
| 56) Chlorobenzene | 8.84 | 112 | 1205123 | 191.50 ppb | | 99 |
| 57) Ethyl Benzene | 8.93 | 91 | 1924543 | 198.33 ppb | | 99 |
| 58) p- & m-Xylenes | 9.05 | 91 | 2962888 | 398.89 ppb | | 97 |
| 59) o-Xylene | 9.49 | 91 | 1473675 | 194.55 ppb | | 98 |
| 60) Styrene | 9.51 | 104 | 1058762 | 189.78 ppb | | 98 |
| 61) 1,1,1,2-Tetrachloroethane | 8.94 | 131 | 537430 | 237.92 ppb | | 96 |
| 63) Bromoform | 9.77 | 173 | 312869 | 244.92 ppb | # | 100 |
| 65) p-Ethyltoulene | 10.51 | 105 | 1578090 | 214.19 ppb | # | 42 |
| 66) p-Diethylbenzene | 11.71 | 119 | 1003036 | 218.27 ppb | | 93 |
| 67) 1,1,2,2-Tetrachloroethane | 10.28 | 83 | 375522 | 212.54 ppb | | 98 |
| 68) 1,2,3-Trichloropropane | 10.32 | 110 | 144125 | 213.27 ppb | | 99 |
| 69) Isopropylbenzene | 9.87 | 105 | 2023734 | 210.00 ppb | # | 99 |
| 70) 1,2-Dibromo-3-Chloropropan | 12.73 | 75 | 78251 | 241.60 ppb | | 97 |
| 71) Bromobenzene | 10.25 | 77 | 738244 | 215.65 ppb | | 97 |
| 72) trans-1,4-Dichloro-2-buten | 10.32 | 75 | 463182m | 213.26 ppb | | |
| 73) n-Propylbenzene | 10.32 | 91 | 2162317 | 207.20 ppb | | 100 |
| 74) 2-Chlorotoluene | 10.45 | 91 | 1495380 | 209.33 ppb | | 100 |
| 75) 4-Chlorotoluene | 10.56 | 91 | 1492012 | 226.20 ppb | | 99 |
| 76) tert-Butylbenzene | 10.87 | 119 | 1593225 | 232.51 ppb | # | 100 |
| 77) 1,3,5-trimethylbenzene | 10.51 | 105 | 1578218 | 211.35 ppb | | 98 |
| 78) 1,2,4-trimethylbenzene | 10.94 | 105 | 1505697 | 209.25 ppb | | 99 |
| 79) sec-Butylbenzene | 11.11 | 105 | 1988657 | 198.09 ppb | # | 99 |
| 80) 1,3-Dichlorobenzene | 11.29 | 146 | 822083 | 224.66 ppb | # | 100 |
| 81) 1,4-Dichlorobenzene | 11.39 | 146 | 859647 | 236.69 ppb | # | 69 |
| 82) 1,2-Dichlorobenzene | 11.81 | 146 | 743638 | 232.26 ppb | # | 68 |
| 83) p-Isopropyltoluene | 11.27 | 119 | 1901489 | 218.55 ppb | # | 100 |
| 84) n-Butylbenzene | 11.74 | 91 | 1802294 | 212.33 ppb | | 98 |
| 85) 1,2,4,5-Tetramethylbenzene | 12.59 | 119 | 1562377 | 235.98 ppb | | 99 |
| 86) 1,2,4-Trichlorobenzene | 13.63 | 180 | 527790 | 229.00 ppb | | 98 |
| 87) Naphthalene | 13.92 | 128 | 988042 | 274.86 ppb | # | 100 |
| 88) Hexachloro-1,3-Butadiene | 13.77 | 225 | 382525 | 232.98 ppb | # | 99 |
| 89) 1,2,3-Trichlorobenzene | 14.19 | 182 | 415719 | 224.08 ppb | | 99 |

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\V5082516\V5387154.D Vial: 12
Acq On : 25 Aug 2016 7:54 pm Operator: SS
Sample : SEQ-CAL6 Inst : VOA No. 5
Misc : QBV5082516A 200PPB Multiplr: 1.00
MS Integration Params: RTEINT1.P
Quant Time: Aug 26 8:09 2016 Quant Results File: V5C00161.RES

Method : C:\HPCHEM\1\METHODS\V5C00162.M (RTE Integrator)
Title : VOCs BY GC/MS EPA SW846-8260
Last Update : Fri Aug 26 08:10:01 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\V5082516\V5387156.D Vial: 14
Acq On : 25 Aug 2016 9:01 pm Operator: SS
Sample : SEQ-SCV1 Inst : VOA No. 5
Misc : QBV5082516A ICV Multiplr: 1.00
MS Integration Params: RTEINT1.P
Quant Time: Aug 26 9:50 2016 Quant Results File: V5C00162.RES

Quant Method : C:\HPCHEM\1\METHODS\V5C00162.M (RTE Integrator)
Title : VOCs BY GC/MS EPA SW846-8260
Last Update : Fri Aug 26 09:47:09 2016
Response via : Initial Calibration
DataAcq Meth : V5C0001A

| Internal Standards | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| 1) FLUOROBENZENE(ISTD) | 5.79 | 70 | 89797 | 50.00 | ppb | | 0.00 |
| 36) CHLOROBENZENE-d5(ISTD) | 8.81 | 117 | 294388 | 50.00 | ppb | | 0.00 |
| 62) 1,2-DICHLOROBENZENE-d4(IST | 11.80 | 152 | 111741 | 50.00 | ppb | | 0.00 |
| **System Monitoring Compounds** | | | | | | | |
| 32) d4-1,2-Dichloroethane(SURR | 5.52 | 65 | 152157 | 51.87 | ppb | | 0.00 |
| Spiked Amount 50.000 | Range 64 - 122 | | Recovery = 103.74% | | | | |
| 47) Toluene-d8(SURR) | 7.31 | 98 | 335526 | 54.31 | ppb | | 0.00 |
| Spiked Amount 50.000 | Range 83 - 114 | | Recovery = 108.62% | | | | |
| 64) p-Bromofluorobenzene(SURR) | 10.08 | 174 | 112795 | 50.68 | ppb | | 0.00 |
| Spiked Amount 50.000 | Range 71 - 126 | | Recovery = 101.36% | | | | |
| **Target Compounds** | | | | | | | Qvalue |
| 2) Dichlorodifluoromethane | 1.52 | 85 | 217694 | 56.52 | ppb | | 100 |
| 3) Chloromethane | 1.71 | 50 | 133337 | 54.58 | ppb | | 100 |
| 4) Vinyl Chloride | 1.82 | 62 | 169474 | 54.93 | ppb | | 100 |
| 5) Bromomethane | 2.15 | 94 | 94400 | 53.03 | ppb | | 99 |
| 6) Chloroethane | 2.26 | 64 | 98606 | 55.82 | ppb | | 99 |
| 7) Trichlorofluoromethane | 2.50 | 101 | 278806 | 53.26 | ppb | | 100 |
| 8) Ethanol | 2.77 | 45 | 31890 | 2979.01 | ppb | | 100 |
| 9) Freon-113 | 3.00 | 101 | 151211 | 57.80 | ppb | | 99 |
| 10) 1,1-Dichloroethylene | 3.03 | 61 | 261075 | 58.85 | ppb | | 100 |
| 11) Acrolein | 2.97 | 56 | 9882 | 65.90 | ppb | | 100 |
| 12) Iodomethane | 3.20 | 142 | 208213 | 59.43 | ppb | | 100 |
| 13) Methyl Acetate | 3.42 | 43 | 71479 | 61.47 | ppb | | 100 |
| 14) tert-Butyl Alcohol (TBA) | 3.66 | 59 | 13785 | 53.89 | ppb | | 99 |
| 15) trans-1,2-Dichloroethylene | 3.76 | 61 | 251541 | 59.81 | ppb | | 99 |
| 16) Carbon Disulfide | 3.25 | 76 | 420373 | 62.46 | ppb | | 100 |
| 17) Methylene Chloride | 3.53 | 49 | 158186 | 57.67 | ppb | | 100 |
| 18) Acrylonitrile | 3.80 | 53 | 31000 | 57.82 | ppb | | 97 |
| 19) tert-Butyl Methyl Ether (M | 3.74 | 73 | 413415 | 60.42 | ppb | | 100 |
| 20) Acetone | 3.12 | 43 | 36177 | 54.85 | ppb | | 99 |
| 21) 1,1-Dichloroethane | 4.19 | 63 | 278651 | 59.86 | ppb | | 100 |
| 22) Vinyl Acetate | 4.21 | 43 | 267205m | 56.10 | ppb | | |
| 23) cis-1,2-Dichloroethylene | 4.73 | 96 | 135008 | 55.68 | ppb | # | 100 |
| 24) 2-Butanone | 4.76 | 72 | 12619 | 55.22 | ppb | | 93 |
| 25) 2,2-Dichloropropane | 4.71 | 77 | 260049 | 55.80 | ppb | | 100 |
| 26) Bromochloromethane | 4.97 | 49 | 108274 | 59.81 | ppb | | 100 |
| 27) Chloroform | 5.04 | 83 | 271182 | 58.74 | ppb | | 100 |
| 28) Tetrahydrofuran | 5.00 | 71 | 13581 | 60.49 | ppb | # | 99 |
| 29) 1,1-Dichloropropylene | 5.32 | 75 | 232705 | 59.16 | ppb | | 100 |
| 30) 1,1,1-Trichloroethane | 5.17 | 97 | 272901 | 59.63 | ppb | # | 99 |
| 31) Cyclohexane | 5.19 | 56 | 229964 | 58.26 | ppb | | 100 |
| 33) Carbon Tetrachloride | 5.32 | 117 | 293259 | 60.37 | ppb | | 100 |
| 34) 1,2-Dichloroethane | 5.59 | 62 | 212786 | 57.27 | ppb | | 99 |
| 35) Benzene | 5.53 | 78 | 482811 | 59.68 | ppb | | 100 |
| 37) Trichloroethylene | 6.14 | 95 | 146905 | 57.25 | ppb | | 99 |
| 38) Methyl Cyclohexane | 6.27 | 83 | 219582 | 60.17 | ppb | # | 100 |
| 39) Dibromomethane | 6.52 | 93 | 77431 | 57.53 | ppb | | 98 |
| 40) Methyl Methacrylate | 6.45 | 69 | 77941 | 57.46 | ppb | | 99 |
| 41) Bromodichloromethane | 6.66 | 83 | 196450 | 60.33 | ppb | | 99 |
| 42) 1,2-Dichloropropane | 6.38 | 63 | 121390 | 59.25 | ppb | | 99 |
| 43) 1,4-Dioxane | 6.52 | 88 | 26108 | 1063.51 | ppb | | 98 |
| 44) 2-Chloroethylvinyl ether | 6.92 | 63 | 65609 | 55.89 | ppb | | 99 |
| 45) cis-1,3-Dichloropropene | 7.08 | 75 | 211226 | 56.53 | ppb | | 100 |
| 46) 2-Hexanone | 8.06 | 43 | 73550 | 61.14 | ppb | | 100 |
| 48) Toluene | 7.38 | 91 | 467279 | 59.47 | ppb | | 100 |
| 49) trans-1,3-Dichloropropene | 7.64 | 75 | 205025 | 59.53 | ppb | | 100 |
| 50) 1,1,2-Trichloroethane | 7.84 | 83 | 73996 | 59.14 | ppb | | 98 |

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\V5082516\V5387156.D Vial: 14
Acq On : 25 Aug 2016 9:01 pm Operator: SS
Sample : SEQ-SCV1 Inst : VOA No. 5
Misc : QBV5082516A ICV Multiplr: 1.00
MS Integration Params: RTEINT1.P
Quant Time: Aug 26 9:50 2016 Quant Results File: V5C00162.RES

Quant Method : C:\HPCHEM\1\METHODS\V5C00162.M (RTE Integrator)
Title : VOCs BY GC/MS EPA SW846-8260
Last Update : Fri Aug 26 09:47:09 2016
Response via : Initial Calibration
DataAcq Meth : V5C0001A

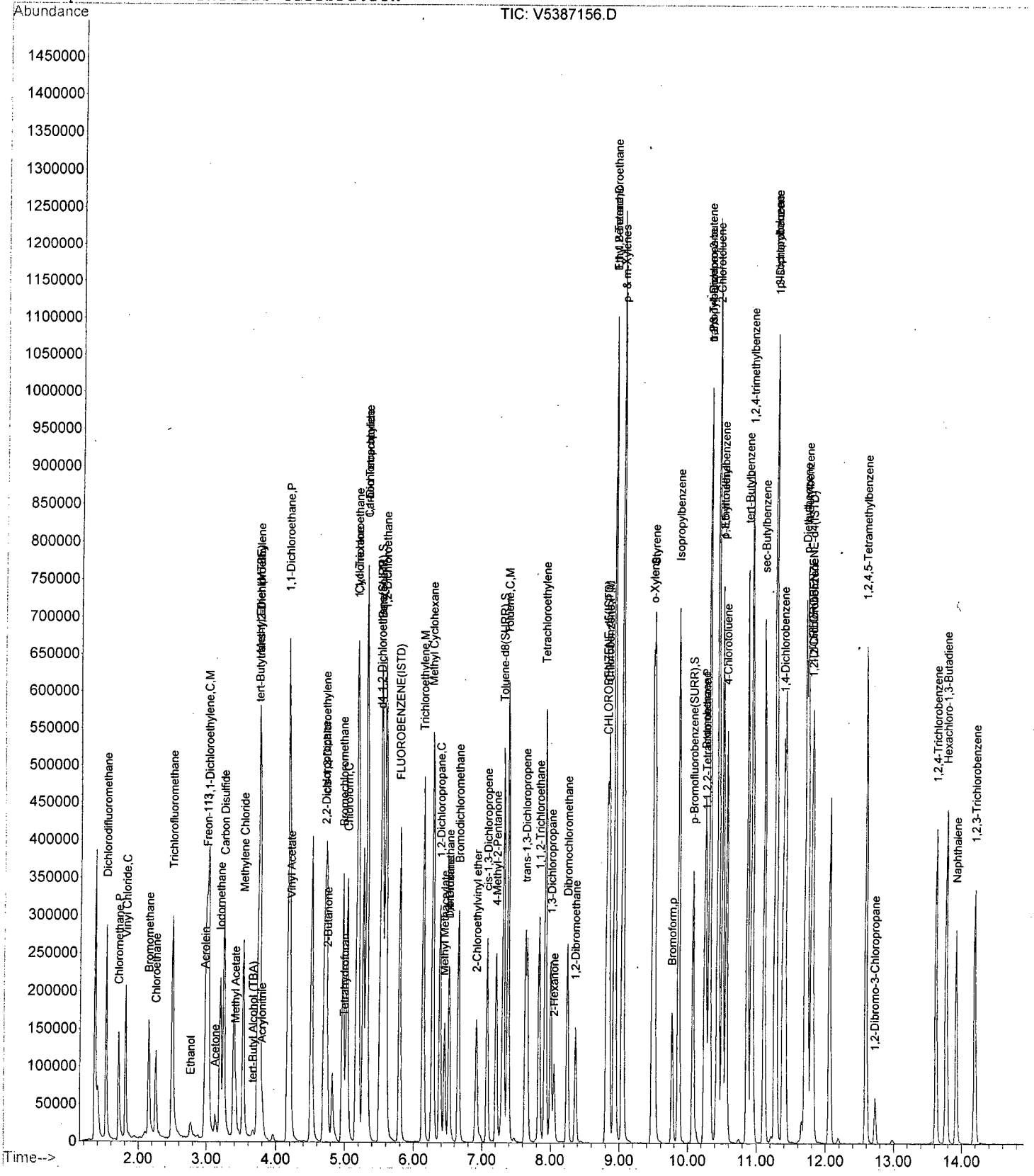
| | Compound | R.T. | QIon | Response | Conc | Unit | | Qvalue |
|---|---|---|---|---|---|---|---|---|
| 51) | 1,3-Dichloropropane | 8.00 | 76 | 171810 | 57.13 | ppb | # | 100 |
| 52) | Tetrachloroethylene | 7.93 | 166 | 175713 | 58.41 | ppb | | 99 |
| 53) | 4-Methyl-2-Pentanone | 7.21 | 43 | 184589 | 58.39 | ppb | | 100 |
| 54) | Dibromochloromethane | 8.25 | 129 | 152871 | 59.82 | ppb | | 100 |
| 55) | 1,2-Dibromoethane | 8.37 | 107 | 107983 | 56.81 | ppb | | 100 |
| 56) | Chlorobenzene | 8.84 | 112 | 314939 | 53.78 | ppb | | 100 |
| 57) | Ethyl Benzene | 8.93 | 91 | 559260 | 59.95 | ppb | | 100 |
| 58) | p- & m-Xylenes | 9.05 | 91 | 834838 | 115.55 | ppb | | 100 |
| 59) | o-Xylene | 9.49 | 91 | 391321 | 54.20 | ppb | | 99 |
| 60) | Styrene | 9.51 | 104 | 320987 | 61.53 | ppb | | 100 |
| 61) | 1,1,1,2-Tetrachloroethane | 8.94 | 131 | 146077 | 57.98 | ppb | | 100 |
| 63) | Bromoform | 9.77 | 173 | 83395 | 61.16 | ppb | # | 100 |
| 65) | p-Ethyltoulene | 10.51 | 105 | 462606 | 57.44 | ppb | | 94 |
| 66) | p-Diethylbenzene | 11.70 | 119 | 292766 | 56.36 | ppb | | 98 |
| 67) | 1,1,2,2-Tetrachloroethane | 10.27 | 83 | 101527 | 55.70 | ppb | | 100 |
| 68) | 1,2,3-Trichloropropane | 10.32 | 110 | 41531 | 55.99 | ppb | | 96 |
| 69) | Isopropylbenzene | 9.87 | 105 | 560048 | 54.57 | ppb | # | 95 |
| 70) | 1,2-Dibromo-3-Chloropropan | 12.73 | 75 | 21187 | 58.41 | ppb | | 97 |
| 71) | Bromobenzene | 10.25 | 77 | 201444 | 55.51 | ppb | | 99 |
| 72) | trans-1,4-Dichloro-2-buten | 10.32 | 75 | 129170m | 56.41 | ppb | | |
| 73) | n-Propylbenzene | 10.32 | 91 | 609050 | 54.07 | ppb | | 100 |
| 74) | 2-Chlorotoluene | 10.45 | 91 | 408259 | 51.70 | ppb | | 100 |
| 75) | 4-Chlorotoluene | 10.56 | 91 | 400694 | 54.52 | ppb | | 100 |
| 76) | tert-Butylbenzene | 10.87 | 119 | 425755 | 52.54 | ppb | # | 100 |
| 77) | 1,3,5-trimethylbenzene | 10.51 | 105 | 462123 | 57.81 | ppb | | 99 |
| 78) | 1,2,4-trimethylbenzene | 10.93 | 105 | 430644 | 56.59 | ppb | | 99 |
| 79) | sec-Butylbenzene | 11.11 | 105 | 547685 | 52.29 | ppb | # | 100 |
| 80) | 1,3-Dichlorobenzene | 11.28 | 146 | 233535 | 52.94 | ppb | # | 100 |
| 81) | 1,4-Dichlorobenzene | 11.38 | 146 | 232745 | 52.20 | ppb | # | 100 |
| 82) | 1,2-Dichlorobenzene | 11.81 | 146 | 205618 | 53.29 | ppb | # | 100 |
| 83) | p-Isopropyltoluene | 11.27 | 119 | 578116 | 57.89 | ppb | # | 100 |
| 84) | n-Butylbenzene | 11.73 | 91 | 516084 | 56.19 | ppb | | 100 |
| 85) | 1,2,4,5-Tetramethylbenzene | 12.59 | 119 | 422372 | 53.66 | ppb | | 99 |
| 86) | 1,2,4-Trichlorobenzene | 13.62 | 180 | 143736 | 54.30 | ppb | | 99 |
| 87) | Naphthalene | 13.92 | 128 | 253806 | 53.92 | ppb | # | 100 |
| 88) | Hexachloro-1,3-Butadiene | 13.77 | 225 | 106475 | 54.95 | ppb | # | 68 |
| 89) | 1,2,3-Trichlorobenzene | 14.19 | 182 | 113938 | 54.92 | ppb | | 99 |

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\V5082516\V5387156.D Vial: 14
Acq On : 25 Aug 2016 9:01 pm Operator: SS
Sample : SEQ-SCV1 Inst : VOA No. 5
Misc : QBV5082516A ICV Multiplr: 1.00
MS Integration Params: RTEINT1.P
Quant Time: Aug 26 9:50 2016 Quant Results File: V5C00162.RES

Method : C:\HPCHEM\1\METHODS\V5C00162.M (RTE Integrator)
Title : VOCs BY GC/MS EPA SW846-8260
Last Update : Fri Aug 26 09:47:09 2016
Response via : Initial Calibration



# Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\V5091416\V5387476.D  Vial: 2
Acq On : 14 Sep 2016 8:52 am  Operator: SS
Sample : SEQ-CCV1  Inst : VOA No. 5
Misc : QBV5091416A Y16H091  Multiplr: 1.00
MS Integration Params: RTEINT1.P

Method : C:\HPCHEM\1\METHODS\V5C00162.M (RTE Integrator)
Title : VOCs BY GC/MS EPA SW846-8260
Last Update : Fri Aug 26 09:47:09 2016
Response via : Multiple Level Calibration

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 200%

| | | Compound | AvgRF | CCRF | %Dev | Area% | Dev(min) |
|---|---|---|---|---|---|---|---|
| 1 | | FLUOROBENZENE(ISTD) | 1.000 | 1.000 | 0.0 | 125 | 0.00 |
| 2 | | Dichlorodifluoromethane | 2.145 | 2.005 | 6.5 | 123 | 0.00 |
| 3 | P | Chloromethane | 1.360 | 1.595 | -17.3 | 156 | 0.00 |
| 4 | C | Vinyl Chloride | 1.718 | 1.655 | 3.7 | 124 | 0.00 |
| 5 | | Bromomethane | 0.991 | 1.010 | -1.9 | 141 | 0.00 |
| 6 | | Chloroethane | 0.984 | 1.037 | -5.4 | 135 | 0.00 |
| 7 | | Trichlorofluoromethane | 2.915 | 2.803 | 3.8 | 126 | 0.00 |
| 8 | | Ethanol | 0.008 | 0.006# | 25.0 | 116 | 0.00 |
| 9 | | Freon-113 | 1.457 | 1.508 | -3.5 | 133 | 0.00 |
| 10 | C,M | 1,1-Dichloroethylene | 2.470 | 2.644 | -7.0 | 136 | 0.00 |
| 11 | | Acrolein | 0.108 | 0.039# | 63.9# | 56 | 0.00 |
| 12 | | Iodomethane | 1.951 | 2.195 | -12.5 | 135 | 0.00 |
| 13 | | Methyl Acetate | 0.916 | 0.820 | 10.5 | 155 | 0.00 |
| 14 | | tert-Butyl Alcohol (TBA) | 0.142 | 0.132 | 7.0 | 113 | 0.00 |
| 15 | | trans-1,2-Dichloroethylene | 2.342 | 2.231 | 4.7 | 116 | 0.00 |
| 16 | | Carbon Disulfide | 3.747 | 4.275 | -14.1 | 151 | 0.00 |
| 17 | | Methylene Chloride | 1.527 | 1.557 | -2.0 | 131 | 0.00 |
| 18 | | Acrylonitrile | 0.299 | 0.319 | -6.7 | 151 | 0.00 |
| 19 | | tert-Butyl Methyl Ether (MT | 3.810 | 3.588 | 5.8 | 111 | 0.00 |
| 20 | | Acetone | 0.367 | 0.408 | -11.2 | 151 | 0.00 |
| 21 | P | 1,1-Dichloroethane | 2.592 | 3.205 | -23.6 | 158 | 0.00 |
| 22 | | Vinyl Acetate | 2.652 | 4.425 | -66.9# | 225# | 0.00 |
| 23 | | cis-1,2-Dichloroethylene | 1.350 | 1.655 | -22.6 | 158 | 0.00 |
| 24 | | 2-Butanone | 0.127 | 0.147 | -15.7 | 142 | 0.00 |
| 25 | | 2,2-Dichloropropane | 2.595 | 2.996 | -15.5 | 150 | 0.00 |
| 26 | | Bromochloromethane | 1.008 | 1.186 | -17.7 | 144 | 0.00 |
| 27 | C | Chloroform | 2.571 | 2.999 | -16.6 | 147 | 0.00 |
| 28 | | Tetrahydrofuran | 0.125 | 0.141 | -12.8 | 141 | 0.00 |
| 29 | | 1,1-Dichloropropylene | 2.190 | 2.614 | -19.4 | 153 | 0.00 |
| 30 | | 1,1,1-Trichloroethane | 2.548 | 2.911 | -14.2 | 143 | 0.00 |
| 31 | | Cyclohexane | 2.198 | 2.613 | -18.9 | 147 | 0.00 |
| 32 | S | d4-1,2-Dichloroethane(SURR) | 1.633 | 1.559 | 4.5 | 123 | 0.00 |
| 33 | | Carbon Tetrachloride | 2.705 | 3.013 | -11.4 | 142 | 0.00 |
| 34 | | 1,2-Dichloroethane | 2.069 | 2.237 | -8.1 | 138 | 0.00 |
| 35 | M | Benzene | 4.504 | 5.643 | -25.3# | 159 | 0.00 |
| 36 | | CHLOROBENZENE-d5(ISTD) | 1.000 | 1.000 | 0.0 | 133 | 0.00 |
| 37 | M | Trichloroethylene | 0.436 | 0.483 | -10.8 | 152 | 0.00 |
| 38 | | Methyl Cyclohexane | 0.620 | 0.740 | -19.4 | 160 | 0.00 |
| 39 | | Dibromomethane | 0.229 | 0.251 | -9.6 | 146 | 0.00 |
| 40 | | Methyl Methacrylate | 0.230 | 0.255 | -10.9 | 142 | 0.00 |
| 41 | | Bromodichloromethane | 0.553 | 0.600 | -8.5 | 140 | 0.00 |
| 42 | C | 1,2-Dichloropropane | 0.348 | 0.416 | -19.5 | 158 | 0.00 |
| 43 | | 1,4-Dioxane | 0.004 | 0.004# | 0.0 | 138 | 0.00 |
| 44 | | 2-Chloroethylvinyl ether | 0.199 | 0.202 | -1.5 | 134 | 0.00 |
| 45 | | cis-1,3-Dichloropropene | 0.635 | 0.723 | -13.9 | 155 | 0.00 |
| 46 | | 2-Hexanone | 0.204 | 0.212 | -3.9 | 139 | 0.00 |
| 47 | S | Toluene-d8(SURR) | 1.049 | 1.123 | -7.1 | 148 | 0.00 |
| 48 | C,M | Toluene | 1.334 | 1.585 | -18.8 | 165 | 0.00 |
| 49 | | trans-1,3-Dichloropropene | 0.585 | 0.690 | -17.9 | 163 | 0.00 |
| 50 | | 1,1,2-Trichloroethane | 0.213 | 0.252 | -18.3 | 159 | 0.00 |
| 51 | | 1,3-Dichloropropane | 0.511 | 0.571 | -11.7 | 154 | 0.00 |
| 52 | | Tetrachloroethylene | 0.511 | 0.557 | -9.0 | 150 | 0.00 |
| 53 | | 4-Methyl-2-Pentanone | 0.537 | 0.558 | -3.9 | 145 | 0.00 |
| 54 | | Dibromochloromethane | 0.434 | 0.458 | -5.5 | 143 | 0.00 |
| 55 | | 1,2-Dibromoethane | 0.323 | 0.356 | -10.2 | 147 | 0.00 |
| 56 | P,M | Chlorobenzene | 0.995 | 1.177 | -18.3 | 159 | 0.00 |
| 57 | C | Ethyl Benzene | 1.584 | 1.854 | -17.0 | 156 | 0.00 |

(#) = Out of Range

Data File : C:\HPCHEM\1\DATA\V5091416\V5387476.D  Vial: 2
Acq On : 14 Sep 2016 8:52 am  Operator: SS
Sample : SEQ-CCV1  Inst : VOA No. 5
Misc : QBV5091416A Y16H091  Multiplr: 1.00
MS Integration Params: RTEINT1.P

Method : C:\HPCHEM\1\METHODS\V5C00162.M (RTE Integrator)
Title : VOCs BY GC/MS EPA SW846-8260
Last Update : Fri Aug 26 09:47:09 2016
Response via : Multiple Level Calibration

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 200%

| | | Compound | AvgRF | CCRF | %Dev | Area% | Dev(min) |
|---|---|---|---|---|---|---|---|
| 58 | | p- & m-Xylenes | 1.227 | 1.428 | -16.4 | 166 | 0.00 |
| 59 | | o-Xylene | 1.226 | 1.452 | -18.4 | 167 | 0.00 |
| 60 | | Styrene | 0.886 | 1.056 | -19.2 | 166 | 0.00 |
| 61 | | 1,1,1,2-Tetrachloroethane | 0.428 | 0.466 | -8.9 | 146 | 0.00 |
| 62 | | 1,2-DICHLOROBENZENE-d4(ISTD | 1.000 | 1.000 | 0.0 | 143 | 0.00 |
| 63 | p | Bromoform | 0.610 | 0.674 | -10.5 | 149 | 0.00 |
| 64 | S | p-Bromofluorobenzene(SURR) | 0.996 | 1.032 | -3.6 | 148 | 0.00 |
| 65 | | p-Ethyltoulene | 3.604 | 3.922 | -8.8 | 154 | 0.00 |
| 66 | | p-Diethylbenzene | 2.324 | 2.460 | -5.9 | 144 | 0.00 |
| 67 | P | 1,1,2,2-Tetrachloroethane | 0.816 | 0.899 | -10.2 | 162 | 0.00 |
| 68 | | 1,2,3-Trichloropropane | 0.332 | 0.339 | -2.1 | 144 | 0.00 |
| 69 | | Isopropylbenzene | 4.592 | 5.090 | -10.8 | 155 | 0.00 |
| 70 | | 1,2-Dibromo-3-Chloropropane | 0.162 | 0.157 | 3.1 | 132 | 0.00 |
| 71 | | Bromobenzene | 1.624 | 1.735 | -6.8 | 153 | 0.00 |
| 72 | | trans-1,4-Dichloro-2-butene | 1.025 | 1.105 | -7.8 | 152 | 0.00 |
| 73 | | n-Propylbenzene | 5.040 | 5.717 | -13.4 | 158 | 0.00 |
| 74 | | 2-Chlorotoluene | 3.533 | 3.741 | -5.9 | 155 | 0.00 |
| 75 | | 4-Chlorotoluene | 3.289 | 3.228 | 1.9 | 134 | 0.00 |
| 76 | | tert-Butylbenzene | 3.626 | 3.768 | -3.9 | 142 | 0.00 |
| 77 | | 1,3,5-trimethylbenzene | 3.577 | 3.893 | -8.8 | 153 | 0.00 |
| 78 | | 1,2,4-trimethylbenzene | 3.405 | 3.717 | -9.2 | 156 | 0.00 |
| 79 | | sec-Butylbenzene | 4.686 | 5.219 | -11.4 | 159 | 0.00 |
| 80 | | 1,3-Dichlorobenzene | 1.974 | 2.127 | -7.8 | 151 | 0.00 |
| 81 | | 1,4-Dichlorobenzene | 1.995 | 2.127 | -6.6 | 147 | 0.00 |
| 82 | | 1,2-Dichlorobenzene | 1.727 | 1.841 | -6.6 | 151 | 0.00 |
| 83 | | p-Isopropyltoluene | 4.468 | 4.866 | -8.9 | 156 | 0.00 |
| 84 | | n-Butylbenzene | 4.110 | 4.528 | -10.2 | 153 | 0.00 |
| 85 | | 1,2,4,5-Tetramethylbenzene | 3.522 | 3.880 | -10.2 | 159 | 0.00 |
| 86 | | 1,2,4-Trichlorobenzene | 1.184 | 1.199 | -1.3 | 146 | 0.00 |
| 87 | | Naphthalene | 2.106 | 1.974 | 6.3 | 136 | 0.00 |
| 88 | | Hexachloro-1,3-Butadiene | 0.867 | 0.920 | -6.1 | 153 | 0.00 |
| 89 | | 1,2,3-Trichlorobenzene | 0.928 | 0.905 | 2.5 | 138 | 0.00 |

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\V5091416\V5387476.D Vial: 2
Acq On : 14 Sep 2016 8:52 am Operator: SS
Sample : SEQ-CCV1 Inst : VOA No. 5
Misc : QBV5091416A Y16H091 Multiplr: 1.00
MS Integration Params: RTEINT1.P
Quant Time: Sep 14 13:03 2016 Quant Results File: V5C00162.RES

Quant Method : C:\HPCHEM\1\METHODS\V5C00162.M (RTE Integrator)
Title : VOCs BY GC/MS EPA SW846-8260
Last Update : Fri Aug 26 09:47:09 2016
Response via : Initial Calibration
DataAcq Meth : V5C0001A

| Internal Standards | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| 1) FLUOROBENZENE(ISTD) | 5.79 | 70 | 123156 | 50.00 | ppb | | 0.00 |
| 36) CHLOROBENZENE-d5(ISTD) | 8.81 | 117 | 426764 | 50.00 | ppb | | 0.00 |
| 62) 1,2-DICHLOROBENZENE-d4(IST | 11.79 | 152 | 162270 | 50.00 | ppb | | 0.00 |
| **System Monitoring Compounds** | | | | | | | |
| 32) d4-1,2-Dichloroethane(SURR | 5.51 | 65 | 191975 | 47.71 | ppb | | 0.00 |
| Spiked Amount 50.000 | Range 64 - 122 | | Recovery = 95.42% | | | | |
| 47) Toluene-d8(SURR) | 7.31 | 98 | 479088 | 53.50 | ppb | | 0.00 |
| Spiked Amount 50.000 | Range 83 - 114 | | Recovery = 107.00% | | | | |
| 64) p-Bromofluorobenzene(SURR) | 10.08 | 174 | 167504 | 51.83 | ppb | | 0.00 |
| Spiked Amount 50.000 | Range 71 - 126 | | Recovery = 103.66% | | | | |
| **Target Compounds** | | | | | | | Qvalue |
| 2) Dichlorodifluoromethane | 1.52 | 85 | 246940 | 46.75 | ppb | | 100 |
| 3) Chloromethane | 1.71 | 50 | 196404 | 58.62 | ppb | | 100 |
| 4) Vinyl Chloride | 1.81 | 62 | 203832 | 48.17 | ppb | | 100 |
| 5) Bromomethane | 2.16 | 94 | 124383 | 50.95 | ppb | | 99 |
| 6) Chloroethane | 2.26 | 64 | 127747 | 52.73 | ppb | | 100 |
| 7) Trichlorofluoromethane | 2.50 | 101 | 345203 | 48.08 | ppb | | 100 |
| 8) Ethanol | 2.77 | 45 | 35900 | 2415.61 | ppb | | 100 |
| 9) Freon-113 | 3.00 | 101 | 185666 | 51.75 | ppb | | 98 |
| 10) 1,1-Dichloroethylene | 3.02 | 61 | 325665 | 53.52 | ppb | | 99 |
| 11) Acrolein | 2.98 | 56 | 4828 | 19.18 | ppb | # | 82 |
| 12) Iodomethane | 3.20 | 142 | 270359 | 56.26 | ppb | | 98 |
| 13) Methyl Acetate | 3.42 | 43 | 100932 | 63.42 | ppb | # | 91 |
| 14) tert-Butyl Alcohol (TBA) | 3.67 | 59 | 16252 | 46.32 | ppb | | 97 |
| 15) trans-1,2-Dichloroethylene | 3.76 | 61 | 274716 | 47.63 | ppb | | 100 |
| 16) Carbon Disulfide | 3.25 | 76 | 526477 | 57.04 | ppb | | 100 |
| 17) Methylene Chloride | 3.53 | 49 | 191697 | 50.96 | ppb | | 97 |
| 18) Acrylonitrile | 3.80 | 53 | 39307 | 53.45 | ppb | | 98 |
| 19) tert-Butyl Methyl Ether (M | 3.74 | 73 | 441876 | 47.09 | ppb | | 99 |
| 20) Acetone | 3.12 | 43 | 50256 | 55.56 | ppb | | 100 |
| 21) 1,1-Dichloroethane | 4.18 | 63 | 394670 | 61.82 | ppb | | 99 |
| 22) Vinyl Acetate | 4.21 | 43 | 544954 | 83.42 | ppb | # | 61 |
| 23) cis-1,2-Dichloroethylene | 4.73 | 96 | 203858 | 61.31 | ppb | # | 100 |
| 24) 2-Butanone | 4.76 | 72 | 18137 | 57.86 | ppb | | 96 |
| 25) 2,2-Dichloropropane | 4.71 | 77 | 369011 | 57.73 | ppb | | 100 |
| 26) Bromochloromethane | 4.97 | 49 | 146078 | 58.83 | ppb | | 100 |
| 27) Chloroform | 5.03 | 83 | 369401 | 58.34 | ppb | | 99 |
| 28) Tetrahydrofuran | 5.00 | 71 | 17360 | 56.38 | ppb | # | 94 |
| 29) 1,1-Dichloropropylene | 5.32 | 75 | 321978 | 59.68 | ppb | | 100 |
| 30) 1,1,1-Trichloroethane | 5.17 | 97 | 358494 | 57.11 | ppb | # | 100 |
| 31) Cyclohexane | 5.19 | 56 | 321774 | 59.44 | ppb | | 97 |
| 33) Carbon Tetrachloride | 5.32 | 117 | 371105 | 55.71 | ppb | | 100 |
| 34) 1,2-Dichloroethane | 5.58 | 62 | 275463 | 54.06 | ppb | | 100 |
| 35) Benzene | 5.53 | 78 | 694931 | 62.64 | ppb | | 98 |
| 37) Trichloroethylene | 6.13 | 95 | 206179 | 55.43 | ppb | | 99 |
| 38) Methyl Cyclohexane | 6.27 | 83 | 316009 | 59.73 | ppb | # | 100 |
| 39) Dibromomethane | 6.51 | 93 | 106993 | 54.84 | ppb | | 97 |
| 40) Methyl Methacrylate | 6.45 | 69 | 108858 | 55.36 | ppb | | 100 |
| 41) Bromodichloromethane | 6.65 | 83 | 256017 | 54.23 | ppb | | 98 |
| 42) 1,2-Dichloropropane | 6.38 | 63 | 177371 | 59.72 | ppb | | 98 |
| 43) 1,4-Dioxane | 6.52 | 88 | 35666 | 1002.20 | ppb | | 99 |
| 44) 2-Chloroethylvinyl ether | 6.91 | 63 | 86345 | 50.74 | ppb | | 99 |
| 45) cis-1,3-Dichloropropene | 7.07 | 75 | 308460 | 56.95 | ppb | | 99 |
| 46) 2-Hexanone | 8.05 | 43 | 90618 | 51.96 | ppb | | 99 |
| 48) Toluene | 7.38 | 91 | 676509 | 59.40 | ppb | | 99 |
| 49) trans-1,3-Dichloropropene | 7.64 | 75 | 294649 | 59.01 | ppb | | 100 |
| 50) 1,1,2-Trichloroethane | 7.83 | 83 | 107372 | 59.19 | ppb | | 98 |

(#) = qualifier out of range (m) = manual integration
V5387476.D V5C00162.M Wed Sep 14 13:03:44 2016

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\V5091416\V5387476.D Vial: 2
Acq On : 14 Sep 2016 8:52 am Operator: SS
Sample : SEQ-CCV1 Inst : VOA No. 5
Misc : QBV5091416A Y16H091 Multiplr: 1.00
MS Integration Params: RTEINT1.P
Quant Time: Sep 14 13:03 2016 Quant Results File: V5C00162.RES

Quant Method : C:\HPCHEM\1\METHODS\V5C00162.M (RTE Integrator)
Title : VOCs BY GC/MS EPA SW846-8260
Last Update : Fri Aug 26 09:47:09 2016
Response via : Initial Calibration
DataAcq Meth : V5C0001A

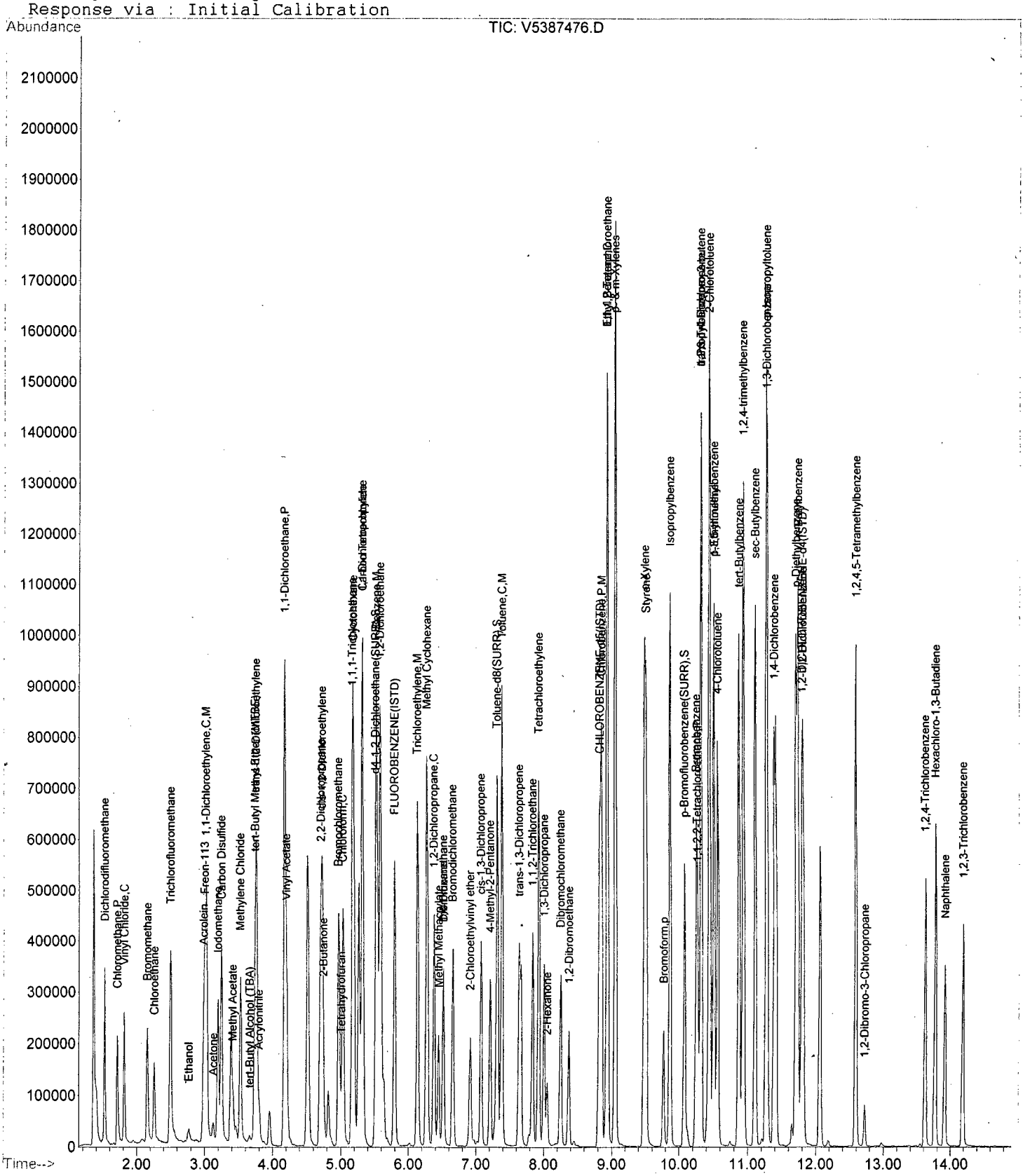
| Compound | R.T. | QIon | Response | Conc | Unit | | Qvalue |
|---|---|---|---|---|---|---|---|
| 51) 1,3-Dichloropropane | 8.00 | 76 | 243789 | 55.92 | ppb | # | 100 |
| 52) Tetrachloroethylene | 7.92 | 166 | 237798 | 54.53 | ppb | # | 73 |
| 53) 4-Methyl-2-Pentanone | 7.21 | 43 | 238093 | 51.95 | ppb | | 99 |
| 54) Dibromochloromethane | 8.25 | 129 | 195661 | 52.82 | ppb | | 99 |
| 55) 1,2-Dibromoethane | 8.37 | 107 | 152128 | 55.21 | ppb | | 99 |
| 56) Chlorobenzene | 8.84 | 112 | 502433 | 59.18 | ppb | | 99 |
| 57) Ethyl Benzene | 8.93 | 91 | 791262 | 58.51 | ppb | | 100 |
| 58) p- & m-Xylenes | 9.04 | 91 | 1218823 | 116.37 | ppb | | 100 |
| 59) o-Xylene | 9.48 | 91 | 619844 | 59.23 | ppb | | 100 |
| 60) Styrene | 9.51 | 104 | 450633 | 59.59 | ppb | | 99 |
| 61) 1,1,1,2-Tetrachloroethane | 8.93 | 131 | 198676 | 54.40 | ppb | | 99 |
| 63) Bromoform | 9.77 | 173 | 109355 | 55.23 | ppb | # | 100 |
| 65) p-Ethyltoulene | 10.51 | 105 | 636358 | 54.41 | ppb | | 92 |
| 66) p-Diethylbenzene | 11.70 | 119 | 399252 | 52.92 | ppb | | 96 |
| 67) 1,1,2,2-Tetrachloroethane | 10.27 | 83 | 145873 | 55.11 | ppb | | 97 |
| 68) 1,2,3-Trichloropropane | 10.32 | 110 | 54966 | 51.03 | ppb | | 93 |
| 69) Isopropylbenzene | 9.86 | 105 | 826002 | 55.42 | ppb | # | 95 |
| 70) 1,2-Dibromo-3-Chloropropan | 12.73 | 75 | 25416 | 48.25 | ppb | | 96 |
| 71) Bromobenzene | 10.25 | 77 | 281475 | 53.41 | ppb | | 98 |
| 72) trans-1,4-Dichloro-2-buten | 10.32 | 75 | 179345m | 53.94 | ppb | | |
| 73) n-Propylbenzene | 10.32 | 91 | 927741 | 56.72 | ppb | | 100 |
| 74) 2-Chlorotoluene | 10.44 | 91 | 607085 | 52.94 | ppb | | 100 |
| 75) 4-Chlorotoluene | 10.56 | 91 | 523878 | 49.08 | ppb | | 99 |
| 76) tert-Butylbenzene | 10.86 | 119 | 611422 | 51.96 | ppb | # | 100 |
| 77) 1,3,5-trimethylbenzene | 10.51 | 105 | 631776 | 54.42 | ppb | | 99 |
| 78) 1,2,4-trimethylbenzene | 10.93 | 105 | 603150 | 54.57 | ppb | | 100 |
| 79) sec-Butylbenzene | 11.11 | 105 | 846843 | 55.68 | ppb | # | 100 |
| 80) 1,3-Dichlorobenzene | 11.28 | 146 | 345174 | 53.89 | ppb | # | 100 |
| 81) 1,4-Dichlorobenzene | 11.38 | 146 | 345108 | 53.30 | ppb | # | 100 |
| 82) 1,2-Dichlorobenzene | 11.81 | 146 | 298808 | 53.32 | ppb | # | 100 |
| 83) p-Isopropyltoluene | 11.27 | 119 | 789662 | 54.45 | ppb | # | 100 |
| 84) n-Butylbenzene | 11.73 | 91 | 734703 | 55.08 | ppb | | 99 |
| 85) 1,2,4,5-Tetramethylbenzene | 12.59 | 119 | 629542 | 55.08 | ppb | | 99 |
| 86) 1,2,4-Trichlorobenzene | 13.62 | 180 | 194518 | 50.60 | ppb | # | 59 |
| 87) Naphthalene | 13.91 | 128 | 320304 | 46.86 | ppb | # | 100 |
| 88) Hexachloro-1,3-Butadiene | 13.77 | 225 | 149239 | 53.04 | ppb | # | 68 |
| 89) 1,2,3-Trichlorobenzene | 14.19 | 182 | 146854 | 48.74 | ppb | | 100 |

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\V5091416\V5387476.D Vial: 2
Acq On : 14 Sep 2016 8:52 am Operator: SS
Sample : SEQ-CCV1 Inst : VOA No. 5
Misc : QBV5091416A Y16H091 Multiplr: 1.00
MS Integration Params: RTEINT1.P
Quant Time: Sep 14 13:03 2016 Quant Results File: V5C00162.RES

Method : C:\HPCHEM\1\METHODS\V5C00162.M (RTE Integrator)
Title : VOCs BY GC/MS EPA SW846-8260
Last Update : Fri Aug 26 09:47:09 2016
Response via : Initial Calibration



# FORM V ANALYSIS BATCH (SEQUENCE) SUMMARY

## EPA 8260C

| | | | |
|---|---|---|---|
| Laboratory: | York Analytical Laboratories, Inc. | SDG: | 16I0260 |
| Client: | Langan Engineering & Environmental Services (NYC) | Project: | 170301202 450 Union Street |
| Sequence: | Y6H2610 | Instrument: | VOA No. 5 |
| | | Calibration: | YH60024 |

| Sample Name | Lab Sample ID | Lab File ID | Analysis Date/Time |
|---|---|---|---|
| MS Tune | Y6H2610-TUN1 | V5387145.D | 08/25/16 14:14 |
| Cal Standard | Y6H2610-CAL1 | V5387149.D | 08/25/16 17:05 |
| Cal Standard | Y6H2610-CAL2 | V5387150.D | 08/25/16 17:38 |
| Cal Standard | Y6H2610-CAL3 | V5387151.D | 08/25/16 18:12 |
| Cal Standard | Y6H2610-CAL4 | V5387152.D | 08/25/16 18:46 |
| Cal Standard | Y6H2610-CAL5 | V5387153.D | 08/25/16 19:20 |
| Cal Standard | Y6H2610-CAL6 | V5387154.D | 08/25/16 19:54 |
| Secondary Cal Check | Y6H2610-SCV1 | V5387156.D | 08/25/16 21:01 |

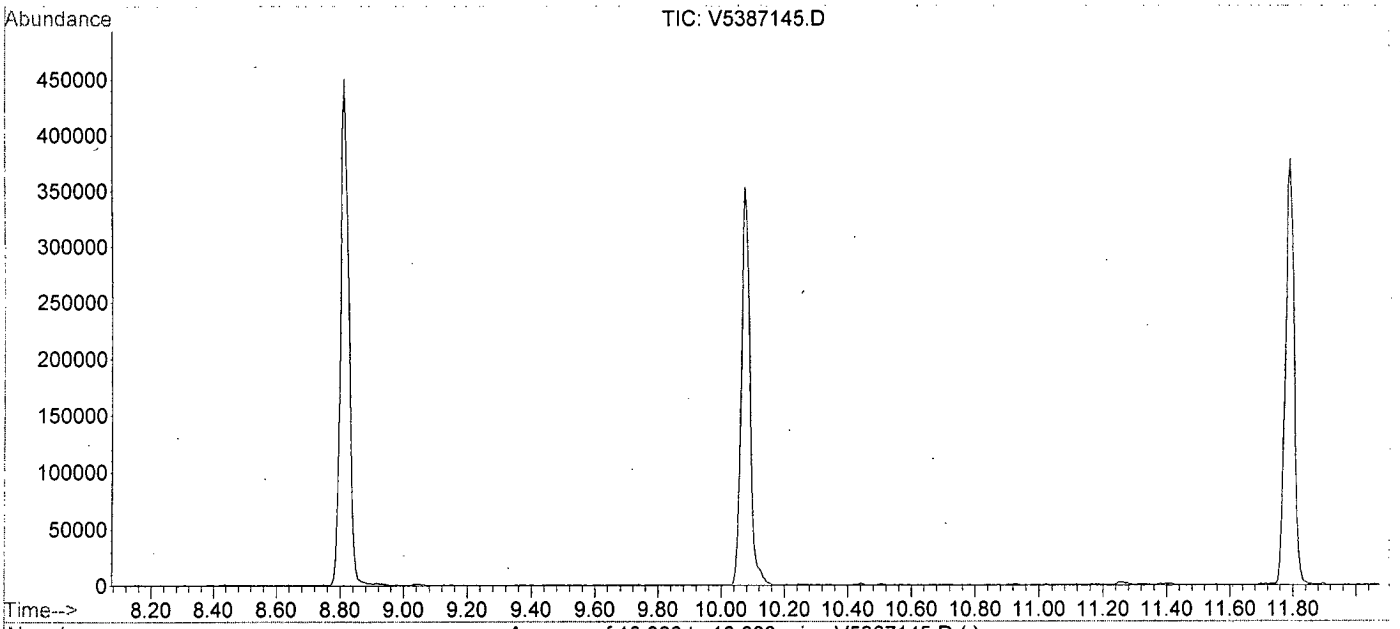
# FORM V ANALYSIS BATCH (SEQUENCE) SUMMARY

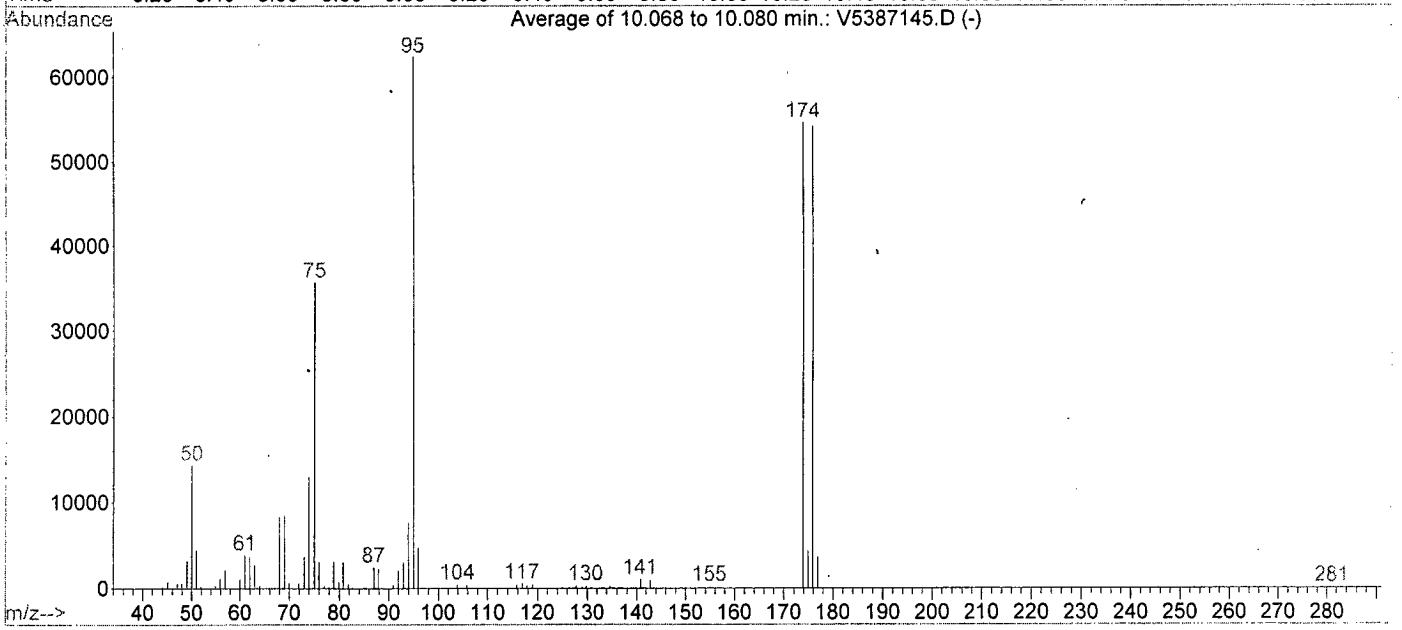
## EPA 8260C

| | | | |
|---|---|---|---|
| Laboratory: | York Analytical Laboratories, Inc. | SDG: | 16I0260 |
| Client: | Langan Engineering & Environmental Services (NYC) | Project: | 170301202 450 Union Street |
| Sequence: | Y6I1422 | Instrument: | VOA No. 5 |
| | | Calibration: | YH60024 |

| Sample Name | Lab Sample ID | Lab File ID | Analysis Date/Time |
|---|---|---|---|
| MS Tune | Y6I1422-TUN1 | V5387475.D | 09/14/16 08:18 |
| Calibration Check | Y6I1422-CCV1 | V5387476.D | 09/14/16 08:52 |
| LCS | BI60530-BS1 | V5387477.D | 09/14/16 09:28 |
| LCS Dup | BI60530-BSD1 | V5387478.D | 09/14/16 10:02 |
| Blank | BI60530-BLK1 | V5387480.D | 09/14/16 11:10 |
| Blank | BI60530-BLK2 | V5387481.D | 09/14/16 11:44 |
| V01_0-1.5 | 16I0260-01 | V5387484.D | 09/14/16 13:25 |

Data File : C:\HPCHEM\1\DATA\V5082516\V5387145.D  Vial: 3
Acq On : 25 Aug 2016 2:14 pm  Operator: SS
Sample : SEQ-TUN1  Inst : VOA No. 5
Misc : QBV5082516A  Multiplr: 1.00
MS Integration Params: RTEINT1.P
Method : C:\HPCHEM\1\METHODS\V5C00162.M (RTE Integrator)
Title : VOCs BY GC/MS EPA SW846-8260



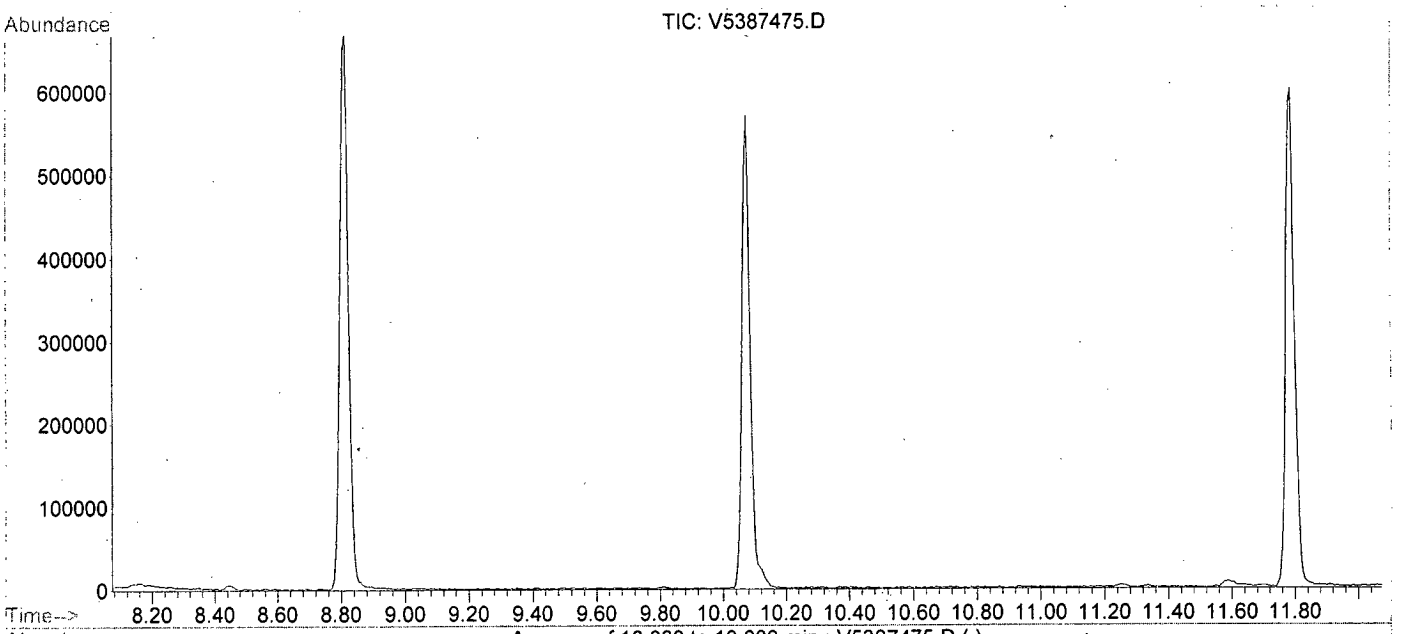

AutoFind: Scans 1516, 1517, 1518; Background Corrected with Scan 1509

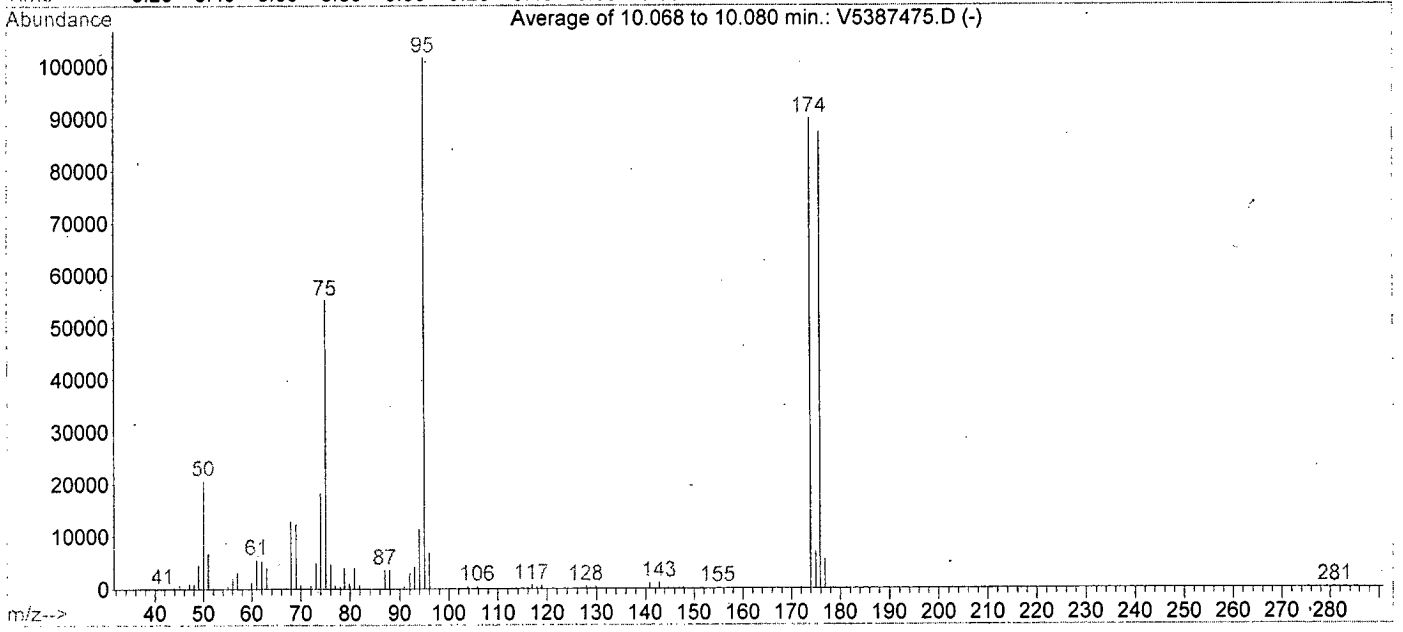
| Target Mass | Rel. to Mass | Lower Limit% | Upper Limit% | Rel. Abn% | Raw Abn | Result Pass/Fail |
|---|---|---|---|---|---|---|
| 50 | 95 | 15 | 40 | 23.0 | 14325 | PASS |
| 75 | 95 | 30 | 60 | 57.2 | 35669 | PASS |
| 95 | 95 | 100 | 100 | 100.0 | 62349 | PASS |
| 96 | 95 | 5 | 9 | 7.6 | 4708 | PASS |
| 173 | 174 | 0.00 | 2 | 0.0 | 0 | PASS |
| 174 | 95 | 50 | 100 | 87.5 | 54549 | PASS |
| 175 | 174 | 5 | 9 | 7.9 | 4318 | PASS |
| 176 | 174 | 95 | 101 | 99.3 | 54147 | PASS |
| 177 | 176 | 5 | 9 | 6.7 | 3622 | PASS |

V5387145.D V5C00162.M Fri Aug 26 09:48:02 2016

Data File : C:\HPCHEM\1\DATA\V5091416\V5387475.D
Acq On : 14 Sep 2016 8:18 am
Sample : SEQ-TUN1
Misc : QBV5091416A
MS Integration Params: RTEINT1.P
Method : C:\HPCHEM\1\METHODS\V5C00162.M (RTE Integrator)
Title : VOCs BY GC/MS EPA SW846-8260

Vial: 1
Operator: SS
Inst : VOA No. 5
Multiplr: 1.00




AutoFind: Scans 1516, 1517, 1518; Background Corrected with Scan 1509

| Target Mass | Rel. to Mass | Lower Limit% | Upper Limit% | Rel. Abn% | Raw Abn | Result Pass/Fail |
|---|---|---|---|---|---|---|
| 50 | 95 | 15 | 40 | 20.4 | 20707 | PASS |
| 75 | 95 | 30 | 60 | 54.3 | 55248 | PASS |
| 95 | 95 | 100 | 100 | 100.0 | 101723 | PASS |
| 96 | 95 | 5 | 9 | 6.8 | 6911 | PASS |
| 173 | 174 | 0.00 | 2 | 0.0 | 0 | PASS |
| 174 | 95 | 50 | 100 | 88.5 | 90043 | PASS |
| 175 | 174 | 5 | 9 | 7.8 | 7064 | PASS |
| 176 | 174 | 95 | 101 | 97.1 | 87448 | PASS |
| 177 | 176 | 5 | 9 | 6.5 | 5700 | PASS |

**FORM I**

# METHOD BLANK DATA SHEET

## EPA 8260C

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | York Analytical Laboratories, Inc. | | | SDG: | 16I0260 |
| Client: | Langan Engineering & Environmental Services (NYC) | | | Project: | 170301202 450 Union Street |
| Matrix: | Soil | Laboratory ID: | BI60530-BLK1 | File ID: | V5387480.D |
| Prepared: | 09/14/16 08:26 | Preparation: | EPA 5035A | Initial/Final: | 5 g / 5 ml |
| Analyzed: | 09/14/16 11:10 | Instrument: | VOA No. 5 | | |
| Batch: | BI60530 | Sequence: | Y6I1422 | Calibration: | YH60024 |

| CAS NO. | COMPOUND | CONC. (mg/kg wet) | Q |
|---|---|---|---|
| 630-20-6 | 1,1,1,2-Tetrachloroethane | 0.0050 | U |
| 71-55-6 | 1,1,1-Trichloroethane | 0.0050 | U |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 0.0050 | U |
| 76-13-1 | 1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113) | 0.0050 | U |
| 79-00-5 | 1,1,2-Trichloroethane | 0.0050 | U |
| 75-34-3 | 1,1-Dichloroethane | 0.0050 | U |
| 75-35-4 | 1,1-Dichloroethylene | 0.0050 | U |
| 87-61-6 | 1,2,3-Trichlorobenzene | 0.0050 | U |
| 120-82-1 | 1,2,4-Trichlorobenzene | 0.0050 | U |
| 95-63-6 | 1,2,4-Trimethylbenzene | 0.0050 | U |
| 96-12-8 | 1,2-Dibromo-3-chloropropane | 0.0050 | U |
| 106-93-4 | 1,2-Dibromoethane | 0.0050 | U |
| 95-50-1 | 1,2-Dichlorobenzene | 0.0050 | U |
| 107-06-2 | 1,2-Dichloroethane | 0.0050 | U |
| 78-87-5 | 1,2-Dichloropropane | 0.0050 | U |
| 108-67-8 | 1,3,5-Trimethylbenzene | 0.0050 | U |
| 541-73-1 | 1,3-Dichlorobenzene | 0.0050 | U |
| 106-46-7 | 1,4-Dichlorobenzene | 0.0050 | U |
| 123-91-1 | 1,4-Dioxane | 0.10 | U |
| 78-93-3 | 2-Butanone | 0.0050 | U |
| 591-78-6 | 2-Hexanone | 0.0050 | U |
| 108-10-1 | 4-Methyl-2-pentanone | 0.0050 | U |
| 67-64-1 | Acetone | 0.010 | U |
| 107-02-8 | Acrolein | 0.010 | U |
| 107-13-1 | Acrylonitrile | 0.0050 | U |
| 71-43-2 | Benzene | 0.0050 | U |
| 74-97-5 | Bromochloromethane | 0.0050 | U |
| 75-27-4 | Bromodichloromethane | 0.0050 | U |
| 75-25-2 | Bromoform | 0.0050 | U |
| 74-83-9 | Bromomethane | 0.0050 | U |

**FORM I**

# METHOD BLANK DATA SHEET

## EPA 8260C

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | York Analytical Laboratories, Inc. | | | SDG: | 16I0260 |
| Client: | Langan Engineering & Environmental Services (NYC) | | | Project: | 170301202 450 Union Street |
| Matrix: | Soil | Laboratory ID: | BI60530-BLK1 | File ID: | V5387480.D |
| Prepared: | 09/14/16 08:26 | Preparation: | EPA 5035A | Initial/Final: | 5 g / 5 ml |
| Analyzed: | 09/14/16 11:10 | Instrument: | VOA No. 5 | | |
| Batch: | BI60530 | Sequence: | Y6I1422 | Calibration: | YH60024 |

| CAS NO. | COMPOUND | CONC. (mg/kg wet) | Q |
|---|---|---|---|
| 75-15-0 | Carbon disulfide | 0.0050 | U |
| 56-23-5 | Carbon tetrachloride | 0.0050 | U |
| 108-90-7 | Chlorobenzene | 0.0050 | U |
| 75-00-3 | Chloroethane | 0.0050 | U |
| 67-66-3 | Chloroform | 0.0050 | U |
| 74-87-3 | Chloromethane | 0.0050 | U |
| 156-59-2 | cis-1,2-Dichloroethylene | 0.0050 | U |
| 10061-01-5 | cis-1,3-Dichloropropylene | 0.0050 | U |
| 110-82-7 | Cyclohexane | 0.0050 | U |
| 124-48-1 | Dibromochloromethane | 0.0050 | U |
| 74-95-3 | Dibromomethane | 0.0050 | U |
| 75-71-8 | Dichlorodifluoromethane | 0.0050 | U |
| 100-41-4 | Ethyl Benzene | 0.0050 | U |
| 87-68-3 | Hexachlorobutadiene | 0.0050 | U |
| 98-82-8 | Isopropylbenzene | 0.0050 | U |
| 79-20-9 | Methyl acetate | 0.0050 | U |
| 1634-04-4 | Methyl tert-butyl ether (MTBE) | 0.0050 | U |
| 108-87-2 | Methylcyclohexane | 0.0050 | U |
| 75-09-2 | Methylene chloride | 0.010 | U |
| 104-51-8 | n-Butylbenzene | 0.0050 | U |
| 103-65-1 | n-Propylbenzene | 0.0050 | U |
| 95-47-6 | o-Xylene | 0.0050 | U |
| 179601-23-1 | p- & m- Xylenes | 0.010 | U |
| 99-87-6 | p-Isopropyltoluene | 0.0050 | U |
| 135-98-8 | sec-Butylbenzene | 0.0050 | U |
| 100-42-5 | Styrene | 0.0050 | U |
| 75-65-0 | tert-Butyl alcohol (TBA) | 0.0050 | U |
| 98-06-6 | tert-Butylbenzene | 0.0050 | U |
| 127-18-4 | Tetrachloroethylene | 0.0050 | U |
| 108-88-3 | Toluene | 0.0050 | U |

**FORM I**

# METHOD BLANK DATA SHEET

## EPA 8260C

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | York Analytical Laboratories, Inc. | | | SDG: | 16I0260 |
| Client: | Langan Engineering & Environmental Services (NYC) | | | Project: | 170301202 450 Union Street |
| Matrix: | Soil | Laboratory ID: | BI60530-BLK1 | File ID: | V5387480.D |
| Prepared: | 09/14/16 08:26 | Preparation: | EPA 5035A | Initial/Final: | 5 g / 5 ml |
| Analyzed: | 09/14/16 11:10 | Instrument: | VOA No. 5 | | |
| Batch: | BI60530 | Sequence: | Y6I1422 | Calibration: | YH60024 |

| CAS NO. | COMPOUND | CONC. (mg/kg wet) | Q |
|---|---|---|---|
| 156-60-5 | trans-1,2-Dichloroethylene | 0.0050 | U |
| 10061-02-6 | trans-1,3-Dichloropropylene | 0.0050 | U |
| 79-01-6 | Trichloroethylene | 0.0050 | U |
| 75-69-4 | Trichlorofluoromethane | 0.0050 | U |
| 75-01-4 | Vinyl Chloride | 0.0050 | U |
| 1330-20-7 | Xylenes, Total | 0.015 | U |

| SYSTEM MONITORING COMPOUND | ADDED (ug/L) | CONC (ug/L) | % REC | QC LIMITS | Q |
|---|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 50.0 | 46.8 | 93.7 | 77 - 125 | |
| Toluene-d8 | 50.0 | 48.9 | 97.7 | 85 - 120 | |
| p-Bromofluorobenzene | 50.0 | 50.6 | 101 | 76 - 130 | |

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\V5091416\V5387480.D Vial: 6
Acq On : 14 Sep 2016 11:10 am Operator: SS
Sample : BI60530-BLK1 Inst : VOA No. 5
Misc : QBV5091416A Multiplr: 1.00
MS Integration Params: RTEINT1.P
Quant Time: Sep 14 13:47 2016 Quant Results File: V5C00162.RES

Quant Method : C:\HPCHEM\1\METHODS\V5C00162.M (RTE Integrator)
Title : VOCs BY GC/MS EPA SW846-8260
Last Update : Fri Aug 26 09:47:09 2016
Response via : Initial Calibration
DataAcq Meth : V5C0001A

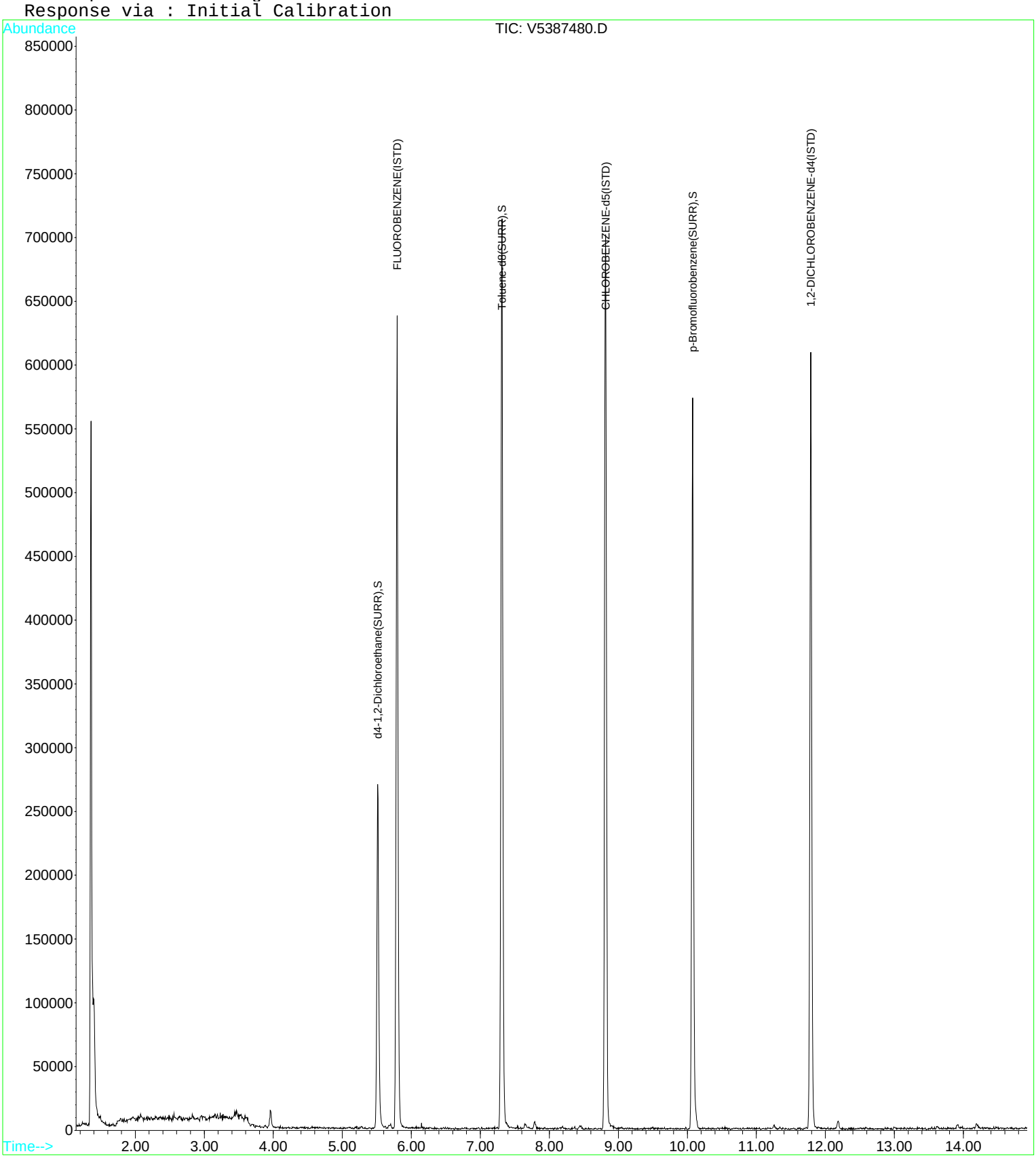
| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 1) FLUOROBENZENE(ISTD) | 5.79 | 70 | 131095 | 50.00 | ppb | 0.00 |
| 36) CHLOROBENZENE-d5(ISTD) | 8.82 | 117 | 469258 | 50.00 | ppb | 0.00 |
| 62) 1,2-DICHLOROBENZENE-d4(IST | 11.79 | 152 | 180325 | 50.00 | ppb | 0.00 |
| **System Monitoring Compounds** | | | | | | |
| 32) d4-1,2-Dichloroethane(SURR | 5.51 | 65 | 200570 | 46.83 | ppb | 0.00 |
| Spiked Amount 50.000 | Range 64 - 122 | | Recovery = 93.66% | | | |
| 47) Toluene-d8(SURR) | 7.31 | 98 | 481215 | 48.87 | ppb | 0.00 |
| Spiked Amount 50.000 | Range 83 - 114 | | Recovery = 97.74% | | | |
| 64) p-Bromofluorobenzene(SURR) | 10.08 | 174 | 181635 | 50.57 | ppb | 0.00 |
| Spiked Amount 50.000 | Range 71 - 126 | | Recovery = 101.14% | | | |
| **Target Compounds** | | | | | | Qvalue |
| 8) Ethanol | 2.77 | 45 | 1861 | Below Cal | | 100 |
| 11) Acrolein | 2.95 | 56 | 1038 | Below Cal | # | 1 |
| 13) Methyl Acetate | 3.38 | 43 | 600 | Below Cal | # | 89 |

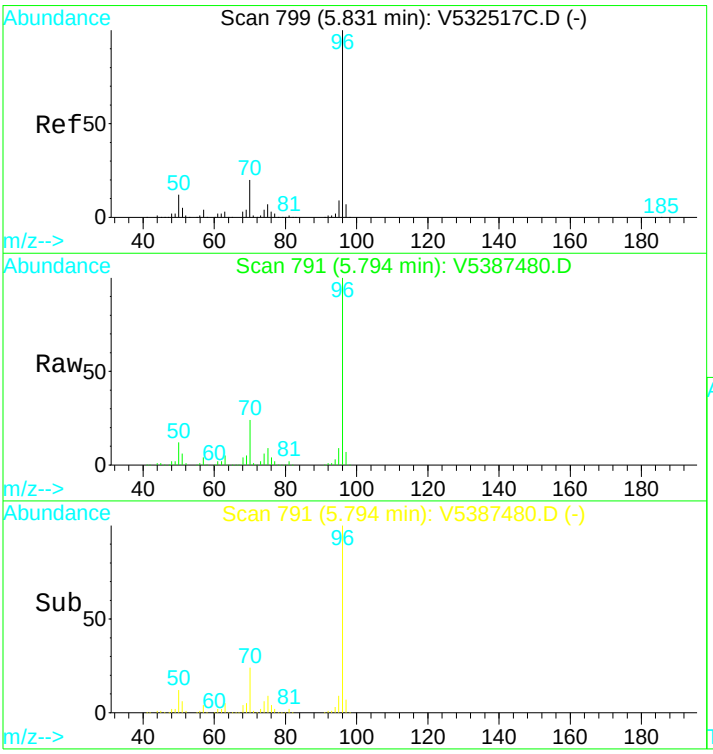
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\V5091416\V5387480.D Vial: 6
Acq On : 14 Sep 2016 11:10 am Operator: SS
Sample : BI60530-BLK1 Inst : VOA No. 5
Misc : QBV5091416A Multiplr: 1.00
MS Integration Params: RTEINT1.P
Quant Time: Sep 14 13:47 2016 Quant Results File: V5C00162.RES

Method : C:\HPCHEM\1\METHODS\V5C00162.M (RTE Integrator)
Title : VOCs BY GC/MS EPA SW846-8260
Last Update : Fri Aug 26 09:47:09 2016
Response via : Initial Calibration

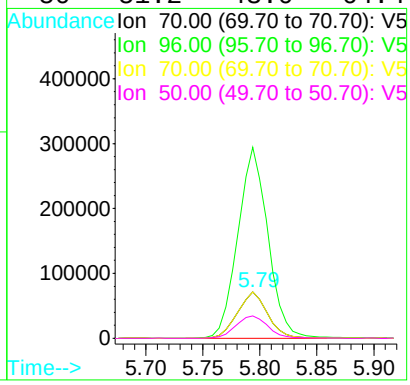


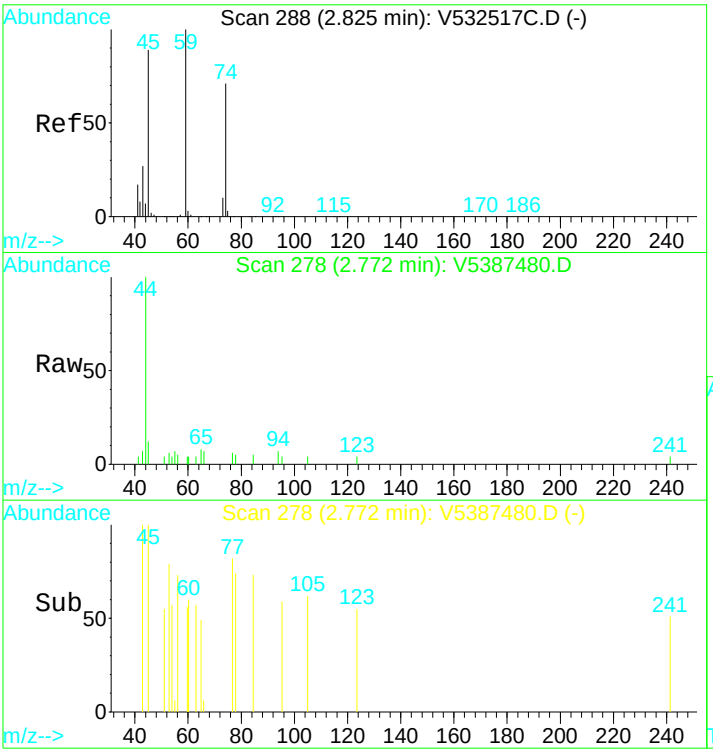



#1
FLUOROBENZENE(ISTD)
Concen: 50.00 ppb
RT: 5.79 min Scan# 791
Delta R.T. 0.00 min
Lab File: V5387480.D
Acq: 14 Sep 2016 11:10 am

Tgt Ion: 70 Resp: 131095

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 70 | 100 | | |
| 96 | 0.0 | 0.0 | 0.0 |
| 70 | 100.0 | 80.0 | 120.0 |
| 50 | 51.2 | 43.0 | 64.4 |

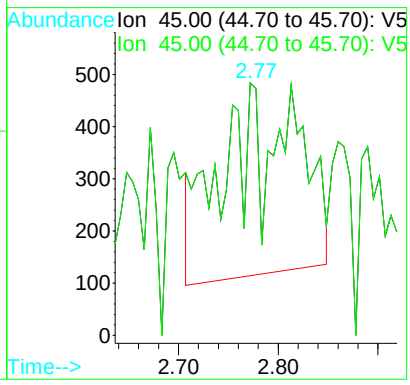


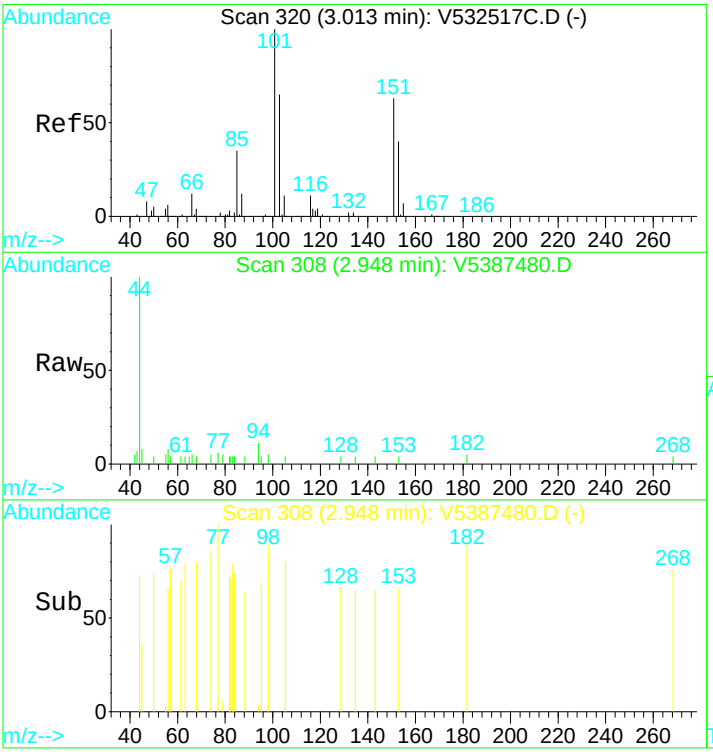




#8
Ethanol
Concen: Below Cal
RT: 2.77 min Scan# 278
Delta R.T. 0.01 min
Lab File: V5387480.D
Acq: 14 Sep 2016 11:10 am

Tgt Ion: 45 Resp: 1861

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 45 | 100 | | |
| 45 | 100.0 | 50.0 | 150.0 |

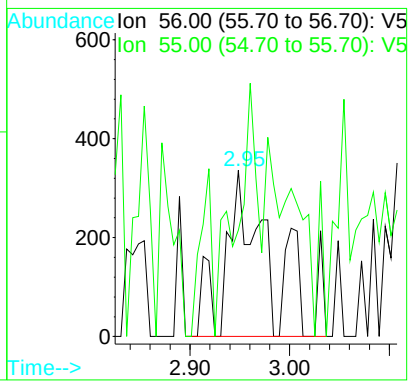


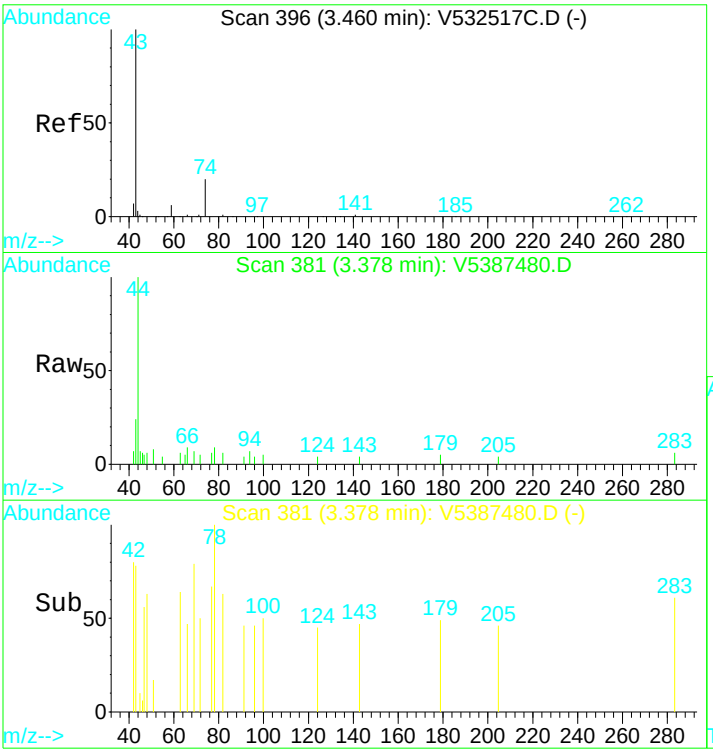



#11
Acrolein
Concen: Below Cal
RT: 2.95 min Scan# 308
Delta R.T. -0.02 min
Lab File: V5387480.D
Acq: 14 Sep 2016 11:10 am

Tgt Ion: 56 Resp: 1038

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 56 | 100 | | |
| 55 | 186.3 | 62.9 | 94.3# |

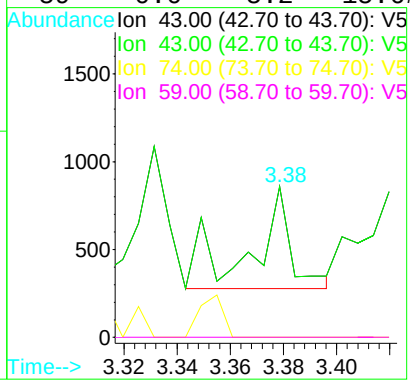


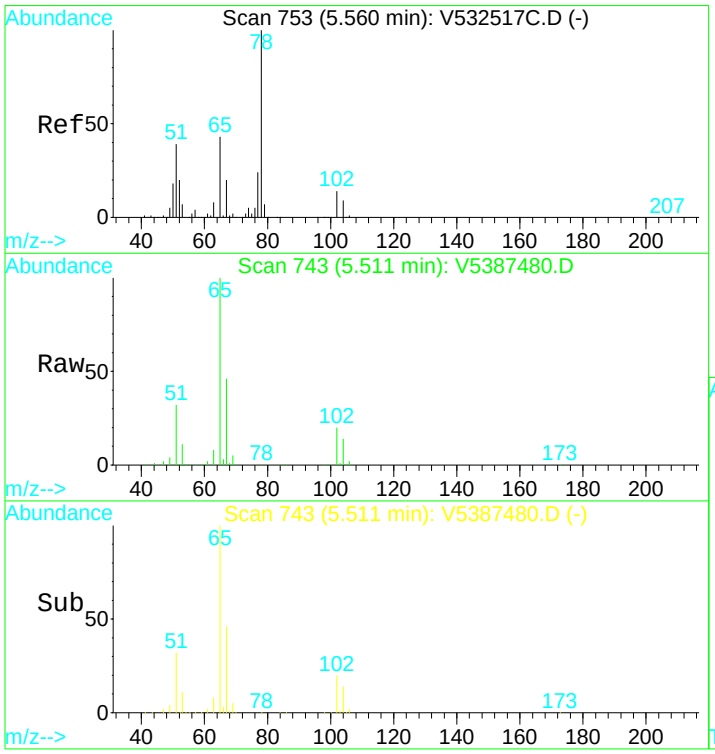




#13
Methyl Acetate
Concen: Below Cal
RT: 3.38 min Scan# 381
Delta R.T. -0.04 min
Lab File: V5387480.D
Acq: 14 Sep 2016 11:10 am

Tgt Ion: 43 Resp: 600

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 43 | 100.0 | 0.0 | 200.0 |
| 74 | 0.0 | 11.8 | 35.3# |
| 59 | 0.0 | 5.2 | 15.6# |

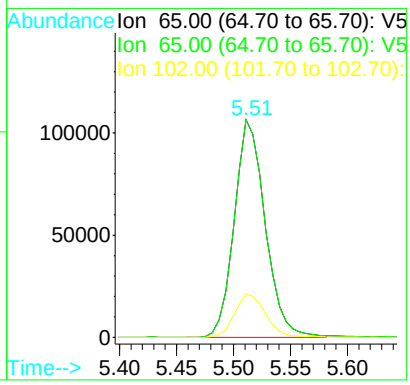


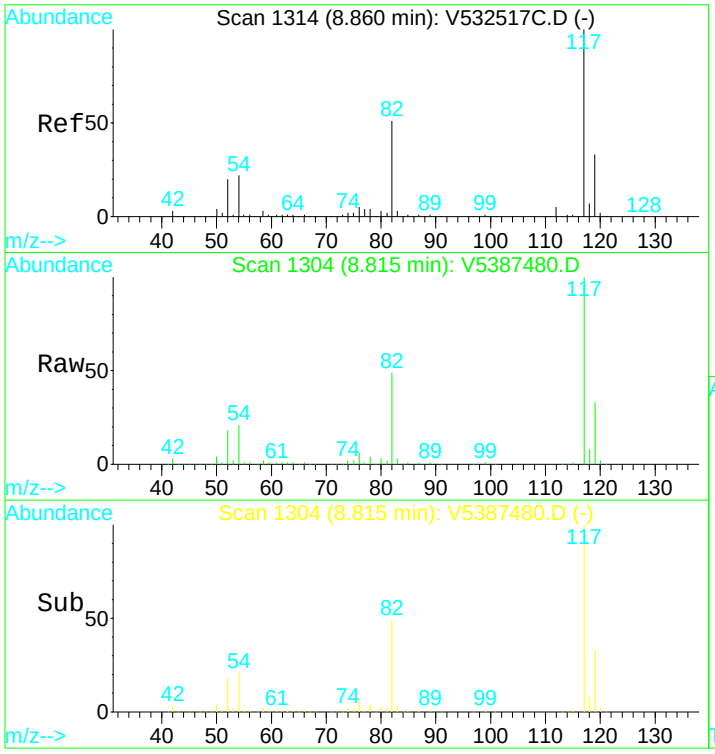



#32
d4-1,2-Dichloroethane(SURR)
Concen:  Below ppb
RT: 5.51 min  Scan# 743
Delta R.T.  -0.01 min
Lab File:  V5387480.D
Acq: 14 Sep 2016  11:10 am

Tgt Ion: 65 Resp:  200570

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 65 | 100 | | |
| 65 | 100.0 | 80.0 | 120.0 |
| 102 | 20.0 | 0.0 | 0.0# |

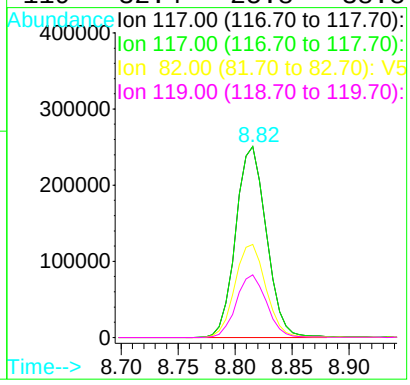


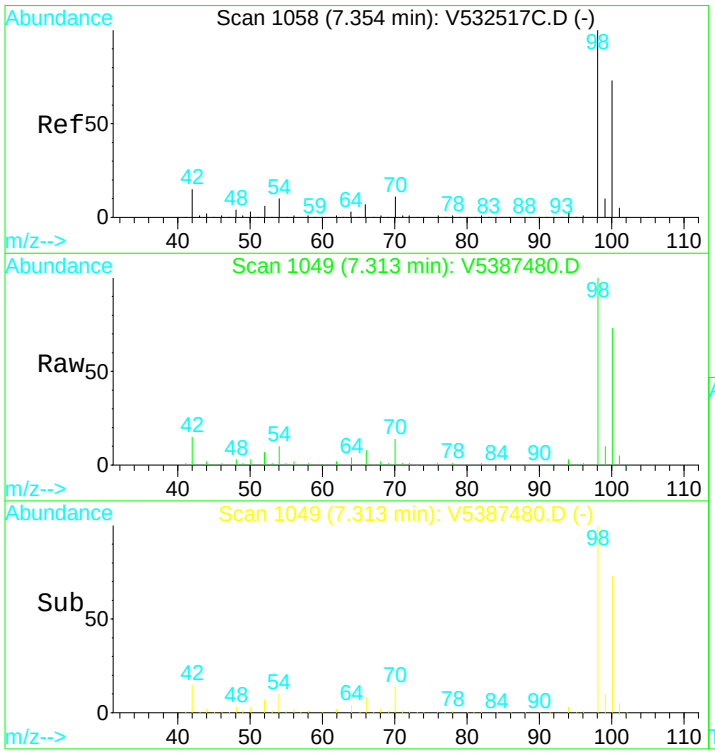




#36
CHLOROBENZENE-d5(ISTD)
Concen:  50.00 ppb
RT: 8.82 min  Scan# 1304
Delta R.T.  0.00 min
Lab File:  V5387480.D
Acq: 14 Sep 2016  11:10 am

Tgt Ion:117 Resp:  469258

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 117 | 100 | | |
| 117 | 100.0 | 80.0 | 120.0 |
| 82 | 0.0 | 0.0 | 0.0 |
| 119 | 32.4 | 25.8 | 38.8 |

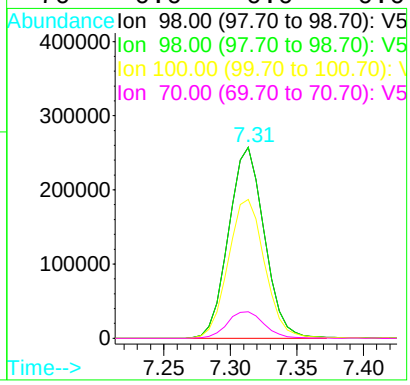


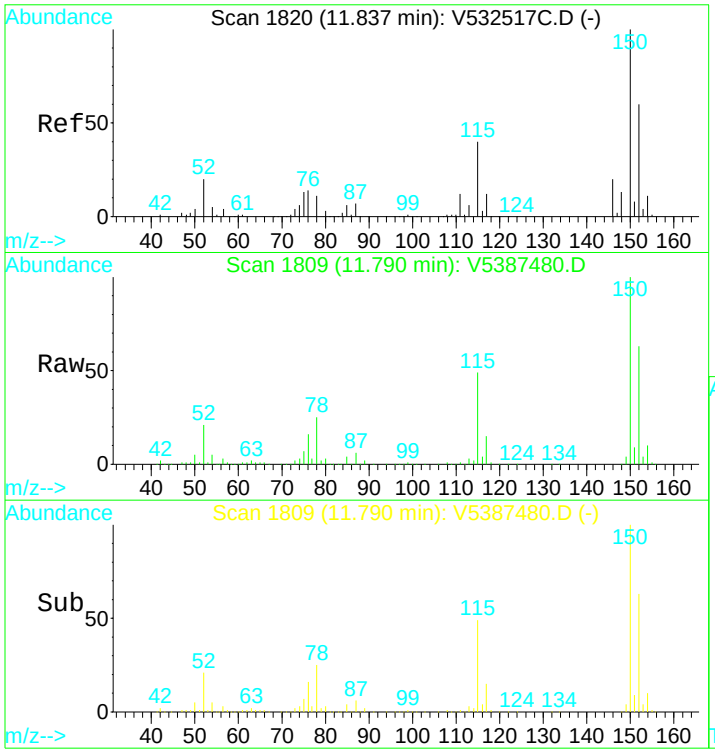



#47
Toluene-d8(SURR)
Concen: Below ppb
RT: 7.31 min Scan# 1049
Delta R.T. 0.00 min
Lab File: V5387480.D
Acq: 14 Sep 2016 11:10 am

Tgt Ion: 98 Resp: 481215

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 98 | 100 | | |
| 98 | 100.0 | 80.0 | 120.0 |
| 100 | 74.1 | 38.1 | 114.5 |
| 70 | 0.0 | 0.0 | 0.0 |

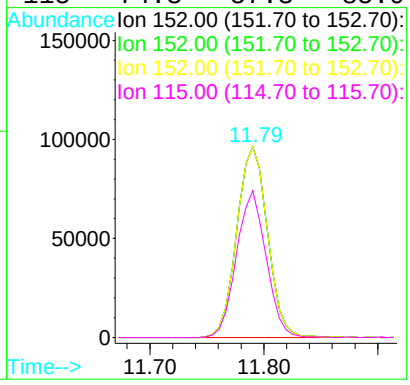


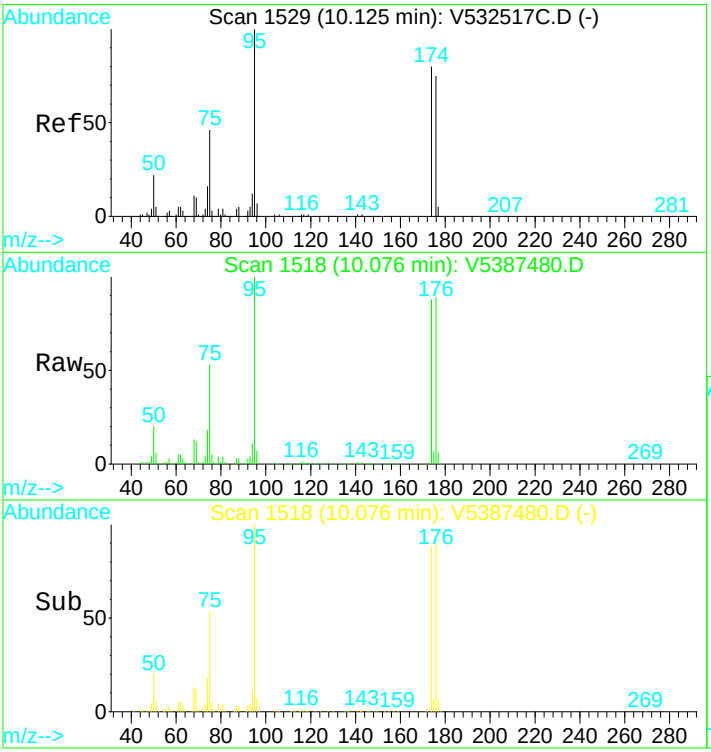




#62
1,2-DICHLOROBENZENE-d4(ISTD)
Concen: 50.00 ppb
RT: 11.79 min Scan# 1809
Delta R.T. 0.00 min
Lab File: V5387480.D
Acq: 14 Sep 2016 11:10 am

Tgt Ion:152 Resp: 180325

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 152 | 100 | | |
| 152 | 100.0 | 80.0 | 120.0 |
| 152 | 100.0 | 80.0 | 120.0 |
| 115 | 74.3 | 57.3 | 85.9 |

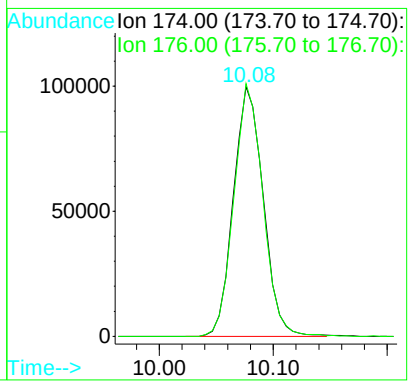





#64
p-Bromofluorobenzene(SURR)
Concen: N.D. ppb
RT: 10.08 min Scan# 1518
Delta R.T. -0.01 min
Lab File: V5387480.D
Acq: 14 Sep 2016 11:10 am

Tgt Ion:174 Resp: 181635

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 174 | 100 | | |
| 176 | 98.6 | 80.8 | 121.2 |



**FORM I**

# METHOD BLANK DATA SHEET

## EPA 8260C

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | York Analytical Laboratories, Inc. | | | SDG: | 16I0260 |
| Client: | Langan Engineering & Environmental Services (NYC) | | | Project: | 170301202 450 Union Street |
| Matrix: | Soil | Laboratory ID: | BI60530-BLK2 | File ID: | V5387481.D |
| Prepared: | 09/14/16 08:26 | Preparation: | EPA 5035A | Initial/Final: | 5 g / 5 ml |
| Analyzed: | 09/14/16 11:44 | Instrument: | VOA No. 5 | | |
| Batch: | BI60530 | Sequence: | Y6I1422 | Calibration: | YH60024 |

| CAS NO. | COMPOUND | CONC. (mg/kg wet) | Q |
|---|---|---|---|
| 630-20-6 | 1,1,1,2-Tetrachloroethane | 0.0050 | U |
| 71-55-6 | 1,1,1-Trichloroethane | 0.0050 | U |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 0.0050 | U |
| 76-13-1 | 1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113) | 0.0050 | U |
| 79-00-5 | 1,1,2-Trichloroethane | 0.0050 | U |
| 75-34-3 | 1,1-Dichloroethane | 0.0050 | U |
| 75-35-4 | 1,1-Dichloroethylene | 0.0050 | U |
| 87-61-6 | 1,2,3-Trichlorobenzene | 0.0050 | U |
| 120-82-1 | 1,2,4-Trichlorobenzene | 0.0050 | U |
| 95-63-6 | 1,2,4-Trimethylbenzene | 0.0050 | U |
| 96-12-8 | 1,2-Dibromo-3-chloropropane | 0.0050 | U |
| 106-93-4 | 1,2-Dibromoethane | 0.0050 | U |
| 95-50-1 | 1,2-Dichlorobenzene | 0.0050 | U |
| 107-06-2 | 1,2-Dichloroethane | 0.0050 | U |
| 78-87-5 | 1,2-Dichloropropane | 0.0050 | U |
| 108-67-8 | 1,3,5-Trimethylbenzene | 0.0050 | U |
| 541-73-1 | 1,3-Dichlorobenzene | 0.0050 | U |
| 106-46-7 | 1,4-Dichlorobenzene | 0.0050 | U |
| 123-91-1 | 1,4-Dioxane | 0.10 | U |
| 78-93-3 | 2-Butanone | 0.0050 | U |
| 591-78-6 | 2-Hexanone | 0.0050 | U |
| 108-10-1 | 4-Methyl-2-pentanone | 0.0050 | U |
| 67-64-1 | Acetone | 0.010 | U |
| 107-02-8 | Acrolein | 0.010 | U |
| 107-13-1 | Acrylonitrile | 0.0050 | U |
| 71-43-2 | Benzene | 0.0050 | U |
| 74-97-5 | Bromochloromethane | 0.0050 | U |
| 75-27-4 | Bromodichloromethane | 0.0050 | U |
| 75-25-2 | Bromoform | 0.0050 | U |
| 74-83-9 | Bromomethane | 0.0050 | U |

**FORM I**

# METHOD BLANK DATA SHEET

## EPA 8260C

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | York Analytical Laboratories, Inc. | | | SDG: | 16I0260 |
| Client: | Langan Engineering & Environmental Services (NYC) | | | Project: | 170301202 450 Union Street |
| Matrix: | Soil | Laboratory ID: | BI60530-BLK2 | File ID: | V5387481.D |
| Prepared: | 09/14/16 08:26 | Preparation: | EPA 5035A | Initial/Final: | 5 g / 5 ml |
| Analyzed: | 09/14/16 11:44 | Instrument: | VOA No. 5 | | |
| Batch: | BI60530 | Sequence: | Y6I1422 | Calibration: | YH60024 |

| CAS NO. | COMPOUND | CONC. (mg/kg wet) | Q |
|---|---|---|---|
| 75-15-0 | Carbon disulfide | 0.0050 | U |
| 56-23-5 | Carbon tetrachloride | 0.0050 | U |
| 108-90-7 | Chlorobenzene | 0.0050 | U |
| 75-00-3 | Chloroethane | 0.0050 | U |
| 67-66-3 | Chloroform | 0.0050 | U |
| 74-87-3 | Chloromethane | 0.0050 | U |
| 156-59-2 | cis-1,2-Dichloroethylene | 0.0050 | U |
| 10061-01-5 | cis-1,3-Dichloropropylene | 0.0050 | U |
| 110-82-7 | Cyclohexane | 0.0050 | U |
| 124-48-1 | Dibromochloromethane | 0.0050 | U |
| 74-95-3 | Dibromomethane | 0.0050 | U |
| 75-71-8 | Dichlorodifluoromethane | 0.0050 | U |
| 100-41-4 | Ethyl Benzene | 0.0050 | U |
| 87-68-3 | Hexachlorobutadiene | 0.0050 | U |
| 98-82-8 | Isopropylbenzene | 0.0050 | U |
| 79-20-9 | Methyl acetate | 0.0050 | U |
| 1634-04-4 | Methyl tert-butyl ether (MTBE) | 0.0050 | U |
| 108-87-2 | Methylcyclohexane | 0.0050 | U |
| 75-09-2 | Methylene chloride | 0.010 | U |
| 104-51-8 | n-Butylbenzene | 0.0050 | U |
| 103-65-1 | n-Propylbenzene | 0.0050 | U |
| 95-47-6 | o-Xylene | 0.0050 | U |
| 179601-23-1 | p- & m- Xylenes | 0.010 | U |
| 99-87-6 | p-Isopropyltoluene | 0.0050 | U |
| 135-98-8 | sec-Butylbenzene | 0.0050 | U |
| 100-42-5 | Styrene | 0.0050 | U |
| 75-65-0 | tert-Butyl alcohol (TBA) | 0.0050 | U |
| 98-06-6 | tert-Butylbenzene | 0.0050 | U |
| 127-18-4 | Tetrachloroethylene | 0.0050 | U |
| 108-88-3 | Toluene | 0.0050 | U |

**FORM I**

# METHOD BLANK DATA SHEET

## EPA 8260C

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | York Analytical Laboratories, Inc. | | | SDG: | 16I0260 |
| Client: | Langan Engineering & Environmental Services (NYC) | | | Project: | 170301202 450 Union Street |
| Matrix: | Soil | Laboratory ID: | BI60530-BLK2 | File ID: | V5387481.D |
| Prepared: | 09/14/16 08:26 | Preparation: | EPA 5035A | Initial/Final: | 5 g / 5 ml |
| Analyzed: | 09/14/16 11:44 | Instrument: | VOA No. 5 | | |
| Batch: | BI60530 | Sequence: | Y6I1422 | Calibration: | YH60024 |

| CAS NO. | COMPOUND | CONC. (mg/kg wet) | Q |
|---|---|---|---|
| 156-60-5 | trans-1,2-Dichloroethylene | 0.0050 | U |
| 10061-02-6 | trans-1,3-Dichloropropylene | 0.0050 | U |
| 79-01-6 | Trichloroethylene | 0.0050 | U |
| 75-69-4 | Trichlorofluoromethane | 0.0050 | U |
| 75-01-4 | Vinyl Chloride | 0.0050 | U |
| 1330-20-7 | Xylenes, Total | 0.015 | U |

| SYSTEM MONITORING COMPOUND | ADDED (ug/L) | CONC (ug/L) | % REC | QC LIMITS | Q |
|---|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 50.0 | 46.5 | 92.9 | 77 - 125 | |
| Toluene-d8 | 50.0 | 46.8 | 93.6 | 85 - 120 | |
| p-Bromofluorobenzene | 50.0 | 51.3 | 103 | 76 - 130 | |

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\V5091416\V5387481.D Vial: 7
Acq On : 14 Sep 2016 11:44 am Operator: SS
Sample : BI60530-BLK2 Inst : VOA No. 5
Misc : QBV5091416A Multiplr: 1.00
MS Integration Params: RTEINT1.P
Quant Time: Sep 14 13:59 2016 Quant Results File: V5C00162.RES

Quant Method : C:\HPCHEM\1\METHODS\V5C00162.M (RTE Integrator)
Title : VOCs BY GC/MS EPA SW846-8260
Last Update : Fri Aug 26 09:47:09 2016
Response via : Initial Calibration
DataAcq Meth : V5C0001A

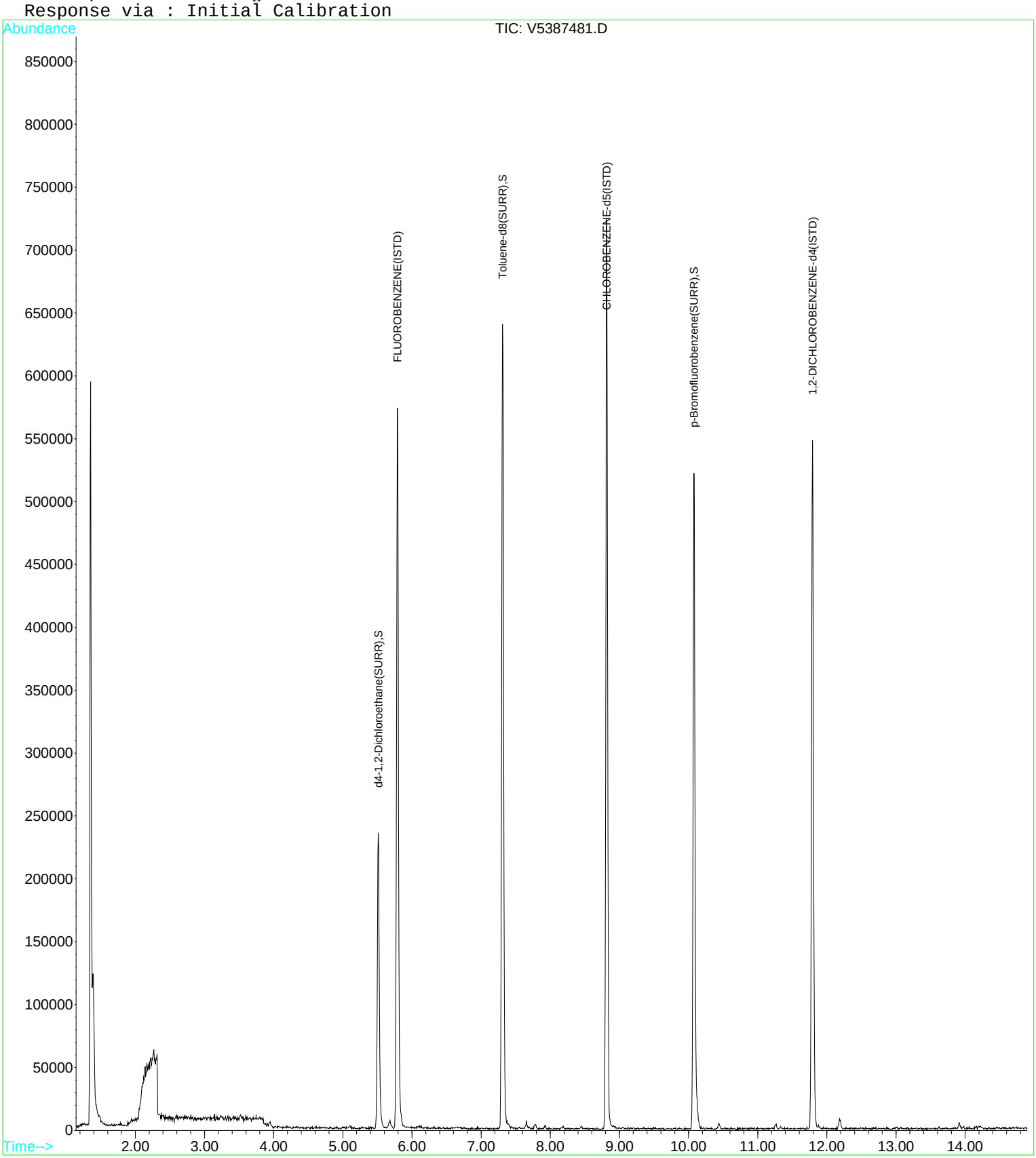
| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 1) FLUOROBENZENE(ISTD) | 5.79 | 70 | 123367 | 50.00 | ppb | 0.00 |
| 36) CHLOROBENZENE-d5(ISTD) | 8.82 | 117 | 461323 | 50.00 | ppb | 0.00 |
| 62) 1,2-DICHLOROBENZENE-d4(IST | 11.79 | 152 | 170128 | 50.00 | ppb | 0.00 |
| **System Monitoring Compounds** | | | | | | |
| 32) d4-1,2-Dichloroethane(SURR | 5.51 | 65 | 187281 | 46.47 | ppb | 0.00 |
| Spiked Amount 50.000 | Range 64 - 122 | | Recovery = 92.94% | | | |
| 47) Toluene-d8(SURR) | 7.31 | 98 | 453145 | 46.81 | ppb | 0.00 |
| Spiked Amount 50.000 | Range 83 - 114 | | Recovery = 93.62% | | | |
| 64) p-Bromofluorobenzene(SURR) | 10.08 | 174 | 173791 | 51.29 | ppb | 0.00 |
| Spiked Amount 50.000 | Range 71 - 126 | | Recovery = 102.58% | | | |
| **Target Compounds** | | | | | | Qvalue |
| 8) Ethanol | 2.76 | 45 | 693 | Below Cal | | 100 |
| 11) Acrolein | 2.91 | 56 | 631 | Below Cal | # | 1 |
| 13) Methyl Acetate | 3.43 | 43 | 1923 | Below Cal | # | 89 |

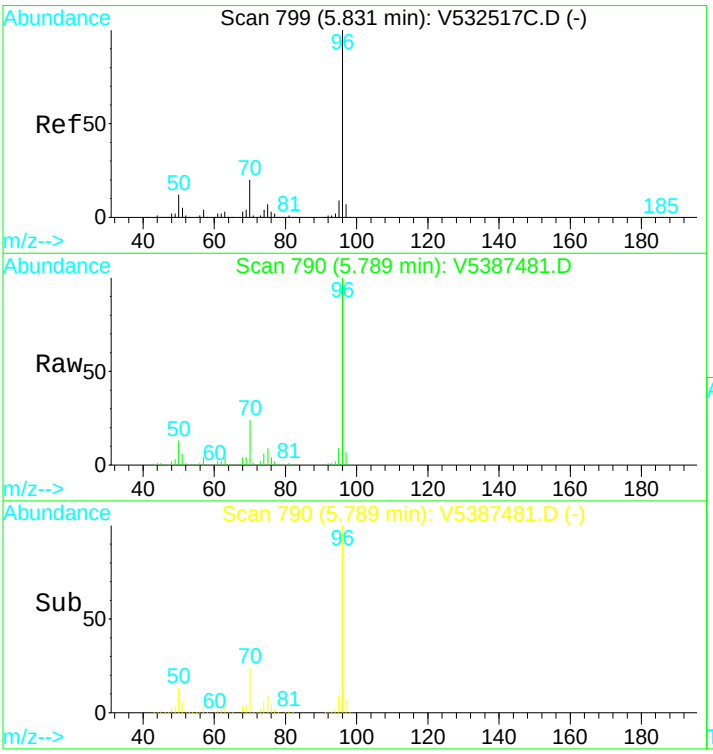
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\V5091416\V5387481.D Vial: 7
Acq On : 14 Sep 2016 11:44 am Operator: SS
Sample : BI60530-BLK2 Inst : VOA No. 5
Misc : QBV5091416A Multiplr: 1.00
MS Integration Params: RTEINT1.P
Quant Time: Sep 14 13:59 2016 Quant Results File: V5C00162.RES

Method : C:\HPCHEM\1\METHODS\V5C00162.M (RTE Integrator)
Title : VOCs BY GC/MS EPA SW846-8260
Last Update : Fri Aug 26 09:47:09 2016
Response via : Initial Calibration

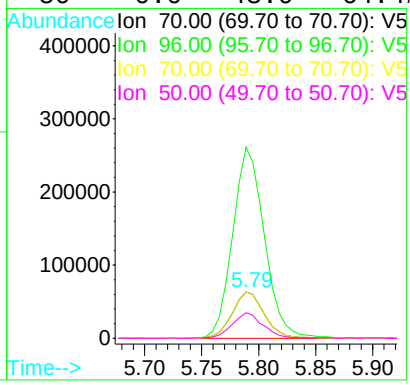


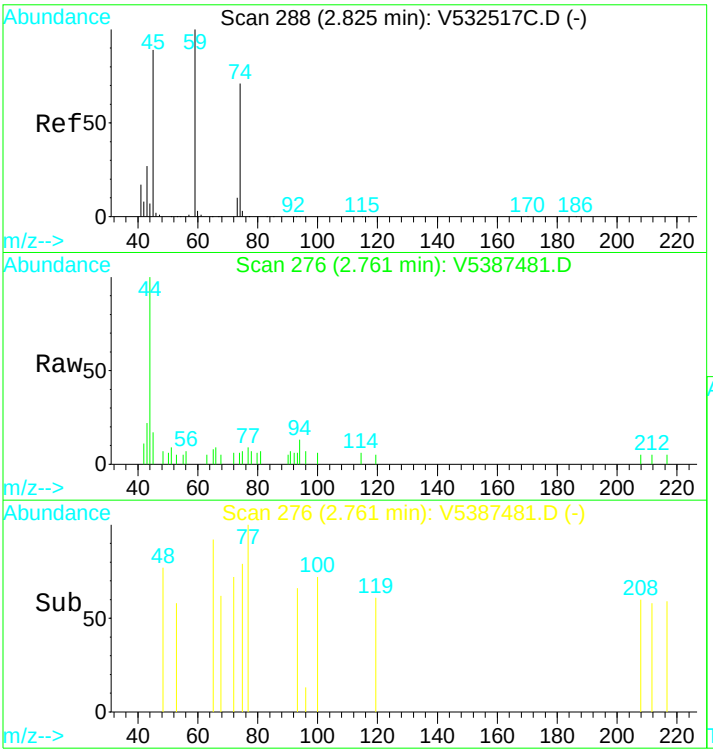



#1
FLUOROBENZENE(ISTD)
Concen: 50.00 ppb
RT: 5.79 min Scan# 790
Delta R.T. -0.00 min
Lab File: V5387481.D
Acq: 14 Sep 2016 11:44 am

Tgt Ion: 70 Resp: 123367

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 70 | 100 | | |
| 96 | 409.7 | 0.0 | 0.0# |
| 70 | 100.0 | 80.0 | 120.0 |
| 50 | 0.0 | 43.0 | 64.4# |

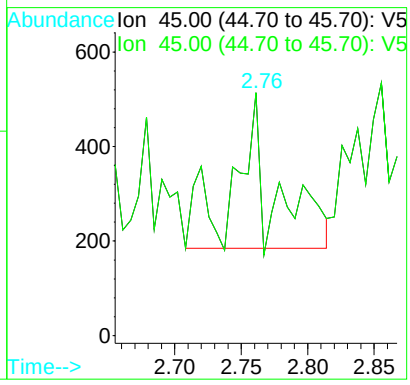


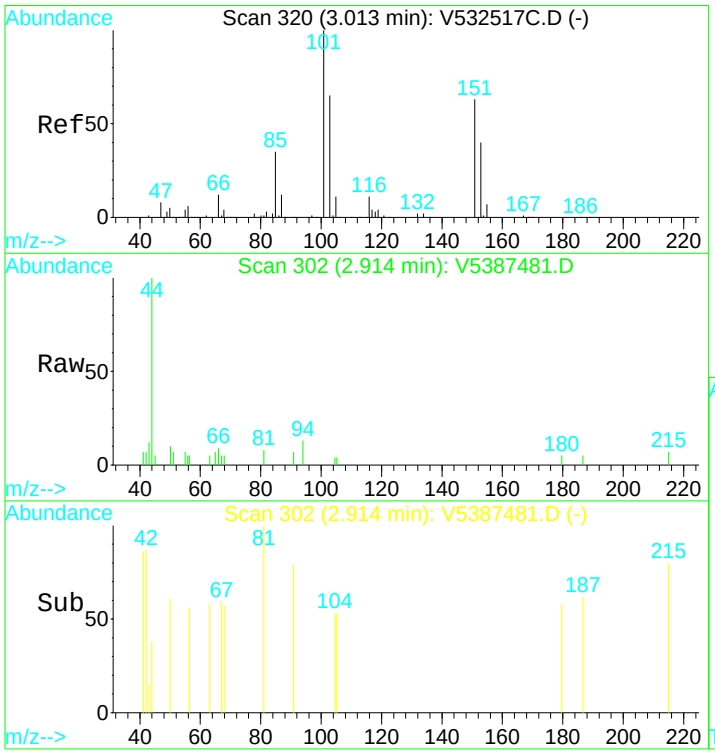




#8
Ethanol
Concen: Below Cal
RT: 2.76 min Scan# 276
Delta R.T. -0.00 min
Lab File: V5387481.D
Acq: 14 Sep 2016 11:44 am

Tgt Ion: 45 Resp: 693

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 45 | 100 | | |
| 45 | 100.0 | 50.0 | 150.0 |

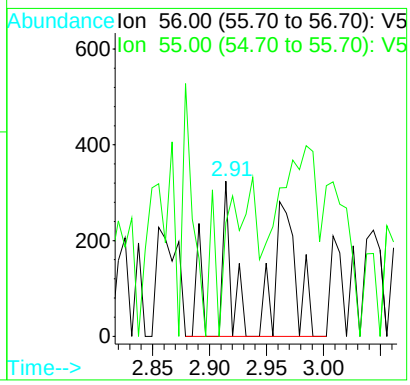


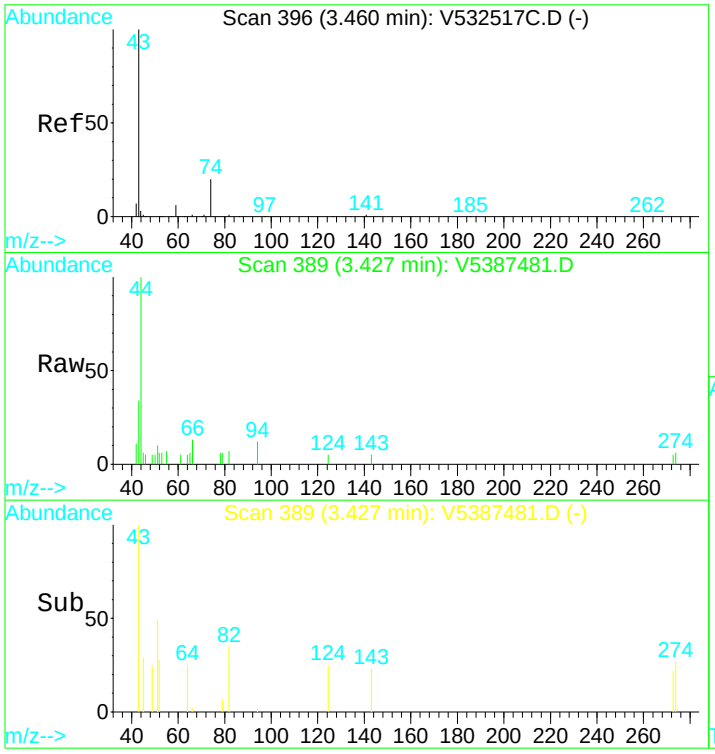



#11
Acrolein
Concen: Below Cal
RT: 2.91 min Scan# 302
Delta R.T. -0.06 min
Lab File: V5387481.D
Acq: 14 Sep 2016 11:44 am

Tgt Ion: 56 Resp: 631

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 56 | 100 | | |
| 55 | 309.0 | 62.9 | 94.3# |

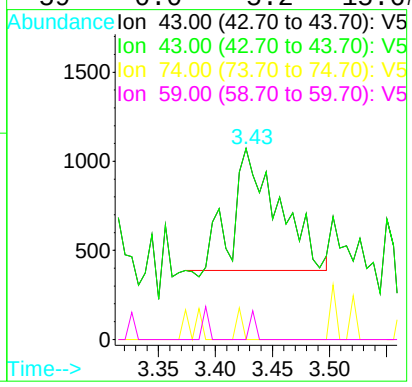


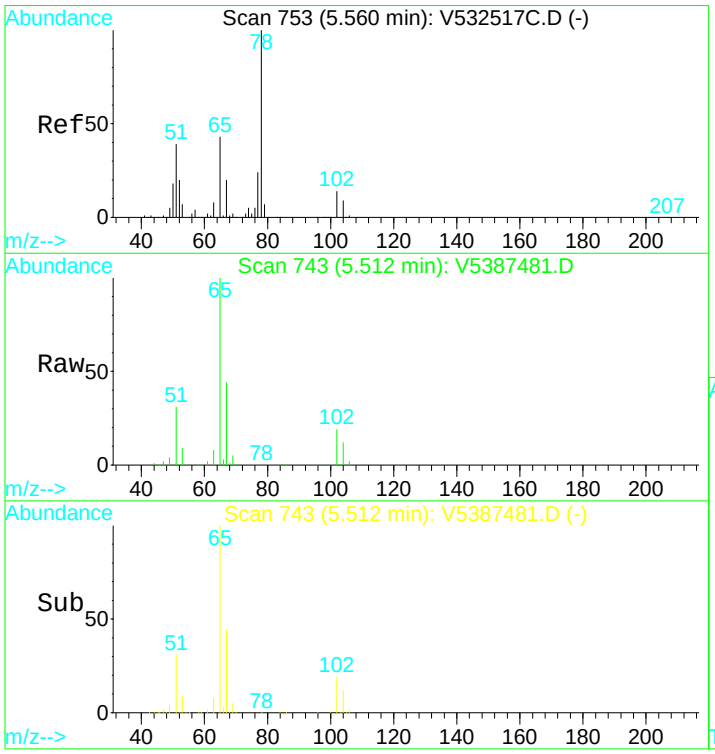




#13
Methyl Acetate
Concen: Below Cal
RT: 3.43 min Scan# 389
Delta R.T. 0.01 min
Lab File: V5387481.D
Acq: 14 Sep 2016 11:44 am

Tgt Ion: 43 Resp: 1923

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 43 | 100.0 | 0.0 | 200.0 |
| 74 | 0.0 | 11.8 | 35.3# |
| 59 | 0.0 | 5.2 | 15.6# |

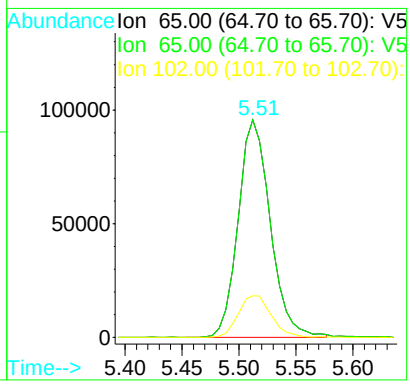


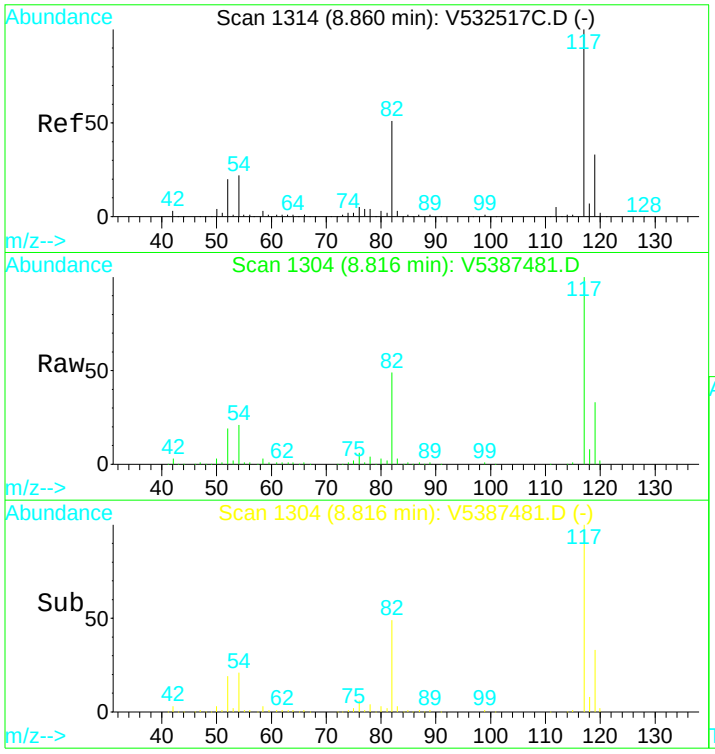



#32
d4-1,2-Dichloroethane(SURR)
Concen: N.D. ppb
RT: 5.51 min Scan# 743
Delta R.T. -0.00 min
Lab File: V5387481.D
Acq: 14 Sep 2016 11:44 am

Tgt Ion: 65 Resp: 187281

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 65 | 100 | | |
| 65 | 100.0 | 80.0 | 120.0 |
| 102 | 19.8 | 0.0 | 0.0# |

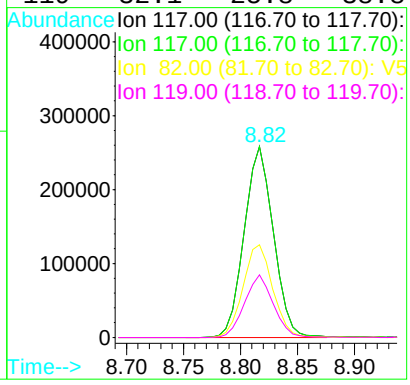


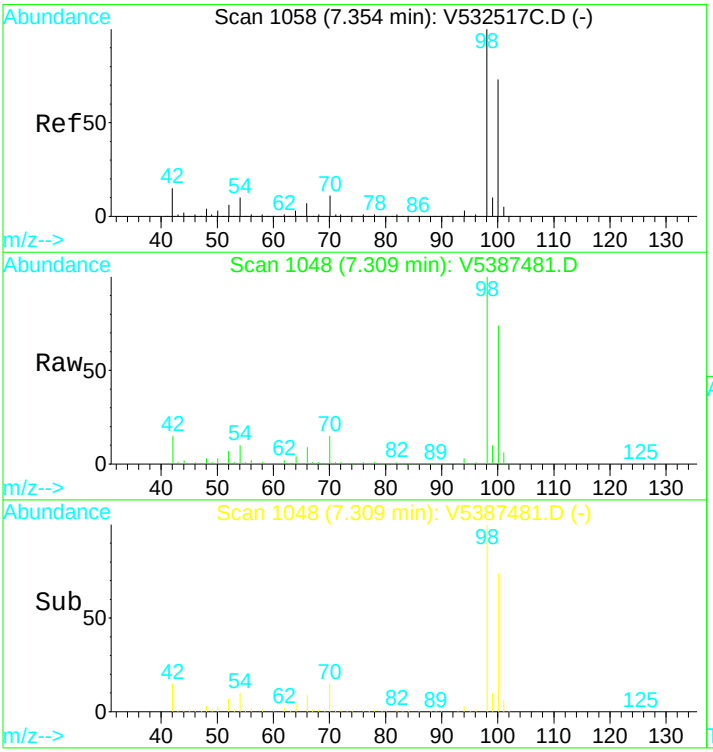




#36
CHLOROBENZENE-d5(ISTD)
Concen: 50.00 ppb
RT: 8.82 min Scan# 1304
Delta R.T. 0.00 min
Lab File: V5387481.D
Acq: 14 Sep 2016 11:44 am

Tgt Ion:117 Resp: 461323

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 117 | 100 | | |
| 117 | 100.0 | 80.0 | 120.0 |
| 82 | 0.0 | 0.0 | 0.0 |
| 119 | 32.1 | 25.8 | 38.8 |

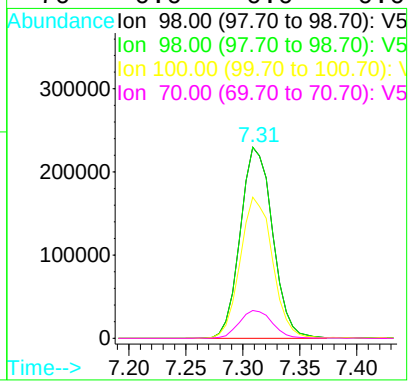


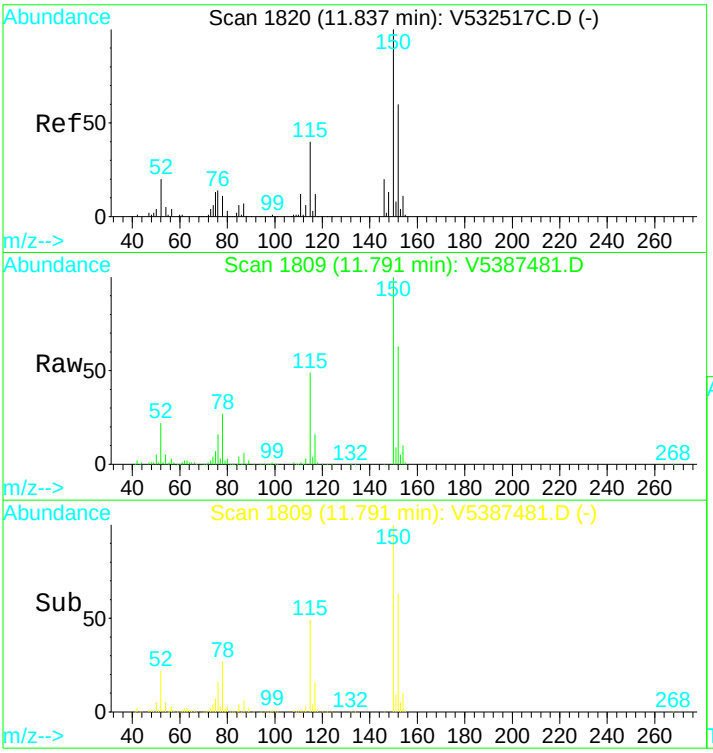



#47
Toluene-d8(SURR)
Concen: Below ppb
RT: 7.31 min Scan# 1048
Delta R.T. -0.00 min
Lab File: V5387481.D
Acq: 14 Sep 2016 11:44 am

Tgt Ion: 98 Resp: 453145

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 98 | 100 | | |
| 98 | 100.0 | 80.0 | 120.0 |
| 100 | 73.6 | 38.1 | 114.5 |
| 70 | 0.0 | 0.0 | 0.0 |

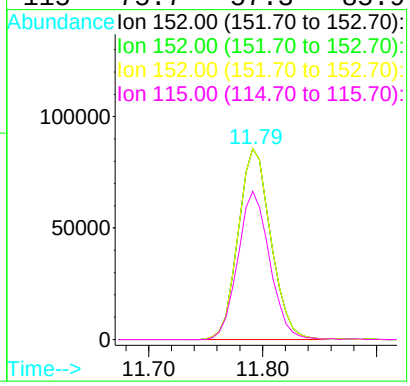


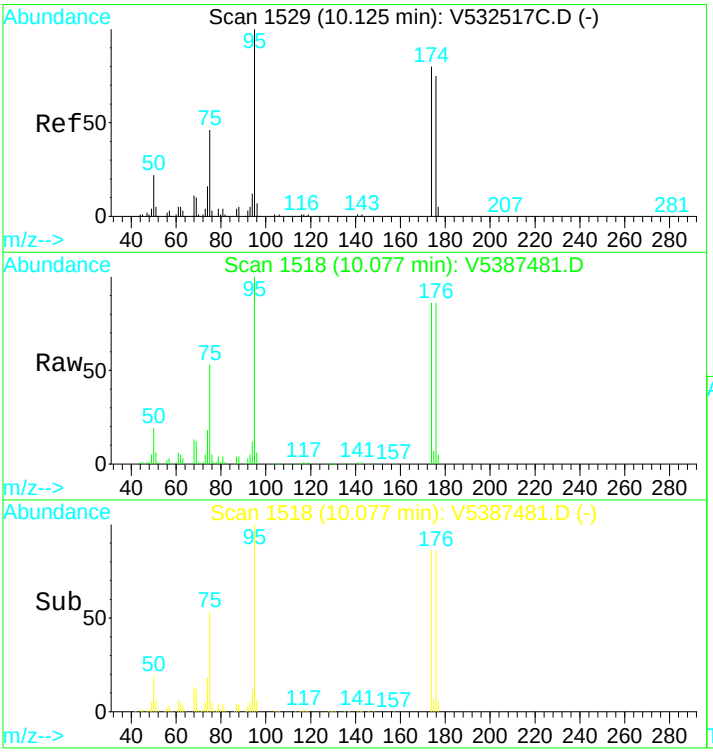




#62
1,2-DICHLOROBENZENE-d4(ISTD)
Concen: 50.00 ppb
RT: 11.79 min Scan# 1809
Delta R.T. 0.00 min
Lab File: V5387481.D
Acq: 14 Sep 2016 11:44 am

Tgt Ion:152 Resp: 170128

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 152 | 100 | | |
| 152 | 100.0 | 80.0 | 120.0 |
| 152 | 100.0 | 80.0 | 120.0 |
| 115 | 75.7 | 57.3 | 85.9 |

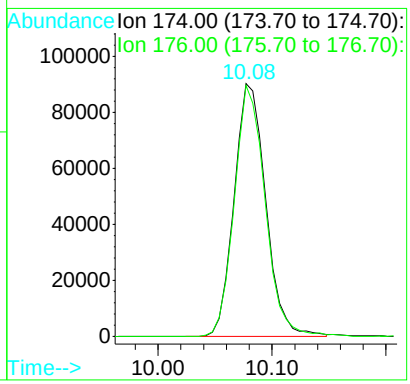





#64
p-Bromofluorobenzene(SURR)
Concen: N.D. ppb
RT: 10.08 min Scan# 1518
Delta R.T. -0.00 min
Lab File: V5387481.D
Acq: 14 Sep 2016 11:44 am

Tgt Ion:174 Resp: 173791

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 174 | 100 | | |
| 176 | 96.5 | 80.8 | 121.2 |



# FORM III LCS / LCS DUPLICATE RECOVERY

## EPA 8260C

Laboratory: York Analytical Laboratories, Inc. SDG: 16I0260

Client: Langan Engineering & Environmental Services (NYC) Project: 170301202 450 Union Street

Matrix: Soil

Batch: BI60530 Laboratory ID: BI60530-BS1

Preparation: EPA 5035A Initial/Final: 5 g / 5 ml

| COMPOUND | SPIKE ADDED (ug/L) | LCS CONCENTRATION (ug/L) | LCS % REC. # | QC LIMITS REC. |
|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 50.0 | 51 | 103 | 75 - 129 |
| 1,1,1-Trichloroethane | 50.0 | 58 | 117 | 71 - 137 |
| 1,1,2,2-Tetrachloroethane | 50.0 | 53 | 107 | 79 - 129 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113) | 50.0 | 53 | 105 | 58 - 146 |
| 1,1,2-Trichloroethane | 50.0 | 57 | 113 | 83 - 123 |
| 1,1-Dichloroethane | 50.0 | 60 | 121 | 75 - 130 |
| 1,1-Dichloroethylene | 50.0 | 53 | 106 | 64 - 137 |
| 1,2,3-Trichlorobenzene | 50.0 | 56 | 113 | 81 - 140 |
| 1,2,4-Trichlorobenzene | 50.0 | 54 | 108 | 80 - 141 |
| 1,2,4-Trimethylbenzene | 50.0 | 56 | 112 | 84 - 125 |
| 1,2-Dibromo-3-chloropropane | 50.0 | 47 | 94.3 | 74 - 142 |
| 1,2-Dibromoethane | 50.0 | 55 | 110 | 86 - 123 |
| 1,2-Dichlorobenzene | 50.0 | 51 | 103 | 85 - 122 |
| 1,2-Dichloroethane | 50.0 | 53 | 106 | 71 - 133 |
| 1,2-Dichloropropane | 50.0 | 58 | 116 | 81 - 122 |
| 1,3,5-Trimethylbenzene | 50.0 | 56 | 111 | 82 - 126 |
| 1,3-Dichlorobenzene | 50.0 | 51 | 103 | 84 - 124 |
| 1,4-Dichlorobenzene | 50.0 | 51 | 102 | 84 - 124 |
| 1,4-Dioxane | 1000 | 950 | 94.5 | 10 - 228 |
| 2-Butanone | 50.0 | 52 | 105 | 58 - 147 |
| 2-Hexanone | 50.0 | 50 | 99.4 | 70 - 139 |
| 4-Methyl-2-pentanone | 50.0 | 49 | 98.6 | 72 - 132 |
| Acetone | 50.0 | 48 | 96.9 | 36 - 155 |
| Acrolein | 50.0 | 58 | 115 | 10 - 238 |
| Acrylonitrile | 50.0 | 53 | 106 | 66 - 141 |
| Benzene | 50.0 | 62 | 123 | 77 - 127 |
| Bromochloromethane | 50.0 | 58 | 117 | 74 - 129 |
| Bromodichloromethane | 50.0 | 57 | 114 | 81 - 124 |
| Bromoform | 50.0 | 57 | 114 | 80 - 136 |
| Bromomethane | 50.0 | 52 | 105 | 32 - 177 |

# FORM III LCS / LCS DUPLICATE RECOVERY

## EPA 8260C

Laboratory: York Analytical Laboratories, Inc. SDG: 16I0260

Client: Langan Engineering & Environmental Services (NYC) Project: 170301202 450 Union Street

Matrix: Soil

Batch: BI60530 Laboratory ID: BI60530-BS1

Preparation: EPA 5035A Initial/Final: 5 g / 5 ml

| COMPOUND | SPIKE ADDED (ug/L) | LCS CONCENTRATION (ug/L) | LCS % REC. # | QC LIMITS REC. |
|---|---|---|---|---|
| Carbon disulfide | 50.0 | 60 | 119 | 10 - 136 |
| Carbon tetrachloride | 50.0 | 57 | 115 | 66 - 143 |
| Chlorobenzene | 50.0 | 55 | 110 | 86 - 120 |
| Chloroethane | 50.0 | 53 | 105 | 51 - 142 |
| Chloroform | 50.0 | 60 | 119 | 76 - 131 |
| Chloromethane | 50.0 | 61 | 122 | 49 - 132 |
| cis-1,2-Dichloroethylene | 50.0 | 59 | 119 | 74 - 132 |
| cis-1,3-Dichloropropylene | 50.0 | 57 | 114 | 81 - 129 |
| Cyclohexane | 50.0 | 62 | 125 | 70 - 130 |
| Dibromochloromethane | 50.0 | 52 | 104 | 10 - 200 |
| Dibromomethane | 50.0 | 55 | 110 | 83 - 124 |
| Dichlorodifluoromethane | 50.0 | 47 | 94.4 | 28 - 158 |
| Ethyl Benzene | 50.0 | 55 | 110 | 84 - 125 |
| Hexachlorobutadiene | 50.0 | 54 | 108 | 83 - 133 |
| Isopropylbenzene | 50.0 | 53 | 106 | 81 - 127 |
| Methyl acetate | 50.0 | 50 | 100 | 41 - 143 |
| Methyl tert-butyl ether (MTBE) | 50.0 | 48 | 95.7 | 74 - 131 |
| Methylcyclohexane | 50.0 | 60 | 120 | 70 - 130 |
| Methylene chloride | 50.0 | 51 | 101 | 57 - 141 |
| n-Butylbenzene | 50.0 | 56 | 112 | 80 - 130 |
| n-Propylbenzene | 50.0 | 54 | 108 | 74 - 136 |
| o-Xylene | 50.0 | 55 | 110 | 83 - 123 |
| p- & m- Xylenes | 100 | 110 | 111 | 82 - 128 |
| p-Isopropyltoluene | 50.0 | 55 | 110 | 85 - 125 |
| sec-Butylbenzene | 50.0 | 51 | 102 | 83 - 125 |
| Styrene | 50.0 | 61 | 122 | 86 - 126 |
| tert-Butyl alcohol (TBA) | 50.0 | 46 | 91.8 | 70 - 130 |
| tert-Butylbenzene | 50.0 | 50 | 99.3 | 80 - 127 |
| Tetrachloroethylene | 50.0 | 55 | 110 | 80 - 129 |
| Toluene | 50.0 | 58 | 116 | 85 - 121 |

# FORM III LCS / LCS DUPLICATE RECOVERY

## EPA 8260C

| | | | |
|---|---|---|---|
| Laboratory: | York Analytical Laboratories, Inc. | SDG: | 16I0260 |
| Client: | Langan Engineering & Environmental Services (NYC) | Project: | 170301202 450 Union Street |
| Matrix: | Soil | | |
| Batch: | BI60530 | Laboratory ID: | BI60530-BS1 |
| Preparation: | EPA 5035A | Initial/Final: | 5 g / 5 ml |

| COMPOUND | SPIKE ADDED (ug/L) | LCS CONCENTRATION (ug/L) | LCS % REC. # | QC LIMITS REC. |
|---|---|---|---|---|
| trans-1,2-Dichloroethylene | 50.0 | 48 | 95.4 | 72 - 132 |
| trans-1,3-Dichloropropylene | 50.0 | 54 | 109 | 78 - 132 |
| Trichloroethylene | 50.0 | 56 | 112 | 84 - 123 |
| Trichlorofluoromethane | 50.0 | 47 | 94.7 | 62 - 140 |
| Vinyl Chloride | 50.0 | 49 | 98.1 | 52 - 130 |

# Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

# FORM III LCS / LCS DUPLICATE RECOVERY

## EPA 8260C

Laboratory: York Analytical Laboratories, Inc. SDG: 16I0260

Client: Langan Engineering & Environmental Services (NYC) Project: 170301202 450 Union Street

Matrix: Soil

Batch: BI60530 Laboratory ID: BI60530-BSD1

Preparation: EPA 5035A Initial/Final: 5 g / 5 ml

| COMPOUND | SPIKE ADDED (ug/L) | LCSD CONCENTRATION (ug/L) | LCSD % REC. # | % RPD # | QC LIMITS RPD | QC LIMITS REC. |
|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 50.0 | 54 | 109 | 5.66 | 30 | 75 - 129 |
| 1,1,1-Trichloroethane | 50.0 | 58 | 116 | 0.533 | 30 | 71 - 137 |
| 1,1,2,2-Tetrachloroethane | 50.0 | 52 | 104 | 2.20 | 30 | 79 - 129 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane ( | 50.0 | 53 | 107 | 1.44 | 30 | 58 - 146 |
| 1,1,2-Trichloroethane | 50.0 | 57 | 114 | 0.737 | 30 | 83 - 123 |
| 1,1-Dichloroethane | 50.0 | 60 | 120 | 0.482 | 30 | 75 - 130 |
| 1,1-Dichloroethylene | 50.0 | 54 | 108 | 1.70 | 30 | 64 - 137 |
| 1,2,3-Trichlorobenzene | 50.0 | 59 | 117 | 3.96 | 30 | 81 - 140 |
| 1,2,4-Trichlorobenzene | 50.0 | 55 | 110 | 2.53 | 30 | 80 - 141 |
| 1,2,4-Trimethylbenzene | 50.0 | 58 | 115 | 2.89 | 30 | 84 - 125 |
| 1,2-Dibromo-3-chloropropane | 50.0 | 49 | 98.5 | 4.32 | 30 | 74 - 142 |
| 1,2-Dibromoethane | 50.0 | 53 | 106 | 3.53 | 30 | 86 - 123 |
| 1,2-Dichlorobenzene | 50.0 | 54 | 108 | 4.60 | 30 | 85 - 122 |
| 1,2-Dichloroethane | 50.0 | 54 | 108 | 1.59 | 30 | 71 - 133 |
| 1,2-Dichloropropane | 50.0 | 57 | 114 | 1.61 | 30 | 81 - 122 |
| 1,3,5-Trimethylbenzene | 50.0 | 55 | 110 | 0.830 | 30 | 82 - 126 |
| 1,3-Dichlorobenzene | 50.0 | 53 | 106 | 2.92 | 30 | 84 - 124 |
| 1,4-Dichlorobenzene | 50.0 | 52 | 104 | 1.13 | 30 | 84 - 124 |
| 1,4-Dioxane | 1000 | 880 | 87.6 | 7.54 | 30 | 10 - 228 |
| 2-Butanone | 50.0 | 53 | 106 | 1.36 | 30 | 58 - 147 |
| 2-Hexanone | 50.0 | 50 | 99.9 | 0.542 | 30 | 70 - 139 |
| 4-Methyl-2-pentanone | 50.0 | 49 | 97.9 | 0.712 | 30 | 72 - 132 |
| Acetone | 50.0 | 48 | 96.2 | 0.705 | 30 | 36 - 155 |
| Acrolein | 50.0 | 53 | 107 | 7.57 | 30 | 10 - 238 |
| Acrylonitrile | 50.0 | 49 | 97.4 | 8.72 | 30 | 66 - 141 |
| Benzene | 50.0 | 62 | 124 | 1.02 | 30 | 77 - 127 |
| Bromochloromethane | 50.0 | 59 | 118 | 1.04 | 30 | 74 - 129 |
| Bromodichloromethane | 50.0 | 58 | 117 | 2.46 | 30 | 81 - 124 |
| Bromoform | 50.0 | 58 | 115 | 1.68 | 30 | 80 - 136 |
| Bromomethane | 50.0 | 52 | 104 | 0.632 | 30 | 32 - 177 |

# FORM III LCS / LCS DUPLICATE RECOVERY

## EPA 8260C

Laboratory: York Analytical Laboratories, Inc. SDG: 16I0260

Client: Langan Engineering & Environmental Services (NYC) Project: 170301202 450 Union Street

Matrix: Soil

Batch: BI60530 Laboratory ID: BI60530-BSD1

Preparation: EPA 5035A Initial/Final: 5 g / 5 ml

| COMPOUND | SPIKE ADDED (ug/L) | LCSD CONCENTRATION (ug/L) | LCSD % REC. # | % RPD # | QC LIMITS RPD | QC LIMITS REC. |
|---|---|---|---|---|---|---|
| Carbon disulfide | 50.0 | 59 | 118 | 0.573 | 30 | 10 - 136 |
| Carbon tetrachloride | 50.0 | 57 | 113 | 1.00 | 30 | 66 - 143 |
| Chlorobenzene | 50.0 | 55 | 110 | 0.00 | 30 | 86 - 120 |
| Chloroethane | 50.0 | 52 | 104 | 1.11 | 30 | 51 - 142 |
| Chloroform | 50.0 | 59 | 118 | 0.993 | 30 | 76 - 131 |
| Chloromethane | 50.0 | 60 | 119 | 2.83 | 30 | 49 - 132 |
| cis-1,2-Dichloroethylene | 50.0 | 61 | 122 | 2.51 | 30 | 74 - 132 |
| cis-1,3-Dichloropropylene | 50.0 | 58 | 115 | 1.05 | 30 | 81 - 129 |
| Cyclohexane | 50.0 | 63 | 125 | 0.288 | 30 | 70 - 130 |
| Dibromochloromethane | 50.0 | 55 | 109 | 4.36 | 30 | 10 - 200 |
| Dibromomethane | 50.0 | 54 | 109 | 1.19 | 30 | 83 - 124 |
| Dichlorodifluoromethane | 50.0 | 48 | 96.8 | 2.47 | 30 | 28 - 158 |
| Ethyl Benzene | 50.0 | 61 | 121 | 9.24 | 30 | 84 - 125 |
| Hexachlorobutadiene | 50.0 | 58 | 116 | 6.78 | 30 | 83 - 133 |
| Isopropylbenzene | 50.0 | 55 | 110 | 3.34 | 30 | 81 - 127 |
| Methyl acetate | 50.0 | 63 | 127 | 23.0 | 30 | 41 - 143 |
| Methyl tert-butyl ether (MTBE) | 50.0 | 56 | 113 | 16.6 | 30 | 74 - 131 |
| Methylcyclohexane | 50.0 | 58 | 116 | 2.80 | 30 | 70 - 130 |
| Methylene chloride | 50.0 | 49 | 98.6 | 2.52 | 30 | 57 - 141 |
| n-Butylbenzene | 50.0 | 59 | 118 | 4.68 | 30 | 80 - 130 |
| n-Propylbenzene | 50.0 | 55 | 109 | 0.716 | 30 | 74 - 136 |
| o-Xylene | 50.0 | 55 | 111 | 0.725 | 30 | 83 - 123 |
| p- & m- Xylenes | 100 | 120 | 118 | 6.16 | 30 | 82 - 128 |
| p-Isopropyltoluene | 50.0 | 56 | 112 | 2.38 | 30 | 85 - 125 |
| sec-Butylbenzene | 50.0 | 53 | 105 | 2.85 | 30 | 83 - 125 |
| Styrene | 50.0 | 62 | 123 | 0.537 | 30 | 86 - 126 |
| tert-Butyl alcohol (TBA) | 50.0 | 45 | 90.0 | 1.91 | 30 | 70 - 130 |
| tert-Butylbenzene | 50.0 | 50 | 100 | 1.08 | 30 | 80 - 127 |
| Tetrachloroethylene | 50.0 | 58 | 117 | 5.81 | 30 | 80 - 129 |
| Toluene | 50.0 | 58 | 117 | 0.790 | 30 | 85 - 121 |

# FORM III LCS / LCS DUPLICATE RECOVERY

## EPA 8260C

| | | | |
|---|---|---|---|
| Laboratory: | York Analytical Laboratories, Inc. | SDG: | 16I0260 |
| Client: | Langan Engineering & Environmental Services (NYC) | Project: | 170301202 450 Union Street |
| Matrix: | Soil | | |
| Batch: | BI60530 | Laboratory ID: | BI60530-BSD1 |
| Preparation: | EPA 5035A | Initial/Final: | 5 g / 5 ml |

| COMPOUND | SPIKE ADDED (ug/L) | LCSD CONCENTRATION (ug/L) | LCSD % REC. # | % RPD # | QC LIMITS RPD | QC LIMITS REC. |
|---|---|---|---|---|---|---|
| trans-1,2-Dichloroethylene | 50.0 | 60 | 120 | 22.7 | 30 | 72 - 132 |
| trans-1,3-Dichloropropylene | 50.0 | 57 | 114 | 4.87 | 30 | 78 - 132 |
| Trichloroethylene | 50.0 | 56 | 111 | 0.305 | 30 | 84 - 123 |
| Trichlorofluoromethane | 50.0 | 48 | 95.8 | 1.15 | 30 | 62 - 140 |
| Vinyl Chloride | 50.0 | 49 | 98.8 | 0.711 | 30 | 52 - 130 |

# Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\V5091416\V5387477.D Vial: 3
Acq On : 14 Sep 2016 9:28 am Operator: SS
Sample : BI60530-BS1 Inst : VOA No. 5
Misc : QBV5091416A Y16H097 Multiplr: 1.00
MS Integration Params: RTEINT1.P
Quant Time: Sep 14 13:04 2016 Quant Results File: V5C00162.RES

Quant Method : C:\HPCHEM\1\METHODS\V5C00162.M (RTE Integrator)
Title : VOCs BY GC/MS EPA SW846-8260
Last Update : Fri Aug 26 09:47:09 2016
Response via : Initial Calibration
DataAcq Meth : V5C0001A

| Internal Standards | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| 1) FLUOROBENZENE(ISTD) | 5.79 | 70 | 130420 | 50.00 | ppb | | 0.00 |
| 36) CHLOROBENZENE-d5(ISTD) | 8.82 | 117 | 447038 | 50.00 | ppb | | 0.00 |
| 62) 1,2-DICHLOROBENZENE-d4(IST | 11.79 | 152 | 165781 | 50.00 | ppb | | 0.00 |
| **System Monitoring Compounds** | | | | | | | |
| 32) d4-1,2-Dichloroethane(SURR | 5.51 | 65 | 192725 | 45.23 | ppb | | 0.00 |
| Spiked Amount 50.000 | Range 64 - 122 | | Recovery = 90.46% | | | | |
| 47) Toluene-d8(SURR) | 7.31 | 98 | 483762 | 51.57 | ppb | | 0.00 |
| Spiked Amount 50.000 | Range 83 - 114 | | Recovery = 103.14% | | | | |
| 64) p-Bromofluorobenzene(SURR) | 10.08 | 174 | 172528 | 52.25 | ppb | | 0.00 |
| Spiked Amount 50.000 | Range 71 - 126 | | Recovery = 104.50% | | | | |
| **Target Compounds** | | | | | | | Qvalue |
| 2) Dichlorodifluoromethane | 1.52 | 85 | 264070 | 47.21 | ppb | | 100 |
| 3) Chloromethane | 1.71 | 50 | 217315 | 61.25 | ppb | | 99 |
| 4) Vinyl Chloride | 1.81 | 62 | 219854 | 49.06 | ppb | | 100 |
| 5) Bromomethane | 2.15 | 94 | 135394 | 52.37 | ppb | | 99 |
| 6) Chloroethane | 2.26 | 64 | 134944 | 52.60 | ppb | | 99 |
| 7) Trichlorofluoromethane | 2.50 | 101 | 360008 | 47.35 | ppb | | 100 |
| 8) Ethanol | 2.77 | 45 | 35048 | 2210.48 | ppb | | 100 |
| 9) Freon-113 | 3.00 | 101 | 199719 | 52.56 | ppb | | 98 |
| 10) 1,1-Dichloroethylene | 3.02 | 61 | 342816 | 53.20 | ppb | | 98 |
| 11) Acrolein | 2.97 | 56 | 12662 | 57.70 | ppb | | 95 |
| 12) Iodomethane | 3.20 | 142 | 294982 | 57.97 | ppb | | 97 |
| 13) Methyl Acetate | 3.42 | 43 | 86462 | 50.25 | ppb | | 100 |
| 14) tert-Butyl Alcohol (TBA) | 3.66 | 59 | 17049 | 45.89 | ppb | | 99 |
| 15) trans-1,2-Dichloroethylene | 3.76 | 61 | 291334 | 47.69 | ppb | | 99 |
| 16) Carbon Disulfide | 3.25 | 76 | 582111 | 59.55 | ppb | | 100 |
| 17) Methylene Chloride | 3.53 | 49 | 201368 | 50.55 | ppb | | 98 |
| 18) Acrylonitrile | 3.80 | 53 | 41370 | 53.13 | ppb | # | 84 |
| 19) tert-Butyl Methyl Ether (M | 3.74 | 73 | 475441 | 47.85 | ppb | | 99 |
| 20) Acetone | 3.13 | 43 | 46395 | 48.43 | ppb | | 100 |
| 21) 1,1-Dichloroethane | 4.18 | 63 | 407932 | 60.34 | ppb | | 100 |
| 22) Vinyl Acetate | 4.21 | 43 | 560609 | 81.03 | ppb | # | 61 |
| 23) cis-1,2-Dichloroethylene | 4.73 | 96 | 209462 | 59.48 | ppb | # | 100 |
| 24) 2-Butanone | 4.76 | 72 | 17402 | 52.43 | ppb | | 99 |
| 25) 2,2-Dichloropropane | 4.70 | 77 | 389000 | 57.47 | ppb | | 100 |
| 26) Bromochloromethane | 4.97 | 49 | 153808 | 58.50 | ppb | | 99 |
| 27) Chloroform | 5.03 | 83 | 400376 | 59.71 | ppb | | 98 |
| 28) Tetrahydrofuran | 5.00 | 71 | 18137 | 55.62 | ppb | # | 94 |
| 29) 1,1-Dichloropropylene | 5.32 | 75 | 338332 | 59.22 | ppb | | 99 |
| 30) 1,1,1-Trichloroethane | 5.17 | 97 | 387983 | 58.37 | ppb | # | 100 |
| 31) Cyclohexane | 5.19 | 56 | 358205 | 62.49 | ppb | | 99 |
| 33) Carbon Tetrachloride | 5.32 | 117 | 404247 | 57.30 | ppb | | 99 |
| 34) 1,2-Dichloroethane | 5.59 | 62 | 286191 | 53.04 | ppb | | 100 |
| 35) Benzene | 5.53 | 78 | 722672 | 61.51 | ppb | # | 86 |
| 37) Trichloroethylene | 6.14 | 95 | 217626 | 55.85 | ppb | | 99 |
| 38) Methyl Cyclohexane | 6.27 | 83 | 331493 | 59.82 | ppb | # | 100 |
| 39) Dibromomethane | 6.52 | 93 | 112468 | 55.03 | ppb | | 98 |
| 40) Methyl Methacrylate | 6.45 | 69 | 106826 | 51.86 | ppb | | 100 |
| 41) Bromodichloromethane | 6.65 | 83 | 281521 | 56.93 | ppb | | 99 |
| 42) 1,2-Dichloropropane | 6.38 | 63 | 180982 | 58.18 | ppb | | 98 |
| 43) 1,4-Dioxane | 6.52 | 88 | 35231 | 945.08 | ppb | | 100 |
| 44) 2-Chloroethylvinyl ether | 6.92 | 63 | 103359 | 57.98 | ppb | | 100 |
| 45) cis-1,3-Dichloropropene | 7.07 | 75 | 323317 | 56.98 | ppb | | 100 |
| 46) 2-Hexanone | 8.05 | 43 | 90776 | 49.69 | ppb | | 100 |
| 48) Toluene | 7.38 | 91 | 691755 | 57.98 | ppb | | 100 |
| 49) trans-1,3-Dichloropropene | 7.64 | 75 | 283762 | 54.26 | ppb | | 100 |

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\V5091416\V5387477.D Vial: 3
Acq On : 14 Sep 2016 9:28 am Operator: SS
Sample : BI60530-BS1 Inst : VOA No. 5
Misc : QBV5091416A Y16H097 Multiplr: 1.00
MS Integration Params: RTEINT1.P
Quant Time: Sep 14 13:04 2016 Quant Results File: V5C00162.RES

Quant Method : C:\HPCHEM\1\METHODS\V5C00162.M (RTE Integrator)
Title : VOCs BY GC/MS EPA SW846-8260
Last Update : Fri Aug 26 09:47:09 2016
Response via : Initial Calibration
DataAcq Meth : V5C0001A

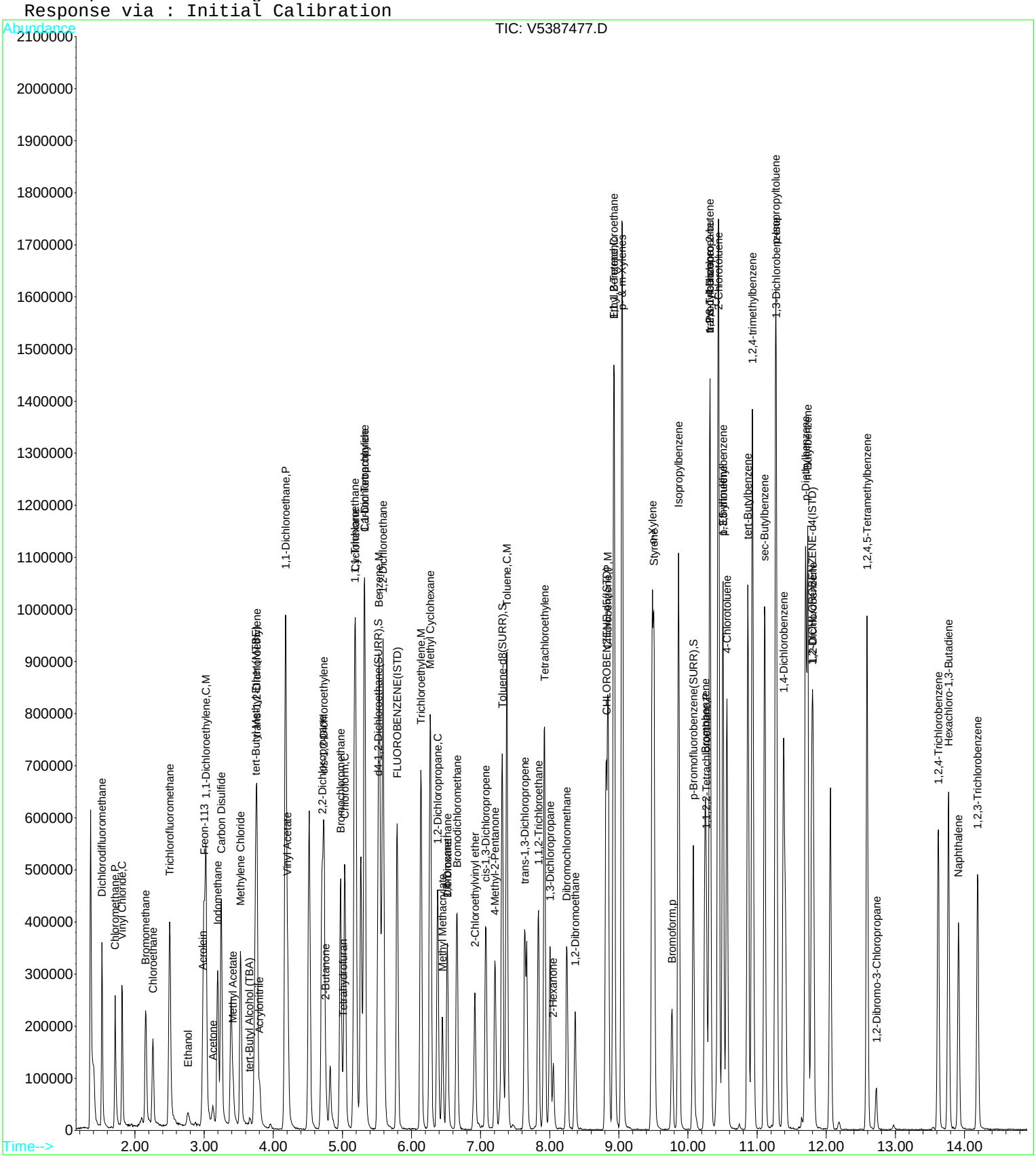
| Compound | R.T. | QIon | Response | Conc | Unit | | Qvalue |
|---|---|---|---|---|---|---|---|
| 50) 1,1,2-Trichloroethane | 7.84 | 83 | 107802 | 56.74 | ppb | | 98 |
| 51) 1,3-Dichloropropane | 8.00 | 76 | 247573 | 54.21 | ppb | # | 100 |
| 52) Tetrachloroethylene | 7.93 | 166 | 251708 | 55.10 | ppb | | 99 |
| 53) 4-Methyl-2-Pentanone | 7.21 | 43 | 236770 | 49.32 | ppb | | 99 |
| 54) Dibromochloromethane | 8.24 | 129 | 202720 | 52.24 | ppb | | 99 |
| 55) 1,2-Dibromoethane | 8.37 | 107 | 158169 | 54.80 | ppb | | 99 |
| 56) Chlorobenzene | 8.84 | 112 | 487622 | 54.83 | ppb | | 99 |
| 57) Ethyl Benzene | 8.93 | 91 | 782177 | 55.22 | ppb | | 100 |
| 58) p- & m-Xylenes | 9.04 | 91 | 1212612 | 110.53 | ppb | | 100 |
| 59) o-Xylene | 9.48 | 91 | 602601 | 54.97 | ppb | | 100 |
| 60) Styrene | 9.51 | 104 | 485228 | 61.25 | ppb | | 99 |
| 61) 1,1,1,2-Tetrachloroethane | 8.93 | 131 | 196427 | 51.34 | ppb | | 98 |
| 63) Bromoform | 9.77 | 173 | 114811 | 56.75 | ppb | # | 100 |
| 65) p-Ethyltoulene | 10.51 | 105 | 660640 | 55.29 | ppb | | 91 |
| 66) p-Diethylbenzene | 11.70 | 119 | 435709 | 56.53 | ppb | | 99 |
| 67) 1,1,2,2-Tetrachloroethane | 10.27 | 83 | 144280 | 53.35 | ppb | | 98 |
| 68) 1,2,3-Trichloropropane | 10.32 | 110 | 56280 | 51.14 | ppb | | 94 |
| 69) Isopropylbenzene | 9.86 | 105 | 810133 | 53.21 | ppb | # | 95 |
| 70) 1,2-Dibromo-3-Chloropropan | 12.72 | 75 | 25382 | 47.16 | ppb | | 95 |
| 71) Bromobenzene | 10.25 | 77 | 287562 | 53.41 | ppb | | 98 |
| 72) trans-1,4-Dichloro-2-buten | 10.32 | 75 | 185349m | 54.56 | ppb | | |
| 73) n-Propylbenzene | 10.32 | 91 | 906401 | 54.24 | ppb | | 100 |
| 74) 2-Chlorotoluene | 10.44 | 91 | 597265 | 50.98 | ppb | | 99 |
| 75) 4-Chlorotoluene | 10.56 | 91 | 535861 | 49.14 | ppb | | 99 |
| 76) tert-Butylbenzene | 10.87 | 119 | 597175 | 49.67 | ppb | # | 100 |
| 77) 1,3,5-trimethylbenzene | 10.51 | 105 | 659940 | 55.64 | ppb | | 99 |
| 78) 1,2,4-trimethylbenzene | 10.93 | 105 | 632269 | 56.00 | ppb | | 100 |
| 79) sec-Butylbenzene | 11.11 | 105 | 796339 | 51.25 | ppb | # | 100 |
| 80) 1,3-Dichlorobenzene | 11.28 | 146 | 336081 | 51.35 | ppb | # | 100 |
| 81) 1,4-Dichlorobenzene | 11.38 | 146 | 338504 | 51.17 | ppb | # | 99 |
| 82) 1,2-Dichlorobenzene | 11.81 | 146 | 294160 | 51.38 | ppb | # | 69 |
| 83) p-Isopropyltoluene | 11.27 | 119 | 813482 | 54.91 | ppb | # | 100 |
| 84) n-Butylbenzene | 11.73 | 91 | 764476 | 56.10 | ppb | | 100 |
| 85) 1,2,4,5-Tetramethylbenzene | 12.59 | 119 | 635577 | 54.43 | ppb | | 100 |
| 86) 1,2,4-Trichlorobenzene | 13.62 | 180 | 211126 | 53.76 | ppb | | 98 |
| 87) Naphthalene | 13.91 | 128 | 363424 | 52.04 | ppb | # | 100 |
| 88) Hexachloro-1,3-Butadiene | 13.77 | 225 | 155195 | 53.99 | ppb | # | 68 |
| 89) 1,2,3-Trichlorobenzene | 14.19 | 182 | 173735 | 56.45 | ppb | | 99 |

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\V5091416\V5387477.D Vial: 3
Acq On : 14 Sep 2016 9:28 am Operator: SS
Sample : BI60530-BS1 Inst : VOA No. 5
Misc : QBV5091416A Y16H097 Multiplr: 1.00
MS Integration Params: RTEINT1.P
Quant Time: Sep 14 13:04 2016 Quant Results File: V5C00162.RES

Method : C:\HPCHEM\1\METHODS\V5C00162.M (RTE Integrator)
Title : VOCs BY GC/MS EPA SW846-8260
Last Update : Fri Aug 26 09:47:09 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\V5091416\V5387478.D Vial: 4
Acq On : 14 Sep 2016 10:02 am Operator: SS
Sample : BI60530-BSD1 Inst : VOA No. 5
Misc : QBV5091416A Y16H097 Multiplr: 1.00
MS Integration Params: RTEINT1.P
Quant Time: Sep 14 13:05 2016 Quant Results File: V5C00162.RES

Quant Method : C:\HPCHEM\1\METHODS\V5C00162.M (RTE Integrator)
Title : VOCs BY GC/MS EPA SW846-8260
Last Update : Fri Aug 26 09:47:09 2016
Response via : Initial Calibration
DataAcq Meth : V5C0001A

| Internal Standards | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| 1) FLUOROBENZENE(ISTD) | 5.79 | 70 | 127235 | 50.00 | ppb | | 0.00 |
| 36) CHLOROBENZENE-d5(ISTD) | 8.82 | 117 | 428449 | 50.00 | ppb | | 0.00 |
| 62) 1,2-DICHLOROBENZENE-d4(IST | 11.79 | 152 | 162563 | 50.00 | ppb | | 0.00 |
| **System Monitoring Compounds** | | | | | | | |
| 32) d4-1,2-Dichloroethane(SURR | 5.51 | 65 | 189166 | 45.51 | ppb | | 0.00 |
| Spiked Amount 50.000 | Range 64 - 122 | | Recovery = 91.02% | | | | |
| 47) Toluene-d8(SURR) | 7.31 | 98 | 483255 | 53.75 | ppb | | 0.00 |
| Spiked Amount 50.000 | Range 83 - 114 | | Recovery = 107.50% | | | | |
| 64) p-Bromofluorobenzene(SURR) | 10.08 | 174 | 164530 | 50.82 | ppb | | 0.00 |
| Spiked Amount 50.000 | Range 71 - 126 | | Recovery = 101.64% | | | | |
| **Target Compounds** | | | | | | | Qvalue |
| 2) Dichlorodifluoromethane | 1.52 | 85 | 264087 | 48.39 | ppb | | 100 |
| 3) Chloromethane | 1.71 | 50 | 206095 | 59.54 | ppb | | 100 |
| 4) Vinyl Chloride | 1.82 | 62 | 216017 | 49.41 | ppb | | 100 |
| 5) Bromomethane | 2.16 | 94 | 131266 | 52.04 | ppb | | 99 |
| 6) Chloroethane | 2.26 | 64 | 130194 | 52.02 | ppb | | 100 |
| 7) Trichlorofluoromethane | 2.50 | 101 | 355330 | 47.90 | ppb | | 100 |
| 8) Ethanol | 2.76 | 45 | 31923 | 2048.45 | ppb | | 100 |
| 9) Freon-113 | 2.99 | 101 | 197655 | 53.32 | ppb | | 99 |
| 10) 1,1-Dichloroethylene | 3.03 | 61 | 340133 | 54.11 | ppb | | 99 |
| 11) Acrolein | 2.98 | 56 | 11517 | 53.49 | ppb | # | 82 |
| 12) Iodomethane | 3.20 | 142 | 287076 | 57.83 | ppb | | 98 |
| 13) Methyl Acetate | 3.42 | 43 | 104062m | 63.28 | ppb | | |
| 14) tert-Butyl Alcohol (TBA) | 3.66 | 59 | 16320 | 45.02 | ppb | | 99 |
| 15) trans-1,2-Dichloroethylene | 3.76 | 61 | 357034 | 59.91 | ppb | | 98 |
| 16) Carbon Disulfide | 3.25 | 76 | 564636 | 59.21 | ppb | | 100 |
| 17) Methylene Chloride | 3.53 | 49 | 191546 | 49.29 | ppb | | 97 |
| 18) Acrylonitrile | 3.80 | 53 | 36987 | 48.69 | ppb | # | 86 |
| 19) tert-Butyl Methyl Ether (M | 3.74 | 73 | 547670 | 56.49 | ppb | | 99 |
| 20) Acetone | 3.13 | 43 | 44940 | 48.09 | ppb | | 99 |
| 21) 1,1-Dichloroethane | 4.18 | 63 | 396068 | 60.05 | ppb | | 100 |
| 22) Vinyl Acetate | 4.21 | 43 | 530909 | 78.66 | ppb | # | 61 |
| 23) cis-1,2-Dichloroethylene | 4.73 | 96 | 209533 | 60.99 | ppb | # | 67 |
| 24) 2-Butanone | 4.76 | 72 | 17212 | 53.15 | ppb | | 100 |
| 25) 2,2-Dichloropropane | 4.71 | 77 | 382644 | 57.95 | ppb | | 100 |
| 26) Bromochloromethane | 4.97 | 49 | 151623 | 59.11 | ppb | | 100 |
| 27) Chloroform | 5.04 | 83 | 386751 | 59.12 | ppb | | 99 |
| 28) Tetrahydrofuran | 5.01 | 71 | 16785 | 52.76 | ppb | # | 47 |
| 29) 1,1-Dichloropropylene | 5.33 | 75 | 321490 | 57.68 | ppb | | 100 |
| 30) 1,1,1-Trichloroethane | 5.17 | 97 | 376540 | 58.06 | ppb | # | 100 |
| 31) Cyclohexane | 5.19 | 56 | 350482 | 62.67 | ppb | | 100 |
| 33) Carbon Tetrachloride | 5.32 | 117 | 390473 | 56.73 | ppb | | 100 |
| 34) 1,2-Dichloroethane | 5.58 | 62 | 283689 | 53.89 | ppb | | 99 |
| 35) Benzene | 5.53 | 78 | 712288 | 62.14 | ppb | | 98 |
| 37) Trichloroethylene | 6.14 | 95 | 207921 | 55.68 | ppb | | 99 |
| 38) Methyl Cyclohexane | 6.27 | 83 | 308945 | 58.17 | ppb | # | 100 |
| 39) Dibromomethane | 6.52 | 93 | 106515 | 54.38 | ppb | | 98 |
| 40) Methyl Methacrylate | 6.44 | 69 | 101824 | 51.58 | ppb | | 99 |
| 41) Bromodichloromethane | 6.66 | 83 | 276531 | 58.35 | ppb | | 99 |
| 42) 1,2-Dichloropropane | 6.38 | 63 | 170696 | 57.25 | ppb | | 98 |
| 43) 1,4-Dioxane | 6.52 | 88 | 31312 | 876.39 | ppb | | 98 |
| 44) 2-Chloroethylvinyl ether | 6.92 | 63 | 95832 | 56.09 | ppb | | 100 |
| 45) cis-1,3-Dichloropropene | 7.08 | 75 | 313084 | 57.58 | ppb | | 100 |
| 46) 2-Hexanone | 8.05 | 43 | 87471 | 49.96 | ppb | | 99 |
| 48) Toluene | 7.38 | 91 | 668269 | 58.44 | ppb | | 100 |
| 49) trans-1,3-Dichloropropene | 7.64 | 75 | 285589 | 56.97 | ppb | | 100 |

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\V5091416\V5387478.D Vial: 4
Acq On : 14 Sep 2016 10:02 am Operator: SS
Sample : BI60530-BSD1 Inst : VOA No. 5
Misc : QBV5091416A Y16H097 Multiplr: 1.00
MS Integration Params: RTEINT1.P
Quant Time: Sep 14 13:05 2016 Quant Results File: V5C00162.RES

Quant Method : C:\HPCHEM\1\METHODS\V5C00162.M (RTE Integrator)
Title : VOCs BY GC/MS EPA SW846-8260
Last Update : Fri Aug 26 09:47:09 2016
Response via : Initial Calibration
DataAcq Meth : V5C0001A

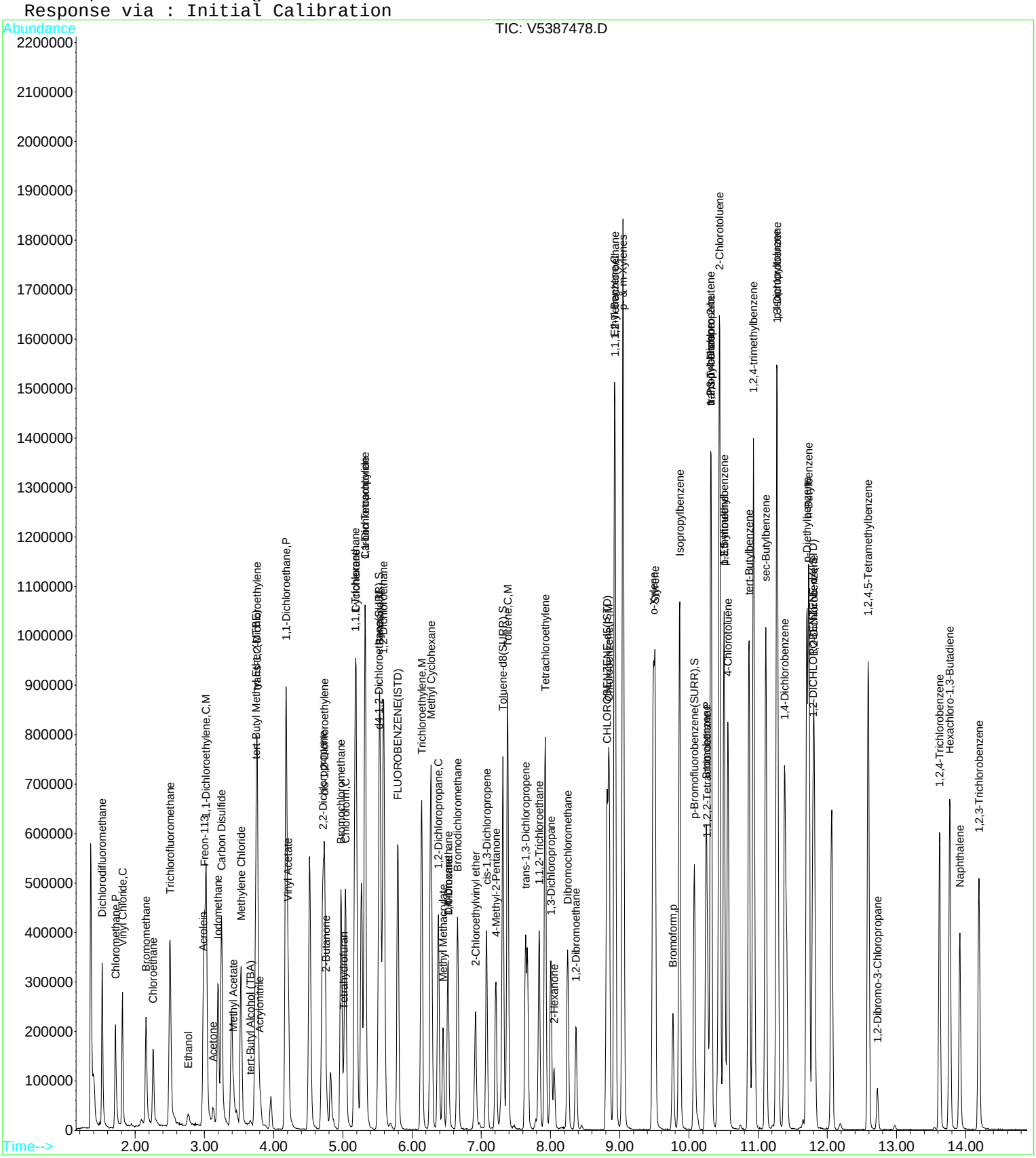
| Compound | R.T. | QIon | Response | Conc | Unit | | Qvalue |
|---|---|---|---|---|---|---|---|
| 50) 1,1,2-Trichloroethane | 7.84 | 83 | 104097 | 57.16 | ppb | | 96 |
| 51) 1,3-Dichloropropane | 8.01 | 76 | 244539 | 55.87 | ppb | # | 100 |
| 52) Tetrachloroethylene | 7.92 | 166 | 255681 | 58.40 | ppb | | 99 |
| 53) 4-Methyl-2-Pentanone | 7.21 | 43 | 225321 | 48.97 | ppb | | 100 |
| 54) Dibromochloromethane | 8.25 | 129 | 202958 | 54.57 | ppb | | 99 |
| 55) 1,2-Dibromoethane | 8.37 | 107 | 146349 | 52.90 | ppb | | 99 |
| 56) Chlorobenzene | 8.85 | 112 | 467292 | 54.83 | ppb | | 99 |
| 57) Ethyl Benzene | 8.92 | 91 | 822263 | 60.57 | ppb | | 100 |
| 58) p- & m-Xylenes | 9.05 | 91 | 1235999 | 117.55 | ppb | | 100 |
| 59) o-Xylene | 9.48 | 91 | 581719 | 55.37 | ppb | | 99 |
| 60) Styrene | 9.51 | 104 | 467561 | 61.58 | ppb | | 99 |
| 61) 1,1,1,2-Tetrachloroethane | 8.94 | 131 | 199213 | 54.33 | ppb | | 98 |
| 63) Bromoform | 9.77 | 173 | 114471 | 57.71 | ppb | # | 100 |
| 65) p-Ethyltoulene | 10.51 | 105 | 650577 | 55.52 | ppb | # | 43 |
| 66) p-Diethylbenzene | 11.71 | 119 | 427993 | 56.63 | ppb | | 96 |
| 67) 1,1,2,2-Tetrachloroethane | 10.27 | 83 | 138394 | 52.19 | ppb | | 97 |
| 68) 1,2,3-Trichloropropane | 10.32 | 110 | 54258 | 50.28 | ppb | | 95 |
| 69) Isopropylbenzene | 9.87 | 105 | 821399 | 55.02 | ppb | # | 95 |
| 70) 1,2-Dibromo-3-Chloropropan | 12.72 | 75 | 25985 | 49.24 | ppb | | 95 |
| 71) Bromobenzene | 10.24 | 77 | 281085 | 53.24 | ppb | | 98 |
| 72) trans-1,4-Dichloro-2-buten | 10.32 | 75 | 178760m | 53.66 | ppb | | |
| 73) n-Propylbenzene | 10.31 | 91 | 895257 | 54.63 | ppb | | 100 |
| 74) 2-Chlorotoluene | 10.44 | 91 | 576032 | 50.14 | ppb | | 100 |
| 75) 4-Chlorotoluene | 10.56 | 91 | 589263 | 55.11 | ppb | | 100 |
| 76) tert-Butylbenzene | 10.87 | 119 | 591955 | 50.21 | ppb | # | 100 |
| 77) 1,3,5-trimethylbenzene | 10.51 | 105 | 641683 | 55.18 | ppb | | 99 |
| 78) 1,2,4-trimethylbenzene | 10.93 | 105 | 638183 | 57.64 | ppb | | 100 |
| 79) sec-Butylbenzene | 11.11 | 105 | 803418 | 52.73 | ppb | # | 100 |
| 80) 1,3-Dichlorobenzene | 11.28 | 146 | 339297 | 52.87 | ppb | # | 100 |
| 81) 1,4-Dichlorobenzene | 11.38 | 146 | 335715 | 51.75 | ppb | # | 69 |
| 82) 1,2-Dichlorobenzene | 11.81 | 146 | 302051 | 53.80 | ppb | # | 100 |
| 83) p-Isopropyltoluene | 11.27 | 119 | 816929 | 56.23 | ppb | # | 100 |
| 84) n-Butylbenzene | 11.73 | 91 | 785535 | 58.79 | ppb | | 99 |
| 85) 1,2,4,5-Tetramethylbenzene | 12.59 | 119 | 631907 | 55.18 | ppb | | 99 |
| 86) 1,2,4-Trichlorobenzene | 13.62 | 180 | 212324 | 55.14 | ppb | | 98 |
| 87) Naphthalene | 13.91 | 128 | 357788 | 52.25 | ppb | # | 100 |
| 88) Hexachloro-1,3-Butadiene | 13.77 | 225 | 162859 | 57.78 | ppb | # | 68 |
| 89) 1,2,3-Trichlorobenzene | 14.19 | 182 | 177271 | 58.73 | ppb | | 98 |

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\V5091416\V5387478.D Vial: 4
Acq On : 14 Sep 2016 10:02 am Operator: SS
Sample : BI60530-BSD1 Inst : VOA No. 5
Misc : QBV5091416A Y16H097 Multiplr: 1.00
MS Integration Params: RTEINT1.P
Quant Time: Sep 14 13:05 2016 Quant Results File: V5C00162.RES

Method : C:\HPCHEM\1\METHODS\V5C00162.M (RTE Integrator)
Title : VOCs BY GC/MS EPA SW846-8260
Last Update : Fri Aug 26 09:47:09 2016
Response via : Initial Calibration



# PREPARATION BENCH SHEET

## BI60530

**York Analytical Laboratories, Inc.**

**Printed: 9/15/2016 1:58:30PM**

**Matrix: Soil** Preparation EPA 5035A **Surrogate used: Y15L023** Surrogate, uL 1

| Lab Number | Analysis | Prepared | By | Initial (g) | Final (ml) | Spike ID | Source ID | ul Spike | pH | Residual Chlorine | Sample Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 16I0181-01 | Volatile Organics, CP-51 (fc | 09/14/2016 08:2 | OW | 6.91 | 5 | | | | | | From BI60388 by OW on 09/14/20 |
| 16I0193-01 | Volatile Organics, CP-51 (fc | 09/14/2016 08:2 | OW | 7.09 | 5 | | | | | | From BI60388 by OW on 09/14/20 |
| 16I0193-02RE2 | Volatile Organics, CP-51 (fc | 09/14/2016 08:2 | OW | 5.67 | 5 | | | | | | From BI60527 by OW on 09/14/20 |
| 16I0260-01 | Volatile Organics, NJDEP/T | 09/14/2016 08:2 | OW | 5.34 | 5 | | | | | | From BI60388 by OW on 09/14/20 |
| 16I0302-01 | Volatile Organics, CT RCP I | 09/14/2016 08:2 | OW | 5.89 | 5 | | | | | | From BI60449 by OW on 09/14/20 |
| 16I0302-02 | Volatile Organics, CT RCP I | 09/14/2016 08:2 | OW | 6.21 | 5 | | | | | | From BI60449 by OW on 09/14/20 |
| 16I0302-03 | Volatile Organics, CT RCP I | 09/14/2016 08:2 | OW | 4.76 | 5 | | | | | | From BI60449 by OW on 09/14/20 |
| 16I0302-05 | Volatile Organics, CT RCP I | 09/14/2016 08:2 | OW | 5.52 | 5 | | | | | | From BI60449 by OW on 09/14/20 |
| 16I0302-05RE1 | Volatile Organics, CT RCP I | 09/14/2016 08:2 | OW | 7.58 | 5 | | | | | | From BI60530 by OW on 09/14/20 |
| 16I0319-02 | Volatile Organics, Tentative | 09/14/2016 08:2 | OW | 6.01 | 5 | | | | | | From BI60496 by OW on 09/14/20 |
| 16I0319-02 | Volatile Organics, 8260 - Cc | 09/14/2016 08:2 | OW | 6.01 | 5 | | | | | | From BI60496 by OW on 09/14/20 |
| 16I0335-01 | Volatile Organics, CP-51 (fc | 09/14/2016 08:2 | OW | 6.24 | 5 | | | | | | |
| 16I0338-02 | Volatile Organics, 8260 - Cc | 09/14/2016 08:2 | OW | 11.04 | 5 | | | | | | |
| BI60530-BLK1 | QC | 09/14/2016 08:2 | OW | 5 | 5 | | | | | | |
| BI60530-BLK2 | QC | 09/14/2016 08:2 | OW | 5 | 5 | | | | | | Added 9/14/2016 by SS |
| BI60530-BS1 | QC | 09/14/2016 08:2 | OW | 5 | 5 | Y16H097 | | 5 | | | |
| BI60530-BSD1 | QC | 09/14/2016 08:2 | OW | 5 | 5 | Y16H097 | | 5 | | | |

Batch Comments:

# Injection Log

Directory: g:\msvoa5~1\dailydat\v5091416

| Line | Vial | FileName | Multiplier | SampleName | Misc Info | Injected |
|---|---|---|---|---|---|---|
| 1 | 1 | v5387475.d | 1. | SEQ-TUN1 | QBV5091416A | 14 Sep 16 08:18 |
| 2 | 2 | v5387476.d | 1. | SEQ-CCV1 | QBV5091416A Y16H091 | 14 Sep 16 08:52 |
| 3 | 3 | v5387477.d | 1. | BI60530-BS1 | QBV5091416A Y16H097 | 14 Sep 16 09:28 |
| 4 | 4 | v5387478.d | 1. | BI60530-BSD1 | QBV5091416A Y16H097 | 14 Sep 16 10:02 |
| 5 | 5 | v5387479.d | 1. | BLK | QBV5091416A | 14 Sep 16 10:36 |
| 6 | 6 | v5387480.d | 1. | BI60530-BLK1 | QBV5091416A | 14 Sep 16 11:10 |
| 7 | 7 | v5387481.d | 1. | BI60530-BLK2 | QBV5091416A | 14 Sep 16 11:44 |
| 8 | 8 | v5387482.d | 1. | 16I0193-01 | QBV5091416A RE CP51 7.09g D | 14 Sep 16 12:18 |
| 9 | 9 | v5387483.d | 1. | 16I0181-01 | QBV5091416A RE CP51 6.91g D | 14 Sep 16 12:51 |
| 10 | 10 | v5387484.d | 1. | 16I0260-01 | QBV5091416A RE NJDEP/TCL/375 5.34g C | 14 Sep 16 13:25 |
| 11 | 11 | v5387485.d | 100000. | 16I0193-02RE2 | QBV5091416A CP51 5.62g E | 14 Sep 16 13:59 |
| 12 | 12 | v5387486.d | 100. | 16I0302-05RE1 | QBV5091416A CT RCP 100UL/5ML 7.58g F | 14 Sep 16 14:33 |
| 13 | 13 | v5387487.d | 1. | 16I0302-01 | QBV5091416A RE CT RCP 5.89g E | 14 Sep 16 15:07 |
| 14 | 14 | v5387488.d | 1. | 16I0302-02 | QBV5091416A RE CT RCP 6.21g E | 14 Sep 16 15:41 |
| 15 | 15 | v5387489.d | 1. | 16I0302-03 | QBV5091416A RE CT RCP 4.76g E | 14 Sep 16 16:15 |
| 16 | 16 | v5387490.d | 1. | 16I0302-05 | QBV5091416A RE CT RCP 5.52g E | 14 Sep 16 16:49 |
| 17 | 17 | v5387491.d | 100. | 16I0319-02 | QBV5091416A RE 8260COMP/TIC 6.01g 100UL | 14 Sep 16 17:23 |
| 18 | 18 | v5387492.d | 1. | 16I0338-02 | QBV5091416A 8260 COMP 11.04g B | 14 Sep 16 17:56 |
| 19 | 19 | v5387493.d | 1. | 16I0335-01 | QBV5091416A CP51 6.24g C | 14 Sep 16 18:30 |
| 20 | 20 | v5387494.d | 1. | SEQ-TUN1 | QBV5091416B | 14 Sep 16 19:04 |
| 21 | 21 | v5387495.d | 1. | SEQ-TUN1 | QBV5091416B | 14 Sep 16 19:38 |
| 22 | 22 | v5387496.d | 1. | SEQ-CCV1 | QBV5091416B Y16H091 | 14 Sep 16 20:11 |
| 23 | 23 | v5387497.d | 1. | BI60577-BS1 | QBV5091416B Y16H097 | 14 Sep 16 20:45 |
| 24 | 24 | v5387498.d | 1. | BI60577-BSD1 | QBV5091416B Y16H097 | 14 Sep 16 21:19 |
| 25 | 25 | v5387499.d | 1. | BI60577-BLK1 | QBV5091416B | 14 Sep 16 21:52 |
| 26 | 26 | v5387500.d | 1. | BI60577-BLK1 | QBV5091416B | 14 Sep 16 22:26 |
| 27 | 27 | v5387501.d | 1. | 16I0423-02 | QBV5091416B NYSDEC 375 5.00g A | 14 Sep 16 22:59 |
| 28 | 28 | v5387502.d | 1. | BI60577-DUP1 | QBV5091416B 16I0423-02 5.00g A | 14 Sep 16 23:33 |
| 29 | 29 | v5387503.d | 1. | BI60577-MS1 | QBV5091416B 16I0423-02 5.00g A | 15 Sep 16 00:07 |
| 30 | 30 | v5387504.d | 1. | MBLK | QBV5091416B | 15 Sep 16 00:40 |
| 31 | 31 | v5387505.d | 1. | 16I0286-01 | QBV5091416B CP51 5.00g A | 15 Sep 16 01:14 |
| 32 | 32 | v5387506.d | 1. | 16I0323-01 | QBV5091416B 8260 COMP 5.00g A | 15 Sep 16 01:47 |
| 33 | 33 | v5387507.d | 1. | 16I0323-03 | QBV5091416B 8260 COMP 5.00g A | 15 Sep 16 02:21 |
| 34 | 34 | v5387508.d | 1. | 16I0323-05 | QBV5091416B 8260 COMP 5.00g A | 15 Sep 16 02:55 |
| 35 | 35 | v5387509.d | 1. | 16I0323-07 | QBV5091416B 8260 COMP 5.00g A | 15 Sep 16 03:28 |
| 36 | 36 | v5387510.d | 1. | 16I0323-09 | QBV5091416B 8260 COMP 5.00g A | 15 Sep 16 04:02 |
| 37 | 37 | v5387511.d | 1. | 16I0323-11 | QBV5091416B 8260 COMP 5.00g A | 15 Sep 16 04:36 |
| 38 | 38 | v5387512.d | 1. | 16I0323-13 | QBV5091416B 8260 COMP 5.00g A | 15 Sep 16 05:09 |

# Injection Log

Directory: g:\msvoa5~1\dailydat\v5091416

| Line | Vial | FileName | Multiplier | SampleName | Misc Info | Injected |
|---|---|---|---|---|---|---|
| 39 | 39 | v5387513.d | 1. | 16I0323-15 | QBV5091416B 8260 COMP 5.00g A | 15 Sep 16 05:44 |
| 40 | 40 | v5387514.d | 1. | 16I0323-17 | QBV5091416B 8260 COMP 5.00g A | 15 Sep 16 06:17 |
| 41 | 41 | v5387515.d | 1. | 16I0323-19 | QBV5091416B 8260 COMP 5.00g A | 15 Sep 16 06:51 |

York Analytical Laboratories, Inc.
SDG: 16I0260
CLASS: SVOA
METHOD: EPA 8270D

# DATA PACKAGE COVER PAGE

## EPA 8270D

Laboratory: York Analytical Laboratories, Inc. SDG: 16I0260

Client: Langan Engineering & Environmental Services (NYC) Project: 170301202 450 Union Street

| Client Sample Id: | Lab Sample Id: |
|---|---|
| V01_0-1.5 | 16I0260-01 |

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in computer-readable data submitted on diskette has been autorized by the Laboratory Manager or the Manager's designee, as verified by the following signatures.

Signature:

Name: Benjamin Gulizia

Date: 9/30/2016

Title: Laboratory Director

# FORM II SURROGATE STANDARD RECOVERY AND RT SUMMARY

## EPA 8270D

Laboratory: York Analytical Laboratories, Inc. SDG: 16I0260

Client: Langan Engineering & Environmental Services (NYC) Project: 170301202 450 Union Street

Sequence: Instrument:

Matrix: Soil Calibration:

| Surrogate Compound | Spike Level mg/kg wet | % Recovery | Recovery Limits | RT | Calibration Mean RT | RT Diff | RT Diff Limit | Q |
|---|---|---|---|---|---|---|---|---|
| **LCS (BI60561-BS1 )** | | | Lab File ID: SV402905.D | | Analyzed: 09/15/16 10:44 | | | |
| 2-Fluorophenol | 2.51 | 52.7 | 20 - 108 | 7.03 | | | | |
| Phenol-d5 | 2.52 | 60.7 | 23 - 114 | 8.18 | | | | |
| Nitrobenzene-d5 | 1.67 | 59.2 | 22 - 108 | 9.22 | | | | |
| 2-Fluorobiphenyl | 1.67 | 57.5 | 21 - 113 | 11.59 | | | | |
| 2,4,6-Tribromophenol | 2.50 | 64.7 | 30 - 130 | 13.7 | | | | |
| Terphenyl-d14 | 1.68 | 48.2 | 24 - 116 | 16.93 | | | | |
| **LCS Dup (BI60561-BSD1 )** | | | Lab File ID: SV402906.D | | Analyzed: 09/15/16 11:16 | | | |
| 2-Fluorophenol | 2.51 | 63.8 | 20 - 108 | 7.04 | | | | |
| Phenol-d5 | 2.52 | 75.4 | 23 - 114 | 8.18 | | | | |
| Nitrobenzene-d5 | 1.67 | 73.2 | 22 - 108 | 9.22 | | | | |
| 2-Fluorobiphenyl | 1.67 | 71.7 | 21 - 113 | 11.59 | | | | |
| 2,4,6-Tribromophenol | 2.50 | 82.9 | 30 - 130 | 13.71 | | | | |
| Terphenyl-d14 | 1.68 | 57.8 | 24 - 116 | 16.93 | | | | |
| **Blank (BI60561-BLK1 )** | | | Lab File ID: SV402907.D | | Analyzed: 09/15/16 11:49 | | | |
| 2-Fluorophenol | 2.51 | 48.7 | 20 - 108 | 7.03 | | | | |
| Phenol-d5 | 2.52 | 50.9 | 23 - 114 | 8.17 | | | | |
| Nitrobenzene-d5 | 1.67 | 47.3 | 22 - 108 | 9.21 | | | | |
| 2-Fluorobiphenyl | 1.67 | 45.6 | 21 - 113 | 11.58 | | | | |
| 2,4,6-Tribromophenol | 2.50 | 44.9 | 19 - 110 | 13.69 | | | | |
| Terphenyl-d14 | 1.68 | 37.8 | 24 - 116 | 16.93 | | | | |
| **V01_0-1.5 (16I0260-01 )** | | | Lab File ID: SV402910.D | | Analyzed: 09/15/16 13:36 | | | |
| 2-Fluorophenol | 2.60 | 37.1 | 20 - 108 | 7.02 | | | | |
| Phenol-d5 | 2.61 | 42.4 | 23 - 114 | 8.16 | | | | |
| Nitrobenzene-d5 | 1.73 | 39.4 | 22 - 108 | 9.21 | | | | |
| 2-Fluorobiphenyl | 1.73 | 32.4 | 21 - 113 | 11.58 | | | | |
| 2,4,6-Tribromophenol | 2.59 | 46.0 | 19 - 110 | 13.69 | | | | |
| Terphenyl-d14 | 1.74 | 36.3 | 24 - 116 | 16.92 | | | | |

# FORM III LCS / LCS DUPLICATE RECOVERY

## EPA 8270D

Laboratory: York Analytical Laboratories, Inc. SDG: 16I0260

Client: Langan Engineering & Environmental Services (NYC) Project: 170301202 450 Union Street

Matrix: Soil

Batch: BI60561 Laboratory ID: BI60561-BS1

Preparation: EPA 3550C Initial/Final: 30 g / 1 mL

| COMPOUND | SPIKE ADDED (mg/kg wet) | LCS CONCENTRATION (mg/kg wet) | LCS % REC. # | QC LIMITS REC. |
|---|---|---|---|---|
| 1,1'-Biphenyl | 1.67 | 0.927 | 55.6 | 22 - 103 |
| 1,2,4,5-Tetrachlorobenzene | 1.67 | 0.872 | 52.3 | 10 - 144 |
| 1,2,4-Trichlorobenzene | 1.67 | 0.824 | 49.4 | 23 - 130 |
| 1,2-Dichlorobenzene | 1.67 | 0.832 | 49.9 | 26 - 113 |
| 1,2-Diphenylhydrazine (as Azobenzene) | 1.67 | 1.18 | 70.6 | 10 - 140 |
| 1,3-Dichlorobenzene | 1.67 | 0.817 | 49.0 | 32 - 113 |
| 1,4-Dichlorobenzene | 1.67 | 0.808 | 48.5 | 28 - 111 |
| 2,3,4,6-Tetrachlorophenol | 1.67 | 2.33 | 140 * | 30 - 130 |
| 2,4,5-Trichlorophenol | 1.67 | 0.911 | 54.6 | 14 - 138 |
| 2,4,6-Trichlorophenol | 1.67 | 1.08 | 64.5 | 27 - 122 |
| 2,4-Dichlorophenol | 1.67 | 0.948 | 56.9 | 23 - 133 |
| 2,4-Dimethylphenol | 1.67 | 0.947 | 56.8 | 15 - 131 |
| 2,4-Dinitrophenol | 1.67 | 0.862 | 51.7 | 10 - 149 |
| 2,4-Dinitrotoluene | 1.67 | 1.02 | 61.1 | 30 - 123 |
| 2,6-Dinitrotoluene | 1.67 | 0.968 | 58.1 | 30 - 125 |
| 2-Chloronaphthalene | 1.67 | 0.894 | 53.6 | 22 - 115 |
| 2-Chlorophenol | 1.67 | 0.888 | 53.3 | 25 - 121 |
| 2-Methylnaphthalene | 1.67 | 1.02 | 61.3 | 16 - 127 |
| 2-Methylphenol | 1.67 | 0.853 | 51.2 | 10 - 146 |
| 2-Nitroaniline | 1.67 | 0.940 | 56.4 | 24 - 126 |
| 2-Nitrophenol | 1.67 | 0.817 | 49.0 | 17 - 129 |
| 3- & 4-Methylphenols | 1.67 | ND | * | 20 - 109 |
| 3,3'-Dichlorobenzidine | 1.67 | 1.02 | 61.3 | 10 - 147 |
| 3-Nitroaniline | 1.67 | 0.923 | 55.4 | 23 - 123 |
| 4,6-Dinitro-2-methylphenol | 1.67 | 1.11 | 66.4 | 10 - 149 |
| 4-Bromophenyl phenyl ether | 1.67 | 0.935 | 56.1 | 30 - 138 |
| 4-Chloro-3-methylphenol | 1.67 | 0.997 | 59.8 | 16 - 138 |
| 4-Chloroaniline | 1.67 | 0.720 | 43.2 | 10 - 117 |
| 4-Chlorophenyl phenyl ether | 1.67 | 0.987 | 59.2 | 18 - 132 |
| 4-Nitroaniline | 1.67 | ND | * | 14 - 125 |

# FORM III LCS / LCS DUPLICATE RECOVERY

## EPA 8270D

Laboratory: York Analytical Laboratories, Inc. SDG: 16I0260

Client: Langan Engineering & Environmental Services (NYC) Project: 170301202 450 Union Street

Matrix: Soil

Batch: BI60561 Laboratory ID: BI60561-BS1

Preparation: EPA 3550C Initial/Final: 30 g / 1 mL

| COMPOUND | SPIKE ADDED (mg/kg wet) | LCS CONCENTRATION (mg/kg wet) | LCS % REC. # | QC LIMITS REC. |
|---|---|---|---|---|
| 4-Nitrophenol | 1.67 | 0.974 | 58.4 | 10 - 136 |
| Acenaphthene | 1.67 | 0.996 | 59.8 | 17 - 124 |
| Acenaphthylene | 1.67 | 0.920 | 55.2 | 16 - 124 |
| Acetophenone | 1.67 | ND | * | 28 - 105 |
| Aniline | 1.67 | 0.793 | 47.6 | 10 - 111 |
| Anthracene | 1.67 | 1.03 | 61.7 | 24 - 124 |
| Atrazine | 1.67 | 1.04 | 62.4 | 22 - 120 |
| Benzaldehyde | 1.67 | 0.931 | 55.9 | 21 - 100 |
| Benzo(a)anthracene | 1.67 | 1.17 | 69.9 | 25 - 134 |
| Benzo(a)pyrene | 1.67 | 0.913 | 54.8 | 29 - 144 |
| Benzo(b)fluoranthene | 1.67 | 0.854 | 51.3 | 20 - 151 |
| Benzo(g,h,i)perylene | 1.67 | 0.962 | 57.7 | 10 - 153 |
| Benzo(k)fluoranthene | 1.67 | 0.863 | 51.8 | 10 - 148 |
| Benzoic acid | 1.67 | ND | * | 10 - 116 |
| Benzyl alcohol | 1.67 | 0.991 | 59.4 | 17 - 128 |
| Benzyl butyl phthalate | 1.67 | 1.06 | 63.4 | 10 - 132 |
| Bis(2-chloroethoxy)methane | 1.67 | 0.913 | 54.8 | 10 - 129 |
| Bis(2-chloroethyl)ether | 1.67 | 0.932 | 55.9 | 14 - 125 |
| Bis(2-chloroisopropyl)ether | 1.67 | 1.05 | 63.1 | 14 - 122 |
| Bis(2-ethylhexyl)phthalate | 1.67 | 1.24 | 74.6 | 10 - 141 |
| Caprolactam | 1.67 | 0.180 | 10.8 | 10 - 123 |
| Carbazole | 1.67 | 0.978 | 58.7 | 31 - 120 |
| Chrysene | 1.67 | 0.949 | 57.0 | 24 - 116 |
| Dibenzo(a,h)anthracene | 1.67 | 1.15 | 68.8 | 17 - 147 |
| Dibenzofuran | 1.67 | ND | * | 23 - 123 |
| Diethyl phthalate | 1.67 | 1.03 | 61.8 | 23 - 122 |
| Dimethyl phthalate | 1.67 | 0.944 | 56.6 | 28 - 127 |
| Di-n-butyl phthalate | 1.67 | 1.04 | 62.2 | 19 - 123 |
| Di-n-octyl phthalate | 1.67 | 0.988 | 59.3 | 10 - 132 |
| Fluoranthene | 1.67 | 1.06 | 63.8 | 36 - 125 |

# FORM III LCS / LCS DUPLICATE RECOVERY

## EPA 8270D

| | | | |
|---|---|---|---|
| Laboratory: | York Analytical Laboratories, Inc. | SDG: | 16I0260 |
| Client: | Langan Engineering & Environmental Services (NYC) | Project: | 170301202 450 Union Street |
| Matrix: | Soil | | |
| Batch: | BI60561 | Laboratory ID: | BI60561-BS1 |
| Preparation: | EPA 3550C | Initial/Final: | 30 g / 1 mL |

| COMPOUND | SPIKE ADDED (mg/kg wet) | LCS CONCENTRATION (mg/kg wet) | LCS % REC. # | QC LIMITS REC. |
|---|---|---|---|---|
| Fluorene | 1.67 | 1.00 | 60.3 | 16 - 130 |
| Hexachlorobenzene | 1.67 | 1.11 | 66.7 | 10 - 129 |
| Hexachlorobutadiene | 1.67 | 0.902 | 54.1 | 22 - 153 |
| Hexachlorocyclopentadiene | 1.67 | 0.410 | 24.6 | 10 - 134 |
| Hexachloroethane | 1.67 | 0.906 | 54.4 | 20 - 112 |
| Indeno(1,2,3-cd)pyrene | 1.67 | 1.13 | 68.0 | 10 - 155 |
| Isophorone | 1.67 | 0.888 | 53.3 | 14 - 131 |
| Naphthalene | 1.67 | 0.939 | 56.4 | 20 - 121 |
| Nitrobenzene | 1.67 | 0.910 | 54.6 | 20 - 121 |
| N-Nitrosodimethylamine | 1.67 | 0.553 | 33.2 | 10 - 124 |
| N-nitroso-di-n-propylamine | 1.67 | 0.994 | 59.6 | 21 - 119 |
| N-Nitrosodiphenylamine | 1.67 | 1.34 | 80.1 | 10 - 163 |
| Pentachlorophenol | 1.67 | 0.848 | 50.9 | 10 - 143 |
| Phenanthrene | 1.67 | 1.07 | 64.1 | 24 - 123 |
| Phenol | 1.67 | 0.0497 | 2.98 * | 15 - 123 |
| Pyrene | 1.67 | 1.06 | 63.9 | 24 - 132 |
| Pyridine | 1.67 | 0.123 | 7.38 * | 10 - 92 |

# Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

# FORM III LCS / LCS DUPLICATE RECOVERY

## EPA 8270D

Laboratory: York Analytical Laboratories, Inc. SDG: 16I0260

Client: Langan Engineering & Environmental Services (NYC) Project: 170301202 450 Union Street

Matrix: Soil

Batch: BI60561 Laboratory ID: BI60561-BSD1

Preparation: EPA 3550C Initial/Final: 30 g / 1 mL

| COMPOUND | SPIKE ADDED (mg/kg wet) | LCSD CONCENTRATION (mg/kg wet) | LCSD % REC. # | % RPD # | QC LIMITS RPD | QC LIMITS REC. |
|---|---|---|---|---|---|---|
| 1,1'-Biphenyl | 1.67 | 1.14 | 68.4 | 20.7 | 30 | 22 - 103 |
| 1,2,4,5-Tetrachlorobenzene | 1.67 | 1.08 | 64.6 | 21.0 | 30 | 10 - 144 |
| 1,2,4-Trichlorobenzene | 1.67 | 0.995 | 59.7 | 18.9 | 30 | 23 - 130 |
| 1,2-Dichlorobenzene | 1.67 | 1.01 | 60.4 | 19.1 | 30 | 26 - 113 |
| 1,2-Diphenylhydrazine (as Azobenzer | 1.67 | 1.53 | 91.5 | 25.8 | 30 | 10 - 140 |
| 1,3-Dichlorobenzene | 1.67 | 0.995 | 59.7 | 19.7 | 30 | 32 - 113 |
| 1,4-Dichlorobenzene | 1.67 | 0.933 | 56.0 | 14.3 | 30 | 28 - 111 |
| 2,3,4,6-Tetrachlorophenol | 1.67 | 2.84 | 171 * | 19.9 | 30 | 30 - 130 |
| 2,4,5-Trichlorophenol | 1.67 | 1.16 | 69.3 | 23.7 | 30 | 14 - 138 |
| 2,4,6-Trichlorophenol | 1.67 | 1.34 | 80.4 | 22.0 | 30 | 27 - 122 |
| 2,4-Dichlorophenol | 1.67 | 1.17 | 70.1 | 20.8 | 30 | 23 - 133 |
| 2,4-Dimethylphenol | 1.67 | 1.19 | 71.1 | 22.4 | 30 | 15 - 131 |
| 2,4-Dinitrophenol | 1.67 | 0.927 | 55.6 | 7.30 | 30 | 10 - 149 |
| 2,4-Dinitrotoluene | 1.67 | 1.24 | 74.4 | 19.6 | 30 | 30 - 123 |
| 2,6-Dinitrotoluene | 1.67 | 1.25 | 74.8 | 25.2 | 30 | 30 - 125 |
| 2-Chloronaphthalene | 1.67 | 1.13 | 67.8 | 23.3 | 30 | 22 - 115 |
| 2-Chlorophenol | 1.67 | 1.07 | 64.1 | 18.5 | 30 | 25 - 121 |
| 2-Methylnaphthalene | 1.67 | 1.21 | 72.5 | 16.7 | 30 | 16 - 127 |
| 2-Methylphenol | 1.67 | 1.04 | 62.7 | 20.2 | 30 | 10 - 146 |
| 2-Nitroaniline | 1.67 | 1.16 | 69.4 | 20.7 | 30 | 24 - 126 |
| 2-Nitrophenol | 1.67 | 1.01 | 60.6 | 21.1 | 30 | 17 - 129 |
| 3- & 4-Methylphenols | 1.67 | ND | * | | 30 | 20 - 109 |
| 3,3'-Dichlorobenzidine | 1.67 | 1.26 | 75.9 | 21.3 | 30 | 10 - 147 |
| 3-Nitroaniline | 1.67 | 1.10 | 65.8 | 17.3 | 30 | 23 - 123 |
| 4,6-Dinitro-2-methylphenol | 1.67 | 1.40 | 83.7 | 23.1 | 30 | 10 - 149 |
| 4-Bromophenyl phenyl ether | 1.67 | 1.18 | 70.7 | 23.0 | 30 | 30 - 138 |
| 4-Chloro-3-methylphenol | 1.67 | 1.21 | 72.4 | 19.0 | 30 | 16 - 138 |
| 4-Chloroaniline | 1.67 | 0.898 | 53.9 | 22.0 | 30 | 10 - 117 |
| 4-Chlorophenyl phenyl ether | 1.67 | 1.24 | 74.5 | 22.8 | 30 | 18 - 132 |
| 4-Nitroaniline | 1.67 | 1.22 | 73.1 | 200 * | 30 | 14 - 125 |

# FORM III LCS / LCS DUPLICATE RECOVERY

## EPA 8270D

| | | | |
|---|---|---|---|
| Laboratory: | York Analytical Laboratories, Inc. | SDG: | 16I0260 |
| Client: | Langan Engineering & Environmental Services (NYC) | Project: | 170301202 450 Union Street |
| Matrix: | Soil | | |
| Batch: | BI60561 | Laboratory ID: | BI60561-BSD1 |
| Preparation: | EPA 3550C | Initial/Final: | 30 g / 1 mL |

| COMPOUND | SPIKE ADDED (mg/kg wet) | LCSD CONCENTRATION (mg/kg wet) | LCSD % REC. # | % RPD # | QC LIMITS RPD | QC LIMITS REC. |
|---|---|---|---|---|---|---|
| 4-Nitrophenol | 1.67 | 1.22 | 72.9 | 22.1 | 30 | 10 - 136 |
| Acenaphthene | 1.67 | 1.25 | 74.7 | 22.2 | 30 | 17 - 124 |
| Acenaphthylene | 1.67 | 1.15 | 68.9 | 22.1 | 30 | 16 - 124 |
| Acetophenone | 1.67 | 0.0277 | 1.66 * | 200 * | 30 | 28 - 105 |
| Aniline | 1.67 | 0.963 | 57.8 | 19.4 | 30 | 10 - 111 |
| Anthracene | 1.67 | 1.29 | 77.6 | 22.8 | 30 | 24 - 124 |
| Atrazine | 1.67 | 1.27 | 76.0 | 19.6 | 30 | 22 - 120 |
| Benzaldehyde | 1.67 | 0.993 | 59.6 | 6.41 | 30 | 21 - 100 |
| Benzo(a)anthracene | 1.67 | 1.43 | 85.7 | 20.3 | 30 | 25 - 134 |
| Benzo(a)pyrene | 1.67 | 1.06 | 63.9 | 15.4 | 30 | 29 - 144 |
| Benzo(b)fluoranthene | 1.67 | 1.03 | 61.7 | 18.5 | 30 | 20 - 151 |
| Benzo(g,h,i)perylene | 1.67 | 1.28 | 76.9 | 28.4 | 30 | 10 - 153 |
| Benzo(k)fluoranthene | 1.67 | 1.04 | 62.4 | 18.5 | 30 | 10 - 148 |
| Benzoic acid | 1.67 | 0.0240 | 1.44 * | 200 * | 30 | 10 - 116 |
| Benzyl alcohol | 1.67 | 1.21 | 72.4 | 19.7 | 30 | 17 - 128 |
| Benzyl butyl phthalate | 1.67 | 1.26 | 75.4 | 17.2 | 30 | 10 - 132 |
| Bis(2-chloroethoxy)methane | 1.67 | 1.11 | 66.3 | 19.1 | 30 | 10 - 129 |
| Bis(2-chloroethyl)ether | 1.67 | 1.07 | 64.4 | 14.1 | 30 | 14 - 125 |
| Bis(2-chloroisopropyl)ether | 1.67 | 1.25 | 75.0 | 17.2 | 30 | 14 - 122 |
| Bis(2-ethylhexyl)phthalate | 1.67 | 1.52 | 91.3 | 20.1 | 30 | 10 - 141 |
| Caprolactam | 1.67 | 0.266 | 16.0 | 38.7 * | 30 | 10 - 123 |
| Carbazole | 1.67 | 1.20 | 72.2 | 20.7 | 30 | 31 - 120 |
| Chrysene | 1.67 | 1.15 | 68.9 | 18.9 | 30 | 24 - 116 |
| Dibenzo(a,h)anthracene | 1.67 | 1.46 | 87.7 | 24.1 | 30 | 17 - 147 |
| Dibenzofuran | 1.67 | 1.19 | 71.4 | 200 * | 30 | 23 - 123 |
| Diethyl phthalate | 1.67 | 1.24 | 74.5 | 18.6 | 30 | 23 - 122 |
| Dimethyl phthalate | 1.67 | 1.16 | 69.6 | 20.5 | 30 | 28 - 127 |
| Di-n-butyl phthalate | 1.67 | 1.28 | 76.8 | 21.1 | 30 | 19 - 123 |
| Di-n-octyl phthalate | 1.67 | 1.20 | 71.8 | 19.1 | 30 | 10 - 132 |
| Fluoranthene | 1.67 | 1.30 | 78.2 | 20.3 | 30 | 36 - 125 |

# FORM III LCS / LCS DUPLICATE RECOVERY

## EPA 8270D

| | | | |
|---|---|---|---|
| Laboratory: | York Analytical Laboratories, Inc. | SDG: | 16I0260 |
| Client: | Langan Engineering & Environmental Services (NYC) | Project: | 170301202 450 Union Street |
| Matrix: | Soil | | |
| Batch: | BI60561 | Laboratory ID: | BI60561-BSD1 |
| Preparation: | EPA 3550C | Initial/Final: | 30 g / 1 mL |

| COMPOUND | SPIKE ADDED (mg/kg wet) | LCSD CONCENTRATION (mg/kg wet) | LCSD % REC. # | % RPD # | QC LIMITS RPD | QC LIMITS REC. |
|---|---|---|---|---|---|---|
| Fluorene | 1.67 | 1.27 | 76.0 | 23.0 | 30 | 16 - 130 |
| Hexachlorobenzene | 1.67 | 1.42 | 85.1 | 24.2 | 30 | 10 - 129 |
| Hexachlorobutadiene | 1.67 | 1.07 | 64.2 | 17.1 | 30 | 22 - 153 |
| Hexachlorocyclopentadiene | 1.67 | 0.637 | 38.2 | 43.4 * | 30 | 10 - 134 |
| Hexachloroethane | 1.67 | 1.10 | 65.9 | 19.2 | 30 | 20 - 112 |
| Indeno(1,2,3-cd)pyrene | 1.67 | 1.43 | 86.1 | 23.4 | 30 | 10 - 155 |
| Isophorone | 1.67 | 1.08 | 65.1 | 19.9 | 30 | 14 - 131 |
| Naphthalene | 1.67 | 1.14 | 68.4 | 19.3 | 30 | 20 - 121 |
| Nitrobenzene | 1.67 | 1.11 | 66.6 | 19.8 | 30 | 20 - 121 |
| N-Nitrosodimethylamine | 1.67 | 0.765 | 45.9 | 32.2 * | 30 | 10 - 124 |
| N-nitroso-di-n-propylamine | 1.67 | 1.21 | 72.8 | 19.9 | 30 | 21 - 119 |
| N-Nitrosodiphenylamine | 1.67 | 1.73 | 104 | 25.9 | 30 | 10 - 163 |
| Pentachlorophenol | 1.67 | 1.05 | 62.8 | 21.0 | 30 | 10 - 143 |
| Phenanthrene | 1.67 | 1.34 | 80.3 | 22.4 | 30 | 24 - 123 |
| Phenol | 1.67 | ND | * | | 30 | 15 - 123 |
| Pyrene | 1.67 | 1.29 | 77.6 | 19.5 | 30 | 24 - 132 |
| Pyridine | 1.67 | 0.369 | 22.1 | 100 * | 30 | 10 - 92 |

# Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

**FORM I**

# METHOD BLANK DATA SHEET

## EPA 8270D

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | York Analytical Laboratories, Inc. | | | SDG: | 16I0260 |
| Client: | Langan Engineering & Environmental Services (NYC) | | | Project: | 170301202 450 Union Street |
| Matrix: | Soil | Laboratory ID: | BI60561-BLK1 | File ID: | SV402907.D |
| Prepared: | 09/14/16 11:54 | Preparation: | EPA 3550C | Initial/Final: | 30 g / 1 mL |
| Analyzed: | 09/15/16 11:49 | Instrument: | GC/MS BNA | | |
| Batch: | BI60561 | Sequence: | | Calibration: | |

| CAS NO. | COMPOUND | CONC. (mg/kg wet) | Q |
|---|---|---|---|
| 92-52-4 | 1,1'-Biphenyl | 0.0417 | U |
| 95-94-3 | 1,2,4,5-Tetrachlorobenzene | 0.0833 | U |
| 120-82-1 | 1,2,4-Trichlorobenzene | 0.0417 | U |
| 95-50-1 | 1,2-Dichlorobenzene | 0.0417 | U |
| 122-66-7 | 1,2-Diphenylhydrazine (as Azobenzene) | 0.0417 | U |
| 541-73-1 | 1,3-Dichlorobenzene | 0.0417 | U |
| 106-46-7 | 1,4-Dichlorobenzene | 0.0417 | U |
| 58-90-2 | 2,3,4,6-Tetrachlorophenol | 0.0833 | U |
| 95-95-4 | 2,4,5-Trichlorophenol | 0.0417 | U |
| 88-06-2 | 2,4,6-Trichlorophenol | 0.0417 | U |
| 120-83-2 | 2,4-Dichlorophenol | 0.0417 | U |
| 105-67-9 | 2,4-Dimethylphenol | 0.0417 | U |
| 51-28-5 | 2,4-Dinitrophenol | 0.0833 | U |
| 121-14-2 | 2,4-Dinitrotoluene | 0.0417 | U |
| 606-20-2 | 2,6-Dinitrotoluene | 0.0417 | U |
| 91-58-7 | 2-Chloronaphthalene | 0.0417 | U |
| 95-57-8 | 2-Chlorophenol | 0.0417 | U |
| 91-57-6 | 2-Methylnaphthalene | 0.0417 | U |
| 95-48-7 | 2-Methylphenol | 0.0417 | U |
| 88-74-4 | 2-Nitroaniline | 0.0833 | U |
| 88-75-5 | 2-Nitrophenol | 0.0417 | U |
| 65794-96-9 | 3- & 4-Methylphenols | 0.0417 | U |
| 91-94-1 | 3,3'-Dichlorobenzidine | 0.0417 | U |
| 99-09-2 | 3-Nitroaniline | 0.0833 | U |
| 534-52-1 | 4,6-Dinitro-2-methylphenol | 0.0833 | U |
| 101-55-3 | 4-Bromophenyl phenyl ether | 0.0417 | U |
| 59-50-7 | 4-Chloro-3-methylphenol | 0.0417 | U |
| 106-47-8 | 4-Chloroaniline | 0.0417 | U |
| 7005-72-3 | 4-Chlorophenyl phenyl ether | 0.0417 | U |
| 100-01-6 | 4-Nitroaniline | 0.0833 | U |

**FORM I**

# METHOD BLANK DATA SHEET

## EPA 8270D

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | York Analytical Laboratories, Inc. | | | SDG: | 16I0260 |
| Client: | Langan Engineering & Environmental Services (NYC) | | | Project: | 170301202 450 Union Street |
| Matrix: | Soil | Laboratory ID: | BI60561-BLK1 | File ID: | SV402907.D |
| Prepared: | 09/14/16 11:54 | Preparation: | EPA 3550C | Initial/Final: | 30 g / 1 mL |
| Analyzed: | 09/15/16 11:49 | Instrument: | GC/MS BNA | | |
| Batch: | BI60561 | Sequence: | | Calibration: | |

| CAS NO. | COMPOUND | CONC. (mg/kg wet) | Q |
|---|---|---|---|
| 100-02-7 | 4-Nitrophenol | 0.0833 | U |
| 83-32-9 | Acenaphthene | 0.0417 | U |
| 208-96-8 | Acenaphthylene | 0.0417 | U |
| 98-86-2 | Acetophenone | 0.0417 | U |
| 62-53-3 | Aniline | 0.167 | U |
| 120-12-7 | Anthracene | 0.0417 | U |
| 1912-24-9 | Atrazine | 0.0417 | U |
| 100-52-7 | Benzaldehyde | 0.0417 | U |
| 92-87-5 | Benzidine | 0.167 | U |
| 56-55-3 | Benzo(a)anthracene | 0.0417 | U |
| 50-32-8 | Benzo(a)pyrene | 0.0417 | U |
| 205-99-2 | Benzo(b)fluoranthene | 0.0417 | U |
| 191-24-2 | Benzo(g,h,i)perylene | 0.0417 | U |
| 207-08-9 | Benzo(k)fluoranthene | 0.0417 | U |
| 65-85-0 | Benzoic acid | 0.0417 | U |
| 100-51-6 | Benzyl alcohol | 0.0417 | U |
| 85-68-7 | Benzyl butyl phthalate | 0.0417 | U |
| 111-91-1 | Bis(2-chloroethoxy)methane | 0.0417 | U |
| 111-44-4 | Bis(2-chloroethyl)ether | 0.0417 | U |
| 108-60-1 | Bis(2-chloroisopropyl)ether | 0.0417 | U |
| 117-81-7 | Bis(2-ethylhexyl)phthalate | 0.0417 | U |
| 105-60-2 | Caprolactam | 0.0833 | U |
| 86-74-8 | Carbazole | 0.0417 | U |
| 218-01-9 | Chrysene | 0.0417 | U |
| 53-70-3 | Dibenzo(a,h)anthracene | 0.0417 | U |
| 132-64-9 | Dibenzofuran | 0.0417 | U |
| 84-66-2 | Diethyl phthalate | 0.0417 | U |
| 131-11-3 | Dimethyl phthalate | 0.0417 | U |
| 84-74-2 | Di-n-butyl phthalate | 0.0417 | U |
| 117-84-0 | Di-n-octyl phthalate | 0.0417 | U |

**FORM I**

# METHOD BLANK DATA SHEET

## EPA 8270D

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | York Analytical Laboratories, Inc. | | | SDG: | 16I0260 |
| Client: | Langan Engineering & Environmental Services (NYC) | | | Project: | 170301202 450 Union Street |
| Matrix: | Soil | Laboratory ID: | BI60561-BLK1 | File ID: | SV402907.D |
| Prepared: | 09/14/16 11:54 | Preparation: | EPA 3550C | Initial/Final: | 30 g / 1 mL |
| Analyzed: | 09/15/16 11:49 | Instrument: | GC/MS BNA | | |
| Batch: | BI60561 | Sequence: | | Calibration: | |

| CAS NO. | COMPOUND | CONC. (mg/kg wet) | Q |
|---|---|---|---|
| 206-44-0 | Fluoranthene | 0.0417 | U |
| 86-73-7 | Fluorene | 0.0417 | U |
| 118-74-1 | Hexachlorobenzene | 0.0417 | U |
| 87-68-3 | Hexachlorobutadiene | 0.0417 | U |
| 77-47-4 | Hexachlorocyclopentadiene | 0.0417 | U |
| 67-72-1 | Hexachloroethane | 0.0417 | U |
| 193-39-5 | Indeno(1,2,3-cd)pyrene | 0.0417 | U |
| 78-59-1 | Isophorone | 0.0417 | U |
| 91-20-3 | Naphthalene | 0.0417 | U |
| 98-95-3 | Nitrobenzene | 0.0417 | U |
| 62-75-9 | N-Nitrosodimethylamine | 0.0417 | U |
| 621-64-7 | N-nitroso-di-n-propylamine | 0.0417 | U |
| 86-30-6 | N-Nitrosodiphenylamine | 0.0417 | U |
| 87-86-5 | Pentachlorophenol | 0.0417 | U |
| 85-01-8 | Phenanthrene | 0.0417 | U |
| 108-95-2 | Phenol | 0.0417 | U |
| 129-00-0 | Pyrene | 0.0417 | U |
| 110-86-1 | Pyridine | 0.167 | U |

| SYSTEM MONITORING COMPOUND | ADDED (mg/kg wet) | CONC (mg/kg wet) | % REC | QC LIMITS | Q |
|---|---|---|---|---|---|
| 2-Fluorophenol | 2.51 | 1.22 | 48.7 | 20 - 108 | |
| Phenol-d5 | 2.52 | 1.28 | 50.9 | 23 - 114 | |
| Nitrobenzene-d5 | 1.67 | 0.791 | 47.3 | 22 - 108 | |
| 2-Fluorobiphenyl | 1.67 | 0.761 | 45.6 | 21 - 113 | |
| 2,4,6-Tribromophenol | 2.50 | 1.12 | 44.9 | 19 - 110 | |
| Terphenyl-d14 | 1.68 | 0.636 | 37.8 | 24 - 116 | |

**FORM IV** **PREPARATION BATCH SUMMARY**

**EPA 8270D**

Laboratory: York Analytical Laboratories, Inc. SDG: 16I0260

Client: Langan Engineering & Environmental Services (NYC) Project: 170301202 450 Union Street

Batch: BI60561 Batch Matrix: Soil Preparation: EPA 3550C

| SAMPLE NAME | LAB SAMPLE ID | LAB FILE ID | DATE PREPARED | OBSERVATIONS |
|---|---|---|---|---|
| V01_0-1.5 | 16I0260-01 | SV402910.D | 09/14/16 11:54 | |
| Blank | BI60561-BLK1 | SV402907.D | 09/14/16 11:54 | |
| LCS | BI60561-BS1 | SV402905.D | 09/14/16 11:54 | |
| LCS Dup | BI60561-BSD1 | SV402906.D | 09/14/16 11:54 | |

**Form 5B**

# Semivolatile Organic Instrument Performance Check

**Decafluorotriphenylphosphine (DFTPP)**

Lab Name: York Analytical Laboratories, Inc.
Client: Langan Engineering & Environmental Services (NYC)
Lab File ID: SV401447.D
Instrument ID: BNA 4
Calibration: BNA4M54

SDG:16I0260
Project: 170301202 450 Union Street
DFTPP Injection Date: 06/24/16
DFTPP Injection Time: 08:24
Sequence: QBSV4062416A

| m/e | Ion Abundance Criteria | % Relative Abundance |
|---|---|---|
| 51 | 10.0-80.0 percent of mass 198 | 51.3 |
| 68 | Less than 2.0 percent of mass 69 | 0.1 |
| 70 | Less than 2.0 percent of mass 69 | 0.3 |
| 127 | 10.0-80.0 percent of mass 198 | 50.3 |
| 197 | Less than 2.0 percent of mass 198 | 0.0 |
| 198 | Base peak, 100 percent relative abundance | 100.0 |
| 199 | 5.0-9.0 percent 0f mass 198 | 7.3 |
| 275 | 10.0-60.0 percent of mass 198 | 21.1 |
| 365 | Greater than 1.0 percent of mass 198 | 2.2 |
| 441 | 0.01-100.0 percent of mass 443 | 15.6 |
| 442 | 50.0-100.0 percent of mass 198 | 79.0 |
| 443 | 15.0-24.0 percent of mass 442 | 20.5 |

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 |
|---|---|---|---|---|---|
| 1 | | 1.25 ppm ICAL STD | SV401453.D | 06/24/16 | 12:37 |
| 2 | | 2.5 ppm ICAL STD | SV401454.D | 06/24/16 | 13:11 |
| 3 | | 5 ppm ICAL STD | SV401455.D | 06/24/16 | 13:44 |
| 4 | | 10 ppm ICAL STD | SV401456.D | 06/24/16 | 14:18 |
| 5 | | 15 ppm ICAL STD | SV401457.D | 06/24/16 | 15:00 |
| 6 | | 20 ppm ICAL STD | SV401458.D | 06/24/16 | 15:34 |
| 7 | | 30 ppm ICAL STD | SV401459.D | 06/24/16 | 16:09 |
| 8 | | 40 ppm ICAL STD | SV401460.D | 06/24/16 | 16:44 |
| 9 | | ICV - 30 ppm | SV4011461.D | 06/24/16 | 17:18 |
| 10 | | | | | |
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**Form 5B**

# Semivolatile Organic Instrument Performance Check

**Decafluorotriphenylphosphine (DFTPP)**

Lab Name: York Analytical Laboratories, Inc. SDG:16I0260
Client: Langan Engineering & Environmental Services (NYC) Project: 170301202 450 Union Street
Lab File ID: SV402902.D DFTPP Injection Date: 09/15/16
Instrument ID: BNA 4 DFTPP Injection Time: 08:37
Calibration: BNA4M54 Sequence: QBSV4091516A

| m/e | Ion Abundance Criteria | % Relative Abundance |
|---|---|---|
| 51 | 10.0-80.0 percent of mass 198 | 40.1 |
| 68 | Less than 2.0 percent of mass 69 | 0.0 |
| 70 | Less than 2.0 percent of mass 69 | 0.0 |
| 127 | 10.0-80.0 percent of mass 198 | 40.6 |
| 197 | Less than 2.0 percent of mass 198 | 0.0 |
| 198 | Base peak, 100 percent relative abundance | 100.0 |
| 199 | 5.0-9.0 percent 0f mass 198 | 6.7 |
| 275 | 10.0-60.0 percent of mass 198 | 27.7 |
| 365 | Greater than 1.0 percent of mass 198 | 4.3 |
| 441 | 0.01-100.0 percent of mass 443 | 13.2 |
| 442 | 50.0-100.0 percent of mass 198 | 150.7 |
| 443 | 15.0-24.0 percent of mass 442 | 19.0 |

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 |
|---|---|---|---|---|---|
| 1 | | CCV - 30 ppm | SV402903.D | 09/15/16 | 09:09 |
| 2 | | BI60561-BS1 | SV402905.D | 9/15/2016 | 10:44 |
| 3 | | BI60561-BSD1 | SV402906.D | 9/15/2016 | 11:16 |
| 4 | | BI60561-BLK1 | SV402907.D | 9/15/2016 | 11:49 |
| 5 | V01_0-1.5 | 16I0260-01 | SV402910.D | 9/15/2016 | 13:36 |
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**Form 8A**

# Semivolatile Internal Standard Area and RT Summary

Lab Name: York Analytical Laboratories, Inc
Client: Langan Engineering & Environmental Services (NYC)
Sequence: QBSV4091516A
Calibration: BNA4M54
Lab File ID: SV402903.D

SDG:16I0260
Project: 170301202 450 Union Street
Instrument ID: BNA 4
Date Analyzed: 09/15/16
Time Analyzed: 9:09

| | IS 1 (DCB) | | IS 2 (NPT) | | IS 3 (ANT) | |
|---|---|---|---|---|---|---|
| | Area | RT | Area | RT | Area | RT |
| 12 Hour Std | 3184704 | 8.46 | 14024113 | 10.11 | 7567491 | 12.55 |
| Upper Limit | 6369408 | 8.96 | 28048226 | 10.61 | 15134982 | 13.05 |
| Lower Limit | 1592352 | 7.96 | 7012057 | 9.61 | 3783746 | 12.05 |
| Client Sample ID | | | | | | |
| BI60561-BS1 | 2844635 | 8.46 | 10552085 | 10.10 | 7250613 | 12.54 |
| BI60561-BSD1 | 3515604 | 8.47 | 13545374 | 10.11 | 8240026 | 12.55 |
| BI60561-BLK1 | 3205929 | 8.46 | 12057353 | 10.11 | 7099556 | 12.55 |
| V01_0-1.5 | 2942566 | 8.46 | 10811264 | 10.10 | 7153344 | 12.54 |
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IS 1 (DCB) = 1,4-Dichlorobenzene
IS 2 (NPT) = Naphthalene-d8
IS 3 (ANT) = Acenaphthene-d10

Area Upper Limit +100% of internal standard area
Area Lower Limit -50% of internal standard area
RT Upper Limit +0.50 minutes of internal standard RT
RT Upper Limit -0.50 minutes of internal standard RT

* = Values outside of QC limits

**Form 8B**

# Semivolatile Internal Standard Area and RT Summary

Lab Name: York Analytical Laboratories, Inc
Client: Langan Engineering & Environmental Services (NYC)
Sequence: QBSV4091516A
Calibration: BNA4M54
Lab File ID: SV402903.D

SDG:16I0260
Project: 170301202 450 Union Street
Instrument ID: BNA 4
Date Analyzed: 09/15/16
Time Analyzed: 9:09

| | IS 4 (PHN) | | IS 5 (CRY) | | IS 6 (PRY) | |
|---|---|---|---|---|---|---|
| | Area | RT | Area | RT | Area | RT |
| 12 Hour Std | 13557900 | 14.66 | 13748521 | 18.49 | 11349137 | 20.51 |
| Upper Limit | 27115800 | 15.16 | 27497042 | 18.99 | 22698274 | 21.01 |
| Lower Limit | 6778950 | 14.16 | 6874261 | 17.99 | 5674569 | 20.01 |
| Client Sample ID | | | | | | |
| BI60561-BS1 | 13682026 | 14.64 | 11027119 | 18.47 | 8500192 | 20.50 |
| BI60561-BSD1 | 14924565 | 14.66 | 14980613 | 18.49 | 10434502 | 20.51 |
| BI60561-BLK1 | 12357264 | 14.66 | 12505723 | 18.48 | 8388538 | 20.50 |
| V01_0-1.5 | 13463684 | 14.64 | 11447928 | 18.48 | 9193612 | 20.50 |
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IS 4 (PHN) = Phenanthrene-d10
IS 5 (CRY) = Chrysene-d12
IS 6 (PRY) = Perylene-d12

Area Upper Limit +100% of internal standard area
Area Lower Limit -50% of internal standard area
RT Upper Limit +0.50 minutes of internal standard RT
RT Upper Limit -0.50 minutes of internal standard RT

* Values outside of QC limits

# METHOD DETECTION AND REPORTING LIMITS

## EPA 8270D

**Laboratory:** York Analytical Laboratories, Inc. **SDG:** 16I0260

**Client:** Langan Engineering & Environmental Services (NYC) **Project:** 170301202 450 Union Street

**Matrix:** Soil **Instrument:**

| Analyte | LOD | LOQ | Units |
|---|---|---|---|
| 1,1'-Biphenyl | 0.0209 | 0.0417 | mg/kg |
| 1,2,4,5-Tetrachlorobenzene | 0.0417 | 0.0833 | mg/kg |
| 1,2,4-Trichlorobenzene | 0.0209 | 0.0417 | mg/kg |
| 1,2-Dichlorobenzene | 0.0209 | 0.0417 | mg/kg |
| 1,2-Diphenylhydrazine (as Azobenzene) | 0.0209 | 0.0417 | mg/kg |
| 1,3-Dichlorobenzene | 0.0209 | 0.0417 | mg/kg |
| 1,4-Dichlorobenzene | 0.0209 | 0.0417 | mg/kg |
| 2,3,4,6-Tetrachlorophenol | 0.0417 | 0.0833 | mg/kg |
| 2,4,5-Trichlorophenol | 0.0209 | 0.0417 | mg/kg |
| 2,4,6-Trichlorophenol | 0.0209 | 0.0417 | mg/kg |
| 2,4-Dichlorophenol | 0.0209 | 0.0417 | mg/kg |
| 2,4-Dimethylphenol | 0.0209 | 0.0417 | mg/kg |
| 2,4-Dinitrophenol | 0.0417 | 0.0833 | mg/kg |
| 2,4-Dinitrotoluene | 0.0209 | 0.0417 | mg/kg |
| 2,6-Dinitrotoluene | 0.0209 | 0.0417 | mg/kg |
| 2-Chloronaphthalene | 0.0209 | 0.0417 | mg/kg |
| 2-Chlorophenol | 0.0209 | 0.0417 | mg/kg |
| 2-Methylnaphthalene | 0.0209 | 0.0417 | mg/kg |
| 2-Methylphenol | 0.0209 | 0.0417 | mg/kg |
| 2-Nitroaniline | 0.0417 | 0.0833 | mg/kg |
| 2-Nitrophenol | 0.0209 | 0.0417 | mg/kg |
| 3- & 4-Methylphenols | 0.0209 | 0.0417 | mg/kg |
| 3,3'-Dichlorobenzidine | 0.0209 | 0.0417 | mg/kg |
| 3-Nitroaniline | 0.0417 | 0.0833 | mg/kg |
| 4,6-Dinitro-2-methylphenol | 0.0417 | 0.0833 | mg/kg |
| 4-Bromophenyl phenyl ether | 0.0209 | 0.0417 | mg/kg |
| 4-Chloro-3-methylphenol | 0.0209 | 0.0417 | mg/kg |
| 4-Chloroaniline | 0.0209 | 0.0417 | mg/kg |
| 4-Chlorophenyl phenyl ether | 0.0209 | 0.0417 | mg/kg |
| 4-Nitroaniline | 0.0417 | 0.0833 | mg/kg |
| 4-Nitrophenol | 0.0417 | 0.0833 | mg/kg |
| Acenaphthene | 0.0209 | 0.0417 | mg/kg |
| Acenaphthylene | 0.0209 | 0.0417 | mg/kg |
| Acetophenone | 0.0209 | 0.0417 | mg/kg |
| Aniline | 0.0835 | 0.167 | mg/kg |
| Anthracene | 0.0209 | 0.0417 | mg/kg |
| Atrazine | 0.0209 | 0.0417 | mg/kg |

# METHOD DETECTION AND REPORTING LIMITS

## EPA 8270D

**Laboratory:** York Analytical Laboratories, Inc. **SDG:** 16I0260

**Client:** Langan Engineering & Environmental Services (NYC) **Project:** 170301202 450 Union Street

**Matrix:** Soil **Instrument:**

| Analyte | LOD | LOQ | Units |
|---|---|---|---|
| Benzaldehyde | 0.0209 | 0.0417 | mg/kg |
| Benzidine | 0.0835 | 0.167 | mg/kg |
| Benzo(a)anthracene | 0.0209 | 0.0417 | mg/kg |
| Benzo(a)pyrene | 0.0209 | 0.0417 | mg/kg |
| Benzo(b)fluoranthene | 0.0209 | 0.0417 | mg/kg |
| Benzo(g,h,i)perylene | 0.0209 | 0.0417 | mg/kg |
| Benzo(k)fluoranthene | 0.0209 | 0.0417 | mg/kg |
| Benzoic acid | 0.0209 | 0.0417 | mg/kg |
| Benzyl alcohol | 0.0209 | 0.0417 | mg/kg |
| Benzyl butyl phthalate | 0.0209 | 0.0417 | mg/kg |
| Bis(2-chloroethoxy)methane | 0.0209 | 0.0417 | mg/kg |
| Bis(2-chloroethyl)ether | 0.0209 | 0.0417 | mg/kg |
| Bis(2-chloroisopropyl)ether | 0.0209 | 0.0417 | mg/kg |
| Bis(2-ethylhexyl)phthalate | 0.0209 | 0.0417 | mg/kg |
| Caprolactam | 0.0417 | 0.0833 | mg/kg |
| Carbazole | 0.0209 | 0.0417 | mg/kg |
| Chrysene | 0.0209 | 0.0417 | mg/kg |
| Dibenzo(a,h)anthracene | 0.0209 | 0.0417 | mg/kg |
| Dibenzofuran | 0.0209 | 0.0417 | mg/kg |
| Diethyl phthalate | 0.0209 | 0.0417 | mg/kg |
| Dimethyl phthalate | 0.0209 | 0.0417 | mg/kg |
| Di-n-butyl phthalate | 0.0209 | 0.0417 | mg/kg |
| Di-n-octyl phthalate | 0.0209 | 0.0417 | mg/kg |
| Fluoranthene | 0.0209 | 0.0417 | mg/kg |
| Fluorene | 0.0209 | 0.0417 | mg/kg |
| Hexachlorobenzene | 0.0209 | 0.0417 | mg/kg |
| Hexachlorobutadiene | 0.0209 | 0.0417 | mg/kg |
| Hexachlorocyclopentadiene | 0.0209 | 0.0417 | mg/kg |
| Hexachloroethane | 0.0209 | 0.0417 | mg/kg |
| Indeno(1,2,3-cd)pyrene | 0.0209 | 0.0417 | mg/kg |
| Isophorone | 0.0209 | 0.0417 | mg/kg |
| Naphthalene | 0.0209 | 0.0417 | mg/kg |
| Nitrobenzene | 0.0209 | 0.0417 | mg/kg |
| N-Nitrosodimethylamine | 0.0209 | 0.0417 | mg/kg |
| N-nitroso-di-n-propylamine | 0.0209 | 0.0417 | mg/kg |
| N-Nitrosodiphenylamine | 0.0209 | 0.0417 | mg/kg |
| Pentachlorophenol | 0.0209 | 0.0417 | mg/kg |

# METHOD DETECTION AND REPORTING LIMITS

## EPA 8270D

**Laboratory:** York Analytical Laboratories, Inc. **SDG:** 16I0260

**Client:** Langan Engineering & Environmental Services (NYC) **Project:** 170301202 450 Union Street

**Matrix:** Soil **Instrument:**

| Analyte | LOD | LOQ | Units |
|---|---|---|---|
| Phenanthrene | 0.0209 | 0.0417 | mg/kg |
| Phenol | 0.0209 | 0.0417 | mg/kg |
| Pyrene | 0.0209 | 0.0417 | mg/kg |
| Pyridine | 0.0835 | 0.167 | mg/kg |

# HOLDING TIME SUMMARY

## EPA 8270D

Laboratory: York Analytical Laboratories, Inc. SDG: 16I0260

Client: Langan Engineering & Environmental Services (NYC) Project: 170301202 450 Union Street

| Sample Name | Date Collected | Date Received | Date Prepared | Days to Prep | Max Days to Prep | Date Analyzed | Days to Analysis | Max Days to Analysis | Q |
|---|---|---|---|---|---|---|---|---|---|
| V01_0-1.5 | 09/07/16 13:00 | 09/08/16 18:45 | 09/14/16 11:54 | 6.95 | 14.00 | 09/15/16 13:36 | 1.07 | 40.00 | |

**FORM I**

# ORGANIC ANALYSIS DATA SHEET

**EPA 8270D**

**V01_0-1.5**

Laboratory: York Analytical Laboratories, Inc. SDG: 16I0260

Client: Langan Engineering & Environmental Services (NYC) Project: 170301202 450 Union Street

Matrix: Soil Laboratory ID: 16I0260-01 File ID: SV402910.D

Sampled: 09/07/16 13:00 Prepared: 09/14/16 11:54 Analyzed: 09/15/16 13:36

Solids: 96.56 Preparation: EPA 3550C Initial/Final: 30 g / 1 mL

Batch: BI60561 Sequence: Calibration: Instrument: GC/MS BNA

| CAS NO. | COMPOUND | DILUTION | CONC. (mg/kg dry) | Q |
|---|---|---|---|---|
| 92-52-4 | 1,1'-Biphenyl | 2 | 0.0864 | U |
| 95-94-3 | 1,2,4,5-Tetrachlorobenzene | 2 | 0.173 | U |
| 120-82-1 | 1,2,4-Trichlorobenzene | 2 | 0.0864 | U |
| 95-50-1 | 1,2-Dichlorobenzene | 2 | 0.0864 | U |
| 122-66-7 | 1,2-Diphenylhydrazine (as Azobenzene) | 2 | 0.0864 | U |
| 541-73-1 | 1,3-Dichlorobenzene | 2 | 0.0864 | U |
| 106-46-7 | 1,4-Dichlorobenzene | 2 | 0.0864 | U |
| 58-90-2 | 2,3,4,6-Tetrachlorophenol | 2 | 0.173 | U |
| 95-95-4 | 2,4,5-Trichlorophenol | 2 | 0.0864 | U |
| 88-06-2 | 2,4,6-Trichlorophenol | 2 | 0.0864 | U |
| 120-83-2 | 2,4-Dichlorophenol | 2 | 0.0864 | U |
| 105-67-9 | 2,4-Dimethylphenol | 2 | 0.0864 | U |
| 51-28-5 | 2,4-Dinitrophenol | 2 | 0.173 | U |
| 121-14-2 | 2,4-Dinitrotoluene | 2 | 0.0864 | U |
| 606-20-2 | 2,6-Dinitrotoluene | 2 | 0.0864 | U |
| 91-58-7 | 2-Chloronaphthalene | 2 | 0.0864 | U |
| 95-57-8 | 2-Chlorophenol | 2 | 0.0864 | U |
| 91-57-6 | 2-Methylnaphthalene | 2 | 0.0864 | U |
| 95-48-7 | 2-Methylphenol | 2 | 0.0864 | U |
| 88-74-4 | 2-Nitroaniline | 2 | 0.173 | U |
| 88-75-5 | 2-Nitrophenol | 2 | 0.0864 | U |
| 65794-96-9 | 3- & 4-Methylphenols | 2 | 0.0864 | U |
| 91-94-1 | 3,3'-Dichlorobenzidine | 2 | 0.0864 | U |
| 99-09-2 | 3-Nitroaniline | 2 | 0.173 | U |
| 534-52-1 | 4,6-Dinitro-2-methylphenol | 2 | 0.173 | U |
| 101-55-3 | 4-Bromophenyl phenyl ether | 2 | 0.0864 | U |
| 59-50-7 | 4-Chloro-3-methylphenol | 2 | 0.0864 | U |
| 106-47-8 | 4-Chloroaniline | 2 | 0.0864 | U |
| 7005-72-3 | 4-Chlorophenyl phenyl ether | 2 | 0.0864 | U |
| 100-01-6 | 4-Nitroaniline | 2 | 0.173 | U |
| 100-02-7 | 4-Nitrophenol | 2 | 0.173 | U |
| 83-32-9 | Acenaphthene | 2 | 0.0864 | U |
| 208-96-8 | Acenaphthylene | 2 | 0.0864 | U |
| 98-86-2 | Acetophenone | 2 | 0.0864 | U |
| 62-53-3 | Aniline | 2 | 0.346 | U |
| 120-12-7 | Anthracene | 2 | 0.0864 | U |
| 1912-24-9 | Atrazine | 2 | 0.0864 | U |
| 100-52-7 | Benzaldehyde | 2 | 0.0864 | U |
| 92-87-5 | Benzidine | 2 | 0.346 | U |
| 56-55-3 | Benzo(a)anthracene | 2 | 0.130 | D |

**FORM I**

# ORGANIC ANALYSIS DATA SHEET

**EPA 8270D**

**V01_0-1.5**

Laboratory: York Analytical Laboratories, Inc. SDG: 16I0260

Client: Langan Engineering & Environmental Services (NYC) Project: 170301202 450 Union Street

Matrix: Soil Laboratory ID: 16I0260-01 File ID: SV402910.D

Sampled: 09/07/16 13:00 Prepared: 09/14/16 11:54 Analyzed: 09/15/16 13:36

Solids: 96.56 Preparation: EPA 3550C Initial/Final: 30 g / 1 mL

Batch: BI60561 Sequence: Calibration: Instrument: GC/MS BNA

| CAS NO. | COMPOUND | DILUTION | CONC. (mg/kg dry) | Q |
|---|---|---|---|---|
| 50-32-8 | Benzo(a)pyrene | 2 | 0.126 | D |
| 205-99-2 | Benzo(b)fluoranthene | 2 | 0.0918 | D |
| 191-24-2 | Benzo(g,h,i)perylene | 2 | 0.0835 | JD |
| 207-08-9 | Benzo(k)fluoranthene | 2 | 0.119 | D |
| 65-85-0 | Benzoic acid | 2 | 0.0864 | U |
| 100-51-6 | Benzyl alcohol | 2 | 0.0864 | U |
| 85-68-7 | Benzyl butyl phthalate | 2 | 0.0864 | U |
| 111-91-1 | Bis(2-chloroethoxy)methane | 2 | 0.0864 | U |
| 111-44-4 | Bis(2-chloroethyl)ether | 2 | 0.0864 | U |
| 108-60-1 | Bis(2-chloroisopropyl)ether | 2 | 0.0864 | U |
| 117-81-7 | Bis(2-ethylhexyl)phthalate | 2 | 0.0525 | JD |
| 105-60-2 | Caprolactam | 2 | 0.173 | U |
| 86-74-8 | Carbazole | 2 | 0.0864 | U |
| 218-01-9 | Chrysene | 2 | 0.159 | D |
| 53-70-3 | Dibenzo(a,h)anthracene | 2 | 0.0864 | U |
| 132-64-9 | Dibenzofuran | 2 | 0.0864 | U |
| 84-66-2 | Diethyl phthalate | 2 | 0.0864 | U |
| 131-11-3 | Dimethyl phthalate | 2 | 0.0864 | U |
| 84-74-2 | Di-n-butyl phthalate | 2 | 0.0864 | U |
| 117-84-0 | Di-n-octyl phthalate | 2 | 0.0864 | U |
| 206-44-0 | Fluoranthene | 2 | 0.244 | D |
| 86-73-7 | Fluorene | 2 | 0.0864 | U |
| 118-74-1 | Hexachlorobenzene | 2 | 0.0864 | U |
| 87-68-3 | Hexachlorobutadiene | 2 | 0.0864 | U |
| 77-47-4 | Hexachlorocyclopentadiene | 2 | 0.0864 | U |
| 67-72-1 | Hexachloroethane | 2 | 0.0864 | U |
| 193-39-5 | Indeno(1,2,3-cd)pyrene | 2 | 0.0677 | JD |
| 78-59-1 | Isophorone | 2 | 0.0864 | U |
| 91-20-3 | Naphthalene | 2 | 0.0864 | U |
| 98-95-3 | Nitrobenzene | 2 | 0.0864 | U |
| 62-75-9 | N-Nitrosodimethylamine | 2 | 0.0864 | U |
| 621-64-7 | N-nitroso-di-n-propylamine | 2 | 0.0864 | U |
| 86-30-6 | N-Nitrosodiphenylamine | 2 | 0.0864 | U |
| 87-86-5 | Pentachlorophenol | 2 | 0.0864 | U |
| 85-01-8 | Phenanthrene | 2 | 0.153 | D |
| 108-95-2 | Phenol | 2 | 0.0864 | U |
| 129-00-0 | Pyrene | 2 | 0.251 | D |
| 110-86-1 | Pyridine | 2 | 0.346 | U |

| SYSTEM MONITORING COMPOUND | ADDED (mg/kg dry) | CONC (mg/kg dry) | % REC | QC LIMITS | Q |
|---|---|---|---|---|---|

**FORM I**

# ORGANIC ANALYSIS DATA SHEET

**EPA 8270D**

**V01_0-1.5**

Laboratory: York Analytical Laboratories, Inc. SDG: 16I0260

Client: Langan Engineering & Environmental Services (NYC) Project: 170301202 450 Union Street

Matrix: Soil Laboratory ID: 16I0260-01 File ID: SV402910.D

Sampled: 09/07/16 13:00 Prepared: 09/14/16 11:54 Analyzed: 09/15/16 13:36

Solids: 96.56 Preparation: EPA 3550C Initial/Final: 30 g / 1 mL

Batch: BI60561 Sequence: Calibration: Instrument: GC/MS BNA

| SYSTEM MONITORING COMPOUND | ADDED (mg/kg dry) | CONC (mg/kg dry) | % REC | QC LIMITS | Q |
|---|---|---|---|---|---|
| 2-Fluorophenol | 2.60 | 0.966 | 37.1 | 20 - 108 | |
| Phenol-d5 | 2.61 | 1.11 | 42.4 | 23 - 114 | |
| Nitrobenzene-d5 | 1.73 | 0.683 | 39.4 | 22 - 108 | |
| 2-Fluorobiphenyl | 1.73 | 0.559 | 32.4 | 21 - 113 | |
| 2,4,6-Tribromophenol | 2.59 | 1.19 | 46.0 | 19 - 110 | |
| Terphenyl-d14 | 1.74 | 0.632 | 36.3 | 24 - 116 | |

* Values outside of QC limits

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\091516\SV402910.D Vial: 9
Acq On : 15 Sep 2016 1:36 pm Operator: KH
Sample : 16I0260-01 Inst : GC/MS BNA
Misc : QBSV4091516A 2X NJDEP/TCL/375 ASPB Multiplr: 2.00
MS Integration Params: EVENTS.E
Quant Time: Sep 15 15:43 2016 Quant Results File: BNA4M54.RES

Quant Method : C:\HPCHEM\1\METHODS\BNA4M54.M (Chemstation Integrator)
Title : GC MS BNA 4 Semi Volatiles Calibration
Last Update : Mon Jul 25 09:09:46 2016
Response via : Initial Calibration
DataAcq Meth : BNA4M54

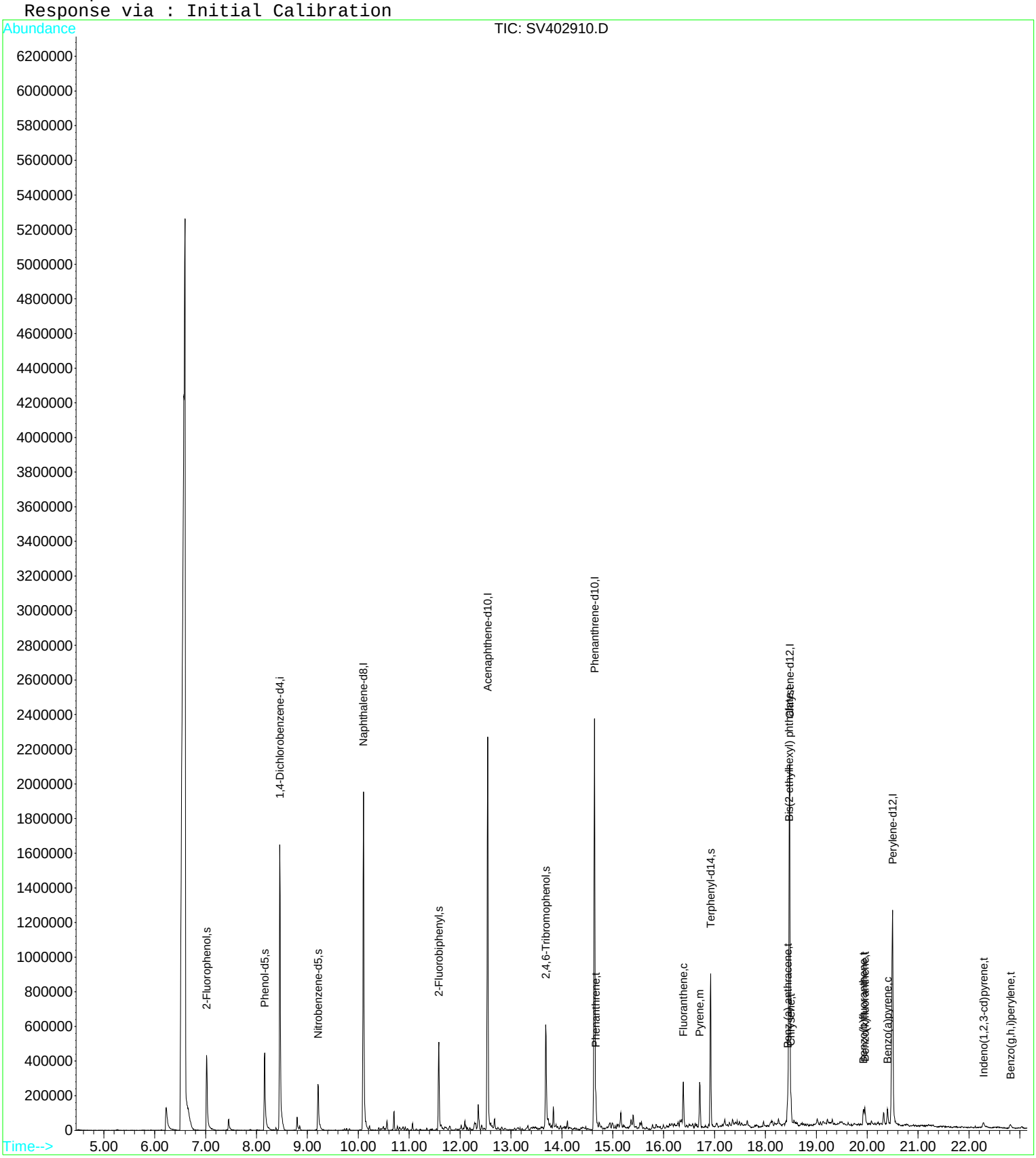
| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 1) 1,4-Dichlorobenzene-d4 | 8.46 | 152 | 2942566 | 40.00 | ug/mL | -0.01 |
| 20) Naphthalene-d8 | 10.10 | 136 | 10811264 | 40.00 | ug/mL | -0.02 |
| 39) Acenaphthene-d10 | 12.54 | 164 | 7153344 | 40.00 | ug/mL | -0.03 |
| 62) Phenanthrene-d10 | 14.64 | 188 | 13463684 | 40.00 | ug/mL | -0.02 |
| 86) Chrysene-d12 | 18.48 | 240 | 11447928 | 40.00 | ug/mL | -0.02 |
| 92) Perylene-d12 | 20.50 | 264 | 9193612 | 40.00 | ug/mL | -0.02 |
| **System Monitoring Compounds** | | | | | | |
| 4) 2-Fluorophenol | 7.02 | 112 | 1610662 | 13.99 | ug/mL | 0.07 |
| Spiked Amount 75.000 | Range 15 - 87 | | Recovery = 18.65% | | | |
| 5) Phenol-d5 | 8.16 | 99 | 1999594 | 16.01 | ug/mL | 0.02 |
| Spiked Amount 75.000 | Range 10 - 100 | | Recovery = 21.35% | | | |
| 21) Nitrobenzene-d5 | 9.21 | 82 | 1227135 | 9.89 | ug/mL | -0.01 |
| Spiked Amount 50.000 | Range 26 - 120 | | Recovery = 19.78%# | | | |
| 44) 2-Fluorobiphenyl | 11.58 | 172 | 2085807 | 8.09 | ug/mL | -0.02 |
| Spiked Amount 50.000 | Range 29 - 120 | | Recovery = 16.18%# | | | |
| 67) 2,4,6-Tribromophenol | 13.69 | 330 | 1094690 | 17.24 | ug/mL | -0.02 |
| Spiked Amount 75.000 | Range 35 - 126 | | Recovery = 22.99%# | | | |
| 81) Terphenyl-d14 | 16.92 | 244 | 2692903 | 9.16 | ug/mL | -0.02 |
| Spiked Amount 50.000 | Range 35 - 127 | | Recovery = 18.32%# | | | |
| **Target Compounds** | | | | | | Qvalue |
| 73) Phenanthrene | 14.67 | 178 | 769906 | 2.22 | ug/mL# | 99 |
| 78) Fluoranthene | 16.39 | 202 | 1408864 | 3.53 | ug/mL# | 99 |
| 80) Pyrene | 16.71 | 202 | 1470855 | 3.63 | ug/mL# | 86 |
| 83) Bis(2-ethylhexyl) phthalat | 18.46 | 149 | 227633 | 0.76 | ug/mL# | 82 |
| 84) Benz (a) anthracene | 18.43 | 228 | 709023 | 1.88 | ug/mL# | 90 |
| 87) Chrysene | 18.50 | 228 | 738314 | 2.31 | ug/mL# | 93 |
| 89) Benzo(b)fluoranthene | 19.93 | 252 | 464173 | 1.33 | ug/mL# | 95 |
| 90) Benzo(k)fluoranthene | 19.95 | 252 | 598146 | 1.73 | ug/mL# | 90 |
| 91) Benzo(a)pyrene | 20.40 | 252 | 573562 | 1.82 | ug/mL# | 91 |
| 93) Indeno(1,2,3-cd)pyrene | 22.29 | 276 | 277584 | 0.98 | ug/mL# | 93 |
| 95) Benzo(g,h,i)perylene | 22.81 | 276 | 266586 | 1.21 | ug/mL# | 91 |

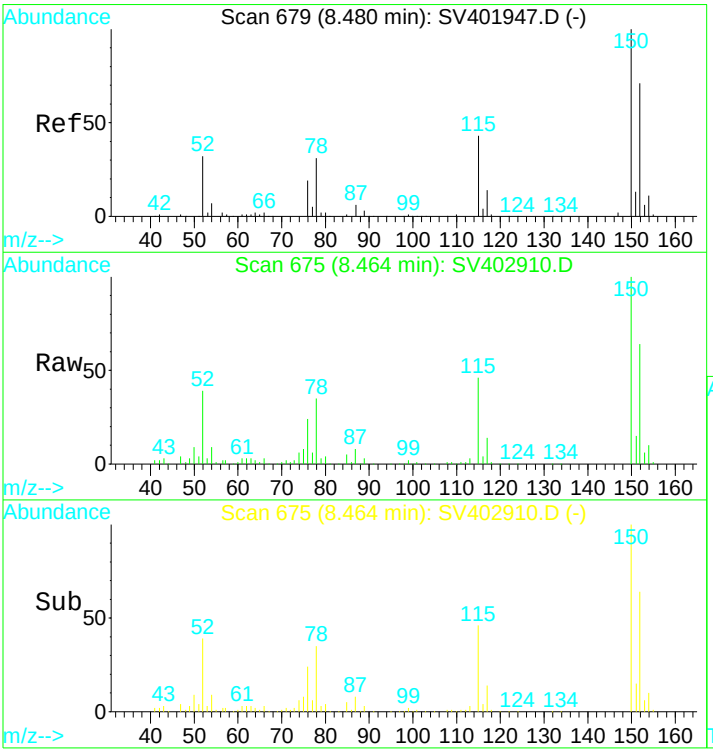
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\091516\SV402910.D Vial: 9
Acq On : 15 Sep 2016 1:36 pm Operator: KH
Sample : 16I0260-01 Inst : GC/MS BNA
Misc : QBSV4091516A 2X NJDEP/TCL/375 ASPB Multiplr: 2.00
MS Integration Params: EVENTS.E
Quant Time: Sep 15 15:43 2016 Quant Results File: BNA4M54.RES

Method : C:\HPCHEM\1\METHODS\BNA4M54.M (Chemstation Integrator)
Title : GC MS BNA 4 Semi Volatiles Calibration
Last Update : Mon Jul 25 09:09:46 2016
Response via : Initial Calibration

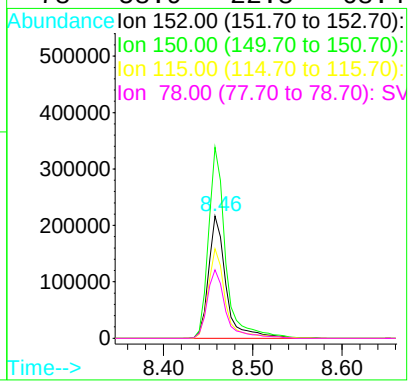


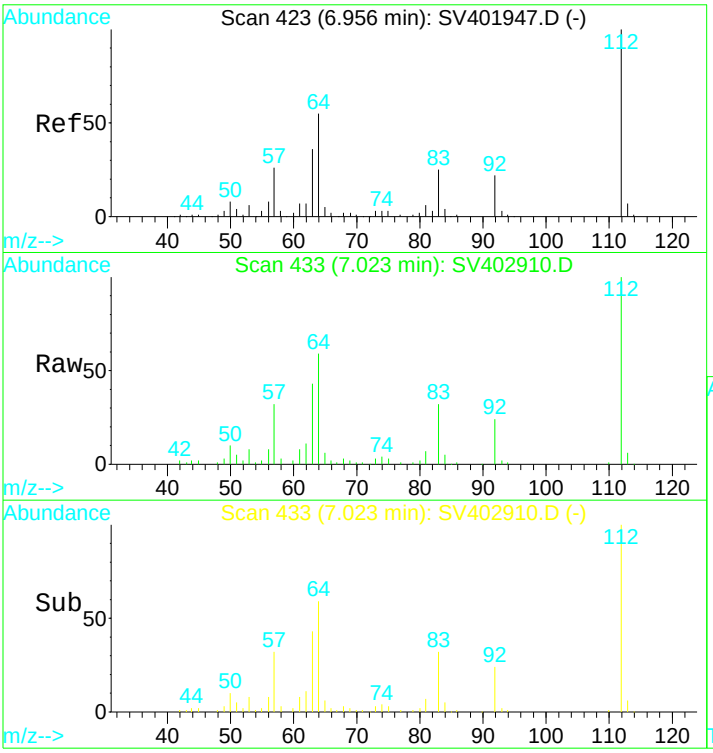



#1
1,4-Dichlorobenzene-d4
Concen: 40.00 ug/mL
RT: 8.46 min Scan# 675
Delta R.T. -0.01 min
Lab File: SV402910.D
Acq: 15 Sep 2016 1:36 pm

Tgt Ion:152 Resp: 2942566

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 152 | 100 | | |
| 150 | 153.1 | 84.0 | 252.2 |
| 115 | 72.1 | 31.3 | 93.9 |
| 78 | 58.9 | 22.8 | 68.4 |

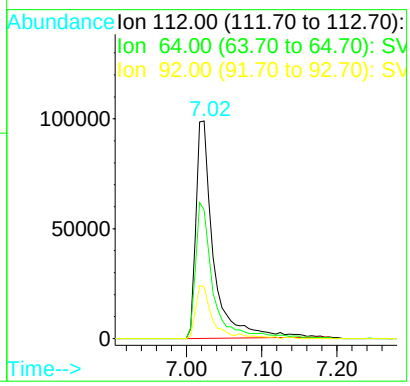


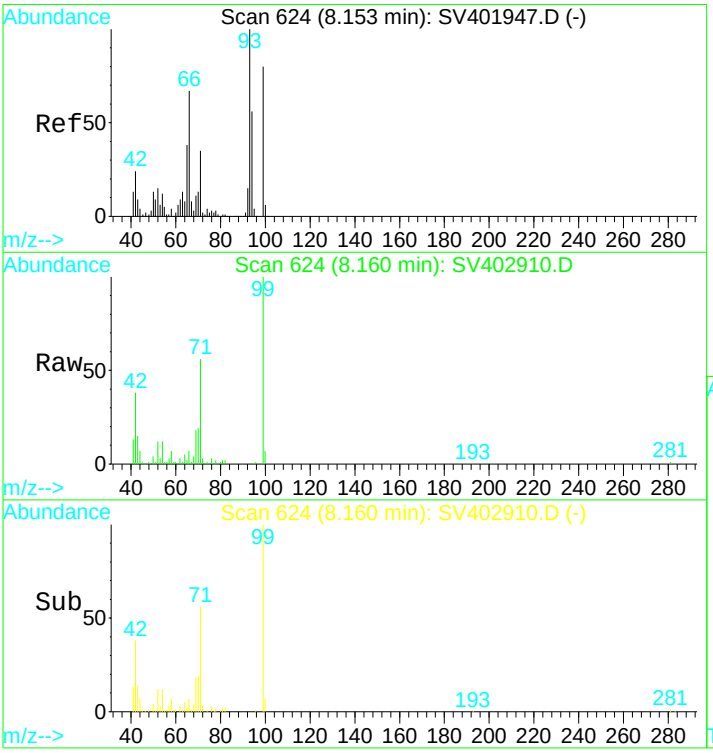




#4
2-Fluorophenol
Concen: N.D. ug/mL
RT: 7.02 min Scan# 433
Delta R.T. 0.07 min
Lab File: SV402910.D
Acq: 15 Sep 2016 1:36 pm

Tgt Ion:112 Resp: 1610662

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 112 | 100 | | |
| 64 | 63.2 | 45.0 | 67.4 |
| 92 | 23.7 | 16.1 | 24.1 |

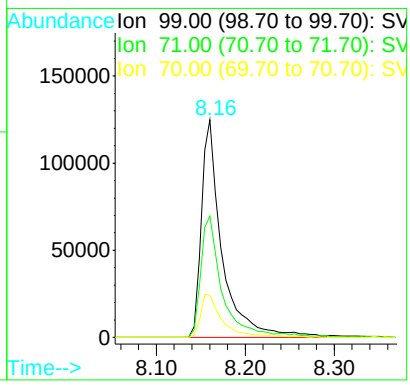


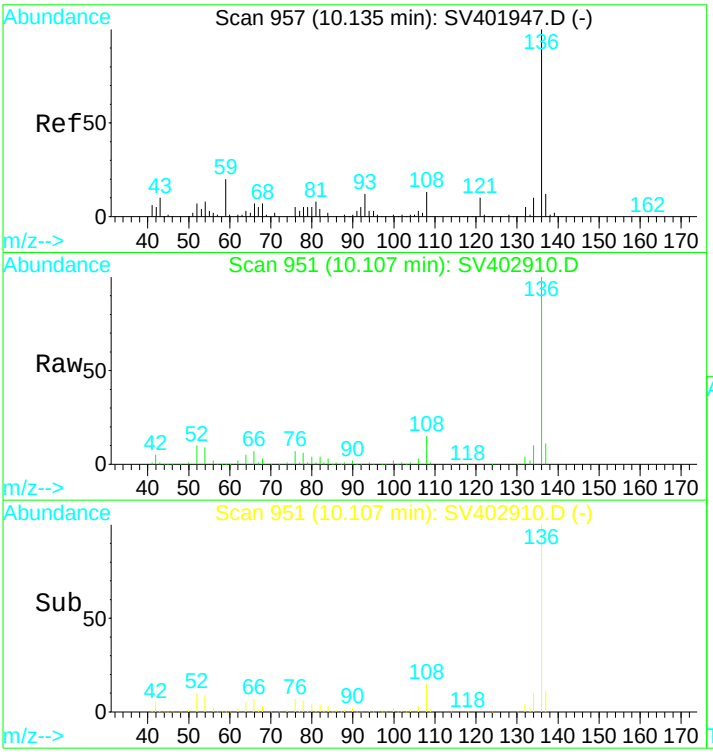



#5
Phenol-d5
Concen: N.D. ug/mL
RT: 8.16 min Scan# 624
Delta R.T. 0.02 min
Lab File: SV402910.D
Acq: 15 Sep 2016 1:36 pm

Tgt Ion: 99 Resp: 1999594

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 99 | 100 | | |
| 71 | 57.9 | 35.7 | 53.5# |
| 70 | 20.8 | 14.5 | 21.7 |

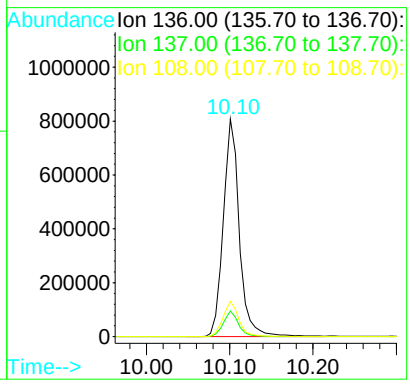


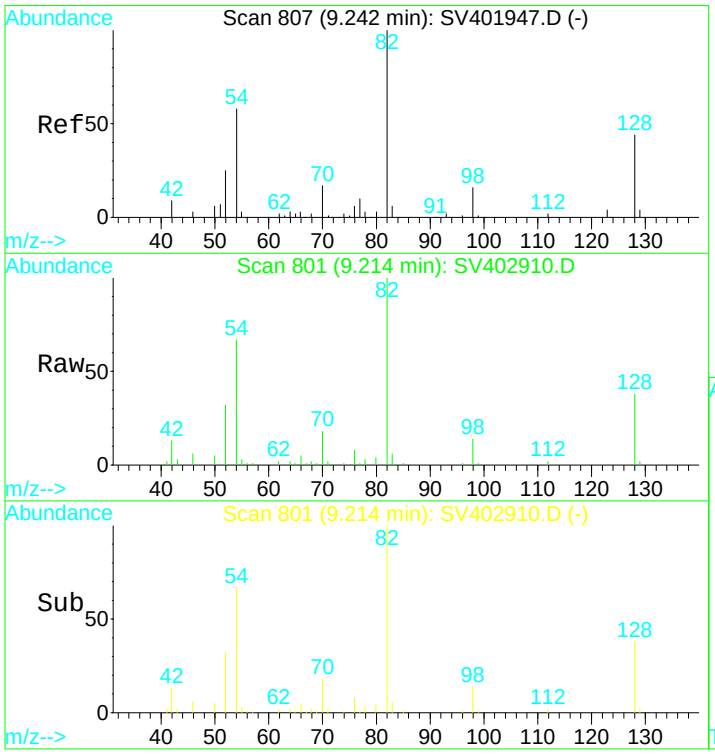




#20
Naphthalene-d8
Concen: 40.00 ug/mL
RT: 10.10 min Scan# 951
Delta R.T. -0.02 min
Lab File: SV402910.D
Acq: 15 Sep 2016 1:36 pm

Tgt Ion:136 Resp:10811264

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 136 | 100 | | |
| 137 | 11.2 | 5.8 | 17.4 |
| 108 | 16.2 | 6.5 | 19.4 |

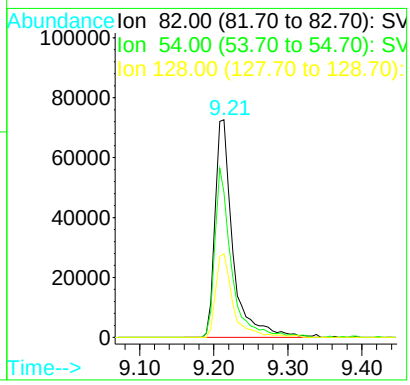


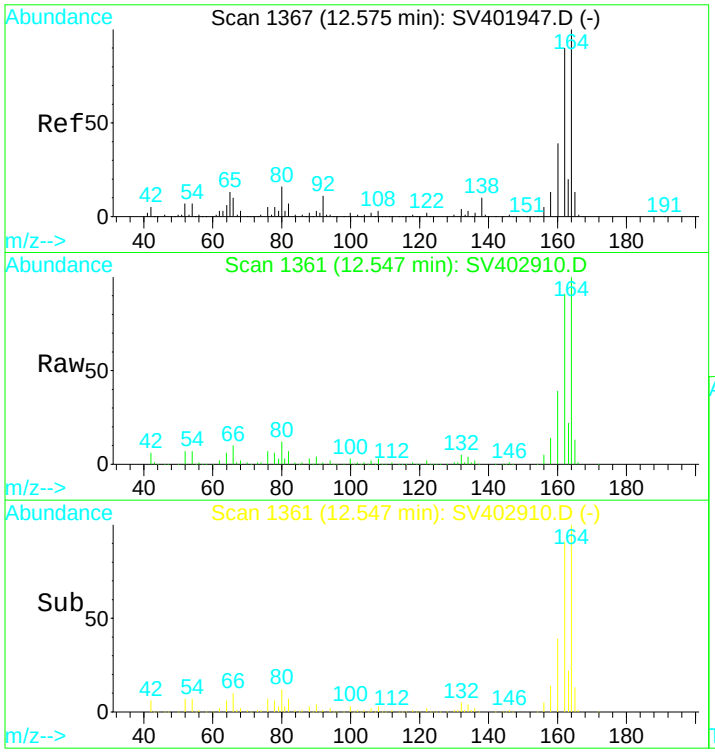



#21
Nitrobenzene-d5
Concen: 40.00 ug/mL
RT: 9.21 min Scan# 801
Delta R.T. -0.01 min
Lab File: SV402910.D
Acq: 15 Sep 2016 1:36 pm

Tgt Ion: 82 Resp: 1227135

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 82 | 100 | | |
| 54 | 71.7 | 0.1 | 0.1# |
| 128 | 37.0 | 0.1 | 0.1# |

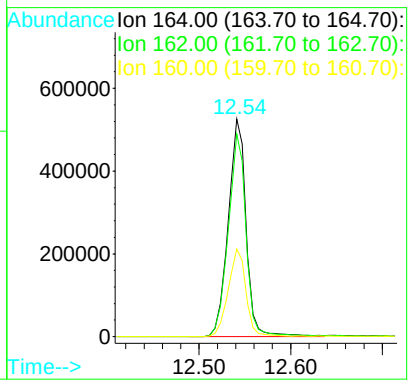


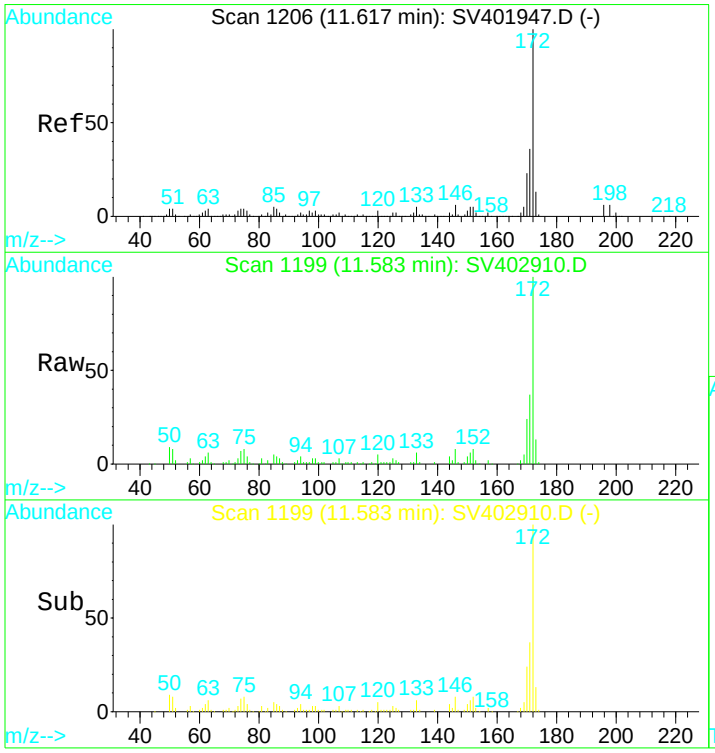




#39
Acenaphthene-d10
Concen: 40.00 ug/mL
RT: 12.54 min Scan# 1361
Delta R.T. -0.03 min
Lab File: SV402910.D
Acq: 15 Sep 2016 1:36 pm

Tgt Ion:164 Resp: 7153344

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 164 | 100 | | |
| 162 | 92.6 | 45.9 | 137.6 |
| 160 | 40.3 | 19.8 | 59.4 |

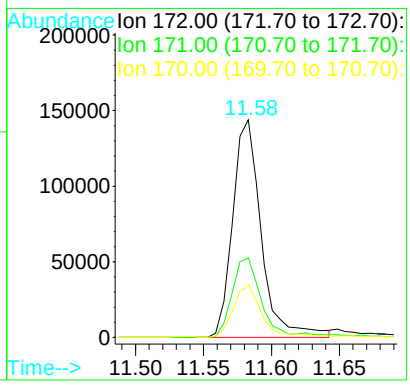


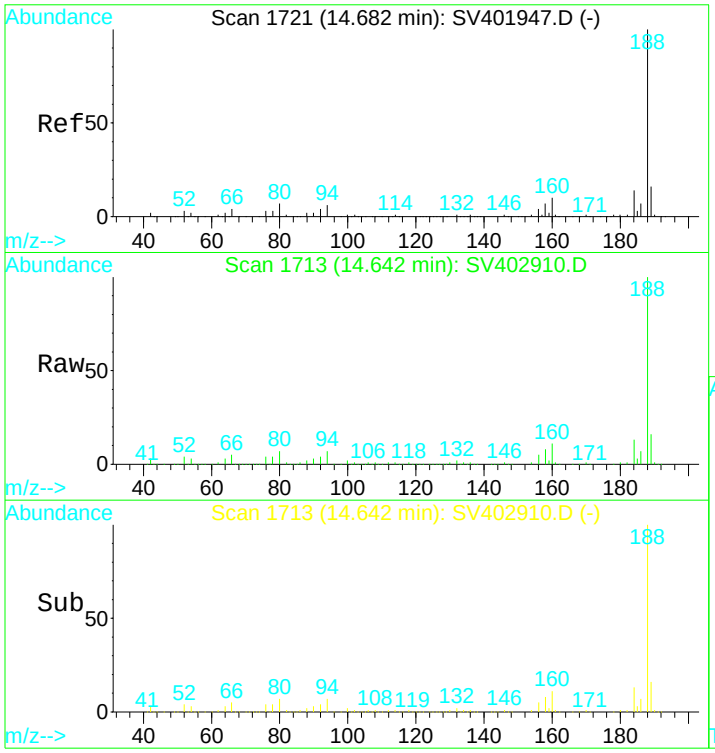



#44
2-Fluorobiphenyl
Concen: N.D. ug/mL
RT: 11.58 min Scan# 1199
Delta R.T. -0.02 min
Lab File: SV402910.D
Acq: 15 Sep 2016 1:36 pm

Tgt Ion:172 Resp: 2085807

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 172 | 100 | | |
| 171 | 40.1 | 29.1 | 43.7 |
| 170 | 24.1 | 18.6 | 27.8 |

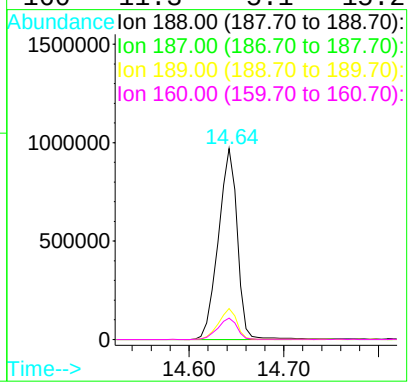


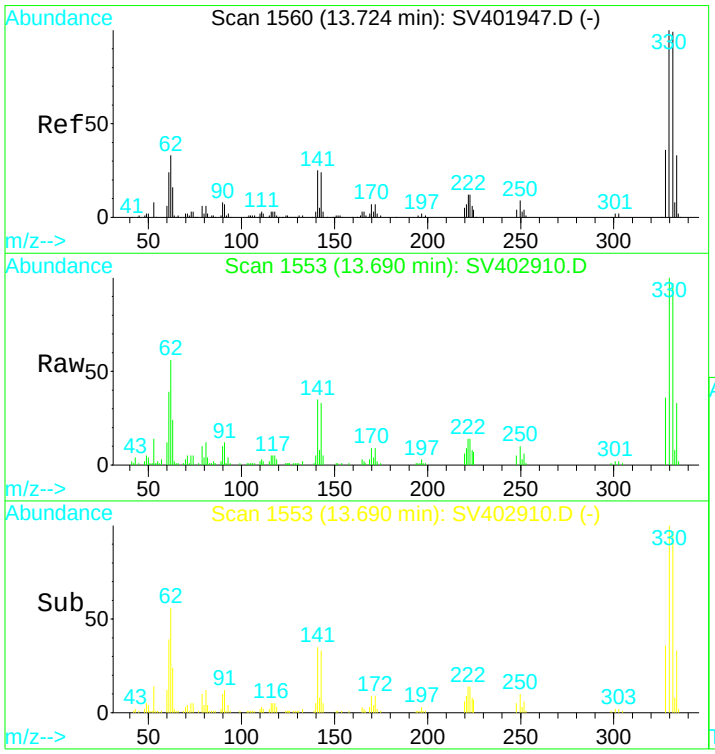




#62
Phenanthrene-d10
Concen: 40.00 ug/mL
RT: 14.64 min Scan# 1713
Delta R.T. -0.02 min
Lab File: SV402910.D
Acq: 15 Sep 2016 1:36 pm

Tgt Ion:188 Resp:13463684

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 188 | 100 | | |
| 187 | 0.0 | 0.2 | 0.2# |
| 189 | 15.7 | 8.0 | 24.0 |
| 160 | 11.3 | 5.1 | 15.2 |

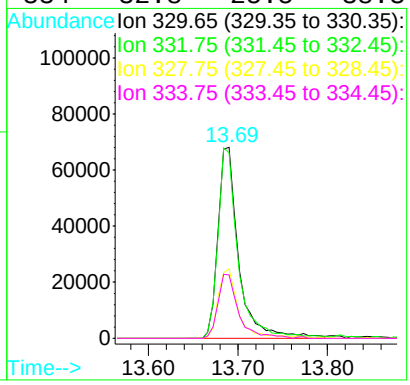


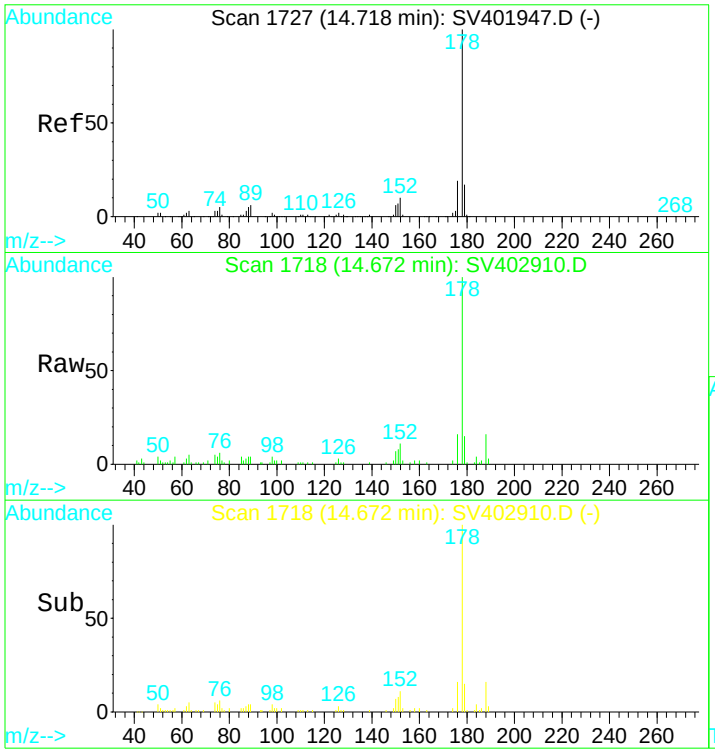



#67
2,4,6-Tribromophenol
Concen: Below ug/mL
RT: 13.69 min Scan# 1553
Delta R.T. -0.02 min
Lab File: SV402910.D
Acq: 15 Sep 2016 1:36 pm

Tgt Ion:330 Resp: 1094690

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 330 | 100 | | |
| 332 | 97.1 | 78.8 | 118.2 |
| 328 | 35.6 | 28.2 | 42.4 |
| 334 | 32.8 | 25.5 | 38.3 |

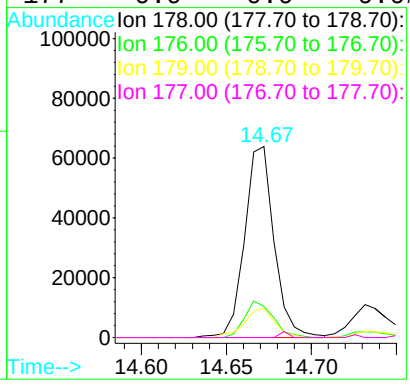


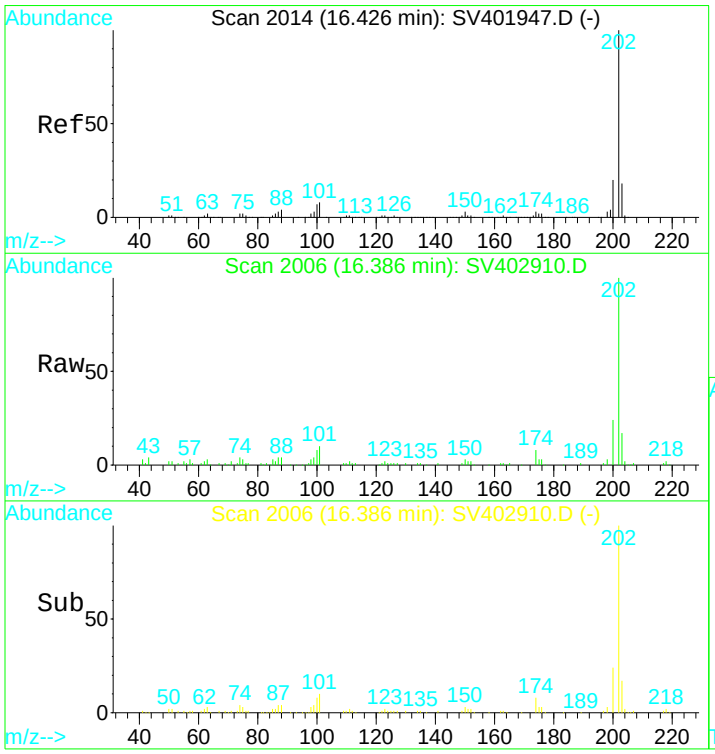




#73
Phenanthrene
Concen: 2.22 ug/mL
RT: 14.67 min Scan# 1718
Delta R.T. -0.02 min
Lab File: SV402910.D
Acq: 15 Sep 2016 1:36 pm

Tgt Ion:178 Resp: 769906

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 178 | 100 | | |
| 176 | 18.4 | 15.2 | 22.8 |
| 179 | 15.7 | 13.0 | 19.4 |
| 177 | 0.9 | 0.0 | 0.0# |

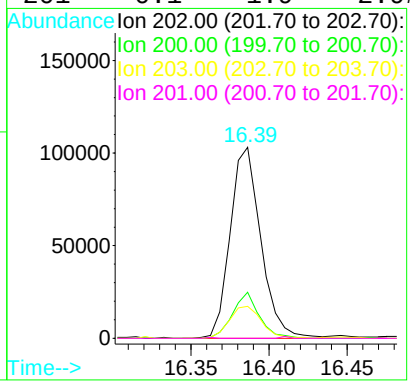


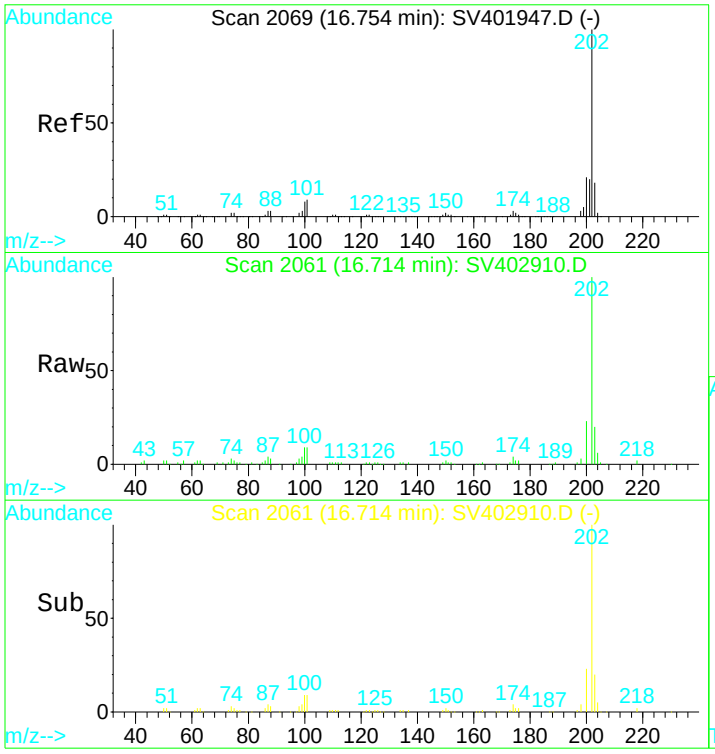



#78
Fluoranthene
Concen: 3.53 ug/mL
RT: 16.39 min Scan# 2006
Delta R.T. -0.02 min
Lab File: SV402910.D
Acq: 15 Sep 2016 1:36 pm

Tgt Ion:202 Resp: 1408864

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 202 | 100 | | |
| 200 | 20.8 | 16.1 | 24.1 |
| 203 | 17.6 | 14.3 | 21.5 |
| 201 | 0.1 | 1.9 | 2.9# |

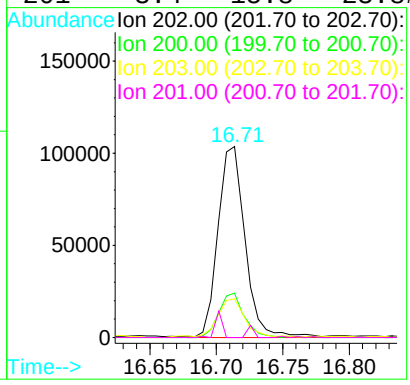


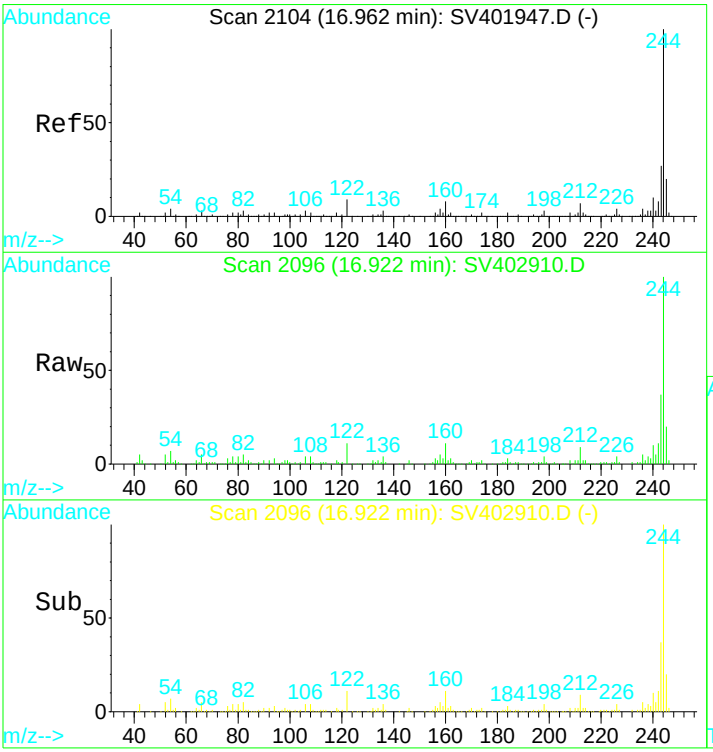




#80
Pyrene
Concen: 3.63 ug/mL
RT: 16.71 min Scan# 2061
Delta R.T. -0.02 min
Lab File: SV402910.D
Acq: 15 Sep 2016 1:36 pm

Tgt Ion:202 Resp: 1470855

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 202 | 100 | | |
| 200 | 21.5 | 16.4 | 24.6 |
| 203 | 20.6 | 15.0 | 22.6 |
| 201 | 3.4 | 15.8 | 23.8# |

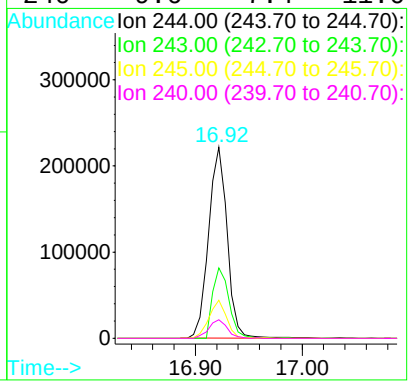


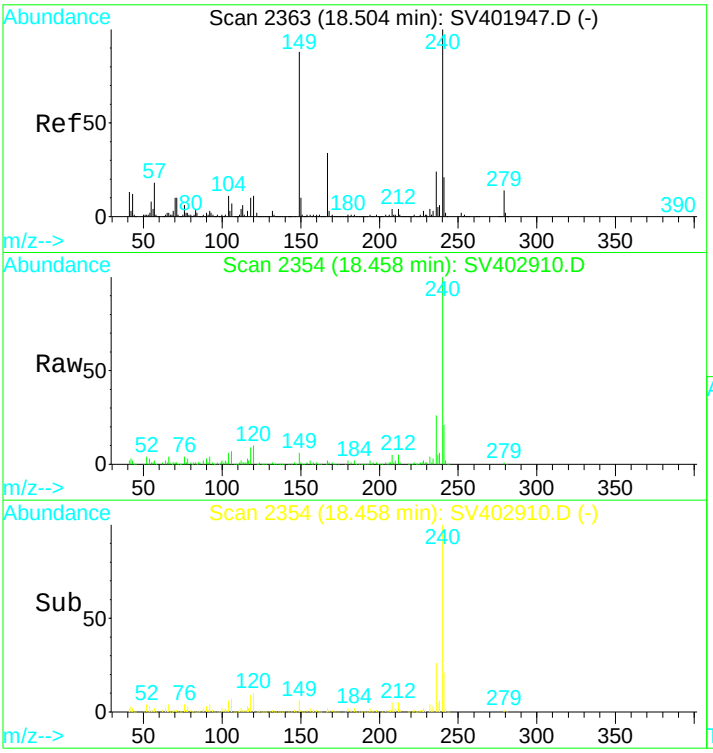



#81
Terphenyl-d14
Concen: 3.63 ug/mL
RT: 16.92 min Scan# 2096
Delta R.T. -0.02 min
Lab File: SV402910.D
Acq: 15 Sep 2016 1:36 pm

Tgt Ion:244 Resp: 2692903

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 244 | 100 | | |
| 243 | 32.5 | 17.0 | 25.4# |
| 245 | 18.9 | 16.1 | 24.1 |
| 240 | 9.6 | 7.4 | 11.0 |

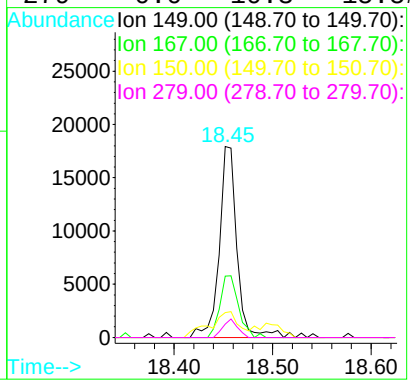


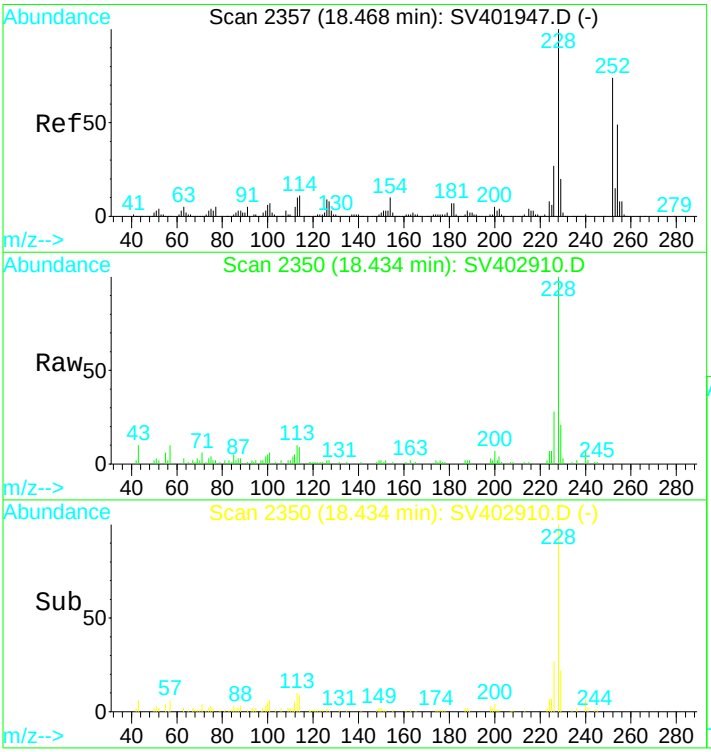




#83
Bis(2-ethylhexyl) phthalate
Concen: 0.76 ug/mL
RT: 18.46 min Scan# 2354
Delta R.T. -0.03 min
Lab File: SV402910.D
Acq: 15 Sep 2016 1:36 pm

Tgt Ion:149 Resp: 227633

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 149 | 100 | | |
| 167 | 33.3 | 29.9 | 44.9 |
| 150 | 0.0 | 11.0 | 16.6# |
| 279 | 0.0 | 10.3 | 15.5# |

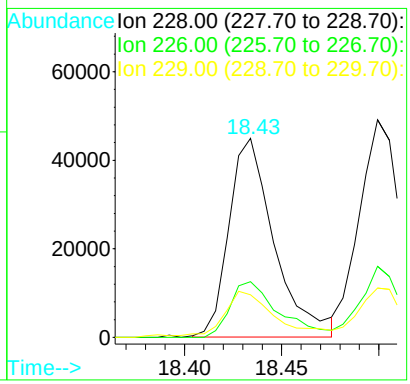


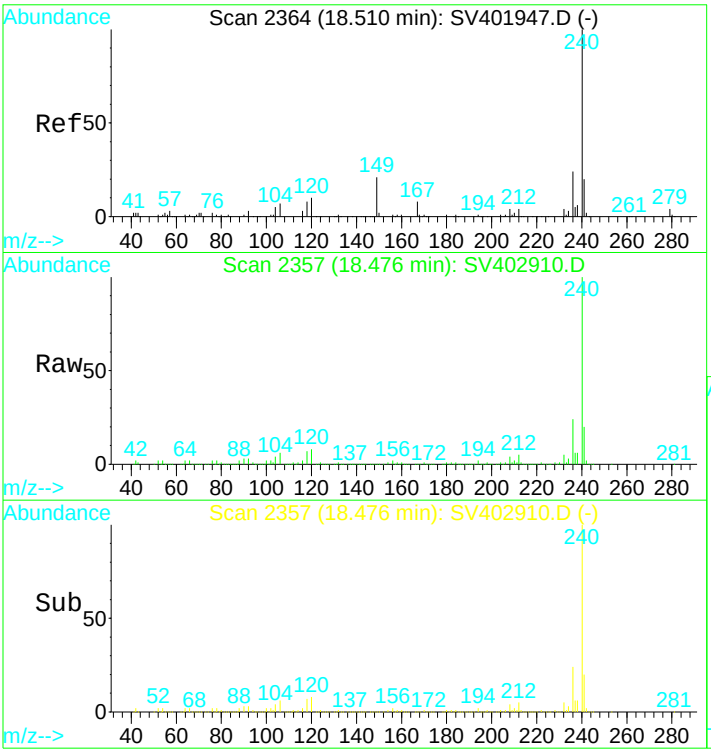



#84
Benz (a) anthracene
Concen: 1.88 ug/mL
RT: 18.43 min Scan# 2350
Delta R.T. -0.01 min
Lab File: SV402910.D
Acq: 15 Sep 2016 1:36 pm

Tgt Ion:228 Resp: 709023

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 228 | 100 | | |
| 226 | 30.6 | 21.8 | 32.6 |
| 229 | 27.1 | 16.2 | 24.2# |

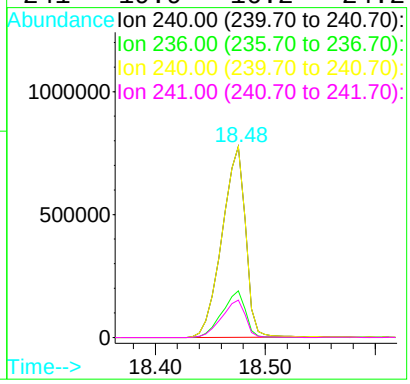


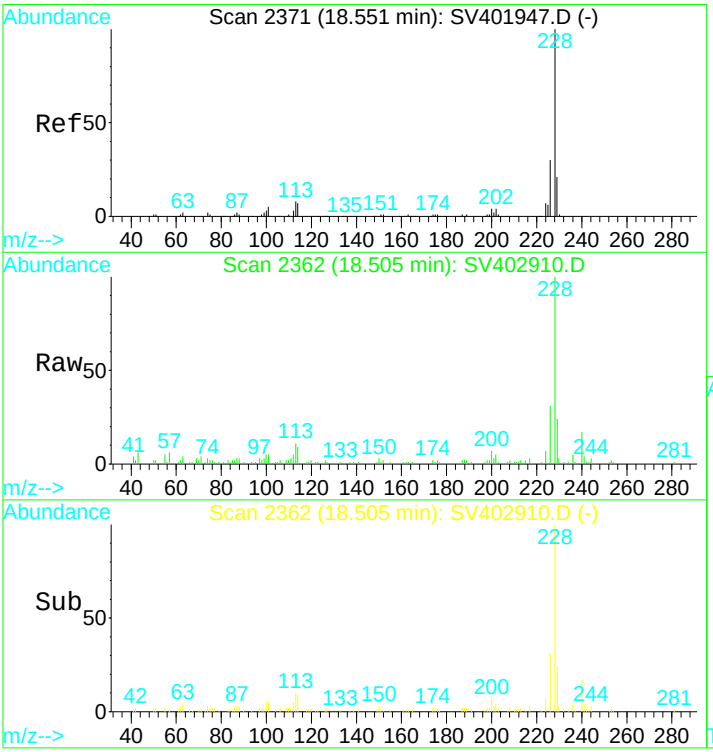




#86
Chrysene-d12
Concen: 40.00 ug/mL
RT: 18.48 min Scan# 2357
Delta R.T. -0.02 min
Lab File: SV402910.D
Acq: 15 Sep 2016 1:36 pm

Tgt Ion:240 Resp:11447928

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 240 | 100 | | |
| 236 | 0.0 | 0.0 | 0.0 |
| 240 | 100.0 | 80.0 | 120.0 |
| 241 | 19.9 | 16.2 | 24.2 |

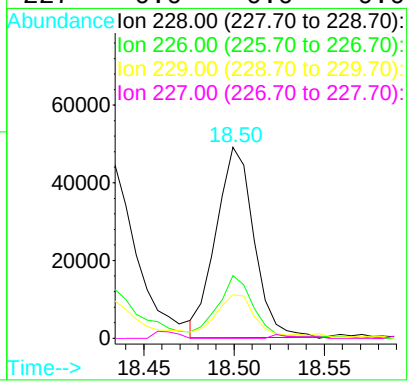


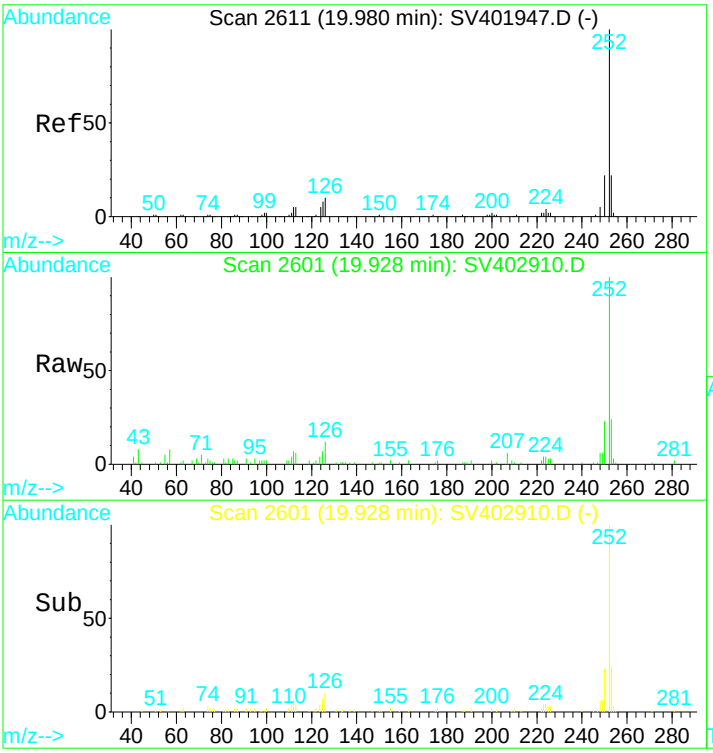



#87
Chrysene
Concen: 2.31 ug/mL
RT: 18.50 min Scan# 2362
Delta R.T. -0.02 min
Lab File: SV402910.D
Acq: 15 Sep 2016 1:36 pm

Tgt Ion:228 Resp: 738314

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 228 | 100 | | |
| 226 | 31.2 | 23.4 | 35.0 |
| 229 | 25.7 | 16.3 | 24.5# |
| 227 | 0.0 | 0.0 | 0.0 |

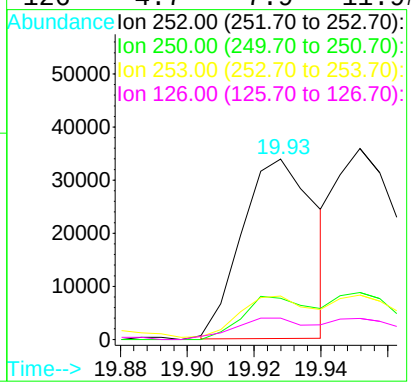


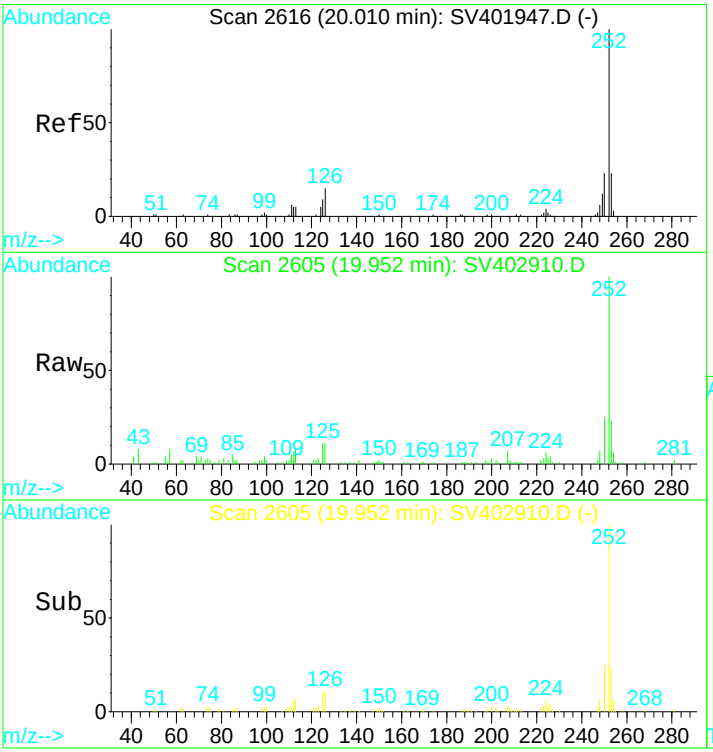




#89
Benzo(b)fluoranthene
Concen: 1.33 ug/mL
RT: 19.93 min Scan# 2601
Delta R.T. -0.00 min
Lab File: SV402910.D
Acq: 15 Sep 2016 1:36 pm

Tgt Ion:252 Resp: 464173

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 252 | 100 | | |
| 250 | 21.5 | 0.0 | 0.0# |
| 253 | 21.6 | 17.2 | 25.8 |
| 126 | 4.7 | 7.9 | 11.9# |

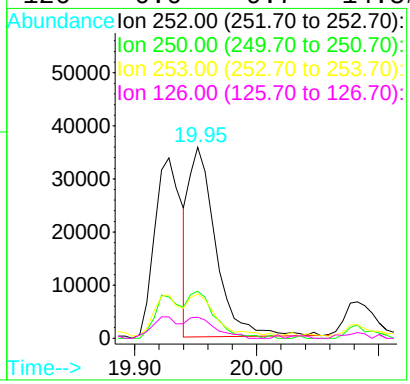


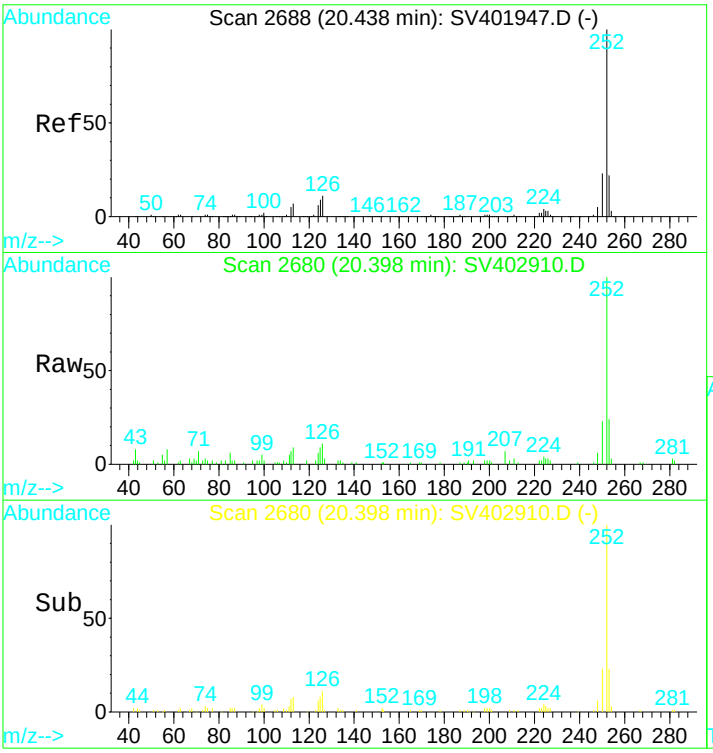



#90
Benzo(k)fluoranthene
Concen: 1.73 ug/mL
RT: 19.95 min Scan# 2605
Delta R.T. -0.01 min
Lab File: SV402910.D
Acq: 15 Sep 2016 1:36 pm

Tgt Ion:252 Resp: 598146

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 252 | 100 | | |
| 250 | 25.4 | 17.7 | 26.5 |
| 253 | 22.5 | 18.6 | 27.8 |
| 126 | 0.0 | 9.7 | 14.5# |

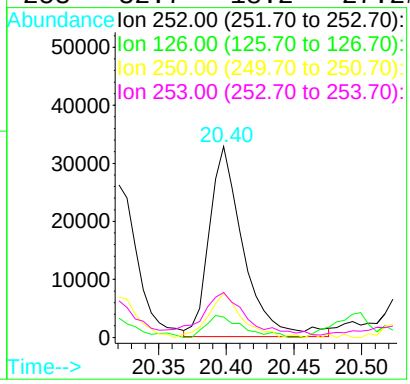


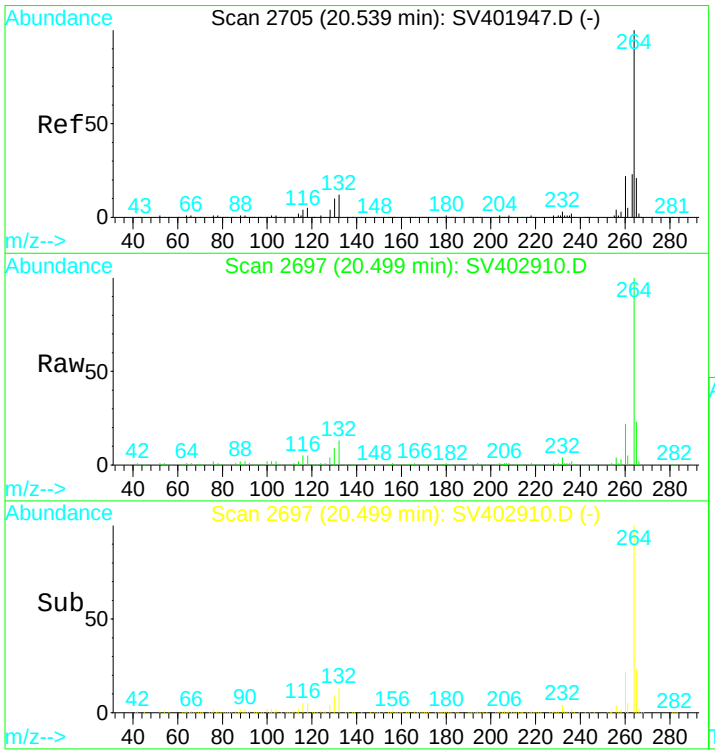




#91
Benzo(a)pyrene
Concen: 1.82 ug/mL
RT: 20.40 min Scan# 2680
Delta R.T. -0.00 min
Lab File: SV402910.D
Acq: 15 Sep 2016 1:36 pm

Tgt Ion:252 Resp: 573562

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 252 | 100 | | |
| 126 | 12.4 | 9.0 | 13.4 |
| 250 | 23.1 | 18.6 | 27.8 |
| 253 | 32.7 | 18.2 | 27.2# |

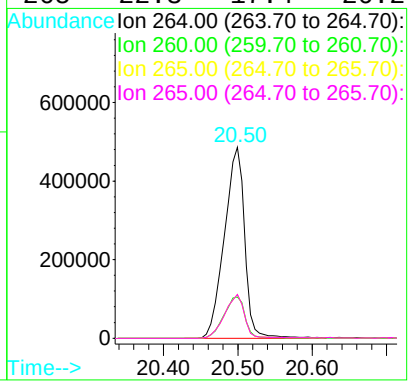


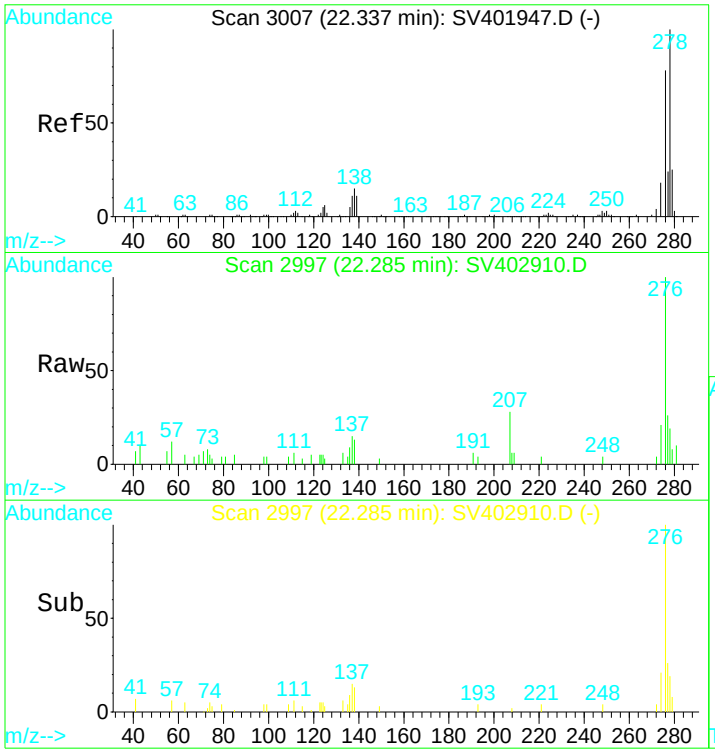



#92
Perylene-d12
Concen: 40.00 ug/mL
RT: 20.50 min Scan# 2697
Delta R.T. -0.02 min
Lab File: SV402910.D
Acq: 15 Sep 2016 1:36 pm

Tgt Ion:264 Resp: 9193612

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 264 | 100 | | |
| 260 | 22.6 | 17.8 | 26.6 |
| 265 | 22.3 | 17.4 | 26.2 |
| 265 | 22.3 | 17.4 | 26.2 |

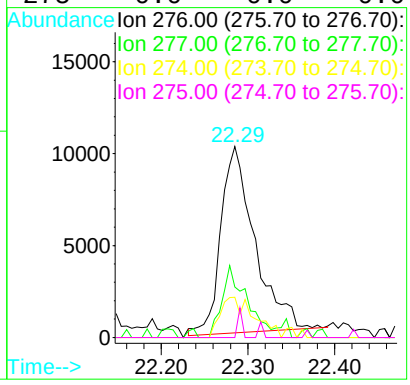


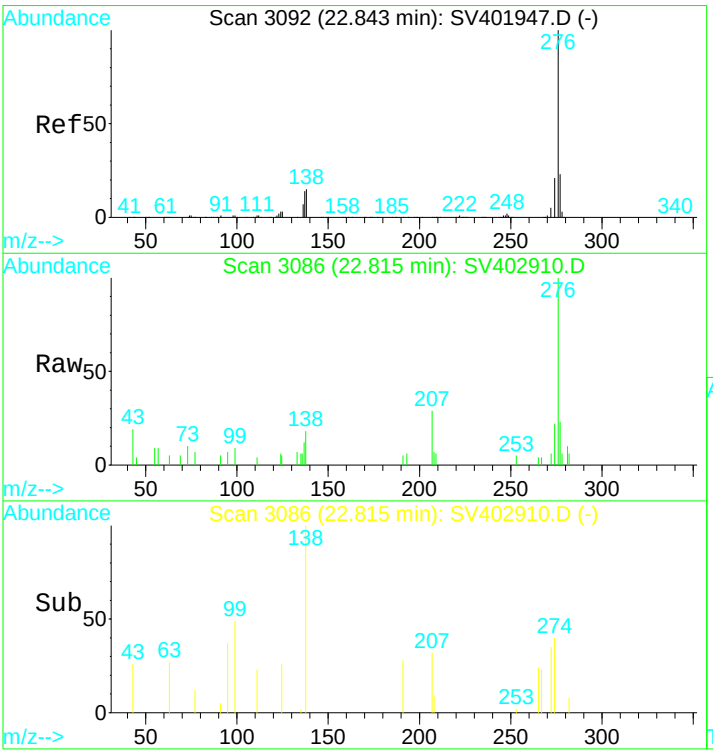




#93
Indeno(1,2,3-cd)pyrene
Concen: 0.98 ug/mL
RT: 22.29 min Scan# 2997
Delta R.T. 0.02 min
Lab File: SV402910.D
Acq: 15 Sep 2016 1:36 pm

Tgt Ion:276 Resp: 277584

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 276 | 100 | | |
| 277 | 24.0 | 23.2 | 34.8 |
| 274 | 20.6 | 17.8 | 26.6 |
| 275 | 0.0 | 0.0 | 0.0 |

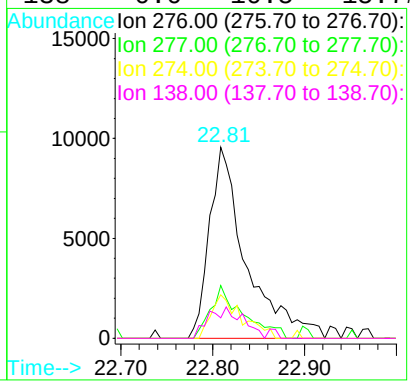





#95
Benzo(g,h,i)perylene
Concen: 1.21 ug/mL
RT: 22.81 min Scan# 3086
Delta R.T. 0.02 min
Lab File: SV402910.D
Acq: 15 Sep 2016 1:36 pm

Tgt Ion:276 Resp: 266586

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 276 | 100 | | |
| 277 | 24.2 | 19.1 | 28.7 |
| 274 | 18.9 | 0.0 | 40.8 |
| 138 | 0.0 | 10.5 | 15.7# |



# Response Factor Report GC/MS BNA

Method : C:\HPCHEM\1\METHODS\BNA4M54.M (Chemstation Integrator)
Title : GC MS BNA 4 Semi Volatiles Calibration
Last Update : Mon Jul 25 09:09:46 2016
Response via : Initial Calibration

Calibration Files
10 =SV401944.D 20 =SV401946.D 40.0 =SV401948.D
15.0 =SV401945.D 2.5 =SV401942.D 5 =SV401943.D

| | | Compound | 10 | 20 | 40.0 | 15.0 | 2.5 | 5 | Avg | %RSD |
|---|---|---|---|---|---|---|---|---|---|---|
| 1) | i | 1,4-Dichlorobenzene-d | ---------- | | | ISTD | ---------- | | | |
| 2) | t | N-Nitrosodimethylam | 0.939 | 0.918 | 0.938 | 0.952 | 0.749 | 0.990 | 0.887 | 11.55 |
| 3) | t | Pyridine | 1.275 | 1.183 | 1.134 | 1.185 | | 1.423 | 1.228 | 8.66 |
| 4) | s | 2-Fluorophenol | 1.485 | 1.439 | 1.957 | 1.487 | | 1.612 | 1.564 | 13.06 |
| 5) | s | Phenol-d5 | 1.708 | 1.640 | 1.655 | 1.697 | | 1.883 | 1.698 | 5.79 |
| 6) | t | Benzaldehyde | 1.398 | 1.148 | 0.769 | 1.256 | | 1.504 | 1.174 | 23.26 |
| 7) | t | Aniline | 1.965 | 1.856 | 1.772 | 1.937 | | 2.179 | 1.913 | 8.00 |
| 8) | c,m | Phenol | 2.135 | 2.006 | 2.013 | 2.084 | 1.968 | 2.263 | 2.039 | 5.79# |
| 9) | t | Bis(2-chloroethyl)e | 1.851 | 1.753 | 1.788 | 1.831 | 1.698 | 1.966 | 1.795 | 4.81 |
| 10) | m | 2-Chlorophenol | 1.546 | 1.510 | 1.516 | 1.540 | 1.519 | 1.653 | 1.511 | 5.77 |
| 11) | t | 1,3-Dichlorobenzene | 1.529 | 1.502 | 1.523 | 1.519 | | 1.655 | 1.533 | 4.19 |
| 12) | c,m | 1,4-Dichlorobenzene | 1.879 | 1.815 | 1.807 | 1.837 | | 2.023 | 1.853 | 4.96# |
| 13) | t | Benzyl Alcohol | 0.954 | 0.948 | 0.947 | 0.960 | | 0.987 | 0.950 | 2.77 |
| 14) | t | 1,2-Dichlorobenzene | 1.612 | 1.542 | 1.583 | 1.619 | | 1.800 | 1.611 | 6.34 |
| 15) | t | 2-Methylphenol | 1.335 | 1.298 | 1.290 | 1.324 | 1.337 | 1.475 | 1.319 | 5.44 |
| 16) | t | Bis(2-chloroisoprop | 1.586 | 1.522 | 1.491 | 1.570 | | 1.747 | 1.563 | 6.54 |
| 17) | p,m | N-Nitroso-di-n-prop | 1.168 | 1.100 | 1.085 | 1.163 | 1.136 | 1.261 | 1.128 | 6.14 |
| 18) | t | 4-Methylphenol | 1.786 | 1.754 | 1.742 | 1.809 | | 1.973 | 1.794 | 5.31 |
| 19) | t | Hexachloroethane | 0.797 | 0.773 | 0.756 | 0.822 | 0.778 | 0.864 | 0.787 | 5.06 |
| 20) | I | Naphthalene-d8 | ---------- | | | ISTD | ---------- | | | |
| 21) | s | Nitrobenzene-d5 | 0.475 | 0.461 | 0.417 | 0.463 | | 0.517 | 0.459 | 8.00 |
| 22) | t | Nitrobenzene | 0.485 | 0.448 | 0.400 | 0.465 | 0.492 | 0.506 | 0.461 | 8.38 |
| 23) | t | Isophorone | 0.926 | 0.867 | 0.799 | 0.891 | 0.892 | 1.015 | 0.885 | 7.63 |
| 24) | c | 2-Nitrophenol | 0.235 | 0.230 | 0.216 | 0.238 | | 0.262 | 0.233 | 7.05# |
| 25) | t | 2,4-Dimethylphenol | 0.343 | 0.318 | 0.303 | 0.327 | 0.315 | 0.367 | 0.320 | 7.92 |
| 26) | t | Bis(2-chloroethoxy) | 0.490 | 0.464 | 0.426 | 0.480 | | 0.544 | 0.472 | 9.27 |
| 27) | t | Benzoic acid | 0.261 | 0.303 | 0.297 | 0.291 | | 0.253 | 0.284 | 7.70 |
| 28) | c | 2,4-Dichlorophenol | 0.350 | 0.343 | 0.332 | 0.348 | 0.297 | 0.361 | 0.327 | 10.70# |
| 29) | m | 1,2,4-Trichlorobenz | 0.435 | 0.419 | 0.386 | 0.429 | 0.432 | 0.466 | 0.426 | 5.91 |
| 30) | t | Naphthalene | 1.049 | 0.986 | 0.916 | 1.018 | | 1.151 | 1.009 | 8.50 |
| 31) | t | 4-Chloroaniline | 0.444 | 0.417 | 0.398 | 0.435 | | 0.451 | 0.426 | 4.80 |
| 32) | c | Acetophenone | 0.656 | 0.580 | 0.501 | 0.601 | | 0.723 | 0.601 | 13.28# |
| 33) | c | Alpha-Terpineol | 0.331 | 0.296 | 0.265 | 0.303 | | 0.385 | 0.310 | 13.98# |
| 34) | c | Hexachlorobutadiene | 0.259 | 0.246 | 0.230 | 0.251 | 0.256 | 0.289 | 0.250 | 7.86# |
| 35) | t | Caprolactam | 0.140 | 0.151 | 0.130 | 0.130 | | 0.159 | 0.143 | 8.29 |
| 36) | c,m | 4-Chloro-3-methylph | 0.419 | 0.398 | 0.360 | 0.401 | | 0.425 | 0.396 | 6.49# |
| 37) | t | 1-Methylnaphthalene | 0.672 | 0.605 | 0.533 | 0.630 | | 0.744 | 0.626 | 11.92 |
| 38) | t | 2-Methylnaphthalene | 0.678 | 0.655 | 0.609 | 0.679 | | 0.715 | 0.660 | 5.97 |
| 39) | I | Acenaphthene-d10 | ---------- | | | ISTD | ---------- | | | |
| 40) | | 1,2,4,5-tetrachloro | 0.735 | 0.675 | 0.702 | 0.704 | | 0.841 | 0.723 | 8.60 |
| 41) | t | Hexachlorocyclopent | 0.274 | 0.318 | 0.369 | 0.304 | | 0.224 | 0.307 | 17.25 |

(#) = Out of Range ### Number of calibration levels exceeded format ###

# Response Factor Report GC/MS BNA

Method : C:\HPCHEM\1\METHODS\BNA4M54.M (Chemstation Integrator)
Title : GC MS BNA 4 Semi Volatiles Calibration
Last Update : Mon Jul 25 09:09:46 2016
Response via : Initial Calibration

Calibration Files
10 =SV401944.D 20 =SV401946.D 40.0 =SV401948.D
15.0 =SV401945.D 2.5 =SV401942.D 5 =SV401943.D

| | | Compound | 10 | 20 | 40.0 | 15.0 | 2.5 | 5 | Avg | %RSD |
|---|---|---|---|---|---|---|---|---|---|---|
| 42) | c | 2,4,6-Trichlorophen | 0.434 | 0.432 | 0.451 | 0.445 | 0.396 | 0.445 | 0.428 | 6.58# |
| 43) | t | 2,4,5-Trichlorophen | 0.494 | 0.495 | 0.516 | 0.509 | | 0.497 | 0.505 | 2.12 |
| 44) | s | 2-Fluorobiphenyl | 1.471 | 1.370 | 1.384 | 1.462 | | 1.548 | 1.442 | 4.55 |
| 45) | t | 2-Chloronaphthalene | 1.209 | 1.163 | 1.180 | 1.215 | | 1.259 | 1.200 | 2.96 |
| 46) | c | Biphenyl | 0.640 | 0.580 | 0.555 | 0.609 | | 0.696 | 0.614 | 8.02# |
| 47) | t | 2-Nitroaniline | 0.422 | 0.409 | 0.407 | 0.405 | | 0.426 | 0.414 | 2.07 |
| 48) | t | Dimethylphthalate | 1.580 | 1.463 | 1.451 | 1.527 | | 1.653 | 1.520 | 5.51 |
| 49) | t | 2,6-Dinitrotoluene | 0.388 | 0.363 | 0.367 | 0.371 | 0.344 | 0.397 | 0.360 | 10.33 |
| 50) | t | Acenaphthylene | 1.818 | 1.712 | 1.705 | 1.791 | | 1.932 | 1.778 | 5.00 |
| 51) | t | 3-Nitroaniline | 0.324 | 0.321 | 0.317 | 0.327 | | 0.321 | 0.322 | 1.08 |
| 52) | c,m | Acenaphthene | 1.034 | 0.973 | 0.980 | 1.016 | | 1.084 | 1.012 | 4.14# |
| 53) | p | 2,4-Dinitrophenol | 0.204 | 0.232 | 0.266 | 0.230 | | 0.164 | 0.226 | 16.56 |
| 54) | t | Dibenzofuran | 1.732 | 1.633 | 1.636 | 1.700 | | 1.770 | 1.683 | 3.57 |
| 55) | m | 2,4-Dinitrotoluene | 0.517 | 0.483 | 0.485 | 0.503 | 0.442 | 0.529 | 0.485 | 7.47 |
| 56) | p,m | 4-Nitrophenol | 0.304 | 0.343 | 0.338 | 0.246 | | 0.338 | 0.316 | 11.71 |
| 57) | t | 2,3,4,6-Tetrachloro | 0.185 | 0.176 | 0.180 | 0.188 | | 0.184 | 0.182 | 2.34 |
| 58) | t | Diethyl phthalate | 1.540 | 1.427 | 1.384 | 1.495 | | 1.638 | 1.480 | 6.56 |
| 59) | t | Fluorene | 1.379 | 1.290 | 1.287 | 1.319 | | 1.410 | 1.334 | 3.75 |
| 60) | t | 4-Chlorophenyl phen | 0.739 | 0.702 | 0.737 | 0.754 | | 0.758 | 0.738 | 2.70 |
| 61) | t | 4-Nitroaniline | 0.330 | 0.311 | 0.322 | 0.313 | | 0.360 | 0.326 | 5.49 |
| 62) | I | Phenanthrene-d10 | ISTD | | | | | | | |
| 63) | t | 4,6-Dinitro-2-methy | 0.183 | 0.191 | 0.214 | 0.184 | 0.116 | 0.164 | 0.179 | 17.82 |
| 64) | c | Diphenylamine | 0.574 | 0.555 | 0.575 | 0.577 | | 0.611 | 0.575 | 3.42# |
| 65) | t | N-Nitrosodiphenylam | 0.194 | 0.193 | 0.197 | 0.195 | 0.170 | 0.203 | 0.189 | 7.33 |
| 66) | t | Azobenzene | 0.844 | 0.866 | 0.819 | 0.926 | 0.820 | 0.882 | 0.855 | 4.14 |
| 67) | s | 2,4,6-Tribromopheno | 0.189 | 0.187 | 0.189 | 0.190 | | 0.192 | 0.189 | 1.52 |
| 68) | t | 4-Bromophenyl pheny | 0.247 | 0.239 | 0.245 | 0.245 | | 0.254 | 0.245 | 2.08 |
| 69) | t | Hexachlorobenzene | 0.107 | 0.101 | 0.097 | 0.105 | 0.103 | 0.117 | 0.103 | 7.08 |
| 70) | t | Atrazine | 0.264 | 0.230 | 0.213 | 0.242 | 0.245 | 0.307 | 0.246 | 11.63 |
| 71) | c,m | Pentachlorophenol | 0.159 | 0.174 | 0.188 | 0.170 | 0.107 | 0.141 | 0.160 | 17.66# |
| 72) | | Pentachloronitroben | 0.122 | 0.107 | 0.107 | 0.114 | | 0.136 | 0.115 | 10.47 |
| 73) | t | Phenanthrene | 1.032 | 1.009 | 1.022 | 1.025 | | 1.087 | 1.029 | 2.94 |
| 74) | t | Anthracene | 1.120 | 1.100 | 1.110 | 1.125 | | 1.181 | 1.120 | 3.03 |
| 75) | | Carbazole | 0.995 | 0.948 | 0.968 | 0.975 | | 1.062 | 0.983 | 4.29 |
| 76) | t | Di-n-butyl phthalat | 1.436 | 1.338 | 1.307 | 1.401 | | 1.557 | 1.390 | 6.99 |
| 77) | c | Parathion | 0.268 | 0.247 | 0.242 | 0.263 | | 0.283 | 0.258 | 6.29# |
| 78) | c | Fluoranthene | 1.209 | 1.143 | 1.162 | 1.194 | | 1.267 | 1.187 | 3.98# |
| 79) | t | Benzidine | 0.392 | 0.307 | 0.243 | 0.320 | 0.343 | 0.424 | 0.328 | 19.54 |
| 80) | m | Pyrene | 1.201 | 1.174 | 1.185 | 1.206 | | 1.303 | 1.205 | 4.21 |
| 81) | s | Terphenyl-d14 | 0.867 | 0.848 | 0.864 | 0.880 | | 0.934 | 0.873 | 3.73 |
| 82) | t | Benzyl butyl phthal | 0.687 | 0.637 | 0.635 | 0.667 | | 0.739 | 0.667 | 6.12 |
| 83) | t | Bis(2-ethylhexyl) p | 0.917 | 0.844 | 0.830 | 0.913 | | 0.994 | 0.889 | 7.23 |
| 84) | t | Benz (a) anthracene | 1.133 | 1.128 | 1.158 | 1.139 | 1.050 | 1.186 | 1.123 | 4.16 |

(#) = Out of Range ### Number of calibration levels exceeded format ###

# Response Factor Report GC/MS BNA

Method : C:\HPCHEM\1\METHODS\BNA4M54.M (Chemstation Integrator)
Title : GC MS BNA 4 Semi Volatiles Calibration
Last Update : Mon Jul 25 09:09:46 2016
Response via : Initial Calibration

Calibration Files
10 =SV401944.D 20 =SV401946.D 40.0 =SV401948.D
15.0 =SV401945.D 2.5 =SV401942.D 5 =SV401943.D

| | | Compound | 10 | 20 | 40.0 | 15.0 | 2.5 | 5 | Avg | %RSD |
|---|---|---|---|---|---|---|---|---|---|---|
| 85) | t | 3,3-Dichlorobenzidi | 0.492 | 0.450 | 0.436 | 0.463 | | 0.518 | 0.466 | 7.14 |
| 86) | I | Chrysene-d12 | ----------ISTD---------- | | | | | | | |
| 87) | t | Chrysene | 1.133 | 1.093 | 1.073 | 1.119 | 1.112 | 1.226 | 1.119 | 4.55 |
| 88) | c | Di-n-octyl phthalat | 1.771 | 1.653 | 1.543 | 1.718 | | 1.902 | 1.692 | 7.98# |
| 89) | t | Benzo(b)fluoranthen | 1.197 | 1.184 | 1.183 | 1.186 | | 1.406 | 1.224 | 7.30 |
| 90) | t | Benzo(k)fluoranthen | 1.278 | 1.181 | 0.972 | 1.230 | 1.303 | 1.349 | 1.210 | 10.11 |
| 91) | c | Benzo(a)pyrene | 1.117 | 1.114 | 1.068 | 1.129 | 1.022 | 1.262 | 1.099 | 7.13# |
| 92) | I | Perylene-d12 | ----------ISTD---------- | | | | | | | |
| 93) | t | Indeno(1,2,3-cd)pyr | 1.264 | 1.270 | 1.254 | 1.291 | 1.187 | 1.323 | 1.237 | 6.28 |
| 94) | t | Dibenz(a,h)anthrace | 1.103 | 1.082 | 1.076 | 1.101 | 0.948 | 1.124 | 1.052 | 6.92 |
| 95) | t | Benzo(g,h,i)perylen | 0.969 | 0.931 | 0.935 | 0.974 | | 1.013 | 0.957 | 3.74 |

(#) = Out of Range ### Number of calibration levels exceeded format ###

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\072416\SV401941.D Vial: 6
Acq On : 24 Jul 2016 8:19 am Operator: KH
Sample : SEQ-CAL1 Inst : GC/MS BNA
Misc : QBSV4072416A Multiplr: 1.00
MS Integration Params: EVENTS.E
Quant Time: Jul 25 9:04 2016 Quant Results File: BNA4M54.RES

Quant Method : C:\HPCHEM\1\METHODS\BNA4M54.M (Chemstation Integrator)
Title : GC MS BNA 4 Semi Volatiles Calibration
Last Update : Mon Jul 25 09:03:08 2016
Response via : Initial Calibration
DataAcq Meth : BNA4M53

| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 1) 1,4-Dichlorobenzene-d4 | 8.48 | 152 | 3511276 | 40.00 | ug/mL | 0.00 |
| 20) Naphthalene-d8 | 10.13 | 136 | 12768388 | 40.00 | ug/mL | 0.00 |
| 39) Acenaphthene-d10 | 12.57 | 164 | 7916714 | 40.00 | ug/mL | 0.00 |
| 62) Phenanthrene-d10 | 14.67 | 188 | 14511361 | 40.00 | ug/mL | 0.00 |
| 86) Chrysene-d12 | 18.50 | 240 | 12835486 | 40.00 | ug/mL | 0.00 |
| 92) Perylene-d12 | 20.52 | 264 | 13521048 | 40.00 | ug/mL | 0.00 |
| **System Monitoring Compounds** | | | | | | |
| 4) 2-Fluorophenol | 6.96 | 112 | 136719 | 1.00 | ug/mL | 0.00 |
| Spiked Amount 75.000 | Range 15 - 87 | | Recovery = 1.33%# | | | |
| 5) Phenol-d5 | 8.14 | 99 | 188051 | 1.26 | ug/mL | 0.00 |
| Spiked Amount 75.000 | Range 10 - 100 | | Recovery = 1.68%# | | | |
| 21) Nitrobenzene-d5 | 9.23 | 82 | 177698 | 1.21 | ug/mL | 0.00 |
| Spiked Amount 50.000 | Range 26 - 120 | | Recovery = 2.42%# | | | |
| 44) 2-Fluorobiphenyl | 11.61 | 172 | 331705 | 1.16 | ug/mL | 0.00 |
| Spiked Amount 50.000 | Range 29 - 120 | | Recovery = 2.32%# | | | |
| 67) 2,4,6-Tribromophenol | 13.72 | 330 | 63677 | 0.93 | ug/mL | 0.00 |
| Spiked Amount 75.000 | Range 35 - 126 | | Recovery = 1.24%# | | | |
| 81) Terphenyl-d14 | 16.95 | 244 | 350926 | 1.11 | ug/mL | 0.00 |
| Spiked Amount 50.000 | Range 35 - 127 | | Recovery = 2.22%# | | | |
| **Target Compounds** | | | | | | Qvalue |
| 2) N-Nitrosodimethylamine | 4.92 | 74 | 77425m | 0.93 | ug/mL | |
| 7) Aniline | 8.15 | 93 | 208065 | 1.24 | ug/mL | 97 |
| 8) Phenol | 8.16 | 94 | 208190 | 1.12 | ug/mL | 92 |
| 9) Bis(2-chloroethyl)ether | 8.21 | 93 | 191659 | 1.16 | ug/mL | 99 |
| 10) 2-Chlorophenol | 8.28 | 128 | 147416 | 1.09 | ug/mL | 95 |
| 11) 1,3-Dichlorobenzene | 8.43 | 146 | 162471 | 1.21 | ug/mL | 98 |
| 12) 1,4-Dichlorobenzene | 8.49 | 146 | 209148m | 1.29 | ug/mL | |
| 13) Benzyl Alcohol | 8.70 | 108 | 73641 | 0.88 | ug/mL | 91 |
| 14) 1,2-Dichlorobenzene | 8.73 | 146 | 173548 | 1.23 | ug/mL | 98 |
| 15) 2-Methylphenol | 8.87 | 107 | 136406 | 1.16 | ug/mL | 98 |
| 16) Bis(2-chloroisopropyl) eth | 8.87 | 45 | 164210 | 1.20 | ug/mL | 98 |
| 17) N-Nitroso-di-n-propylamine | 9.06 | 70 | 114562 | 1.13 | ug/mL | 89 |
| 18) 4-Methylphenol | 9.05 | 107 | 157412 | 1.00 | ug/mL# | 54 |
| 19) Hexachloroethane | 9.11 | 117 | 81399 | 1.18 | ug/mL | 96 |
| 22) Nitrobenzene | 9.25 | 77 | 192695 | 1.30 | ug/mL | 96 |
| 23) Isophorone | 9.54 | 82 | 350533 | 1.20 | ug/mL | 96 |
| 24) 2-Nitrophenol | 9.66 | 139 | 90656 | 1.22 | ug/mL# | 89 |
| 25) 2,4-Dimethylphenol | 9.71 | 122 | 114734 | 1.07 | ug/mL | 97 |
| 26) Bis(2-chloroethoxy) methan | 9.82 | 93 | 192782 | 1.28 | ug/mL | 97 |
| 28) 2,4-Dichlorophenol | 9.99 | 162 | 101635 | 0.95 | ug/mL# | 91 |

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\072416\SV401941.D Vial: 6
Acq On : 24 Jul 2016 8:19 am Operator: KH
Sample : SEQ-CAL1 Inst : GC/MS BNA
Misc : QBSV4072416A Multiplr: 1.00
MS Integration Params: EVENTS.E
Quant Time: Jul 25 9:04 2016 Quant Results File: BNA4M54.RES

Quant Method : C:\HPCHEM\1\METHODS\BNA4M54.M (Chemstation Integrator)
Title : GC MS BNA 4 Semi Volatiles Calibration
Last Update : Mon Jul 25 09:03:08 2016
Response via : Initial Calibration
DataAcq Meth : BNA4M53

| | Compound | R.T. | QIon | Response | Conc Unit | Qvalue |
|---|---|---|---|---|---|---|
| 29) | 1,2,4-Trichlorobenzene | 10.06 | 180 | 176511 | 1.31 ug/mL | 95 |
| 30) | Naphthalene | 10.15 | 128 | 422822 | 1.31 ug/mL# | 84 |
| 31) | 4-Chloroaniline | 10.27 | 127 | 151956 | 1.12 ug/mL | 96 |
| 34) | Hexachlorobutadiene | 10.37 | 225 | 92056 | 1.17 ug/mL | 93 |
| 36) | 4-Chloro-3-methylphenol | 10.95 | 107 | 139194 | 1.10 ug/mL# | 90 |
| 38) | 2-Methylnaphthalene | 11.08 | 142 | 277458 | 1.32 ug/mL | 96 |
| 42) | 2,4,6-Trichlorophenol | 11.54 | 196 | 92491m | 1.09 ug/mL | |
| 43) | 2,4,5-Trichlorophenol | 11.62 | 196 | 104731 | 1.05 ug/mL# | 93 |
| 45) | 2-Chloronaphthalene | 11.76 | 162 | 253190 | 1.07 ug/mL | 97 |
| 47) | 2-Nitroaniline | 11.99 | 138 | 60306 | 0.74 ug/mL# | 85 |
| 48) | Dimethylphthalate | 12.24 | 163 | 355329 | 1.18 ug/mL | 98 |
| 49) | 2,6-Dinitrotoluene | 12.36 | 165 | 68383 | 0.94 ug/mL# | 75 |
| 50) | Acenaphthylene | 12.35 | 152 | 410077 | 1.17 ug/mL | 96 |
| 51) | 3-Nitroaniline | 12.59 | 138 | 45330 | 0.71 ug/mL# | 1 |
| 52) | Acenaphthene | 12.61 | 154 | 233652 | 1.17 ug/mL | 98 |
| 54) | Dibenzofuran | 12.83 | 168 | 395875 | 1.19 ug/mL# | 81 |
| 55) | 2,4-Dinitrotoluene | 12.92 | 165 | 104628 | 1.07 ug/mL | 97 |
| 57) | 2,3,4,6-Tetrachlorophenol | 13.10 | 131 | 32017 | 0.89 ug/mL | 92 |
| 58) | Diethyl phthalate | 13.22 | 149 | 370187 | 1.26 ug/mL | 96 |
| 59) | Fluorene | 13.32 | 166 | 297632 | 1.13 ug/mL | 95 |
| 60) | 4-Chlorophenyl phenylether | 13.31 | 204 | 161425 | 1.10 ug/mL | 95 |
| 64) | Diphenylamine | 13.50 | 169 | 224034 | 1.07 ug/mL | 98 |
| 65) | N-Nitrosodiphenylamine | 13.50 | 167 | 74240 | 1.03 ug/mL | 95 |
| 66) | Azobenzene | 13.53 | 77 | 385135 | 1.18 ug/mL# | 90 |
| 68) | 4-Bromophenyl phenylether | 14.00 | 248 | 91252 | 1.02 ug/mL | 89 |
| 69) | Hexachlorobenzene | 14.22 | 142 | 42498 | 1.12 ug/mL | 97 |
| 70) | Atrazine | 14.30 | 200 | 108883 | 1.23 ug/mL# | 98 |
| 73) | Phenanthrene | 14.69 | 178 | 437559 | 1.17 ug/mL# | 98 |
| 74) | Anthracene | 14.75 | 178 | 472850 | 1.16 ug/mL# | 97 |
| 75) | Carbazole | 15.02 | 167 | 399203 | 1.12 ug/mL# | 99 |
| 76) | Di-n-butyl phthalate | 15.53 | 149 | 617136 | 1.22 ug/mL | 99 |
| 77) | Parathion | 15.81 | 97 | 99989 | 1.07 ug/mL# | 93 |
| 78) | Fluoranthene | 16.41 | 202 | 495699 | 1.15 ug/mL# | 98 |
| 79) | Benzidine | 16.63 | 184 | 191694 | 1.57 ug/mL# | 86 |
| 80) | Pyrene | 16.74 | 202 | 508574 | 1.16 ug/mL# | 94 |
| 82) | Benzyl butyl phthalate | 17.68 | 149 | 279719 | 1.16 ug/mL# | 90 |
| 83) | Bis(2-ethylhexyl) phthalat | 18.49 | 149 | 388413 | 1.20 ug/mL | 97 |
| 84) | Benz (a) anthracene | 18.45 | 228 | 479848 | 1.16 ug/mL | 95 |
| 85) | 3,3-Dichlorobenzidine | 18.45 | 252 | 167424 | 0.99 ug/mL# | 82 |
| 87) | Chrysene | 18.52 | 228 | 455457 | 1.24 ug/mL# | 98 |
| 88) | Di-n-octyl phthalate | 19.31 | 149 | 660059 | 1.22 ug/mL# | 95 |

(#) = qualifier out of range (m) = manual integration

Data File : C:\HPCHEM\1\DATA\072416\SV401941.D Vial: 6
Acq On : 24 Jul 2016 8:19 am Operator: KH
Sample : SEQ-CAL1 Inst : GC/MS BNA
Misc : QBSV4072416A Multiplr: 1.00
MS Integration Params: EVENTS.E
Quant Time: Jul 25 9:04 2016 Quant Results File: BNA4M54.RES

Quant Method : C:\HPCHEM\1\METHODS\BNA4M54.M (Chemstation Integrator)
Title : GC MS BNA 4 Semi Volatiles Calibration
Last Update : Mon Jul 25 09:03:08 2016
Response via : Initial Calibration
DataAcq Meth : BNA4M53

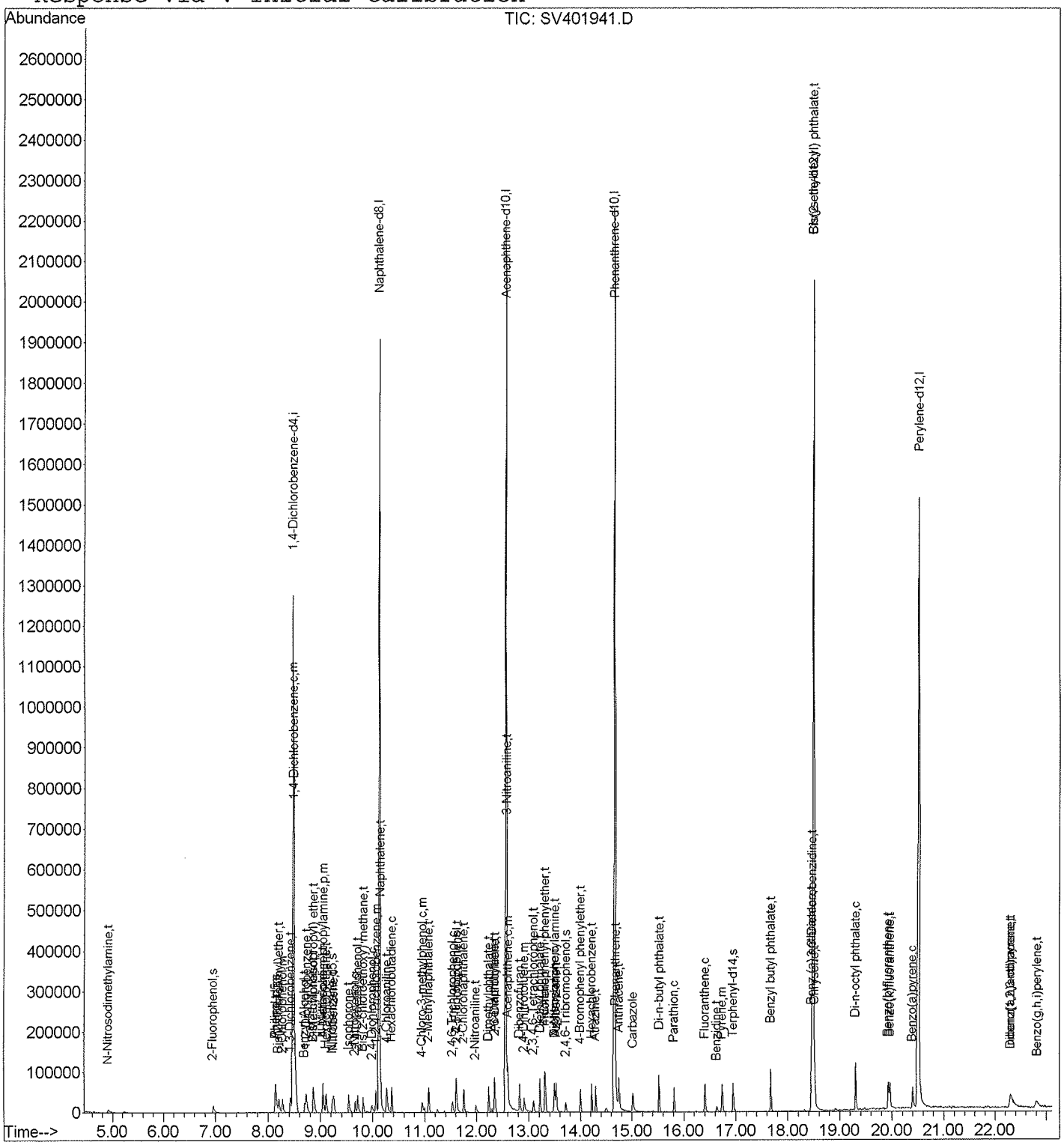
| | Compound | R.T. | QIon | Response | Conc | Unit | Qvalue |
|---|---|---|---|---|---|---|---|
| 89) | Benzo(b)fluoranthene | 19.94 | 252 | 424434 | 1.08 | ug/mL# | 98 |
| 90) | Benzo(k)fluoranthene | 19.97 | 252 | 507253 | 1.30 | ug/mL | 98 |
| 91) | Benzo(a)pyrene | 20.40 | 252 | 407829 | 1.12 | ug/mL | 97 |
| 93) | Indeno(1,2,3-cd)pyrene | 22.30 | 276 | 452949 | 1.09 | ug/mL# | 71 |
| 94) | Dibenz(a,h)anthracene | 22.31 | 278 | 393474m | 1.12 | ug/mL | |
| 95) | Benzo(g,h,i)perylene | 22.82 | 276 | 361660m | 1.12 | ug/mL | |

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\072416\SV401941.D Vial: 6
Acq On : 24 Jul 2016 8:19 am Operator: KH
Sample : SEQ-CAL1 Inst : GC/MS BNA
Misc : QBSV4072416A Multiplr: 1.00
MS Integration Params: EVENTS.E
Quant Time: Jul 25 9:04 2016 Quant Results File: BNA4M54.RES

Method : C:\HPCHEM\1\METHODS\BNA4M54.M (Chemstation Integrator)
Title : GC MS BNA 4 Semi Volatiles Calibration
Last Update : Mon Jul 25 09:09:46 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\072416\SV401942.D Vial: 7
Acq On : 24 Jul 2016 8:52 am Operator: KH
Sample : SEQ-CAL2 Inst : GC/MS BNA
Misc : QBSV4072416A Multiplr: 1.00
MS Integration Params: EVENTS.E
Quant Time: Jul 25 9:02 2016 Quant Results File: BNA4M54.RES

Quant Method : C:\HPCHEM\1\METHODS\BNA4M54.M (Chemstation Integrator)
Title : GC MS BNA 4 Semi Volatiles Calibration
Last Update : Mon Jul 25 09:00:44 2016
Response via : Initial Calibration
DataAcq Meth : BNA4M53

| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 1) 1,4-Dichlorobenzene-d4 | 8.48 | 152 | 3696361 | 40.00 | ug/mL | 0.00 |
| 20) Naphthalene-d8 | 10.13 | 136 | 13254028 | 40.00 | ug/mL | 0.00 |
| 39) Acenaphthene-d10 | 12.57 | 164 | 8237449 | 40.00 | ug/mL | 0.00 |
| 62) Phenanthrene-d10 | 14.67 | 188 | 15248363 | 40.00 | ug/mL | 0.00 |
| 86) Chrysene-d12 | 18.49 | 240 | 13704955 | 40.00 | ug/mL | 0.00 |
| 92) Perylene-d12 | 20.52 | 264 | 14384035 | 40.00 | ug/mL | 0.00 |
| **System Monitoring Compounds** | | | | | | |
| 4) 2-Fluorophenol | 6.96 | 112 | 263939 | 1.83 | ug/mL | 0.00 |
| Spiked Amount 75.000 | Range 15 - 87 | | Recovery = 2.44%# | | | |
| 5) Phenol-d5 | 8.14 | 99 | 376950 | 2.40 | ug/mL | 0.00 |
| Spiked Amount 75.000 | Range 10 - 100 | | Recovery = 3.20%# | | | |
| 21) Nitrobenzene-d5 | 9.23 | 82 | 398617 | 2.62 | ug/mL | 0.00 |
| Spiked Amount 50.000 | Range 26 - 120 | | Recovery = 5.24%# | | | |
| 44) 2-Fluorobiphenyl | 11.61 | 172 | 695853 | 2.34 | ug/mL | 0.00 |
| Spiked Amount 50.000 | Range 29 - 120 | | Recovery = 4.68%# | | | |
| 67) 2,4,6-Tribromophenol | 13.71 | 330 | 153322 | 2.13 | ug/mL | 0.00 |
| Spiked Amount 75.000 | Range 35 - 126 | | Recovery = 2.84%# | | | |
| 81) Terphenyl-d14 | 16.95 | 244 | 765285 | 2.30 | ug/mL | 0.00 |
| Spiked Amount 50.000 | Range 35 - 127 | | Recovery = 4.60%# | | | |
| **Target Compounds** | | | | | | Qvalue |
| 2) N-Nitrosodimethylamine | 4.90 | 74 | 172941 | 1.85 | ug/mL# | 63 |
| 7) Aniline | 8.15 | 93 | 428621 | 2.42 | ug/mL | 99 |
| 8) Phenol | 8.15 | 94 | 454616 | 2.25 | ug/mL | 96 |
| 9) Bis(2-chloroethyl)ether | 8.21 | 93 | 392304 | 2.18 | ug/mL | 92 |
| 10) 2-Chlorophenol | 8.28 | 128 | 350898 | 2.45 | ug/mL | 98 |
| 11) 1,3-Dichlorobenzene | 8.43 | 146 | 349854 | 2.47 | ug/mL | 98 |
| 12) 1,4-Dichlorobenzene | 8.49 | 146 | 435188m | 2.54 | ug/mL | |
| 13) Benzyl Alcohol | 8.70 | 108 | 184093 | 2.10 | ug/mL | 95 |
| 14) 1,2-Dichlorobenzene | 8.73 | 146 | 357426 | 2.40 | ug/mL | 96 |
| 15) 2-Methylphenol | 8.87 | 107 | 308904 | 2.46 | ug/mL | 98 |
| 16) Bis(2-chloroisopropyl) eth | 8.87 | 45 | 370000 | 2.56 | ug/mL | 98 |
| 17) N-Nitroso-di-n-propylamine | 9.05 | 70 | 262419 | 2.40 | ug/mL | 86 |
| 18) 4-Methylphenol | 9.05 | 107 | 382830 | 2.31 | ug/mL# | 55 |
| 19) Hexachloroethane | 9.11 | 117 | 179725 | 2.50 | ug/mL | 98 |
| 22) Nitrobenzene | 9.25 | 77 | 407586 | 2.63 | ug/mL | 97 |
| 23) Isophorone | 9.53 | 82 | 738621 | 2.35 | ug/mL | 99 |
| 24) 2-Nitrophenol | 9.66 | 139 | 183896 | 2.38 | ug/mL | 98 |
| 25) 2,4-Dimethylphenol | 9.71 | 122 | 261303 | 2.29 | ug/mL | 97 |
| 26) Bis(2-chloroethoxy) methan | 9.82 | 93 | 402126 | 2.57 | ug/mL | 98 |
| 27) Benzoic acid | 9.86 | 105 | 105666 | 1.12 | ug/mL# | 31 |

(#) = qualifier out of range (m) = manual integration

Data File : C:\HPCHEM\1\DATA\072416\SV401942.D Vial: 7
Acq On : 24 Jul 2016 8:52 am Operator: KH
Sample : SEQ-CAL2 Inst : GC/MS BNA
Misc : QBSV4072416A Multiplr: 1.00
MS Integration Params: EVENTS.E
Quant Time: Jul 25 9:02 2016 Quant Results File: BNA4M54.RES

Quant Method : C:\HPCHEM\1\METHODS\BNA4M54.M (Chemstation Integrator)
Title : GC MS BNA 4 Semi Volatiles Calibration
Last Update : Mon Jul 25 09:00:44 2016
Response via : Initial Calibration
DataAcq Meth : BNA4M53

| | Compound | R.T. | QIon | Response | Conc Unit | Qvalue |
|---|---|---|---|---|---|---|
| 28) | 2,4-Dichlorophenol | 9.98 | 162 | 245835 | 2.16 ug/mL | 96 |
| 29) | 1,2,4-Trichlorobenzene | 10.06 | 180 | 357577 | 2.58 ug/mL | 98 |
| 30) | Naphthalene | 10.15 | 128 | 867231 | 2.59 ug/mL# | 91 |
| 31) | 4-Chloroaniline | 10.27 | 127 | 333733 | 2.36 ug/mL | 99 |
| 34) | Hexachlorobutadiene | 10.37 | 225 | 212389 | 2.70 ug/mL | 97 |
| 36) | 4-Chloro-3-methylphenol | 10.93 | 107 | 317211 | 2.42 ug/mL | 89 |
| 38) | 2-Methylnaphthalene | 11.08 | 142 | 550119 | 2.52 ug/mL | 99 |
| 41) | Hexachlorocyclopentadiene | 11.38 | 237 | 65602 | 1.04 ug/mL# | 87 |
| 42) | 2,4,6-Trichlorophenol | 11.53 | 196 | 203659 | 2.29 ug/mL | 99 |
| 43) | 2,4,5-Trichlorophenol | 11.61 | 196 | 223494 | 2.15 ug/mL | 92 |
| 45) | 2-Chloronaphthalene | 11.75 | 162 | 591778 | 2.39 ug/mL | 95 |
| 47) | 2-Nitroaniline | 11.98 | 138 | 188107 | 2.21 ug/mL | 98 |
| 48) | Dimethylphthalate | 12.23 | 163 | 779879 | 2.49 ug/mL | 98 |
| 49) | 2,6-Dinitrotoluene | 12.36 | 165 | 177156 | 2.31 ug/mL | 88 |
| 50) | Acenaphthylene | 12.35 | 152 | 890894 | 2.43 ug/mL | 97 |
| 51) | 3-Nitroaniline | 12.57 | 138 | 139862 | 2.11 ug/mL# | 43 |
| 52) | Acenaphthene | 12.61 | 154 | 508325 | 2.44 ug/mL | 99 |
| 53) | 2,4-Dinitrophenol | 12.73 | 184 | 40279 | 2.40 ug/mL# | 90 |
| 54) | Dibenzofuran | 12.83 | 168 | 822711 | 2.37 ug/mL# | 83 |
| 55) | 2,4-Dinitrotoluene | 12.91 | 165 | 227700 | 2.19 ug/mL | 96 |
| 56) | 4-Nitrophenol | 12.91 | 65 | 116644m | 1.79 ug/mL | |
| 57) | 2,3,4,6-Tetrachlorophenol | 13.09 | 131 | 74030 | 1.97 ug/mL# | 97 |
| 58) | Diethyl phthalate | 13.22 | 149 | 792786 | 2.60 ug/mL | 95 |
| 59) | Fluorene | 13.32 | 166 | 667858 | 2.43 ug/mL | 99 |
| 60) | 4-Chlorophenyl phenylether | 13.31 | 204 | 359858 | 2.37 ug/mL | 91 |
| 61) | 4-Nitroaniline | 13.46 | 138 | 121876 | 1.82 ug/mL# | 78 |
| 63) | 4,6-Dinitro-2-methylphenol | 13.49 | 198 | 110748 | 1.59 ug/mL | 90 |
| 64) | Diphenylamine | 13.50 | 169 | 486206 | 2.22 ug/mL | 96 |
| 65) | N-Nitrosodiphenylamine | 13.49 | 167 | 162192 | 2.07 ug/mL | 93 |
| 66) | Azobenzene | 13.53 | 77 | 781458 | 2.17 ug/mL# | 89 |
| 68) | 4-Bromophenyl phenylether | 14.00 | 248 | 208408 | 2.23 ug/mL | 95 |
| 69) | Hexachlorobenzene | 14.22 | 142 | 98427 | 2.44 ug/mL | 90 |
| 70) | Atrazine | 14.30 | 200 | 233710 | 2.55 ug/mL# | 99 |
| 71) | Pentachlorophenol | 14.50 | 266 | 102062 | 1.60 ug/mL | 92 |
| 73) | Phenanthrene | 14.69 | 178 | 922468 | 2.35 ug/mL# | 99 |
| 74) | Anthracene | 14.75 | 178 | 1018418 | 2.39 ug/mL# | 98 |
| 75) | Carbazole | 15.01 | 167 | 875568 | 2.34 ug/mL# | 100 |
| 76) | Di-n-butyl phthalate | 15.52 | 149 | 1331413 | 2.51 ug/mL | 98 |
| 77) | Parathion | 15.81 | 97 | 226618 | 2.30 ug/mL# | 94 |
| 78) | Fluoranthene | 16.40 | 202 | 1053169 | 2.33 ug/mL# | 99 |
| 79) | Benzidine | 16.63 | 184 | 326491 | 2.35 ug/mL# | 96 |

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\072416\SV401942.D Vial: 7
Acq On : 24 Jul 2016 8:52 am Operator: KH
Sample : SEQ-CAL2 Inst : GC/MS BNA
Misc : QBSV4072416A Multiplr: 1.00
MS Integration Params: EVENTS.E
Quant Time: Jul 25 9:02 2016 Quant Results File: BNA4M54.RES

Quant Method : C:\HPCHEM\1\METHODS\BNA4M54.M (Chemstation Integrator)
Title : GC MS BNA 4 Semi Volatiles Calibration
Last Update : Mon Jul 25 09:00:44 2016
Response via : Initial Calibration
DataAcq Meth : BNA4M53

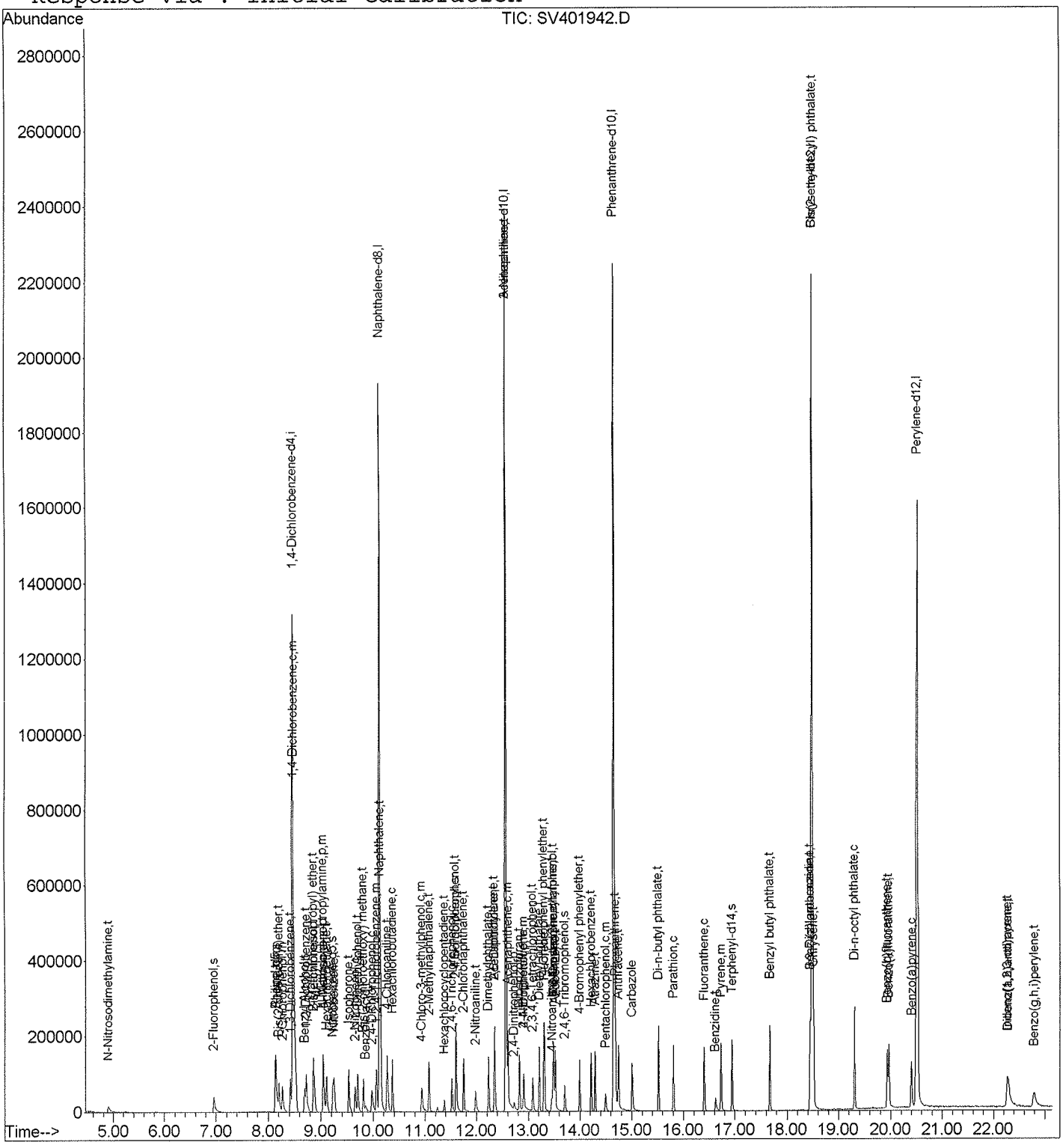
| | Compound | R.T. | QIon | Response | Conc | Unit | Qvalue |
|---|---|---|---|---|---|---|---|
| 80) | Pyrene | 16.73 | 202 | 1107724 | 2.41 | ug/mL# | 88 |
| 82) | Benzyl butyl phthalate | 17.67 | 149 | 624736 | 2.46 | ug/mL | 96 |
| 83) | Bis(2-ethylhexyl) phthalat | 18.48 | 149 | 840570 | 2.48 | ug/mL | 96 |
| 84) | Benz (a) anthracene | 18.45 | 228 | 1000432 | 2.28 | ug/mL | 99 |
| 85) | 3,3-Dichlorobenzidine | 18.45 | 252 | 399274 | 2.25 | ug/mL | 97 |
| 87) | Chrysene | 18.52 | 228 | 952173 | 2.38 | ug/mL# | 98 |
| 88) | Di-n-octyl phthalate | 19.31 | 149 | 1452434 | 2.51 | ug/mL# | 97 |
| 89) | Benzo(b)fluoranthene | 19.93 | 252 | 882696 | 2.11 | ug/mL# | 97 |
| 90) | Benzo(k)fluoranthene | 19.96 | 252 | 1116246 | 2.66 | ug/mL | 99 |
| 91) | Benzo(a)pyrene | 20.40 | 252 | 875159 | 2.18 | ug/mL | 96 |
| 93) | Indeno(1,2,3-cd)pyrene | 22.27 | 276 | 1067414 | 2.42 | ug/mL# | 90 |
| 94) | Dibenz(a,h)anthracene | 22.29 | 278 | 851904 | 2.29 | ug/mL# | 90 |
| 95) | Benzo(g,h,i)perylene | 22.79 | 276 | 753365m | 2.19 | ug/mL | |

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\072416\SV401942.D Vial: 7
Acq On : 24 Jul 2016 8:52 am Operator: KH
Sample : SEQ-CAL2 Inst : GC/MS BNA
Misc : QBSV4072416A Multiplr: 1.00
MS Integration Params: EVENTS.E
Quant Time: Jul 25 9:02 2016 Quant Results File: BNA4M54.RES

Method : C:\HPCHEM\1\METHODS\BNA4M54.M (Chemstation Integrator)
Title : GC MS BNA 4 Semi Volatiles Calibration
Last Update : Mon Jul 25 09:09:46 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\072416\SV401943.D Vial: 8
Acq On : 24 Jul 2016 9:25 am Operator: KH
Sample : SEQ-CAL3 Inst : GC/MS BNA
Misc : QBSV4072416A Multiplr: 1.00
MS Integration Params: EVENTS.E
Quant Time: Jul 25 9:07 2016 Quant Results File: BNA4M54.RES

Quant Method : C:\HPCHEM\1\METHODS\BNA4M54.M (Chemstation Integrator)
Title : GC MS BNA 4 Semi Volatiles Calibration
Last Update : Mon Jul 25 08:58:56 2016
Response via : Initial Calibration
DataAcq Meth : BNA4M53

| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 1) 1,4-Dichlorobenzene-d4 | 8.47 | 152 | 3814659 | 40.00 | ug/mL | 0.00 |
| 20) Naphthalene-d8 | 10.13 | 136 | 14092341 | 40.00 | ug/mL | 0.00 |
| 39) Acenaphthene-d10 | 12.57 | 164 | 8810063 | 40.00 | ug/mL | 0.00 |
| 62) Phenanthrene-d10 | 14.67 | 188 | 16092109 | 40.00 | ug/mL | 0.00 |
| 86) Chrysene-d12 | 18.50 | 240 | 14566952 | 40.00 | ug/mL | 0.00 |
| 92) Perylene-d12 | 20.53 | 264 | 15325114 | 40.00 | ug/mL | 0.00 |
| **System Monitoring Compounds** | | | | | | |
| 4) 2-Fluorophenol | 6.95 | 112 | 768523m | 5.11 | ug/mL | 0.00 |
| Spiked Amount 75.000 | Range 15 - 87 | | Recovery = 6.81%# | | | |
| 5) Phenol-d5 | 8.14 | 99 | 897964 | 5.38 | ug/mL | 0.00 |
| Spiked Amount 75.000 | Range 10 - 100 | | Recovery = 7.17%# | | | |
| 21) Nitrobenzene-d5 | 9.23 | 82 | 910909 | 5.58 | ug/mL | 0.00 |
| Spiked Amount 50.000 | Range 26 - 120 | | Recovery = 11.16%# | | | |
| 44) 2-Fluorobiphenyl | 11.60 | 172 | 1704661 | 5.29 | ug/mL | 0.00 |
| Spiked Amount 50.000 | Range 29 - 120 | | Recovery = 10.58%# | | | |
| 67) 2,4,6-Tribromophenol | 13.71 | 330 | 387188 | 5.17 | ug/mL | 0.00 |
| Spiked Amount 75.000 | Range 35 - 126 | | Recovery = 6.89%# | | | |
| 81) Terphenyl-d14 | 16.95 | 244 | 1879594 | 5.32 | ug/mL | 0.00 |
| Spiked Amount 50.000 | Range 35 - 127 | | Recovery = 10.64%# | | | |
| **Target Compounds** | | | | | | Qvalue |
| 2) N-Nitrosodimethylamine | 4.89 | 74 | 472009m | 4.68 | ug/mL | |
| 3) Pyridine | 4.82 | 79 | 678637m | 5.05 | ug/mL | |
| 6) Benzaldehyde | 7.97 | 105 | 717282 | 6.38 | ug/mL# | 92 |
| 7) Aniline | 8.15 | 93 | 1038879 | 5.48 | ug/mL | 98 |
| 8) Phenol | 8.15 | 94 | 1078836 | 5.07 | ug/mL | 96 |
| 9) Bis(2-chloroethyl)ether | 8.21 | 93 | 937682 | 4.93 | ug/mL | 95 |
| 10) 2-Chlorophenol | 8.27 | 128 | 788107 | 5.36 | ug/mL | 99 |
| 11) 1,3-Dichlorobenzene | 8.43 | 146 | 789272 | 5.45 | ug/mL | 97 |
| 12) 1,4-Dichlorobenzene | 8.49 | 146 | 964828 | 5.56 | ug/mL | 92 |
| 13) Benzyl Alcohol | 8.70 | 108 | 470796 | 5.11 | ug/mL | 96 |
| 14) 1,2-Dichlorobenzene | 8.73 | 146 | 858425 | 5.68 | ug/mL | 99 |
| 15) 2-Methylphenol | 8.87 | 107 | 703093 | 5.42 | ug/mL | 97 |
| 16) Bis(2-chloroisopropyl) eth | 8.87 | 45 | 833173 | 4.99 | ug/mL | 99 |
| 17) N-Nitroso-di-n-propylamine | 9.05 | 70 | 601297 | 5.28 | ug/mL | 97 |
| 18) 4-Methylphenol | 9.04 | 107 | 940867 | 5.48 | ug/mL | 92 |
| 19) Hexachloroethane | 9.11 | 117 | 411985 | 5.66 | ug/mL | 99 |
| 22) Nitrobenzene | 9.25 | 77 | 890894 | 5.37 | ug/mL | 98 |
| 23) Isophorone | 9.54 | 82 | 1788301 | 5.24 | ug/mL | 98 |
| 24) 2-Nitrophenol | 9.66 | 139 | 461550 | 5.58 | ug/mL | 96 |
| 25) 2,4-Dimethylphenol | 9.71 | 122 | 645838 | 5.23 | ug/mL | 96 |

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\072416\SV401943.D Vial: 8
Acq On : 24 Jul 2016 9:25 am Operator: KH
Sample : SEQ-CAL3 Inst : GC/MS BNA
Misc : QBSV4072416A Multiplr: 1.00
MS Integration Params: EVENTS.E
Quant Time: Jul 25 9:07 2016 Quant Results File: BNA4M54.RES

Quant Method : C:\HPCHEM\1\METHODS\BNA4M54.M (Chemstation Integrator)
Title : GC MS BNA 4 Semi Volatiles Calibration
Last Update : Mon Jul 25 08:58:56 2016
Response via : Initial Calibration
DataAcq Meth : BNA4M53

| | Compound | R.T. | QIon | Response | Conc | Unit | Qvalue |
|---|---|---|---|---|---|---|---|
| 26) | Bis(2-chloroethoxy) methan | 9.82 | 93 | 958700 | 5.47 | ug/mL | 99 |
| 27) | Benzoic acid | 9.86 | 105 | 444811m | 4.40 | ug/mL | |
| 28) | 2,4-Dichlorophenol | 9.97 | 162 | 635523 | 5.23 | ug/mL | 95 |
| 29) | 1,2,4-Trichlorobenzene | 10.06 | 180 | 820728 | 5.67 | ug/mL | 99 |
| 30) | Naphthalene | 10.15 | 128 | 2027665 | 5.64 | ug/mL | 95 |
| 31) | 4-Chloroaniline | 10.26 | 127 | 794281 | 5.09 | ug/mL | 97 |
| 32) | Acetophenone | 9.03 | 105 | 1274243 | 6.02 | ug/mL# | 99 |
| 33) | Alpha-Terpineol | 10.12 | 59 | 678971 | 6.15 | ug/mL | 99 |
| 34) | Hexachlorobutadiene | 10.37 | 225 | 509927 | 6.38 | ug/mL | 96 |
| 35) | Caprolactam | 10.74 | 113 | 280889 | 5.39 | ug/mL# | 84 |
| 36) | 4-Chloro-3-methylphenol | 10.93 | 107 | 749208 | 5.46 | ug/mL | 97 |
| 37) | 1-Methylnaphthalene | 11.23 | 141 | 1310365 | 5.89 | ug/mL | 96 |
| 38) | 2-Methylnaphthalene | 11.07 | 142 | 1260345 | 5.29 | ug/mL | 94 |
| 40) | 1,2,4,5-tetrachlorobenzene | 11.36 | 216 | 926701 | 5.99 | ug/mL | 96 |
| 41) | Hexachlorocyclopentadiene | 11.38 | 237 | 246667 | 3.46 | ug/mL | 98 |
| 42) | 2,4,6-Trichlorophenol | 11.52 | 196 | 489578 | 5.14 | ug/mL | 97 |
| 43) | 2,4,5-Trichlorophenol | 11.60 | 196 | 547652 | 4.89 | ug/mL | 95 |
| 45) | 2-Chloronaphthalene | 11.75 | 162 | 1386675 | 5.11 | ug/mL | 96 |
| 46) | Biphenyl | 11.73 | 153 | 766267 | 5.56 | ug/mL# | 95 |
| 47) | 2-Nitroaniline | 11.98 | 138 | 468894 | 4.92 | ug/mL | 98 |
| 48) | Dimethylphthalate | 12.23 | 163 | 1820098 | 5.35 | ug/mL | 99 |
| 49) | 2,6-Dinitrotoluene | 12.35 | 165 | 436701 | 5.29 | ug/mL | 93 |
| 50) | Acenaphthylene | 12.35 | 152 | 2127582 | 5.23 | ug/mL | 97 |
| 51) | 3-Nitroaniline | 12.57 | 138 | 353383 | 4.72 | ug/mL# | 77 |
| 52) | Acenaphthene | 12.61 | 154 | 1193435 | 5.17 | ug/mL | 99 |
| 53) | 2,4-Dinitrophenol | 12.72 | 184 | 180779 | 4.92 | ug/mL# | 90 |
| 54) | Dibenzofuran | 12.83 | 168 | 1949486 | 5.13 | ug/mL | 95 |
| 55) | 2,4-Dinitrotoluene | 12.91 | 165 | 582258 | 5.18 | ug/mL | 98 |
| 56) | 4-Nitrophenol | 12.85 | 65 | 371882m | 5.32 | ug/mL | |
| 57) | 2,3,4,6-Tetrachlorophenol | 13.08 | 131 | 202717 | 5.11 | ug/mL | 94 |
| 58) | Diethyl phthalate | 13.22 | 149 | 1803378 | 5.44 | ug/mL | 98 |
| 59) | Fluorene | 13.32 | 166 | 1553284 | 5.16 | ug/mL | 96 |
| 60) | 4-Chlorophenyl phenylether | 13.31 | 204 | 835197 | 5.13 | ug/mL | 93 |
| 61) | 4-Nitroaniline | 13.45 | 138 | 395905m | 5.22 | ug/mL | |
| 63) | 4,6-Dinitro-2-methylphenol | 13.49 | 198 | 329716 | 4.45 | ug/mL | 95 |
| 64) | Diphenylamine | 13.50 | 169 | 1229359 | 5.14 | ug/mL | 99 |
| 65) | N-Nitrosodiphenylamine | 13.50 | 167 | 408245 | 4.82 | ug/mL | 96 |
| 66) | Azobenzene | 13.53 | 77 | 1773539 | 4.48 | ug/mL# | 91 |
| 68) | 4-Bromophenyl phenylether | 14.00 | 248 | 511449 | 5.15 | ug/mL | 94 |
| 69) | Hexachlorobenzene | 14.22 | 142 | 235976 | 5.57 | ug/mL | 90 |
| 70) | Atrazine | 14.30 | 200 | 618195 | 6.48 | ug/mL# | 93 |

(#) = qualifier out of range (m) = manual integration

Data File : C:\HPCHEM\1\DATA\072416\SV401943.D Vial: 8
Acq On : 24 Jul 2016 9:25 am Operator: KH
Sample : SEQ-CAL3 Inst : GC/MS BNA
Misc : QBSV4072416A Multiplr: 1.00
MS Integration Params: EVENTS.E
Quant Time: Jul 25 9:07 2016 Quant Results File: BNA4M54.RES

Quant Method : C:\HPCHEM\1\METHODS\BNA4M54.M (Chemstation Integrator)
Title : GC MS BNA 4 Semi Volatiles Calibration
Last Update : Mon Jul 25 08:58:56 2016
Response via : Initial Calibration
DataAcq Meth : BNA4M53

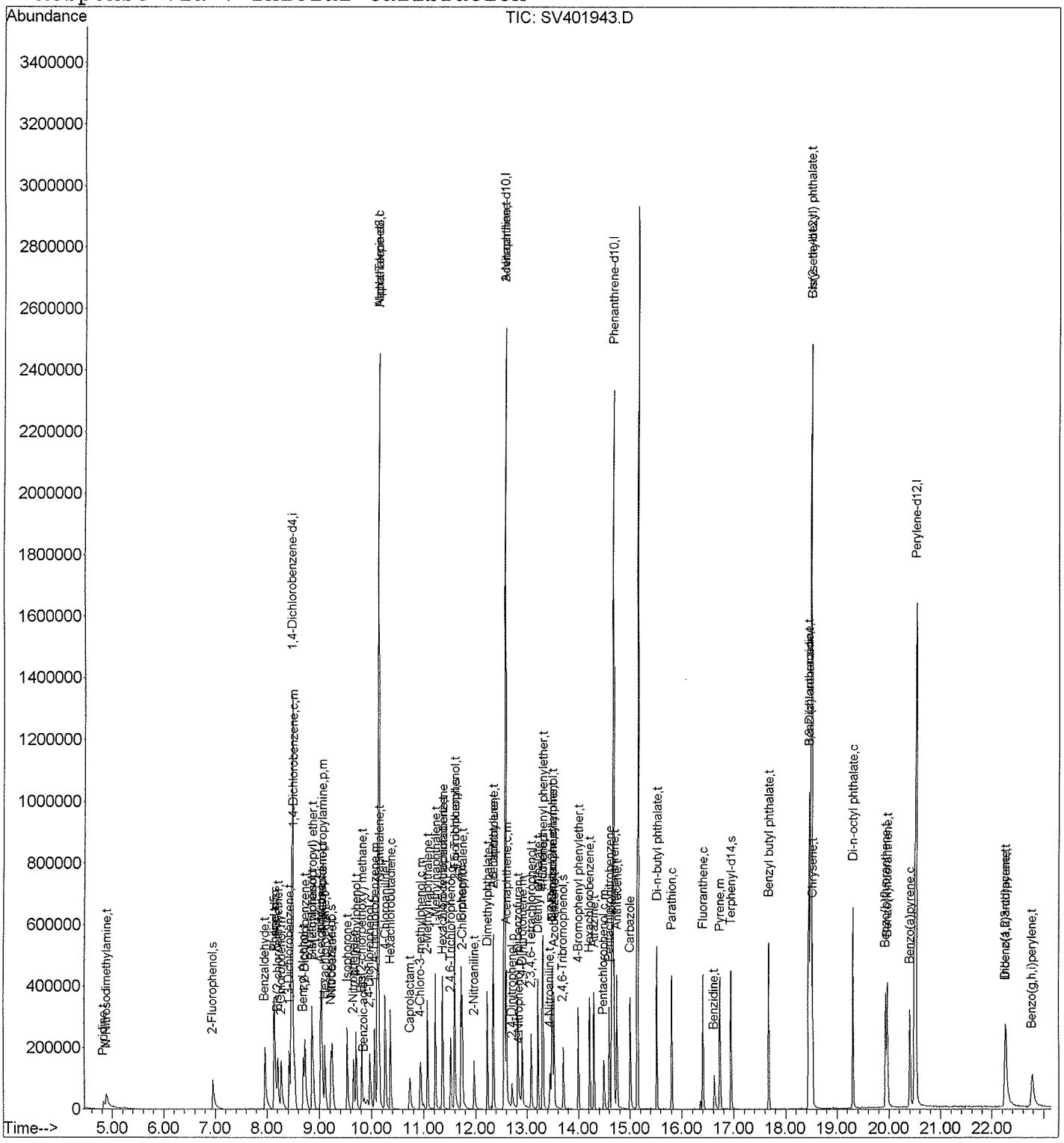
| Compound | R.T. | QIon | Response | Conc | Unit | Qvalue |
|---|---|---|---|---|---|---|
| 71) Pentachlorophenol | 14.50 | 266 | 283641 | 4.06 | ug/mL | 98 |
| 72) Pentachloronitrobenzene | 14.61 | 237 | 273019 | 6.20 | ug/mL | 98 |
| 73) Phenanthrene | 14.70 | 178 | 2186592 | 5.14 | ug/mL# | 98 |
| 74) Anthracene | 14.75 | 178 | 2375596 | 5.13 | ug/mL# | 99 |
| 75) Carbazole | 15.01 | 167 | 2136430 | 5.20 | ug/mL# | 96 |
| 76) Di-n-butyl phthalate | 15.53 | 149 | 3132080 | 5.40 | ug/mL | 99 |
| 77) Parathion | 15.81 | 97 | 570146 | 5.31 | ug/mL# | 97 |
| 78) Fluoranthene | 16.41 | 202 | 2548733 | 5.27 | ug/mL# | 98 |
| 79) Benzidine | 16.62 | 184 | 853735m | 5.53 | ug/mL | |
| 80) Pyrene | 16.73 | 202 | 2621565 | 5.34 | ug/mL# | 85 |
| 82) Benzyl butyl phthalate | 17.68 | 149 | 1485538 | 5.38 | ug/mL | 98 |
| 83) Bis(2-ethylhexyl) phthalat | 18.49 | 149 | 1998623 | 5.71 | ug/mL | 97 |
| 84) Benz (a) anthracene | 18.45 | 228 | 2386526 | 5.14 | ug/mL | 99 |
| 85) 3,3-Dichlorobenzidine | 18.45 | 252 | 2084974 | 11.28 | ug/mL | 98 |
| 87) Chrysene | 18.53 | 228 | 2231775 | 5.17 | ug/mL# | 98 |
| 88) Di-n-octyl phthalate | 19.31 | 149 | 3462969 | 5.37 | ug/mL | 98 |
| 89) Benzo(b)fluoranthene | 19.93 | 252 | 2559364m | 5.70 | ug/mL | |
| 90) Benzo(k)fluoranthene | 19.97 | 252 | 2457162m | 5.46 | ug/mL | |
| 91) Benzo(a)pyrene | 20.41 | 252 | 2298231 | 5.33 | ug/mL | 100 |
| 93) Indeno(1,2,3-cd)pyrene | 22.27 | 276 | 2534945 | 5.45 | ug/mL# | 93 |
| 94) Dibenz(a,h)anthracene | 22.27 | 278 | 2153357m | 5.48 | ug/mL | |
| 95) Benzo(g,h,i)perylene | 22.78 | 276 | 1941187m | 5.33 | ug/mL | |

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\072416\SV401943.D Vial: 8
Acq On : 24 Jul 2016 9:25 am Operator: KH
Sample : SEQ-CAL3 Inst : GC/MS BNA
Misc : QBSV4072416A Multiplr: 1.00
MS Integration Params: EVENTS.E
Quant Time: Jul 25 9:07 2016 Quant Results File: BNA4M54.RES

Method : C:\HPCHEM\1\METHODS\BNA4M54.M (Chemstation Integrator)
Title : GC MS BNA 4 Semi Volatiles Calibration
Last Update : Mon Jul 25 09:09:46 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\072416\SV401944.D Vial: 9
Acq On : 24 Jul 2016 9:58 am Operator: KH
Sample : SEQ-CAL4 Inst : GC/MS BNA
Misc : QBSV4072416A Multiplr: 1.00
MS Integration Params: EVENTS.E
Quant Time: Jul 25 8:58 2016 Quant Results File: BNA4M54.RES

Quant Method : C:\HPCHEM\1\METHODS\BNA4M54.M (Chemstation Integrator)
Title : GC MS BNA 4 Semi Volatiles Calibration
Last Update : Mon Jul 25 08:57:14 2016
Response via : Initial Calibration
DataAcq Meth : BNA4M53

| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 1) 1,4-Dichlorobenzene-d4 | 8.48 | 152 | 4055021 | 40.00 | ug/mL | 0.00 |
| 20) Naphthalene-d8 | 10.13 | 136 | 14931560 | 40.00 | ug/mL | 0.00 |
| 39) Acenaphthene-d10 | 12.57 | 164 | 9106564 | 40.00 | ug/mL | 0.00 |
| 62) Phenanthrene-d10 | 14.67 | 188 | 16591161 | 40.00 | ug/mL | 0.00 |
| 86) Chrysene-d12 | 18.50 | 240 | 15060171 | 40.00 | ug/mL | 0.00 |
| 92) Perylene-d12 | 20.53 | 264 | 15664718 | 40.00 | ug/mL | 0.00 |
| **System Monitoring Compounds** | | | | | | |
| 4) 2-Fluorophenol | 6.96 | 112 | 1505851m | 9.16 | ug/mL | 0.00 |
| Spiked Amount 75.000 | Range 15 - 87 | | Recovery = 12.21%# | | | |
| 5) Phenol-d5 | 8.14 | 99 | 1731428 | 9.31 | ug/mL | 0.00 |
| Spiked Amount 75.000 | Range 10 - 100 | | Recovery = 12.41% | | | |
| 21) Nitrobenzene-d5 | 9.23 | 82 | 1772396 | 9.92 | ug/mL | 0.00 |
| Spiked Amount 50.000 | Range 26 - 120 | | Recovery = 19.84%# | | | |
| 44) 2-Fluorobiphenyl | 11.61 | 172 | 3348854 | 9.82 | ug/mL | 0.00 |
| Spiked Amount 50.000 | Range 29 - 120 | | Recovery = 19.64%# | | | |
| 67) 2,4,6-Tribromophenol | 13.71 | 330 | 785807 | 10.22 | ug/mL | 0.00 |
| Spiked Amount 75.000 | Range 35 - 126 | | Recovery = 13.63%# | | | |
| 81) Terphenyl-d14 | 16.95 | 244 | 3594373 | 9.71 | ug/mL | 0.00 |
| Spiked Amount 50.000 | Range 35 - 127 | | Recovery = 19.42%# | | | |
| **Target Compounds** | | | | | | Qvalue |
| 2) N-Nitrosodimethylamine | 4.88 | 74 | 951470m | 8.37 | ug/mL | |
| 3) Pyridine | 4.79 | 79 | 1292033m | 8.09 | ug/mL | |
| 6) Benzaldehyde | 7.97 | 105 | 1417427 | 11.55 | ug/mL# | 97 |
| 7) Aniline | 8.15 | 93 | 1991853 | 9.36 | ug/mL | 97 |
| 8) Phenol | 8.15 | 94 | 2164629 | 9.31 | ug/mL | 98 |
| 9) Bis(2-chloroethyl)ether | 8.21 | 93 | 1876003 | 9.03 | ug/mL | 98 |
| 10) 2-Chlorophenol | 8.27 | 128 | 1566956 | 9.94 | ug/mL | 99 |
| 11) 1,3-Dichlorobenzene | 8.43 | 146 | 1550358 | 10.02 | ug/mL | 98 |
| 12) 1,4-Dichlorobenzene | 8.50 | 146 | 1904588 | 10.37 | ug/mL | 97 |
| 13) Benzyl Alcohol | 8.70 | 108 | 966776 | 9.61 | ug/mL | 99 |
| 14) 1,2-Dichlorobenzene | 8.73 | 146 | 1633990 | 10.12 | ug/mL | 97 |
| 15) 2-Methylphenol | 8.87 | 107 | 1353177 | 9.64 | ug/mL | 99 |
| 16) Bis(2-chloroisopropyl) eth | 8.87 | 45 | 1608178 | 8.05 | ug/mL | 98 |
| 17) N-Nitroso-di-n-propylamine | 9.06 | 70 | 1183987 | 9.58 | ug/mL | 98 |
| 18) 4-Methylphenol | 9.05 | 107 | 1810680 | 9.70 | ug/mL | 95 |
| 19) Hexachloroethane | 9.11 | 117 | 807942 | 10.50 | ug/mL | 99 |
| 22) Nitrobenzene | 9.25 | 77 | 1809155 | 10.10 | ug/mL | 98 |
| 23) Isophorone | 9.54 | 82 | 3455666 | 9.23 | ug/mL | 99 |
| 24) 2-Nitrophenol | 9.66 | 139 | 876907 | 9.66 | ug/mL | 96 |
| 25) 2,4-Dimethylphenol | 9.71 | 122 | 1282049 | 9.48 | ug/mL | 97 |

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\072416\SV401944.D Vial: 9
Acq On : 24 Jul 2016 9:58 am Operator: KH
Sample : SEQ-CAL4 Inst : GC/MS BNA
Misc : QBSV4072416A Multiplr: 1.00
MS Integration Params: EVENTS.E
Quant Time: Jul 25 8:58 2016 Quant Results File: BNA4M54.RES

Quant Method : C:\HPCHEM\1\METHODS\BNA4M54.M (Chemstation Integrator)
Title : GC MS BNA 4 Semi Volatiles Calibration
Last Update : Mon Jul 25 08:57:14 2016
Response via : Initial Calibration
DataAcq Meth : BNA4M53

| | Compound | R.T. | QIon | Response | Conc | Unit | Qvalue |
|---|---|---|---|---|---|---|---|
| 26) | Bis(2-chloroethoxy) methan | 9.82 | 93 | 1828643 | 9.16 | ug/mL | 98 |
| 27) | Benzoic acid | 9.90 | 105 | 973540m | 8.67 | ug/mL | |
| 28) | 2,4-Dichlorophenol | 9.97 | 162 | 1307240 | 10.01 | ug/mL | 98 |
| 29) | 1,2,4-Trichlorobenzene | 10.07 | 180 | 1624696 | 10.61 | ug/mL | 99 |
| 30) | Naphthalene | 10.15 | 128 | 3915936 | 10.00 | ug/mL | 96 |
| 31) | 4-Chloroaniline | 10.26 | 127 | 1656380 | 9.59 | ug/mL | 97 |
| 32) | Acetophenone | 9.03 | 105 | 2449905 | 10.66 | ug/mL# | 98 |
| 33) | Alpha-Terpineol | 10.13 | 59 | 1236058 | 10.44 | ug/mL | 97 |
| 34) | Hexachlorobutadiene | 10.37 | 225 | 965645 | 11.74 | ug/mL | 99 |
| 35) | Caprolactam | 10.76 | 113 | 521224 | 9.04 | ug/mL# | 87 |
| 36) | 4-Chloro-3-methylphenol | 10.93 | 107 | 1565263 | 10.72 | ug/mL | 94 |
| 37) | 1-Methylnaphthalene | 11.23 | 141 | 2509531 | 10.33 | ug/mL | 99 |
| 38) | 2-Methylnaphthalene | 11.08 | 142 | 2529765 | 9.68 | ug/mL | 98 |
| 40) | 1,2,4,5-tetrachlorobenzene | 11.36 | 216 | 1673591 | 10.47 | ug/mL | 99 |
| 41) | Hexachlorocyclopentadiene | 11.38 | 237 | 623093 | 8.07 | ug/mL | 99 |
| 42) | 2,4,6-Trichlorophenol | 11.52 | 196 | 987116 | 9.89 | ug/mL | 97 |
| 43) | 2,4,5-Trichlorophenol | 11.60 | 196 | 1125359 | 9.50 | ug/mL | 96 |
| 45) | 2-Chloronaphthalene | 11.75 | 162 | 2751550 | 9.51 | ug/mL | 98 |
| 46) | Biphenyl | 11.73 | 153 | 1457281 | 9.91 | ug/mL# | 99 |
| 47) | 2-Nitroaniline | 11.98 | 138 | 961509 | 9.21 | ug/mL | 98 |
| 48) | Dimethylphthalate | 12.24 | 163 | 3598120 | 10.02 | ug/mL | 99 |
| 49) | 2,6-Dinitrotoluene | 12.36 | 165 | 883637 | 10.23 | ug/mL | 97 |
| 50) | Acenaphthylene | 12.35 | 152 | 4138513 | 9.43 | ug/mL | 99 |
| 51) | 3-Nitroaniline | 12.57 | 138 | 738113 | 8.99 | ug/mL# | 91 |
| 52) | Acenaphthene | 12.61 | 154 | 2353711 | 9.51 | ug/mL | 99 |
| 53) | 2,4-Dinitrophenol | 12.72 | 184 | 464481 | 9.55 | ug/mL# | 93 |
| 54) | Dibenzofuran | 12.83 | 168 | 3943520 | 9.72 | ug/mL | 94 |
| 55) | 2,4-Dinitrotoluene | 12.92 | 165 | 1178045 | 9.95 | ug/mL | 98 |
| 56) | 4-Nitrophenol | 12.84 | 65 | 693020m | 9.21 | ug/mL | |
| 57) | 2,3,4,6-Tetrachlorophenol | 13.09 | 131 | 421592 | 10.22 | ug/mL | 95 |
| 58) | Diethyl phthalate | 13.22 | 149 | 3505675 | 10.02 | ug/mL | 98 |
| 59) | Fluorene | 13.32 | 166 | 3139546 | 9.88 | ug/mL | 99 |
| 60) | 4-Chlorophenyl phenylether | 13.31 | 204 | 1682821 | 9.97 | ug/mL | 93 |
| 61) | 4-Nitroaniline | 13.46 | 138 | 750993 | 8.89 | ug/mL# | 74 |
| 63) | 4,6-Dinitro-2-methylphenol | 13.49 | 198 | 759385 | 9.82 | ug/mL | 97 |
| 64) | Diphenylamine | 13.50 | 169 | 2379180 | 9.31 | ug/mL | 100 |
| 65) | N-Nitrosodiphenylamine | 13.50 | 167 | 805136 | 9.00 | ug/mL | 98 |
| 66) | Azobenzene | 13.53 | 77 | 3499641 | 8.20 | ug/mL# | 92 |
| 68) | 4-Bromophenyl phenylether | 14.00 | 248 | 1023885 | 9.88 | ug/mL | 93 |
| 69) | Hexachlorobenzene | 14.22 | 142 | 444188 | 10.09 | ug/mL | 95 |
| 70) | Atrazine | 14.31 | 200 | 1093882 | 11.01 | ug/mL# | 98 |

(#) = qualifier out of range (m) = manual integration

Data File : C:\HPCHEM\1\DATA\072416\SV401944.D Vial: 9
Acq On : 24 Jul 2016 9:58 am Operator: KH
Sample : SEQ-CAL4 Inst : GC/MS BNA
Misc : QBSV4072416A Multiplr: 1.00
MS Integration Params: EVENTS.E
Quant Time: Jul 25 8:58 2016 Quant Results File: BNA4M54.RES

Quant Method : C:\HPCHEM\1\METHODS\BNA4M54.M (Chemstation Integrator)
Title : GC MS BNA 4 Semi Volatiles Calibration
Last Update : Mon Jul 25 08:57:14 2016
Response via : Initial Calibration
DataAcq Meth : BNA4M53

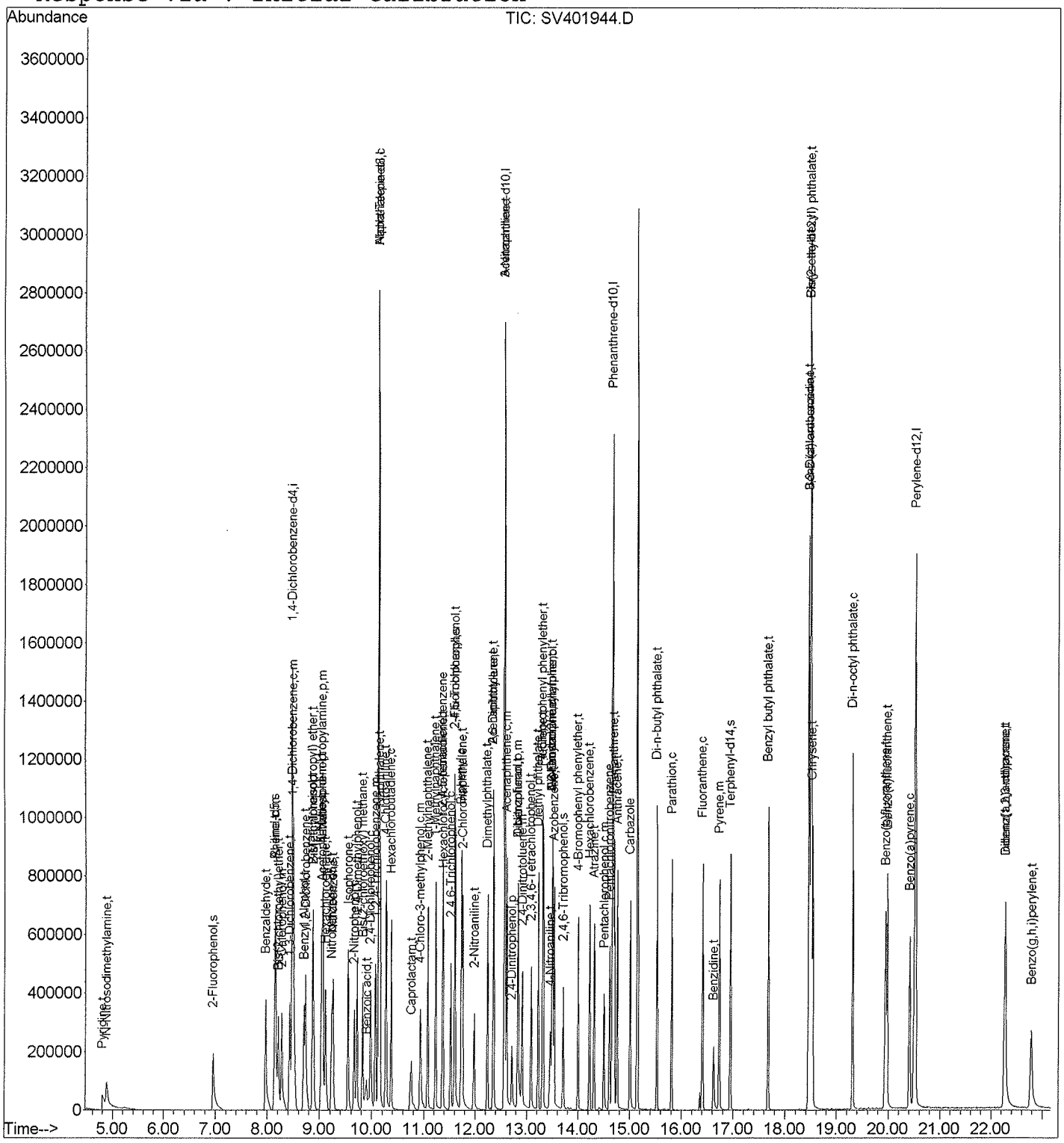
| | Compound | R.T. | QIon | Response | Conc | Unit | Qvalue |
|---|---|---|---|---|---|---|---|
| 71) | Pentachlorophenol | 14.50 | 266 | 658980 | 8.83 | ug/mL | 97 |
| 72) | Pentachloronitrobenzene | 14.61 | 237 | 507316 | 11.58 | ug/mL | 99 |
| 73) | Phenanthrene | 14.70 | 178 | 4279823 | 9.47 | ug/mL# | 99 |
| 74) | Anthracene | 14.76 | 178 | 4647240 | 9.41 | ug/mL# | 100 |
| 75) | Carbazole | 15.01 | 167 | 4127637 | 9.33 | ug/mL# | 96 |
| 76) | Di-n-butyl phthalate | 15.53 | 149 | 5955070 | 9.56 | ug/mL | 100 |
| 77) | Parathion | 15.81 | 97 | 1112799 | 9.63 | ug/mL# | 96 |
| 78) | Fluoranthene | 16.41 | 202 | 5016068 | 9.88 | ug/mL# | 99 |
| 79) | Benzidine | 16.62 | 184 | 1624272m | 9.43 | ug/mL | |
| 80) | Pyrene | 16.74 | 202 | 4983060 | 9.63 | ug/mL# | 92 |
| 82) | Benzyl butyl phthalate | 17.68 | 149 | 2848390 | 9.63 | ug/mL | 96 |
| 83) | Bis(2-ethylhexyl) phthalat | 18.49 | 149 | 3801562 | 10.70 | ug/mL | 97 |
| 84) | Benz (a) anthracene | 18.45 | 228 | 4701079 | 9.81 | ug/mL | 100 |
| 85) | 3,3-Dichlorobenzidine | 18.46 | 252 | 4080899 | 21.84 | ug/mL | 98 |
| 87) | Chrysene | 18.53 | 228 | 4266915 | 9.33 | ug/mL# | 99 |
| 88) | Di-n-octyl phthalate | 19.31 | 149 | 6667350 | 9.42 | ug/mL | 99 |
| 89) | Benzo(b)fluoranthene | 19.95 | 252 | 4506287 | 9.16 | ug/mL# | 98 |
| 90) | Benzo(k)fluoranthene | 19.98 | 252 | 4813008m | 10.15 | ug/mL | |
| 91) | Benzo(a)pyrene | 20.41 | 252 | 4206836 | 9.15 | ug/mL | 98 |
| 93) | Indeno(1,2,3-cd)pyrene | 22.28 | 276 | 4949895 | 10.29 | ug/mL# | 96 |
| 94) | Dibenz(a,h)anthracene | 22.28 | 278 | 4319335m | 10.72 | ug/mL | |
| 95) | Benzo(g,h,i)perylene | 22.79 | 276 | 3796443m | 10.08 | ug/mL | |

(#) = qualifier out of range (m) = manual integration

# Quantitation Report

Data File : C:\HPCHEM\1\DATA\072416\SV401944.D Vial: 9
Acq On : 24 Jul 2016 9:58 am Operator: KH
Sample : SEQ-CAL4 Inst : GC/MS BNA
Misc : QBSV4072416A Multiplr: 1.00
MS Integration Params: EVENTS.E
Quant Time: Jul 25 8:58 2016 Quant Results File: BNA4M54.RES

Method : C:\HPCHEM\1\METHODS\BNA4M54.M (Chemstation Integrator)
Title : GC MS BNA 4 Semi Volatiles Calibration
Last Update : Mon Jul 25 09:09:46 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\072416\SV401945.D Vial: 10
Acq On : 24 Jul 2016 10:31 am Operator: KH
Sample : SEQ-CAL5 Inst : GC/MS BNA
Misc : QBSV4072416A Multiplr: 1.00
MS Integration Params: EVENTS.E
Quant Time: Jul 25 8:56 2016 Quant Results File: BNA4M54.RES

Quant Method : C:\HPCHEM\1\METHODS\BNA4M54.M (Chemstation Integrator)
Title : GC MS BNA 4 Semi Volatiles Calibration
Last Update : Mon Jul 25 08:55:56 2016
Response via : Initial Calibration
DataAcq Meth : BNA4M53

| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 1) 1,4-Dichlorobenzene-d4 | 8.48 | 152 | 4144260 | 40.00 | ug/mL | 0.00 |
| 20) Naphthalene-d8 | 10.13 | 136 | 15648758 | 40.00 | ug/mL | 0.00 |
| 39) Acenaphthene-d10 | 12.57 | 164 | 9451427 | 40.00 | ug/mL | 0.00 |
| 62) Phenanthrene-d10 | 14.68 | 188 | 17094106 | 40.00 | ug/mL | 0.00 |
| 86) Chrysene-d12 | 18.50 | 240 | 15664247 | 40.00 | ug/mL | 0.00 |
| 92) Perylene-d12 | 20.53 | 264 | 15837829 | 40.00 | ug/mL | 0.00 |
| **System Monitoring Compounds** | | | | | | |
| 4) 2-Fluorophenol | 6.96 | 112 | 2311584 | 13.36 | ug/mL | 0.00 |
| Spiked Amount 75.000 | Range 15 - 87 | | Recovery = 17.81% | | | |
| 5) Phenol-d5 | 8.14 | 99 | 2637355 | 13.21 | ug/mL | 0.00 |
| Spiked Amount 75.000 | Range 10 - 100 | | Recovery = 17.61% | | | |
| 21) Nitrobenzene-d5 | 9.23 | 82 | 2717782 | 13.93 | ug/mL | 0.00 |
| Spiked Amount 50.000 | Range 26 - 120 | | Recovery = 27.86% | | | |
| 44) 2-Fluorobiphenyl | 11.61 | 172 | 5180738 | 14.39 | ug/mL | 0.00 |
| Spiked Amount 50.000 | Range 29 - 120 | | Recovery = 28.78%# | | | |
| 67) 2,4,6-Tribromophenol | 13.71 | 330 | 1216098 | 15.40 | ug/mL | 0.00 |
| Spiked Amount 75.000 | Range 35 - 126 | | Recovery = 20.53%# | | | |
| 81) Terphenyl-d14 | 16.95 | 244 | 5638509 | 14.73 | ug/mL | 0.00 |
| Spiked Amount 50.000 | Range 35 - 127 | | Recovery = 29.46%# | | | |
| **Target Compounds** | | | | | | Qvalue |
| 2) N-Nitrosodimethylamine | 4.88 | 74 | 1479160m | 12.07 | ug/mL | |
| 3) Pyridine | 4.78 | 79 | 1842149m | 10.03 | ug/mL | |
| 6) Benzaldehyde | 7.97 | 105 | 1952472 | 15.10 | ug/mL# | 97 |
| 7) Aniline | 8.15 | 93 | 3010280 | 13.07 | ug/mL | 99 |
| 8) Phenol | 8.16 | 94 | 3238589 | 13.22 | ug/mL | 98 |
| 9) Bis(2-chloroethyl)ether | 8.21 | 93 | 2845503 | 13.01 | ug/mL | 99 |
| 10) 2-Chlorophenol | 8.28 | 128 | 2393531 | 14.72 | ug/mL | 100 |
| 11) 1,3-Dichlorobenzene | 8.43 | 146 | 2360486 | 14.77 | ug/mL | 98 |
| 12) 1,4-Dichlorobenzene | 8.50 | 146 | 2854467 | 15.26 | ug/mL | 98 |
| 13) Benzyl Alcohol | 8.71 | 108 | 1491395 | 14.09 | ug/mL | 99 |
| 14) 1,2-Dichlorobenzene | 8.73 | 146 | 2515771 | 15.15 | ug/mL | 98 |
| 15) 2-Methylphenol | 8.87 | 107 | 2057526 | 14.08 | ug/mL | 98 |
| 16) Bis(2-chloroisopropyl) eth | 8.87 | 45 | 2439796 | 10.77 | ug/mL | 100 |
| 17) N-Nitroso-di-n-propylamine | 9.07 | 70 | 1807126 | 14.05 | ug/mL | 89 |
| 18) 4-Methylphenol | 9.05 | 107 | 2811345 | 14.55 | ug/mL | 98 |
| 19) Hexachloroethane | 9.11 | 117 | 1277974 | 16.41 | ug/mL | 97 |
| 22) Nitrobenzene | 9.26 | 77 | 2730972 | 14.22 | ug/mL | 99 |
| 23) Isophorone | 9.55 | 82 | 5228307 | 12.83 | ug/mL | 99 |
| 24) 2-Nitrophenol | 9.66 | 139 | 1397381 | 14.09 | ug/mL | 98 |
| 25) 2,4-Dimethylphenol | 9.72 | 122 | 1920093 | 13.13 | ug/mL | 99 |

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\072416\SV401945.D Vial: 10
Acq On : 24 Jul 2016 10:31 am Operator: KH
Sample : SEQ-CAL5 Inst : GC/MS BNA
Misc : QBSV4072416A Multiplr: 1.00
MS Integration Params: EVENTS.E
Quant Time: Jul 25 8:56 2016 Quant Results File: BNA4M54.RES

Quant Method : C:\HPCHEM\1\METHODS\BNA4M54.M (Chemstation Integrator)
Title : GC MS BNA 4 Semi Volatiles Calibration
Last Update : Mon Jul 25 08:55:56 2016
Response via : Initial Calibration
DataAcq Meth : BNA4M53

| | Compound | R.T. | QIon | Response | Conc | Unit | Qvalue |
|---|---|---|---|---|---|---|---|
| 26) | Bis(2-chloroethoxy) methan | 9.82 | 93 | 2815952 | 12.57 | ug/mL | 99 |
| 27) | Benzoic acid | 9.93 | 105 | 1710339 | 13.92 | ug/mL# | 1 |
| 28) | 2,4-Dichlorophenol | 9.98 | 162 | 2043605 | 14.63 | ug/mL | 97 |
| 29) | 1,2,4-Trichlorobenzene | 10.07 | 180 | 2514764 | 15.63 | ug/mL | 99 |
| 30) | Naphthalene | 10.16 | 128 | 5975046 | 14.17 | ug/mL | 98 |
| 31) | 4-Chloroaniline | 10.27 | 127 | 2552071 | 13.52 | ug/mL | 97 |
| 32) | Acetophenone | 9.04 | 105 | 3525577 | 14.29 | ug/mL# | 98 |
| 33) | Alpha-Terpineol | 10.13 | 59 | 1775784 | 14.19 | ug/mL | 98 |
| 34) | Hexachlorobutadiene | 10.37 | 225 | 1471690 | 17.46 | ug/mL | 98 |
| 35) | Caprolactam | 10.78 | 113 | 760610 | 11.99 | ug/mL# | 75 |
| 36) | 4-Chloro-3-methylphenol | 10.94 | 107 | 2352980 | 15.20 | ug/mL | 99 |
| 37) | 1-Methylnaphthalene | 11.23 | 141 | 3698118 | 14.17 | ug/mL | 100 |
| 38) | 2-Methylnaphthalene | 11.08 | 142 | 3983213 | 14.11 | ug/mL | 99 |
| 40) | 1,2,4,5-tetrachlorobenzene | 11.37 | 216 | 2494056 | 15.00 | ug/mL | 98 |
| 41) | Hexachlorocyclopentadiene | 11.38 | 237 | 1076334 | 12.91 | ug/mL | 99 |
| 42) | 2,4,6-Trichlorophenol | 11.53 | 196 | 1578035 | 15.06 | ug/mL | 98 |
| 43) | 2,4,5-Trichlorophenol | 11.60 | 196 | 1802850 | 14.40 | ug/mL | 94 |
| 45) | 2-Chloronaphthalene | 11.76 | 162 | 4307365 | 14.07 | ug/mL | 98 |
| 46) | Biphenyl | 11.73 | 153 | 2158959 | 13.78 | ug/mL# | 99 |
| 47) | 2-Nitroaniline | 11.98 | 138 | 1434495 | 12.41 | ug/mL | 97 |
| 48) | Dimethylphthalate | 12.24 | 163 | 5413350 | 14.28 | ug/mL | 99 |
| 49) | 2,6-Dinitrotoluene | 12.36 | 165 | 1314292 | 14.49 | ug/mL | 96 |
| 50) | Acenaphthylene | 12.35 | 152 | 6349499 | 13.55 | ug/mL | 98 |
| 51) | 3-Nitroaniline | 12.58 | 138 | 1158370 | 13.13 | ug/mL# | 97 |
| 52) | Acenaphthene | 12.62 | 154 | 3601237 | 13.64 | ug/mL | 99 |
| 53) | 2,4-Dinitrophenol | 12.72 | 184 | 814837 | 14.28 | ug/mL# | 99 |
| 54) | Dibenzofuran | 12.83 | 168 | 6023901 | 14.00 | ug/mL | 97 |
| 55) | 2,4-Dinitrotoluene | 12.92 | 165 | 1783173 | 14.25 | ug/mL | 97 |
| 56) | 4-Nitrophenol | 12.84 | 65 | 870728 | 10.59 | ug/mL# | 59 |
| 57) | 2,3,4,6-Tetrachlorophenol | 13.09 | 131 | 666886 | 15.64 | ug/mL | 95 |
| 58) | Diethyl phthalate | 13.23 | 149 | 5297349 | 14.39 | ug/mL | 98 |
| 59) | Fluorene | 13.33 | 166 | 4675340 | 14.00 | ug/mL | 98 |
| 60) | 4-Chlorophenyl phenylether | 13.31 | 204 | 2672564 | 15.44 | ug/mL | 96 |
| 61) | 4-Nitroaniline | 13.47 | 138 | 1109906 | 11.78 | ug/mL# | 79 |
| 63) | 4,6-Dinitro-2-methylphenol | 13.50 | 198 | 1177584 | 14.40 | ug/mL | 95 |
| 64) | Diphenylamine | 13.51 | 169 | 3701032 | 13.74 | ug/mL | 99 |
| 65) | N-Nitrosodiphenylamine | 13.51 | 167 | 1252896 | 13.41 | ug/mL | 99 |
| 66) | Azobenzene | 13.54 | 77 | 5933212 | 13.01 | ug/mL | 95 |
| 68) | 4-Bromophenyl phenylether | 14.00 | 248 | 1572001 | 14.58 | ug/mL | 97 |
| 69) | Hexachlorobenzene | 14.22 | 142 | 673646 | 14.84 | ug/mL | 94 |
| 70) | Atrazine | 14.32 | 200 | 1551892 | 15.00 | ug/mL# | 100 |

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\072416\SV401945.D Vial: 10
Acq On : 24 Jul 2016 10:31 am Operator: KH
Sample : SEQ-CAL5 Inst : GC/MS BNA
Misc : QBSV4072416A Multiplr: 1.00
MS Integration Params: EVENTS.E
Quant Time: Jul 25 8:56 2016 Quant Results File: BNA4M54.RES

Quant Method : C:\HPCHEM\1\METHODS\BNA4M54.M (Chemstation Integrator)
Title : GC MS BNA 4 Semi Volatiles Calibration
Last Update : Mon Jul 25 08:55:56 2016
Response via : Initial Calibration
DataAcq Meth : BNA4M53

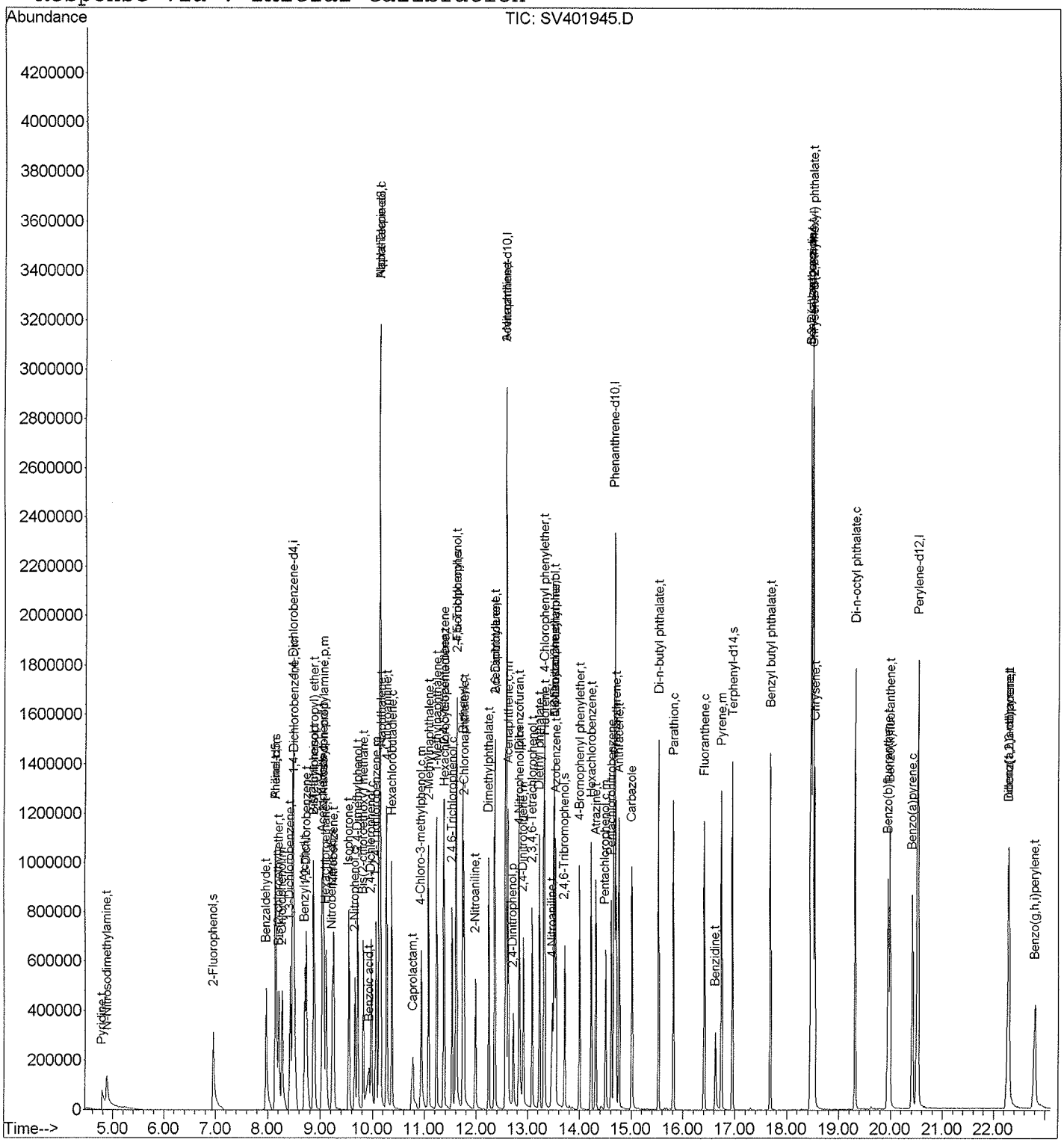
| | Compound | R.T. | QIon | Response | Conc | Unit | Qvalue |
|---|---|---|---|---|---|---|---|
| 71) | Pentachlorophenol | 14.50 | 266 | 1087494 | 13.69 | ug/mL | 99 |
| 72) | Pentachloronitrobenzene | 14.61 | 237 | 732795 | 16.62 | ug/mL | 99 |
| 73) | Phenanthrene | 14.71 | 178 | 6571300 | 13.88 | ug/mL# | 99 |
| 74) | Anthracene | 14.77 | 178 | 7209971 | 13.88 | ug/mL# | 100 |
| 75) | Carbazole | 15.02 | 167 | 6251213 | 13.27 | ug/mL# | 96 |
| 76) | Di-n-butyl phthalate | 15.53 | 149 | 8978128 | 13.64 | ug/mL | 100 |
| 77) | Parathion | 15.82 | 97 | 1683078 | 13.60 | ug/mL# | 97 |
| 78) | Fluoranthene | 16.41 | 202 | 7653912 | 14.45 | ug/mL# | 99 |
| 79) | Benzidine | 16.62 | 184 | 2049415 | 10.71 | ug/mL | 100 |
| 80) | Pyrene | 16.74 | 202 | 7733487 | 14.31 | ug/mL | 99 |
| 82) | Benzyl butyl phthalate | 17.68 | 149 | 4274911 | 13.64 | ug/mL | 97 |
| 83) | Bis(2-ethylhexyl) phthalat | 18.49 | 149 | 5854438 | 16.55 | ug/mL | 96 |
| 84) | Benz (a) anthracene | 18.46 | 228 | 7302317 | 14.94 | ug/mL | 100 |
| 85) | 3,3-Dichlorobenzidine | 18.46 | 252 | 5931194 | 31.73 | ug/mL | 100 |
| 87) | Chrysene | 18.54 | 228 | 6573682 | 13.51 | ug/mL# | 99 |
| 88) | Di-n-octyl phthalate | 19.32 | 149 | 10091288 | 12.95 | ug/mL | 99 |
| 89) | Benzo(b)fluoranthene | 19.95 | 252 | 6967297 | 12.99 | ug/mL# | 98 |
| 90) | Benzo(k)fluoranthene | 19.99 | 252 | 7227410 | 14.19 | ug/mL | 99 |
| 91) | Benzo(a)pyrene | 20.42 | 252 | 6628977 | 13.35 | ug/mL | 99 |
| 93) | Indeno(1,2,3-cd)pyrene | 22.29 | 276 | 7668311 | 15.64 | ug/mL# | 98 |
| 94) | Dibenz(a,h)anthracene | 22.30 | 278 | 6537733 | 16.02 | ug/mL | 99 |
| 95) | Benzo(g,h,i)perylene | 22.81 | 276 | 5783105 | 14.89 | ug/mL | 97 |

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\072416\SV401945.D Vial: 10
Acq On : 24 Jul 2016 10:31 am Operator: KH
Sample : SEQ-CAL5 Inst : GC/MS BNA
Misc : QBSV4072416A Multiplr: 1.00
MS Integration Params: EVENTS.E
Quant Time: Jul 25 8:56 2016 Quant Results File: BNA4M54.RES

Method : C:\HPCHEM\1\METHODS\BNA4M54.M (Chemstation Integrator)
Title : GC MS BNA 4 Semi Volatiles Calibration
Last Update : Mon Jul 25 09:09:46 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\072416\SV401946.D Vial: 11
Acq On : 24 Jul 2016 11:04 am Operator: KH
Sample : SEQ-CAL6 Inst : GC/MS BNA
Misc : QBSV4072416A Multiplr: 1.00
MS Integration Params: EVENTS.E
Quant Time: Jul 25 8:55 2016 Quant Results File: BNA4M54.RES

Quant Method : C:\HPCHEM\1\METHODS\BNA4M54.M (Chemstation Integrator)
Title : GC MS BNA 4 Semi Volatiles Calibration
Last Update : Mon Jul 25 08:54:10 2016
Response via : Initial Calibration
DataAcq Meth : BNA4M53

| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 1) 1,4-Dichlorobenzene-d4 | 8.48 | 152 | 4225401 | 40.00 | ug/mL | 0.00 |
| 20) Naphthalene-d8 | 10.13 | 136 | 15819621 | 40.00 | ug/mL | 0.00 |
| 39) Acenaphthene-d10 | 12.58 | 164 | 9746798 | 40.00 | ug/mL | 0.00 |
| 62) Phenanthrene-d10 | 14.68 | 188 | 17350481 | 40.00 | ug/mL | 0.00 |
| 86) Chrysene-d12 | 18.51 | 240 | 15813224 | 40.00 | ug/mL | 0.00 |
| 92) Perylene-d12 | 20.53 | 264 | 16100533 | 40.00 | ug/mL | 0.00 |
| **System Monitoring Compounds** | | | | | | |
| 4) 2-Fluorophenol | 6.96 | 112 | 3041018m | 16.75 | ug/mL | 0.00 |
| Spiked Amount 75.000 | Range 15 - 87 | | Recovery = 22.33% | | | |
| 5) Phenol-d5 | 8.15 | 99 | 3464682 | 16.31 | ug/mL | 0.00 |
| Spiked Amount 75.000 | Range 10 - 100 | | Recovery = 21.75% | | | |
| 21) Nitrobenzene-d5 | 9.24 | 82 | 3646334 | 17.90 | ug/mL | 0.00 |
| Spiked Amount 50.000 | Range 26 - 120 | | Recovery = 35.80% | | | |
| 44) 2-Fluorobiphenyl | 11.61 | 172 | 6676252 | 17.66 | ug/mL | 0.00 |
| Spiked Amount 50.000 | Range 29 - 120 | | Recovery = 35.32% | | | |
| 67) 2,4,6-Tribromophenol | 13.72 | 330 | 1624800 | 20.33 | ug/mL | 0.00 |
| Spiked Amount 75.000 | Range 35 - 126 | | Recovery = 27.11%# | | | |
| 81) Terphenyl-d14 | 16.96 | 244 | 7356602 | 18.93 | ug/mL | 0.00 |
| Spiked Amount 50.000 | Range 35 - 127 | | Recovery = 37.86% | | | |
| **Target Compounds** | | | | | | Qvalue |
| 2) N-Nitrosodimethylamine | 4.88 | 74 | 1940078m | 14.71 | ug/mL | |
| 3) Pyridine | 4.78 | 79 | 2500236m | 12.16 | ug/mL | |
| 6) Benzaldehyde | 7.97 | 105 | 2424463 | 17.69 | ug/mL# | 98 |
| 7) Aniline | 8.15 | 93 | 3921266 | 15.97 | ug/mL | 98 |
| 8) Phenol | 8.16 | 94 | 4238693 | 16.55 | ug/mL | 99 |
| 9) Bis(2-chloroethyl)ether | 8.22 | 93 | 3702561 | 16.16 | ug/mL | 99 |
| 10) 2-Chlorophenol | 8.28 | 128 | 3190448 | 19.09 | ug/mL | 99 |
| 11) 1,3-Dichlorobenzene | 8.43 | 146 | 3174083 | 19.38 | ug/mL | 99 |
| 12) 1,4-Dichlorobenzene | 8.50 | 146 | 3834094 | 20.32 | ug/mL | 99 |
| 13) Benzyl Alcohol | 8.71 | 108 | 2003726 | 18.09 | ug/mL | 97 |
| 14) 1,2-Dichlorobenzene | 8.74 | 146 | 3258183 | 19.14 | ug/mL | 99 |
| 15) 2-Methylphenol | 8.87 | 107 | 2743156 | 18.16 | ug/mL | 99 |
| 16) Bis(2-chloroisopropyl) eth | 8.87 | 45 | 3215134 | 12.73 | ug/mL | 98 |
| 17) N-Nitroso-di-n-propylamine | 9.07 | 70 | 2323899 | 17.39 | ug/mL | 99 |
| 18) 4-Methylphenol | 9.06 | 107 | 3705772 | 18.73 | ug/mL | 100 |
| 19) Hexachloroethane | 9.11 | 117 | 1633719 | 20.72 | ug/mL | 100 |
| 22) Nitrobenzene | 9.26 | 77 | 3545372 | 17.91 | ug/mL | 99 |
| 23) Isophorone | 9.55 | 82 | 6861631 | 16.10 | ug/mL | 99 |
| 24) 2-Nitrophenol | 9.67 | 139 | 1820910 | 17.49 | ug/mL | 99 |
| 25) 2,4-Dimethylphenol | 9.72 | 122 | 2512423 | 16.53 | ug/mL | 98 |

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\072416\SV401946.D Vial: 11
Acq On : 24 Jul 2016 11:04 am Operator: KH
Sample : SEQ-CAL6 Inst : GC/MS BNA
Misc : QBSV4072416A Multiplr: 1.00
MS Integration Params: EVENTS.E
Quant Time: Jul 25 8:55 2016 Quant Results File: BNA4M54.RES

Quant Method : C:\HPCHEM\1\METHODS\BNA4M54.M (Chemstation Integrator)
Title : GC MS BNA 4 Semi Volatiles Calibration
Last Update : Mon Jul 25 08:54:10 2016
Response via : Initial Calibration
DataAcq Meth : BNA4M53

| | Compound | R.T. | QIon | Response | Conc | Unit | Qvalue |
|---|---|---|---|---|---|---|---|
| 26) | Bis(2-chloroethoxy) methan | 9.83 | 93 | 3670180 | 15.29 | ug/mL | 100 |
| 27) | Benzoic acid | 9.96 | 105 | 2397339 | 18.48 | ug/mL# | 1 |
| 28) | 2,4-Dichlorophenol | 9.98 | 162 | 2715801 | 18.94 | ug/mL | 98 |
| 29) | 1,2,4-Trichlorobenzene | 10.07 | 180 | 3316927 | 20.42 | ug/mL | 100 |
| 30) | Naphthalene | 10.16 | 128 | 7795859 | 17.97 | ug/mL | 97 |
| 31) | 4-Chloroaniline | 10.27 | 127 | 3297366 | 16.59 | ug/mL | 98 |
| 32) | Acetophenone | 9.04 | 105 | 4585904 | 18.05 | ug/mL# | 99 |
| 33) | Alpha-Terpineol | 10.14 | 59 | 2343175 | 18.35 | ug/mL | 100 |
| 34) | Hexachlorobutadiene | 10.37 | 225 | 1944653 | 23.42 | ug/mL | 99 |
| 35) | Caprolactam | 10.79 | 113 | 1195658m | 18.39 | ug/mL | |
| 36) | 4-Chloro-3-methylphenol | 10.94 | 107 | 3145682 | 19.93 | ug/mL | 98 |
| 37) | 1-Methylnaphthalene | 11.23 | 141 | 4784236 | 17.75 | ug/mL | 99 |
| 38) | 2-Methylnaphthalene | 11.08 | 142 | 5180638 | 17.75 | ug/mL | 98 |
| 40) | 1,2,4,5-tetrachlorobenzene | 11.37 | 216 | 3291798 | 19.15 | ug/mL | 98 |
| 41) | Hexachlorocyclopentadiene | 11.38 | 237 | 1547873 | 17.63 | ug/mL | 99 |
| 42) | 2,4,6-Trichlorophenol | 11.53 | 196 | 2104363 | 19.25 | ug/mL | 99 |
| 43) | 2,4,5-Trichlorophenol | 11.60 | 196 | 2410974 | 18.34 | ug/mL | 99 |
| 45) | 2-Chloronaphthalene | 11.76 | 162 | 5667535 | 17.57 | ug/mL | 100 |
| 46) | Biphenyl | 11.74 | 153 | 2826375 | 17.14 | ug/mL# | 98 |
| 47) | 2-Nitroaniline | 11.99 | 138 | 1994646 | 15.83 | ug/mL | 98 |
| 48) | Dimethylphthalate | 12.25 | 163 | 7128563 | 17.92 | ug/mL | 99 |
| 49) | 2,6-Dinitrotoluene | 12.37 | 165 | 1767766 | 18.76 | ug/mL | 98 |
| 50) | Acenaphthylene | 12.35 | 152 | 8343176 | 16.89 | ug/mL | 99 |
| 51) | 3-Nitroaniline | 12.58 | 138 | 1566797 | 16.74 | ug/mL | 97 |
| 52) | Acenaphthene | 12.62 | 154 | 4741296 | 17.03 | ug/mL | 99 |
| 53) | 2,4-Dinitrophenol | 12.72 | 184 | 1130664 | 17.36 | ug/mL# | 96 |
| 54) | Dibenzofuran | 12.84 | 168 | 7959659 | 17.61 | ug/mL | 97 |
| 55) | 2,4-Dinitrotoluene | 12.93 | 165 | 2356069 | 17.94 | ug/mL | 97 |
| 56) | 4-Nitrophenol | 12.84 | 65 | 1671165m | 19.75 | ug/mL | |
| 57) | 2,3,4,6-Tetrachlorophenol | 13.09 | 131 | 858169 | 19.44 | ug/mL | 99 |
| 58) | Diethyl phthalate | 13.24 | 149 | 6953061 | 18.06 | ug/mL | 98 |
| 59) | Fluorene | 13.33 | 166 | 6287373 | 18.14 | ug/mL | 99 |
| 60) | 4-Chlorophenyl phenylether | 13.32 | 204 | 3420767 | 19.31 | ug/mL | 96 |
| 61) | 4-Nitroaniline | 13.48 | 138 | 1517008 | 14.64 | ug/mL# | 81 |
| 63) | 4,6-Dinitro-2-methylphenol | 13.51 | 198 | 1656936 | 19.71 | ug/mL | 96 |
| 64) | Diphenylamine | 13.52 | 169 | 4816906 | 17.33 | ug/mL | 99 |
| 65) | N-Nitrosodiphenylamine | 13.52 | 167 | 1672990 | 17.50 | ug/mL | 98 |
| 66) | Azobenzene | 13.54 | 77 | 7511766 | 15.68 | ug/mL | 96 |
| 68) | 4-Bromophenyl phenylether | 14.01 | 248 | 2071699 | 18.77 | ug/mL | 97 |
| 69) | Hexachlorobenzene | 14.23 | 142 | 876554 | 18.97 | ug/mL | 96 |
| 70) | Atrazine | 14.32 | 200 | 1996786 | 18.74 | ug/mL# | 100 |

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\072416\SV401946.D Vial: 11
Acq On : 24 Jul 2016 11:04 am Operator: KH
Sample : SEQ-CAL6 Inst : GC/MS BNA
Misc : QBSV4072416A Multiplr: 1.00
MS Integration Params: EVENTS.E
Quant Time: Jul 25 8:55 2016 Quant Results File: BNA4M54.RES

Quant Method : C:\HPCHEM\1\METHODS\BNA4M54.M (Chemstation Integrator)
Title : GC MS BNA 4 Semi Volatiles Calibration
Last Update : Mon Jul 25 08:54:10 2016
Response via : Initial Calibration
DataAcq Meth : BNA4M53

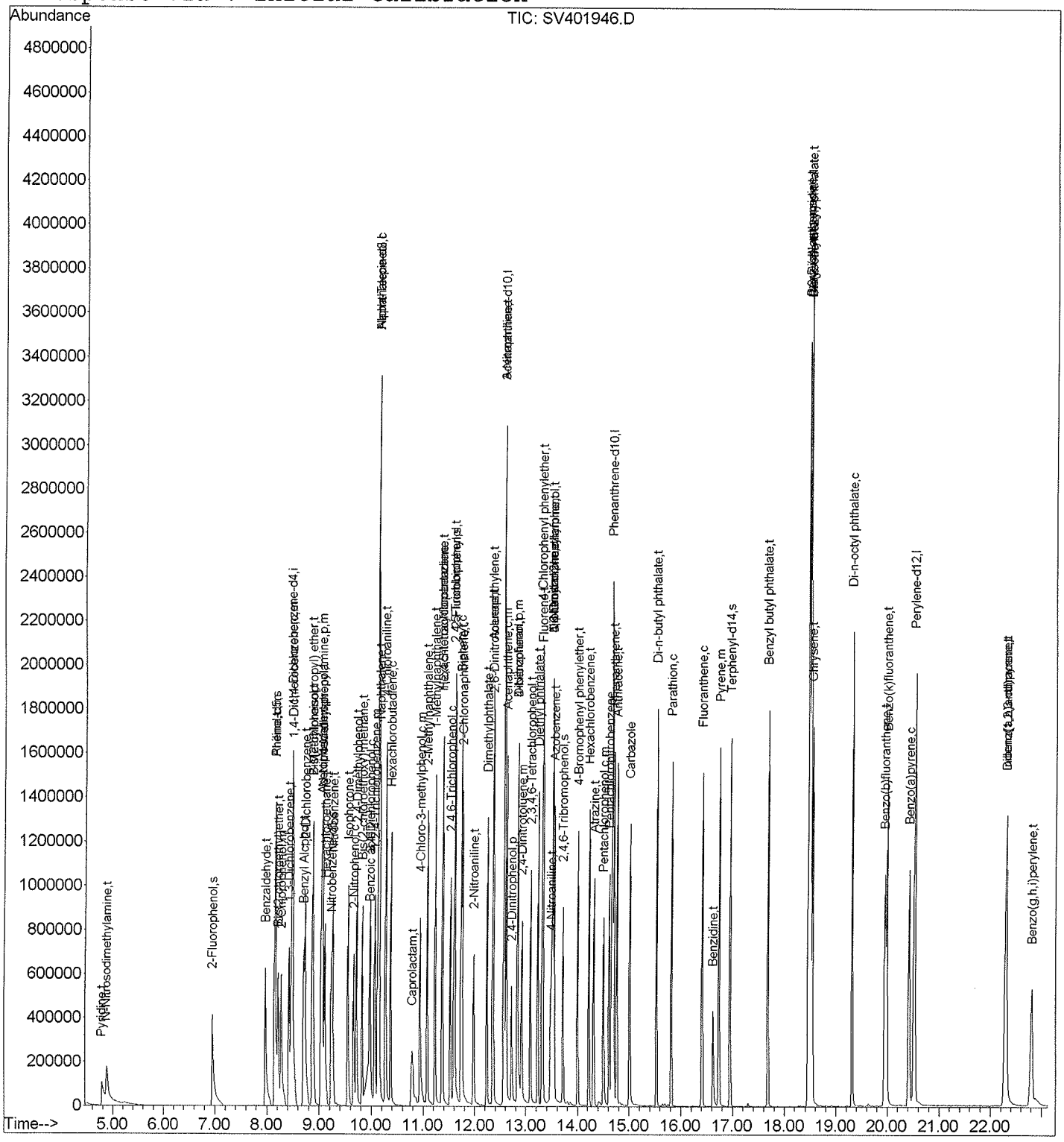
| | Compound | R.T. | QIon | Response | Conc | Unit | Qvalue |
|---|---|---|---|---|---|---|---|
| 71) | Pentachlorophenol | 14.51 | 266 | 1512567 | 18.31 | ug/mL | 99 |
| 72) | Pentachloronitrobenzene | 14.62 | 237 | 930324 | 21.17 | ug/mL | 99 |
| 73) | Phenanthrene | 14.71 | 178 | 8756113 | 18.01 | ug/mL# | 99 |
| 74) | Anthracene | 14.77 | 178 | 9543541 | 17.86 | ug/mL# | 100 |
| 75) | Carbazole | 15.02 | 167 | 8224979 | 16.71 | ug/mL# | 100 |
| 76) | Di-n-butyl phthalate | 15.53 | 149 | 11607846 | 16.99 | ug/mL | 99 |
| 77) | Parathion | 15.82 | 97 | 2140114 | 16.42 | ug/mL# | 98 |
| 78) | Fluoranthene | 16.42 | 202 | 9914158 | 18.25 | ug/mL# | 99 |
| 79) | Benzidine | 16.63 | 184 | 2663979 | 12.75 | ug/mL | 99 |
| 80) | Pyrene | 16.75 | 202 | 10183660 | 18.42 | ug/mL | 97 |
| 82) | Benzyl butyl phthalate | 17.69 | 149 | 5523544 | 16.93 | ug/mL | 98 |
| 83) | Bis(2-ethylhexyl) phthalat | 18.50 | 149 | 7320372 | 20.92 | ug/mL | 99 |
| 84) | Benz (a) anthracene | 18.46 | 228 | 9785084 | 20.08 | ug/mL | 99 |
| 85) | 3,3-Dichlorobenzidine | 18.47 | 252 | 7799674 | 42.48 | ug/mL | 98 |
| 87) | Chrysene | 18.54 | 228 | 8639238 | 17.22 | ug/mL# | 100 |
| 88) | Di-n-octyl phthalate | 19.32 | 149 | 13071610 | 15.79 | ug/mL | 99 |
| 89) | Benzo(b)fluoranthene | 19.96 | 252 | 9361894 | 16.94 | ug/mL# | 98 |
| 90) | Benzo(k)fluoranthene | 20.00 | 252 | 9340199 | 17.80 | ug/mL | 99 |
| 91) | Benzo(a)pyrene | 20.43 | 252 | 8805552 | 16.91 | ug/mL | 100 |
| 93) | Indeno(1,2,3-cd)pyrene | 22.31 | 276 | 10224874 | 20.35 | ug/mL# | 99 |
| 94) | Dibenz(a,h)anthracene | 22.31 | 278 | 8708842 | 20.94 | ug/mL | 99 |
| 95) | Benzo(g,h,i)perylene | 22.82 | 276 | 7494202 | 18.52 | ug/mL | 99 |

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\072416\SV401946.D Vial: 11
Acq On : 24 Jul 2016 11:04 am Operator: KH
Sample : SEQ-CAL6 Inst : GC/MS BNA
Misc : QBSV4072416A Multiplr: 1.00
MS Integration Params: EVENTS.E
Quant Time: Jul 25 8:55 2016 Quant Results File: BNA4M54.RES

Method : C:\HPCHEM\1\METHODS\BNA4M54.M (Chemstation Integrator)
Title : GC MS BNA 4 Semi Volatiles Calibration
Last Update : Mon Jul 25 09:09:46 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\072416\SV401947.D Vial: 12
Acq On : 24 Jul 2016 11:37 am Operator: KH
Sample : SEQ-CAL7 Inst : GC/MS BNA
Misc : QBSV4072416A Multiplr: 1.00
MS Integration Params: EVENTS.E
Quant Time: Jul 25 8:53 2016 Quant Results File: BNA4M54.RES

Quant Method : C:\HPCHEM\1\METHODS\BNA4M54.M (Chemstation Integrator)
Title : GC MS BNA 4 Semi Volatiles Calibration
Last Update : Mon Jul 25 08:50:10 2016
Response via : Initial Calibration
DataAcq Meth : BNA4M53

| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 1) 1,4-Dichlorobenzene-d4 | 8.48 | 152 | 4269917 | 40.00 | ug/mL | 0.00 |
| 20) Naphthalene-d8 | 10.14 | 136 | 16520766 | 40.00 | ug/mL | 0.00 |
| 39) Acenaphthene-d10 | 12.58 | 164 | 9538458 | 40.00 | ug/mL | 0.00 |
| 62) Phenanthrene-d10 | 14.68 | 188 | 17268918 | 40.00 | ug/mL | 0.00 |
| 86) Chrysene-d12 | 18.51 | 240 | 16297710 | 40.00 | ug/mL | 0.00 |
| 92) Perylene-d12 | 20.54 | 264 | 15849655 | 40.00 | ug/mL | 0.00 |
| **System Monitoring Compounds** | | | | | | |
| 4) 2-Fluorophenol | 6.96 | 112 | 4503923 | 23.32 | ug/mL | 0.00 |
| Spiked Amount 75.000 | Range 15 - 87 | | Recovery = 31.09% | | | |
| 5) Phenol-d5 | 8.15 | 99 | 5138258 | 22.68 | ug/mL | 0.00 |
| Spiked Amount 75.000 | Range 10 - 100 | | Recovery = 30.24% | | | |
| 21) Nitrobenzene-d5 | 9.24 | 82 | 5231711m | 23.35 | ug/mL | 0.00 |
| Spiked Amount 50.000 | Range 26 - 120 | | Recovery = 46.70% | | | |
| 44) 2-Fluorobiphenyl | 11.62 | 172 | 10151466 | 26.89 | ug/mL | 0.00 |
| Spiked Amount 50.000 | Range 29 - 120 | | Recovery = 53.78% | | | |
| 67) 2,4,6-Tribromophenol | 13.72 | 330 | 2381206 | 29.82 | ug/mL | 0.00 |
| Spiked Amount 75.000 | Range 35 - 126 | | Recovery = 39.76% | | | |
| 81) Terphenyl-d14 | 16.96 | 244 | 10955374 | 28.42 | ug/mL | 0.00 |
| Spiked Amount 50.000 | Range 35 - 127 | | Recovery = 56.84% | | | |
| **Target Compounds** | | | | | | Qvalue |
| 2) N-Nitrosodimethylamine | 4.89 | 74 | 2892965m | 20.30 | ug/mL | |
| 3) Pyridine | 4.77 | 79 | 3739405m | 16.14 | ug/mL | |
| 6) Benzaldehyde | 7.97 | 105 | 3101069 | 21.28 | ug/mL# | 99 |
| 7) Aniline | 8.16 | 93 | 5670301 | 21.62 | ug/mL# | 72 |
| 8) Phenol | 8.17 | 94 | 6220061 | 23.30 | ug/mL# | 81 |
| 9) Bis(2-chloroethyl)ether | 8.22 | 93 | 5528190 | 22.95 | ug/mL | 98 |
| 10) 2-Chlorophenol | 8.28 | 128 | 4667082 | 26.86 | ug/mL# | 94 |
| 11) 1,3-Dichlorobenzene | 8.43 | 146 | 4695929 | 27.66 | ug/mL | 98 |
| 12) 1,4-Dichlorobenzene | 8.50 | 146 | 5635274 | 29.28 | ug/mL | 96 |
| 13) Benzyl Alcohol | 8.72 | 108 | 2900346 | 24.65 | ug/mL# | 85 |
| 14) 1,2-Dichlorobenzene | 8.74 | 146 | 4827204 | 27.48 | ug/mL | 97 |
| 15) 2-Methylphenol | 8.88 | 107 | 4013288 | 25.57 | ug/mL | 93 |
| 16) Bis(2-chloroisopropyl) eth | 8.87 | 45 | 4673336 | 16.75 | ug/mL# | 62 |
| 17) N-Nitroso-di-n-propylamine | 9.08 | 70 | 3428419 | 24.69 | ug/mL# | 70 |
| 18) 4-Methylphenol | 9.07 | 107 | 5446090 | 26.89 | ug/mL# | 88 |
| 19) Hexachloroethane | 9.11 | 117 | 2445824 | 30.51 | ug/mL | 93 |
| 22) Nitrobenzene | 9.27 | 77 | 5090602 | 23.92 | ug/mL# | 91 |
| 23) Isophorone | 9.56 | 82 | 10049552 | 21.66 | ug/mL# | 94 |
| 24) 2-Nitrophenol | 9.67 | 139 | 2721180 | 23.78 | ug/mL# | 73 |
| 25) 2,4-Dimethylphenol | 9.73 | 122 | 3729788 | 22.72 | ug/mL | 86 |

(#) = qualifier out of range (m) = manual integration

Data File : C:\HPCHEM\1\DATA\072416\SV401947.D Vial: 12
Acq On : 24 Jul 2016 11:37 am Operator: KH
Sample : SEQ-CAL7 Inst : GC/MS BNA
Misc : QBSV4072416A Multiplr: 1.00
MS Integration Params: EVENTS.E
Quant Time: Jul 25 8:53 2016 Quant Results File: BNA4M54.RES

Quant Method : C:\HPCHEM\1\METHODS\BNA4M54.M (Chemstation Integrator)
Title : GC MS BNA 4 Semi Volatiles Calibration
Last Update : Mon Jul 25 08:50:10 2016
Response via : Initial Calibration
DataAcq Meth : BNA4M53

| | Compound | R.T. | QIon | Response | Conc Unit | Qvalue |
|---|---|---|---|---|---|---|
| 26) | Bis(2-chloroethoxy) methan | 9.83 | 93 | 5321463 | 19.91 ug/mL | 99 |
| 27) | Benzoic acid | 10.00 | 105 | 3726278m | 25.76 ug/mL | |
| 28) | 2,4-Dichlorophenol | 9.99 | 162 | 4113110 | 26.90 ug/mL | 96 |
| 29) | 1,2,4-Trichlorobenzene | 10.07 | 180 | 4920431 | 28.67 ug/mL | 99 |
| 30) | Naphthalene | 10.16 | 128 | 11563157 | 24.95 ug/mL | 96 |
| 31) | 4-Chloroaniline | 10.28 | 127 | 5098509 | 23.82 ug/mL | 95 |
| 32) | Acetophenone | 9.05 | 105 | 6727902 | 25.05 ug/mL# | 96 |
| 33) | Alpha-Terpineol | 10.14 | 59 | 3458806 | 25.54 ug/mL# | 89 |
| 34) | Hexachlorobutadiene | 10.38 | 225 | 2913033 | 34.16 ug/mL | 99 |
| 35) | Caprolactam | 10.82 | 113 | 1822120m | 26.67 ug/mL | |
| 36) | 4-Chloro-3-methylphenol | 10.95 | 107 | 4608607 | 27.28 ug/mL | 90 |
| 37) | 1-Methylnaphthalene | 11.24 | 141 | 7118973 | 25.01 ug/mL# | 92 |
| 38) | 2-Methylnaphthalene | 11.08 | 142 | 7717137 | 24.67 ug/mL# | 95 |
| 40) | 1,2,4,5-tetrachlorobenzene | 11.37 | 216 | 4851532 | 29.01 ug/mL | 98 |
| 41) | Hexachlorocyclopentadiene | 11.38 | 237 | 2522191 | 28.82 ug/mL | 100 |
| 42) | 2,4,6-Trichlorophenol | 11.54 | 196 | 3206958 | 29.39 ug/mL | 98 |
| 43) | 2,4,5-Trichlorophenol | 11.60 | 196 | 3700184 | 27.87 ug/mL | 99 |
| 45) | 2-Chloronaphthalene | 11.77 | 162 | 8394029 | 25.94 ug/mL | 96 |
| 46) | Biphenyl | 11.74 | 153 | 4327547 | 26.66 ug/mL# | 99 |
| 47) | 2-Nitroaniline | 11.99 | 138 | 2956364 | 22.34 ug/mL# | 91 |
| 48) | Dimethylphthalate | 12.25 | 163 | 10335690 | 25.75 ug/mL | 100 |
| 49) | 2,6-Dinitrotoluene | 12.38 | 165 | 2656401 | 28.49 ug/mL | 94 |
| 50) | Acenaphthylene | 12.36 | 152 | 12244302 | 24.62 ug/mL | 98 |
| 51) | 3-Nitroaniline | 12.59 | 138 | 2284696 | 23.81 ug/mL# | 91 |
| 52) | Acenaphthene | 12.62 | 154 | 7060173 | 25.12 ug/mL | 99 |
| 53) | 2,4-Dinitrophenol | 12.73 | 184 | 1847469 | 25.72 ug/mL | 84 |
| 54) | Dibenzofuran | 12.84 | 168 | 11641010 | 25.64 ug/mL | 98 |
| 55) | 2,4-Dinitrotoluene | 12.94 | 165 | 3580864 | 27.09 ug/mL | 96 |
| 56) | 4-Nitrophenol | 12.86 | 65 | 2327142m | 27.42 ug/mL | |
| 57) | 2,3,4,6-Tetrachlorophenol | 13.10 | 131 | 1296902 | 29.73 ug/mL | 89 |
| 58) | Diethyl phthalate | 13.25 | 149 | 10013953 | 25.91 ug/mL | 97 |
| 59) | Fluorene | 13.34 | 166 | 9426591 | 27.59 ug/mL | 100 |
| 60) | 4-Chlorophenyl phenylether | 13.32 | 204 | 5289234 | 30.76 ug/mL | 100 |
| 61) | 4-Nitroaniline | 13.50 | 138 | 2275045 | 20.84 ug/mL# | 55 |
| 63) | 4,6-Dinitro-2-methylphenol | 13.53 | 198 | 2627493 | 31.30 ug/mL | 97 |
| 64) | Diphenylamine | 13.53 | 169 | 7249061 | 26.01 ug/mL | 97 |
| 65) | N-Nitrosodiphenylamine | 13.53 | 167 | 2490000 | 26.08 ug/mL | 97 |
| 66) | Azobenzene | 13.55 | 77 | 10855832 | 22.09 ug/mL# | 89 |
| 68) | 4-Bromophenyl phenylether | 14.01 | 248 | 3149041 | 28.49 ug/mL | 93 |
| 69) | Hexachlorobenzene | 14.23 | 142 | 1270390 | 27.59 ug/mL | 87 |
| 70) | Atrazine | 14.34 | 200 | 2975018 | 28.00 ug/mL# | 94 |

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\072416\SV401947.D Vial: 12
Acq On : 24 Jul 2016 11:37 am Operator: KH
Sample : SEQ-CAL7 Inst : GC/MS BNA
Misc : QBSV4072416A Multiplr: 1.00
MS Integration Params: EVENTS.E
Quant Time: Jul 25 8:53 2016 Quant Results File: BNA4M54.RES

Quant Method : C:\HPCHEM\1\METHODS\BNA4M54.M (Chemstation Integrator)
Title : GC MS BNA 4 Semi Volatiles Calibration
Last Update : Mon Jul 25 08:50:10 2016
Response via : Initial Calibration
DataAcq Meth : BNA4M53

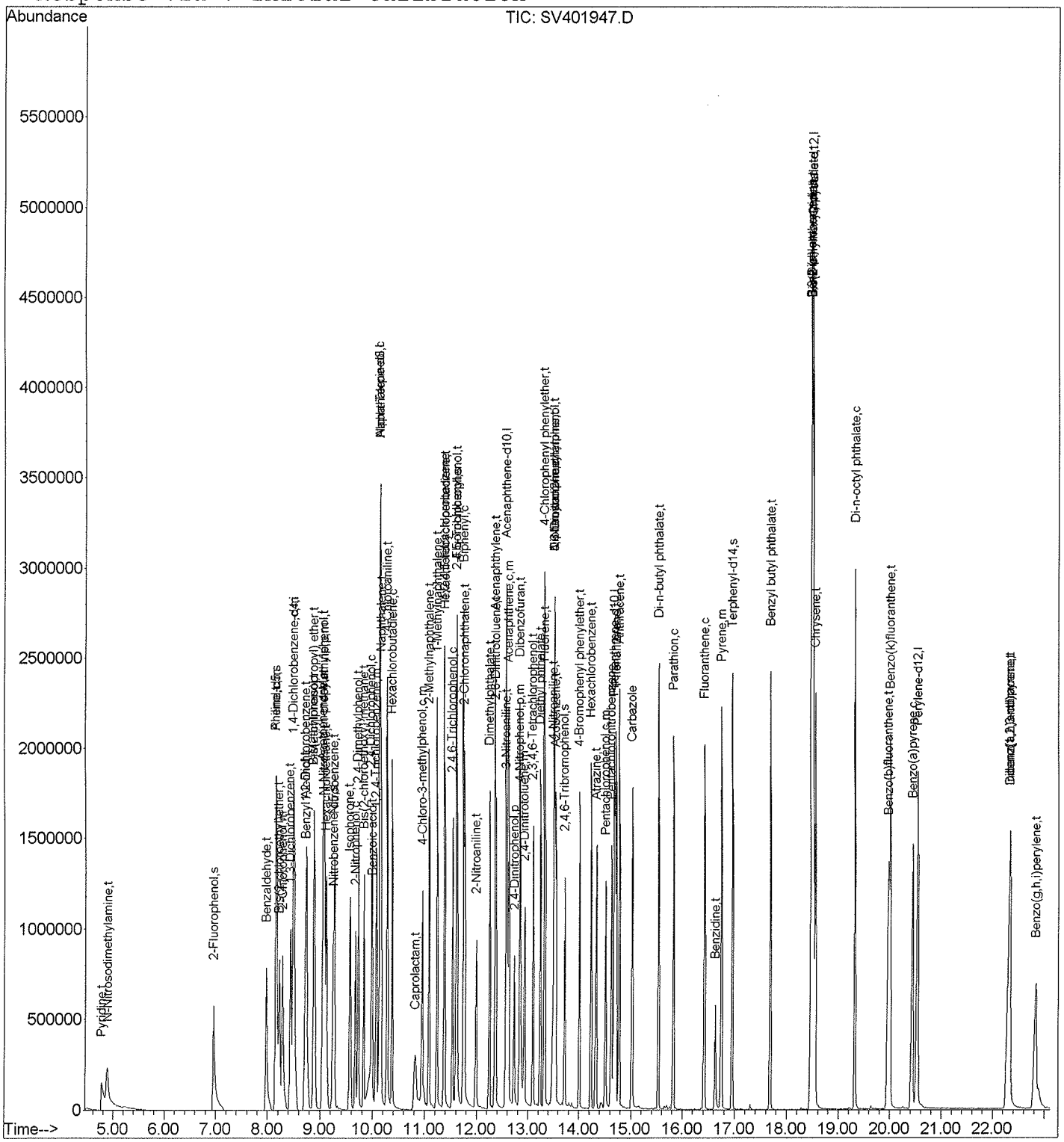
| | Compound | R.T. | QIon | Response | Conc | Unit | Qvalue |
|---|---|---|---|---|---|---|---|
| 71) | Pentachlorophenol | 14.52 | 266 | 2377421 | 28.22 | ug/mL | 99 |
| 72) | Pentachloronitrobenzene | 14.63 | 237 | 1350043 | 31.59 | ug/mL | 96 |
| 73) | Phenanthrene | 14.72 | 178 | 12968145 | 26.59 | ug/mL# | 91 |
| 74) | Anthracene | 14.78 | 178 | 13998441 | 26.01 | ug/mL# | 99 |
| 75) | Carbazole | 15.03 | 167 | 12327098 | 24.53 | ug/mL# | 93 |
| 76) | Di-n-butyl phthalate | 15.54 | 149 | 16878374 | 24.37 | ug/mL | 98 |
| 77) | Parathion | 15.83 | 97 | 3174424 | 23.69 | ug/mL# | 89 |
| 78) | Fluoranthene | 16.43 | 202 | 14856432 | 27.32 | ug/mL# | 91 |
| 79) | Benzidine | 16.63 | 184 | 3487370 | 15.58 | ug/mL# | 93 |
| 80) | Pyrene | 16.75 | 202 | 15050510 | 27.18 | ug/mL | 98 |
| 82) | Benzyl butyl phthalate | 17.69 | 149 | 8259806 | 24.95 | ug/mL | 96 |
| 83) | Bis(2-ethylhexyl) phthalat | 18.50 | 149 | 10827720 | 31.89 | ug/mL# | 94 |
| 84) | Benz (a) anthracene | 18.47 | 228 | 14683837 | 30.93 | ug/mL | 100 |
| 85) | 3,3-Dichlorobenzidine | 18.48 | 252 | 11265873 | 64.28 | ug/mL | 98 |
| 87) | Chrysene | 18.55 | 228 | 12955932 | 24.28 | ug/mL# | 97 |
| 88) | Di-n-octyl phthalate | 19.32 | 149 | 19109203 | 21.13 | ug/mL# | 98 |
| 89) | Benzo(b)fluoranthene | 19.98 | 252 | 14497961 | 24.13 | ug/mL# | 77 |
| 90) | Benzo(k)fluoranthene | 20.01 | 252 | 13484620 | 24.06 | ug/mL# | 91 |
| 91) | Benzo(a)pyrene | 20.44 | 252 | 12997329 | 23.07 | ug/mL# | 92 |
| 93) | Indeno(1,2,3-cd)pyrene | 22.34 | 276 | 14648908 | 29.10 | ug/mL# | 97 |
| 94) | Dibenz(a,h)anthracene | 22.33 | 278 | 12488647 | 30.21 | ug/mL# | 91 |
| 95) | Benzo(g,h,i)perylene | 22.84 | 276 | 10895514 | 26.26 | ug/mL# | 87 |

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\072416\SV401947.D Vial: 12
Acq On : 24 Jul 2016 11:37 am Operator: KH
Sample : SEQ-CAL7 Inst : GC/MS BNA
Misc : QBSV4072416A Multiplr: 1.00
MS Integration Params: EVENTS.E
Quant Time: Jul 25 8:53 2016 Quant Results File: BNA4M54.RES

Method : C:\HPCHEM\1\METHODS\BNA4M54.M (Chemstation Integrator)
Title : GC MS BNA 4 Semi Volatiles Calibration
Last Update : Mon Jul 25 09:09:46 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\072416\SV401948.D Vial: 13
Acq On : 24 Jul 2016 12:10 pm Operator: KH
Sample : SEQ-CAL8 Inst : GC/MS BNA
Misc : QBSV4072416A Multiplr: 1.00
MS Integration Params: EVENTS.E
Quant Time: Jul 25 9:06 2016 Quant Results File: BNA4M54.RES

Quant Method : C:\HPCHEM\1\METHODS\BNA4M54.M (Chemstation Integrator)
Title : GC MS BNA 4 Semi Volatiles Calibration
Last Update : Tue Jul 05 11:52:05 2016
Response via : Initial Calibration
DataAcq Meth : BNA4M53

| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 1) 1,4-Dichlorobenzene-d4 | 8.49 | 152 | 4122084 | 40.00 | ug/mL | 0.00 |
| 20) Naphthalene-d8 | 10.14 | 136 | 16699868 | 40.00 | ug/mL | 0.01 |
| 39) Acenaphthene-d10 | 12.58 | 164 | 9593700 | 40.00 | ug/mL | 0.00 |
| 62) Phenanthrene-d10 | 14.69 | 188 | 16900967 | 40.00 | ug/mL | 0.02 |
| 86) Chrysene-d12 | 18.51 | 240 | 16214464 | 40.00 | ug/mL | 0.03 |
| 92) Perylene-d12 | 20.54 | 264 | 15386039 | 40.00 | ug/mL | 0.04 |
| **System Monitoring Compounds** | | | | | | |
| 4) 2-Fluorophenol | 6.96 | 112 | 6048849 | 30.86 | ug/mL | 0.02 |
| Spiked Amount 75.000 | Range 15 - 87 | | Recovery = 41.15% | | | |
| 5) Phenol-d5 | 8.16 | 99 | 6820383 | 30.11 | ug/mL | 0.04 |
| Spiked Amount 75.000 | Range 10 - 100 | | Recovery = 40.15% | | | |
| 21) Nitrobenzene-d5 | 9.25 | 82 | 6967394 | 29.60 | ug/mL | 0.02 |
| Spiked Amount 50.000 | Range 26 - 120 | | Recovery = 59.20% | | | |
| 44) 2-Fluorobiphenyl | 11.62 | 172 | 13275038 | 34.88 | ug/mL | 0.01 |
| Spiked Amount 50.000 | Range 29 - 120 | | Recovery = 69.76% | | | |
| 67) 2,4,6-Tribromophenol | 13.73 | 330 | 3190690 | 41.39 | ug/mL | 0.03 |
| Spiked Amount 75.000 | Range 35 - 126 | | Recovery = 55.19% | | | |
| 81) Terphenyl-d14 | 16.97 | 244 | 14596146 | 39.62 | ug/mL | 0.03 |
| Spiked Amount 50.000 | Range 35 - 127 | | Recovery = 79.24% | | | |
| **Target Compounds** | | | | | | Qvalue |
| 2) N-Nitrosodimethylamine | 4.88 | 74 | 3867588m | 26.58 | ug/mL | |
| 3) Pyridine | 4.76 | 79 | 4675437m | 18.98 | ug/mL | |
| 6) Benzaldehyde | 7.97 | 105 | 3173861m | 21.28 | ug/mL | |
| 7) Aniline | 8.16 | 93 | 7304505 | 27.96 | ug/mL# | 71 |
| 8) Phenol | 8.17 | 94 | 8297794 | 31.77 | ug/mL# | 84 |
| 9) Bis(2-chloroethyl)ether | 8.22 | 93 | 7372257 | 30.91 | ug/mL | 98 |
| 10) 2-Chlorophenol | 8.28 | 128 | 6250808 | 36.69 | ug/mL# | 94 |
| 11) 1,3-Dichlorobenzene | 8.44 | 146 | 6279827 | 38.00 | ug/mL | 97 |
| 12) 1,4-Dichlorobenzene | 8.50 | 146 | 7447943 | 40.46 | ug/mL | 97 |
| 13) Benzyl Alcohol | 8.72 | 108 | 3904293 | 33.31 | ug/mL# | 88 |
| 14) 1,2-Dichlorobenzene | 8.74 | 146 | 6526834 | 38.54 | ug/mL | 98 |
| 15) 2-Methylphenol | 8.89 | 107 | 5318767 | 34.63 | ug/mL | 94 |
| 16) Bis(2-chloroisopropyl) eth | 8.88 | 45 | 6145023 | 21.57 | ug/mL# | 62 |
| 17) N-Nitroso-di-n-propylamine | 9.09 | 70 | 4471440 | 32.96 | ug/mL# | 85 |
| 18) 4-Methylphenol | 9.08 | 107 | 7180081 | 37.07 | ug/mL# | 91 |
| 19) Hexachloroethane | 9.12 | 117 | 3114876 | 40.50 | ug/mL# | 89 |
| 22) Nitrobenzene | 9.27 | 77 | 6674827 | 30.45 | ug/mL# | 91 |
| 23) Isophorone | 9.57 | 82 | 13344729 | 27.43 | ug/mL# | 95 |
| 24) 2-Nitrophenol | 9.68 | 139 | 3602592 | 29.87 | ug/mL# | 75 |
| 25) 2,4-Dimethylphenol | 9.73 | 122 | 5063104 | 29.80 | ug/mL | 91 |

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\072416\SV401948.D Vial: 13
Acq On : 24 Jul 2016 12:10 pm Operator: KH
Sample : SEQ-CAL8 Inst : GC/MS BNA
Misc : QBSV4072416A Multiplr: 1.00
MS Integration Params: EVENTS.E
Quant Time: Jul 25 9:06 2016 Quant Results File: BNA4M54.RES

Quant Method : C:\HPCHEM\1\METHODS\BNA4M54.M (Chemstation Integrator)
Title : GC MS BNA 4 Semi Volatiles Calibration
Last Update : Tue Jul 05 11:52:05 2016
Response via : Initial Calibration
DataAcq Meth : BNA4M53

| | Compound | R.T. | QIon | Response | Conc | Unit | Qvalue |
|---|---|---|---|---|---|---|---|
| 26) | Bis(2-chloroethoxy) methan | 9.84 | 93 | 7116724 | 25.22 | ug/mL | 99 |
| 27) | Benzoic acid | 10.03 | 105 | 4959865 | 33.45 | ug/mL | 96 |
| 28) | 2,4-Dichlorophenol | 9.99 | 162 | 5551051 | 35.58 | ug/mL | 96 |
| 29) | 1,2,4-Trichlorobenzene | 10.07 | 180 | 6452797 | 36.94 | ug/mL | 97 |
| 30) | Naphthalene | 10.17 | 128 | 15303087 | 32.54 | ug/mL | 98 |
| 31) | 4-Chloroaniline | 10.29 | 127 | 6647596 | 30.20 | ug/mL | 97 |
| 32) | Acetophenone | 9.05 | 105 | 8369720 | 30.22 | ug/mL# | 96 |
| 33) | Alpha-Terpineol | 10.15 | 59 | 4421752 | 32.01 | ug/mL# | 88 |
| 34) | Hexachlorobutadiene | 10.38 | 225 | 3838116 | 45.49 | ug/mL | 99 |
| 35) | Caprolactam | 10.83 | 113 | 2178312m | 30.38 | ug/mL | |
| 36) | 4-Chloro-3-methylphenol | 10.96 | 107 | 6013218 | 34.49 | ug/mL | 91 |
| 37) | 1-Methylnaphthalene | 11.24 | 141 | 8895414 | 30.36 | ug/mL# | 95 |
| 38) | 2-Methylnaphthalene | 11.09 | 142 | 10169273 | 31.67 | ug/mL# | 93 |
| 40) | 1,2,4,5-tetrachlorobenzene | 11.38 | 216 | 6730910 | 40.66 | ug/mL | 100 |
| 41) | Hexachlorocyclopentadiene | 11.39 | 237 | 3535602 | 40.38 | ug/mL | 99 |
| 42) | 2,4,6-Trichlorophenol | 11.54 | 196 | 4329395 | 39.06 | ug/mL | 99 |
| 43) | 2,4,5-Trichlorophenol | 11.61 | 196 | 4954444 | 36.64 | ug/mL | 98 |
| 45) | 2-Chloronaphthalene | 11.77 | 162 | 11320919 | 34.65 | ug/mL | 97 |
| 46) | Biphenyl | 11.75 | 153 | 5324146m | 32.27 | ug/mL | |
| 47) | 2-Nitroaniline | 12.00 | 138 | 3904491 | 27.65 | ug/mL# | 93 |
| 48) | Dimethylphthalate | 12.26 | 163 | 13920557 | 33.98 | ug/mL | 100 |
| 49) | 2,6-Dinitrotoluene | 12.38 | 165 | 3517653 | 37.44 | ug/mL | 96 |
| 50) | Acenaphthylene | 12.37 | 152 | 16356111 | 32.33 | ug/mL | 99 |
| 51) | 3-Nitroaniline | 12.61 | 138 | 3041332m | 30.26 | ug/mL | |
| 52) | Acenaphthene | 12.63 | 154 | 9406254 | 32.95 | ug/mL | 99 |
| 53) | 2,4-Dinitrophenol | 12.74 | 184 | 2550090 | 32.56 | ug/mL | 85 |
| 54) | Dibenzofuran | 12.85 | 168 | 15699728 | 34.25 | ug/mL | 97 |
| 55) | 2,4-Dinitrotoluene | 12.95 | 165 | 4655872 | 34.28 | ug/mL | 95 |
| 56) | 4-Nitrophenol | 12.87 | 65 | 3239972m | 38.05 | ug/mL | |
| 57) | 2,3,4,6-Tetrachlorophenol | 13.11 | 131 | 1725373 | 39.20 | ug/mL | 92 |
| 58) | Diethyl phthalate | 13.26 | 149 | 13277469 | 33.79 | ug/mL | 97 |
| 59) | Fluorene | 13.34 | 166 | 12348436 | 36.18 | ug/mL | 99 |
| 60) | 4-Chlorophenyl phenylether | 13.33 | 204 | 7067195 | 41.95 | ug/mL | 99 |
| 61) | 4-Nitroaniline | 13.52 | 138 | 3088980m | 26.63 | ug/mL | |
| 63) | 4,6-Dinitro-2-methylphenol | 13.54 | 198 | 3609797 | 45.02 | ug/mL | 92 |
| 64) | Diphenylamine | 13.54 | 169 | 9719859 | 36.27 | ug/mL | 98 |
| 65) | N-Nitrosodiphenylamine | 13.54 | 167 | 3322714 | 36.11 | ug/mL | 97 |
| 66) | Azobenzene | 13.56 | 77 | 13840102 | 28.49 | ug/mL# | 65 |
| 68) | 4-Bromophenyl phenylether | 14.02 | 248 | 4134363 | 38.80 | ug/mL# | 74 |
| 69) | Hexachlorobenzene | 14.24 | 142 | 1646826 | 36.84 | ug/mL | 85 |
| 70) | Atrazine | 14.35 | 200 | 3594522 | 34.30 | ug/mL# | 95 |

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\072416\SV401948.D
Acq On : 24 Jul 2016 12:10 pm
Sample : SEQ-CAL8
Misc : QBSV4072416A
MS Integration Params: EVENTS.E
Quant Time: Jul 25 9:06 2016

Vial: 13
Operator: KH
Inst : GC/MS BNA
Multiplr: 1.00

Quant Results File: BNA4M54.RES

Quant Method : C:\HPCHEM\1\METHODS\BNA4M54.M (Chemstation Integrator)
Title : GC MS BNA 4 Semi Volatiles Calibration
Last Update : Tue Jul 05 11:52:05 2016
Response via : Initial Calibration
DataAcq Meth : BNA4M53

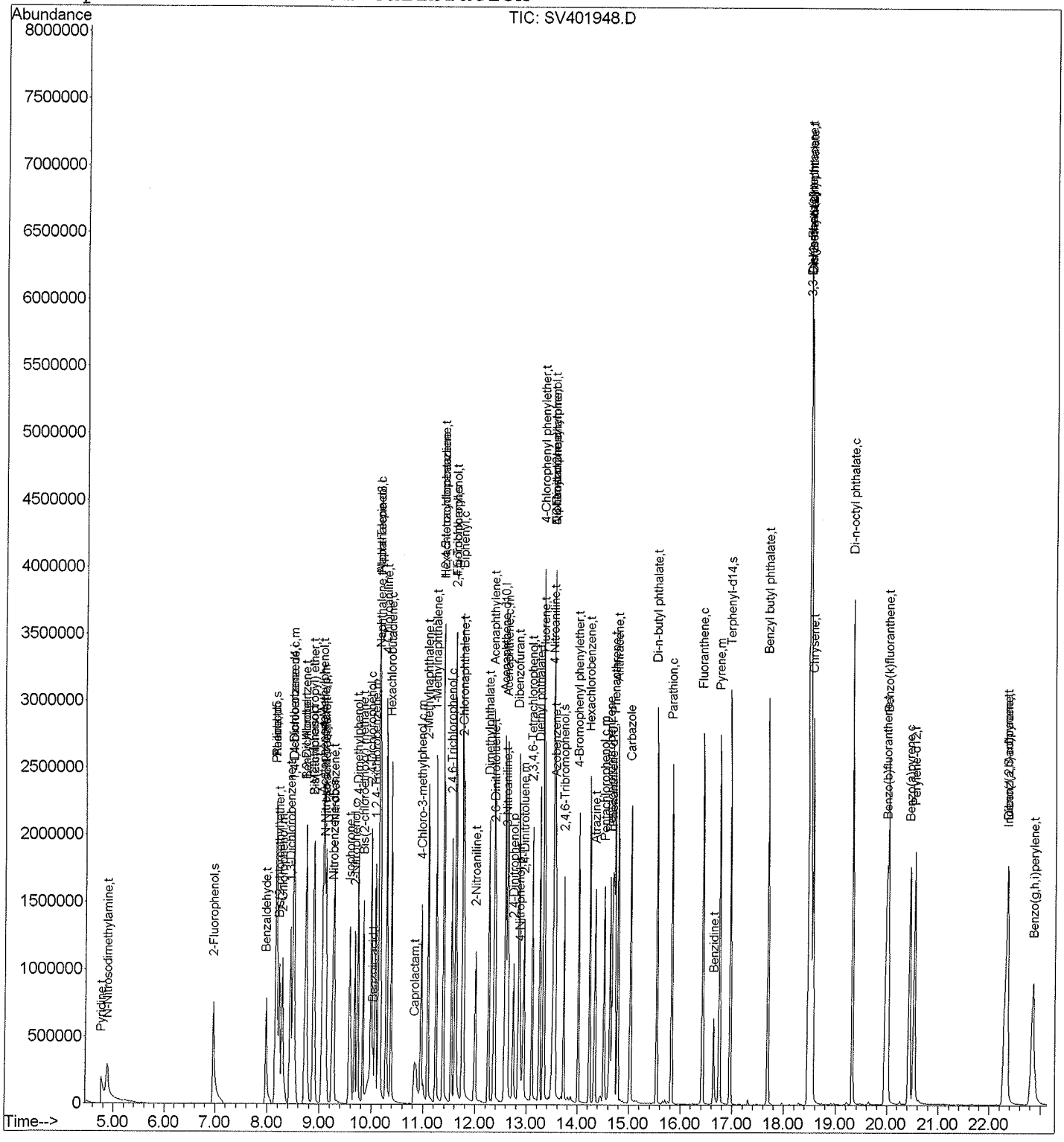
| Compound | R.T. | QIon | Response | Conc | Unit | Qvalue |
|---|---|---|---|---|---|---|
| 71) Pentachlorophenol | 14.52 | 266 | 3182310 | 38.21 | ug/mL | 99 |
| 72) Pentachloronitrobenzene | 14.64 | 237 | 1805357 | 44.48 | ug/mL | 97 |
| 73) Phenanthrene | 14.73 | 178 | 17278445 | 36.63 | ug/mL# | 91 |
| 74) Anthracene | 14.79 | 178 | 18764370 | 35.96 | ug/mL# | 99 |
| 75) Carbazole | 15.03 | 167 | 16352854 | 33.02 | ug/mL# | 93 |
| 76) Di-n-butyl phthalate | 15.55 | 149 | 22088344 | 32.63 | ug/mL | 97 |
| 77) Parathion | 15.83 | 97 | 4093310 | 30.75 | ug/mL# | 86 |
| 78) Fluoranthene | 16.43 | 202 | 19634682m | 37.37 | ug/mL | |
| 79) Benzidine | 16.64 | 184 | 4111847 | 17.82 | ug/mL# | 92 |
| 80) Pyrene | 16.76 | 202 | 20028279 | 37.51 | ug/mL | 99 |
| 82) Benzyl butyl phthalate | 17.70 | 149 | 10726158 | 33.05 | ug/mL | 95 |
| 83) Bis(2-ethylhexyl) phthalat | 18.51 | 149 | 14021035 | 44.12 | ug/mL# | 93 |
| 84) Benz (a) anthracene | 18.48 | 228 | 19564789 | 43.56 | ug/mL | 99 |
| 85) 3,3-Dichlorobenzidine | 18.49 | 252 | 14752500 | 91.12 | ug/mL# | 98 |
| 87) Chrysene | 18.56 | 228 | 17405536 | 32.16 | ug/mL# | 97 |
| 88) Di-n-octyl phthalate | 19.33 | 149 | 25016700 | 26.68 | ug/mL# | 97 |
| 89) Benzo(b)fluoranthene | 19.99 | 252 | 19176395m | 30.18 | ug/mL | |
| 90) Benzo(k)fluoranthene | 20.02 | 252 | 15768160m | 27.84 | ug/mL | |
| 91) Benzo(a)pyrene | 20.45 | 252 | 17322729 | 29.70 | ug/mL# | 92 |
| 93) Indeno(1,2,3-cd)pyrene | 22.36 | 276 | 19290375 | 39.26 | ug/mL# | 97 |
| 94) Dibenz(a,h)anthracene | 22.35 | 278 | 16562491 | 41.35 | ug/mL# | 91 |
| 95) Benzo(g,h,i)perylene | 22.86 | 276 | 14387136 | 34.76 | ug/mL# | 88 |

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\072416\SV401948.D Vial: 13
Acq On : 24 Jul 2016 12:10 pm Operator: KH
Sample : SEQ-CAL8 Inst : GC/MS BNA
Misc : QBSV4072416A Multiplr: 1.00
MS Integration Params: EVENTS.E
Quant Time: Jul 25 9:06 2016 Quant Results File: BNA4M54.RES

Method : C:\HPCHEM\1\METHODS\BNA4M54.M (Chemstation Integrator)
Title : GC MS BNA 4 Semi Volatiles Calibration
Last Update : Mon Jul 25 09:09:46 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\072416\SV401949.D Vial: 14
Acq On : 24 Jul 2016 12:43 pm Operator: KH
Sample : SEQ-SCV1 Inst : GC/MS BNA
Misc : QBSV4072416A Multiplr: 1.00
MS Integration Params: EVENTS.E
Quant Time: Jul 25 9:20 2016 Quant Results File: BNA4M54.RES

Quant Method : C:\HPCHEM\1\METHODS\BNA4M54.M (Chemstation Integrator)
Title : GC MS BNA 4 Semi Volatiles Calibration
Last Update : Mon Jul 25 09:09:46 2016
Response via : Initial Calibration
DataAcq Meth : BNA4M53

| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 1) 1,4-Dichlorobenzene-d4 | 8.48 | 152 | 3637603 | 40.00 | ug/mL | 0.00 |
| 20) Naphthalene-d8 | 10.13 | 136 | 13283380 | 40.00 | ug/mL | 0.00 |
| 39) Acenaphthene-d10 | 12.58 | 164 | 8404548 | 40.00 | ug/mL | 0.00 |
| 62) Phenanthrene-d10 | 14.68 | 188 | 15085383 | 40.00 | ug/mL | 0.00 |
| 86) Chrysene-d12 | 18.51 | 240 | 13975172 | 40.00 | ug/mL | 0.01 |
| 92) Perylene-d12 | 20.53 | 264 | 14050852 | 40.00 | ug/mL | 0.01 |
| **System Monitoring Compounds** | | | | | | |
| 4) 2-Fluorophenol | 0.00 | 112 | 0 | 0.00 | ug/mL | |
| Spiked Amount 75.000 | Range 15 - 87 | | Recovery = | 0.00%# | | |
| 5) Phenol-d5 | 8.28 | 99 | 294852 | 1.91 | ug/mL | 0.14 |
| Spiked Amount 75.000 | Range 10 - 100 | | Recovery = | 2.55%# | | |
| 21) Nitrobenzene-d5 | 9.55 | 82 | 8188676m | 53.69 | ug/mL | 0.33 |
| Spiked Amount 50.000 | Range 26 - 120 | | Recovery = | 107.38% | | |
| 44) 2-Fluorobiphenyl | 11.58 | 172 | 3086 | 0.01 | ug/mL | -0.02 |
| Spiked Amount 50.000 | Range 29 - 120 | | Recovery = | 0.02%# | | |
| 67) 2,4,6-Tribromophenol | 0.00 | 330 | 0 | 0.00 | ug/mL | |
| Spiked Amount 75.000 | Range 35 - 126 | | Recovery = | 0.00%# | | |
| 81) Terphenyl-d14 | 0.00 | 244 | 0 | 0.00 | ug/mL | |
| Spiked Amount 50.000 | Range 35 - 127 | | Recovery = | 0.00%# | | |
| **Target Compounds** | | | | | | Qvalue |
| 2) N-Nitrosodimethylamine | 4.90 | 74 | 2346480m | 29.10 | ug/mL | |
| 3) Pyridine | 4.77 | 79 | 3831434m | 34.31 | ug/mL | |
| 7) Aniline | 8.16 | 93 | 5090088 | 29.26 | ug/mL | 92 |
| 8) Phenol | 8.16 | 94 | 5092296 | 27.47 | ug/mL | 98 |
| 9) Bis(2-chloroethyl)ether | 8.22 | 93 | 4531782 | 27.76 | ug/mL | 99 |
| 10) 2-Chlorophenol | 8.28 | 128 | 3704783 | 26.97 | ug/mL | 99 |
| 11) 1,3-Dichlorobenzene | 8.43 | 146 | 3758464 | 26.97 | ug/mL | 98 |
| 12) 1,4-Dichlorobenzene | 8.50 | 146 | 4491844 | 26.65 | ug/mL | 99 |
| 13) Benzyl Alcohol | 8.71 | 108 | 2365920 | 27.38 | ug/mL | 99 |
| 14) 1,2-Dichlorobenzene | 8.74 | 146 | 3938487 | 26.89 | ug/mL | 99 |
| 15) 2-Methylphenol | 8.87 | 107 | 3075609 | 25.63 | ug/mL | 95 |
| 16) Bis(2-chloroisopropyl) eth | 8.88 | 45 | 4315828 | 30.37 | ug/mL | 89 |
| 17) N-Nitroso-di-n-propylamine | 9.07 | 70 | 2839081 | 27.67 | ug/mL | 84 |
| 18) 4-Methylphenol | 9.06 | 107 | 4050321 | 24.82 | ug/mL# | 51 |
| 19) Hexachloroethane | 9.11 | 117 | 1946956 | 27.20 | ug/mL | 98 |
| 22) Nitrobenzene | 9.26 | 77 | 4238750 | 27.68 | ug/mL | 99 |
| 23) Isophorone | 9.56 | 82 | 8041734 | 27.36 | ug/mL | 100 |
| 24) 2-Nitrophenol | 9.67 | 139 | 2153219 | 27.78 | ug/mL | 99 |
| 25) 2,4-Dimethylphenol | 9.72 | 122 | 3099338 | 29.14 | ug/mL | 97 |
| 26) Bis(2-chloroethoxy) methan | 9.83 | 93 | 4498780 | 28.69 | ug/mL | 99 |

(#) = qualifier out of range (m) = manual integration

Data File : C:\HPCHEM\1\DATA\072416\SV401949.D Vial: 14
Acq On : 24 Jul 2016 12:43 pm Operator: KH
Sample : SEQ-SCV1 Inst : GC/MS BNA
Misc : QBSV4072416A Multiplr: 1.00
MS Integration Params: EVENTS.E
Quant Time: Jul 25 9:20 2016 Quant Results File: BNA4M54.RES

Quant Method : C:\HPCHEM\1\METHODS\BNA4M54.M (Chemstation Integrator)
Title : GC MS BNA 4 Semi Volatiles Calibration
Last Update : Mon Jul 25 09:09:46 2016
Response via : Initial Calibration
DataAcq Meth : BNA4M53

| | Compound | R.T. | QIon | Response | Conc | Unit | Qvalue |
|---|---|---|---|---|---|---|---|
| 28) | 2,4-Dichlorophenol | 9.98 | 162 | 3248542 | 29.89 | ug/mL | 99 |
| 29) | 1,2,4-Trichlorobenzene | 10.07 | 180 | 3957389 | 27.99 | ug/mL | 99 |
| 30) | Naphthalene | 10.16 | 128 | 9615705 | 28.70 | ug/mL | 98 |
| 31) | 4-Chloroaniline | 10.27 | 127 | 4275184 | 30.22 | ug/mL | 99 |
| 34) | Hexachlorobutadiene | 10.37 | 225 | 2415175 | 29.14 | ug/mL | 100 |
| 35) | Caprolactam | 10.92 | 113 | 104765 | 2.21 | ug/mL# | 86 |
| 36) | 4-Chloro-3-methylphenol | 10.92 | 107 | 3709770 | 28.22 | ug/mL | 99 |
| 37) | 1-Methylnaphthalene | 11.24 | 141 | 5461339 | 26.25 | ug/mL | 99 |
| 38) | 2-Methylnaphthalene | 11.08 | 142 | 6628516 | 30.25 | ug/mL | 99 |
| 41) | Hexachlorocyclopentadiene | 11.38 | 237 | 1744671 | 27.08 | ug/mL | 98 |
| 42) | 2,4,6-Trichlorophenol | 11.52 | 196 | 2502060 | 27.82 | ug/mL | 99 |
| 43) | 2,4,5-Trichlorophenol | 11.59 | 196 | 2632232 | 24.82 | ug/mL | 96 |
| 45) | 2-Chloronaphthalene | 11.76 | 162 | 6752172 | 26.78 | ug/mL | 97 |
| 47) | 2-Nitroaniline | 11.99 | 138 | 2423356 | 27.88 | ug/mL | 99 |
| 48) | Dimethylphthalate | 12.26 | 163 | 8541088 | 26.75 | ug/mL | 100 |
| 49) | 2,6-Dinitrotoluene | 12.38 | 165 | 2123515 | 28.11 | ug/mL | 99 |
| 50) | Acenaphthylene | 12.36 | 152 | 10093872 | 27.01 | ug/mL | 98 |
| 51) | 3-Nitroaniline | 12.59 | 138 | 1920927 | 28.42 | ug/mL | 99 |
| 52) | Acenaphthene | 12.63 | 154 | 6023345 | 28.32 | ug/mL | 99 |
| 53) | 2,4-Dinitrophenol | 12.73 | 184 | 1414226 | 29.82 | ug/mL# | 96 |
| 54) | Dibenzofuran | 12.84 | 168 | 10038787 | 28.39 | ug/mL | 96 |
| 55) | 2,4-Dinitrotoluene | 12.94 | 165 | 2948997 | 28.91 | ug/mL | 100 |
| 56) | 4-Nitrophenol | 12.85 | 65 | 1840094m | 27.75 | ug/mL | |
| 57) | 2,3,4,6-Tetrachlorophenol | 13.09 | 131 | 1076578 | 28.08 | ug/mL | 97 |
| 58) | Diethyl phthalate | 13.24 | 149 | 8190330 | 26.33 | ug/mL | 99 |
| 59) | Fluorene | 13.34 | 166 | 7864244 | 28.06 | ug/mL | 99 |
| 60) | 4-Chlorophenyl phenylether | 13.32 | 204 | 4194178 | 27.04 | ug/mL | 97 |
| 61) | 4-Nitroaniline | 13.49 | 138 | 1924466 | 28.13 | ug/mL# | 84 |
| 63) | 4,6-Dinitro-2-methylphenol | 13.52 | 198 | 2001564 | 29.62 | ug/mL | 98 |
| 64) | Diphenylamine | 13.52 | 169 | 7082609 | 32.64 | ug/mL | 97 |
| 65) | N-Nitrosodiphenylamine | 13.52 | 167 | 2373185 | 33.38 | ug/mL | 97 |
| 66) | Azobenzene | 13.55 | 77 | 8890819 | 27.56 | ug/mL | 99 |
| 68) | 4-Bromophenyl phenylether | 14.01 | 248 | 2585675 | 27.93 | ug/mL# | 66 |
| 69) | Hexachlorobenzene | 14.23 | 142 | 1031190 | 26.58 | ug/mL | 95 |
| 70) | Atrazine | 14.51 | 200 | 306277m | 3.30 | ug/mL | |
| 71) | Pentachlorophenol | 14.51 | 266 | 1785605 | 29.52 | ug/mL | 99 |
| 72) | Pentachloronitrobenzene | 14.51 | 237 | 57949 | 1.33 | ug/mL# | 69 |
| 73) | Phenanthrene | 14.71 | 178 | 11080710 | 28.54 | ug/mL# | 99 |
| 74) | Anthracene | 14.77 | 178 | 11850386 | 28.07 | ug/mL# | 100 |
| 75) | Carbazole | 15.02 | 167 | 9902309 | 26.70 | ug/mL# | 100 |
| 76) | Di-n-butyl phthalate | 15.54 | 149 | 13785355 | 26.29 | ug/mL | 99 |

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\072416\SV401949.D Vial: 14
Acq On : 24 Jul 2016 12:43 pm Operator: KH
Sample : SEQ-SCV1 Inst : GC/MS BNA
Misc : QBSV4072416A Multiplr: 1.00
MS Integration Params: EVENTS.E
Quant Time: Jul 25 9:20 2016 Quant Results File: BNA4M54.RES

Quant Method : C:\HPCHEM\1\METHODS\BNA4M54.M (Chemstation Integrator)
Title : GC MS BNA 4 Semi Volatiles Calibration
Last Update : Mon Jul 25 09:09:46 2016
Response via : Initial Calibration
DataAcq Meth : BNA4M53

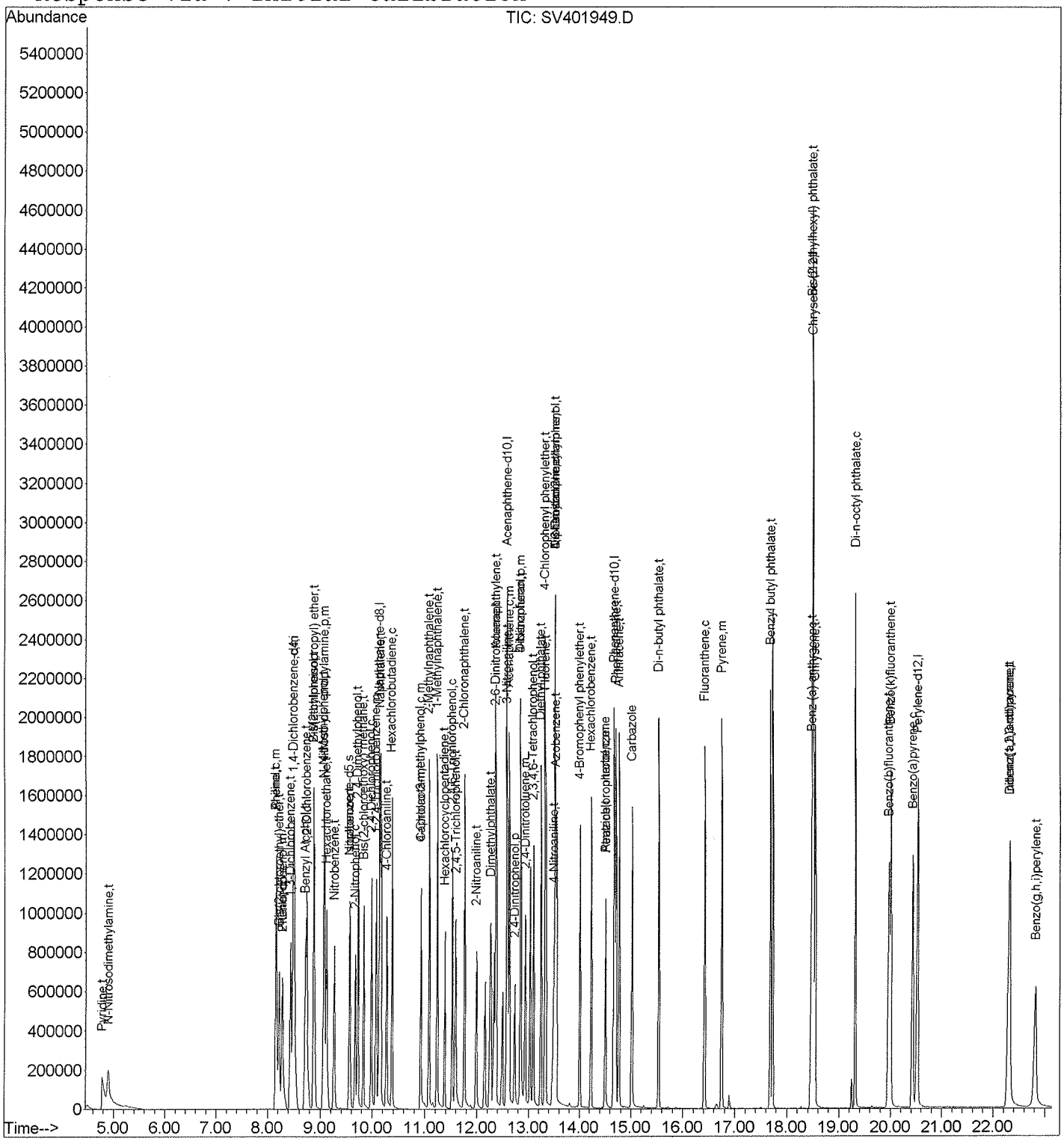
| | Compound | R.T. | QIon | Response | Conc | Unit | Qvalue |
|---|---|---|---|---|---|---|---|
| 78) | Fluoranthene | 16.42 | 202 | 12547231 | 28.03 | ug/mL | 100 |
| 80) | Pyrene | 16.75 | 202 | 12994403 | 28.59 | ug/mL | 99 |
| 82) | Benzyl butyl phthalate | 17.69 | 149 | 6594037 | 26.22 | ug/mL | 99 |
| 83) | Bis(2-ethylhexyl) phthalat | 18.50 | 149 | 9122010 | 27.21 | ug/mL | 98 |
| 84) | Benz (a) anthracene | 18.47 | 228 | 11585107 | 27.35 | ug/mL | 98 |
| 87) | Chrysene | 18.54 | 228 | 10454129 | 26.74 | ug/mL# | 98 |
| 88) | Di-n-octyl phthalate | 19.32 | 149 | 15594664 | 26.39 | ug/mL | 99 |
| 89) | Benzo(b)fluoranthene | 19.97 | 252 | 11579159 | 27.09 | ug/mL# | 98 |
| 90) | Benzo(k)fluoranthene | 20.00 | 252 | 11469013m | 27.12 | ug/mL | |
| 91) | Benzo(a)pyrene | 20.43 | 252 | 11239513 | 29.27 | ug/mL | 99 |
| 93) | Indeno(1,2,3-cd)pyrene | 22.32 | 276 | 11948922 | 27.50 | ug/mL# | 99 |
| 94) | Dibenz(a,h)anthracene | 22.32 | 278 | 10147744 | 27.46 | ug/mL | 99 |
| 95) | Benzo(g,h,i)perylene | 22.83 | 276 | 9202885 | 27.39 | ug/mL | 98 |

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\072416\SV401949.D Vial: 14
Acq On : 24 Jul 2016 12:43 pm Operator: KH
Sample : SEQ-SCV1 Inst : GC/MS BNA
Misc : QBSV4072416A Multiplr: 1.00
MS Integration Params: EVENTS.E
Quant Time: Jul 25 9:20 2016 Quant Results File: BNA4M54.RES

Method : C:\HPCHEM\1\METHODS\BNA4M54.M (Chemstation Integrator)
Title : GC MS BNA 4 Semi Volatiles Calibration
Last Update : Mon Jul 25 09:09:46 2016
Response via : Initial Calibration



# Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\091516\SV402903.D Vial: 2
Acq On : 15 Sep 2016 9:09 am Operator: KH
Sample : SEQ-CCV1 Inst : GC/MS BNA
Misc : QBSV4091516A CCV = Y16H188 IS = Y16D042 Multiplr: 1.00
MS Integration Params: EVENTS.E

Method : C:\HPCHEM\1\METHODS\BNA4M54.M (Chemstation Integrator)
Title : GC MS BNA 4 Semi Volatiles Calibration
Last Update : Mon Jul 25 09:09:46 2016
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 200%

| | | Compound | AvgRF | CCRF | %Dev | Area% | Dev(min) |
|---|---|---|---|---|---|---|---|
| 1 | i | 1,4-Dichlorobenzene-d4 | 1.000 | 1.000 | 0.0 | 75 | -0.02 |
| 2 | t | N-Nitrosodimethylamine | 0.887 | 0.544 | 38.7# | 45# | -0.06 |
| 3 | t | Pyridine | 1.228 | 0.823 | 33.0# | 53 | -0.09 |
| 4 | s | 2-Fluorophenol | 1.564 | 1.374 | 12.1 | 73 | 0.00 |
| 5 | s | Phenol-d5 | 1.698 | 1.683 | 0.9 | 78 | 0.00 |
| 6 | t | Benzaldehyde | 1.174 | 0.955 | 18.7 | 74 | -0.02 |
| 7 | t | Aniline | 1.913 | 1.912 | 0.1 | 81 | -0.01 |
| 8 | c,m | Phenol | 2.039 | 1.964 | 3.7# | 75 | 0.00 |
| 9 | t | Bis(2-chloroethyl)ether | 1.795 | 1.724 | 4.0 | 74 | -0.01 |
| 10 | m | 2-Chlorophenol | 1.511 | 1.457 | 3.6 | 75 | 0.00 |
| 11 | t | 1,3-Dichlorobenzene | 1.533 | 1.393 | 9.1 | 71 | -0.02 |
| 12 | c,m | 1,4-Dichlorobenzene | 1.853 | 1.745 | 5.8# | 74 | -0.02 |
| 13 | t | Benzyl Alcohol | 0.950 | 0.960 | -1.1 | 79 | 0.00 |
| 14 | t | 1,2-Dichlorobenzene | 1.611 | 1.465 | 9.1 | 72 | -0.02 |
| 15 | t | 2-Methylphenol | 1.319 | 1.286 | 2.5 | 77 | 0.00 |
| 16 | t | Bis(2-chloroisopropyl) ethe | 1.563 | 1.588 | -1.6 | 81 | -0.02 |
| 17 | p,m | N-Nitroso-di-n-propylamine | 1.128 | 1.243 | -10.2 | 87 | 0.00 |
| 18 | t | 4-Methylphenol | 1.794 | 1.861 | -3.7 | 82 | 0.00 |
| 19 | t | Hexachloroethane | 0.787 | 0.837 | -6.4 | 82 | -0.02 |
| 20 | I | Naphthalene-d8 | 1.000 | 1.000 | 0.0 | 85 | -0.01 |
| 21 | s | Nitrobenzene-d5 | 0.459 | 0.431 | 6.1 | 87 | 0.00 |
| 22 | t | Nitrobenzene | 0.461 | 0.406 | 11.9 | 84 | 0.00 |
| 23 | t | Isophorone | 0.885 | 0.750 | 15.3 | 79 | 0.00 |
| 24 | c | 2-Nitrophenol | 0.233 | 0.185 | 20.6# | 72 | -0.01 |
| 25 | t | 2,4-Dimethylphenol | 0.320 | 0.282 | 11.9 | 80 | 0.00 |
| 26 | t | Bis(2-chloroethoxy) methane | 0.472 | 0.392 | 16.9 | 77 | 0.00 |
| 27 | t | Benzoic acid | 0.284 | 0.013 | 95.4# | 4# | -0.15 |
| 28 | c | 2,4-Dichlorophenol | 0.327 | 0.286 | 12.5# | 73 | 0.00 |
| 29 | m | 1,2,4-Trichlorobenzene | 0.426 | 0.339 | 20.4 | 72 | -0.01 |
| 30 | t | Naphthalene | 1.009 | 0.928 | 8.0 | 84 | -0.01 |
| 31 | t | 4-Chloroaniline | 0.426 | 0.388 | 8.9 | 80 | 0.00 |
| 32 | c | Acetophenone | 0.601 | 0.012 | 98.0# | 2# | 0.00 |
| 33 | c | Alpha-Terpineol | 0.310 | 0.337 | -8.7# | 103 | -0.01 |
| 34 | c | Hexachlorobutadiene | 0.250 | 0.213 | 14.8# | 77 | -0.02 |
| 35 | t | Caprolactam | 0.143 | 0.016 | 88.8# | 9# | 0.01 |
| 36 | c,m | 4-Chloro-3-methylphenol | 0.396 | 0.356 | 10.1# | 81 | 0.00 |
| 37 | t | 1-Methylnaphthalene | 0.626 | 0.544 | 13.1 | 80 | -0.01 |
| 38 | t | 2-Methylnaphthalene | 0.660 | 0.578 | 12.4 | 79 | -0.02 |
| 39 | I | Acenaphthene-d10 | 1.000 | 1.000 | 0.0 | 79 | -0.02 |

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\091516\SV402903.D Vial: 2
Acq On : 15 Sep 2016 9:09 am Operator: KH
Sample : SEQ-CCV1 Inst : GC/MS BNA
Misc : QBSV4091516A CCV = Y16H188 IS = Y16D042 Multiplr: 1.00
MS Integration Params: EVENTS.E

Method : C:\HPCHEM\1\METHODS\BNA4M54.M (Chemstation Integrator)
Title : GC MS BNA 4 Semi Volatiles Calibration
Last Update : Mon Jul 25 09:09:46 2016
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 200%

| | | Compound | AvgRF | CCRF | %Dev | Area% | Dev(min) |
|---|---|---|---|---|---|---|---|
| 40 | | 1,2,4,5-tetrachlorobenzene | 0.723 | 0.662 | 8.4 | 77 | -0.01 |
| 41 | t | Hexachlorocyclopentadiene | 0.307 | 0.150 | 51.1# | 34# | -0.02 |
| 42 | c | 2,4,6-Trichlorophenol | 0.428 | 0.454 | -6.1# | 80 | 0.07 |
| 43 | t | 2,4,5-Trichlorophenol | 0.505 | 0.455 | 9.9 | 70 | -0.01 |
| 44 | s | 2-Fluorobiphenyl | 1.442 | 1.463 | -1.5 | 82 | -0.02 |
| 45 | t | 2-Chloronaphthalene | 1.200 | 1.111 | 7.4 | 75 | -0.01 |
| 46 | c | Biphenyl | 0.614 | 0.607 | 1.1# | 80 | -0.01 |
| 47 | t | 2-Nitroaniline | 0.414 | 0.381 | 8.0 | 73 | 0.00 |
| 48 | t | Dimethylphthalate | 1.520 | 1.411 | 7.2 | 77 | 0.00 |
| 49 | t | 2,6-Dinitrotoluene | 0.360 | 0.350 | 2.8 | 75 | 0.00 |
| 50 | t | Acenaphthylene | 1.778 | 1.684 | 5.3 | 78 | -0.01 |
| 51 | t | 3-Nitroaniline | 0.322 | 0.322 | 0.0 | 80 | 0.00 |
| 52 | c,m | Acenaphthene | 1.012 | 0.974 | 3.8# | 78 | -0.01 |
| 53 | p | 2,4-Dinitrophenol | 0.226 | 0.196 | 13.3 | 60 | -0.01 |
| 54 | t | Dibenzofuran | 1.683 | 1.607 | 4.5 | 78 | -0.01 |
| 55 | m | 2,4-Dinitrotoluene | 0.485 | 0.459 | 5.4 | 73 | 0.00 |
| 56 | p,m | 4-Nitrophenol | 0.316 | 0.315 | 0.3 | 77 | -0.03 |
| 57 | t | 2,3,4,6-Tetrachlorophenol | 0.182 | 0.197 | -8.2 | 86 | 0.00 |
| 58 | t | Diethyl phthalate | 1.480 | 1.466 | 0.9 | 83 | 0.00 |
| 59 | t | Fluorene | 1.334 | 1.300 | 2.5 | 78 | 0.00 |
| 60 | t | 4-Chlorophenyl phenylether | 0.738 | 0.716 | 3.0 | 77 | -0.01 |
| 61 | t | 4-Nitroaniline | 0.326 | 0.306 | 6.1 | 76 | 0.02 |
| 62 | I | Phenanthrene-d10 | 1.000 | 1.000 | 0.0 | 79 | -0.01 |
| 63 | t | 4,6-Dinitro-2-methylphenol | 0.179 | 0.197 | -10.1 | 76 | 0.02 |
| 64 | c | Diphenylamine | 0.575 | 0.572 | 0.5# | 80 | 0.00 |
| 65 | t | N-Nitrosodiphenylamine | 0.189 | 0.196 | -3.7 | 80 | 0.00 |
| 66 | t | Azobenzene | 0.855 | 1.002 | -17.2 | 94 | 0.00 |
| 67 | s | 2,4,6-Tribromophenol | 0.189 | 0.178 | 5.8 | 76 | -0.01 |
| 68 | t | 4-Bromophenyl phenylether | 0.245 | 0.228 | 6.9 | 74 | -0.01 |
| 69 | t | Hexachlorobenzene | 0.103 | 0.117 | -13.6 | 93 | -0.01 |
| 70 | t | Atrazine | 0.246 | 0.242 | 1.6 | 83 | 0.02 |
| 71 | c,m | Pentachlorophenol | 0.160 | 0.131 | 18.1# | 56 | 0.00 |
| 72 | | Pentachloronitrobenzene | 0.115 | 0.121 | -5.2 | 91 | 0.00 |
| 73 | t | Phenanthrene | 1.029 | 1.016 | 1.3 | 80 | 0.00 |
| 74 | t | Anthracene | 1.120 | 1.073 | 4.2 | 78 | 0.00 |
| 75 | | Carbazole | 0.983 | 0.886 | 9.9 | 73 | 0.00 |
| 76 | t | Di-n-butyl phthalate | 1.390 | 1.373 | 1.2 | 83 | 0.00 |
| 77 | c | Parathion | 0.258 | 0.276 | -7.0# | 89 | 0.00 |
| 78 | c | Fluoranthene | 1.187 | 1.156 | 2.6# | 79 | 0.00 |
| 79 | t | Benzidine | 0.328 | 0.351 | -7.0 | 102 | -0.02 |

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\091516\SV402903.D Vial: 2
Acq On : 15 Sep 2016 9:09 am Operator: KH
Sample : SEQ-CCV1 Inst : GC/MS BNA
Misc : QBSV4091516A CCV = Y16H188 IS = Y16D042 Multiplr: 1.00
MS Integration Params: EVENTS.E

Method : C:\HPCHEM\1\METHODS\BNA4M54.M (Chemstation Integrator)
Title : GC MS BNA 4 Semi Volatiles Calibration
Last Update : Mon Jul 25 09:09:46 2016
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 200%

| | | Compound | AvgRF | CCRF | %Dev | Area% | Dev(min) |
|---|---|---|---|---|---|---|---|
| 80 | m | Pyrene | 1.205 | 1.162 | 3.6 | 79 | 0.00 |
| 81 | s | Terphenyl-d14 | 0.873 | 0.880 | -0.8 | 82 | 0.00 |
| 82 | t | Benzyl butyl phthalate | 0.667 | 0.659 | 1.2 | 81 | -0.01 |
| 83 | t | Bis(2-ethylhexyl) phthalate | 0.889 | 1.016 | -14.3 | 95 | -0.01 |
| 84 | t | Benz (a) anthracene | 1.123 | 1.302 | -15.9 | 90 | 0.00 |
| 85 | t | 3,3-Dichlorobenzidine | 0.466 | 0.481 | -3.2 | 87 | 0.00 |
| 86 | I | Chrysene-d12 | 1.000 | 1.000 | 0.0 | 84 | 0.00 |
| 87 | t | Chrysene | 1.119 | 1.005 | 10.2 | 80 | 0.00 |
| 88 | c | Di-n-octyl phthalate | 1.692 | 1.560 | 7.8# | 84 | -0.01 |
| 89 | t | Benzo(b)fluoranthene | 1.224 | 0.960 | 21.6 | 68 | 0.02 |
| 90 | t | Benzo(k)fluoranthene | 1.210 | 0.960 | 20.7 | 73 | -0.01 |
| 91 | c | Benzo(a)pyrene | 1.099 | 0.903 | 17.8# | 72 | 0.02 |
| 92 | I | Perylene-d12 | 1.000 | 1.000 | 0.0 | 72 | -0.01 |
| 93 | t | Indeno(1,2,3-cd)pyrene | 1.237 | 1.082 | 12.5 | 63 | 0.04 |
| 94 | t | Dibenz(a,h)anthracene | 1.052 | 0.955 | 9.2 | 65 | 0.02 |
| 95 | t | Benzo(g,h,i)perylene | 0.957 | 0.742 | 22.5 | 58 | 0.02 |

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\091516\SV402903.D Vial: 2
Acq On : 15 Sep 2016 9:09 am Operator: KH
Sample : SEQ-CCV1 Inst : GC/MS BNA
Misc : QBSV4091516A CCV = Y16H188 IS = Y16D042 Multiplr: 1.00
MS Integration Params: EVENTS.E
Quant Time: Sep 16 11:56 2016 Quant Results File: BNA4M54.RES

Quant Method : C:\HPCHEM\1\METHODS\BNA4M54.M (Chemstation Integrator)
Title : GC MS BNA 4 Semi Volatiles Calibration
Last Update : Mon Jul 25 09:09:46 2016
Response via : Initial Calibration
DataAcq Meth : BNA4M54

| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 1) 1,4-Dichlorobenzene-d4 | 8.46 | 152 | 3184704 | 40.00 | ug/mL | -0.02 |
| 20) Naphthalene-d8 | 10.11 | 136 | 14024113 | 40.00 | ug/mL | -0.01 |
| 39) Acenaphthene-d10 | 12.55 | 164 | 7565491 | 40.00 | ug/mL | -0.02 |
| 62) Phenanthrene-d10 | 14.66 | 188 | 13557900 | 40.00 | ug/mL | -0.01 |
| 86) Chrysene-d12 | 18.49 | 240 | 13748521 | 40.00 | ug/mL | 0.00 |
| 92) Perylene-d12 | 20.51 | 264 | 11349137 | 40.00 | ug/mL | -0.01 |
| **System Monitoring Compounds** | | | | | | |
| 4) 2-Fluorophenol | 6.96 | 112 | 3281187 | 26.34 | ug/mL | 0.00 |
| Spiked Amount 75.000 | Range 15 - 87 | | Recovery = 35.12% | | | |
| 5) Phenol-d5 | 8.15 | 99 | 4019621 | 29.74 | ug/mL | 0.00 |
| Spiked Amount 75.000 | Range 10 - 100 | | Recovery = 39.65% | | | |
| 21) Nitrobenzene-d5 | 9.22 | 82 | 4528076 | 28.12 | ug/mL | 0.00 |
| Spiked Amount 50.000 | Range 26 - 120 | | Recovery = 56.24% | | | |
| 44) 2-Fluorobiphenyl | 11.59 | 172 | 8300717 | 30.43 | ug/mL | -0.02 |
| Spiked Amount 50.000 | Range 29 - 120 | | Recovery = 60.86% | | | |
| 67) 2,4,6-Tribromophenol | 13.70 | 330 | 1809165 | 28.30 | ug/mL | -0.01 |
| Spiked Amount 75.000 | Range 35 - 126 | | Recovery = 37.73% | | | |
| 81) Terphenyl-d14 | 16.94 | 244 | 8943659 | 30.22 | ug/mL | 0.00 |
| Spiked Amount 50.000 | Range 35 - 127 | | Recovery = 60.44% | | | |
| **Target Compounds** | | | | | | Qvalue |
| 2) N-Nitrosodimethylamine | 4.84 | 74 | 1298223 | 18.39 | ug/mL# | 38 |
| 3) Pyridine | 4.73 | 79 | 1966758m | 20.11 | ug/mL | |
| 6) Benzaldehyde | 7.95 | 105 | 2280784 | 24.40 | ug/mL# | 96 |
| 7) Aniline | 8.13 | 93 | 4567593 | 29.99 | ug/mL | 88 |
| 8) Phenol | 8.16 | 94 | 4692141 | 28.91 | ug/mL# | 82 |
| 9) Bis(2-chloroethyl)ether | 8.19 | 93 | 4116829 | 28.81 | ug/mL | 92 |
| 10) 2-Chlorophenol | 8.27 | 128 | 3481188 | 28.94 | ug/mL# | 92 |
| 11) 1,3-Dichlorobenzene | 8.41 | 146 | 3326674 | 27.26 | ug/mL | 97 |
| 12) 1,4-Dichlorobenzene | 8.48 | 146 | 4166877 | 28.24 | ug/mL | 97 |
| 13) Benzyl Alcohol | 8.70 | 108 | 2293634 | 30.31 | ug/mL | 93 |
| 14) 1,2-Dichlorobenzene | 8.71 | 146 | 3499310 | 27.29 | ug/mL | 95 |
| 15) 2-Methylphenol | 8.87 | 107 | 3070477 | 29.23 | ug/mL | 93 |
| 16) Bis(2-chloroisopropyl) eth | 8.85 | 45 | 3792511 | 30.48 | ug/mL | 95 |
| 17) N-Nitroso-di-n-propylamine | 9.06 | 70 | 2969140 | 33.05 | ug/mL | 91 |
| 18) 4-Methylphenol | 9.05 | 107 | 4444860 | 31.12 | ug/mL# | 61 |
| 19) Hexachloroethane | 9.09 | 117 | 1998699 | 31.90 | ug/mL | 95 |
| 22) Nitrobenzene | 9.24 | 77 | 4269934 | 26.41 | ug/mL | 92 |
| 23) Isophorone | 9.54 | 82 | 7891888 | 25.44 | ug/mL | 96 |
| 24) 2-Nitrophenol | 9.65 | 139 | 1947038 | 23.79 | ug/mL# | 76 |
| 25) 2,4-Dimethylphenol | 9.71 | 122 | 2970491 | 26.45 | ug/mL | 97 |

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\091516\SV402903.D Vial: 2
Acq On : 15 Sep 2016 9:09 am Operator: KH
Sample : SEQ-CCV1 Inst : GC/MS BNA
Misc : QBSV4091516A CCV = Y16H188 IS = Y16D042 Multiplr: 1.00
MS Integration Params: EVENTS.E
Quant Time: Sep 16 11:56 2016 Quant Results File: BNA4M54.RES

Quant Method : C:\HPCHEM\1\METHODS\BNA4M54.M (Chemstation Integrator)
Title : GC MS BNA 4 Semi Volatiles Calibration
Last Update : Mon Jul 25 09:09:46 2016
Response via : Initial Calibration
DataAcq Meth : BNA4M54

| | Compound | R.T. | QIon | Response | Conc | Unit | Qvalue |
|---|---|---|---|---|---|---|---|
| 26) | Bis(2-chloroethoxy) methan | 9.81 | 93 | 4123996 | 24.91 | ug/mL | 95 |
| 27) | Benzoic acid | 9.71 | 105 | 139909 | 1.40 | ug/mL# | 1 |
| 28) | 2,4-Dichlorophenol | 9.97 | 162 | 3003097 | 26.17 | ug/mL# | 89 |
| 29) | 1,2,4-Trichlorobenzene | 10.05 | 180 | 3562782 | 23.86 | ug/mL | 98 |
| 30) | Naphthalene | 10.14 | 128 | 9756186 | 27.58 | ug/mL# | 87 |
| 31) | 4-Chloroaniline | 10.26 | 127 | 4085878 | 27.36 | ug/mL# | 92 |
| 33) | Alpha-Terpineol | 10.12 | 59 | 3547652 | 32.65 | ug/mL | 96 |
| 34) | Hexachlorobutadiene | 10.35 | 225 | 2239963 | 25.60 | ug/mL | 99 |
| 35) | Caprolactam | 10.94 | 113 | 169356 | 3.38 | ug/mL# | 82 |
| 36) | 4-Chloro-3-methylphenol | 10.94 | 107 | 3748690 | 27.01 | ug/mL | 93 |
| 37) | 1-Methylnaphthalene | 11.21 | 141 | 5720552 | 26.05 | ug/mL | 95 |
| 38) | 2-Methylnaphthalene | 11.06 | 142 | 6078017 | 26.28 | ug/mL | 94 |
| 40) | 1,2,4,5-tetrachlorobenzene | 11.35 | 216 | 3754805 | 27.47 | ug/mL# | 96 |
| 41) | Hexachlorocyclopentadiene | 11.36 | 237 | 849587 | 14.65 | ug/mL | 99 |
| 42) | 2,4,6-Trichlorophenol | 11.59 | 196 | 2578876 | 31.86 | ug/mL | 97 |
| 43) | 2,4,5-Trichlorophenol | 11.59 | 196 | 2584316 | 27.07 | ug/mL# | 94 |
| 45) | 2-Chloronaphthalene | 11.74 | 162 | 6303485 | 27.78 | ug/mL | 94 |
| 46) | Biphenyl | 11.72 | 153 | 3446722 | 29.67 | ug/mL# | 99 |
| 47) | 2-Nitroaniline | 11.98 | 138 | 2164502 | 27.66 | ug/mL# | 83 |
| 48) | Dimethylphthalate | 12.23 | 163 | 8005755 | 27.85 | ug/mL | 99 |
| 49) | 2,6-Dinitrotoluene | 12.35 | 165 | 1985159 | 29.19 | ug/mL# | 70 |
| 50) | Acenaphthylene | 12.34 | 152 | 9553309 | 28.40 | ug/mL | 99 |
| 51) | 3-Nitroaniline | 12.57 | 138 | 1825703 | 30.01 | ug/mL# | 79 |
| 52) | Acenaphthene | 12.60 | 154 | 5525262 | 28.86 | ug/mL | 98 |
| 53) | 2,4-Dinitrophenol | 12.72 | 184 | 1113337 | 26.08 | ug/mL | 81 |
| 54) | Dibenzofuran | 12.82 | 168 | 9118440 | 28.64 | ug/mL# | 86 |
| 55) | 2,4-Dinitrotoluene | 12.92 | 165 | 2602754 | 28.35 | ug/mL# | 82 |
| 56) | 4-Nitrophenol | 12.87 | 65 | 1787869 | 29.95 | ug/mL# | 20 |
| 57) | 2,3,4,6-Tetrachlorophenol | 13.08 | 131 | 1115820 | 32.34 | ug/mL# | 77 |
| 58) | Diethyl phthalate | 13.22 | 149 | 8316348 | 29.70 | ug/mL | 97 |
| 59) | Fluorene | 13.31 | 166 | 7376243 | 29.24 | ug/mL | 98 |
| 60) | 4-Chlorophenyl phenylether | 13.29 | 204 | 4062952 | 29.10 | ug/mL# | 89 |
| 61) | 4-Nitroaniline | 13.48 | 138 | 1734303 | 28.16 | ug/mL# | 67 |
| 63) | 4,6-Dinitro-2-methylphenol | 13.50 | 198 | 2006236 | 33.03 | ug/mL | 82 |
| 64) | Diphenylamine | 13.50 | 169 | 5812022 | 29.80 | ug/mL | 100 |
| 65) | N-Nitrosodiphenylamine | 13.50 | 167 | 1989371 | 31.13 | ug/mL | 99 |
| 66) | Azobenzene | 13.52 | 77 | 10185346 | 35.13 | ug/mL# | 66 |
| 68) | 4-Bromophenyl phenylether | 13.98 | 248 | 2321638 | 27.90 | ug/mL# | 25 |
| 69) | Hexachlorobenzene | 14.21 | 142 | 1185908 | 34.01 | ug/mL | 72 |
| 70) | Atrazine | 14.31 | 200 | 2462103 | 29.48 | ug/mL# | 99 |
| 71) | Pentachlorophenol | 14.50 | 266 | 1329077 | 24.45 | ug/mL | 99 |

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\091516\SV402903.D Vial: 2
Acq On : 15 Sep 2016 9:09 am Operator: KH
Sample : SEQ-CCV1 Inst : GC/MS BNA
Misc : QBSV4091516A CCV = Y16H188 IS = Y16D042 Multiplr: 1.00
MS Integration Params: EVENTS.E
Quant Time: Sep 16 11:56 2016 Quant Results File: BNA4M54.RES

Quant Method : C:\HPCHEM\1\METHODS\BNA4M54.M (Chemstation Integrator)
Title : GC MS BNA 4 Semi Volatiles Calibration
Last Update : Mon Jul 25 09:09:46 2016
Response via : Initial Calibration
DataAcq Meth : BNA4M54

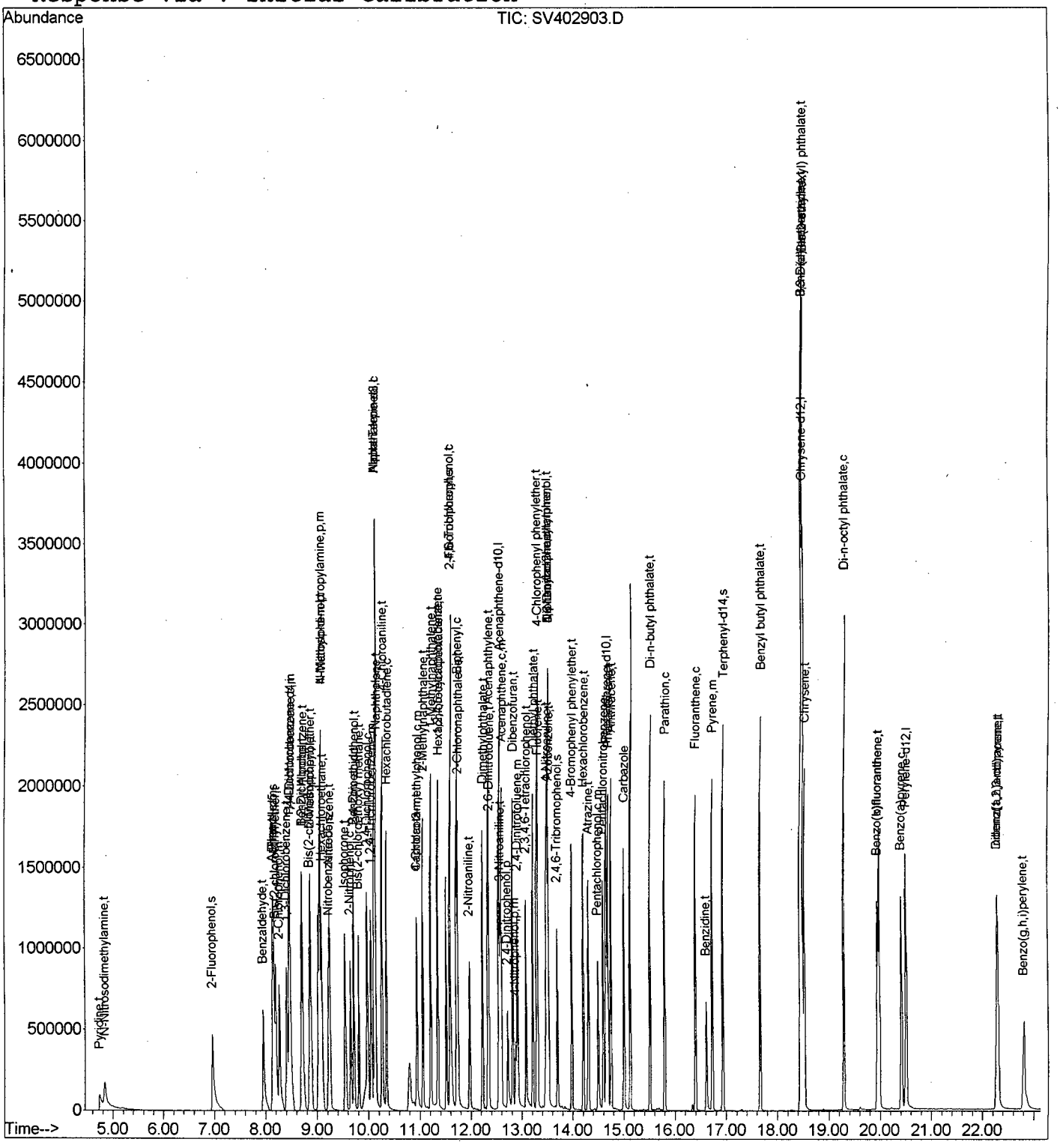
| | Compound | R.T. | QIon | Response | Conc | Unit | Qvalue |
|---|---|---|---|---|---|---|---|
| 72) | Pentachloronitrobenzene | 14.60 | 237 | 1231730 | 31.57 | ug/mL | 95 |
| 73) | Phenanthrene | 14.69 | 178 | 10326762 | 29.59 | ug/mL# | 99 |
| 74) | Anthracene | 14.75 | 178 | 10912547 | 28.76 | ug/mL# | 99 |
| 75) | Carbazole | 15.01 | 167 | 9011842 | 27.04 | ug/mL# | 100 |
| 76) | Di-n-butyl phthalate | 15.51 | 149 | 13960813 | 29.63 | ug/mL | 97 |
| 77) | Parathion | 15.80 | 97 | 2810773 | 32.14 | ug/mL# | 93 |
| 78) | Fluoranthene | 16.40 | 202 | 11752768 | 29.21 | ug/mL# | 99 |
| 79) | Benzidine | 16.61 | 184 | 3573485 | 32.12 | ug/mL | 98 |
| 80) | Pyrene | 16.73 | 202 | 11819288 | 28.93 | ug/mL# | 93 |
| 82) | Benzyl butyl phthalate | 17.66 | 149 | 6700509 | 29.64 | ug/mL | 92 |
| 83) | Bis(2-ethylhexyl) phthalat | 18.47 | 149 | 10334285 | 34.30 | ug/mL | 98 |
| 84) | Benz (a) anthracene | 18.45 | 228 | 13236959 | 34.77 | ug/mL | 100 |
| 85) | 3,3-Dichlorobenzidine | 18.45 | 252 | 9784146 | 62.00 | ug/mL | 99 |
| 87) | Chrysene | 18.53 | 228 | 10357910 | 26.93 | ug/mL# | 100 |
| 88) | Di-n-octyl phthalate | 19.29 | 149 | 16089437 | 27.67 | ug/mL | 99 |
| 89) | Benzo(b)fluoranthene | 19.95 | 252 | 9898633 | 23.54 | ug/mL# | 99 |
| 90) | Benzo(k)fluoranthene | 19.95 | 252 | 9901015 | 23.80 | ug/mL | 98 |
| 91) | Benzo(a)pyrene | 20.42 | 252 | 9313462 | 24.66 | ug/mL | 100 |
| 93) | Indeno(1,2,3-cd)pyrene | 22.31 | 276 | 9211118 | 26.25 | ug/mL# | 99 |
| 94) | Dibenz(a,h)anthracene | 22.30 | 278 | 8126936 | 27.23 | ug/mL | 98 |
| 95) | Benzo(g,h,i)perylene | 22.82 | 276 | 6312438 | 23.26 | ug/mL | 98 |

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\091516\SV402903.D Vial: 2
Acq On : 15 Sep 2016 9:09 am Operator: KH
Sample : SEQ-CCV1 Inst : GC/MS BNA
Misc : QBSV4091516A CCV = Y16H188 IS = Y16D042 Multiplr: 1.00
MS Integration Params: EVENTS.E
Quant Time: Sep 16 11:56 2016 Quant Results File: BNA4M54.RES

Method : C:\HPCHEM\1\METHODS\BNA4M54.M (Chemstation Integrator)
Title : GC MS BNA 4 Semi Volatiles Calibration
Last Update : Mon Jul 25 09:09:46 2016
Response via : Initial Calibration



# FORM V ANALYSIS BATCH (SEQUENCE) SUMMARY

## EPA 8270D

Laboratory: York Analytical Laboratories, Inc. SDG: 16I0260

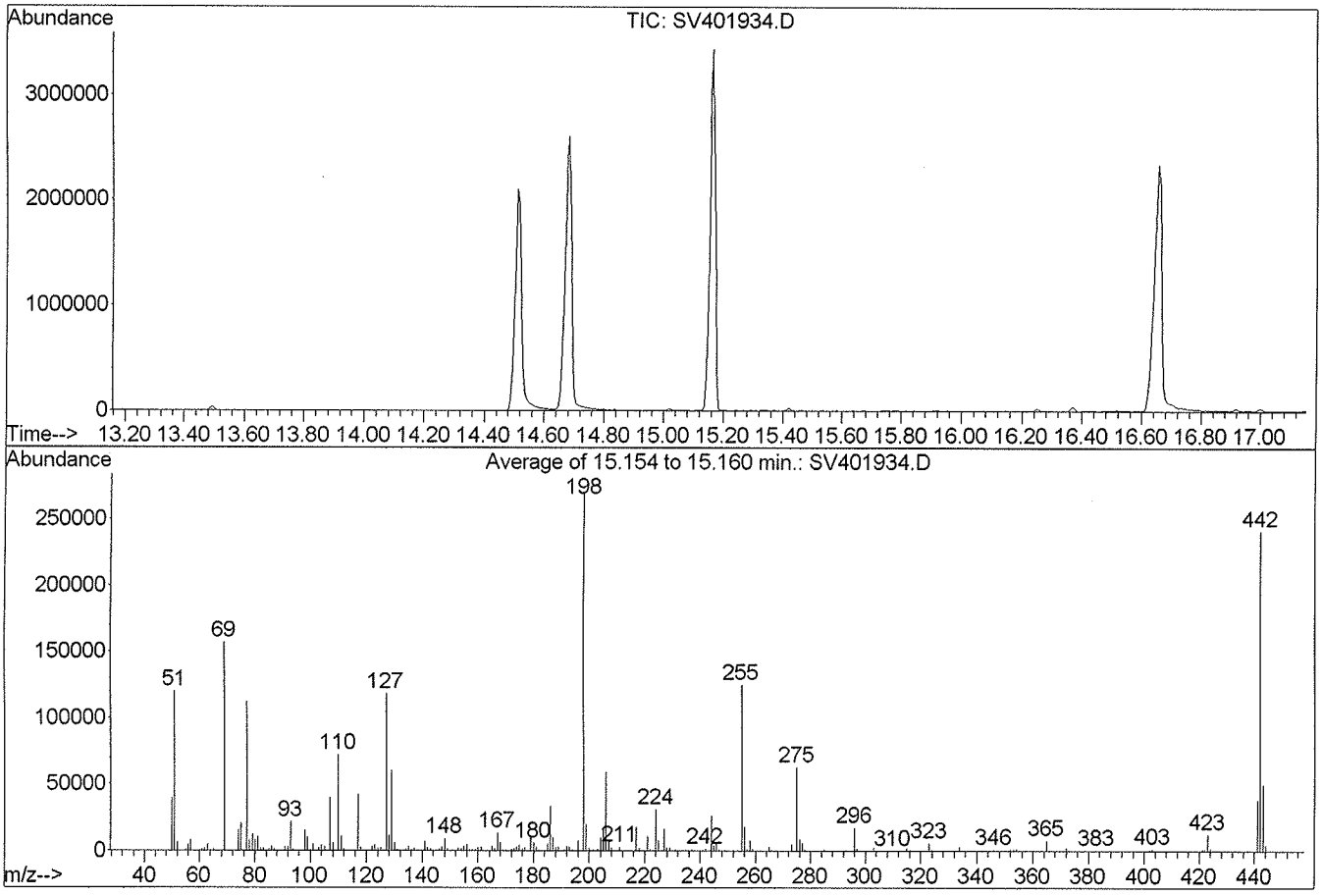
Client: Langan Engineering & Environmental Services (NYC) Project: 170301202 450 Union Street

Sequence: Instrument:

Calibration:

| Sample Name | Lab Sample ID | Lab File ID | Analysis Date/Time |
|---|---|---|---|
| LCS | BI60561-BS1 | SV402905.D | 09/15/16 10:44 |
| LCS Dup | BI60561-BSD1 | SV402906.D | 09/15/16 11:16 |
| Blank | BI60561-BLK1 | SV402907.D | 09/15/16 11:49 |
| V01_0-1.5 | 16I0260-01 | SV402910.D | 09/15/16 13:36 |

Data File : C:\HPCHEM\1\DATA\072416\SV401934.D Vial: 1
Acq On : 24 Jul 2016 1:58 am Operator: KH
Sample : SEQ-TUN1 Inst : GC/MS BNA
Misc : QBSV4072416A TUNE = Y16F002 MeCl2 = Y1 Multiplr: 1.00
MS Integration Params: EVENTS.E
Method : C:\HPCHEM\1\METHODS\BNA4M50.M (Chemstation Integrator)
Title : GC MS BNA 4 Semi Volatiles Calibration



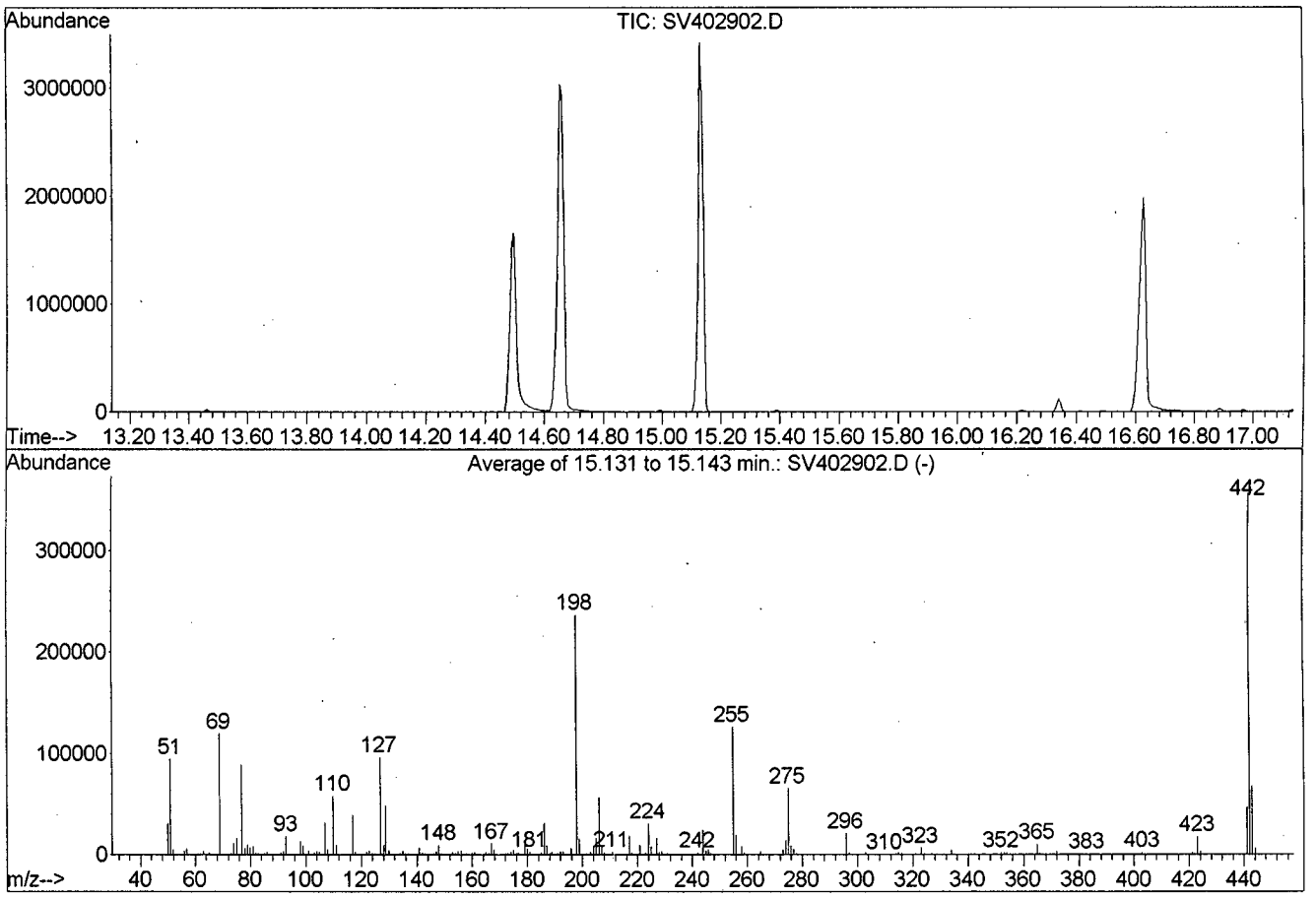

Spectrum Information: Average of 15.154 to 15.160 min.

| Target Mass | Rel. to Mass | Lower Limit% | Upper Limit% | Rel. Abn% | Raw Abn | Result Pass/Fail |
|---|---|---|---|---|---|---|
| 51 | 198 | 10 | 80 | 44.3 | 120064 | PASS |
| 68 | 69 | 0.00 | 2 | 0.0 | 0 | PASS |
| 70 | 69 | 0.00 | 2 | 0.0 | 0 | PASS |
| 127 | 198 | 10 | 80 | 43.7 | 118344 | PASS |
| 197 | 198 | 0.00 | 2 | 0.0 | 0 | PASS |
| 198 | 198 | 100 | 100 | 100.0 | 270784 | PASS |
| 199 | 198 | 5 | 9 | 7.5 | 20204 | PASS |
| 275 | 198 | 10 | 60 | 23.3 | 62988 | PASS |
| 365 | 198 | 1 | 100 | 2.8 | 7666 | PASS |
| 441 | 442 | 0.01 | 24 | 15.7 | 38024 | PASS |
| 442 | 198 | 50 | 100 | 89.3 | 241728 | PASS |
| 443 | 442 | 15 | 24 | 20.7 | 50036 | PASS |

SV401934.D BNA4M50.M Sun Jul 24 02:58:08 2016 BNA4

# DFTPP

Data File : C:\HPCHEM\1\DATA\091516\SV402902.D Vial: 1
Acq On : 15 Sep 2016 8:37 am Operator: KH
Sample : SEQ-TUN1 Inst : GC/MS BNA
Misc : QBSV4091516A TUNE = Y16F002 MeCl2 = Y16 Multiplr: 1.00
MS Integration Params: EVENTS.E
Method : C:\HPCHEM\1\METHODS\BNA4M54.M (Chemstation Integrator)
Title : GC MS BNA 4 Semi Volatiles Calibration




AutoFind: Scans 1796, 1797, 1798; Background Corrected with Scan 1786

| Target Mass | Rel. to Mass | Lower Limit% | Upper Limit% | Rel. Abn% | Raw Abn | Result Pass/Fail |
|---|---|---|---|---|---|---|
| 51 | 198 | 10 | 80 | 40.1 | 94752 | PASS |
| 68 | 69 | 0.00 | 2 | 0.0 | 0 | PASS |
| 70 | 69 | 0.00 | 2 | 0.0 | 0 | PASS |
| 127 | 198 | 10 | 80 | 40.6 | 96099 | PASS |
| 197 | 198 | 0.00 | 2 | 0.0 | 0 | PASS |
| 198 | 198 | 100 | 100 | 100.0 | 236464 | PASS |
| 199 | 198 | 5 | 9 | 6.7 | 15782 | PASS |
| 275 | 198 | 10 | 60 | 27.7 | 65405 | PASS |
| 365 | 198 | 1 | 100 | 4.3 | 10146 | PASS |
| 441 | 442 | 0.01 | 24 | 13.2 | 47099 | PASS |
| 442 | 198 | 50 | 100 | 150.7 | 356373 | FAIL* |
| 443 | 442 | 15 | 24 | 19.0 | 67632 | PASS |

SV402902.D BNA4M54.M Tue Sep 20 16:32:10 2016 BNA4

**FORM I**

# METHOD BLANK DATA SHEET

## EPA 8270D

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | York Analytical Laboratories, Inc. | | | SDG: | 16I0260 |
| Client: | Langan Engineering & Environmental Services (NYC) | | | Project: | 170301202 450 Union Street |
| Matrix: | Soil | Laboratory ID: | BI60561-BLK1 | File ID: | SV402907.D |
| Prepared: | 09/14/16 11:54 | Preparation: | EPA 3550C | Initial/Final: | 30 g / 1 mL |
| Analyzed: | 09/15/16 11:49 | Instrument: | GC/MS BNA | | |
| Batch: | BI60561 | Sequence: | | Calibration: | |

| CAS NO. | COMPOUND | CONC. (mg/kg wet) | Q |
|---|---|---|---|
| 92-52-4 | 1,1'-Biphenyl | 0.0417 | U |
| 95-94-3 | 1,2,4,5-Tetrachlorobenzene | 0.0833 | U |
| 120-82-1 | 1,2,4-Trichlorobenzene | 0.0417 | U |
| 95-50-1 | 1,2-Dichlorobenzene | 0.0417 | U |
| 122-66-7 | 1,2-Diphenylhydrazine (as Azobenzene) | 0.0417 | U |
| 541-73-1 | 1,3-Dichlorobenzene | 0.0417 | U |
| 106-46-7 | 1,4-Dichlorobenzene | 0.0417 | U |
| 58-90-2 | 2,3,4,6-Tetrachlorophenol | 0.0833 | U |
| 95-95-4 | 2,4,5-Trichlorophenol | 0.0417 | U |
| 88-06-2 | 2,4,6-Trichlorophenol | 0.0417 | U |
| 120-83-2 | 2,4-Dichlorophenol | 0.0417 | U |
| 105-67-9 | 2,4-Dimethylphenol | 0.0417 | U |
| 51-28-5 | 2,4-Dinitrophenol | 0.0833 | U |
| 121-14-2 | 2,4-Dinitrotoluene | 0.0417 | U |
| 606-20-2 | 2,6-Dinitrotoluene | 0.0417 | U |
| 91-58-7 | 2-Chloronaphthalene | 0.0417 | U |
| 95-57-8 | 2-Chlorophenol | 0.0417 | U |
| 91-57-6 | 2-Methylnaphthalene | 0.0417 | U |
| 95-48-7 | 2-Methylphenol | 0.0417 | U |
| 88-74-4 | 2-Nitroaniline | 0.0833 | U |
| 88-75-5 | 2-Nitrophenol | 0.0417 | U |
| 65794-96-9 | 3- & 4-Methylphenols | 0.0417 | U |
| 91-94-1 | 3,3'-Dichlorobenzidine | 0.0417 | U |
| 99-09-2 | 3-Nitroaniline | 0.0833 | U |
| 534-52-1 | 4,6-Dinitro-2-methylphenol | 0.0833 | U |
| 101-55-3 | 4-Bromophenyl phenyl ether | 0.0417 | U |
| 59-50-7 | 4-Chloro-3-methylphenol | 0.0417 | U |
| 106-47-8 | 4-Chloroaniline | 0.0417 | U |
| 7005-72-3 | 4-Chlorophenyl phenyl ether | 0.0417 | U |
| 100-01-6 | 4-Nitroaniline | 0.0833 | U |

**FORM I**

# METHOD BLANK DATA SHEET

## EPA 8270D

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | York Analytical Laboratories, Inc. | | | SDG: | 16I0260 |
| Client: | Langan Engineering & Environmental Services (NYC) | | | Project: | 170301202 450 Union Street |
| Matrix: | Soil | Laboratory ID: | BI60561-BLK1 | File ID: | SV402907.D |
| Prepared: | 09/14/16 11:54 | Preparation: | EPA 3550C | Initial/Final: | 30 g / 1 mL |
| Analyzed: | 09/15/16 11:49 | Instrument: | GC/MS BNA | | |
| Batch: | BI60561 | Sequence: | | Calibration: | |

| CAS NO. | COMPOUND | CONC. (mg/kg wet) | Q |
|---|---|---|---|
| 100-02-7 | 4-Nitrophenol | 0.0833 | U |
| 83-32-9 | Acenaphthene | 0.0417 | U |
| 208-96-8 | Acenaphthylene | 0.0417 | U |
| 98-86-2 | Acetophenone | 0.0417 | U |
| 62-53-3 | Aniline | 0.167 | U |
| 120-12-7 | Anthracene | 0.0417 | U |
| 1912-24-9 | Atrazine | 0.0417 | U |
| 100-52-7 | Benzaldehyde | 0.0417 | U |
| 92-87-5 | Benzidine | 0.167 | U |
| 56-55-3 | Benzo(a)anthracene | 0.0417 | U |
| 50-32-8 | Benzo(a)pyrene | 0.0417 | U |
| 205-99-2 | Benzo(b)fluoranthene | 0.0417 | U |
| 191-24-2 | Benzo(g,h,i)perylene | 0.0417 | U |
| 207-08-9 | Benzo(k)fluoranthene | 0.0417 | U |
| 65-85-0 | Benzoic acid | 0.0417 | U |
| 100-51-6 | Benzyl alcohol | 0.0417 | U |
| 85-68-7 | Benzyl butyl phthalate | 0.0417 | U |
| 111-91-1 | Bis(2-chloroethoxy)methane | 0.0417 | U |
| 111-44-4 | Bis(2-chloroethyl)ether | 0.0417 | U |
| 108-60-1 | Bis(2-chloroisopropyl)ether | 0.0417 | U |
| 117-81-7 | Bis(2-ethylhexyl)phthalate | 0.0417 | U |
| 105-60-2 | Caprolactam | 0.0833 | U |
| 86-74-8 | Carbazole | 0.0417 | U |
| 218-01-9 | Chrysene | 0.0417 | U |
| 53-70-3 | Dibenzo(a,h)anthracene | 0.0417 | U |
| 132-64-9 | Dibenzofuran | 0.0417 | U |
| 84-66-2 | Diethyl phthalate | 0.0417 | U |
| 131-11-3 | Dimethyl phthalate | 0.0417 | U |
| 84-74-2 | Di-n-butyl phthalate | 0.0417 | U |
| 117-84-0 | Di-n-octyl phthalate | 0.0417 | U |

**FORM I**

# METHOD BLANK DATA SHEET

## EPA 8270D

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | York Analytical Laboratories, Inc. | | | SDG: | 16I0260 |
| Client: | Langan Engineering & Environmental Services (NYC) | | | Project: | 170301202 450 Union Street |
| Matrix: | Soil | Laboratory ID: | BI60561-BLK1 | File ID: | SV402907.D |
| Prepared: | 09/14/16 11:54 | Preparation: | EPA 3550C | Initial/Final: | 30 g / 1 mL |
| Analyzed: | 09/15/16 11:49 | Instrument: | GC/MS BNA | | |
| Batch: | BI60561 | Sequence: | | Calibration: | |

| CAS NO. | COMPOUND | CONC. (mg/kg wet) | Q |
|---|---|---|---|
| 206-44-0 | Fluoranthene | 0.0417 | U |
| 86-73-7 | Fluorene | 0.0417 | U |
| 118-74-1 | Hexachlorobenzene | 0.0417 | U |
| 87-68-3 | Hexachlorobutadiene | 0.0417 | U |
| 77-47-4 | Hexachlorocyclopentadiene | 0.0417 | U |
| 67-72-1 | Hexachloroethane | 0.0417 | U |
| 193-39-5 | Indeno(1,2,3-cd)pyrene | 0.0417 | U |
| 78-59-1 | Isophorone | 0.0417 | U |
| 91-20-3 | Naphthalene | 0.0417 | U |
| 98-95-3 | Nitrobenzene | 0.0417 | U |
| 62-75-9 | N-Nitrosodimethylamine | 0.0417 | U |
| 621-64-7 | N-nitroso-di-n-propylamine | 0.0417 | U |
| 86-30-6 | N-Nitrosodiphenylamine | 0.0417 | U |
| 87-86-5 | Pentachlorophenol | 0.0417 | U |
| 85-01-8 | Phenanthrene | 0.0417 | U |
| 108-95-2 | Phenol | 0.0417 | U |
| 129-00-0 | Pyrene | 0.0417 | U |
| 110-86-1 | Pyridine | 0.167 | U |

| SYSTEM MONITORING COMPOUND | ADDED (mg/kg wet) | CONC (mg/kg wet) | % REC | QC LIMITS | Q |
|---|---|---|---|---|---|
| 2-Fluorophenol | 2.51 | 1.22 | 48.7 | 20 - 108 | |
| Phenol-d5 | 2.52 | 1.28 | 50.9 | 23 - 114 | |
| Nitrobenzene-d5 | 1.67 | 0.791 | 47.3 | 22 - 108 | |
| 2-Fluorobiphenyl | 1.67 | 0.761 | 45.6 | 21 - 113 | |
| 2,4,6-Tribromophenol | 2.50 | 1.12 | 44.9 | 19 - 110 | |
| Terphenyl-d14 | 1.68 | 0.636 | 37.8 | 24 - 116 | |

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\091516\SV402907.D Vial: 6
Acq On : 15 Sep 2016 11:49 am Operator: KH
Sample : BI60561-BLK1 Inst : GC/MS BNA
Misc : QBSV4091516A RE Multiplr: 1.00
MS Integration Params: EVENTS.E
Quant Time: Sep 15 15:44 2016 Quant Results File: BNA4M54.RES

Quant Method : C:\HPCHEM\1\METHODS\BNA4M54.M (Chemstation Integrator)
Title : GC MS BNA 4 Semi Volatiles Calibration
Last Update : Mon Jul 25 09:09:46 2016
Response via : Initial Calibration
DataAcq Meth : BNA4M54

| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 1) 1,4-Dichlorobenzene-d4 | 8.46 | 152 | 2844635 | 40.00 | ug/mL | -0.01 |
| 20) Naphthalene-d8 | 10.10 | 136 | 10552085 | 40.00 | ug/mL | -0.02 |
| 39) Acenaphthene-d10 | 12.54 | 164 | 7250613 | 40.00 | ug/mL | -0.03 |
| 62) Phenanthrene-d10 | 14.64 | 188 | 13682026 | 40.00 | ug/mL | -0.02 |
| 86) Chrysene-d12 | 18.47 | 240 | 11027119 | 40.00 | ug/mL | -0.02 |
| 92) Perylene-d12 | 20.50 | 264 | 8500192 | 40.00 | ug/mL | -0.03 |
| **System Monitoring Compounds** | | | | | | |
| 4) 2-Fluorophenol | 7.03 | 112 | 4087594 | 36.74 | ug/mL | 0.07 |
| Spiked Amount 75.000 | Range 15 - 87 | | Recovery = 48.99% | | | |
| 5) Phenol-d5 | 8.17 | 99 | 4641507 | 38.44 | ug/mL | 0.03 |
| Spiked Amount 75.000 | Range 10 - 100 | | Recovery = 51.25% | | | |
| 21) Nitrobenzene-d5 | 9.21 | 82 | 2875974 | 23.74 | ug/mL | -0.01 |
| Spiked Amount 50.000 | Range 26 - 120 | | Recovery = 47.48% | | | |
| 44) 2-Fluorobiphenyl | 11.58 | 172 | 5965596 | 22.82 | ug/mL | -0.02 |
| Spiked Amount 50.000 | Range 29 - 120 | | Recovery = 45.64% | | | |
| 67) 2,4,6-Tribromophenol | 13.69 | 330 | 2170728 | 33.65 | ug/mL | -0.02 |
| Spiked Amount 75.000 | Range 35 - 126 | | Recovery = 44.87% | | | |
| 81) Terphenyl-d14 | 16.93 | 244 | 5698923 | 19.08 | ug/mL | -0.02 |
| Spiked Amount 50.000 | Range 35 - 127 | | Recovery = 38.16% | | | |

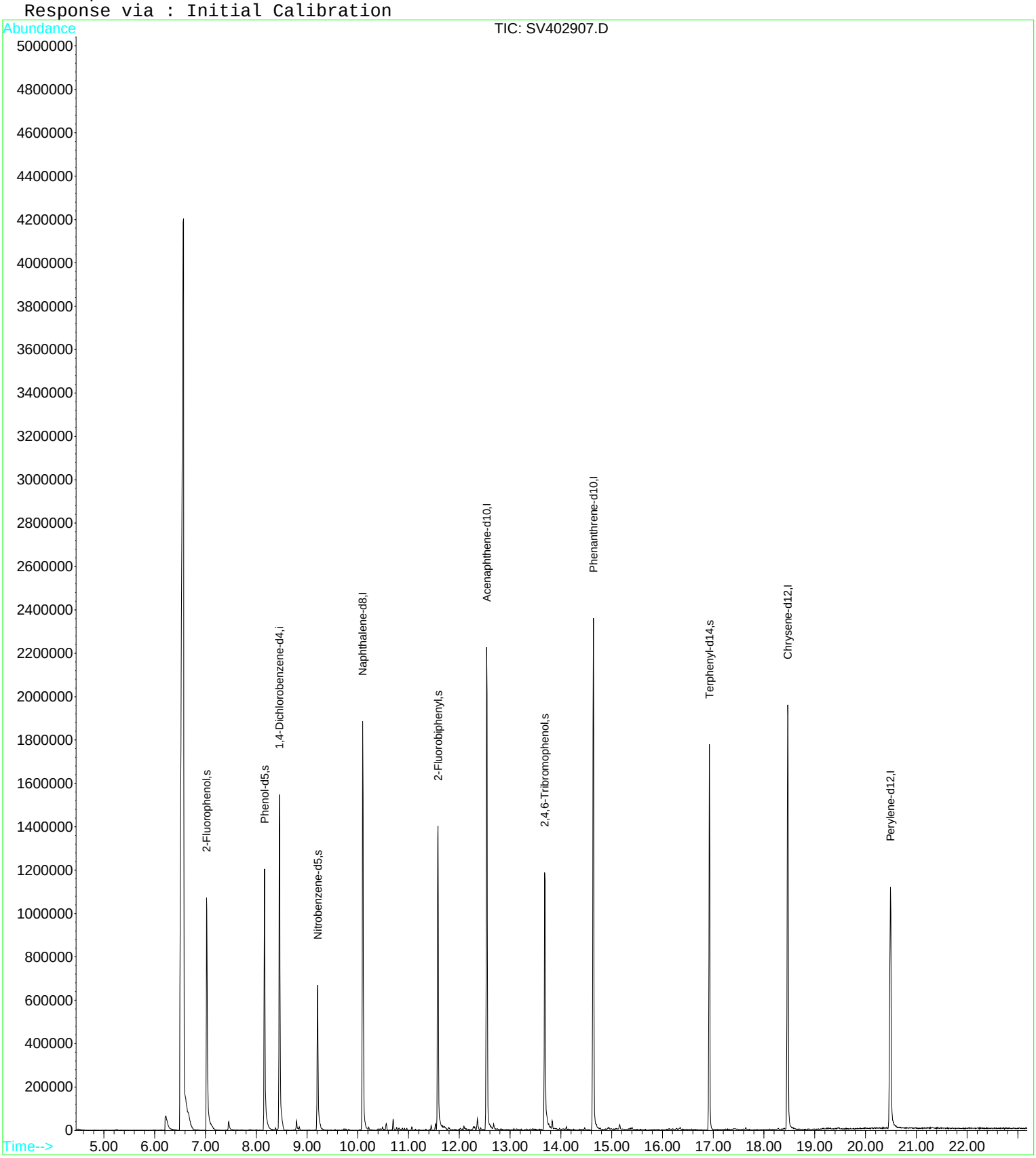
Target Compounds Qvalue

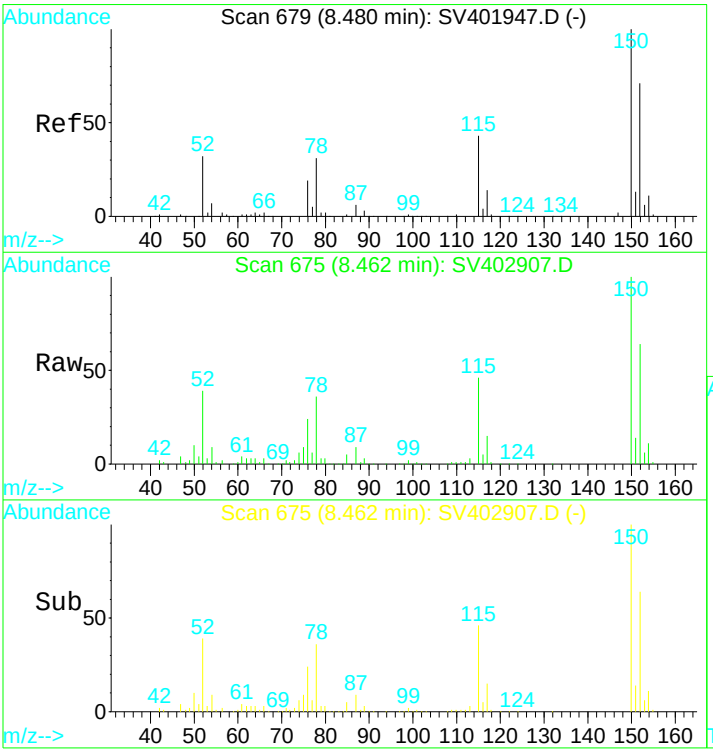
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\091516\SV402907.D Vial: 6
Acq On : 15 Sep 2016 11:49 am Operator: KH
Sample : BI60561-BLK1 Inst : GC/MS BNA
Misc : QBSV4091516A RE Multiplr: 1.00
MS Integration Params: EVENTS.E
Quant Time: Sep 15 15:44 2016 Quant Results File: BNA4M54.RES

Method : C:\HPCHEM\1\METHODS\BNA4M54.M (Chemstation Integrator)
Title : GC MS BNA 4 Semi Volatiles Calibration
Last Update : Mon Jul 25 09:09:46 2016
Response via : Initial Calibration

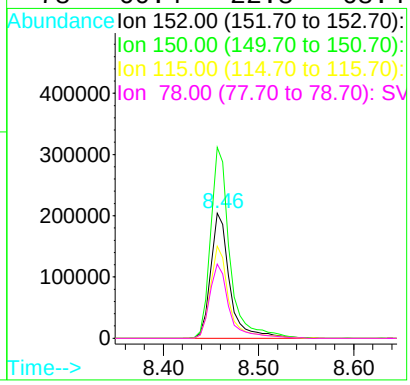


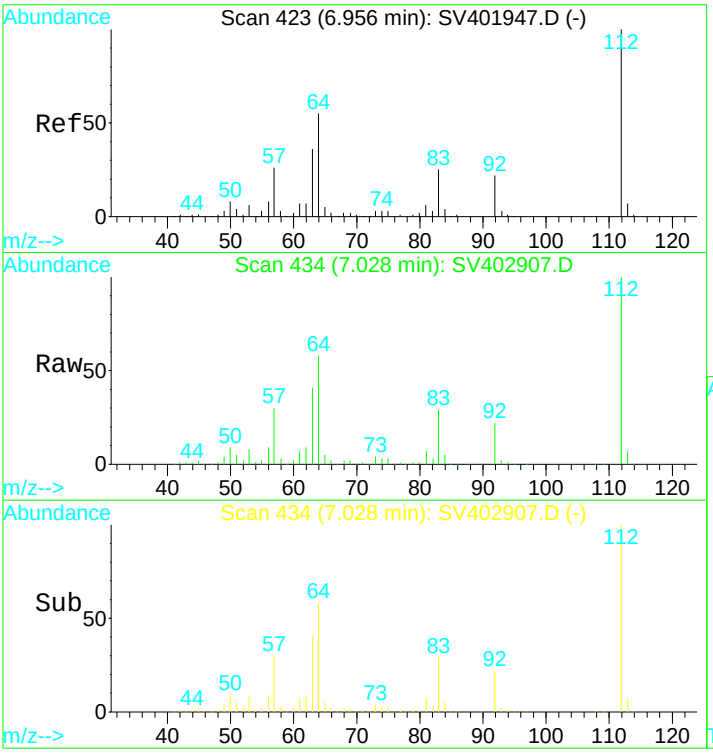



#1
1,4-Dichlorobenzene-d4
Concen: 40.00 ug/mL
RT: 8.46 min Scan# 675
Delta R.T. -0.01 min
Lab File: SV402907.D
Acq: 15 Sep 2016 11:49 am

Tgt Ion:152 Resp: 2844635

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 152 | 100 | | |
| 150 | 154.0 | 84.0 | 252.2 |
| 115 | 71.5 | 31.3 | 93.9 |
| 78 | 60.4 | 22.8 | 68.4 |

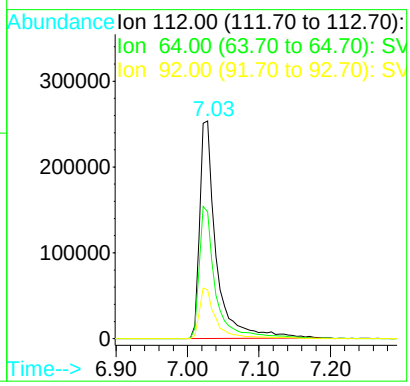


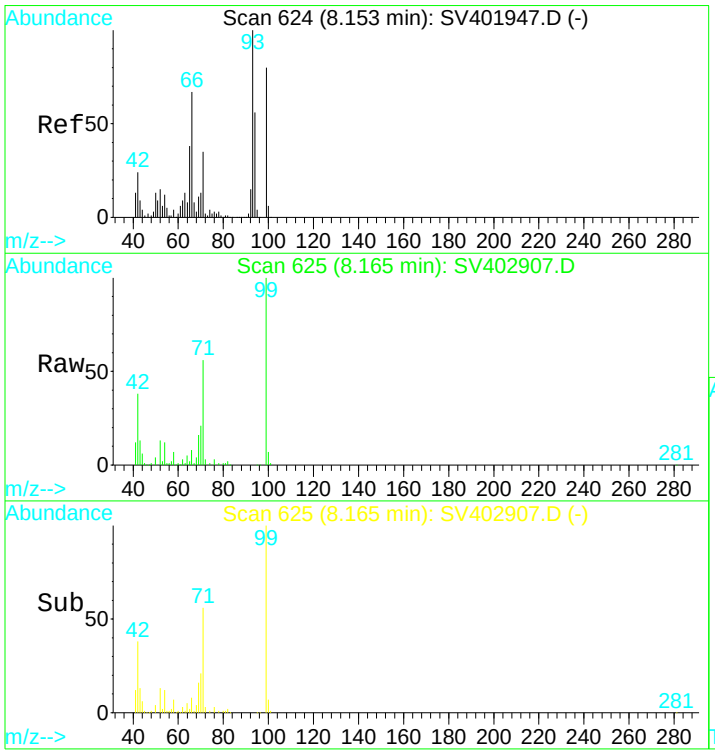




#4
2-Fluorophenol
Concen: N.D. ug/mL
RT: 7.03 min Scan# 434
Delta R.T. 0.07 min
Lab File: SV402907.D
Acq: 15 Sep 2016 11:49 am

Tgt Ion:112 Resp: 4087594

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 112 | 100 | | |
| 64 | 60.4 | 45.0 | 67.4 |
| 92 | 21.9 | 16.1 | 24.1 |

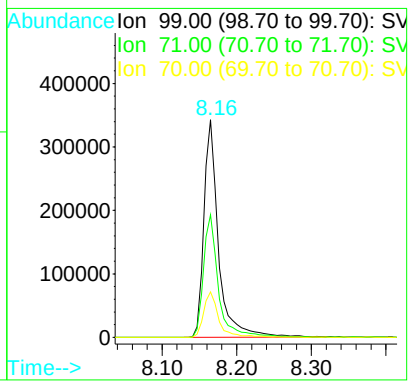


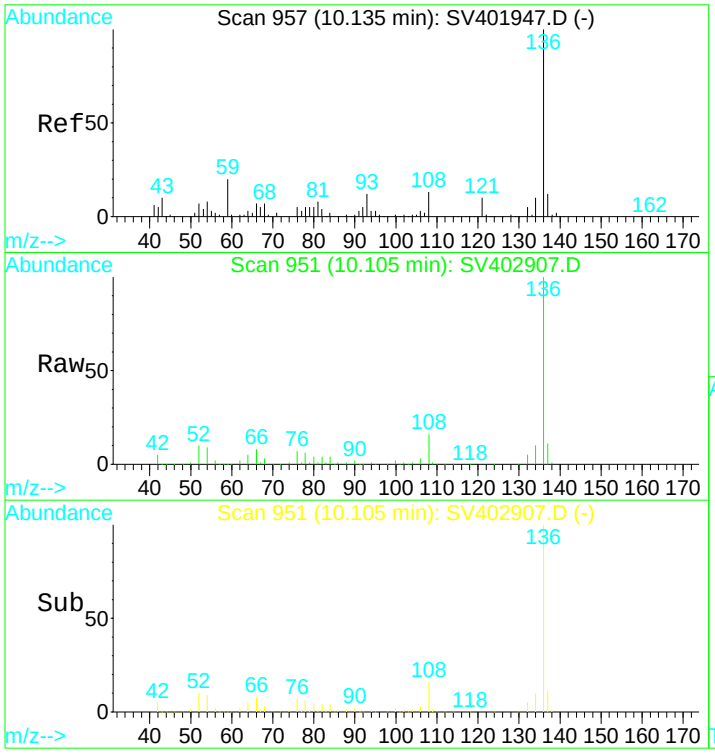



#5
Phenol-d5
Concen: N.D. ug/mL
RT: 8.17 min Scan# 625
Delta R.T. 0.03 min
Lab File: SV402907.D
Acq: 15 Sep 2016 11:49 am

Tgt Ion: 99 Resp: 4641507

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 99 | 100 | | |
| 71 | 58.1 | 35.7 | 53.5# |
| 70 | 20.7 | 14.5 | 21.7 |

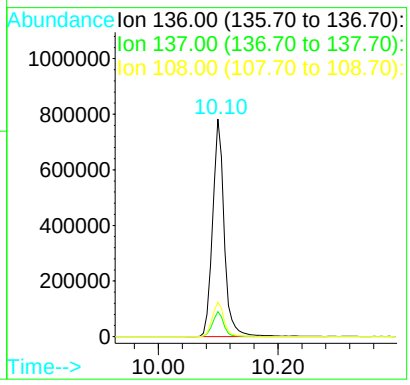


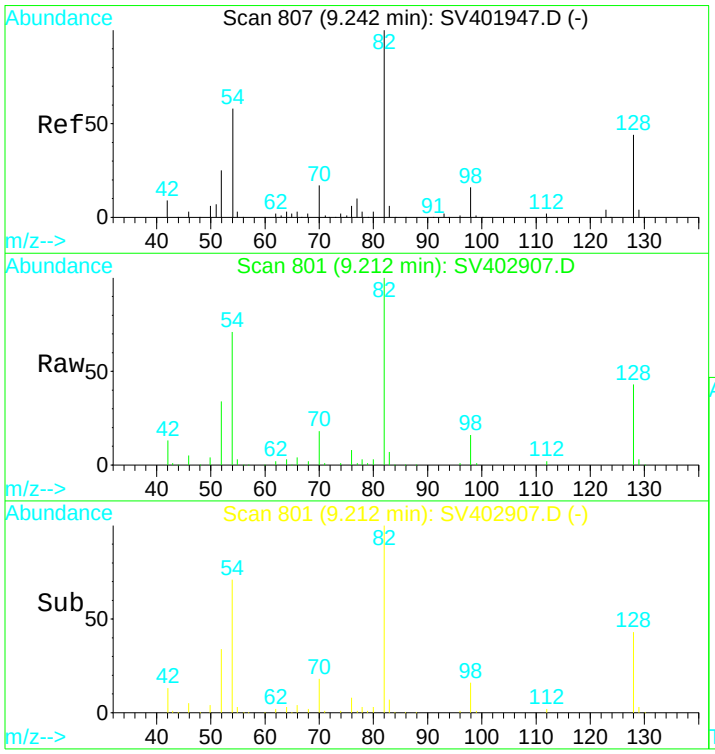




#20
Naphthalene-d8
Concen: 40.00 ug/mL
RT: 10.10 min Scan# 951
Delta R.T. -0.02 min
Lab File: SV402907.D
Acq: 15 Sep 2016 11:49 am

Tgt Ion:136 Resp:10552085

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 136 | 100 | | |
| 137 | 11.2 | 5.8 | 17.4 |
| 108 | 16.2 | 6.5 | 19.4 |

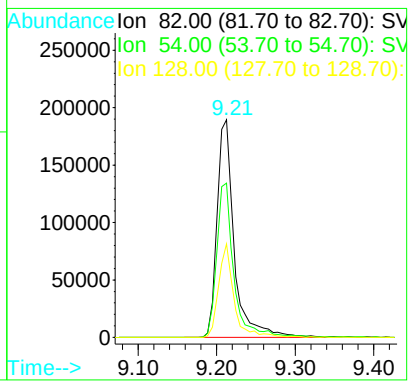


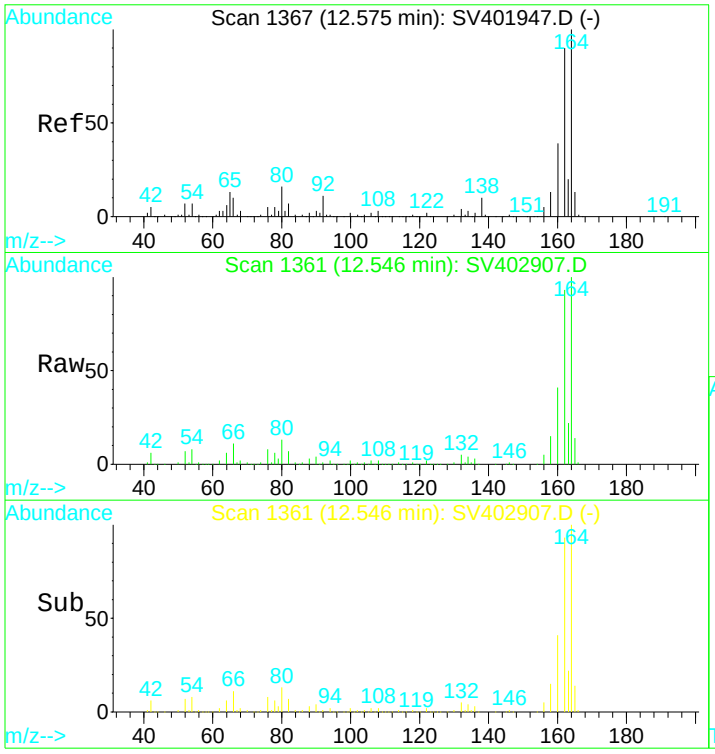



#21
Nitrobenzene-d5
Concen: 40.00 ug/mL
RT: 9.21 min Scan# 801
Delta R.T. -0.01 min
Lab File: SV402907.D
Acq: 15 Sep 2016 11:49 am

Tgt Ion: 82 Resp: 2875974

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 82 | 100 | | |
| 54 | 67.5 | 0.1 | 0.1# |
| 128 | 38.1 | 0.1 | 0.1# |

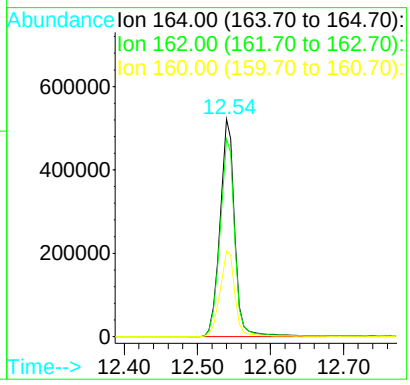


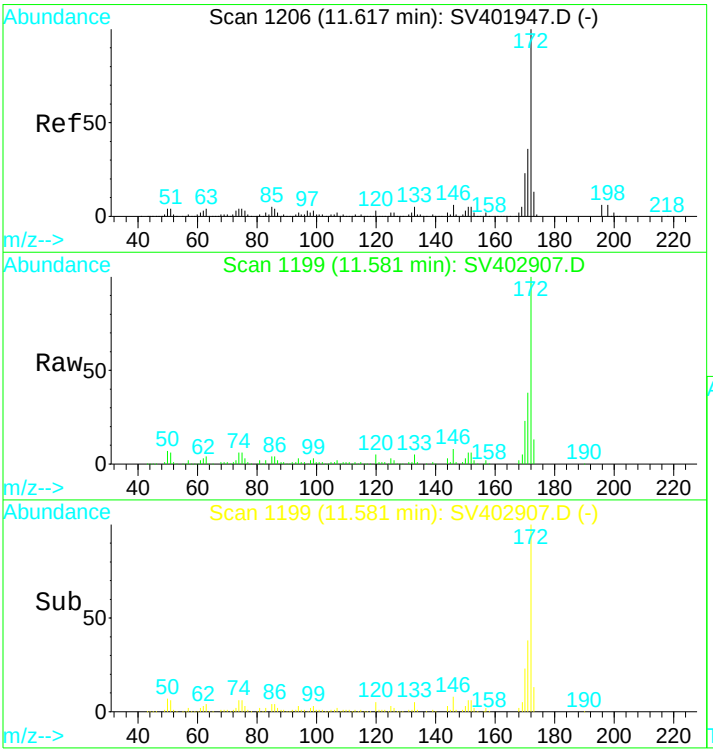




#39
Acenaphthene-d10
Concen: 40.00 ug/mL
RT: 12.54 min Scan# 1361
Delta R.T. -0.03 min
Lab File: SV402907.D
Acq: 15 Sep 2016 11:49 am

Tgt Ion:164 Resp: 7250613

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 164 | 100 | | |
| 162 | 91.7 | 45.9 | 137.6 |
| 160 | 40.1 | 19.8 | 59.4 |

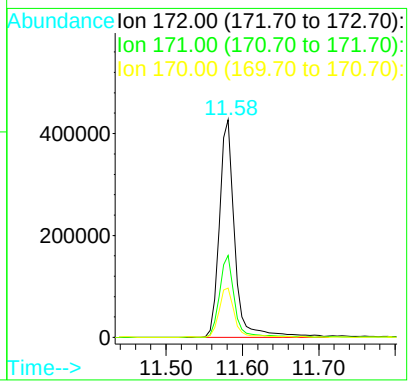


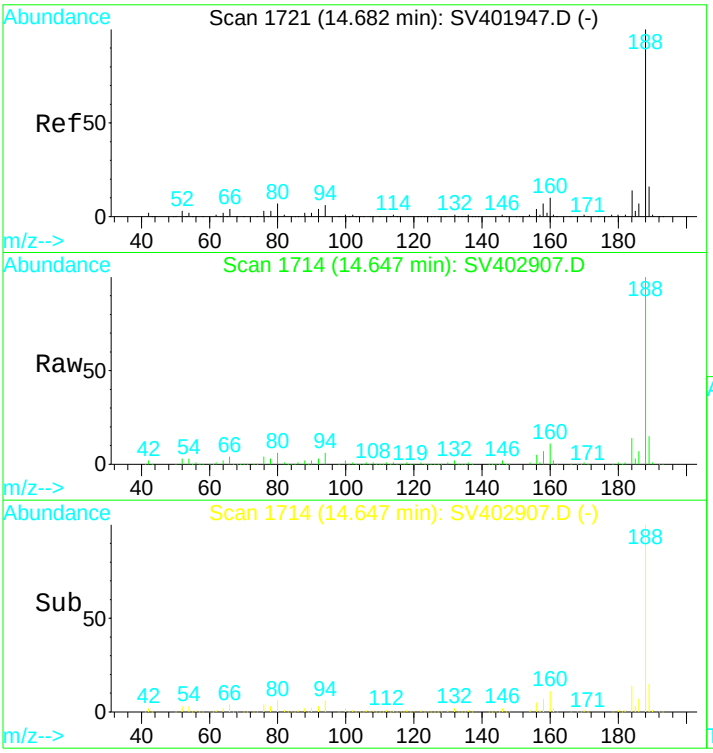



#44
2-Fluorobiphenyl
Concen: N.D. ug/mL
RT: 11.58 min Scan# 1199
Delta R.T. -0.02 min
Lab File: SV402907.D
Acq: 15 Sep 2016 11:49 am

Tgt Ion:172 Resp: 5965596

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 172 | 100 | | |
| 171 | 37.0 | 29.1 | 43.7 |
| 170 | 22.9 | 18.6 | 27.8 |

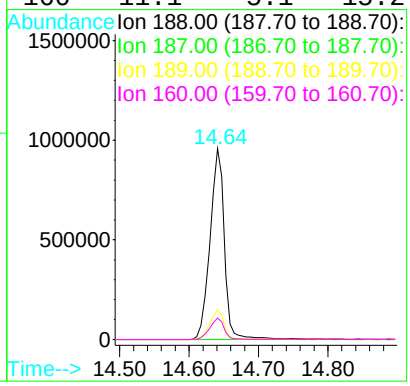


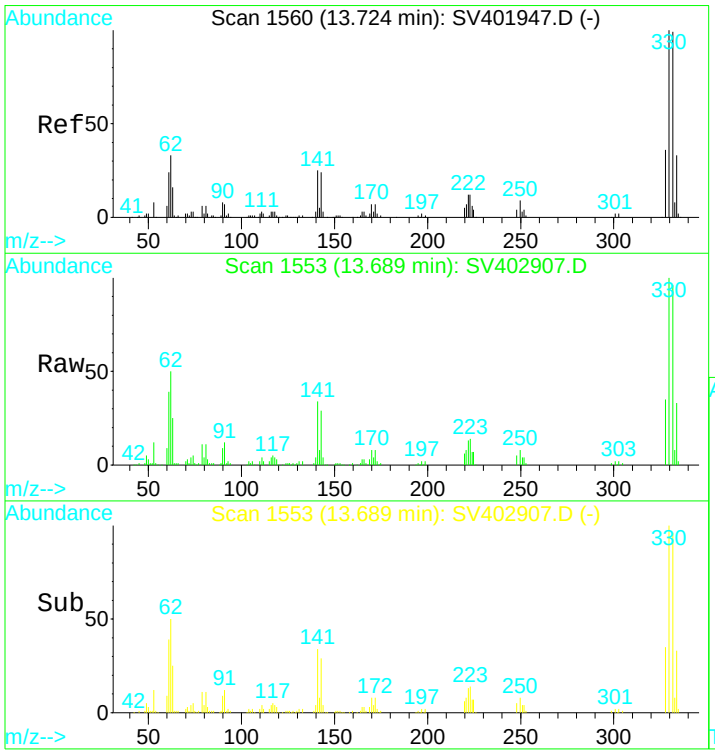




#62
Phenanthrene-d10
Concen: 40.00 ug/mL
RT: 14.64 min Scan# 1714
Delta R.T. -0.02 min
Lab File: SV402907.D
Acq: 15 Sep 2016 11:49 am

Tgt Ion:188 Resp:13682026

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 188 | 100 | | |
| 187 | 0.0 | 0.2 | 0.2# |
| 189 | 15.5 | 8.0 | 24.0 |
| 160 | 11.1 | 5.1 | 15.2 |

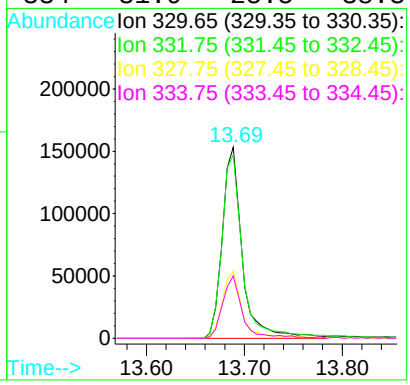


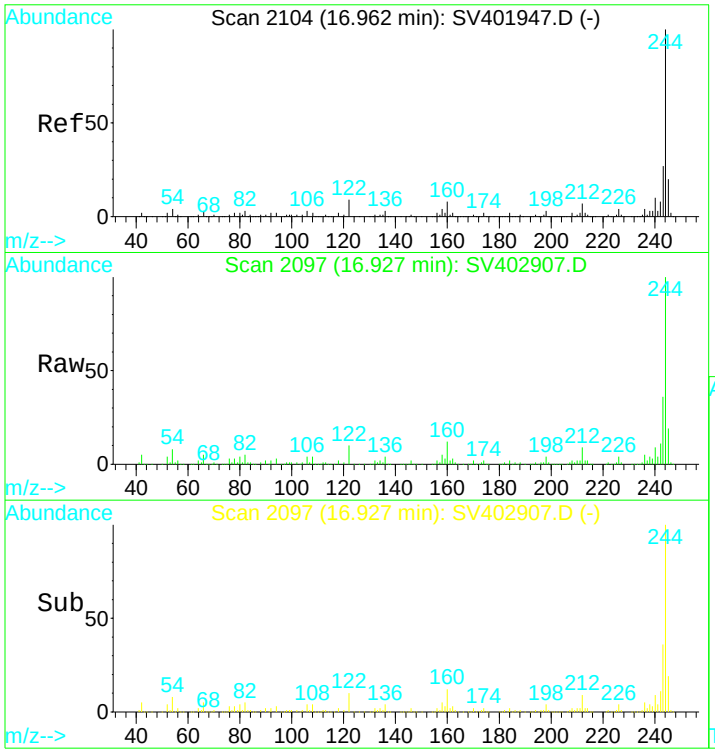



#67
2,4,6-Tribromophenol
Concen: Below ug/mL
RT: 13.69 min Scan# 1553
Delta R.T. -0.02 min
Lab File: SV402907.D
Acq: 15 Sep 2016 11:49 am

Tgt Ion:330 Resp: 2170728

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 330 | 100 | | |
| 332 | 100.7 | 78.8 | 118.2 |
| 328 | 35.0 | 28.2 | 42.4 |
| 334 | 31.9 | 25.5 | 38.3 |

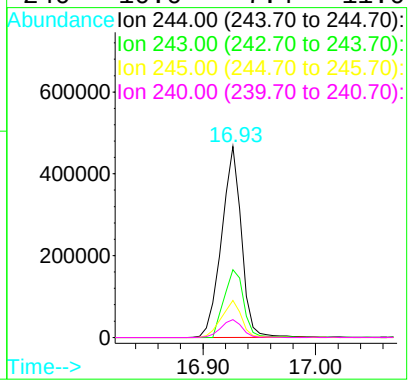


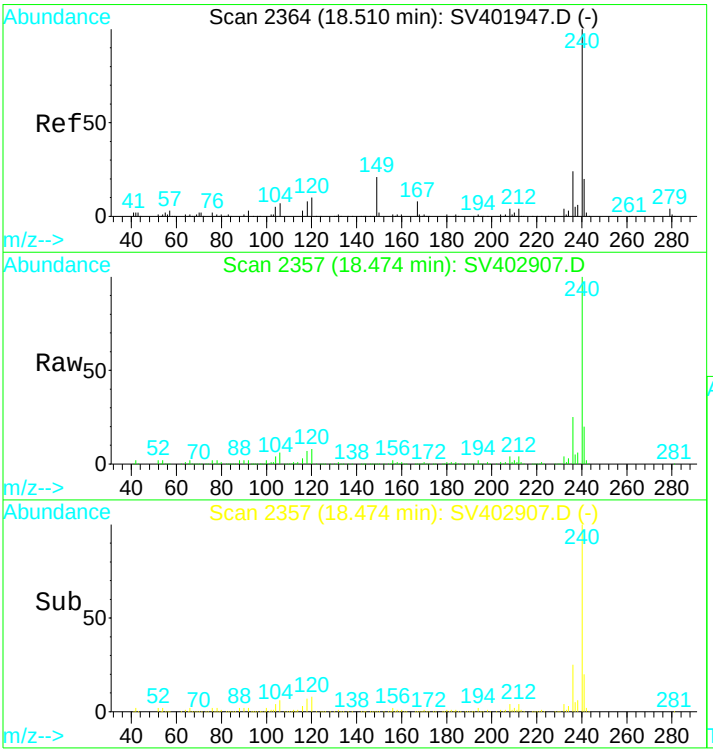




#81
Terphenyl-d14
Concen: Below ug/mL
RT: 16.93 min Scan# 2097
Delta R.T. -0.02 min
Lab File: SV402907.D
Acq: 15 Sep 2016 11:49 am

Tgt Ion:244 Resp: 5698923

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 244 | 100 | | |
| 243 | 35.3 | 17.0 | 25.4# |
| 245 | 19.6 | 16.1 | 24.1 |
| 240 | 10.0 | 7.4 | 11.0 |

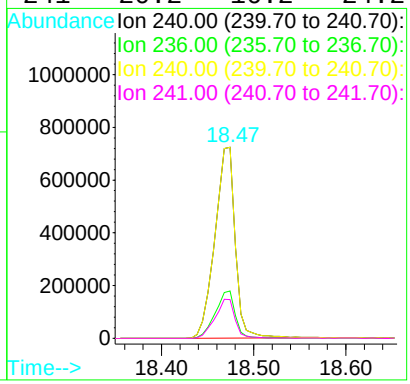


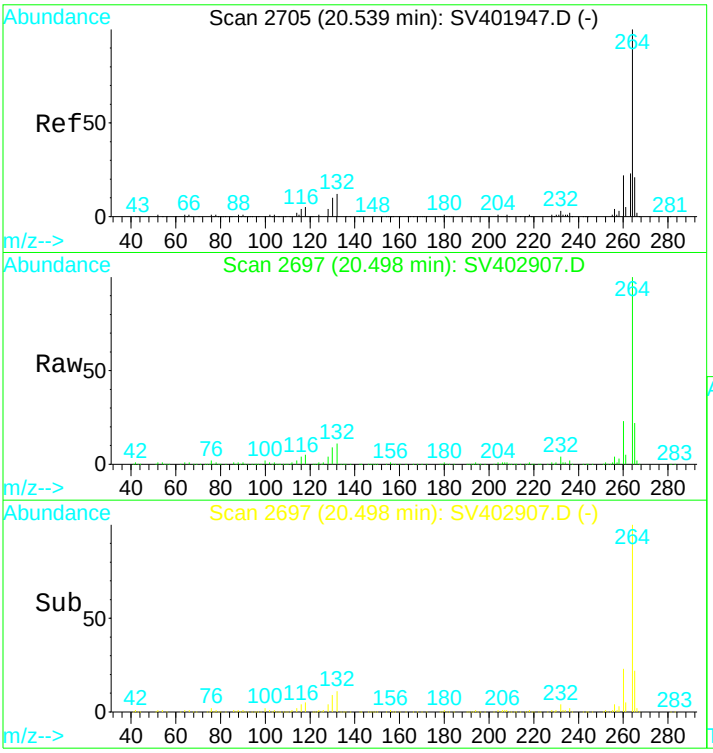



#86
Chrysene-d12
Concen: 40.00 ug/mL
RT: 18.47 min Scan# 2357
Delta R.T. -0.02 min
Lab File: SV402907.D
Acq: 15 Sep 2016 11:49 am

Tgt Ion:240 Resp:11027119

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 240 | 100 | | |
| 236 | 0.0 | 0.0 | 0.0 |
| 240 | 100.0 | 80.0 | 120.0 |
| 241 | 20.2 | 16.2 | 24.2 |

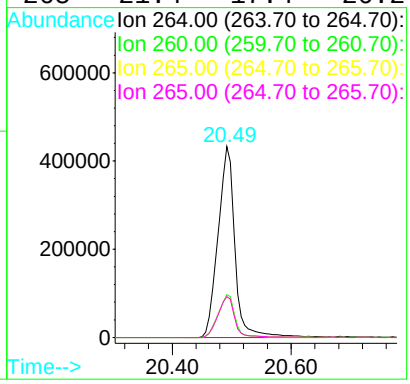



#92
Perylene-d12
Concen: 40.00 ug/mL
RT: 20.50 min Scan# 2697
Delta R.T. -0.03 min
Lab File: SV402907.D
Acq: 15 Sep 2016 11:49 am

Tgt Ion:264 Resp: 8500192

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 264 | 100 | | |
| 260 | 22.5 | 17.8 | 26.6 |
| 265 | 21.4 | 17.4 | 26.2 |
| 265 | 21.4 | 17.4 | 26.2 |



# FORM III LCS / LCS DUPLICATE RECOVERY

## EPA 8270D

Laboratory: York Analytical Laboratories, Inc. SDG: 16I0260

Client: Langan Engineering & Environmental Services (NYC) Project: 170301202 450 Union Street

Matrix: Soil

Batch: BI60561 Laboratory ID: BI60561-BS1

Preparation: EPA 3550C Initial/Final: 30 g / 1 mL

| COMPOUND | SPIKE ADDED (mg/kg wet) | LCS CONCENTRATION (mg/kg wet) | LCS % REC. # | QC LIMITS REC. |
|---|---|---|---|---|
| 1,1'-Biphenyl | 1.67 | 0.927 | 55.6 | 22 - 103 |
| 1,2,4,5-Tetrachlorobenzene | 1.67 | 0.872 | 52.3 | 10 - 144 |
| 1,2,4-Trichlorobenzene | 1.67 | 0.824 | 49.4 | 23 - 130 |
| 1,2-Dichlorobenzene | 1.67 | 0.832 | 49.9 | 26 - 113 |
| 1,2-Diphenylhydrazine (as Azobenzene) | 1.67 | 1.18 | 70.6 | 10 - 140 |
| 1,3-Dichlorobenzene | 1.67 | 0.817 | 49.0 | 32 - 113 |
| 1,4-Dichlorobenzene | 1.67 | 0.808 | 48.5 | 28 - 111 |
| 2,3,4,6-Tetrachlorophenol | 1.67 | 2.33 | 140 * | 30 - 130 |
| 2,4,5-Trichlorophenol | 1.67 | 0.911 | 54.6 | 14 - 138 |
| 2,4,6-Trichlorophenol | 1.67 | 1.08 | 64.5 | 27 - 122 |
| 2,4-Dichlorophenol | 1.67 | 0.948 | 56.9 | 23 - 133 |
| 2,4-Dimethylphenol | 1.67 | 0.947 | 56.8 | 15 - 131 |
| 2,4-Dinitrophenol | 1.67 | 0.862 | 51.7 | 10 - 149 |
| 2,4-Dinitrotoluene | 1.67 | 1.02 | 61.1 | 30 - 123 |
| 2,6-Dinitrotoluene | 1.67 | 0.968 | 58.1 | 30 - 125 |
| 2-Chloronaphthalene | 1.67 | 0.894 | 53.6 | 22 - 115 |
| 2-Chlorophenol | 1.67 | 0.888 | 53.3 | 25 - 121 |
| 2-Methylnaphthalene | 1.67 | 1.02 | 61.3 | 16 - 127 |
| 2-Methylphenol | 1.67 | 0.853 | 51.2 | 10 - 146 |
| 2-Nitroaniline | 1.67 | 0.940 | 56.4 | 24 - 126 |
| 2-Nitrophenol | 1.67 | 0.817 | 49.0 | 17 - 129 |
| 3- & 4-Methylphenols | 1.67 | ND | * | 20 - 109 |
| 3,3'-Dichlorobenzidine | 1.67 | 1.02 | 61.3 | 10 - 147 |
| 3-Nitroaniline | 1.67 | 0.923 | 55.4 | 23 - 123 |
| 4,6-Dinitro-2-methylphenol | 1.67 | 1.11 | 66.4 | 10 - 149 |
| 4-Bromophenyl phenyl ether | 1.67 | 0.935 | 56.1 | 30 - 138 |
| 4-Chloro-3-methylphenol | 1.67 | 0.997 | 59.8 | 16 - 138 |
| 4-Chloroaniline | 1.67 | 0.720 | 43.2 | 10 - 117 |
| 4-Chlorophenyl phenyl ether | 1.67 | 0.987 | 59.2 | 18 - 132 |
| 4-Nitroaniline | 1.67 | ND | * | 14 - 125 |

# FORM III LCS / LCS DUPLICATE RECOVERY

## EPA 8270D

Laboratory: York Analytical Laboratories, Inc. SDG: 16I0260

Client: Langan Engineering & Environmental Services (NYC) Project: 170301202 450 Union Street

Matrix: Soil

Batch: BI60561 Laboratory ID: BI60561-BS1

Preparation: EPA 3550C Initial/Final: 30 g / 1 mL

| COMPOUND | SPIKE ADDED (mg/kg wet) | LCS CONCENTRATION (mg/kg wet) | LCS % REC. # | QC LIMITS REC. |
|---|---|---|---|---|
| 4-Nitrophenol | 1.67 | 0.974 | 58.4 | 10 - 136 |
| Acenaphthene | 1.67 | 0.996 | 59.8 | 17 - 124 |
| Acenaphthylene | 1.67 | 0.920 | 55.2 | 16 - 124 |
| Acetophenone | 1.67 | ND | * | 28 - 105 |
| Aniline | 1.67 | 0.793 | 47.6 | 10 - 111 |
| Anthracene | 1.67 | 1.03 | 61.7 | 24 - 124 |
| Atrazine | 1.67 | 1.04 | 62.4 | 22 - 120 |
| Benzaldehyde | 1.67 | 0.931 | 55.9 | 21 - 100 |
| Benzo(a)anthracene | 1.67 | 1.17 | 69.9 | 25 - 134 |
| Benzo(a)pyrene | 1.67 | 0.913 | 54.8 | 29 - 144 |
| Benzo(b)fluoranthene | 1.67 | 0.854 | 51.3 | 20 - 151 |
| Benzo(g,h,i)perylene | 1.67 | 0.962 | 57.7 | 10 - 153 |
| Benzo(k)fluoranthene | 1.67 | 0.863 | 51.8 | 10 - 148 |
| Benzoic acid | 1.67 | ND | * | 10 - 116 |
| Benzyl alcohol | 1.67 | 0.991 | 59.4 | 17 - 128 |
| Benzyl butyl phthalate | 1.67 | 1.06 | 63.4 | 10 - 132 |
| Bis(2-chloroethoxy)methane | 1.67 | 0.913 | 54.8 | 10 - 129 |
| Bis(2-chloroethyl)ether | 1.67 | 0.932 | 55.9 | 14 - 125 |
| Bis(2-chloroisopropyl)ether | 1.67 | 1.05 | 63.1 | 14 - 122 |
| Bis(2-ethylhexyl)phthalate | 1.67 | 1.24 | 74.6 | 10 - 141 |
| Caprolactam | 1.67 | 0.180 | 10.8 | 10 - 123 |
| Carbazole | 1.67 | 0.978 | 58.7 | 31 - 120 |
| Chrysene | 1.67 | 0.949 | 57.0 | 24 - 116 |
| Dibenzo(a,h)anthracene | 1.67 | 1.15 | 68.8 | 17 - 147 |
| Dibenzofuran | 1.67 | ND | * | 23 - 123 |
| Diethyl phthalate | 1.67 | 1.03 | 61.8 | 23 - 122 |
| Dimethyl phthalate | 1.67 | 0.944 | 56.6 | 28 - 127 |
| Di-n-butyl phthalate | 1.67 | 1.04 | 62.2 | 19 - 123 |
| Di-n-octyl phthalate | 1.67 | 0.988 | 59.3 | 10 - 132 |
| Fluoranthene | 1.67 | 1.06 | 63.8 | 36 - 125 |

# FORM III LCS / LCS DUPLICATE RECOVERY

## EPA 8270D

| | | | |
|---|---|---|---|
| Laboratory: | York Analytical Laboratories, Inc. | SDG: | 16I0260 |
| Client: | Langan Engineering & Environmental Services (NYC) | Project: | 170301202 450 Union Street |
| Matrix: | Soil | | |
| Batch: | BI60561 | Laboratory ID: | BI60561-BS1 |
| Preparation: | EPA 3550C | Initial/Final: | 30 g / 1 mL |

| COMPOUND | SPIKE ADDED (mg/kg wet) | LCS CONCENTRATION (mg/kg wet) | LCS % REC. # | QC LIMITS REC. |
|---|---|---|---|---|
| Fluorene | 1.67 | 1.00 | 60.3 | 16 - 130 |
| Hexachlorobenzene | 1.67 | 1.11 | 66.7 | 10 - 129 |
| Hexachlorobutadiene | 1.67 | 0.902 | 54.1 | 22 - 153 |
| Hexachlorocyclopentadiene | 1.67 | 0.410 | 24.6 | 10 - 134 |
| Hexachloroethane | 1.67 | 0.906 | 54.4 | 20 - 112 |
| Indeno(1,2,3-cd)pyrene | 1.67 | 1.13 | 68.0 | 10 - 155 |
| Isophorone | 1.67 | 0.888 | 53.3 | 14 - 131 |
| Naphthalene | 1.67 | 0.939 | 56.4 | 20 - 121 |
| Nitrobenzene | 1.67 | 0.910 | 54.6 | 20 - 121 |
| N-Nitrosodimethylamine | 1.67 | 0.553 | 33.2 | 10 - 124 |
| N-nitroso-di-n-propylamine | 1.67 | 0.994 | 59.6 | 21 - 119 |
| N-Nitrosodiphenylamine | 1.67 | 1.34 | 80.1 | 10 - 163 |
| Pentachlorophenol | 1.67 | 0.848 | 50.9 | 10 - 143 |
| Phenanthrene | 1.67 | 1.07 | 64.1 | 24 - 123 |
| Phenol | 1.67 | 0.0497 | 2.98 * | 15 - 123 |
| Pyrene | 1.67 | 1.06 | 63.9 | 24 - 132 |
| Pyridine | 1.67 | 0.123 | 7.38 * | 10 - 92 |

# Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

# FORM III LCS / LCS DUPLICATE RECOVERY

## EPA 8270D

| | | | |
|---|---|---|---|
| Laboratory: | York Analytical Laboratories, Inc. | SDG: | 16I0260 |
| Client: | Langan Engineering & Environmental Services (NYC) | Project: | 170301202 450 Union Street |
| Matrix: | Soil | | |
| Batch: | BI60561 | Laboratory ID: | BI60561-BSD1 |
| Preparation: | EPA 3550C | Initial/Final: | 30 g / 1 mL |

| COMPOUND | SPIKE ADDED (mg/kg wet) | LCSD CONCENTRATION (mg/kg wet) | LCSD % REC. # | % RPD # | QC LIMITS RPD | QC LIMITS REC. |
|---|---|---|---|---|---|---|
| 1,1'-Biphenyl | 1.67 | 1.14 | 68.4 | 20.7 | 30 | 22 - 103 |
| 1,2,4,5-Tetrachlorobenzene | 1.67 | 1.08 | 64.6 | 21.0 | 30 | 10 - 144 |
| 1,2,4-Trichlorobenzene | 1.67 | 0.995 | 59.7 | 18.9 | 30 | 23 - 130 |
| 1,2-Dichlorobenzene | 1.67 | 1.01 | 60.4 | 19.1 | 30 | 26 - 113 |
| 1,2-Diphenylhydrazine (as Azobenzer | 1.67 | 1.53 | 91.5 | 25.8 | 30 | 10 - 140 |
| 1,3-Dichlorobenzene | 1.67 | 0.995 | 59.7 | 19.7 | 30 | 32 - 113 |
| 1,4-Dichlorobenzene | 1.67 | 0.933 | 56.0 | 14.3 | 30 | 28 - 111 |
| 2,3,4,6-Tetrachlorophenol | 1.67 | 2.84 | 171 * | 19.9 | 30 | 30 - 130 |
| 2,4,5-Trichlorophenol | 1.67 | 1.16 | 69.3 | 23.7 | 30 | 14 - 138 |
| 2,4,6-Trichlorophenol | 1.67 | 1.34 | 80.4 | 22.0 | 30 | 27 - 122 |
| 2,4-Dichlorophenol | 1.67 | 1.17 | 70.1 | 20.8 | 30 | 23 - 133 |
| 2,4-Dimethylphenol | 1.67 | 1.19 | 71.1 | 22.4 | 30 | 15 - 131 |
| 2,4-Dinitrophenol | 1.67 | 0.927 | 55.6 | 7.30 | 30 | 10 - 149 |
| 2,4-Dinitrotoluene | 1.67 | 1.24 | 74.4 | 19.6 | 30 | 30 - 123 |
| 2,6-Dinitrotoluene | 1.67 | 1.25 | 74.8 | 25.2 | 30 | 30 - 125 |
| 2-Chloronaphthalene | 1.67 | 1.13 | 67.8 | 23.3 | 30 | 22 - 115 |
| 2-Chlorophenol | 1.67 | 1.07 | 64.1 | 18.5 | 30 | 25 - 121 |
| 2-Methylnaphthalene | 1.67 | 1.21 | 72.5 | 16.7 | 30 | 16 - 127 |
| 2-Methylphenol | 1.67 | 1.04 | 62.7 | 20.2 | 30 | 10 - 146 |
| 2-Nitroaniline | 1.67 | 1.16 | 69.4 | 20.7 | 30 | 24 - 126 |
| 2-Nitrophenol | 1.67 | 1.01 | 60.6 | 21.1 | 30 | 17 - 129 |
| 3- & 4-Methylphenols | 1.67 | ND | * | | 30 | 20 - 109 |
| 3,3'-Dichlorobenzidine | 1.67 | 1.26 | 75.9 | 21.3 | 30 | 10 - 147 |
| 3-Nitroaniline | 1.67 | 1.10 | 65.8 | 17.3 | 30 | 23 - 123 |
| 4,6-Dinitro-2-methylphenol | 1.67 | 1.40 | 83.7 | 23.1 | 30 | 10 - 149 |
| 4-Bromophenyl phenyl ether | 1.67 | 1.18 | 70.7 | 23.0 | 30 | 30 - 138 |
| 4-Chloro-3-methylphenol | 1.67 | 1.21 | 72.4 | 19.0 | 30 | 16 - 138 |
| 4-Chloroaniline | 1.67 | 0.898 | 53.9 | 22.0 | 30 | 10 - 117 |
| 4-Chlorophenyl phenyl ether | 1.67 | 1.24 | 74.5 | 22.8 | 30 | 18 - 132 |
| 4-Nitroaniline | 1.67 | 1.22 | 73.1 | 200 * | 30 | 14 - 125 |

# FORM III LCS / LCS DUPLICATE RECOVERY

## EPA 8270D

Laboratory: York Analytical Laboratories, Inc. SDG: 16I0260

Client: Langan Engineering & Environmental Services (NYC) Project: 170301202 450 Union Street

Matrix: Soil

Batch: BI60561 Laboratory ID: BI60561-BSD1

Preparation: EPA 3550C Initial/Final: 30 g / 1 mL

| COMPOUND | SPIKE ADDED (mg/kg wet) | LCSD CONCENTRATION (mg/kg wet) | LCSD % REC. # | % RPD # | QC LIMITS RPD | QC LIMITS REC. |
|---|---|---|---|---|---|---|
| 4-Nitrophenol | 1.67 | 1.22 | 72.9 | 22.1 | 30 | 10 - 136 |
| Acenaphthene | 1.67 | 1.25 | 74.7 | 22.2 | 30 | 17 - 124 |
| Acenaphthylene | 1.67 | 1.15 | 68.9 | 22.1 | 30 | 16 - 124 |
| Acetophenone | 1.67 | 0.0277 | 1.66 * | 200 * | 30 | 28 - 105 |
| Aniline | 1.67 | 0.963 | 57.8 | 19.4 | 30 | 10 - 111 |
| Anthracene | 1.67 | 1.29 | 77.6 | 22.8 | 30 | 24 - 124 |
| Atrazine | 1.67 | 1.27 | 76.0 | 19.6 | 30 | 22 - 120 |
| Benzaldehyde | 1.67 | 0.993 | 59.6 | 6.41 | 30 | 21 - 100 |
| Benzo(a)anthracene | 1.67 | 1.43 | 85.7 | 20.3 | 30 | 25 - 134 |
| Benzo(a)pyrene | 1.67 | 1.06 | 63.9 | 15.4 | 30 | 29 - 144 |
| Benzo(b)fluoranthene | 1.67 | 1.03 | 61.7 | 18.5 | 30 | 20 - 151 |
| Benzo(g,h,i)perylene | 1.67 | 1.28 | 76.9 | 28.4 | 30 | 10 - 153 |
| Benzo(k)fluoranthene | 1.67 | 1.04 | 62.4 | 18.5 | 30 | 10 - 148 |
| Benzoic acid | 1.67 | 0.0240 | 1.44 * | 200 * | 30 | 10 - 116 |
| Benzyl alcohol | 1.67 | 1.21 | 72.4 | 19.7 | 30 | 17 - 128 |
| Benzyl butyl phthalate | 1.67 | 1.26 | 75.4 | 17.2 | 30 | 10 - 132 |
| Bis(2-chloroethoxy)methane | 1.67 | 1.11 | 66.3 | 19.1 | 30 | 10 - 129 |
| Bis(2-chloroethyl)ether | 1.67 | 1.07 | 64.4 | 14.1 | 30 | 14 - 125 |
| Bis(2-chloroisopropyl)ether | 1.67 | 1.25 | 75.0 | 17.2 | 30 | 14 - 122 |
| Bis(2-ethylhexyl)phthalate | 1.67 | 1.52 | 91.3 | 20.1 | 30 | 10 - 141 |
| Caprolactam | 1.67 | 0.266 | 16.0 | 38.7 * | 30 | 10 - 123 |
| Carbazole | 1.67 | 1.20 | 72.2 | 20.7 | 30 | 31 - 120 |
| Chrysene | 1.67 | 1.15 | 68.9 | 18.9 | 30 | 24 - 116 |
| Dibenzo(a,h)anthracene | 1.67 | 1.46 | 87.7 | 24.1 | 30 | 17 - 147 |
| Dibenzofuran | 1.67 | 1.19 | 71.4 | 200 * | 30 | 23 - 123 |
| Diethyl phthalate | 1.67 | 1.24 | 74.5 | 18.6 | 30 | 23 - 122 |
| Dimethyl phthalate | 1.67 | 1.16 | 69.6 | 20.5 | 30 | 28 - 127 |
| Di-n-butyl phthalate | 1.67 | 1.28 | 76.8 | 21.1 | 30 | 19 - 123 |
| Di-n-octyl phthalate | 1.67 | 1.20 | 71.8 | 19.1 | 30 | 10 - 132 |
| Fluoranthene | 1.67 | 1.30 | 78.2 | 20.3 | 30 | 36 - 125 |

# FORM III LCS / LCS DUPLICATE RECOVERY

## EPA 8270D

| | | | |
|---|---|---|---|
| Laboratory: | York Analytical Laboratories, Inc. | SDG: | 16I0260 |
| Client: | Langan Engineering & Environmental Services (NYC) | Project: | 170301202 450 Union Street |
| Matrix: | Soil | | |
| Batch: | BI60561 | Laboratory ID: | BI60561-BSD1 |
| Preparation: | EPA 3550C | Initial/Final: | 30 g / 1 mL |

| COMPOUND | SPIKE ADDED (mg/kg wet) | LCSD CONCENTRATION (mg/kg wet) | LCSD % REC. # | % RPD # | QC LIMITS RPD | QC LIMITS REC. |
|---|---|---|---|---|---|---|
| Fluorene | 1.67 | 1.27 | 76.0 | 23.0 | 30 | 16 - 130 |
| Hexachlorobenzene | 1.67 | 1.42 | 85.1 | 24.2 | 30 | 10 - 129 |
| Hexachlorobutadiene | 1.67 | 1.07 | 64.2 | 17.1 | 30 | 22 - 153 |
| Hexachlorocyclopentadiene | 1.67 | 0.637 | 38.2 | 43.4 * | 30 | 10 - 134 |
| Hexachloroethane | 1.67 | 1.10 | 65.9 | 19.2 | 30 | 20 - 112 |
| Indeno(1,2,3-cd)pyrene | 1.67 | 1.43 | 86.1 | 23.4 | 30 | 10 - 155 |
| Isophorone | 1.67 | 1.08 | 65.1 | 19.9 | 30 | 14 - 131 |
| Naphthalene | 1.67 | 1.14 | 68.4 | 19.3 | 30 | 20 - 121 |
| Nitrobenzene | 1.67 | 1.11 | 66.6 | 19.8 | 30 | 20 - 121 |
| N-Nitrosodimethylamine | 1.67 | 0.765 | 45.9 | 32.2 * | 30 | 10 - 124 |
| N-nitroso-di-n-propylamine | 1.67 | 1.21 | 72.8 | 19.9 | 30 | 21 - 119 |
| N-Nitrosodiphenylamine | 1.67 | 1.73 | 104 | 25.9 | 30 | 10 - 163 |
| Pentachlorophenol | 1.67 | 1.05 | 62.8 | 21.0 | 30 | 10 - 143 |
| Phenanthrene | 1.67 | 1.34 | 80.3 | 22.4 | 30 | 24 - 123 |
| Phenol | 1.67 | ND | * | | 30 | 15 - 123 |
| Pyrene | 1.67 | 1.29 | 77.6 | 19.5 | 30 | 24 - 132 |
| Pyridine | 1.67 | 0.369 | 22.1 | 100 * | 30 | 10 - 92 |

# Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\091516\SV402905.D Vial: 4
Acq On : 15 Sep 2016 10:44 am Operator: KH
Sample : BI60561-BS1 Inst : GC/MS BNA
Misc : QBSV4091516A Multiplr: 1.00
MS Integration Params: EVENTS.E
Quant Time: Sep 15 15:42 2016 Quant Results File: BNA4M54.RES

Quant Method : C:\HPCHEM\1\METHODS\BNA4M54.M (Chemstation Integrator)
Title : GC MS BNA 4 Semi Volatiles Calibration
Last Update : Mon Jul 25 09:09:46 2016
Response via : Initial Calibration
DataAcq Meth : BNA4M54

| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 1) 1,4-Dichlorobenzene-d4 | 8.47 | 152 | 3515604 | 40.00 | ug/mL | 0.00 |
| 20) Naphthalene-d8 | 10.11 | 136 | 13545374 | 40.00 | ug/mL | -0.01 |
| 39) Acenaphthene-d10 | 12.55 | 164 | 8240026 | 40.00 | ug/mL | -0.02 |
| 62) Phenanthrene-d10 | 14.66 | 188 | 14924565 | 40.00 | ug/mL | -0.01 |
| 86) Chrysene-d12 | 18.49 | 240 | 14980613 | 40.00 | ug/mL | 0.00 |
| 92) Perylene-d12 | 20.51 | 264 | 10434502 | 40.00 | ug/mL | -0.01 |
| **System Monitoring Compounds** | | | | | | |
| 4) 2-Fluorophenol | 7.03 | 112 | 5459309 | 39.70 | ug/mL | 0.07 |
| Spiked Amount 75.000 | Range 15 - 87 | | Recovery = 52.93% | | | |
| 5) Phenol-d5 | 8.18 | 99 | 6841716 | 45.85 | ug/mL | 0.04 |
| Spiked Amount 75.000 | Range 10 - 100 | | Recovery = 61.13% | | | |
| 21) Nitrobenzene-d5 | 9.22 | 82 | 4622833 | 29.73 | ug/mL | 0.00 |
| Spiked Amount 50.000 | Range 26 - 120 | | Recovery = 59.46% | | | |
| 44) 2-Fluorobiphenyl | 11.59 | 172 | 8541518 | 28.75 | ug/mL | -0.02 |
| Spiked Amount 50.000 | Range 29 - 120 | | Recovery = 57.50% | | | |
| 67) 2,4,6-Tribromophenol | 13.70 | 330 | 3414642 | 48.53 | ug/mL | 0.00 |
| Spiked Amount 75.000 | Range 35 - 126 | | Recovery = 64.71% | | | |
| 81) Terphenyl-d14 | 16.93 | 244 | 7929099 | 24.34 | ug/mL | -0.01 |
| Spiked Amount 50.000 | Range 35 - 127 | | Recovery = 48.68% | | | |
| **Target Compounds** | | | | | | Qvalue |
| 2) N-Nitrosodimethylamine | 4.87 | 74 | 1293393 | 16.59 | ug/mL# | 1 |
| 3) Pyridine | 4.85 | 79 | 397956 | 3.69 | ug/mL# | 9 |
| 6) Benzaldehyde | 7.96 | 105 | 2881880 | 27.93 | ug/mL# | 95 |
| 7) Aniline | 8.14 | 93 | 3999065 | 23.78 | ug/mL# | 50 |
| 8) Phenol | 8.14 | 94 | 267046 | 1.49 | ug/mL# | 1 |
| 9) Bis(2-chloroethyl)ether | 8.20 | 93 | 4412151 | 27.97 | ug/mL# | 81 |
| 10) 2-Chlorophenol | 8.29 | 128 | 3537441 | 26.64 | ug/mL | 94 |
| 11) 1,3-Dichlorobenzene | 8.42 | 146 | 3301784 | 24.51 | ug/mL | 98 |
| 12) 1,4-Dichlorobenzene | 8.49 | 146 | 3950913 | 24.25 | ug/mL | 96 |
| 13) Benzyl Alcohol | 8.72 | 108 | 2482043 | 29.72 | ug/mL | 93 |
| 14) 1,2-Dichlorobenzene | 8.72 | 146 | 3532122 | 24.95 | ug/mL | 97 |
| 15) 2-Methylphenol | 8.89 | 107 | 2968494 | 25.60 | ug/mL | 92 |
| 16) Bis(2-chloroisopropyl) eth | 8.86 | 45 | 4333986 | 31.56 | ug/mL# | 54 |
| 17) N-Nitroso-di-n-propylamine | 9.06 | 70 | 2957713 | 29.82 | ug/mL | 92 |
| 19) Hexachloroethane | 9.09 | 117 | 1879980 | 27.18 | ug/mL | 97 |
| 22) Nitrobenzene | 9.25 | 77 | 4262555 | 27.29 | ug/mL | 93 |
| 23) Isophorone | 9.54 | 82 | 7985825 | 26.65 | ug/mL | 96 |
| 24) 2-Nitrophenol | 9.65 | 139 | 1936474 | 24.50 | ug/mL# | 78 |
| 25) 2,4-Dimethylphenol | 9.72 | 122 | 3079550 | 28.40 | ug/mL | 94 |
| 26) Bis(2-chloroethoxy) methan | 9.81 | 93 | 4379635 | 27.39 | ug/mL | 96 |
| 28) 2,4-Dichlorophenol | 9.98 | 162 | 3150791 | 28.43 | ug/mL# | 90 |
| 29) 1,2,4-Trichlorobenzene | 10.05 | 180 | 3562670 | 24.71 | ug/mL | 98 |
| 30) Naphthalene | 10.14 | 128 | 9627026 | 28.18 | ug/mL | 97 |
| 31) 4-Chloroaniline | 10.26 | 127 | 3117874 | 21.61 | ug/mL# | 91 |
| 33) Alpha-Terpineol | 10.11 | 59 | 84282 | 0.80 | ug/mL# | 53 |
| 34) Hexachlorobutadiene | 10.35 | 225 | 2287638 | 27.06 | ug/mL | 98 |
| 35) Caprolactam | 10.94 | 113 | 261504 | 5.40 | ug/mL# | 68 |
| 36) 4-Chloro-3-methylphenol | 10.94 | 107 | 4009817 | 29.91 | ug/mL | 95 |
| 37) 1-Methylnaphthalene | 11.21 | 141 | 5441345 | 25.65 | ug/mL | 95 |
| 38) 2-Methylnaphthalene | 11.06 | 142 | 6849164 | 30.66 | ug/mL | 96 |
| 40) 1,2,4,5-tetrachlorobenzene | 11.35 | 216 | 3893915 | 26.16 | ug/mL# | 96 |
| 41) Hexachlorocyclopentadiene | 11.36 | 237 | 776492 | 12.29 | ug/mL | 98 |
| 42) 2,4,6-Trichlorophenol | 11.59 | 196 | 2843200 | 32.25 | ug/mL | 98 |
| 43) 2,4,5-Trichlorophenol | 11.59 | 196 | 2840776 | 27.32 | ug/mL# | 95 |
| 45) 2-Chloronaphthalene | 11.74 | 162 | 6630380 | 26.82 | ug/mL | 95 |
| 46) Biphenyl | 11.72 | 153 | 3518612 | 27.81 | ug/mL# | 97 |

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\091516\SV402905.D Vial: 4
Acq On : 15 Sep 2016 10:44 am Operator: KH
Sample : BI60561-BS1 Inst : GC/MS BNA
Misc : QBSV4091516A Multiplr: 1.00
MS Integration Params: EVENTS.E
Quant Time: Sep 15 15:42 2016 Quant Results File: BNA4M54.RES

Quant Method : C:\HPCHEM\1\METHODS\BNA4M54.M (Chemstation Integrator)
Title : GC MS BNA 4 Semi Volatiles Calibration
Last Update : Mon Jul 25 09:09:46 2016
Response via : Initial Calibration
DataAcq Meth : BNA4M54

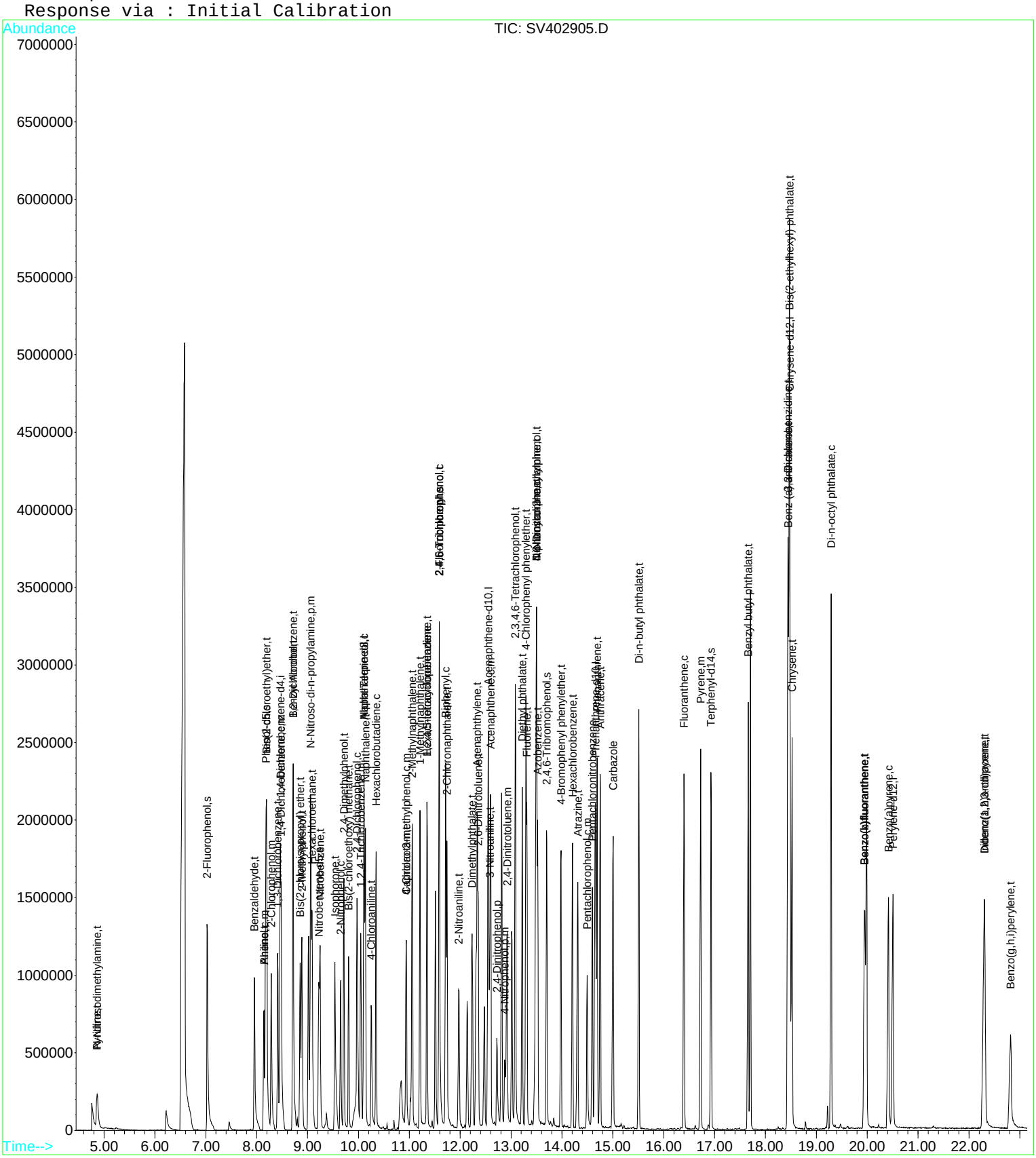
| | Compound | R.T. | QIon | Response | Conc | Unit | Qvalue |
|---|---|---|---|---|---|---|---|
| 47) | 2-Nitroaniline | 11.98 | 138 | 2402658 | 28.19 | ug/mL# | 87 |
| 48) | Dimethylphthalate | 12.24 | 163 | 8863923 | 28.31 | ug/mL | 99 |
| 49) | 2,6-Dinitrotoluene | 12.36 | 165 | 2150100 | 29.03 | ug/mL# | 72 |
| 50) | Acenaphthylene | 12.34 | 152 | 10112392 | 27.60 | ug/mL | 99 |
| 51) | 3-Nitroaniline | 12.58 | 138 | 1834814 | 27.69 | ug/mL# | 82 |
| 52) | Acenaphthene | 12.60 | 154 | 6232662 | 29.89 | ug/mL | 98 |
| 53) | 2,4-Dinitrophenol | 12.73 | 184 | 1202109 | 25.86 | ug/mL | 84 |
| 55) | 2,4-Dinitrotoluene | 12.92 | 165 | 3055111 | 30.55 | ug/mL# | 86 |
| 56) | 4-Nitrophenol | 12.88 | 65 | 1898912 | 29.21 | ug/mL# | 24 |
| 57) | 2,3,4,6-Tetrachlorophenol | 13.09 | 131 | 2625961 | 69.87 | ug/mL | 89 |
| 58) | Diethyl phthalate | 13.22 | 149 | 9417472 | 30.88 | ug/mL | 97 |
| 59) | Fluorene | 13.31 | 166 | 8284212 | 30.15 | ug/mL | 98 |
| 60) | 4-Chlorophenyl phenylether | 13.29 | 204 | 4504880 | 29.62 | ug/mL# | 91 |
| 63) | 4,6-Dinitro-2-methylphenol | 13.51 | 198 | 2218327 | 33.18 | ug/mL# | 49 |
| 64) | Diphenylamine | 13.50 | 169 | 7783479 | 36.26 | ug/mL | 98 |
| 65) | N-Nitrosodiphenylamine | 13.50 | 167 | 2817576 | 40.06 | ug/mL | 93 |
| 66) | Azobenzene | 13.53 | 77 | 11267353 | 35.30 | ug/mL# | 67 |
| 68) | 4-Bromophenyl phenylether | 13.98 | 248 | 2570252 | 28.06 | ug/mL# | 86 |
| 69) | Hexachlorobenzene | 14.21 | 142 | 1281020 | 33.37 | ug/mL | 74 |
| 70) | Atrazine | 14.31 | 200 | 2869868 | 31.22 | ug/mL# | 100 |
| 71) | Pentachlorophenol | 14.50 | 266 | 1523195 | 25.45 | ug/mL | 100 |
| 72) | Pentachloronitrobenzene | 14.60 | 237 | 1390308 | 32.37 | ug/mL | 95 |
| 73) | Phenanthrene | 14.69 | 178 | 12306065 | 32.04 | ug/mL# | 100 |
| 74) | Anthracene | 14.76 | 178 | 12892290 | 30.86 | ug/mL# | 99 |
| 75) | Carbazole | 15.01 | 167 | 10763562 | 29.34 | ug/mL# | 96 |
| 76) | Di-n-butyl phthalate | 15.51 | 149 | 16123832 | 31.08 | ug/mL | 97 |
| 78) | Fluoranthene | 16.40 | 202 | 14131981 | 31.91 | ug/mL# | 99 |
| 80) | Pyrene | 16.73 | 202 | 14358836 | 31.93 | ug/mL# | 95 |
| 82) | Benzyl butyl phthalate | 17.66 | 149 | 7889395 | 31.71 | ug/mL | 94 |
| 83) | Bis(2-ethylhexyl) phthalat | 18.47 | 149 | 12370947 | 37.30 | ug/mL | 98 |
| 84) | Benz (a) anthracene | 18.45 | 228 | 14650384 | 34.96 | ug/mL | 99 |
| 85) | 3,3-Dichlorobenzidine | 18.44 | 252 | 5325219 | 30.65 | ug/mL | 98 |
| 87) | Chrysene | 18.53 | 228 | 11934599 | 28.48 | ug/mL# | 100 |
| 88) | Di-n-octyl phthalate | 19.29 | 149 | 18787385 | 29.65 | ug/mL | 99 |
| 89) | Benzo(b)fluoranthene | 19.95 | 252 | 11742698 | 25.63 | ug/mL# | 99 |
| 90) | Benzo(k)fluoranthene | 19.95 | 252 | 11740634 | 25.90 | ug/mL | 98 |
| 91) | Benzo(a)pyrene | 20.42 | 252 | 11270925 | 27.38 | ug/mL | 99 |
| 93) | Indeno(1,2,3-cd)pyrene | 22.31 | 276 | 10972932 | 34.01 | ug/mL# | 99 |
| 94) | Dibenz(a,h)anthracene | 22.31 | 278 | 9442926 | 34.41 | ug/mL | 99 |
| 95) | Benzo(g,h,i)perylene | 22.82 | 276 | 7203351 | 28.87 | ug/mL# | 96 |

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\091516\SV402905.D Vial: 4
Acq On : 15 Sep 2016 10:44 am Operator: KH
Sample : BI60561-BS1 Inst : GC/MS BNA
Misc : QBSV4091516A Multiplr: 1.00
MS Integration Params: EVENTS.E
Quant Time: Sep 15 15:42 2016 Quant Results File: BNA4M54.RES

Method : C:\HPCHEM\1\METHODS\BNA4M54.M (Chemstation Integrator)
Title : GC MS BNA 4 Semi Volatiles Calibration
Last Update : Mon Jul 25 09:09:46 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\091516\SV402906.D Vial: 5
Acq On : 15 Sep 2016 11:16 am Operator: KH
Sample : BI60561-BSD1 Inst : GC/MS BNA
Misc : QBSV4091516A Multiplr: 1.00
MS Integration Params: EVENTS.E
Quant Time: Sep 15 15:42 2016 Quant Results File: BNA4M54.RES

Quant Method : C:\HPCHEM\1\METHODS\BNA4M54.M (Chemstation Integrator)
Title : GC MS BNA 4 Semi Volatiles Calibration
Last Update : Mon Jul 25 09:09:46 2016
Response via : Initial Calibration
DataAcq Meth : BNA4M54

| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 1) 1,4-Dichlorobenzene-d4 | 8.46 | 152 | 3205929 | 40.00 | ug/mL | -0.01 |
| 20) Naphthalene-d8 | 10.11 | 136 | 12057353 | 40.00 | ug/mL | -0.02 |
| 39) Acenaphthene-d10 | 12.55 | 164 | 7099556 | 40.00 | ug/mL | -0.02 |
| 62) Phenanthrene-d10 | 14.66 | 188 | 12357264 | 40.00 | ug/mL | -0.01 |
| 86) Chrysene-d12 | 18.48 | 240 | 12505723 | 40.00 | ug/mL | -0.01 |
| 92) Perylene-d12 | 20.50 | 264 | 8388538 | 40.00 | ug/mL | -0.02 |
| **System Monitoring Compounds** | | | | | | |
| 4) 2-Fluorophenol | 7.04 | 112 | 6029897 | 48.09 | ug/mL | 0.08 |
| Spiked Amount 75.000 | Range 15 - 87 | | Recovery = 64.12% | | | |
| 5) Phenol-d5 | 8.18 | 99 | 7748522 | 56.94 | ug/mL | 0.05 |
| Spiked Amount 75.000 | Range 10 - 100 | | Recovery = 75.92% | | | |
| 21) Nitrobenzene-d5 | 9.22 | 82 | 5088729 | 36.76 | ug/mL | 0.00 |
| Spiked Amount 50.000 | Range 26 - 120 | | Recovery = 73.52% | | | |
| 44) 2-Fluorobiphenyl | 11.59 | 172 | 9181728 | 35.87 | ug/mL | -0.02 |
| Spiked Amount 50.000 | Range 29 - 120 | | Recovery = 71.74% | | | |
| 67) 2,4,6-Tribromophenol | 13.71 | 330 | 3621188 | 62.15 | ug/mL | 0.00 |
| Spiked Amount 75.000 | Range 35 - 126 | | Recovery = 82.87% | | | |
| 81) Terphenyl-d14 | 16.93 | 244 | 7875682 | 29.20 | ug/mL | -0.01 |
| Spiked Amount 50.000 | Range 35 - 127 | | Recovery = 58.40% | | | |
| **Target Compounds** | | | | | | Qvalue |
| 2) N-Nitrosodimethylamine | 4.91 | 74 | 1631232 | 22.95 | ug/mL# | 1 |
| 3) Pyridine | 4.84 | 79 | 1089468 | 11.07 | ug/mL# | 9 |
| 6) Benzaldehyde | 7.96 | 105 | 2802088 | 29.78 | ug/mL# | 99 |
| 7) Aniline | 8.14 | 93 | 4428138 | 28.88 | ug/mL# | 50 |
| 9) Bis(2-chloroethyl)ether | 8.20 | 93 | 4634916 | 32.22 | ug/mL# | 77 |
| 10) 2-Chlorophenol | 8.29 | 128 | 3882109 | 32.06 | ug/mL | 94 |
| 11) 1,3-Dichlorobenzene | 8.42 | 146 | 3668097 | 29.86 | ug/mL | 97 |
| 12) 1,4-Dichlorobenzene | 8.48 | 146 | 4155864 | 27.98 | ug/mL | 96 |
| 13) Benzyl Alcohol | 8.72 | 108 | 2757654 | 36.21 | ug/mL | 94 |
| 14) 1,2-Dichlorobenzene | 8.72 | 146 | 3899602 | 30.21 | ug/mL | 96 |
| 15) 2-Methylphenol | 8.89 | 107 | 3314221 | 31.34 | ug/mL | 91 |
| 16) Bis(2-chloroisopropyl) eth | 8.85 | 45 | 4695366 | 37.49 | ug/mL# | 54 |
| 17) N-Nitroso-di-n-propylamine | 9.06 | 70 | 3293630 | 36.42 | ug/mL | 90 |
| 19) Hexachloroethane | 9.09 | 117 | 2078046 | 32.95 | ug/mL | 95 |
| 22) Nitrobenzene | 9.25 | 77 | 4629421 | 33.30 | ug/mL | 92 |
| 23) Isophorone | 9.54 | 82 | 8676513 | 32.53 | ug/mL | 96 |
| 24) 2-Nitrophenol | 9.65 | 139 | 2131152 | 30.29 | ug/mL# | 79 |
| 25) 2,4-Dimethylphenol | 9.72 | 122 | 3433613 | 35.57 | ug/mL | 96 |
| 26) Bis(2-chloroethoxy) methan | 9.81 | 93 | 4721515 | 33.17 | ug/mL | 97 |
| 27) Benzoic acid | 9.77 | 105 | 61283 | 0.72 | ug/mL# | 1 |
| 28) 2,4-Dichlorophenol | 9.98 | 162 | 3455931 | 35.03 | ug/mL# | 90 |
| 29) 1,2,4-Trichlorobenzene | 10.05 | 180 | 3833015 | 29.86 | ug/mL | 97 |
| 30) Naphthalene | 10.14 | 128 | 10402405 | 34.20 | ug/mL# | 93 |
| 31) 4-Chloroaniline | 10.26 | 127 | 3459151 | 26.94 | ug/mL | 96 |
| 32) Acetophenone | 8.72 | 105 | 149792 | 0.83 | ug/mL# | 75 |
| 33) Alpha-Terpineol | 10.12 | 59 | 97255 | 1.04 | ug/mL# | 38 |
| 34) Hexachlorobutadiene | 10.35 | 225 | 2416485 | 32.12 | ug/mL | 98 |
| 35) Caprolactam | 10.94 | 113 | 344294 | 7.99 | ug/mL# | 69 |
| 36) 4-Chloro-3-methylphenol | 10.94 | 107 | 4319322 | 36.20 | ug/mL | 94 |
| 37) 1-Methylnaphthalene | 11.21 | 141 | 5936606 | 31.44 | ug/mL | 96 |
| 38) 2-Methylnaphthalene | 11.06 | 142 | 7206910 | 36.24 | ug/mL | 94 |
| 40) 1,2,4,5-tetrachlorobenzene | 11.35 | 216 | 4141128 | 32.29 | ug/mL# | 98 |
| 41) Hexachlorocyclopentadiene | 11.35 | 237 | 1040014 | 19.11 | ug/mL | 97 |
| 42) 2,4,6-Trichlorophenol | 11.59 | 196 | 3054789 | 40.21 | ug/mL | 97 |
| 43) 2,4,5-Trichlorophenol | 11.60 | 196 | 3106180 | 34.67 | ug/mL# | 95 |
| 45) 2-Chloronaphthalene | 11.74 | 162 | 7219481 | 33.90 | ug/mL | 94 |

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\091516\SV402906.D Vial: 5
Acq On : 15 Sep 2016 11:16 am Operator: KH
Sample : BI60561-BSD1 Inst : GC/MS BNA
Misc : QBSV4091516A Multiplr: 1.00
MS Integration Params: EVENTS.E
Quant Time: Sep 15 15:42 2016 Quant Results File: BNA4M54.RES

Quant Method : C:\HPCHEM\1\METHODS\BNA4M54.M (Chemstation Integrator)
Title : GC MS BNA 4 Semi Volatiles Calibration
Last Update : Mon Jul 25 09:09:46 2016
Response via : Initial Calibration
DataAcq Meth : BNA4M54

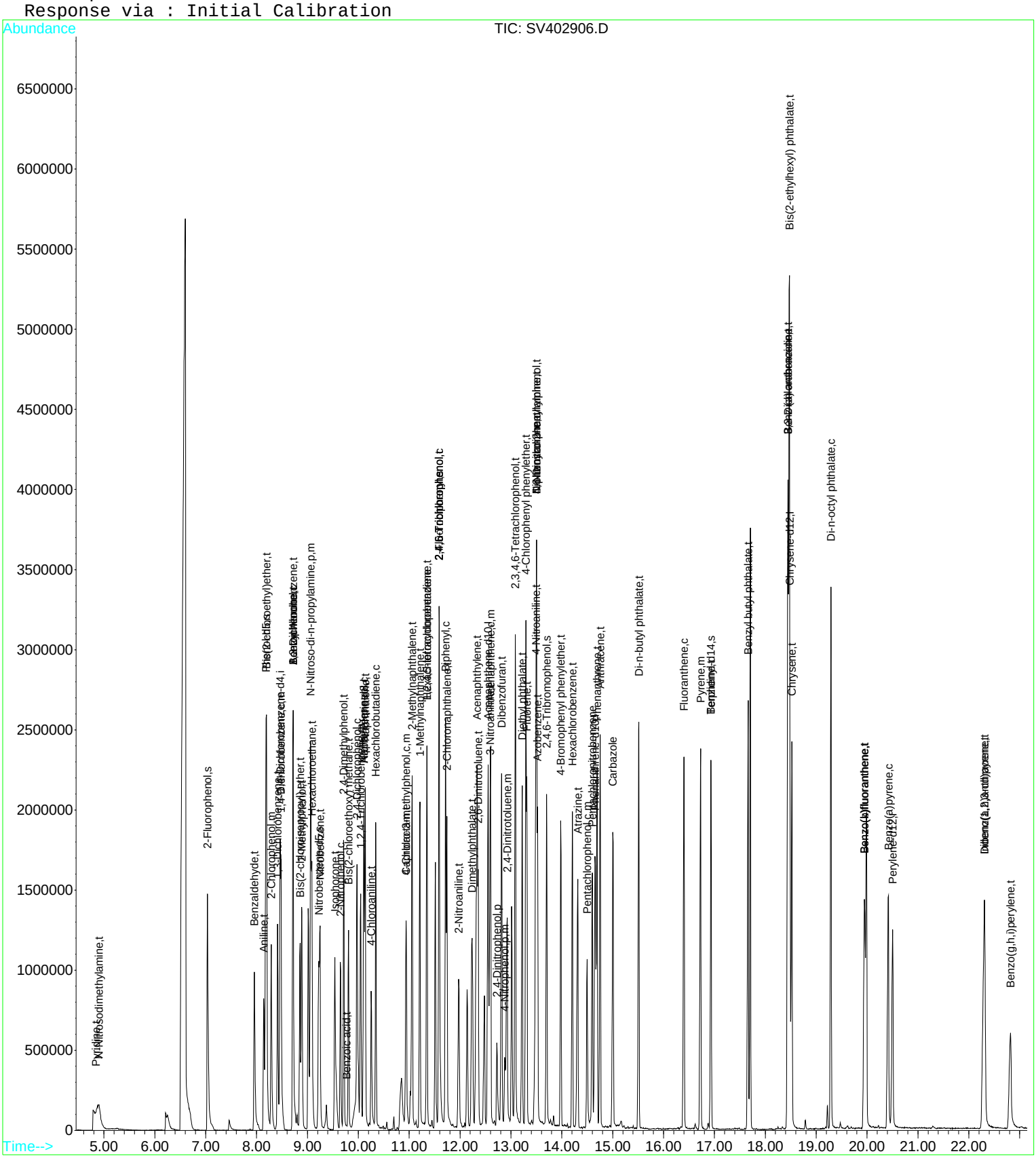
| Compound | R.T. | QIon | Response | Conc | Unit | Qvalue |
|---|---|---|---|---|---|---|
| 46) Biphenyl | 11.72 | 153 | 3729622 | 34.22 | ug/mL# | 98 |
| 47) 2-Nitroaniline | 11.98 | 138 | 2547925 | 34.70 | ug/mL# | 83 |
| 48) Dimethylphthalate | 12.24 | 163 | 9382081 | 34.78 | ug/mL | 99 |
| 49) 2,6-Dinitrotoluene | 12.36 | 165 | 2387507 | 37.41 | ug/mL# | 56 |
| 50) Acenaphthylene | 12.34 | 152 | 10869985 | 34.44 | ug/mL | 99 |
| 51) 3-Nitroaniline | 12.58 | 138 | 1879381 | 32.92 | ug/mL# | 77 |
| 52) Acenaphthene | 12.60 | 154 | 6714801 | 37.37 | ug/mL | 98 |
| 53) 2,4-Dinitrophenol | 12.73 | 184 | 1114274 | 27.82 | ug/mL# | 85 |
| 54) Dibenzofuran | 12.82 | 168 | 10665841 | 35.70 | ug/mL# | 86 |
| 55) 2,4-Dinitrotoluene | 12.93 | 165 | 3205730 | 37.20 | ug/mL# | 85 |
| 56) 4-Nitrophenol | 12.88 | 65 | 2042548 | 36.46 | ug/mL# | 23 |
| 57) 2,3,4,6-Tetrachlorophenol | 13.09 | 131 | 2763622 | 85.35 | ug/mL | 88 |
| 58) Diethyl phthalate | 13.22 | 149 | 9783148 | 37.23 | ug/mL | 97 |
| 59) Fluorene | 13.31 | 166 | 8996555 | 38.00 | ug/mL | 99 |
| 60) 4-Chlorophenyl phenylether | 13.30 | 204 | 4882420 | 37.26 | ug/mL | 91 |
| 61) 4-Nitroaniline | 13.49 | 138 | 2111706 | 36.54 | ug/mL# | 71 |
| 63) 4,6-Dinitro-2-methylphenol | 13.51 | 198 | 2316689 | 41.85 | ug/mL# | 50 |
| 64) Diphenylamine | 13.50 | 169 | 8403128 | 47.28 | ug/mL | 98 |
| 65) N-Nitrosodiphenylamine | 13.50 | 167 | 3028134 | 52.00 | ug/mL | 92 |
| 66) Azobenzene | 13.52 | 77 | 12095225 | 45.77 | ug/mL# | 64 |
| 68) 4-Bromophenyl phenylether | 13.98 | 248 | 2681050 | 35.35 | ug/mL# | 45 |
| 69) Hexachlorobenzene | 14.21 | 142 | 1351988 | 42.54 | ug/mL | 73 |
| 70) Atrazine | 14.32 | 200 | 2892791 | 38.01 | ug/mL# | 98 |
| 71) Pentachlorophenol | 14.50 | 266 | 1556995 | 31.42 | ug/mL | 99 |
| 72) Pentachloronitrobenzene | 14.60 | 237 | 1474116 | 41.45 | ug/mL | 97 |
| 73) Phenanthrene | 14.69 | 178 | 12764448 | 40.13 | ug/mL# | 99 |
| 74) Anthracene | 14.76 | 178 | 13425024 | 38.82 | ug/mL# | 100 |
| 75) Carbazole | 15.01 | 167 | 10969634 | 36.11 | ug/mL# | 100 |
| 76) Di-n-butyl phthalate | 15.51 | 149 | 16495174 | 38.41 | ug/mL | 97 |
| 78) Fluoranthene | 16.40 | 202 | 14336292 | 39.10 | ug/mL# | 99 |
| 79) Benzidine | 16.93 | 184 | 195573 | 1.93 | ug/mL# | 15 |
| 80) Pyrene | 16.73 | 202 | 14453296 | 38.81 | ug/mL# | 92 |
| 82) Benzyl butyl phthalate | 17.66 | 149 | 7763096 | 37.68 | ug/mL | 92 |
| 83) Bis(2-ethylhexyl) phthalat | 18.47 | 149 | 12529713 | 45.63 | ug/mL | 98 |
| 84) Benz (a) anthracene | 18.45 | 228 | 14874649 | 42.86 | ug/mL | 99 |
| 85) 3,3-Dichlorobenzidine | 18.44 | 252 | 5458407 | 37.95 | ug/mL | 100 |
| 87) Chrysene | 18.53 | 228 | 12046832 | 34.44 | ug/mL# | 100 |
| 88) Di-n-octyl phthalate | 19.29 | 149 | 18994035 | 35.91 | ug/mL | 99 |
| 89) Benzo(b)fluoranthene | 19.95 | 252 | 11797472 | 30.84 | ug/mL# | 98 |
| 90) Benzo(k)fluoranthene | 19.95 | 252 | 11802524 | 31.19 | ug/mL | 98 |
| 91) Benzo(a)pyrene | 20.42 | 252 | 10972869 | 31.94 | ug/mL | 99 |
| 93) Indeno(1,2,3-cd)pyrene | 22.31 | 276 | 11162330 | 43.04 | ug/mL# | 99 |
| 94) Dibenz(a,h)anthracene | 22.31 | 278 | 9676877 | 43.86 | ug/mL | 100 |
| 95) Benzo(g,h,i)perylene | 22.82 | 276 | 7708160 | 38.43 | ug/mL | 98 |

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\091516\SV402906.D Vial: 5
Acq On : 15 Sep 2016 11:16 am Operator: KH
Sample : BI60561-BSD1 Inst : GC/MS BNA
Misc : QBSV4091516A Multiplr: 1.00
MS Integration Params: EVENTS.E
Quant Time: Sep 15 15:42 2016 Quant Results File: BNA4M54.RES

Method : C:\HPCHEM\1\METHODS\BNA4M54.M (Chemstation Integrator)
Title : GC MS BNA 4 Semi Volatiles Calibration
Last Update : Mon Jul 25 09:09:46 2016
Response via : Initial Calibration



**PREPARATION BENCH SHEET**

BI60561

**York Analytical Laboratories, Inc.**

**Printed: 9/30/2016 10:47:25AM**

**Matrix: Soil**

**Surrogate used: Y16H063**

| Lab Number | Analysis | Prepared | By | Initial (g) | Final (mL) | Spike ID | Source ID | ul Spike | ul Surrogate | Preparation | Sample Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 16I0223-01 | Semi-Volatiles, CP-51 (formerly | 09/14/2016 11:54 | MRW | 30 | 1 | | | | 1000 | EPA 3550C | |
| 16I0223-02 | Semi-Volatiles, 8270 - Compreh | 09/14/2016 11:54 | MRW | 30 | 1 | | | | 1000 | EPA 3550C | Added for BatchQC in: BI60561 |
| 16I0223-02 | Semi-Volatiles, 8270 Base/Neut | 09/14/2016 11:54 | MRW | 30 | 1 | | | | 1000 | EPA 3550C | Added for BatchQC in: BI60561 |
| 16I0223-02 | Semi-Volatiles, CP-51 (formerly | 09/14/2016 11:54 | MRW | 30 | 1 | | | | 1000 | EPA 3550C | |
| 16I0223-02 | Semi-Volatiles, NJDEP/TCL/Pa | 09/14/2016 11:54 | MRW | 30 | 1 | | | | 1000 | EPA 3550C | Added for BatchQC in: BI60561 |
| 16I0223-02 | Semi-Volatiles, NYSDEC Part 3 | 09/14/2016 11:54 | MRW | 30 | 1 | | | | 1000 | EPA 3550C | Added for BatchQC in: BI60561 |
| 16I0223-02 | Semi-Volatiles, Suffolk Co. DH | 09/14/2016 11:54 | MRW | 30 | 1 | | | | 1000 | EPA 3550C | Added for BatchQC in: BI60561 |
| 16I0232-01 | Semi-Volatiles, CP-51 (formerly | 09/14/2016 11:54 | MRW | 30 | 1 | | | | 1000 | EPA 3550C | |
| 16I0236-01 | Semi-Volatiles, CP-51 (formerly | 09/14/2016 11:54 | MRW | 30 | 1 | | | | 1000 | EPA 3550C | |
| 16I0236-02 | Semi-Volatiles, CP-51 (formerly | 09/14/2016 11:54 | MRW | 30 | 1 | | | | 1000 | EPA 3550C | |
| 16I0236-03 | Semi-Volatiles, CP-51 (formerly | 09/14/2016 11:54 | MRW | 30 | 1 | | | | 1000 | EPA 3550C | |
| 16I0236-04 | Semi-Volatiles, CP-51 (formerly | 09/14/2016 11:54 | MRW | 30 | 1 | | | | 1000 | EPA 3550C | |
| 16I0236-05 | Semi-Volatiles, CP-51 (formerly | 09/14/2016 11:54 | MRW | 30 | 1 | | | | 1000 | EPA 3550C | |
| 16I0260-01 | Semi-Volatiles, NJDEP/TCL/Pa | 09/14/2016 11:54 | MRW | 30 | 1 | | | | 1000 | EPA 3550C | |
| 16I0329-01 | Semi-Volatiles, Suffolk Co. DH | 09/14/2016 11:54 | MRW | 30 | 1 | | | | 1000 | EPA 3550C | 4 day firm |
| 16I0338-03 | Semi-Volatiles, 8270 - Compreh | 09/14/2016 11:54 | MRW | 30 | 1 | | | | 1000 | EPA 3550C | |
| 16I0368-01 | Semi-Volatiles, 8270 Base/Neut | 09/14/2016 11:54 | MRW | 30 | 1 | | | | 1000 | EPA 3550C | |
| 16I0368-02 | Semi-Volatiles, 8270 Base/Neut | 09/14/2016 11:54 | MRW | 30 | 1 | | | | 1000 | EPA 3550C | |
| 16I0368-03 | Semi-Volatiles, 8270 Base/Neut | 09/14/2016 11:54 | MRW | 30 | 1 | | | | 1000 | EPA 3550C | |
| 16I0368-04 | Semi-Volatiles, 8270 Base/Neut | 09/14/2016 11:54 | MRW | 30 | 1 | | | | 1000 | EPA 3550C | |
| 16I0381-01 | Semi-Volatiles, CP-51 (formerly | 09/14/2016 11:54 | MRW | 30 | 1 | | | | 1000 | EPA 3550C | Log for soil |
| 16I0381-02 | Semi-Volatiles, CP-51 (formerly | 09/14/2016 11:54 | MRW | 30 | 1 | | | | 1000 | EPA 3550C | Log for soil |
| 16I0381-03 | Semi-Volatiles, CP-51 (formerly | 09/14/2016 11:54 | MRW | 30 | 1 | | | | 1000 | EPA 3550C | Log for soil |

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**PREPARATION BENCH SHEET**

BI60561

**York Analytical Laboratories, Inc.**

**Printed: 9/30/2016 10:47:25AM**

**Matrix: Soil**

**Surrogate used: Y16H063**

| Lab Number | Analysis | Prepared | By | Initial (g) | Final (mL) | Spike ID | Source ID | ul Spike | ul Surrogate | Preparation | Sample Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 16I0381-04 | Semi-Volatiles, CP-51 (formerly | 09/14/2016 11:54 | MRW | 30 | 1 | | | | 1000 | EPA 3550C | Log for soil |
| 16I0423-01 | Semi-Volatiles, NYSDEC Part 3 | 09/14/2016 11:54 | MRW | 30 | 1 | | | | 1000 | EPA 3550C | |
| BI60561-BLK1 | QC | 09/14/2016 11:54 | MRW | 30 | 1 | | | | 1000 | EPA 3550C | |
| BI60561-BS1 | QC | 09/14/2016 11:54 | MRW | 30 | 1 | Y16I014 | | 500 | 1000 | EPA 3550C | |
| BI60561-BSD1 | QC | 09/14/2016 11:54 | MRW | 30 | 1 | Y16I014 | | 500 | 1000 | EPA 3550C | |
| BI60561-MS1 | QC | 09/14/2016 11:54 | MRW | 30 | 1 | Y16I014 | 16I0223-02 | 500 | 1000 | EPA 3550C | |

Batch Comments:

# Injection Log

Directory: C:\HPCHEM\1\DATA\091516

| Line | Vial | FileName | Multiplier | SampleName | Misc Info | Injected |
|---|---|---|---|---|---|---|
| 1 | 1 | SV402902.D | 1. | SEQ-TUN1 | QBSV4091516A TUNE = Y16F002 MeCl2 = Y1 | 15 Sep 2016 08:3 |
| 2 | 2 | SV402903.D | 1. | SEQ-CCV1 | QBSV4091516A CCV = Y16H188 IS = Y16D04 | 15 Sep 2016 09:0 |
| 3 | 3 | SV402904.D | 1. | BI60561-BLK1 | QBSV4091516A | 15 Sep 2016 10:1 |
| 4 | 4 | SV402905.D | 1. | BI60561-BS1 | QBSV4091516A | 15 Sep 2016 10:4 |
| 5 | 5 | SV402906.D | 1. | BI60561-BSD1 | QBSV4091516A | 15 Sep 2016 11:1 |
| 6 | 6 | SV402907.D | 1. | BI60561-BLK1 | QBSV4091516A RE | 15 Sep 2016 11:4 |
| 7 | 7 | SV402908.D | 1. | BI60562-BS1 | QBSV4091516A | 15 Sep 2016 12:3 |
| 8 | 8 | SV402909.D | 1. | BI60562-BSD1 | QBSV4091516A | 15 Sep 2016 13:0 |
| 9 | 9 | SV402910.D | 2. | 16I0260-01 | QBSV4091516A 2X NJDEP/TCL/375 ASPB | 15 Sep 2016 13:3 |
| 10 | 10 | SV402911.D | 2. | 16I0336-01 | QBSV4091516A 2X NYSDEC 375 ASPB | 15 Sep 2016 14:0 |
| 11 | 11 | SV402912.D | 2. | 16I0336-02 | QBSV4091516A 2X NYSDEC 375 ASPB | 15 Sep 2016 14:4 |
| 12 | 12 | SV402913.D | 2. | 16I0336-03 | QBSV4091516A 2X NYSDEC 375 ASPB | 15 Sep 2016 15:1 |
| 13 | 13 | SV402914.D | 2. | 16I0336-04 | QBSV4091516A 2X NYSDEC 375 ASPB | 15 Sep 2016 15:4 |
| 14 | 14 | SV402915.D | 1. | BI60562-BLK1 | QBSV4091516A | 15 Sep 2016 16:4 |
| 15 | 15 | SV402916.D | 2. | 16I0323-16 | QBSV4091516A | 15 Sep 2016 17:1 |
| 16 | 16 | SV402917.D | 2. | 16I0323-18 | QBSV4091516A | 15 Sep 2016 17:4 |
| 17 | 17 | SV402918.D | 2. | 16I0323-20 | QBSV4091516A | 15 Sep 2016 18:1 |
| 18 | 18 | SV402919.D | 2. | 16I0335-01 | QBSV4091516A | 15 Sep 2016 18:4 |
| 19 | 19 | SV402920.D | 1. | BI60570-BS1 | QBSV4091516A | 15 Sep 2016 19:2 |
| 20 | 20 | SV402921.D | 1. | BI60570-BS2 | QBSV4091516A | 15 Sep 2016 19:5 |
| 21 | 21 | SV402922.D | 1. | BI60570-BS3 | QBSV4091516A | 15 Sep 2016 20:2 |
| 22 | 22 | SV402923.D | 1. | BI60570-BS4 | QBSV4091516A | 15 Sep 2016 20:5 |

York Analytical Laboratories, Inc.
SDG: 16I0260
CLASS: PEST
METHOD: EPA 8081B

# DATA PACKAGE COVER PAGE

## EPA 8081B

Laboratory: York Analytical Laboratories, Inc. SDG: 16I0260

Client: Langan Engineering & Environmental Services (NYC) Project: 170301202 450 Union Street

| Client Sample Id: | Lab Sample Id: |
|---|---|
| V01_0-1.5 | 16I0260-01 |

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in computer-readable data submitted on diskette has been autorized by the Laboratory Manager or the Manager's designee, as verified by the following signatures.

Signature:

Name: Benjamin Gulizia

Date: 9/30/2016

Title: Laboratory Director

# FORM II SURROGATE STANDARD RECOVERY AND RT SUMMARY

## EPA 8081B

| | | | |
|---|---|---|---|
| Laboratory: | York Analytical Laboratories, Inc. | SDG: | 16I0260 |
| Client: | Langan Engineering & Environmental Services (NYC) | Project: | 170301202 450 Union Street |
| Sequence: | Y6I1309 | Instrument: | GC Dual E |
| Matrix: | Soil | Calibration: | YH60012 |

| Surrogate Compound | Spike Level ng/mL | % Recovery | Recovery Limits | RT | Calibration Mean RT | RT Diff | RT Diff Limit | Q |
|---|---|---|---|---|---|---|---|---|
| **Calibration Check (Y6I1309-CCV1 )** | | | Lab File ID: P5019760.D | | Analyzed: 09/12/16 09:51 | | | |
| Decachlorobiphenyl | 160 | 89.0 | 0 - 200 | 6.32 | | | | |
| Tetrachloro-m-xylene | 160 | 91.6 | 0 - 200 | 2.43 | | | | |
| **Calibration Check (Y6I1309-CCV4 )** | | | Lab File ID: P5019780.D | | Analyzed: 09/12/16 14:59 | | | |
| Decachlorobiphenyl | 160 | 78.5 | 0 - 200 | 6.32 | | | | |
| Tetrachloro-m-xylene | 160 | 94.3 | 0 - 200 | 2.43 | | | | |
| **Blank (BI60374-BLK1 )** | | | Lab File ID: P5019781.D | | Analyzed: 09/12/16 16:42 | | | |
| Decachlorobiphenyl | 0.0667 | 82.1 | 30 - 150 | | | | | |
| Tetrachloro-m-xylene | 0.0667 | 84.0 | 30 - 150 | | | | | |
| **LCS (BI60374-BS1 )** | | | Lab File ID: P5019782.D | | Analyzed: 09/12/16 16:56 | | | |
| Decachlorobiphenyl | 0.0667 | 63.1 | 30 - 150 | 6.32 | | | | |
| Tetrachloro-m-xylene | 0.0667 | 86.5 | 30 - 150 | 2.43 | | | | |
| **V01_0-1.5 (16I0260-01 )** | | | Lab File ID: P5019790.D | | Analyzed: 09/12/16 18:56 | | | |
| Decachlorobiphenyl | 0.0690 | 63.6 | 30 - 150 | 6.32 | | | | |
| Tetrachloro-m-xylene | 0.0690 | 69.7 | 30 - 150 | 2.43 | | | | |
| **Calibration Check (Y6I1309-CCV5 )** | | | Lab File ID: P5019798.D | | Analyzed: 09/12/16 20:55 | | | |
| Decachlorobiphenyl | 160 | 73.2 | 0 - 200 | 6.31 | | | | |
| Tetrachloro-m-xylene | 160 | 95.6 | 0 - 200 | 2.42 | | | | |

# FORM III LCS / LCS DUPLICATE RECOVERY

## EPA 8081B

| | | | |
|---|---|---|---|
| Laboratory: | York Analytical Laboratories, Inc. | SDG: | 16I0260 |
| Client: | Langan Engineering & Environmental Services (NYC) | Project: | 170301202 450 Union Street |
| Matrix: | Soil | | |
| Batch: | BI60374 | Laboratory ID: | BI60374-BS1 |
| Preparation: | EPA 3550C | Initial/Final: | 30 g / 10 mL |

| COMPOUND | SPIKE ADDED (mg/kg wet) | LCS CONCENTRATION (mg/kg wet) | LCS % REC. # | QC LIMITS REC. |
|---|---|---|---|---|
| 4,4'-DDD | 0.0333 | 0.0377 | 113 | 40 - 140 |
| 4,4'-DDE | 0.0333 | 0.0324 | 97.3 | 40 - 140 |
| 4,4'-DDT | 0.0333 | 0.0318 | 95.3 | 40 - 140 |
| Aldrin | 0.0333 | 0.0324 | 97.1 | 40 - 140 |
| alpha-BHC | 0.0333 | 0.0344 | 103 | 40 - 140 |
| alpha-Chlordane | 0.0333 | 0.0293 | 87.9 | 40 - 140 |
| beta-BHC | 0.0333 | 0.0332 | 99.5 | 40 - 140 |
| delta-BHC | 0.0333 | 0.0348 | 104 | 40 - 140 |
| Dieldrin | 0.0333 | 0.0305 | 91.6 | 40 - 140 |
| Endosulfan I | 0.0333 | 0.0320 | 96.1 | 40 - 140 |
| Endosulfan II | 0.0333 | 0.0277 | 83.2 | 40 - 140 |
| Endosulfan sulfate | 0.0333 | 0.0287 | 86.1 | 40 - 140 |
| Endrin | 0.0333 | 0.0302 | 90.5 | 40 - 140 |
| Endrin aldehyde | 0.0333 | 0.0235 | 70.6 | 40 - 140 |
| Endrin ketone | 0.0333 | 0.0254 | 76.3 | 40 - 140 |
| gamma-BHC (Lindane) | 0.0333 | 0.0337 | 101 | 40 - 140 |
| gamma-Chlordane | 0.0333 | 0.0299 | 89.7 | 40 - 140 |
| Heptachlor | 0.0333 | 0.0315 | 94.4 | 40 - 140 |
| Heptachlor epoxide | 0.0333 | 0.0300 | 90.0 | 40 - 140 |
| Methoxychlor | 0.0333 | 0.0314 | 94.3 | 40 - 140 |

# Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

**FORM I**

# METHOD BLANK DATA SHEET

## EPA 8081B

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | York Analytical Laboratories, Inc. | | | SDG: | 16I0260 |
| Client: | Langan Engineering & Environmental Services (NYC) | | | Project: | 170301202 450 Union Street |
| Matrix: | Soil | Laboratory ID: | BI60374-BLK1 | File ID: | P5019781.D |
| Prepared: | 09/12/16 08:21 | Preparation: | EPA 3550C | Initial/Final: | 30 g / 10 mL |
| Analyzed: | 09/12/16 16:42 | Instrument: | GC Dual E | | |
| Batch: | BI60374 | Sequence: | Y6I1309 | Calibration: | YH60012 |

| CAS NO. | COMPOUND | CONC. (mg/kg wet) | Q |
|---|---|---|---|
| 72-54-8 | 4,4'-DDD | 0.000330 | U |
| 72-55-9 | 4,4'-DDE | 0.000330 | U |
| 50-29-3 | 4,4'-DDT | 0.000330 | U |
| 309-00-2 | Aldrin | 0.000330 | U |
| 319-84-6 | alpha-BHC | 0.000330 | U |
| 5103-71-9 | alpha-Chlordane | 0.000330 | U |
| 319-85-7 | beta-BHC | 0.000330 | U |
| 57-74-9 | Chlordane, total | 0.0132 | U |
| 319-86-8 | delta-BHC | 0.000330 | U |
| 60-57-1 | Dieldrin | 0.000330 | U |
| 959-98-8 | Endosulfan I | 0.000330 | U |
| 33213-65-9 | Endosulfan II | 0.000330 | U |
| 1031-07-8 | Endosulfan sulfate | 0.000330 | U |
| 72-20-8 | Endrin | 0.000330 | U |
| 7421-93-4 | Endrin aldehyde | 0.000330 | U |
| 53494-70-5 | Endrin ketone | 0.000330 | U |
| 58-89-9 | gamma-BHC (Lindane) | 0.000330 | U |
| 5566-34-7 | gamma-Chlordane | 0.000330 | U |
| 76-44-8 | Heptachlor | 0.000330 | U |
| 1024-57-3 | Heptachlor epoxide | 0.000330 | U |
| 72-43-5 | Methoxychlor | 0.000330 | U |
| 8001-35-2 | Toxaphene | 0.0330 | U |
| | Chlordane, total (alpha, gamma) | 0.000330 | U |

| SYSTEM MONITORING COMPOUND | ADDED (mg/kg wet) | CONC (mg/kg wet) | % REC | QC LIMITS | Q |
|---|---|---|---|---|---|
| Decachlorobiphenyl | 0.0667 | 0.0547 | 82.1 | 30 - 150 | |
| Tetrachloro-m-xylene | 0.0667 | 0.0560 | 84.0 | 30 - 150 | |

**FORM IV** **PREPARATION BATCH SUMMARY**

**EPA 8081B**

Laboratory: York Analytical Laboratories, Inc. SDG: 16I0260

Client: Langan Engineering & Environmental Services (NYC) Project: 170301202 450 Union Street

Batch: BI60374 Batch Matrix: Soil Preparation: EPA 3550C

| SAMPLE NAME | LAB SAMPLE ID | LAB FILE ID | DATE PREPARED | OBSERVATIONS |
|---|---|---|---|---|
| V01_0-1.5 | 16I0260-01 | P5019790.D | 09/12/16 08:21 | |
| Blank | BI60374-BLK1 | P5019781.D | 09/12/16 08:21 | |
| LCS | BI60374-BS1 | P5019782.D | 09/12/16 08:21 | |

# METHOD DETECTION AND REPORTING LIMITS

## EPA 8081B

**Laboratory:** York Analytical Laboratories, Inc. **SDG:** 16I0260

**Client:** Langan Engineering & Environmental Services (NYC) **Project:** 170301202 450 Union Street

**Matrix:** Soil **Instrument:** GC Dual E

| Analyte | LOD | LOQ | Units |
|---|---|---|---|
| 4,4'-DDD | 0.000330 | 0.000330 | mg/kg |
| 4,4'-DDD [2C] | 0.000330 | 0.000330 | mg/kg |
| 4,4'-DDE | 0.000330 | 0.000330 | mg/kg |
| 4,4'-DDE [2C] | 0.000330 | 0.000330 | mg/kg |
| 4,4'-DDT | 0.000330 | 0.000330 | mg/kg |
| 4,4'-DDT [2C] | 0.000330 | 0.000330 | mg/kg |
| Aldrin | 0.000330 | 0.000330 | mg/kg |
| alpha-BHC | 0.000330 | 0.000330 | mg/kg |
| alpha-Chlordane | 0.000330 | 0.000330 | mg/kg |
| beta-BHC | 0.000330 | 0.000330 | mg/kg |
| Chlordane, total | 0.00660 | 0.00660 | mg/kg |
| delta-BHC | 0.000330 | 0.000330 | mg/kg |
| Dieldrin | 0.000330 | 0.000330 | mg/kg |
| Endosulfan I | 0.000330 | 0.000330 | mg/kg |
| Endosulfan II | 0.000330 | 0.000330 | mg/kg |
| Endosulfan sulfate | 0.000330 | 0.000330 | mg/kg |
| Endrin | 0.000330 | 0.000330 | mg/kg |
| Endrin [2C] | 0.000330 | 0.000330 | mg/kg |
| Endrin aldehyde | 0.000330 | 0.000330 | mg/kg |
| Endrin aldehyde [2C] | 0.000330 | 0.000330 | mg/kg |
| Endrin ketone | 0.000330 | 0.000330 | mg/kg |
| Endrin ketone [2C] | 0.000330 | 0.000330 | mg/kg |
| gamma-BHC (Lindane) | 0.000330 | 0.000330 | mg/kg |
| gamma-Chlordane | 0.000330 | 0.000330 | mg/kg |
| Heptachlor | 0.000330 | 0.000330 | mg/kg |
| Heptachlor epoxide | 0.000330 | 0.000330 | mg/kg |
| Methoxychlor | 0.000330 | 0.000330 | mg/kg |
| Toxaphene | 0.0330 | 0.0330 | mg/kg |
| Chlordane, total (alpha, gamma) | 0.000330 | 0.000330 | mg/kg |

# HOLDING TIME SUMMARY

## EPA 8081B

Laboratory: York Analytical Laboratories, Inc. SDG: 16I0260

Client: Langan Engineering & Environmental Services (NYC) Project: 170301202 450 Union Street

| Sample Name | Date Collected | Date Received | Date Prepared | Days to Prep | Max Days to Prep | Date Analyzed | Days to Analysis | Max Days to Analysis | Q |
|---|---|---|---|---|---|---|---|---|---|
| V01_0-1.5 | 09/07/16 13:00 | 09/08/16 18:45 | 09/12/16 08:21 | 4.81 | 14.00 | 09/12/16 18:56 | 0.44 | 40.00 | |

**FORM I**

# ORGANIC ANALYSIS DATA SHEET

## EPA 8081B

V01_0-1.5

Laboratory: York Analytical Laboratories, Inc. SDG: 16I0260

Client: Langan Engineering & Environmental Services (NYC) Project: 170301202 450 Union Street

Matrix: Soil Laboratory ID: 16I0260-01 File ID: P5019790.D

Sampled: 09/07/16 13:00 Prepared: 09/12/16 08:21 Analyzed: 09/12/16 18:56

Solids: 96.56 Preparation: EPA 3550C Initial/Final: 30 g / 10 mL

Batch: BI60374 Sequence: Y6I1309 Calibration: YH60012 Instrument: GC Dual E

| CAS NO. | COMPOUND | DILUTION | CONC. (mg/kg dry) | Q |
|---|---|---|---|---|
| 72-54-8 | 4,4'-DDD | 5 | 0.00171 | U |
| 72-55-9 | 4,4'-DDE | 5 | 0.00171 | U |
| 50-29-3 | 4,4'-DDT | 5 | 0.00171 | U |
| 309-00-2 | Aldrin | 5 | 0.00171 | U |
| 319-84-6 | alpha-BHC | 5 | 0.00171 | U |
| 5103-71-9 | alpha-Chlordane | 5 | 0.00171 | U |
| 319-85-7 | beta-BHC | 5 | 0.00171 | U |
| 57-74-9 | Chlordane, total | 5 | 0.0684 | U |
| 319-86-8 | delta-BHC | 5 | 0.00171 | U |
| 60-57-1 | Dieldrin | 5 | 0.00171 | U |
| 959-98-8 | Endosulfan I | 5 | 0.00171 | U |
| 33213-65-9 | Endosulfan II | 5 | 0.00171 | U |
| 1031-07-8 | Endosulfan sulfate | 5 | 0.00171 | U |
| 72-20-8 | Endrin | 5 | 0.00171 | U |
| 7421-93-4 | Endrin aldehyde | 5 | 0.00171 | U |
| 53494-70-5 | Endrin ketone | 5 | 0.00171 | U |
| 58-89-9 | gamma-BHC (Lindane) | 5 | 0.00171 | U |
| 5566-34-7 | gamma-Chlordane | 5 | 0.00171 | U |
| 76-44-8 | Heptachlor | 5 | 0.00171 | U |
| 1024-57-3 | Heptachlor epoxide | 5 | 0.00171 | U |
| 72-43-5 | Methoxychlor | 5 | 0.00171 | U |
| 8001-35-2 | Toxaphene | 5 | 0.171 | U |
| | Chlordane, total (alpha, gamma) | 5 | 0.00171 | U |

| SYSTEM MONITORING COMPOUND | ADDED (mg/kg dry) | CONC (mg/kg dry) | % REC | QC LIMITS | Q |
|---|---|---|---|---|---|
| Decachlorobiphenyl | 0.0690 | 0.0439 | 63.6 | 30 - 150 | |
| Tetrachloro-m-xylene | 0.0690 | 0.0481 | 69.7 | 30 - 150 | |

* Values outside of QC limits

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\091216\P5019790.D\ECD1A.CH Vial: 31
Signal #2 : C:\HPCHEM\1\DATA\091216\P5019790.D\ECD2B.CH
Acq On : 12 Sep 2016 6:56 pm Operator: AMC
Sample : 16I0260-01 Inst : GC DUAL E
Misc : QBPEST5-091216A Multiplr: 5.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Sep 13 10:34 2016 Quant Results File: P5081116.RES

Quant Method : C:\HPCHEM\1\METHODS\P5081116.M (Chemstation Integrator)
Title : 08/11/16 - Stx-CLP & CLP2 - single tower,dual det
Last Update : Tue Sep 13 10:21:00 2016
Response via : Initial Calibration
DataAcq Meth : PEST.M

Volume Inj. : 1 uL
Signal #1 Phase : Stx-CLPesticides Signal #2 Phase: Stx-CLPesticides2 Serial # 1124629
Signal #1 Info : .32 Signal #2 Info : .32

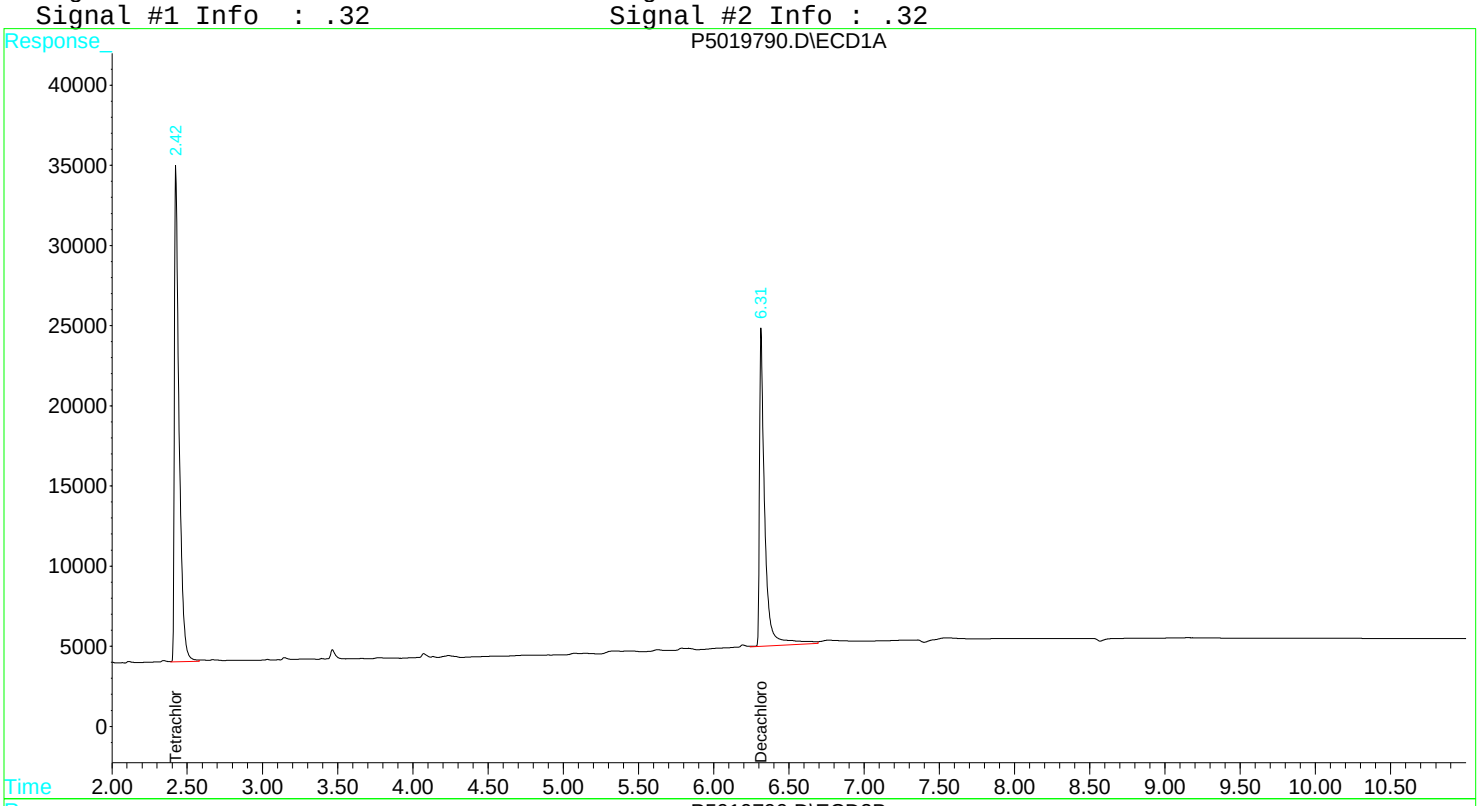
| | Compound | RT#1 | RT#2 | Resp#1 | Resp#2 | ng/mL | ng/mL |
|---|---|---|---|---|---|---|---|
| | **System Monitoring Compounds** | | | | | | |
| 1) | SA Tetrachloro-m-xy | 2.43 | 2.71 | 672036 | 567386 | 27.872 | 28.991 |
| | Spiked Amount 200.000 | Range 30 - 150 | | Recovery = | | 13.94%# | 14.50%# |
| 24) | SA Decachlorobiphen | 6.32 | 6.98 | 486266 | 371768 | 25.452 | 20.705 |
| | Spiked Amount 200.000 | Range 30 - 150 | | Recovery = | | 12.73%# | 10.35%# |
| | **Target Compounds** | | | | | | |
| 2) | M alpha-BHC | 0.00 | 0.00 | 0 | 0 | N.D. | N.D. |
| 3) | M gamma-BHC (Linda | 0.00 | 0.00 | 0 | 0 | N.D. | N.D. |
| 4) | M beta-BHC | 0.00 | 0.00 | 0 | 0 | N.D. | N.D. |
| 5) | M delta-BHC | 0.00 | 0.00 | 0 | 0 | N.D. d | N.D. |
| 6) | M Heptachlor | 0.00 | 0.00 | 0 | 0 | N.D. | N.D. |
| 7) | M Aldrin | 0.00 | 0.00 | 0 | 0 | N.D. | N.D. d |
| 8) | M Alachlor | 0.00 | 0.00 | 0 | 0 | N.D. | N.D. |
| 9) | M Heptachlor Epoxi | 0.00 | 0.00 | 0 | 0 | N.D. | N.D. |
| 10) | M gamma-Chlordane | 0.00 | 0.00 | 0 | 0 | N.D. | N.D. |
| 11) | M alpha-Chlordane | 0.00 | 0.00 | 0 | 0 | N.D. d | N.D. d |
| 12) | M Endosulfan I | 0.00 | 0.00 | 0 | 0 | N.D. | N.D. |
| 13) | M 4,4'-DDE | 0.00 | 0.00 | 0 | 0 | N.D. | N.D. |
| 14) | M Dieldrin | 0.00 | 0.00 | 0 | 0 | N.D. | N.D. |
| 15) | M Endrin | 0.00 | 0.00 | 0 | 0 | N.D. | N.D. |
| 16) | M 4,4'-DDD | 0.00 | 0.00 | 0 | 0 | N.D. | N.D. |
| 17) | M Endosulfan II | 0.00 | 0.00 | 0 | 0 | N.D. | N.D. |
| 18) | M 4,4'-DDT | 0.00 | 0.00 | 0 | 0 | N.D. | N.D. |
| 19) | M Endrin Aldehyde | 0.00 | 0.00 | 0 | 0 | N.D. d | N.D. |
| 20) | M Methoxychlor | 0.00 | 0.00 | 0 | 0 | N.D. | N.D. |
| 21) | M Mirex | 0.00 | 0.00 | 0 | 0 | N.D. d | N.D. |
| 22) | M Endosulfan sulfa | 0.00 | 0.00 | 0 | 0 | N.D. d | N.D. |
| 23) | M Endrin Ketone | 0.00 | 0.00 | 0 | 0 | N.D. d | N.D. |

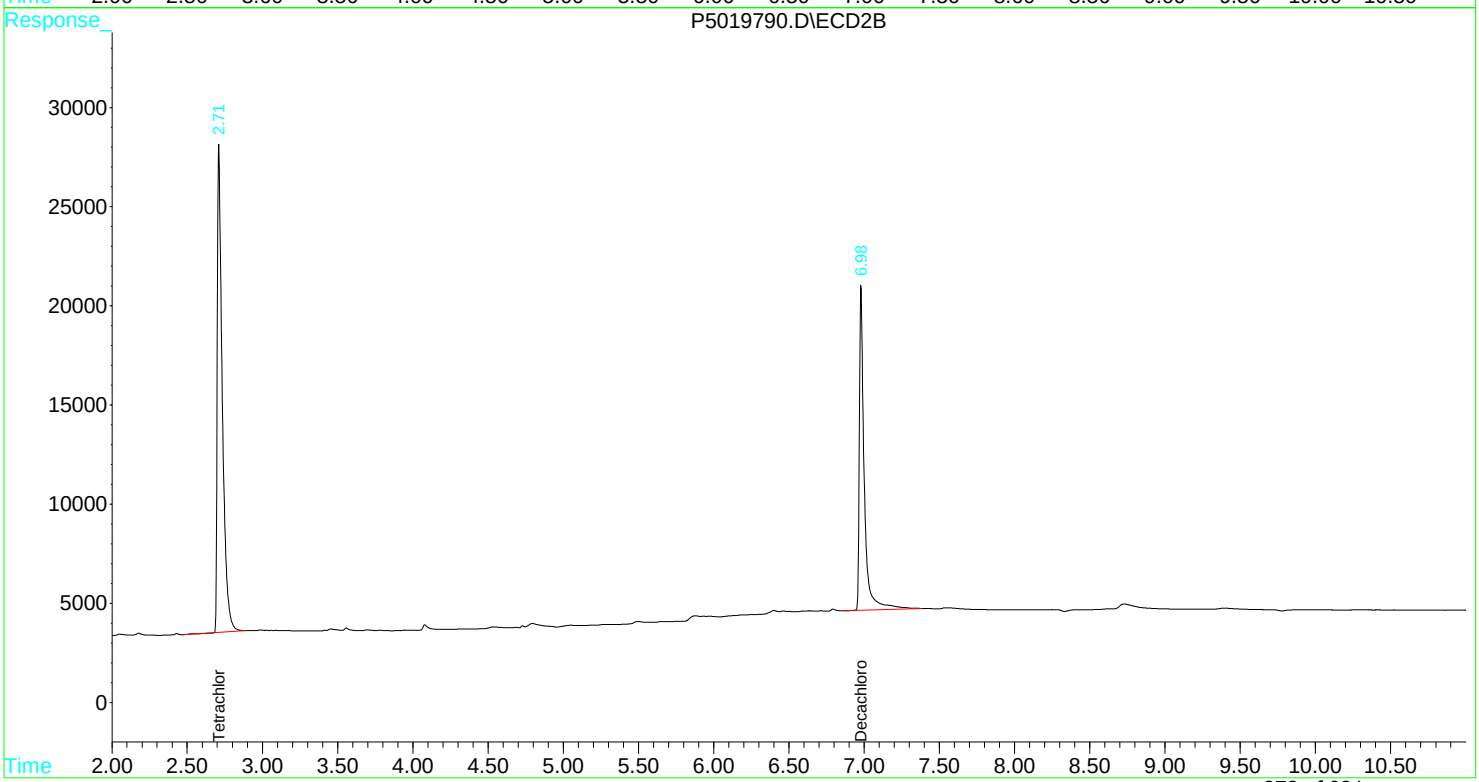
Quantitation Report

Signal #1 : C:\HPCHEM\1\DATA\091216\P5019790.D\ECD1A.CH  Vial: 31
Signal #2 : C:\HPCHEM\1\DATA\091216\P5019790.D\ECD2B.CH
Acq On    : 12 Sep 2016   6:56 pm                    Operator: AMC
Sample    : 16I0260-01                               Inst    : GC DUAL E
Misc      : QBPEST5-091216A                          Multiplr: 5.00
IntFile Signal #1: EVENTS.E     IntFile Signal #2: EVENTS2.E
Quant Time: Sep 13 10:34 2016  Quant Results File: P5081116.RES

Quant Method : C:\HPCHEM\1\METHODS\P5081116.M (Chemstation Integrator)
Title        : 08/11/16 - Stx-CLP & CLP2 - single tower,dual det
Last Update  : Tue Sep 13 10:21:00 2016
Response via : Multiple Level Calibration
DataAcq Meth : PEST.M

Volume Inj.     : 1 uL
Signal #1 Phase : Stx-CLPesticides  Signal #2 Phase: Stx-CLPesticides2 Serial # 1124629
Signal #1 Info  : .32               Signal #2 Info : .32



# Response Factor Report GC DUAL E

Method : C:\HPCHEM\1\METHODS\P5081116.M (Chemstation Integrator)
Title : 08/11/16 - Stx-CLP & CLP2 - single tower,dual det
Last Update : Thu Aug 11 17:07:14 2016

Calibration Files
200 =P5018856.D 100 =P5018855.D 50 =P5018854.D
20 =P5018853.D 5 =P5018852.D 1 =P5018851.D

| | | Compound | 200 | 100 | 50 | 20 | 5 | 1 | Avg | | %RSD |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1) | S | Tetrachloro-m-xylen | 2.291 | 2.383 | 2.598 | 2.341 | 2.517 | 2.336 | 2.411 | E4 | 4.98 |
| 2) | M | alpha-BHC | 2.716 | 2.872 | 2.849 | 2.389 | 2.081 | 2.304 | 2.535 | E4 | 12.79 |
| 3) | M | gamma-BHC (Lindane) | 2.306 | 2.511 | 2.551 | 2.235 | 2.044 | 1.884 | 2.255 | E4 | 11.54 |
| 4) | M | beta-BHC | 1.367 | 1.465 | 1.374 | 1.311 | 1.293 | 1.263 | 1.345 | E4 | 5.39 |
| 5) | M | delta-BHC | 2.228 | 2.374 | 2.179 | 1.808 | 1.665 | 1.766 | 2.003 | E4 | 14.61 |
| 6) | M | Heptachlor | 1.990 | 2.199 | 2.389 | 2.211 | 2.450 | 2.656 | 2.316 | E4 | 10.03 |
| 7) | M | Aldrin | 2.080 | 2.252 | 2.343 | 2.049 | 2.012 | 2.098 | 2.139 | E4 | 6.05 |
| 8) | M | Alachlor | 4.200 | 4.582 | 4.768 | 4.437 | 4.998 | 5.469 | 4.742 | E3 | 9.46 |
| 9) | M | Heptachlor Epoxide | 1.821 | 2.010 | 2.134 | 2.067 | 2.439 | 2.234 | 2.118 | E4 | 9.88 |
| 10) | M | gamma-Chlordane | 2.043 | 2.216 | 2.266 | 2.113 | 2.280 | 2.501 | 2.236 | E4 | 7.09 |
| 11) | M | alpha-Chlordane | 1.864 | 2.067 | 2.170 | 2.055 | 2.194 | 2.322 | 2.112 | E4 | 7.36 |
| 12) | M | Endosulfan I | 2.458 | 2.646 | 2.707 | 2.232 | 2.636 | 2.588 | 2.545 | E4 | 6.85 |
| 13) | M | 4,4'-DDE | 1.273 | 1.407 | 1.397 | 1.017 | 1.069 | 1.043 | 1.201 | E4 | 15.00 |
| 14) | M | Dieldrin | 1.961 | 2.126 | 2.166 | 1.987 | 2.038 | 2.085 | 2.060 | E4 | 3.88 |
| 15) | M | Endrin | 1.422 | 1.594 | 1.673 | 1.551 | 1.652 | 1.637 | 1.588 | E4 | 5.81 |
| 16) | M | 4,4'-DDD | 1.284 | 1.194 | 1.133 | 0.914 | 1.012 | 0.898 | 1.072 | E4 | 14.59 |
| 17) | M | Endosulfan II | 1.737 | 1.914 | 1.930 | 1.739 | 1.673 | 2.072 | 1.844 | E4 | 8.25 |
| 18) | M | 4,4'-DDT | 1.508 | 1.474 | 1.421 | 1.207 | 1.243 | 1.063 | 1.319 | E4 | 13.29 |
| 19) | M | Endrin Aldehyde | 1.457 | 1.629 | 1.510 | 1.589 | 1.732 | 1.844 | 1.627 | E4 | 8.78 |
| 20) | M | Methoxychlor | 7.047 | 7.043 | 6.718 | 5.883 | 5.578 | 4.816 | 6.181 | E3 | 14.65 |
| 21) | M | Mirex | 1.167 | 1.294 | 1.249 | 1.194 | 1.313 | 1.821 | 1.340 | E4 | 18.08 |
| 22) | M | Endosulfan sulfate | 1.917 | 2.325 | 2.294 | 2.348 | 2.269 | 2.304 | 2.243 | E4 | 7.21 |
| 23) | M | Endrin Ketone | 1.752 | 1.892 | 1.852 | 1.879 | 1.922 | 1.981 | 1.880 | E4 | 4.07 |
| 24) | SA | Decachlorobiphenyl | 1.830 | 1.812 | 1.949 | 1.819 | 2.038 | 2.014 | 1.911 | E4 | 5.40 |

Signal #2 Calibration Files
200 =P5018856.D 100 =P5018855.D 50 =P5019111.D
20 =P5018853.D 5 =P5018852.D 1 =P5018851.D

| | | Compound | 200 | 100 | 50 | 20 | 5 | 1 | Avg | | %RSD |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1) | SA | Tetrachloro-m-xylen | 1.925 | 1.983 | 2.160 | 1.937 | 1.973 | 1.765 | 1.957 | E4 | 6.48 |
| 2) | M | alpha-BHC | 2.792 | 2.807 | 2.661 | 2.214 | 1.957 | 2.273 | 2.451 | E4 | 14.35 |
| 3) | M | gamma-BHC (Lindane) | 2.343 | 2.441 | 2.374 | 1.967 | 1.761 | 1.761 | 2.108 | E4 | 14.97 |
| 4) | M | beta-BHC | 1.373 | 1.388 | 1.147 | 1.026 | 1.015 | 1.054 | 1.167 | E4 | 14.70 |
| 5) | M | delta-BHC | 1.547 | 1.642 | 1.537 | 1.313 | 1.220 | 1.335 | 1.432 | E4 | 11.56 |
| 6) | M | Heptachlor | 2.964 | 3.026 | 2.873 | 2.280 | 2.207 | 2.545 | 2.649 | E4 | 13.44 |
| 7) | M | Aldrin | 2.337 | 2.399 | 2.357 | 2.063 | 2.237 | 3.114 | 2.418 | E4 | 14.96 |
| 8) | M | Alachlor | 2.878 | 3.140 | 3.195 | 3.052 | 2.892 | 2.938 | 3.016 | E3 | 4.43 |
| 9) | M | Heptachlor Epoxide | 1.942 | 2.016 | 1.992 | 1.720 | 1.811 | 1.827 | 1.885 | E4 | 6.19 |
| 10) | M | gamma-Chlordane | 2.096 | 2.150 | 2.081 | 1.788 | 1.797 | 1.791 | 1.951 | E4 | 8.99 |
| 11) | M | alpha-Chlordane | 1.607 | 1.721 | 1.754 | 1.633 | 1.659 | 1.686 | 1.677 | E4 | 3.29 |
| 12) | M | Endosulfan I | 2.236 | 2.318 | 2.258 | 1.874 | 1.840 | 1.793 | 2.053 | E4 | 11.75 |
| 13) | M | 4,4'-DDE | 2.002 | 2.116 | 1.953 | 1.729 | 1.612 | 1.596 | 1.835 | E4 | 11.91 |
| 14) | M | Dieldrin | 2.071 | 2.121 | 2.054 | 1.791 | 1.719 | 1.709 | 1.911 | E4 | 9.99 |

(#) = Out of Range

Method : C:\HPCHEM\1\METHODS\P5081116.M (Chemstation Integrator)
Title : 08/11/16 - Stx-CLP & CLP2 - single tower,dual det
Last Update : Thu Aug 11 17:07:14 2016

Calibration Files
200 =P5018856.D 100 =P5018855.D 50 =P5019111.D
20 =P5018853.D 5 =P5018852.D 1 =P5018851.D

| | | Compound | 200 | 100 | 50 | 20 | 5 | 1 | Avg | | %RSD |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 15) | M | Endrin | 1.343 | 1.449 | 1.478 | 1.315 | 1.417 | 1.323 | 1.387 | E4 | 5.01 |
| 16) | M | 4,4'-DDD | 1.435 | 1.293 | 1.095 | 1.009 | 1.081 | 1.049 | 1.160 | E4 | 14.37 |
| 17) | M | Endosulfan II | 1.900 | 1.962 | 1.857 | 1.744 | 1.736 | 1.400 | 1.766 | E4 | 11.33 |
| 18) | M | 4,4'-DDT | 1.357 | 1.361 | 1.240 | 1.101 | 1.073 | 0.962 | 1.182 | E4 | 13.78 |
| 19) | M | Endrin Aldehyde | 1.552 | 1.627 | 1.403 | 1.381 | 1.522 | 1.328 | 1.469 | E4 | 7.86 |
| 20) | M | Methoxychlor | 6.177 | 5.603 | 5.427 | 5.372 | 5.198 | 3.922 | 5.283 | E3 | 14.14 |
| 21) | M | Mirex | 0.949 | 0.850 | 0.795 | 0.855 | 0.829 | 1.080 | 0.893 | E4 | 11.77 |
| 22) | M | Endosulfan sulfate | 1.515 | 1.540 | 1.362 | 1.312 | 1.368 | 1.227 | 1.387 | E4 | 8.64 |
| 23) | M | Endrin Ketone | 2.692 | 2.785 | 2.682 | 2.423 | 2.622 | 2.037 | 2.540 | E4 | 10.82 |
| 24) | SA | Decachlorobiphenyl | 1.804 | 1.754 | 1.913 | 1.651 | 1.884 | 1.768 | 1.796 | E4 | 5.30 |

(#) = Out of Range

# Calibration Retention Time Report GC DUAL E

Method : C:\HPCHEM\1\METHODS\P5081116.M (Chemstation Integrator)
Title : 08/11/16 - Stx-CLP & CLP2 - single tower,dual det
Last Update : Thu Aug 11 17:07:14 2016
Response via : Initial Calibration

First Calibration Standard : C:\HPCHEM\1\DATA\081116\P5018851.D\ECD1A.CH
Second Calibration Standard : P5018853.D
Third Calibration Standard : P5018855.D

| Compound | RT of Standard First | Second | Third | Mean RT | RT Window From | To |
|---|---|---|---|---|---|---|
| 1 Tetrachloro-m-xylene | 2.447 | 2.446 | 2.446 | 2.446 | 2.399 | 2.459 |
| 2 alpha-BHC | 2.796 | 2.799 | 2.797 | 2.797 | 2.746 | 2.806 |
| 3 gamma-BHC (Lindane) | 3.012 | 3.013 | 3.011 | 3.012 | 2.962 | 3.022 |
| 4 beta-BHC | 3.073 | 3.074 | 3.071 | 3.073 | 3.021 | 3.081 |
| 5 delta-BHC | 3.200 | 3.203 | 3.201 | 3.202 | 3.149 | 3.209 |
| 6 Heptachlor | 3.370 | 3.370 | 3.368 | 3.370 | 3.316 | 3.376 |
| 7 Aldrin | 3.602 | 3.603 | 3.601 | 3.602 | 3.548 | 3.608 |
| 8 Alachlor | 3.684 | 3.685 | 3.683 | 3.684 | 3.158 | 4.158 |
| 9 Heptachlor Epoxide | 4.069 | 4.070 | 4.069 | 4.069 | 4.014 | 4.074 |
| 10 gamma-Chlordane | 4.173 | 4.172 | 4.171 | 4.172 | 4.117 | 4.177 |
| 11 alpha-Chlordane | 4.275 | 4.275 | 4.273 | 4.274 | 4.219 | 4.279 |
| 12 Endosulfan I | 4.372 | 4.370 | 4.369 | 4.370 | 4.314 | 4.374 |
| 13 4,4'-DDE | 4.334 | 4.335 | 4.332 | 4.334 | 4.278 | 4.338 |
| 14 Dieldrin | 4.556 | 4.558 | 4.557 | 4.557 | 4.500 | 4.560 |
| 15 Endrin | 4.725 | 4.727 | 4.725 | 4.726 | 4.671 | 4.731 |
| 16 4,4'-DDD | 4.797 | 4.788 | 4.780 | 4.788 | 4.738 | 4.798 |
| 17 Endosulfan II | 4.891 | 4.888 | 4.888 | 4.889 | 4.833 | 4.893 |
| 18 4,4'-DDT | 4.990 | 4.989 | 4.985 | 4.988 | 4.935 | 4.995 |
| 19 Endrin Aldehyde | 5.179 | 5.179 | 5.177 | 5.179 | 5.122 | 5.182 |
| 20 Methoxychlor | 5.360 | 5.355 | 5.349 | 5.355 | 5.302 | 5.362 |
| 21 Mirex | 5.447 | 5.446 | 5.444 | 5.446 | 4.920 | 5.920 |
| 22 Endosulfan sulfate | 5.470 | 5.471 | 5.470 | 5.471 | 5.413 | 5.473 |
| 23 Endrin Ketone | 5.672 | 5.671 | 5.669 | 5.671 | 5.614 | 5.674 |
| 24 Decachlorobiphenyl | 6.351 | 6.348 | 6.345 | 6.348 | 6.293 | 6.353 |

Signal #2

First Calibration Standard : C:\HPCHEM\1\DATA\081116\P5018851.D\ECD2B.CH
Second Calibration Standard : C:\HPCHEM\1\DATA\081116\P5018853.D\ECD2B.CH
Third Calibration Standard : C:\HPCHEM\1\DATA\081116\P5018855.D\ECD2B.CH

| Compound | RT of Standard First | Second | Third | Mean RT | RT Window From | To |
|---|---|---|---|---|---|---|
| 1 Tetrachloro-m-xylene | 2.729 | 2.732 | 2.730 | 2.730 | 2.683 | 2.743 |
| 2 alpha-BHC | 3.181 | 3.185 | 3.183 | 3.183 | 3.136 | 3.196 |
| 3 gamma-BHC (Lindane) | 3.468 | 3.468 | 3.469 | 3.468 | 3.421 | 3.481 |
| 4 beta-BHC | 3.537 | 3.539 | 3.536 | 3.537 | 3.490 | 3.550 |
| 5 delta-BHC | 3.792 | 3.795 | 3.794 | 3.794 | 3.745 | 3.805 |
| 6 Heptachlor | 3.832 | 3.833 | 3.831 | 3.832 | 3.783 | 3.843 |
| 7 Aldrin | 4.108 | 4.112 | 4.111 | 4.110 | 4.062 | 4.122 |
| 8 Alachlor | 3.993 | 3.996 | 3.994 | 3.994 | 3.475 | 4.475 |
| 9 Heptachlor Epoxide | 4.565 | 4.568 | 4.566 | 4.567 | 4.519 | 4.579 |
| 10 gamma-Chlordane | 4.711 | 4.714 | 4.712 | 4.713 | 4.665 | 4.725 |
| 11 alpha-Chlordane | 4.819 | 4.822 | 4.820 | 4.820 | 4.773 | 4.833 |
| 12 Endosulfan I | 4.869 | 4.870 | 4.868 | 4.869 | 4.821 | 4.881 |
| 13 4,4'-DDE | 4.935 | 4.935 | 4.934 | 4.934 | 4.887 | 4.947 |
| 14 Dieldrin | 5.074 | 5.075 | 5.074 | 5.074 | 5.027 | 5.087 |
| 15 Endrin | 5.297 | 5.299 | 5.297 | 5.298 | 5.249 | 5.309 |

| | | | | | | |
|---|---|---|---|---|---|---|
| 16 4,4'-DDD | 5.367 | 5.361 | 5.356 | 5.361 | 5.317 | 5.377 |
| 17 Endosulfan II | 5.452 | 5.452 | 5.451 | 5.452 | 5.405 | 5.465 |
| 18 4,4'-DDT | 5.573 | 5.572 | 5.572 | 5.572 | 5.527 | 5.587 |
| 19 Endrin Aldehyde | 5.681 | 5.681 | 5.678 | 5.680 | 5.632 | 5.692 |
| 20 Methoxychlor | 6.047 | 6.040 | 6.037 | 6.042 | 5.997 | 6.057 |
| 21 Mirex | 6.203 | 6.203 | 6.201 | 6.203 | 5.685 | 6.685 |
| 22 Endosulfan sulfate | 5.860 | 5.863 | 5.861 | 5.861 | 5.813 | 5.873 |
| 23 Endrin Ketone | 6.231 | 6.228 | 6.228 | 6.229 | 6.183 | 6.243 |
| 24 Decachlorobiphenyl | 7.008 | 7.007 | 7.002 | 7.005 | 6.957 | 7.017 |

P5081116.M Fri Aug 19 08:58:41 2016

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\081116\P5018851.D\ECD1A.CH Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\081116\P5018851.D\ECD2B.CH
Acq On : 11 Aug 2016 12:57 pm Operator: AMC
Sample : SEQ-CAL1 Inst : GC DUAL E
Misc : QBPEST5-081116A Y16G101, PEST CAL 1.0ng/ Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 11 17:06 2016 Quant Results File: P5052516.RES

Quant Method : C:\HPCHEM\1\METHODS\P5052516.M (Chemstation Integrator)
Title : 05/25/16 - Stx-CLP & CLP2 - single tower,dual det
Last Update : Wed Jun 29 12:02:51 2016
Response via : Initial Calibration
DataAcq Meth : PEST.M

Volume Inj. : 1 uL
Signal #1 Phase : Stx-CLPesticides Signal #2 Phase: Stx-CLPesticides2 Se
Signal #1 Info : .32 Signal #2 Info : .32

| | | Compound | RT#1 | RT#2 | Resp#1 | Resp#2 | ng/mL | ng/mL |
|---|---|---|---|---|---|---|---|---|
| | | System Monitoring Compounds | | | | | | |
| 1) | SA | Tetrachloro-m-xy | 2.45f | 2.73f | 934595 | 706047 | 41.049 | 40.763m |
| | | Spiked Amount 200.000 | Range 30 - 150 | | Recovery = | | 20.52%# | 20.38%# |
| 24) | SA | Decachlorobiphen | 6.35f | 7.01f | 805766 | 707088 | 49.432 | 49.709m |
| | | Spiked Amount 200.000 | Range 30 - 150 | | Recovery = | | 24.72%# | 24.85%# |
| | | Target Compounds | | | | | | |
| 2) | M | alpha-BHC | 2.80f | 3.18f | 23037 | 22732 | 0.985m | 1.029m |
| 3) | M | gamma-BHC (Linda | 3.01f | 3.47f | 18836 | 17610 | 0.895 | 0.907m |
| 4) | M | beta-BHC | 3.07f | 3.54f | 12633 | 10543 | 1.088 | 0.984m |
| 5) | M | delta-BHC | 3.20f | 3.79f | 17657 | 13350 | 0.930m | 0.969m |
| 6) | M | Heptachlor | 3.37f | 3.83f | 26559 | 25452 | 1.206 | 1.096m |
| 7) | M | Aldrin | 3.60f | 4.11f | 20981 | 31143 | 1.038 | 1.434m# |
| 8) | M | Alachlor | 3.68 | 3.99 | 5469 | 2938 | 1.391 | 1.014m# |
| 9) | M | Heptachlor Epoxi | 4.07f | 4.57f | 22336 | 18269 | 1.170m | 1.055m |
| 10) | M | gamma-Chlordane | 4.17f | 4.71f | 25005 | 17907 | 1.253 | 1.032m |
| 11) | M | alpha-Chlordane | 4.28f | 4.82f | 23218 | 16861 | 1.226 | 1.161m |
| 12) | M | Endosulfan I | 4.37f | 4.87f | 25884 | 17925 | 1.229 | 1.006 |
| 13) | M | 4,4'-DDE | 4.33f | 4.93f | 10428 | 15963 | 0.791m | 0.890m |
| 14) | M | Dieldrin | 4.56f | 5.07f | 20846 | 17089 | 1.170m | 0.954 |
| 15) | M | Endrin | 4.72f | 5.30f | 16369 | 13232 | 1.228m | 1.062m |
| 16) | M | 4,4'-DDD | 4.80 | 5.37 | 8984 | 10488 | 0.826m | 0.865m |
| 17) | M | Endosulfan II | 4.89f | 5.45f | 20724 | 13999 | 1.410 | 0.897 # |
| 18) | M | 4,4'-DDT | 4.99f | 5.57 | 10634 | 9622 | 0.875m | 0.842m |
| 19) | M | Endrin Aldehyde | 5.18f | 5.68f | 18437 | 13280 | 1.424m | 0.943 # |
| 20) | M | Methoxychlor | 5.36 | 6.05 | 4816 | 3922 | 0.752m | 0.625m |
| 21) | M | Mirex | 5.45 | 6.20 | 18206 | 10801 | 1.409m | 1.280m |
| 22) | M | Endosulfan sulfa | 5.47f | 5.86f | 23041 | 12271 | 1.294m | 0.955m# |
| 23) | M | Endrin Ketone | 5.67f | 6.23 | 19811 | 20366 | 1.354 | 0.971 # |

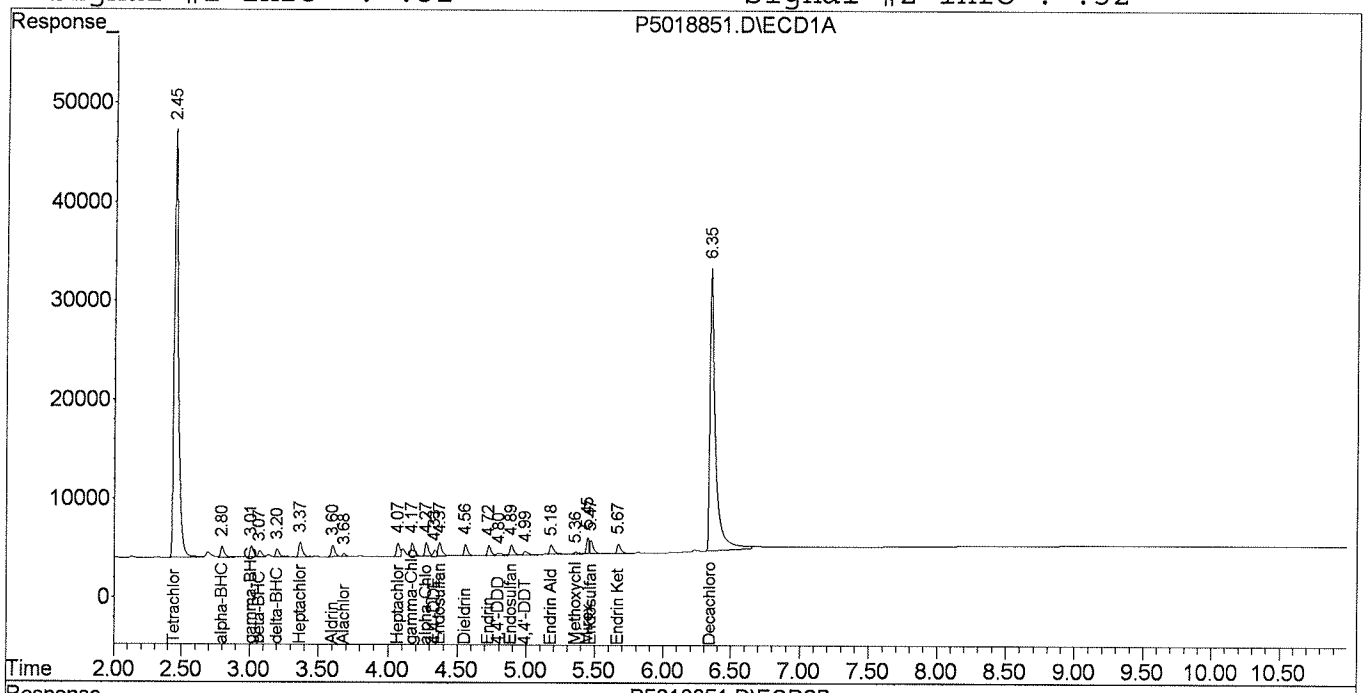
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

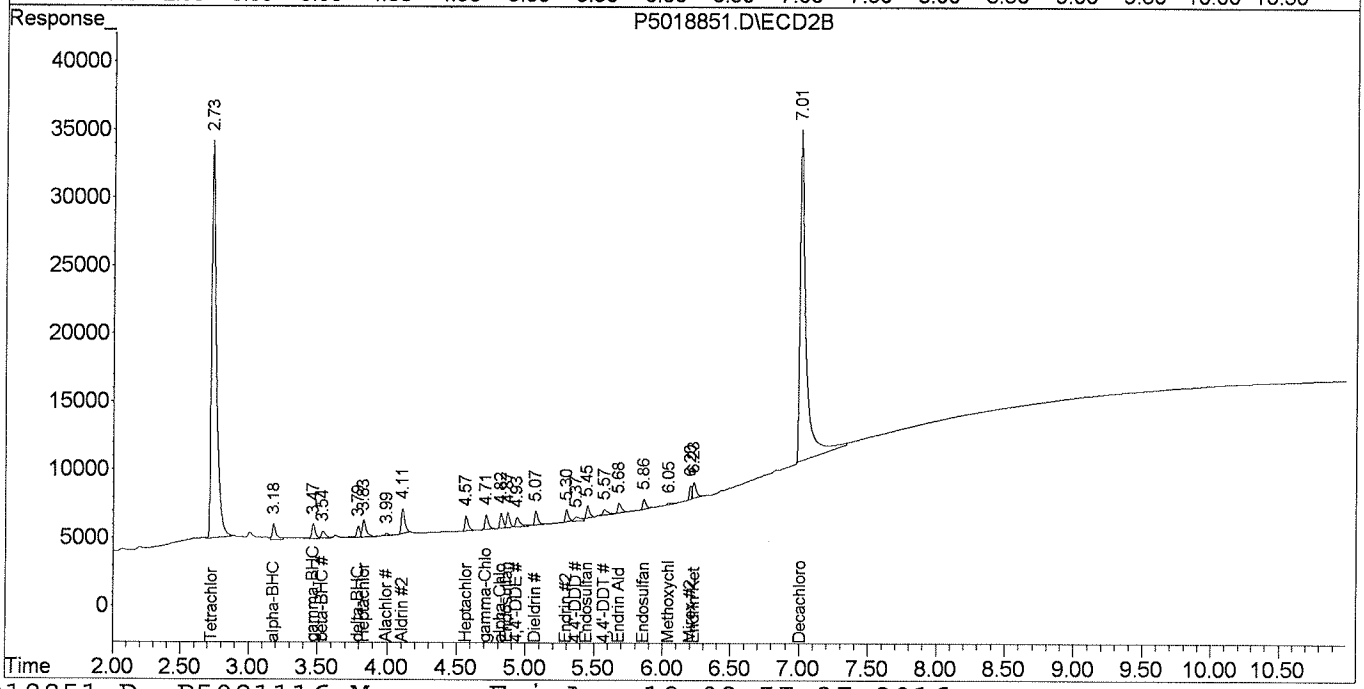
# Quantitation Report

Signal #1 : C:\HPCHEM\1\DATA\081116\P5018851.D\ECD1A.CH Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\081116\P5018851.D\ECD2B.CH
Acq On : 11 Aug 2016 12:57 pm Operator: AMC
Sample : SEQ-CAL1 Inst : GC DUAL E
Misc : QBPEST5-081116A Y16G101, PEST CAL 1.0ng/ Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 11 17:06 2016 Quant Results File: P5052516.RES

Quant Method : C:\HPCHEM\1\METHODS\P5052516.M (Chemstation Integrator)
Title : 05/25/16 - Stx-CLP & CLP2 - single tower,dual det
Last Update : Wed Jun 29 12:02:51 2016
Response via : Multiple Level Calibration
DataAcq Meth : PEST.M

Volume Inj. : 1 uL
Signal #1 Phase : Stx-CLPesticides Signal #2 Phase: Stx-CLPesticides2 Se
Signal #1 Info : .32 Signal #2 Info : .32



Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\081116\P5018852.D\ECD1A.CH Vial: 3
Signal #2 : C:\HPCHEM\1\DATA\081116\P5018852.D\ECD2B.CH
Acq On : 11 Aug 2016 1:12 pm Operator: AMC
Sample : SEQ-CAL2 Inst : GC DUAL E
Misc : QBPEST5-081116A Y16G102, PEST CAL 5.0ng/ Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 11 17:07 2016 Quant Results File: P5052516.RES

Quant Method : C:\HPCHEM\1\METHODS\P5052516.M (Chemstation Integrator)
Title : 05/25/16 - Stx-CLP & CLP2 - single tower,dual det
Last Update : Wed Jun 29 12:02:51 2016
Response via : Initial Calibration
DataAcq Meth : PEST.M

Volume Inj. : 1 uL
Signal #1 Phase : Stx-CLPesticides Signal #2 Phase: Stx-CLPesticides2 Se
Signal #1 Info : .32 Signal #2 Info : .32

| | | Compound | RT#1 | RT#2 | Resp#1 | Resp#2 | ng/mL | ng/mL |
|---|---|---|---|---|---|---|---|---|
| | | System Monitoring Compounds | | | | | | |
| 1) | SA | Tetrachloro-m-xy | 2.45f | 2.73f | 2013491 | 1578624 | 88.436 | 91.141m |
| | | Spiked Amount 200.000 | Range 30 - 150 | | Recovery = | | 44.22% | 45.57% |
| 24) | SA | Decachlorobiphen | 6.35f | 7.00f | 1630773 | 1507138 | 100.044 | 105.952m |
| | | Spiked Amount 200.000 | Range 30 - 150 | | Recovery = | | 50.02% | 52.98% |
| | | Target Compounds | | | | | | |
| 2) | M | alpha-BHC | 2.80f | 3.18f | 104060 | 97854 | 4.448 | 4.430 |
| 3) | M | gamma-BHC (Linda | 3.01f | 3.47f | 102189 | 88044 | 4.856 | 4.537 |
| 4) | M | beta-BHC | 3.07f | 3.54f | 64636 | 50750 | 5.569 | 4.738 |
| 5) | M | delta-BHC | 3.20f | 3.79f | 83249 | 60998 | 4.385m | 4.429 |
| 6) | M | Heptachlor | 3.37f | 3.83f | 122499 | 110329 | 5.564 | 4.750 |
| 7) | M | Aldrin | 3.60f | 4.11f | 100598 | 111834 | 4.976 | 5.148 |
| 8) | M | Alachlor | 3.68 | 3.99 | 24990 | 14460 | 6.357 | 4.993 |
| 9) | M | Heptachlor Epoxi | 4.07f | 4.57f | 121943 | 90556 | 6.388 | 5.229m |
| 10) | M | gamma-Chlordane | 4.17f | 4.71f | 114012 | 89850 | 5.711 | 5.176 |
| 11) | M | alpha-Chlordane | 4.27f | 4.82f | 109687 | 82962 | 5.792 | 5.710 |
| 12) | M | Endosulfan I | 4.37f | 4.87f | 131810 | 92014 | 6.259 | 5.165 |
| 13) | M | 4,4'-DDE | 4.33f | 4.93f | 53464 | 80596 | 4.055m | 4.495m |
| 14) | M | Dieldrin | 4.56f | 5.07f | 101902 | 85954 | 5.718 | 4.800 |
| 15) | M | Endrin | 4.73f | 5.30f | 82593 | 70836 | 6.198 | 5.685m |
| 16) | M | 4,4'-DDD | 4.79f | 5.36 | 50577 | 54036 | 4.653m | 4.457m |
| 17) | M | Endosulfan II | 4.89f | 5.45f | 83672 | 86776 | 5.694m | 5.562 |
| 18) | M | 4,4'-DDT | 4.99f | 5.57f | 62156 | 53668 | 5.112 | 4.698m |
| 19) | M | Endrin Aldehyde | 5.18f | 5.68f | 86581 | 76101 | 6.688m | 5.406 |
| 20) | M | Methoxychlor | 5.35f | 6.04 | 27890 | 25988 | 4.353m | 4.139m |
| 21) | M | Mirex | 5.45 | 6.20 | 65644 | 41441 | 5.082m | 4.910m |
| 22) | M | Endosulfan sulfa | 5.47f | 5.86f | 113467 | 68422 | 6.374m | 5.324 |
| 23) | M | Endrin Ketone | 5.67f | 6.23f | 96115 | 131089 | 6.571m | 6.248 |

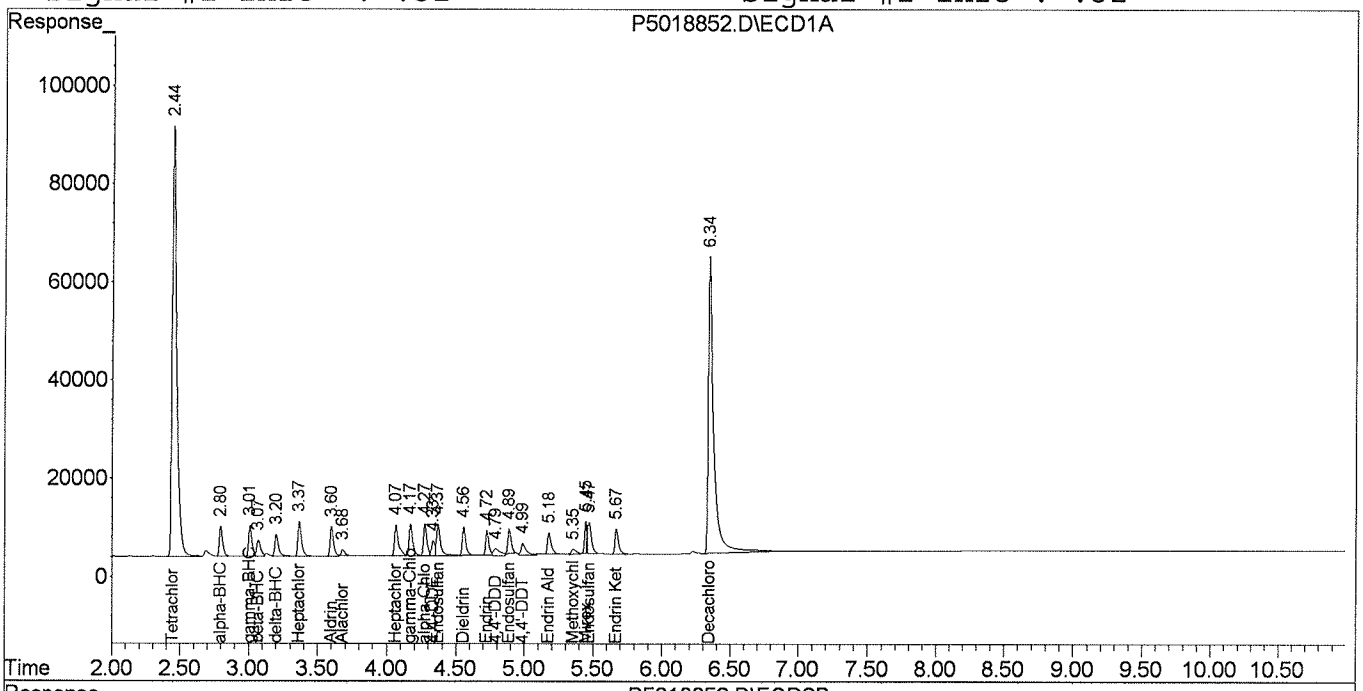
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

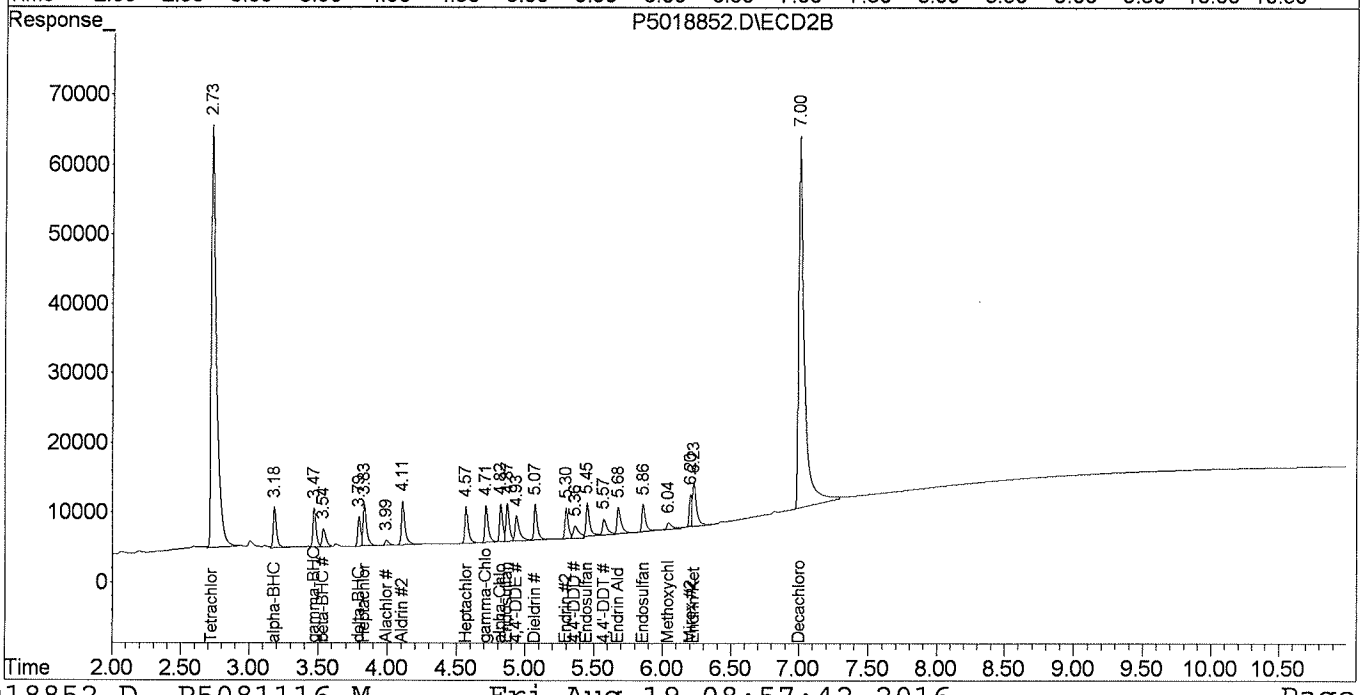
Quantitation Report

Signal #1 : C:\HPCHEM\1\DATA\081116\P5018852.D\ECD1A.CH Vial: 3
Signal #2 : C:\HPCHEM\1\DATA\081116\P5018852.D\ECD2B.CH
Acq On : 11 Aug 2016 1:12 pm Operator: AMC
Sample : SEQ-CAL2 Inst : GC DUAL E
Misc : QBPEST5-081116A Y16G102, PEST CAL 5.0ng/ Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 11 17:07 2016 Quant Results File: P5052516.RES

Quant Method : C:\HPCHEM\1\METHODS\P5052516.M (Chemstation Integrator)
Title : 05/25/16 - Stx-CLP & CLP2 - single tower,dual det
Last Update : Wed Jun 29 12:02:51 2016
Response via : Multiple Level Calibration
DataAcq Meth : PEST.M

Volume Inj. : 1 uL
Signal #1 Phase : Stx-CLPesticides Signal #2 Phase: Stx-CLPesticides2 Se
Signal #1 Info : .32 Signal #2 Info : .32



Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\081116\P5018853.D\ECD1A.CH Vial: 4
Signal #2 : C:\HPCHEM\1\DATA\081116\P5018853.D\ECD2B.CH
Acq On : 11 Aug 2016 1:27 pm Operator: AMC
Sample : SEQ-CAL3 Inst : GC DUAL E
Misc : QBPEST5-081116A Y16G103, PEST CAL 20.0ng Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 11 16:58 2016 Quant Results File: P5052516.RES

Quant Method : C:\HPCHEM\1\METHODS\P5052516.M (Chemstation Integrator)
Title : 05/25/16 - Stx-CLP & CLP2 - single tower,dual det
Last Update : Wed Jun 29 12:02:51 2016
Response via : Initial Calibration
DataAcq Meth : PEST.M

Volume Inj. : 1 uL
Signal #1 Phase : Stx-CLPesticides Signal #2 Phase: Stx-CLPesticides2 Se
Signal #1 Info : .32 Signal #2 Info : .32

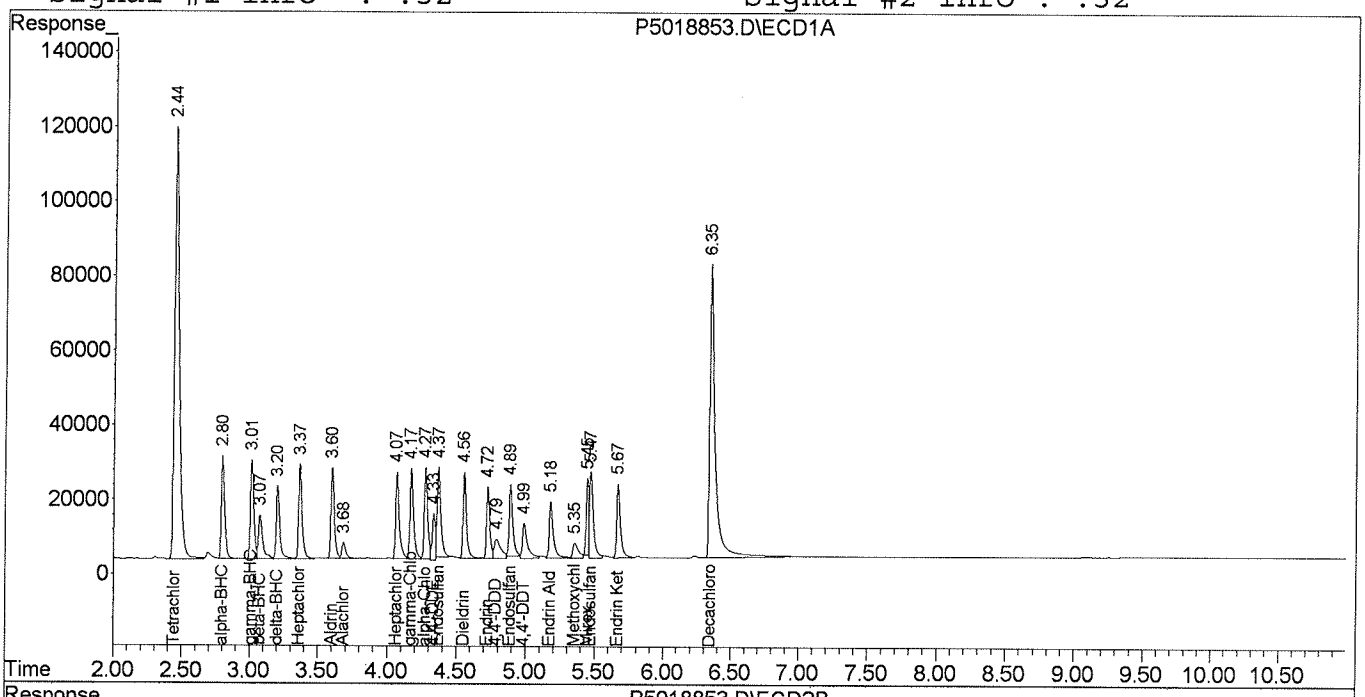
| | Compound | RT#1 | RT#2 | Resp#1 | Resp#2 | ng/mL | ng/mL |
|---|---|---|---|---|---|---|---|
| | System Monitoring Compounds | | | | | | |
| 1) | SA Tetrachloro-m-xy | 2.45f | 2.73 | 2809513 | 2323857 | 123.399 | 134.166 |
| | Spiked Amount 200.000 | Range 30 - 150 | | Recovery = | | 61.70% | 67.08% |
| 24) | SA Decachlorobiphen | 6.35f | 7.01f | 2183065 | 1980866 | 133.926 | 139.256m |
| | Spiked Amount 200.000 | Range 30 - 150 | | Recovery = | | 66.96% | 69.63% |
| | Target Compounds | | | | | | |
| 2) | M alpha-BHC | 2.80f | 3.18 | 477742 | 442807 | 20.420 | 20.045 |
| 3) | M gamma-BHC (Linda | 3.01f | 3.47f | 447026 | 393465 | 21.241 | 20.275m |
| 4) | M beta-BHC | 3.07f | 3.54 | 262129 | 205200 | 22.584 | 19.156 |
| 5) | M delta-BHC | 3.20f | 3.80f | 361505 | 262543 | 19.042 | 19.062 |
| 6) | M Heptachlor | 3.37f | 3.83f | 442164 | 456099 | 20.084 | 19.638 |
| 7) | M Aldrin | 3.60f | 4.11f | 409793 | 412547 | 20.269 | 18.989 |
| 8) | M Alachlor | 3.68 | 4.00 | 88745 | 61045 | 22.576 | 21.076 |
| 9) | M Heptachlor Epoxi | 4.07f | 4.57f | 413450 | 343975 | 21.659 | 19.862 |
| 10) | M gamma-Chlordane | 4.17f | 4.71f | 422534 | 357587 | 21.165 | 20.600 |
| 11) | M alpha-Chlordane | 4.27f | 4.82f | 411077 | 326514 | 21.706 | 22.473 |
| 12) | M Endosulfan I | 4.37f | 4.87f | 446488 | 374721 | 21.201m | 21.034 |
| 13) | M 4,4'-DDE | 4.33f | 4.93f | 203455 | 345824 | 15.432m | 19.286m |
| 14) | M Dieldrin | 4.56f | 5.08f | 397440 | 358132 | 22.302 | 19.998 |
| 15) | M Endrin | 4.73f | 5.30f | 310273 | 262928 | 23.284 | 21.100 |
| 16) | M 4,4'-DDD | 4.79f | 5.36 | 182783 | 201841 | 16.815m | 16.648m |
| 17) | M Endosulfan II | 4.89f | 5.45 | 347853 | 348750 | 23.670m | 22.354 |
| 18) | M 4,4'-DDT | 4.99f | 5.57f | 241457 | 220118 | 19.857 | 19.269m |
| 19) | M Endrin Aldehyde | 5.18f | 5.68f | 317726 | 276243 | 24.543 | 19.622 |
| 20) | M Methoxychlor | 5.36f | 6.04 | 117654 | 107430 | 18.364 | 17.109m |
| 21) | M Mirex | 5.45 | 6.20 | 238837 | 170929 | 18.489m | 20.253m |
| 22) | M Endosulfan sulfa | 5.47f | 5.86f | 469528 | 262372 | 26.376 | 20.417 |
| 23) | M Endrin Ketone | 5.67f | 6.23f | 375897 | 484506 | 25.699 | 23.094m |

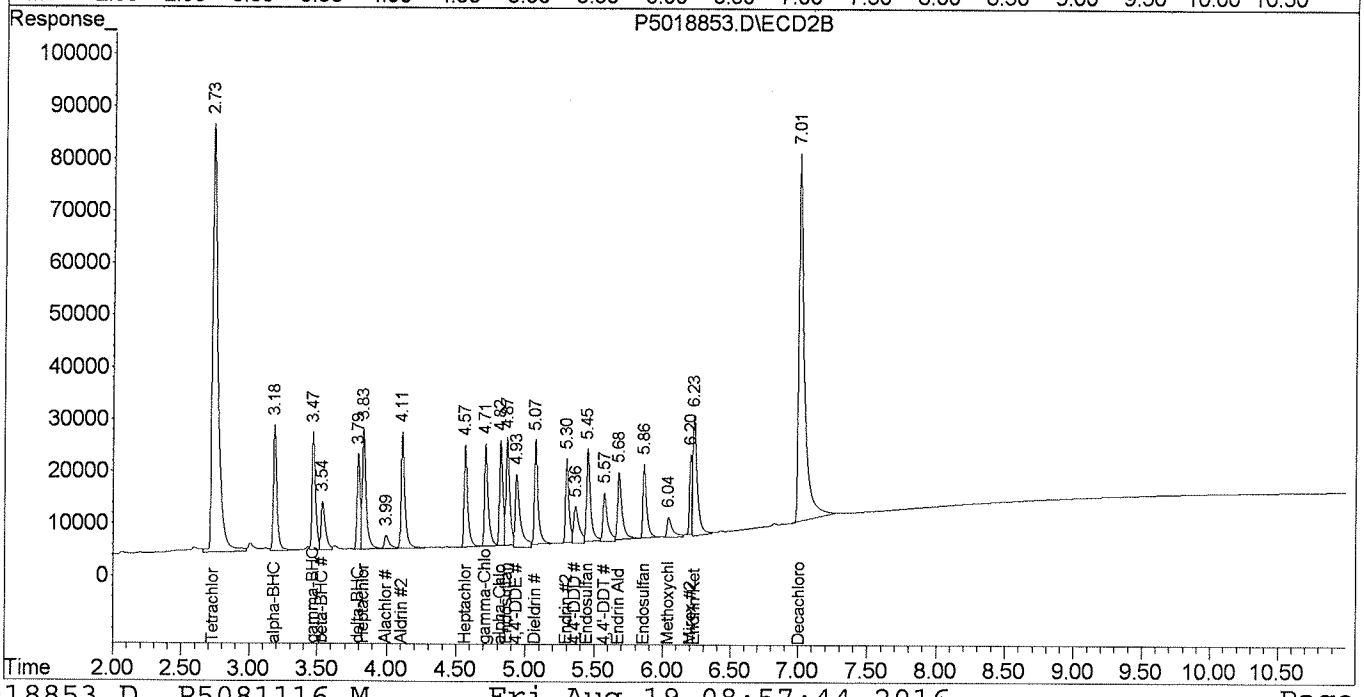
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Signal #1 : C:\HPCHEM\1\DATA\081116\P5018853.D\ECD1A.CH Vial: 4
Signal #2 : C:\HPCHEM\1\DATA\081116\P5018853.D\ECD2B.CH
Acq On : 11 Aug 2016 1:27 pm Operator: AMC
Sample : SEQ-CAL3 Inst : GC DUAL E
Misc : QBPEST5-081116A Y16G103, PEST CAL 20.0ng Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 11 16:58 2016 Quant Results File: P5052516.RES

Quant Method : C:\HPCHEM\1\METHODS\P5052516.M (Chemstation Integrator)
Title : 05/25/16 - Stx-CLP & CLP2 - single tower,dual det
Last Update : Wed Jun 29 12:02:51 2016
Response via : Multiple Level Calibration
DataAcq Meth : PEST.M

Volume Inj. : 1 uL
Signal #1 Phase : Stx-CLPesticides Signal #2 Phase: Stx-CLPesticides2 Se
Signal #1 Info : .32 Signal #2 Info : .32



Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\081116\P5018854.D\ECD1A.CH Vial: 5
Signal #2 : C:\HPCHEM\1\DATA\081116\P5018854.D\ECD2B.CH
Acq On : 11 Aug 2016 1:42 pm Operator: AMC
Sample : SEQ-CAL4 Inst : GC DUAL E
Misc : QBPEST5-081116A Y16G104, PEST CAL 50.0ng Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 11 17:05 2016 Quant Results File: P5052516.RES

Quant Method : C:\HPCHEM\1\METHODS\P5052516.M (Chemstation Integrator)
Title : 05/25/16 - Stx-CLP & CLP2 - single tower,dual det
Last Update : Wed Jun 29 12:02:51 2016
Response via : Initial Calibration
DataAcq Meth : PEST.M

Volume Inj. : 1 uL
Signal #1 Phase : Stx-CLPesticides Signal #2 Phase: Stx-CLPesticides2 Se
Signal #1 Info : .32 Signal #2 Info : .32

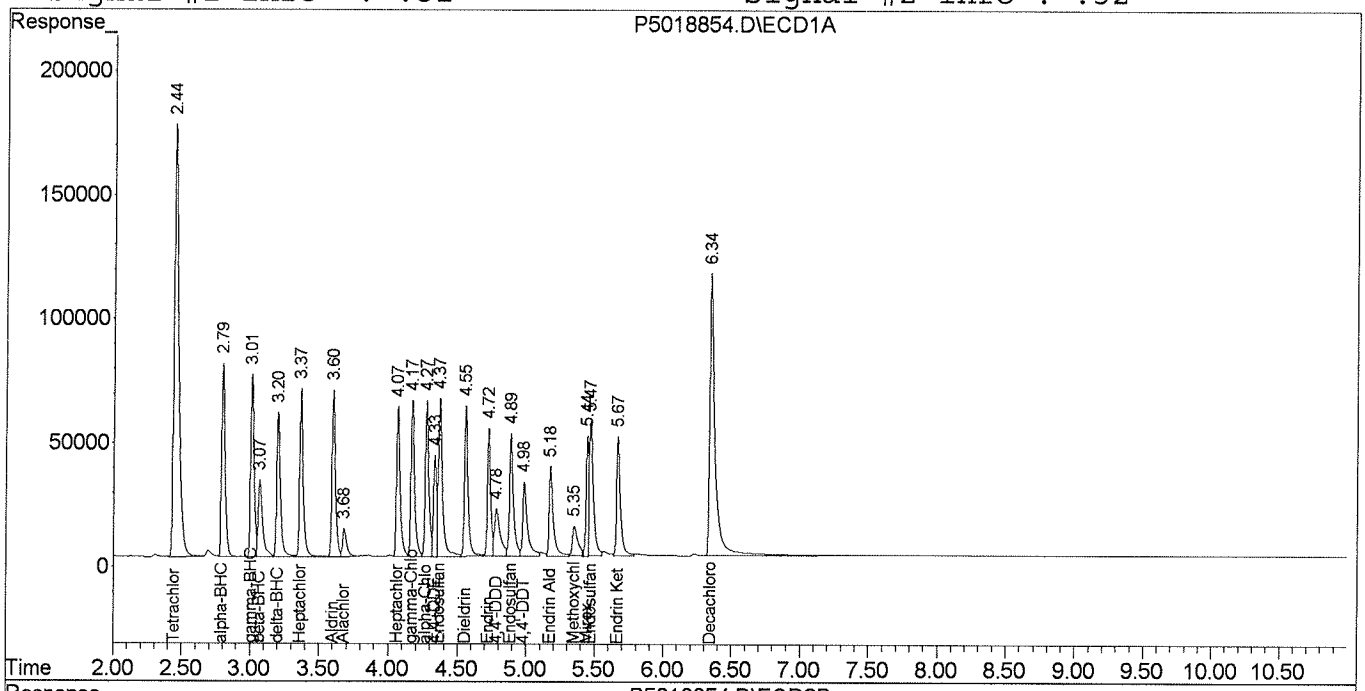
| | | Compound | RT#1 | RT#2 | Resp#1 | Resp#2 | ng/mL | ng/mL |
|---|---|---|---|---|---|---|---|---|
| | | System Monitoring Compounds | | | | | | |
| 1) | SA | Tetrachloro-m-xy | 2.45f | 2.73f | 4157503 | 3455724 | 182.605 | 199.513 |
| | | Spiked Amount 200.000 | Range 30 - 150 | | Recovery = | | 91.30% | 99.76% |
| 24) | SA | Decachlorobiphen | 6.35f | 7.01f | 3118696 | 3061120 | 191.324 | 215.198m |
| | | Spiked Amount 200.000 | Range 30 - 150 | | Recovery = | | 95.66% | 107.60% |
| | | Target Compounds | | | | | | |
| 2) | M | alpha-BHC | 2.80f | 3.18f | 1424438 | 1330407 | 60.885 | 60.226 |
| 3) | M | gamma-BHC (Linda | 3.01f | 3.47f | 1275448 | 1187105 | 60.605 | 61.171 |
| 4) | M | beta-BHC | 3.07f | 3.54f | 686838 | 573577 | 59.175 | 53.544 |
| 5) | M | delta-BHC | 3.20f | 3.79f | 1089696 | 768527 | 57.398 | 55.799 |
| 6) | M | Heptachlor | 3.37f | 3.83f | 1194683 | 1436549 | 54.265 | 61.852 |
| 7) | M | Aldrin | 3.60f | 4.11f | 1171738 | 1178479 | 57.957 | 54.245 |
| 8) | M | Alachlor | 3.68 | 3.99 | 238383 | 159765 | 60.642 | 55.159 |
| 9) | M | Heptachlor Epoxi | 4.07f | 4.57f | 1067158 | 996143 | 55.904 | 57.520 |
| 10) | M | gamma-Chlordane | 4.17f | 4.71f | 1132957 | 1040680 | 56.752 | 59.951 |
| 11) | M | alpha-Chlordane | 4.27f | 4.82f | 1085058 | 877021 | 57.295 | 60.363 |
| 12) | M | Endosulfan I | 4.37f | 4.87f | 1353490 | 1128762 | 64.269 | 63.359 |
| 13) | M | 4,4'-DDE | 4.33f | 4.93f | 698374 | 976534 | 52.972m | 54.460 |
| 14) | M | Dieldrin | 4.56f | 5.07f | 1083097 | 1026902 | 60.777 | 57.342 |
| 15) | M | Endrin | 4.72f | 5.30f | 836349 | 738769 | 62.761 | 59.286 |
| 16) | M | 4,4'-DDD | 4.78f | 5.36f | 566491 | 547488 | 52.115 | 45.158m |
| 17) | M | Endosulfan II | 4.89f | 5.45f | 964769 | 928353 | 65.649 | 59.505 |
| 18) | M | 4,4'-DDT | 4.99f | 5.57f | 710574 | 620013 | 58.437 | 54.276 |
| 19) | M | Endrin Aldehyde | 5.18f | 5.68f | 754936 | 701410 | 58.317 | 49.823 |
| 20) | M | Methoxychlor | 5.35f | 6.04 | 335915 | 271358 | 52.433 | 43.216 |
| 21) | M | Mirex | 5.44 | 6.20 | 624457 | 397575 | 48.341m | 47.109m |
| 22) | M | Endosulfan sulfa | 5.47f | 5.86f | 1146827 | 680793 | 64.423 | 52.978 |
| 23) | M | Endrin Ketone | 5.67f | 6.23f | 926192 | 1341182 | 63.322 | 63.928 |

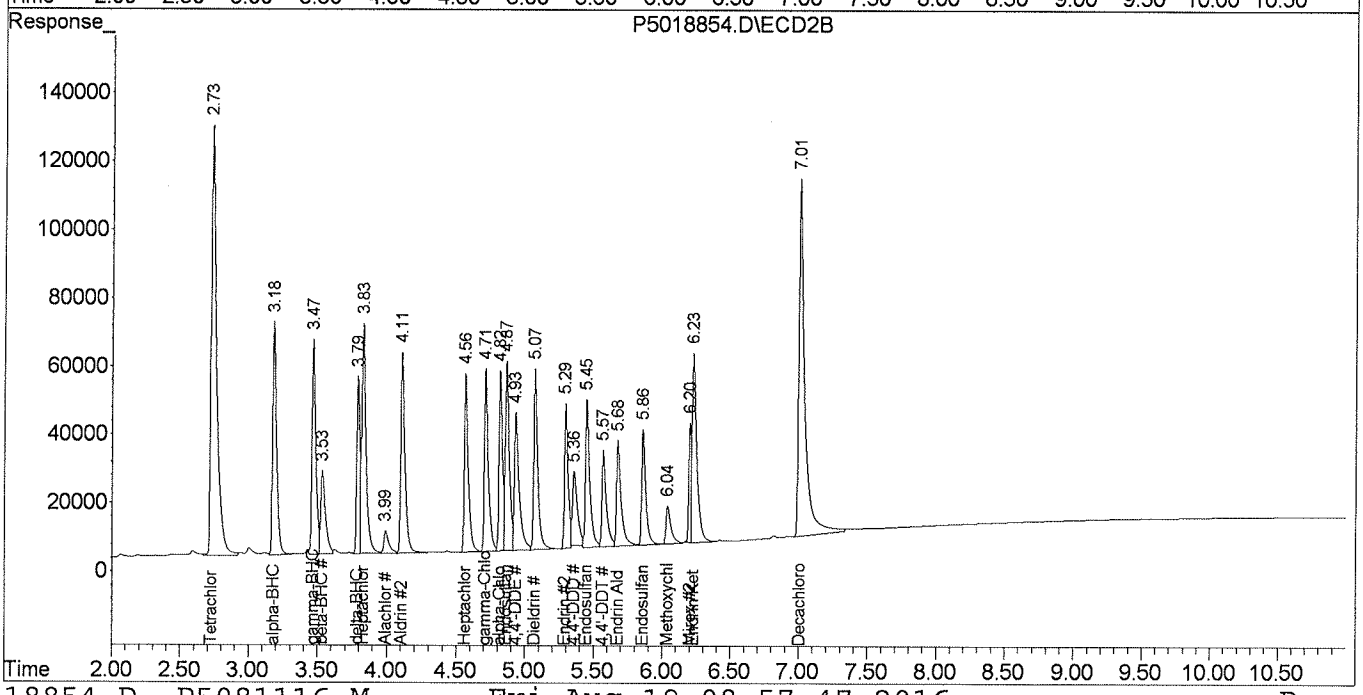
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Signal #1 : C:\HPCHEM\1\DATA\081116\P5018854.D\ECD1A.CH Vial: 5
Signal #2 : C:\HPCHEM\1\DATA\081116\P5018854.D\ECD2B.CH
Acq On : 11 Aug 2016 1:42 pm Operator: AMC
Sample : SEQ-CAL4 Inst : GC DUAL E
Misc : QBPEST5-081116A Y16G104, PEST CAL 50.0ng Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 11 17:05 2016 Quant Results File: P5052516.RES

Quant Method : C:\HPCHEM\1\METHODS\P5052516.M (Chemstation Integrator)
Title : 05/25/16 - Stx-CLP & CLP2 - single tower,dual det
Last Update : Wed Jun 29 12:02:51 2016
Response via : Multiple Level Calibration
DataAcq Meth : PEST.M

Volume Inj. : 1 uL
Signal #1 Phase : Stx-CLPesticides Signal #2 Phase: Stx-CLPesticides2 Se
Signal #1 Info : .32 Signal #2 Info : .32



Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\081116\P5018855.D\ECD1A.CH Vial: 6
Signal #2 : C:\HPCHEM\1\DATA\081116\P5018855.D\ECD2B.CH
Acq On : 11 Aug 2016 1:57 pm Operator: AMC
Sample : SEQ-CAL5 Inst : GC DUAL E
Misc : QBPEST5-081116A Y16G105, PEST CAL 100.0n Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 11 17:03 2016 Quant Results File: P5052516.RES

Quant Method : C:\HPCHEM\1\METHODS\P5052516.M (Chemstation Integrator)
Title : 05/25/16 - Stx-CLP & CLP2 - single tower,dual det
Last Update : Wed Jun 29 12:02:51 2016
Response via : Initial Calibration
DataAcq Meth : PEST.M

Volume Inj. : 1 uL
Signal #1 Phase : Stx-CLPesticides Signal #2 Phase: Stx-CLPesticides2 Se
Signal #1 Info : .32 Signal #2 Info : .32

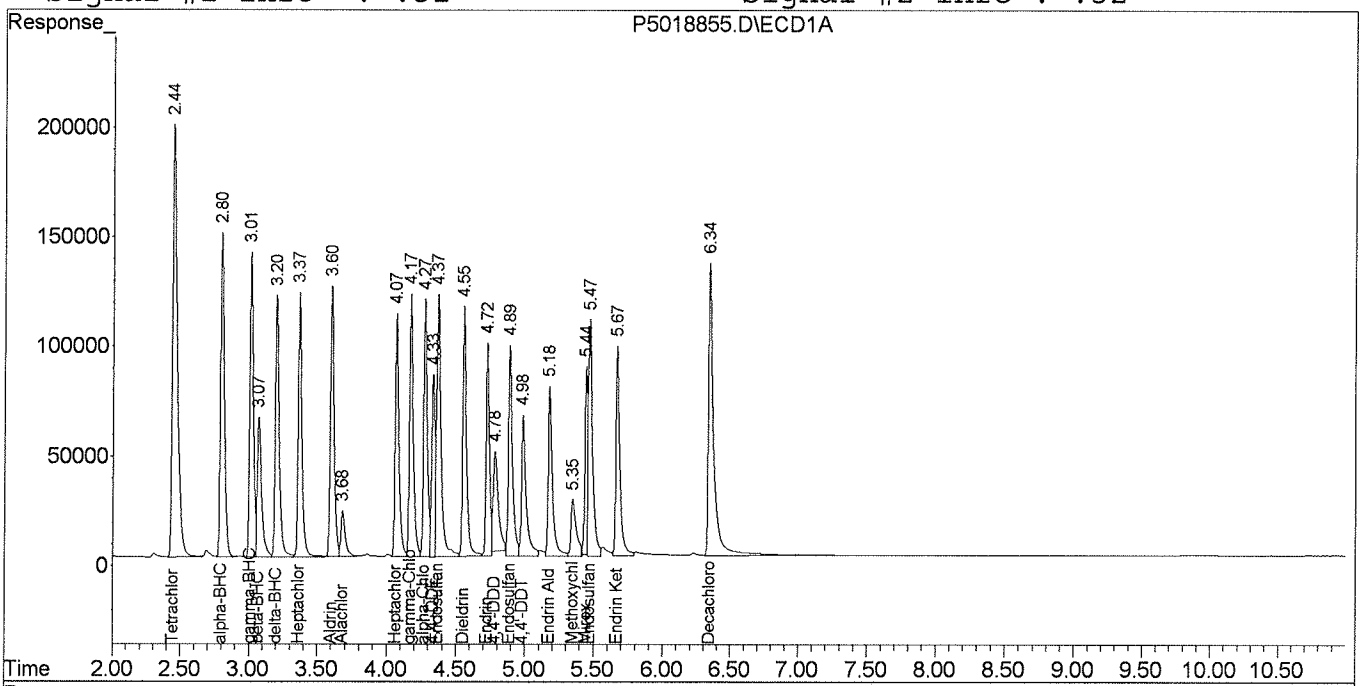
| | Compound | RT#1 | RT#2 | Resp#1 | Resp#2 | ng/mL | ng/mL |
|---|---|---|---|---|---|---|---|
| | System Monitoring Compounds | | | | | | |
| 1) | SA Tetrachloro-m-xy | 2.45f | 2.73f | 4765765 | 3966036 | 209.322 | 228.976 |
| | Spiked Amount 200.000 | Range 30 - 150 | | Recovery = | | 104.66% | 114.49% |
| 24) | SA Decachlorobiphen | 6.34f | 7.00f | 3623936 | 3507833 | 222.319 | 246.602m |
| | Spiked Amount 200.000 | Range 30 - 150 | | Recovery = | | 111.16% | 123.30% |
| | Target Compounds | | | | | | |
| 2) | M alpha-BHC | 2.80f | 3.18f | 2871620 | 2807285 | 122.741 | 127.082 |
| 3) | M gamma-BHC (Linda | 3.01f | 3.47f | 2511101 | 2440809 | 119.319 | 125.775 |
| 4) | M beta-BHC | 3.07f | 3.54f | 1465172 | 1387700 | 126.232 | 129.544 |
| 5) | M delta-BHC | 3.20f | 3.79f | 2374113 | 1642455 | 125.052 | 119.251 |
| 6) | M Heptachlor | 3.37f | 3.83f | 2198536 | 3026380 | 99.861 | 130.304 # |
| 7) | M Aldrin | 3.60f | 4.11f | 2251722 | 2398805 | 111.376 | 110.416 |
| 8) | M Alachlor | 3.68 | 3.99 | 458154 | 314030 | 116.548 | 108.420 |
| 9) | M Heptachlor Epoxi | 4.07f | 4.57f | 2010476 | 2015858 | 105.321 | 116.400 |
| 10) | M gamma-Chlordane | 4.17f | 4.71f | 2216179 | 2150443 | 111.012 | 123.882 |
| 11) | M alpha-Chlordane | 4.27f | 4.82f | 2066728 | 1720808 | 109.131 | 118.438 |
| 12) | M Endosulfan I | 4.37f | 4.87f | 2646136 | 2318175 | 125.649 | 130.123 |
| 13) | M 4,4'-DDE | 4.33f | 4.93f | 1407262 | 2116030 | 106.742m | 118.007 |
| 14) | M Dieldrin | 4.56f | 5.07f | 2125816 | 2121071 | 119.287 | 118.439 |
| 15) | M Endrin | 4.73f | 5.30f | 1594413 | 1448582 | 119.648 | 116.248 |
| 16) | M 4,4'-DDD | 4.78f | 5.36f | 1193958 | 1292655 | 109.840m | 106.620m |
| 17) | M Endosulfan II | 4.89f | 5.45f | 1914358 | 1962470 | 130.266 | 125.790 |
| 18) | M 4,4'-DDT | 4.99f | 5.57f | 1474327 | 1360689 | 121.248 | 119.114 |
| 19) | M Endrin Aldehyde | 5.18f | 5.68f | 1628733 | 1627002 | 125.815 | 115.569 |
| 20) | M Methoxychlor | 5.35f | 6.04f | 704259 | 560272 | 109.927 | 89.227m |
| 21) | M Mirex | 5.44 | 6.20 | 1293774 | 849983 | 100.155m | 100.715m |
| 22) | M Endosulfan sulfa | 5.47f | 5.86f | 2324843 | 1539953 | 130.598 | 119.836 |
| 23) | M Endrin Ketone | 5.67f | 6.23f | 1892003 | 2784930 | 129.352 | 132.746 |

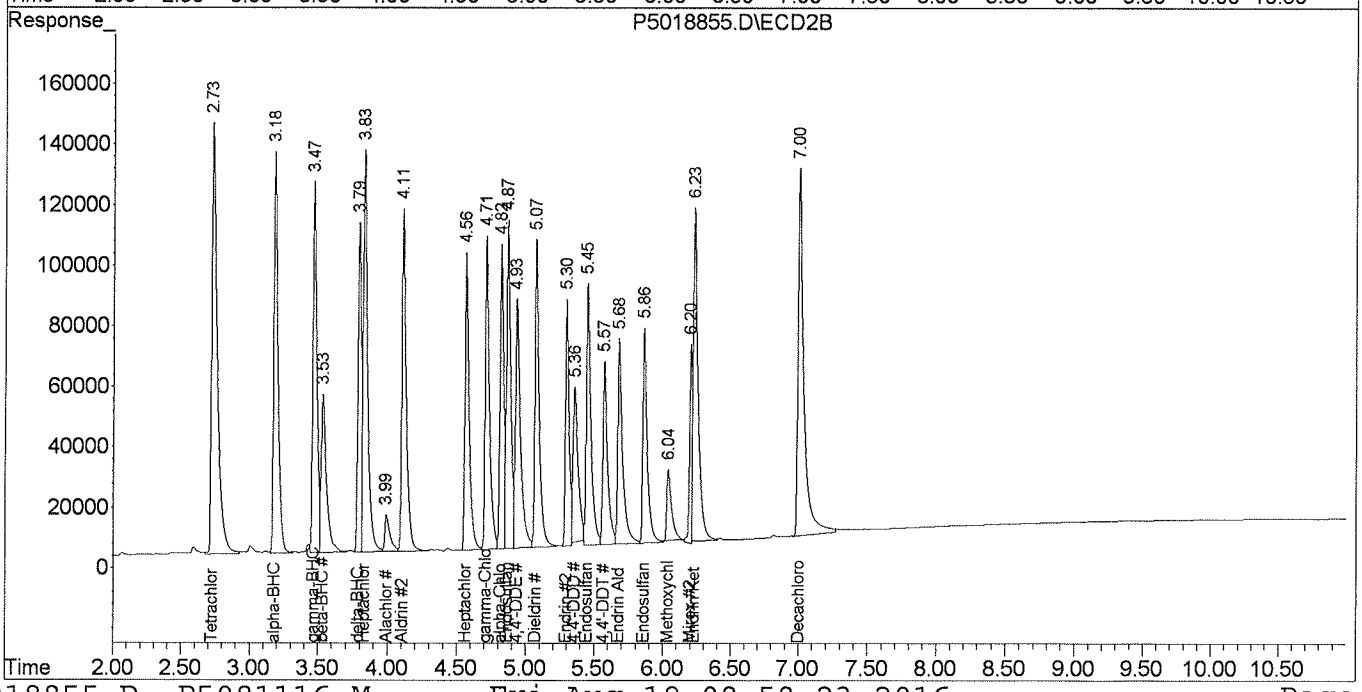
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Signal #1 : C:\HPCHEM\1\DATA\081116\P5018855.D\ECD1A.CH Vial: 6
Signal #2 : C:\HPCHEM\1\DATA\081116\P5018855.D\ECD2B.CH
Acq On : 11 Aug 2016 1:57 pm Operator: AMC
Sample : SEQ-CAL5 Inst : GC DUAL E
Misc : QBPEST5-081116A Y16G105, PEST CAL 100.0n Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 11 17:03 2016 Quant Results File: P5052516.RES

Quant Method : C:\HPCHEM\1\METHODS\P5052516.M (Chemstation Integrator)
Title : 05/25/16 - Stx-CLP & CLP2 - single tower,dual det
Last Update : Wed Jun 29 12:02:51 2016
Response via : Multiple Level Calibration
DataAcq Meth : PEST.M

Volume Inj. : 1 uL
Signal #1 Phase : Stx-CLPesticides Signal #2 Phase: Stx-CLPesticides2 Se
Signal #1 Info : .32 Signal #2 Info : .32



Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\081116\P5018856.D\ECD1A.CH Vial: 7
Signal #2 : C:\HPCHEM\1\DATA\081116\P5018856.D\ECD2B.CH
Acq On : 11 Aug 2016 2:12 pm Operator: AMC
Sample : SEQ-CAL6 Inst : GC DUAL E
Misc : QBPEST5-081116A Y16G106, PEST CAL 200.0n Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 11 17:01 2016 Quant Results File: P5052516.RES

Quant Method : C:\HPCHEM\1\METHODS\P5052516.M (Chemstation Integrator)
Title : 05/25/16 - Stx-CLP & CLP2 - single tower,dual det
Last Update : Wed Jun 29 12:02:51 2016
Response via : Initial Calibration
DataAcq Meth : PEST.M

Volume Inj. : 1 uL
Signal #1 Phase : Stx-CLPesticides Signal #2 Phase: Stx-CLPesticides2 Se
Signal #1 Info : .32 Signal #2 Info : .32

| | | Compound | RT#1 | RT#2 | Resp#1 | Resp#2 | ng/mL | ng/mL |
|---|---|---|---|---|---|---|---|---|
| | | System Monitoring Compounds | | | | | | |
| 1) | SA | Tetrachloro-m-xy | 2.45f | 2.73f | 5497918 | 4620002 | 241.479 | 266.732 |
| | | Spiked Amount 200.000 | Range 30 - 150 | | Recovery = | | 120.74% | 133.37% |
| 24) | SA | Decachlorobiphen | 6.35f | 7.00f | 4391959 | 4329107 | 269.436 | 304.338m |
| | | Spiked Amount 200.000 | Range 30 - 150 | | Recovery = | | 134.72% | 152.17%# |
| | | Target Compounds | | | | | | |
| 2) | M | alpha-BHC | 2.80f | 3.18f | 5432234 | 5583184 | 232.190 | 252.743 |
| 3) | M | gamma-BHC (Linda | 3.01f | 3.47f | 4612390 | 4686241 | 219.166 | 241.481 |
| 4) | M | beta-BHC | 3.07f | 3.53f | 2733954 | 2745464 | 235.545 | 256.294 |
| 5) | M | delta-BHC | 3.20f | 3.79f | 4456372 | 3093014 | 234.732 | 224.570 |
| 6) | M | Heptachlor | 3.37f | 3.83f | 3980469 | 5928184 | 180.800 | 255.243 # |
| 7) | M | Aldrin | 3.60f | 4.11f | 4160713 | 4674647 | 205.799 | 215.173 |
| 8) | M | Alachlor | 3.68 | 3.99 | 840042 | 575531 | 213.695 | 198.704 |
| 9) | M | Heptachlor Epoxi | 4.07f | 4.57f | 3642081 | 3884926 | 190.794 | 224.324 |
| 10) | M | gamma-Chlordane | 4.17f | 4.71f | 4086044 | 4191391 | 204.677 | 241.456 |
| 11) | M | alpha-Chlordane | 4.27f | 4.82f | 3727689 | 3213291 | 196.835 | 221.161 |
| 12) | M | Endosulfan I | 4.37f | 4.87f | 4915942 | 4472394 | 233.428 | 251.043 |
| 13) | M | 4,4'-DDE | 4.33f | 4.93f | 2546335 | 4003022 | 193.142m | 223.242m |
| 14) | M | Dieldrin | 4.56f | 5.07f | 3921067 | 4142343 | 220.025 | 231.306 |
| 15) | M | Endrin | 4.73f | 5.30f | 2844010 | 2685605 | 213.420 | 215.518 |
| 16) | M | 4,4'-DDD | 4.78f | 5.35f | 2568298 | 2870749 | 236.274m | 236.784m |
| 17) | M | Endosulfan II | 4.89f | 5.45f | 3474962 | 3800853 | 236.460 | 243.626 |
| 18) | M | 4,4'-DDT | 4.98f | 5.57f | 3015238 | 2713693 | 247.972 | 237.556m |
| 19) | M | Endrin Aldehyde | 5.18f | 5.68f | 2914554 | 3103521 | 225.141 | 220.450 |
| 20) | M | Methoxychlor | 5.35f | 6.04f | 1409393 | 1235302 | 219.991 | 196.730m |
| 21) | M | Mirex | 5.44 | 6.20 | 2334389 | 1898338 | 180.711m | 224.935m |
| 22) | M | Endosulfan sulfa | 5.47f | 5.86f | 3834609 | 3029385 | 215.408m | 235.741 |
| 23) | M | Endrin Ketone | 5.67f | 6.23f | 3503929 | 5384729 | 239.556 | 256.667 |

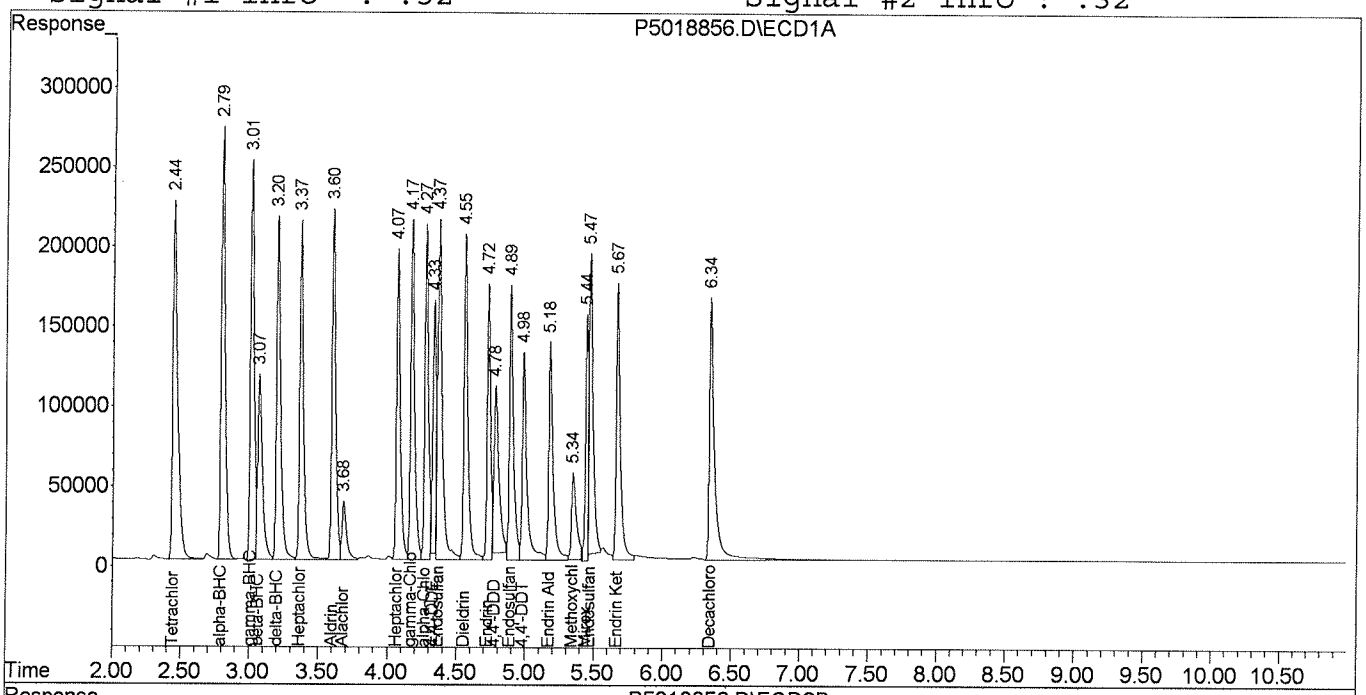
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

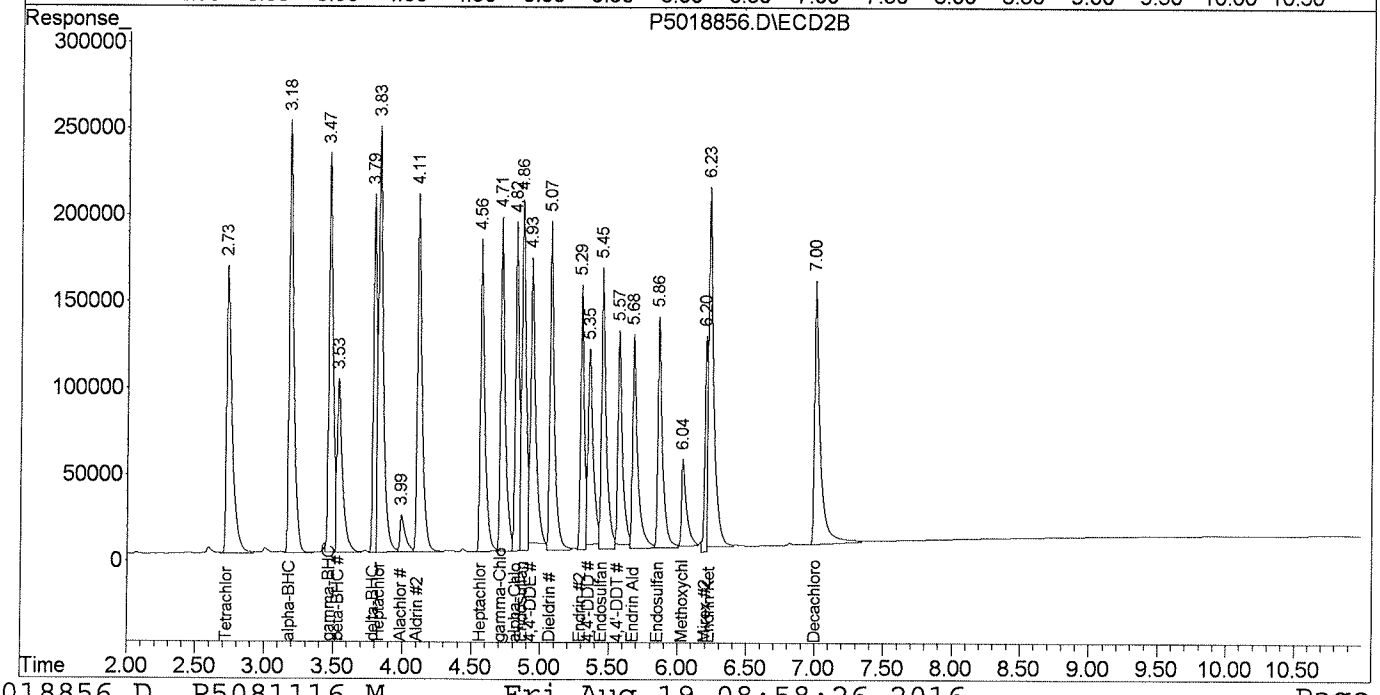
# Quantitation Report

Signal #1 : C:\HPCHEM\1\DATA\081116\P5018856.D\ECD1A.CH Vial: 7
Signal #2 : C:\HPCHEM\1\DATA\081116\P5018856.D\ECD2B.CH
Acq On : 11 Aug 2016 2:12 pm Operator: AMC
Sample : SEQ-CAL6 Inst : GC DUAL E
Misc : QBPEST5-081116A Y16G106, PEST CAL 200.0n Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 11 17:01 2016 Quant Results File: P5052516.RES

Quant Method : C:\HPCHEM\1\METHODS\P5052516.M (Chemstation Integrator)
Title : 05/25/16 - Stx-CLP & CLP2 - single tower,dual det
Last Update : Wed Jun 29 12:02:51 2016
Response via : Multiple Level Calibration
DataAcq Meth : PEST.M

Volume Inj. : 1 uL
Signal #1 Phase : Stx-CLPesticides Signal #2 Phase: Stx-CLPesticides2 Se
Signal #1 Info : .32 Signal #2 Info : .32



Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\081116\P5018857.D\ECD1A.CH Vial: 8
Signal #2 : C:\HPCHEM\1\DATA\081116\P5018857.D\ECD2B.CH
Acq On : 11 Aug 2016 2:27 pm Operator: AMC
Sample : SEQ-SCV1 Inst : GC DUAL E
Misc : QBPEST5-081116A Y16G108, PEST ICV 50.0ng Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 11 17:08 2016 Quant Results File: P5081116.RES

Quant Method : C:\HPCHEM\1\METHODS\P5081116.M (Chemstation Integrator)
Title : 08/11/16 - Stx-CLP & CLP2 - single tower,dual det
Last Update : Thu Aug 11 17:07:14 2016
Response via : Initial Calibration
DataAcq Meth : PEST.M

Volume Inj. : 1 uL
Signal #1 Phase : Stx-CLPesticides Signal #2 Phase: Stx-CLPesticides2 Se
Signal #1 Info : .32 Signal #2 Info : .32

| | | Compound | RT#1 | RT#2 | Resp#1 | Resp#2 | ng/mL | ng/mL |
|---|---|---|---|---|---|---|---|---|
| | | System Monitoring Compounds | | | | | | |
| 1) | SA | Tetrachloro-m-xy | 2.45 | 2.73 | 3727861 | 3107689 | 154.611 | 158.788 |
| | | Spiked Amount 200.000 | Range 30 - 150 | | Recovery = | | 77.31% | 79.39% |
| 24) | SA | Decachlorobiphen | 6.35 | 7.00 | 2816937 | 2967439 | 147.442 | 165.267 |
| | | Spiked Amount 200.000 | Range 30 - 150 | | Recovery = | | 73.72% | 82.63% |
| | | Target Compounds | | | | | | |
| 2) | M | alpha-BHC | 2.80 | 3.18 | 1267417 | 1165608 | 49.996 | 47.563 |
| 3) | M | gamma-BHC (Linda | 3.01 | 3.47 | 1103655 | 1014794 | 48.940 | 48.143 |
| 4) | M | beta-BHC | 3.07 | 3.54 | 564917 | 509073 | 41.988 | 43.617m |
| 5) | M | delta-BHC | 3.20 | 3.79 | 920459 | 651242 | 45.947 | 45.469 |
| 6) | M | Heptachlor | 3.37 | 3.83 | 1061461 | 1237653 | 45.836 | 46.716 |
| 7) | M | Aldrin | 3.60 | 4.11 | 1070817 | 1075916 | 50.059 | 44.500 |
| 8) | M | Alachlor | 3.68 | 3.99 | 227564 | 153253 | 47.986 | 50.814 |
| 9) | M | Heptachlor Epoxi | 4.07 | 4.57 | 951527 | 880547 | 44.934 | 46.720 |
| 10) | M | gamma-Chlordane | 4.17 | 4.71 | 1010005 | 912315 | 45.162 | 46.773 |
| 11) | M | alpha-Chlordane | 4.27 | 4.82 | 969759 | 787233 | 45.918 | 46.955 |
| 12) | M | Endosulfan I | 4.37 | 4.87 | 1199807 | 977260 | 47.149 | 47.600 |
| 13) | M | 4,4'-DDE | 4.33 | 4.93 | 535823 | 858041 | 44.611 | 46.768 |
| 14) | M | Dieldrin | 4.56 | 5.07 | 959834 | 907239 | 46.585 | 47.480 |
| 15) | M | Endrin | 4.73 | 5.30 | 765245 | 670759 | 48.183 | 48.352 |
| 16) | M | 4,4'-DDD | 4.78 | 5.36 | 470120 | 492446 | 43.835 | 42.442 |
| 17) | M | Endosulfan II | 4.89 | 5.45 | 852936 | 814284 | 46.244 | 46.097 |
| 18) | M | 4,4'-DDT | 4.99 | 5.57 | 615051 | 532235 | 46.613 | 45.018 |
| 19) | M | Endrin Aldehyde | 5.18 | 5.68 | 685161 | 632484 | 42.121 | 43.061 |
| 20) | M | Methoxychlor | 5.35 | 6.04 | 288358 | 232117 | 46.654 | 43.937 |
| 21) | M | Mirex | 5.45 | 6.20 | 592553 | 384746 | 44.234 | 43.085 |
| 22) | M | Endosulfan sulfa | 5.47 | 5.86 | 1061302 | 602843 | 47.320 | 43.455 |
| 23) | M | Endrin Ketone | 5.67 | 6.23 | 821647 | 1225303 | 43.708 | 48.238 |

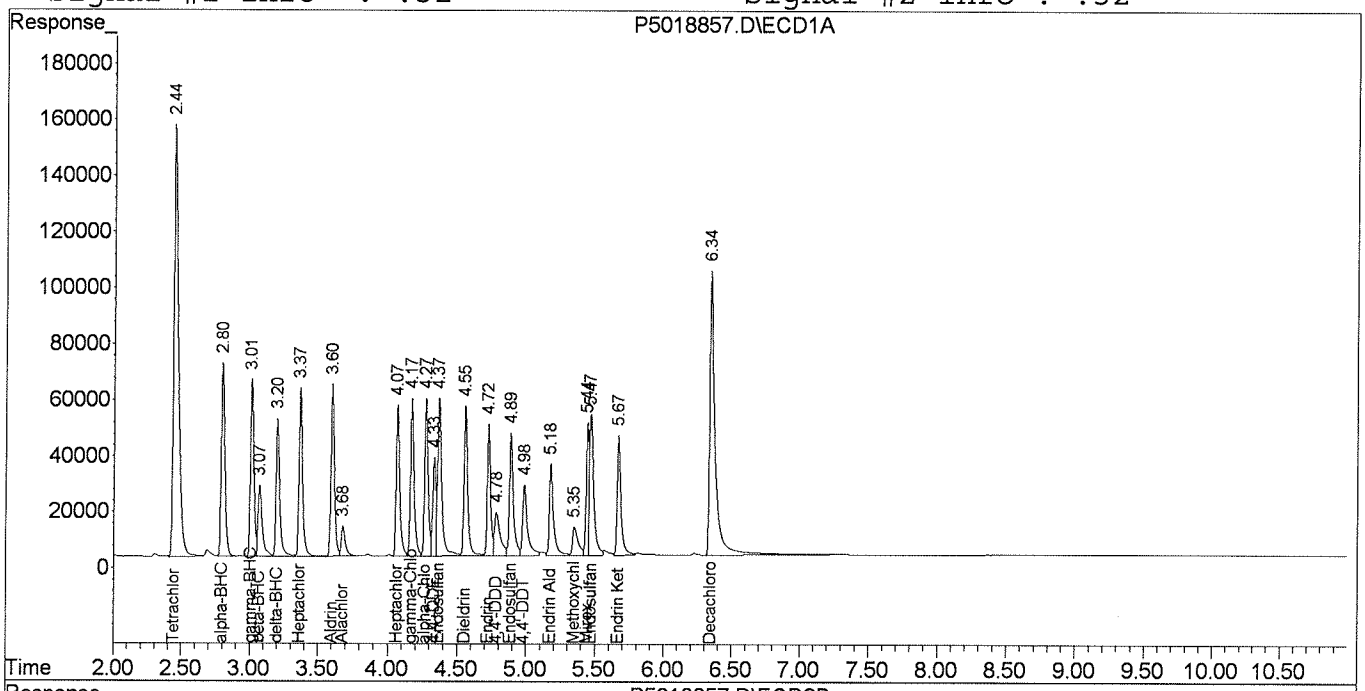
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

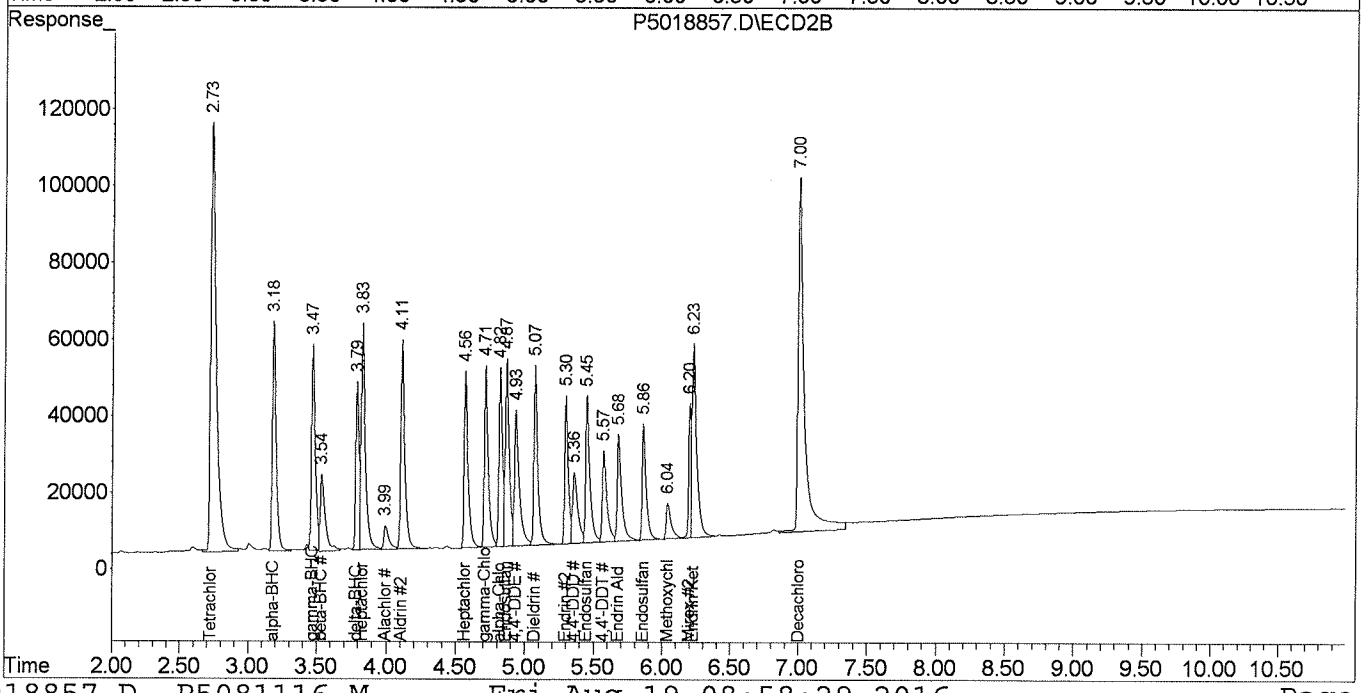
Quantitation Report

Signal #1 : C:\HPCHEM\1\DATA\081116\P5018857.D\ECD1A.CH Vial: 8
Signal #2 : C:\HPCHEM\1\DATA\081116\P5018857.D\ECD2B.CH
Acq On : 11 Aug 2016 2:27 pm Operator: AMC
Sample : SEQ-SCV1 Inst : GC DUAL E
Misc : QBPEST5-081116A Y16G108, PEST ICV 50.0ng Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 11 17:08 2016 Quant Results File: P5081116.RES

Quant Method : C:\HPCHEM\1\METHODS\P5081116.M (Chemstation Integrator)
Title : 08/11/16 - Stx-CLP & CLP2 - single tower,dual det
Last Update : Thu Aug 11 17:07:14 2016
Response via : Multiple Level Calibration
DataAcq Meth : PEST.M

Volume Inj. : 1 uL
Signal #1 Phase : Stx-CLPesticides Signal #2 Phase: Stx-CLPesticides2 Se
Signal #1 Info : .32 Signal #2 Info : .32



## % BREAKDOWN of ENDRIN and DDT

DATE: 9/12/2016 TIME: 9:10 AM

| ENDRIN | ALDEHYDE | KETONE | TOTAL AREA | %BREAKDOWN ENDRIN |
|---|---|---|---|---|
| 1643978 | 12517 | 26354 | 1682849 | 2.3 |

| DDT | DDE | DDD | TOTAL AREA | %BREAKDOWN DDT |
|---|---|---|---|---|
| 2444208 | 13976 | 0 | 2458184 | 0.6 |

## % BREAKDOWN of ENDRIN and DDT

| ENDRIN | ALDEHYDE | KETONE | TOTAL AREA | %BREAKDOWN ENDRIN |
|---|---|---|---|---|
| 1458692 | 4841 | 23797 | 1487330 | 1.9 |

| DDT | DDE | DDD | TOTAL AREA | %BREAKDOWN DDT |
|---|---|---|---|---|
| 2022957 | 14802 | 0 | 2037759 | 0.7 |

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\091216\P5019759.D\ECD1A.CH Vial: 1
Signal #2 : C:\HPCHEM\1\DATA\091216\P5019759.D\ECD2B.CH
Acq On : 12 Sep 2016 9:10 am Operator: AMC
Sample : SEQ-PEM1 Inst : GC DUAL E
Misc : QBPEST5-091216A Y14J138 DDT/ENDRIN Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Sep 12 9:45 2016 Quant Results File: P5081116.RES

Quant Method : C:\HPCHEM\1\METHODS\P5081116.M (Chemstation Integrator)
Title : 08/11/16 - Stx-CLP & CLP2 - single tower,dual det
Last Update : Fri Sep 09 10:38:28 2016
Response via : Initial Calibration
DataAcq Meth : PEST.M

Volume Inj. : 1 uL
Signal #1 Phase : Stx-CLPesticides Signal #2 Phase: Stx-CLPesticides2 Se
Signal #1 Info : .32 Signal #2 Info : .32

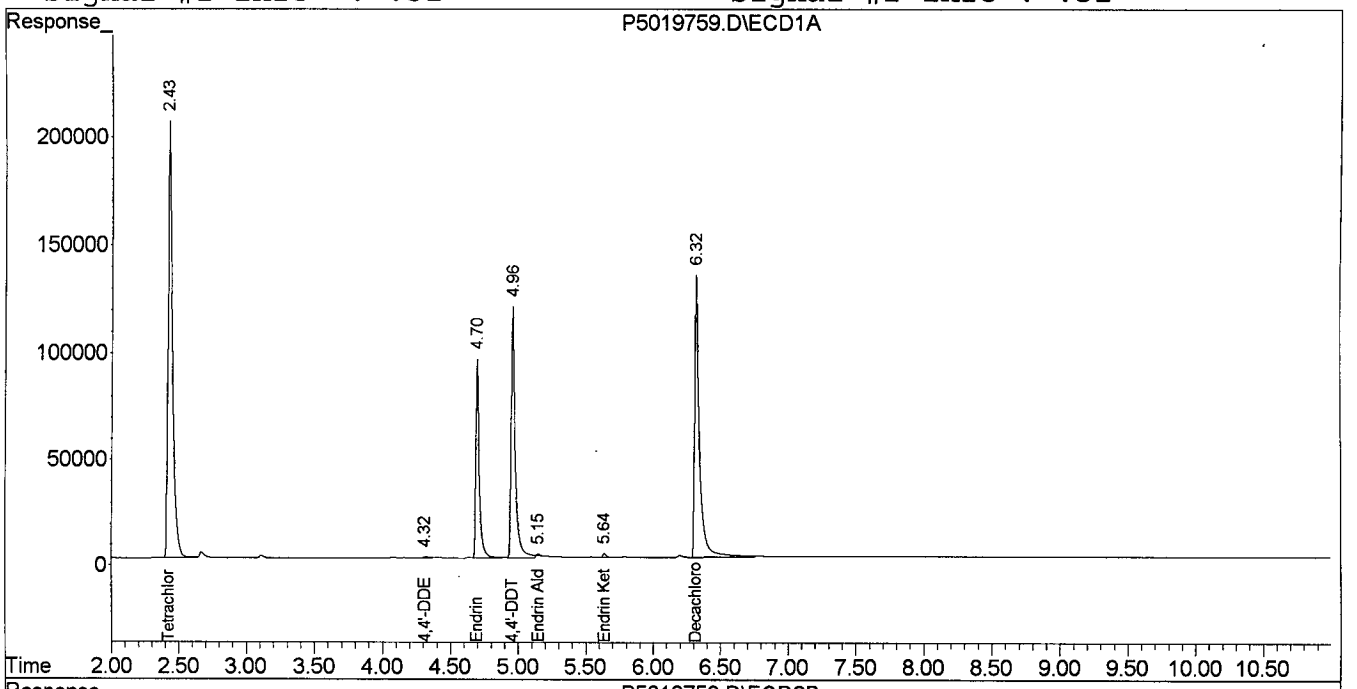
| | | Compound | RT#1 | RT#2 | Resp#1 | Resp#2 | ng/mL | ng/mL |
|---|---|---|---|---|---|---|---|---|
| | | System Monitoring Compounds | | | | | | |
| 1) | SA | Tetrachloro-m-xy | 2.43 | 2.71 | 4658909 | 4548119 | 193.226 | 232.387 |
| | | Spiked Amount 200.000 | Range 30 - 150 | | Recovery = | | 96.61% | 116.19% |
| 24) | SA | Decachlorobiphen | 6.32 | 6.98 | 3302197 | 3148383 | 172.841 | 175.344 |
| | | Spiked Amount 200.000 | Range 30 - 150 | | Recovery = | | 86.42% | 87.67% |
| | | Target Compounds | | | | | | |
| 2) | M | alpha-BHC | 0.00 | 0.00 | 0 | 0 | N.D. | N.D. |
| 3) | M | gamma-BHC (Linda | 0.00 | 0.00 | 0 | 0 | N.D. | N.D. |
| 4) | M | beta-BHC | 0.00 | 0.00 | 0 | 0 | N.D. | N.D. |
| 5) | M | delta-BHC | 0.00 | 0.00 | 0 | 0 | N.D. | N.D. |
| 6) | M | Heptachlor | 0.00 | 0.00 | 0 | 0 | N.D. | N.D. |
| 7) | M | Aldrin | 0.00 | 0.00 | 0 | 0 | N.D. d | N.D. d |
| 8) | M | Alachlor | 0.00 | 0.00 | 0 | 0 | N.D. | N.D. |
| 9) | M | Heptachlor Epoxi | 0.00 | 0.00 | 0 | 0 | N.D. d | N.D. d |
| 10) | M | gamma-Chlordane | 0.00 | 0.00 | 0 | 0 | N.D. d | N.D. d |
| 11) | M | alpha-Chlordane | 0.00 | 0.00 | 0 | 0 | N.D. | N.D. |
| 12) | M | Endosulfan I | 0.00 | 0.00 | 0 | 0 | N.D. d | N.D. d |
| 13) | M | 4,4'-DDE | 4.32 | 4.92 | 13976 | 14802 | 1.164m | 0.807m# |
| 14) | M | Dieldrin | 0.00 | 0.00 | 0 | 0 | N.D. | N.D. |
| 15) | M | Endrin | 4.70 | 5.27 | 1643978 | 1458692 | 103.512 | 105.150 |
| 16) | M | 4,4'-DDD | 0.00 | 0.00 | 0 | 0 | N.D. | N.D. |
| 17) | M | Endosulfan II | 0.00 | 0.00 | 0 | 0 | N.D. d | N.D. d |
| 18) | M | 4,4'-DDT | 4.96 | 5.55 | 2444208 | 2022957 | 185.239 | 171.106 |
| 19) | M | Endrin Aldehyde | 5.15 | 5.66 | 12517 | 4841 | 0.770m | 0.330m# |
| 20) | M | Methoxychlor | 0.00 | 0.00 | 0 | 0 | N.D. | N.D. |
| 21) | M | Mirex | 0.00 | 0.00 | 0 | 0 | N.D. d | N.D. d |
| 22) | M | Endosulfan sulfa | 0.00 | 0.00 | 0 | 0 | N.D. d | N.D. d |
| 23) | M | Endrin Ketone | 5.64 | 6.21 | 26354 | 23797 | 1.402m | 0.937m# |

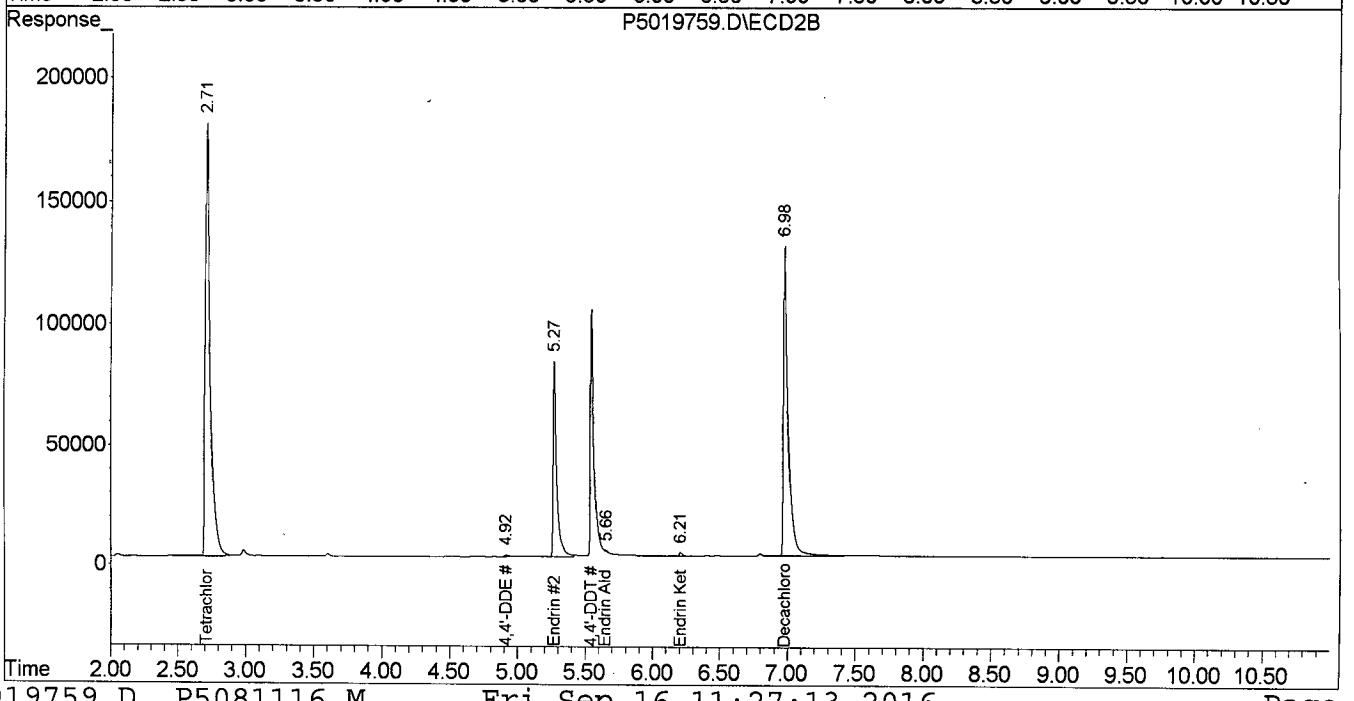
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Signal #1 : C:\HPCHEM\1\DATA\091216\P5019759.D\ECD1A.CH Vial: 1
Signal #2 : C:\HPCHEM\1\DATA\091216\P5019759.D\ECD2B.CH
Acq On : 12 Sep 2016 9:10 am Operator: AMC
Sample : SEQ-PEM1 Inst : GC DUAL E
Misc : QBPEST5-091216A Y14J138 DDT/ENDRIN Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Sep 12 9:45 2016 Quant Results File: P5081116.RES

Quant Method : C:\HPCHEM\1\METHODS\P5081116.M (Chemstation Integrator)
Title : 08/11/16 - Stx-CLP & CLP2 - single tower,dual det
Last Update : Fri Sep 09 10:38:28 2016
Response via : Multiple Level Calibration
DataAcq Meth : PEST.M

Volume Inj. : 1 uL
Signal #1 Phase : Stx-CLPesticides Signal #2 Phase: Stx-CLPesticides2 Se
Signal #1 Info : .32 Signal #2 Info : .32



# Evaluate Continuing Calibration Report

Signal #1 : C:\HPCHEM\1\DATA\091216\P5019780.D\ECD1A.CH Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\091216\P5019780.D\ECD2B.CH
Acq On : 12 Sep 2016 2:59 pm Operator: AMC
Sample : SEQ-CCV4 Inst : GC DUAL E
Misc : QBPEST5-091216A Y15G090 PEST MIX 50.0ng/ Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E

Method : C:\HPCHEM\1\METHODS\P5081116.M (Chemstation Integrator)
Title : 08/11/16 - Stx-CLP & CLP2 - single tower,dual det
Last Update : Fri Sep 16 10:42:26 2016
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 40% Max. Rel. Area : 150%

| | | Compound | AvgRF | CCRF | %Dev | Area% | Dev(min) |
|---|---|---|---|---|---|---|---|
| 1 | S | Tetrachloro-m-xylene | 24.111 | 22.749 E3 | 5.6 | 88 | 0.00 |
| 2 | M | alpha-BHC | 25.350 | 28.966 E3 | -14.3 | 102 | 0.00 |
| 3 | M | gamma-BHC (Lindane) | 22.551 | 25.529 E3 | -13.2 | 100 | 0.00 |
| 4 | M | beta-BHC | 13.454 | 14.218 E3 | -5.7 | 104 | 0.00 |
| 5 | M | delta-BHC | 20.033 | 22.587 E3 | -12.7 | 104 | 0.00 |
| 6 | M | Heptachlor | 23.158 | 25.688 E3 | -10.9 | 108 | 0.00 |
| 7 | M | Aldrin | 21.391 | 24.362 E3 | -13.9 | 104 | 0.00 |
| 8 | M | Alachlor | 4.742 | 4.742 E3 | 0.0 | 99 | 0.00 |
| 9 | M | Heptachlor Epoxide | 21.176 | 22.373 E3 | -5.7 | 105 | 0.00 |
| 10 | M | gamma-Chlordane | 22.364 | 23.222 E3 | -3.8 | 102 | 0.00 |
| 11 | M | alpha-Chlordane | 21.119 | 22.068 E3 | -4.5 | 102 | 0.00 |
| 12 | M | Endosulfan I | 25.447 | 27.788 E3 | -9.2 | 103 | 0.00 |
| 13 | M | 4,4'-DDE | 12.011 | 11.582 E3 | 3.6 | 83 | 0.00 |
| 14 | M | Dieldrin | 20.604 | 22.356 E3 | -8.5 | 103 | 0.00 |
| 15 | M | Endrin | 15.882 | 18.413 E3 | -15.9 | 110 | 0.00 |
| 16 | M | 4,4'-DDD | 10.725 | 12.820 E3 | -19.5 | 113 | 0.00 |
| 17 | M | Endosulfan II | 18.444 | 14.801 E3 | 19.8 | 77 | 0.00 |
| 18 | M | 4,4'-DDT | 13.195 | 15.281 E3 | -15.8 | 108 | 0.00 |
| 19 | M | Endrin Aldehyde | 16.266 | 15.107 E3 | 7.1 | 100 | 0.00 |
| 20 | M | Methoxychlor | 6.181 | 7.334 E3 | -18.7 | 109 | 0.00 |
| 21 | M | Mirex | 13.396 | 10.780 E3 | 19.5 | 86 | -0.01 |
| 22 | M | Endosulfan sulfate | 22.428 | 25.239 E3 | -12.5 | 110 | 0.00 |
| 23 | M | Endrin Ketone | 18.799 | 17.442 E3 | 7.2 | 94 | 0.00 |
| 24 | SA | Decachlorobiphenyl | 19.105 | 14.988 E3 | 21.5 | 77 | 0.00 |
| | | Signal #2 | | | | | |
| 1 | SA | Tetrachloro-m-xylene | 19.571 | 20.273 E3 | -3.6 | 94 | 0.00 |
| 2 | M | alpha-BHC | 24.507 | 27.072 E3 | -10.5 | 102 | 0.00 |
| 3 | M | gamma-BHC (Lindane) | 21.079 | 23.944 E3 | -13.6 | 101 | 0.00 |
| 4 | M | beta-BHC | 11.672 | 11.493 E3 | 1.5 | 100 | 0.00 |
| 5 | M | delta-BHC | 14.323 | 16.598 E3 | -15.9 | 108 | 0.00 |
| 6 | M | Heptachlor | 26.493 | 23.593 E3 | 10.9 | 82 | 0.00 |
| 7 | M | Aldrin | 24.178 | 23.220 E3 | 4.0 | 99 | 0.00 |
| 8 | M | Alachlor | 3.016 | 2.487 E3 | 17.5 | 78 | 0.00 |
| 9 | M | Heptachlor Epoxide | 18.847 | 18.468 E3 | 2.0 | 93 | 0.00 |
| 10 | M | gamma-Chlordane | 19.505 | 20.213 E3 | -3.6 | 97 | 0.00 |
| 11 | M | alpha-Chlordane | 16.766 | 17.457 E3 | -4.1 | 100 | 0.00 |
| 12 | M | Endosulfan I | 20.531 | 20.179 E3 | 1.7 | 89 | 0.00 |
| 13 | M | 4,4'-DDE | 18.347 | 17.572 E3 | 4.2 | 90 | 0.00 |

(#) = Out of Range

# Evaluate Continuing Calibration Report

Signal #1 : C:\HPCHEM\1\DATA\091216\P5019780.D\ECD1A.CH Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\091216\P5019780.D\ECD2B.CH
Acq On : 12 Sep 2016 2:59 pm Operator: AMC
Sample : SEQ-CCV4 Inst : GC DUAL E
Misc : QBPEST5-091216A Y15G090 PEST MIX 50.0ng/ Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E

Method : C:\HPCHEM\1\METHODS\P5081116.M (Chemstation Integrator)
Title : 08/11/16 - Stx-CLP & CLP2 - single tower,dual det
Last Update : Fri Sep 16 10:42:26 2016
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 40% Max. Rel. Area : 150%

| | | Compound | AvgRF | CCRF | %Dev | Area% | Dev(min) |
|---|---|---|---|---|---|---|---|
| 14 | M | Dieldrin | 19.108 | 19.684 E3 | -3.0 | 96 | 0.00 |
| 15 | M | Endrin | 13.873 | 13.896 E3 | -0.2 | 94 | 0.00 |
| 16 | M | 4,4'-DDD | 11.603 | 11.936 E3 | -2.9 | 109 | 0.00 |
| 17 | M | Endosulfan II | 17.665 | 14.362 E3 | 18.7 | 77 | 0.00 |
| 18 | M | 4,4'-DDT | 11.823 | 10.764 E3 | 9.0 | 87 | 0.00 |
| 19 | M | Endrin Aldehyde | 14.688 | 13.221 E3 | 10.0 | 94 | 0.00 |
| 20 | M | Methoxychlor | 5.283 | 5.261 E3 | 0.4 | 97 | 0.00 |
| 21 | M | Mirex | 8.930 | 8.895 E3 | 0.4 | 112 | 0.00 |
| 22 | M | Endosulfan sulfate | 13.873 | 12.289 E3 | 11.4 | 90 | 0.00 |
| 23 | M | Endrin Ketone | 25.401 | 21.527 E3 | 15.3 | 80 | 0.00 |
| 24 | SA | Decachlorobiphenyl | 17.955 | 13.412 E3 | 25.3 | 70 | 0.00 |

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\091216\P5019780.D\ECD1A.CH Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\091216\P5019780.D\ECD2B.CH
Acq On : 12 Sep 2016 2:59 pm Operator: AMC
Sample : SEQ-CCV4 Inst : GC DUAL E
Misc : QBPEST5-091216A Y15G090 PEST MIX 50.0ng/ Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Sep 12 16:31 2016 Quant Results File: P5081116.RES

Quant Method : C:\HPCHEM\1\METHODS\P5081116.M (Chemstation Integrator)
Title : 08/11/16 - Stx-CLP & CLP2 - single tower,dual det
Last Update : Mon Sep 12 10:34:40 2016
Response via : Initial Calibration
DataAcq Meth : PEST.M

Volume Inj. : 1 uL
Signal #1 Phase : Stx-CLPesticides Signal #2 Phase: Stx-CLPesticides2 Se
Signal #1 Info : .32 Signal #2 Info : .32

| | Compound | RT#1 | RT#2 | Resp#1 | Resp#2 | ng/mL | ng/mL |
|---|---|---|---|---|---|---|---|
| | System Monitoring Compounds | | | | | | |
| 1) | SA Tetrachloro-m-xy | 2.43 | 2.71 | 3639796 | 3243643 | 150.959 | 165.735 |
| | Spiked Amount 200.000 | Range 30 - 150 | | Recovery = | | 75.48% | 82.87% |
| 24) | SA Decachlorobiphen | 6.32 | 6.98 | 2398137 | 2145881 | 125.521 | 119.511 |
| | Spiked Amount 200.000 | Range 30 - 150 | | Recovery = | | 62.76% | 59.76% |
| | Target Compounds | | | | | | |
| 2) | M alpha-BHC | 2.77 | 3.16 | 1448310 | 1353611 | 57.132 | 55.234 |
| 3) | M gamma-BHC (Linda | 2.99 | 3.45 | 1276462 | 1197219 | 56.603 | 56.797 |
| 4) | M beta-BHC | 3.04 | 3.51 | 710896 | 574659 | 52.838 | 49.236 |
| 5) | M delta-BHC | 3.17 | 3.77 | 1129333 | 829885 | 56.373 | 57.942 |
| 6) | M Heptachlor | 3.34 | 3.81 | 1284397 | 1179650 | 55.462 | 44.527 |
| 7) | M Aldrin | 3.57 | 4.09 | 1218107 | 1161017 | 56.945 | 48.020 |
| 8) | M Alachlor | 3.65 | 3.97 | 237083 | 124367 | 49.993 | 41.236m |
| 9) | M Heptachlor Epoxi | 4.04 | 4.54 | 1118648 | 923380 | 52.826 | 48.992 |
| 10) | M gamma-Chlordane | 4.14 | 4.69 | 1161090 | 1010657 | 51.917 | 51.815 |
| 11) | M alpha-Chlordane | 4.24 | 4.80 | 1103389 | 872846 | 52.246 | 52.061 |
| 12) | M Endosulfan I | 4.34 | 4.84 | 1389388 | 1008973 | 54.600m | 49.145 |
| 13) | M 4,4'-DDE | 4.30 | 4.91 | 579119 | 878605 | 48.216m | 47.889 |
| 14) | M Dieldrin | 4.53 | 5.05 | 1117815 | 984218 | 54.252 | 51.509 |
| 15) | M Endrin | 4.69 | 5.27 | 920637 | 694809 | 57.967 | 50.085 |
| 16) | M 4,4'-DDD | 4.75 | 5.33 | 641006 | 596797 | 59.768m | 51.435 |
| 17) | M Endosulfan II | 4.85 | 5.43 | 740033 | 718100 | 40.123m | 40.652m |
| 18) | M 4,4'-DDT | 4.95 | 5.55 | 764035 | 538221 | 57.904 | 45.524m |
| 19) | M Endrin Aldehyde | 5.14 | 5.66 | 755361 | 661027 | 46.437 | 45.004 |
| 20) | M Methoxychlor | 5.31 | 6.02 | 366685 | 263059 | 59.327m | 49.794 |
| 21) | M Mirex | 5.42 | 6.18 | 539001 | 444757 | 40.236m | 49.806m |
| 22) | M Endosulfan sulfa | 5.43 | 5.84 | 1261934 | 614438 | 56.266m | 44.291 |
| 23) | M Endrin Ketone | 5.64 | 6.20 | 872086 | 1076325 | 46.391 | 42.373m |

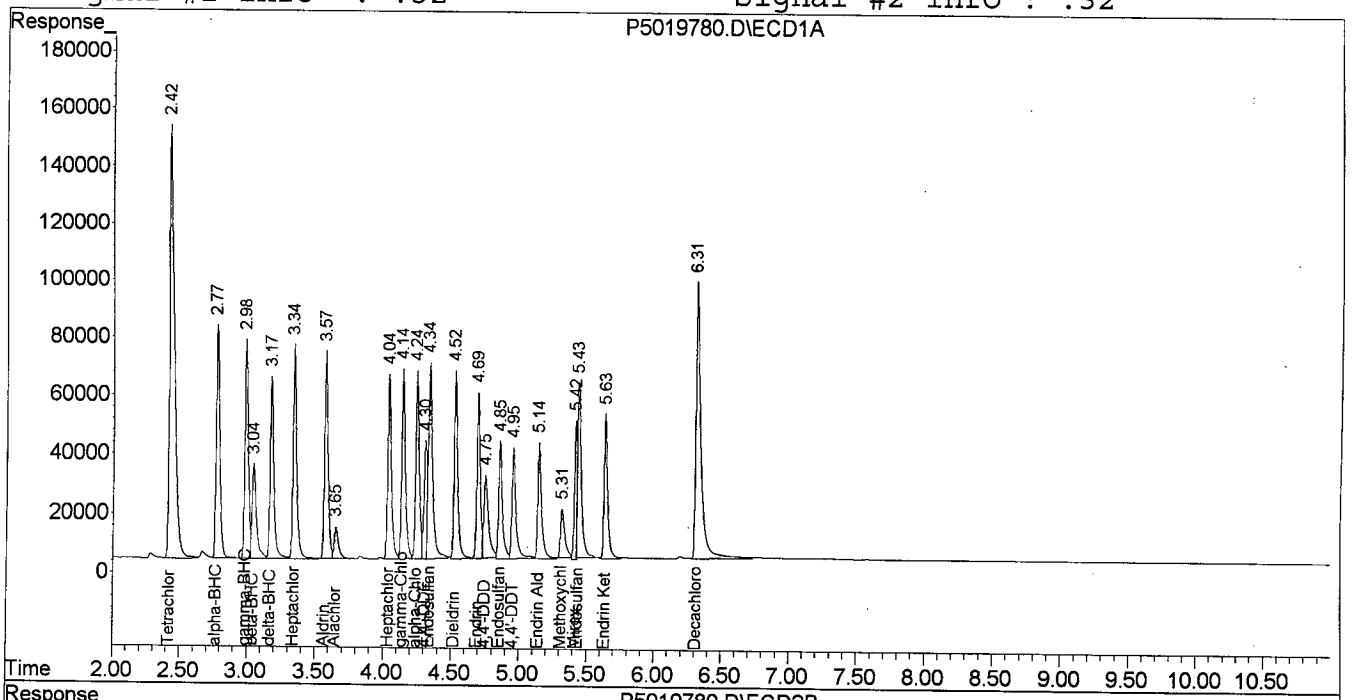
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

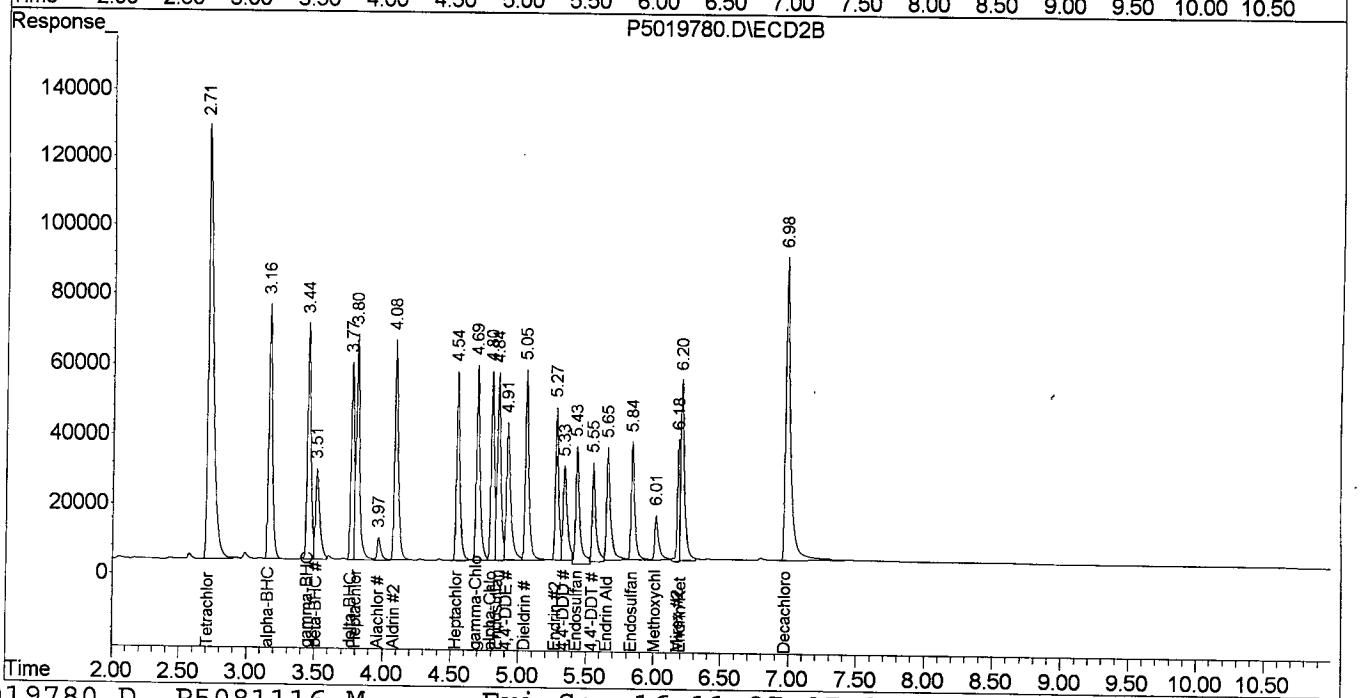
# Quantitation Report

Signal #1 : C:\HPCHEM\1\DATA\091216\P5019780.D\ECD1A.CH Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\091216\P5019780.D\ECD2B.CH
Acq On : 12 Sep 2016 2:59 pm Operator: AMC
Sample : SEQ-CCV4 Inst : GC DUAL E
Misc : QBPEST5-091216A Y15G090 PEST MIX 50.0ng/ Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Sep 12 16:31 2016 Quant Results File: P5081116.RES

Quant Method : C:\HPCHEM\1\METHODS\P5081116.M (Chemstation Integrator)
Title : 08/11/16 - Stx-CLP & CLP2 - single tower,dual det
Last Update : Mon Sep 12 10:34:40 2016
Response via : Multiple Level Calibration
DataAcq Meth : PEST.M

Volume Inj. : 1 uL
Signal #1 Phase : Stx-CLPesticides Signal #2 Phase: Stx-CLPesticides2 Se
Signal #1 Info : .32 Signal #2 Info : .32



**% BREAKDOWN of ENDRIN and DDT**

DATE: 9/12/2016 TIME: 7:11 PM

| ENDRIN | ALDEHYDE | KETONE | TOTAL AREA | %BREAKDOWN ENDRIN |
|---|---|---|---|---|
| 1488431 | 14367 | 38531 | 1541329 | 3.4 |

| DDT | DDE | DDD | TOTAL AREA | %BREAKDOWN DDT |
|---|---|---|---|---|
| 2097028 | 15761 | 0 | 2112789 | 0.7 |

**% BREAKDOWN of ENDRIN and DDT**

| ENDRIN | ALDEHYDE | KETONE | TOTAL AREA | %BREAKDOWN ENDRIN |
|---|---|---|---|---|
| 1198233 | 7171 | 30273 | 1235677 | 3.0 |

| DDT | DDE | DDD | TOTAL AREA | %BREAKDOWN DDT |
|---|---|---|---|---|
| 1553076 | 15360 | 0 | 1568436 | 1.0 |

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\091216\P5019791.D\ECD1A.CH Vial: 1
Signal #2 : C:\HPCHEM\1\DATA\091216\P5019791.D\ECD2B.CH
Acq On : 12 Sep 2016 7:11 pm Operator: AMC
Sample : SEQ-PEM2 Inst : GC DUAL E
Misc : QBPEST5-091216A Y14J138 DDT/ENDRIN Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Sep 13 10:35 2016 Quant Results File: P5081116.RES

Quant Method : C:\HPCHEM\1\METHODS\P5081116.M (Chemstation Integrator)
Title : 08/11/16 - Stx-CLP & CLP2 - single tower,dual det
Last Update : Tue Sep 13 10:21:00 2016
Response via : Initial Calibration
DataAcq Meth : PEST.M

Volume Inj. : 1 uL
Signal #1 Phase : Stx-CLPesticides Signal #2 Phase: Stx-CLPesticides2 Se
Signal #1 Info : .32 Signal #2 Info : .32

| | Compound | RT#1 | RT#2 | Resp#1 | Resp#2 | ng/mL | ng/mL |
|---|---|---|---|---|---|---|---|
| | System Monitoring Compounds | | | | | | |
| 1) | SA Tetrachloro-m-xy | 2.42 | 2.71 | 4406387 | 4069833 | 182.753 | 207.949 |
| | Spiked Amount 200.000 | Range 30 - 150 | | Recovery = | | 91.38% | 103.97% |
| 24) | SA Decachlorobiphen | 6.31 | 6.98 | 2866662 | 2499359 | 150.045 | 139.198 |
| | Spiked Amount 200.000 | Range 30 - 150 | | Recovery = | | 75.02% | 69.60% |
| | Target Compounds | | | | | | |
| 2) | M alpha-BHC | 0.00 | 0.00 | 0 | 0 | N.D. | N.D. |
| 3) | M gamma-BHC (Linda | 0.00 | 0.00 | 0 | 0 | N.D. | N.D. |
| 4) | M beta-BHC | 0.00 | 0.00 | 0 | 0 | N.D. | N.D. |
| 5) | M delta-BHC | 0.00 | 0.00 | 0 | 0 | N.D. | N.D. |
| 6) | M Heptachlor | 0.00 | 0.00 | 0 | 0 | N.D. | N.D. |
| 7) | M Aldrin | 0.00 | 0.00 | 0 | 0 | N.D. | N.D. |
| 8) | M Alachlor | 0.00 | 0.00 | 0 | 0 | N.D. | N.D. |
| 9) | M Heptachlor Epoxi | 0.00 | 0.00 | 0 | 0 | N.D. | N.D. |
| 10) | M gamma-Chlordane | 0.00 | 0.00 | 0 | 0 | N.D. | N.D. d |
| 11) | M alpha-Chlordane | 0.00 | 0.00 | 0 | 0 | N.D. | N.D. |
| 12) | M Endosulfan I | 0.00 | 0.00 | 0 | 0 | N.D. d | N.D. |
| 13) | M 4,4'-DDE | 4.31 | 4.91 | 15761 | 15360 | 1.312m | 0.837m# |
| 14) | M Dieldrin | 0.00 | 0.00 | 0 | 0 | N.D. | N.D. d |
| 15) | M Endrin | 4.69 | 5.27 | 1488431 | 1198233 | 93.718 | 86.375 |
| 16) | M 4,4'-DDD | 0.00 | 0.00 | 0 | 0 | N.D. | N.D. |
| 17) | M Endosulfan II | 0.00 | 0.00 | 0 | 0 | N.D. | N.D. d |
| 18) | M 4,4'-DDT | 4.95 | 5.55 | 2097028 | 1553076 | 158.928 | 131.363 |
| 19) | M Endrin Aldehyde | 5.14 | 5.65 | 14367 | 7171 | 0.883m | 0.488m# |
| 20) | M Methoxychlor | 0.00 | 0.00 | 0 | 0 | N.D. | N.D. d |
| 21) | M Mirex | 0.00 | 0.00 | 0 | 0 | N.D. | N.D. d |
| 22) | M Endosulfan sulfa | 0.00 | 0.00 | 0 | 0 | N.D. | N.D. |
| 23) | M Endrin Ketone | 5.64 | 6.21 | 38531 | 30273 | 2.050m | 1.192m# |

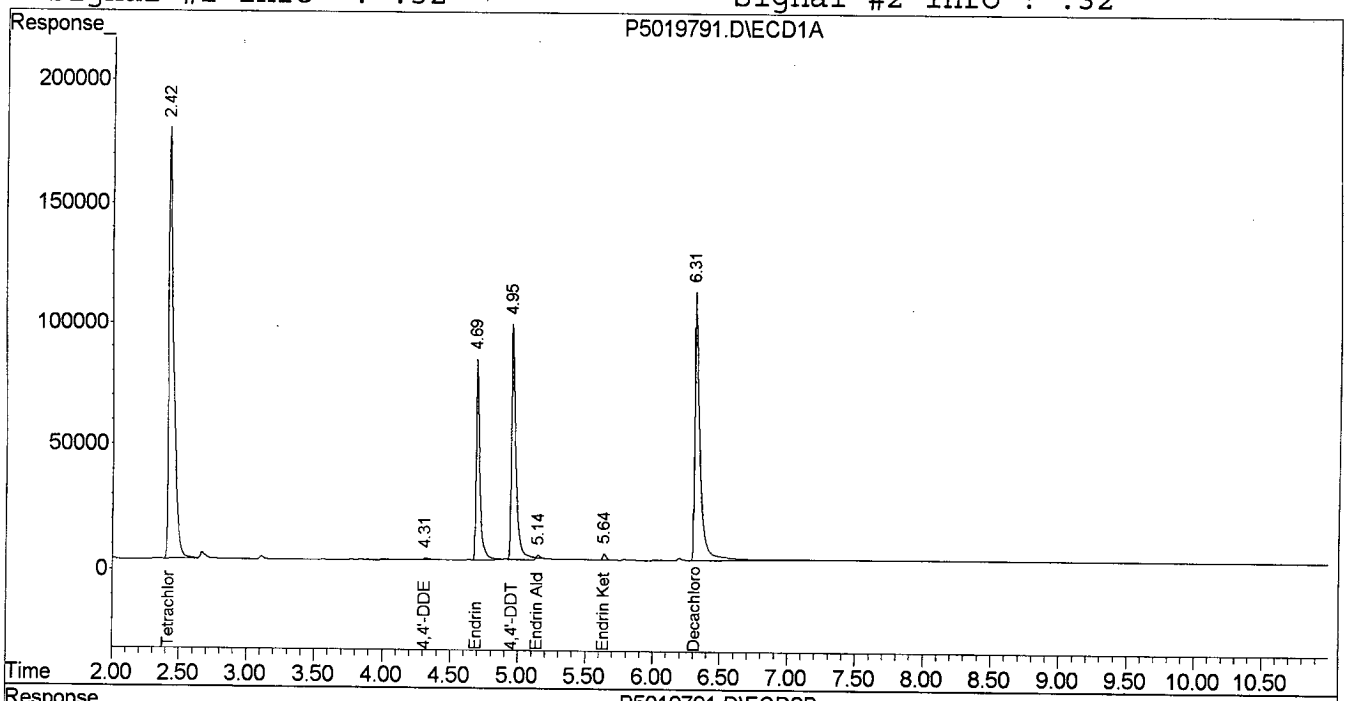
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

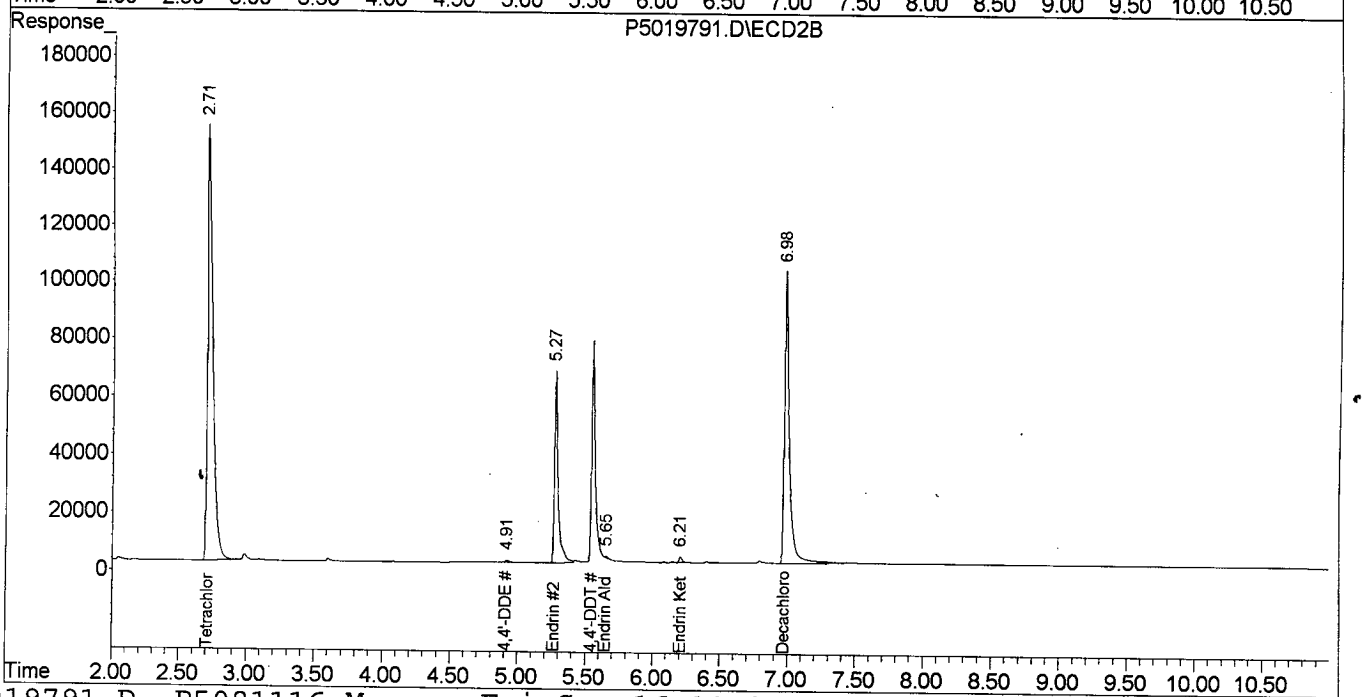
Quantitation Report

Signal #1 : C:\HPCHEM\1\DATA\091216\P5019791.D\ECD1A.CH Vial: 1
Signal #2 : C:\HPCHEM\1\DATA\091216\P5019791.D\ECD2B.CH
Acq On : 12 Sep 2016 7:11 pm Operator: AMC
Sample : SEQ-PEM2 Inst : GC DUAL E
Misc : QBPEST5-091216A Y14J138 DDT/ENDRIN Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Sep 13 10:35 2016 Quant Results File: P5081116.RES

Quant Method : C:\HPCHEM\1\METHODS\P5081116.M (Chemstation Integrator)
Title : 08/11/16 - Stx-CLP & CLP2 - single tower,dual det
Last Update : Tue Sep 13 10:21:00 2016
Response via : Multiple Level Calibration
DataAcq Meth : PEST.M

Volume Inj. : 1 uL
Signal #1 Phase : Stx-CLPesticides Signal #2 Phase: Stx-CLPesticides2 Se
Signal #1 Info : .32 Signal #2 Info : .32



# Evaluate Continuing Calibration Report

Signal #1 : C:\HPCHEM\1\DATA\091216\P5019798.D\ECD1A.CH Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\091216\P5019798.D\ECD2B.CH
Acq On : 12 Sep 2016 8:55 pm Operator: AMC
Sample : SEQ-CCV5 Inst : GC DUAL E
Misc : QBPEST5-091216A Y15G090 PEST MIX 50.0ng/ Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E

Method : C:\HPCHEM\1\METHODS\P5081116.M (Chemstation Integrator)
Title : 08/11/16 - Stx-CLP & CLP2 - single tower,dual det
Last Update : Fri Sep 16 10:42:26 2016
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 40% Max. Rel. Area : 150%

| | | Compound | AvgRF | CCRF | %Dev | Area% | Dev(min) |
|---|---|---|---|---|---|---|---|
| 1 | S | Tetrachloro-m-xylene | 24.111 | 23.039 E3 | 4.4 | 89 | 0.00 |
| 2 | M | alpha-BHC | 25.350 | 29.195 E3 | -15.2 | 102 | 0.00 |
| 3 | M | gamma-BHC (Lindane) | 22.551 | 25.977 E3 | -15.2 | 102 | 0.00 |
| 4 | M | beta-BHC | 13.454 | 14.439 E3 | -7.3 | 105 | 0.00 |
| 5 | M | delta-BHC | 20.033 | 22.399 E3 | -11.8 | 103 | 0.00 |
| 6 | M | Heptachlor | 23.158 | 26.271 E3 | -13.4 | 110 | 0.00 |
| 7 | M | Aldrin | 21.391 | 24.657 E3 | -15.3 | 105 | 0.00 |
| 8 | M | Alachlor | 4.742 | 5.087 E3 | -7.3 | 107 | 0.00 |
| 9 | M | Heptachlor Epoxide | 21.176 | 22.719 E3 | -7.3 | 106 | 0.00 |
| 10 | M | gamma-Chlordane | 22.364 | 23.559 E3 | -5.3 | 104 | 0.00 |
| 11 | M | alpha-Chlordane | 21.119 | 22.409 E3 | -6.1 | 103 | 0.00 |
| 12 | M | Endosulfan I | 25.447 | 29.013 E3 | -14.0 | 107 | 0.00 |
| 13 | M | 4,4'-DDE | 12.011 | 10.917 E3 | 9.1 | 78 | 0.00 |
| 14 | M | Dieldrin | 20.604 | 22.670 E3 | -10.0 | 105 | 0.00 |
| 15 | M | Endrin | 15.882 | 18.115 E3 | -14.1 | 108 | 0.00 |
| 16 | M | 4,4'-DDD | 10.725 | 12.345 E3 | -15.1 | 109 | 0.00 |
| 17 | M | Endosulfan II | 18.444 | 14.847 E3 | 19.5 | 77 | 0.00 |
| 18 | M | 4,4'-DDT | 13.195 | 14.952 E3 | -13.3 | 105 | 0.00 |
| 19 | M | Endrin Aldehyde | 16.266 | 14.943 E3 | 8.1 | 99 | 0.00 |
| 20 | M | Methoxychlor | 6.181 | 7.061 E3 | -14.2 | 105 | 0.00 |
| 21 | M | Mirex | 13.396 | 11.742 E3 | 12.3 | 94 | -0.02 |
| 22 | M | Endosulfan sulfate | 22.428 | 24.351 E3 | -8.6 | 106 | 0.00 |
| 23 | M | Endrin Ketone | 18.799 | 16.938 E3 | 9.9 | 91 | 0.00 |
| 24 | SA | Decachlorobiphenyl | 19.105 | 13.980 E3 | 26.8 | 72 | 0.00 |
| | | Signal #2 | | | | | |
| 1 | SA | Tetrachloro-m-xylene | 19.571 | 21.240 E3 | -8.5 | 98 | 0.00 |
| 2 | M | alpha-BHC | 24.507 | 28.062 E3 | -14.5 | 105 | 0.00 |
| 3 | M | gamma-BHC (Lindane) | 21.079 | 25.108 E3 | -19.1 | 106 | 0.00 |
| 4 | M | beta-BHC | 11.672 | 11.988 E3 | -2.7 | 104 | 0.00 |
| 5 | M | delta-BHC | 14.323 | 16.813 E3 | -17.4 | 109 | 0.00 |
| 6 | M | Heptachlor | 26.493 | 25.341 E3 | 4.3 | 88 | 0.00 |
| 7 | M | Aldrin | 24.178 | 24.187 E3 | -0.0 | 103 | 0.00 |
| 8 | M | Alachlor | 3.016 | 2.478 E3 | 17.8 | 78 | 0.00 |
| 9 | M | Heptachlor Epoxide | 18.847 | 19.162 E3 | -1.7 | 96 | 0.00 |
| 10 | M | gamma-Chlordane | 19.505 | 21.446 E3 | -10.0 | 103 | 0.00 |
| 11 | M | alpha-Chlordane | 16.766 | 18.334 E3 | -9.4 | 105 | 0.00 |
| 12 | M | Endosulfan I | 20.531 | 20.805 E3 | -1.3 | 92 | 0.00 |
| 13 | M | 4,4'-DDE | 18.347 | 17.548 E3 | 4.4 | 90 | 0.00 |

(#) = Out of Range

# Evaluate Continuing Calibration Report

Signal #1 : C:\HPCHEM\1\DATA\091216\P5019798.D\ECD1A.CH Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\091216\P5019798.D\ECD2B.CH
Acq On : 12 Sep 2016 8:55 pm Operator: AMC
Sample : SEQ-CCV5 Inst : GC DUAL E
Misc : QBPEST5-091216A Y15G090 PEST MIX 50.0ng/ Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E

Method : C:\HPCHEM\1\METHODS\P5081116.M (Chemstation Integrator)
Title : 08/11/16 - Stx-CLP & CLP2 - single tower,dual det
Last Update : Fri Sep 16 10:42:26 2016
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 40% Max. Rel. Area : 150%

| | | Compound | AvgRF | CCRF | %Dev | Area% | Dev(min) |
|---|---|---|---|---|---|---|---|
| 14 | M | Dieldrin | 19.108 | 20.030 E3 | -4.8 | 98 | 0.00 |
| 15 | M | Endrin | 13.873 | 13.525 E3 | 2.5 | 92 | 0.00 |
| 16 | M | 4,4'-DDD | 11.603 | 11.278 E3 | 2.8 | 103 | 0.00 |
| 17 | M | Endosulfan II | 17.665 | 14.427 E3 | 18.3 | 78 | 0.00 |
| 18 | M | 4,4'-DDT | 11.823 | 9.905 E3 | 16.2 | 80 | 0.00 |
| 19 | M | Endrin Aldehyde | 14.688 | 12.852 E3 | 12.5 | 92 | 0.00 |
| 20 | M | Methoxychlor | 5.283 | 4.930 E3 | 6.7 | 91 | 0.00 |
| 21 | M | Mirex | 8.930 | 7.536 E3 | 15.6 | 95 | 0.00 |
| 22 | M | Endosulfan sulfate | 13.873 | 11.941 E3 | 13.9 | 88 | 0.00 |
| 23 | M | Endrin Ketone | 25.401 | 22.734 E3 | 10.5 | 85 | 0.00 |
| 24 | SA | Decachlorobiphenyl | 17.955 | 12.117 E3 | 32.5 | 63 | 0.00 |

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\091216\P5019798.D\ECD1A.CH Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\091216\P5019798.D\ECD2B.CH
Acq On : 12 Sep 2016 8:55 pm Operator: AMC
Sample : SEQ-CCV5 Inst : GC DUAL E
Misc : QBPEST5-091216A Y15G090 PEST MIX 50.0ng/ Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Sep 13 7:55 2016 Quant Results File: P5081116.RES

Quant Method : C:\HPCHEM\1\METHODS\P5081116.M (Chemstation Integrator)
Title : 08/11/16 - Stx-CLP & CLP2 - single tower,dual det
Last Update : Mon Sep 12 10:34:40 2016
Response via : Initial Calibration
DataAcq Meth : PEST.M

Volume Inj. : 1 uL
Signal #1 Phase : Stx-CLPesticides Signal #2 Phase: Stx-CLPesticides2 Se
Signal #1 Info : .32 Signal #2 Info : .32

| | | Compound | RT#1 | RT#2 | Resp#1 | Resp#2 | ng/mL | ng/mL |
|---|---|---|---|---|---|---|---|---|
| | | System Monitoring Compounds | | | | | | |
| 1) | SA | Tetrachloro-m-xy | 2.42 | 2.71 | 3686263 | 3398331 | 152.886 | 173.638 |
| | | Spiked Amount 200.000 | Range 30 - 150 | | | Recovery = | 76.44% | 86.82% |
| 24) | SA | Decachlorobiphen | 6.31 | 6.98 | 2236745 | 1938752 | 117.074 | 107.976 |
| | | Spiked Amount 200.000 | Range 30 - 150 | | | Recovery = | 58.54% | 53.99% |
| | | Target Compounds | | | | | | |
| 2) | M | alpha-BHC | 2.77 | 3.16 | 1459736 | 1403109 | 57.583 | 57.254 |
| 3) | M | gamma-BHC (Linda | 2.98 | 3.45 | 1298843 | 1255409 | 57.595 | 59.558 |
| 4) | M | beta-BHC | 3.04 | 3.51 | 721944 | 599377 | 53.660 | 51.354 |
| 5) | M | delta-BHC | 3.17 | 3.77 | 1119939 | 840632 | 55.904 | 58.692 |
| 6) | M | Heptachlor | 3.34 | 3.81 | 1313556 | 1267039 | 56.721 | 47.825 |
| 7) | M | Aldrin | 3.57 | 4.09 | 1232842 | 1209347 | 57.634 | 50.018 |
| 8) | M | Alachlor | 3.65 | 3.97 | 254356 | 123918 | 53.636 | 41.087 |
| 9) | M | Heptachlor Epoxi | 4.04 | 4.54 | 1135940 | 958120 | 53.643 | 50.835 |
| 10) | M | gamma-Chlordane | 4.14 | 4.69 | 1177963 | 1072282 | 52.672 | 54.974 |
| 11) | M | alpha-Chlordane | 4.24 | 4.80 | 1120444 | 916707 | 53.053 | 54.677 |
| 12) | M | Endosulfan I | 4.34 | 4.84 | 1450640 | 1040267 | 57.007 | 50.669 |
| 13) | M | 4,4'-DDE | 4.31 | 4.91 | 545867 | 877395 | 45.448 | 47.823 |
| 14) | M | Dieldrin | 4.52 | 5.05 | 1133484 | 1001504 | 55.013 | 52.413 |
| 15) | M | Endrin | 4.69 | 5.27 | 905753 | 676237 | 57.030 | 48.746 |
| 16) | M | 4,4'-DDD | 4.75 | 5.33 | 617236 | 563920 | 57.552m | 48.602 |
| 17) | M | Endosulfan II | 4.85 | 5.42 | 742361 | 721354 | 40.249m | 40.836m |
| 18) | M | 4,4'-DDT | 4.95 | 5.55 | 747596 | 495228 | 56.658 | 41.887 # |
| 19) | M | Endrin Aldehyde | 5.14 | 5.65 | 747140 | 642585 | 45.931 | 43.749 |
| 20) | M | Methoxychlor | 5.31 | 6.01 | 353074 | 246488 | 57.125m | 46.658 |
| 21) | M | Mirex | 5.41 | 6.18 | 587120 | 376807 | 43.828m | 42.196m |
| 22) | M | Endosulfan sulfa | 5.43 | 5.84 | 1217572 | 597030 | 54.288m | 43.036 |
| 23) | M | Endrin Ketone | 5.63 | 6.20 | 846887 | 1136717 | 45.050 | 44.751m |

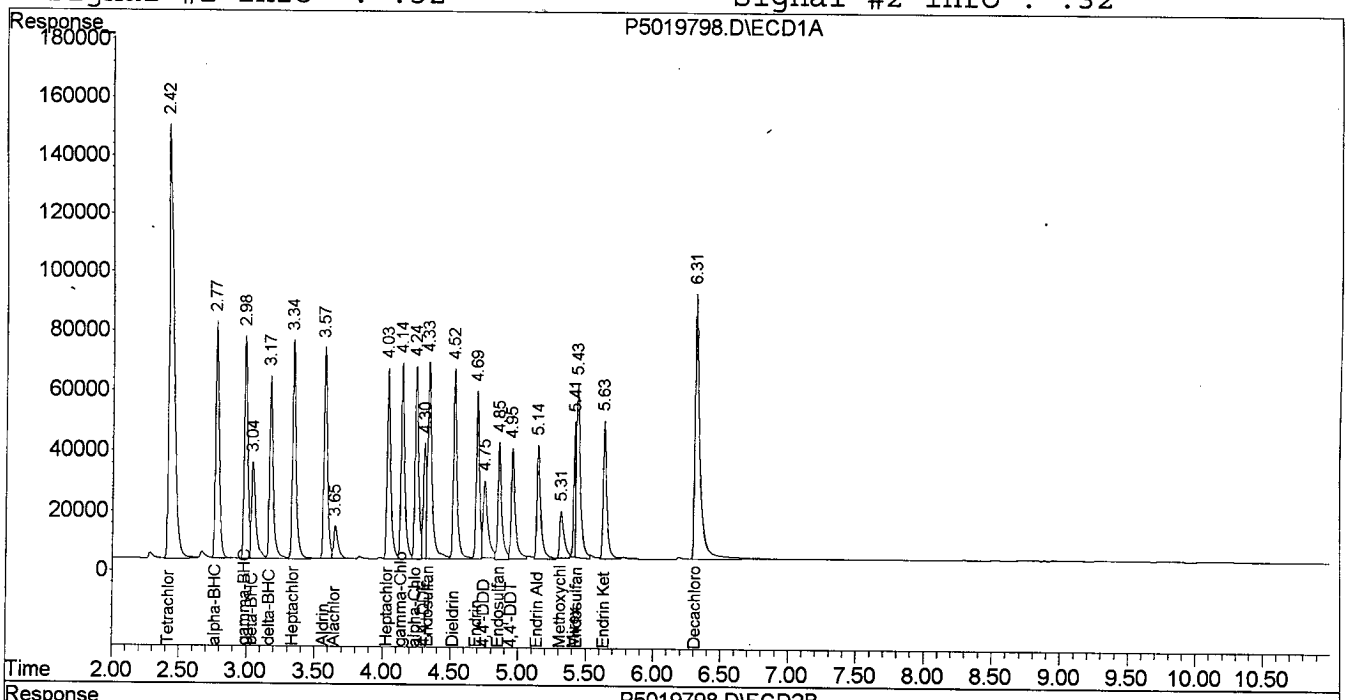
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

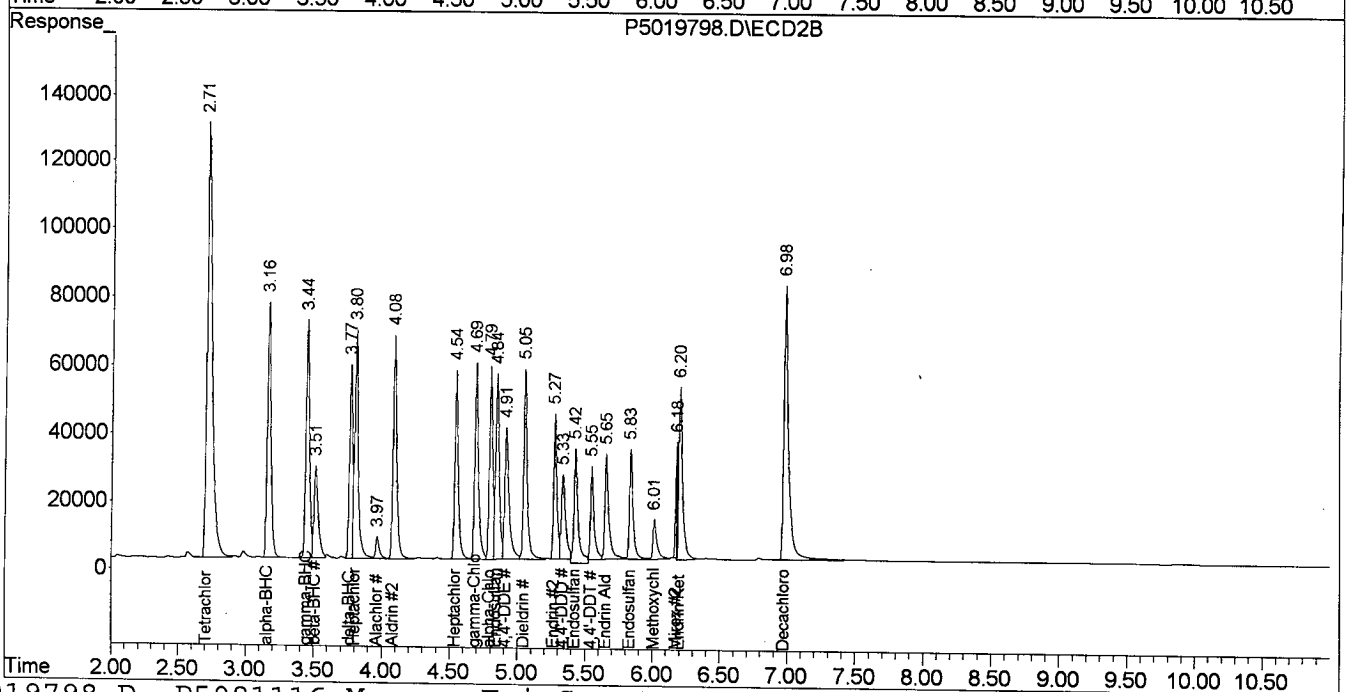
# Quantitation Report

Signal #1 : C:\HPCHEM\1\DATA\091216\P5019798.D\ECD1A.CH Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\091216\P5019798.D\ECD2B.CH
Acq On : 12 Sep 2016 8:55 pm Operator: AMC
Sample : SEQ-CCV5 Inst : GC DUAL E
Misc : QBPEST5-091216A Y15G090 PEST MIX 50.0ng/ Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Sep 13 7:55 2016 Quant Results File: P5081116.RES

Quant Method : C:\HPCHEM\1\METHODS\P5081116.M (Chemstation Integrator)
Title : 08/11/16 - Stx-CLP & CLP2 - single tower,dual det
Last Update : Mon Sep 12 10:34:40 2016
Response via : Multiple Level Calibration
DataAcq Meth : PEST.M

Volume Inj. : 1 uL
Signal #1 Phase : Stx-CLPesticides Signal #2 Phase: Stx-CLPesticides2 Se
Signal #1 Info : .32 Signal #2 Info : .32



# FORM V ANALYSIS BATCH (SEQUENCE) SUMMARY

## EPA 8081B

| | | | |
|---|---|---|---|
| Laboratory: | York Analytical Laboratories, Inc. | SDG: | 16I0260 |
| Client: | Langan Engineering & Environmental Services (NYC) | Project: | 170301202 450 Union Street |
| Sequence: | Y6H1225 | Instrument: | GC Dual E |
| | | Calibration: | YH60012 |

| Sample Name | Lab Sample ID | Lab File ID | Analysis Date/Time |
|---|---|---|---|
| Cal Standard | Y6H1225-CAL1 | P5018851.D | 08/11/16 12:57 |
| Cal Standard | Y6H1225-CAL2 | P5018852.D | 08/11/16 13:12 |
| Cal Standard | Y6H1225-CAL3 | P5018853.D | 08/11/16 13:27 |
| Cal Standard | Y6H1225-CAL4 | P5018854.D | 08/11/16 13:42 |
| Cal Standard | Y6H1225-CAL5 | P5018855.D | 08/11/16 13:57 |
| Cal Standard | Y6H1225-CAL6 | P5018856.D | 08/11/16 14:12 |
| Secondary Cal Check | Y6H1225-SCV1 | P5018857.D | 08/11/16 14:27 |

# FORM V ANALYSIS BATCH (SEQUENCE) SUMMARY

## EPA 8081B

| | | | |
|---|---|---|---|
| Laboratory: | York Analytical Laboratories, Inc. | SDG: | 16I0260 |
| Client: | Langan Engineering & Environmental Services (NYC) | Project: | 170301202 450 Union Street |
| Sequence: | Y6I1309 | Instrument: | GC Dual E |
| | | Calibration: | YH60012 |

| Sample Name | Lab Sample ID | Lab File ID | Analysis Date/Time |
|---|---|---|---|
| Performance Mix | Y6I1309-PEM1 | P5019759.D | 09/12/16 09:10 |
| Calibration Check | Y6I1309-CCV1 | P5019760.D | 09/12/16 09:51 |
| Calibration Check | Y6I1309-CCV2 | P5019761.D | 09/12/16 10:06 |
| Calibration Check | Y6I1309-CCV3 | P5019762.D | 09/12/16 10:20 |
| Calibration Check | Y6I1309-CCV4 | P5019780.D | 09/12/16 14:59 |
| Blank | BI60374-BLK1 | P5019781.D | 09/12/16 16:42 |
| LCS | BI60374-BS1 | P5019782.D | 09/12/16 16:56 |
| V01_0-1.5 | 16I0260-01 | P5019790.D | 09/12/16 18:56 |
| Performance Mix | Y6I1309-PEM2 | P5019791.D | 09/12/16 19:11 |
| Calibration Check | Y6I1309-CCV5 | P5019798.D | 09/12/16 20:55 |

**FORM I**

# METHOD BLANK DATA SHEET

## EPA 8081B

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | York Analytical Laboratories, Inc. | | | SDG: | 16I0260 |
| Client: | Langan Engineering & Environmental Services (NYC) | | | Project: | 170301202 450 Union Street |
| Matrix: | Soil | Laboratory ID: | BI60374-BLK1 | File ID: | P5019781.D |
| Prepared: | 09/12/16 08:21 | Preparation: | EPA 3550C | Initial/Final: | 30 g / 10 mL |
| Analyzed: | 09/12/16 16:42 | Instrument: | GC Dual E | | |
| Batch: | BI60374 | Sequence: | Y6I1309 | Calibration: | YH60012 |

| CAS NO. | COMPOUND | CONC. (mg/kg wet) | Q |
|---|---|---|---|
| 72-54-8 | 4,4'-DDD | 0.000330 | U |
| 72-55-9 | 4,4'-DDE | 0.000330 | U |
| 50-29-3 | 4,4'-DDT | 0.000330 | U |
| 309-00-2 | Aldrin | 0.000330 | U |
| 319-84-6 | alpha-BHC | 0.000330 | U |
| 5103-71-9 | alpha-Chlordane | 0.000330 | U |
| 319-85-7 | beta-BHC | 0.000330 | U |
| 57-74-9 | Chlordane, total | 0.0132 | U |
| 319-86-8 | delta-BHC | 0.000330 | U |
| 60-57-1 | Dieldrin | 0.000330 | U |
| 959-98-8 | Endosulfan I | 0.000330 | U |
| 33213-65-9 | Endosulfan II | 0.000330 | U |
| 1031-07-8 | Endosulfan sulfate | 0.000330 | U |
| 72-20-8 | Endrin | 0.000330 | U |
| 7421-93-4 | Endrin aldehyde | 0.000330 | U |
| 53494-70-5 | Endrin ketone | 0.000330 | U |
| 58-89-9 | gamma-BHC (Lindane) | 0.000330 | U |
| 5566-34-7 | gamma-Chlordane | 0.000330 | U |
| 76-44-8 | Heptachlor | 0.000330 | U |
| 1024-57-3 | Heptachlor epoxide | 0.000330 | U |
| 72-43-5 | Methoxychlor | 0.000330 | U |
| 8001-35-2 | Toxaphene | 0.0330 | U |
| | Chlordane, total (alpha, gamma) | 0.000330 | U |

| SYSTEM MONITORING COMPOUND | ADDED (mg/kg wet) | CONC (mg/kg wet) | % REC | QC LIMITS | Q |
|---|---|---|---|---|---|
| Decachlorobiphenyl | 0.0667 | 0.0547 | 82.1 | 30 - 150 | |
| Tetrachloro-m-xylene | 0.0667 | 0.0560 | 84.0 | 30 - 150 | |

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\091216\P5019781.D\ECD1A.CH Vial: 22
Signal #2 : C:\HPCHEM\1\DATA\091216\P5019781.D\ECD2B.CH
Acq On : 12 Sep 2016 4:42 pm Operator: AMC
Sample : BI60374-BLK1 Inst : GC DUAL E
Misc : QBPEST5-091216A Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Sep 13 10:27 2016 Quant Results File: P5081116.RES

Quant Method : C:\HPCHEM\1\METHODS\P5081116.M (Chemstation Integrator)
Title : 08/11/16 - Stx-CLP & CLP2 - single tower,dual det
Last Update : Tue Sep 13 10:21:00 2016
Response via : Initial Calibration
DataAcq Meth : PEST.M

Volume Inj. : 1 uL
Signal #1 Phase : Stx-CLPesticides Signal #2 Phase: Stx-CLPesticides2 Serial # 1124629
Signal #1 Info : .32 Signal #2 Info : .32

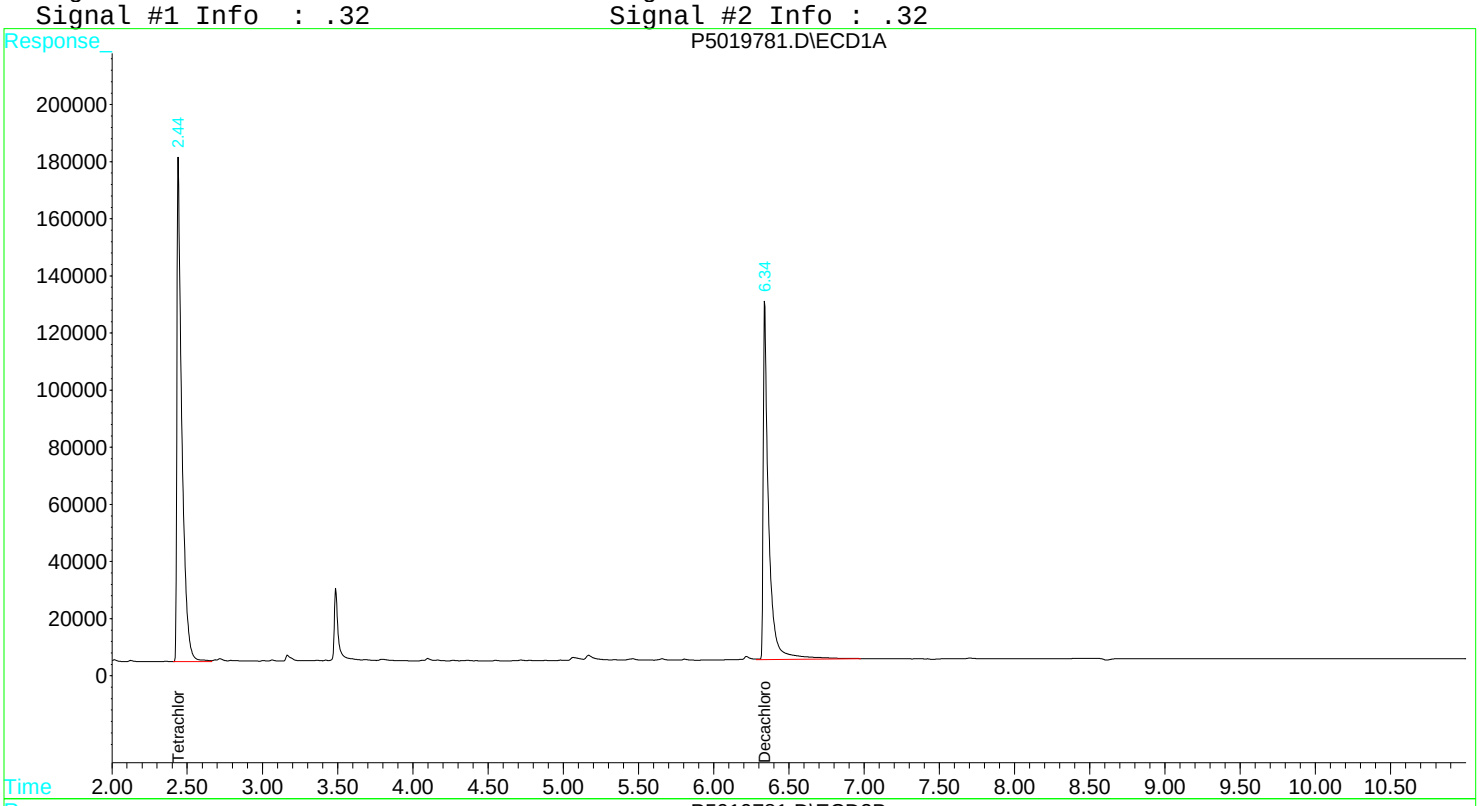
| | Compound | RT#1 | RT#2 | Resp#1 | Resp#2 | ng/mL | ng/mL |
|---|---|---|---|---|---|---|---|
| | **System Monitoring Compounds** | | | | | | |
| 1) SA | Tetrachloro-m-xy | 2.44f | 2.71 | 4048990 | 3597433 | 167.930 | 183.811 |
| | Spiked Amount 200.000 | Range 30 - 150 | | Recovery = | | 83.97% | 91.91% |
| 24) SA | Decachlorobiphen | 6.34f | 7.00f | 3136587 | 2821372 | 164.173 | 157.132 |
| | Spiked Amount 200.000 | Range 30 - 150 | | Recovery = | | 82.09% | 78.57% |
| | **Target Compounds** | | | | | | |
| 2) M | alpha-BHC | 0.00 | 0.00 | 0 | 0 | N.D. d | N.D. |
| 3) M | gamma-BHC (Linda | 0.00 | 0.00 | 0 | 0 | N.D. d | N.D. d |
| 4) M | beta-BHC | 0.00 | 0.00 | 0 | 0 | N.D. d | N.D. d |
| 5) M | delta-BHC | 0.00 | 0.00 | 0 | 0 | N.D. d | N.D. d |
| 6) M | Heptachlor | 0.00 | 0.00 | 0 | 0 | N.D. d | N.D. |
| 7) M | Aldrin | 0.00 | 0.00 | 0 | 0 | N.D. | N.D. d |
| 8) M | Alachlor | 0.00 | 0.00 | 0 | 0 | N.D. d | N.D. |
| 9) M | Heptachlor Epoxi | 0.00 | 0.00 | 0 | 0 | N.D. d | N.D. d |
| 10) M | gamma-Chlordane | 0.00 | 0.00 | 0 | 0 | N.D. d | N.D. d |
| 11) M | alpha-Chlordane | 0.00 | 0.00 | 0 | 0 | N.D. d | N.D. d |
| 12) M | Endosulfan I | 0.00 | 0.00 | 0 | 0 | N.D. d | N.D. d |
| 13) M | 4,4'-DDE | 0.00 | 0.00 | 0 | 0 | N.D. | N.D. |
| 14) M | Dieldrin | 0.00 | 0.00 | 0 | 0 | N.D. d | N.D. d |
| 15) M | Endrin | 0.00 | 0.00 | 0 | 0 | N.D. d | N.D. d |
| 16) M | 4,4'-DDD | 0.00 | 0.00 | 0 | 0 | N.D. d | N.D. d |
| 17) M | Endosulfan II | 0.00 | 0.00 | 0 | 0 | N.D. d | N.D. |
| 18) M | 4,4'-DDT | 0.00 | 0.00 | 0 | 0 | N.D. d | N.D. |
| 19) M | Endrin Aldehyde | 0.00 | 0.00 | 0 | 0 | N.D. d | N.D. d |
| 20) M | Methoxychlor | 0.00 | 0.00 | 0 | 0 | N.D. d | N.D. d |
| 21) M | Mirex | 0.00 | 0.00 | 0 | 0 | N.D. d | N.D. d |
| 22) M | Endosulfan sulfa | 0.00 | 0.00 | 0 | 0 | N.D. d | N.D. d |
| 23) M | Endrin Ketone | 0.00 | 0.00 | 0 | 0 | N.D. d | N.D. d |

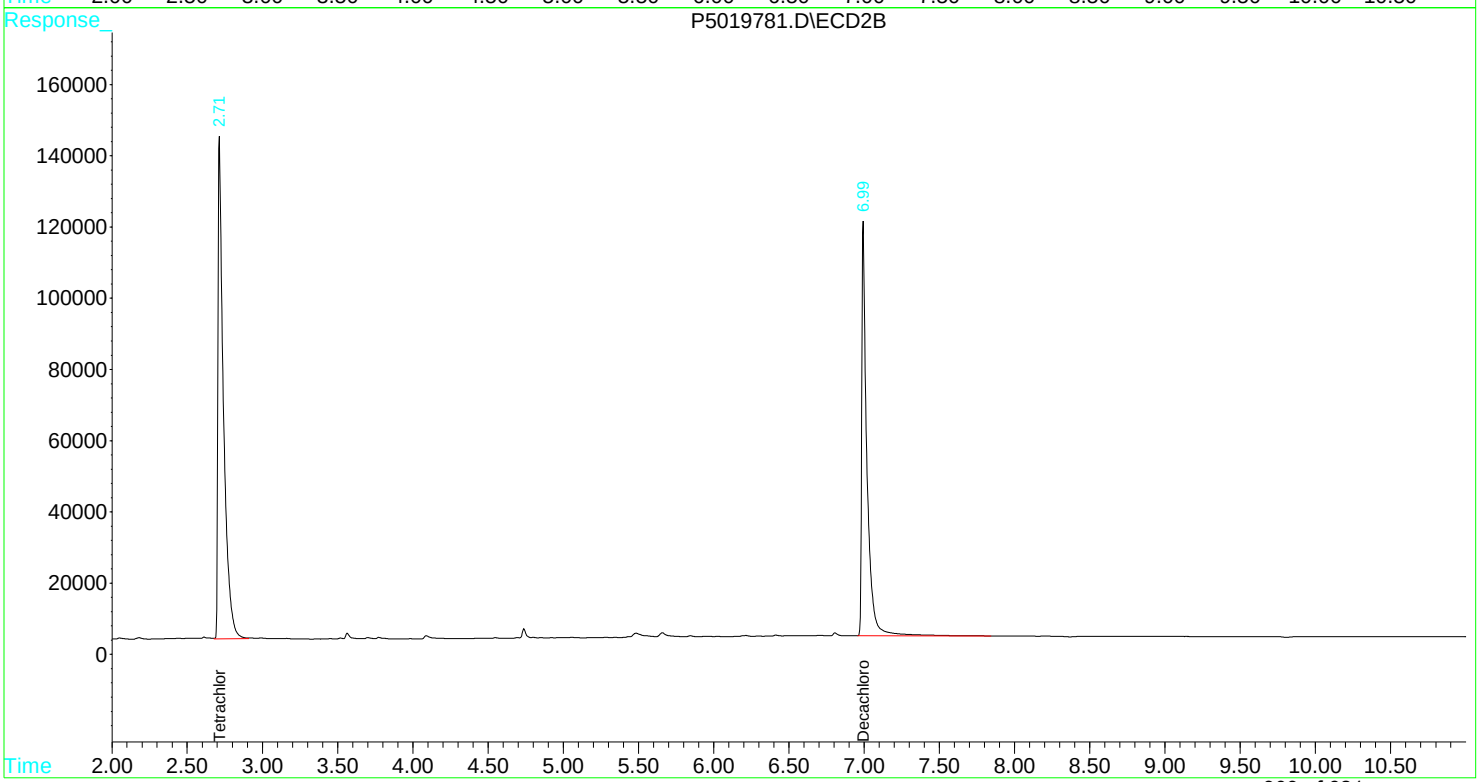
Quantitation Report

Signal #1 : C:\HPCHEM\1\DATA\091216\P5019781.D\ECD1A.CH  Vial: 22
Signal #2 : C:\HPCHEM\1\DATA\091216\P5019781.D\ECD2B.CH
Acq On    : 12 Sep 2016   4:42 pm                    Operator: AMC
Sample    : BI60374-BLK1                             Inst    : GC DUAL E
Misc      : QBPEST5-091216A                          Multiplr: 1.00
IntFile Signal #1: EVENTS.E     IntFile Signal #2: EVENTS2.E
Quant Time: Sep 13 10:27 2016  Quant Results File: P5081116.RES

Quant Method : C:\HPCHEM\1\METHODS\P5081116.M (Chemstation Integrator)
Title        : 08/11/16 - Stx-CLP & CLP2 - single tower,dual det
Last Update  : Tue Sep 13 10:21:00 2016
Response via : Multiple Level Calibration
DataAcq Meth : PEST.M

Volume Inj.     : 1 uL
Signal #1 Phase : Stx-CLPesticides  Signal #2 Phase: Stx-CLPesticides2 Serial # 1124629
Signal #1 Info  : .32               Signal #2 Info : .32



# FORM III LCS / LCS DUPLICATE RECOVERY

## EPA 8081B

| | | | |
|---|---|---|---|
| Laboratory: | York Analytical Laboratories, Inc. | SDG: | 16I0260 |
| Client: | Langan Engineering & Environmental Services (NYC) | Project: | 170301202 450 Union Street |
| Matrix: | Soil | | |
| Batch: | BI60374 | Laboratory ID: | BI60374-BS1 |
| Preparation: | EPA 3550C | Initial/Final: | 30 g / 10 mL |

| COMPOUND | SPIKE ADDED (mg/kg wet) | LCS CONCENTRATION (mg/kg wet) | LCS % REC. # | QC LIMITS REC. |
|---|---|---|---|---|
| 4,4'-DDD | 0.0333 | 0.0377 | 113 | 40 - 140 |
| 4,4'-DDE | 0.0333 | 0.0324 | 97.3 | 40 - 140 |
| 4,4'-DDT | 0.0333 | 0.0318 | 95.3 | 40 - 140 |
| Aldrin | 0.0333 | 0.0324 | 97.1 | 40 - 140 |
| alpha-BHC | 0.0333 | 0.0344 | 103 | 40 - 140 |
| alpha-Chlordane | 0.0333 | 0.0293 | 87.9 | 40 - 140 |
| beta-BHC | 0.0333 | 0.0332 | 99.5 | 40 - 140 |
| delta-BHC | 0.0333 | 0.0348 | 104 | 40 - 140 |
| Dieldrin | 0.0333 | 0.0305 | 91.6 | 40 - 140 |
| Endosulfan I | 0.0333 | 0.0320 | 96.1 | 40 - 140 |
| Endosulfan II | 0.0333 | 0.0277 | 83.2 | 40 - 140 |
| Endosulfan sulfate | 0.0333 | 0.0287 | 86.1 | 40 - 140 |
| Endrin | 0.0333 | 0.0302 | 90.5 | 40 - 140 |
| Endrin aldehyde | 0.0333 | 0.0235 | 70.6 | 40 - 140 |
| Endrin ketone | 0.0333 | 0.0254 | 76.3 | 40 - 140 |
| gamma-BHC (Lindane) | 0.0333 | 0.0337 | 101 | 40 - 140 |
| gamma-Chlordane | 0.0333 | 0.0299 | 89.7 | 40 - 140 |
| Heptachlor | 0.0333 | 0.0315 | 94.4 | 40 - 140 |
| Heptachlor epoxide | 0.0333 | 0.0300 | 90.0 | 40 - 140 |
| Methoxychlor | 0.0333 | 0.0314 | 94.3 | 40 - 140 |

# Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\091216\P5019782.D\ECD1A.CH Vial: 23
Signal #2 : C:\HPCHEM\1\DATA\091216\P5019782.D\ECD2B.CH
Acq On : 12 Sep 2016 4:56 pm Operator: AMC
Sample : BI60374-BS1 Inst : GC DUAL E
Misc : QBPEST5-091216A Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Sep 13 10:28 2016 Quant Results File: P5081116.RES

Quant Method : C:\HPCHEM\1\METHODS\P5081116.M (Chemstation Integrator)
Title : 08/11/16 - Stx-CLP & CLP2 - single tower,dual det
Last Update : Mon Sep 12 10:34:40 2016
Response via : Initial Calibration
DataAcq Meth : PEST.M

Volume Inj. : 1 uL
Signal #1 Phase : Stx-CLPesticides Signal #2 Phase: Stx-CLPesticides2 Serial # 1124629
Signal #1 Info : .32 Signal #2 Info : .32

| | Compound | RT#1 | RT#2 | Resp#1 | Resp#2 | ng/mL | ng/mL |
|---|---|---|---|---|---|---|---|
| | **System Monitoring Compounds** | | | | | | |
| 1) SA | Tetrachloro-m-xy | 2.43 | 2.71 | 4170967 | 3748561 | 172.989 | 191.533 |
| | Spiked Amount 200.000 | Range 30 - 150 | | Recovery = | | 86.49% | 95.77% |
| 24) SA | Decachlorobiphen | 6.32 | 6.98 | 2412836 | 2198756 | 126.291 | 122.456 |
| | Spiked Amount 200.000 | Range 30 - 150 | | Recovery = | | 63.15% | 61.23% |
| | **Target Compounds** | | | | | | |
| 2) M | alpha-BHC | 2.77 | 3.16 | 2616074 | 2584626 | 103.197 | 105.466 |
| 3) M | gamma-BHC (Linda | 2.99 | 3.45 | 2278672 | 2244124 | 101.044 | 106.463 |
| 4) M | beta-BHC | 3.05 | 3.51 | 1338735 | 1196909 | 99.504 | 102.549 |
| 5) M | delta-BHC | 3.17 | 3.77 | 2089886 | 1529077 | 104.322 | 106.758 |
| 6) M | Heptachlor | 3.34 | 3.81 | 2185923 | 2241409 | 94.392 | 84.604 |
| 7) M | Aldrin | 3.58 | 4.09 | 2078022 | 2066185 | 97.145 | 85.457 |
| 8) M | Alachlor | 3.65 | 3.97 | 381536 | 218309 | 80.454m | 72.384m |
| 9) M | Heptachlor Epoxi | 4.04 | 4.54 | 1905700 | 1644705 | 89.994 | 87.264 |
| 10) M | gamma-Chlordane | 4.14 | 4.69 | 2006472 | 1886118 | 89.718 | 96.698 |
| 11) M | alpha-Chlordane | 4.24 | 4.80 | 1856582 | 1510559 | 87.909 | 90.098 |
| 12) M | Endosulfan I | 4.34 | 4.84 | 2444564 | 1874413 | 96.065 | 91.299 |
| 13) M | 4,4'-DDE | 4.31 | 4.91 | 1168485 | 1646027 | 97.285 | 89.718 |
| 14) M | Dieldrin | 4.53 | 5.05 | 1887771 | 1690340 | 91.622 | 88.463 |
| 15) M | Endrin | 4.70 | 5.27 | 1437556 | 1132412 | 90.515 | 81.630 |
| 16) M | 4,4'-DDD | 4.75 | 5.33 | 1212400 | 1099630 | 113.046m | 94.772 |
| 17) M | Endosulfan II | 4.86 | 5.43 | 1533645 | 1320166 | 83.150 | 74.735 |
| 18) M | 4,4'-DDT | 4.96 | 5.55 | 1257391 | 843861 | 95.294 | 71.376 # |
| 19) M | Endrin Aldehyde | 5.15 | 5.66 | 1147721 | 1005683 | 70.558 | 68.469 |
| 20) M | Methoxychlor | 5.31 | 6.01 | 582616 | 394387 | 94.263m | 74.653 |
| 21) M | Mirex | 5.42 | 6.18 | 846949 | 557816 | 63.224m | 62.466m |
| 22) M | Endosulfan sulfa | 5.44 | 5.84 | 1930000 | 1080237 | 86.053m | 77.867 |
| 23) M | Endrin Ketone | 5.64 | 6.20 | 1434958 | 1748932 | 76.333 | 68.853m |

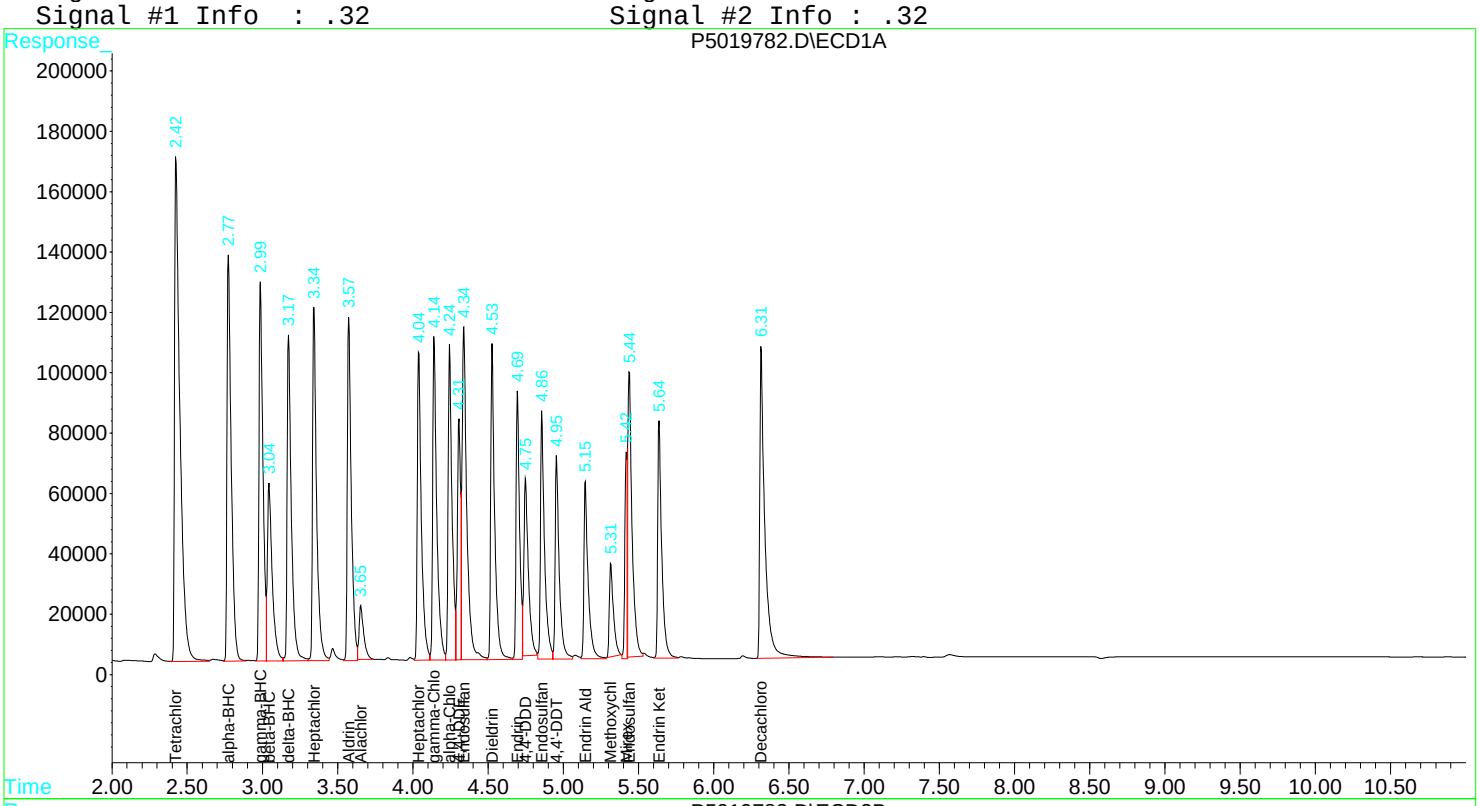
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

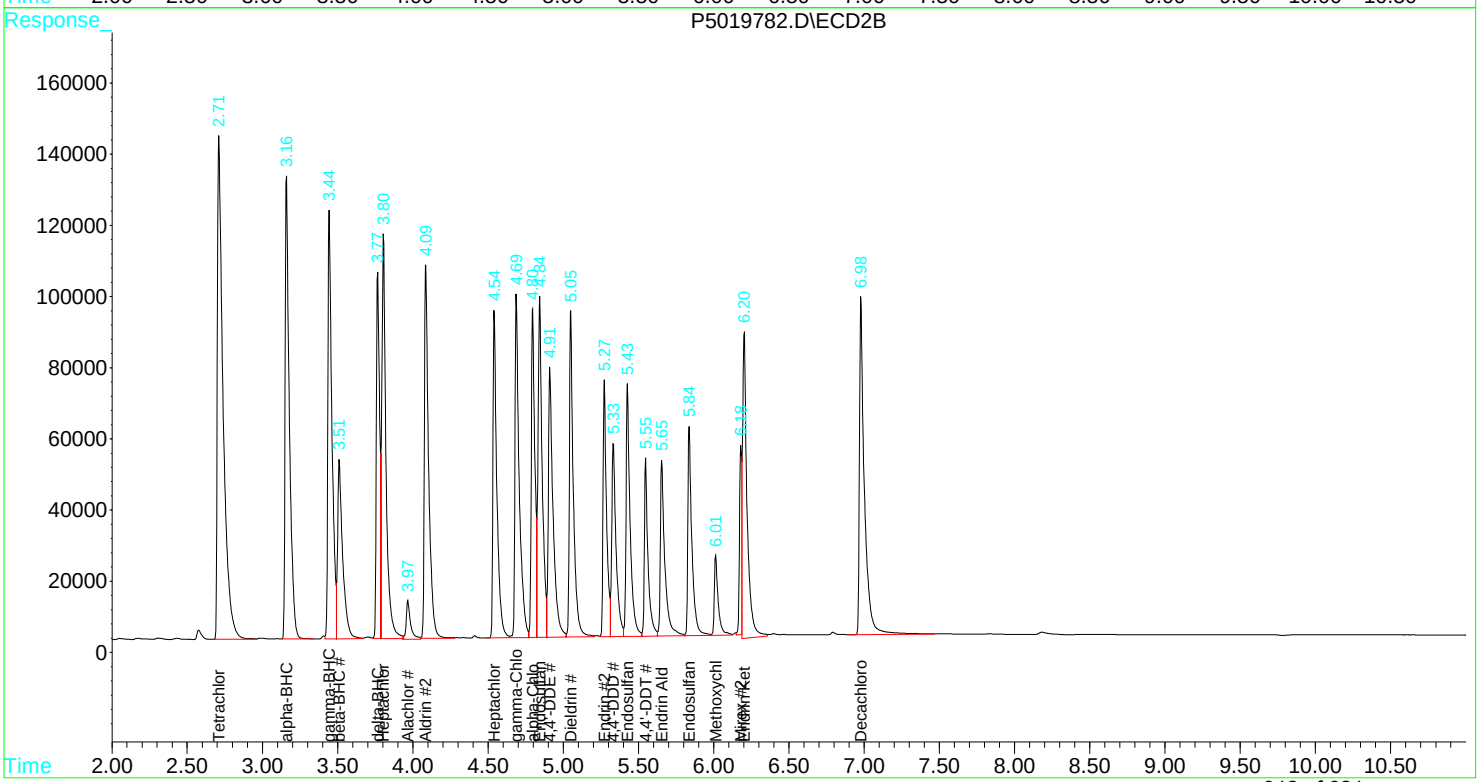
Quantitation Report

Signal #1 : C:\HPCHEM\1\DATA\091216\P5019782.D\ECD1A.CH  Vial: 23
Signal #2 : C:\HPCHEM\1\DATA\091216\P5019782.D\ECD2B.CH
Acq On    : 12 Sep 2016   4:56 pm                    Operator: AMC
Sample    : BI60374-BS1                              Inst    : GC DUAL E
Misc      : QBPEST5-091216A                          Multiplr: 1.00
IntFile Signal #1: EVENTS.E     IntFile Signal #2: EVENTS2.E
Quant Time: Sep 13 10:28 2016  Quant Results File: P5081116.RES

Quant Method : C:\HPCHEM\1\METHODS\P5081116.M (Chemstation Integrator)
Title        : 08/11/16 - Stx-CLP & CLP2 - single tower,dual det
Last Update  : Mon Sep 12 10:34:40 2016
Response via : Multiple Level Calibration
DataAcq Meth : PEST.M

Volume Inj.     : 1 uL
Signal #1 Phase : Stx-CLPesticides  Signal #2 Phase: Stx-CLPesticides2 Serial # 1124629
Signal #1 Info  : .32               Signal #2 Info : .32



## PREPARATION BENCH SHEET-SOILS/SOLIDS

BI60374

**York Analytical Laboratories, Inc.**

**Printed: 9/16/2016 11:26:38AM**

**Matrix: Soil** **Preparation: EPA 3550C** **Surrogate used: Y16H070**

| Lab Number | Analysis | Prepared | Initial (g) | Final (mL) | Spike ID | Source ID | ul Spike | ul Surrogate | Herbicides Information | | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | Optional C/U(Y/N) | pH after HCl | |
| 16I0249-10 A | Pesticides, NJDEP/TCL | 09/12/2016 08:21 | 30 | 10 | | | | 100 | | | Added for BatchQC in: BI60374 |
| 16I0249-10 A | Pesticides, NYSDEC Pa | 09/12/2016 08:21 | 30 | 10 | | | | 100 | | | Added for BatchQC in: BI60374 |
| 16I0249-10 A | Polychlorinated Biphen | 09/12/2016 08:21 | 30 | 10 | | | | 100 | | | |
| 16I0249-10 A | Pesticides, 8081 target l | 09/12/2016 08:21 | 30 | 10 | | | | 100 | | | |
| 16I0249-11 A | Pesticides, 8081 target l | 09/12/2016 08:21 | 30 | 10 | | | | 100 | | | |
| 16I0249-11 A | Polychlorinated Biphen | 09/12/2016 08:21 | 30 | 10 | | | | 100 | | | |
| 16I0249-12 A | Pesticides, 8081 target l | 09/12/2016 08:21 | 30 | 10 | | | | 100 | | | |
| 16I0249-12 A | Polychlorinated Biphen | 09/12/2016 08:21 | 30 | 10 | | | | 100 | | | |
| 16I0249-13 A | Pesticides, 8081 target l | 09/12/2016 08:21 | 30 | 10 | | | | 100 | | | |
| 16I0249-13 A | Polychlorinated Biphen | 09/12/2016 08:21 | 30 | 10 | | | | 100 | | | |
| 16I0249-14 A | Polychlorinated Biphen | 09/12/2016 08:21 | 30 | 10 | | | | 100 | | | |
| 16I0249-14 A | Pesticides, 8081 target l | 09/12/2016 08:21 | 30 | 10 | | | | 100 | | | |
| 16I0249-15 A | Pesticides, 8081 target l | 09/12/2016 08:21 | 30 | 10 | | | | 100 | | | |
| 16I0249-15 A | Polychlorinated Biphen | 09/12/2016 08:21 | 30 | 10 | | | | 100 | | | |
| 16I0260-01 E | Pesticides, NJDEP/TCL | 09/12/2016 08:21 | 30 | 10 | | | | 100 | | | |
| 16I0260-01 E | Polychlorinated Biphen | 09/12/2016 08:21 | 30 | 10 | | | | 100 | | | |
| 16I0267-01 A | Pesticides, NYSDEC Pa | 09/12/2016 08:21 | 30 | 10 | | | | 100 | | | |
| 16I0267-01 A | Polychlorinated Biphen | 09/12/2016 08:21 | 30 | 10 | | | | 100 | | | |
| 16I0267-02 A | Polychlorinated Biphen | 09/12/2016 08:21 | 30 | 10 | | | | 100 | | | |
| 16I0267-02 A | Pesticides, NYSDEC Pa | 09/12/2016 08:21 | 30 | 10 | | | | 100 | | | |
| 16I0269-01 A | Pesticides, NYSDEC Pa | 09/12/2016 08:21 | 30 | 10 | | | | 100 | | | |
| 16I0269-01 A | Polychlorinated Biphen | 09/12/2016 08:21 | 30 | 10 | | | | 100 | | | |
| 16I0269-03 A | Pesticides, NYSDEC Pa | 09/12/2016 08:21 | 30 | 10 | | | | 100 | | | |
| 16I0269-03 A | Polychlorinated Biphen | 09/12/2016 08:21 | 30 | 10 | | | | 100 | | | |

**Preparation Performed by** TB **Date:** 09/12/2016 08:21 PUF Lot no.: _____

## PREPARATION BENCH SHEET-SOILS/SOLIDS

BI60374

**York Analytical Laboratories, Inc.**

**Printed: 9/16/2016 11:26:38AM**

**Matrix: Soil** **Preparation: EPA 3550C** **Surrogate used: Y16H070**

| Lab Number | Analysis | Prepared | Initial (g) | Final (mL) | Spike ID | Source ID | ul Spike | ul Surrogate | Herbicides Information | | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | Optional C/U(Y/N) | pH after HCl | |
| 16I0269-05 A | Pesticides, NYSDEC Pa | 09/12/2016 08:21 | 30 | 10 | | | | 100 | | | |
| 16I0269-05 A | Polychlorinated Biphen | 09/12/2016 08:21 | 30 | 10 | | | | 100 | | | |
| 16I0269-07 A | Pesticides, NYSDEC Pa | 09/12/2016 08:21 | 30 | 10 | | | | 100 | | | |
| 16I0269-07 A | Polychlorinated Biphen | 09/12/2016 08:21 | 30 | 10 | | | | 100 | | | |
| 16I0338-03 E | Polychlorinated Biphen | 09/12/2016 08:21 | 30 | 10 | | | | 100 | | | |
| 16I0338-03 E | Pesticides, 8081 target l | 09/12/2016 08:21 | 30 | 10 | | | | 100 | | | |
| BI60374-BLK1 | QC | 09/12/2016 08:21 | 30 | 10 | | | | 100 | | | |
| BI60374-BLK2 | QC | 09/12/2016 08:21 | 30 | 10 | | | | 100 | | | |
| BI60374-BS1 | QC | 09/12/2016 08:21 | 30 | 10 | Y16H176 | | 100 | 100 | | | |
| BI60374-BS2 | QC | 09/12/2016 08:21 | 30 | 10 | Y16C070 | | 100 | 100 | | | |
| BI60374-MS1 | QC | 09/12/2016 08:21 | 30 | 10 | Y16H176 | 16I0249-10 | 100 | 100 | | | |
| BI60374-MSD1 | QC | 09/12/2016 08:21 | 30 | 10 | Y16H176 | 16I0249-10 | 100 | 100 | | | |

**Reagents:**

| ID Number | Description | Lot Number | ID Number | Description | Lot Number |
|---|---|---|---|---|---|
| Y15F070 | Ottawa Sand Mix | 101614 | Y16E002 | Sodium Sulfate, Anhydrous | XK07D |
| Y16E130 | ACETONE | 0000133024 | Y16G085 | HEXANE | 0000140377 |

314 of 621

**Preparation Performed by** TB **Date:** 09/12/2016 08:21 PUF Lot no.: _____

# Injection Log

Directory: C:\HPCHEM\1\DATA\091216

| Line | Vial | FileName | Multiplier | SampleName | Misc Info | Injected |
|---|---|---|---|---|---|---|
| 1 | 1 | P5019759.D | 1. | SEQ-PEM1 | QBPEST5-091216A Y14J138 DDT/ENDRIN | 12 Sep 2016 09:1 |
| 2 | 2 | P5019760.D | 1. | SEQ-CCV1 | QBPEST5-091216A Y15G090 PEST MIX 50.0ng | 12 Sep 2016 09:5 |
| 3 | 3 | P5019761.D | 1. | SEQ-CCV2 | QBPEST5-091216A Y14A024 CHLORDANE 1.0 | 12 Sep 2016 10:0 |
| 4 | 4 | P5019762.D | 1. | SEQ-CCV3 | QBPEST5-091216A Y14A025 TOXAPHENE 2.0 | 12 Sep 2016 10:2 |
| 5 | 5 | P5019763.D | 5. | 16I0208-09 | QBPEST5-091216A | 12 Sep 2016 10:4 |
| 6 | 6 | P5019764.D | 1. | BI60348-BLK1 | QBPEST5-091216A | 12 Sep 2016 11:0 |
| 7 | 7 | P5019765.D | 1. | BI60348-BS1 | QBPEST5-091216A | 12 Sep 2016 11:1 |
| 8 | 8 | P5019766.D | 1. | BI60348-BSD1 | QBPEST5-091216A | 12 Sep 2016 11:3 |
| 9 | 9 | P5019767.D | 1. | 16I0208-08 | QBPEST5-091216A TCLP | 12 Sep 2016 11:4 |
| 10 | 10 | P5019768.D | 1. | 16I0271-08 | QBPEST5-091216A TCLP | 12 Sep 2016 12:0 |
| 11 | 11 | P5019769.D | 1. | BI60348-DUP1 | QBPEST5-091216A TCLP | 12 Sep 2016 12:1 |
| 12 | 12 | P5019770.D | 5. | 16I0271-10 | QBPEST5-091216A | 12 Sep 2016 12:3 |
| 13 | 13 | P5019771.D | 5. | BI60316-MS1 | QBPEST5-091216A | 12 Sep 2016 12:4 |
| 14 | 14 | P5019772.D | 1. | BI60362-BLK1 | QBPEST5-091216A | 12 Sep 2016 13:0 |
| 15 | 15 | P5019773.D | 1. | BI60362-BS1 | QBPEST5-091216A | 12 Sep 2016 13:1 |
| 16 | 16 | P5019774.D | 1. | BI60362-BSD1 | QBPEST5-091216A | 12 Sep 2016 13:3 |
| 17 | 17 | P5019775.D | 1. | 16I0228-01 | QBPEST5-091216A | 12 Sep 2016 13:4 |
| 18 | 18 | P5019776.D | 1. | 16I0228-02 | QBPEST5-091216A | 12 Sep 2016 14:0 |
| 19 | 19 | P5019777.D | 1. | 16I0310-01 | QBPEST5-091216A | 12 Sep 2016 14:1 |
| 20 | 20 | P5019778.D | 1. | 16I0228-03 | QBPEST5-091216A | 12 Sep 2016 14:2 |
| 21 | 21 | P5019779.D | 1. | 16I0228-04 | QBPEST5-091216A | 12 Sep 2016 14:4 |
| 22 | 2 | P5019780.D | 1. | SEQ-CCV4 | QBPEST5-091216A Y15G090 PEST MIX 50.0ng | 12 Sep 2016 14:5 |
| 23 | 22 | P5019781.D | 1. | BI60374-BLK1 | QBPEST5-091216A | 12 Sep 2016 16:4 |
| 24 | 23 | P5019782.D | 1. | BI60374-BS1 | QBPEST5-091216A | 12 Sep 2016 16:5 |
| 25 | 24 | P5019783.D | 5. | 16I0249-10 | QBPEST5-091216A | 12 Sep 2016 17:1 |
| 26 | 25 | P5019784.D | 5. | BI60374-MS1 | QBPEST5-091216A | 12 Sep 2016 17:2 |
| 27 | 26 | P5019785.D | 5. | BI60374-MSD1 | QBPEST5-091216A | 12 Sep 2016 17:4 |
| 28 | 27 | P5019786.D | 5. | 16I0249-11 | QBPEST5-091216A | 12 Sep 2016 17:5 |
| 29 | 28 | P5019787.D | 5. | 16I0249-13 | QBPEST5-091216A | 12 Sep 2016 18:1 |

# Injection Log

Directory: C:\HPCHEM\1\DATA\091216

| Line | Vial | FileName | Multiplier | SampleName | Misc Info | Injected |
|---|---|---|---|---|---|---|
| 30 | 29 | P5019788.D | 5. | 16I0249-14 | QBPEST5-091216A | 12 Sep 2016 18:2 |
| 31 | 30 | P5019789.D | 5. | 16I0249-15 | QBPEST5-091216A | 12 Sep 2016 18:4 |
| 32 | 31 | P5019790.D | 5. | 16I0260-01 | QBPEST5-091216A | 12 Sep 2016 18:5 |
| 33 | 1 | P5019791.D | 1. | SEQ-PEM2 | QBPEST5-091216A Y14J138 DDT/ENDRIN | 12 Sep 2016 19:1 |
| 34 | 32 | P5019792.D | 5. | 16I0267-01 | QBPEST5-091216A | 12 Sep 2016 19:2 |
| 35 | 33 | P5019793.D | 5. | 16I0267-02 | QBPEST5-091216A | 12 Sep 2016 19:4 |
| 36 | 34 | P5019794.D | 5. | 16I0269-01 | QBPEST5-091216A | 12 Sep 2016 19:5 |
| 37 | 35 | P5019795.D | 5. | 16I0269-03 | QBPEST5-091216A | 12 Sep 2016 20:1 |
| 38 | 36 | P5019796.D | 5. | 16I0269-05 | QBPEST5-091216A | 12 Sep 2016 20:2 |
| 39 | 37 | P5019797.D | 5. | 16I0269-07 | QBPEST5-091216A | 12 Sep 2016 20:4 |
| 40 | 2 | P5019798.D | 1. | SEQ-CCV5 | QBPEST5-091216A Y15G090 PEST MIX 50.0ng | 12 Sep 2016 20:5 |

York Analytical Laboratories, Inc.
SDG: 16I0260
CLASS: ARO
METHOD: EPA 8082A

# DATA PACKAGE COVER PAGE

## EPA 8082A

Laboratory: York Analytical Laboratories, Inc. SDG: 16I0260

Client: Langan Engineering & Environmental Services (NYC) Project: 170301202 450 Union Street

| Client Sample Id: | Lab Sample Id: |
|---|---|
| V01_0-1.5 | 16I0260-01 |

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in computer-readable data submitted on diskette has been autorized by the Laboratory Manager or the Manager's designee, as verified by the following signatures.

Signature:

Name: Benjamin Gulizia

Date: 9/30/2016

Title: Laboratory Director

# FORM II SURROGATE STANDARD RECOVERY AND RT SUMMARY

## EPA 8082A

| | | | |
|---|---|---|---|
| Laboratory: | York Analytical Laboratories, Inc. | SDG: | 16I0260 |
| Client: | Langan Engineering & Environmental Services (NYC) | Project: | 170301202 450 Union Street |
| Sequence: | Y6H1915 | Instrument: | GC_5890_I |
| Matrix: | Soil | Calibration: | YH60018 |

| Surrogate Compound | Spike Level ug/mL | % Recovery | Recovery Limits | RT | Calibration Mean RT | RT Diff | RT Diff Limit | Q |
|---|---|---|---|---|---|---|---|---|
| **Secondary Cal Check (Y6H1915-SCV1 )** | | | Lab File ID: P2024978.D | | Analyzed: 08/18/16 18:59 | | | |
| Tetrachloro-m-xylene | 0.160 | 98.1 | 0 - 200 | 6.32 | | | | |
| Decachlorobiphenyl | 0.160 | 95.6 | 0 - 200 | 17.38 | | | | |

# FORM II SURROGATE STANDARD RECOVERY AND RT SUMMARY

## EPA 8082A

| | | | |
|---|---|---|---|
| Laboratory: | York Analytical Laboratories, Inc. | SDG: | 16I0260 |
| Client: | Langan Engineering & Environmental Services (NYC) | Project: | 170301202 450 Union Street |
| Sequence: | Y6I1310 | Instrument: | GC_5890_I |
| Matrix: | Soil | Calibration: | YH60018 |

| Surrogate Compound | Spike Level ug/mL | % Recovery | Recovery Limits | RT | Calibration Mean RT | RT Diff | RT Diff Limit | Q |
|---|---|---|---|---|---|---|---|---|
| **Calibration Check (Y6I1310-CCV1 )** | | | Lab File ID: P2025505.D | | Analyzed: 09/12/16 11:41 | | | |
| Tetrachloro-m-xylene | 0.160 | 95.6 | 0 - 200 | 6.31 | | | | |
| Decachlorobiphenyl | 0.160 | 86.2 | 0 - 200 | 17.38 | | | | |
| **Blank (BI60374-BLK2 )** | | | Lab File ID: P2025507.D | | Analyzed: 09/12/16 12:39 | | | |
| Tetrachloro-m-xylene | 0.0667 | 88.0 | 30 - 140 | 6.31 | | | | |
| Decachlorobiphenyl | 0.0667 | 82.5 | 30 - 140 | 17.38 | | | | |
| **LCS (BI60374-BS2 )** | | | Lab File ID: P2025508.D | | Analyzed: 09/12/16 13:08 | | | |
| Tetrachloro-m-xylene | 0.0667 | 77.0 | 30 - 140 | 6.31 | | | | |
| Decachlorobiphenyl | 0.0667 | 71.5 | 30 - 140 | 17.38 | | | | |
| **V01_0-1.5 (16I0260-01 )** | | | Lab File ID: P2025519.D | | Analyzed: 09/12/16 18:29 | | | |
| Tetrachloro-m-xylene | 0.0690 | 61.0 | 30 - 140 | 6.31 | | | | |
| Decachlorobiphenyl | 0.0690 | 57.0 | 30 - 140 | 17.38 | | | | |
| **Calibration Check (Y6I1310-CCV3 )** | | | Lab File ID: P2025527.D | | Analyzed: 09/12/16 22:23 | | | |
| Tetrachloro-m-xylene | 0.160 | 88.1 | 0 - 200 | 6.31 | | | | |
| Decachlorobiphenyl | 0.160 | 80.6 | 0 - 200 | 17.38 | | | | |
| **Calibration Check (Y6I1310-CCV4 )** | | | Lab File ID: P2025546.D | | Analyzed: 09/13/16 07:37 | | | |
| Tetrachloro-m-xylene | 0.160 | 90.0 | 0 - 200 | 6.31 | | | | |
| Decachlorobiphenyl | 0.160 | 86.9 | 0 - 200 | 17.38 | | | | |

**FORM III** **LCS / LCS DUPLICATE RECOVERY**

**EPA 8082A**

| | | | |
|---|---|---|---|
| Laboratory: | York Analytical Laboratories, Inc. | SDG: | 16I0260 |
| Client: | Langan Engineering & Environmental Services (NYC) | Project: | 170301202 450 Union Street |
| Matrix: | Soil | | |
| Batch: | BI60374 | Laboratory ID: | BI60374-BS2 |
| Preparation: | EPA 3550C | Initial/Final: | 30 g / 10 mL |

| COMPOUND | SPIKE ADDED (mg/kg wet) | LCS CONCENTRATION (mg/kg wet) | LCS % REC. # | QC LIMITS REC. |
|---|---|---|---|---|
| Aroclor 1016 | 0.333 | 0.260 | 77.9 | 40 - 130 |
| Aroclor 1260 | 0.333 | 0.231 | 69.2 | 40 - 130 |

# Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

**FORM I**

# METHOD BLANK DATA SHEET

## EPA 8082A

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | York Analytical Laboratories, Inc. | | | SDG: | 16I0260 |
| Client: | Langan Engineering & Environmental Services (NYC) | | | Project: | 170301202 450 Union Street |
| Matrix: | Soil | Laboratory ID: | BI60374-BLK2 | File ID: | P2025507.D |
| Prepared: | 09/12/16 08:21 | Preparation: | EPA 3550C | Initial/Final: | 30 g / 10 mL |
| Analyzed: | 09/12/16 12:39 | Instrument: | GC_5890_I | | |
| Batch: | BI60374 | Sequence: | Y6I1310 | Calibration: | YH60018 |

| CAS NO. | COMPOUND | CONC. (mg/kg wet) | Q |
|---|---|---|---|
| 12674-11-2 | Aroclor 1016 | 0.0167 | U |
| 11104-28-2 | Aroclor 1221 | 0.0167 | U |
| 11141-16-5 | Aroclor 1232 | 0.0167 | U |
| 53469-21-9 | Aroclor 1242 | 0.0167 | U |
| 12672-29-6 | Aroclor 1248 | 0.0167 | U |
| 11097-69-1 | Aroclor 1254 | 0.0167 | U |
| 11096-82-5 | Aroclor 1260 | 0.0167 | U |
| 1336-36-3 | Total PCBs | 0.0167 | U |

| SYSTEM MONITORING COMPOUND | ADDED (mg/kg wet) | CONC (mg/kg wet) | % REC | QC LIMITS | Q |
|---|---|---|---|---|---|
| Tetrachloro-m-xylene | 0.0667 | 0.0587 | 88.0 | 30 - 140 | |
| Decachlorobiphenyl | 0.0667 | 0.0550 | 82.5 | 30 - 140 | |

**FORM IV** **PREPARATION BATCH SUMMARY**

**EPA 8082A**

Laboratory: York Analytical Laboratories, Inc. SDG: 16I0260

Client: Langan Engineering & Environmental Services (NYC) Project: 170301202 450 Union Street

Batch: BI60374 Batch Matrix: Soil Preparation: EPA 3550C

| SAMPLE NAME | LAB SAMPLE ID | LAB FILE ID | DATE PREPARED | OBSERVATIONS |
|---|---|---|---|---|
| V01_0-1.5 | 16I0260-01 | P2025519.D | 09/12/16 08:21 | |
| Blank | BI60374-BLK2 | P2025507.D | 09/12/16 08:21 | |
| LCS | BI60374-BS2 | P2025508.D | 09/12/16 08:21 | |

# METHOD DETECTION AND REPORTING LIMITS

## EPA 8082A

**Laboratory:** York Analytical Laboratories, Inc. **SDG:** 16I0260

**Client:** Langan Engineering & Environmental Services (NYC) **Project:** 170301202 450 Union Street

**Matrix:** Soil **Instrument:** GC_5890_I

| Analyte | LOD | LOQ | Units |
|---|---|---|---|
| Aroclor 1016 | 0.0167 | 0.0167 | mg/kg |
| Aroclor 1221 | 0.0167 | 0.0167 | mg/kg |
| Aroclor 1232 | 0.0167 | 0.0167 | mg/kg |
| Aroclor 1242 | 0.0167 | 0.0167 | mg/kg |
| Aroclor 1248 | 0.0167 | 0.0167 | mg/kg |
| Aroclor 1254 | 0.0167 | 0.0167 | mg/kg |
| Aroclor 1260 | 0.0167 | 0.0167 | mg/kg |
| Total PCBs | 0.0167 | 0.0167 | mg/kg |

# HOLDING TIME SUMMARY

## EPA 8082A

Laboratory: York Analytical Laboratories, Inc. SDG: 16I0260

Client: Langan Engineering & Environmental Services (NYC) Project: 170301202 450 Union Street

| Sample Name | Date Collected | Date Received | Date Prepared | Days to Prep | Max Days to Prep | Date Analyzed | Days to Analysis | Max Days to Analysis | Q |
|---|---|---|---|---|---|---|---|---|---|
| V01_0-1.5 | 09/07/16 13:00 | 09/08/16 18:45 | 09/12/16 08:21 | 4.81 | 14.00 | 09/12/16 18:29 | 0.42 | 40.00 | |

**FORM I**

# ORGANIC ANALYSIS DATA SHEET

## EPA 8082A

**V01_0-1.5**

Laboratory: York Analytical Laboratories, Inc. SDG: 16I0260

Client: Langan Engineering & Environmental Services (NYC) Project: 170301202 450 Union Street

Matrix: Soil Laboratory ID: 16I0260-01 File ID: P2025519.D

Sampled: 09/07/16 13:00 Prepared: 09/12/16 08:21 Analyzed: 09/12/16 18:29

Solids: 96.56 Preparation: EPA 3550C Initial/Final: 30 g / 10 mL

Batch: BI60374 Sequence: Y6I1310 Calibration: YH60018 Instrument: GC_5890_I

| CAS NO. | COMPOUND | DILUTION | CONC. (mg/kg dry) | Q |
|---|---|---|---|---|
| 12674-11-2 | Aroclor 1016 | 1 | 0.0173 | U |
| 11104-28-2 | Aroclor 1221 | 1 | 0.0173 | U |
| 11141-16-5 | Aroclor 1232 | 1 | 0.0173 | U |
| 53469-21-9 | Aroclor 1242 | 1 | 0.0173 | U |
| 12672-29-6 | Aroclor 1248 | 1 | 0.0173 | U |
| 11097-69-1 | Aroclor 1254 | 1 | 0.0173 | U |
| 11096-82-5 | Aroclor 1260 | 1 | 0.0173 | U |
| 1336-36-3 | Total PCBs | 1 | 0.0173 | U |

| SYSTEM MONITORING COMPOUND | ADDED (mg/kg dry) | CONC (mg/kg dry) | % REC | QC LIMITS | Q |
|---|---|---|---|---|---|
| Tetrachloro-m-xylene | 0.0690 | 0.0421 | 61.0 | 30 - 140 | |
| Decachlorobiphenyl | 0.0690 | 0.0394 | 57.0 | 30 - 140 | |

* Values outside of QC limits

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\091216\P2025519.D\ECD1A.CH Vial: 15
Signal #2 : C:\HPCHEM\1\DATA\091216\P2025519.D\ECD2B.CH
Acq On : 12 Sep 2016 6:29 pm Operator: AMC
Sample : 16I0260-01 Inst : GC_5890_I
Misc : QBPCB2-091216A Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Sep 13 11:04 2016 Quant Results File: P2081816.RES

Quant Method : C:\HPCHEM\1\METHODS\P2081816.M (Chemstation Integrator)
Title : 08/18/16 - MR-1 & MR-2 MU-A = 60 MU-B = 60
Last Update : Wed Aug 31 11:36:38 2016
Response via : Initial Calibration
DataAcq Meth : PEST.M

Volume Inj. : 1 uL
Signal #1 Phase : ZB-Multiresidue-1 Signal #2 Phase: ZB-Multiresidue-2
Signal #1 Info : .32 Signal #2 Info : .32

| Compound | RT#1 | RT#2 | Resp#1 | Resp#2 | ug/mL | ug/mL |
|---|---|---|---|---|---|---|
| System Monitoring Compounds | | | | | | |
| 1) S Tetrachloro-m-xy | 6.31 | 5.03 | 4507199 | 3197512 | 0.122 | 0.123 |
| Spiked Amount 0.200 | Range 30 - 150 | | Recovery = | | 61.00% | 61.50% |
| 45) S Decachlorobiphen | 17.38 | 15.90 | 2209809 | 1581411 | 0.114 | 0.113 |
| Spiked Amount 0.200 | Range 30 - 150 | | Recovery = | | 57.00% | 56.50% |
| Target Compounds | | | | | | |

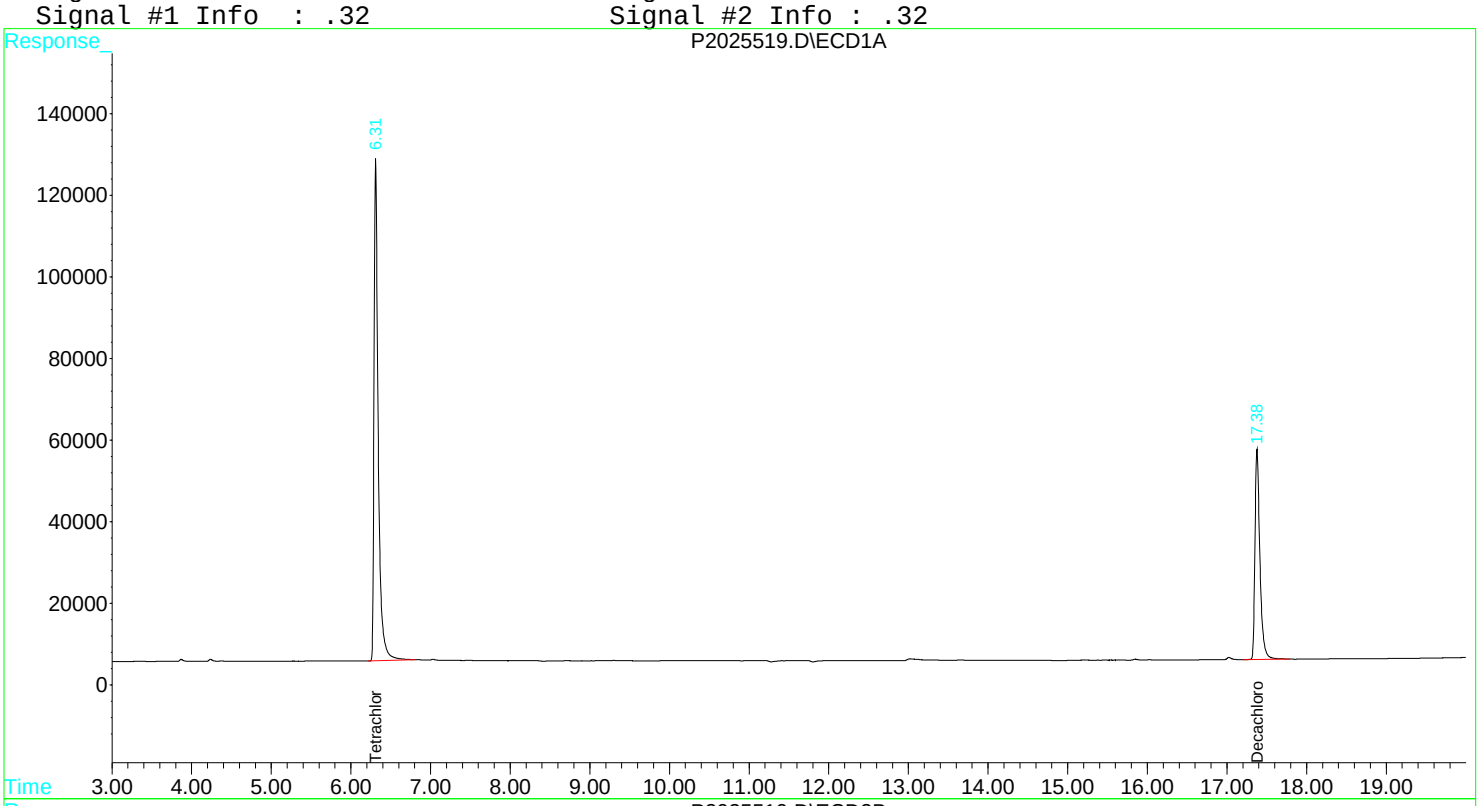
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

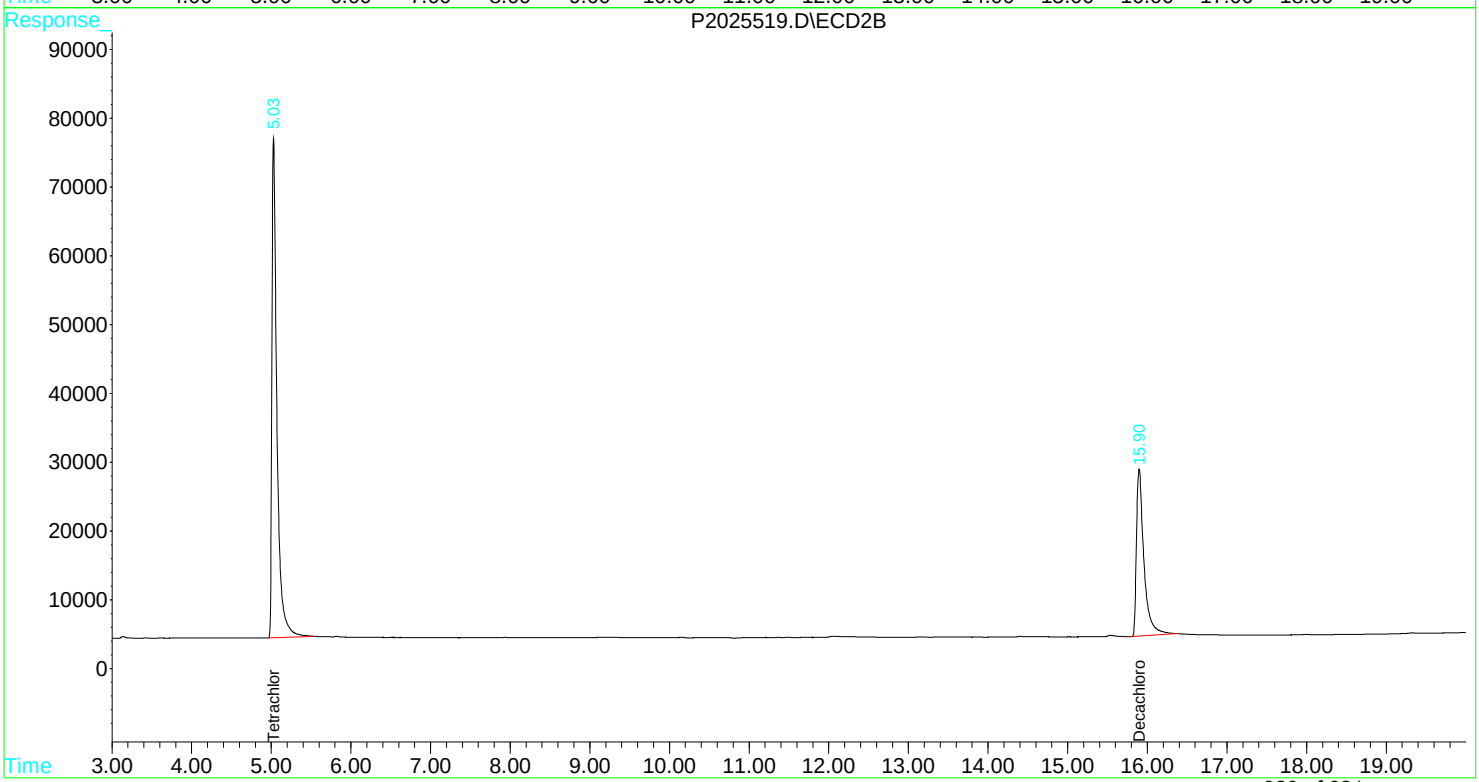
Quantitation Report

Signal #1 : C:\HPCHEM\1\DATA\091216\P2025519.D\ECD1A.CH  Vial: 15
Signal #2 : C:\HPCHEM\1\DATA\091216\P2025519.D\ECD2B.CH
Acq On    : 12 Sep 2016   6:29 pm                    Operator: AMC
Sample    : 16I0260-01                               Inst    : GC_5890_I
Misc      : QBPCB2-091216A                           Multiplr: 1.00
IntFile Signal #1: EVENTS.E     IntFile Signal #2: EVENTS2.E
Quant Time: Sep 13 11:04 2016  Quant Results File: P2081816.RES

Quant Method : C:\HPCHEM\1\METHODS\P2081816.M (Chemstation Integrator)
Title        : 08/18/16 - MR-1 & MR-2 MU-A = 60 MU-B = 60
Last Update  : Wed Aug 31 11:36:38 2016
Response via : Multiple Level Calibration
DataAcq Meth : PEST.M

Volume Inj.     : 1 uL
Signal #1 Phase : ZB-Multiresidue-1 Signal #2 Phase: ZB-Multiresidue-2
Signal #1 Info  : .32               Signal #2 Info : .32



# Response Factor Report GC_5890_I

Method : C:\HPCHEM\1\METHODS\P2081816.M (Chemstation Integrator)
Title : 08/18/16 - MR-1 & MR-2 MU-A = 60 MU-B = 60
Last Update : Fri Aug 19 08:51:44 2016

Calibration Files
3 =P2024977.D 2 =P2024976.D 1 =P2024975.D
0.5 =P2024974.D 0.2 =P2024973.D 0.05 =P2024972.D

| | | Compound | 3 | 2 | 1 | 0.5 | 0.2 | 0.05 | Avg | %RSD |
|---|---|---|---|---|---|---|---|---|---|---|
| 1) | S | Tetrachloro-m-xylen | 3.332 | 3.475 | 3.599 | 3.847 | 3.997 | 3.996 | 3.708 E7 | 7.56 |
| 2) | T | 1221 1 | | | | | | | 3.714 E5 | 0.00 |
| 3) | T | 1221 2 | | | | | | | 2.617 E5 | 0.00 |
| 4) | T | 1221 3 | | | | | | | 8.706 E5 | 0.00 |
| 5) | T | 1016 1 | 0.723 | 0.809 | 0.920 | 1.002 | 1.119 | 1.239 | 0.969 E6 | 19.85 |
| 6) | T | 1016 2 | 2.219 | 2.371 | 2.616 | 2.755 | 2.910 | 2.537 | 2.568 E6 | 9.78 |
| 7) | T | 1016 3 | 1.152 | 1.280 | 1.499 | 1.667 | 1.916 | 1.838 | 1.559 E6 | 19.55 |
| 8) | T | 1016 4 | 0.912 | 0.987 | 1.118 | 1.206 | 1.349 | 1.262 | 1.139 E6 | 14.64 |
| 9) | T | 1016 5 | 0.777 | 0.838 | 0.957 | 1.054 | 1.184 | 1.096 | 0.984 E6 | 15.87 |
| 10) | T | 1232 1 | | | | | | | 7.098 E5 | 0.00 |
| 11) | T | 1232 2 | | | | | | | 3.972 E5 | 0.00 |
| 12) | T | 1232 3 | | | | | | | 4.890 E5 | 0.00 |
| 13) | T | 1232 4 | | | | | | | 9.774 E5 | 0.00 |
| 14) | T | 1232 5 | | | | | | | 5.669 E5 | 0.00 |
| 15) | T | 1242 1 | | | | | | | 2.706 E5 | 0.00 |
| 16) | T | 1242 2 | | | | | | | 3.198 E5 | 0.00 |
| 17) | T | 1242 3 | | | | | | | 6.014 E5 | 0.00 |
| 18) | T | 1242 4 | | | | | | | 3.895 E5 | 0.00 |
| 19) | T | 1242 5 | | | | | | | 2.286 E5 | 0.00 |
| 20) | | 1248 1 | | | | | | | 7.919 E5 | 0.00 |
| 21) | | 1248 2 | | | | | | | 9.093 E5 | 0.00 |
| 22) | | 1248 3 | | | | | | | 6.852 E5 | 0.00 |
| 23) | | 1248 4 | | | | | | | 7.242 E5 | 0.00 |
| 24) | | 1248 5 | | | | | | | 1.345 E6 | 0.00 |
| 25) | T | 1254 1 | | | | | | | 8.085 E5 | 0.00 |
| 26) | T | 1254 2 | | | | | | | 9.405 E5 | 0.00 |
| 27) | T | 1254 3 | | | | | | | 7.793 E5 | 0.00 |
| 28) | T | 1254 4 | | | | | | | 1.283 E6 | 0.00 |
| 29) | T | 1254 5 | | | | | | | 1.267 E6 | 0.00 |
| 30) | T | 1260 1 | 1.630 | 1.769 | 2.064 | 2.302 | 2.594 | 2.658 | 2.170 E6 | 19.54 |
| 31) | T | 1260 2 | 2.226 | 2.409 | 2.978 | 3.043 | 3.522 | 3.632 | 2.968 E6 | 19.16 |
| 32) | T | 1260 3 | 2.497 | 2.688 | 3.099 | 3.428 | 3.753 | 3.891 | 3.226 E6 | 17.52 |
| 33) | T | 1260 4 | 2.504 | 2.708 | 3.121 | 3.420 | 3.771 | 3.749 | 3.212 E6 | 16.52 |
| 34) | T | 1260 5 | 1.642 | 1.773 | 2.027 | 1.926 | 2.254 | 2.266 | 1.981 E6 | 12.75 |
| 35) | | 1262 1 | | | | | | | 1.208 E6 | 0.00 |
| 36) | | 1262 2 | | | | | | | 1.637 E6 | 0.00 |
| 37) | | 1262 3 | | | | | | | 1.634 E6 | 0.00 |
| 38) | | 1262 4 | | | | | | | 2.739 E6 | 0.00 |
| 39) | | 1262 5 | | | | | | | 1.808 E6 | 0.00 |
| 40) | | 1268 1 | | | | | | | 2.941 E6 | 0.00 |
| 41) | | 1268 2 | | | | | | | 3.051 E6 | 0.00 |
| 42) | | 1268 3 | | | | | | | 2.095 E6 | 0.00 |
| 43) | | 1268 4 | | | | | | | 1.033 E6 | 0.00 |
| 44) | | 1268 5 | | | | | | | 4.765 E6 | 0.00 |

(#) = Out of Range ### Number of calibration levels exceeded format ###

Method : C:\HPCHEM\1\METHODS\P2081816.M (Chemstation Integrator)
Title : 08/18/16 - MR-1 & MR-2 MU-A = 60 MU-B = 60
Last Update : Fri Aug 19 08:51:44 2016

Calibration Files
3 =P2024977.D 2 =P2024976.D 1 =P2024975.D
0.5 =P2024974.D 0.2 =P2024973.D 0.05 =P2024972.D

| | | Compound | 3 | 2 | 1 | 0.5 | 0.2 | 0.05 | Avg | %RSD |
|---|---|---|---|---|---|---|---|---|---|---|
| 45) | S | Decachlorobiphenyl | 1.651 | 1.724 | 1.839 | 1.997 | 2.198 | 2.263 | 1.945 E7 | 12.90 |

Signal #2 Calibration Files
3 =P2024977.D 2 =P2024976.D 1 =P2024975.D
0.5 =P2024974.D 0.2 =P2024973.D 0.05 =P2024972.D

| | | Compound | 3 | 2 | 1 | 0.5 | 0.2 | 0.05 | Avg | %RSD |
|---|---|---|---|---|---|---|---|---|---|---|
| 1) | S | Tetrachloro-m-xylen | 2.410 | 2.486 | 2.553 | 2.702 | 2.825 | 2.620 | 2.599 E7 | 5.79 |
| 2) | T | 1221 1 | | | | | | | 2.822 E5 | 0.00 |
| 3) | T | 1221 2 | | | | | | | 1.802 E5 | 0.00 |
| 4) | T | 1221 3 | | | | | | | 6.253 E5 | 0.00 |
| 5) | T | 1016 1 | 0.990 | 1.078 | 1.212 | 1.337 | 1.510 | 1.586 | 1.285 E6 | 18.37 |
| 6) | T | 1016 2 | 6.868 | 7.322 | 8.052 | 8.349 | 8.878 | 8.158 | 7.938 E5 | 9.15 |
| 7) | T | 1016 3 | 1.448 | 1.496 | 1.485 | 1.460 | 1.445 | 1.268 | 1.434 E6 | 5.82 |
| 8) | T | 1016 4 | 0.951 | 1.027 | 1.059 | 1.146 | 1.262 | 1.159 | 1.101 E6 | 10.02 |
| 9) | T | 1016 5 | 5.795 | 6.108 | 5.732 | 6.154 | 6.140 | 6.867 | 6.133 E5 | 6.59 |
| 10) | T | 1232 1 | | | | | | | 4.980 E5 | 0.00 |
| 11) | T | 1232 2 | | | | | | | 4.662 E5 | 0.00 |
| 12) | T | 1232 3 | | | | | | | 3.400 E5 | 0.00 |
| 13) | T | 1232 4 | | | | | | | 5.706 E5 | 0.00 |
| 14) | T | 1232 5 | | | | | | | 4.171 E5 | 0.00 |
| 15) | T | 1242 1 | | | | | | | 3.176 E5 | 0.00 |
| 16) | T | 1242 2 | | | | | | | 1.924 E5 | 0.00 |
| 17) | T | 1242 3 | | | | | | | 3.101 E5 | 0.00 |
| 18) | T | 1242 4 | | | | | | | 2.500 E5 | 0.00 |
| 19) | T | 1242 5 | | | | | | | 1.216 E5 | 0.00 |
| 20) | | 1248 1 | | | | | | | 5.343 E5 | 0.00 |
| 21) | | 1248 2 | | | | | | | 6.232 E5 | 0.00 |
| 22) | | 1248 3 | | | | | | | 8.955 E5 | 0.00 |
| 23) | | 1248 4 | | | | | | | 7.821 E5 | 0.00 |
| 24) | | 1248 5 | | | | | | | 9.606 E5 | 0.00 |
| 25) | T | 1254 1 | | | | | | | 7.035 E5 | 0.00 |
| 26) | T | 1254 2 | | | | | | | 4.870 E5 | 0.00 |
| 27) | T | 1254 3 | | | | | | | 3.887 E5 | 0.00 |
| 28) | T | 1254 4 | | | | | | | 1.051 E6 | 0.00 |
| 29) | T | 1254 5 | | | | | | | 9.423 E5 | 0.00 |
| 30) | T | 1260 1 | 1.208 | 1.288 | 1.423 | 1.573 | 1.682 | 1.641 | 1.469 E6 | 13.22 |
| 31) | T | 1260 2 | 1.271 | 1.342 | 1.489 | 1.635 | 1.709 | 1.510 | 1.493 E6 | 11.17 |
| 32) | T | 1260 3 | 1.315 | 1.384 | 1.511 | 1.611 | 1.630 | 1.393 | 1.474 E6 | 8.81 |
| 33) | T | 1260 4 | 1.893 | 2.040 | 2.134 | 2.354 | 2.298 | 2.018 | 2.123 E6 | 8.30 |
| 34) | T | 1260 5 | 1.401 | 1.455 | 1.580 | 1.671 | 1.677 | 1.614 | 1.566 E6 | 7.31 |
| 35) | | 1262 1 | | | | | | | 8.019 E5 | 0.00 |
| 36) | | 1262 2 | | | | | | | 1.101 E6 | 0.00 |
| 37) | | 1262 3 | | | | | | | 1.054 E6 | 0.00 |

(#) = Out of Range ### Number of calibration levels exceeded format ###

Method : C:\HPCHEM\1\METHODS\P2081816.M (Chemstation Integrator)
Title : 08/18/16 - MR-1 & MR-2 MU-A = 60 MU-B = 60
Last Update : Fri Aug 19 08:51:44 2016

Calibration Files
3 =P2024977.D 2 =P2024976.D 1 =P2024975.D
0.5 =P2024974.D 0.2 =P2024973.D 0.05 =P2024972.D

| | | Compound | 3 | 2 | 1 | 0.5 | 0.2 | 0.05 | Avg | %RSD |
|---|---|---|---|---|---|---|---|---|---|---|
| 38) | | 1262 4 | | | | | | | 1.921 E6 | 0.00 |
| 39) | | 1262 5 | | | | | | | 1.458 E6 | 0.00 |
| 40) | | 1268 1 | | | | | | | 1.777 E6 | 0.00 |
| 41) | | 1268 2 | | | | | | | 2.260 E6 | 0.00 |
| 42) | | 1268 3 | | | | | | | 1.416 E6 | 0.00 |
| 43) | | 1268 4 | | | | | | | 6.849 E5 | 0.00 |
| 44) | | 1268 5 | | | | | | | 3.336 E6 | 0.00 |
| 45) | S | Decachlorobiphenyl | 1.222 | 1.254 | 1.351 | 1.451 | 1.548 | 1.555 | 1.397 E7 | 10.31 |

(#) = Out of Range ### Number of calibration levels exceeded format ###

# Calibration Retention Time Report GC_5890_I

Method : C:\HPCHEM\1\METHODS\P2081816.M (Chemstation Integrator)
Title : 08/18/16 - MR-1 & MR-2 MU-A = 60 MU-B = 60
Last Update : Fri Aug 19 08:51:44 2016
Response via : Initial Calibration

First Calibration Standard : C:\HPCHEM\1\DATA\081816\P2024972.D\ECD1A.CH
Second Calibration Standard : P2024974.D
Third Calibration Standard : P2024976.D

| Compound | RT of Standard | | | Mean | RT Window | |
|---|---|---|---|---|---|---|
| | First | Second | Third | RT | From | To |
| 1 Tetrachloro-m-xylene | 6.320 | 6.319 | 6.319 | 6.320 | 6.267 | 6.367 |
| 2 1221 1 | 0.000 | 0.000 | 0.000 | 0.000 | -0.505 | 0.495 |
| 3 1221 2 | 0.000 | 0.000 | 0.000 | 0.000 | -0.506 | 0.494 |
| 4 1221 3 | 0.000 | 0.000 | 0.000 | 0.000 | -0.505 | 0.495 |
| 5 1016 1 | 8.135 | 8.132 | 8.133 | 8.134 | 8.079 | 8.179 |
| 6 1016 2 | 9.227 | 9.220 | 9.216 | 9.221 | 9.169 | 9.269 |
| 7 1016 3 | 9.346 | 9.343 | 9.339 | 9.343 | 9.291 | 9.391 |
| 8 1016 4 | 9.536 | 9.536 | 9.535 | 9.536 | 9.485 | 9.585 |
| 9 1016 5 | 10.204 | 10.203 | 10.202 | 10.203 | 10.152 | 10.252 |
| 10 1232 1 | 0.000 | 0.000 | 0.000 | 0.000 | -0.503 | 0.497 |
| 11 1232 2 | 0.000 | 0.000 | 0.000 | 0.000 | -0.504 | 0.496 |
| 12 1232 3 | 0.000 | 0.000 | 0.000 | 0.000 | -0.499 | 0.501 |
| 13 1232 4 | 0.000 | 0.000 | 0.000 | 0.000 | -0.504 | 0.496 |
| 14 1232 5 | 0.000 | 0.000 | 0.000 | 0.000 | -0.504 | 0.496 |
| 15 1242 1 | 0.000 | 0.000 | 0.000 | 0.000 | -0.501 | 0.499 |
| 16 1242 2 | 0.000 | 0.000 | 0.000 | 0.000 | -0.498 | 0.502 |
| 17 1242 3 | 0.000 | 0.000 | 0.000 | 0.000 | -0.499 | 0.501 |
| 18 1242 4 | 0.000 | 0.000 | 0.000 | 0.000 | -0.503 | 0.497 |
| 19 1242 5 | 0.000 | 0.000 | 0.000 | 0.000 | -0.502 | 0.498 |
| 20 1248 1 | 0.000 | 0.000 | 0.000 | 0.000 | -0.502 | 0.498 |
| 21 1248 2 | 0.000 | 0.000 | 0.000 | 0.000 | -0.503 | 0.497 |
| 22 1248 3 | 0.000 | 0.000 | 0.000 | 0.000 | -0.501 | 0.499 |
| 23 1248 4 | 0.000 | 0.000 | 0.000 | 0.000 | -0.502 | 0.498 |
| 24 1248 5 | 0.000 | 0.000 | 0.000 | 0.000 | -0.502 | 0.498 |
| 25 1254 1 | 0.000 | 0.000 | 0.000 | 0.000 | -0.052 | 0.048 |
| 26 1254 2 | 0.000 | 0.000 | 0.000 | 0.000 | -0.051 | 0.049 |
| 27 1254 3 | 0.000 | 0.000 | 0.000 | 0.000 | -0.051 | 0.049 |
| 28 1254 4 | 0.000 | 0.000 | 0.000 | 0.000 | -0.051 | 0.049 |
| 29 1254 5 | 0.000 | 0.000 | 0.000 | 0.000 | -0.049 | 0.051 |
| 30 1260 1 | 12.562 | 12.561 | 12.560 | 12.561 | 12.510 | 12.610 |
| 31 1260 2 | 13.135 | 13.131 | 13.129 | 13.132 | 13.081 | 13.181 |
| 32 1260 3 | 13.641 | 13.637 | 13.636 | 13.638 | 13.587 | 13.687 |
| 33 1260 4 | 14.878 | 14.875 | 14.873 | 14.875 | 14.825 | 14.925 |
| 34 1260 5 | 15.383 | 15.377 | 15.377 | 15.379 | 15.330 | 15.430 |
| 35 1262 1 | 0.000 | 0.000 | 0.000 | 0.000 | -0.501 | 0.499 |
| 36 1262 2 | 0.000 | 0.000 | 0.000 | 0.000 | -0.501 | 0.499 |
| 37 1262 3 | 0.000 | 0.000 | 0.000 | 0.000 | -0.502 | 0.498 |
| 38 1262 4 | 0.000 | 0.000 | 0.000 | 0.000 | -0.501 | 0.499 |
| 39 1262 5 | 0.000 | 0.000 | 0.000 | 0.000 | -0.501 | 0.499 |
| 40 1268 1 | 0.000 | 0.000 | 0.000 | 0.000 | -0.501 | 0.499 |
| 41 1268 2 | 0.000 | 0.000 | 0.000 | 0.000 | -0.503 | 0.497 |
| 42 1268 3 | 0.000 | 0.000 | 0.000 | 0.000 | -0.500 | 0.500 |
| 43 1268 4 | 0.000 | 0.000 | 0.000 | 0.000 | -0.502 | 0.498 |
| 44 1268 5 | 0.000 | 0.000 | 0.000 | 0.000 | -0.501 | 0.499 |
| 45 Decachlorobiphenyl | 17.388 | 17.386 | 17.385 | 17.386 | 17.337 | 17.437 |

Signal #2

First Calibration Standard : C:\HPCHEM\1\DATA\081816\P2024972.D\ECD2B.CH

Second Calibration Standard : C:\HPCHEM\1\DATA\081816\P2024974.D\ECD2B.CH
Third Calibration Standard : C:\HPCHEM\1\DATA\081816\P2024976.D\ECD2B.CH

| Compound | RT of Standard First | Second | Third | Mean RT | RT Window From | To |
|---|---|---|---|---|---|---|
| 1 Tetrachloro-m-xylene | 5.042 | 5.043 | 5.044 | 5.043 | 4.991 | 5.091 |
| 2 1221 1 | 0.000 | 0.000 | 0.000 | 0.000 | -0.504 | 0.496 |
| 3 1221 2 | 0.000 | 0.000 | 0.000 | 0.000 | -0.505 | 0.495 |
| 4 1221 3 | 0.000 | 0.000 | 0.000 | 0.000 | -0.505 | 0.495 |
| 5 1016 1 | 6.939 | 6.939 | 6.940 | 6.939 | 6.887 | 6.987 |
| 6 1016 2 | 7.358 | 7.357 | 7.357 | 7.357 | 7.303 | 7.403 |
| 7 1016 3 | 7.982 | 7.980 | 7.975 | 7.979 | 7.925 | 8.025 |
| 8 1016 4 | 8.107 | 8.104 | 8.099 | 8.103 | 8.050 | 8.150 |
| 9 1016 5 | 8.981 | 8.980 | 8.977 | 8.979 | 8.926 | 9.026 |
| 10 1232 1 | 0.000 | 0.000 | 0.000 | 0.000 | -0.502 | 0.498 |
| 11 1232 2 | 0.000 | 0.000 | 0.000 | 0.000 | -0.500 | 0.500 |
| 12 1232 3 | 0.000 | 0.000 | 0.000 | 0.000 | -0.503 | 0.497 |
| 13 1232 4 | 0.000 | 0.000 | 0.000 | 0.000 | -0.502 | 0.498 |
| 14 1232 5 | 0.000 | 0.000 | 0.000 | 0.000 | -0.504 | 0.496 |
| 15 1242 1 | 0.000 | 0.000 | 0.000 | 0.000 | -0.500 | 0.500 |
| 16 1242 2 | 0.000 | 0.000 | 0.000 | 0.000 | -0.502 | 0.498 |
| 17 1242 3 | 0.000 | 0.000 | 0.000 | 0.000 | -0.499 | 0.501 |
| 18 1242 4 | 0.000 | 0.000 | 0.000 | 0.000 | -0.502 | 0.498 |
| 19 1242 5 | 0.000 | 0.000 | 0.000 | 0.000 | -0.503 | 0.497 |
| 20 1248 1 | 0.000 | 0.000 | 0.000 | 0.000 | -0.500 | 0.500 |
| 21 1248 2 | 0.000 | 0.000 | 0.000 | 0.000 | -0.503 | 0.497 |
| 22 1248 3 | 0.000 | 0.000 | 0.000 | 0.000 | -0.503 | 0.497 |
| 23 1248 4 | 0.000 | 0.000 | 0.000 | 0.000 | -0.506 | 0.494 |
| 24 1248 5 | 0.000 | 0.000 | 0.000 | 0.000 | -0.503 | 0.497 |
| 25 1254 1 | 0.000 | 0.000 | 0.000 | 0.000 | -0.050 | 0.050 |
| 26 1254 2 | 0.000 | 0.000 | 0.000 | 0.000 | -0.047 | 0.053 |
| 27 1254 3 | 0.000 | 0.000 | 0.000 | 0.000 | -0.049 | 0.051 |
| 28 1254 4 | 0.000 | 0.000 | 0.000 | 0.000 | -0.049 | 0.051 |
| 29 1254 5 | 0.000 | 0.000 | 0.000 | 0.000 | -0.047 | 0.053 |
| 30 1260 1 | 11.240 | 11.238 | 11.237 | 11.238 | 11.188 | 11.288 |
| 31 1260 2 | 11.699 | 11.696 | 11.692 | 11.696 | 11.647 | 11.747 |
| 32 1260 3 | 12.303 | 12.302 | 12.298 | 12.301 | 12.253 | 12.353 |
| 33 1260 4 | 13.425 | 13.423 | 13.420 | 13.423 | 13.374 | 13.474 |
| 34 1260 5 | 14.056 | 14.054 | 14.050 | 14.053 | 14.005 | 14.105 |
| 35 1262 1 | 0.000 | 0.000 | 0.000 | 0.000 | -0.500 | 0.500 |
| 36 1262 2 | 0.000 | 0.000 | 0.000 | 0.000 | -0.497 | 0.503 |
| 37 1262 3 | 0.000 | 0.000 | 0.000 | 0.000 | -0.500 | 0.500 |
| 38 1262 4 | 0.000 | 0.000 | 0.000 | 0.000 | -0.500 | 0.500 |
| 39 1262 5 | 0.000 | 0.000 | 0.000 | 0.000 | -0.502 | 0.498 |
| 40 1268 1 | 0.000 | 0.000 | 0.000 | 0.000 | -0.498 | 0.502 |
| 41 1268 2 | 0.000 | 0.000 | 0.000 | 0.000 | -0.499 | 0.501 |
| 42 1268 3 | 0.000 | 0.000 | 0.000 | 0.000 | -0.500 | 0.500 |
| 43 1268 4 | 0.000 | 0.000 | 0.000 | 0.000 | -0.500 | 0.500 |
| 44 1268 5 | 0.000 | 0.000 | 0.000 | 0.000 | -0.497 | 0.503 |
| 45 Decachlorobiphenyl | 15.908 | 15.905 | 15.907 | 15.907 | 15.851 | 15.971 |

P2081816.M Fri Aug 19 08:54:18 2016

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\081816\P2024972.D\ECD1A.CH Vial: 1
Signal #2 : C:\HPCHEM\1\DATA\081816\P2024972.D\ECD2B.CH
Acq On : 18 Aug 2016 4:34 pm Operator: AMC
Sample : SEQ-CAL1 Inst : GC_5890_I
Misc : QBPCB2-081816A Y16A058 1016/1260 0.05ug/ Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 19 8:43 2016 Quant Results File: P2072516.RES

Quant Method : C:\HPCHEM\1\METHODS\P2072516.M (Chemstation Integrator)
Title : 07/25/16 - MR-1 & MR-2 MU-A = 60 MU-B = 60
Last Update : Tue Jul 26 14:07:05 2016
Response via : Initial Calibration
DataAcq Meth : PEST.M

Volume Inj. : 1 uL
Signal #1 Phase : ZB-Multiresidue-1 Signal #2 Phase: ZB-Multiresidue-2
Signal #1 Info : .32 Signal #2 Info : .32

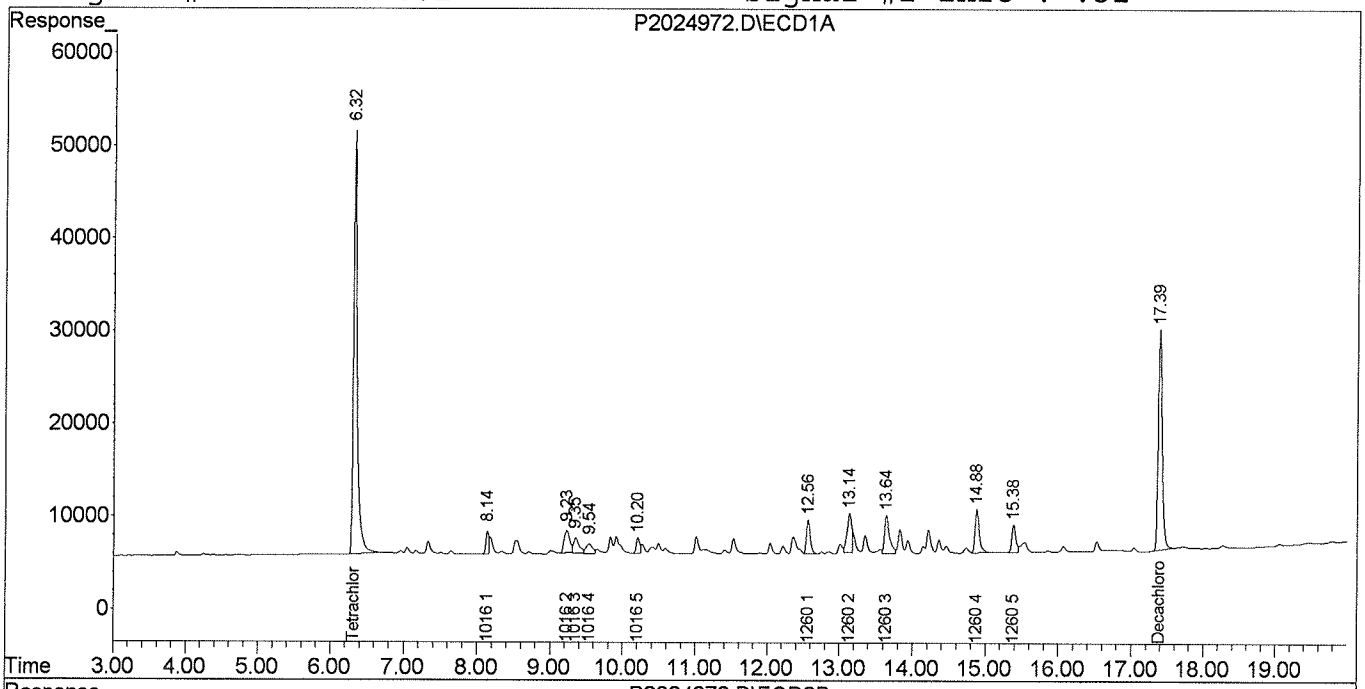
| | Compound | RT#1 | RT#2 | Resp#1 | Resp#2 | ug/mL | ug/mL |
|---|---|---|---|---|---|---|---|
| | System Monitoring Compounds | | | | | | |
| 1) | S Tetrachloro-m-xy | 6.32 | 5.04 | 1598355 | 1048074 | 0.052 | 0.069 # |
| | Spiked Amount 0.200 | Range 30 - 150 | | Recovery = | | 26.00%# | 34.50% |
| 45) | S Decachlorobiphen | 17.39 | 15.91 | 905289 | 621956 | 0.062 | 0.088 # |
| | Spiked Amount 0.200 | Range 30 - 150 | | Recovery = | | 31.00% | 44.00% |
| | Target Compounds | | | | | | |
| 5) | T 1016 1 | 8.14 | 6.94 | 61932 | 79277 | 0.092m | 0.134m# |
| 6) | T 1016 2 | 9.23 | 7.36 | 126840 | 40788 | 0.086 | 0.117 # |
| 7) | T 1016 3 | 9.35 | 7.98 | 91900 | 63423 | 0.097m | 0.102 |
| 8) | T 1016 4 | 9.54 | 8.11 | 63096 | 57962 | 0.098m | 0.144 # |
| 9) | T 1016 5 | 10.20 | 8.98 | 54785 | 34336 | 0.088m | 0.125m# |
| 30) | T 1260 1 | 12.56 | 11.24 | 132923 | 82043 | 0.097m | 0.130 # |
| 31) | T 1260 2 | 13.14 | 11.70 | 181619 | 75517 | 0.099m | 0.117 |
| 32) | T 1260 3 | 13.64 | 12.30 | 194542 | 69652 | 0.100 | 0.110m |
| 33) | T 1260 4 | 14.88 | 13.43 | 187458 | 100882 | 0.096 | 0.115 |
| 34) | T 1260 5 | 15.38 | 14.06 | 113278 | 80689 | 0.098 | 0.126 # |

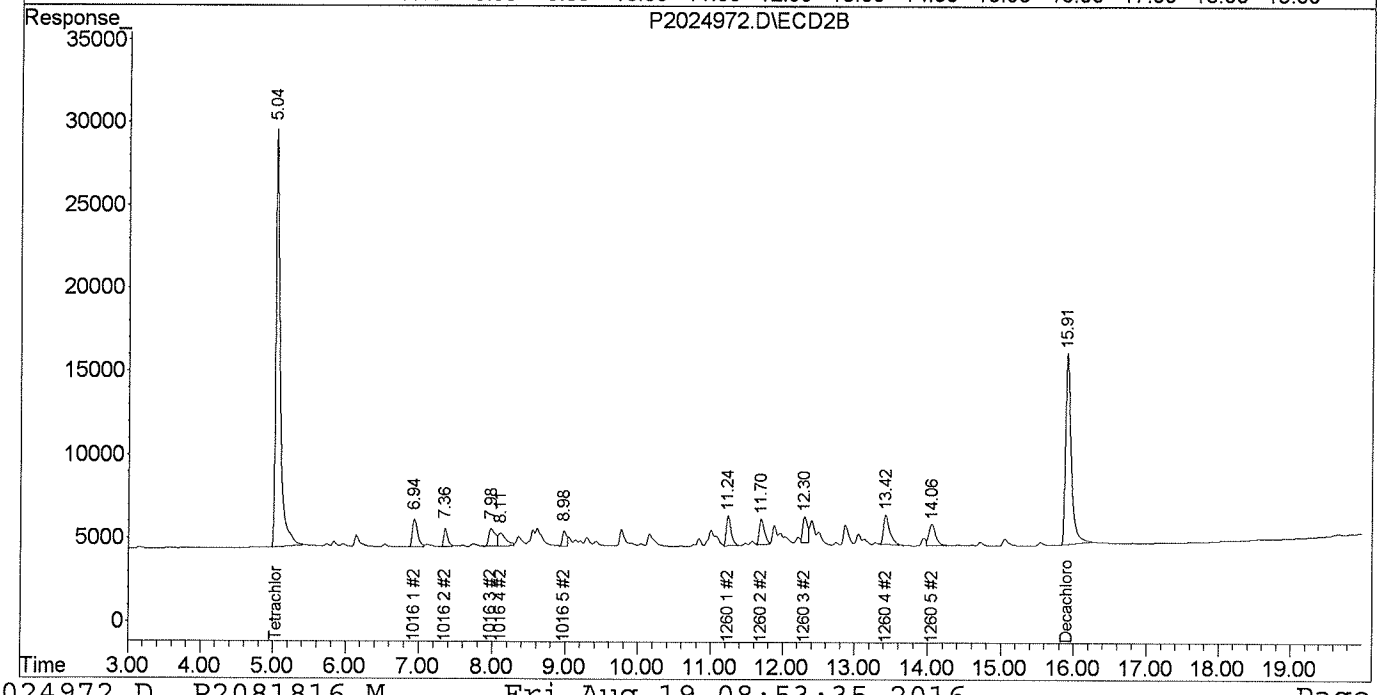
Quantitation Report

Signal #1 : C:\HPCHEM\1\DATA\081816\P2024972.D\ECD1A.CH Vial: 1
Signal #2 : C:\HPCHEM\1\DATA\081816\P2024972.D\ECD2B.CH
Acq On : 18 Aug 2016 4:34 pm Operator: AMC
Sample : SEQ-CAL1 Inst : GC_5890_I
Misc : QBPCB2-081816A Y16A058 1016/1260 0.05ug/ Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 19 8:43 2016 Quant Results File: P2072516.RES

Quant Method : C:\HPCHEM\1\METHODS\P2072516.M (Chemstation Integrator)
Title : 07/25/16 - MR-1 & MR-2 MU-A = 60 MU-B = 60
Last Update : Tue Jul 26 14:07:05 2016
Response via : Multiple Level Calibration
DataAcq Meth : PEST.M

Volume Inj. : 1 uL
Signal #1 Phase : ZB-Multiresidue-1 Signal #2 Phase: ZB-Multiresidue-2
Signal #1 Info : .32 Signal #2 Info : .32



Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\081816\P2024973.D\ECD1A.CH Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\081816\P2024973.D\ECD2B.CH
Acq On : 18 Aug 2016 4:58 pm Operator: AMC
Sample : SEQ-CAL2 Inst : GC_5890_I
Misc : QBPCB2-081816A Y16A060 1016/1260 0.2g/mL Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 19 8:44 2016 Quant Results File: P2072516.RES

Quant Method : C:\HPCHEM\1\METHODS\P2072516.M (Chemstation Integrator)
Title : 07/25/16 - MR-1 & MR-2 MU-A = 60 MU-B = 60
Last Update : Tue Jul 26 14:07:05 2016
Response via : Initial Calibration
DataAcq Meth : PEST.M

Volume Inj. : 1 uL
Signal #1 Phase : ZB-Multiresidue-1 Signal #2 Phase: ZB-Multiresidue-2
Signal #1 Info : .32 Signal #2 Info : .32

| | Compound | RT#1 | RT#2 | Resp#1 | Resp#2 | ug/mL | ug/mL | |
|---|---|---|---|---|---|---|---|---|
| | System Monitoring Compounds | | | | | | | |
| 1) | S Tetrachloro-m-xy | 6.32 | 5.04 | 3197580 | 2260323 | 0.105 | 0.149 | # |
| | Spiked Amount 0.200 | Range 30 - 150 | | Recovery = | | 52.50% | 74.50% | |
| 45) | S Decachlorobiphen | 17.39 | 15.91 | 1758561 | 1238424 | 0.121 | 0.175 | # |
| | Spiked Amount 0.200 | Range 30 - 150 | | Recovery = | | 60.50% | 87.50% | |
| | Target Compounds | | | | | | | |
| 5) | T 1016 1 | 8.13 | 6.94 | 223848 | 302013 | 0.334m | 0.511 | # |
| 6) | T 1016 2 | 9.22 | 7.36 | 581956 | 177570 | 0.395 | 0.509 | # |
| 7) | T 1016 3 | 9.34 | 7.98 | 383280 | 289069 | 0.406 | 0.463 | |
| 8) | T 1016 4 | 9.54 | 8.10 | 269768 | 252364 | 0.417 | 0.629 | # |
| 9) | T 1016 5 | 10.20 | 8.98 | 236731 | 122807 | 0.382 | 0.448m | |
| 30) | T 1260 1 | 12.56 | 11.24 | 518721 | 336467 | 0.377 | 0.532 | # |
| 31) | T 1260 2 | 13.13 | 11.70 | 704464 | 341700 | 0.384m | 0.532 | # |
| 32) | T 1260 3 | 13.64 | 12.30 | 750664 | 325936 | 0.388 | 0.514 | # |
| 33) | T 1260 4 | 14.88 | 13.42 | 754250 | 459517 | 0.386 | 0.525m | # |
| 34) | T 1260 5 | 15.38 | 14.06 | 450716 | 335422 | 0.390 | 0.526 | # |

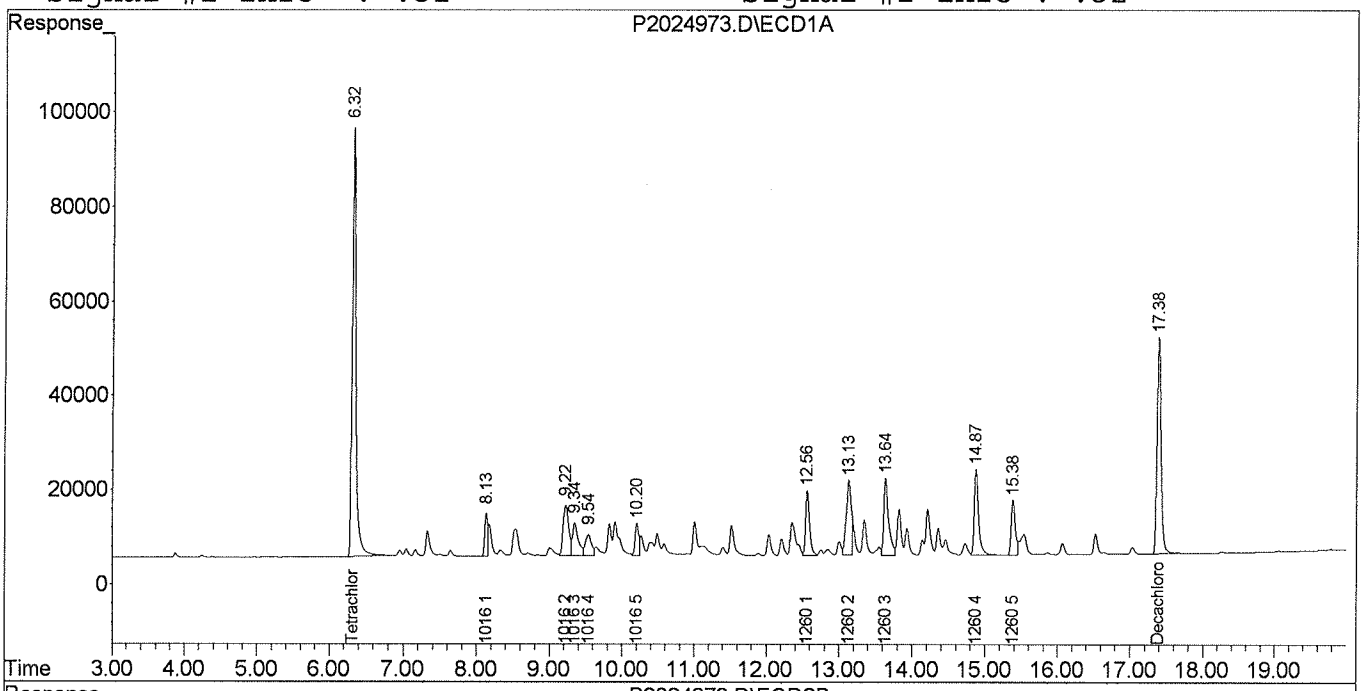
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

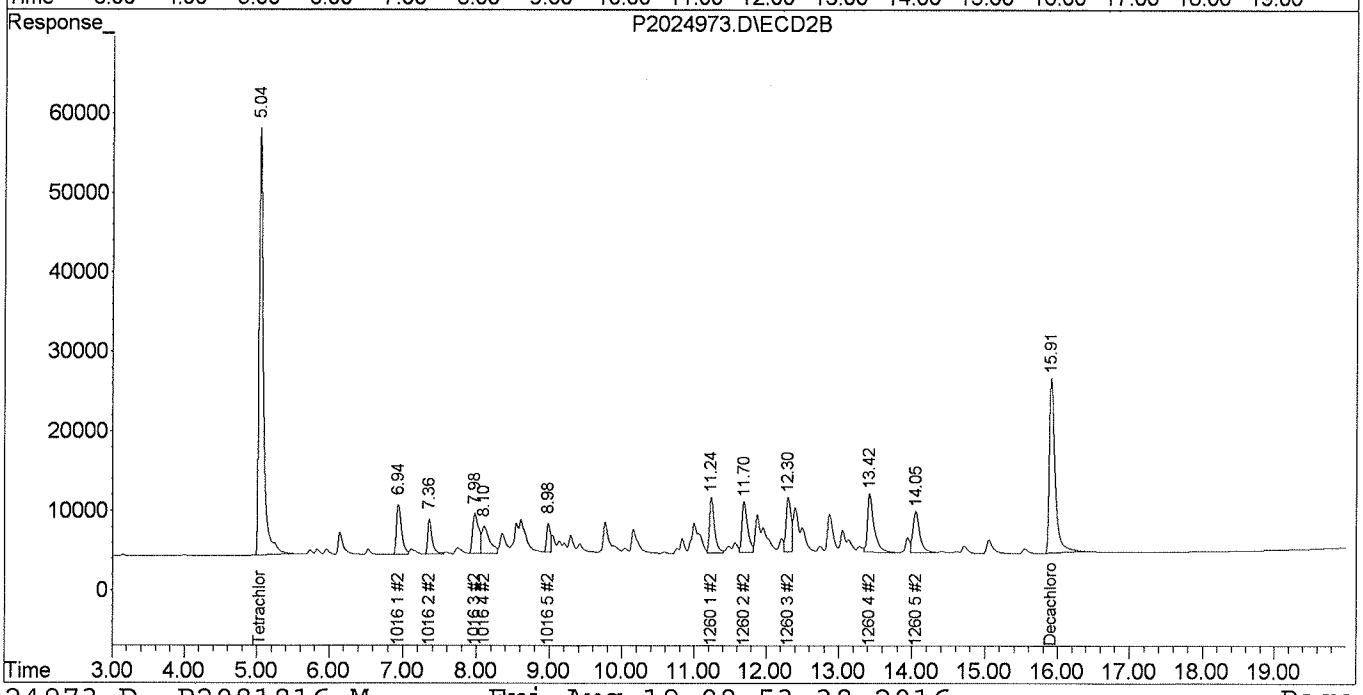
Quantitation Report

Signal #1 : C:\HPCHEM\1\DATA\081816\P2024973.D\ECD1A.CH Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\081816\P2024973.D\ECD2B.CH
Acq On : 18 Aug 2016 4:58 pm Operator: AMC
Sample : SEQ-CAL2 Inst : GC_5890_I
Misc : QBPCB2-081816A Y16A060 1016/1260 0.2g/mL Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 19 8:44 2016 Quant Results File: P2072516.RES

Quant Method : C:\HPCHEM\1\METHODS\P2072516.M (Chemstation Integrator)
Title : 07/25/16 - MR-1 & MR-2 MU-A = 60 MU-B = 60
Last Update : Tue Jul 26 14:07:05 2016
Response via : Multiple Level Calibration
DataAcq Meth : PEST.M

Volume Inj. : 1 uL
Signal #1 Phase : ZB-Multiresidue-1 Signal #2 Phase: ZB-Multiresidue-2
Signal #1 Info : .32 Signal #2 Info : .32



Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\081816\P2024974.D\ECD1A.CH Vial: 3
Signal #2 : C:\HPCHEM\1\DATA\081816\P2024974.D\ECD2B.CH
Acq On : 18 Aug 2016 5:23 pm Operator: AMC
Sample : SEQ-CAL3 Inst : GC_5890_I
Misc : QBPCB2-081816A Y16A061 1016/1260 0.50ug/ Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 19 8:44 2016 Quant Results File: P2072516.RES

Quant Method : C:\HPCHEM\1\METHODS\P2072516.M (Chemstation Integrator)
Title : 07/25/16 - MR-1 & MR-2 MU-A = 60 MU-B = 60
Last Update : Tue Jul 26 14:07:05 2016
Response via : Initial Calibration
DataAcq Meth : PEST.M

Volume Inj. : 1 uL
Signal #1 Phase : ZB-Multiresidue-1 Signal #2 Phase: ZB-Multiresidue-2
Signal #1 Info : .32 Signal #2 Info : .32

| | Compound | RT#1 | RT#2 | Resp#1 | Resp#2 | ug/mL | ug/mL | |
|---|---|---|---|---|---|---|---|---|
| | **System Monitoring Compounds** | | | | | | | |
| 1) | S Tetrachloro-m-xy | 6.32 | 5.04 | 4616788 | 3242544 | 0.151 | 0.214 | # |
| | Spiked Amount 0.200 | Range 30 - 150 | | Recovery = | | 75.50% | 107.00% | |
| 45) | S Decachlorobiphen | 17.39 | 15.91 | 2395860 | 1740995 | 0.165 | 0.246 | # |
| | Spiked Amount 0.200 | Range 30 - 150 | | Recovery = | | 82.50% | 123.00% | |
| | **Target Compounds** | | | | | | | |
| 5) | T 1016 1 | 8.13 | 6.94 | 500993 | 668369 | 0.748m | 1.131 | # |
| 6) | T 1016 2 | 9.22 | 7.36 | 1377613 | 417427 | 0.936 | 1.197 | # |
| 7) | T 1016 3 | 9.34 | 7.98 | 833545 | 729865 | 0.883 | 1.170 | # |
| 8) | T 1016 4 | 9.54 | 8.10 | 603234 | 572883 | 0.932 | 1.427 | # |
| 9) | T 1016 5 | 10.20 | 8.98 | 527119 | 307714 | 0.851 | 1.122m | # |
| 30) | T 1260 1 | 12.56 | 11.24 | 1150840 | 786278 | 0.837 | 1.243 | # |
| 31) | T 1260 2 | 13.13 | 11.70 | 1521354 | 817341 | 0.829m | 1.271 | # |
| 32) | T 1260 3 | 13.64 | 12.30 | 1714097 | 805717 | 0.885 | 1.271 | # |
| 33) | T 1260 4 | 14.88 | 13.42 | 1709965 | 1177232 | 0.875 | 1.345 | # |
| 34) | T 1260 5 | 15.38 | 14.05 | 962815 | 835376 | 0.834m | 1.309 | # |

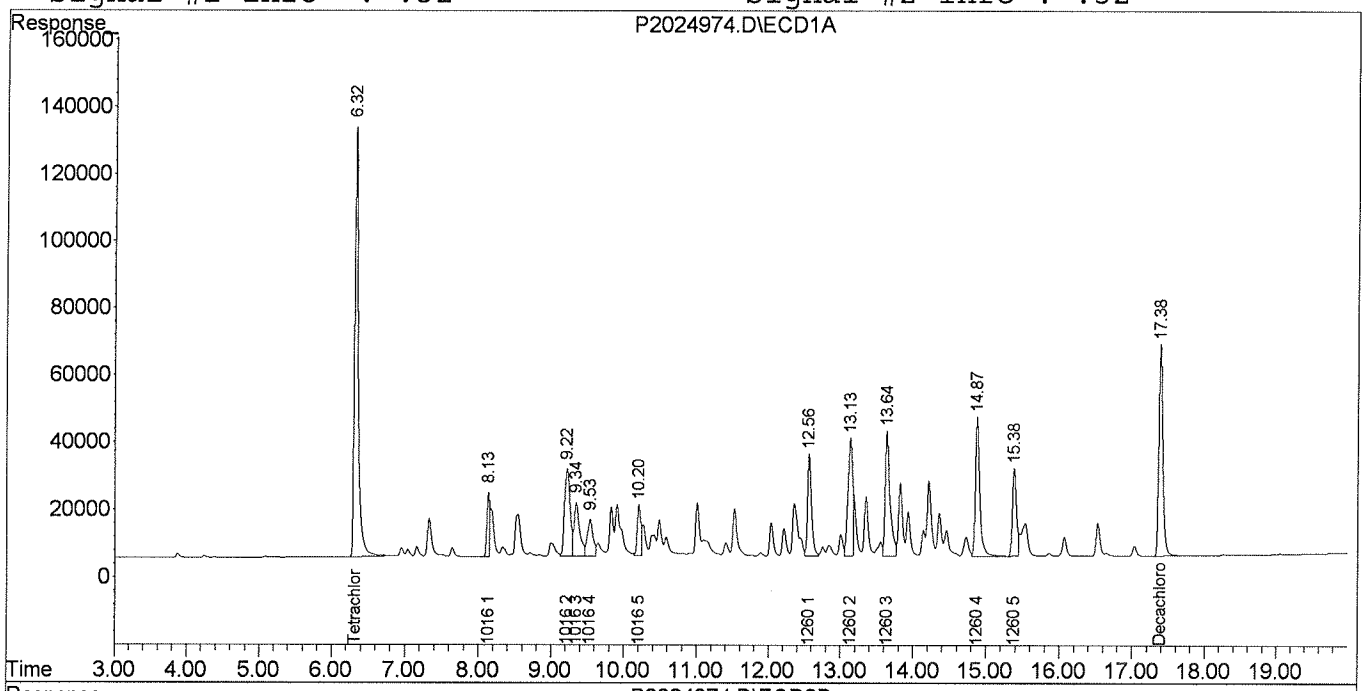
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

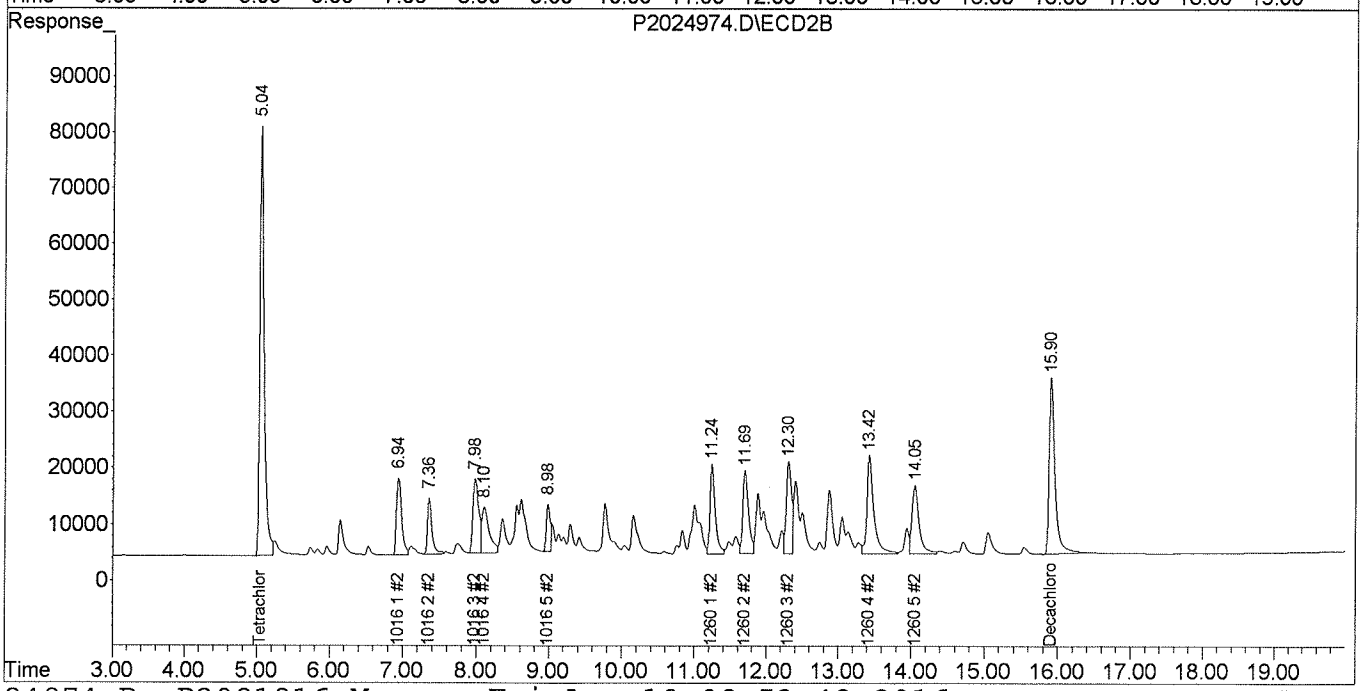
Quantitation Report

Signal #1 : C:\HPCHEM\1\DATA\081816\P2024974.D\ECD1A.CH Vial: 3
Signal #2 : C:\HPCHEM\1\DATA\081816\P2024974.D\ECD2B.CH
Acq On : 18 Aug 2016 5:23 pm Operator: AMC
Sample : SEQ-CAL3 Inst : GC_5890_I
Misc : QBPCB2-081816A Y16A061 1016/1260 0.50ug/ Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 19 8:44 2016 Quant Results File: P2072516.RES

Quant Method : C:\HPCHEM\1\METHODS\P2072516.M (Chemstation Integrator)
Title : 07/25/16 - MR-1 & MR-2 MU-A = 60 MU-B = 60
Last Update : Tue Jul 26 14:07:05 2016
Response via : Multiple Level Calibration
DataAcq Meth : PEST.M

Volume Inj. : 1 uL
Signal #1 Phase : ZB-Multiresidue-1 Signal #2 Phase: ZB-Multiresidue-2
Signal #1 Info : .32 Signal #2 Info : .32



Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\081816\P2024975.D\ECD1A.CH Vial: 4
Signal #2 : C:\HPCHEM\1\DATA\081816\P2024975.D\ECD2B.CH
Acq On : 18 Aug 2016 5:47 pm Operator: AMC
Sample : SEQ-CAL4 Inst : GC_5890_I
Misc : QBPCB2-081816A Y16A062 1016/1260 1.0ug/m Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 19 8:39 2016 Quant Results File: P2072516.RES

Quant Method : C:\HPCHEM\1\METHODS\P2072516.M (Chemstation Integrator)
Title : 07/25/16 - MR-1 & MR-2 MU-A = 60 MU-B = 60
Last Update : Tue Jul 26 14:07:05 2016
Response via : Initial Calibration
DataAcq Meth : PEST.M

Volume Inj. : 1 uL
Signal #1 Phase : ZB-Multiresidue-1 Signal #2 Phase: ZB-Multiresidue-2
Signal #1 Info : .32 Signal #2 Info : .32

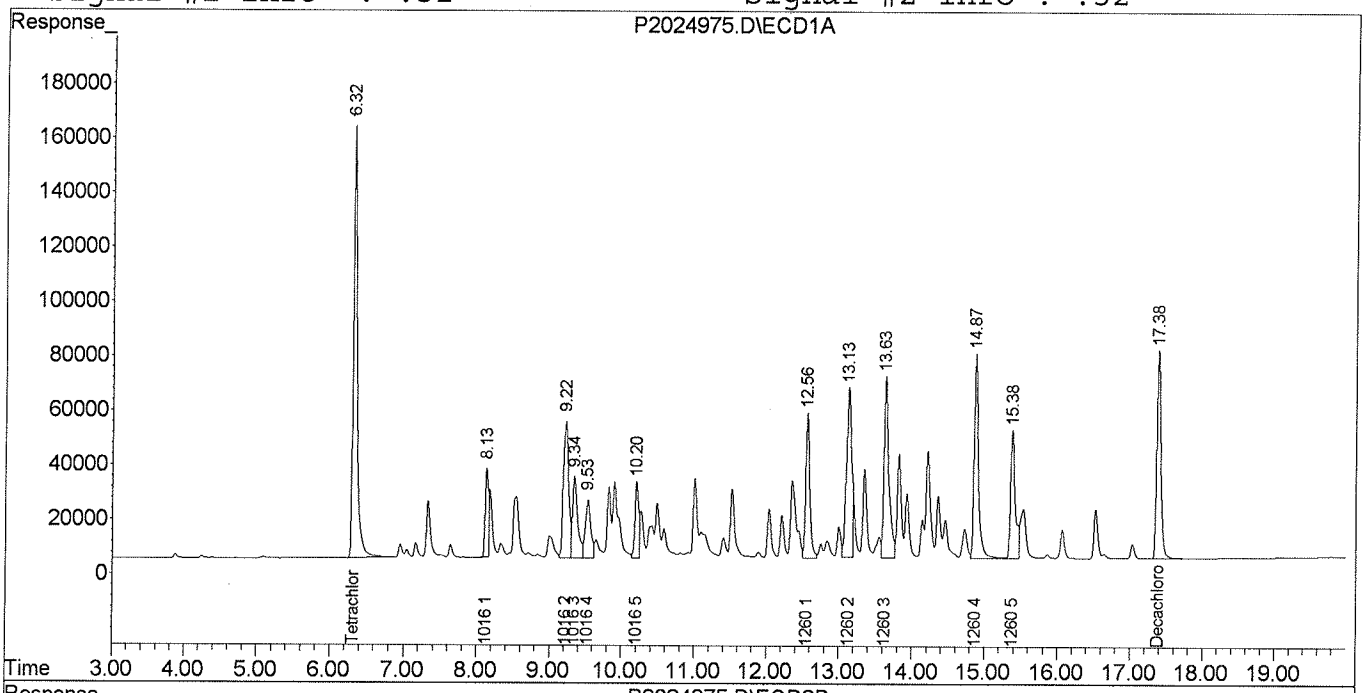
| | Compound | RT#1 | RT#2 | Resp#1 | Resp#2 | ug/mL | ug/mL |
|---|---|---|---|---|---|---|---|
| | System Monitoring Compounds | | | | | | |
| 1) | S Tetrachloro-m-xy | 6.32 | 5.04 | 5758089 | 4084987 | 0.188 | 0.270 # |
| | Spiked Amount 0.200 | Range 30 - 150 | | Recovery = | | 94.00% | 135.00% |
| 45) | S Decachlorobiphen | 17.39 | 15.91 | 2942952 | 2160814 | 0.203 | 0.305 # |
| | Spiked Amount 0.200 | Range 30 - 150 | | Recovery = | | 101.50% | 152.50%# |
| | Target Compounds | | | | | | |
| 5) | T 1016 1 | 8.13 | 6.94 | 920095 | 1211655 | 1.374m | 2.050 # |
| 6) | T 1016 2 | 9.22 | 7.36 | 2616210 | 805197 | 1.777 | 2.309 # |
| 7) | T 1016 3 | 9.34 | 7.98 | 1498788 | 1485008 | 1.587 | 2.381 # |
| 8) | T 1016 4 | 9.54 | 8.10 | 1118440 | 1058928 | 1.729 | 2.638 # |
| 9) | T 1016 5 | 10.20 | 8.98 | 957129 | 573189 | 1.545 | 2.090m# |
| 30) | T 1260 1 | 12.56 | 11.24 | 2063908 | 1423441 | 1.501 | 2.250 # |
| 31) | T 1260 2 | 13.13 | 11.69 | 2977516 | 1489205 | 1.623m | 2.317 # |
| 32) | T 1260 3 | 13.64 | 12.30 | 3099454 | 1511500 | 1.601 | 2.384 # |
| 33) | T 1260 4 | 14.87 | 13.42 | 3120961 | 2133707 | 1.596 | 2.438m# |
| 34) | T 1260 5 | 15.38 | 14.05 | 2026637 | 1580190 | 1.755 | 2.476 # |

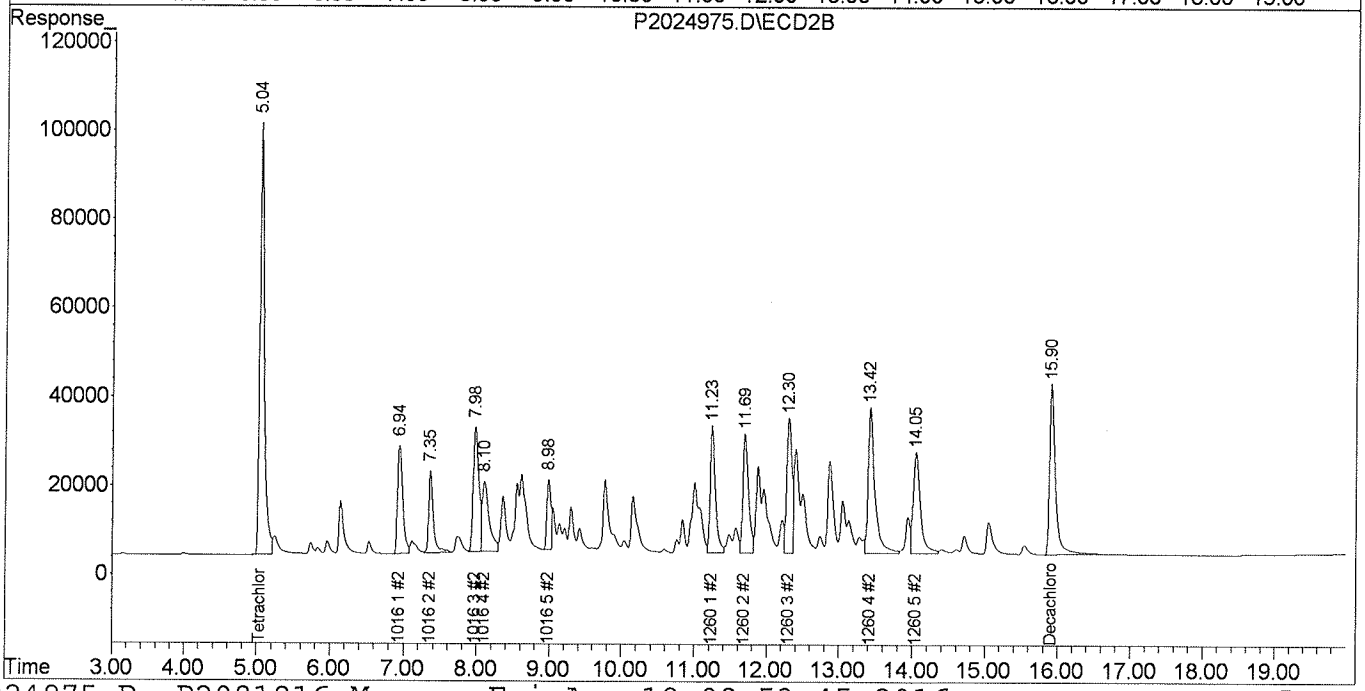
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Signal #1 : C:\HPCHEM\1\DATA\081816\P2024975.D\ECD1A.CH Vial: 4
Signal #2 : C:\HPCHEM\1\DATA\081816\P2024975.D\ECD2B.CH
Acq On : 18 Aug 2016 5:47 pm Operator: AMC
Sample : SEQ-CAL4 Inst : GC_5890_I
Misc : QBPCB2-081816A Y16A062 1016/1260 1.0ug/m Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 19 8:39 2016 Quant Results File: P2072516.RES

Quant Method : C:\HPCHEM\1\METHODS\P2072516.M (Chemstation Integrator)
Title : 07/25/16 - MR-1 & MR-2 MU-A = 60 MU-B = 60
Last Update : Tue Jul 26 14:07:05 2016
Response via : Multiple Level Calibration
DataAcq Meth : PEST.M

Volume Inj. : 1 uL
Signal #1 Phase : ZB-Multiresidue-1 Signal #2 Phase: ZB-Multiresidue-2
Signal #1 Info : .32 Signal #2 Info : .32



Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\081816\P2024976.D\ECD1A.CH Vial: 5
Signal #2 : C:\HPCHEM\1\DATA\081816\P2024976.D\ECD2B.CH
Acq On : 18 Aug 2016 6:11 pm Operator: AMC
Sample : SEQ-CAL5 Inst : GC_5890_I
Misc : QBPCB2-081816A Y16A063 1016/1260 2.0ug/m Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 19 8:40 2016 Quant Results File: P2072516.RES

Quant Method : C:\HPCHEM\1\METHODS\P2072516.M (Chemstation Integrator)
Title : 07/25/16 - MR-1 & MR-2 MU-A = 60 MU-B = 60
Last Update : Tue Jul 26 14:07:05 2016
Response via : Initial Calibration
DataAcq Meth : PEST.M

Volume Inj. : 1 uL
Signal #1 Phase : ZB-Multiresidue-1 Signal #2 Phase: ZB-Multiresidue-2
Signal #1 Info : .32 Signal #2 Info : .32

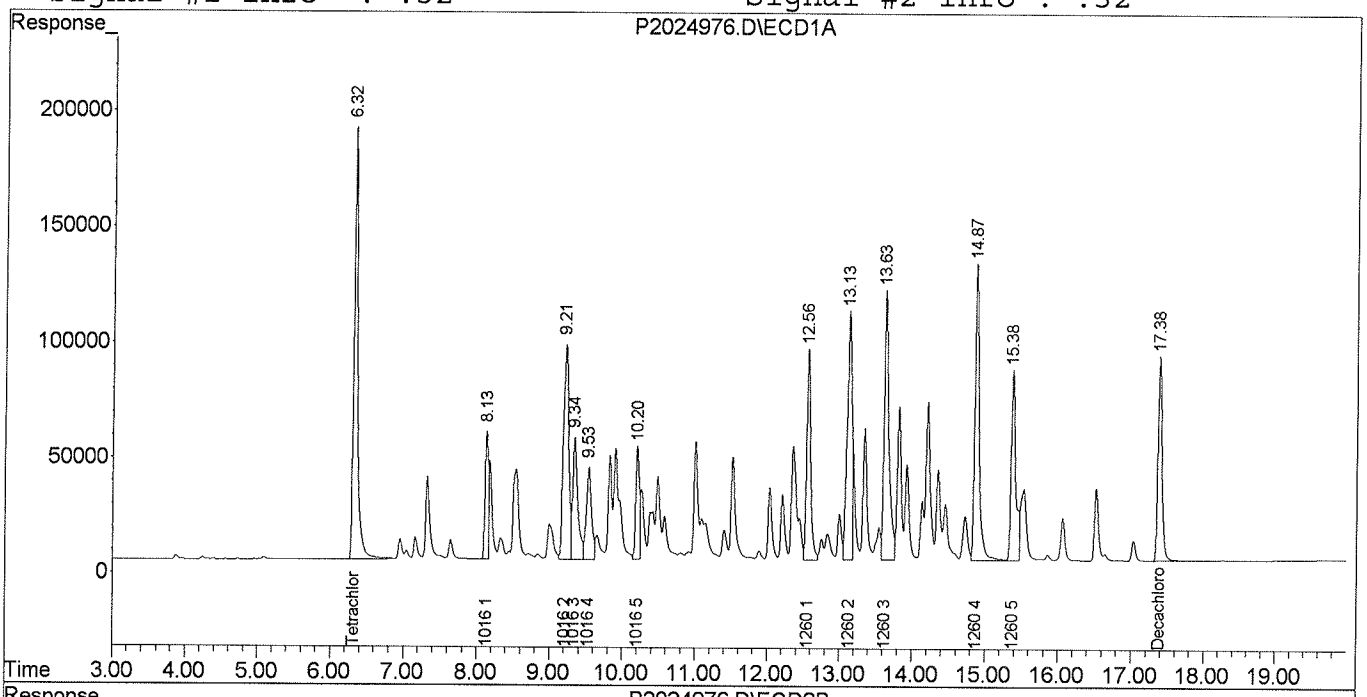
| | Compound | RT#1 | RT#2 | Resp#1 | Resp#2 | ug/mL | ug/mL |
|---|---|---|---|---|---|---|---|
| | System Monitoring Compounds | | | | | | |
| 1) | S Tetrachloro-m-xy | 6.32 | 5.04 | 6950163 | 4971144 | 0.227 | 0.329 # |
| | Spiked Amount 0.200 | Range 30 - 150 | | Recovery = | | 113.50% | 164.50%# |
| 45) | S Decachlorobiphen | 17.39 | 15.91 | 3447098 | 2508228 | 0.238 | 0.354 # |
| | Spiked Amount 0.200 | Range 30 - 150 | | Recovery = | | 119.00% | 177.00%# |
| | Target Compounds | | | | | | |
| 5) | T 1016 1 | 8.13 | 6.94 | 1618471 | 2155651 | 2.416 | 3.646 # |
| 6) | T 1016 2 | 9.22 | 7.36 | 4742930 | 1464384 | 3.221 | 4.199 # |
| 7) | T 1016 3 | 9.34 | 7.97 | 2560490 | 2991208 | 2.711 | 4.796 # |
| 8) | T 1016 4 | 9.54 | 8.10 | 1973212 | 2054782 | 3.050 | 5.120 # |
| 9) | T 1016 5 | 10.20 | 8.98 | 1675179 | 1221531 | 2.704 | 4.455m# |
| 30) | T 1260 1 | 12.56 | 11.24 | 3538297 | 2576065 | 2.574 | 4.072 # |
| 31) | T 1260 2 | 13.13 | 11.69 | 4817044 | 2684895 | 2.626m | 4.177 # |
| 32) | T 1260 3 | 13.64 | 12.30 | 5376301 | 2767801 | 2.776 | 4.366 # |
| 33) | T 1260 4 | 14.87 | 13.42 | 5416192 | 4079081 | 2.770 | 4.660 # |
| 34) | T 1260 5 | 15.38 | 14.05 | 3546025 | 2910295 | 3.070 | 4.561 # |

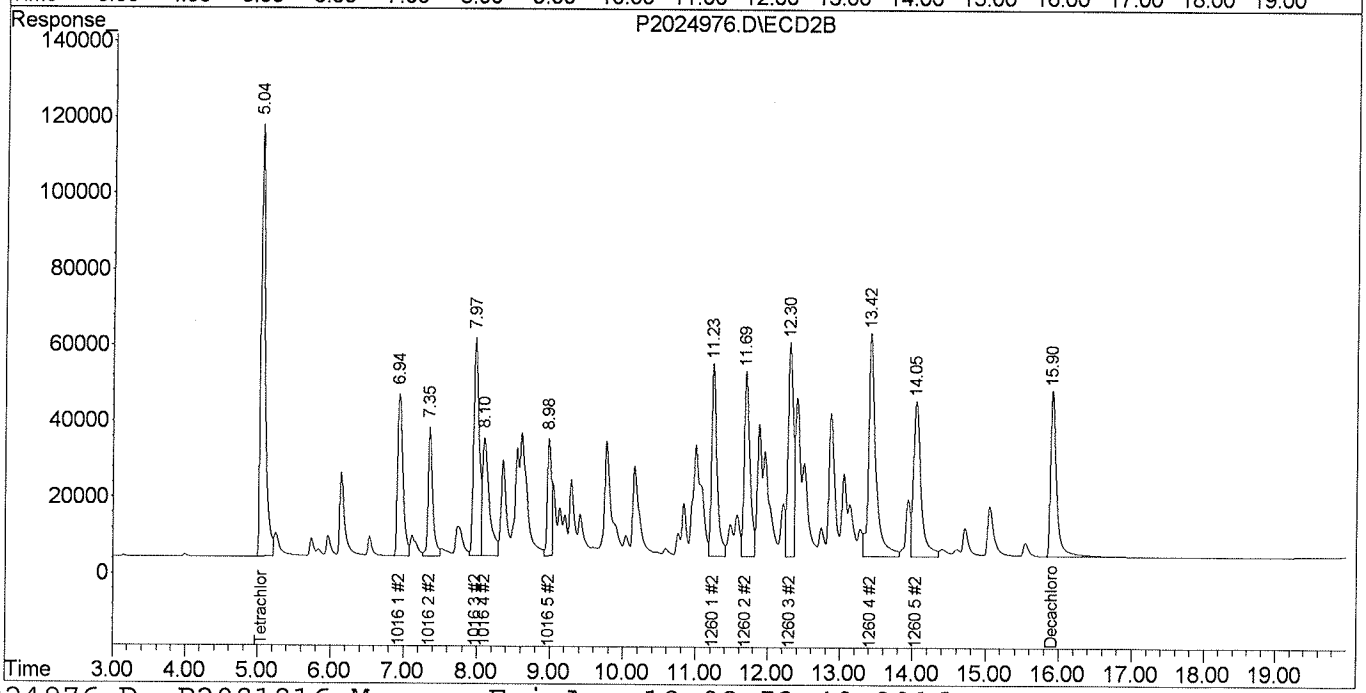
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Signal #1 : C:\HPCHEM\1\DATA\081816\P2024976.D\ECD1A.CH Vial: 5
Signal #2 : C:\HPCHEM\1\DATA\081816\P2024976.D\ECD2B.CH
Acq On : 18 Aug 2016 6:11 pm Operator: AMC
Sample : SEQ-CAL5 Inst : GC_5890_I
Misc : QBPCB2-081816A Y16A063 1016/1260 2.0ug/m Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 19 8:40 2016 Quant Results File: P2072516.RES

Quant Method : C:\HPCHEM\1\METHODS\P2072516.M (Chemstation Integrator)
Title : 07/25/16 - MR-1 & MR-2 MU-A = 60 MU-B = 60
Last Update : Tue Jul 26 14:07:05 2016
Response via : Multiple Level Calibration
DataAcq Meth : PEST.M

Volume Inj. : 1 uL
Signal #1 Phase : ZB-Multiresidue-1 Signal #2 Phase: ZB-Multiresidue-2
Signal #1 Info : .32 Signal #2 Info : .32



Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\081816\P2024977.D\ECD1A.CH Vial: 6
Signal #2 : C:\HPCHEM\1\DATA\081816\P2024977.D\ECD2B.CH
Acq On : 18 Aug 2016 6:35 pm Operator: AMC
Sample : SEQ-CAL6 Inst : GC_5890_I
Misc : QBPCB2-081816A Y16A064 1016/1260 3.0ug/m Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 19 8:40 2016 Quant Results File: P2072516.RES

Quant Method : C:\HPCHEM\1\METHODS\P2072516.M (Chemstation Integrator)
Title : 07/25/16 - MR-1 & MR-2 MU-A = 60 MU-B = 60
Last Update : Tue Jul 26 14:07:05 2016
Response via : Initial Calibration
DataAcq Meth : PEST.M

Volume Inj. : 1 uL
Signal #1 Phase : ZB-Multiresidue-1 Signal #2 Phase: ZB-Multiresidue-2
Signal #1 Info : .32 Signal #2 Info : .32

| | Compound | RT#1 | RT#2 | Resp#1 | Resp#2 | ug/mL | ug/mL |
|---|---|---|---|---|---|---|---|
| | System Monitoring Compounds | | | | | | |
| 1) | S Tetrachloro-m-xy | 6.32 | 5.04 | 7996927 | 5783681 | 0.262 | 0.382 # |
| | Spiked Amount 0.200 | Range 30 - 150 | | Recovery = | | 131.00% | 191.00%# |
| 45) | S Decachlorobiphen | 17.38 | 15.91 | 3961756 | 2933448 | 0.273 | 0.414 # |
| | Spiked Amount 0.200 | Range 30 - 150 | | Recovery = | | 136.50% | 207.00%# |
| | Target Compounds | | | | | | |
| 5) | T 1016 1 | 8.13 | 6.94 | 2168439 | 2970761 | 3.237 | 5.025 # |
| 6) | T 1016 2 | 9.21 | 7.36 | 6657526 | 2060542 | 4.521 | 5.908 # |
| 7) | T 1016 3 | 9.34 | 7.97 | 3456300 | 4342519 | 3.660 | 6.963 # |
| 8) | T 1016 4 | 9.53 | 8.10 | 2734774 | 2853726 | 4.226 | 7.111 # |
| 9) | T 1016 5 | 10.20 | 8.98 | 2332463 | 1738392 | 3.765 | 6.339m# |
| 30) | T 1260 1 | 12.56 | 11.23 | 4891091 | 3624240 | 3.558 | 5.728 # |
| 31) | T 1260 2 | 13.13 | 11.69 | 6678348 | 3811714 | 3.641m | 5.930 # |
| 32) | T 1260 3 | 13.63 | 12.30 | 7491876 | 3946495 | 3.869 | 6.225 # |
| 33) | T 1260 4 | 14.87 | 13.42 | 7512252 | 5678371 | 3.843 | 6.487 # |
| 34) | T 1260 5 | 15.38 | 14.05 | 4924901 | 4201513 | 4.264 | 6.584 # |

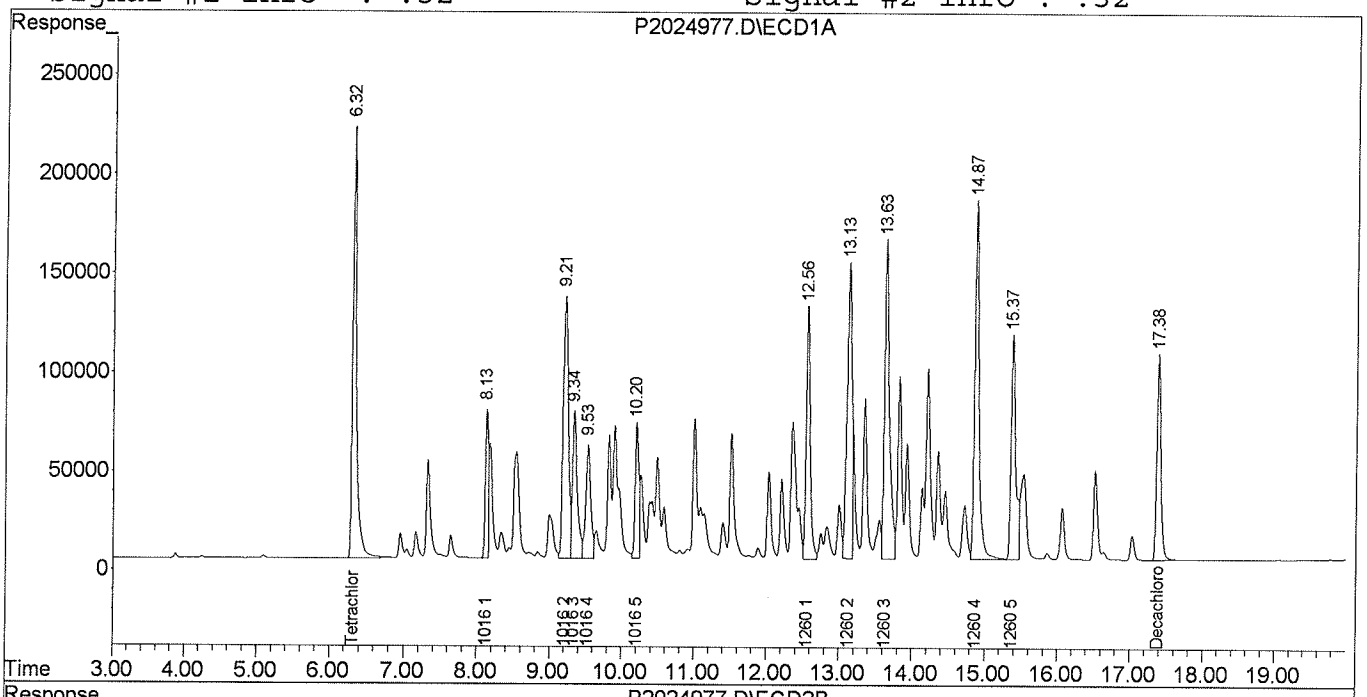
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

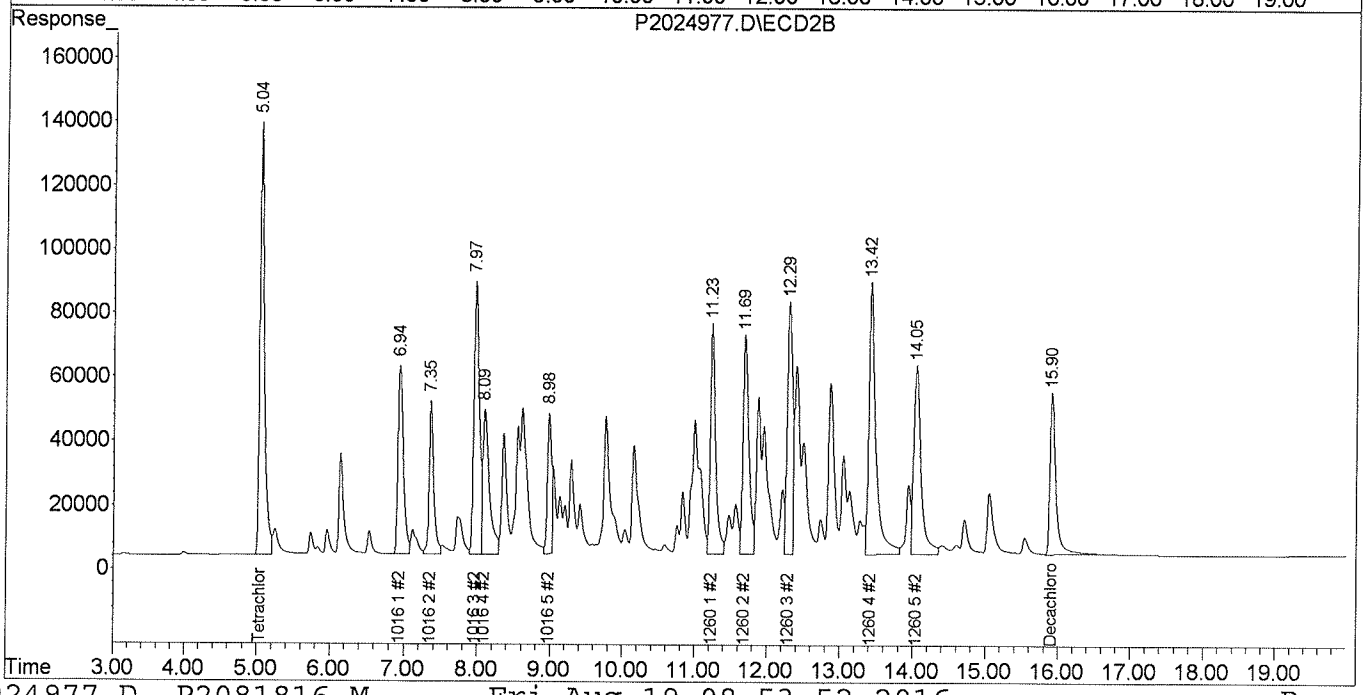
# Quantitation Report

Signal #1 : C:\HPCHEM\1\DATA\081816\P2024977.D\ECD1A.CH Vial: 6
Signal #2 : C:\HPCHEM\1\DATA\081816\P2024977.D\ECD2B.CH
Acq On : 18 Aug 2016 6:35 pm Operator: AMC
Sample : SEQ-CAL6 Inst : GC_5890_I
Misc : QBPCB2-081816A Y16A064 1016/1260 3.0ug/m Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 19 8:40 2016 Quant Results File: P2072516.RES

Quant Method : C:\HPCHEM\1\METHODS\P2072516.M (Chemstation Integrator)
Title : 07/25/16 - MR-1 & MR-2 MU-A = 60 MU-B = 60
Last Update : Tue Jul 26 14:07:05 2016
Response via : Multiple Level Calibration
DataAcq Meth : PEST.M

Volume Inj. : 1 uL
Signal #1 Phase : ZB-Multiresidue-1 Signal #2 Phase: ZB-Multiresidue-2
Signal #1 Info : .32 Signal #2 Info : .32



Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\081816\P2024978.D\ECD1A.CH Vial: 7
Signal #2 : C:\HPCHEM\1\DATA\081816\P2024978.D\ECD2B.CH
Acq On : 18 Aug 2016 6:59 pm Operator: AMC
Sample : SEQ-SCV1 Inst : GC_5890_I
Misc : QBPCB2-081816A Y16A098 1016, 1260 REF ST Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 19 8:46 2016 Quant Results File: P2081816.RES

Quant Method : C:\HPCHEM\1\METHODS\P2081816.M (Chemstation Integrator)
Title : 08/18/16 - MR-1 & MR-2 MU-A = 60 MU-B = 60
Last Update : Fri Aug 19 08:44:56 2016
Response via : Initial Calibration
DataAcq Meth : PEST.M

Volume Inj. : 1 uL
Signal #1 Phase : ZB-Multiresidue-1 Signal #2 Phase: ZB-Multiresidue-2
Signal #1 Info : .32 Signal #2 Info : .32

| | Compound | RT#1 | RT#2 | Resp#1 | Resp#2 | ug/mL | ug/mL |
|---|---|---|---|---|---|---|---|
| | System Monitoring Compounds | | | | | | |
| 1) | S Tetrachloro-m-xy | 6.32 | 5.04 | 5838259 | 4134065 | 0.157 | 0.159 |
| | Spiked Amount 0.200 | Range 30 - 150 | | Recovery = | | 78.50% | 79.50% |
| 45) | S Decachlorobiphen | 17.38 | 15.90 | 2975692 | 2137276 | 0.153m | 0.153m |
| | Spiked Amount 0.200 | Range 30 - 150 | | Recovery = | | 76.50% | 76.50% |
| | Target Compounds | | | | | | |
| 5) | T 1016 1 | 8.13 | 6.94 | 969925 | 1224012 | 1.001 | 0.952 |
| 6) | T 1016 2 | 9.22 | 7.36 | 2641624 | 813221 | 1.029 | 1.024 |
| 7) | T 1016 3 | 9.34 | 7.98 | 1510854 | 1494430 | 0.969 | 1.042 |
| 8) | T 1016 4 | 9.53 | 8.10 | 1130352 | 1062372 | 0.992 | 0.965 |
| 9) | T 1016 5 | 10.20 | 8.98 | 971966 | 581053 | 0.987 | 0.947m |
| 30) | T 1260 1 | 12.56 | 11.24 | 2067747 | 1418400 | 0.953 | 0.965 |
| 31) | T 1260 2 | 13.13 | 11.69 | 2795864 | 1473937 | 0.942m | 0.987 |
| 32) | T 1260 3 | 13.64 | 12.30 | 3072013 | 1483200 | 0.952 | 1.006 |
| 33) | T 1260 4 | 14.87 | 13.42 | 3064326 | 2162098 | 0.954 | 1.019 |
| 34) | T 1260 5 | 15.38 | 14.05 | 1960024 | 1539796 | 0.989 | 0.983 |

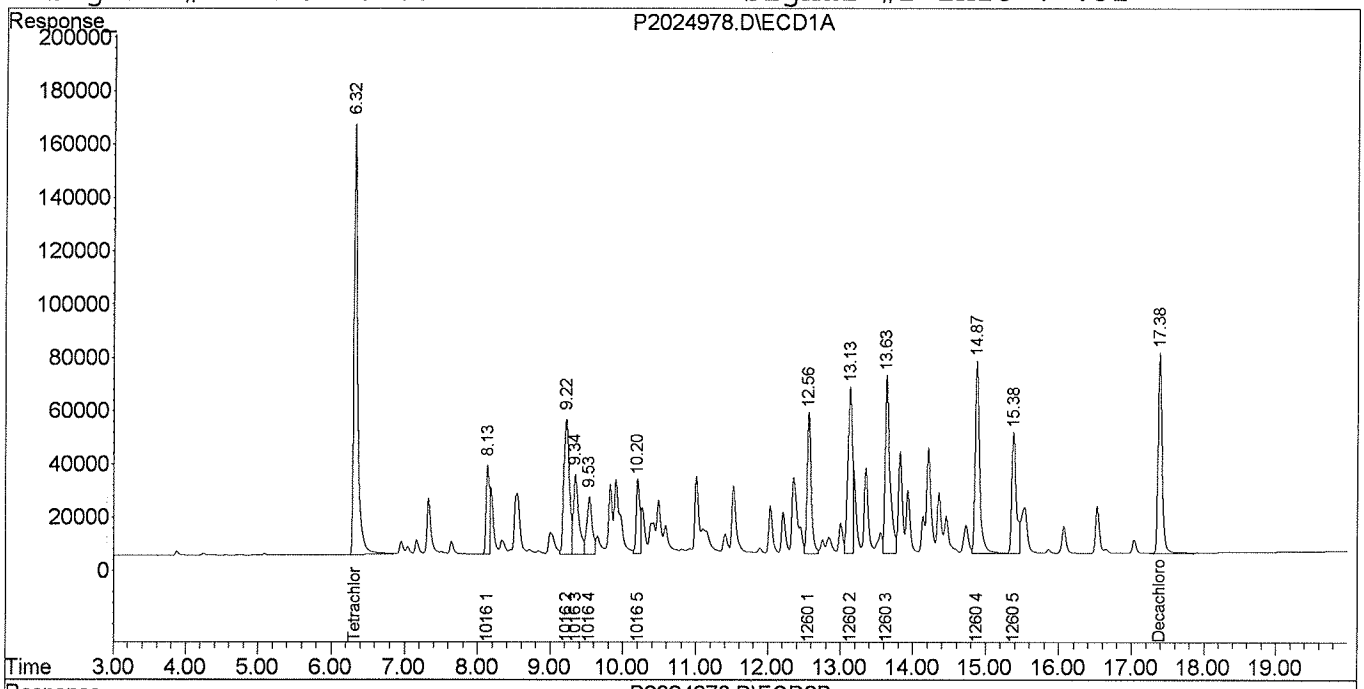
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

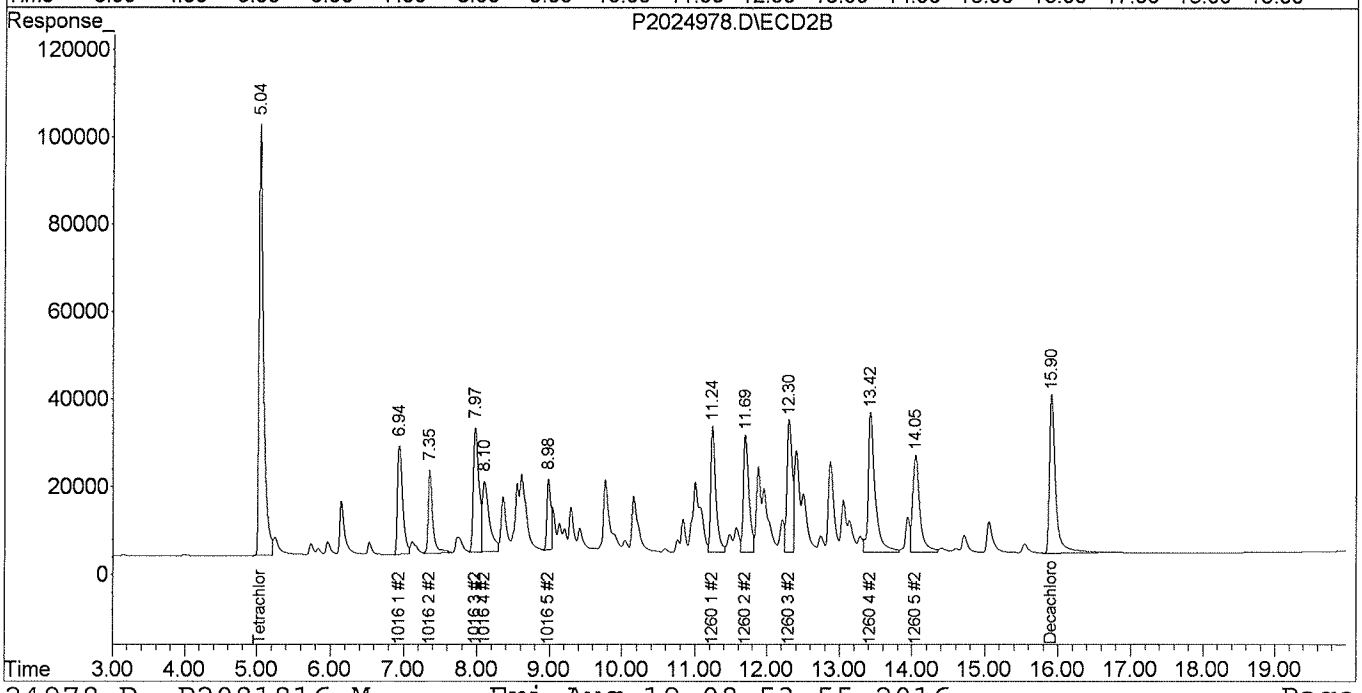
# Quantitation Report

Signal #1 : C:\HPCHEM\1\DATA\081816\P2024978.D\ECD1A.CH Vial: 7
Signal #2 : C:\HPCHEM\1\DATA\081816\P2024978.D\ECD2B.CH
Acq On : 18 Aug 2016 6:59 pm Operator: AMC
Sample : SEQ-SCV1 Inst : GC_5890_I
Misc : QBPCB2-081816A Y16A098 1016, 1260 REF ST Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 19 8:46 2016 Quant Results File: P2081816.RES

Quant Method : C:\HPCHEM\1\METHODS\P2081816.M (Chemstation Integrator)
Title : 08/18/16 - MR-1 & MR-2 MU-A = 60 MU-B = 60
Last Update : Fri Aug 19 08:44:56 2016
Response via : Multiple Level Calibration
DataAcq Meth : PEST.M

Volume Inj. : 1 uL
Signal #1 Phase : ZB-Multiresidue-1 Signal #2 Phase: ZB-Multiresidue-2
Signal #1 Info : .32 Signal #2 Info : .32



# Evaluate Continuing Calibration Report

Signal #1 : C:\HPCHEM\1\DATA\091216\P2025505.D\ECD1A.CH Vial: 1
Signal #2 : C:\HPCHEM\1\DATA\091216\P2025505.D\ECD2B.CH
Acq On : 12 Sep 2016 11:41 am Operator: AMC
Sample : SEQ-CCV1 Inst : GC_5890_I
Misc : QBPCB2-091216A Y16A04 1016/1260 1.0ug/mL Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E

Method : C:\HPCHEM\1\METHODS\P2081816.M (Chemstation Integrator)
Title : 08/18/16 - MR-1 & MR-2 MU-A = 60 MU-B = 60
Last Update : Wed Aug 31 11:36:38 2016
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 40% Max. Rel. Area : 150%

| | | Compound | AvgRF | CCRF | %Dev | Area% | Dev(min) |
|---|---|---|---|---|---|---|---|
| 1 | S | Tetrachloro-m-xylene | 37.077 | 35.516 E6 | 4.2 | 99 | 0.00 |
| 5 | T | 1016 1 | 968.668 | 875.077 E3 | 9.7 | 95 | 0.00 |
| 6 | T | 1016 2 | 2.568 | 2.215 E6 | 13.7 | 85 | -0.01 |
| 7 | T | 1016 3 | 1.559 | 1.342 E6 | 13.9 | 90 | 0.00 |
| 8 | T | 1016 4 | 1138.978 | 986.487 E3 | 13.4 | 88 | 0.00 |
| 9 | T | 1016 5 | 984.298 | 867.251 E3 | 11.9 | 91 | 0.00 |
| 30 | T | 1260 1 | 2.170 | 1.851 E6 | 14.7 | 90 | 0.00 |
| 31 | T | 1260 2 | 2.968 | 2.546 E6 | 14.2 | 86 | 0.00 |
| 32 | T | 1260 3 | 3.226 | 2.745 E6 | 14.9 | 89 | 0.00 |
| 33 | T | 1260 4 | 3.212 | 2.873 E6 | 10.6 | 92 | 0.00 |
| 34 | T | 1260 5 | 1.981 | 1.733 E6 | 12.5 | 85 | 0.00 |
| 45 | S | Decachlorobiphenyl | 19.453 | 16.803 E6 | 13.6 | 91 | 0.00 |
| | | Signal #2 | | | | | |
| 1 | S | Tetrachloro-m-xylene | 25.994 | 22.886 E6 | 12.0 | 90 | -0.01 |
| 5 | T | 1016 1 | 1285.346 | 1101.359 E3 | 14.3 | 91 | -0.02 |
| 6 | T | 1016 2 | 793.784 | 707.823 E3 | 10.8 | 88 | -0.02 |
| 7 | T | 1016 3 | 1.434 | 1.254 E6 | 12.6 | 84 | -0.02 |
| 8 | T | 1016 4 | 1100.731 | 996.607 E3 | 9.5 | 94 | -0.02 |
| 9 | T | 1016 5 | 613.267 | 554.924 E3 | 9.5 | 97 | -0.01 |
| 30 | T | 1260 1 | 1.469 | 1.259 E6 | 14.3 | 88 | 0.00 |
| 31 | T | 1260 2 | 1.493 | 1.269 E6 | 15.0 | 85 | 0.00 |
| 32 | T | 1260 3 | 1.474 | 1.271 E6 | 13.8 | 84 | 0.00 |
| 33 | T | 1260 4 | 2.123 | 1.838 E6 | 13.4 | 86 | 0.00 |
| 34 | T | 1260 5 | 1.566 | 1.343 E6 | 14.2 | 85 | 0.00 |
| 45 | S | Decachlorobiphenyl | 13.968 | 11.979 E6 | 14.2 | 89 | 0.00 |

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\091216\P2025505.D\ECD1A.CH Vial: 1
Signal #2 : C:\HPCHEM\1\DATA\091216\P2025505.D\ECD2B.CH
Acq On : 12 Sep 2016 11:41 am Operator: AMC
Sample : SEQ-CCV1 Inst : GC_5890_I
Misc : QBPCB2-091216A Y16A04 1016/1260 1.0ug/mL Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Sep 12 12:23 2016 Quant Results File: P2081816.RES

Quant Method : C:\HPCHEM\1\METHODS\P2081816.M (Chemstation Integrator)
Title : 08/18/16 - MR-1 & MR-2 MU-A = 60 MU-B = 60
Last Update : Wed Aug 31 11:36:38 2016
Response via : Initial Calibration
DataAcq Meth : PEST.M

Volume Inj. : 1 uL
Signal #1 Phase : ZB-Multiresidue-1 Signal #2 Phase: ZB-Multiresidue-2
Signal #1 Info : .32 Signal #2 Info : .32

| | Compound | RT#1 | RT#2 | Resp#1 | Resp#2 | ug/mL | ug/mL |
|---|---|---|---|---|---|---|---|
| | System Monitoring Compounds | | | | | | |
| 1) | S Tetrachloro-m-xy | 6.31 | 5.03 | 5682595 | 3661812 | 0.153 | 0.141 |
| | Spiked Amount 0.200 | Range 30 - 150 | | Recovery = | | 76.50% | 70.50% |
| 45) | S Decachlorobiphen | 17.38 | 15.90 | 2688433 | 1916607 | 0.138 | 0.137 |
| | Spiked Amount 0.200 | Range 30 - 150 | | Recovery = | | 69.00% | 68.50% |
| | Target Compounds | | | | | | |
| 5) | T 1016 1 | 8.12 | 6.92 | 875077 | 1101359 | 0.903 | 0.857m |
| 6) | T 1016 2 | 9.21 | 7.34 | 2214782 | 707823 | 0.862m | 0.892 |
| 7) | T 1016 3 | 9.33 | 7.96 | 1342350 | 1254420 | 0.861 | 0.875m |
| 8) | T 1016 4 | 9.53 | 8.08 | 986487 | 996607 | 0.866 | 0.905 |
| 9) | T 1016 5 | 10.19 | 8.97 | 867251 | 554924 | 0.881m | 0.905m |
| 30) | T 1260 1 | 12.56 | 11.23 | 1850945 | 1259244 | 0.853 | 0.857m |
| 31) | T 1260 2 | 13.13 | 11.69 | 2546399 | 1269337 | 0.858m | 0.850m |
| 32) | T 1260 3 | 13.63 | 12.30 | 2744553 | 1270989 | 0.851m | 0.862m |
| 33) | T 1260 4 | 14.87 | 13.42 | 2873228 | 1838168 | 0.894m | 0.866 |
| 34) | T 1260 5 | 15.37 | 14.05 | 1732726 | 1343306 | 0.875m | 0.858 |

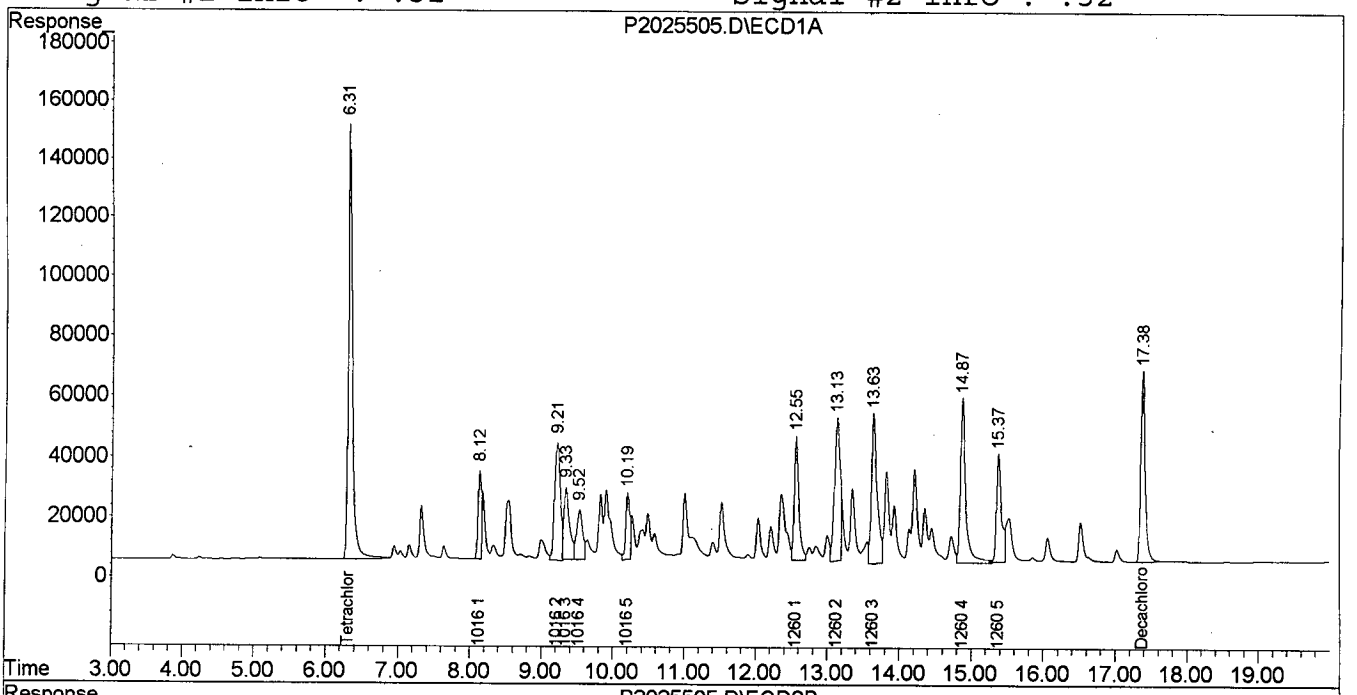
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

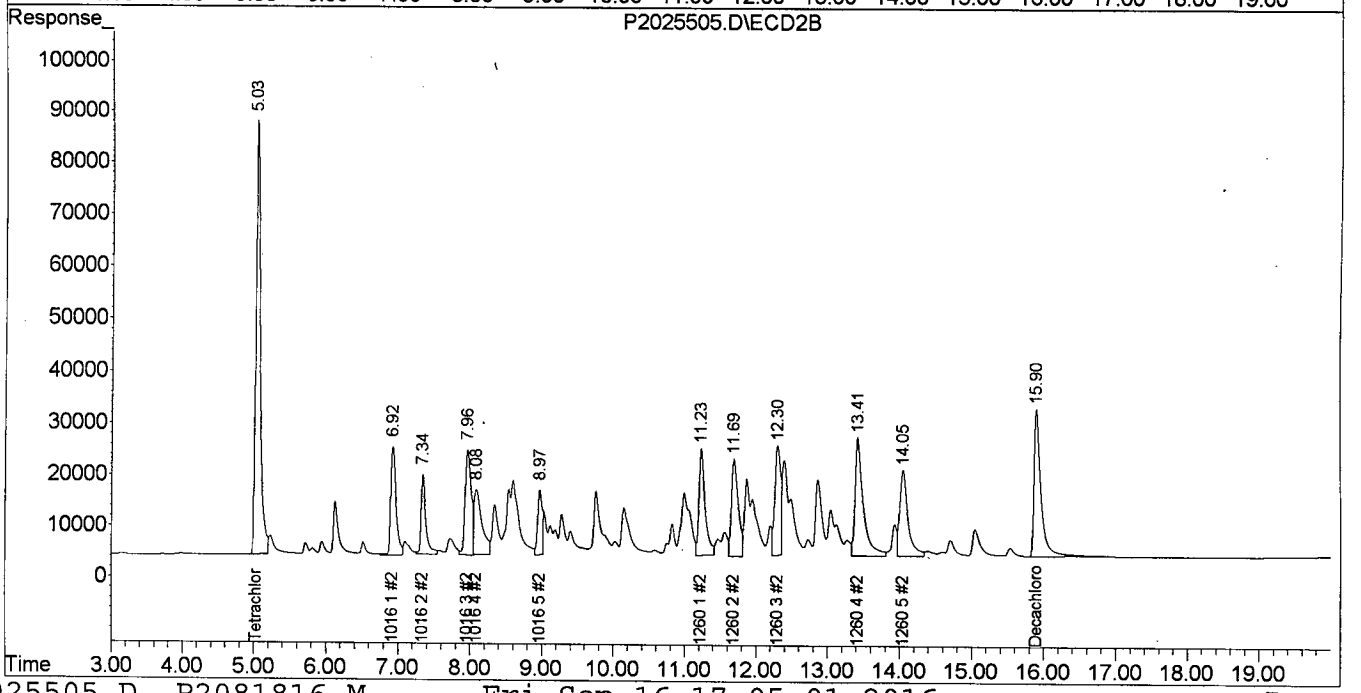
# Quantitation Report

Signal #1 : C:\HPCHEM\1\DATA\091216\P2025505.D\ECD1A.CH Vial: 1
Signal #2 : C:\HPCHEM\1\DATA\091216\P2025505.D\ECD2B.CH
Acq On : 12 Sep 2016 11:41 am Operator: AMC
Sample : SEQ-CCV1 Inst : GC_5890_I
Misc : QBPCB2-091216A Y16A04 1016/1260 1.0ug/mL Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Sep 12 12:23 2016 Quant Results File: P2081816.RES

Quant Method : C:\HPCHEM\1\METHODS\P2081816.M (Chemstation Integrator)
Title : 08/18/16 - MR-1 & MR-2 MU-A = 60 MU-B = 60
Last Update : Wed Aug 31 11:36:38 2016
Response via : Multiple Level Calibration
DataAcq Meth : PEST.M

Volume Inj. : 1 uL
Signal #1 Phase : ZB-Multiresidue-1 Signal #2 Phase: ZB-Multiresidue-2
Signal #1 Info : .32 Signal #2 Info : .32



# Evaluate Continuing Calibration Report

Signal #1 : C:\HPCHEM\1\DATA\091216\P2025527.D\ECD1A.CH Vial: 1
Signal #2 : C:\HPCHEM\1\DATA\091216\P2025527.D\ECD2B.CH
Acq On : 12 Sep 2016 10:23 pm Operator: AMC
Sample : SEQ-CCV3 Inst : GC_5890_I
Misc : QBPCB2-091216A Y16A04 1016/1260 1.0ug/mL Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E

Method : C:\HPCHEM\1\METHODS\P2081816.M (Chemstation Integrator)
Title : 08/18/16 - MR-1 & MR-2 MU-A = 60 MU-B = 60
Last Update : Wed Aug 31 11:36:38 2016
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 40% Max. Rel. Area : 150%

| | | Compound | AvgRF | CCRF | %Dev | Area% | Dev(min) |
|---|---|---|---|---|---|---|---|
| 1 | S | Tetrachloro-m-xylene | 37.077 | 32.784 E6 | 11.6 | 91 | 0.00 |
| 5 | T | 1016 1 | 968.668 | 895.940 E3 | 7.5 | 97 | 0.00 |
| 6 | T | 1016 2 | 2.568 | 2.182 E6 | 15.0 | 83 | -0.01 |
| 7 | T | 1016 3 | 1.559 | 1.346 E6 | 13.7 | 90 | 0.00 |
| 8 | T | 1016 4 | 1138.978 | 993.284 E3 | 12.8 | 89 | 0.00 |
| 9 | T | 1016 5 | 984.298 | 864.252 E3 | 12.2 | 90 | 0.00 |
| 30 | T | 1260 1 | 2.170 | 1.850 E6 | 14.7 | 90 | 0.00 |
| 31 | T | 1260 2 | 2.968 | 2.571 E6 | 13.4 | 86 | 0.00 |
| 32 | T | 1260 3 | 3.226 | 2.754 E6 | 14.6 | 89 | 0.00 |
| 33 | T | 1260 4 | 3.212 | 2.778 E6 | 13.5 | 89 | 0.00 |
| 34 | T | 1260 5 | 1.981 | 1.684 E6 | 15.0 | 83 | 0.00 |
| 45 | S | Decachlorobiphenyl | 19.453 | 15.697 E6 | 19.3 | 85 | 0.00 |
| | | Signal #2 | | | | | |
| 1 | S | Tetrachloro-m-xylene | 25.994 | 22.270 E6 | 14.3 | 87 | -0.01 |
| 5 | T | 1016 1 | 1285.346 | 1094.507 E3 | 14.8 | 90 | -0.01 |
| 6 | T | 1016 2 | 793.784 | 685.552 E3 | 13.6 | 85 | -0.02 |
| 7 | T | 1016 3 | 1.434 | 1.276 E6 | 11.0 | 86 | -0.01 |
| 8 | T | 1016 4 | 1100.731 | 951.281 E3 | 13.6 | 90 | -0.02 |
| 9 | T | 1016 5 | 613.267 | 523.941 E3 | 14.6 | 91 | -0.01 |
| 30 | T | 1260 1 | 1.469 | 1.252 E6 | 14.8 | 88 | 0.00 |
| 31 | T | 1260 2 | 1.493 | 1.280 E6 | 14.3 | 86 | 0.00 |
| 32 | T | 1260 3 | 1.474 | 1.276 E6 | 13.4 | 84 | 0.00 |
| 33 | T | 1260 4 | 2.123 | 1.829 E6 | 13.8 | 86 | 0.00 |
| 34 | T | 1260 5 | 1.566 | 1.331 E6 | 15.0 | 84 | 0.00 |
| 45 | S | Decachlorobiphenyl | 13.968 | 11.921 E6 | 14.7 | 88 | 0.00 |

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\091216\P2025527.D\ECD1A.CH Vial: 1
Signal #2 : C:\HPCHEM\1\DATA\091216\P2025527.D\ECD2B.CH
Acq On : 12 Sep 2016 10:23 pm Operator: AMC
Sample : SEQ-CCV3 Inst : GC_5890_I
Misc : QBPCB2-091216A Y16A04 1016/1260 1.0ug/mL Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Sep 13 7:45 2016 Quant Results File: P2081816.RES

Quant Method : C:\HPCHEM\1\METHODS\P2081816.M (Chemstation Integrator)
Title : 08/18/16 - MR-1 & MR-2 MU-A = 60 MU-B = 60
Last Update : Wed Aug 31 11:36:38 2016
Response via : Initial Calibration
DataAcq Meth : PEST.M

Volume Inj. : 1 uL
Signal #1 Phase : ZB-Multiresidue-1 Signal #2 Phase: ZB-Multiresidue-2
Signal #1 Info : .32 Signal #2 Info : .32

| | Compound | RT#1 | RT#2 | Resp#1 | Resp#2 | ug/mL | ug/mL |
|---|---|---|---|---|---|---|---|
| | System Monitoring Compounds | | | | | | |
| 1) | S Tetrachloro-m-xy | 6.31 | 5.03 | 5245498 | 3563123 | 0.141 | 0.137 |
| | Spiked Amount 0.200 | Range 30 - 150 | | Recovery = | | 70.50% | 68.50% |
| 45) | S Decachlorobiphen | 17.38 | 15.90 | 2511532 | 1907308 | 0.129 | 0.137 |
| | Spiked Amount 0.200 | Range 30 - 150 | | Recovery = | | 64.50% | 68.50% |
| | Target Compounds | | | | | | |
| 5) | T 1016 1 | 8.12 | 6.93 | 895940 | 1094507 | 0.925m | 0.852m |
| 6) | T 1016 2 | 9.21 | 7.34 | 2181767 | 685552 | 0.850m | 0.864m |
| 7) | T 1016 3 | 9.33 | 7.96 | 1345808 | 1275642 | 0.863 | 0.890m |
| 8) | T 1016 4 | 9.53 | 8.09 | 993284 | 951281 | 0.872 | 0.864m |
| 9) | T 1016 5 | 10.19 | 8.97 | 864252 | 523941 | 0.878m | 0.854m |
| 30) | T 1260 1 | 12.55 | 11.23 | 1850178 | 1251561 | 0.853m | 0.852m |
| 31) | T 1260 2 | 13.13 | 11.69 | 2571447 | 1280220 | 0.866m | 0.858m |
| 32) | T 1260 3 | 13.63 | 12.30 | 2753741 | 1276402 | 0.854m | 0.866m |
| 33) | T 1260 4 | 14.87 | 13.42 | 2777770 | 1828847 | 0.865m | 0.862 |
| 34) | T 1260 5 | 15.37 | 14.05 | 1683910 | 1331099 | 0.850m | 0.850 |

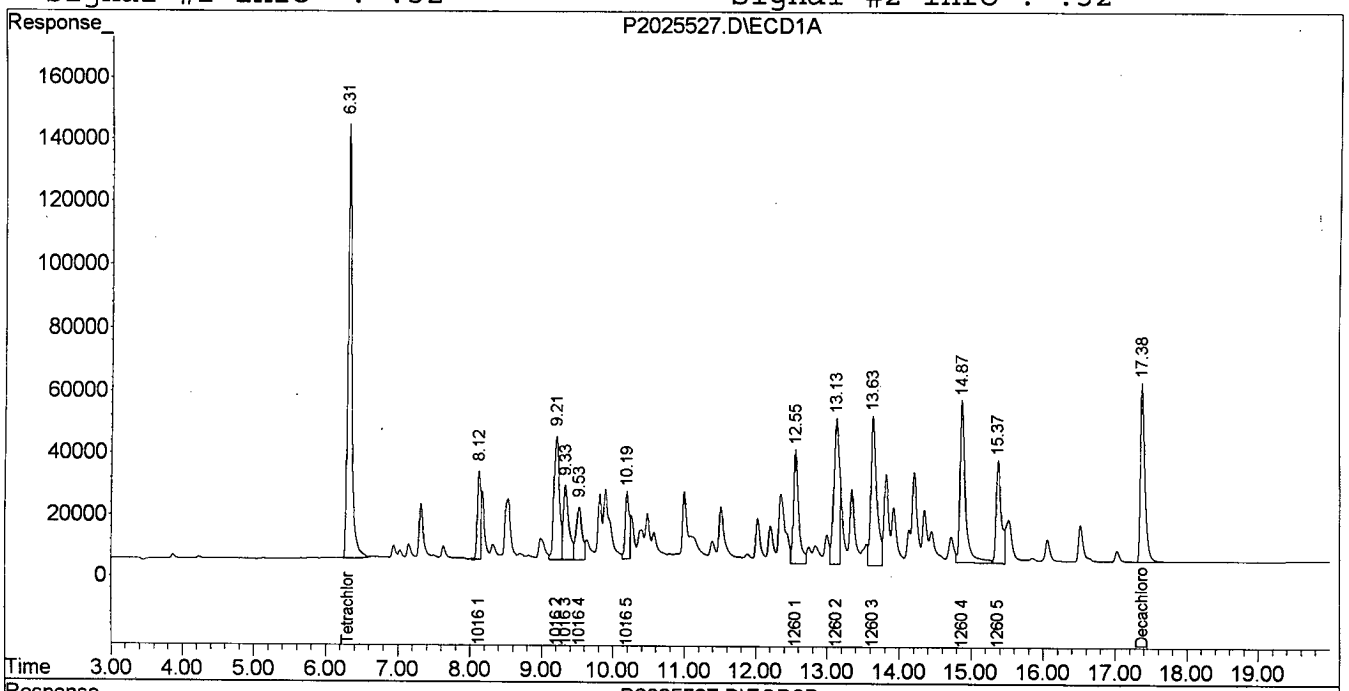
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

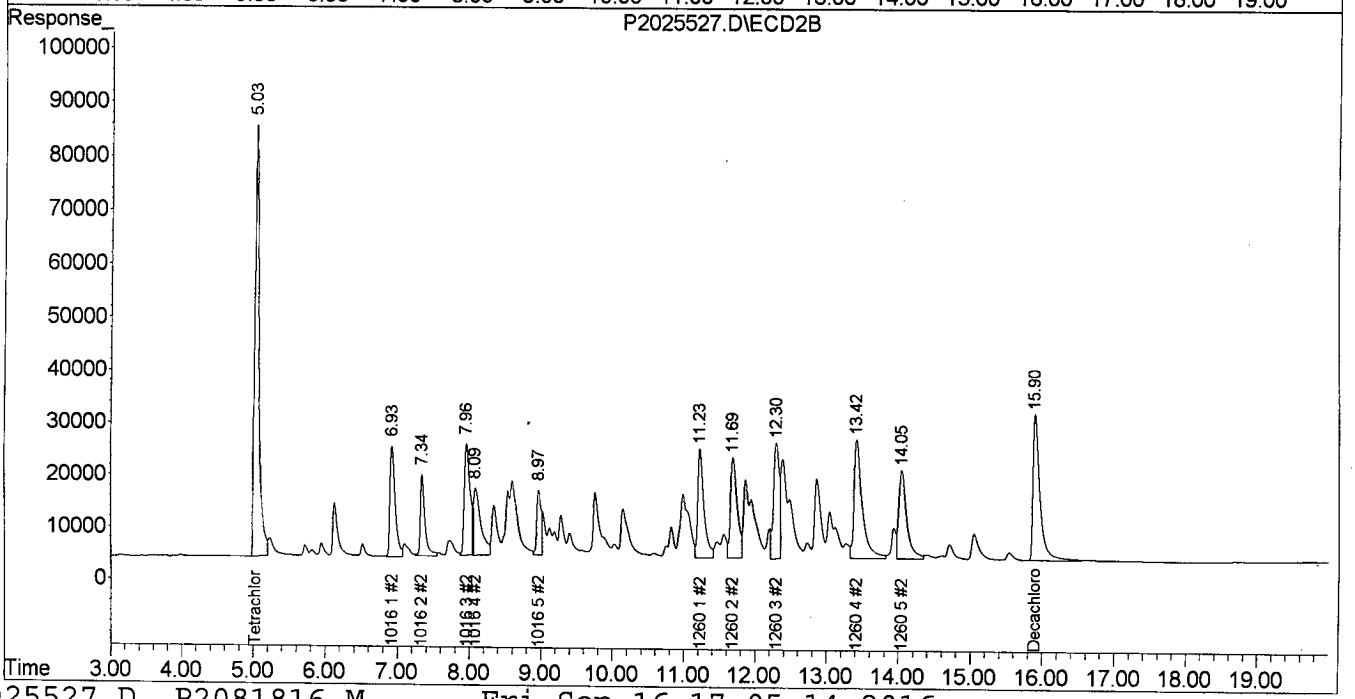
# Quantitation Report

Signal #1 : C:\HPCHEM\1\DATA\091216\P2025527.D\ECD1A.CH Vial: 1
Signal #2 : C:\HPCHEM\1\DATA\091216\P2025527.D\ECD2B.CH
Acq On : 12 Sep 2016 10:23 pm Operator: AMC
Sample : SEQ-CCV3 Inst : GC_5890_I
Misc : QBPCB2-091216A Y16A04 1016/1260 1.0ug/mL Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Sep 13 7:45 2016 Quant Results File: P2081816.RES

Quant Method : C:\HPCHEM\1\METHODS\P2081816.M (Chemstation Integrator)
Title : 08/18/16 - MR-1 & MR-2 MU-A = 60 MU-B = 60
Last Update : Wed Aug 31 11:36:38 2016
Response via : Multiple Level Calibration
DataAcq Meth : PEST.M

Volume Inj. : 1 uL
Signal #1 Phase : ZB-Multiresidue-1 Signal #2 Phase: ZB-Multiresidue-2
Signal #1 Info : .32 Signal #2 Info : .32



# FORM V ANALYSIS BATCH (SEQUENCE) SUMMARY

## EPA 8082A

| | | | |
|---|---|---|---|
| Laboratory: | York Analytical Laboratories, Inc. | SDG: | 16I0260 |
| Client: | Langan Engineering & Environmental Services (NYC) | Project: | 170301202 450 Union Street |
| Sequence: | Y6H1915 | Instrument: | GC_5890_I |
| | | Calibration: | YH60018 |

| Sample Name | Lab Sample ID | Lab File ID | Analysis Date/Time |
|---|---|---|---|
| Cal Standard | Y6H1915-CAL1 | P2024972.D | 08/18/16 16:34 |
| Cal Standard | Y6H1915-CAL2 | P2024973.D | 08/18/16 16:58 |
| Cal Standard | Y6H1915-CAL3 | P2024974.D | 08/18/16 17:23 |
| Cal Standard | Y6H1915-CAL4 | P2024975.D | 08/18/16 17:47 |
| Cal Standard | Y6H1915-CAL5 | P2024976.D | 08/18/16 18:11 |
| Cal Standard | Y6H1915-CAL6 | P2024977.D | 08/18/16 18:35 |
| Secondary Cal Check | Y6H1915-SCV1 | P2024978.D | 08/18/16 18:59 |

# FORM V ANALYSIS BATCH (SEQUENCE) SUMMARY

## EPA 8082A

| | | | |
|---|---|---|---|
| Laboratory: | York Analytical Laboratories, Inc. | SDG: | 16I0260 |
| Client: | Langan Engineering & Environmental Services (NYC) | Project: | 170301202 450 Union Street |
| Sequence: | Y6I1310 | Instrument: | GC_5890_I |
| | | Calibration: | YH60018 |

| Sample Name | Lab Sample ID | Lab File ID | Analysis Date/Time |
|---|---|---|---|
| Calibration Check | Y6I1310-CCV1 | P2025505.D | 09/12/16 11:41 |
| Blank | BI60374-BLK2 | P2025507.D | 09/12/16 12:39 |
| LCS | BI60374-BS2 | P2025508.D | 09/12/16 13:08 |
| V01_0-1.5 | 16I0260-01 | P2025519.D | 09/12/16 18:29 |
| Calibration Check | Y6I1310-CCV3 | P2025527.D | 09/12/16 22:23 |
| Calibration Check | Y6I1310-CCV4 | P2025546.D | 09/13/16 07:37 |

**FORM I**

# METHOD BLANK DATA SHEET

## EPA 8082A

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | York Analytical Laboratories, Inc. | | | SDG: | 16I0260 |
| Client: | Langan Engineering & Environmental Services (NYC) | | | Project: | 170301202 450 Union Street |
| Matrix: | Soil | Laboratory ID: | BI60374-BLK2 | File ID: | P2025507.D |
| Prepared: | 09/12/16 08:21 | Preparation: | EPA 3550C | Initial/Final: | 30 g / 10 mL |
| Analyzed: | 09/12/16 12:39 | Instrument: | GC_5890_I | | |
| Batch: | BI60374 | Sequence: | Y6I1310 | Calibration: | YH60018 |

| CAS NO. | COMPOUND | CONC. (mg/kg wet) | Q |
|---|---|---|---|
| 12674-11-2 | Aroclor 1016 | 0.0167 | U |
| 11104-28-2 | Aroclor 1221 | 0.0167 | U |
| 11141-16-5 | Aroclor 1232 | 0.0167 | U |
| 53469-21-9 | Aroclor 1242 | 0.0167 | U |
| 12672-29-6 | Aroclor 1248 | 0.0167 | U |
| 11097-69-1 | Aroclor 1254 | 0.0167 | U |
| 11096-82-5 | Aroclor 1260 | 0.0167 | U |
| 1336-36-3 | Total PCBs | 0.0167 | U |

| SYSTEM MONITORING COMPOUND | ADDED (mg/kg wet) | CONC (mg/kg wet) | % REC | QC LIMITS | Q |
|---|---|---|---|---|---|
| Tetrachloro-m-xylene | 0.0667 | 0.0587 | 88.0 | 30 - 140 | |
| Decachlorobiphenyl | 0.0667 | 0.0550 | 82.5 | 30 - 140 | |

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\091216\P2025507.D\ECD1A.CH Vial: 3
Signal #2 : C:\HPCHEM\1\DATA\091216\P2025507.D\ECD2B.CH
Acq On : 12 Sep 2016 12:39 pm Operator: AMC
Sample : BI60374-BLK2 Inst : GC_5890_I
Misc : QBPCB2-091216A Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Sep 12 14:32 2016 Quant Results File: P2081816.RES

Quant Method : C:\HPCHEM\1\METHODS\P2081816.M (Chemstation Integrator)
Title : 08/18/16 - MR-1 & MR-2 MU-A = 60 MU-B = 60
Last Update : Wed Aug 31 11:36:38 2016
Response via : Initial Calibration
DataAcq Meth : PEST.M

Volume Inj. : 1 uL
Signal #1 Phase : ZB-Multiresidue-1 Signal #2 Phase: ZB-Multiresidue-2
Signal #1 Info : .32 Signal #2 Info : .32

| Compound | RT#1 | RT#2 | Resp#1 | Resp#2 | ug/mL | ug/mL |
|---|---|---|---|---|---|---|
| System Monitoring Compounds | | | | | | |
| 1) S Tetrachloro-m-xy | 6.31 | 5.03 | 6529911 | 4511647 | 0.176 | 0.174 |
| Spiked Amount | 0.200 | Range 30 - 150 | Recovery = | | 88.00% | 87.00% |
| 45) S Decachlorobiphen | 17.38 | 15.89 | 3207675 | 2324864 | 0.165 | 0.166 |
| Spiked Amount | 0.200 | Range 30 - 150 | Recovery = | | 82.50% | 83.00% |
| Target Compounds | | | | | | |

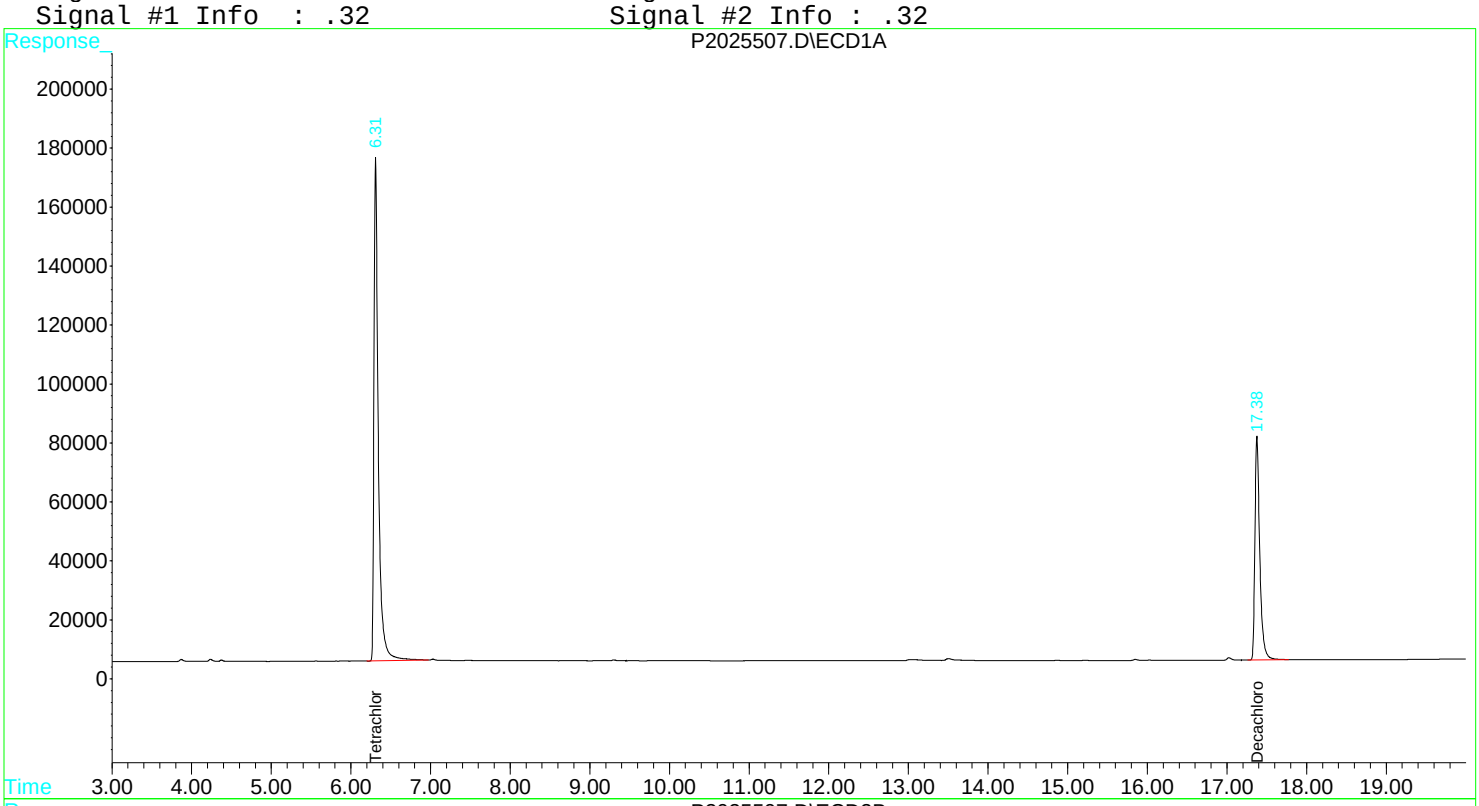
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

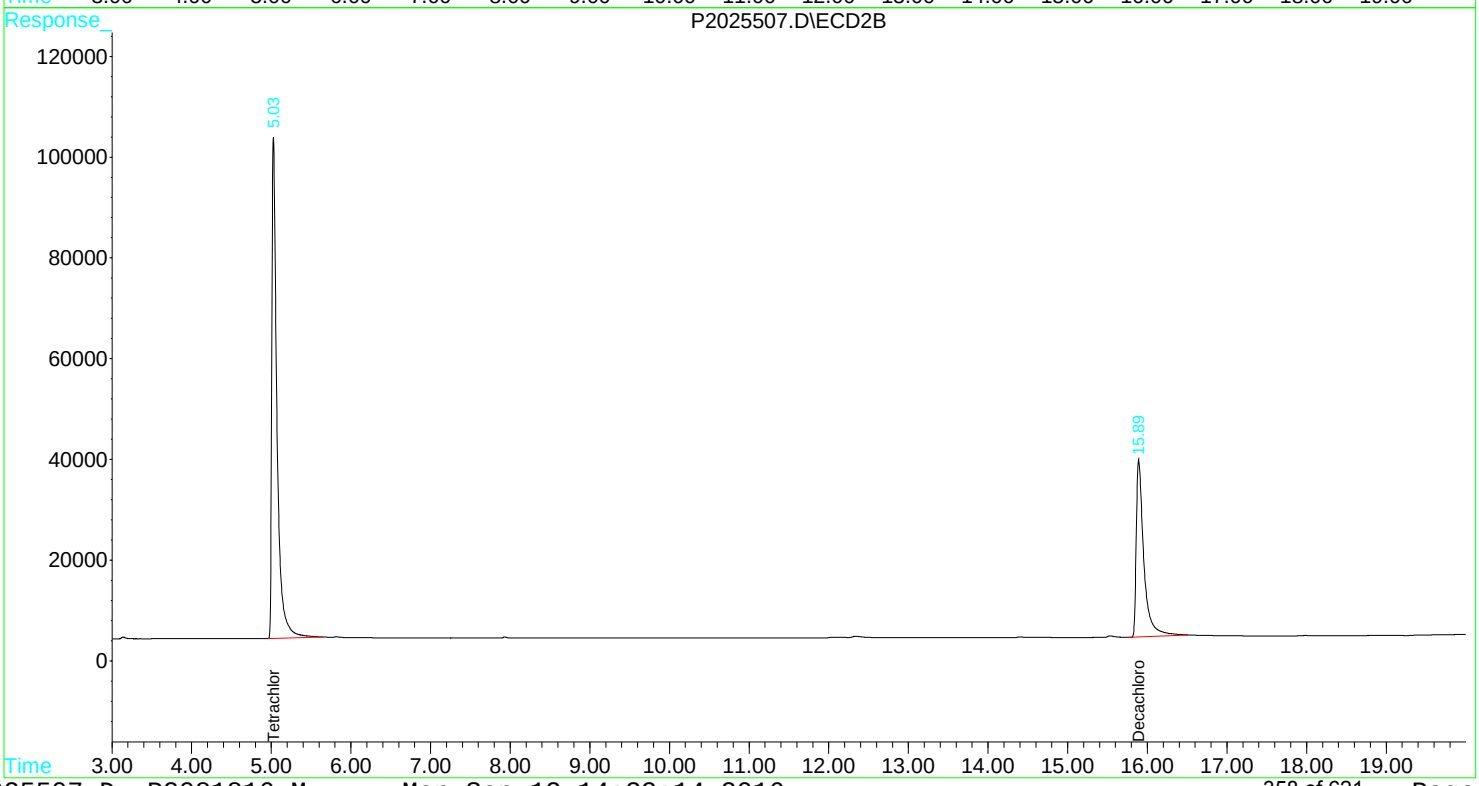
Quantitation Report

Signal #1 : C:\HPCHEM\1\DATA\091216\P2025507.D\ECD1A.CH  Vial: 3
Signal #2 : C:\HPCHEM\1\DATA\091216\P2025507.D\ECD2B.CH
Acq On    : 12 Sep 2016  12:39 pm                    Operator: AMC
Sample    : BI60374-BLK2                             Inst    : GC_5890_I
Misc      : QBPCB2-091216A                           Multiplr: 1.00
IntFile Signal #1: EVENTS.E     IntFile Signal #2: EVENTS2.E
Quant Time: Sep 12 14:32 2016  Quant Results File: P2081816.RES

Quant Method : C:\HPCHEM\1\METHODS\P2081816.M (Chemstation Integrator)
Title        : 08/18/16 - MR-1 & MR-2 MU-A = 60 MU-B = 60
Last Update  : Wed Aug 31 11:36:38 2016
Response via : Multiple Level Calibration
DataAcq Meth : PEST.M

Volume Inj.     : 1 uL
Signal #1 Phase : ZB-Multiresidue-1 Signal #2 Phase: ZB-Multiresidue-2
Signal #1 Info  : .32               Signal #2 Info : .32



# FORM III LCS / LCS DUPLICATE RECOVERY

## EPA 8082A

| | | | |
|---|---|---|---|
| Laboratory: | York Analytical Laboratories, Inc. | SDG: | 16I0260 |
| Client: | Langan Engineering & Environmental Services (NYC) | Project: | 170301202 450 Union Street |
| Matrix: | Soil | | |
| Batch: | BI60374 | Laboratory ID: | BI60374-BS2 |
| Preparation: | EPA 3550C | Initial/Final: | 30 g / 10 mL |

| COMPOUND | SPIKE ADDED (mg/kg wet) | LCS CONCENTRATION (mg/kg wet) | LCS % REC. # | QC LIMITS REC. |
|---|---|---|---|---|
| Aroclor 1016 | 0.333 | 0.260 | 77.9 | 40 - 130 |
| Aroclor 1260 | 0.333 | 0.231 | 69.2 | 40 - 130 |

# Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\091216\P2025508.D\ECD1A.CH Vial: 4
Signal #2 : C:\HPCHEM\1\DATA\091216\P2025508.D\ECD2B.CH
Acq On : 12 Sep 2016 1:08 pm Operator: AMC
Sample : BI60374-BS2 Inst : GC_5890_I
Misc : QBPCB2-091216A Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Sep 12 14:32 2016 Quant Results File: P2081816.RES

Quant Method : C:\HPCHEM\1\METHODS\P2081816.M (Chemstation Integrator)
Title : 08/18/16 - MR-1 & MR-2 MU-A = 60 MU-B = 60
Last Update : Wed Aug 31 11:36:38 2016
Response via : Initial Calibration
DataAcq Meth : PEST.M

Volume Inj. : 1 uL
Signal #1 Phase : ZB-Multiresidue-1 Signal #2 Phase: ZB-Multiresidue-2
Signal #1 Info : .32 Signal #2 Info : .32

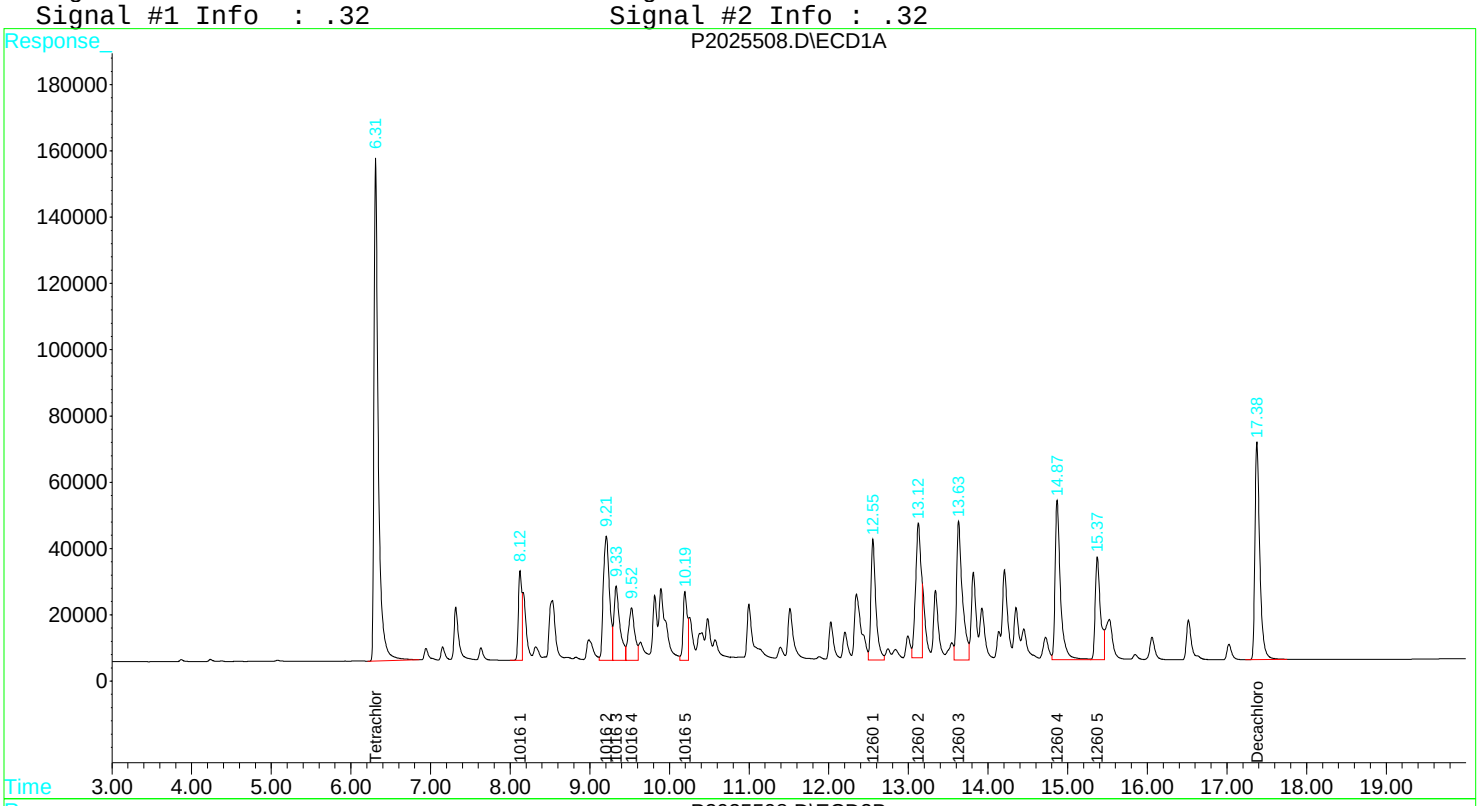
| | Compound | RT#1 | RT#2 | Resp#1 | Resp#2 | ug/mL | ug/mL |
|---|---|---|---|---|---|---|---|
| | System Monitoring Compounds | | | | | | |
| 1) S | Tetrachloro-m-xy | 6.31 | 5.03 | 5715655 | 3836934 | 0.154 | 0.148 |
| | Spiked Amount 0.200 | Range 30 - 150 | | Recovery = | | 77.00% | 74.00% |
| 45) S | Decachlorobiphen | 17.38 | 15.89 | 2782323 | 2040624 | 0.143 | 0.146 |
| | Spiked Amount 0.200 | Range 30 - 150 | | Recovery = | | 71.50% | 73.00% |
| | Target Compounds | | | | | | |
| 5) T | 1016 1 | 8.12 | 6.92 | 801426 | 974499 | 0.827 | 0.758 |
| 6) T | 1016 2 | 9.21 | 7.34 | 2015367 | 635765 | 0.785 | 0.801 |
| 7) T | 1016 3 | 9.33 | 7.96 | 1173219 | 1119533 | 0.753 | 0.781 |
| 8) T | 1016 4 | 9.52 | 8.09 | 876415 | 845980 | 0.769 | 0.769 |
| 9) T | 1016 5 | 10.19 | 8.97 | 750600 | 472206 | 0.763 | 0.770m |
| 30) T | 1260 1 | 12.55 | 11.23 | 1565683 | 1034191 | 0.722 | 0.704 |
| 31) T | 1260 2 | 13.12 | 11.69 | 1981876 | 1031174 | 0.668m | 0.691 |
| 32) T | 1260 3 | 13.63 | 12.29 | 2102914 | 940737 | 0.652 | 0.638 |
| 33) T | 1260 4 | 14.87 | 13.41 | 2258619 | 1542854 | 0.703 | 0.727 |
| 34) T | 1260 5 | 15.37 | 14.04 | 1414321 | 1128106 | 0.714 | 0.720 |

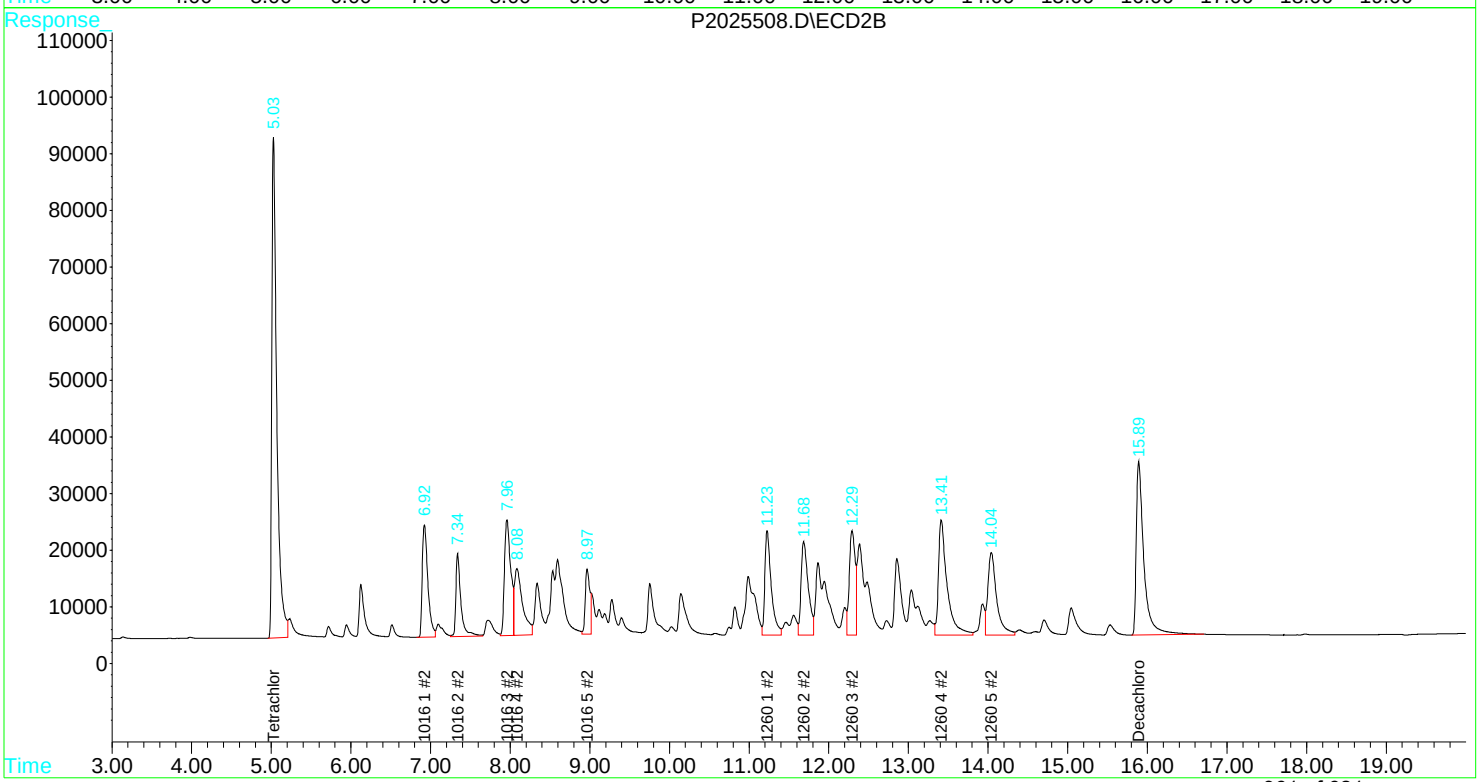
Quantitation Report

Signal #1 : C:\HPCHEM\1\DATA\091216\P2025508.D\ECD1A.CH  Vial: 4
Signal #2 : C:\HPCHEM\1\DATA\091216\P2025508.D\ECD2B.CH
Acq On    : 12 Sep 2016   1:08 pm                    Operator: AMC
Sample    : BI60374-BS2                              Inst    : GC_5890_I
Misc      : QBPCB2-091216A                           Multiplr: 1.00
IntFile Signal #1: EVENTS.E     IntFile Signal #2: EVENTS2.E
Quant Time: Sep 12 14:32 2016  Quant Results File: P2081816.RES

Quant Method : C:\HPCHEM\1\METHODS\P2081816.M (Chemstation Integrator)
Title        : 08/18/16 - MR-1 & MR-2 MU-A = 60 MU-B = 60
Last Update  : Wed Aug 31 11:36:38 2016
Response via : Multiple Level Calibration
DataAcq Meth : PEST.M

Volume Inj.     : 1 uL
Signal #1 Phase : ZB-Multiresidue-1 Signal #2 Phase: ZB-Multiresidue-2
Signal #1 Info  : .32               Signal #2 Info : .32



# PREPARATION BENCH SHEET-SOILS/SOLIDS

BI60374

**York Analytical Laboratories, Inc.**

**Printed: 9/16/2016 11:26:38AM**

**Matrix: Soil** **Preparation: EPA 3550C** **Surrogate used: Y16H070**

| Lab Number | Analysis | Prepared | Initial (g) | Final (mL) | Spike ID | Source ID | ul Spike | ul Surrogate | Herbicides Information | | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | Optional C/U(Y/N) | pH after HCl | |
| 16I0249-10 A | Pesticides, NJDEP/TCL | 09/12/2016 08:21 | 30 | 10 | | | | 100 | | | Added for BatchQC in: BI60374 |
| 16I0249-10 A | Pesticides, NYSDEC Pa | 09/12/2016 08:21 | 30 | 10 | | | | 100 | | | Added for BatchQC in: BI60374 |
| 16I0249-10 A | Polychlorinated Biphen | 09/12/2016 08:21 | 30 | 10 | | | | 100 | | | |
| 16I0249-10 A | Pesticides, 8081 target l | 09/12/2016 08:21 | 30 | 10 | | | | 100 | | | |
| 16I0249-11 A | Pesticides, 8081 target l | 09/12/2016 08:21 | 30 | 10 | | | | 100 | | | |
| 16I0249-11 A | Polychlorinated Biphen | 09/12/2016 08:21 | 30 | 10 | | | | 100 | | | |
| 16I0249-12 A | Pesticides, 8081 target l | 09/12/2016 08:21 | 30 | 10 | | | | 100 | | | |
| 16I0249-12 A | Polychlorinated Biphen | 09/12/2016 08:21 | 30 | 10 | | | | 100 | | | |
| 16I0249-13 A | Pesticides, 8081 target l | 09/12/2016 08:21 | 30 | 10 | | | | 100 | | | |
| 16I0249-13 A | Polychlorinated Biphen | 09/12/2016 08:21 | 30 | 10 | | | | 100 | | | |
| 16I0249-14 A | Polychlorinated Biphen | 09/12/2016 08:21 | 30 | 10 | | | | 100 | | | |
| 16I0249-14 A | Pesticides, 8081 target l | 09/12/2016 08:21 | 30 | 10 | | | | 100 | | | |
| 16I0249-15 A | Pesticides, 8081 target l | 09/12/2016 08:21 | 30 | 10 | | | | 100 | | | |
| 16I0249-15 A | Polychlorinated Biphen | 09/12/2016 08:21 | 30 | 10 | | | | 100 | | | |
| 16I0260-01 E | Pesticides, NJDEP/TCL | 09/12/2016 08:21 | 30 | 10 | | | | 100 | | | |
| 16I0260-01 E | Polychlorinated Biphen | 09/12/2016 08:21 | 30 | 10 | | | | 100 | | | |
| 16I0267-01 A | Pesticides, NYSDEC Pa | 09/12/2016 08:21 | 30 | 10 | | | | 100 | | | |
| 16I0267-01 A | Polychlorinated Biphen | 09/12/2016 08:21 | 30 | 10 | | | | 100 | | | |
| 16I0267-02 A | Polychlorinated Biphen | 09/12/2016 08:21 | 30 | 10 | | | | 100 | | | |
| 16I0267-02 A | Pesticides, NYSDEC Pa | 09/12/2016 08:21 | 30 | 10 | | | | 100 | | | |
| 16I0269-01 A | Pesticides, NYSDEC Pa | 09/12/2016 08:21 | 30 | 10 | | | | 100 | | | |
| 16I0269-01 A | Polychlorinated Biphen | 09/12/2016 08:21 | 30 | 10 | | | | 100 | | | |
| 16I0269-03 A | Pesticides, NYSDEC Pa | 09/12/2016 08:21 | 30 | 10 | | | | 100 | | | |
| 16I0269-03 A | Polychlorinated Biphen | 09/12/2016 08:21 | 30 | 10 | | | | 100 | | | |

**Preparation Performed by** TB **Date:** 09/12/2016 08:21 PUF Lot no.: _____

## PREPARATION BENCH SHEET-SOILS/SOLIDS

BI60374

**York Analytical Laboratories, Inc.**

**Printed: 9/16/2016 11:26:38AM**

**Matrix: Soil** **Preparation: EPA 3550C** **Surrogate used: Y16H070**

| Lab Number | Analysis | Prepared | Initial (g) | Final (mL) | Spike ID | Source ID | ul Spike | ul Surrogate | Herbicides Information | | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | Optional C/U(Y/N) | pH after HCl | |
| 16I0269-05 A | Pesticides, NYSDEC Pa | 09/12/2016 08:21 | 30 | 10 | | | | 100 | | | |
| 16I0269-05 A | Polychlorinated Biphen | 09/12/2016 08:21 | 30 | 10 | | | | 100 | | | |
| 16I0269-07 A | Pesticides, NYSDEC Pa | 09/12/2016 08:21 | 30 | 10 | | | | 100 | | | |
| 16I0269-07 A | Polychlorinated Biphen | 09/12/2016 08:21 | 30 | 10 | | | | 100 | | | |
| 16I0338-03 E | Polychlorinated Biphen | 09/12/2016 08:21 | 30 | 10 | | | | 100 | | | |
| 16I0338-03 E | Pesticides, 8081 target l | 09/12/2016 08:21 | 30 | 10 | | | | 100 | | | |
| BI60374-BLK1 | QC | 09/12/2016 08:21 | 30 | 10 | | | | 100 | | | |
| BI60374-BLK2 | QC | 09/12/2016 08:21 | 30 | 10 | | | | 100 | | | |
| BI60374-BS1 | QC | 09/12/2016 08:21 | 30 | 10 | Y16H176 | | 100 | 100 | | | |
| BI60374-BS2 | QC | 09/12/2016 08:21 | 30 | 10 | Y16C070 | | 100 | 100 | | | |
| BI60374-MS1 | QC | 09/12/2016 08:21 | 30 | 10 | Y16H176 | 16I0249-10 | 100 | 100 | | | |
| BI60374-MSD1 | QC | 09/12/2016 08:21 | 30 | 10 | Y16H176 | 16I0249-10 | 100 | 100 | | | |

**Reagents:**

| ID Number | Description | Lot Number | ID Number | Description | Lot Number |
|---|---|---|---|---|---|
| Y15F070 | Ottawa Sand Mix | 101614 | Y16E002 | Sodium Sulfate, Anhydrous | XK07D |
| Y16E130 | ACETONE | 0000133024 | Y16G085 | HEXANE | 0000140377 |

363 of 621

**Preparation Performed by** TB **Date:** 09/12/2016 08:21 PUF Lot no.: _____

# Injection Log

Directory: C:\HPCHEM\1\DATA\091216

| Line | Vial | FileName | Multiplier | SampleName | Misc Info | Injected |
|---|---|---|---|---|---|---|
| 1 | 1 | P2025505.D | 1. | SEQ-CCV1 | QBPCB2-091216A Y16A04 1016/1260 1.0ug/mL | 12 Sep 2016 11:4 |
| 2 | 2 | P2025506.D | 1. | SEQ-CCV2 | QBPCB2-091216A Y16A107, 1254 2.0ug/mL | 12 Sep 2016 12:1 |
| 3 | 3 | P2025507.D | 1. | BI60374-BLK2 | QBPCB2-091216A | 12 Sep 2016 12:3 |
| 4 | 4 | P2025508.D | 1. | BI60374-BS2 | QBPCB2-091216A | 12 Sep 2016 13:0 |
| 5 | 5 | P2025509.D | 1. | BI60378-BLK1 | QBPCB2-091216A | 12 Sep 2016 13:3 |
| 6 | 6 | P2025510.D | 1. | BI60378-SRM1 | QBPCB2-091216A | 12 Sep 2016 14:0 |
| 7 | 7 | P2025511.D | 1. | 16I0307-01 | QBPCB2-091216A | 12 Sep 2016 14:3 |
| 8 | 8 | P2025512.D | 1. | BI60378-DUP1 | QBPCB2-091216A | 12 Sep 2016 15:0 |
| 9 | 9 | P2025513.D | 1. | 16I0249-10 | QBPCB2-091216A | 12 Sep 2016 15:3 |
| 10 | 10 | P2025514.D | 1. | 16I0249-11 | QBPCB2-091216A | 12 Sep 2016 16:0 |
| 11 | 11 | P2025515.D | 1. | 16I0249-12 | QBPCB2-091216A | 12 Sep 2016 16:3 |
| 12 | 12 | P2025516.D | 1. | 16I0249-13 | QBPCB2-091216A | 12 Sep 2016 17:0 |
| 13 | 13 | P2025517.D | 1. | 16I0249-14 | QBPCB2-091216A | 12 Sep 2016 17:3 |
| 14 | 14 | P2025518.D | 1. | 16I0249-15 | QBPCB2-091216A | 12 Sep 2016 18:0 |
| 15 | 15 | P2025519.D | 1. | 16I0260-01 | QBPCB2-091216A | 12 Sep 2016 18:2 |
| 16 | 16 | P2025520.D | 1. | 16I0267-01 | QBPCB2-091216A | 12 Sep 2016 18:5 |
| 17 | 17 | P2025521.D | 1. | 16I0267-02 | QBPCB2-091216A | 12 Sep 2016 19:2 |
| 18 | 18 | P2025522.D | 1. | 16I0269-01 | QBPCB2-091216A | 12 Sep 2016 19:5 |
| 19 | 19 | P2025523.D | 1. | 16I0269-03 | QBPCB2-091216A | 12 Sep 2016 20:2 |
| 20 | 20 | P2025524.D | 1. | 16I0269-05 | QBPCB2-091216A | 12 Sep 2016 20:5 |
| 21 | 21 | P2025525.D | 1. | 16I0269-07 | QBPCB2-091216A | 12 Sep 2016 21:2 |
| 22 | 22 | P2025526.D | 1. | 16I0338-03 | QBPCB2-091216A | 12 Sep 2016 21:5 |
| 23 | 1 | P2025527.D | 1. | SEQ-CCV3 | QBPCB2-091216A Y16A04 1016/1260 1.0ug/mL | 12 Sep 2016 22:2 |
| 24 | 23 | P2025528.D | 1. | BI60376-BLK1 | QBPCB2-091216A | 12 Sep 2016 22:5 |
| 25 | 24 | P2025529.D | 1. | BI60376-BS1 | QBPCB2-091216A | 12 Sep 2016 23:2 |
| 26 | 25 | P2025530.D | 1. | 16I0249-09 | QBPCB2-091216A | 12 Sep 2016 23:5 |
| 27 | 26 | P2025531.D | 1. | BI60376-MS1 | QBPCB2-091216A | 13 Sep 2016 00:2 |
| 28 | 27 | P2025532.D | 1. | BI60376-MSD1 | QBPCB2-091216A | 13 Sep 2016 00:4 |
| 29 | 28 | P2025533.D | 1. | 16I0259-02 | QBPCB2-091216A | 13 Sep 2016 01:1 |

# Injection Log

Directory: C:\HPCHEM\1\DATA\091216

| Line | Vial | FileName | Multiplier | SampleName | Misc Info | Injected |
|---|---|---|---|---|---|---|
| 30 | 29 | P2025534.D | 1. | 16I0262-01 | QBPCB2-091216A | 13 Sep 2016 01:4 |
| 31 | 30 | P2025535.D | 1. | 16I0262-02 | QBPCB2-091216A | 13 Sep 2016 02:1 |
| 32 | 31 | P2025536.D | 1. | 16I0262-03 | QBPCB2-091216A | 13 Sep 2016 02:4 |
| 33 | 32 | P2025537.D | 1. | 16I0262-04 | QBPCB2-091216A | 13 Sep 2016 03:1 |
| 34 | 33 | P2025538.D | 1. | 16I0262-05 | QBPCB2-091216A | 13 Sep 2016 03:4 |
| 35 | 34 | P2025539.D | 1. | 16I0262-06 | QBPCB2-091216A | 13 Sep 2016 04:1 |
| 36 | 35 | P2025540.D | 1. | 16I0262-07 | QBPCB2-091216A | 13 Sep 2016 04:4 |
| 37 | 36 | P2025541.D | 1. | 16I0262-08 | QBPCB2-091216A | 13 Sep 2016 05:1 |
| 38 | 37 | P2025542.D | 1. | 16I0262-09 | QBPCB2-091216A | 13 Sep 2016 05:4 |
| 39 | 38 | P2025543.D | 1. | 16I0262-10 | QBPCB2-091216A | 13 Sep 2016 06:1 |
| 40 | 39 | P2025544.D | 1. | 16I0262-11 | QBPCB2-091216A | 13 Sep 2016 06:3 |
| 41 | 40 | P2025545.D | 1. | 16I0262-12 | QBPCB2-091216A | 13 Sep 2016 07:0 |
| 42 | 1 | P2025546.D | 1. | SEQ-CCV4 | QBPCB2-091216A Y16A04 1016/1260 1.0ug/mL | 13 Sep 2016 07:3 |

York Analytical Laboratories, Inc.
SDG: 16I0260
CLASS: HERB
METHOD: EPA 8151A

# DATA PACKAGE COVER PAGE

## EPA 8151A

Laboratory: York Analytical Laboratories, Inc. SDG: 16I0260

Client: Langan Engineering & Environmental Services (NYC) Project: 170301202 450 Union Street

| Client Sample Id: | Lab Sample Id: |
|---|---|
| V01_0-1.5 | 16I0260-01 |

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in computer-readable data submitted on diskette has been autorized by the Laboratory Manager or the Manager's designee, as verified by the following signatures.

Signature:

Name: Benjamin Gulizia

Date: 9/30/2016

Title: Laboratory Director

# FORM II SURROGATE STANDARD RECOVERY AND RT SUMMARY

## EPA 8151A

| | | | |
|---|---|---|---|
| Laboratory: | York Analytical Laboratories, Inc. | SDG: | 16I0260 |
| Client: | Langan Engineering & Environmental Services (NYC) | Project: | 170301202 450 Union Street |
| Sequence: | Y6H3107 | Instrument: | GC ECD #3 |
| Matrix: | Soil | Calibration: | YH60030 |

| Surrogate Compound | Spike Level ug/mL | % Recovery | Recovery Limits | RT | Calibration Mean RT | RT Diff | RT Diff Limit | Q |
|---|---|---|---|---|---|---|---|---|
| **Initial Cal Check (Y6H3107-ICV1 )** | | | Lab File ID: H306193.D | | Analyzed: 08/30/16 15:51 | | | |
| 2,4-Dichlorophenylacetic acid (DCA | 0.500 | 82.2 | 0 - 200 | 1.98 | | | | |

# FORM II SURROGATE STANDARD RECOVERY AND RT SUMMARY

## EPA 8151A

| | | | |
|---|---|---|---|
| Laboratory: | York Analytical Laboratories, Inc. | SDG: | 16I0260 |
| Client: | Langan Engineering & Environmental Services (NYC) | Project: | 170301202 450 Union Street |
| Sequence: | Y6I1317 | Instrument: | GC ECD #3 |
| Matrix: | Soil | Calibration: | YH60030 |

| Surrogate Compound | Spike Level ug/mL | % Recovery | Recovery Limits | RT | Calibration Mean RT | RT Diff | RT Diff Limit | Q |
|---|---|---|---|---|---|---|---|---|
| **Calibration Check (Y6I1317-CCV1 )** | | | Lab File ID: H306313.D | | Analyzed: 09/13/16 11:07 | | | |
| 2,4-Dichlorophenylacetic acid (DCA | 0.400 | 106 | 0 - 200 | 1.98 | | | | |
| **Blank (BI60441-BLK1 )** | | | Lab File ID: H306314.D | | Analyzed: 09/13/16 11:27 | | | |
| 2,4-Dichlorophenylacetic acid (DCA | 0.500 | 134 | 30 - 150 | 1.98 | | | | |
| **LCS (BI60441-BS1 )** | | | Lab File ID: H306315.D | | Analyzed: 09/13/16 11:43 | | | |
| 2,4-Dichlorophenylacetic acid (DCA | 0.500 | 88.0 | 30 - 150 | 1.98 | | | | |
| **LCS Dup (BI60441-BSD1 )** | | | Lab File ID: H306316.D | | Analyzed: 09/13/16 11:59 | | | |
| 2,4-Dichlorophenylacetic acid (DCA | 0.500 | 91.6 | 30 - 150 | 1.98 | | | | |
| **V01_0-1.5 (16I0260-01 )** | | | Lab File ID: H306321.D | | Analyzed: 09/13/16 13:18 | | | |
| 2,4-Dichlorophenylacetic acid (DCA | 0.518 | 105 | 30 - 150 | 1.98 | | | | |
| **Matrix Spike (BI60441-MS1 )** | | | Lab File ID: H306322.D | | Analyzed: 09/13/16 13:34 | | | |
| 2,4-Dichlorophenylacetic acid (DCA | 0.518 | 71.2 | 30 - 150 | 1.98 | | | | |
| **Calibration Check (Y6I1317-CCV2 )** | | | Lab File ID: H306323.D | | Analyzed: 09/13/16 14:06 | | | |
| 2,4-Dichlorophenylacetic acid (DCA | 0.400 | 92.2 | 0 - 200 | 1.98 | | | | |

# MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

## EPA 8151A

**V01_0-1.5**

| | | | |
|---|---|---|---|
| Laboratory: | York Analytical Laboratories, Inc. | SDG: | 16I0260 |
| Client: | Langan Engineering & Environmental Services (NYC) | Project: | 170301202 450 Union Street |
| Matrix: | Soil | | |
| Batch: | BI60441 | Laboratory ID: | BI60441-MS1 |
| Preparation: | EPA 3550B/8151A | Initial/Final: | 25 g / 25 mL |

Source Sample Name: V01_0-1.5

| COMPOUND | SPIKE ADDED (mg/kg dry) | SAMPLE CONCENTRATION (mg/kg dry) | MS CONCENTRATION (mg/kg dry) | MS % REC. # | QC LIMITS REC. |
|---|---|---|---|---|---|
| 2,4,5-T | 0.166 | ND | 0.133 | 80.0 | 30 - 150 |
| 2,4,5-TP (Silvex) | 0.166 | ND | 0.123 | 74.4 | 30 - 150 |
| 2,4-D | 0.166 | ND | 0.125 | 75.6 | 30 - 150 |

# Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

**FORM III** **LCS / LCS DUPLICATE RECOVERY**

**EPA 8151A**

| | | | |
|---|---|---|---|
| Laboratory: | York Analytical Laboratories, Inc. | SDG: | 16I0260 |
| Client: | Langan Engineering & Environmental Services (NYC) | Project: | 170301202 450 Union Street |
| Matrix: | Soil | | |
| Batch: | BI60441 | Laboratory ID: | BI60441-BS1 |
| Preparation: | EPA 3550B/8151A | Initial/Final: | 25 g / 25 mL |

| COMPOUND | SPIKE ADDED (mg/kg wet) | LCS CONCENTRATION (mg/kg wet) | LCS % REC. # | QC LIMITS REC. |
|---|---|---|---|---|
| 2,4,5-T | 0.160 | 0.126 | 78.8 | 40 - 140 |
| 2,4,5-TP (Silvex) | 0.160 | 0.108 | 67.5 | 40 - 140 |
| 2,4-D | 0.160 | 0.152 | 95.0 | 40 - 140 |

# Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

# FORM III LCS / LCS DUPLICATE RECOVERY

## EPA 8151A

| | | | |
|---|---|---|---|
| Laboratory: | York Analytical Laboratories, Inc. | SDG: | 16I0260 |
| Client: | Langan Engineering & Environmental Services (NYC) | Project: | 170301202 450 Union Street |
| Matrix: | Soil | | |
| Batch: | BI60441 | Laboratory ID: | BI60441-BSD1 |
| Preparation: | EPA 3550B/8151A | Initial/Final: | 25 g / 25 mL |

| COMPOUND | SPIKE ADDED (mg/kg wet) | LCSD CONCENTRATION (mg/kg wet) | LCSD % REC. # | % RPD # | QC LIMITS RPD | QC LIMITS REC. |
|---|---|---|---|---|---|---|
| 2,4,5-T | 0.160 | 0.129 | 80.6 | 2.35 | 30 | 40 - 140 |
| 2,4,5-TP (Silvex) | 0.160 | 0.115 | 71.9 | 6.28 | 30 | 40 - 140 |
| 2,4-D | 0.160 | 0.164 | 102 | 7.59 | 30 | 40 - 140 |

# Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

**FORM I**

# METHOD BLANK DATA SHEET

## EPA 8151A

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | York Analytical Laboratories, Inc. | | | SDG: | 16I0260 |
| Client: | Langan Engineering & Environmental Services (NYC) | | | Project: | 170301202 450 Union Street |
| Matrix: | Soil | Laboratory ID: | BI60441-BLK1 | File ID: | H306314.D |
| Prepared: | 09/13/16 07:14 | Preparation: | EPA 3550B/8151A | Initial/Final: | 25 g / 25 mL |
| Analyzed: | 09/13/16 11:27 | Instrument: | GC ECD #3 | | |
| Batch: | BI60441 | Sequence: | Y6I1317 | Calibration: | YH60030 |

| CAS NO. | COMPOUND | CONC. (mg/kg wet) | Q |
|---|---|---|---|
| 93-76-5 | 2,4,5-T | 0.0200 | U |
| 93-72-1 | 2,4,5-TP (Silvex) | 0.0200 | U |
| 94-75-7 | 2,4-D | 0.0200 | U |

| SYSTEM MONITORING COMPOUND | ADDED (mg/kg wet) | CONC (mg/kg wet) | % REC | QC LIMITS | Q |
|---|---|---|---|---|---|
| 2,4-Dichlorophenylacetic acid (DCAA) | 0.500 | 0.671 | 134 | 30 - 150 | |

**FORM IV**

# PREPARATION BATCH SUMMARY

## EPA 8151A

Laboratory: York Analytical Laboratories, Inc. SDG: 16I0260

Client: Langan Engineering & Environmental Services (NYC) Project: 170301202 450 Union Street

Batch: BI60441 Batch Matrix: Soil Preparation: EPA 3550B/8151A

| SAMPLE NAME | LAB SAMPLE ID | LAB FILE ID | DATE PREPARED | OBSERVATIONS |
|---|---|---|---|---|
| V01_0-1.5 | 16I0260-01 | H306321.D | 09/13/16 07:14 | |
| Blank | BI60441-BLK1 | H306314.D | 09/13/16 07:14 | |
| LCS | BI60441-BS1 | H306315.D | 09/13/16 07:14 | |
| LCS Dup | BI60441-BSD1 | H306316.D | 09/13/16 07:14 | |
| V01_0-1.5 | BI60441-MS1 | H306322.D | 09/13/16 07:14 | |

# METHOD DETECTION AND REPORTING LIMITS

## EPA 8151A

**Laboratory:** York Analytical Laboratories, Inc. **SDG:** 16I0260

**Client:** Langan Engineering & Environmental Services (NYC) **Project:** 170301202 450 Union Street

**Matrix:** Soil **Instrument:** GC ECD #3

| Analyte | LOD | LOQ | Units |
|---|---|---|---|
| 2,4,5-T | 0.0200 | 0.0200 | mg/kg |
| 2,4,5-TP (Silvex) | 0.0200 | 0.0200 | mg/kg |
| 2,4-D | 0.0200 | 0.0200 | mg/kg |

# HOLDING TIME SUMMARY

## EPA 8151A

Laboratory: York Analytical Laboratories, Inc. SDG: 16I0260

Client: Langan Engineering & Environmental Services (NYC) Project: 170301202 450 Union Street

| Sample Name | Date Collected | Date Received | Date Prepared | Days to Prep | Max Days to Prep | Date Analyzed | Days to Analysis | Max Days to Analysis | Q |
|---|---|---|---|---|---|---|---|---|---|
| V01_0-1.5 | 09/07/16 13:00 | 09/08/16 18:45 | 09/13/16 07:14 | 5.76 | 14.00 | 09/13/16 13:18 | 0.25 | 40.00 | |

**FORM I**

# ORGANIC ANALYSIS DATA SHEET

## EPA 8151A

**V01_0-1.5**

Laboratory: York Analytical Laboratories, Inc. SDG: 16I0260

Client: Langan Engineering & Environmental Services (NYC) Project: 170301202 450 Union Street

Matrix: Soil Laboratory ID: 16I0260-01 File ID: H306321.D

Sampled: 09/07/16 13:00 Prepared: 09/13/16 07:14 Analyzed: 09/13/16 13:18

Solids: 96.56 Preparation: EPA 3550B/8151A Initial/Final: 25 g / 25 mL

Batch: BI60441 Sequence: Y6I1317 Calibration: YH60030 Instrument: GC ECD #3

| CAS NO. | COMPOUND | DILUTION | CONC. (mg/kg dry) | Q |
|---|---|---|---|---|
| 93-76-5 | 2,4,5-T | 1 | 0.0207 | U |
| 93-72-1 | 2,4,5-TP (Silvex) | 1 | 0.0207 | U |
| 94-75-7 | 2,4-D | 1 | 0.0207 | U |

| SYSTEM MONITORING COMPOUND | ADDED (mg/kg dry) | CONC (mg/kg dry) | % REC | QC LIMITS | Q |
|---|---|---|---|---|---|
| 2,4-Dichlorophenylacetic acid (DCAA) | 0.518 | 0.542 | 105 | 30 - 150 | |

* Values outside of QC limits

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\091316\H306321.D\ECD1A.CH Vial: 9
Signal #2 : C:\HPCHEM\1\DATA\091316\H306321.D\ECD2B.CH
Acq On : 13 Sep 2016 1:18 pm Operator: AMC
Sample : 16I0260-01 Inst : GC ECD #3
Misc : QBHERB3-091316A Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Sep 13 14:01 2016 Quant Results File: H3083016.RES

Quant Method : C:\HPCHEM\1\METHODS\H3083016.M (Chemstation Integrator)
Title : CLP-1&2, HERBICIDES 5/29/15
Last Update : Wed Aug 31 09:41:36 2016
Response via : Initial Calibration
DataAcq Meth : HERB3.M

Volume Inj. : 1 uL
Signal #1 Phase : STX-CLPesticides1 Signal #2 Phase: STX-CLPesticides2
Signal #1 Info : .32 Signal #2 Info : .32

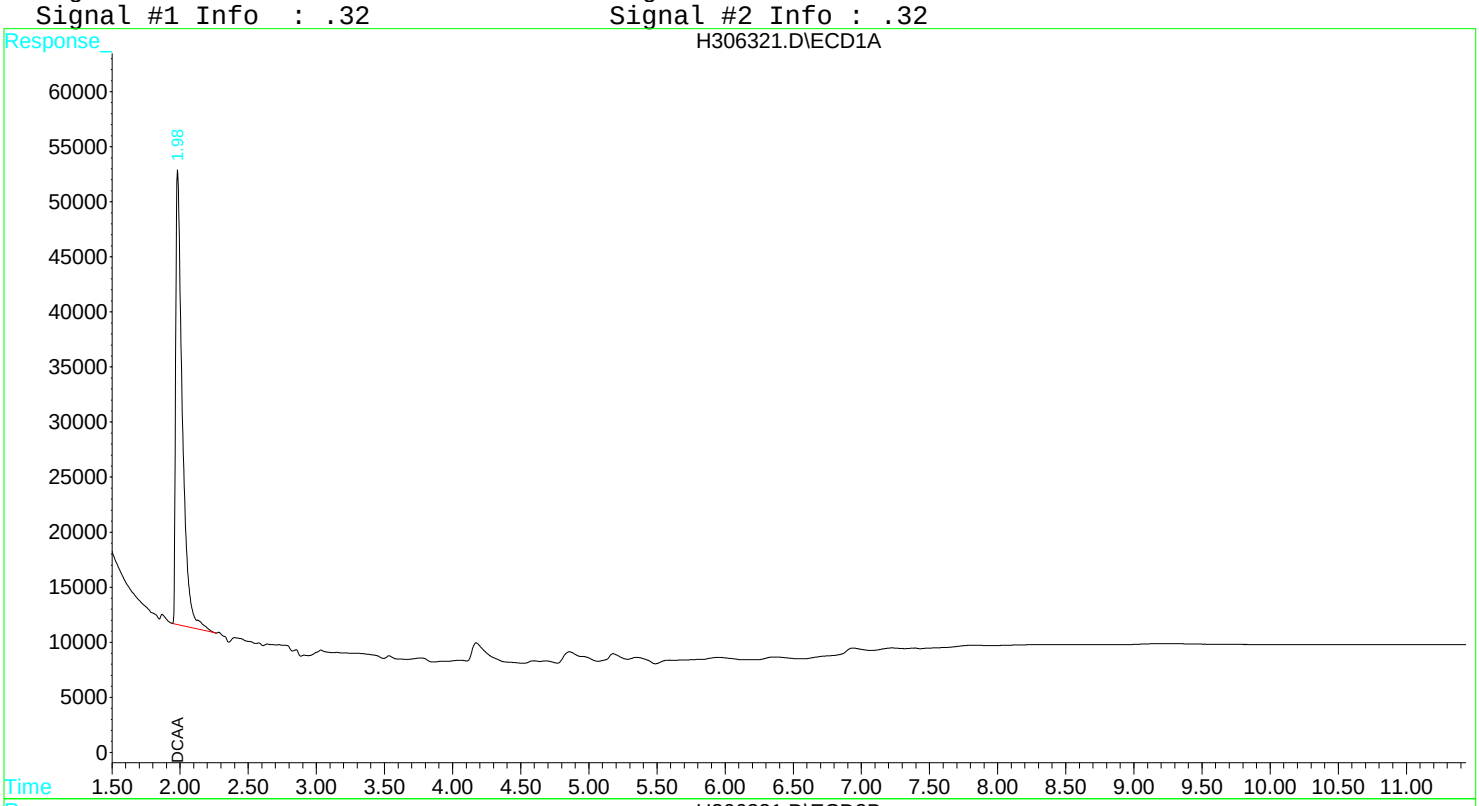
| | Compound | RT#1 | RT#2 | Resp#1 | Resp#2 | ug/mL | ug/mL |
|---|---|---|---|---|---|---|---|
| | System Monitoring Compounds | | | | | | |
| 1) S | DCAA | 1.98 | 2.37 | 1422682 | 1268664 | 0.523 | 0.401 |
| | Spiked Amount 0.500 | Range 30 - 150 | | Recovery = | | 104.60% | 80.20% |
| | Target Compounds | | | | | | |
| 2) | DICAMBA | 0.00 | 0.00 | 0 | 0 | N.D. | N.D. |
| 3) | 2,4-D | 0.00 | 0.00 | 0 | 0 | N.D. | N.D. |
| 4) | SILVEX | 0.00 | 0.00 | 0 | 0 | N.D. | N.D. |
| 5) | 2,4,5-T | 0.00 | 0.00 | 0 | 0 | N.D. | N.D. |

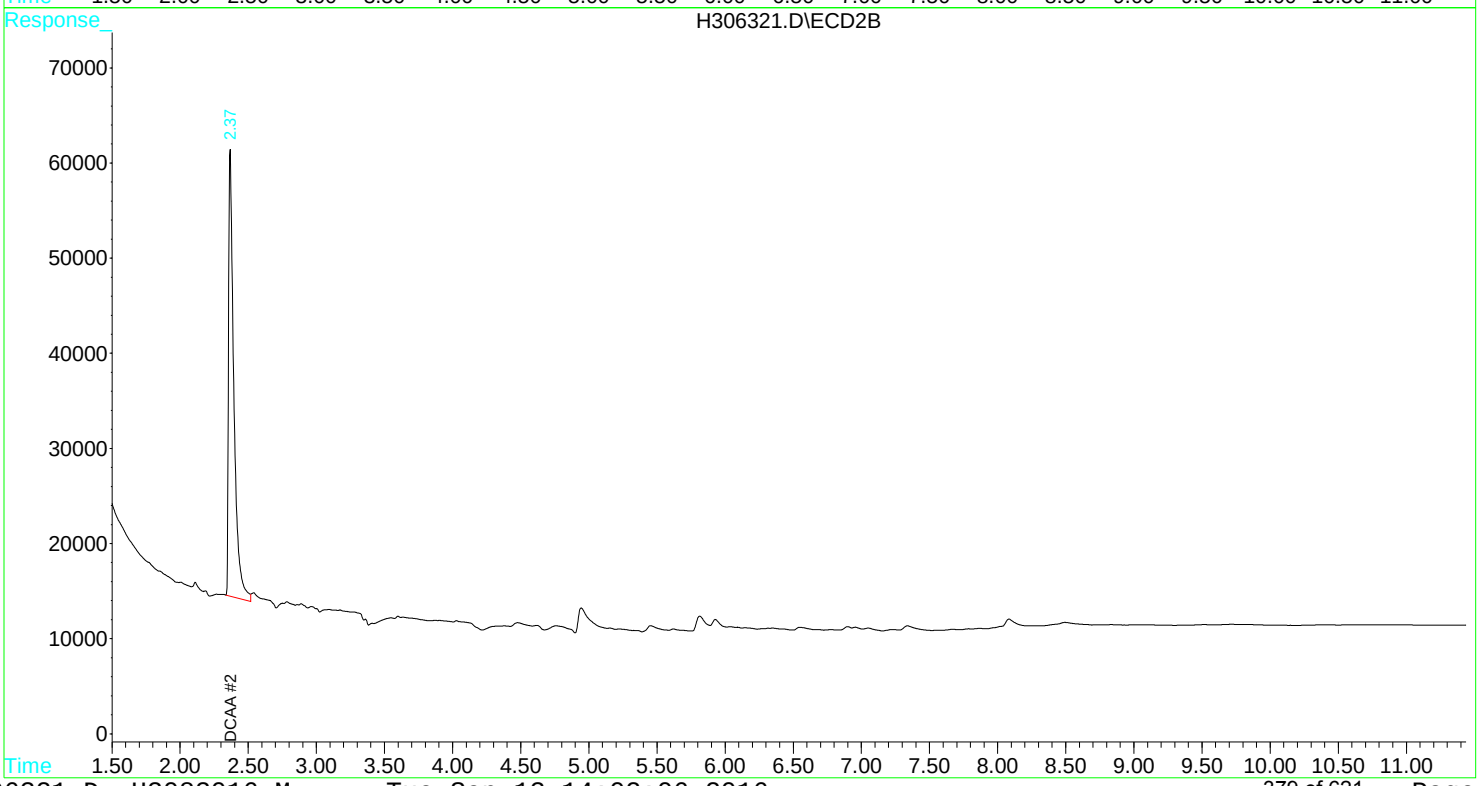
Quantitation Report

Signal #1 : C:\HPCHEM\1\DATA\091316\H306321.D\ECD1A.CH  Vial: 9
Signal #2 : C:\HPCHEM\1\DATA\091316\H306321.D\ECD2B.CH
Acq On  : 13 Sep 2016  1:18 pm  Operator: AMC
Sample  : 16I0260-01  Inst  : GC ECD #3
Misc  : QBHERB3-091316A  Multiplr: 1.00
IntFile Signal #1: EVENTS.E  IntFile Signal #2: EVENTS2.E
Quant Time: Sep 13 14:01 2016  Quant Results File: H3083016.RES

Quant Method : C:\HPCHEM\1\METHODS\H3083016.M (Chemstation Integrator)
Title  : CLP-1&2, HERBICIDES 5/29/15
Last Update  : Wed Aug 31 09:41:36 2016
Response via : Multiple Level Calibration
DataAcq Meth : HERB3.M

Volume Inj.  : 1 uL
Signal #1 Phase : STX-CLPesticides1 Signal #2 Phase: STX-CLPesticides2
Signal #1 Info  : .32  Signal #2 Info : .32



# Calibration Retention Time Report GC ECD #3

Method : C:\HPCHEM\1\METHODS\H3083016.M (Chemstation Integrator)
Title : CLP-1&2, HERBICIDES 5/29/15
Last Update : Wed Aug 31 09:41:36 2016
Response via : Initial Calibration

First Calibration Standard : C:\HPCHEM\1\DATA\083016\H306188.D\ECD1A.CH
Second Calibration Standard : H306190.D
Third Calibration Standard : H306191.D

| Compound | RT of Standard | | | Mean | RT Window | |
|---|---|---|---|---|---|---|
| | First | Second | Third | RT | From | To |
| 1 DCAA | 1.981 | 1.980 | 1.979 | 1.980 | 1.935 | 1.995 |
| 2 DICAMBA | 2.032 | 2.036 | 2.036 | 2.034 | 1.986 | 2.046 |
| 3 2,4-D | 2.336 | 2.334 | 2.330 | 2.333 | 2.287 | 2.347 |
| 4 SILVEX | 2.616 | 2.616 | 2.615 | 2.616 | 2.566 | 2.626 |
| 5 2,4,5-T | 2.819 | 2.725 | 2.721 | 2.755 | 2.706 | 2.766 |

Signal #2

First Calibration Standard : C:\HPCHEM\1\DATA\083016\H306188.D\ECD2B.CH
Second Calibration Standard : C:\HPCHEM\1\DATA\083016\H306190.D\ECD2B.CH
Third Calibration Standard : C:\HPCHEM\1\DATA\083016\H306191.D\ECD2B.CH

| Compound | RT of Standard | | | Mean | RT Window | |
|---|---|---|---|---|---|---|
| | First | Second | Third | RT | From | To |
| 1 DCAA | 2.365 | 2.367 | 2.367 | 2.366 | 2.304 | 2.364 |
| 2 DICAMBA | 2.439 | 2.443 | 2.443 | 2.442 | 2.378 | 2.438 |
| 3 2,4-D | 2.833 | 2.832 | 2.831 | 2.832 | 2.765 | 2.825 |
| 4 SILVEX | 3.180 | 3.182 | 3.181 | 3.181 | 3.110 | 3.170 |
| 5 2,4,5-T | 3.431 | 3.374 | 3.371 | 3.392 | 3.321 | 3.381 |

H3083016.M Wed Aug 31 09:44:03 2016

# Response Factor Report GC ECD #3

Method : C:\HPCHEM\1\METHODS\H3083016.M (Chemstation Integrator)
Title : CLP-1&2, HERBICIDES 5/29/15
Last Update : Wed Aug 31 09:41:36 2016

Calibration Files
0.20 =H306192.D 0.15 =H306191.D 0.10 =H306190.D
0.05 =H306189.D 0.02 =H306188.D

| | Compound | 0.20 | 0.15 | 0.10 | 0.05 | 0.02 | Avg | | %RSD |
|---|---|---|---|---|---|---|---|---|---|
| 1) S | DCAA | 2.559 | 2.633 | 2.581 | 2.688 | 3.133 | 2.719 | E6 | 8.71 |
| 2) | DICAMBA | 1.524 | 1.610 | 1.606 | 1.905 | 2.131 | 1.755 | E7 | 14.53 |
| 3) | 2,4-D | 4.156 | 4.502 | 4.148 | 3.121 | 2.868 | 3.759 | E6 | 19.10 |
| 4) | SILVEX | 1.336 | 1.348 | 1.235 | 1.132 | 1.103 | 1.231 | E7 | 9.16 |
| 5) | 2,4,5-T | 1.456 | 1.433 | 1.007 | 1.265 | 0.939 | 1.220 | E7 | 19.56 |

Signal #2 Calibration Files
0.20 =H306192.D 0.15 =H306191.D 0.10 =H306190.D
0.05 =H306189.D 0.02 =H306188.D

| | Compound | 0.20 | 0.15 | 0.10 | 0.05 | 0.02 | Avg | | %RSD |
|---|---|---|---|---|---|---|---|---|---|
| 1) S | DCAA | 3.076 | 3.126 | 3.028 | 3.200 | 3.373 | 3.161 | E6 | 4.26 |
| 2) | DICAMBA | 1.248 | 1.373 | 1.253 | 1.419 | 1.509 | 1.361 | E7 | 8.23 |
| 3) | 2,4-D | 3.255 | 3.215 | 2.917 | 2.952 | 2.467 | 2.961 | E6 | 10.64 |
| 4) | SILVEX | 1.055 | 1.074 | 1.115 | 1.102 | 1.120 | 1.093 | E7 | 2.55 |
| 5) | 2,4,5-T | 0.973 | 0.893 | 1.002 | 0.867 | 0.776 | 0.902 | E7 | 9.93 |

(#) = Out of Range

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\083016\H306188.D\ECD1A.CH Vial: 1
Signal #2 : C:\HPCHEM\1\DATA\083016\H306188.D\ECD2B.CH
Acq On : 30 Aug 2016 2:32 pm Operator: AMC
Sample : SEQ-CAL1 Inst : GC ECD #3
Misc : QBHERB3-083016A HERB MIX 0.02ug/mL Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 31 9:38 2016 Quant Results File: H3081116.RES

Quant Method : C:\HPCHEM\1\METHODS\H3081116.M (Chemstation Integrator)
Title : CLP-1&2, HERBICIDES 5/29/15
Last Update : Fri Aug 12 09:59:48 2016
Response via : Initial Calibration
DataAcq Meth : HERB3.M

Volume Inj. : 1 uL
Signal #1 Phase : STX-CLPesticides1 Signal #2 Phase: STX-CLPesticides2
Signal #1 Info : .32 Signal #2 Info : .32

| | Compound | RT#1 | RT#2 | Resp#1 | Resp#2 | ug/mL | ug/mL |
|---|---|---|---|---|---|---|---|
| | System Monitoring Compounds | | | | | | |
| 1) S | DCAA | 1.98 | 2.37f | 626527 | 674578 | 0.184 | 0.149m |
| | Spiked Amount 0.500 | Range 30 - 150 | | Recovery = | | 36.80% | 29.80%# |
| | Target Compounds | | | | | | |
| 2) | DICAMBA | 2.03f | 2.44f | 426269 | 301895 | 0.025 | 0.017m# |
| 3) | 2,4-D | 2.34 | 2.83f | 57353 | 49334 | 0.012m | 0.008m# |
| 4) | SILVEX | 2.62f | 3.18f | 220654 | 224076 | 0.013m | 0.010m |
| 5) | 2,4,5-T | 2.82f | 3.43f | 187751 | 155289 | 0.011m | 0.008m# |

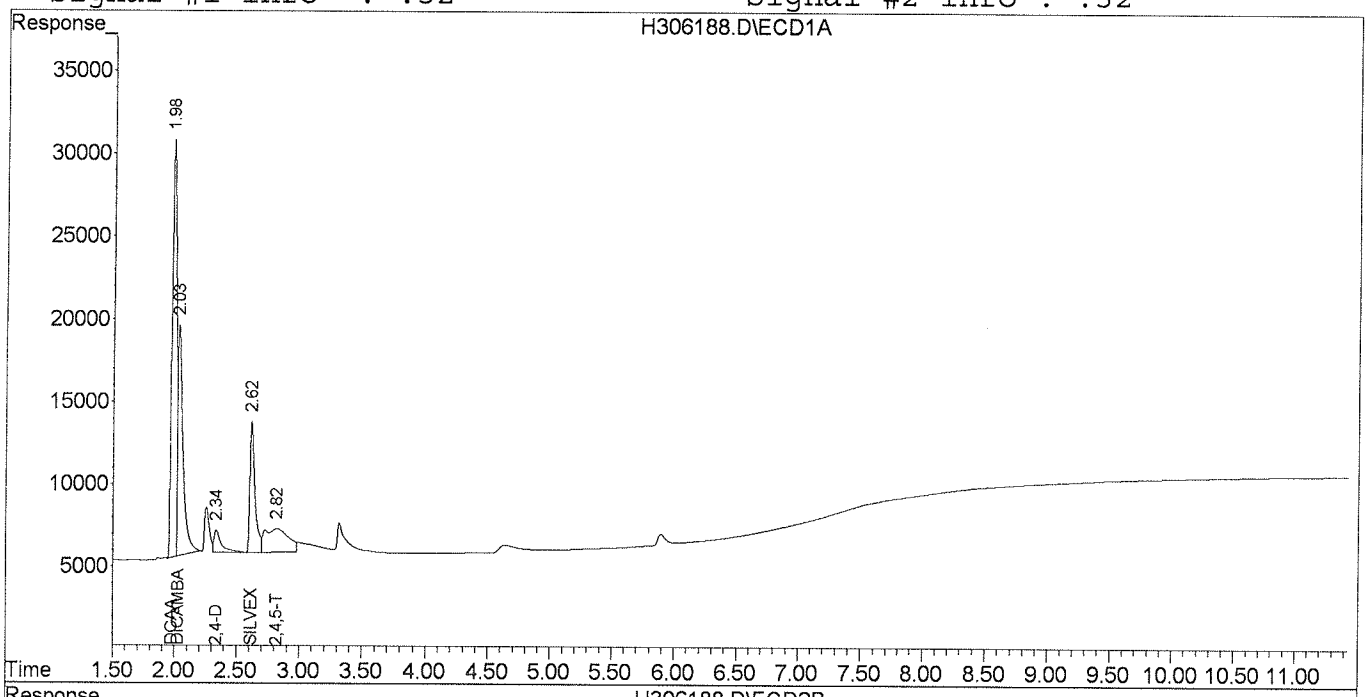
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

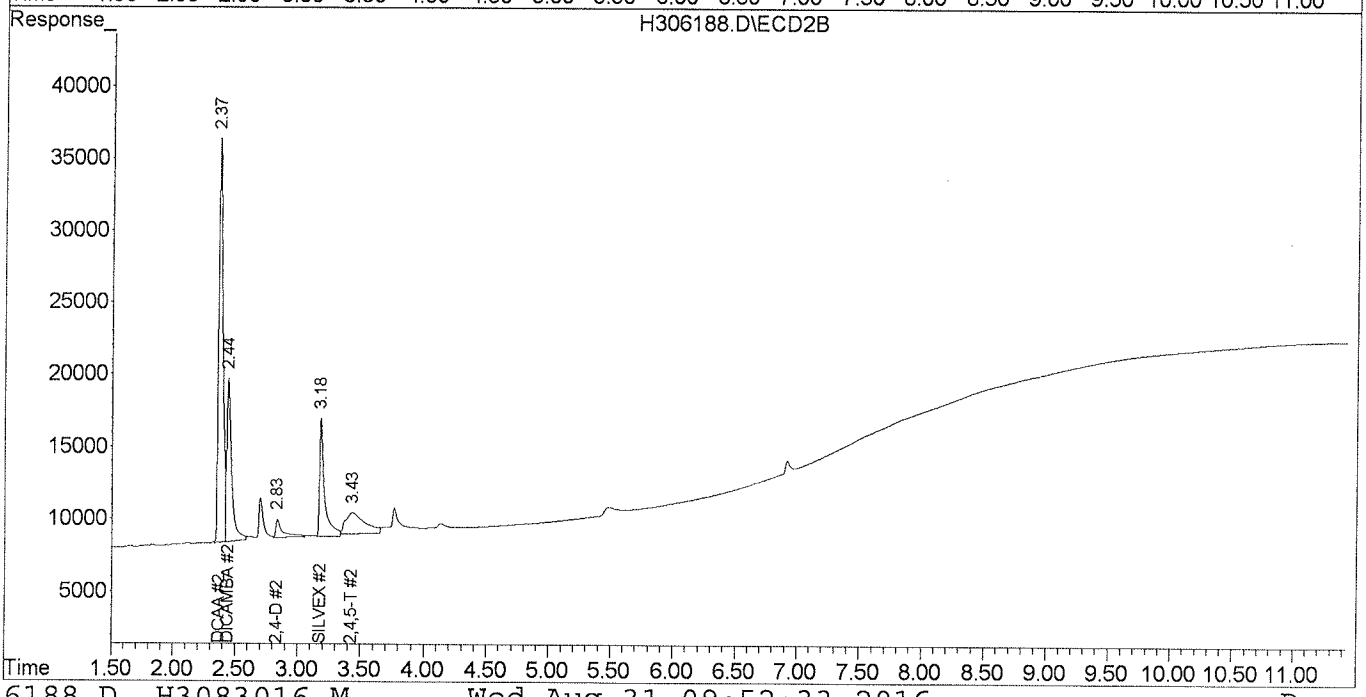
Quantitation Report

Signal #1 : C:\HPCHEM\1\DATA\083016\H306188.D\ECD1A.CH Vial: 1
Signal #2 : C:\HPCHEM\1\DATA\083016\H306188.D\ECD2B.CH
Acq On : 30 Aug 2016 2:32 pm Operator: AMC
Sample : SEQ-CAL1 Inst : GC ECD #3
Misc : QBHERB3-083016A HERB MIX 0.02ug/mL Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 31 9:38 2016 Quant Results File: H3081116.RES

Quant Method : C:\HPCHEM\1\METHODS\H3081116.M (Chemstation Integrator)
Title : CLP-1&2, HERBICIDES 5/29/15
Last Update : Fri Aug 12 09:59:48 2016
Response via : Multiple Level Calibration
DataAcq Meth : HERB3.M

Volume Inj. : 1 uL
Signal #1 Phase : STX-CLPesticides1 Signal #2 Phase: STX-CLPesticides2
Signal #1 Info : .32 Signal #2 Info : .32



Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\083016\H306189.D\ECD1A.CH Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\083016\H306189.D\ECD2B.CH
Acq On : 30 Aug 2016 2:48 pm Operator: AMC
Sample : SEQ-CAL2 Inst : GC ECD #3
Misc : QBHERB3-083016A HERB MIX 0.05ug/mL Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 31 9:39 2016 Quant Results File: H3081116.RES

Quant Method : C:\HPCHEM\1\METHODS\H3081116.M (Chemstation Integrator)
Title : CLP-1&2, HERBICIDES 5/29/15
Last Update : Fri Aug 12 09:59:48 2016
Response via : Initial Calibration
DataAcq Meth : HERB3.M

Volume Inj. : 1 uL
Signal #1 Phase : STX-CLPesticides1 Signal #2 Phase: STX-CLPesticides2
Signal #1 Info : .32 Signal #2 Info : .32

| | Compound | RT#1 | RT#2 | Resp#1 | Resp#2 | ug/mL | ug/mL |
|---|---|---|---|---|---|---|---|
| | System Monitoring Compounds | | | | | | |
| 1) S | DCAA | 1.98 | 2.37f | 806485 | 960085 | 0.237 | 0.212m |
| | Spiked Amount 0.500 | Range 30 - 150 | | Recovery = | | 47.40% | 42.40% |
| | Target Compounds | | | | | | |
| 2) | DICAMBA | 2.03f | 2.44f | 952291 | 709747 | 0.056 | 0.039m# |
| 3) | 2,4-D | 2.33f | 2.83f | 156043 | 147577 | 0.033 | 0.024m# |
| 4) | SILVEX | 2.62f | 3.18f | 565934 | 551023 | 0.032 | 0.025m |
| 5) | 2,4,5-T | 2.72f | 3.42 | 632583 | 433691 | 0.037m | 0.021 # |

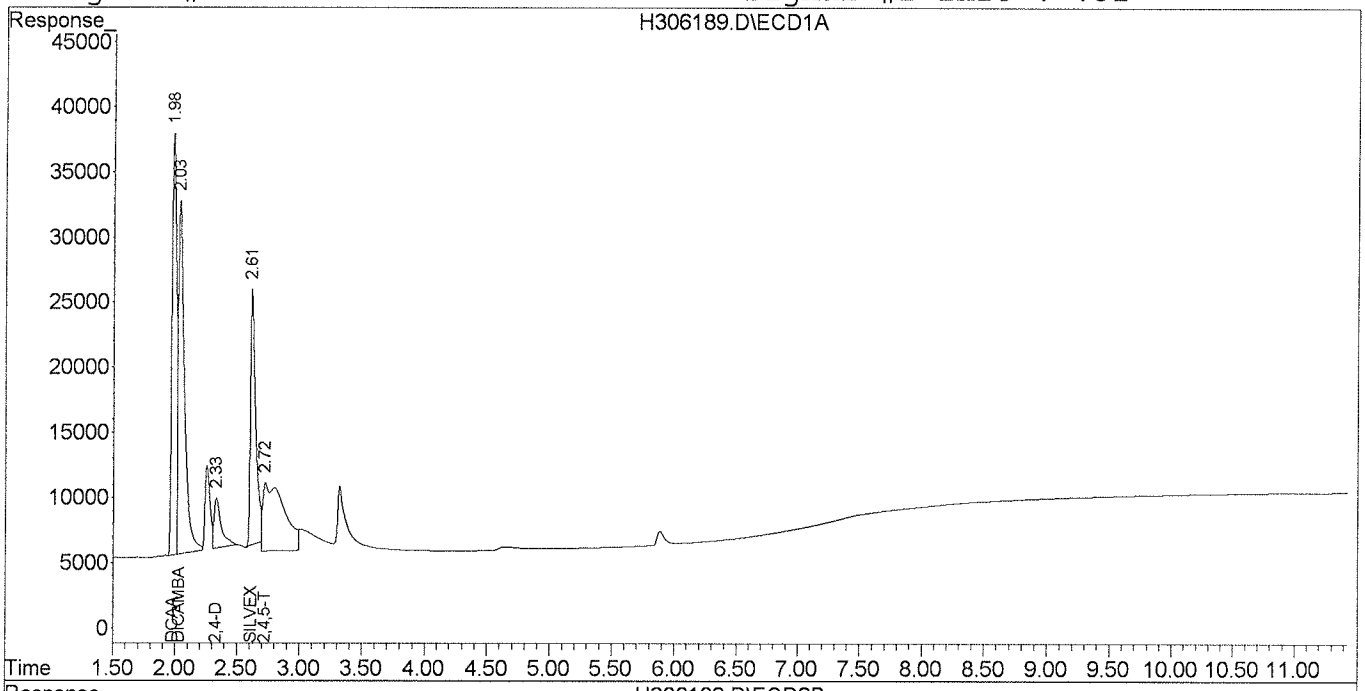
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

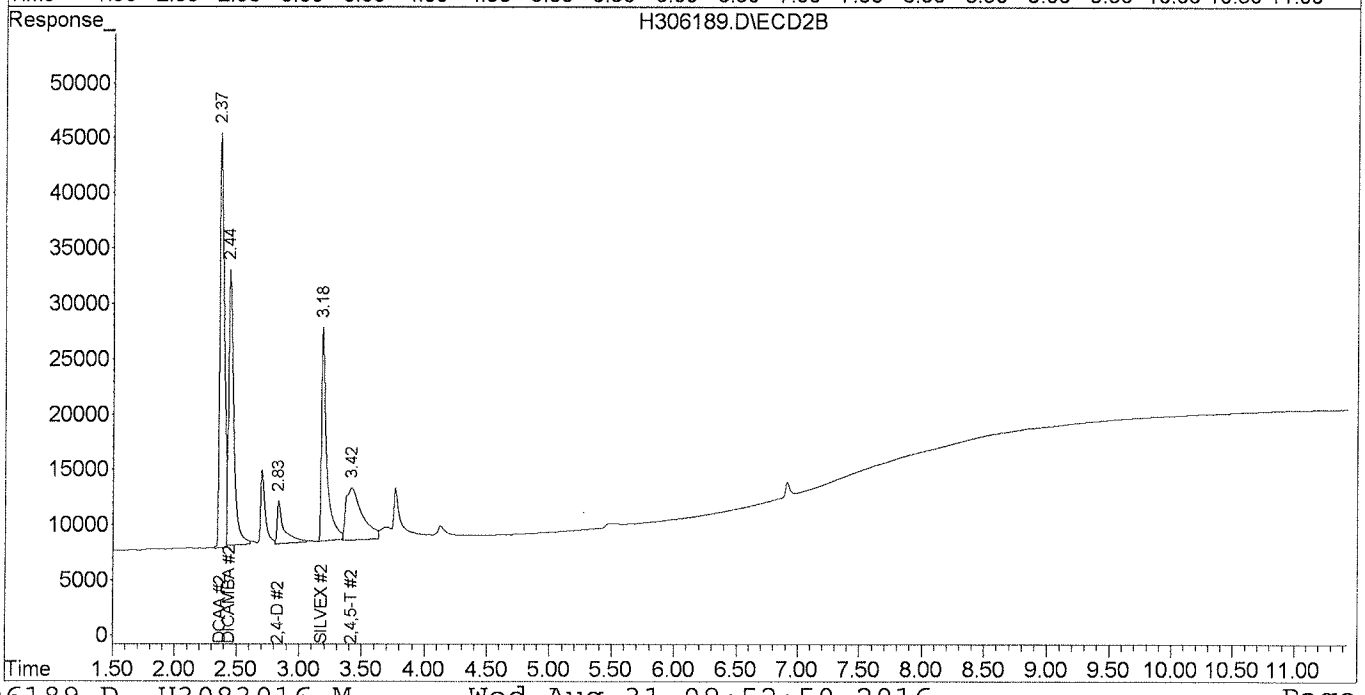
# Quantitation Report

Signal #1 : C:\HPCHEM\1\DATA\083016\H306189.D\ECD1A.CH Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\083016\H306189.D\ECD2B.CH
Acq On : 30 Aug 2016 2:48 pm Operator: AMC
Sample : SEQ-CAL2 Inst : GC ECD #3
Misc : QBHERB3-083016A HERB MIX 0.05ug/mL Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 31 9:39 2016 Quant Results File: H3081116.RES

Quant Method : C:\HPCHEM\1\METHODS\H3081116.M (Chemstation Integrator)
Title : CLP-1&2, HERBICIDES 5/29/15
Last Update : Fri Aug 12 09:59:48 2016
Response via : Multiple Level Calibration
DataAcq Meth : HERB3.M

Volume Inj. : 1 uL
Signal #1 Phase : STX-CLPesticides1 Signal #2 Phase: STX-CLPesticides2
Signal #1 Info : .32 Signal #2 Info : .32



Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\083016\H306190.D\ECD1A.CH Vial: 3
Signal #2 : C:\HPCHEM\1\DATA\083016\H306190.D\ECD2B.CH
Acq On : 30 Aug 2016 3:04 pm Operator: AMC
Sample : SEQ-CAL3 Inst : GC ECD #3
Misc : QBHERB3-083016A HERB MIX 0.10ug/mL Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 31 9:34 2016 Quant Results File: H3081116.RES

Quant Method : C:\HPCHEM\1\METHODS\H3081116.M (Chemstation Integrator)
Title : CLP-1&2, HERBICIDES 5/29/15
Last Update : Fri Aug 12 09:59:48 2016
Response via : Initial Calibration
DataAcq Meth : HERB3.M

Volume Inj. : 1 uL
Signal #1 Phase : STX-CLPesticides1 Signal #2 Phase: STX-CLPesticides2
Signal #1 Info : .32 Signal #2 Info : .32

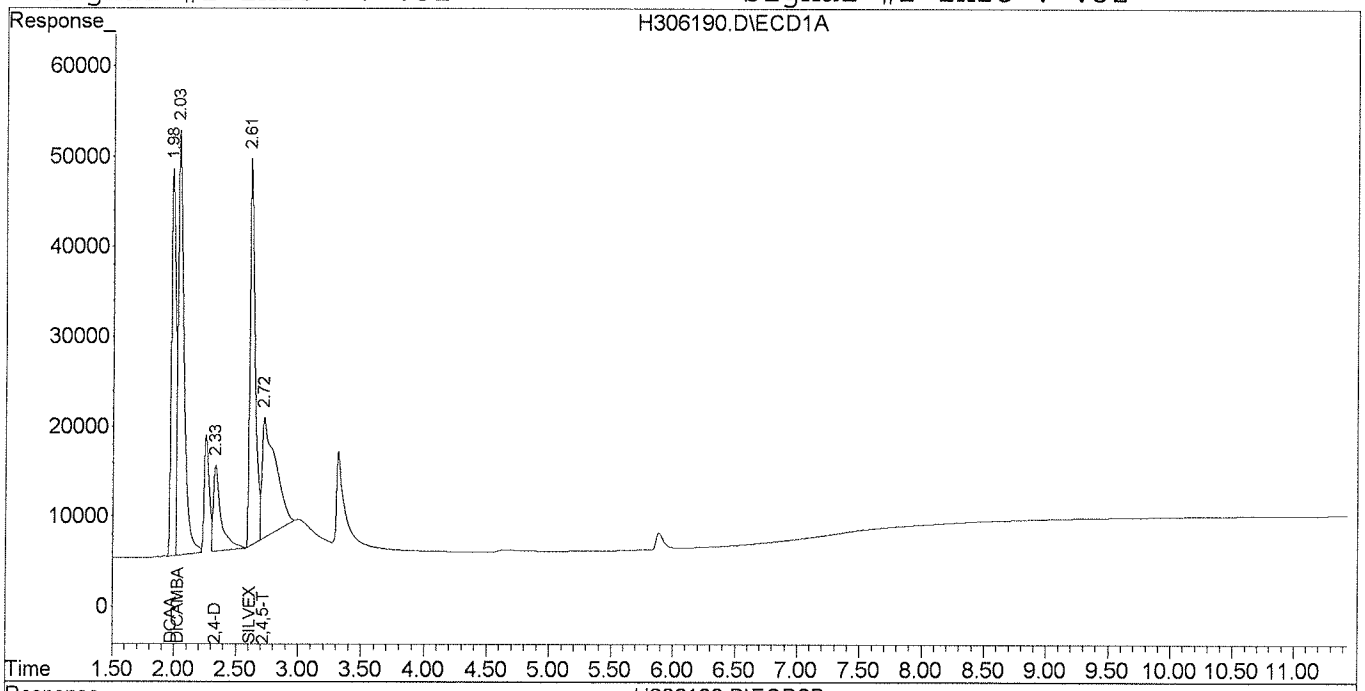
| | Compound | RT#1 | RT#2 | Resp#1 | Resp#2 | ug/mL | ug/mL |
|---|---|---|---|---|---|---|---|
| | System Monitoring Compounds | | | | | | |
| 1) S | DCAA | 1.98f | 2.37f | 1032544 | 1211171 | 0.303 | 0.268m |
| | Spiked Amount 0.500 | Range 30 - 150 | | Recovery = | | 60.60% | 53.60% |
| | Target Compounds | | | | | | |
| 2) | DICAMBA | 2.04f | 2.44f | 1605966 | 1252984 | 0.095 | 0.069m# |
| 3) | 2,4-D | 2.33f | 2.83f | 414837 | 291664 | 0.088 | 0.048m# |
| 4) | SILVEX | 2.62f | 3.18f | 1235465 | 1114753 | 0.071 | 0.051m# |
| 5) | 2,4,5-T | 2.73f | 3.37f | 1006512 | 1002287 | 0.059 | 0.049m |

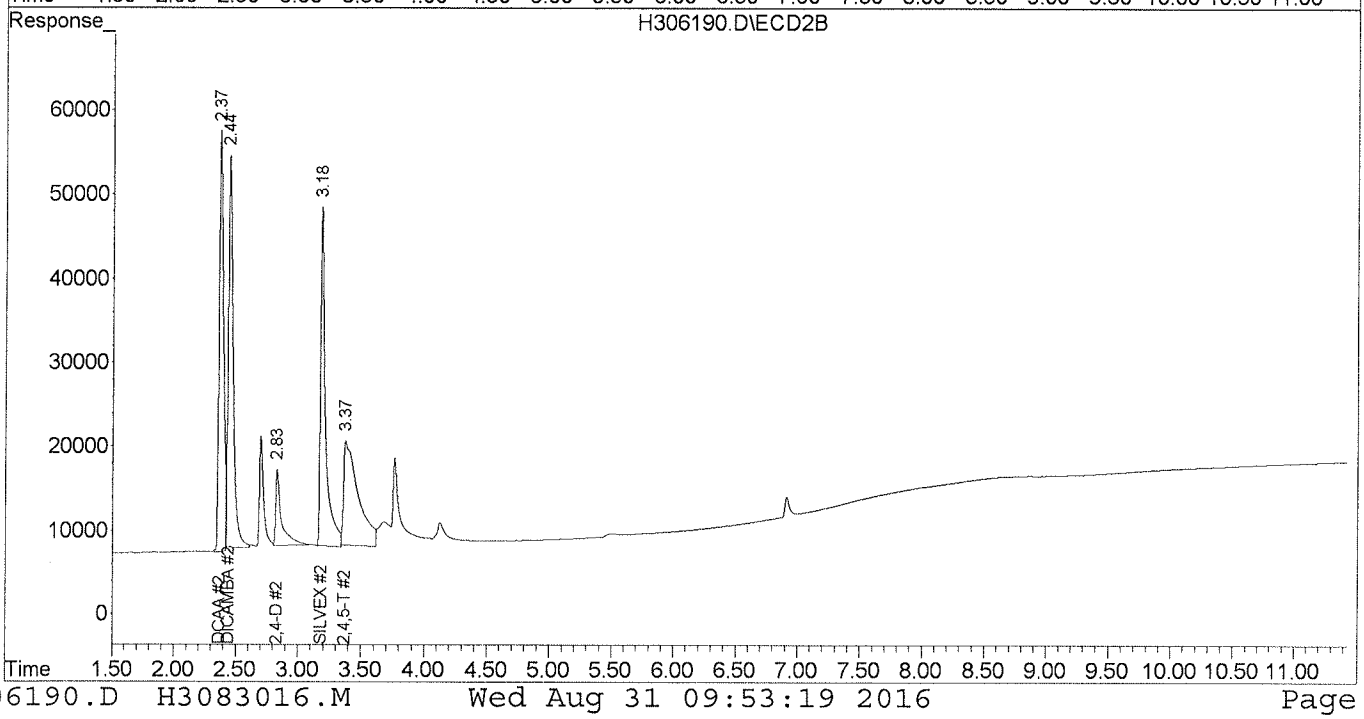
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Signal #1 : C:\HPCHEM\1\DATA\083016\H306190.D\ECD1A.CH Vial: 3
Signal #2 : C:\HPCHEM\1\DATA\083016\H306190.D\ECD2B.CH
Acq On : 30 Aug 2016 3:04 pm Operator: AMC
Sample : SEQ-CAL3 Inst : GC ECD #3
Misc : QBHERB3-083016A HERB MIX 0.10ug/mL Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 31 9:34 2016 Quant Results File: H3081116.RES

Quant Method : C:\HPCHEM\1\METHODS\H3081116.M (Chemstation Integrator)
Title : CLP-1&2, HERBICIDES 5/29/15
Last Update : Fri Aug 12 09:59:48 2016
Response via : Multiple Level Calibration
DataAcq Meth : HERB3.M

Volume Inj. : 1 uL
Signal #1 Phase : STX-CLPesticides1 Signal #2 Phase: STX-CLPesticides2
Signal #1 Info : .32 Signal #2 Info : .32



Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\083016\H306191.D\ECD1A.CH Vial: 4
Signal #2 : C:\HPCHEM\1\DATA\083016\H306191.D\ECD2B.CH
Acq On : 30 Aug 2016 3:20 pm Operator: AMC
Sample : SEQ-CAL4 Inst : GC ECD #3
Misc : QBHERB3-083016A HERB MIX 0.15ug/mL Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 31 9:41 2016 Quant Results File: H3081116.RES

Quant Method : C:\HPCHEM\1\METHODS\H3081116.M (Chemstation Integrator)
Title : CLP-1&2, HERBICIDES 5/29/15
Last Update : Fri Aug 12 09:59:48 2016
Response via : Initial Calibration
DataAcq Meth : HERB3.M

Volume Inj. : 1 uL
Signal #1 Phase : STX-CLPesticides1 Signal #2 Phase: STX-CLPesticides2
Signal #1 Info : .32 Signal #2 Info : .32

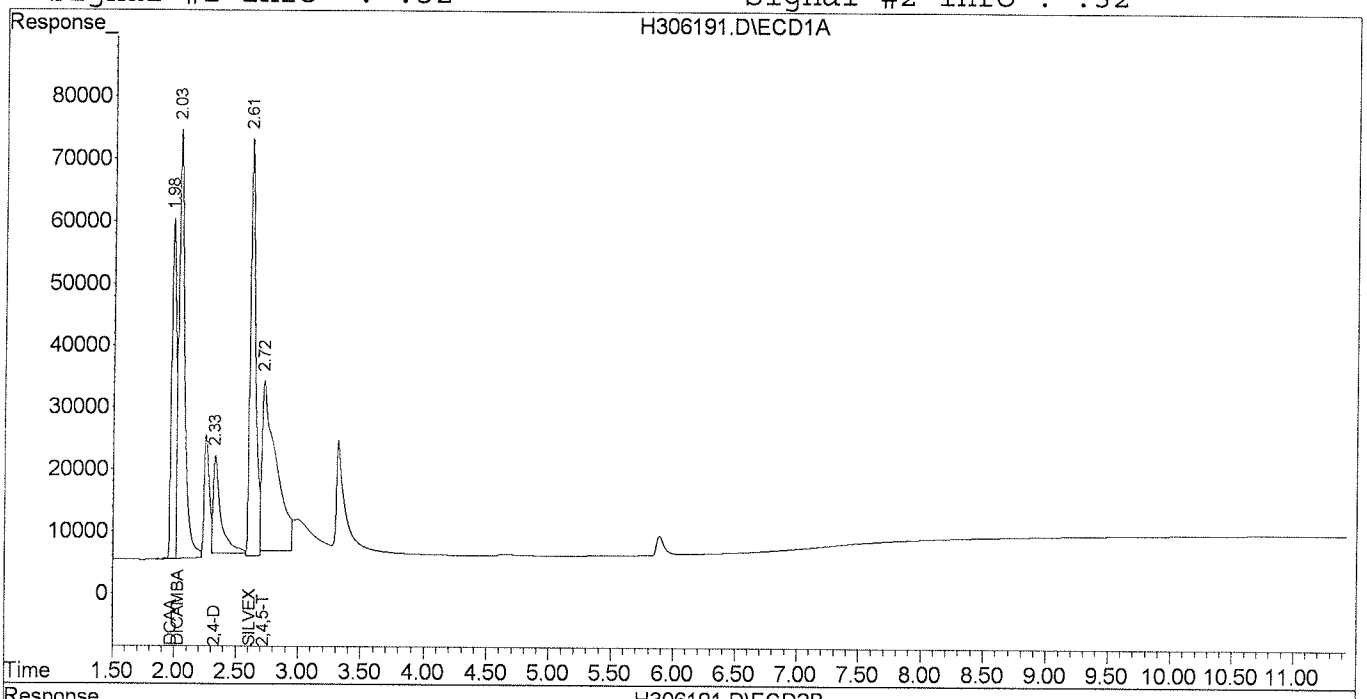
| | Compound | RT#1 | RT#2 | Resp#1 | Resp#2 | ug/mL | ug/mL |
|---|---|---|---|---|---|---|---|
| | System Monitoring Compounds | | | | | | |
| 1) S | DCAA | 1.98f | 2.37f | 1316277 | 1563011 | 0.386 | 0.345m |
| | Spiked Amount 0.500 | Range 30 - 150 | | Recovery = | | 77.20% | 69.00% |
| | Target Compounds | | | | | | |
| 2) | DICAMBA | 2.04f | 2.44f | 2415688 | 2059583 | 0.143 | 0.113m |
| 3) | 2,4-D | 2.33f | 2.83f | 675261 | 482225 | 0.143m | 0.080m# |
| 4) | SILVEX | 2.62f | 3.18f | 2022216 | 1611738 | 0.116 | 0.074m# |
| 5) | 2,4,5-T | 2.72f | 3.37f | 2149475 | 1339276 | 0.125m | 0.066m# |

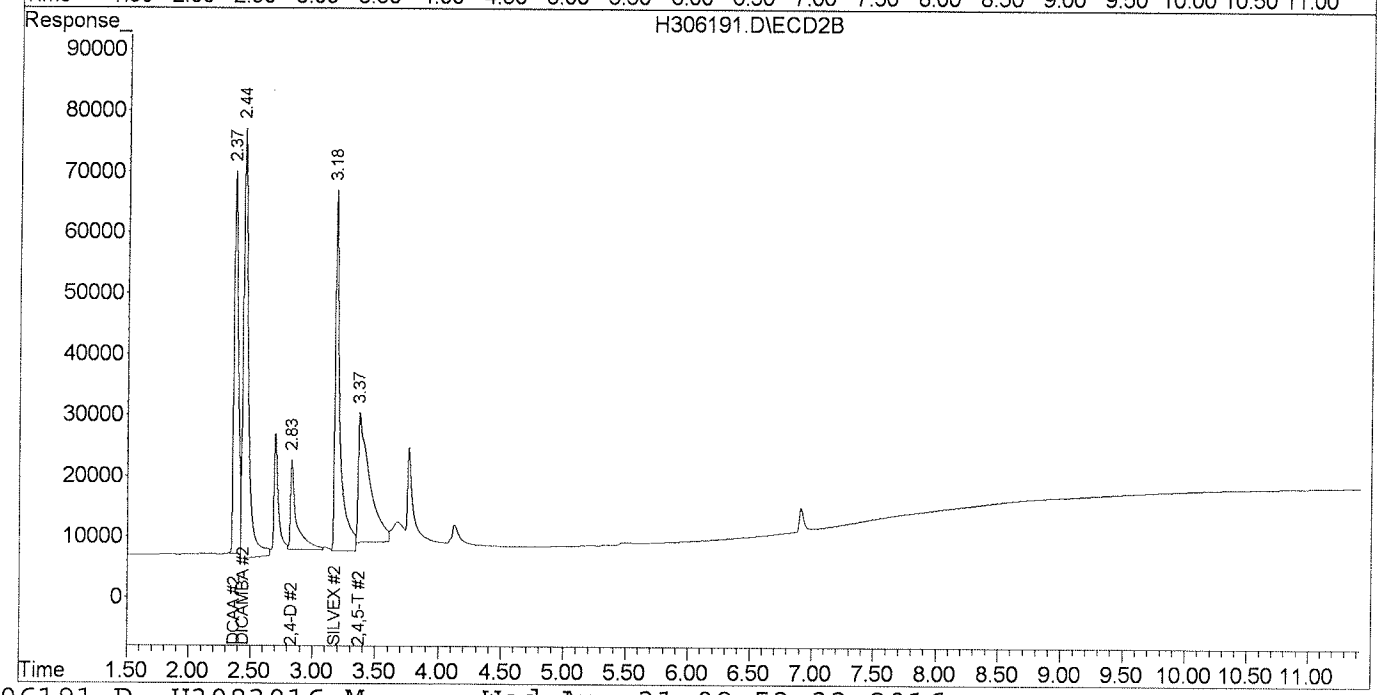
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Signal #1 : C:\HPCHEM\1\DATA\083016\H306191.D\ECD1A.CH Vial: 4
Signal #2 : C:\HPCHEM\1\DATA\083016\H306191.D\ECD2B.CH
Acq On : 30 Aug 2016 3:20 pm Operator: AMC
Sample : SEQ-CAL4 Inst : GC ECD #3
Misc : QBHERB3-083016A HERB MIX 0.15ug/mL Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 31 9:41 2016 Quant Results File: H3081116.RES

Quant Method : C:\HPCHEM\1\METHODS\H3081116.M (Chemstation Integrator)
Title : CLP-1&2, HERBICIDES 5/29/15
Last Update : Fri Aug 12 09:59:48 2016
Response via : Multiple Level Calibration
DataAcq Meth : HERB3.M

Volume Inj. : 1 uL
Signal #1 Phase : STX-CLPesticides1 Signal #2 Phase: STX-CLPesticides2
Signal #1 Info : .32 Signal #2 Info : .32



Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\083016\H306192.D\ECD1A.CH Vial: 5
Signal #2 : C:\HPCHEM\1\DATA\083016\H306192.D\ECD2B.CH
Acq On : 30 Aug 2016 3:35 pm Operator: AMC
Sample : SEQ-CAL5 Inst : GC ECD #3
Misc : QBHERB3-083016A HERB MIX 0.20ug/mL Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 31 9:40 2016 Quant Results File: H3081116.RES

Quant Method : C:\HPCHEM\1\METHODS\H3081116.M (Chemstation Integrator)
Title : CLP-1&2, HERBICIDES 5/29/15
Last Update : Fri Aug 12 09:59:48 2016
Response via : Initial Calibration
DataAcq Meth : HERB3.M

Volume Inj. : 1 uL
Signal #1 Phase : STX-CLPesticides1 Signal #2 Phase: STX-CLPesticides2
Signal #1 Info : .32 Signal #2 Info : .32

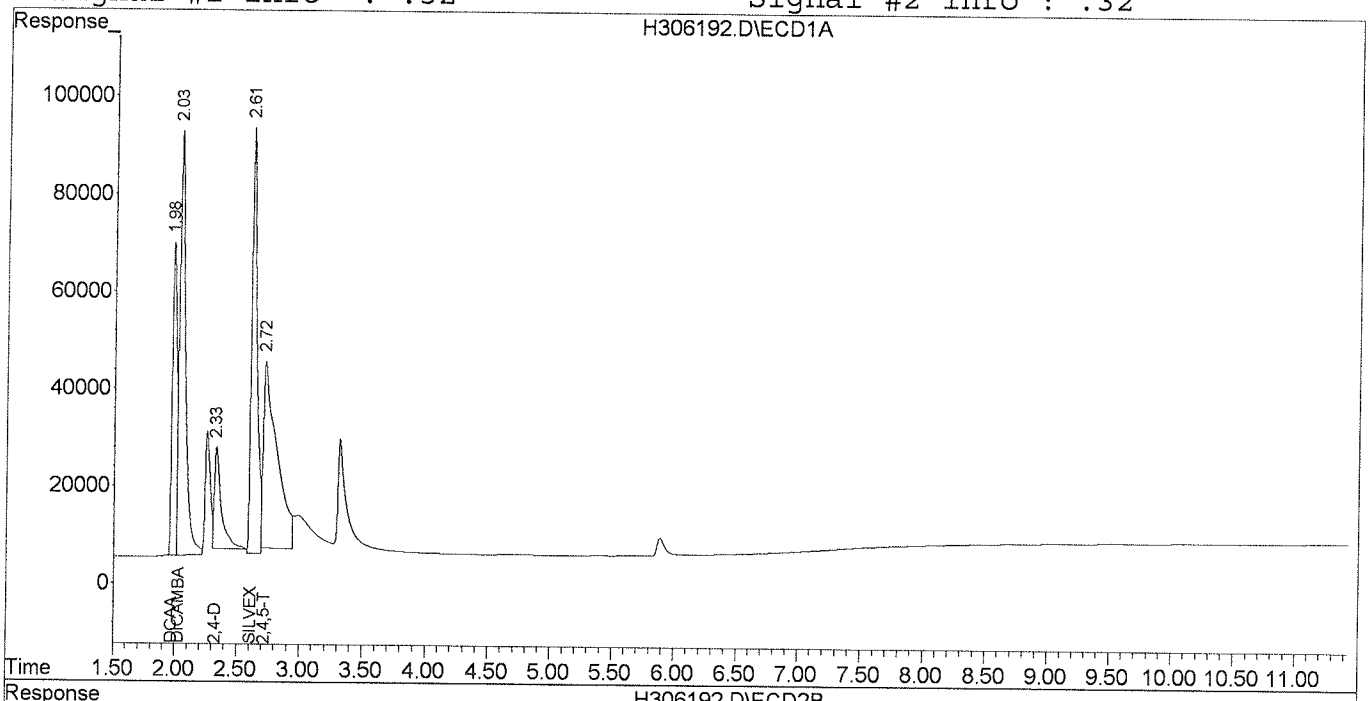
| | Compound | RT#1 | RT#2 | Resp#1 | Resp#2 | ug/mL | ug/mL |
|---|---|---|---|---|---|---|---|
| | System Monitoring Compounds | | | | | | |
| 1) S | DCAA | 1.98f | 2.37f | 1535372 | 1845683 | 0.451 | 0.408m |
| | Spiked Amount 0.500 | Range 30 - 150 | | Recovery = | | 90.20% | 81.60% |
| | Target Compounds | | | | | | |
| 2) | DICAMBA | 2.04f | 2.44f | 3048675 | 2495362 | 0.180 | 0.137m |
| 3) | 2,4-D | 2.33f | 2.83f | 831165 | 650957 | 0.176m | 0.108m# |
| 4) | SILVEX | 2.62f | 3.18f | 2671955 | 2109417 | 0.153 | 0.097m# |
| 5) | 2,4,5-T | 2.72f | 3.37f | 2912286 | 1945789 | 0.170m | 0.096m# |

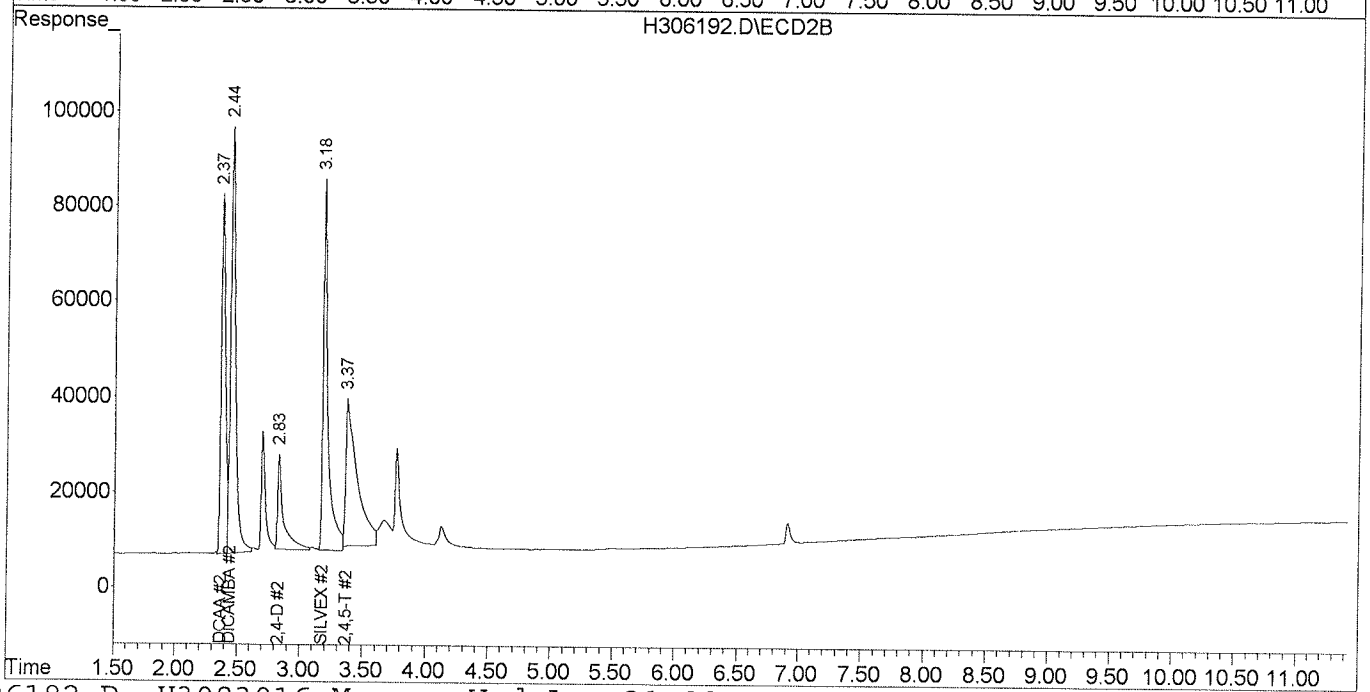
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Signal #1 : C:\HPCHEM\1\DATA\083016\H306192.D\ECD1A.CH Vial: 5
Signal #2 : C:\HPCHEM\1\DATA\083016\H306192.D\ECD2B.CH
Acq On : 30 Aug 2016 3:35 pm Operator: AMC
Sample : SEQ-CAL5 Inst : GC ECD #3
Misc : QBHERB3-083016A HERB MIX 0.20ug/mL Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 31 9:40 2016 Quant Results File: H3081116.RES

Quant Method : C:\HPCHEM\1\METHODS\H3081116.M (Chemstation Integrator)
Title : CLP-1&2, HERBICIDES 5/29/15
Last Update : Fri Aug 12 09:59:48 2016
Response via : Multiple Level Calibration
DataAcq Meth : HERB3.M

Volume Inj. : 1 uL
Signal #1 Phase : STX-CLPesticides1 Signal #2 Phase: STX-CLPesticides2
Signal #1 Info : .32 Signal #2 Info : .32



Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\083016\H306193.D\ECD1A.CH Vial: 6
Signal #2 : C:\HPCHEM\1\DATA\083016\H306193.D\ECD2B.CH
Acq On : 30 Aug 2016 3:51 pm Operator: AMC
Sample : SEQ-ICV1 Inst : GC ECD #3
Misc : QBHERB3-083016A HERB MIX 0.10ug/mL Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 31 9:42 2016 Quant Results File: H3083016.RES

Quant Method : C:\HPCHEM\1\METHODS\H3083016.M (Chemstation Integrator)
Title : CLP-1&2, HERBICIDES 5/29/15
Last Update : Wed Aug 31 09:41:36 2016
Response via : Initial Calibration
DataAcq Meth : HERB3.M

Volume Inj. : 1 uL
Signal #1 Phase : STX-CLPesticides1 Signal #2 Phase: STX-CLPesticides2
Signal #1 Info : .32 Signal #2 Info : .32

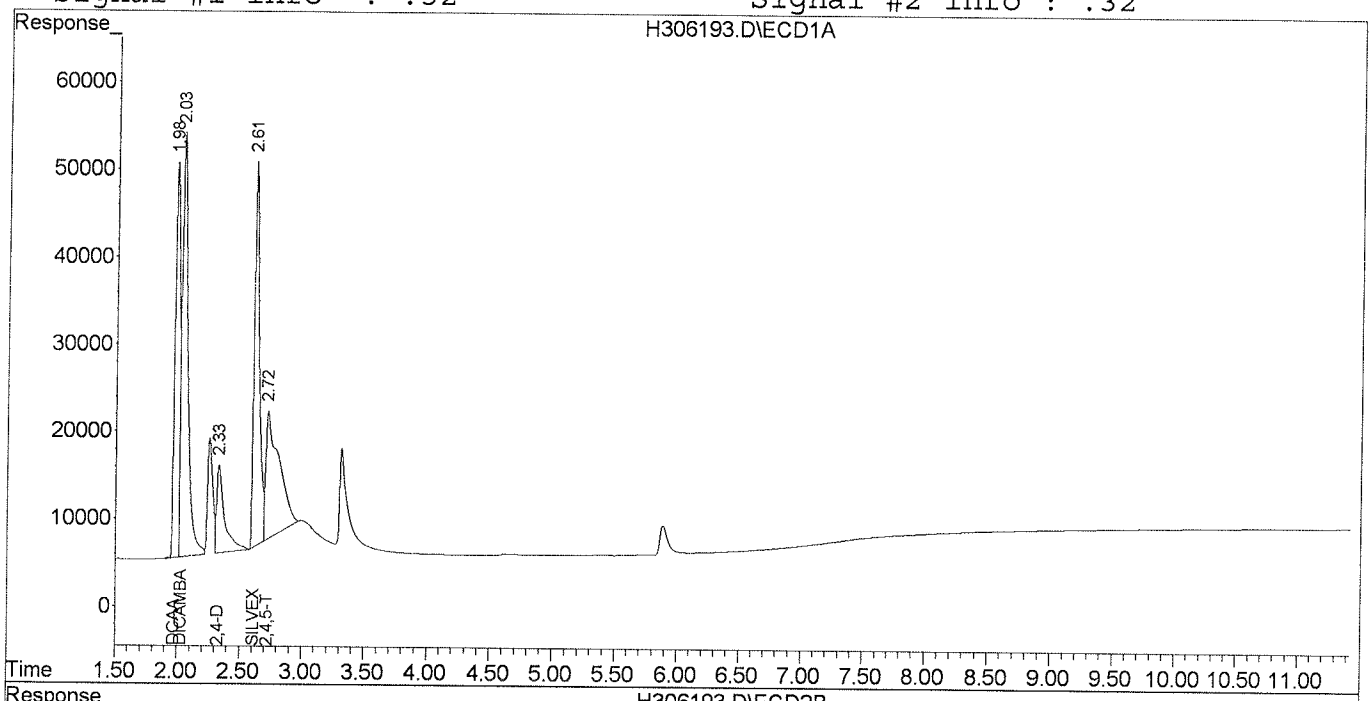
| | Compound | RT#1 | RT#2 | Resp#1 | Resp#2 | ug/mL | ug/mL |
|---|---|---|---|---|---|---|---|
| | System Monitoring Compounds | | | | | | |
| 1) | S DCAA | 1.98 | 2.37 | 1116298 | 1237038 | 0.411 | 0.391 |
| | Spiked Amount 0.500 | Range 30 - 150 | | Recovery = | | 82.20% | 78.20% |
| | Target Compounds | | | | | | |
| 2) | DICAMBA | 2.03 | 2.44 | 1741349 | 1381500 | 0.099 | 0.102 |
| 3) | 2,4-D | 2.33 | 2.83 | 442662 | 353892 | 0.118 | 0.120 |
| 4) | SILVEX | 2.62 | 3.18 | 1290098 | 997942 | 0.105 | 0.091 |
| 5) | 2,4,5-T | 2.72 | 3.37 | 1081630 | 983665 | 0.089 | 0.109m |

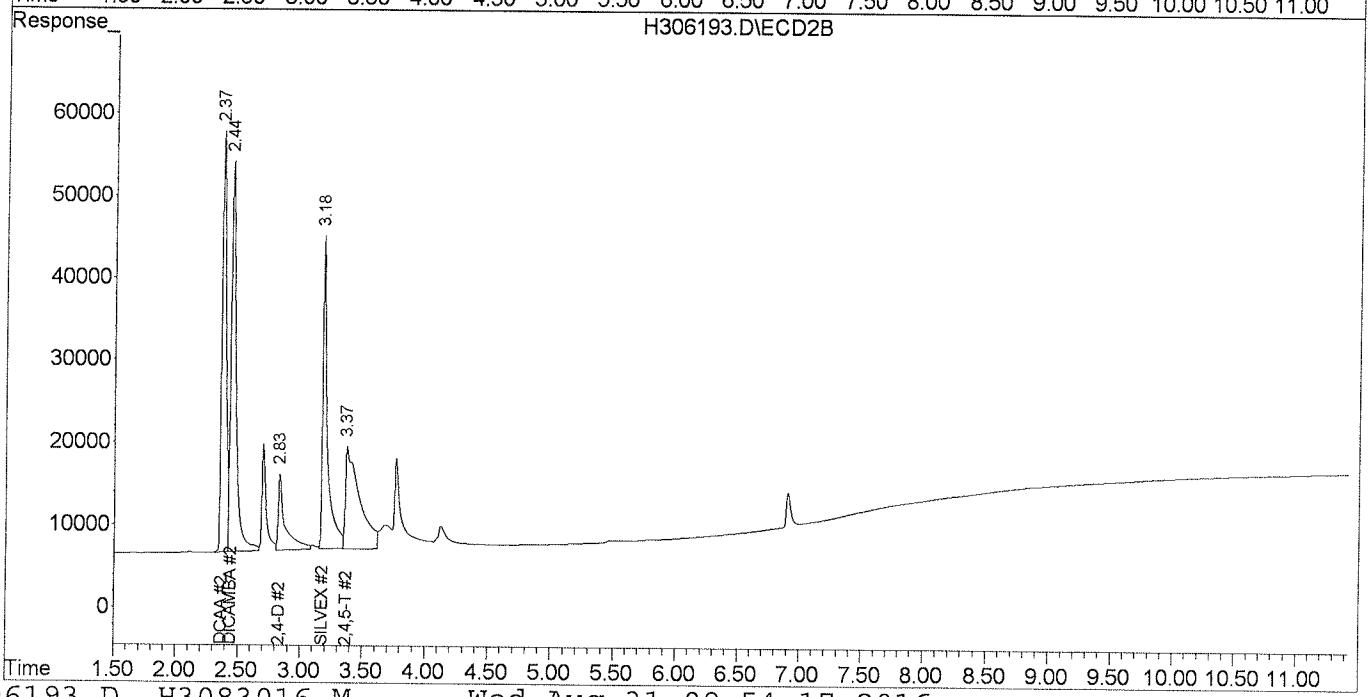
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Signal #1 : C:\HPCHEM\1\DATA\083016\H306193.D\ECD1A.CH Vial: 6
Signal #2 : C:\HPCHEM\1\DATA\083016\H306193.D\ECD2B.CH
Acq On : 30 Aug 2016 3:51 pm Operator: AMC
Sample : SEQ-ICV1 Inst : GC ECD #3
Misc : QBHERB3-083016A HERB MIX 0.10ug/mL Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 31 9:42 2016 Quant Results File: H3083016.RES

Quant Method : C:\HPCHEM\1\METHODS\H3083016.M (Chemstation Integrator)
Title : CLP-1&2, HERBICIDES 5/29/15
Last Update : Wed Aug 31 09:41:36 2016
Response via : Multiple Level Calibration
DataAcq Meth : HERB3.M

Volume Inj. : 1 uL
Signal #1 Phase : STX-CLPesticides1 Signal #2 Phase: STX-CLPesticides2
Signal #1 Info : .32 Signal #2 Info : .32



# Evaluate Continuing Calibration Report

Signal #1 : C:\HPCHEM\1\DATA\091316\H306313.D\ECD1A.CH Vial: 1
Signal #2 : C:\HPCHEM\1\DATA\091316\H306313.D\ECD2B.CH
Acq On : 13 Sep 2016 11:07 am Operator: AMC
Sample : SEQ-CCV1 Inst : GC ECD #3
Misc : QBHERB3-091316A HERB MIX 0.10ug/mL Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E

Method : C:\HPCHEM\1\METHODS\H3083016.M (Chemstation Integrator)
Title : CLP-1&2, HERBICIDES 5/29/15
Last Update : Wed Aug 31 09:41:36 2016
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 150%

| | | Compound | AvgRF | CCRF | %Dev | Area% | Dev(min) |
|---|---|---|---|---|---|---|---|
| 1 | S | DCAA | 2.719 | 2.866 E6 | -5.4 | 111 | 0.00 |
| 2 | | DICAMBA | 17.553 | 17.697 E6 | -0.8 | 110 | 0.00 |
| 3 | | 2,4-D | 3.759 | 3.896 E6 | -3.6 | 94 | 0.00 |
| 4 | | SILVEX | 12.309 | 13.344 E6 | -8.4 | 108 | 0.00 |
| 5 | | 2,4,5-T | 12.199 | 13.192 E6 | -8.1 | 131 | 0.00 |
| | | Signal #2 | | | | | |
| 1 | S | DCAA | 3.161 | 3.043 E6 | 3.7 | 100 | 0.00 |
| 2 | | DICAMBA | 13.605 | 14.184 E6 | -4.3 | 113 | 0.00 |
| 3 | | 2,4-D | 2.961 | 3.307 E6 | -11.7 | 113 | 0.00 |
| 4 | | SILVEX | 10.933 | 12.318 E6 | -12.7 | 111 | 0.00 |
| 5 | | 2,4,5-T | 9.024 | 9.913 E6 | -9.9 | 99 | 0.03 |

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\091316\H306313.D\ECD1A.CH Vial: 1
Signal #2 : C:\HPCHEM\1\DATA\091316\H306313.D\ECD2B.CH
Acq On : 13 Sep 2016 11:07 am Operator: AMC
Sample : SEQ-CCV1 Inst : GC ECD #3
Misc : QBHERB3-091316A HERB MIX 0.10ug/mL Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Sep 13 11:24 2016 Quant Results File: H3083016.RES

Quant Method : C:\HPCHEM\1\METHODS\H3083016.M (Chemstation Integrator)
Title : CLP-1&2, HERBICIDES 5/29/15
Last Update : Wed Aug 31 09:41:36 2016
Response via : Initial Calibration
DataAcq Meth : HERB3.M

Volume Inj. : 1 uL
Signal #1 Phase : STX-CLPesticides1 Signal #2 Phase: STX-CLPesticides2
Signal #1 Info : .32 Signal #2 Info : .32

| | Compound | RT#1 | RT#2 | Resp#1 | Resp#2 | ug/mL | ug/mL |
|---|---|---|---|---|---|---|---|
| | System Monitoring Compounds | | | | | | |
| 1) S | DCAA | 1.98 | 2.36 | 1146451 | 1217190 | 0.422 | 0.385 |
| | Spiked Amount 0.500 | Range 30 - 150 | | Recovery = | | 84.40% | 77.00% |
| | Target Compounds | | | | | | |
| 2) | DICAMBA | 2.03 | 2.44 | 1769727 | 1418385 | 0.101 | 0.104 |
| 3) | 2,4-D | 2.33 | 2.83 | 389627 | 330700 | 0.104m | 0.112m |
| 4) | SILVEX | 2.61 | 3.17 | 1334394 | 1231846 | 0.108 | 0.113 |
| 5) | 2,4,5-T | 2.72 | 3.41f | 1319228 | 991266 | 0.108m | 0.110m |

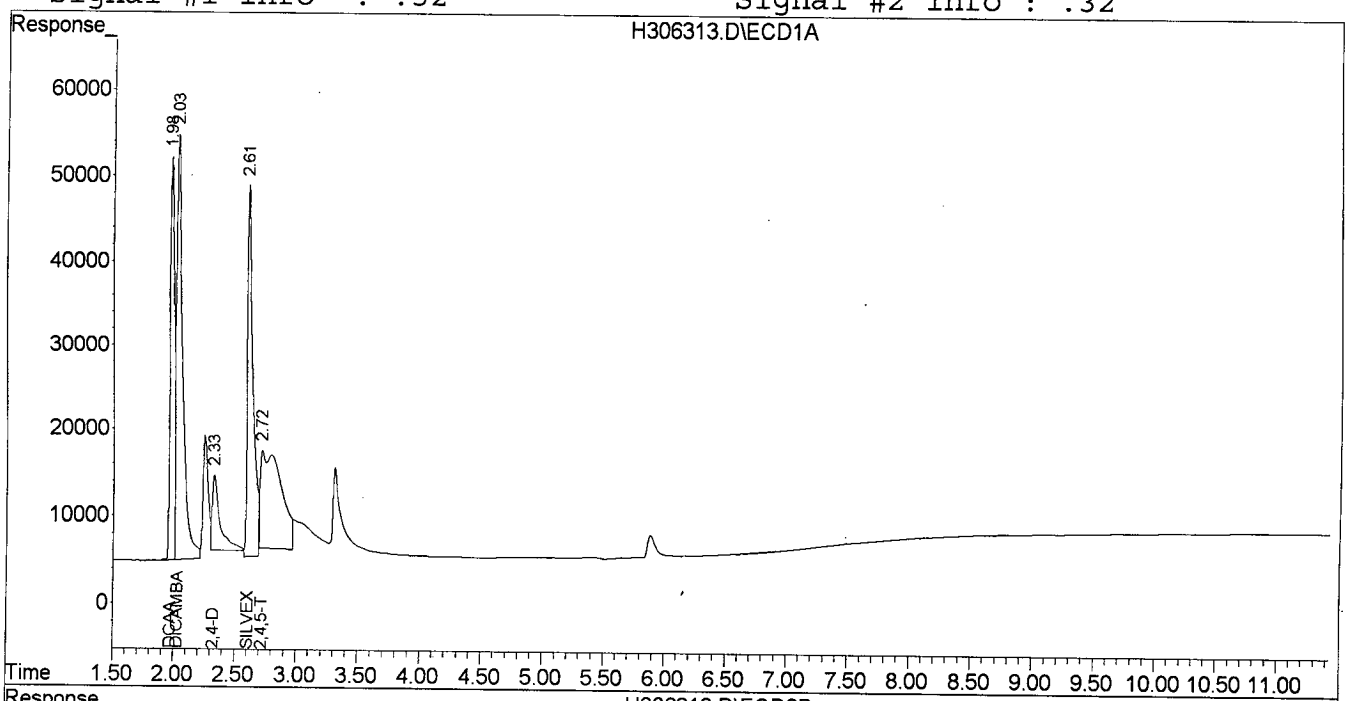
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

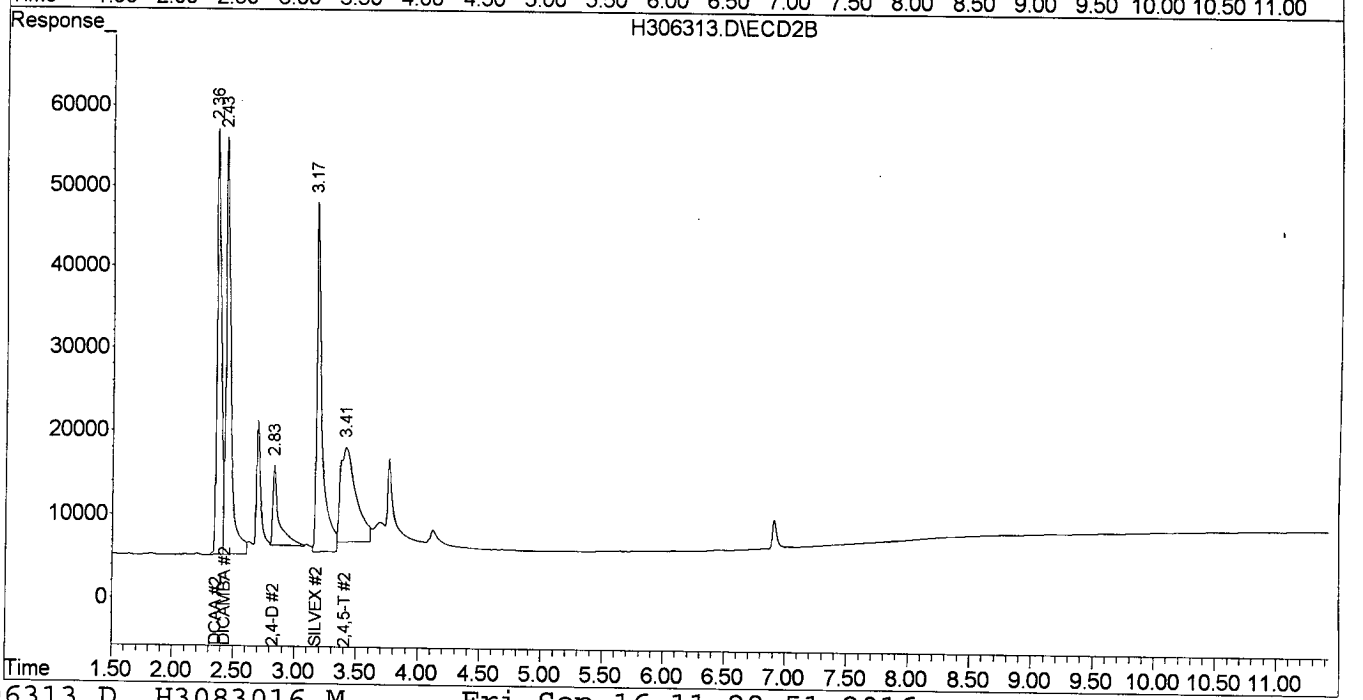
# Quantitation Report

Signal #1 : C:\HPCHEM\1\DATA\091316\H306313.D\ECD1A.CH Vial: 1
Signal #2 : C:\HPCHEM\1\DATA\091316\H306313.D\ECD2B.CH
Acq On : 13 Sep 2016 11:07 am Operator: AMC
Sample : SEQ-CCV1 Inst : GC ECD #3
Misc : QBHERB3-091316A HERB MIX 0.10ug/mL Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Sep 13 11:24 2016 Quant Results File: H3083016.RES

Quant Method : C:\HPCHEM\1\METHODS\H3083016.M (Chemstation Integrator)
Title : CLP-1&2, HERBICIDES 5/29/15
Last Update : Wed Aug 31 09:41:36 2016
Response via : Multiple Level Calibration
DataAcq Meth : HERB3.M

Volume Inj. : 1 uL
Signal #1 Phase : STX-CLPesticides1 Signal #2 Phase: STX-CLPesticides2
Signal #1 Info : .32 Signal #2 Info : .32



# Evaluate Continuing Calibration Report

Signal #1 : C:\HPCHEM\1\DATA\091316\H306323.D\ECD1A.CH Vial: 1
Signal #2 : C:\HPCHEM\1\DATA\091316\H306323.D\ECD2B.CH
Acq On : 13 Sep 2016 2:06 pm Operator: AMC
Sample : SEQ-CCV2 Inst : GC ECD #3
Misc : QBHERB3-091316A HERB MIX 0.10ug/mL Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E

Method : C:\HPCHEM\1\METHODS\H3083016.M (Chemstation Integrator)
Title : CLP-1&2, HERBICIDES 5/29/15
Last Update : Wed Aug 31 09:41:36 2016
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 150%

| | | Compound | AvgRF | CCRF | %Dev | Area% | Dev(min) |
|---|---|---|---|---|---|---|---|
| 1 | S | DCAA | 2.719 | 2.505 E6 | 7.9 | 97 | 0.00 |
| 2 | | DICAMBA | 17.553 | 17.154 E6 | 2.3 | 107 | 0.00 |
| 3 | | 2,4-D | 3.759 | 3.405 E6 | 9.4 | 82 | 0.00 |
| 4 | | SILVEX | 12.309 | 11.996 E6 | 2.5 | 97 | 0.00 |
| 5 | | 2,4,5-T | 12.199 | 13.445 E6 | -10.2 | 134 | 0.08 |

Signal #2

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 1 | S | DCAA | 3.161 | 2.928 E6 | 7.4 | 97 | 0.00 |
| 2 | | DICAMBA | 13.605 | 13.236 E6 | 2.7 | 106 | 0.00 |
| 3 | | 2,4-D | 2.961 | 3.233 E6 | -9.2 | 111 | 0.00 |
| 4 | | SILVEX | 10.933 | 12.441 E6 | -13.8 | 112 | 0.00 |
| 5 | | 2,4,5-T | 9.024 | 10.401 E6 | -15.3 | 104 | 0.05 |

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\091316\H306323.D\ECD1A.CH Vial: 1
Signal #2 : C:\HPCHEM\1\DATA\091316\H306323.D\ECD2B.CH
Acq On : 13 Sep 2016 2:06 pm Operator: AMC
Sample : SEQ-CCV2 Inst : GC ECD #3
Misc : QBHERB3-091316A HERB MIX 0.10ug/mL Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Sep 13 14:16 2016 Quant Results File: H3083016.RES

Quant Method : C:\HPCHEM\1\METHODS\H3083016.M (Chemstation Integrator)
Title : CLP-1&2, HERBICIDES 5/29/15
Last Update : Wed Aug 31 09:41:36 2016
Response via : Initial Calibration
DataAcq Meth : HERB3.M

Volume Inj. : 1 uL
Signal #1 Phase : STX-CLPesticides1 Signal #2 Phase: STX-CLPesticides2
Signal #1 Info : .32 Signal #2 Info : .32

| | Compound | RT#1 | RT#2 | Resp#1 | Resp#2 | ug/mL | ug/mL |
|---|---|---|---|---|---|---|---|
| | System Monitoring Compounds | | | | | | |
| 1) S | DCAA | 1.98 | 2.37 | 1002141 | 1171147 | 0.369 | 0.371 |
| | Spiked Amount 0.500 | Range 30 - 150 | | Recovery = | | 73.80% | 74.20% |
| | Target Compounds | | | | | | |
| 2) | DICAMBA | 2.04 | 2.44 | 1715448 | 1323594 | 0.098 | 0.097 |
| 3) | 2,4-D | 2.33 | 2.83 | 340526 | 323286 | 0.091m | 0.109m |
| 4) | SILVEX | 2.61 | 3.18 | 1199573 | 1244092 | 0.097 | 0.114 |
| 5) | 2,4,5-T | 2.81f | 3.42f | 1344477 | 1040074 | 0.110m | 0.115m |

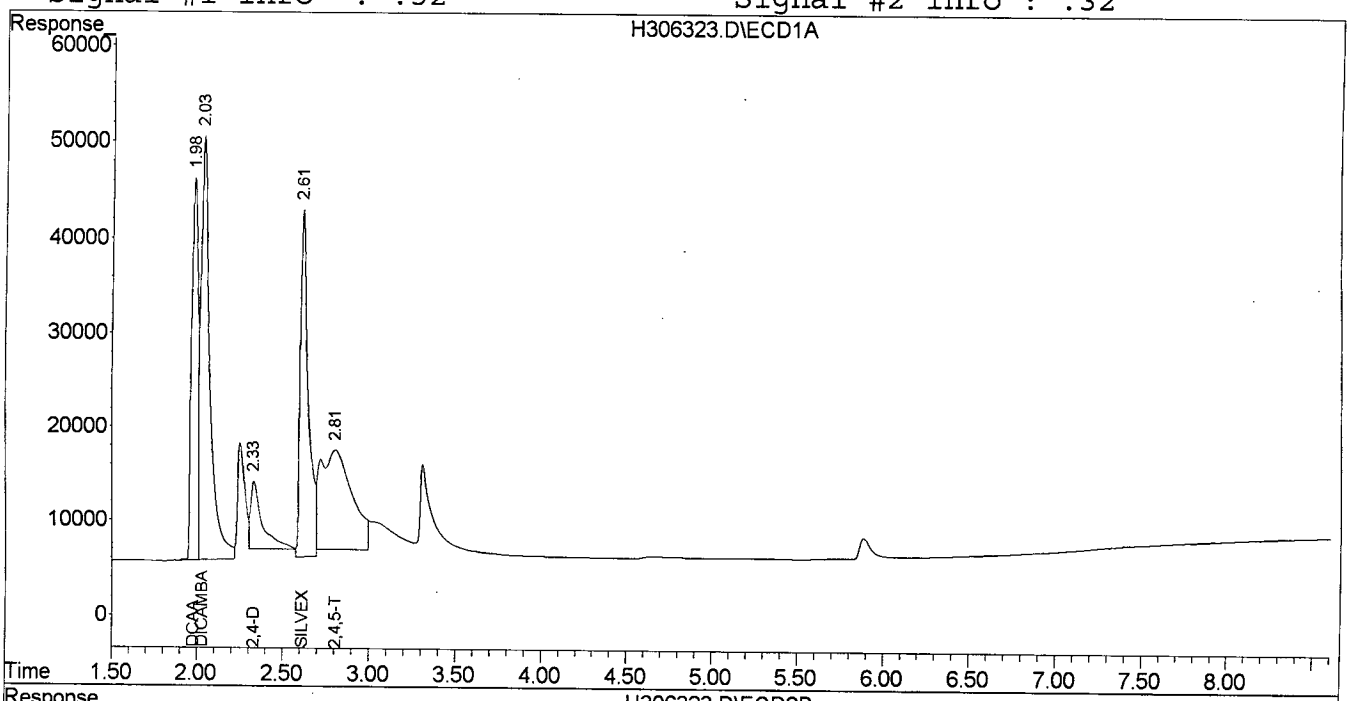
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

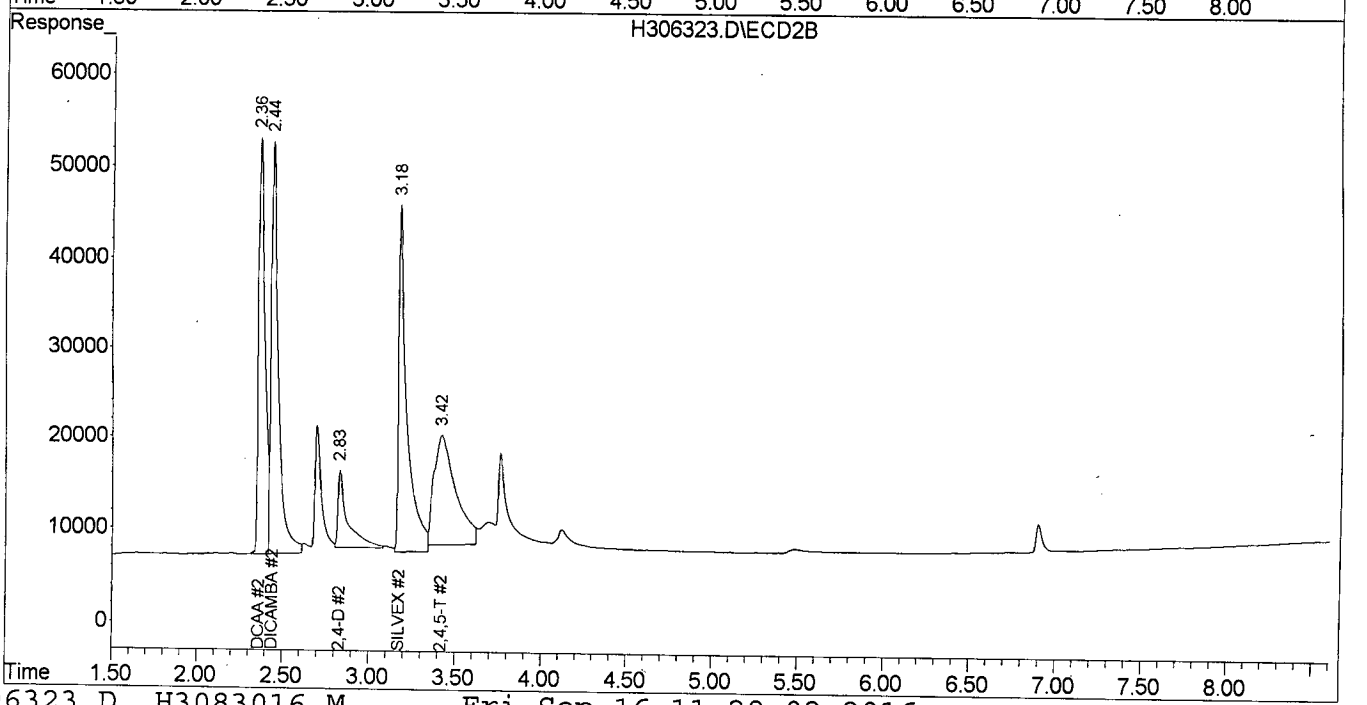
Quantitation Report

Signal #1 : C:\HPCHEM\1\DATA\091316\H306323.D\ECD1A.CH Vial: 1
Signal #2 : C:\HPCHEM\1\DATA\091316\H306323.D\ECD2B.CH
Acq On : 13 Sep 2016 2:06 pm Operator: AMC
Sample : SEQ-CCV2 Inst : GC ECD #3
Misc : QBHERB3-091316A HERB MIX 0.10ug/mL Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Sep 13 14:16 2016 Quant Results File: H3083016.RES

Quant Method : C:\HPCHEM\1\METHODS\H3083016.M (Chemstation Integrator)
Title : CLP-1&2, HERBICIDES 5/29/15
Last Update : Wed Aug 31 09:41:36 2016
Response via : Multiple Level Calibration
DataAcq Meth : HERB3.M

Volume Inj. : 1 uL
Signal #1 Phase : STX-CLPesticides1 Signal #2 Phase: STX-CLPesticides2
Signal #1 Info : .32 Signal #2 Info : .32



# FORM V ANALYSIS BATCH (SEQUENCE) SUMMARY

## EPA 8151A

| | | | |
|---|---|---|---|
| Laboratory: | York Analytical Laboratories, Inc. | SDG: | 16I0260 |
| Client: | Langan Engineering & Environmental Services (NYC) | Project: | 170301202 450 Union Street |
| Sequence: | Y6H3107 | Instrument: | GC ECD #3 |
| | | Calibration: | YH60030 |

| Sample Name | Lab Sample ID | Lab File ID | Analysis Date/Time |
|---|---|---|---|
| Cal Standard | Y6H3107-CAL1 | H306188.D | 08/30/16 14:32 |
| Cal Standard | Y6H3107-CAL2 | H306189.D | 08/30/16 14:48 |
| Cal Standard | Y6H3107-CAL3 | H306190.D | 08/30/16 15:04 |
| Cal Standard | Y6H3107-CAL4 | H306191.D | 08/30/16 15:20 |
| Cal Standard | Y6H3107-CAL5 | H306192.D | 08/30/16 15:35 |
| Initial Cal Check | Y6H3107-ICV1 | H306193.D | 08/30/16 15:51 |

# FORM V ANALYSIS BATCH (SEQUENCE) SUMMARY

## EPA 8151A

| | | | |
|---|---|---|---|
| Laboratory: | York Analytical Laboratories, Inc. | SDG: | 16I0260 |
| Client: | Langan Engineering & Environmental Services (NYC) | Project: | 170301202 450 Union Street |
| Sequence: | Y6I1317 | Instrument: | GC ECD #3 |
| | | Calibration: | YH60030 |

| Sample Name | Lab Sample ID | Lab File ID | Analysis Date/Time |
|---|---|---|---|
| Calibration Check | Y6I1317-CCV1 | H306313.D | 09/13/16 11:07 |
| Blank | BI60441-BLK1 | H306314.D | 09/13/16 11:27 |
| LCS | BI60441-BS1 | H306315.D | 09/13/16 11:43 |
| LCS Dup | BI60441-BSD1 | H306316.D | 09/13/16 11:59 |
| V01_0-1.5 | 16I0260-01 | H306321.D | 09/13/16 13:18 |
| V01_0-1.5 | BI60441-MS1 | H306322.D | 09/13/16 13:34 |
| Calibration Check | Y6I1317-CCV2 | H306323.D | 09/13/16 14:06 |

**FORM I**

# METHOD BLANK DATA SHEET

## EPA 8151A

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | York Analytical Laboratories, Inc. | | | SDG: | 16I0260 |
| Client: | Langan Engineering & Environmental Services (NYC) | | | Project: | 170301202 450 Union Street |
| Matrix: | Soil | Laboratory ID: | BI60441-BLK1 | File ID: | H306314.D |
| Prepared: | 09/13/16 07:14 | Preparation: | EPA 3550B/8151A | Initial/Final: | 25 g / 25 mL |
| Analyzed: | 09/13/16 11:27 | Instrument: | GC ECD #3 | | |
| Batch: | BI60441 | Sequence: | Y6I1317 | Calibration: | YH60030 |

| CAS NO. | COMPOUND | CONC. (mg/kg wet) | Q |
|---|---|---|---|
| 93-76-5 | 2,4,5-T | 0.0200 | U |
| 93-72-1 | 2,4,5-TP (Silvex) | 0.0200 | U |
| 94-75-7 | 2,4-D | 0.0200 | U |

| SYSTEM MONITORING COMPOUND | ADDED (mg/kg wet) | CONC (mg/kg wet) | % REC | QC LIMITS | Q |
|---|---|---|---|---|---|
| 2,4-Dichlorophenylacetic acid (DCAA) | 0.500 | 0.671 | 134 | 30 - 150 | |

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\091316\H306314.D\ECD1A.CH Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\091316\H306314.D\ECD2B.CH
Acq On : 13 Sep 2016 11:27 am Operator: AMC
Sample : BI60441-BLK1 Inst : GC ECD #3
Misc : QBHERB3-091316A Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Sep 13 13:49 2016 Quant Results File: H3083016.RES

Quant Method : C:\HPCHEM\1\METHODS\H3083016.M (Chemstation Integrator)
Title : CLP-1&2, HERBICIDES 5/29/15
Last Update : Wed Aug 31 09:41:36 2016
Response via : Initial Calibration
DataAcq Meth : HERB3.M

Volume Inj. : 1 uL
Signal #1 Phase : STX-CLPesticides1 Signal #2 Phase: STX-CLPesticides2
Signal #1 Info : .32 Signal #2 Info : .32

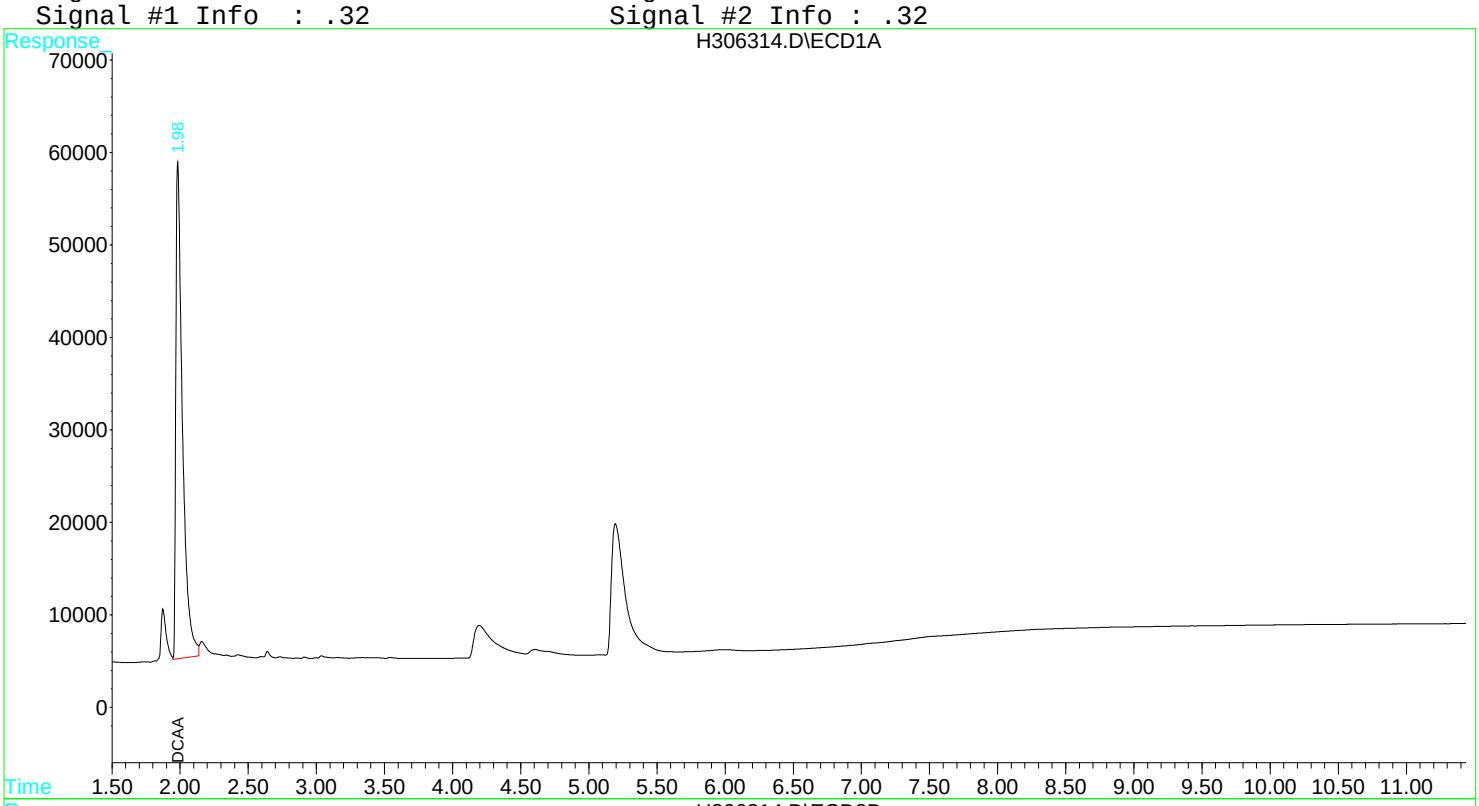
| | Compound | RT#1 | RT#2 | Resp#1 | Resp#2 | ug/mL | ug/mL |
|---|---|---|---|---|---|---|---|
| | System Monitoring Compounds | | | | | | |
| 1) S | DCAA | 1.98 | 2.36 | 1824152 | 1555680 | 0.671 | 0.492 # |
| | Spiked Amount 0.500 | Range 30 - 150 | | Recovery = | | 134.20% | 98.40% |
| | Target Compounds | | | | | | |
| 2) | DICAMBA | 0.00 | 0.00 | 0 | 0 | N.D. | N.D. |
| 3) | 2,4-D | 0.00 | 0.00 | 0 | 0 | N.D. | N.D. |
| 4) | SILVEX | 0.00 | 0.00 | 0 | 0 | N.D. | N.D. |
| 5) | 2,4,5-T | 0.00 | 0.00 | 0 | 0 | N.D. | N.D. |

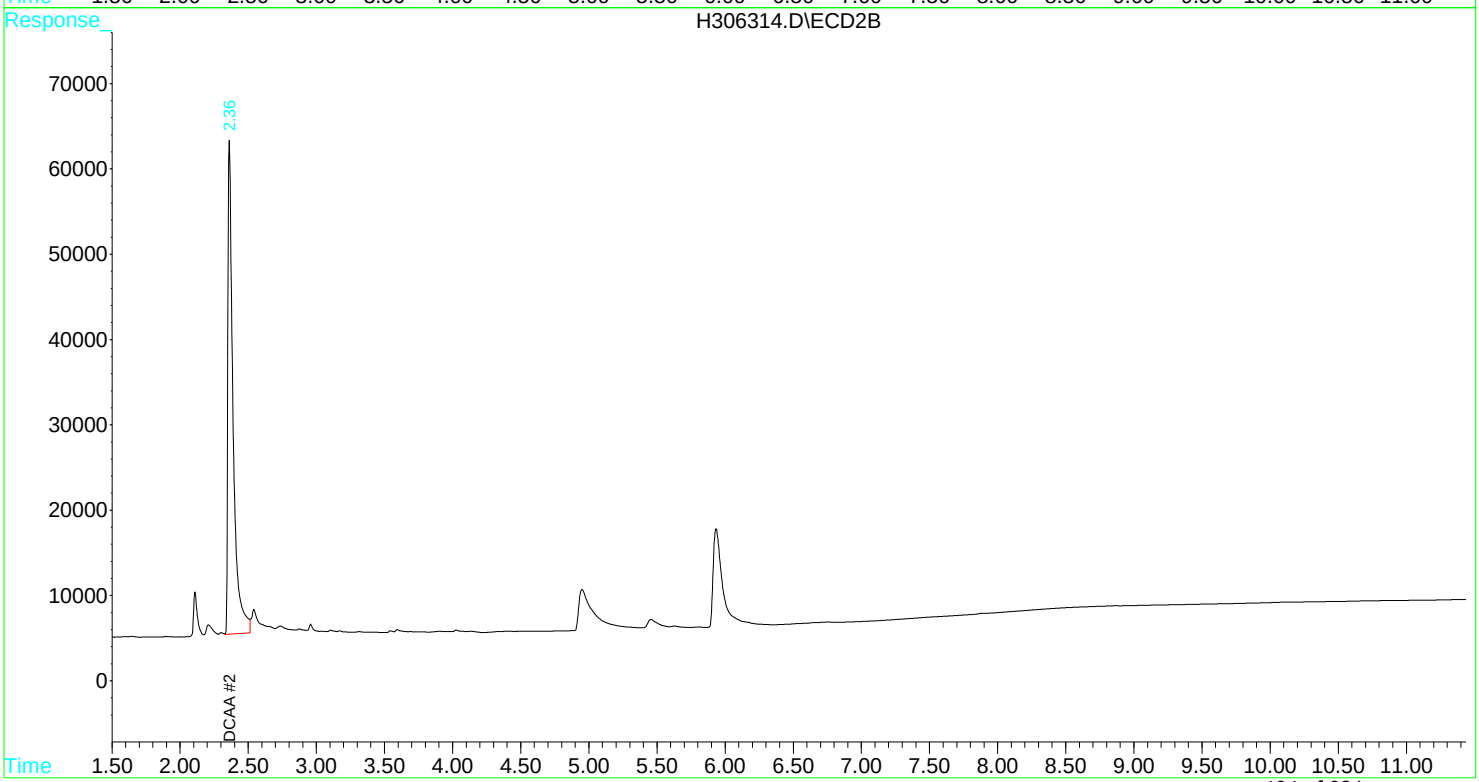
Quantitation Report

Signal #1 : C:\HPCHEM\1\DATA\091316\H306314.D\ECD1A.CH  Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\091316\H306314.D\ECD2B.CH
Acq On  : 13 Sep 2016  11:27 am  Operator: AMC
Sample  : BI60441-BLK1  Inst  : GC ECD #3
Misc  : QBHERB3-091316A  Multiplr: 1.00
IntFile Signal #1: EVENTS.E  IntFile Signal #2: EVENTS2.E
Quant Time: Sep 13 13:49 2016  Quant Results File: H3083016.RES

Quant Method : C:\HPCHEM\1\METHODS\H3083016.M (Chemstation Integrator)
Title  : CLP-1&2, HERBICIDES 5/29/15
Last Update  : Wed Aug 31 09:41:36 2016
Response via : Multiple Level Calibration
DataAcq Meth : HERB3.M

Volume Inj.  : 1 uL
Signal #1 Phase : STX-CLPesticides1 Signal #2 Phase: STX-CLPesticides2
Signal #1 Info  : .32  Signal #2 Info : .32



**FORM III** **LCS / LCS DUPLICATE RECOVERY**

**EPA 8151A**

| | | | |
|---|---|---|---|
| Laboratory: | York Analytical Laboratories, Inc. | SDG: | 16I0260 |
| Client: | Langan Engineering & Environmental Services (NYC) | Project: | 170301202 450 Union Street |
| Matrix: | Soil | | |
| Batch: | BI60441 | Laboratory ID: | BI60441-BS1 |
| Preparation: | EPA 3550B/8151A | Initial/Final: | 25 g / 25 mL |

| COMPOUND | SPIKE ADDED (mg/kg wet) | LCS CONCENTRATION (mg/kg wet) | LCS % REC. # | QC LIMITS REC. |
|---|---|---|---|---|
| 2,4,5-T | 0.160 | 0.126 | 78.8 | 40 - 140 |
| 2,4,5-TP (Silvex) | 0.160 | 0.108 | 67.5 | 40 - 140 |
| 2,4-D | 0.160 | 0.152 | 95.0 | 40 - 140 |

# Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

# FORM III LCS / LCS DUPLICATE RECOVERY

## EPA 8151A

| | | | |
|---|---|---|---|
| Laboratory: | York Analytical Laboratories, Inc. | SDG: | 16I0260 |
| Client: | Langan Engineering & Environmental Services (NYC) | Project: | 170301202 450 Union Street |
| Matrix: | Soil | | |
| Batch: | BI60441 | Laboratory ID: | BI60441-BSD1 |
| Preparation: | EPA 3550B/8151A | Initial/Final: | 25 g / 25 mL |

| COMPOUND | SPIKE ADDED (mg/kg wet) | LCSD CONCENTRATION (mg/kg wet) | LCSD % REC. # | % RPD # | QC LIMITS RPD | QC LIMITS REC. |
|---|---|---|---|---|---|---|
| 2,4,5-T | 0.160 | 0.129 | 80.6 | 2.35 | 30 | 40 - 140 |
| 2,4,5-TP (Silvex) | 0.160 | 0.115 | 71.9 | 6.28 | 30 | 40 - 140 |
| 2,4-D | 0.160 | 0.164 | 102 | 7.59 | 30 | 40 - 140 |

# Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\091316\H306315.D\ECD1A.CH Vial: 3
Signal #2 : C:\HPCHEM\1\DATA\091316\H306315.D\ECD2B.CH
Acq On : 13 Sep 2016 11:43 am Operator: AMC
Sample : BI60441-BS1 Inst : GC ECD #3
Misc : QBHERB3-091316A Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Sep 13 13:49 2016 Quant Results File: H3083016.RES

Quant Method : C:\HPCHEM\1\METHODS\H3083016.M (Chemstation Integrator)
Title : CLP-1&2, HERBICIDES 5/29/15
Last Update : Wed Aug 31 09:41:36 2016
Response via : Initial Calibration
DataAcq Meth : HERB3.M

Volume Inj. : 1 uL
Signal #1 Phase : STX-CLPesticides1 Signal #2 Phase: STX-CLPesticides2
Signal #1 Info : .32 Signal #2 Info : .32

| | Compound | RT#1 | RT#2 | Resp#1 | Resp#2 | ug/mL | ug/mL |
|---|---|---|---|---|---|---|---|
| | System Monitoring Compounds | | | | | | |
| 1) S | DCAA | 1.98 | 2.36 | 1196823 | 1278879 | 0.440 | 0.405 |
| | Spiked Amount 0.500 | Range 30 - 150 | | Recovery = | | 88.00% | 81.00% |
| | Target Compounds | | | | | | |
| 2) | DICAMBA | 2.04 | 2.44 | 1750523 | 1254878 | 0.100 | 0.092 |
| 3) | 2,4-D | 2.33 | 2.83 | 571604 | 403254 | 0.152 | 0.136 |
| 4) | SILVEX | 2.61 | 3.18 | 1331407 | 1185839 | 0.108 | 0.108 |
| 5) | 2,4,5-T | 2.72 | 3.37 | 1542149 | 1166265 | 0.126 | 0.129 |

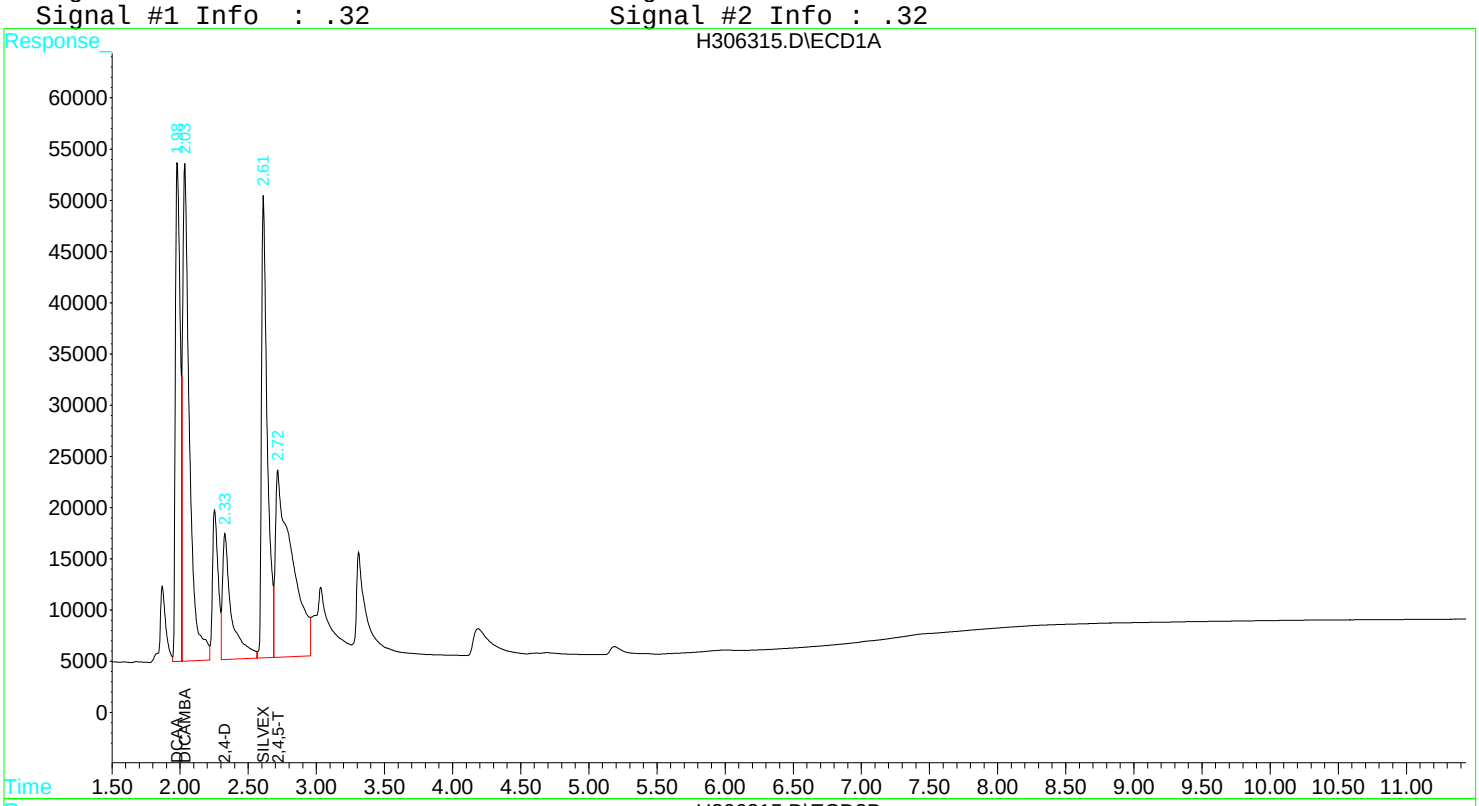
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

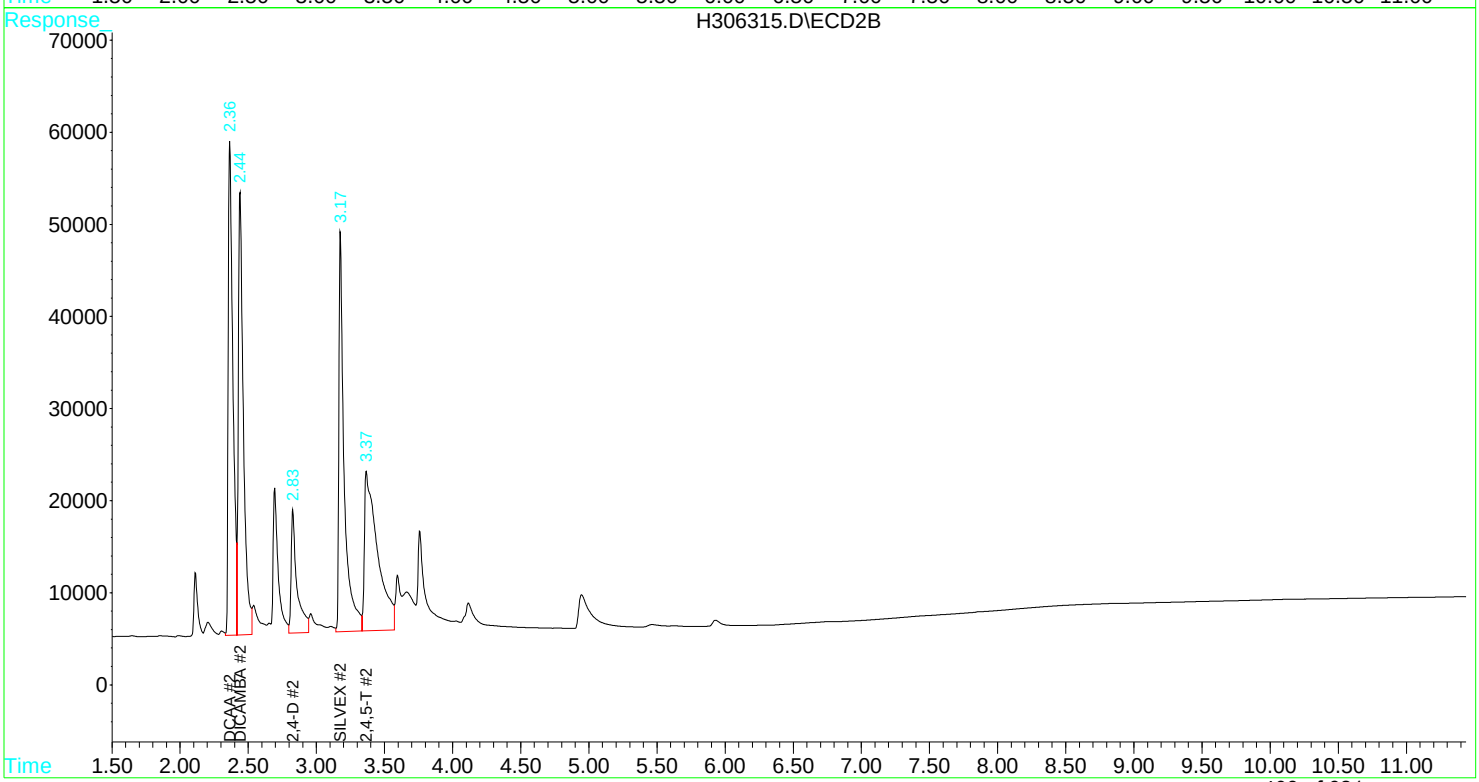
Quantitation Report

Signal #1 : C:\HPCHEM\1\DATA\091316\H306315.D\ECD1A.CH  Vial: 3
Signal #2 : C:\HPCHEM\1\DATA\091316\H306315.D\ECD2B.CH
Acq On  : 13 Sep 2016  11:43 am  Operator: AMC
Sample  : BI60441-BS1  Inst  : GC ECD #3
Misc  : QBHERB3-091316A  Multiplr: 1.00
IntFile Signal #1: EVENTS.E  IntFile Signal #2: EVENTS2.E
Quant Time: Sep 13 13:49 2016  Quant Results File: H3083016.RES

Quant Method : C:\HPCHEM\1\METHODS\H3083016.M (Chemstation Integrator)
Title  : CLP-1&2, HERBICIDES 5/29/15
Last Update  : Wed Aug 31 09:41:36 2016
Response via : Multiple Level Calibration
DataAcq Meth : HERB3.M

Volume Inj.  : 1 uL
Signal #1 Phase : STX-CLPesticides1 Signal #2 Phase: STX-CLPesticides2
Signal #1 Info  : .32  Signal #2 Info : .32



Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\091316\H306316.D\ECD1A.CH Vial: 4
Signal #2 : C:\HPCHEM\1\DATA\091316\H306316.D\ECD2B.CH
Acq On : 13 Sep 2016 11:59 am Operator: AMC
Sample : BI60441-BSD1 Inst : GC ECD #3
Misc : QBHERB3-091316A Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Sep 13 13:50 2016 Quant Results File: H3083016.RES

Quant Method : C:\HPCHEM\1\METHODS\H3083016.M (Chemstation Integrator)
Title : CLP-1&2, HERBICIDES 5/29/15
Last Update : Wed Aug 31 09:41:36 2016
Response via : Initial Calibration
DataAcq Meth : HERB3.M

Volume Inj. : 1 uL
Signal #1 Phase : STX-CLPesticides1 Signal #2 Phase: STX-CLPesticides2
Signal #1 Info : .32 Signal #2 Info : .32

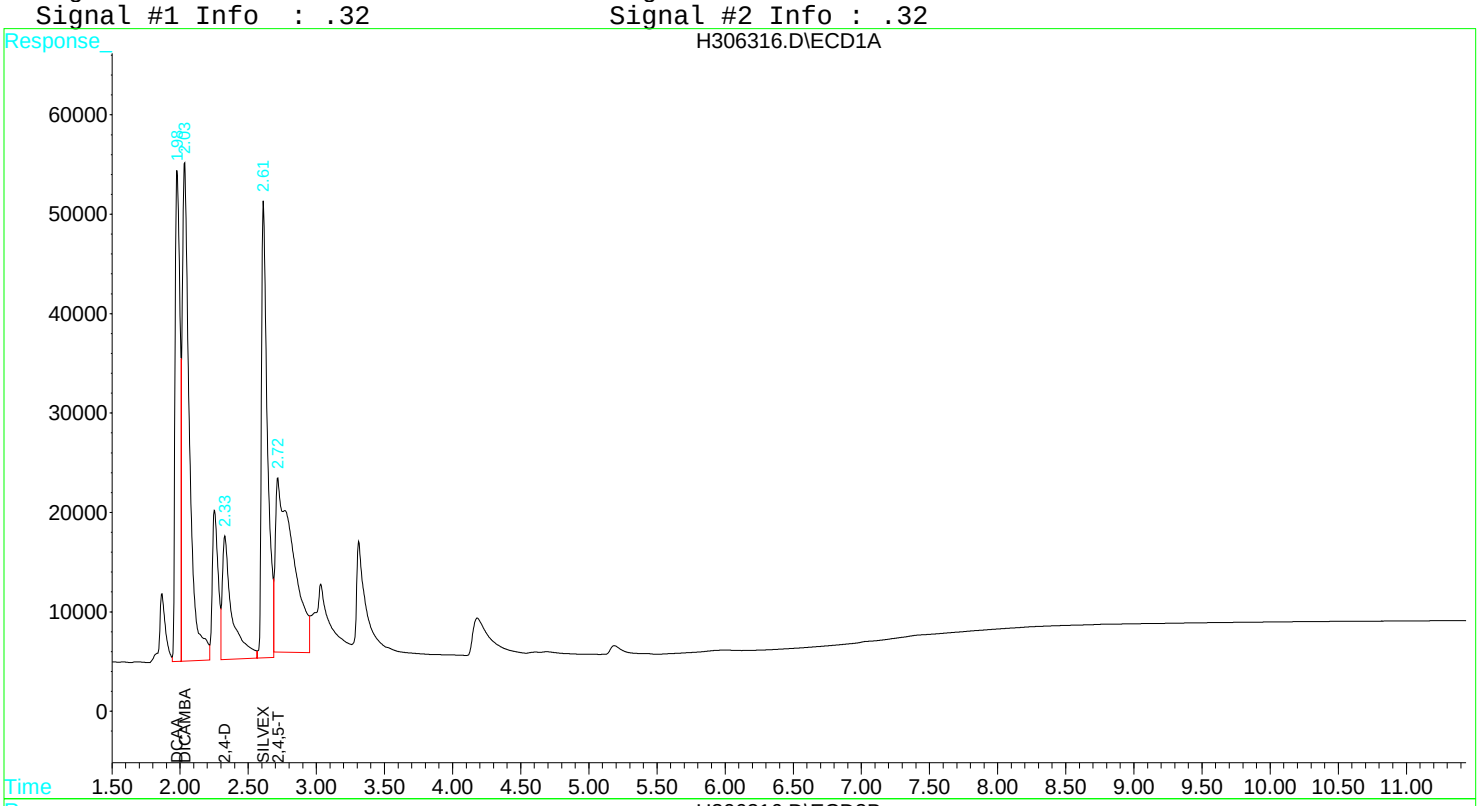
| | Compound | RT#1 | RT#2 | Resp#1 | Resp#2 | ug/mL | ug/mL |
|---|---|---|---|---|---|---|---|
| | System Monitoring Compounds | | | | | | |
| 1) S | DCAA | 1.98 | 2.37 | 1246096 | 1356104 | 0.458 | 0.429 |
| | Spiked Amount 0.500 | Range 30 - 150 | | Recovery = | | 91.60% | 85.80% |
| | Target Compounds | | | | | | |
| 2) | DICAMBA | 2.03 | 2.44 | 1878455 | 1333176 | 0.107 | 0.098 |
| 3) | 2,4-D | 2.33 | 2.83 | 616215 | 433200 | 0.164 | 0.146 |
| 4) | SILVEX | 2.61 | 3.18 | 1410197 | 1269680 | 0.115 | 0.116 |
| 5) | 2,4,5-T | 2.72 | 3.37 | 1570860 | 1156486 | 0.129m | 0.128m |

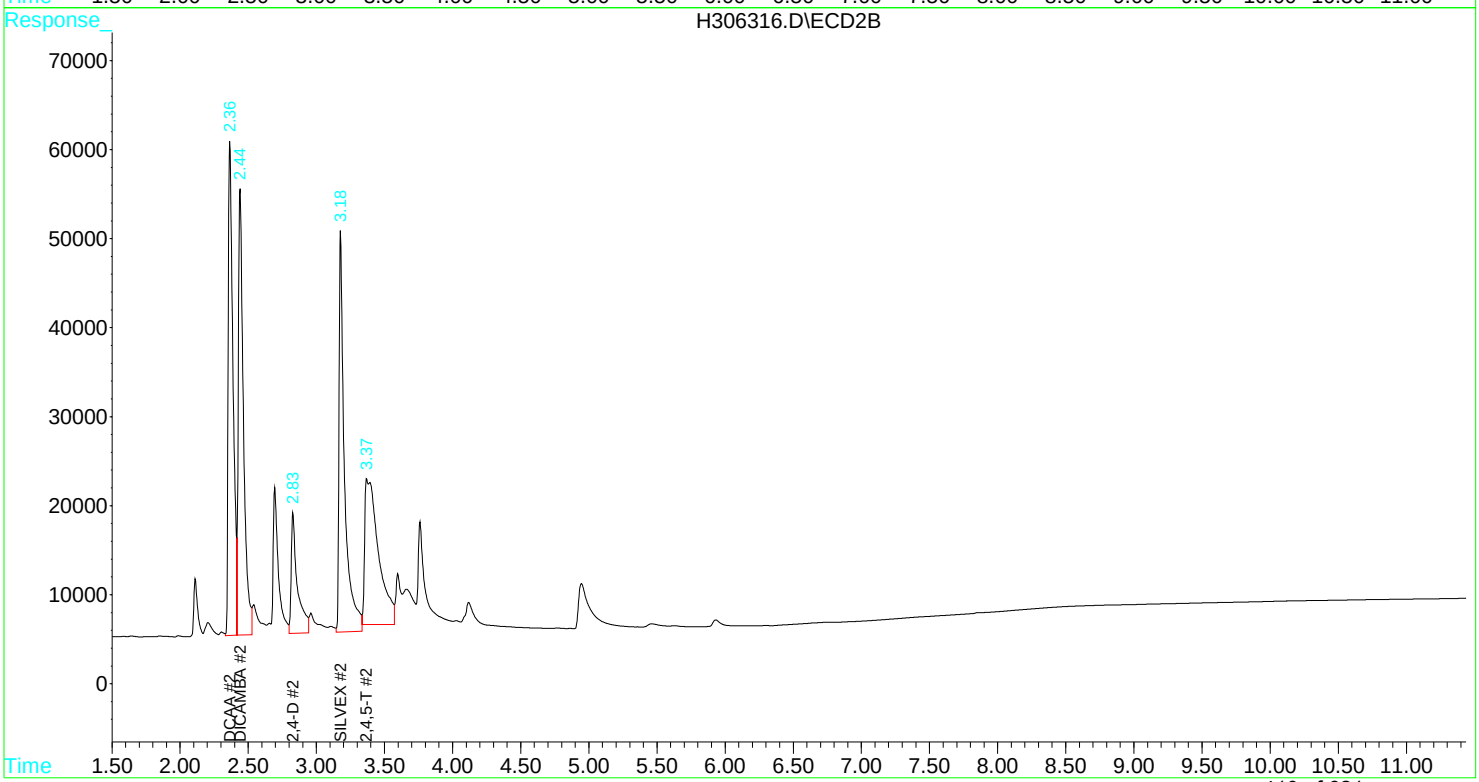
Quantitation Report

Signal #1 : C:\HPCHEM\1\DATA\091316\H306316.D\ECD1A.CH  Vial: 4
Signal #2 : C:\HPCHEM\1\DATA\091316\H306316.D\ECD2B.CH
Acq On  : 13 Sep 2016  11:59 am  Operator: AMC
Sample  : BI60441-BSD1  Inst  : GC ECD #3
Misc  : QBHERB3-091316A  Multiplr: 1.00
IntFile Signal #1: EVENTS.E  IntFile Signal #2: EVENTS2.E
Quant Time: Sep 13 13:50 2016  Quant Results File: H3083016.RES

Quant Method : C:\HPCHEM\1\METHODS\H3083016.M (Chemstation Integrator)
Title  : CLP-1&2, HERBICIDES 5/29/15
Last Update  : Wed Aug 31 09:41:36 2016
Response via : Multiple Level Calibration
DataAcq Meth : HERB3.M

Volume Inj.  : 1 uL
Signal #1 Phase : STX-CLPesticides1 Signal #2 Phase: STX-CLPesticides2
Signal #1 Info  : .32  Signal #2 Info : .32



# MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

## EPA 8151A

**V01_0-1.5**

| | | | |
|---|---|---|---|
| Laboratory: | York Analytical Laboratories, Inc. | SDG: | 16I0260 |
| Client: | Langan Engineering & Environmental Services (NYC) | Project: | 170301202 450 Union Street |
| Matrix: | Soil | | |
| Batch: | BI60441 | Laboratory ID: | BI60441-MS1 |
| Preparation: | EPA 3550B/8151A | Initial/Final: | 25 g / 25 mL |

Source Sample Name: V01_0-1.5

| COMPOUND | SPIKE ADDED (mg/kg dry) | SAMPLE CONCENTRATION (mg/kg dry) | MS CONCENTRATION (mg/kg dry) | MS % REC. # | QC LIMITS REC. |
|---|---|---|---|---|---|
| 2,4,5-T | 0.166 | ND | 0.133 | 80.0 | 30 - 150 |
| 2,4,5-TP (Silvex) | 0.166 | ND | 0.123 | 74.4 | 30 - 150 |
| 2,4-D | 0.166 | ND | 0.125 | 75.6 | 30 - 150 |

# Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\091316\H306322.D\ECD1A.CH Vial: 10
Signal #2 : C:\HPCHEM\1\DATA\091316\H306322.D\ECD2B.CH
Acq On : 13 Sep 2016 1:34 pm Operator: AMC
Sample : BI60441-MS1 Inst : GC ECD #3
Misc : QBHERB3-091316A Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Sep 13 14:02 2016 Quant Results File: H3083016.RES

Quant Method : C:\HPCHEM\1\METHODS\H3083016.M (Chemstation Integrator)
Title : CLP-1&2, HERBICIDES 5/29/15
Last Update : Wed Aug 31 09:41:36 2016
Response via : Initial Calibration
DataAcq Meth : HERB3.M

Volume Inj. : 1 uL
Signal #1 Phase : STX-CLPesticides1 Signal #2 Phase: STX-CLPesticides2
Signal #1 Info : .32 Signal #2 Info : .32

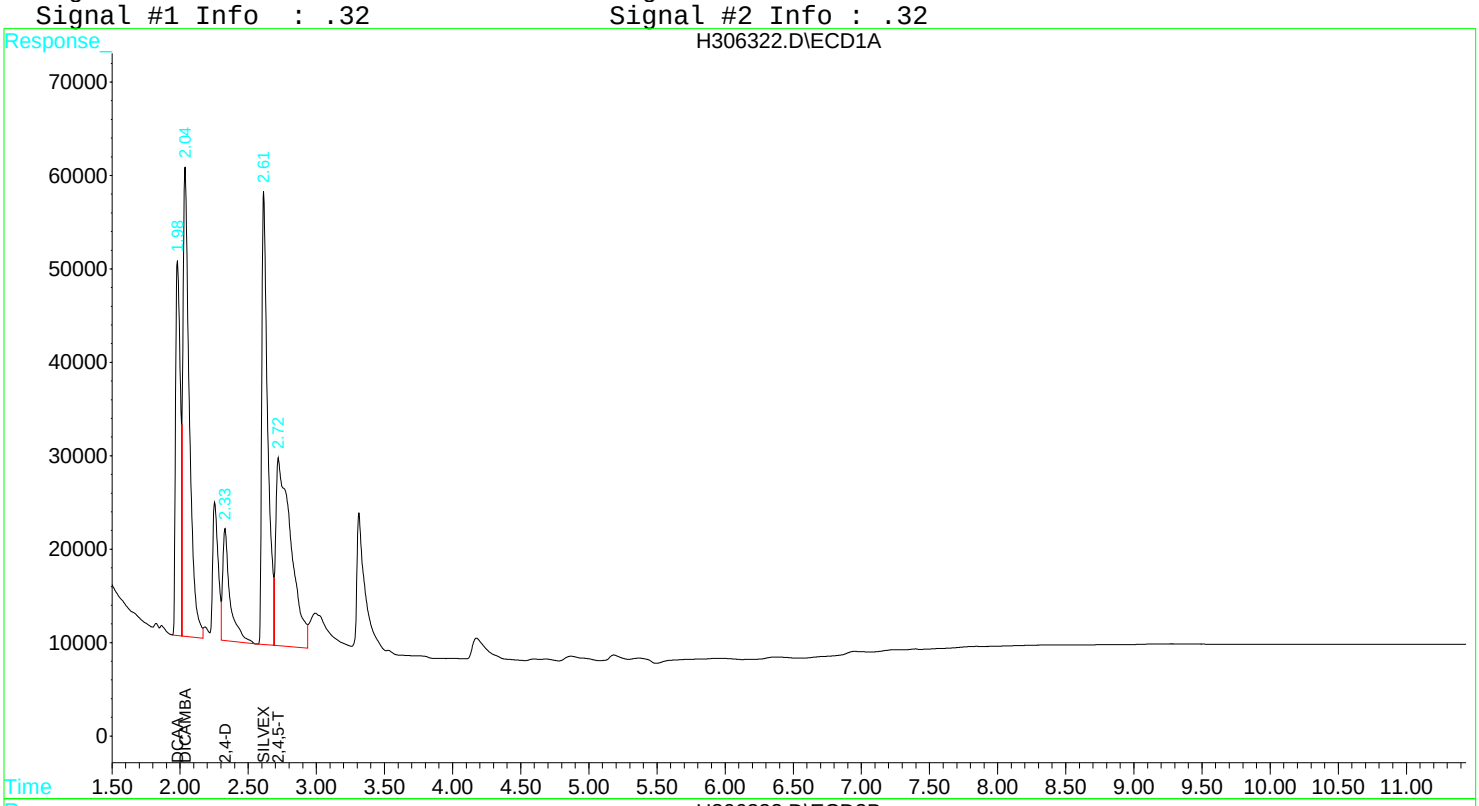
| | Compound | RT#1 | RT#2 | Resp#1 | Resp#2 | ug/mL | ug/mL |
|---|---|---|---|---|---|---|---|
| | System Monitoring Compounds | | | | | | |
| 1) S | DCAA | 1.98 | 2.37 | 967867 | 1101388 | 0.356 | 0.348 |
| | Spiked Amount 0.500 | Range 30 - 150 | | Recovery = | | 71.20% | 69.60% |
| | Target Compounds | | | | | | |
| 2) | DICAMBA | 2.04 | 2.44 | 1680879 | 1365615 | 0.096 | 0.100 |
| 3) | 2,4-D | 2.33 | 2.83 | 456558 | 436838 | 0.121 | 0.148 |
| 4) | SILVEX | 2.61 | 3.18 | 1460106 | 1468484 | 0.119 | 0.134 |
| 5) | 2,4,5-T | 2.72 | 3.37 | 1566346 | 1262355 | 0.128 | 0.140m |

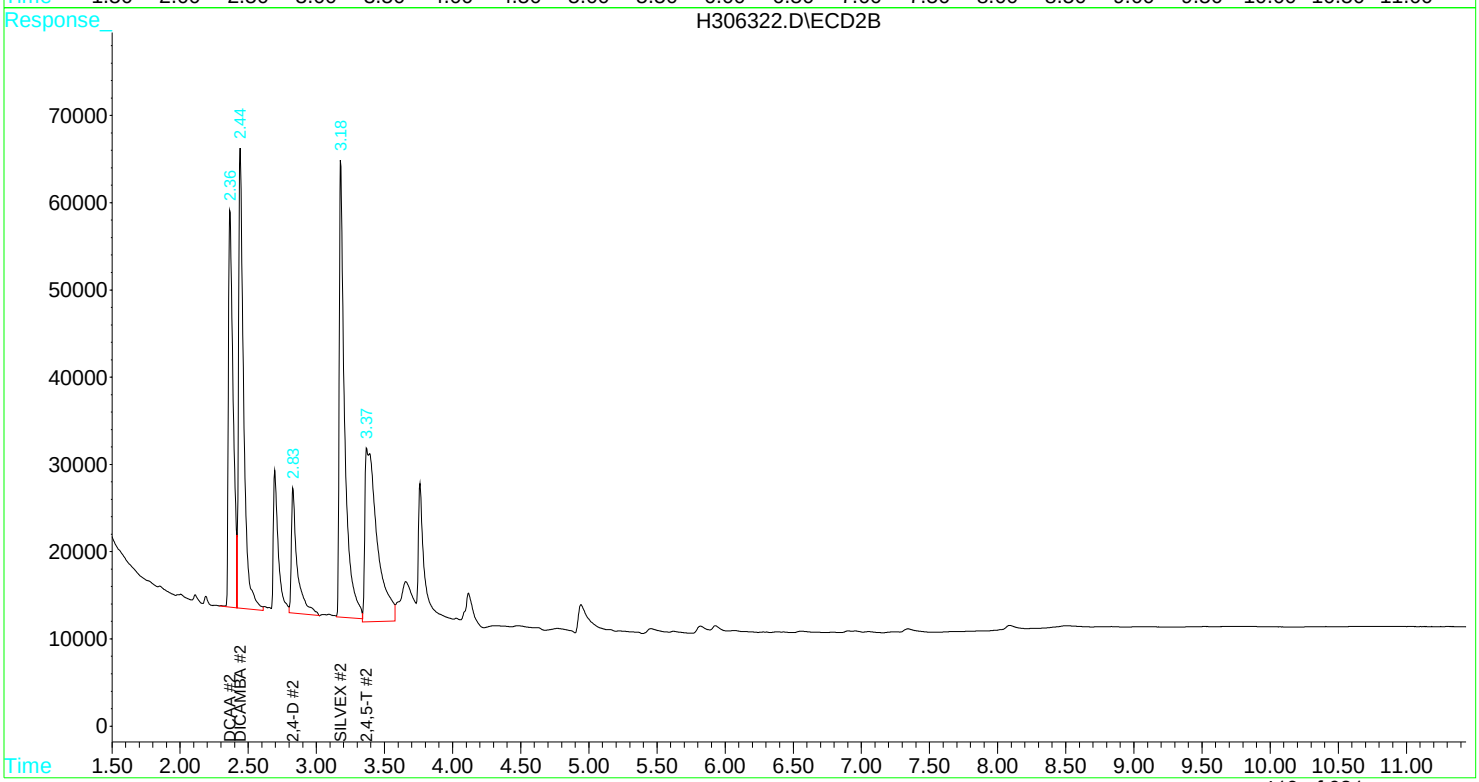
Quantitation Report

Signal #1 : C:\HPCHEM\1\DATA\091316\H306322.D\ECD1A.CH  Vial: 10
Signal #2 : C:\HPCHEM\1\DATA\091316\H306322.D\ECD2B.CH
Acq On  : 13 Sep 2016  1:34 pm  Operator: AMC
Sample  : BI60441-MS1  Inst  : GC ECD #3
Misc  : QBHERB3-091316A  Multiplr: 1.00
IntFile Signal #1: EVENTS.E  IntFile Signal #2: EVENTS2.E
Quant Time: Sep 13 14:02 2016  Quant Results File: H3083016.RES

Quant Method : C:\HPCHEM\1\METHODS\H3083016.M (Chemstation Integrator)
Title  : CLP-1&2, HERBICIDES 5/29/15
Last Update  : Wed Aug 31 09:41:36 2016
Response via : Multiple Level Calibration
DataAcq Meth : HERB3.M

Volume Inj.  : 1 uL
Signal #1 Phase : STX-CLPesticides1 Signal #2 Phase: STX-CLPesticides2
Signal #1 Info  : .32  Signal #2 Info : .32



# PREPARATION BENCH SHEET-SOILS/SOLIDS

BI60441

**York Analytical Laboratories, Inc.**

**Printed: 9/16/2016 11:26:13AM**

**Matrix: Soil** **Preparation: EPA 3550B/8151A** **Surrogate used: Y16E015**

| Lab Number | Analysis | Prepared | Initial (g) | Final (mL) | Spike ID | Source ID | ul Spike | ul Surrogate | Herbicides Information | | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | Optional C/U(Y/N) | pH after HCl | |
| 16I0161-02 A | Herbicides, Target List | 09/13/2016 07:14 | 25 | 25 | | | | 100 | Y | <2 | |
| 16I0161-04 A | Herbicides, Target List | 09/13/2016 07:14 | 25 | 25 | | | | 100 | Y | <2 | |
| 16I0161-06 A | Herbicides, Target List | 09/13/2016 07:14 | 25 | 25 | | | | 100 | Y | <2 | |
| 16I0161-08 A | Herbicides, Target List | 09/13/2016 07:14 | 25 | 25 | | | | 100 | Y | <2 | |
| 16I0260-01 E | Herbicides, Target List | 09/13/2016 07:14 | 25 | 25 | | | | 100 | Y | <2 | Added for BatchQC in: BI60441 |
| 16I0260-01 E | Herbicides, NJDEP/TCL | 09/13/2016 07:14 | 25 | 25 | | | | 100 | Y | <2 | |
| BI60441-BLK1 | QC | 09/13/2016 07:14 | 25 | 25 | | | | 100 | Y | <2 | |
| BI60441-BS1 | QC | 09/13/2016 07:14 | 25 | 25 | Y16G002 | | 20 | 100 | Y | <2 | |
| BI60441-BSD1 | QC | 09/13/2016 07:14 | 25 | 25 | Y16G002 | | 20 | 100 | Y | <2 | |
| BI60441-MS1 | QC | 09/13/2016 07:14 | 25 | 25 | Y16G002 | 16I0260-01 | 20 | 100 | Y | <2 | |

**Reagents:**

| ID Number | Description | Lot Number |
|---|---|---|
| Y15D051 | Hydrochloric Acid | 0000092175 |
| Y16C067 | 2,2,4-Trimethylpentane | MKBV6160V |
| Y16D031 | Sodium Sulfate, ACIDIFIED | ETHER #0000108187 |
| Y16D074 | ETHER, Anhydrous | Batch- WO099514 |
| Y16F166 | 2-(2-ethoxyethoxy) Ethanol | 0000133734 |
| Y16G110 | Methylene Chloride HW | DP971 |

| ID Number | Description | Lot Number |
|---|---|---|
| Y15F070 | Ottawa Sand Mix | 101614 |
| Y16C107 | Methanol | 0706U13 |
| Y16D068 | Potassium Hydroxide 37% | 0000087280 |
| Y16F060 | Diazald 99% | SHBD5563V |
| Y16G085 | HEXANE | 0000140377 |



**Preparation Performed by** CM **Date:** 09/13/2016 07:14 PUF Lot no.: _____

# Injection Log

Directory: C:\HPCHEM\1\DATA\091316

| Line | Vial | FileName | Multiplier | SampleName | Misc Info | Injected |
|---|---|---|---|---|---|---|
| 1 | 1 | H306313.D | 1. | SEQ-CCV1 | QBHERB3-091316A HERB MIX 0.10ug/mL | 13 Sep 2016 11:0 |
| 2 | 2 | H306314.D | 1. | BI60441-BLK1 | QBHERB3-091316A | 13 Sep 2016 11:2 |
| 3 | 3 | H306315.D | 1. | BI60441-BS1 | QBHERB3-091316A | 13 Sep 2016 11:4 |
| 4 | 4 | H306316.D | 1. | BI60441-BSD1 | QBHERB3-091316A | 13 Sep 2016 11:5 |
| 5 | 5 | H306317.D | 1. | 16I0161-02 | QBHERB3-091316A | 13 Sep 2016 12:1 |
| 6 | 6 | H306318.D | 1. | 16I0161-04 | QBHERB3-091316A | 13 Sep 2016 12:3 |
| 7 | 7 | H306319.D | 1. | 16I0161-06 | QBHERB3-091316A | 13 Sep 2016 12:4 |
| 8 | 8 | H306320.D | 1. | 16I0161-08 | QBHERB3-091316A | 13 Sep 2016 13:0 |
| 9 | 9 | H306321.D | 1. | 16I0260-01 | QBHERB3-091316A | 13 Sep 2016 13:1 |
| 10 | 10 | H306322.D | 1. | BI60441-MS1 | QBHERB3-091316A | 13 Sep 2016 13:3 |
| 11 | 1 | H306323.D | 1. | SEQ-CCV2 | QBHERB3-091316A HERB MIX 0.10ug/mL | 13 Sep 2016 14:0 |

York Analytical Laboratories, Inc.
SDG: 16I0260
CLASS: METALS
METHOD: EPA 6010C

# DATA PACKAGE COVER PAGE

## EPA 6010C

Laboratory: York Analytical Laboratories, Inc. SDG: 16I0260

Client: Langan Engineering & Environmental Services (NYC) Project: 170301202 450 Union Street

| Client Sample Id: | Lab Sample Id: |
|---|---|
| V01_0-1.5 | 16I0260-01 |

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed in the project narrative. Release of the data contained in this hardcopy data package and in computer-readable data submitted on diskette has been autorized by the Laboratory Manager or the Manager's designee, as verified by the

Signature: Name: Benjamin Gulizia

Date: 9/30/2016 Title: Laboratory Director

**FORM I** **INORGANIC ANALYSIS DATA SHEET**

**EPA 6010C**

**V01_0-1.5**

Laboratory: York Analytical Laboratories, Inc. SDG: 16I0260

Client: Langan Engineering & Environmental Services (NYC) Project: 170301202 450 Union Street

Matrix: Soil Laboratory ID: 16I0260-01 File ID: qbi091216bRE_1-101

Sampled: 09/07/16 13:00 Prepared: 09/12/16 10:18 Analyzed: 09/13/16 00:10

Solids: 96.56 Preparation: EPA 3050B Initial/Final: 0.5 g / 50 mL

Batch: BI60400 Sequence: Y6I1304 Calibration: 09/13/16 0 Instrument: WinLabICP

| CAS NO. | Analyte | Concentration (mg/kg dry) | Dilution Factor | Q | Method |
|---|---|---|---|---|---|
| 7429-90-5 | Aluminum | 2840 | 1 | | EPA 6010C |
| 7440-36-0 | Antimony | 0.518 | 1 | U | EPA 6010C |
| 7440-38-2 | Arsenic | 3.80 | 1 | | EPA 6010C |
| 7440-39-3 | Barium | 29.5 | 1 | | EPA 6010C |
| 7440-41-7 | Beryllium | 0.605 | 1 | | EPA 6010C |
| 7440-43-9 | Cadmium | 0.311 | 1 | U | EPA 6010C |
| 7440-70-2 | Calcium | 1400 | 1 | B | EPA 6010C |
| 7440-47-3 | Chromium | 2.18 | 1 | | EPA 6010C |
| 7440-48-4 | Cobalt | 3.16 | 1 | | EPA 6010C |
| 7440-50-8 | Copper | 17.5 | 1 | | EPA 6010C |
| 7439-89-6 | Iron | 8390 | 1 | | EPA 6010C |
| 7439-92-1 | Lead | 23.7 | 1 | B | EPA 6010C |
| 7439-95-4 | Magnesium | 1770 | 1 | | EPA 6010C |
| 7439-96-5 | Manganese | 224 | 1 | | EPA 6010C |
| 7440-02-0 | Nickel | 2.83 | 1 | | EPA 6010C |
| 7440-09-7 | Potassium | 1970 | 1 | | EPA 6010C |
| 7782-49-2 | Selenium | 1.04 | 1 | U | EPA 6010C |
| 7440-22-4 | Silver | 0.518 | 1 | U | EPA 6010C |
| 7440-23-5 | Sodium | 122 | 1 | | EPA 6010C |
| 7440-28-0 | Thallium | 1.04 | 1 | U | EPA 6010C |
| 7440-62-2 | Vanadium | 7.85 | 1 | | EPA 6010C |
| 7440-66-6 | Zinc | 75.1 | 1 | | EPA 6010C |

# INITIAL AND CONTINUING CALIBRATION CHECK

## EPA 6010C

Laboratory: York Analytical Laboratories, Inc.
SDG: 16I0260
Client: Langan Engineering & Environmental Services (NYC)
Project: 170301202 450 Union Street
Instrument ID: WinLabICP
Calibration: 09/12/16
Control Limt: +/- 10.00%
Sequence: Y6I1304

| Lab Sample ID | Analyte | True | Found | %R | Units | Method |
|---|---|---|---|---|---|---|
| Y6I1304-ICV1 | Aluminum | 10.0 | 9.93 | 99.3 | ug/mL | EPA 6010C |
| | Antimony | 0.250 | 0.264 | 105 | ug/mL | EPA 6010C |
| | Arsenic | 0.250 | 0.256 | 102 | ug/mL | EPA 6010C |
| | Barium | 10.0 | 10.5 | 105 | ug/mL | EPA 6010C |
| | Beryllium | 0.250 | 0.256 | 102 | ug/mL | EPA 6010C |
| | Cadmium | 0.125 | 0.125 | 100 | ug/mL | EPA 6010C |
| | Calcium | 25.0 | 25.1 | 101 | ug/mL | EPA 6010C |
| | Chromium | 1.00 | 1.03 | 103 | ug/mL | EPA 6010C |
| | Cobalt | 2.50 | 2.60 | 104 | ug/mL | EPA 6010C |
| | Copper | 1.25 | 1.30 | 104 | ug/mL | EPA 6010C |
| | Iron | 5.00 | 5.05 | 101 | ug/mL | EPA 6010C |
| | Lead | 0.250 | 0.258 | 103 | ug/mL | EPA 6010C |
| | Magnesium | 25.0 | 25.1 | 100 | ug/mL | EPA 6010C |
| | Manganese | 2.50 | 2.61 | 104 | ug/mL | EPA 6010C |
| | Nickel | 2.50 | 2.56 | 102 | ug/mL | EPA 6010C |
| | Potassium | 5.00 | 5.09 | 102 | ug/mL | EPA 6010C |
| | Selenium | 0.250 | 0.262 | 105 | ug/mL | EPA 6010C |
| | Silver | 1.25 | 1.30 | 104 | ug/mL | EPA 6010C |
| | Sodium | 25.0 | 24.8 | 99.1 | ug/mL | EPA 6010C |
| | Thallium | 0.250 | 0.249 | 99.5 | ug/mL | EPA 6010C |
| | Vanadium | 2.50 | 2.55 | 102 | ug/mL | EPA 6010C |
| | Zinc | 2.50 | 2.57 | 103 | ug/mL | EPA 6010C |
| Y6I1304-CCV1 | Aluminum | 10.0 | 9.90 | 99.0 | ug/mL | EPA 6010C |
| | Antimony | 0.250 | 0.259 | 104 | ug/mL | EPA 6010C |
| | Arsenic | 0.250 | 0.253 | 101 | ug/mL | EPA 6010C |
| | Barium | 10.0 | 10.8 | 108 | ug/mL | EPA 6010C |
| | Beryllium | 0.250 | 0.260 | 104 | ug/mL | EPA 6010C |
| | Cadmium | 0.125 | 0.130 | 104 | ug/mL | EPA 6010C |
| | Calcium | 25.0 | 25.6 | 102 | ug/mL | EPA 6010C |
| | Chromium | 1.00 | 1.05 | 105 | ug/mL | EPA 6010C |
| | Cobalt | 2.50 | 2.64 | 106 | ug/mL | EPA 6010C |
| | Copper | 1.25 | 1.30 | 104 | ug/mL | EPA 6010C |
| | Iron | 5.00 | 5.07 | 101 | ug/mL | EPA 6010C |
| | Lead | 0.250 | 0.263 | 105 | ug/mL | EPA 6010C |
| | Magnesium | 25.0 | 25.6 | 102 | ug/mL | EPA 6010C |
| | Manganese | 2.50 | 2.66 | 107 | ug/mL | EPA 6010C |
| | Nickel | 2.50 | 2.58 | 103 | ug/mL | EPA 6010C |
| | Potassium | 5.00 | 5.12 | 102 | ug/mL | EPA 6010C |

# INITIAL AND CONTINUING CALIBRATION CHECK

## EPA 6010C

Laboratory: York Analytical Laboratories, Inc.
SDG: 16I0260
Client: Langan Engineering & Environmental Services (NYC)
Project: 170301202 450 Union Street
Instrument ID: WinLabICP
Calibration: 09/12/16
Control Limt: +/- 10.00%
Sequence: Y6I1304

| Lab Sample ID | Analyte | True | Found | %R | Units | Method |
|---|---|---|---|---|---|---|
| Y6I1304-CCV1 | Selenium | 0.250 | 0.261 | 105 | ug/mL | EPA 6010C |
| | Silver | 1.25 | 1.30 | 104 | ug/mL | EPA 6010C |
| | Sodium | 25.0 | 25.7 | 103 | ug/mL | EPA 6010C |
| | Thallium | 0.250 | 0.248 | 99.3 | ug/mL | EPA 6010C |
| | Vanadium | 2.50 | 2.59 | 104 | ug/mL | EPA 6010C |
| | Zinc | 2.50 | 2.65 | 106 | ug/mL | EPA 6010C |
| Y6I1304-CCV8 | Aluminum | 10.0 | 9.82 | 98.2 | ug/mL | EPA 6010C |
| | Antimony | 0.250 | 0.252 | 101 | ug/mL | EPA 6010C |
| | Arsenic | 0.250 | 0.250 | 99.9 | ug/mL | EPA 6010C |
| | Barium | 10.0 | 10.4 | 104 | ug/mL | EPA 6010C |
| | Beryllium | 0.250 | 0.253 | 101 | ug/mL | EPA 6010C |
| | Cadmium | 0.125 | 0.125 | 100 | ug/mL | EPA 6010C |
| | Calcium | 25.0 | 25.4 | 101 | ug/mL | EPA 6010C |
| | Chromium | 1.00 | 1.03 | 103 | ug/mL | EPA 6010C |
| | Cobalt | 2.50 | 2.59 | 104 | ug/mL | EPA 6010C |
| | Copper | 1.25 | 1.27 | 102 | ug/mL | EPA 6010C |
| | Iron | 5.00 | 5.02 | 100 | ug/mL | EPA 6010C |
| | Lead | 0.250 | 0.256 | 103 | ug/mL | EPA 6010C |
| | Magnesium | 25.0 | 25.1 | 101 | ug/mL | EPA 6010C |
| | Manganese | 2.50 | 2.57 | 103 | ug/mL | EPA 6010C |
| | Nickel | 2.50 | 2.53 | 101 | ug/mL | EPA 6010C |
| | Potassium | 5.00 | 5.07 | 101 | ug/mL | EPA 6010C |
| | Selenium | 0.250 | 0.261 | 104 | ug/mL | EPA 6010C |
| | Silver | 1.25 | 1.28 | 102 | ug/mL | EPA 6010C |
| | Sodium | 25.0 | 25.4 | 102 | ug/mL | EPA 6010C |
| | Thallium | 0.250 | 0.243 | 97.2 | ug/mL | EPA 6010C |
| | Vanadium | 2.50 | 2.52 | 101 | ug/mL | EPA 6010C |
| | Zinc | 2.50 | 2.58 | 103 | ug/mL | EPA 6010C |
| Y6I1304-CCV7 | Aluminum | 10.0 | 9.53 | 95.3 | ug/mL | EPA 6010C |
| | Antimony | 0.250 | 0.245 | 98.0 | ug/mL | EPA 6010C |
| | Arsenic | 0.250 | 0.254 | 102 | ug/mL | EPA 6010C |
| | Barium | 10.0 | 10.4 | 104 | ug/mL | EPA 6010C |
| | Beryllium | 0.250 | 0.258 | 103 | ug/mL | EPA 6010C |
| | Cadmium | 0.125 | 0.125 | 100 | ug/mL | EPA 6010C |
| | Calcium | 25.0 | 25.4 | 101 | ug/mL | EPA 6010C |
| | Chromium | 1.00 | 1.04 | 104 | ug/mL | EPA 6010C |
| | Cobalt | 2.50 | 2.57 | 103 | ug/mL | EPA 6010C |
| | Copper | 1.25 | 1.29 | 103 | ug/mL | EPA 6010C |

# INITIAL AND CONTINUING CALIBRATION CHECK

## EPA 6010C

Laboratory: York Analytical Laboratories, Inc.
SDG: 16I0260
Client: Langan Engineering & Environmental Services (NYC)
Project: 170301202 450 Union Street
Instrument ID: WinLabICP
Calibration: 09/12/16
Control Limt: +/- 10.00%
Sequence: Y6I1304

| Lab Sample ID | Analyte | True | Found | %R | Units | Method |
|---|---|---|---|---|---|---|
| Y6I1304-CCV7 | Iron | 5.00 | 5.18 | 104 | ug/mL | EPA 6010C |
| | Lead | 0.250 | 0.260 | 104 | ug/mL | EPA 6010C |
| | Magnesium | 25.0 | 25.9 | 104 | ug/mL | EPA 6010C |
| | Manganese | 2.50 | 2.60 | 104 | ug/mL | EPA 6010C |
| | Nickel | 2.50 | 2.52 | 101 | ug/mL | EPA 6010C |
| | Potassium | 5.00 | 5.12 | 102 | ug/mL | EPA 6010C |
| | Selenium | 0.250 | 0.250 | 99.9 | ug/mL | EPA 6010C |
| | Silver | 1.25 | 1.30 | 104 | ug/mL | EPA 6010C |
| | Sodium | 25.0 | 25.3 | 101 | ug/mL | EPA 6010C |
| | Thallium | 0.250 | 0.231 | 92.3 | ug/mL | EPA 6010C |
| | Vanadium | 2.50 | 2.57 | 103 | ug/mL | EPA 6010C |
| | Zinc | 2.50 | 2.54 | 102 | ug/mL | EPA 6010C |
| Y6I1304-CCV9 | Aluminum | 10.0 | 9.97 | 99.7 | ug/mL | EPA 6010C |
| | Antimony | 0.250 | 0.250 | 100 | ug/mL | EPA 6010C |
| | Arsenic | 0.250 | 0.258 | 103 | ug/mL | EPA 6010C |
| | Barium | 10.0 | 10.3 | 103 | ug/mL | EPA 6010C |
| | Beryllium | 0.250 | 0.256 | 102 | ug/mL | EPA 6010C |
| | Cadmium | 0.125 | 0.127 | 101 | ug/mL | EPA 6010C |
| | Calcium | 25.0 | 25.5 | 102 | ug/mL | EPA 6010C |
| | Chromium | 1.00 | 1.04 | 104 | ug/mL | EPA 6010C |
| | Cobalt | 2.50 | 2.58 | 103 | ug/mL | EPA 6010C |
| | Copper | 1.25 | 1.29 | 103 | ug/mL | EPA 6010C |
| | Iron | 5.00 | 5.16 | 103 | ug/mL | EPA 6010C |
| | Lead | 0.250 | 0.259 | 103 | ug/mL | EPA 6010C |
| | Magnesium | 25.0 | 25.9 | 104 | ug/mL | EPA 6010C |
| | Manganese | 2.50 | 2.57 | 103 | ug/mL | EPA 6010C |
| | Nickel | 2.50 | 2.54 | 102 | ug/mL | EPA 6010C |
| | Potassium | 5.00 | 5.10 | 102 | ug/mL | EPA 6010C |
| | Selenium | 0.250 | 0.246 | 98.2 | ug/mL | EPA 6010C |
| | Silver | 1.25 | 1.30 | 104 | ug/mL | EPA 6010C |
| | Sodium | 25.0 | 25.6 | 102 | ug/mL | EPA 6010C |
| | Thallium | 0.250 | 0.233 | 93.1 | ug/mL | EPA 6010C |
| | Vanadium | 2.50 | 2.53 | 101 | ug/mL | EPA 6010C |
| | Zinc | 2.50 | 2.56 | 102 | ug/mL | EPA 6010C |
| Y6I1304-CCVA | Aluminum | 10.0 | 9.52 | 95.2 | ug/mL | EPA 6010C |
| | Antimony | 0.250 | 0.246 | 98.3 | ug/mL | EPA 6010C |
| | Arsenic | 0.250 | 0.251 | 100 | ug/mL | EPA 6010C |
| | Barium | 10.0 | 10.2 | 102 | ug/mL | EPA 6010C |

# INITIAL AND CONTINUING CALIBRATION CHECK

## EPA 6010C

Laboratory: York Analytical Laboratories, Inc.
SDG: 16I0260
Client: Langan Engineering & Environmental Services (NYC)
Project: 170301202 450 Union Street
Instrument ID: WinLabICP
Calibration: 09/13/16
Control Limt: +/- 10.00%
Sequence: Y6I1304

| Lab Sample ID | Analyte | True | Found | %R | Units | Method |
|---|---|---|---|---|---|---|
| Y6I1304-CCVA | Beryllium | 0.250 | 0.255 | 102 | ug/mL | EPA 6010C |
| | Cadmium | 0.125 | 0.123 | 98.6 | ug/mL | EPA 6010C |
| | Calcium | 25.0 | 25.4 | 101 | ug/mL | EPA 6010C |
| | Chromium | 1.00 | 1.02 | 102 | ug/mL | EPA 6010C |
| | Cobalt | 2.50 | 2.53 | 101 | ug/mL | EPA 6010C |
| | Copper | 1.25 | 1.28 | 102 | ug/mL | EPA 6010C |
| | Iron | 5.00 | 5.11 | 102 | ug/mL | EPA 6010C |
| | Lead | 0.250 | 0.252 | 101 | ug/mL | EPA 6010C |
| | Magnesium | 25.0 | 25.5 | 102 | ug/mL | EPA 6010C |
| | Manganese | 2.50 | 2.56 | 102 | ug/mL | EPA 6010C |
| | Nickel | 2.50 | 2.50 | 99.8 | ug/mL | EPA 6010C |
| | Potassium | 5.00 | 5.06 | 101 | ug/mL | EPA 6010C |
| | Selenium | 0.250 | 0.245 | 98.1 | ug/mL | EPA 6010C |
| | Silver | 1.25 | 1.28 | 103 | ug/mL | EPA 6010C |
| | Sodium | 25.0 | 25.2 | 101 | ug/mL | EPA 6010C |
| | Thallium | 0.250 | 0.234 | 93.4 | ug/mL | EPA 6010C |
| | Vanadium | 2.50 | 2.52 | 101 | ug/mL | EPA 6010C |
| | Zinc | 2.50 | 2.50 | 99.8 | ug/mL | EPA 6010C |

* Values outside of QC limits

# CRDL STANDARD

## EPA 6010C

Laboratory: York Analytical Laboratories, Inc.
SDG: 16I0260
Client: Langan Engineering & Environmental Services (NYC)
Project: 170301202 450 Union Street
Instrument ID: WinLabICP
Calibration: 09/12/16
Sequence: Y6I1304

| Lab Sample ID | Analyte | True | Found | %R | Units | QC Limts |
|---|---|---|---|---|---|---|
| Y6I1304-CRL1 | Aluminum | | -0.140 | | ug/mL | 70 - 130 |
| | Antimony | 0.0100 | 0.015 | 147 * | ug/mL | 70 - 130 |
| | Arsenic | 0.0100 | -0.001 | * | ug/mL | 70 - 130 |
| | Barium | 0.0100 | 0.011 | 109 | ug/mL | 70 - 130 |
| | Beryllium | 0.000500 | 0.0005 | 94.0 | ug/mL | 70 - 130 |
| | Cadmium | 0.00300 | 0.003 | 101 | ug/mL | 70 - 130 |
| | Calcium | | 0.107 | | ug/mL | 70 - 130 |
| | Chromium | 0.00500 | 0.005 | 105 | ug/mL | 70 - 130 |
| | Cobalt | 0.00500 | 0.005 | 103 | ug/mL | 70 - 130 |
| | Copper | 0.00500 | 0.005 | 93.9 | ug/mL | 70 - 130 |
| | Iron | | 0.004 | | ug/mL | 70 - 130 |
| | Lead | 0.00300 | 0.003 | 103 | ug/mL | 70 - 130 |
| | Magnesium | | -0.004 | | ug/mL | 70 - 130 |
| | Manganese | 0.00500 | 0.005 | 102 | ug/mL | 70 - 130 |
| | Nickel | 0.00500 | 0.003 | 56.2 * | ug/mL | 70 - 130 |
| | Potassium | | -0.031 | | ug/mL | 70 - 130 |
| | Selenium | 0.0100 | 0.008 | 84.6 | ug/mL | 70 - 130 |
| | Silver | 0.00500 | 0.006 | 121 | ug/mL | 70 - 130 |
| | Sodium | | -0.147 | | ug/mL | 70 - 130 |
| | Thallium | 0.0100 | 0.003 | 34.3 * | ug/mL | 70 - 130 |
| | Vanadium | 0.00500 | 0.005 | 97.5 | ug/mL | 70 - 130 |
| | Zinc | 0.00500 | 0.0001 | 2.77 * | ug/mL | 70 - 130 |
| Y6I1304-CRL2 | Aluminum | 0.0500 | -0.111 | * | ug/mL | 70 - 130 |
| | Antimony | | 0.0005 | | ug/mL | 70 - 130 |
| | Arsenic | | -0.007 | | ug/mL | 70 - 130 |
| | Barium | | 0.000008 | | ug/mL | 70 - 130 |
| | Beryllium | | -0.00007 | | ug/mL | 70 - 130 |
| | Cadmium | | -0.0003 | | ug/mL | 70 - 130 |

# CRDL STANDARD

## EPA 6010C

Laboratory: York Analytical Laboratories, Inc. SDG: 16I0260

Client: Langan Engineering & Environmental Services (NYC) Project: 170301202 450 Union Street

Instrument ID: WinLabICP Calibration: 09/12/16

Sequence: Y6I1304

| Lab Sample ID | Analyte | True | Found | %R | Units | QC Limts |
|---|---|---|---|---|---|---|
| Y6I1304-CRL2 | Calcium | 0.100 | 0.084 | 83.8 | ug/mL | 70 - 130 |
| | Chromium | | 0.0003 | | ug/mL | 70 - 130 |
| | Cobalt | | 0.0001 | | ug/mL | 70 - 130 |
| | Copper | | -0.001 | | ug/mL | 70 - 130 |
| | Iron | 0.200 | 0.210 | 105 | ug/mL | 70 - 130 |
| | Lead | | 0.0005 | | ug/mL | 70 - 130 |
| | Magnesium | 0.0500 | 0.060 | 120 | ug/mL | 70 - 130 |
| | Manganese | | -0.00006 | | ug/mL | 70 - 130 |
| | Nickel | | -0.002 | | ug/mL | 70 - 130 |
| | Potassium | 0.200 | 0.177 | 88.5 | ug/mL | 70 - 130 |
| | Selenium | | 0.008 | | ug/mL | 70 - 130 |
| | Silver | | -0.0006 | | ug/mL | 70 - 130 |
| | Sodium | 0.200 | 0.082 | 41.2 * | ug/mL | 70 - 130 |
| | Thallium | | -0.003 | | ug/mL | 70 - 130 |
| | Vanadium | | -0.00006 | | ug/mL | 70 - 130 |
| | Zinc | | -0.006 | | ug/mL | 70 - 130 |

* Values outside of QC limits

# FORM I

# BLANKS

## EPA 6010C

Laboratory: York Analytical Laboratories, Inc. SDG: 16I0260

Client: Langan Engineering & Environmental Services (NYC

Instrument ID: WinLabICP Project: 170301202 450 Union Street

Sequence: Y6I1304 Calibration: 09/12/16 1

| Lab Sample ID | Analyte | Found | MRL | Units | C | Method |
|---|---|---|---|---|---|---|
| Y6I1304-ICB1 | Aluminum | -0.130 | 0.050 | ug/mL | | EPA 6010C |
| | Antimony | 0.004 | 0.005 | ug/mL | | EPA 6010C |
| | Arsenic | -0.002 | 0.010 | ug/mL | | EPA 6010C |
| | Barium | 0.0002 | 0.010 | ug/mL | | EPA 6010C |
| | Beryllium | -0.0001 | 0.001 | ug/mL | | EPA 6010C |
| | Cadmium | -0.0002 | 0.003 | ug/mL | | EPA 6010C |
| | Calcium | 0.057 | 0.050 | ug/mL | * | EPA 6010C |
| | Chromium | 0.00002 | 0.005 | ug/mL | | EPA 6010C |
| | Cobalt | -0.00003 | 0.005 | ug/mL | | EPA 6010C |
| | Copper | 0.00003 | 0.005 | ug/mL | | EPA 6010C |
| | Iron | -0.004 | 0.020 | ug/mL | | EPA 6010C |
| | Lead | 0.00005 | 0.003 | ug/mL | | EPA 6010C |
| | Magnesium | -0.014 | 0.050 | ug/mL | | EPA 6010C |
| | Manganese | -0.00003 | 0.005 | ug/mL | | EPA 6010C |
| | Nickel | -0.002 | 0.005 | ug/mL | | EPA 6010C |
| | Potassium | -0.028 | 0.050 | ug/mL | | EPA 6010C |
| | Selenium | -0.0006 | 0.010 | ug/mL | | EPA 6010C |
| | Silver | -0.00007 | 0.005 | ug/mL | | EPA 6010C |
| | Sodium | -0.157 | 0.100 | ug/mL | | EPA 6010C |
| | Thallium | 0.002 | 0.010 | ug/mL | | EPA 6010C |
| | Vanadium | -0.00006 | 0.010 | ug/mL | | EPA 6010C |
| | Zinc | -0.005 | 0.010 | ug/mL | | EPA 6010C |
| Y6I1304-CCB1 | Aluminum | -0.131 | 0.050 | ug/mL | | EPA 6010C |
| | Antimony | 0.003 | 0.005 | ug/mL | | EPA 6010C |
| | Arsenic | -0.007 | 0.010 | ug/mL | | EPA 6010C |
| | Barium | -0.00007 | 0.010 | ug/mL | | EPA 6010C |
| | Beryllium | -0.0002 | 0.001 | ug/mL | | EPA 6010C |
| | Cadmium | -0.0003 | 0.003 | ug/mL | | EPA 6010C |
| | Calcium | 0.044 | 0.050 | ug/mL | | EPA 6010C |
| | Chromium | 0.0004 | 0.005 | ug/mL | | EPA 6010C |
| | Cobalt | -0.0002 | 0.005 | ug/mL | | EPA 6010C |
| | Copper | -0.00007 | 0.005 | ug/mL | | EPA 6010C |
| | Iron | 0.005 | 0.020 | ug/mL | | EPA 6010C |

# FORM I

# BLANKS

## EPA 6010C

Laboratory: York Analytical Laboratories, Inc.

SDG: 16I0260

Client: Langan Engineering & Environmental Services (NYC

Instrument ID: WinLabICP

Project: 170301202 450 Union Street

Sequence: Y6I1304

Calibration: 09/12/16 1

| Lab Sample ID | Analyte | Found | MRL | Units | C | Method |
|---|---|---|---|---|---|---|
| Y6I1304-CCB1 | Lead | 0.00004 | 0.003 | ug/mL | | EPA 6010C |
| | Magnesium | -0.006 | 0.050 | ug/mL | | EPA 6010C |
| | Manganese | -0.00007 | 0.005 | ug/mL | | EPA 6010C |
| | Nickel | -0.004 | 0.005 | ug/mL | | EPA 6010C |
| | Potassium | -0.008 | 0.050 | ug/mL | | EPA 6010C |
| | Selenium | 0.001 | 0.010 | ug/mL | | EPA 6010C |
| | Silver | -0.00009 | 0.005 | ug/mL | | EPA 6010C |
| | Sodium | -0.260 | 0.100 | ug/mL | | EPA 6010C |
| | Thallium | -0.004 | 0.010 | ug/mL | | EPA 6010C |
| | Vanadium | -0.00002 | 0.010 | ug/mL | | EPA 6010C |
| | Zinc | -0.005 | 0.010 | ug/mL | | EPA 6010C |
| Y6I1304-CCB7 | Aluminum | -0.130 | 0.050 | ug/mL | | EPA 6010C |
| | Antimony | -0.0006 | 0.005 | ug/mL | | EPA 6010C |
| | Arsenic | -0.0004 | 0.010 | ug/mL | | EPA 6010C |
| | Barium | -0.0001 | 0.010 | ug/mL | | EPA 6010C |
| | Beryllium | -0.00007 | 0.001 | ug/mL | | EPA 6010C |
| | Cadmium | -0.0004 | 0.003 | ug/mL | | EPA 6010C |
| | Calcium | 0.049 | 0.050 | ug/mL | | EPA 6010C |
| | Chromium | 0.0002 | 0.005 | ug/mL | | EPA 6010C |
| | Cobalt | -0.00006 | 0.005 | ug/mL | | EPA 6010C |
| | Copper | 0.0001 | 0.005 | ug/mL | | EPA 6010C |
| | Iron | -0.002 | 0.020 | ug/mL | | EPA 6010C |
| | Lead | 0.004 | 0.003 | ug/mL | * | EPA 6010C |
| | Magnesium | -0.0006 | 0.050 | ug/mL | | EPA 6010C |
| | Manganese | -0.0001 | 0.005 | ug/mL | | EPA 6010C |
| | Nickel | -0.002 | 0.005 | ug/mL | | EPA 6010C |
| | Potassium | 0.018 | 0.050 | ug/mL | | EPA 6010C |
| | Selenium | 0.001 | 0.010 | ug/mL | | EPA 6010C |
| | Silver | -0.0002 | 0.005 | ug/mL | | EPA 6010C |
| | Sodium | -0.193 | 0.100 | ug/mL | | EPA 6010C |
| | Thallium | 0.001 | 0.010 | ug/mL | | EPA 6010C |
| | Vanadium | -0.00004 | 0.010 | ug/mL | | EPA 6010C |
| | Zinc | -0.005 | 0.010 | ug/mL | | EPA 6010C |

# FORM I

# BLANKS

## EPA 6010C

Laboratory: York Analytical Laboratories, Inc.

SDG: 16I0260

Client: Langan Engineering & Environmental Services (NYC

Instrument ID: WinLabICP

Project: 170301202 450 Union Street

Sequence: Y6I1304

Calibration: 09/12/16 2

| Lab Sample ID | Analyte | Found | MRL | Units | C | Method |
|---|---|---|---|---|---|---|
| BI60400-BLK1 | Aluminum | -16.5 | 5.00 | mg/kg wet | | EPA 6010C |
| | Antimony | -0.151 | 0.500 | mg/kg wet | | EPA 6010C |
| | Arsenic | -0.964 | 1.00 | mg/kg wet | | EPA 6010C |
| | Barium | -0.034 | 1.00 | mg/kg wet | | EPA 6010C |
| | Beryllium | -0.013 | 0.100 | mg/kg wet | | EPA 6010C |
| | Cadmium | -0.035 | 0.300 | mg/kg wet | | EPA 6010C |
| | Calcium | 5.43 | 5.00 | mg/kg wet | * | EPA 6010C |
| | Chromium | 0.008 | 0.500 | mg/kg wet | | EPA 6010C |
| | Cobalt | -0.019 | 0.500 | mg/kg wet | | EPA 6010C |
| | Copper | -0.002 | 0.500 | mg/kg wet | | EPA 6010C |
| | Iron | 0.236 | 2.00 | mg/kg wet | | EPA 6010C |
| | Lead | 0.361 | 0.300 | mg/kg wet | * | EPA 6010C |
| | Magnesium | -0.511 | 5.00 | mg/kg wet | | EPA 6010C |
| | Manganese | -0.010 | 0.500 | mg/kg wet | | EPA 6010C |
| | Nickel | -0.234 | 0.500 | mg/kg wet | | EPA 6010C |
| | Potassium | -3.46 | 5.00 | mg/kg wet | | EPA 6010C |
| | Selenium | 0.562 | 1.00 | mg/kg wet | | EPA 6010C |
| | Silver | -0.100 | 0.500 | mg/kg wet | | EPA 6010C |
| | Sodium | -24.1 | 10.0 | mg/kg wet | | EPA 6010C |
| | Thallium | -0.573 | 1.00 | mg/kg wet | | EPA 6010C |
| | Vanadium | -0.008 | 1.00 | mg/kg wet | | EPA 6010C |
| | Zinc | -0.522 | 1.00 | mg/kg wet | | EPA 6010C |
| Y6I1304-CCB8 | Aluminum | -0.134 | 0.050 | ug/mL | | EPA 6010C |
| | Antimony | 0.0003 | 0.005 | ug/mL | | EPA 6010C |
| | Arsenic | -0.009 | 0.010 | ug/mL | | EPA 6010C |
| | Barium | -0.00002 | 0.010 | ug/mL | | EPA 6010C |
| | Beryllium | -0.00006 | 0.001 | ug/mL | | EPA 6010C |
| | Cadmium | -0.0003 | 0.003 | ug/mL | | EPA 6010C |
| | Calcium | 0.043 | 0.050 | ug/mL | | EPA 6010C |
| | Chromium | 0.0002 | 0.005 | ug/mL | | EPA 6010C |
| | Cobalt | -0.00006 | 0.005 | ug/mL | | EPA 6010C |
| | Copper | 0.00002 | 0.005 | ug/mL | | EPA 6010C |
| | Iron | -0.001 | 0.020 | ug/mL | | EPA 6010C |

# FORM I

# BLANKS

## EPA 6010C

Laboratory: York Analytical Laboratories, Inc.

SDG: 16I0260

Client: Langan Engineering & Environmental Services (NYC

Instrument ID: WinLabICP

Project: 170301202 450 Union Street

Sequence: Y6I1304

Calibration: 09/12/16 2

| Lab Sample ID | Analyte | Found | MRL | Units | C | Method |
|---|---|---|---|---|---|---|
| Y6I1304-CCB8 | Lead | 0.002 | 0.003 | ug/mL | | EPA 6010C |
| | Magnesium | -0.008 | 0.050 | ug/mL | | EPA 6010C |
| | Manganese | -0.00007 | 0.005 | ug/mL | | EPA 6010C |
| | Nickel | -0.003 | 0.005 | ug/mL | | EPA 6010C |
| | Potassium | 0.047 | 0.050 | ug/mL | | EPA 6010C |
| | Selenium | 0.003 | 0.010 | ug/mL | | EPA 6010C |
| | Silver | -0.000007 | 0.005 | ug/mL | | EPA 6010C |
| | Sodium | -0.155 | 0.100 | ug/mL | | EPA 6010C |
| | Thallium | -0.004 | 0.010 | ug/mL | | EPA 6010C |
| | Vanadium | -0.0002 | 0.010 | ug/mL | | EPA 6010C |
| | Zinc | -0.005 | 0.010 | ug/mL | | EPA 6010C |
| Y6I1304-CCB9 | Aluminum | -0.047 | 0.050 | ug/mL | | EPA 6010C |
| | Antimony | -0.0003 | 0.005 | ug/mL | | EPA 6010C |
| | Arsenic | 0.001 | 0.010 | ug/mL | | EPA 6010C |
| | Barium | 0.00005 | 0.010 | ug/mL | | EPA 6010C |
| | Beryllium | -0.00005 | 0.001 | ug/mL | | EPA 6010C |
| | Cadmium | -0.0001 | 0.003 | ug/mL | | EPA 6010C |
| | Calcium | 0.018 | 0.050 | ug/mL | | EPA 6010C |
| | Chromium | -0.00009 | 0.005 | ug/mL | | EPA 6010C |
| | Cobalt | 0.0001 | 0.005 | ug/mL | | EPA 6010C |
| | Copper | -0.0003 | 0.005 | ug/mL | | EPA 6010C |
| | Iron | 0.011 | 0.020 | ug/mL | | EPA 6010C |
| | Lead | 0.001 | 0.003 | ug/mL | | EPA 6010C |
| | Magnesium | -0.019 | 0.050 | ug/mL | | EPA 6010C |
| | Manganese | -0.0001 | 0.005 | ug/mL | | EPA 6010C |
| | Nickel | 0.0005 | 0.005 | ug/mL | | EPA 6010C |
| | Potassium | -0.011 | 0.050 | ug/mL | | EPA 6010C |
| | Selenium | -0.0008 | 0.010 | ug/mL | | EPA 6010C |
| | Silver | 0.0002 | 0.005 | ug/mL | | EPA 6010C |
| | Sodium | -0.205 | 0.100 | ug/mL | | EPA 6010C |
| | Thallium | 0.005 | 0.010 | ug/mL | | EPA 6010C |
| | Vanadium | -0.00009 | 0.010 | ug/mL | | EPA 6010C |
| | Zinc | -0.002 | 0.010 | ug/mL | | EPA 6010C |

# FORM I

# BLANKS

## EPA 6010C

Laboratory: York Analytical Laboratories, Inc.

SDG: 16I0260

Client: Langan Engineering & Environmental Services (NYC

Instrument ID: WinLabICP

Project: 170301202 450 Union Street

Sequence: Y6I1304

Calibration: 09/13/16 0

| Lab Sample ID | Analyte | Found | MRL | Units | C | Method |
|---|---|---|---|---|---|---|
| Y6I1304-CCBA | Aluminum | -0.060 | 0.050 | ug/mL | | EPA 6010C |
| | Antimony | -0.001 | 0.005 | ug/mL | | EPA 6010C |
| | Arsenic | 0.002 | 0.010 | ug/mL | | EPA 6010C |
| | Barium | 0.00006 | 0.010 | ug/mL | | EPA 6010C |
| | Beryllium | 0.00002 | 0.001 | ug/mL | | EPA 6010C |
| | Cadmium | -0.00003 | 0.003 | ug/mL | | EPA 6010C |
| | Calcium | 0.011 | 0.050 | ug/mL | | EPA 6010C |
| | Chromium | 0.0002 | 0.005 | ug/mL | | EPA 6010C |
| | Cobalt | 0.0003 | 0.005 | ug/mL | | EPA 6010C |
| | Copper | -0.0003 | 0.005 | ug/mL | | EPA 6010C |
| | Iron | -0.006 | 0.020 | ug/mL | | EPA 6010C |
| | Lead | 0.002 | 0.003 | ug/mL | | EPA 6010C |
| | Magnesium | -0.018 | 0.050 | ug/mL | | EPA 6010C |
| | Manganese | -0.0001 | 0.005 | ug/mL | | EPA 6010C |
| | Nickel | 0.002 | 0.005 | ug/mL | | EPA 6010C |
| | Potassium | 0.002 | 0.050 | ug/mL | | EPA 6010C |
| | Selenium | -0.0004 | 0.010 | ug/mL | | EPA 6010C |
| | Silver | -0.0003 | 0.005 | ug/mL | | EPA 6010C |
| | Sodium | -0.155 | 0.100 | ug/mL | | EPA 6010C |
| | Thallium | 0.004 | 0.010 | ug/mL | | EPA 6010C |
| | Vanadium | 0.00001 | 0.010 | ug/mL | | EPA 6010C |
| | Zinc | -0.002 | 0.010 | ug/mL | | EPA 6010C |

# ICP INTERFERENCE CHECK SAMPLE

## EPA 6010C

Laboratory: York Analytical Laboratories, Inc.
SDG: 16I0260
Client: Langan Engineering & Environmental Services (
Project: 170301202 450 Union Street
Instrument ID: WinLabICP
Calibration: 09/12/16
Sequence: Y6I1304

| Lab Sample ID | Analyte | True | Found | %R | Units |
|---|---|---|---|---|---|
| Y6I1304-IFA1 | Aluminum | 500 | 493.80 | 98.8 | ug/mL |
| | Antimony | | 0.00 | | ug/mL |
| | Arsenic | | 0.00 | | ug/mL |
| | Barium | | 0.00 | | ug/mL |
| | Beryllium | | 0.00 | | ug/mL |
| | Cadmium | | 0.00 | | ug/mL |
| | Calcium | 500 | 491.23 | 98.2 | ug/mL |
| | Chromium | | 0.00 | | ug/mL |
| | Cobalt | | 0.00 | | ug/mL |
| | Copper | | 0.00 | | ug/mL |
| | Iron | 200 | 189.56 | 94.8 | ug/mL |
| | Lead | | 0.00 | | ug/mL |
| | Magnesium | 500 | 494.16 | 98.8 | ug/mL |
| | Manganese | | 0.00 | | ug/mL |
| | Nickel | | 0.00 | | ug/mL |
| | Potassium | | -0.09 | | ug/mL |
| | Selenium | | 0.00 | | ug/mL |
| | Silver | | 0.00 | | ug/mL |
| | Sodium | | 0.02 | | ug/mL |
| | Thallium | | 0.00 | | ug/mL |
| | Vanadium | | 0.00 | | ug/mL |
| | Zinc | | 0.00 | | ug/mL |
| Y6I1304-IFB1 | Aluminum | 500 | 496.67 | 99.3 | ug/mL |
| | Antimony | 0.500 | 0.54 | 107 | ug/mL |
| | Arsenic | 0.500 | 0.56 | 113 | ug/mL |
| | Barium | 0.500 | 0.53 | 106 | ug/mL |
| | Beryllium | 0.500 | 0.51 | 102 | ug/mL |
| | Cadmium | 1.00 | 0.98 | 98.0 | ug/mL |
| | Calcium | 500 | 495.95 | 99.2 | ug/mL |

# ICP INTERFERENCE CHECK SAMPLE

## EPA 6010C

Laboratory: York Analytical Laboratories, Inc.
SDG: 16I0260
Client: Langan Engineering & Environmental Services (
Project: 170301202 450 Union Street
Instrument ID: WinLabICP
Calibration: 09/12/16
Sequence: Y6I1304

| Lab Sample ID | Analyte | True | Found | %R | Units |
|---|---|---|---|---|---|
| Y6I1304-IFB1 | Chromium | 0.500 | 0.49 | 97.8 | ug/mL |
| | Cobalt | 0.500 | 0.49 | 98.1 | ug/mL |
| | Copper | 0.500 | 0.55 | 111 | ug/mL |
| | Iron | 200 | 191.95 | 96.0 | ug/mL |
| | Lead | 1.00 | 0.98 | 98.3 | ug/mL |
| | Magnesium | 500 | 498.17 | 99.6 | ug/mL |
| | Manganese | 0.500 | 0.50 | 101 | ug/mL |
| | Nickel | 1.00 | 1.02 | 102 | ug/mL |
| | Potassium | | -0.08 | | ug/mL |
| | Selenium | 0.500 | 0.53 | 105 | ug/mL |
| | Silver | 1.00 | 1.11 | 111 | ug/mL |
| | Sodium | | 0.04 | | ug/mL |
| | Thallium | 0.500 | 0.43 | 86.2 | ug/mL |
| | Vanadium | 0.500 | 0.50 | 100 | ug/mL |
| | Zinc | 1.00 | 0.98 | 97.6 | ug/mL |

* Values outside of QC limits

# METHOD DETECTION AND REPORTING LIMITS

## EPA 6010C

**Laboratory:** York Analytical Laboratories, Inc. **SDG:** 16I0260

**Client:** Langan Engineering & Environmental Services (NYC) **Project:** 170301202 450 Union Street

**Matrix:** Soil **Instrument:** WinLabICP

| Analyte | LOD | LOQ | Units |
|---|---|---|---|
| Aluminum | 5.00 | 5.00 | mg/kg |
| Antimony | 0.500 | 0.500 | mg/kg |
| Arsenic | 1.00 | 1.00 | mg/kg |
| Barium | 1.00 | 1.00 | mg/kg |
| Beryllium | 0.100 | 0.100 | mg/kg |
| Cadmium | 0.300 | 0.300 | mg/kg |
| Calcium | 0.500 | 5.00 | mg/kg |
| Chromium | 0.500 | 0.500 | mg/kg |
| Cobalt | 0.500 | 0.500 | mg/kg |
| Copper | 0.500 | 0.500 | mg/kg |
| Iron | 2.00 | 2.00 | mg/kg |
| Lead | 0.300 | 0.300 | mg/kg |
| Magnesium | 5.00 | 5.00 | mg/kg |
| Manganese | 0.500 | 0.500 | mg/kg |
| Nickel | 0.500 | 0.500 | mg/kg |
| Potassium | 5.00 | 5.00 | mg/kg |
| Selenium | 1.00 | 1.00 | mg/kg |
| Silver | 0.500 | 0.500 | mg/kg |
| Sodium | 10.0 | 10.0 | mg/kg |
| Thallium | 1.00 | 1.00 | mg/kg |
| Vanadium | 1.00 | 1.00 | mg/kg |
| Zinc | 1.00 | 1.00 | mg/kg |

# ICP Interelement Correction Factors

## EPA 6010C

Laboratory: York Analytical Laboratories, Inc. SDG: 16I0260

Client: Langan Engineering & Environmental Services (NYC) Project: 170301202 450 Union Street

Instrument: WinLabICP Date: 01/31/2013

| Analyte | Wavelength (nm) | Fe | Al | Ca | Mg |
|---|---|---|---|---|---|
| Ag | 338.289 | 0 | 0 | 0.011281 | 0 |
| Al | 308.215 | -0.0817898 | n/a | 0.0245069 | 0.0376104 |
| Al RADIAL | | -0.105128 | n/a | 0.0296996 | 0 |
| As | 188.979 | -0.045524 | 0 | 0 | 0 |
| Ba | 233.527 | 0 | 0 | 0 | 0 |
| Be | 313.107 | 0 | 0 | 0 | 0 |
| Ca | 227.546 | -8.62387 | -0.675005 | n/a | -0.0625929 |
| Ca RADIAL | | 0 | 0 | n/a | 0 |
| Cd | 226.502 | 0.084631 | 0 | 0 | 0 |
| Co | 228.616 | -0.0209450 | 0 | 0 | 0 |
| Cr | 267.716 | -0.0304787 | 0 | 0 | 0 |
| Cu | 324.752 | -0.073852 | 0 | 0 | 0 |
| Fe | 273.955 | n/a | 0 | 0 | 0 |
| Fe RADIAL | | n/a | 0 | 0 | 0 |
| K RADIAL | | 0 | 0 | 0 | 0 |
| Mg | 279.077 | 0.161547 | 0 | 0 | n/a |
| Mg RADIAL | | 0.0994223 | 0 | 0 | n/a |
| Mn | 257.610 | -0.186929 | 0 | 0 | 0 |
| Na | 330.237 | -4.63141 | -0.0462274 | -0.983571 | 0 |
| Na RADIAL | | 0 | 0 | 0 | 0 |
| Ni | 232.003 | 0.22501 | 0 | 0 | 0 |
| Pb | 220.353 | 0.039335 | -0.129664 | -0.0141428 | 0 |
| Sb | 206.836 | 0.025931 | 0.000505 | 0 | 0 |
| Se | 196.026 | -0.487772 | 0 | 0 | 0 |
| Tl | 190.801 | -0.105455 | 0 | 0 | 0 |
| V | 292.402 | 0.096273 | 0 | 0 | 0 |
| Y | 371.029 | 0 | 0 | 0 | 0 |
| Y RADIAL | | 0 | 0 | 0 | 0 |
| Zn | 206.200 | 0100528 | 0 | 0 | 0 |

March 4, 2015

# ICP Linear Dynamic Range

## EPA 6010C

Laboratory: York Analytical Laboratories, Inc.
SDG: 16I0260
Client: Langan Engineering & Environmental Services (NYC)
Project: 170301202 450 Union Street
Instrument: WinLabICP
Date: 01/31/2013

| CAS NO. | Analyte | Concentration mg/kg dry |
|---|---|---|
| 7429-90-5 | Aluminum | 83300 |
| 7440-36-0 | Antimony | 20000 |
| 7440-38-2 | Arsenic | 10000 |
| 7440-39-3 | Barium | 2500 |
| 7440-41-7 | Beryllium | 500 |
| 7440-43-9 | Cadmium | 1000 |
| 7440-70-2 | Calcium | 100000 |
| 7440-47-3 | Chromium | 2000 |
| 7440-48-4 | Cobalt | 1670 |
| 7440-50-8 | Copper | 2500 |
| 7439-89-6 | Iron | 33300 |
| 7439-92-1 | Lead | 3000 |
| 7439-95-4 | Magnesium | 100000 |
| 7439-96-5 | Manganese | 1000 |
| 7440-02-0 | Nickel | 5000 |
| 7440-09-7 | Potassium | 10000 |
| 7782-49-2 | Selenium | 10000 |
| 7440-22-4 | Silver | 2500 |
| 7440-23-5 | Sodium | 50000 |
| 7440-28-0 | Thallium | 1670 |
| 7440-62-2 | Vanadium | 5000 |
| 7440-66-6 | Zinc | 1500 |

**FORM IV** **PREPARATION BATCH SUMMARY**

**EPA 6010C**

Laboratory: York Analytical Laboratories, Inc. SDG: 16I0260

Client: Langan Engineering & Environmental Services (NYC) Project: 170301202 450 Union Street

Batch: BI60400 Batch Matrix: Soil Preparation: EPA 3050B

| SAMPLE NAME | LAB SAMPLE ID | LAB FILE ID | DATE PREPARED | OBSERVATIONS |
|---|---|---|---|---|
| V01_0-1.5 | 16I0260-01 | qbi091216bRE_1-101 | 09/12/16 10:18 | |
| Blank | BI60400-BLK1 | qbi091216bRE_1-084 | 09/12/16 10:18 | |
| Reference | BI60400-SRM1 | qbi091216bRE_1-085 | 09/12/16 10:18 | |

**FORM V**

# ANALYSIS BATCH (SEQUENCE) SUMMARY

## EPA 6010C

| | | | |
|---|---|---|---|
| Laboratory: | York Analytical Laboratories, Inc. | SDG: | 16I0260 |
| Client: | Langan Engineering & Environmental Services (NYC) | Project: | 170301202 450 Union Street |
| Sequence: | Y6I1304 | Instrument: | WinLabICP |
| Matrix: | Soil | Calibration: | 09/12/16 |

| Sample Name | Lab Sample ID | Lab File ID | Analysis Date/Time |
|---|---|---|---|
| Initial Cal Check | Y6I1304-ICV1 | qbi091216bRE_1-001 | 09/12/16 14:44 |
| Initial Cal Blank | Y6I1304-ICB1 | qbi091216bRE_1-002 | 09/12/16 14:52 |
| Instrument RL Check | Y6I1304-CRL1 | qbi091216bRE_1-003 | 09/12/16 14:57 |
| Instrument RL Check | Y6I1304-CRL2 | qbi091216bRE_1-004 | 09/12/16 15:03 |
| Interference Check A | Y6I1304-IFA1 | qbi091216bRE_1-005 | 09/12/16 15:08 |
| Interference Check B | Y6I1304-IFB1 | qbi091216bRE_1-006 | 09/12/16 15:15 |
| Calibration Check | Y6I1304-CCV1 | qbi091216bRE_1-007 | 09/12/16 15:23 |
| Calibration Blank | Y6I1304-CCB1 | qbi091216bRE_1-008 | 09/12/16 15:31 |
| Calibration Check | Y6I1304-CCV8 | qbi091216bRE_1-019 | 09/12/16 16:33 |
| Calibration Check | Y6I1304-CCV7 | qbi091216bRE_1-079 | 09/12/16 22:03 |
| Calibration Blank | Y6I1304-CCB7 | qbi091216bRE_1-080 | 09/12/16 22:11 |
| Blank | BI60400-BLK1 | qbi091216bRE_1-084 | 09/12/16 22:34 |
| Reference | BI60400-SRM1 | qbi091216bRE_1-085 | 09/12/16 22:39 |
| Calibration Blank | Y6I1304-CCB8 | qbi091216bRE_1-092 | 09/12/16 23:27 |
| V01_0-1.5 | 16I0260-01 | qbi091216bRE_1-101 | 09/13/16 00:10 |
| Calibration Check | Y6I1304-CCV9 | qbi091216bRE_1-103 | 09/13/16 00:19 |
| Calibration Blank | Y6I1304-CCB9 | qbi091216bRE_1-104 | 09/13/16 00:28 |
| Calibration Check | Y6I1304-CCVA | qbi091216bRE_1-115 | 09/13/16 01:30 |
| Calibration Blank | Y6I1304-CCBA | qbi091216bRE_1-116 | 09/13/16 01:38 |

# HOLDING TIME SUMMARY

## EPA 6010C

Laboratory: York Analytical Laboratories, Inc. SDG: 16I0260

Client: Langan Engineering & Environmental Services (NYC) Project: 170301202 450 Union Street

| Sample Name | Date Collected | Date Received | Date Prepared | Days to Prep | Max Days to Prep | Date Analyzed | Days to Analysis | Max Days to Analysis | Q |
|---|---|---|---|---|---|---|---|---|---|
| V01_0-1.5 | 09/07/16 13:00 | 09/08/16 18:45 | 09/12/16 10:18 | 4.89 | 180.00 | 09/13/16 00:10 | 0.58 | 30.00 | |

**Sample Information Detail Report**
**Document Name: 091216b**

**File Description**
Sample Information File

**Parameters Common to All Samples**

| | |
|---|---|
| Batch ID | qbi091216b |
| Analyst Name | KV |
| Volume Units | mL |
| Weight Units | g |

**Parameters That Vary By Sample**

| | | | |
|---|---|---|---|
| 3 | 3 | SEQ-ICV1 | |
| 4 | 4 | SEQ-ICB1 | |
| 5 | 156 | SEQ-CRL1 | |
| 6 | 157 | SEQ-CRL2 | |
| 7 | 6 | SEQ-IFA1 | |
| 8 | 7 | SEQ-IFB1 | |
| 9 | 3 | SEQ-CCV1 | |
| 10 | 4 | SEQ-CCB1 | |
| 11 | 9 | BI60384-BLK1 | |
| 12 | 10 | BI60384-SRM1 | |
| 13 | 11 | 16I0135-01 | |
| 14 | 12 | BI60384-DUP1 | |
| 15 | 13 | BI60384-MS1 | |
| 16 | 14 | 16I0135-02 | |
| 17 | 15 | 16I0135-03 | |
| 18 | 16 | 16I0135-04 | |
| 19 | 17 | 16I0136-01 | |
| 20 | 18 | 16I0136-02 | |
| 21 | 3 | SEQ-CCV2 | |
| 22 | 4 | SEQ-CCB2 | |
| 23 | 19 | 16I0138-01 | |
| 24 | 20 | 16I0138-02 | |
| 25 | 21 | 16I0138-03 | |
| 26 | 22 | 16I0138-04 | |
| 27 | 23 | 16I0142-02 | |
| 28 | 24 | 16I0142-03 | |
| 29 | 25 | 16I0142-04 | |
| 30 | 26 | 16I0142-05 | |
| 31 | 27 | 16I0174-07 | |
| 32 | 28 | 16I0197-01 | |
| 33 | 3 | SEQ-CCV3 | |
| 34 | 4 | SEQ-CCB3 | |
| 35 | 29 | 16I0200-01 | |
| 36 | 30 | 16I0200-02 | |
| 37 | 31 | 16I0206-01 | |
| 38 | 32 | 16I0212-01 | |
| 39 | 33 | SEQ-SRD1 | 16I0135-01 |
| 40 | 34 | BI60394-BLK1 | |
| 41 | 35 | BI60394-SRM1 | |
| 42 | 36 | 16I0222-01 | |
| 43 | 37 | BI60394-DUP1 | |
| 44 | 38 | BI60394-MS1 | |
| 45 | 3 | SEQ-CCV4 | |
| 46 | 4 | SEQ-CCB4 | |
| 47 | 39 | 16I0241-01 | |
| 48 | 40 | 16I0241-02 | |
| 49 | 41 | 16I0241-03 | |
| 50 | 42 | 16I0242-01 | |
| 51 | 43 | 16I0281-01 | |
| 52 | 44 | 16I0281-02 | |
| 53 | 45 | 16I0282-01 | |
| 54 | 46 | SEQ-SRD2 | 16I0222-01 |
| 55 | 47 | BI60399-BLK1 | |
| 56 | 48 | BI60399-SRM1 | |
| 57 | 3 | SEQ-CCV5 | |
| 58 | 4 | SEQ-CCB5 | |

| | | | |
|---|---|---|---|
| 59 | 49 | 16I0040-05 | |
| 60 | 50 | BI60399-DUP1 | |
| 61 | 51 | BI60399-MS1 | |
| 62 | 52 | 16I0040-06 | |
| 63 | 53 | 16I0040-07 | |
| 64 | 54 | 16I0040-08 | |
| 65 | 55 | 16I0240-79 | |
| 66 | 56 | 16I0240-80 | |
| 67 | 57 | 16I0240-81 | |
| 68 | 58 | 16I0240-82 | |
| 69 | 3 | SEQ-CCV6 | |
| 70 | 4 | SEQ-CCB6 | |
| 71 | 59 | 16I0240-83 | |
| 72 | 60 | 16I0240-84 | |
| 73 | 61 | 16I0240-85 | |
| 74 | 62 | 16I0240-86 | |
| 75 | 63 | 16I0240-87 | |
| 76 | 64 | 16I0240-88 | |
| 77 | 65 | 16I0252-01 | |
| 78 | 66 | 16I0307-01 | |
| 79 | 67 | 16I0331-02 | |
| 80 | 68 | 16I0331-03 | |
| 81 | 3 | SEQ-CCV7 | |
| 82 | 4 | SEQ-CCB7 | |
| 83 | 69 | 16I0332-02 | |
| 84 | 70 | 16I0332-03 | |
| 85 | 71 | SEQ-SRD3 | 16I0040-05 |
| 86 | 72 | BI60400-BLK1 | |
| 87 | 73 | BI60400-SRM1 | |
| 88 | 74 | 16I0249-01 | |
| 89 | 75 | BI60400-DUP1 | |
| 90 | 76 | BI60400-MS1 | |
| 91 | 77 | 16I0249-03 | |
| 92 | 78 | 16I0249-05 | |
| 93 | 3 | SEQ-CCV8 | |
| 94 | 4 | SEQ-CCB8 | |
| 95 | 79 | 16I0249-07 | |
| 96 | 80 | 16I0249-09 | |
| 97 | 81 | 16I0249-10 | |
| 98 | 82 | 16I0249-11 | |
| 99 | 83 | 16I0249-12 | |
| 100 | 84 | 16I0249-13 | |
| 101 | 85 | 16I0249-14 | |
| 102 | 86 | 16I0249-15 | |
| 103 | 87 | 16I0260-01 | |
| 104 | 88 | 16I0267-01 | |
| 105 | 8 | SEQ-CCV9 | |
| 106 | 1 | SEQ-CCB9 | |
| 107 | 89 | 16I0267-02 | |
| 108 | 90 | 16I0269-01 | |
| 109 | 91 | 16I0269-03 | |
| 110 | 92 | 16I0269-05 | |
| 111 | 93 | 16I0269-07 | |
| 112 | 94 | 16I0291-01 | |
| 113 | 95 | 16I0296-01 | |
| 114 | 96 | SEQ-SRD4 | 16I0249-01 |
| 115 | 97 | BI60401-BLK1 | |
| 116 | 98 | BI60401-SRM1 | |
| 117 | 8 | SEQ-CCVA | |
| 118 | 1 | SEQ-CCBA | |
| 119 | 99 | 16I0251-03 | |
| 120 | 100 | 16I0251-04 | |
| 121 | 101 | 16I0251-05 | |
| 122 | 102 | 16I0251-06 | |
| 123 | 103 | 16I0251-07 | |
| 124 | 104 | 16I0251-08 | |
| 125 | 105 | 16I0251-09 | |
| 126 | 106 | 16I0251-10 | |

| | | | |
|---|---|---|---|
| 127 | 107 | 16I0251-11 | |
| 128 | 108 | 16I0251-12 | |
| 129 | 8 | SEQ-CCVB | |
| 130 | 1 | SEQ-CCBB | |
| 131 | 109 | 16I0251-13 | |
| 132 | 110 | 16I0314-01 | |
| 133 | 111 | 16I0314-02 | |
| 134 | 112 | 16I0314-03 | |
| 135 | 113 | 16I0314-04 | |
| 136 | 114 | BI60401-DUP1 | |
| 137 | 115 | BI60401-MS1 | |
| 138 | 116 | 16I0314-05 | |
| 139 | 117 | 16I0314-06 | |
| 140 | 118 | 16I0314-07 | |
| 141 | 8 | SEQ-CCVC | |
| 142 | 1 | SEQ-CCBC | |
| 143 | 119 | 16I0321-01 | |
| 144 | 120 | 16I0321-02 | |
| 145 | 121 | SEQ-SRD5 | 16I0314-04 |
| 146 | 122 | BI60402-BLK1 | |
| 147 | 123 | BI60402-SRM1 | |
| 148 | 124 | 16I0297-01 | |
| 149 | 125 | 16I0297-02 | |
| 150 | 126 | 16I0297-03 | |
| 151 | 127 | 16I0297-04 | |
| 152 | 128 | 16I0297-05 | |
| 153 | 8 | SEQ-CCVD | |
| 154 | 1 | SEQ-CCBD | |
| 155 | 129 | 16I0297-06 | |
| 156 | 130 | 16I0302-01 | |
| 157 | 131 | 16I0302-02 | |
| 158 | 132 | 16I0302-03 | |
| 159 | 133 | 16I0302-04 | |
| 160 | 134 | 16I0302-05 | |
| 161 | 135 | 16I0302-06 | |
| 162 | 136 | 16I0319-01 | |
| 163 | 137 | 16I0326-01 | |
| 164 | 138 | 16I0326-02 | |
| 165 | 8 | SEQ-CCVE | |
| 166 | 1 | SEQ-CCBE | |
| 167 | 139 | 16I0326-03 | |
| 168 | 140 | 16I0326-04 | |
| 169 | 141 | BI60402-DUP1 | |
| 170 | 142 | BI60402-MS1 | |
| 171 | 143 | 16I0326-05 | |
| 172 | 144 | 16I0326-06 | |
| 173 | 145 | 16I0326-07 | |
| 174 | 146 | SEQ-SRD6 | 16I0326-04 |
| 175 | 8 | SEQ-CCVF | |
| 176 | 1 | SEQ-CCBF | |

# PREPARATION BENCH SHEET

## BI60384

**York Analytical Laboratories, Inc.**

**Printed: 9/12/2016 8:57:13AM**

**Matrix: Water** **(No Surrogate)**

| Lab Number | Analysis | Prepared | By | Initial (mL) | Final (mL) | Spike ID | Source ID | ul Spike | ul Surrogate | Preparation | Sample Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 16I0135-01 | Zinc by EPA 200.7 | 09/12/2016 08:5 | ALD | 45 | 50 | | | | | EPA 200.7 | Added for BatchQC in: BI60384 |
| 16I0135-01 | Calcium by EPA 200.7 | 09/12/2016 08:5 | ALD | 45 | 50 | | | | | EPA 200.7 | |
| 16I0135-01 | Chromium by EPA 200.7 | 09/12/2016 08:5 | ALD | 45 | 50 | | | | | EPA 200.7 | Added for BatchQC in: BI60384 |
| 16I0135-01 | Copper by EPA 200.7 | 09/12/2016 08:5 | ALD | 45 | 50 | | | | | EPA 200.7 | Added for BatchQC in: BI60384 |
| 16I0135-01 | Iron by EPA 200.7 | 09/12/2016 08:5 | ALD | 45 | 50 | | | | | EPA 200.7 | Added for BatchQC in: BI60384 |
| 16I0135-01 | Lead by EPA 200.7 | 09/12/2016 08:5 | ALD | 45 | 50 | | | | | EPA 200.7 | Added for BatchQC in: BI60384 |
| 16I0135-01 | Magnesium by EPA 200.7 | 09/12/2016 08:5 | ALD | 45 | 50 | | | | | EPA 200.7 | |
| 16I0135-01 | Nickel by EPA 200.7 | 09/12/2016 08:5 | ALD | 45 | 50 | | | | | EPA 200.7 | Added for BatchQC in: BI60384 |
| 16I0135-01 | Silver by EPA 200.7 | 09/12/2016 08:5 | ALD | 45 | 50 | | | | | EPA 200.7 | Added for BatchQC in: BI60384 |
| 16I0135-01 | Cadmium by EPA 200.7 | 09/12/2016 08:5 | ALD | 45 | 50 | | | | | EPA 200.7 | Added for BatchQC in: BI60384 |
| 16I0135-02 | Zinc by EPA 200.7 | 09/12/2016 08:5 | ALD | 45 | 50 | | | | | EPA 200.7 | |
| 16I0135-02 | Magnesium by EPA 200.7 | 09/12/2016 08:5 | ALD | 45 | 50 | | | | | EPA 200.7 | |
| 16I0135-02 | Iron by EPA 200.7 | 09/12/2016 08:5 | ALD | 45 | 50 | | | | | EPA 200.7 | |
| 16I0135-02 | Calcium by EPA 200.7 | 09/12/2016 08:5 | ALD | 45 | 50 | | | | | EPA 200.7 | |
| 16I0135-02 | Copper by EPA 200.7 | 09/12/2016 08:5 | ALD | 45 | 50 | | | | | EPA 200.7 | |
| 16I0135-03 | Calcium by EPA 200.7 | 09/12/2016 08:5 | ALD | 45 | 50 | | | | | EPA 200.7 | |
| 16I0135-03 | Copper by EPA 200.7 | 09/12/2016 08:5 | ALD | 45 | 50 | | | | | EPA 200.7 | |
| 16I0135-03 | Iron by EPA 200.7 | 09/12/2016 08:5 | ALD | 45 | 50 | | | | | EPA 200.7 | |
| 16I0135-03 | Magnesium by EPA 200.7 | 09/12/2016 08:5 | ALD | 45 | 50 | | | | | EPA 200.7 | |
| 16I0135-04 | Calcium by EPA 200.7 | 09/12/2016 08:5 | ALD | 45 | 50 | | | | | EPA 200.7 | |
| 16I0135-04 | Magnesium by EPA 200.7 | 09/12/2016 08:5 | ALD | 45 | 50 | | | | | EPA 200.7 | |
| 16I0135-04 | Copper by EPA 200.7 | 09/12/2016 08:5 | ALD | 45 | 50 | | | | | EPA 200.7 | |
| 16I0135-04 | Iron by EPA 200.7 | 09/12/2016 08:5 | ALD | 45 | 50 | | | | | EPA 200.7 | |

## PREPARATION BENCH SHEET

BI60384

**York Analytical Laboratories, Inc.**

**Printed: 9/12/2016 8:57:13AM**

**Matrix: Water** **(No Surrogate)**

| Lab Number | Analysis | Prepared | By | Initial (mL) | Final (mL) | Spike ID | Source ID | ul Spike | ul Surrogate | Preparation | Sample Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 16I0136-01 | Calcium by EPA 200.7 | 09/12/2016 08:5 | ALD | 45 | 50 | | | | | EPA 200.7 | |
| 16I0136-01 | Magnesium by EPA 200.7 | 09/12/2016 08:5 | ALD | 45 | 50 | | | | | EPA 200.7 | |
| 16I0136-02 | Calcium by EPA 200.7 | 09/12/2016 08:5 | ALD | 45 | 50 | | | | | EPA 200.7 | |
| 16I0136-02 | Copper by EPA 200.7 | 09/12/2016 08:5 | ALD | 45 | 50 | | | | | EPA 200.7 | |
| 16I0136-02 | Iron by EPA 200.7 | 09/12/2016 08:5 | ALD | 45 | 50 | | | | | EPA 200.7 | |
| 16I0136-02 | Magnesium by EPA 200.7 | 09/12/2016 08:5 | ALD | 45 | 50 | | | | | EPA 200.7 | |
| 16I0136-02 | Zinc by EPA 200.7 | 09/12/2016 08:5 | ALD | 45 | 50 | | | | | EPA 200.7 | |
| 16I0138-01 | Calcium by EPA 200.7 | 09/12/2016 08:5 | ALD | 45 | 50 | | | | | EPA 200.7 | |
| 16I0138-01 | Magnesium by EPA 200.7 | 09/12/2016 08:5 | ALD | 45 | 50 | | | | | EPA 200.7 | |
| 16I0138-01 | Copper by EPA 200.7 | 09/12/2016 08:5 | ALD | 45 | 50 | | | | | EPA 200.7 | |
| 16I0138-01 | Iron by EPA 200.7 | 09/12/2016 08:5 | ALD | 45 | 50 | | | | | EPA 200.7 | |
| 16I0138-02 | Calcium by EPA 200.7 | 09/12/2016 08:5 | ALD | 45 | 50 | | | | | EPA 200.7 | |
| 16I0138-02 | Copper by EPA 200.7 | 09/12/2016 08:5 | ALD | 45 | 50 | | | | | EPA 200.7 | |
| 16I0138-02 | Iron by EPA 200.7 | 09/12/2016 08:5 | ALD | 45 | 50 | | | | | EPA 200.7 | |
| 16I0138-02 | Magnesium by EPA 200.7 | 09/12/2016 08:5 | ALD | 45 | 50 | | | | | EPA 200.7 | |
| 16I0138-03 | Magnesium by EPA 200.7 | 09/12/2016 08:5 | ALD | 45 | 50 | | | | | EPA 200.7 | |
| 16I0138-03 | Calcium by EPA 200.7 | 09/12/2016 08:5 | ALD | 45 | 50 | | | | | EPA 200.7 | |
| 16I0138-03 | Copper by EPA 200.7 | 09/12/2016 08:5 | ALD | 45 | 50 | | | | | EPA 200.7 | |
| 16I0138-03 | Iron by EPA 200.7 | 09/12/2016 08:5 | ALD | 45 | 50 | | | | | EPA 200.7 | |
| 16I0138-04 | Copper by EPA 200.7 | 09/12/2016 08:5 | ALD | 45 | 50 | | | | | EPA 200.7 | |
| 16I0138-04 | Iron by EPA 200.7 | 09/12/2016 08:5 | ALD | 45 | 50 | | | | | EPA 200.7 | |
| 16I0138-04 | Magnesium by EPA 200.7 | 09/12/2016 08:5 | ALD | 45 | 50 | | | | | EPA 200.7 | |
| 16I0138-04 | Calcium by EPA 200.7 | 09/12/2016 08:5 | ALD | 45 | 50 | | | | | EPA 200.7 | |

4 of 5 9/12/2016

# PREPARATION BENCH SHEET

BI60384

**York Analytical Laboratories, Inc.**

**Printed: 9/12/2016 8:57:13AM**

**Matrix: Water** **(No Surrogate)**

| Lab Number | Analysis | Prepared | By | Initial (mL) | Final (mL) | Spike ID | Source ID | ul Spike | ul Surrogate | Preparation | Sample Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 16I0142-02 | Calcium by EPA 200.7 | 09/12/2016 08:5 | ALD | 45 | 50 | | | | | EPA 200.7 | |
| 16I0142-02 | Copper by EPA 200.7 | 09/12/2016 08:5 | ALD | 45 | 50 | | | | | EPA 200.7 | |
| 16I0142-02 | Iron by EPA 200.7 | 09/12/2016 08:5 | ALD | 45 | 50 | | | | | EPA 200.7 | |
| 16I0142-02 | Magnesium by EPA 200.7 | 09/12/2016 08:5 | ALD | 45 | 50 | | | | | EPA 200.7 | |
| 16I0142-03 | Copper by EPA 200.7 | 09/12/2016 08:5 | ALD | 45 | 50 | | | | | EPA 200.7 | |
| 16I0142-03 | Iron by EPA 200.7 | 09/12/2016 08:5 | ALD | 45 | 50 | | | | | EPA 200.7 | |
| 16I0142-03 | Calcium by EPA 200.7 | 09/12/2016 08:5 | ALD | 45 | 50 | | | | | EPA 200.7 | |
| 16I0142-03 | Magnesium by EPA 200.7 | 09/12/2016 08:5 | ALD | 45 | 50 | | | | | EPA 200.7 | |
| 16I0142-04 | Calcium by EPA 200.7 | 09/12/2016 08:5 | ALD | 45 | 50 | | | | | EPA 200.7 | |
| 16I0142-04 | Copper by EPA 200.7 | 09/12/2016 08:5 | ALD | 45 | 50 | | | | | EPA 200.7 | |
| 16I0142-04 | Iron by EPA 200.7 | 09/12/2016 08:5 | ALD | 45 | 50 | | | | | EPA 200.7 | |
| 16I0142-04 | Magnesium by EPA 200.7 | 09/12/2016 08:5 | ALD | 45 | 50 | | | | | EPA 200.7 | |
| 16I0142-05 | Magnesium by EPA 200.7 | 09/12/2016 08:5 | ALD | 45 | 50 | | | | | EPA 200.7 | |
| 16I0142-05 | Calcium by EPA 200.7 | 09/12/2016 08:5 | ALD | 45 | 50 | | | | | EPA 200.7 | |
| 16I0142-05 | Copper by EPA 200.7 | 09/12/2016 08:5 | ALD | 45 | 50 | | | | | EPA 200.7 | |
| 16I0142-05 | Iron by EPA 200.7 | 09/12/2016 08:5 | ALD | 45 | 50 | | | | | EPA 200.7 | |
| 16I0174-07 | Zinc by EPA 200.7 | 09/12/2016 08:5 | ALD | 45 | 50 | | | | | EPA 200.7 | HNO3 added on 09/07/16 @ 1136 |
| 16I0174-07 | Nickel by EPA 200.7 | 09/12/2016 08:5 | ALD | 45 | 50 | | | | | EPA 200.7 | HNO3 added on 09/07/16 @ 1136 |
| 16I0174-07 | Chromium by EPA 200.7 | 09/12/2016 08:5 | ALD | 45 | 50 | | | | | EPA 200.7 | HNO3 added on 09/07/16 @ 1136 |
| 16I0174-07 | Lead by EPA 200.7 | 09/12/2016 08:5 | ALD | 45 | 50 | | | | | EPA 200.7 | HNO3 added on 09/07/16 @ 1136 |
| 16I0174-07 | Copper by EPA 200.7 | 09/12/2016 08:5 | ALD | 45 | 50 | | | | | EPA 200.7 | HNO3 added on 09/07/16 @ 1136 |
| 16I0197-01 | Zinc by EPA 200.7 | 09/12/2016 08:5 | ALD | 45 | 50 | | | | | EPA 200.7 | |
| 16I0200-01 | Copper by EPA 200.7 | 09/12/2016 08:5 | ALD | 45 | 50 | | | | | EPA 200.7 | |

4 of 8 R1

## PREPARATION BENCH SHEET

BI60384

**York Analytical Laboratories, Inc.**

**Printed: 9/12/2016 8:57:13AM**

**Matrix: Water**

**(No Surrogate)**

| Lab Number | Analysis | Prepared | By | Initial (mL) | Final (mL) | Spike ID | Source ID | ul Spike | ul Surrogate | Preparation | Sample Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 16I0200-01 | Zinc by EPA 200.7 | 09/12/2016 08:5 | ALD | 45 | 50 | | | | | EPA 200.7 | |
| 16I0200-02 | Copper by EPA 200.7 | 09/12/2016 08:5 | ALD | 45 | 50 | | | | | EPA 200.7 | |
| 16I0200-02 | Zinc by EPA 200.7 | 09/12/2016 08:5 | ALD | 45 | 50 | | | | | EPA 200.7 | |
| 16I0206-01 | Zinc by EPA 200.7 | 09/12/2016 08:5 | ALD | 45 | 50 | | | | | EPA 200.7 | |
| 16I0212-01 | Zinc by EPA 200.7 | 09/12/2016 08:5 | ALD | 45 | 50 | | | | | EPA 200.7 | HNO3 added on 09/07/16 @ 1822 |
| 16I0212-01 | Silver by EPA 200.7 | 09/12/2016 08:5 | ALD | 45 | 50 | | | | | EPA 200.7 | HNO3 added on 09/07/16 @ 1822 |
| 16I0212-01 | Lead by EPA 200.7 | 09/12/2016 08:5 | ALD | 45 | 50 | | | | | EPA 200.7 | HNO3 added on 09/07/16 @ 1822 |
| 16I0212-01 | Iron by EPA 200.7 | 09/12/2016 08:5 | ALD | 45 | 50 | | | | | EPA 200.7 | HNO3 added on 09/07/16 @ 1822 |
| 16I0212-01 | Cadmium by EPA 200.7 | 09/12/2016 08:5 | ALD | 45 | 50 | | | | | EPA 200.7 | HNO3 added on 09/07/16 @ 1822 |
| 16I0212-01 | Chromium by EPA 200.7 | 09/12/2016 08:5 | ALD | 45 | 50 | | | | | EPA 200.7 | HNO3 added on 09/07/16 @ 1822 |
| BI60384-BLK1 | QC | 09/12/2016 08:5 | ALD | 50 | 50 | | | | | EPA 200.7 | |
| BI60384-DUP1 | QC | 09/12/2016 08:5 | ALD | 45 | 50 | | 16I0135-01 | | | EPA 200.7 | |
| BI60384-MS1 | QC | 09/12/2016 08:5 | ALD | 45 | 50 | Y15C050 | 16I0135-01 | 500 | | EPA 200.7 | |
| BI60384-SRM1 | QC | 09/12/2016 08:5 | ALD | 50 | 50 | Y16D066 | | 1 | | EPA 200.7 | |

Batch Comments:

# PREPARATION BENCH SHEET

BI60394

**York Analytical Laboratories, Inc.**

**Printed: 9/12/2016 9:01:45AM**

**Matrix: Water** **(No Surrogate)**

| Lab Number | Analysis | Prepared | By | Initial (mL) | Final (mL) | Spike ID | Source ID | ul Spike | ul Surrogate | Preparation | Sample Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 16I0222-01 | Zinc by EPA 200.7 | 09/12/2016 08:5 | ALD | 45 | 50 | | | | | EPA 200.7 | Added for BatchQC in: BI60394 |
| 16I0222-01 | Sodium by EPA 200.7 | 09/12/2016 08:5 | ALD | 45 | 50 | | | | | EPA 200.7 | Added for BatchQC in: BI60394 |
| 16I0222-01 | Lead by EPA 200.7 | 09/12/2016 08:5 | ALD | 45 | 50 | | | | | EPA 200.7 | |
| 16I0222-01 | Hardness, total (as CaCO3) | 09/12/2016 08:5 | ALD | 45 | 50 | | | | | EPA 200.7 | Added for BatchQC in: BI60394 |
| 16I0222-01 | Nickel by EPA 200.7 | 09/12/2016 08:5 | ALD | 45 | 50 | | | | | EPA 200.7 | Added for BatchQC in: BI60394 |
| 16I0222-01 | Cadmium by EPA 200.7 | 09/12/2016 08:5 | ALD | 45 | 50 | | | | | EPA 200.7 | Added for BatchQC in: BI60394 |
| 16I0222-01 | Copper by EPA 200.7 | 09/12/2016 08:5 | ALD | 45 | 50 | | | | | EPA 200.7 | Added for BatchQC in: BI60394 |
| 16I0222-01 | Iron by EPA 200.7 | 09/12/2016 08:5 | ALD | 45 | 50 | | | | | EPA 200.7 | Added for BatchQC in: BI60394 |
| 16I0241-01 | Sodium by EPA 200.7 | 09/12/2016 08:5 | ALD | 45 | 50 | | | | | EPA 200.7 | |
| 16I0241-02 | Sodium by EPA 200.7 | 09/12/2016 08:5 | ALD | 45 | 50 | | | | | EPA 200.7 | |
| 16I0241-03 | Sodium by EPA 200.7 | 09/12/2016 08:5 | ALD | 45 | 50 | | | | | EPA 200.7 | |
| 16I0242-01 | Hardness, total (as CaCO3) | 09/12/2016 08:5 | ALD | 45 | 50 | | | | | EPA 200.7 | |
| 16I0242-01 | Copper by EPA 200.7 | 09/12/2016 08:5 | ALD | 45 | 50 | | | | | EPA 200.7 | |
| 16I0242-01 | Iron by EPA 200.7 | 09/12/2016 08:5 | ALD | 45 | 50 | | | | | EPA 200.7 | |
| 16I0242-01 | Cadmium by EPA 200.7 | 09/12/2016 08:5 | ALD | 45 | 50 | | | | | EPA 200.7 | |
| 16I0242-01 | Lead by EPA 200.7 | 09/12/2016 08:5 | ALD | 45 | 50 | | | | | EPA 200.7 | |
| 16I0242-01 | Zinc by EPA 200.7 | 09/12/2016 08:5 | ALD | 45 | 50 | | | | | EPA 200.7 | |
| 16I0281-01 | Nickel by EPA 200.7 | 09/12/2016 08:5 | ALD | 45 | 50 | | | | | EPA 200.7 | |
| 16I0281-01 | Cadmium by EPA 200.7 | 09/12/2016 08:5 | ALD | 45 | 50 | | | | | EPA 200.7 | |
| 16I0281-01 | Copper by EPA 200.7 | 09/12/2016 08:5 | ALD | 45 | 50 | | | | | EPA 200.7 | |
| 16I0281-01 | Zinc by EPA 200.7 | 09/12/2016 08:5 | ALD | 45 | 50 | | | | | EPA 200.7 | |
| 16I0281-01 | Lead by EPA 200.7 | 09/12/2016 08:5 | ALD | 45 | 50 | | | | | EPA 200.7 | |
| 16I0281-02 | Cadmium by EPA 200.7 | 09/12/2016 08:5 | ALD | 45 | 50 | | | | | EPA 200.7 | |

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# PREPARATION BENCH SHEET

BI60394

**York Analytical Laboratories, Inc.**

**Printed: 9/12/2016 9:01:45AM**

**Matrix: Water**

**(No Surrogate)**

| Lab Number | Analysis | Prepared | By | Initial (mL) | Final (mL) | Spike ID | Source ID | ul Spike | ul Surrogate | Preparation | Sample Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 16I0281-02 | Zinc by EPA 200.7 | 09/12/2016 08:5 | ALD | 45 | 50 | | | | | EPA 200.7 | |
| 16I0281-02 | Nickel by EPA 200.7 | 09/12/2016 08:5 | ALD | 45 | 50 | | | | | EPA 200.7 | |
| 16I0281-02 | Lead by EPA 200.7 | 09/12/2016 08:5 | ALD | 45 | 50 | | | | | EPA 200.7 | |
| 16I0281-02 | Copper by EPA 200.7 | 09/12/2016 08:5 | ALD | 45 | 50 | | | | | EPA 200.7 | |
| 16I0282-01 | Nickel by EPA 200.7 | 09/12/2016 08:5 | ALD | 45 | 50 | | | | | EPA 200.7 | |
| 16I0282-01 | Lead by EPA 200.7 | 09/12/2016 08:5 | ALD | 45 | 50 | | | | | EPA 200.7 | |
| 16I0282-01 | Zinc by EPA 200.7 | 09/12/2016 08:5 | ALD | 45 | 50 | | | | | EPA 200.7 | |
| 16I0282-01 | Copper by EPA 200.7 | 09/12/2016 08:5 | ALD | 45 | 50 | | | | | EPA 200.7 | |
| 16I0282-01 | Cadmium by EPA 200.7 | 09/12/2016 08:5 | ALD | 45 | 50 | | | | | EPA 200.7 | |
| BI60394-BLK1 | QC | 09/12/2016 08:5 | ALD | 50 | 50 | | | | | EPA 200.7 | |
| BI60394-DUP1 | QC | 09/12/2016 08:5 | ALD | 45 | 50 | | 16I0222-01 | | | EPA 200.7 | |
| BI60394-MS1 | QC | 09/12/2016 08:5 | ALD | 45 | 50 | Y15C050 | 16I0222-01 | 500 | | EPA 200.7 | |
| BI60394-SRM1 | QC | 09/12/2016 08:5 | ALD | 50 | 50 | Y16D066 | | 1 | | EPA 200.7 | |

Batch Comments:

# PREPARATION BENCH SHEET

BI60399

**York Analytical Laboratories, Inc.**

**Printed: 9/12/2016 10:17:48AM**

**Matrix: Soil**

**(No Surrogate)**

| Lab Number | Analysis | Prepared | By | Initial (g) | Final (mL) | Spike ID | Source ID | ul Spike | ul Surrogate | Preparation | Sample Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 16I0040-05 | Metals, RCRA | 09/12/2016 10:1 | ALD | 0.5 | 50 | | | | | EPA 3050B | Added for BatchQC in: BI60399 |
| 16I0040-05 | Cadmium by EPA 6010 | 09/12/2016 10:1 | ALD | 0.5 | 50 | | | | | EPA 3050B | Added for BatchQC in: BI60399 |
| 16I0040-05 | Chromium by EPA 6010 | 09/12/2016 10:1 | ALD | 0.5 | 50 | | | | | EPA 3050B | Added for BatchQC in: BI60399 |
| 16I0040-05 | Metals, Target Analyte | 09/12/2016 10:1 | ALD | 0.5 | 50 | | | | | EPA 3050B | Added for BatchQC in: BI60399 |
| 16I0040-05 | Zinc by EPA 6010 | 09/12/2016 10:1 | ALD | 0.5 | 50 | | | | | EPA 3050B | Added for BatchQC in: BI60399 |
| 16I0040-05 | Nickel by EPA 6010 | 09/12/2016 10:1 | ALD | 0.5 | 50 | | | | | EPA 3050B | Added for BatchQC in: BI60399 |
| 16I0040-05 | Arsenic by EPA 6010 | 09/12/2016 10:1 | ALD | 0.5 | 50 | | | | | EPA 3050B | |
| 16I0040-05 | Magnesium by EPA 6010 | 09/12/2016 10:1 | ALD | 0.5 | 50 | | | | | EPA 3050B | Added for BatchQC in: BI60399 |
| 16I0040-05 | Lead by EPA 6010 | 09/12/2016 10:1 | ALD | 0.5 | 50 | | | | | EPA 3050B | Added for BatchQC in: BI60399 |
| 16I0040-06 | Arsenic by EPA 6010 | 09/12/2016 10:1 | ALD | 0.5 | 50 | | | | | EPA 3050B | |
| 16I0040-07 | Arsenic by EPA 6010 | 09/12/2016 10:1 | ALD | 0.5 | 50 | | | | | EPA 3050B | |
| 16I0040-08 | Arsenic by EPA 6010 | 09/12/2016 10:1 | ALD | 0.5 | 50 | | | | | EPA 3050B | |
| 16I0240-79 | Metals, Target Analyte | 09/12/2016 10:1 | ALD | 0.5 | 50 | | | | | EPA 3050B | |
| 16I0240-80 | Metals, Target Analyte | 09/12/2016 10:1 | ALD | 0.5 | 50 | | | | | EPA 3050B | |
| 16I0240-81 | Metals, Target Analyte | 09/12/2016 10:1 | ALD | 0.5 | 50 | | | | | EPA 3050B | |
| 16I0240-82 | Metals, Target Analyte | 09/12/2016 10:1 | ALD | 0.5 | 50 | | | | | EPA 3050B | |
| 16I0240-83 | Metals, Target Analyte | 09/12/2016 10:1 | ALD | 0.5 | 50 | | | | | EPA 3050B | |
| 16I0240-84 | Metals, Target Analyte | 09/12/2016 10:1 | ALD | 0.5 | 50 | | | | | EPA 3050B | |
| 16I0240-85 | Metals, Target Analyte | 09/12/2016 10:1 | ALD | 0.5 | 50 | | | | | EPA 3050B | |
| 16I0240-86 | Metals, Target Analyte | 09/12/2016 10:1 | ALD | 0.5 | 50 | | | | | EPA 3050B | |
| 16I0240-87 | Metals, Target Analyte | 09/12/2016 10:1 | ALD | 0.5 | 50 | | | | | EPA 3050B | |
| 16I0240-88 | Metals, Target Analyte | 09/12/2016 10:1 | ALD | 0.5 | 50 | | | | | EPA 3050B | |
| 16I0252-01 | Nickel by EPA 6010 | 09/12/2016 10:1 | ALD | 0.5 | 50 | | | | | EPA 3050B | |

# PREPARATION BENCH SHEET

BI60399

**York Analytical Laboratories, Inc.**

**Printed: 9/12/2016 10:17:48AM**

**Matrix: Soil**

**(No Surrogate)**

| Lab Number | Analysis | Prepared | By | Initial (g) | Final (mL) | Spike ID | Source ID | ul Spike | ul Surrogate | Preparation | Sample Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 16I0252-01 | Metals, RCRA | 09/12/2016 10:1 | ALD | 0.5 | 50 | | | | | EPA 3050B | |
| 16I0252-01 | Zinc by EPA 6010 | 09/12/2016 10:1 | ALD | 0.5 | 50 | | | | | EPA 3050B | |
| 16I0307-01 | Cadmium by EPA 6010 | 09/12/2016 10:1 | ALD | 0.5 | 50 | | | | | EPA 3050B | |
| 16I0307-01 | Lead by EPA 6010 | 09/12/2016 10:1 | ALD | 0.5 | 50 | | | | | EPA 3050B | |
| 16I0307-01 | Arsenic by EPA 6010 | 09/12/2016 10:1 | ALD | 0.5 | 50 | | | | | EPA 3050B | |
| 16I0307-01 | Chromium by EPA 6010 | 09/12/2016 10:1 | ALD | 0.5 | 50 | | | | | EPA 3050B | |
| 16I0331-02 | Lead by EPA 6010 | 09/12/2016 10:1 | ALD | 0.5 | 50 | | | | | EPA 3050B | |
| 16I0331-03 | Magnesium by EPA 6010 | 09/12/2016 10:1 | ALD | 0.5 | 50 | | | | | EPA 3050B | |
| 16I0332-02 | Lead by EPA 6010 | 09/12/2016 10:1 | ALD | 0.5 | 50 | | | | | EPA 3050B | |
| 16I0332-03 | Magnesium by EPA 6010 | 09/12/2016 10:1 | ALD | 0.5 | 50 | | | | | EPA 3050B | |
| BI60399-BLK1 | QC | 09/12/2016 10:1 | ALD | 0.5 | 50 | | | | | EPA 3050B | |
| BI60399-DUP1 | QC | 09/12/2016 10:1 | ALD | 0.5 | 50 | | 16I0040-05 | | | EPA 3050B | |
| BI60399-MS1 | QC | 09/12/2016 10:1 | ALD | 0.5 | 50 | Y15C050 | 16I0040-05 | 500 | | EPA 3050B | |
| BI60399-SRM1 | QC | 09/12/2016 10:1 | ALD | 0.5 | 50 | Y16G058 | | 500 | | EPA 3050B | |

Batch Comments:

# PREPARATION BENCH SHEET

## BI60400

**York Analytical Laboratories, Inc.**

**Printed: 9/12/2016 10:19:45AM**

**Matrix: Soil** **(No Surrogate)**

| Lab Number | Analysis | Prepared | By | Initial (g) | Final (mL) | Spike ID | Source ID | ul Spike | ul Surrogate | Preparation | Sample Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 16I0249-01 | Metals, NYSDEC Part 375 | 09/12/2016 10:1 | ALD | 0.5 | 50 | | | | | EPA 3050B | Added for BatchQC in: BI60400 |
| 16I0249-01 | Metals, RCRA | 09/12/2016 10:1 | ALD | 0.5 | 50 | | | | | EPA 3050B | Added for BatchQC in: BI60400 |
| 16I0249-01 | Metals, Target Analyte | 09/12/2016 10:1 | ALD | 0.5 | 50 | | | | | EPA 3050B | Added for BatchQC in: BI60400 |
| 16I0249-01 | Lead by EPA 6010 | 09/12/2016 10:1 | ALD | 0.5 | 50 | | | | | EPA 3050B | |
| 16I0249-03 | Lead by EPA 6010 | 09/12/2016 10:1 | ALD | 0.5 | 50 | | | | | EPA 3050B | |
| 16I0249-05 | Lead by EPA 6010 | 09/12/2016 10:1 | ALD | 0.5 | 50 | | | | | EPA 3050B | |
| 16I0249-07 | Lead by EPA 6010 | 09/12/2016 10:1 | ALD | 0.5 | 50 | | | | | EPA 3050B | |
| 16I0249-09 | Lead by EPA 6010 | 09/12/2016 10:1 | ALD | 0.5 | 50 | | | | | EPA 3050B | |
| 16I0249-09 | Metals, Target Analyte | 09/12/2016 10:1 | ALD | 0.5 | 50 | | | | | EPA 3050B | |
| 16I0249-10 | Metals, Target Analyte | 09/12/2016 10:1 | ALD | 0.5 | 50 | | | | | EPA 3050B | |
| 16I0249-11 | Metals, Target Analyte | 09/12/2016 10:1 | ALD | 0.5 | 50 | | | | | EPA 3050B | |
| 16I0249-12 | Metals, Target Analyte | 09/12/2016 10:1 | ALD | 0.5 | 50 | | | | | EPA 3050B | |
| 16I0249-13 | Metals, Target Analyte | 09/12/2016 10:1 | ALD | 0.5 | 50 | | | | | EPA 3050B | |
| 16I0249-14 | Metals, Target Analyte | 09/12/2016 10:1 | ALD | 0.5 | 50 | | | | | EPA 3050B | |
| 16I0249-15 | Metals, Target Analyte | 09/12/2016 10:1 | ALD | 0.5 | 50 | | | | | EPA 3050B | |
| 16I0260-01 | Metals, Target Analyte | 09/12/2016 10:1 | ALD | 0.5 | 50 | | | | | EPA 3050B | |
| 16I0267-01 | Metals, Target Analyte | 09/12/2016 10:1 | ALD | 0.5 | 50 | | | | | EPA 3050B | |
| 16I0267-02 | Metals, Target Analyte | 09/12/2016 10:1 | ALD | 0.5 | 50 | | | | | EPA 3050B | |
| 16I0269-01 | Metals, NYSDEC Part 375 | 09/12/2016 10:1 | ALD | 0.5 | 50 | | | | | EPA 3050B | |
| 16I0269-03 | Metals, NYSDEC Part 375 | 09/12/2016 10:1 | ALD | 0.5 | 50 | | | | | EPA 3050B | |
| 16I0269-05 | Metals, NYSDEC Part 375 | 09/12/2016 10:1 | ALD | 0.5 | 50 | | | | | EPA 3050B | |
| 16I0269-07 | Metals, NYSDEC Part 375 | 09/12/2016 10:1 | ALD | 0.5 | 50 | | | | | EPA 3050B | |
| 16I0291-01 | Metals, RCRA | 09/12/2016 10:1 | ALD | 0.5 | 50 | | | | | EPA 3050B | |

4499016621

## PREPARATION BENCH SHEET

BI60400

**York Analytical Laboratories, Inc.**

**Printed: 9/12/2016 10:19:45AM**

**Matrix: Soil**

**(No Surrogate)**

| Lab Number | Analysis | Prepared | By | Initial (g) | Final (mL) | Spike ID | Source ID | ul Spike | ul Surrogate | Preparation | Sample Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 16I0296-01 | Metals, RCRA | 09/12/2016 10:1 | ALD | 0.5 | 50 | | | | | EPA 3050B | |
| BI60400-BLK1 | QC | 09/12/2016 10:1 | ALD | 0.5 | 50 | | | | | EPA 3050B | |
| BI60400-DUP1 | QC | 09/12/2016 10:1 | ALD | 0.5 | 50 | | 16I0249-01 | | | EPA 3050B | |
| BI60400-MS1 | QC | 09/12/2016 10:1 | ALD | 0.5 | 50 | Y15C050 | 16I0249-01 | 500 | | EPA 3050B | |
| BI60400-SRM1 | QC | 09/12/2016 10:1 | ALD | 0.5 | 50 | Y16G058 | | 500 | | EPA 3050B | |

Batch Comments:

# PREPARATION BENCH SHEET

BI60401

**York Analytical Laboratories, Inc.**

**Printed: 9/12/2016 10:30:19AM**

**Matrix: Soil**

**(No Surrogate)**

| Lab Number | Analysis | Prepared | By | Initial (g) | Final (mL) | Spike ID | Source ID | ul Spike | ul Surrogate | Preparation | Sample Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 16I0251-03 | Metals, CTDEP RCP | 09/12/2016 10:2 | ALD | 0.5 | 50 | | | | | EPA 3050B | |
| 16I0251-04 | Metals, CTDEP RCP | 09/12/2016 10:2 | ALD | 0.5 | 50 | | | | | EPA 3050B | |
| 16I0251-05 | Metals, CTDEP RCP | 09/12/2016 10:2 | ALD | 0.5 | 50 | | | | | EPA 3050B | |
| 16I0251-06 | Metals, CTDEP RCP | 09/12/2016 10:2 | ALD | 0.5 | 50 | | | | | EPA 3050B | |
| 16I0251-07 | Metals, CTDEP RCP | 09/12/2016 10:2 | ALD | 0.5 | 50 | | | | | EPA 3050B | |
| 16I0251-08 | Metals, CTDEP RCP | 09/12/2016 10:2 | ALD | 0.5 | 50 | | | | | EPA 3050B | |
| 16I0251-09 | Metals, CTDEP RCP | 09/12/2016 10:2 | ALD | 0.5 | 50 | | | | | EPA 3050B | |
| 16I0251-10 | Metals, CTDEP RCP | 09/12/2016 10:2 | ALD | 0.5 | 50 | | | | | EPA 3050B | |
| 16I0251-11 | Metals, CTDEP RCP | 09/12/2016 10:2 | ALD | 0.5 | 50 | | | | | EPA 3050B | |
| 16I0251-12 | Metals, CTDEP RCP | 09/12/2016 10:2 | ALD | 0.5 | 50 | | | | | EPA 3050B | |
| 16I0251-13 | Metals, CTDEP RCP | 09/12/2016 10:2 | ALD | 0.5 | 50 | | | | | EPA 3050B | |
| 16I0314-01 | Metals, NYSDEC Part 375 | 09/12/2016 10:2 | ALD | 0.5 | 50 | | | | | EPA 3050B | |
| 16I0314-02 | Metals, NYSDEC Part 375 | 09/12/2016 10:2 | ALD | 0.5 | 50 | | | | | EPA 3050B | |
| 16I0314-03 | Metals, NYSDEC Part 375 | 09/12/2016 10:2 | ALD | 0.5 | 50 | | | | | EPA 3050B | |
| 16I0314-04 | Metals, CTDEP RCP | 09/12/2016 10:2 | ALD | 0.5 | 50 | | | | | EPA 3050B | Added for BatchQC in: BI60401 |
| 16I0314-04 | Metals, NYSDEC Part 375 | 09/12/2016 10:2 | ALD | 0.5 | 50 | | | | | EPA 3050B | |
| 16I0314-04 | Metals, Target Analyte | 09/12/2016 10:2 | ALD | 0.5 | 50 | | | | | EPA 3050B | Added for BatchQC in: BI60401 |
| 16I0314-05 | Metals, NYSDEC Part 375 | 09/12/2016 10:2 | ALD | 0.5 | 50 | | | | | EPA 3050B | |
| 16I0314-06 | Metals, NYSDEC Part 375 | 09/12/2016 10:2 | ALD | 0.5 | 50 | | | | | EPA 3050B | |
| 16I0314-07 | Metals, NYSDEC Part 375 | 09/12/2016 10:2 | ALD | 0.5 | 50 | | | | | EPA 3050B | |
| 16I0321-01 | Metals, Target Analyte | 09/12/2016 10:2 | ALD | 0.5 | 50 | | | | | EPA 3050B | |
| 16I0321-02 | Metals, Target Analyte | 09/12/2016 10:2 | ALD | 0.5 | 50 | | | | | EPA 3050B | |
| BI60401-BLK1 | QC | 09/12/2016 10:2 | ALD | 0.5 | 50 | | | | | EPA 3050B | |

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## PREPARATION BENCH SHEET

BI60401

**York Analytical Laboratories, Inc.**

**Printed: 9/12/2016 10:30:19AM**

**Matrix: Soil**

**(No Surrogate)**

| Lab Number | Analysis | Prepared | By | Initial (g) | Final (mL) | Spike ID | Source ID | ul Spike | ul Surrogate | Preparation | Sample Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|
| BI60401-DUP1 | QC | 09/12/2016 10:2 | ALD | 0.5 | 50 | | 16I0314-04 | | | EPA 3050B | |
| BI60401-MS1 | QC | 09/12/2016 10:2 | ALD | 0.5 | 50 | Y15C050 | 16I0314-04 | 500 | | EPA 3050B | |
| BI60401-SRM1 | QC | 09/12/2016 10:2 | ALD | 0.5 | 50 | Y16G058 | | 500 | | EPA 3050B | |

Batch Comments:

# PREPARATION BENCH SHEET

## BI60402

**York Analytical Laboratories, Inc.**

**Printed: 9/12/2016 10:32:14AM**

**(No Surrogate)**

**Matrix: Soil**

| Lab Number | Analysis | Prepared | By | Initial (g) | Final (mL) | Spike ID | Source ID | ul Spike | ul Surrogate | Preparation | Sample Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 16I0297-01 | Metals, CTDEP RCP | 09/12/2016 10:3 | ALD | 0.5 | 50 | | | | | EPA 3050B | |
| 16I0297-02 | Metals, CTDEP RCP | 09/12/2016 10:3 | ALD | 0.5 | 50 | | | | | EPA 3050B | |
| 16I0297-03 | Metals, CTDEP RCP | 09/12/2016 10:3 | ALD | 0.5 | 50 | | | | | EPA 3050B | |
| 16I0297-04 | Metals, CTDEP RCP | 09/12/2016 10:3 | ALD | 0.5 | 50 | | | | | EPA 3050B | |
| 16I0297-05 | Metals, CTDEP RCP | 09/12/2016 10:3 | ALD | 0.5 | 50 | | | | | EPA 3050B | |
| 16I0297-06 | Metals, CTDEP RCP | 09/12/2016 10:3 | ALD | 0.5 | 50 | | | | | EPA 3050B | |
| 16I0302-01 | Metals, RCRA | 09/12/2016 10:3 | ALD | 0.5 | 50 | | | | | EPA 3050B | |
| 16I0302-02 | Metals, RCRA | 09/12/2016 10:3 | ALD | 0.5 | 50 | | | | | EPA 3050B | |
| 16I0302-03 | Metals, RCRA | 09/12/2016 10:3 | ALD | 0.5 | 50 | | | | | EPA 3050B | |
| 16I0302-04 | Metals, RCRA | 09/12/2016 10:3 | ALD | 0.5 | 50 | | | | | EPA 3050B | |
| 16I0302-05 | Metals, RCRA | 09/12/2016 10:3 | ALD | 0.5 | 50 | | | | | EPA 3050B | |
| 16I0302-06 | Metals, RCRA | 09/12/2016 10:3 | ALD | 0.5 | 50 | | | | | EPA 3050B | |
| 16I0319-01 | Metals, Target Analyte | 09/12/2016 10:3 | ALD | 0.5 | 50 | | | | | EPA 3050B | |
| 16I0326-01 | Metals, CTDEP RCP | 09/12/2016 10:3 | ALD | 0.5 | 50 | | | | | EPA 3050B | |
| 16I0326-02 | Metals, CTDEP RCP | 09/12/2016 10:3 | ALD | 0.5 | 50 | | | | | EPA 3050B | |
| 16I0326-03 | Metals, CTDEP RCP | 09/12/2016 10:3 | ALD | 0.5 | 50 | | | | | EPA 3050B | |
| 16I0326-04 | Metals, CTDEP RCP | 09/12/2016 10:3 | ALD | 0.5 | 50 | | | | | EPA 3050B | |
| 16I0326-04 | Metals, RCRA | 09/12/2016 10:3 | ALD | 0.5 | 50 | | | | | EPA 3050B | Added for BatchQC in: BI60402 |
| 16I0326-04 | Metals, Target Analyte | 09/12/2016 10:3 | ALD | 0.5 | 50 | | | | | EPA 3050B | Added for BatchQC in: BI60402 |
| 16I0326-05 | Metals, CTDEP RCP | 09/12/2016 10:3 | ALD | 0.5 | 50 | | | | | EPA 3050B | |
| 16I0326-06 | Metals, CTDEP RCP | 09/12/2016 10:3 | ALD | 0.5 | 50 | | | | | EPA 3050B | |
| 16I0326-07 | Metals, CTDEP RCP | 09/12/2016 10:3 | ALD | 0.5 | 50 | | | | | EPA 3050B | |
| BI60402-BLK1 | QC | 09/12/2016 10:3 | ALD | 0.5 | 50 | | | | | EPA 3050B | |

## PREPARATION BENCH SHEET

BI60402

**York Analytical Laboratories, Inc.**

**Printed: 9/12/2016 10:32:14AM**

**Matrix: Soil** **(No Surrogate)**

| Lab Number | Analysis | Prepared | By | Initial (g) | Final (mL) | Spike ID | Source ID | ul Spike | ul Surrogate | Preparation | Sample Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|
| BI60402-DUP1 | QC | 09/12/2016 10:3 | ALD | 0.5 | 50 | | 16I0326-04 | | | EPA 3050B | |
| BI60402-MS1 | QC | 09/12/2016 10:3 | ALD | 0.5 | 50 | Y15C050 | 16I0326-04 | 500 | | EPA 3050B | |
| BI60402-SRM1 | QC | 09/12/2016 10:3 | ALD | 0.5 | 50 | Y16G058 | | 500 | | EPA 3050B | |

Batch Comments:

**Sequence No.: 1** **Autosampler Location: 1**
**Sample ID: Calib Blank 1** **Date Collected: 9/12/2016 2:31:53 PM**
**Analyst:** **Data Type: Reprocessed on 9/13/2016 6:59:04 AM**
**Logged In Analyst (Original) : administrator**
**Initial Sample Wt:** **Initial Sample Vol:**
**Dilution:** **Sample Prep Vol:**

**Mean Data: Calib Blank 1**

| Analyte | Mean Corrected Intensity | Std.Dev. | RSD | Conc. | Calib Units |
|---|---|---|---|---|---|
| Y 371.029 | 15377589.5 | 131191.92 | 0.85% | 5.000 | mg/L |
| Y RADIAL | 229536.4 | 2859.54 | 1.25% | 5.000 | mg/L |
| As 188.979† | -11.7 | 4.05 | 34.63% | [0.00] | mg/L |
| Tl 190.801† | -79.8 | 5.77 | 7.23% | [0.00] | mg/L |
| Se 196.026† | 20.5 | 4.50 | 21.94% | [0.00] | mg/L |
| Zn 206.200† | 349.2 | 11.00 | 3.15% | [0.00] | mg/L |
| Sb 206.836† | 75.5 | 1.31 | 1.73% | [0.00] | mg/L |
| Pb 220.353† | 124.4 | 12.39 | 9.96% | [0.00] | mg/L |
| Cd 226.502† | -210.1 | 1.86 | 0.88% | [0.00] | mg/L |
| Co 228.616† | -107.4 | 6.04 | 5.62% | [0.00] | mg/L |
| Ni 232.003† | -964.5 | 21.11 | 2.19% | [0.00] | mg/L |
| Ba 233.527† | 31.0 | 5.05 | 16.26% | [0.00] | mg/L |
| Mn 257.610† | 1109.6 | 26.97 | 2.43% | [0.00] | mg/L |
| Cr 267.716† | 129.6 | 32.27 | 24.90% | [0.00] | mg/L |
| Fe 273.955† | 224.0 | 15.75 | 7.03% | [0.00] | mg/L |
| Mg 279.077† | 206.0 | 40.65 | 19.73% | [0.00] | mg/L |
| V 292.402† | -108.4 | 90.28 | 83.25% | [0.00] | mg/L |
| Al 308.215† | 15260.1 | 338.48 | 2.22% | [0.00] | mg/L |
| Be 313.107† | -9758.3 | 174.84 | 1.79% | [0.00] | mg/L |
| Cu 324.752† | 2582.4 | 52.38 | 2.03% | [0.00] | mg/L |
| Ag 338.289† | 75.6 | 17.93 | 23.72% | [0.00] | mg/L |
| Na 330.237† | 577.5 | 20.36 | 3.53% | [0.00] | mg/L |
| Ca 227.546† | -401.2 | 3.95 | 0.99% | [0.00] | mg/L |
| Al RADIAL† | 439.4 | 14.81 | 3.37% | [0.00] | mg/L |
| Fe RADIAL† | 8.4 | 1.74 | 20.83% | [0.00] | mg/L |
| Ca RADIAL† | 1341.5 | 8.21 | 0.61% | [0.00] | mg/L |
| K RADIAL† | 161.3 | 77.60 | 48.12% | [0.00] | mg/L |
| Mg RADIAL† | 22.4 | 3.36 | 15.01% | [0.00] | mg/L |
| Na RADIAL† | -16974.6 | 242.29 | 1.43% | [0.00] | mg/L |
| Mo 202.031 | 81.3 | 4.61 | 5.67% | [0.00] | mg/L |

**Sequence No.: 2** **Autosampler Location: 2**
**Sample ID: CAL STD 1** **Date Collected: 9/12/2016 2:36:57 PM**
**Analyst:** **Data Type: Reprocessed on 9/13/2016 6:59:07 AM**
**Logged In Analyst (Original) : administrator**
**Initial Sample Wt:** **Initial Sample Vol:**
**Dilution:** **Sample Prep Vol:**

**Mean Data: CAL STD 1**

| Analyte | Mean Corrected Intensity | Std.Dev. | RSD | Conc. | Calib Units |
|---|---|---|---|---|---|
| Y 371.029 | 14061732.9 | 44727.24 | 0.32% | 4.572 | mg/L |
| Y RADIAL | 218512.0 | 2531.92 | 1.16% | 4.760 | mg/L |
| As 188.979† | 1892.4 | 6.30 | 0.33% | [1.0000] | mg/L |
| Tl 190.801† | 2909.7 | 18.29 | 0.63% | [1.0000] | mg/L |
| Se 196.026† | 962.3 | 6.75 | 0.70% | [1.0000] | mg/L |
| Zn 206.200† | 228108.9 | 2023.20 | 0.89% | [5.0000] | mg/L |
| Sb 206.836† | 1717.9 | 15.38 | 0.90% | [0.5000] | mg/L |
| Pb 220.353† | 10898.7 | 44.96 | 0.41% | [1.0000] | mg/L |
| Cd 226.502† | 73199.8 | 689.44 | 0.94% | [0.5000] | mg/L |
| Co 228.616† | 214463.5 | 2323.81 | 1.08% | [5.0000] | mg/L |
| Ni 232.003† | 121010.9 | 1204.26 | 1.00% | [5.0000] | mg/L |
| Ba 233.527† | 1980538.7 | 16605.10 | 0.84% | [20.0000] | mg/L |
| Mn 257.610† | 4797760.4 | 30846.95 | 0.64% | [5.0000] | mg/L |
| Cr 267.716† | 289199.7 | 3001.52 | 1.04% | [2.0000] | mg/L |
| Fe 273.955† | 271724.9 | 2963.24 | 1.09% | [10.0000] | mg/L |
| Mg 279.077† | 1108565.9 | 9052.57 | 0.82% | [50.0000] | mg/L |

| | | | | |
|---|---|---|---|---|
| V 292.402† | 1444895.2 | 7792.11 | 0.54% | [5.0000] mg/L |
| Al 308.215† | 558678.8 | 5364.57 | 0.96% | [20.0000] mg/L |
| Be 313.107† | 2180429.0 | 8938.82 | 0.41% | [0.5000] mg/L |
| Cu 324.752† | 664621.6 | 5294.51 | 0.80% | [2.5000] mg/L |
| Ag 338.289† | 372145.7 | 2467.65 | 0.66% | [2.5000] mg/L |
| Na 330.237† | 49714.2 | 600.74 | 1.21% | [50.0000] mg/L |
| Ca 227.546† | 18684.0 | 215.03 | 1.15% | [50.0000] mg/L |
| Al RADIAL† | 38475.1 | 577.28 | 1.50% | [20.0000] mg/L |
| Fe RADIAL† | 3683.1 | 82.22 | 2.23% | [10.0000] mg/L |
| Ca RADIAL† | 230335.4 | 307.04 | 0.13% | [50.0000] mg/L |
| K RADIAL† | 11607.4 | 194.73 | 1.68% | [10.0000] mg/L |
| Mg RADIAL† | 17102.0 | 291.42 | 1.70% | [50.0000] mg/L |
| Na RADIAL† | 656749.0 | 1510.29 | 0.23% | [50.0000] mg/L |
| Mo 202.031 | 54605.8 | 476.92 | 0.87% | [2.00000] mg/L |

**Sequence No.: 3**
**Sample ID: SEQ-ICV1**
**Analyst: KV**
**Logged In Analyst (Original) : administrator**
**Initial Sample Wt:**
**Dilution:**

**Autosampler Location: 3**
**Date Collected: 9/12/2016 2:44:40 PM**
**Data Type: Reprocessed on 9/13/2016 6:59:08 AM**

**Initial Sample Vol:**
**Sample Prep Vol:**

**Mean Data: SEQ-ICV1**

| Analyte | Mean Corrected Intensity | Calib. Conc. | Units | Std.Dev. | Sample Conc. | Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 14034062.1 | 4.563 | mg/L | 0.0334 | | | | 0.73% |
| Y RADIAL | 221277.5 | 4.820 | mg/L | 0.1089 | | | | 2.26% |
| As 188.979† | 483.3 | 0.2558 | mg/L | 0.00353 | 0.2558 | mg/L | 0.00353 | 1.38% |
| Tl 190.801† | 723.2 | 0.2488 | mg/L | 0.00191 | 0.2488 | mg/L | 0.00191 | 0.77% |
| Se 196.026† | 249.9 | 0.2620 | mg/L | 0.00441 | 0.2620 | mg/L | 0.00441 | 1.68% |
| Zn 206.200† | 117119.5 | 2.567 | mg/L | 0.0554 | 2.567 | mg/L | 0.0554 | 2.16% |
| Sb 206.836† | 905.5 | 0.2635 | mg/L | 0.00641 | 0.2635 | mg/L | 0.00641 | 2.43% |
| Pb 220.353† | 2801.4 | 0.2582 | mg/L | 0.00323 | 0.2582 | mg/L | 0.00323 | 1.25% |
| Cd 226.502† | 18388.6 | 0.1250 | mg/L | 0.00279 | 0.1250 | mg/L | 0.00279 | 2.23% |
| Co 228.616† | 111521.9 | 2.600 | mg/L | 0.0569 | 2.600 | mg/L | 0.0569 | 2.19% |
| Ni 232.003† | 61871.6 | 2.557 | mg/L | 0.0568 | 2.557 | mg/L | 0.0568 | 2.22% |
| Ba 233.527† | 1040468.3 | 10.51 | mg/L | 0.194 | 10.51 | mg/L | 0.194 | 1.85% |
| Mn 257.610† | 2504927.0 | 2.611 | mg/L | 0.0479 | 2.611 | mg/L | 0.0479 | 1.83% |
| Cr 267.716† | 149323.5 | 1.033 | mg/L | 0.0210 | 1.033 | mg/L | 0.0210 | 2.03% |
| Fe 273.955† | 140578.8 | 5.174 | mg/L | 0.1095 | 5.174 | mg/L | 0.1095 | 2.12% |
| Mg 279.077† | 565907.8 | 25.52 | mg/L | 0.475 | 25.52 | mg/L | 0.475 | 1.86% |
| V 292.402† | 736739.6 | 2.549 | mg/L | 0.0425 | 2.549 | mg/L | 0.0425 | 1.67% |
| Al 308.215† | 282481.1 | 10.11 | mg/L | 0.226 | 10.11 | mg/L | 0.226 | 2.23% |
| Be 313.107† | 1116169.7 | 0.2560 | mg/L | 0.00426 | 0.2560 | mg/L | 0.00426 | 1.67% |
| Cu 324.752† | 345311.0 | 1.299 | mg/L | 0.0269 | 1.299 | mg/L | 0.0269 | 2.07% |
| Ag 338.289† | 194256.4 | 1.305 | mg/L | 0.0263 | 1.305 | mg/L | 0.0263 | 2.02% |
| Na 330.237† | 23931.4 | 24.12 | mg/L | 0.523 | 24.12 | mg/L | 0.523 | 2.17% |
| Ca 227.546† | 9710.8 | 26.04 | mg/L | 0.363 | 26.04 | mg/L | 0.363 | 1.39% |
| Al RADIAL† | 19096.0 | 9.926 | mg/L | 0.2396 | 9.926 | mg/L | 0.2396 | 2.41% |
| Fe RADIAL† | 1861.3 | 5.054 | mg/L | 0.1204 | 5.054 | mg/L | 0.1204 | 2.38% |
| Ca RADIAL† | 115836.3 | 25.15 | mg/L | 0.061 | 25.15 | mg/L | 0.061 | 0.24% |
| K RADIAL† | 5904.6 | 5.087 | mg/L | 0.0943 | 5.087 | mg/L | 0.0943 | 1.85% |
| Mg RADIAL† | 8582.2 | 25.09 | mg/L | 0.597 | 25.09 | mg/L | 0.597 | 2.38% |
| Na RADIAL† | 325577.4 | 24.79 | mg/L | 0.369 | 24.79 | mg/L | 0.369 | 1.49% |
| Mo 202.031 | 27518.6 | 1.008 | mg/L | 0.0140 | 1.008 | mg/L | 0.0140 | 1.39% |

**Sequence No.: 4**
**Sample ID: SEQ-ICB1**
**Analyst: KV**
**Logged In Analyst (Original) : administrator**
**Initial Sample Wt:**
**Dilution:**

**Autosampler Location: 4**
**Date Collected: 9/12/2016 2:52:47 PM**
**Data Type: Reprocessed on 9/13/2016 6:59:08 AM**

**Initial Sample Vol:**
**Sample Prep Vol:**

**Mean Data: SEQ-ICB1**

| Analyte | Mean Corrected Intensity | Calib. Conc. | Units | Std.Dev. | Sample Conc. | Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 14983448.9 | 4.872 | mg/L | 0.0579 | | | | 1.19% |
| Y RADIAL | 225138.6 | 4.904 | mg/L | 0.0518 | | | | 1.06% |

| | | | | | | |
|---|---|---|---|---|---|---|
| As 188.979† | -4.4 | -0.0023 mg/L | 0.00126 | -0.0023 mg/L | 0.00126 | 54.23% |
| Tl 190.801† | 7.1 | 0.0024 mg/L | 0.00217 | 0.0024 mg/L | 0.00217 | 89.60% |
| Se 196.026† | -0.6 | -0.0006 mg/L | 0.00493 | -0.0006 mg/L | 0.00493 | 794.80% |
| Zn 206.200† | -216.5 | -0.0047 mg/L | 0.00021 | -0.0047 mg/L | 0.00021 | 4.34% |
| Sb 206.836† | 12.4 | 0.0036 mg/L | 0.00265 | 0.0036 mg/L | 0.00265 | 73.27% |
| Pb 220.353† | 0.7 | 0.0000 mg/L | 0.00155 | 0.0000 mg/L | 0.00155 | >999.9% |
| Cd 226.502† | -35.1 | -0.0002 mg/L | 0.00019 | -0.0002 mg/L | 0.00019 | 77.44% |
| Co 228.616† | -1.4 | 0.0000 mg/L | 0.00020 | 0.0000 mg/L | 0.00020 | 634.54% |
| Ni 232.003† | -41.1 | -0.0017 mg/L | 0.00083 | -0.0017 mg/L | 0.00083 | 48.55% |
| Ba 233.527† | 15.4 | 0.0002 mg/L | 0.00009 | 0.0002 mg/L | 0.00009 | 56.49% |
| Mn 257.610† | -29.2 | 0.0000 mg/L | 0.00001 | 0.0000 mg/L | 0.00001 | 37.40% |
| Cr 267.716† | 3.5 | 0.0000 mg/L | 0.00006 | 0.0000 mg/L | 0.00006 | 229.48% |
| Fe 273.955† | -98.6 | -0.0036 mg/L | 0.00021 | -0.0036 mg/L | 0.00021 | 5.91% |
| Mg 279.077† | 19.1 | 0.0009 mg/L | 0.00183 | 0.0009 mg/L | 0.00183 | 212.76% |
| V 292.402† | -17.8 | -0.0001 mg/L | 0.00010 | -0.0001 mg/L | 0.00010 | 166.19% |
| Al 308.215† | -3009.2 | -0.1077 mg/L | 0.00353 | -0.1077 mg/L | 0.00353 | 3.28% |
| Be 313.107† | -439.4 | -0.0001 mg/L | 0.00008 | -0.0001 mg/L | 0.00008 | 80.63% |
| Cu 324.752† | 8.1 | 0.0000 mg/L | 0.00013 | 0.0000 mg/L | 0.00013 | 432.81% |
| Ag 338.289† | -9.9 | -0.0001 mg/L | 0.00026 | -0.0001 mg/L | 0.00026 | 379.84% |
| Na 330.237† | 28.2 | 0.0284 mg/L | 0.03645 | 0.0284 mg/L | 0.03645 | 128.28% |
| Ca 227.546† | 24.3 | 0.0650 mg/L | 0.06593 | 0.0650 mg/L | 0.06593 | 101.37% |
| Al RADIAL† | -250.0 | -0.1300 mg/L | 0.00711 | -0.1300 mg/L | 0.00711 | 5.47% |
| Fe RADIAL† | -1.4 | -0.0037 mg/L | 0.00629 | -0.0037 mg/L | 0.00629 | 168.98% |
| Ca RADIAL† | 264.4 | 0.0574 mg/L | 0.00740 | 0.0574 mg/L | 0.00740 | 12.90% |
| K RADIAL† | -32.8 | -0.0282 mg/L | 0.01118 | -0.0282 mg/L | 0.01118 | 39.59% |
| Mg RADIAL† | -4.7 | -0.0136 mg/L | 0.01606 | -0.0136 mg/L | 0.01606 | 118.03% |
| Na RADIAL† | -2062.5 | -0.1570 mg/L | 0.02689 | -0.1570 mg/L | 0.02689 | 17.12% |
| Mo 202.031 | -4.9 | 0.000 mg/L | 0.0005 | 0.000 mg/L | 0.0005 | 280.32% |

**Sequence No.: 5**
**Sample ID: SEQ-CRL1**
**Analyst: KV**
**Logged In Analyst (Original) : administrator**
**Initial Sample Wt:**
**Dilution:**

**Autosampler Location: 156**
**Date Collected: 9/12/2016 2:57:52 PM**
**Data Type: Reprocessed on 9/13/2016 6:59:09 AM**

**Initial Sample Vol:**
**Sample Prep Vol:**

**Mean Data: SEQ-CRL1**

| Analyte | Mean Corrected Intensity | Calib. Conc. | Calib. Units | Std.Dev. | Sample Conc. | Sample Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 15102065.7 | 4.910 | mg/L | 0.0137 | | | | 0.28% |
| Y RADIAL | 230546.8 | 5.022 | mg/L | 0.0196 | | | | 0.39% |
| As 188.979† | -2.6 | -0.0014 | mg/L | 0.00242 | -0.0014 | mg/L | 0.00242 | 174.91% |
| Tl 190.801† | 10.0 | 0.0034 | mg/L | 0.00219 | 0.0034 | mg/L | 0.00219 | 63.66% |
| Se 196.026† | 8.1 | 0.0085 | mg/L | 0.00737 | 0.0085 | mg/L | 0.00737 | 87.18% |
| Zn 206.200† | 6.3 | 0.0001 | mg/L | 0.00043 | 0.0001 | mg/L | 0.00043 | 310.53% |
| Sb 206.836† | 50.5 | 0.0147 | mg/L | 0.00319 | 0.0147 | mg/L | 0.00319 | 21.70% |
| Pb 220.353† | 33.7 | 0.0031 | mg/L | 0.00059 | 0.0031 | mg/L | 0.00059 | 19.33% |
| Cd 226.502† | 443.0 | 0.0030 | mg/L | 0.00005 | 0.0030 | mg/L | 0.00005 | 1.75% |
| Co 228.616† | 221.7 | 0.0052 | mg/L | 0.00021 | 0.0052 | mg/L | 0.00021 | 4.11% |
| Ni 232.003† | 68.0 | 0.0028 | mg/L | 0.00037 | 0.0028 | mg/L | 0.00037 | 13.05% |
| Ba 233.527† | 1082.4 | 0.0109 | mg/L | 0.00022 | 0.0109 | mg/L | 0.00022 | 1.98% |
| Mn 257.610† | 4882.8 | 0.0051 | mg/L | 0.00005 | 0.0051 | mg/L | 0.00005 | 0.94% |
| Cr 267.716† | 757.7 | 0.0052 | mg/L | 0.00025 | 0.0052 | mg/L | 0.00025 | 4.73% |
| Fe 273.955† | -104.2 | -0.0038 | mg/L | 0.00075 | -0.0038 | mg/L | 0.00075 | 19.63% |
| Mg 279.077† | -3.5 | -0.0002 | mg/L | 0.00434 | -0.0002 | mg/L | 0.00434 | >999.9% |
| V 292.402† | 1408.2 | 0.0049 | mg/L | 0.00012 | 0.0049 | mg/L | 0.00012 | 2.46% |
| Al 308.215† | -3308.9 | -0.1185 | mg/L | 0.00176 | -0.1185 | mg/L | 0.00176 | 1.48% |
| Be 313.107† | 2050.0 | 0.0005 | mg/L | 0.00003 | 0.0005 | mg/L | 0.00003 | 7.33% |
| Cu 324.752† | 1248.6 | 0.0047 | mg/L | 0.00019 | 0.0047 | mg/L | 0.00019 | 4.14% |
| Ag 338.289† | 903.2 | 0.0061 | mg/L | 0.00046 | 0.0061 | mg/L | 0.00046 | 7.64% |
| Na 330.237† | -0.1 | 0.0000 | mg/L | 0.14565 | 0.0000 | mg/L | 0.14565 | >999.9% |
| Ca 227.546† | 28.4 | 0.0759 | mg/L | 0.00640 | 0.0759 | mg/L | 0.00640 | 8.43% |
| Al RADIAL† | -269.0 | -0.1399 | mg/L | 0.00505 | -0.1399 | mg/L | 0.00505 | 3.61% |
| Fe RADIAL† | 1.5 | 0.0040 | mg/L | 0.01077 | 0.0040 | mg/L | 0.01077 | 269.60% |
| Ca RADIAL† | 491.1 | 0.1066 | mg/L | 0.00347 | 0.1066 | mg/L | 0.00347 | 3.26% |
| K RADIAL† | -35.8 | -0.0309 | mg/L | 0.03868 | -0.0309 | mg/L | 0.03868 | 125.32% |
| Mg RADIAL† | -1.2 | -0.0036 | mg/L | 0.02491 | -0.0036 | mg/L | 0.02491 | 682.45% |
| Na RADIAL† | -1931.3 | -0.1470 | mg/L | 0.01323 | -0.1470 | mg/L | 0.01323 | 9.00% |
| Mo 202.031 | 165.6 | 0.006 | mg/L | 0.0001 | 0.006 | mg/L | 0.0001 | 1.37% |

Sequence No.: 6
Sample ID: SEQ-CRL2
Analyst: KV
Logged In Analyst (Original) : administrator
Initial Sample Wt:
Dilution:

Autosampler Location: 157
Date Collected: 9/12/2016 3:03:00 PM
Data Type: Reprocessed on 9/13/2016 6:59:10 AM

Initial Sample Vol:
Sample Prep Vol:

Mean Data: SEQ-CRL2

| Analyte | Mean Corrected Intensity | Calib. Conc. | Units | Std.Dev. | Sample Conc. | Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 15488918.2 | 5.036 | mg/L | 0.0403 | | | | 0.80% |
| Y RADIAL | 239033.4 | 5.207 | mg/L | 0.0700 | | | | 1.34% |
| As 188.979† | -13.9 | -0.0073 | mg/L | 0.00258 | -0.0073 | mg/L | 0.00258 | 35.14% |
| Tl 190.801† | -7.9 | -0.0027 | mg/L | 0.00306 | -0.0027 | mg/L | 0.00306 | 113.00% |
| Se 196.026† | 7.9 | 0.0083 | mg/L | 0.00612 | 0.0083 | mg/L | 0.00612 | 74.03% |
| Zn 206.200† | -272.6 | -0.0060 | mg/L | 0.00010 | -0.0060 | mg/L | 0.00010 | 1.67% |
| Sb 206.836† | 1.6 | 0.0005 | mg/L | 0.00262 | 0.0005 | mg/L | 0.00262 | 551.39% |
| Pb 220.353† | 5.9 | 0.0005 | mg/L | 0.00206 | 0.0005 | mg/L | 0.00206 | 406.95% |
| Cd 226.502† | -36.7 | -0.0003 | mg/L | 0.00012 | -0.0003 | mg/L | 0.00012 | 44.68% |
| Co 228.616† | 4.6 | 0.0001 | mg/L | 0.00026 | 0.0001 | mg/L | 0.00026 | 231.27% |
| Ni 232.003† | -46.4 | -0.0019 | mg/L | 0.00095 | -0.0019 | mg/L | 0.00095 | 49.85% |
| Ba 233.527† | 0.7 | 0.0000 | mg/L | 0.00006 | 0.0000 | mg/L | 0.00006 | 861.55% |
| Mn 257.610† | -80.3 | -0.0001 | mg/L | 0.00002 | -0.0001 | mg/L | 0.00002 | 42.05% |
| Cr 267.716† | 47.5 | 0.0003 | mg/L | 0.00024 | 0.0003 | mg/L | 0.00024 | 72.61% |
| Fe 273.955† | 5545.8 | 0.2041 | mg/L | 0.00041 | 0.2041 | mg/L | 0.00041 | 0.20% |
| Mg 279.077† | 1176.3 | 0.0530 | mg/L | 0.00327 | 0.0530 | mg/L | 0.00327 | 6.17% |
| V 292.402† | -15.4 | -0.0001 | mg/L | 0.00018 | -0.0001 | mg/L | 0.00018 | 286.79% |
| Al 308.215† | -2729.1 | -0.0977 | mg/L | 0.00183 | -0.0977 | mg/L | 0.00183 | 1.88% |
| Be 313.107† | -304.7 | -0.0001 | mg/L | 0.00003 | -0.0001 | mg/L | 0.00003 | 43.23% |
| Cu 324.752† | -314.1 | -0.0012 | mg/L | 0.00020 | -0.0012 | mg/L | 0.00020 | 16.70% |
| Ag 338.289† | -93.2 | -0.0006 | mg/L | 0.00027 | -0.0006 | mg/L | 0.00027 | 43.57% |
| Na 330.237† | 106.9 | 0.1086 | mg/L | 0.06841 | 0.1086 | mg/L | 0.06841 | 63.00% |
| Ca 227.546† | 38.1 | 0.1036 | mg/L | 0.01107 | 0.1036 | mg/L | 0.01107 | 10.69% |
| Al RADIAL† | -214.5 | -0.1115 | mg/L | 0.01478 | -0.1115 | mg/L | 0.01478 | 13.25% |
| Fe RADIAL† | 77.4 | 0.2101 | mg/L | 0.01199 | 0.2101 | mg/L | 0.01199 | 5.71% |
| Ca RADIAL† | 386.0 | 0.0838 | mg/L | 0.00150 | 0.0838 | mg/L | 0.00150 | 1.79% |
| K RADIAL† | 205.5 | 0.1771 | mg/L | 0.02386 | 0.1771 | mg/L | 0.02386 | 13.48% |
| Mg RADIAL† | 20.5 | 0.0600 | mg/L | 0.01862 | 0.0600 | mg/L | 0.01862 | 31.04% |
| Na RADIAL† | 1081.2 | 0.0823 | mg/L | 0.02992 | 0.0823 | mg/L | 0.02992 | 36.35% |
| Mo 202.031 | 10.5 | 0.000 | mg/L | 0.0002 | 0.000 | mg/L | 0.0002 | 60.75% |

Sequence No.: 7
Sample ID: SEQ-IFA1
Analyst: KV
Logged In Analyst (Original) : administrator
Initial Sample Wt:
Dilution:

Autosampler Location: 6
Date Collected: 9/12/2016 3:08:08 PM
Data Type: Reprocessed on 9/13/2016 6:59:10 AM

Initial Sample Vol:
Sample Prep Vol:

Mean Data: SEQ-IFA1

| Analyte | Mean Corrected Intensity | Calib. Conc. | Units | Std.Dev. | Sample Conc. | Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 12514648.7 | 4.069 | mg/L | 0.0404 | | | | 0.99% |
| Y RADIAL | 222271.9 | 4.842 | mg/L | 0.0430 | | | | 0.89% |
| As 188.979† | -28.3 | 0.0021 | mg/L | 0.00562 | 0.0021 | mg/L | 0.00562 | 267.57% |
| Tl 190.801† | -40.3 | -0.0044 | mg/L | 0.00250 | -0.0044 | mg/L | 0.00250 | 57.33% |
| Se 196.026† | -78.1 | 0.0041 | mg/L | 0.00150 | 0.0041 | mg/L | 0.00150 | 36.56% |
| Zn 206.200† | 203.5 | 0.0026 | mg/L | 0.00014 | 0.0026 | mg/L | 0.00014 | 5.48% |
| Sb 206.836† | 21.8 | 0.0042 | mg/L | 0.00385 | 0.0042 | mg/L | 0.00385 | 91.64% |
| Pb 220.353† | -571.8 | -0.0004 | mg/L | 0.00127 | -0.0004 | mg/L | 0.00127 | 283.26% |
| Cd 226.502† | 2894.5 | -0.0011 | mg/L | 0.00052 | -0.0011 | mg/L | 0.00052 | 47.98% |
| Co 228.616† | -175.7 | -0.0001 | mg/L | 0.00043 | -0.0001 | mg/L | 0.00043 | 340.15% |
| Ni 232.003† | -377.6 | -0.0023 | mg/L | 0.00387 | -0.0023 | mg/L | 0.00387 | 166.04% |
| Ba 233.527† | 166.1 | 0.0017 | mg/L | 0.00027 | 0.0017 | mg/L | 0.00027 | 16.15% |
| Mn 257.610† | -27603.9 | -0.0041 | mg/L | 0.00036 | -0.0041 | mg/L | 0.00036 | 8.81% |
| Cr 267.716† | -660.5 | -0.0027 | mg/L | 0.00023 | -0.0027 | mg/L | 0.00023 | 8.71% |
| Fe 273.955† | 5220308.5 | 192.1 | mg/L | 0.78 | 192.1 | mg/L | 0.78 | 0.40% |
| Mg 279.077† | 11854901.2 | 534.7 | mg/L | 2.00 | 534.7 | mg/L | 2.00 | 0.37% |
| V 292.402† | 2447.3 | -0.0010 | mg/L | 0.00148 | -0.0010 | mg/L | 0.00148 | 146.64% |

| | | | | | | |
|---|---|---|---|---|---|---|
| Al 308.215† | 15739638.0 | 563.4 mg/L | 2.07 | 563.4 mg/L | 2.07 | 0.37% |
| Be 313.107† | -2186.6 | -0.0005 mg/L | 0.00003 | -0.0005 mg/L | 0.00003 | 5.71% |
| Cu 324.752† | -1057.9 | 0.0036 mg/L | 0.00013 | 0.0036 mg/L | 0.00013 | 3.63% |
| Ag 338.289† | -31.3 | -0.0020 mg/L | 0.00035 | -0.0020 mg/L | 0.00035 | 17.74% |
| Na 330.237† | -681.4 | 0.6757 mg/L | 0.04193 | 0.6757 mg/L | 0.04193 | 6.21% |
| Ca 227.546† | 216709.7 | 581.9 mg/L | 9.84 | 581.9 mg/L | 9.84 | 1.69% |
| Al RADIAL† | 949938.1 | 493.8 mg/L | 6.20 | 493.8 mg/L | 6.20 | 1.26% |
| Fe RADIAL† | 69815.0 | 189.6 mg/L | 0.51 | 189.6 mg/L | 0.51 | 0.27% |
| Ca RADIAL† | 2262936.7 | 491.2 mg/L | 5.24 | 491.2 mg/L | 5.24 | 1.07% |
| K RADIAL† | -103.3 | -0.0890 mg/L | 0.05171 | -0.0890 mg/L | 0.05171 | 58.13% |
| Mg RADIAL† | 169029.4 | 494.2 mg/L | 1.35 | 494.2 mg/L | 1.35 | 0.27% |
| Na RADIAL† | 230.8 | 0.0176 mg/L | 0.02458 | 0.0176 mg/L | 0.02458 | 139.85% |
| Mo 202.031 | -205.6 | -0.008 mg/L | 0.0012 | -0.008 mg/L | 0.0012 | 16.15% |

**Sequence No.: 8**
**Sample ID: SEQ-IFB1**
**Analyst: KV**
**Logged In Analyst (Original) : administrator**
**Initial Sample Wt:**
**Dilution:**

**Autosampler Location: 7**
**Date Collected: 9/12/2016 3:15:44 PM**
**Data Type: Reprocessed on 9/13/2016 6:59:11 AM**

**Initial Sample Vol:**
**Sample Prep Vol:**

**Mean Data: SEQ-IFB1**

| Analyte | Mean Corrected Intensity | Calib. Conc. | Units | Std.Dev. | Sample Conc. | Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 12737092.1 | 4.141 | mg/L | 0.0319 | | | | 0.77% |
| Y RADIAL | 219325.0 | 4.778 | mg/L | 0.0946 | | | | 1.98% |
| As 188.979† | 1034.7 | 0.5640 | mg/L | 0.01674 | 0.5640 | mg/L | 0.01674 | 2.97% |
| Tl 190.801† | 1226.3 | 0.4311 | mg/L | 0.00470 | 0.4311 | mg/L | 0.00470 | 1.09% |
| Se 196.026† | 424.0 | 0.5270 | mg/L | 0.00430 | 0.5270 | mg/L | 0.00430 | 0.82% |
| Zn 206.200† | 44602.7 | 0.9757 | mg/L | 0.00675 | 0.9757 | mg/L | 0.00675 | 0.69% |
| Sb 206.836† | 1851.6 | 0.5368 | mg/L | 0.00392 | 0.5368 | mg/L | 0.00392 | 0.73% |
| Pb 220.353† | 10141.9 | 0.9828 | mg/L | 0.00928 | 0.9828 | mg/L | 0.00928 | 0.94% |
| Cd 226.502† | 146503.2 | 0.9796 | mg/L | 0.01634 | 0.9796 | mg/L | 0.01634 | 1.67% |
| Co 228.616† | 20867.3 | 0.4905 | mg/L | 0.00352 | 0.4905 | mg/L | 0.00352 | 0.72% |
| Ni 232.003† | 24435.3 | 1.023 | mg/L | 0.0174 | 1.023 | mg/L | 0.0174 | 1.70% |
| Ba 233.527† | 52280.0 | 0.5279 | mg/L | 0.00886 | 0.5279 | mg/L | 0.00886 | 1.68% |
| Mn 257.610† | 459041.2 | 0.5033 | mg/L | 0.00739 | 0.5033 | mg/L | 0.00739 | 1.47% |
| Cr 267.716† | 70451.5 | 0.4891 | mg/L | 0.00708 | 0.4891 | mg/L | 0.00708 | 1.45% |
| Fe 273.955† | 5179653.6 | 190.6 | mg/L | 0.43 | 190.6 | mg/L | 0.43 | 0.22% |
| Mg 279.077† | 11753058.5 | 530.1 | mg/L | 0.91 | 530.1 | mg/L | 0.91 | 0.17% |
| V 292.402† | 147402.3 | 0.5005 | mg/L | 0.00920 | 0.5005 | mg/L | 0.00920 | 1.84% |
| Al 308.215† | 15588213.8 | 558.0 | mg/L | 1.27 | 558.0 | mg/L | 1.27 | 0.23% |
| Be 313.107† | 2222319.2 | 0.5096 | mg/L | 0.00893 | 0.5096 | mg/L | 0.00893 | 1.75% |
| Cu 324.752† | 144893.3 | 0.5527 | mg/L | 0.00814 | 0.5527 | mg/L | 0.00814 | 1.47% |
| Ag 338.289† | 165723.0 | 1.112 | mg/L | 0.0158 | 1.112 | mg/L | 0.0158 | 1.42% |
| Na 330.237† | 847.6 | 2.229 | mg/L | 0.0782 | 2.229 | mg/L | 0.0782 | 3.51% |
| Ca 227.546† | 207961.3 | 558.5 | mg/L | 8.80 | 558.5 | mg/L | 8.80 | 1.58% |
| Al RADIAL† | 955468.0 | 496.7 | mg/L | 13.73 | 496.7 | mg/L | 13.73 | 2.76% |
| Fe RADIAL† | 70697.9 | 192.0 | mg/L | 1.08 | 192.0 | mg/L | 1.08 | 0.56% |
| Ca RADIAL† | 2284711.0 | 496.0 | mg/L | 14.07 | 496.0 | mg/L | 14.07 | 2.84% |
| K RADIAL† | -90.9 | -0.0783 | mg/L | 0.04547 | -0.0783 | mg/L | 0.04547 | 58.06% |
| Mg RADIAL† | 170402.2 | 498.2 | mg/L | 2.90 | 498.2 | mg/L | 2.90 | 0.58% |
| Na RADIAL† | 522.3 | 0.0398 | mg/L | 0.02672 | 0.0398 | mg/L | 0.02672 | 67.19% |
| Mo 202.031 | -156.8 | -0.006 | mg/L | 0.0003 | -0.006 | mg/L | 0.0003 | 4.75% |

**Sequence No.: 9**
**Sample ID: SEQ-CCV1**
**Analyst: KV**
**Logged In Analyst (Original) : administrator**
**Initial Sample Wt:**
**Dilution:**

**Autosampler Location: 3**
**Date Collected: 9/12/2016 3:23:22 PM**
**Data Type: Reprocessed on 9/13/2016 6:59:12 AM**

**Initial Sample Vol:**
**Sample Prep Vol:**

**Mean Data: SEQ-CCV1**

| Analyte | Mean Corrected Intensity | Calib. Conc. | Units | Std.Dev. | Sample Conc. | Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 14751127.9 | 4.796 | mg/L | 0.0360 | | | | 0.75% |
| Y RADIAL | 234353.0 | 5.105 | mg/L | 0.1089 | | | | 2.13% |
| As 188.979† | 477.1 | 0.2526 | mg/L | 0.00669 | 0.2526 | mg/L | 0.00669 | 2.65% |

| | | | | | | |
|---|---|---|---|---|---|---|
| Tl 190.801† | 721.9 | 0.2483 mg/L | 0.00401 | 0.2483 mg/L | 0.00401 | 1.62% |
| Se 196.026† | 249.4 | 0.2614 mg/L | 0.01289 | 0.2614 mg/L | 0.01289 | 4.93% |
| Zn 206.200† | 121048.4 | 2.653 mg/L | 0.0130 | 2.653 mg/L | 0.0130 | 0.49% |
| Sb 206.836† | 889.4 | 0.2588 mg/L | 0.00710 | 0.2588 mg/L | 0.00710 | 2.75% |
| Pb 220.353† | 2854.5 | 0.2630 mg/L | 0.00353 | 0.2630 mg/L | 0.00353 | 1.34% |
| Cd 226.502† | 19112.8 | 0.1300 mg/L | 0.00088 | 0.1300 mg/L | 0.00088 | 0.68% |
| Co 228.616† | 113320.4 | 2.642 mg/L | 0.0185 | 2.642 mg/L | 0.0185 | 0.70% |
| Ni 232.003† | 62531.3 | 2.584 mg/L | 0.0165 | 2.584 mg/L | 0.0165 | 0.64% |
| Ba 233.527† | 1073005.9 | 10.84 mg/L | 0.090 | 10.84 mg/L | 0.090 | 0.83% |
| Mn 257.610† | 2554247.5 | 2.663 mg/L | 0.0177 | 2.663 mg/L | 0.0177 | 0.67% |
| Cr 267.716† | 151821.5 | 1.050 mg/L | 0.0076 | 1.050 mg/L | 0.0076 | 0.72% |
| Fe 273.955† | 142496.0 | 5.244 mg/L | 0.0339 | 5.244 mg/L | 0.0339 | 0.65% |
| Mg 279.077† | 588737.0 | 26.55 mg/L | 0.229 | 26.55 mg/L | 0.229 | 0.86% |
| V 292.402† | 749904.6 | 2.595 mg/L | 0.0154 | 2.595 mg/L | 0.0154 | 0.59% |
| Al 308.215† | 284215.0 | 10.17 mg/L | 0.059 | 10.17 mg/L | 0.059 | 0.58% |
| Be 313.107† | 1134286.1 | 0.2601 mg/L | 0.00132 | 0.2601 mg/L | 0.00132 | 0.51% |
| Cu 324.752† | 345040.2 | 1.298 mg/L | 0.0082 | 1.298 mg/L | 0.0082 | 0.63% |
| Ag 338.289† | 194089.8 | 1.304 mg/L | 0.0092 | 1.304 mg/L | 0.0092 | 0.70% |
| Na 330.237† | 23640.0 | 23.82 mg/L | 0.197 | 23.82 mg/L | 0.197 | 0.83% |
| Ca 227.546† | 9691.4 | 25.99 mg/L | 0.310 | 25.99 mg/L | 0.310 | 1.19% |
| Al RADIAL† | 19037.8 | 9.896 mg/L | 0.2195 | 9.896 mg/L | 0.2195 | 2.22% |
| Fe RADIAL† | 1866.6 | 5.068 mg/L | 0.0874 | 5.068 mg/L | 0.0874 | 1.72% |
| Ca RADIAL† | 117857.4 | 25.58 mg/L | 0.053 | 25.58 mg/L | 0.053 | 0.21% |
| K RADIAL† | 5948.6 | 5.125 mg/L | 0.1012 | 5.125 mg/L | 0.1012 | 1.98% |
| Mg RADIAL† | 8752.6 | 25.59 mg/L | 0.530 | 25.59 mg/L | 0.530 | 2.07% |
| Na RADIAL† | 337986.1 | 25.73 mg/L | 0.130 | 25.73 mg/L | 0.130 | 0.50% |
| Mo 202.031 | 29346.8 | 1.075 mg/L | 0.0056 | 1.075 mg/L | 0.0056 | 0.52% |

**Sequence No.: 10**
**Sample ID: SEQ-CCB1**
**Analyst: KV**
**Logged In Analyst (Original) : administrator**
**Initial Sample Wt:**
**Dilution:**

**Autosampler Location: 4**
**Date Collected: 9/12/2016 3:31:29 PM**
**Data Type: Reprocessed on 9/13/2016 6:59:12 AM**

**Initial Sample Vol:**
**Sample Prep Vol:**

**Mean Data: SEQ-CCB1**

| Analyte | Mean Corrected Intensity | Calib. Conc. | Units | Std.Dev. | Sample Conc. | Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 14825830.3 | 4.821 | mg/L | 0.0106 | | | | 0.22% |
| Y RADIAL | 224831.7 | 4.898 | mg/L | 0.0862 | | | | 1.76% |
| As 188.979† | -14.2 | -0.0075 | mg/L | 0.00253 | -0.0075 | mg/L | 0.00253 | 33.81% |
| Tl 190.801† | -11.3 | -0.0039 | mg/L | 0.00440 | -0.0039 | mg/L | 0.00440 | 113.72% |
| Se 196.026† | 1.1 | 0.0011 | mg/L | 0.00404 | 0.0011 | mg/L | 0.00404 | 352.58% |
| Zn 206.200† | -216.9 | -0.0048 | mg/L | 0.00036 | -0.0048 | mg/L | 0.00036 | 7.65% |
| Sb 206.836† | 10.1 | 0.0029 | mg/L | 0.00215 | 0.0029 | mg/L | 0.00215 | 73.29% |
| Pb 220.353† | 0.7 | 0.0000 | mg/L | 0.00060 | 0.0000 | mg/L | 0.00060 | >999.9% |
| Cd 226.502† | -44.6 | -0.0003 | mg/L | 0.00013 | -0.0003 | mg/L | 0.00013 | 42.24% |
| Co 228.616† | -7.0 | -0.0002 | mg/L | 0.00034 | -0.0002 | mg/L | 0.00034 | 206.23% |
| Ni 232.003† | -106.8 | -0.0044 | mg/L | 0.00017 | -0.0044 | mg/L | 0.00017 | 3.91% |
| Ba 233.527† | -6.8 | -0.0001 | mg/L | 0.00012 | -0.0001 | mg/L | 0.00012 | 176.96% |
| Mn 257.610† | -66.5 | -0.0001 | mg/L | 0.00003 | -0.0001 | mg/L | 0.00003 | 38.42% |
| Cr 267.716† | 55.9 | 0.0004 | mg/L | 0.00014 | 0.0004 | mg/L | 0.00014 | 37.24% |
| Fe 273.955† | -77.0 | -0.0028 | mg/L | 0.00040 | -0.0028 | mg/L | 0.00040 | 14.16% |
| Mg 279.077† | 3.0 | 0.0001 | mg/L | 0.00072 | 0.0001 | mg/L | 0.00072 | 525.43% |
| V 292.402† | -6.1 | 0.0000 | mg/L | 0.00007 | 0.0000 | mg/L | 0.00007 | 337.34% |
| Al 308.215† | -2715.1 | -0.0972 | mg/L | 0.00144 | -0.0972 | mg/L | 0.00144 | 1.49% |
| Be 313.107† | -715.2 | -0.0002 | mg/L | 0.00004 | -0.0002 | mg/L | 0.00004 | 26.17% |
| Cu 324.752† | -19.0 | -0.0001 | mg/L | 0.00032 | -0.0001 | mg/L | 0.00032 | 456.53% |
| Ag 338.289† | -13.8 | -0.0001 | mg/L | 0.00053 | -0.0001 | mg/L | 0.00053 | 565.97% |
| Na 330.237† | -38.9 | -0.0390 | mg/L | 0.03561 | -0.0390 | mg/L | 0.03561 | 91.22% |
| Ca 227.546† | 1.9 | 0.0050 | mg/L | 0.02014 | 0.0050 | mg/L | 0.02014 | 401.57% |
| Al RADIAL† | -251.7 | -0.1308 | mg/L | 0.00558 | -0.1308 | mg/L | 0.00558 | 4.26% |
| Fe RADIAL† | 1.7 | 0.0047 | mg/L | 0.01106 | 0.0047 | mg/L | 0.01106 | 237.23% |
| Ca RADIAL† | 203.5 | 0.0442 | mg/L | 0.00411 | 0.0442 | mg/L | 0.00411 | 9.31% |
| K RADIAL† | -9.1 | -0.0078 | mg/L | 0.01730 | -0.0078 | mg/L | 0.01730 | 221.90% |
| Mg RADIAL† | -2.1 | -0.0062 | mg/L | 0.01542 | -0.0062 | mg/L | 0.01542 | 248.21% |
| Na RADIAL† | -3411.1 | -0.2597 | mg/L | 0.01748 | -0.2597 | mg/L | 0.01748 | 6.73% |
| Mo 202.031 | -7.6 | 0.000 | mg/L | 0.0002 | 0.000 | mg/L | 0.0002 | 63.60% |

Sequence No.: 11
Sample ID: BI60384-BLK1
Analyst: KV
Logged In Analyst (Original) : administrator
Initial Sample Wt:
Dilution:

Autosampler Location: 9
Date Collected: 9/12/2016 3:36:35 PM
Data Type: Reprocessed on 9/13/2016 6:59:13 AM

Initial Sample Vol:
Sample Prep Vol:

Mean Data: BI60384-BLK1

| Analyte | Mean Corrected Intensity | Calib. Conc. | Units | Std.Dev. | Sample Conc. | Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 14583328.7 | 4.742 | mg/L | 0.0671 | | | | 1.42% |
| Y RADIAL | 217943.3 | 4.747 | mg/L | 0.0568 | | | | 1.20% |
| As 188.979† | -5.4 | -0.0028 | mg/L | 0.00205 | -0.0028 | mg/L | 0.00205 | 72.00% |
| Tl 190.801† | -2.6 | -0.0009 | mg/L | 0.00346 | -0.0009 | mg/L | 0.00346 | 384.85% |
| Se 196.026† | 2.4 | 0.0025 | mg/L | 0.00314 | 0.0025 | mg/L | 0.00314 | 126.50% |
| Zn 206.200† | -289.9 | -0.0064 | mg/L | 0.00011 | -0.0064 | mg/L | 0.00011 | 1.72% |
| Sb 206.836† | 15.6 | 0.0045 | mg/L | 0.00051 | 0.0045 | mg/L | 0.00051 | 11.26% |
| Pb 220.353† | 14.8 | 0.0013 | mg/L | 0.00097 | 0.0013 | mg/L | 0.00097 | 72.28% |
| Cd 226.502† | -58.0 | -0.0004 | mg/L | 0.00007 | -0.0004 | mg/L | 0.00007 | 18.11% |
| Co 228.616† | -11.3 | -0.0003 | mg/L | 0.00045 | -0.0003 | mg/L | 0.00045 | 172.17% |
| Ni 232.003† | -106.0 | -0.0044 | mg/L | 0.00074 | -0.0044 | mg/L | 0.00074 | 16.94% |
| Ba 233.527† | -25.1 | -0.0003 | mg/L | 0.00016 | -0.0003 | mg/L | 0.00016 | 64.68% |
| Mn 257.610† | -118.3 | -0.0001 | mg/L | 0.00003 | -0.0001 | mg/L | 0.00003 | 22.31% |
| Cr 267.716† | 4.4 | 0.0000 | mg/L | 0.00026 | 0.0000 | mg/L | 0.00026 | 858.30% |
| Fe 273.955† | -146.4 | -0.0054 | mg/L | 0.00035 | -0.0054 | mg/L | 0.00035 | 6.55% |
| Mg 279.077† | 35.4 | 0.0016 | mg/L | 0.00246 | 0.0016 | mg/L | 0.00246 | 154.05% |
| V 292.402† | -7.2 | 0.0000 | mg/L | 0.00024 | 0.0000 | mg/L | 0.00024 | 970.82% |
| Al 308.215† | -4035.1 | -0.1445 | mg/L | 0.00677 | -0.1445 | mg/L | 0.00677 | 4.69% |
| Be 313.107† | -488.1 | -0.0001 | mg/L | 0.00005 | -0.0001 | mg/L | 0.00005 | 48.67% |
| Cu 324.752† | -97.3 | -0.0004 | mg/L | 0.00043 | -0.0004 | mg/L | 0.00043 | 116.89% |
| Ag 338.289† | -54.1 | -0.0004 | mg/L | 0.00035 | -0.0004 | mg/L | 0.00035 | 95.81% |
| Na 330.237† | -33.8 | -0.0339 | mg/L | 0.06360 | -0.0339 | mg/L | 0.06360 | 187.64% |
| Ca 227.546† | 16.1 | 0.0429 | mg/L | 0.04473 | 0.0429 | mg/L | 0.04473 | 104.27% |
| Al RADIAL† | -352.3 | -0.1831 | mg/L | 0.00796 | -0.1831 | mg/L | 0.00796 | 4.35% |
| Fe RADIAL† | 0.9 | 0.0023 | mg/L | 0.01119 | 0.0023 | mg/L | 0.01119 | 477.30% |
| Ca RADIAL† | 215.1 | 0.0467 | mg/L | 0.00204 | 0.0467 | mg/L | 0.00204 | 4.38% |
| K RADIAL† | -11.9 | -0.0103 | mg/L | 0.02297 | -0.0103 | mg/L | 0.02297 | 223.61% |
| Mg RADIAL† | -1.4 | -0.0040 | mg/L | 0.01222 | -0.0040 | mg/L | 0.01222 | 308.65% |
| Na RADIAL† | -4176.1 | -0.3179 | mg/L | 0.01002 | -0.3179 | mg/L | 0.01002 | 3.15% |
| Mo 202.031 | 1.6 | 0.000 | mg/L | 0.0001 | 0.000 | mg/L | 0.0001 | 249.35% |

Sequence No.: 12
Sample ID: BI60384-SRM1
Analyst: KV
Logged In Analyst (Original) : administrator
Initial Sample Wt:
Dilution:

Autosampler Location: 10
Date Collected: 9/12/2016 3:41:40 PM
Data Type: Reprocessed on 9/13/2016 6:59:14 AM

Initial Sample Vol:
Sample Prep Vol:

Mean Data: BI60384-SRM1

| Analyte | Mean Corrected Intensity | Calib. Conc. | Units | Std.Dev. | Sample Conc. | Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 13993589.6 | 4.550 | mg/L | 0.0173 | | | | 0.38% |
| Y RADIAL | 216570.9 | 4.718 | mg/L | 0.0127 | | | | 0.27% |
| As 188.979† | 1288.9 | 0.6812 | mg/L | 0.00924 | 0.6812 | mg/L | 0.00924 | 1.36% |
| Tl 190.801† | 1790.2 | 0.6153 | mg/L | 0.00683 | 0.6153 | mg/L | 0.00683 | 1.11% |
| Se 196.026† | 653.5 | 0.6795 | mg/L | 0.00894 | 0.6795 | mg/L | 0.00894 | 1.32% |
| Zn 206.200† | 25810.2 | 0.5657 | mg/L | 0.01047 | 0.5657 | mg/L | 0.01047 | 1.85% |
| Sb 206.836† | 1324.6 | 0.3855 | mg/L | 0.00128 | 0.3855 | mg/L | 0.00128 | 0.33% |
| Pb 220.353† | 8817.8 | 0.8105 | mg/L | 0.00359 | 0.8105 | mg/L | 0.00359 | 0.44% |
| Cd 226.502† | 61065.7 | 0.4170 | mg/L | 0.00769 | 0.4170 | mg/L | 0.00769 | 1.84% |
| Co 228.616† | 22960.8 | 0.5353 | mg/L | 0.00884 | 0.5353 | mg/L | 0.00884 | 1.65% |
| Ni 232.003† | 13986.7 | 0.5780 | mg/L | 0.00847 | 0.5780 | mg/L | 0.00847 | 1.47% |
| Ba 233.527† | 38458.7 | 0.3884 | mg/L | 0.00595 | 0.3884 | mg/L | 0.00595 | 1.53% |
| Mn 257.610† | 1117944.7 | 1.165 | mg/L | 0.0160 | 1.165 | mg/L | 0.0160 | 1.37% |
| Cr 267.716† | 31296.0 | 0.2164 | mg/L | 0.00322 | 0.2164 | mg/L | 0.00322 | 1.49% |
| Fe 273.955† | 23696.9 | 0.8721 | mg/L | 0.01328 | 0.8721 | mg/L | 0.01328 | 1.52% |
| Mg 279.077† | 399517.4 | 18.02 | mg/L | 0.273 | 18.02 | mg/L | 0.273 | 1.51% |
| V 292.402† | 60316.9 | 0.2087 | mg/L | 0.00235 | 0.2087 | mg/L | 0.00235 | 1.13% |
| Al 308.215† | 11245.2 | 0.3993 | mg/L | 0.00556 | 0.3993 | mg/L | 0.00556 | 1.39% |

| | | | | | | |
|---|---|---|---|---|---|---|
| Be 313.107† | 655070.1 | 0.1502 mg/L | 0.00164 | 0.1502 mg/L | 0.00164 | 1.09% |
| Cu 324.752† | 208904.7 | 0.7858 mg/L | 0.00985 | 0.7858 mg/L | 0.00985 | 1.25% |
| Ag 338.289† | 117096.6 | 0.7854 mg/L | 0.00840 | 0.7854 mg/L | 0.00840 | 1.07% |
| Na 330.237† | 89365.5 | 89.99 mg/L | 1.526 | 89.99 mg/L | 1.526 | 1.70% |
| Ca 227.546† | 39215.2 | 105.0 mg/L | 1.29 | 105.0 mg/L | 1.29 | 1.23% |
| Al RADIAL† | 625.2 | 0.3219 mg/L | 0.01826 | 0.3219 mg/L | 0.01826 | 5.67% |
| Fe RADIAL† | 342.0 | 0.9286 mg/L | 0.01424 | 0.9286 mg/L | 0.01424 | 1.53% |
| Ca RADIAL† | 490613.0 | 106.5 mg/L | 0.06 | 106.5 mg/L | 0.06 | 0.05% |
| K RADIAL† | 33566.9 | 28.92 mg/L | 0.573 | 28.92 mg/L | 0.573 | 1.98% |
| Mg RADIAL† | 6479.1 | 18.94 mg/L | 0.205 | 18.94 mg/L | 0.205 | 1.08% |
| Na RADIAL† | 1385113.6 | 105.5 mg/L | 0.78 | 105.5 mg/L | 0.78 | 0.74% |
| Mo 202.031 | 8681.6 | 0.318 mg/L | 0.0009 | 0.318 mg/L | 0.0009 | 0.27% |

**Sequence No.: 13**
**Sample ID: 16I0135-01**
**Analyst: KV**
**Logged In Analyst (Original) : administrator**
**Initial Sample Wt:**
**Dilution:**

**Autosampler Location: 11**
**Date Collected: 9/12/2016 3:49:47 PM**
**Data Type: Reprocessed on 9/13/2016 6:59:15 AM**

**Initial Sample Vol:**
**Sample Prep Vol:**

**Mean Data: 16I0135-01**

| Analyte | Mean Corrected Intensity | Calib. Conc. | Units | Std.Dev. | Sample Conc. | Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 13886831.0 | 4.515 | mg/L | 0.0795 | | | | 1.76% |
| Y RADIAL | 212647.5 | 4.632 | mg/L | 0.0474 | | | | 1.02% |
| As 188.979† | -12.6 | -0.0066 | mg/L | 0.00670 | -0.0066 | mg/L | 0.00670 | 101.74% |
| Tl 190.801† | -19.6 | -0.0067 | mg/L | 0.00057 | -0.0067 | mg/L | 0.00057 | 8.60% |
| Se 196.026† | 5.4 | 0.0059 | mg/L | 0.01467 | 0.0059 | mg/L | 0.01467 | 246.91% |
| Zn 206.200† | 451.4 | 0.0099 | mg/L | 0.00027 | 0.0099 | mg/L | 0.00027 | 2.72% |
| Sb 206.836† | 18.4 | 0.0054 | mg/L | 0.00203 | 0.0054 | mg/L | 0.00203 | 37.91% |
| Pb 220.353† | 31.0 | 0.0032 | mg/L | 0.00079 | 0.0032 | mg/L | 0.00079 | 24.96% |
| Cd 226.502† | -28.8 | -0.0003 | mg/L | 0.00016 | -0.0003 | mg/L | 0.00016 | 58.24% |
| Co 228.616† | -30.7 | -0.0007 | mg/L | 0.00033 | -0.0007 | mg/L | 0.00033 | 47.10% |
| Ni 232.003† | -159.1 | -0.0065 | mg/L | 0.00097 | -0.0065 | mg/L | 0.00097 | 14.91% |
| Ba 233.527† | 1740.7 | 0.0176 | mg/L | 0.00053 | 0.0176 | mg/L | 0.00053 | 3.02% |
| Mn 257.610† | 3692.3 | 0.0039 | mg/L | 0.00008 | 0.0039 | mg/L | 0.00008 | 1.94% |
| Cr 267.716† | 205.4 | 0.0014 | mg/L | 0.00032 | 0.0014 | mg/L | 0.00032 | 22.22% |
| Fe 273.955† | 19833.6 | 0.7299 | mg/L | 0.01357 | 0.7299 | mg/L | 0.01357 | 1.86% |
| Mg 279.077† | 177959.9 | 8.026 | mg/L | 0.1443 | 8.026 | mg/L | 0.1443 | 1.80% |
| V 292.402† | 50.4 | 0.0001 | mg/L | 0.00023 | 0.0001 | mg/L | 0.00023 | 165.23% |
| Al 308.215† | -3155.0 | -0.1139 | mg/L | 0.00910 | -0.1139 | mg/L | 0.00910 | 7.99% |
| Be 313.107† | -529.0 | -0.0001 | mg/L | 0.00008 | -0.0001 | mg/L | 0.00008 | 64.69% |
| Cu 324.752† | 5192.6 | 0.0196 | mg/L | 0.00028 | 0.0196 | mg/L | 0.00028 | 1.41% |
| Ag 338.289† | 311.8 | 0.0018 | mg/L | 0.00056 | 0.0018 | mg/L | 0.00056 | 31.91% |
| Na 330.237† | 7112.4 | 7.186 | mg/L | 0.1772 | 7.186 | mg/L | 0.1772 | 2.47% |
| Ca 227.546† | 10271.2 | 27.49 | mg/L | 0.383 | 27.49 | mg/L | 0.383 | 1.39% |
| Al RADIAL† | -295.5 | -0.1544 | mg/L | 0.00184 | -0.1544 | mg/L | 0.00184 | 1.19% |
| Fe RADIAL† | 278.1 | 0.7550 | mg/L | 0.01521 | 0.7550 | mg/L | 0.01521 | 2.01% |
| Ca RADIAL† | 139228.3 | 30.22 | mg/L | 0.441 | 30.22 | mg/L | 0.441 | 1.46% |
| K RADIAL† | 1529.3 | 1.318 | mg/L | 0.0608 | 1.318 | mg/L | 0.0608 | 4.61% |
| Mg RADIAL† | 2774.9 | 8.113 | mg/L | 0.0887 | 8.113 | mg/L | 0.0887 | 1.09% |
| Na RADIAL† | 128966.6 | 9.819 | mg/L | 0.0372 | 9.819 | mg/L | 0.0372 | 0.38% |
| Mo 202.031 | 539.0 | 0.020 | mg/L | 0.0005 | 0.020 | mg/L | 0.0005 | 2.75% |

**Sequence No.: 14**
**Sample ID: BI60384-DUP1**
**Analyst: KV**
**Logged In Analyst (Original) : administrator**
**Initial Sample Wt:**
**Dilution:**

**Autosampler Location: 12**
**Date Collected: 9/12/2016 3:54:53 PM**
**Data Type: Reprocessed on 9/13/2016 6:59:15 AM**

**Initial Sample Vol:**
**Sample Prep Vol:**

**Mean Data: BI60384-DUP1**

| Analyte | Mean Corrected Intensity | Calib. Conc. | Units | Std.Dev. | Sample Conc. | Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 13816015.6 | 4.492 | mg/L | 0.0456 | | | | 1.02% |
| Y RADIAL | 212480.1 | 4.628 | mg/L | 0.0470 | | | | 1.02% |
| As 188.979† | -17.8 | -0.0093 | mg/L | 0.00129 | -0.0093 | mg/L | 0.00129 | 13.82% |
| Tl 190.801† | -13.0 | -0.0044 | mg/L | 0.00072 | -0.0044 | mg/L | 0.00072 | 16.26% |

| | | | | | | |
|---|---|---|---|---|---|---|
| Se 196.026† | 9.5 | 0.0102 mg/L | 0.00230 | 0.0102 mg/L | 0.00230 | 22.59% |
| Zn 206.200† | 389.3 | 0.0085 mg/L | 0.00033 | 0.0085 mg/L | 0.00033 | 3.83% |
| Sb 206.836† | 24.1 | 0.0070 mg/L | 0.00313 | 0.0070 mg/L | 0.00313 | 44.73% |
| Pb 220.353† | 12.5 | 0.0015 mg/L | 0.00134 | 0.0015 mg/L | 0.00134 | 90.67% |
| Cd 226.502† | -54.4 | -0.0005 mg/L | 0.00008 | -0.0005 mg/L | 0.00008 | 17.73% |
| Co 228.616† | -8.9 | -0.0002 mg/L | 0.00013 | -0.0002 mg/L | 0.00013 | 66.50% |
| Ni 232.003† | -170.9 | -0.0070 mg/L | 0.00113 | -0.0070 mg/L | 0.00113 | 16.07% |
| Ba 233.527† | 1773.1 | 0.0179 mg/L | 0.00013 | 0.0179 mg/L | 0.00013 | 0.72% |
| Mn 257.610† | 3685.1 | 0.0039 mg/L | 0.00008 | 0.0039 mg/L | 0.00008 | 2.07% |
| Cr 267.716† | 221.5 | 0.0015 mg/L | 0.00042 | 0.0015 mg/L | 0.00042 | 27.10% |
| Fe 273.955† | 20501.4 | 0.7545 mg/L | 0.01355 | 0.7545 mg/L | 0.01355 | 1.80% |
| Mg 279.077† | 184593.6 | 8.326 mg/L | 0.1562 | 8.326 mg/L | 0.1562 | 1.88% |
| V 292.402† | 50.0 | 0.0001 mg/L | 0.00034 | 0.0001 mg/L | 0.00034 | 252.68% |
| Al 308.215† | -3081.4 | -0.1113 mg/L | 0.00740 | -0.1113 mg/L | 0.00740 | 6.65% |
| Be 313.107† | -673.5 | -0.0002 mg/L | 0.00005 | -0.0002 mg/L | 0.00005 | 33.22% |
| Cu 324.752† | 5360.5 | 0.0202 mg/L | 0.00026 | 0.0202 mg/L | 0.00026 | 1.28% |
| Ag 338.289† | 183.5 | 0.0009 mg/L | 0.00025 | 0.0009 mg/L | 0.00025 | 27.89% |
| Na 330.237† | 7307.3 | 7.382 mg/L | 0.1171 | 7.382 mg/L | 0.1171 | 1.59% |
| Ca 227.546† | 10637.9 | 28.48 mg/L | 0.686 | 28.48 mg/L | 0.686 | 2.41% |
| Al RADIAL† | -320.3 | -0.1673 mg/L | 0.00456 | -0.1673 mg/L | 0.00456 | 2.73% |
| Fe RADIAL† | 282.2 | 0.7662 mg/L | 0.00740 | 0.7662 mg/L | 0.00740 | 0.97% |
| Ca RADIAL† | 137921.7 | 29.94 mg/L | 0.240 | 29.94 mg/L | 0.240 | 0.80% |
| K RADIAL† | 1575.5 | 1.357 mg/L | 0.0312 | 1.357 mg/L | 0.0312 | 2.30% |
| Mg RADIAL† | 2837.8 | 8.297 mg/L | 0.1051 | 8.297 mg/L | 0.1051 | 1.27% |
| Na RADIAL† | 131108.5 | 9.982 mg/L | 0.1040 | 9.982 mg/L | 0.1040 | 1.04% |
| Mo 202.031 | 546.9 | 0.020 mg/L | 0.0002 | 0.020 mg/L | 0.0002 | 0.82% |

**Sequence No.: 15**
**Sample ID: BI60384-MS1**
**Analyst: KV**
**Logged In Analyst (Original) : administrator**
**Initial Sample Wt:**
**Dilution:**

**Autosampler Location: 13**
**Date Collected: 9/12/2016 4:00:00 PM**
**Data Type: Reprocessed on 9/13/2016 6:59:16 AM**

**Initial Sample Vol:**
**Sample Prep Vol:**

**Mean Data: BI60384-MS1**

| Analyte | Mean Corrected Intensity | Calib. Conc. | Units | Std.Dev. | Sample Conc. | Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 13506146.5 | 4.392 | mg/L | 0.0400 | | | | 0.91% |
| Y RADIAL | 202796.0 | 4.418 | mg/L | 0.0878 | | | | 1.99% |
| As 188.979† | 3785.3 | 2.000 | mg/L | 0.0383 | 2.000 | mg/L | 0.0383 | 1.91% |
| Tl 190.801† | 5176.9 | 1.779 | mg/L | 0.0252 | 1.779 | mg/L | 0.0252 | 1.42% |
| Se 196.026† | 1882.9 | 1.958 | mg/L | 0.0364 | 1.958 | mg/L | 0.0364 | 1.86% |
| Zn 206.200† | 23891.8 | 0.5237 | mg/L | 0.00839 | 0.5237 | mg/L | 0.00839 | 1.60% |
| Sb 206.836† | 927.6 | 0.2700 | mg/L | 0.00453 | 0.2700 | mg/L | 0.00453 | 1.68% |
| Pb 220.353† | 5625.8 | 0.5167 | mg/L | 0.00806 | 0.5167 | mg/L | 0.00806 | 1.56% |
| Cd 226.502† | 7556.5 | 0.0514 | mg/L | 0.00067 | 0.0514 | mg/L | 0.00067 | 1.29% |
| Co 228.616† | 23459.9 | 0.5470 | mg/L | 0.00859 | 0.5470 | mg/L | 0.00859 | 1.57% |
| Ni 232.003† | 12701.7 | 0.5249 | mg/L | 0.00726 | 0.5249 | mg/L | 0.00726 | 1.38% |
| Ba 233.527† | 220570.9 | 2.227 | mg/L | 0.0305 | 2.227 | mg/L | 0.0305 | 1.37% |
| Mn 257.610† | 528823.1 | 0.5514 | mg/L | 0.00693 | 0.5514 | mg/L | 0.00693 | 1.26% |
| Cr 267.716† | 32003.9 | 0.2213 | mg/L | 0.00342 | 0.2213 | mg/L | 0.00342 | 1.55% |
| Fe 273.955† | 49771.3 | 1.832 | mg/L | 0.0219 | 1.832 | mg/L | 0.0219 | 1.20% |
| Mg 279.077† | 184525.0 | 8.322 | mg/L | 0.1165 | 8.322 | mg/L | 0.1165 | 1.40% |
| V 292.402† | 155499.6 | 0.5380 | mg/L | 0.00703 | 0.5380 | mg/L | 0.00703 | 1.31% |
| Al 308.215† | 53731.6 | 1.923 | mg/L | 0.0281 | 1.923 | mg/L | 0.0281 | 1.46% |
| Be 313.107† | 230161.2 | 0.0528 | mg/L | 0.00065 | 0.0528 | mg/L | 0.00065 | 1.23% |
| Cu 324.752† | 78419.0 | 0.2951 | mg/L | 0.00438 | 0.2951 | mg/L | 0.00438 | 1.49% |
| Ag 338.289† | 8064.7 | 0.0539 | mg/L | 0.00134 | 0.0539 | mg/L | 0.00134 | 2.49% |
| Na 330.237† | 8271.4 | 8.357 | mg/L | 0.1489 | 8.357 | mg/L | 0.1489 | 1.78% |
| Ca 227.546† | 10801.9 | 28.93 | mg/L | 0.508 | 28.93 | mg/L | 0.508 | 1.76% |
| Al RADIAL† | 3810.4 | 1.980 | mg/L | 0.0379 | 1.980 | mg/L | 0.0379 | 1.91% |
| Fe RADIAL† | 699.9 | 1.900 | mg/L | 0.0366 | 1.900 | mg/L | 0.0366 | 1.93% |
| Ca RADIAL† | 137422.7 | 29.83 | mg/L | 0.024 | 29.83 | mg/L | 0.024 | 0.08% |
| K RADIAL† | 1492.3 | 1.286 | mg/L | 0.0242 | 1.286 | mg/L | 0.0242 | 1.89% |
| Mg RADIAL† | 2901.7 | 8.483 | mg/L | 0.1795 | 8.483 | mg/L | 0.1795 | 2.12% |
| Na RADIAL† | 132824.1 | 10.11 | mg/L | 0.032 | 10.11 | mg/L | 0.032 | 0.32% |
| Mo 202.031 | 506.8 | 0.019 | mg/L | 0.0004 | 0.019 | mg/L | 0.0004 | 1.99% |

**Sequence No.: 16**

**Autosampler Location: 14**

**Sample ID: 16I0135-02**
**Analyst: KV**
**Logged In Analyst (Original) : administrator**
**Initial Sample Wt:**
**Dilution:**

**Date Collected: 9/12/2016 4:08:02 PM**
**Data Type: Reprocessed on 9/13/2016 6:59:17 AM**

**Initial Sample Vol:**
**Sample Prep Vol:**

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**Mean Data: 16I0135-02**

| Analyte | Mean Corrected Intensity | Calib. Conc. | Units | Std.Dev. | Sample Conc. | Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 13819685.4 | 4.493 | mg/L | 0.0669 | | | | 1.49% |
| Y RADIAL | 216533.3 | 4.717 | mg/L | 0.0325 | | | | 0.69% |
| As 188.979† | 72.9 | 0.0385 | mg/L | 0.00403 | 0.0385 | mg/L | 0.00403 | 10.45% |
| Tl 190.801† | -36.6 | -0.0125 | mg/L | 0.00456 | -0.0125 | mg/L | 0.00456 | 36.33% |
| Se 196.026† | 9.0 | 0.0096 | mg/L | 0.00423 | 0.0096 | mg/L | 0.00423 | 43.98% |
| Zn 206.200† | 14443.7 | 0.3166 | mg/L | 0.00481 | 0.3166 | mg/L | 0.00481 | 1.52% |
| Sb 206.836† | -99.7 | -0.0290 | mg/L | 0.00585 | -0.0290 | mg/L | 0.00585 | 20.15% |
| Pb 220.353† | -283.3 | -0.0239 | mg/L | 0.00111 | -0.0239 | mg/L | 0.00111 | 4.65% |
| Cd 226.502† | -68.2 | -0.0005 | mg/L | 0.00017 | -0.0005 | mg/L | 0.00017 | 31.48% |
| Co 228.616† | -917.6 | -0.0214 | mg/L | 0.00047 | -0.0214 | mg/L | 0.00047 | 2.18% |
| Ni 232.003† | 1811.3 | 0.0749 | mg/L | 0.00150 | 0.0749 | mg/L | 0.00150 | 2.00% |
| Ba 233.527† | 7643.9 | 0.0772 | mg/L | 0.00100 | 0.0772 | mg/L | 0.00100 | 1.30% |
| Mn 257.610† | 17895.0 | 0.0187 | mg/L | 0.00026 | 0.0187 | mg/L | 0.00026 | 1.37% |
| Cr 267.716† | 582.1 | 0.0040 | mg/L | 0.00033 | 0.0040 | mg/L | 0.00033 | 8.31% |
| Fe 273.955† | 13986.3 | 0.5147 | mg/L | 0.00640 | 0.5147 | mg/L | 0.00640 | 1.24% |
| Mg 279.077† | 978400.6 | 44.13 | mg/L | 0.517 | 44.13 | mg/L | 0.517 | 1.17% |
| V 292.402† | -31173.0 | -0.1079 | mg/L | 0.00179 | -0.1079 | mg/L | 0.00179 | 1.66% |
| Al 308.215† | 9126.5 | 0.3215 | mg/L | 0.00912 | 0.3215 | mg/L | 0.00912 | 2.84% |
| Be 313.107† | -579.5 | -0.0001 | mg/L | 0.00004 | -0.0001 | mg/L | 0.00004 | 32.82% |
| Cu 324.752† | 36722.3 | 0.1382 | mg/L | 0.00162 | 0.1382 | mg/L | 0.00162 | 1.18% |
| Ag 338.289† | -2200.6 | -0.0165 | mg/L | 0.00020 | -0.0165 | mg/L | 0.00020 | 1.21% |
| Na 330.237† | 85089.3 | 85.73 | mg/L | 1.129 | 85.73 | mg/L | 1.129 | 1.32% |
| Ca 227.546† | 55546.4 | 148.7 | mg/L | 1.78 | 148.7 | mg/L | 1.78 | 1.20% |
| Al RADIAL† | 804.2 | 0.4136 | mg/L | 0.01021 | 0.4136 | mg/L | 0.01021 | 2.47% |
| Fe RADIAL† | 198.1 | 0.5379 | mg/L | 0.02040 | 0.5379 | mg/L | 0.02040 | 3.79% |
| Ca RADIAL† | 688420.1 | 149.4 | mg/L | 0.22 | 149.4 | mg/L | 0.22 | 0.15% |
| K RADIAL† | 8803.3 | 7.584 | mg/L | 0.1633 | 7.584 | mg/L | 0.1633 | 2.15% |
| Mg RADIAL† | 14682.2 | 42.93 | mg/L | 0.833 | 42.93 | mg/L | 0.833 | 1.94% |
| Na RADIAL† | 1273234.2 | 96.93 | mg/L | 0.137 | 96.93 | mg/L | 0.137 | 0.14% |
| Mo 202.031 | 290769.9 | 10.65 | mg/L | 0.120 | 10.65 | mg/L | 0.120 | 1.13% |

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**Sequence No.: 17**
**Sample ID: 16I0135-03**
**Analyst: KV**
**Logged In Analyst (Original) : administrator**
**Initial Sample Wt:**
**Dilution:**

**Autosampler Location: 15**
**Date Collected: 9/12/2016 4:13:07 PM**
**Data Type: Reprocessed on 9/13/2016 6:59:17 AM**

**Initial Sample Vol:**
**Sample Prep Vol:**

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**Mean Data: 16I0135-03**

| Analyte | Mean Corrected Intensity | Calib. Conc. | Units | Std.Dev. | Sample Conc. | Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 13338194.0 | 4.337 | mg/L | 0.0542 | | | | 1.25% |
| Y RADIAL | 210749.8 | 4.591 | mg/L | 0.0092 | | | | 0.20% |
| As 188.979† | 917.0 | 0.4865 | mg/L | 0.00941 | 0.4865 | mg/L | 0.00941 | 1.93% |
| Tl 190.801† | -202.2 | -0.0684 | mg/L | 0.00189 | -0.0684 | mg/L | 0.00189 | 2.77% |
| Se 196.026† | 14.9 | 0.0253 | mg/L | 0.00508 | 0.0253 | mg/L | 0.00508 | 20.06% |
| Zn 206.200† | -1996.7 | -0.0440 | mg/L | 0.00051 | -0.0440 | mg/L | 0.00051 | 1.15% |
| Sb 206.836† | -1147.5 | -0.3342 | mg/L | 0.01047 | -0.3342 | mg/L | 0.01047 | 3.13% |
| Pb 220.353† | -3048.8 | -0.2810 | mg/L | 0.00431 | -0.2810 | mg/L | 0.00431 | 1.53% |
| Cd 226.502† | -268.9 | -0.0042 | mg/L | 0.00015 | -0.0042 | mg/L | 0.00015 | 3.64% |
| Co 228.616† | -10257.8 | -0.2387 | mg/L | 0.00188 | -0.2387 | mg/L | 0.00188 | 0.79% |
| Ni 232.003† | 20391.7 | 0.8441 | mg/L | 0.01071 | 0.8441 | mg/L | 0.01071 | 1.27% |
| Ba 233.527† | 2701.5 | 0.0273 | mg/L | 0.00028 | 0.0273 | mg/L | 0.00028 | 1.02% |
| Mn 257.610† | 523117.6 | 0.5480 | mg/L | 0.00632 | 0.5480 | mg/L | 0.00632 | 1.15% |
| Cr 267.716† | 2014.5 | 0.0142 | mg/L | 0.00030 | 0.0142 | mg/L | 0.00030 | 2.15% |
| Fe 273.955† | 591976.6 | 21.79 | mg/L | 0.019 | 21.79 | mg/L | 0.019 | 0.09% |
| Mg 279.077† | 177441.9 | 8.000 | mg/L | 0.0984 | 8.000 | mg/L | 0.0984 | 1.23% |
| V 292.402† | -356551.0 | -1.235 | mg/L | 0.0203 | -1.235 | mg/L | 0.0203 | 1.65% |
| Al 308.215† | 62792.0 | 2.249 | mg/L | 0.0294 | 2.249 | mg/L | 0.0294 | 1.31% |
| Be 313.107† | -1207.0 | -0.0003 | mg/L | 0.00001 | -0.0003 | mg/L | 0.00001 | 4.96% |

| | | | | | | |
|---|---|---|---|---|---|---|
| Cu 324.752† | 159440.5 | 0.6006 mg/L | 0.00666 | 0.6006 mg/L | 0.00666 | 1.11% |
| Ag 338.289† | -28510.2 | -0.1914 mg/L | 0.00295 | -0.1914 mg/L | 0.00295 | 1.54% |
| Na 330.237† | 105463.3 | 106.2 mg/L | 1.25 | 106.2 mg/L | 1.25 | 1.18% |
| Ca 227.546† | 11432.3 | 30.79 mg/L | 0.245 | 30.79 mg/L | 0.245 | 0.80% |
| Al RADIAL† | 7109.3 | 3.697 mg/L | 0.0281 | 3.697 mg/L | 0.0281 | 0.76% |
| Fe RADIAL† | 8076.2 | 21.93 mg/L | 0.184 | 21.93 mg/L | 0.184 | 0.84% |
| Ca RADIAL† | 139834.6 | 30.35 mg/L | 0.065 | 30.35 mg/L | 0.065 | 0.21% |
| K RADIAL† | 2631.0 | 2.267 mg/L | 0.0414 | 2.267 mg/L | 0.0414 | 1.83% |
| Mg RADIAL† | 2675.4 | 7.820 mg/L | 0.1008 | 7.820 mg/L | 0.1008 | 1.29% |
| Na RADIAL† | 1622759.9 | 123.5 mg/L | 1.04 | 123.5 mg/L | 1.04 | 0.84% |
| Mo 202.031 | 2792970.4 | 102.3 mg/L | 1.37 | 102.3 mg/L | 1.37 | 1.33% |

**Sequence No.: 18**
**Sample ID: 16I0135-04**
**Analyst: KV**
**Logged In Analyst (Original) : administrator**
**Initial Sample Wt:**
**Dilution:**

**Autosampler Location: 16**
**Date Collected: 9/12/2016 4:18:18 PM**
**Data Type: Reprocessed on 9/13/2016 6:59:18 AM**

**Initial Sample Vol:**
**Sample Prep Vol:**

**Mean Data: 16I0135-04**

| Analyte | Mean Corrected Intensity | Calib. Conc. | Units | Std.Dev. | Sample Conc. | Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 12940490.4 | 4.208 | mg/L | 0.0894 | | | | 2.12% |
| Y RADIAL | 210865.0 | 4.593 | mg/L | 0.0588 | | | | 1.28% |
| As 188.979† | -8.9 | -0.0047 | mg/L | 0.00162 | -0.0047 | mg/L | 0.00162 | 34.66% |
| Tl 190.801† | -10.0 | -0.0034 | mg/L | 0.00364 | -0.0034 | mg/L | 0.00364 | 106.25% |
| Se 196.026† | 4.5 | 0.0047 | mg/L | 0.00491 | 0.0047 | mg/L | 0.00491 | 103.74% |
| Zn 206.200† | 3704.1 | 0.0812 | mg/L | 0.00272 | 0.0812 | mg/L | 0.00272 | 3.35% |
| Sb 206.836† | 99.7 | 0.0290 | mg/L | 0.00502 | 0.0290 | mg/L | 0.00502 | 17.30% |
| Pb 220.353† | 281.7 | 0.0259 | mg/L | 0.00126 | 0.0259 | mg/L | 0.00126 | 4.84% |
| Cd 226.502† | -53.6 | -0.0004 | mg/L | 0.00015 | -0.0004 | mg/L | 0.00015 | 39.54% |
| Co 228.616† | -27.9 | -0.0006 | mg/L | 0.00024 | -0.0006 | mg/L | 0.00024 | 37.62% |
| Ni 232.003† | -185.1 | -0.0076 | mg/L | 0.00071 | -0.0076 | mg/L | 0.00071 | 9.34% |
| Ba 233.527† | 291.9 | 0.0029 | mg/L | 0.00015 | 0.0029 | mg/L | 0.00015 | 5.05% |
| Mn 257.610† | 1690.9 | 0.0018 | mg/L | 0.00008 | 0.0018 | mg/L | 0.00008 | 4.47% |
| Cr 267.716† | 208.5 | 0.0014 | mg/L | 0.00024 | 0.0014 | mg/L | 0.00024 | 16.38% |
| Fe 273.955† | 5779.3 | 0.2127 | mg/L | 0.00803 | 0.2127 | mg/L | 0.00803 | 3.77% |
| Mg 279.077† | 54284.5 | 2.448 | mg/L | 0.0906 | 2.448 | mg/L | 0.0906 | 3.70% |
| V 292.402† | -155.8 | -0.0006 | mg/L | 0.00004 | -0.0006 | mg/L | 0.00004 | 7.28% |
| Al 308.215† | -3084.0 | -0.1107 | mg/L | 0.01136 | -0.1107 | mg/L | 0.01136 | 10.26% |
| Be 313.107† | -1417.1 | -0.0003 | mg/L | 0.00004 | -0.0003 | mg/L | 0.00004 | 11.70% |
| Cu 324.752† | 114411.3 | 0.4304 | mg/L | 0.01432 | 0.4304 | mg/L | 0.01432 | 3.33% |
| Ag 338.289† | -38.7 | -0.0004 | mg/L | 0.00039 | -0.0004 | mg/L | 0.00039 | 103.76% |
| Na 330.237† | 648712.2 | 652.5 | mg/L | 23.92 | 652.5 | mg/L | 23.92 | 3.67% |
| Ca 227.546† | 4015.9 | 10.75 | mg/L | 0.262 | 10.75 | mg/L | 0.262 | 2.44% |
| Al RADIAL† | -375.2 | -0.1953 | mg/L | 0.00474 | -0.1953 | mg/L | 0.00474 | 2.43% |
| Fe RADIAL† | 81.0 | 0.2200 | mg/L | 0.01127 | 0.2200 | mg/L | 0.01127 | 5.12% |
| Ca RADIAL† | 47334.3 | 10.28 | mg/L | 0.018 | 10.28 | mg/L | 0.018 | 0.18% |
| K RADIAL† | 1790.8 | 1.543 | mg/L | 0.0142 | 1.543 | mg/L | 0.0142 | 0.92% |
| Mg RADIAL† | 839.2 | 2.454 | mg/L | 0.0414 | 2.454 | mg/L | 0.0414 | 1.69% |
| Na RADIAL† | 7228742.0 | 550.3 | mg/L | 3.38 | 550.3 | mg/L | 3.38 | 0.61% |
| Mo 202.031 | 1388.3 | 0.051 | mg/L | 0.0005 | 0.051 | mg/L | 0.0005 | 1.08% |

**Sequence No.: 19**
**Sample ID: 16I0136-01**
**Analyst: KV**
**Logged In Analyst (Original) : administrator**
**Initial Sample Wt:**
**Dilution:**

**Autosampler Location: 17**
**Date Collected: 9/12/2016 4:23:25 PM**
**Data Type: Reprocessed on 9/13/2016 6:59:19 AM**

**Initial Sample Vol:**
**Sample Prep Vol:**

**Mean Data: 16I0136-01**

| Analyte | Mean Corrected Intensity | Calib. Conc. | Units | Std.Dev. | Sample Conc. | Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 14296688.7 | 4.649 | mg/L | 0.0390 | | | | 0.84% |
| Y RADIAL | 212539.1 | 4.630 | mg/L | 0.0357 | | | | 0.77% |
| As 188.979† | -21.3 | -0.0112 | mg/L | 0.00153 | -0.0112 | mg/L | 0.00153 | 13.64% |
| Tl 190.801† | -23.9 | -0.0082 | mg/L | 0.00193 | -0.0082 | mg/L | 0.00193 | 23.61% |
| Se 196.026† | 2.7 | 0.0031 | mg/L | 0.00661 | 0.0031 | mg/L | 0.00661 | 211.93% |

| | | | | | | |
|---|---|---|---|---|---|---|
| Zn 206.200† | 408.9 | 0.0090 mg/L | 0.00054 | 0.0090 mg/L | 0.00054 | 5.99% |
| Sb 206.836† | 19.1 | 0.0056 mg/L | 0.00280 | 0.0056 mg/L | 0.00280 | 50.47% |
| Pb 220.353† | 20.7 | 0.0019 mg/L | 0.00049 | 0.0019 mg/L | 0.00049 | 25.99% |
| Cd 226.502† | 725.8 | 0.0049 mg/L | 0.00006 | 0.0049 mg/L | 0.00006 | 1.22% |
| Co 228.616† | -14.5 | -0.0003 mg/L | 0.00022 | -0.0003 mg/L | 0.00022 | 68.85% |
| Ni 232.003† | -103.8 | -0.0042 mg/L | 0.00047 | -0.0042 mg/L | 0.00047 | 11.11% |
| Ba 233.527† | 1501.2 | 0.0152 mg/L | 0.00028 | 0.0152 mg/L | 0.00028 | 1.86% |
| Mn 257.610† | 16005.3 | 0.0168 mg/L | 0.00007 | 0.0168 mg/L | 0.00007 | 0.40% |
| Cr 267.716† | 112.4 | 0.0008 mg/L | 0.00015 | 0.0008 mg/L | 0.00015 | 18.70% |
| Fe 273.955† | 19222.8 | 0.7074 mg/L | 0.00090 | 0.7074 mg/L | 0.00090 | 0.13% |
| Mg 279.077† | 26362.5 | 1.189 mg/L | 0.0085 | 1.189 mg/L | 0.0085 | 0.71% |
| V 292.402† | -300.5 | -0.0011 mg/L | 0.00007 | -0.0011 mg/L | 0.00007 | 6.70% |
| Al 308.215† | -4586.2 | -0.1643 mg/L | 0.00083 | -0.1643 mg/L | 0.00083 | 0.51% |
| Be 313.107† | -512.2 | -0.0001 mg/L | 0.00007 | -0.0001 mg/L | 0.00007 | 61.31% |
| Cu 324.752† | 6294.2 | 0.0237 mg/L | 0.00025 | 0.0237 mg/L | 0.00025 | 1.06% |
| Ag 338.289† | 9.2 | 0.0000 mg/L | 0.00070 | 0.0000 mg/L | 0.00070 | >999.9% |
| Na 330.237† | 6842.9 | 6.891 mg/L | 0.0482 | 6.891 mg/L | 0.0482 | 0.70% |
| Ca 227.546† | 1990.3 | 5.333 mg/L | 0.0459 | 5.333 mg/L | 0.0459 | 0.86% |
| Al RADIAL† | -401.0 | -0.2085 mg/L | 0.01241 | -0.2085 mg/L | 0.01241 | 5.95% |
| Fe RADIAL† | 276.9 | 0.7518 mg/L | 0.00996 | 0.7518 mg/L | 0.00996 | 1.33% |
| Ca RADIAL† | 26580.8 | 5.770 mg/L | 0.1702 | 5.770 mg/L | 0.1702 | 2.95% |
| K RADIAL† | 616.7 | 0.5313 mg/L | 0.03880 | 0.5313 mg/L | 0.03880 | 7.30% |
| Mg RADIAL† | 426.9 | 1.248 mg/L | 0.0135 | 1.248 mg/L | 0.0135 | 1.08% |
| Na RADIAL† | 130775.2 | 9.956 mg/L | 0.0611 | 9.956 mg/L | 0.0611 | 0.61% |
| Mo 202.031 | 1932.6 | 0.071 mg/L | 0.0006 | 0.071 mg/L | 0.0006 | 0.85% |

**Sequence No.: 20**
**Sample ID: 16I0136-02**
**Analyst: KV**
**Logged In Analyst (Original) : administrator**
**Initial Sample Wt:**
**Dilution:**

**Autosampler Location: 18**
**Date Collected: 9/12/2016 4:28:30 PM**
**Data Type: Reprocessed on 9/13/2016 6:59:19 AM**

**Initial Sample Vol:**
**Sample Prep Vol:**

**Mean Data: 16I0136-02**

| Analyte | Mean Corrected Intensity | Calib. Conc. | Units | Std.Dev. | Sample Conc. | Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 14840594.8 | 4.825 | mg/L | 0.0481 | | | | 1.00% |
| Y RADIAL | 232710.3 | 5.069 | mg/L | 0.1250 | | | | 2.47% |
| As 188.979† | 24.1 | 0.0128 | mg/L | 0.00531 | 0.0128 | mg/L | 0.00531 | 41.49% |
| Tl 190.801† | -26.2 | -0.0090 | mg/L | 0.00428 | -0.0090 | mg/L | 0.00428 | 47.62% |
| Se 196.026† | 6.3 | 0.0068 | mg/L | 0.01098 | 0.0068 | mg/L | 0.01098 | 161.92% |
| Zn 206.200† | 45414.9 | 0.9955 | mg/L | 0.03161 | 0.9955 | mg/L | 0.03161 | 3.18% |
| Sb 206.836† | -41.2 | -0.0120 | mg/L | 0.00143 | -0.0120 | mg/L | 0.00143 | 11.88% |
| Pb 220.353† | -105.7 | -0.0095 | mg/L | 0.00180 | -0.0095 | mg/L | 0.00180 | 18.94% |
| Cd 226.502† | -58.8 | -0.0005 | mg/L | 0.00007 | -0.0005 | mg/L | 0.00007 | 15.06% |
| Co 228.616† | -470.1 | -0.0109 | mg/L | 0.00032 | -0.0109 | mg/L | 0.00032 | 2.89% |
| Ni 232.003† | 892.7 | 0.0369 | mg/L | 0.00062 | 0.0369 | mg/L | 0.00062 | 1.67% |
| Ba 233.527† | 3478.1 | 0.0351 | mg/L | 0.00053 | 0.0351 | mg/L | 0.00053 | 1.51% |
| Mn 257.610† | 62396.2 | 0.0651 | mg/L | 0.00182 | 0.0651 | mg/L | 0.00182 | 2.80% |
| Cr 267.716† | 245.1 | 0.0017 | mg/L | 0.00016 | 0.0017 | mg/L | 0.00016 | 9.39% |
| Fe 273.955† | 14773.2 | 0.5437 | mg/L | 0.01480 | 0.5437 | mg/L | 0.01480 | 2.72% |
| Mg 279.077† | 78941.8 | 3.560 | mg/L | 0.1053 | 3.560 | mg/L | 0.1053 | 2.96% |
| V 292.402† | -16192.3 | -0.0561 | mg/L | 0.00142 | -0.0561 | mg/L | 0.00142 | 2.54% |
| Al 308.215† | 4732.1 | 0.1689 | mg/L | 0.01369 | 0.1689 | mg/L | 0.01369 | 8.10% |
| Be 313.107† | -46.7 | 0.0000 | mg/L | 0.00005 | 0.0000 | mg/L | 0.00005 | 421.66% |
| Cu 324.752† | 69158.6 | 0.2602 | mg/L | 0.00661 | 0.2602 | mg/L | 0.00661 | 2.54% |
| Ag 338.289† | -1194.1 | -0.0082 | mg/L | 0.00075 | -0.0082 | mg/L | 0.00075 | 9.14% |
| Na 330.237† | 54882.1 | 55.21 | mg/L | 1.441 | 55.21 | mg/L | 1.441 | 2.61% |
| Ca 227.546† | 5373.1 | 14.38 | mg/L | 0.396 | 14.38 | mg/L | 0.396 | 2.75% |
| Al RADIAL† | 402.0 | 0.2086 | mg/L | 0.01493 | 0.2086 | mg/L | 0.01493 | 7.15% |
| Fe RADIAL† | 200.9 | 0.5455 | mg/L | 0.00294 | 0.5455 | mg/L | 0.00294 | 0.54% |
| Ca RADIAL† | 68888.2 | 14.95 | mg/L | 0.508 | 14.95 | mg/L | 0.508 | 3.40% |
| K RADIAL† | 1554.7 | 1.339 | mg/L | 0.0685 | 1.339 | mg/L | 0.0685 | 5.12% |
| Mg RADIAL† | 1188.7 | 3.475 | mg/L | 0.0844 | 3.475 | mg/L | 0.0844 | 2.43% |
| Na RADIAL† | 857246.4 | 65.26 | mg/L | 0.445 | 65.26 | mg/L | 0.445 | 0.68% |
| Mo 202.031 | 158566.2 | 5.808 | mg/L | 0.1436 | 5.808 | mg/L | 0.1436 | 2.47% |

**Sequence No.: 21**
**Sample ID: SEQ-CCV2**

**Autosampler Location: 3**
**Date Collected: 9/12/2016 4:33:35 PM**

Analyst: KV
Logged In Analyst (Original) : administrator
Initial Sample Wt:
Dilution:

Data Type: Reprocessed on 9/13/2016 6:59:20 AM

Initial Sample Vol:
Sample Prep Vol:

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Mean Data: SEQ-CCV2

| Analyte | Mean Corrected Intensity | Calib. Conc. | Calib. Units | Std.Dev. | Sample Conc. | Sample Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 14621160.5 | 4.754 | mg/L | 0.0546 | | | | 1.15% |
| Y RADIAL | 226972.8 | 4.944 | mg/L | 0.1132 | | | | 2.29% |
| As 188.979† | 472.0 | 0.2499 | mg/L | 0.00191 | 0.2499 | mg/L | 0.00191 | 0.76% |
| Tl 190.801† | 706.0 | 0.2429 | mg/L | 0.00200 | 0.2429 | mg/L | 0.00200 | 0.82% |
| Se 196.026† | 248.7 | 0.2607 | mg/L | 0.01225 | 0.2607 | mg/L | 0.01225 | 4.70% |
| Zn 206.200† | 117484.6 | 2.575 | mg/L | 0.0405 | 2.575 | mg/L | 0.0405 | 1.57% |
| Sb 206.836† | 864.3 | 0.2515 | mg/L | 0.00322 | 0.2515 | mg/L | 0.00322 | 1.28% |
| Pb 220.353† | 2781.1 | 0.2563 | mg/L | 0.00084 | 0.2563 | mg/L | 0.00084 | 0.33% |
| Cd 226.502† | 18411.9 | 0.1252 | mg/L | 0.00204 | 0.1252 | mg/L | 0.00204 | 1.63% |
| Co 228.616† | 111039.6 | 2.589 | mg/L | 0.0380 | 2.589 | mg/L | 0.0380 | 1.47% |
| Ni 232.003† | 61325.8 | 2.534 | mg/L | 0.0452 | 2.534 | mg/L | 0.0452 | 1.78% |
| Ba 233.527† | 1029905.4 | 10.40 | mg/L | 0.064 | 10.40 | mg/L | 0.064 | 0.61% |
| Mn 257.610† | 2466323.0 | 2.571 | mg/L | 0.0143 | 2.571 | mg/L | 0.0143 | 0.56% |
| Cr 267.716† | 148554.5 | 1.027 | mg/L | 0.0175 | 1.027 | mg/L | 0.0175 | 1.71% |
| Fe 273.955† | 139523.7 | 5.135 | mg/L | 0.0777 | 5.135 | mg/L | 0.0777 | 1.51% |
| Mg 279.077† | 563404.2 | 25.41 | mg/L | 0.170 | 25.41 | mg/L | 0.170 | 0.67% |
| V 292.402† | 726916.5 | 2.515 | mg/L | 0.0103 | 2.515 | mg/L | 0.0103 | 0.41% |
| Al 308.215† | 278527.1 | 9.970 | mg/L | 0.1694 | 9.970 | mg/L | 0.1694 | 1.70% |
| Be 313.107† | 1104630.9 | 0.2533 | mg/L | 0.00064 | 0.2533 | mg/L | 0.00064 | 0.25% |
| Cu 324.752† | 338314.3 | 1.273 | mg/L | 0.0197 | 1.273 | mg/L | 0.0197 | 1.55% |
| Ag 338.289† | 190717.5 | 1.281 | mg/L | 0.0180 | 1.281 | mg/L | 0.0180 | 1.40% |
| Na 330.237† | 23598.0 | 23.78 | mg/L | 0.412 | 23.78 | mg/L | 0.412 | 1.73% |
| Ca 227.546† | 9569.8 | 25.66 | mg/L | 0.168 | 25.66 | mg/L | 0.168 | 0.65% |
| Al RADIAL† | 18889.5 | 9.819 | mg/L | 0.2133 | 9.819 | mg/L | 0.2133 | 2.17% |
| Fe RADIAL† | 1848.1 | 5.018 | mg/L | 0.0960 | 5.018 | mg/L | 0.0960 | 1.91% |
| Ca RADIAL† | 116849.3 | 25.37 | mg/L | 0.027 | 25.37 | mg/L | 0.027 | 0.11% |
| K RADIAL† | 5885.8 | 5.071 | mg/L | 0.0970 | 5.071 | mg/L | 0.0970 | 1.91% |
| Mg RADIAL† | 8602.2 | 25.15 | mg/L | 0.497 | 25.15 | mg/L | 0.497 | 1.98% |
| Na RADIAL† | 333961.0 | 25.43 | mg/L | 0.103 | 25.43 | mg/L | 0.103 | 0.41% |
| Mo 202.031 | 28565.1 | 1.046 | mg/L | 0.0195 | 1.046 | mg/L | 0.0195 | 1.86% |

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Sequence No.: 22
Sample ID: SEQ-CCB2
Analyst: KV
Logged In Analyst (Original) : administrator
Initial Sample Wt:
Dilution:

Autosampler Location: 4
Date Collected: 9/12/2016 4:41:42 PM
Data Type: Reprocessed on 9/13/2016 6:59:21 AM

Initial Sample Vol:
Sample Prep Vol:

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Mean Data: SEQ-CCB2

| Analyte | Mean Corrected Intensity | Calib. Conc. | Calib. Units | Std.Dev. | Sample Conc. | Sample Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 14818936.5 | 4.818 | mg/L | 0.0735 | | | | 1.53% |
| Y RADIAL | 221301.3 | 4.821 | mg/L | 0.0388 | | | | 0.81% |
| As 188.979† | 2.5 | 0.0013 | mg/L | 0.00297 | 0.0013 | mg/L | 0.00297 | 222.30% |
| Tl 190.801† | 11.7 | 0.0040 | mg/L | 0.00098 | 0.0040 | mg/L | 0.00098 | 24.47% |
| Se 196.026† | -4.2 | -0.0044 | mg/L | 0.00539 | -0.0044 | mg/L | 0.00539 | 123.91% |
| Zn 206.200† | -222.1 | -0.0049 | mg/L | 0.00039 | -0.0049 | mg/L | 0.00039 | 7.94% |
| Sb 206.836† | -0.4 | -0.0001 | mg/L | 0.00389 | -0.0001 | mg/L | 0.00389 | >999.9% |
| Pb 220.353† | 9.7 | 0.0009 | mg/L | 0.00059 | 0.0009 | mg/L | 0.00059 | 67.69% |
| Cd 226.502† | -30.2 | -0.0002 | mg/L | 0.00008 | -0.0002 | mg/L | 0.00008 | 39.64% |
| Co 228.616† | -10.7 | -0.0002 | mg/L | 0.00018 | -0.0002 | mg/L | 0.00018 | 70.50% |
| Ni 232.003† | -48.5 | -0.0020 | mg/L | 0.00078 | -0.0020 | mg/L | 0.00078 | 38.89% |
| Ba 233.527† | -1.4 | 0.0000 | mg/L | 0.00012 | 0.0000 | mg/L | 0.00012 | 885.07% |
| Mn 257.610† | -65.0 | -0.0001 | mg/L | 0.00002 | -0.0001 | mg/L | 0.00002 | 33.94% |
| Cr 267.716† | 15.2 | 0.0001 | mg/L | 0.00046 | 0.0001 | mg/L | 0.00046 | 434.81% |
| Fe 273.955† | -78.0 | -0.0029 | mg/L | 0.00016 | -0.0029 | mg/L | 0.00016 | 5.68% |
| Mg 279.077† | 39.0 | 0.0018 | mg/L | 0.00339 | 0.0018 | mg/L | 0.00339 | 192.73% |
| V 292.402† | -26.2 | -0.0001 | mg/L | 0.00016 | -0.0001 | mg/L | 0.00016 | 173.67% |
| Al 308.215† | -2874.5 | -0.1029 | mg/L | 0.00733 | -0.1029 | mg/L | 0.00733 | 7.13% |
| Be 313.107† | -122.3 | 0.0000 | mg/L | 0.00008 | 0.0000 | mg/L | 0.00008 | 299.25% |
| Cu 324.752† | -24.7 | -0.0001 | mg/L | 0.00029 | -0.0001 | mg/L | 0.00029 | 308.55% |

| | | | | | | |
|---|---|---|---|---|---|---|
| Ag 338.289† | -3.4 | 0.0000 mg/L | 0.00024 | 0.0000 mg/L | 0.00024 | >999.9% |
| Na 330.237† | 114.2 | 0.1149 mg/L | 0.05363 | 0.1149 mg/L | 0.05363 | 46.68% |
| Ca 227.546† | 13.6 | 0.0362 mg/L | 0.00636 | 0.0362 mg/L | 0.00636 | 17.57% |
| Al RADIAL† | -250.4 | -0.1301 mg/L | 0.00500 | -0.1301 mg/L | 0.00500 | 3.84% |
| Fe RADIAL† | -1.5 | -0.0041 mg/L | 0.00911 | -0.0041 mg/L | 0.00911 | 221.27% |
| Ca RADIAL† | 245.2 | 0.0532 mg/L | 0.00605 | 0.0532 mg/L | 0.00605 | 11.37% |
| K RADIAL† | -22.8 | -0.0197 mg/L | 0.06048 | -0.0197 mg/L | 0.06048 | 307.49% |
| Mg RADIAL† | 0.4 | 0.0013 mg/L | 0.00544 | 0.0013 mg/L | 0.00544 | 425.27% |
| Na RADIAL† | -466.2 | -0.0355 mg/L | 0.01530 | -0.0355 mg/L | 0.01530 | 43.11% |
| Mo 202.031 | 11.7 | 0.000 mg/L | 0.0004 | 0.000 mg/L | 0.0004 | 84.28% |

**Sequence No.: 23**
**Sample ID: 16I0138-01**
**Analyst: KV**
**Logged In Analyst (Original) : administrator**
**Initial Sample Wt:**
**Dilution:**

**Autosampler Location: 19**
**Date Collected: 9/12/2016 4:46:48 PM**
**Data Type: Reprocessed on 9/13/2016 6:59:22 AM**

**Initial Sample Vol:**
**Sample Prep Vol:**

**Mean Data: 16I0138-01**

| Analyte | Mean Corrected Intensity | Calib. Conc. | Units | Std.Dev. | Sample Conc. | Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 14765945.0 | 4.801 | mg/L | 0.0791 | | | | 1.65% |
| Y RADIAL | 226438.5 | 4.933 | mg/L | 0.0552 | | | | 1.12% |
| As 188.979† | -13.7 | -0.0072 | mg/L | 0.00180 | -0.0072 | mg/L | 0.00180 | 24.90% |
| Tl 190.801† | -28.6 | -0.0098 | mg/L | 0.00399 | -0.0098 | mg/L | 0.00399 | 40.56% |
| Se 196.026† | 7.9 | 0.0082 | mg/L | 0.00206 | 0.0082 | mg/L | 0.00206 | 25.16% |
| Zn 206.200† | 294.6 | 0.0065 | mg/L | 0.00024 | 0.0065 | mg/L | 0.00024 | 3.66% |
| Sb 206.836† | 15.2 | 0.0044 | mg/L | 0.00374 | 0.0044 | mg/L | 0.00374 | 84.76% |
| Pb 220.353† | -4.7 | 0.0004 | mg/L | 0.00194 | 0.0004 | mg/L | 0.00194 | 547.34% |
| Cd 226.502† | -13.1 | -0.0001 | mg/L | 0.00006 | -0.0001 | mg/L | 0.00006 | 69.92% |
| Co 228.616† | -25.1 | -0.0006 | mg/L | 0.00015 | -0.0006 | mg/L | 0.00015 | 24.96% |
| Ni 232.003† | -82.8 | -0.0034 | mg/L | 0.00126 | -0.0034 | mg/L | 0.00126 | 36.81% |
| Ba 233.527† | 6280.4 | 0.0634 | mg/L | 0.00093 | 0.0634 | mg/L | 0.00093 | 1.47% |
| Mn 257.610† | 629.6 | 0.0007 | mg/L | 0.00003 | 0.0007 | mg/L | 0.00003 | 4.22% |
| Cr 267.716† | 222.9 | 0.0015 | mg/L | 0.00009 | 0.0015 | mg/L | 0.00009 | 5.80% |
| Fe 273.955† | 431.4 | 0.0159 | mg/L | 0.00096 | 0.0159 | mg/L | 0.00096 | 6.03% |
| Mg 279.077† | 371588.6 | 16.76 | mg/L | 0.148 | 16.76 | mg/L | 0.148 | 0.88% |
| V 292.402† | 505.8 | 0.0017 | mg/L | 0.00005 | 0.0017 | mg/L | 0.00005 | 3.03% |
| Al 308.215† | -5266.9 | -0.1906 | mg/L | 0.00488 | -0.1906 | mg/L | 0.00488 | 2.56% |
| Be 313.107† | -363.8 | -0.0001 | mg/L | 0.00003 | -0.0001 | mg/L | 0.00003 | 35.05% |
| Cu 324.752† | 18333.5 | 0.0690 | mg/L | 0.00059 | 0.0690 | mg/L | 0.00059 | 0.86% |
| Ag 338.289† | 173.0 | 0.0005 | mg/L | 0.00014 | 0.0005 | mg/L | 0.00014 | 26.81% |
| Na 330.237† | 40187.8 | 40.48 | mg/L | 0.282 | 40.48 | mg/L | 0.282 | 0.70% |
| Ca 227.546† | 21065.1 | 56.37 | mg/L | 0.269 | 56.37 | mg/L | 0.269 | 0.48% |
| Al RADIAL† | -410.7 | -0.2152 | mg/L | 0.00648 | -0.2152 | mg/L | 0.00648 | 3.01% |
| Fe RADIAL† | 11.3 | 0.0308 | mg/L | 0.00976 | 0.0308 | mg/L | 0.00976 | 31.71% |
| Ca RADIAL† | 267267.2 | 58.02 | mg/L | 0.139 | 58.02 | mg/L | 0.139 | 0.24% |
| K RADIAL† | 3943.6 | 3.397 | mg/L | 0.0750 | 3.397 | mg/L | 0.0750 | 2.21% |
| Mg RADIAL† | 5824.2 | 17.03 | mg/L | 0.294 | 17.03 | mg/L | 0.294 | 1.73% |
| Na RADIAL† | 671610.6 | 51.13 | mg/L | 0.596 | 51.13 | mg/L | 0.596 | 1.17% |
| Mo 202.031 | 1574.1 | 0.058 | mg/L | 0.0002 | 0.058 | mg/L | 0.0002 | 0.29% |

**Sequence No.: 24**
**Sample ID: 16I0138-02**
**Analyst: KV**
**Logged In Analyst (Original) : administrator**
**Initial Sample Wt:**
**Dilution:**

**Autosampler Location: 20**
**Date Collected: 9/12/2016 4:51:53 PM**
**Data Type: Reprocessed on 9/13/2016 6:59:22 AM**

**Initial Sample Vol:**
**Sample Prep Vol:**

**Mean Data: 16I0138-02**

| Analyte | Mean Corrected Intensity | Calib. Conc. | Units | Std.Dev. | Sample Conc. | Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 13943733.5 | 4.534 | mg/L | 0.0778 | | | | 1.71% |
| Y RADIAL | 230182.5 | 5.014 | mg/L | 0.0529 | | | | 1.06% |
| As 188.979† | 134.5 | 0.0711 | mg/L | 0.00323 | 0.0711 | mg/L | 0.00323 | 4.54% |
| Tl 190.801† | -53.0 | -0.0182 | mg/L | 0.00314 | -0.0182 | mg/L | 0.00314 | 17.29% |
| Se 196.026† | 4.9 | 0.0053 | mg/L | 0.00812 | 0.0053 | mg/L | 0.00812 | 151.92% |
| Zn 206.200† | 23050.0 | 0.5052 | mg/L | 0.01264 | 0.5052 | mg/L | 0.01264 | 2.50% |

| | | | | | | |
|---|---|---|---|---|---|---|
| Sb 206.836† | -125.2 | -0.0364 mg/L | 0.00330 | -0.0364 mg/L | 0.00330 | 9.05% |
| Pb 220.353† | -453.9 | -0.0367 mg/L | 0.00160 | -0.0367 mg/L | 0.00160 | 4.35% |
| Cd 226.502† | -17.1 | -0.0002 mg/L | 0.00009 | -0.0002 mg/L | 0.00009 | 55.64% |
| Co 228.616† | -1334.4 | -0.0311 mg/L | 0.00029 | -0.0311 mg/L | 0.00029 | 0.94% |
| Ni 232.003† | 2663.7 | 0.1101 mg/L | 0.00048 | 0.1101 mg/L | 0.00048 | 0.43% |
| Ba 233.527† | 32345.6 | 0.3266 mg/L | 0.00858 | 0.3266 mg/L | 0.00858 | 2.63% |
| Mn 257.610† | 22358.8 | 0.0234 mg/L | 0.00058 | 0.0234 mg/L | 0.00058 | 2.48% |
| Cr 267.716† | 1549.3 | 0.0107 mg/L | 0.00035 | 0.0107 mg/L | 0.00035 | 3.27% |
| Fe 273.955† | 13393.7 | 0.4929 mg/L | 0.01031 | 0.4929 mg/L | 0.01031 | 2.09% |
| Mg 279.077† | 2275989.8 | 102.7 mg/L | 1.24 | 102.7 mg/L | 1.24 | 1.21% |
| V 292.402† | -42069.0 | -0.1456 mg/L | 0.00069 | -0.1456 mg/L | 0.00069 | 0.47% |
| Al 308.215† | 6709.8 | 0.2281 mg/L | 0.01487 | 0.2281 mg/L | 0.01487 | 6.52% |
| Be 313.107† | -916.4 | -0.0002 mg/L | 0.00003 | -0.0002 mg/L | 0.00003 | 14.25% |
| Cu 324.752† | 19365.2 | 0.0729 mg/L | 0.00183 | 0.0729 mg/L | 0.00183 | 2.51% |
| Ag 338.289† | -3430.4 | -0.0269 mg/L | 0.00103 | -0.0269 mg/L | 0.00103 | 3.83% |
| Na 330.237† | 463568.9 | 466.6 mg/L | 12.57 | 466.6 mg/L | 12.57 | 2.69% |
| Ca 227.546† | 140207.2 | 375.2 mg/L | 9.33 | 375.2 mg/L | 9.33 | 2.49% |
| Al RADIAL† | 804.9 | 0.4081 mg/L | 0.02259 | 0.4081 mg/L | 0.02259 | 5.53% |
| Fe RADIAL† | 180.5 | 0.4902 mg/L | 0.00809 | 0.4902 mg/L | 0.00809 | 1.65% |
| Ca RADIAL† | 1597925.6 | 346.9 mg/L | 0.45 | 346.9 mg/L | 0.45 | 0.13% |
| K RADIAL† | 24537.9 | 21.14 mg/L | 0.409 | 21.14 mg/L | 0.409 | 1.93% |
| Mg RADIAL† | 33424.5 | 97.72 mg/L | 1.946 | 97.72 mg/L | 1.946 | 1.99% |
| Na RADIAL† | 5234846.5 | 398.5 mg/L | 10.49 | 398.5 mg/L | 10.49 | 2.63% |
| Mo 202.031 | 420479.9 | 15.40 mg/L | 0.188 | 15.40 mg/L | 0.188 | 1.22% |

**Sequence No.: 25**
**Sample ID: 16I0138-03**
**Analyst: KV**
**Logged In Analyst (Original) : administrator**
**Initial Sample Wt:**
**Dilution:**

**Autosampler Location: 21**
**Date Collected: 9/12/2016 4:57:12 PM**
**Data Type: Reprocessed on 9/13/2016 6:59:23 AM**

**Initial Sample Vol:**
**Sample Prep Vol:**

**Mean Data: 16I0138-03**

| Analyte | Mean Corrected Intensity | Calib. Conc. | Units | Std.Dev. | Sample Conc. | Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 14926273.0 | 4.853 | mg/L | 0.0888 | | | | 1.83% |
| Y RADIAL | 240035.3 | 5.229 | mg/L | 0.0197 | | | | 0.38% |
| As 188.979† | 543.5 | 0.2872 | mg/L | 0.00829 | 0.2872 | mg/L | 0.00829 | 2.89% |
| Tl 190.801† | -120.8 | -0.0415 | mg/L | 0.00271 | -0.0415 | mg/L | 0.00271 | 6.52% |
| Se 196.026† | 12.1 | 0.0126 | mg/L | 0.00379 | 0.0126 | mg/L | 0.00379 | 30.13% |
| Zn 206.200† | -1483.6 | -0.0325 | mg/L | 0.00011 | -0.0325 | mg/L | 0.00011 | 0.33% |
| Sb 206.836† | -642.8 | -0.1871 | mg/L | 0.00848 | -0.1871 | mg/L | 0.00848 | 4.53% |
| Pb 220.353† | -1824.3 | -0.1663 | mg/L | 0.00204 | -0.1663 | mg/L | 0.00204 | 1.22% |
| Cd 226.502† | -173.9 | -0.0012 | mg/L | 0.00008 | -0.0012 | mg/L | 0.00008 | 6.33% |
| Co 228.616† | -6108.7 | -0.1424 | mg/L | 0.00281 | -0.1424 | mg/L | 0.00281 | 1.97% |
| Ni 232.003† | 12512.5 | 0.5170 | mg/L | 0.00825 | 0.5170 | mg/L | 0.00825 | 1.60% |
| Ba 233.527† | 9063.0 | 0.0915 | mg/L | 0.00163 | 0.0915 | mg/L | 0.00163 | 1.78% |
| Mn 257.610† | 6263.8 | 0.0065 | mg/L | 0.00007 | 0.0065 | mg/L | 0.00007 | 1.08% |
| Cr 267.716† | 1173.3 | 0.0081 | mg/L | 0.00043 | 0.0081 | mg/L | 0.00043 | 5.32% |
| Fe 273.955† | 3798.3 | 0.1398 | mg/L | 0.00315 | 0.1398 | mg/L | 0.00315 | 2.25% |
| Mg 279.077† | 370544.9 | 16.71 | mg/L | 0.167 | 16.71 | mg/L | 0.167 | 1.00% |
| V 292.402† | -214239.0 | -0.7414 | mg/L | 0.01759 | -0.7414 | mg/L | 0.01759 | 2.37% |
| Al 308.215† | 36202.9 | 1.294 | mg/L | 0.0199 | 1.294 | mg/L | 0.0199 | 1.54% |
| Be 313.107† | -100.8 | 0.0000 | mg/L | 0.00005 | 0.0000 | mg/L | 0.00005 | 210.42% |
| Cu 324.752† | 27253.2 | 0.1025 | mg/L | 0.00086 | 0.1025 | mg/L | 0.00086 | 0.84% |
| Ag 338.289† | -17566.2 | -0.1186 | mg/L | 0.00100 | -0.1186 | mg/L | 0.00100 | 0.84% |
| Na 330.237† | 127755.1 | 128.5 | mg/L | 1.17 | 128.5 | mg/L | 1.17 | 0.91% |
| Ca 227.546† | 21213.9 | 56.77 | mg/L | 0.533 | 56.77 | mg/L | 0.533 | 0.94% |
| Al RADIAL† | 4118.0 | 2.139 | mg/L | 0.0115 | 2.139 | mg/L | 0.0115 | 0.54% |
| Fe RADIAL† | 51.2 | 0.1390 | mg/L | 0.01080 | 0.1390 | mg/L | 0.01080 | 7.77% |
| Ca RADIAL† | 263462.3 | 57.19 | mg/L | 0.088 | 57.19 | mg/L | 0.088 | 0.15% |
| K RADIAL† | 4016.1 | 3.460 | mg/L | 0.0444 | 3.460 | mg/L | 0.0444 | 1.28% |
| Mg RADIAL† | 5564.8 | 16.27 | mg/L | 0.137 | 16.27 | mg/L | 0.137 | 0.84% |
| Na RADIAL† | 1795290.8 | 136.7 | mg/L | 4.06 | 136.7 | mg/L | 4.06 | 2.97% |
| Mo 202.031 | 1946350.1 | 71.29 | mg/L | 0.358 | 71.29 | mg/L | 0.358 | 0.50% |

**Sequence No.: 26**
**Sample ID: 16I0138-04**
**Analyst: KV**

**Autosampler Location: 22**
**Date Collected: 9/12/2016 5:02:24 PM**
**Data Type: Reprocessed on 9/13/2016 6:59:24 AM**

Logged In Analyst (Original) : administrator
Initial Sample Wt:
Dilution:

Initial Sample Vol:
Sample Prep Vol:

Mean Data: 16I0138-04

| Analyte | Mean Corrected Intensity | Calib. Conc. | Units | Std.Dev. | Sample Conc. | Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 13477090.8 | 4.382 | mg/L | 0.0544 | | | | 1.24% |
| Y RADIAL | 219211.6 | 4.775 | mg/L | 0.0559 | | | | 1.17% |
| As 188.979† | 790.9 | 0.4181 | mg/L | 0.00787 | 0.4181 | mg/L | 0.00787 | 1.88% |
| Tl 190.801† | -137.9 | -0.0473 | mg/L | 0.00426 | -0.0473 | mg/L | 0.00426 | 9.01% |
| Se 196.026† | 4.7 | 0.0058 | mg/L | 0.00955 | 0.0058 | mg/L | 0.00955 | 163.84% |
| Zn 206.200† | -1815.5 | -0.0398 | mg/L | 0.00024 | -0.0398 | mg/L | 0.00024 | 0.60% |
| Sb 206.836† | -976.1 | -0.2841 | mg/L | 0.00890 | -0.2841 | mg/L | 0.00890 | 3.13% |
| Pb 220.353† | -2628.9 | -0.2401 | mg/L | 0.00015 | -0.2401 | mg/L | 0.00015 | 0.06% |
| Cd 226.502† | -414.9 | -0.0031 | mg/L | 0.00002 | -0.0031 | mg/L | 0.00002 | 0.68% |
| Co 228.616† | -8642.1 | -0.2014 | mg/L | 0.00210 | -0.2014 | mg/L | 0.00210 | 1.04% |
| Ni 232.003† | 17287.8 | 0.7145 | mg/L | 0.00761 | 0.7145 | mg/L | 0.00761 | 1.06% |
| Ba 233.527† | 10218.2 | 0.1032 | mg/L | 0.00078 | 0.1032 | mg/L | 0.00078 | 0.75% |
| Mn 257.610† | 20159.3 | 0.0213 | mg/L | 0.00038 | 0.0213 | mg/L | 0.00038 | 1.78% |
| Cr 267.716† | 1524.6 | 0.0106 | mg/L | 0.00019 | 0.0106 | mg/L | 0.00019 | 1.80% |
| Fe 273.955† | 59845.3 | 2.202 | mg/L | 0.0230 | 2.202 | mg/L | 0.0230 | 1.04% |
| Mg 279.077† | 531227.3 | 23.96 | mg/L | 0.595 | 23.96 | mg/L | 0.595 | 2.48% |
| V 292.402† | -299594.7 | -1.037 | mg/L | 0.0214 | -1.037 | mg/L | 0.0214 | 2.07% |
| Al 308.215† | 52084.2 | 1.862 | mg/L | 0.0310 | 1.862 | mg/L | 0.0310 | 1.66% |
| Be 313.107† | -1138.7 | -0.0003 | mg/L | 0.00002 | -0.0003 | mg/L | 0.00002 | 9.42% |
| Cu 324.752† | 49235.9 | 0.1853 | mg/L | 0.00254 | 0.1853 | mg/L | 0.00254 | 1.37% |
| Ag 338.289† | -24722.6 | -0.1668 | mg/L | 0.00214 | -0.1668 | mg/L | 0.00214 | 1.29% |
| Na 330.237† | 247140.3 | 248.6 | mg/L | 3.76 | 248.6 | mg/L | 3.76 | 1.51% |
| Ca 227.546† | 24655.2 | 66.00 | mg/L | 0.953 | 66.00 | mg/L | 0.953 | 1.44% |
| Al RADIAL† | 5667.5 | 2.944 | mg/L | 0.0049 | 2.944 | mg/L | 0.0049 | 0.17% |
| Fe RADIAL† | 803.9 | 2.183 | mg/L | 0.0540 | 2.183 | mg/L | 0.0540 | 2.47% |
| Ca RADIAL† | 294979.7 | 64.03 | mg/L | 0.087 | 64.03 | mg/L | 0.087 | 0.14% |
| K RADIAL† | 4376.4 | 3.770 | mg/L | 0.0149 | 3.770 | mg/L | 0.0149 | 0.40% |
| Mg RADIAL† | 8405.5 | 24.57 | mg/L | 0.620 | 24.57 | mg/L | 0.620 | 2.52% |
| Na RADIAL† | 3178984.2 | 242.0 | mg/L | 4.48 | 242.0 | mg/L | 4.48 | 1.85% |
| Mo 202.031 | 2414037.7 | 88.42 | mg/L | 0.826 | 88.42 | mg/L | 0.826 | 0.93% |

Sequence No.: 27
Sample ID: 16I0142-02
Analyst: KV
Logged In Analyst (Original) : administrator
Initial Sample Wt:
Dilution:

Autosampler Location: 23
Date Collected: 9/12/2016 5:07:38 PM
Data Type: Reprocessed on 9/13/2016 6:59:24 AM

Initial Sample Vol:
Sample Prep Vol:

Mean Data: 16I0142-02

| Analyte | Mean Corrected Intensity | Calib. Conc. | Units | Std.Dev. | Sample Conc. | Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 13689036.8 | 4.451 | mg/L | 0.0562 | | | | 1.26% |
| Y RADIAL | 220500.4 | 4.803 | mg/L | 0.0545 | | | | 1.13% |
| As 188.979† | 88.2 | 0.0466 | mg/L | 0.00284 | 0.0466 | mg/L | 0.00284 | 6.09% |
| Tl 190.801† | -47.5 | -0.0163 | mg/L | 0.00509 | -0.0163 | mg/L | 0.00509 | 31.18% |
| Se 196.026† | 18.6 | 0.0194 | mg/L | 0.00342 | 0.0194 | mg/L | 0.00342 | 17.68% |
| Zn 206.200† | 1805.4 | 0.0396 | mg/L | 0.00003 | 0.0396 | mg/L | 0.00003 | 0.07% |
| Sb 206.836† | -91.5 | -0.0266 | mg/L | 0.00248 | -0.0266 | mg/L | 0.00248 | 9.33% |
| Pb 220.353† | -337.2 | -0.0273 | mg/L | 0.00019 | -0.0273 | mg/L | 0.00019 | 0.70% |
| Cd 226.502† | -42.6 | -0.0003 | mg/L | 0.00004 | -0.0003 | mg/L | 0.00004 | 13.26% |
| Co 228.616† | -929.4 | -0.0217 | mg/L | 0.00030 | -0.0217 | mg/L | 0.00030 | 1.41% |
| Ni 232.003† | 1808.9 | 0.0747 | mg/L | 0.00089 | 0.0747 | mg/L | 0.00089 | 1.19% |
| Ba 233.527† | 33417.1 | 0.3375 | mg/L | 0.00494 | 0.3375 | mg/L | 0.00494 | 1.46% |
| Mn 257.610† | 705.1 | 0.0007 | mg/L | 0.00004 | 0.0007 | mg/L | 0.00004 | 4.85% |
| Cr 267.716† | 1024.4 | 0.0071 | mg/L | 0.00028 | 0.0071 | mg/L | 0.00028 | 3.88% |
| Fe 273.955† | 523.4 | 0.0193 | mg/L | 0.00041 | 0.0193 | mg/L | 0.00041 | 2.14% |
| Mg 279.077† | 2685982.7 | 121.1 | mg/L | 0.79 | 121.1 | mg/L | 0.79 | 0.65% |
| V 292.402† | -27286.0 | -0.0944 | mg/L | 0.00077 | -0.0944 | mg/L | 0.00077 | 0.81% |
| Al 308.215† | 3627.1 | 0.1192 | mg/L | 0.01081 | 0.1192 | mg/L | 0.01081 | 9.07% |
| Be 313.107† | -975.5 | -0.0002 | mg/L | 0.00007 | -0.0002 | mg/L | 0.00007 | 32.05% |
| Cu 324.752† | 17401.6 | 0.0655 | mg/L | 0.00105 | 0.0655 | mg/L | 0.00105 | 1.61% |
| Ag 338.289† | -2271.8 | -0.0182 | mg/L | 0.00052 | -0.0182 | mg/L | 0.00052 | 2.84% |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Na 330.237† | 459884.8 | 462.8 | mg/L | 7.28 | 462.8 | mg/L | 7.28 | 1.57% |
| Ca 227.546† | 103488.7 | 277.0 | mg/L | 4.20 | 277.0 | mg/L | 4.20 | 1.52% |
| Al RADIAL† | 400.1 | 0.2003 | mg/L | 0.02412 | 0.2003 | mg/L | 0.02412 | 12.04% |
| Fe RADIAL† | 9.2 | 0.0250 | mg/L | 0.00800 | 0.0250 | mg/L | 0.00800 | 31.98% |
| Ca RADIAL† | 1187643.7 | 257.8 | mg/L | 0.10 | 257.8 | mg/L | 0.10 | 0.04% |
| K RADIAL† | 28881.2 | 24.88 | mg/L | 0.363 | 24.88 | mg/L | 0.363 | 1.46% |
| Mg RADIAL† | 39437.1 | 115.3 | mg/L | 1.80 | 115.3 | mg/L | 1.80 | 1.56% |
| Na RADIAL† | 5225323.2 | 397.8 | mg/L | 11.20 | 397.8 | mg/L | 11.20 | 2.82% |
| Mo 202.031 | 289825.1 | 10.62 | mg/L | 0.119 | 10.62 | mg/L | 0.119 | 1.12% |

**Sequence No.: 28**
**Sample ID: 16I0142-03**
**Analyst: KV**
**Logged In Analyst (Original) : administrator**
**Initial Sample Wt:**
**Dilution:**

**Autosampler Location: 24**
**Date Collected: 9/12/2016 5:12:58 PM**
**Data Type: Reprocessed on 9/13/2016 6:59:25 AM**

**Initial Sample Vol:**
**Sample Prep Vol:**

**Mean Data: 16I0142-03**

| Analyte | Mean Corrected Intensity | Calib. Conc. | Units | Std.Dev. | Sample Conc. | Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 13830186.1 | 4.497 | mg/L | 0.0300 | | | | 0.67% |
| Y RADIAL | 224354.4 | 4.887 | mg/L | 0.0849 | | | | 1.74% |
| As 188.979† | 330.2 | 0.1745 | mg/L | 0.00445 | 0.1745 | mg/L | 0.00445 | 2.55% |
| Tl 190.801† | -89.2 | -0.0306 | mg/L | 0.00140 | -0.0306 | mg/L | 0.00140 | 4.57% |
| Se 196.026† | 8.9 | 0.0094 | mg/L | 0.00967 | 0.0094 | mg/L | 0.00967 | 103.43% |
| Zn 206.200† | -1047.8 | -0.0230 | mg/L | 0.00013 | -0.0230 | mg/L | 0.00013 | 0.58% |
| Sb 206.836† | -420.9 | -0.1225 | mg/L | 0.00493 | -0.1225 | mg/L | 0.00493 | 4.02% |
| Pb 220.353† | -1119.6 | -0.1019 | mg/L | 0.00096 | -0.1019 | mg/L | 0.00096 | 0.94% |
| Cd 226.502† | -222.0 | -0.0015 | mg/L | 0.00006 | -0.0015 | mg/L | 0.00006 | 3.99% |
| Co 228.616† | -3660.0 | -0.0853 | mg/L | 0.00098 | -0.0853 | mg/L | 0.00098 | 1.15% |
| Ni 232.003† | 7245.1 | 0.2994 | mg/L | 0.00515 | 0.2994 | mg/L | 0.00515 | 1.72% |
| Ba 233.527† | 1762.3 | 0.0178 | mg/L | 0.00023 | 0.0178 | mg/L | 0.00023 | 1.27% |
| Mn 257.610† | 23250.2 | 0.0243 | mg/L | 0.00036 | 0.0243 | mg/L | 0.00036 | 1.48% |
| Cr 267.716† | 693.4 | 0.0048 | mg/L | 0.00067 | 0.0048 | mg/L | 0.00067 | 14.03% |
| Fe 273.955† | 4845.2 | 0.1783 | mg/L | 0.00288 | 0.1783 | mg/L | 0.00288 | 1.62% |
| Mg 279.077† | 380501.4 | 17.16 | mg/L | 0.194 | 17.16 | mg/L | 0.194 | 1.13% |
| V 292.402† | -129477.0 | -0.4481 | mg/L | 0.00564 | -0.4481 | mg/L | 0.00564 | 1.26% |
| Al 308.215† | 19658.9 | 0.7019 | mg/L | 0.02075 | 0.7019 | mg/L | 0.02075 | 2.96% |
| Be 313.107† | -997.1 | -0.0002 | mg/L | 0.00007 | -0.0002 | mg/L | 0.00007 | 30.63% |
| Cu 324.752† | 17890.4 | 0.0673 | mg/L | 0.00116 | 0.0673 | mg/L | 0.00116 | 1.73% |
| Ag 338.289† | -10568.8 | -0.0716 | mg/L | 0.00129 | -0.0716 | mg/L | 0.00129 | 1.80% |
| Na 330.237† | 100904.8 | 101.5 | mg/L | 1.65 | 101.5 | mg/L | 1.65 | 1.62% |
| Ca 227.546† | 19349.9 | 51.79 | mg/L | 0.720 | 51.79 | mg/L | 0.720 | 1.39% |
| Al RADIAL† | 2156.0 | 1.119 | mg/L | 0.0198 | 1.119 | mg/L | 0.0198 | 1.77% |
| Fe RADIAL† | 65.2 | 0.1770 | mg/L | 0.01144 | 0.1770 | mg/L | 0.01144 | 6.46% |
| Ca RADIAL† | 238592.8 | 51.79 | mg/L | 0.071 | 51.79 | mg/L | 0.071 | 0.14% |
| K RADIAL† | 3842.1 | 3.310 | mg/L | 0.0265 | 3.310 | mg/L | 0.0265 | 0.80% |
| Mg RADIAL† | 5732.0 | 16.76 | mg/L | 0.118 | 16.76 | mg/L | 0.118 | 0.71% |
| Na RADIAL† | 1432159.2 | 109.0 | mg/L | 1.15 | 109.0 | mg/L | 1.15 | 1.05% |
| Mo 202.031 | 1124996.6 | 41.20 | mg/L | 0.341 | 41.20 | mg/L | 0.341 | 0.83% |

**Sequence No.: 29**
**Sample ID: 16I0142-04**
**Analyst: KV**
**Logged In Analyst (Original) : administrator**
**Initial Sample Wt:**
**Dilution:**

**Autosampler Location: 25**
**Date Collected: 9/12/2016 5:18:10 PM**
**Data Type: Reprocessed on 9/13/2016 6:59:26 AM**

**Initial Sample Vol:**
**Sample Prep Vol:**

**Mean Data: 16I0142-04**

| Analyte | Mean Corrected Intensity | Calib. Conc. | Units | Std.Dev. | Sample Conc. | Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 14274792.0 | 4.641 | mg/L | 0.0641 | | | | 1.38% |
| Y RADIAL | 228047.2 | 4.968 | mg/L | 0.0395 | | | | 0.79% |
| As 188.979† | -10.8 | -0.0057 | mg/L | 0.00060 | -0.0057 | mg/L | 0.00060 | 10.59% |
| Tl 190.801† | -9.8 | -0.0033 | mg/L | 0.00267 | -0.0033 | mg/L | 0.00267 | 79.99% |
| Se 196.026† | 3.7 | 0.0039 | mg/L | 0.01248 | 0.0039 | mg/L | 0.01248 | 316.79% |
| Zn 206.200† | 190.6 | 0.0042 | mg/L | 0.00032 | 0.0042 | mg/L | 0.00032 | 7.56% |
| Sb 206.836† | 21.8 | 0.0063 | mg/L | 0.00257 | 0.0063 | mg/L | 0.00257 | 40.49% |

| | | | | | | |
|---|---|---|---|---|---|---|
| Pb 220.353† | 134.7 | 0.0124 mg/L | 0.00208 | 0.0124 mg/L | 0.00208 | 16.75% |
| Cd 226.502† | -65.0 | -0.0005 mg/L | 0.00009 | -0.0005 mg/L | 0.00009 | 19.42% |
| Co 228.616† | -38.3 | -0.0009 mg/L | 0.00034 | -0.0009 mg/L | 0.00034 | 38.22% |
| Ni 232.003† | 16.2 | 0.0007 mg/L | 0.00065 | 0.0007 mg/L | 0.00065 | 94.55% |
| Ba 233.527† | 1777.6 | 0.0180 mg/L | 0.00020 | 0.0180 mg/L | 0.00020 | 1.10% |
| Mn 257.610† | 2270.3 | 0.0024 mg/L | 0.00001 | 0.0024 mg/L | 0.00001 | 0.55% |
| Cr 267.716† | 67.1 | 0.0005 mg/L | 0.00026 | 0.0005 mg/L | 0.00026 | 55.80% |
| Fe 273.955† | 5636.2 | 0.2074 mg/L | 0.00356 | 0.2074 mg/L | 0.00356 | 1.72% |
| Mg 279.077† | 51707.0 | 2.332 mg/L | 0.0306 | 2.332 mg/L | 0.0306 | 1.31% |
| V 292.402† | -1230.7 | -0.0043 mg/L | 0.00023 | -0.0043 mg/L | 0.00023 | 5.27% |
| Al 308.215† | -4598.8 | -0.1649 mg/L | 0.00663 | -0.1649 mg/L | 0.00663 | 4.02% |
| Be 313.107† | -318.6 | -0.0001 mg/L | 0.00007 | -0.0001 mg/L | 0.00007 | 101.35% |
| Cu 324.752† | 68861.0 | 0.2590 mg/L | 0.00389 | 0.2590 mg/L | 0.00389 | 1.50% |
| Ag 338.289† | -184.0 | -0.0013 mg/L | 0.00051 | -0.0013 mg/L | 0.00051 | 38.90% |
| Na 330.237† | 187252.1 | 188.3 mg/L | 3.16 | 188.3 mg/L | 3.16 | 1.68% |
| Ca 227.546† | 3116.3 | 8.341 mg/L | 0.0925 | 8.341 mg/L | 0.0925 | 1.11% |
| Al RADIAL† | -387.6 | -0.2017 mg/L | 0.01312 | -0.2017 mg/L | 0.01312 | 6.51% |
| Fe RADIAL† | 74.2 | 0.2015 mg/L | 0.01138 | 0.2015 mg/L | 0.01138 | 5.65% |
| Ca RADIAL† | 37119.4 | 8.058 mg/L | 0.0250 | 8.058 mg/L | 0.0250 | 0.31% |
| K RADIAL† | 4001.2 | 3.447 mg/L | 0.0508 | 3.447 mg/L | 0.0508 | 1.47% |
| Mg RADIAL† | 778.8 | 2.277 mg/L | 0.0485 | 2.277 mg/L | 0.0485 | 2.13% |
| Na RADIAL† | 2553420.5 | 194.4 mg/L | 1.87 | 194.4 mg/L | 1.87 | 0.96% |
| Mo 202.031 | 11226.1 | 0.411 mg/L | 0.0060 | 0.411 mg/L | 0.0060 | 1.46% |

**Sequence No.: 30**
**Sample ID: 16I0142-05**
**Analyst: KV**
**Logged In Analyst (Original) : administrator**
**Initial Sample Wt:**
**Dilution:**

**Autosampler Location: 26**
**Date Collected: 9/12/2016 5:23:19 PM**
**Data Type: Reprocessed on 9/13/2016 6:59:26 AM**

**Initial Sample Vol:**
**Sample Prep Vol:**

**Mean Data: 16I0142-05**

| Analyte | Mean Corrected Intensity | Calib. Conc. | Units | Std.Dev. | Sample Conc. | Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 13273928.0 | 4.316 | mg/L | 0.0148 | | | | 0.34% |
| Y RADIAL | 214587.3 | 4.674 | mg/L | 0.0262 | | | | 0.56% |
| As 188.979† | 1944.2 | 1.027 | mg/L | 0.0185 | 1.027 | mg/L | 0.0185 | 1.80% |
| Tl 190.801† | -321.7 | -0.1106 | mg/L | 0.00717 | -0.1106 | mg/L | 0.00717 | 6.48% |
| Se 196.026† | 25.1 | 0.0261 | mg/L | 0.00421 | 0.0261 | mg/L | 0.00421 | 16.10% |
| Zn 206.200† | -5450.8 | -0.1195 | mg/L | 0.00195 | -0.1195 | mg/L | 0.00195 | 1.63% |
| Sb 206.836† | -2329.1 | -0.6779 | mg/L | 0.02924 | -0.6779 | mg/L | 0.02924 | 4.31% |
| Pb 220.353† | -6424.8 | -0.5883 | mg/L | 0.01162 | -0.5883 | mg/L | 0.01162 | 1.98% |
| Cd 226.502† | -1069.0 | -0.0073 | mg/L | 0.00025 | -0.0073 | mg/L | 0.00025 | 3.42% |
| Co 228.616† | -20385.3 | -0.4753 | mg/L | 0.00569 | -0.4753 | mg/L | 0.00569 | 1.20% |
| Ni 232.003† | 41783.5 | 1.726 | mg/L | 0.0231 | 1.726 | mg/L | 0.0231 | 1.34% |
| Ba 233.527† | 5382.5 | 0.0544 | mg/L | 0.00054 | 0.0544 | mg/L | 0.00054 | 0.99% |
| Mn 257.610† | -5910.4 | -0.0061 | mg/L | 0.00006 | -0.0061 | mg/L | 0.00006 | 0.96% |
| Cr 267.716† | 3373.5 | 0.0233 | mg/L | 0.00071 | 0.0233 | mg/L | 0.00071 | 3.02% |
| Fe 273.955† | 2154.0 | 0.0793 | mg/L | 0.00095 | 0.0793 | mg/L | 0.00095 | 1.20% |
| Mg 279.077† | 320665.8 | 14.46 | mg/L | 0.211 | 14.46 | mg/L | 0.211 | 1.46% |
| V 292.402† | -731253.3 | -2.530 | mg/L | 0.0020 | -2.530 | mg/L | 0.0020 | 0.08% |
| Al 308.215† | 133965.7 | 4.795 | mg/L | 0.0766 | 4.795 | mg/L | 0.0766 | 1.60% |
| Be 313.107† | -1153.5 | -0.0003 | mg/L | 0.00001 | -0.0003 | mg/L | 0.00001 | 2.19% |
| Cu 324.752† | 44444.4 | 0.1672 | mg/L | 0.00244 | 0.1672 | mg/L | 0.00244 | 1.46% |
| Ag 338.289† | -59651.2 | -0.4009 | mg/L | 0.00860 | -0.4009 | mg/L | 0.00860 | 2.15% |
| Na 330.237† | 301874.1 | 303.6 | mg/L | 4.80 | 303.6 | mg/L | 4.80 | 1.58% |
| Ca 227.546† | 6896.5 | 18.46 | mg/L | 0.385 | 18.46 | mg/L | 0.385 | 2.09% |
| Al RADIAL† | 14417.8 | 7.494 | mg/L | 0.0045 | 7.494 | mg/L | 0.0045 | 0.06% |
| Fe RADIAL† | 35.3 | 0.0958 | mg/L | 0.00702 | 0.0958 | mg/L | 0.00702 | 7.33% |
| Ca RADIAL† | 84014.1 | 18.24 | mg/L | 0.011 | 18.24 | mg/L | 0.011 | 0.06% |
| K RADIAL† | 4740.4 | 4.084 | mg/L | 0.0743 | 4.084 | mg/L | 0.0743 | 1.82% |
| Mg RADIAL† | 5002.5 | 14.63 | mg/L | 0.100 | 14.63 | mg/L | 0.100 | 0.68% |
| Na RADIAL† | 3879166.6 | 295.3 | mg/L | 1.60 | 295.3 | mg/L | 1.60 | 0.54% |
| Mo 202.031 | 5025256.1 | 184.1 | mg/L | 0.90 | 184.1 | mg/L | 0.90 | 0.49% |

**Sequence No.: 31**
**Sample ID: 16I0174-07**
**Analyst: KV**
**Logged In Analyst (Original) : administrator**

**Autosampler Location: 27**
**Date Collected: 9/12/2016 5:28:25 PM**
**Data Type: Reprocessed on 9/13/2016 6:59:27 AM**

**Initial Sample Wt:**
**Dilution:**

**Initial Sample Vol:**
**Sample Prep Vol:**

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**Mean Data: 16I0174-07**

| Analyte | Mean Corrected Intensity | Conc. | Calib. Units | Std.Dev. | Conc. | Sample Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 14502323.1 | 4.715 | mg/L | 0.0667 | | | | 1.42% |
| Y RADIAL | 230439.3 | 5.020 | mg/L | 0.0666 | | | | 1.33% |
| As 188.979† | -18.4 | -0.0097 | mg/L | 0.00275 | -0.0097 | mg/L | 0.00275 | 28.21% |
| Tl 190.801† | -15.5 | -0.0053 | mg/L | 0.00430 | -0.0053 | mg/L | 0.00430 | 80.87% |
| Se 196.026† | 11.9 | 0.0124 | mg/L | 0.00748 | 0.0124 | mg/L | 0.00748 | 60.45% |
| Zn 206.200† | 374.0 | 0.0082 | mg/L | 0.00038 | 0.0082 | mg/L | 0.00038 | 4.60% |
| Sb 206.836† | 37.7 | 0.0110 | mg/L | 0.00328 | 0.0110 | mg/L | 0.00328 | 29.83% |
| Pb 220.353† | 17.1 | 0.0016 | mg/L | 0.00175 | 0.0016 | mg/L | 0.00175 | 111.48% |
| Cd 226.502† | -25.7 | -0.0002 | mg/L | 0.00017 | -0.0002 | mg/L | 0.00017 | 90.41% |
| Co 228.616† | -11.7 | -0.0003 | mg/L | 0.00007 | -0.0003 | mg/L | 0.00007 | 26.27% |
| Ni 232.003† | 74.8 | 0.0031 | mg/L | 0.00121 | 0.0031 | mg/L | 0.00121 | 39.11% |
| Ba 233.527† | 695.7 | 0.0070 | mg/L | 0.00016 | 0.0070 | mg/L | 0.00016 | 2.28% |
| Mn 257.610† | 5793.8 | 0.0060 | mg/L | 0.00013 | 0.0060 | mg/L | 0.00013 | 2.18% |
| Cr 267.716† | 8485.8 | 0.0587 | mg/L | 0.00045 | 0.0587 | mg/L | 0.00045 | 0.77% |
| Fe 273.955† | 1958.3 | 0.0721 | mg/L | 0.00195 | 0.0721 | mg/L | 0.00195 | 2.70% |
| Mg 279.077† | 11829.4 | 0.5335 | mg/L | 0.01102 | 0.5335 | mg/L | 0.01102 | 2.07% |
| V 292.402† | -89.6 | -0.0003 | mg/L | 0.00029 | -0.0003 | mg/L | 0.00029 | 93.71% |
| Al 308.215† | -2824.9 | -0.1012 | mg/L | 0.00477 | -0.1012 | mg/L | 0.00477 | 4.72% |
| Be 313.107† | -425.1 | -0.0001 | mg/L | 0.00002 | -0.0001 | mg/L | 0.00002 | 19.02% |
| Cu 324.752† | 12175.4 | 0.0458 | mg/L | 0.00095 | 0.0458 | mg/L | 0.00095 | 2.08% |
| Ag 338.289† | -22.1 | -0.0002 | mg/L | 0.00046 | -0.0002 | mg/L | 0.00046 | 275.19% |
| Na 330.237† | 461699.6 | 464.4 | mg/L | 4.17 | 464.4 | mg/L | 4.17 | 0.90% |
| Ca 227.546† | 753.5 | 2.017 | mg/L | 0.0342 | 2.017 | mg/L | 0.0342 | 1.70% |
| Al RADIAL† | -298.0 | -0.1550 | mg/L | 0.00233 | -0.1550 | mg/L | 0.00233 | 1.50% |
| Fe RADIAL† | 32.9 | 0.0893 | mg/L | 0.00735 | 0.0893 | mg/L | 0.00735 | 8.23% |
| Ca RADIAL† | 8870.6 | 1.926 | mg/L | 0.0088 | 1.926 | mg/L | 0.0088 | 0.46% |
| K RADIAL† | 5478.0 | 4.719 | mg/L | 0.0297 | 4.719 | mg/L | 0.0297 | 0.63% |
| Mg RADIAL† | 190.1 | 0.5558 | mg/L | 0.02872 | 0.5558 | mg/L | 0.02872 | 5.17% |
| Na RADIAL† | 5485388.2 | 417.6 | mg/L | 3.87 | 417.6 | mg/L | 3.87 | 0.93% |
| Mo 202.031 | 792.8 | 0.029 | mg/L | 0.0018 | 0.029 | mg/L | 0.0018 | 6.26% |

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**Sequence No.: 32**
**Sample ID: 16I0197-01**
**Analyst: KV**
**Logged In Analyst (Original) : administrator**
**Initial Sample Wt:**
**Dilution:**

**Autosampler Location: 28**
**Date Collected: 9/12/2016 5:33:31 PM**
**Data Type: Reprocessed on 9/13/2016 6:59:28 AM**

**Initial Sample Vol:**
**Sample Prep Vol:**

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**Mean Data: 16I0197-01**

| Analyte | Mean Corrected Intensity | Conc. | Calib. Units | Std.Dev. | Conc. | Sample Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 12798824.3 | 4.162 | mg/L | 0.0623 | | | | 1.50% |
| Y RADIAL | 220587.4 | 4.805 | mg/L | 0.0938 | | | | 1.95% |
| As 188.979† | -11.3 | -0.0058 | mg/L | 0.00184 | -0.0058 | mg/L | 0.00184 | 31.80% |
| Tl 190.801† | -35.5 | -0.0121 | mg/L | 0.00159 | -0.0121 | mg/L | 0.00159 | 13.16% |
| Se 196.026† | 14.6 | 0.0160 | mg/L | 0.00396 | 0.0160 | mg/L | 0.00396 | 24.76% |
| Zn 206.200† | 730.3 | 0.0160 | mg/L | 0.00053 | 0.0160 | mg/L | 0.00053 | 3.29% |
| Sb 206.836† | 30.0 | 0.0087 | mg/L | 0.00380 | 0.0087 | mg/L | 0.00380 | 43.52% |
| Pb 220.353† | 5.1 | 0.0014 | mg/L | 0.00134 | 0.0014 | mg/L | 0.00134 | 94.25% |
| Cd 226.502† | -11.0 | -0.0003 | mg/L | 0.00013 | -0.0003 | mg/L | 0.00013 | 46.38% |
| Co 228.616† | 1058.6 | 0.0247 | mg/L | 0.00025 | 0.0247 | mg/L | 0.00025 | 1.00% |
| Ni 232.003† | 1011.3 | 0.0419 | mg/L | 0.00045 | 0.0419 | mg/L | 0.00045 | 1.08% |
| Ba 233.527† | 34684.6 | 0.3503 | mg/L | 0.00434 | 0.3503 | mg/L | 0.00434 | 1.24% |
| Mn 257.610† | 155714.5 | 0.1625 | mg/L | 0.00228 | 0.1625 | mg/L | 0.00228 | 1.40% |
| Cr 267.716† | 10814.1 | 0.0748 | mg/L | 0.00104 | 0.0748 | mg/L | 0.00104 | 1.39% |
| Fe 273.955† | 50755.2 | 1.868 | mg/L | 0.0214 | 1.868 | mg/L | 0.0214 | 1.14% |
| Mg 279.077† | 1112972.8 | 50.20 | mg/L | 0.698 | 50.20 | mg/L | 0.698 | 1.39% |
| V 292.402† | 17304.7 | 0.0598 | mg/L | 0.00101 | 0.0598 | mg/L | 0.00101 | 1.69% |
| Al 308.215† | 39940.0 | 1.426 | mg/L | 0.0229 | 1.426 | mg/L | 0.0229 | 1.61% |
| Be 313.107† | -1695.7 | -0.0004 | mg/L | 0.00010 | -0.0004 | mg/L | 0.00010 | 24.99% |
| Cu 324.752† | 1916.1 | 0.0073 | mg/L | 0.00026 | 0.0073 | mg/L | 0.00026 | 3.62% |
| Ag 338.289† | -16.2 | -0.0008 | mg/L | 0.00037 | -0.0008 | mg/L | 0.00037 | 44.04% |
| Na 330.237† | 1827800.2 | 1838 | mg/L | 26.3 | 1838 | mg/L | 26.3 | 1.43% |

| | | | | | | |
|---|---|---|---|---|---|---|
| Ca 227.546† | 27639.6 | 73.99 mg/L | 1.378 | 73.99 mg/L | 1.378 | 1.86% |
| Al RADIAL† | 2245.9 | 1.166 mg/L | 0.0304 | 1.166 mg/L | 0.0304 | 2.60% |
| Fe RADIAL† | 657.5 | 1.785 mg/L | 0.0376 | 1.785 mg/L | 0.0376 | 2.11% |
| Ca RADIAL† | 316778.2 | 68.76 mg/L | 0.008 | 68.76 mg/L | 0.008 | 0.01% |
| K RADIAL† | 190190.4 | 163.9 mg/L | 0.41 | 163.9 mg/L | 0.41 | 0.25% |
| Mg RADIAL† | 16673.9 | 48.75 mg/L | 0.911 | 48.75 mg/L | 0.911 | 1.87% |
| Na RADIAL† | 15873418.9 | 1208 mg/L | 23.4 | 1208 mg/L | 23.4 | 1.94% |
| Mo 202.031 | 334.6 | 0.012 mg/L | 0.0001 | 0.012 mg/L | 0.0001 | 1.04% |

**Sequence No.: 33**
**Sample ID: SEQ-CCV3**
**Analyst: KV**
**Logged In Analyst (Original) : administrator**
**Initial Sample Wt:**
**Dilution:**

**Autosampler Location: 3**
**Date Collected: 9/12/2016 5:38:42 PM**
**Data Type: Reprocessed on 9/13/2016 6:59:29 AM**

**Initial Sample Vol:**
**Sample Prep Vol:**

**Mean Data: SEQ-CCV3**

| Analyte | Mean Corrected Intensity | Calib. Conc. | Units | Std.Dev. | Sample Conc. | Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 14781423.8 | 4.806 | mg/L | 0.0746 | | | | 1.55% |
| Y RADIAL | 233376.1 | 5.084 | mg/L | 0.0352 | | | | 0.69% |
| As 188.979† | 477.6 | 0.2528 | mg/L | 0.00177 | 0.2528 | mg/L | 0.00177 | 0.70% |
| Tl 190.801† | 683.3 | 0.2351 | mg/L | 0.01090 | 0.2351 | mg/L | 0.01090 | 4.64% |
| Se 196.026† | 239.0 | 0.2506 | mg/L | 0.00768 | 0.2506 | mg/L | 0.00768 | 3.06% |
| Zn 206.200† | 118992.1 | 2.608 | mg/L | 0.0799 | 2.608 | mg/L | 0.0799 | 3.06% |
| Sb 206.836† | 864.5 | 0.2516 | mg/L | 0.00798 | 0.2516 | mg/L | 0.00798 | 3.17% |
| Pb 220.353† | 2783.8 | 0.2566 | mg/L | 0.00610 | 0.2566 | mg/L | 0.00610 | 2.38% |
| Cd 226.502† | 18760.4 | 0.1276 | mg/L | 0.00438 | 0.1276 | mg/L | 0.00438 | 3.43% |
| Co 228.616† | 112532.1 | 2.624 | mg/L | 0.0791 | 2.624 | mg/L | 0.0791 | 3.02% |
| Ni 232.003† | 62218.0 | 2.571 | mg/L | 0.0791 | 2.571 | mg/L | 0.0791 | 3.08% |
| Ba 233.527† | 1037712.8 | 10.48 | mg/L | 0.154 | 10.48 | mg/L | 0.154 | 1.47% |
| Mn 257.610† | 2487171.0 | 2.593 | mg/L | 0.0354 | 2.593 | mg/L | 0.0354 | 1.37% |
| Cr 267.716† | 151302.2 | 1.046 | mg/L | 0.0307 | 1.046 | mg/L | 0.0307 | 2.94% |
| Fe 273.955† | 141933.3 | 5.223 | mg/L | 0.1542 | 5.223 | mg/L | 0.1542 | 2.95% |
| Mg 279.077† | 569829.5 | 25.70 | mg/L | 0.378 | 25.70 | mg/L | 0.378 | 1.47% |
| V 292.402† | 733270.0 | 2.537 | mg/L | 0.0400 | 2.537 | mg/L | 0.0400 | 1.58% |
| Al 308.215† | 284255.9 | 10.17 | mg/L | 0.330 | 10.17 | mg/L | 0.330 | 3.25% |
| Be 313.107† | 1113297.2 | 0.2553 | mg/L | 0.00437 | 0.2553 | mg/L | 0.00437 | 1.71% |
| Cu 324.752† | 345172.7 | 1.299 | mg/L | 0.0446 | 1.299 | mg/L | 0.0446 | 3.43% |
| Ag 338.289† | 194234.2 | 1.305 | mg/L | 0.0396 | 1.305 | mg/L | 0.0396 | 3.04% |
| Na 330.237† | 24455.5 | 24.64 | mg/L | 0.842 | 24.64 | mg/L | 0.842 | 3.42% |
| Ca 227.546† | 9568.5 | 25.66 | mg/L | 0.555 | 25.66 | mg/L | 0.555 | 2.16% |
| Al RADIAL† | 18837.8 | 9.792 | mg/L | 0.1588 | 9.792 | mg/L | 0.1588 | 1.62% |
| Fe RADIAL† | 1850.1 | 5.023 | mg/L | 0.1111 | 5.023 | mg/L | 0.1111 | 2.21% |
| Ca RADIAL† | 117131.4 | 25.43 | mg/L | 0.039 | 25.43 | mg/L | 0.039 | 0.15% |
| K RADIAL† | 5913.8 | 5.095 | mg/L | 0.0635 | 5.095 | mg/L | 0.0635 | 1.25% |
| Mg RADIAL† | 8601.4 | 25.15 | mg/L | 0.461 | 25.15 | mg/L | 0.461 | 1.83% |
| Na RADIAL† | 338360.8 | 25.76 | mg/L | 0.080 | 25.76 | mg/L | 0.080 | 0.31% |
| Mo 202.031 | 29178.4 | 1.069 | mg/L | 0.0167 | 1.069 | mg/L | 0.0167 | 1.56% |

**Sequence No.: 34**
**Sample ID: SEQ-CCB3**
**Analyst: KV**
**Logged In Analyst (Original) : administrator**
**Initial Sample Wt:**
**Dilution:**

**Autosampler Location: 4**
**Date Collected: 9/12/2016 5:46:48 PM**
**Data Type: Reprocessed on 9/13/2016 6:59:29 AM**

**Initial Sample Vol:**
**Sample Prep Vol:**

**Mean Data: SEQ-CCB3**

| Analyte | Mean Corrected Intensity | Calib. Conc. | Units | Std.Dev. | Sample Conc. | Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 15023831.6 | 4.885 | mg/L | 0.0125 | | | | 0.26% |
| Y RADIAL | 224288.4 | 4.886 | mg/L | 0.1140 | | | | 2.33% |
| As 188.979† | -5.1 | -0.0027 | mg/L | 0.00075 | -0.0027 | mg/L | 0.00075 | 27.64% |
| Tl 190.801† | 9.8 | 0.0034 | mg/L | 0.00191 | 0.0034 | mg/L | 0.00191 | 56.36% |
| Se 196.026† | 3.0 | 0.0032 | mg/L | 0.00366 | 0.0032 | mg/L | 0.00366 | 116.07% |
| Zn 206.200† | -229.6 | -0.0050 | mg/L | 0.00028 | -0.0050 | mg/L | 0.00028 | 5.48% |
| Sb 206.836† | 4.8 | 0.0014 | mg/L | 0.00314 | 0.0014 | mg/L | 0.00314 | 223.51% |
| Pb 220.353† | 5.5 | 0.0005 | mg/L | 0.00087 | 0.0005 | mg/L | 0.00087 | 179.83% |

| | | | | | | |
|---|---|---|---|---|---|---|
| Cd 226.502† | -45.4 | -0.0003 mg/L | 0.00004 | -0.0003 mg/L | 0.00004 | 12.21% |
| Co 228.616† | -6.5 | -0.0002 mg/L | 0.00044 | -0.0002 mg/L | 0.00044 | 293.71% |
| Ni 232.003† | -27.0 | -0.0011 mg/L | 0.00028 | -0.0011 mg/L | 0.00028 | 25.31% |
| Ba 233.527† | -4.4 | 0.0000 mg/L | 0.00007 | 0.0000 mg/L | 0.00007 | 158.36% |
| Mn 257.610† | -97.0 | -0.0001 mg/L | 0.00001 | -0.0001 mg/L | 0.00001 | 6.81% |
| Cr 267.716† | 52.5 | 0.0004 mg/L | 0.00011 | 0.0004 mg/L | 0.00011 | 31.48% |
| Fe 273.955† | -84.4 | -0.0031 mg/L | 0.00106 | -0.0031 mg/L | 0.00106 | 34.20% |
| Mg 279.077† | 47.1 | 0.0021 mg/L | 0.00249 | 0.0021 mg/L | 0.00249 | 117.26% |
| V 292.402† | -41.4 | -0.0001 mg/L | 0.00013 | -0.0001 mg/L | 0.00013 | 91.57% |
| Al 308.215† | -3205.5 | -0.1148 mg/L | 0.00177 | -0.1148 mg/L | 0.00177 | 1.55% |
| Be 313.107† | -157.2 | 0.0000 mg/L | 0.00003 | 0.0000 mg/L | 0.00003 | 77.76% |
| Cu 324.752† | -56.9 | -0.0002 mg/L | 0.00021 | -0.0002 mg/L | 0.00021 | 99.32% |
| Ag 338.289† | 59.5 | 0.0004 mg/L | 0.00059 | 0.0004 mg/L | 0.00059 | 147.26% |
| Na 330.237† | 303.5 | 0.3053 mg/L | 0.06654 | 0.3053 mg/L | 0.06654 | 21.79% |
| Ca 227.546† | 28.7 | 0.0768 mg/L | 0.01561 | 0.0768 mg/L | 0.01561 | 20.34% |
| Al RADIAL† | -253.5 | -0.1318 mg/L | 0.00838 | -0.1318 mg/L | 0.00838 | 6.36% |
| Fe RADIAL† | -0.0 | -0.0001 mg/L | 0.00478 | -0.0001 mg/L | 0.00478 | >999.9% |
| Ca RADIAL† | 231.2 | 0.0502 mg/L | 0.01102 | 0.0502 mg/L | 0.01102 | 21.97% |
| K RADIAL† | 17.6 | 0.0152 mg/L | 0.04206 | 0.0152 mg/L | 0.04206 | 277.51% |
| Mg RADIAL† | -1.3 | -0.0039 mg/L | 0.00905 | -0.0039 mg/L | 0.00905 | 231.79% |
| Na RADIAL† | 3759.1 | 0.2862 mg/L | 0.02308 | 0.2862 mg/L | 0.02308 | 8.06% |
| Mo 202.031 | 22.9 | 0.001 mg/L | 0.0003 | 0.001 mg/L | 0.0003 | 34.71% |

**Sequence No.: 35**
**Sample ID: 16I0200-01**
**Analyst: KV**
**Logged In Analyst (Original) : administrator**
**Initial Sample Wt:**
**Dilution:**

**Autosampler Location: 29**
**Date Collected: 9/12/2016 5:51:53 PM**
**Data Type: Reprocessed on 9/13/2016 6:59:30 AM**

**Initial Sample Vol:**
**Sample Prep Vol:**

**Mean Data: 16I0200-01**

| Analyte | Mean Corrected Intensity | Calib. Conc. | Units | Std.Dev. | Sample Conc. | Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 14319798.8 | 4.656 | mg/L | 0.0076 | | | | 0.16% |
| Y RADIAL | 230716.6 | 5.026 | mg/L | 0.0401 | | | | 0.80% |
| As 188.979† | -28.8 | -0.0150 | mg/L | 0.00187 | -0.0150 | mg/L | 0.00187 | 12.45% |
| Tl 190.801† | -32.4 | -0.0110 | mg/L | 0.00262 | -0.0110 | mg/L | 0.00262 | 23.73% |
| Se 196.026† | 6.0 | 0.0072 | mg/L | 0.00568 | 0.0072 | mg/L | 0.00568 | 79.14% |
| Zn 206.200† | 14602.4 | 0.3201 | mg/L | 0.00239 | 0.3201 | mg/L | 0.00239 | 0.75% |
| Sb 206.836† | 18.9 | 0.0055 | mg/L | 0.00283 | 0.0055 | mg/L | 0.00283 | 51.62% |
| Pb 220.353† | 93.0 | 0.0092 | mg/L | 0.00119 | 0.0092 | mg/L | 0.00119 | 13.00% |
| Cd 226.502† | 36.6 | 0.0000 | mg/L | 0.00008 | 0.0000 | mg/L | 0.00008 | 527.23% |
| Co 228.616† | 65.4 | 0.0016 | mg/L | 0.00016 | 0.0016 | mg/L | 0.00016 | 10.01% |
| Ni 232.003† | 23.8 | 0.0011 | mg/L | 0.00024 | 0.0011 | mg/L | 0.00024 | 21.12% |
| Ba 233.527† | 7803.4 | 0.0788 | mg/L | 0.00108 | 0.0788 | mg/L | 0.00108 | 1.37% |
| Mn 257.610† | 70609.3 | 0.0739 | mg/L | 0.00083 | 0.0739 | mg/L | 0.00083 | 1.12% |
| Cr 267.716† | 629.9 | 0.0044 | mg/L | 0.00032 | 0.0044 | mg/L | 0.00032 | 7.30% |
| Fe 273.955† | 57144.4 | 2.103 | mg/L | 0.0266 | 2.103 | mg/L | 0.0266 | 1.26% |
| Mg 279.077† | 446394.1 | 20.13 | mg/L | 0.228 | 20.13 | mg/L | 0.228 | 1.13% |
| V 292.402† | 480.5 | 0.0016 | mg/L | 0.00014 | 0.0016 | mg/L | 0.00014 | 9.21% |
| Al 308.215† | 15903.6 | 0.5674 | mg/L | 0.01473 | 0.5674 | mg/L | 0.01473 | 2.60% |
| Be 313.107† | -719.7 | -0.0002 | mg/L | 0.00003 | -0.0002 | mg/L | 0.00003 | 21.07% |
| Cu 324.752† | 82796.0 | 0.3115 | mg/L | 0.00392 | 0.3115 | mg/L | 0.00392 | 1.26% |
| Ag 338.289† | 121.7 | 0.0002 | mg/L | 0.00019 | 0.0002 | mg/L | 0.00019 | 79.64% |
| Na 330.237† | 56294.5 | 56.68 | mg/L | 0.748 | 56.68 | mg/L | 0.748 | 1.32% |
| Ca 227.546† | 20031.9 | 53.63 | mg/L | 0.630 | 53.63 | mg/L | 0.630 | 1.18% |
| Al RADIAL† | 984.5 | 0.5104 | mg/L | 0.00865 | 0.5104 | mg/L | 0.00865 | 1.69% |
| Fe RADIAL† | 784.0 | 2.129 | mg/L | 0.0017 | 2.129 | mg/L | 0.0017 | 0.08% |
| Ca RADIAL† | 254687.0 | 55.29 | mg/L | 0.092 | 55.29 | mg/L | 0.092 | 0.17% |
| K RADIAL† | 29836.4 | 25.70 | mg/L | 0.054 | 25.70 | mg/L | 0.054 | 0.21% |
| Mg RADIAL† | 6868.1 | 20.08 | mg/L | 0.153 | 20.08 | mg/L | 0.153 | 0.76% |
| Na RADIAL† | 888750.7 | 67.66 | mg/L | 0.558 | 67.66 | mg/L | 0.558 | 0.82% |
| Mo 202.031 | 272.3 | 0.010 | mg/L | 0.0001 | 0.010 | mg/L | 0.0001 | 0.61% |

**Sequence No.: 36**
**Sample ID: 16I0200-02**
**Analyst: KV**
**Logged In Analyst (Original) : administrator**
**Initial Sample Wt:**

**Autosampler Location: 30**
**Date Collected: 9/12/2016 5:56:59 PM**
**Data Type: Reprocessed on 9/13/2016 6:59:31 AM**

**Initial Sample Vol:**

Dilution: Sample Prep Vol:

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Mean Data: 16I0200-02

| Analyte | Mean Corrected Intensity | Calib. Conc. | Units | Std.Dev. | Sample Conc. | Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 13967366.1 | 4.541 | mg/L | 0.0235 | | | | 0.52% |
| Y RADIAL | 215769.6 | 4.700 | mg/L | 0.0356 | | | | 0.76% |
| As 188.979† | -16.1 | -0.0085 | mg/L | 0.00107 | -0.0085 | mg/L | 0.00107 | 12.62% |
| Tl 190.801† | -20.3 | -0.0070 | mg/L | 0.00200 | -0.0070 | mg/L | 0.00200 | 28.78% |
| Se 196.026† | 0.4 | 0.0004 | mg/L | 0.01231 | 0.0004 | mg/L | 0.01231 | >999.9% |
| Zn 206.200† | 2521.5 | 0.0553 | mg/L | 0.00027 | 0.0553 | mg/L | 0.00027 | 0.50% |
| Sb 206.836† | 5.3 | 0.0015 | mg/L | 0.00133 | 0.0015 | mg/L | 0.00133 | 85.64% |
| Pb 220.353† | 3.1 | 0.0011 | mg/L | 0.00115 | 0.0011 | mg/L | 0.00115 | 109.56% |
| Cd 226.502† | -33.5 | -0.0002 | mg/L | 0.00010 | -0.0002 | mg/L | 0.00010 | 41.41% |
| Co 228.616† | 24.1 | 0.0006 | mg/L | 0.00021 | 0.0006 | mg/L | 0.00021 | 36.89% |
| Ni 232.003† | -86.2 | -0.0036 | mg/L | 0.00016 | -0.0036 | mg/L | 0.00016 | 4.37% |
| Ba 233.527† | 2723.6 | 0.0275 | mg/L | 0.00022 | 0.0275 | mg/L | 0.00022 | 0.81% |
| Mn 257.610† | 5305.6 | 0.0055 | mg/L | 0.00009 | 0.0055 | mg/L | 0.00009 | 1.63% |
| Cr 267.716† | 98.4 | 0.0007 | mg/L | 0.00048 | 0.0007 | mg/L | 0.00048 | 70.47% |
| Fe 273.955† | 3138.6 | 0.1155 | mg/L | 0.00181 | 0.1155 | mg/L | 0.00181 | 1.57% |
| Mg 279.077† | 478101.3 | 21.56 | mg/L | 0.352 | 21.56 | mg/L | 0.352 | 1.63% |
| V 292.402† | 589.9 | 0.0020 | mg/L | 0.00003 | 0.0020 | mg/L | 0.00003 | 1.28% |
| Al 308.215† | -2951.4 | -0.1079 | mg/L | 0.00308 | -0.1079 | mg/L | 0.00308 | 2.86% |
| Be 313.107† | -981.9 | -0.0002 | mg/L | 0.00005 | -0.0002 | mg/L | 0.00005 | 22.88% |
| Cu 324.752† | 1316.4 | 0.0050 | mg/L | 0.00035 | 0.0050 | mg/L | 0.00035 | 6.97% |
| Ag 338.289† | 3.0 | -0.0006 | mg/L | 0.00031 | -0.0006 | mg/L | 0.00031 | 50.68% |
| Na 330.237† | 59380.7 | 59.78 | mg/L | 0.944 | 59.78 | mg/L | 0.944 | 1.58% |
| Ca 227.546† | 20292.5 | 54.31 | mg/L | 1.012 | 54.31 | mg/L | 1.012 | 1.86% |
| Al RADIAL† | -290.9 | -0.1529 | mg/L | 0.00686 | -0.1529 | mg/L | 0.00686 | 4.49% |
| Fe RADIAL† | 43.7 | 0.1186 | mg/L | 0.00863 | 0.1186 | mg/L | 0.00863 | 7.28% |
| Ca RADIAL† | 260187.9 | 56.48 | mg/L | 0.079 | 56.48 | mg/L | 0.079 | 0.14% |
| K RADIAL† | 21555.5 | 18.57 | mg/L | 0.417 | 18.57 | mg/L | 0.417 | 2.25% |
| Mg RADIAL† | 7455.9 | 21.80 | mg/L | 0.196 | 21.80 | mg/L | 0.196 | 0.90% |
| Na RADIAL† | 928726.2 | 70.71 | mg/L | 0.064 | 70.71 | mg/L | 0.064 | 0.09% |
| Mo 202.031 | 243.9 | 0.009 | mg/L | 0.0001 | 0.009 | mg/L | 0.0001 | 1.18% |

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Sequence No.: 37
Sample ID: 16I0206-01
Analyst: KV
Logged In Analyst (Original) : administrator
Initial Sample Wt:
Dilution:

Autosampler Location: 31
Date Collected: 9/12/2016 6:02:05 PM
Data Type: Reprocessed on 9/13/2016 6:59:31 AM

Initial Sample Vol:
Sample Prep Vol:

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Mean Data: 16I0206-01

| Analyte | Mean Corrected Intensity | Calib. Conc. | Units | Std.Dev. | Sample Conc. | Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 15020354.5 | 4.884 | mg/L | 0.0825 | | | | 1.69% |
| Y RADIAL | 233617.7 | 5.089 | mg/L | 0.0199 | | | | 0.39% |
| As 188.979† | -4.8 | -0.0025 | mg/L | 0.00113 | -0.0025 | mg/L | 0.00113 | 44.73% |
| Tl 190.801† | -5.6 | -0.0019 | mg/L | 0.00230 | -0.0019 | mg/L | 0.00230 | 120.21% |
| Se 196.026† | -5.5 | -0.0057 | mg/L | 0.00910 | -0.0057 | mg/L | 0.00910 | 160.49% |
| Zn 206.200† | 2202.1 | 0.0483 | mg/L | 0.00111 | 0.0483 | mg/L | 0.00111 | 2.31% |
| Sb 206.836† | 5.3 | 0.0015 | mg/L | 0.00143 | 0.0015 | mg/L | 0.00143 | 93.52% |
| Pb 220.353† | -16.8 | -0.0008 | mg/L | 0.00101 | -0.0008 | mg/L | 0.00101 | 124.59% |
| Cd 226.502† | -22.6 | -0.0002 | mg/L | 0.00012 | -0.0002 | mg/L | 0.00012 | 71.50% |
| Co 228.616† | 36.0 | 0.0008 | mg/L | 0.00016 | 0.0008 | mg/L | 0.00016 | 19.53% |
| Ni 232.003† | -32.3 | -0.0013 | mg/L | 0.00059 | -0.0013 | mg/L | 0.00059 | 44.51% |
| Ba 233.527† | 2629.7 | 0.0266 | mg/L | 0.00045 | 0.0266 | mg/L | 0.00045 | 1.68% |
| Mn 257.610† | 17940.6 | 0.0187 | mg/L | 0.00014 | 0.0187 | mg/L | 0.00014 | 0.74% |
| Cr 267.716† | 103.5 | 0.0007 | mg/L | 0.00025 | 0.0007 | mg/L | 0.00025 | 34.53% |
| Fe 273.955† | 2249.6 | 0.0828 | mg/L | 0.00178 | 0.0828 | mg/L | 0.00178 | 2.15% |
| Mg 279.077† | 443731.8 | 20.01 | mg/L | 0.231 | 20.01 | mg/L | 0.231 | 1.15% |
| V 292.402† | 589.6 | 0.0020 | mg/L | 0.00031 | 0.0020 | mg/L | 0.00031 | 15.27% |
| Al 308.215† | 885.4 | 0.0297 | mg/L | 0.00739 | 0.0297 | mg/L | 0.00739 | 24.91% |
| Be 313.107† | -101.6 | 0.0000 | mg/L | 0.00002 | 0.0000 | mg/L | 0.00002 | 99.00% |
| Cu 324.752† | 1981.3 | 0.0075 | mg/L | 0.00013 | 0.0075 | mg/L | 0.00013 | 1.79% |
| Ag 338.289† | 24.4 | -0.0004 | mg/L | 0.00050 | -0.0004 | mg/L | 0.00050 | 117.08% |
| Na 330.237† | 54086.4 | 54.45 | mg/L | 0.496 | 54.45 | mg/L | 0.496 | 0.91% |
| Ca 227.546† | 18931.3 | 50.66 | mg/L | 0.684 | 50.66 | mg/L | 0.684 | 1.35% |

| | | | | | | |
|---|---|---|---|---|---|---|
| Al RADIAL† | 20.1 | 0.0089 mg/L | 0.00713 | 0.0089 mg/L | 0.00713 | 80.00% |
| Fe RADIAL† | 32.7 | 0.0887 mg/L | 0.00744 | 0.0887 mg/L | 0.00744 | 8.38% |
| Ca RADIAL† | 240637.0 | 52.24 mg/L | 0.079 | 52.24 mg/L | 0.079 | 0.15% |
| K RADIAL† | 19740.7 | 17.01 mg/L | 0.464 | 17.01 mg/L | 0.464 | 2.73% |
| Mg RADIAL† | 6911.0 | 20.21 mg/L | 0.266 | 20.21 mg/L | 0.266 | 1.32% |
| Na RADIAL† | 859338.4 | 65.42 mg/L | 0.277 | 65.42 mg/L | 0.277 | 0.42% |
| Mo 202.031 | 135.1 | 0.005 mg/L | 0.0003 | 0.005 mg/L | 0.0003 | 5.22% |

**Sequence No.: 38**
**Sample ID: 16I0212-01**
**Analyst: KV**
**Logged In Analyst (Original) : administrator**
**Initial Sample Wt:**
**Dilution:**

**Autosampler Location: 32**
**Date Collected: 9/12/2016 6:07:11 PM**
**Data Type: Reprocessed on 9/13/2016 6:59:32 AM**

**Initial Sample Vol:**
**Sample Prep Vol:**

**Mean Data: 16I0212-01**

| Analyte | Mean Corrected Intensity | Calib. Conc. | Calib. Units | Std.Dev. | Sample Conc. | Sample Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 15208724.0 | 4.945 | mg/L | 0.0686 | | | | 1.39% |
| Y RADIAL | 228058.2 | 4.968 | mg/L | 0.0743 | | | | 1.50% |
| As 188.979† | -3.6 | -0.0019 | mg/L | 0.00286 | -0.0019 | mg/L | 0.00286 | 152.48% |
| Tl 190.801† | -2.8 | -0.0009 | mg/L | 0.00232 | -0.0009 | mg/L | 0.00232 | 249.59% |
| Se 196.026† | 6.0 | 0.0065 | mg/L | 0.00461 | 0.0065 | mg/L | 0.00461 | 71.45% |
| Zn 206.200† | 8505.2 | 0.1864 | mg/L | 0.00225 | 0.1864 | mg/L | 0.00225 | 1.21% |
| Sb 206.836† | 2.2 | 0.0006 | mg/L | 0.00194 | 0.0006 | mg/L | 0.00194 | 310.24% |
| Pb 220.353† | 22.1 | 0.0024 | mg/L | 0.00112 | 0.0024 | mg/L | 0.00112 | 46.81% |
| Cd 226.502† | 54.8 | 0.0003 | mg/L | 0.00003 | 0.0003 | mg/L | 0.00003 | 10.07% |
| Co 228.616† | 93.3 | 0.0022 | mg/L | 0.00026 | 0.0022 | mg/L | 0.00026 | 11.83% |
| Ni 232.003† | 118.7 | 0.0049 | mg/L | 0.00103 | 0.0049 | mg/L | 0.00103 | 20.93% |
| Ba 233.527† | 2234.4 | 0.0226 | mg/L | 0.00043 | 0.0226 | mg/L | 0.00043 | 1.92% |
| Mn 257.610† | 45346.2 | 0.0473 | mg/L | 0.00047 | 0.0473 | mg/L | 0.00047 | 1.00% |
| Cr 267.716† | 190.6 | 0.0013 | mg/L | 0.00031 | 0.0013 | mg/L | 0.00031 | 23.17% |
| Fe 273.955† | 11603.0 | 0.4270 | mg/L | 0.00421 | 0.4270 | mg/L | 0.00421 | 0.99% |
| Mg 279.077† | 112973.1 | 5.095 | mg/L | 0.0480 | 5.095 | mg/L | 0.0480 | 0.94% |
| V 292.402† | 480.7 | 0.0016 | mg/L | 0.00020 | 0.0016 | mg/L | 0.00020 | 12.15% |
| Al 308.215† | 5362.2 | 0.1911 | mg/L | 0.00826 | 0.1911 | mg/L | 0.00826 | 4.32% |
| Be 313.107† | -8.1 | 0.0000 | mg/L | 0.00002 | 0.0000 | mg/L | 0.00002 | >999.9% |
| Cu 324.752† | 11530.5 | 0.0434 | mg/L | 0.00052 | 0.0434 | mg/L | 0.00052 | 1.20% |
| Ag 338.289† | -91.7 | -0.0009 | mg/L | 0.00076 | -0.0009 | mg/L | 0.00076 | 82.61% |
| Na 330.237† | 19982.2 | 20.13 | mg/L | 0.113 | 20.13 | mg/L | 0.113 | 0.56% |
| Ca 227.546† | 9178.6 | 24.57 | mg/L | 0.328 | 24.57 | mg/L | 0.328 | 1.33% |
| Al RADIAL† | 356.9 | 0.1848 | mg/L | 0.00313 | 0.1848 | mg/L | 0.00313 | 1.70% |
| Fe RADIAL† | 170.4 | 0.4625 | mg/L | 0.00262 | 0.4625 | mg/L | 0.00262 | 0.57% |
| Ca RADIAL† | 125413.3 | 27.22 | mg/L | 0.610 | 27.22 | mg/L | 0.610 | 2.24% |
| K RADIAL† | 19545.4 | 16.84 | mg/L | 0.196 | 16.84 | mg/L | 0.196 | 1.17% |
| Mg RADIAL† | 1802.8 | 5.271 | mg/L | 0.1074 | 5.271 | mg/L | 0.1074 | 2.04% |
| Na RADIAL† | 352787.1 | 26.86 | mg/L | 0.113 | 26.86 | mg/L | 0.113 | 0.42% |
| Mo 202.031 | 82.1 | 0.003 | mg/L | 0.0004 | 0.003 | mg/L | 0.0004 | 11.85% |

**Sequence No.: 39**
**Sample ID: SEQ-SRD1**
**Analyst: KV**
**Logged In Analyst (Original) : administrator**
**Initial Sample Wt:**
**Dilution:**

**Autosampler Location: 33**
**Date Collected: 9/12/2016 6:12:16 PM**
**Data Type: Reprocessed on 9/13/2016 6:59:33 AM**

**Initial Sample Vol:**
**Sample Prep Vol:**

**Mean Data: SEQ-SRD1**

| Analyte | Mean Corrected Intensity | Calib. Conc. | Calib. Units | Std.Dev. | Sample Conc. | Sample Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 16063560.1 | 5.223 | mg/L | 0.0096 | | | | 0.18% |
| Y RADIAL | 244766.5 | 5.332 | mg/L | 0.0250 | | | | 0.47% |
| As 188.979† | -22.8 | -0.0120 | mg/L | 0.00094 | -0.0120 | mg/L | 0.00094 | 7.79% |
| Tl 190.801† | -17.8 | -0.0061 | mg/L | 0.00060 | -0.0061 | mg/L | 0.00060 | 9.75% |
| Se 196.026† | 0.9 | 0.0010 | mg/L | 0.00477 | 0.0010 | mg/L | 0.00477 | 474.86% |
| Zn 206.200† | 361.7 | 0.0079 | mg/L | 0.00011 | 0.0079 | mg/L | 0.00011 | 1.44% |
| Sb 206.836† | -1.4 | -0.0004 | mg/L | 0.00260 | -0.0004 | mg/L | 0.00260 | 658.01% |
| Pb 220.353† | -3.5 | -0.0003 | mg/L | 0.00099 | -0.0003 | mg/L | 0.00099 | 354.08% |
| Cd 226.502† | -34.0 | -0.0002 | mg/L | 0.00009 | -0.0002 | mg/L | 0.00009 | 34.74% |

| | | | | | | |
|---|---|---|---|---|---|---|
| Co 228.616† | -4.7 | -0.0001 mg/L | 0.00028 | -0.0001 mg/L | 0.00028 | 258.65% |
| Ni 232.003† | -24.0 | -0.0010 mg/L | 0.00052 | -0.0010 mg/L | 0.00052 | 53.45% |
| Ba 233.527† | 299.5 | 0.0030 mg/L | 0.00007 | 0.0030 mg/L | 0.00007 | 2.28% |
| Mn 257.610† | 802.1 | 0.0009 mg/L | 0.00003 | 0.0009 mg/L | 0.00003 | 3.76% |
| Cr 267.716† | 92.9 | 0.0006 mg/L | 0.00009 | 0.0006 mg/L | 0.00009 | 14.00% |
| Fe 273.955† | 3702.5 | 0.1363 mg/L | 0.00224 | 0.1363 mg/L | 0.00224 | 1.64% |
| Mg 279.077† | 31459.0 | 1.419 mg/L | 0.0054 | 1.419 mg/L | 0.0054 | 0.38% |
| V 292.402† | -9.0 | 0.0000 mg/L | 0.00006 | 0.0000 mg/L | 0.00006 | 147.92% |
| Al 308.215† | -4728.9 | -0.1695 mg/L | 0.00301 | -0.1695 mg/L | 0.00301 | 1.77% |
| Be 313.107† | 363.6 | 0.0001 mg/L | 0.00003 | 0.0001 mg/L | 0.00003 | 31.19% |
| Cu 324.752† | 516.3 | 0.0019 mg/L | 0.00016 | 0.0019 mg/L | 0.00016 | 8.20% |
| Ag 338.289† | -38.4 | -0.0003 mg/L | 0.00049 | -0.0003 mg/L | 0.00049 | 156.14% |
| Na 330.237† | 1337.6 | 1.351 mg/L | 0.0389 | 1.351 mg/L | 0.0389 | 2.88% |
| Ca 227.546† | 1841.5 | 4.929 mg/L | 0.0497 | 4.929 mg/L | 0.0497 | 1.01% |
| Al RADIAL† | -331.1 | -0.1723 mg/L | 0.00182 | -0.1723 mg/L | 0.00182 | 1.06% |
| Fe RADIAL† | 53.7 | 0.1459 mg/L | 0.00849 | 0.1459 mg/L | 0.00849 | 5.82% |
| Ca RADIAL† | 23872.9 | 5.182 mg/L | 0.1273 | 5.182 mg/L | 0.1273 | 2.46% |
| K RADIAL† | 259.1 | 0.2232 mg/L | 0.03979 | 0.2232 mg/L | 0.03979 | 17.83% |
| Mg RADIAL† | 497.6 | 1.455 mg/L | 0.0118 | 1.455 mg/L | 0.0118 | 0.81% |
| Na RADIAL† | 24898.8 | 1.896 mg/L | 0.0059 | 1.896 mg/L | 0.0059 | 0.31% |
| Mo 202.031 | 125.2 | 0.005 mg/L | 0.0002 | 0.005 mg/L | 0.0002 | 4.05% |

**Sequence No.: 40**
**Sample ID: BI60394-BLK1**
**Analyst: KV**
**Logged In Analyst (Original) : administrator**
**Initial Sample Wt:**
**Dilution:**

**Autosampler Location: 34**
**Date Collected: 9/12/2016 6:17:22 PM**
**Data Type: Reprocessed on 9/13/2016 6:59:33 AM**

**Initial Sample Vol:**
**Sample Prep Vol:**

**Mean Data: BI60394-BLK1**

| Analyte | Mean Corrected Intensity | Calib. Conc. | Units | Std.Dev. | Sample Conc. | Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 15045984.6 | 4.892 | mg/L | 0.0337 | | | | 0.69% |
| Y RADIAL | 232116.5 | 5.056 | mg/L | 0.0599 | | | | 1.18% |
| As 188.979† | -17.9 | -0.0095 | mg/L | 0.00289 | -0.0095 | mg/L | 0.00289 | 30.53% |
| Tl 190.801† | -18.4 | -0.0063 | mg/L | 0.00332 | -0.0063 | mg/L | 0.00332 | 52.40% |
| Se 196.026† | 0.4 | 0.0004 | mg/L | 0.00769 | 0.0004 | mg/L | 0.00769 | >999.9% |
| Zn 206.200† | -310.0 | -0.0068 | mg/L | 0.00012 | -0.0068 | mg/L | 0.00012 | 1.80% |
| Sb 206.836† | -3.9 | -0.0011 | mg/L | 0.00154 | -0.0011 | mg/L | 0.00154 | 134.82% |
| Pb 220.353† | 12.9 | 0.0012 | mg/L | 0.00147 | 0.0012 | mg/L | 0.00147 | 126.72% |
| Cd 226.502† | -33.0 | -0.0002 | mg/L | 0.00011 | -0.0002 | mg/L | 0.00011 | 48.74% |
| Co 228.616† | -10.0 | -0.0002 | mg/L | 0.00045 | -0.0002 | mg/L | 0.00045 | 193.19% |
| Ni 232.003† | -58.4 | -0.0024 | mg/L | 0.00079 | -0.0024 | mg/L | 0.00079 | 32.72% |
| Ba 233.527† | -27.5 | -0.0003 | mg/L | 0.00002 | -0.0003 | mg/L | 0.00002 | 8.61% |
| Mn 257.610† | -127.2 | -0.0001 | mg/L | 0.00002 | -0.0001 | mg/L | 0.00002 | 14.56% |
| Cr 267.716† | 17.8 | 0.0001 | mg/L | 0.00037 | 0.0001 | mg/L | 0.00037 | 303.55% |
| Fe 273.955† | -131.6 | -0.0048 | mg/L | 0.00053 | -0.0048 | mg/L | 0.00053 | 10.89% |
| Mg 279.077† | 22.1 | 0.0010 | mg/L | 0.00108 | 0.0010 | mg/L | 0.00108 | 109.01% |
| V 292.402† | -101.7 | -0.0004 | mg/L | 0.00014 | -0.0004 | mg/L | 0.00014 | 39.81% |
| Al 308.215† | -4170.4 | -0.1493 | mg/L | 0.00318 | -0.1493 | mg/L | 0.00318 | 2.13% |
| Be 313.107† | -452.8 | -0.0001 | mg/L | 0.00010 | -0.0001 | mg/L | 0.00010 | 93.76% |
| Cu 324.752† | -158.0 | -0.0006 | mg/L | 0.00039 | -0.0006 | mg/L | 0.00039 | 66.12% |
| Ag 338.289† | -47.7 | -0.0003 | mg/L | 0.00080 | -0.0003 | mg/L | 0.00080 | 249.70% |
| Na 330.237† | 310.3 | 0.3122 | mg/L | 0.05726 | 0.3122 | mg/L | 0.05726 | 18.34% |
| Ca 227.546† | 31.6 | 0.0845 | mg/L | 0.08729 | 0.0845 | mg/L | 0.08729 | 103.33% |
| Al RADIAL† | -354.8 | -0.1845 | mg/L | 0.00872 | -0.1845 | mg/L | 0.00872 | 4.73% |
| Fe RADIAL† | 2.7 | 0.0073 | mg/L | 0.01831 | 0.0073 | mg/L | 0.01831 | 250.83% |
| Ca RADIAL† | 211.5 | 0.0459 | mg/L | 0.00341 | 0.0459 | mg/L | 0.00341 | 7.43% |
| K RADIAL† | -17.2 | -0.0148 | mg/L | 0.03636 | -0.0148 | mg/L | 0.03636 | 246.01% |
| Mg RADIAL† | -1.8 | -0.0051 | mg/L | 0.01226 | -0.0051 | mg/L | 0.01226 | 238.61% |
| Na RADIAL† | 1895.7 | 0.1443 | mg/L | 0.02090 | 0.1443 | mg/L | 0.02090 | 14.48% |
| Mo 202.031 | 3.5 | 0.000 | mg/L | 0.0003 | 0.000 | mg/L | 0.0003 | 255.76% |

**Sequence No.: 41**
**Sample ID: BI60394-SRM1**
**Analyst: KV**
**Logged In Analyst (Original) : administrator**
**Initial Sample Wt:**
**Dilution:**

**Autosampler Location: 35**
**Date Collected: 9/12/2016 6:22:28 PM**
**Data Type: Reprocessed on 9/13/2016 6:59:34 AM**

**Initial Sample Vol:**
**Sample Prep Vol:**

**Mean Data: BI60394-SRM1**

| Analyte | Mean Corrected Intensity | Calib. Conc. | Calib. Units | Std.Dev. | Sample Conc. | Sample Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 15334686.0 | 4.986 | mg/L | 0.0448 | | | | 0.90% |
| Y RADIAL | 245483.8 | 5.347 | mg/L | 0.0649 | | | | 1.21% |
| As 188.979† | 1209.5 | 0.6392 | mg/L | 0.00464 | 0.6392 | mg/L | 0.00464 | 0.73% |
| Tl 190.801† | 1553.2 | 0.5338 | mg/L | 0.00352 | 0.5338 | mg/L | 0.00352 | 0.66% |
| Se 196.026† | 606.7 | 0.6309 | mg/L | 0.00897 | 0.6309 | mg/L | 0.00897 | 1.42% |
| Zn 206.200† | 24248.9 | 0.5315 | mg/L | 0.00279 | 0.5315 | mg/L | 0.00279 | 0.53% |
| Sb 206.836† | 1192.0 | 0.3469 | mg/L | 0.00435 | 0.3469 | mg/L | 0.00435 | 1.25% |
| Pb 220.353† | 8146.7 | 0.7488 | mg/L | 0.00670 | 0.7488 | mg/L | 0.00670 | 0.90% |
| Cd 226.502† | 56209.1 | 0.3839 | mg/L | 0.00137 | 0.3839 | mg/L | 0.00137 | 0.36% |
| Co 228.616† | 21123.3 | 0.4925 | mg/L | 0.00250 | 0.4925 | mg/L | 0.00250 | 0.51% |
| Ni 232.003† | 12904.4 | 0.5332 | mg/L | 0.00222 | 0.5332 | mg/L | 0.00222 | 0.42% |
| Ba 233.527† | 35400.1 | 0.3575 | mg/L | 0.00291 | 0.3575 | mg/L | 0.00291 | 0.81% |
| Mn 257.610† | 1035577.3 | 1.079 | mg/L | 0.0067 | 1.079 | mg/L | 0.0067 | 0.62% |
| Cr 267.716† | 28958.4 | 0.2003 | mg/L | 0.00091 | 0.2003 | mg/L | 0.00091 | 0.46% |
| Fe 273.955† | 22219.5 | 0.8177 | mg/L | 0.00551 | 0.8177 | mg/L | 0.00551 | 0.67% |
| Mg 279.077† | 370875.2 | 16.73 | mg/L | 0.113 | 16.73 | mg/L | 0.113 | 0.67% |
| V 292.402† | 55901.1 | 0.1934 | mg/L | 0.00129 | 0.1934 | mg/L | 0.00129 | 0.67% |
| Al 308.215† | 9764.3 | 0.3466 | mg/L | 0.00725 | 0.3466 | mg/L | 0.00725 | 2.09% |
| Be 313.107† | 608485.9 | 0.1395 | mg/L | 0.00115 | 0.1395 | mg/L | 0.00115 | 0.82% |
| Cu 324.752† | 192063.4 | 0.7225 | mg/L | 0.00416 | 0.7225 | mg/L | 0.00416 | 0.58% |
| Ag 338.289† | 107783.3 | 0.7230 | mg/L | 0.00399 | 0.7230 | mg/L | 0.00399 | 0.55% |
| Na 330.237† | 82765.8 | 83.34 | mg/L | 0.390 | 83.34 | mg/L | 0.390 | 0.47% |
| Ca 227.546† | 36078.0 | 96.56 | mg/L | 0.491 | 96.56 | mg/L | 0.491 | 0.51% |
| Al RADIAL† | 602.9 | 0.3106 | mg/L | 0.01457 | 0.3106 | mg/L | 0.01457 | 4.69% |
| Fe RADIAL† | 303.6 | 0.8244 | mg/L | 0.00930 | 0.8244 | mg/L | 0.00930 | 1.13% |
| Ca RADIAL† | 445721.9 | 96.75 | mg/L | 0.855 | 96.75 | mg/L | 0.855 | 0.88% |
| K RADIAL† | 29827.9 | 25.70 | mg/L | 0.023 | 25.70 | mg/L | 0.023 | 0.09% |
| Mg RADIAL† | 5782.0 | 16.90 | mg/L | 0.187 | 16.90 | mg/L | 0.187 | 1.11% |
| Na RADIAL† | 1208686.6 | 92.02 | mg/L | 1.180 | 92.02 | mg/L | 1.180 | 1.28% |
| Mo 202.031 | 8770.2 | 0.321 | mg/L | 0.0009 | 0.321 | mg/L | 0.0009 | 0.27% |

**Sequence No.: 42**
**Sample ID: 16I0222-01**
**Analyst: KV**
**Logged In Analyst (Original) : administrator**
**Initial Sample Wt:**
**Dilution:**

**Autosampler Location: 36**
**Date Collected: 9/12/2016 6:30:35 PM**
**Data Type: Reprocessed on 9/13/2016 6:59:35 AM**

**Initial Sample Vol:**
**Sample Prep Vol:**

**Mean Data: 16I0222-01**

| Analyte | Mean Corrected Intensity | Calib. Conc. | Calib. Units | Std.Dev. | Sample Conc. | Sample Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 13304218.8 | 4.326 | mg/L | 0.0037 | | | | 0.09% |
| Y RADIAL | 215645.7 | 4.697 | mg/L | 0.0524 | | | | 1.12% |
| As 188.979† | -5.2 | -0.0023 | mg/L | 0.00186 | -0.0023 | mg/L | 0.00186 | 81.43% |
| Tl 190.801† | -12.3 | -0.0040 | mg/L | 0.00440 | -0.0040 | mg/L | 0.00440 | 111.05% |
| Se 196.026† | -7.9 | -0.0057 | mg/L | 0.00871 | -0.0057 | mg/L | 0.00871 | 151.85% |
| Zn 206.200† | 1832.6 | 0.0401 | mg/L | 0.00015 | 0.0401 | mg/L | 0.00015 | 0.38% |
| Sb 206.836† | 11.5 | 0.0033 | mg/L | 0.00358 | 0.0033 | mg/L | 0.00358 | 108.65% |
| Pb 220.353† | -24.4 | 0.0021 | mg/L | 0.00239 | 0.0021 | mg/L | 0.00239 | 115.48% |
| Cd 226.502† | 99.2 | 0.0001 | mg/L | 0.00003 | 0.0001 | mg/L | 0.00003 | 37.75% |
| Co 228.616† | 132.1 | 0.0032 | mg/L | 0.00020 | 0.0032 | mg/L | 0.00020 | 6.20% |
| Ni 232.003† | 10.5 | 0.0008 | mg/L | 0.00059 | 0.0008 | mg/L | 0.00059 | 71.99% |
| Ba 233.527† | 69447.0 | 0.7013 | mg/L | 0.01474 | 0.7013 | mg/L | 0.01474 | 2.10% |
| Mn 257.610† | 1235157.3 | 1.288 | mg/L | 0.0053 | 1.288 | mg/L | 0.0053 | 0.41% |
| Cr 267.716† | 764.3 | 0.0053 | mg/L | 0.00018 | 0.0053 | mg/L | 0.00018 | 3.30% |
| Fe 273.955† | 143024.4 | 5.264 | mg/L | 0.1138 | 5.264 | mg/L | 0.1138 | 2.16% |
| Mg 279.077† | 3652729.5 | 164.7 | mg/L | 0.61 | 164.7 | mg/L | 0.61 | 0.37% |
| V 292.402† | 2272.6 | 0.0076 | mg/L | 0.00008 | 0.0076 | mg/L | 0.00008 | 1.02% |
| Al 308.215† | 94543.8 | 3.371 | mg/L | 0.0715 | 3.371 | mg/L | 0.0715 | 2.12% |
| Be 313.107† | -2574.8 | -0.0006 | mg/L | 0.00005 | -0.0006 | mg/L | 0.00005 | 8.68% |
| Cu 324.752† | 3624.2 | 0.0138 | mg/L | 0.00015 | 0.0138 | mg/L | 0.00015 | 1.09% |
| Ag 338.289† | 89.6 | -0.0029 | mg/L | 0.00065 | -0.0029 | mg/L | 0.00065 | 22.88% |
| Na 330.237† | 1275327.1 | 1283 | mg/L | 7.0 | 1283 | mg/L | 7.0 | 0.55% |
| Ca 227.546† | 128713.3 | 344.5 | mg/L | 6.42 | 344.5 | mg/L | 6.42 | 1.86% |
| Al RADIAL† | 5719.3 | 2.964 | mg/L | 0.0487 | 2.964 | mg/L | 0.0487 | 1.64% |

| | | | | | | |
|---|---|---|---|---|---|---|
| Fe RADIAL† | 1997.8 | 5.424 mg/L | 0.0684 | 5.424 mg/L | 0.0684 | 1.26% |
| Ca RADIAL† | 1456074.9 | 316.1 mg/L | 0.72 | 316.1 mg/L | 0.72 | 0.23% |
| K RADIAL† | 16717.9 | 14.40 mg/L | 0.062 | 14.40 mg/L | 0.062 | 0.43% |
| Mg RADIAL† | 55509.9 | 162.3 mg/L | 0.93 | 162.3 mg/L | 0.93 | 0.57% |
| Na RADIAL† | 13139452.2 | 1000 mg/L | 7.4 | 1000 mg/L | 7.4 | 0.74% |
| Mo 202.031 | 63.6 | 0.002 mg/L | 0.0003 | 0.002 mg/L | 0.0003 | 13.21% |

**Sequence No.: 43**
**Sample ID: BI60394-DUP1**
**Analyst: KV**
**Logged In Analyst (Original) : administrator**
**Initial Sample Wt:**
**Dilution:**

**Autosampler Location: 37**
**Date Collected: 9/12/2016 6:35:51 PM**
**Data Type: Reprocessed on 9/13/2016 6:59:36 AM**

**Initial Sample Vol:**
**Sample Prep Vol:**

**Mean Data: BI60394-DUP1**

| Analyte | Mean Corrected Intensity | Calib. Conc. | Calib. Units | Std.Dev. | Sample Conc. | Sample Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 12579872.2 | 4.090 | mg/L | 0.0513 | | | | 1.25% |
| Y RADIAL | 210156.4 | 4.578 | mg/L | 0.0763 | | | | 1.67% |
| As 188.979† | -17.2 | -0.0086 | mg/L | 0.00439 | -0.0086 | mg/L | 0.00439 | 51.31% |
| Tl 190.801† | -48.4 | -0.0164 | mg/L | 0.00077 | -0.0164 | mg/L | 0.00077 | 4.70% |
| Se 196.026† | 5.1 | 0.0079 | mg/L | 0.00033 | 0.0079 | mg/L | 0.00033 | 4.13% |
| Zn 206.200† | 1967.5 | 0.0431 | mg/L | 0.00049 | 0.0431 | mg/L | 0.00049 | 1.13% |
| Sb 206.836† | -0.9 | -0.0003 | mg/L | 0.00117 | -0.0003 | mg/L | 0.00117 | 376.95% |
| Pb 220.353† | -27.3 | 0.0021 | mg/L | 0.00056 | 0.0021 | mg/L | 0.00056 | 26.24% |
| Cd 226.502† | 89.9 | 0.0000 | mg/L | 0.00008 | 0.0000 | mg/L | 0.00008 | 447.39% |
| Co 228.616† | 125.1 | 0.0030 | mg/L | 0.00019 | 0.0030 | mg/L | 0.00019 | 6.22% |
| Ni 232.003† | -78.8 | -0.0029 | mg/L | 0.00020 | -0.0029 | mg/L | 0.00020 | 7.09% |
| Ba 233.527† | 76551.9 | 0.7730 | mg/L | 0.00526 | 0.7730 | mg/L | 0.00526 | 0.68% |
| Mn 257.610† | 1351712.2 | 1.409 | mg/L | 0.0319 | 1.409 | mg/L | 0.0319 | 2.26% |
| Cr 267.716† | 808.9 | 0.0057 | mg/L | 0.00015 | 0.0057 | mg/L | 0.00015 | 2.71% |
| Fe 273.955† | 157623.5 | 5.801 | mg/L | 0.0397 | 5.801 | mg/L | 0.0397 | 0.68% |
| Mg 279.077† | 4003512.9 | 180.6 | mg/L | 4.01 | 180.6 | mg/L | 4.01 | 2.22% |
| V 292.402† | 2439.9 | 0.0082 | mg/L | 0.00038 | 0.0082 | mg/L | 0.00038 | 4.61% |
| Al 308.215† | 105769.7 | 3.772 | mg/L | 0.0432 | 3.772 | mg/L | 0.0432 | 1.15% |
| Be 313.107† | -3626.4 | -0.0008 | mg/L | 0.00005 | -0.0008 | mg/L | 0.00005 | 6.39% |
| Cu 324.752† | 4206.5 | 0.0161 | mg/L | 0.00027 | 0.0161 | mg/L | 0.00027 | 1.66% |
| Ag 338.289† | 69.1 | -0.0033 | mg/L | 0.00177 | -0.0033 | mg/L | 0.00177 | 54.37% |
| Na 330.237† | 1393123.4 | 1401 | mg/L | 31.1 | 1401 | mg/L | 31.1 | 2.22% |
| Ca 227.546† | 141586.4 | 379.0 | mg/L | 3.06 | 379.0 | mg/L | 3.06 | 0.81% |
| Al RADIAL† | 6050.1 | 3.135 | mg/L | 0.0468 | 3.135 | mg/L | 0.0468 | 1.49% |
| Fe RADIAL† | 2116.7 | 5.747 | mg/L | 0.1309 | 5.747 | mg/L | 0.1309 | 2.28% |
| Ca RADIAL† | 1565300.2 | 339.8 | mg/L | 0.47 | 339.8 | mg/L | 0.47 | 0.14% |
| K RADIAL† | 18027.7 | 15.53 | mg/L | 0.073 | 15.53 | mg/L | 0.073 | 0.47% |
| Mg RADIAL† | 59949.3 | 175.3 | mg/L | 1.43 | 175.3 | mg/L | 1.43 | 0.82% |
| Na RADIAL† | 13854198.6 | 1055 | mg/L | 10.9 | 1055 | mg/L | 10.9 | 1.04% |
| Mo 202.031 | 64.5 | 0.002 | mg/L | 0.0003 | 0.002 | mg/L | 0.0003 | 11.55% |

**Sequence No.: 44**
**Sample ID: BI60394-MS1**
**Analyst: KV**
**Logged In Analyst (Original) : administrator**
**Initial Sample Wt:**
**Dilution:**

**Autosampler Location: 38**
**Date Collected: 9/12/2016 6:41:08 PM**
**Data Type: Reprocessed on 9/13/2016 6:59:36 AM**

**Initial Sample Vol:**
**Sample Prep Vol:**

**Mean Data: BI60394-MS1**

| Analyte | Mean Corrected Intensity | Calib. Conc. | Calib. Units | Std.Dev. | Sample Conc. | Sample Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 14682536.3 | 4.774 | mg/L | 0.0279 | | | | 0.58% |
| Y RADIAL | 247281.3 | 5.387 | mg/L | 0.0339 | | | | 0.63% |
| As 188.979† | 3275.1 | 1.731 | mg/L | 0.0051 | 1.731 | mg/L | 0.0051 | 0.30% |
| Tl 190.801† | 3802.2 | 1.307 | mg/L | 0.0059 | 1.307 | mg/L | 0.0059 | 0.45% |
| Se 196.026† | 1655.6 | 1.723 | mg/L | 0.0056 | 1.723 | mg/L | 0.0056 | 0.33% |
| Zn 206.200† | 20571.2 | 0.4509 | mg/L | 0.00122 | 0.4509 | mg/L | 0.00122 | 0.27% |
| Sb 206.836† | 795.7 | 0.2315 | mg/L | 0.00216 | 0.2315 | mg/L | 0.00216 | 0.93% |
| Pb 220.353† | 4274.3 | 0.3963 | mg/L | 0.00212 | 0.3963 | mg/L | 0.00212 | 0.53% |
| Cd 226.502† | 6173.0 | 0.0415 | mg/L | 0.00010 | 0.0415 | mg/L | 0.00010 | 0.24% |
| Co 228.616† | 18053.6 | 0.4210 | mg/L | 0.00090 | 0.4210 | mg/L | 0.00090 | 0.21% |

| | | | | | | |
|---|---|---|---|---|---|---|
| Ni 232.003† | 10728.0 | 0.4437 mg/L | 0.00086 | 0.4437 mg/L | 0.00086 | 0.19% |
| Ba 233.527† | 229123.5 | 2.314 mg/L | 0.0190 | 2.314 mg/L | 0.0190 | 0.82% |
| Mn 257.610† | 1549947.9 | 1.616 mg/L | 0.0159 | 1.616 mg/L | 0.0159 | 0.98% |
| Cr 267.716† | 24201.4 | 0.1674 mg/L | 0.00260 | 0.1674 mg/L | 0.00260 | 1.55% |
| Fe 273.955† | 151716.5 | 5.583 mg/L | 0.0556 | 5.583 mg/L | 0.0556 | 1.00% |
| Mg 279.077† | 3404281.9 | 153.5 mg/L | 1.51 | 153.5 mg/L | 1.51 | 0.98% |
| V 292.402† | 123422.0 | 0.4268 mg/L | 0.00456 | 0.4268 mg/L | 0.00456 | 1.07% |
| Al 308.215† | 135276.7 | 4.831 mg/L | 0.0456 | 4.831 mg/L | 0.0456 | 0.94% |
| Be 313.107† | 178526.4 | 0.0409 mg/L | 0.00048 | 0.0409 mg/L | 0.00048 | 1.17% |
| Cu 324.752† | 63140.0 | 0.2377 mg/L | 0.00164 | 0.2377 mg/L | 0.00164 | 0.69% |
| Ag 338.289† | 7096.3 | 0.0445 mg/L | 0.00053 | 0.0445 mg/L | 0.00053 | 1.19% |
| Na 330.237† | 1174751.7 | 1182 mg/L | 9.3 | 1182 mg/L | 9.3 | 0.79% |
| Ca 227.546† | 116155.0 | 310.9 mg/L | 2.24 | 310.9 mg/L | 2.24 | 0.72% |
| Al RADIAL† | 8430.2 | 4.374 mg/L | 0.0496 | 4.374 mg/L | 0.0496 | 1.13% |
| Fe RADIAL† | 2082.8 | 5.655 mg/L | 0.0493 | 5.655 mg/L | 0.0493 | 0.87% |
| Ca RADIAL† | 1330901.3 | 288.9 mg/L | 0.58 | 288.9 mg/L | 0.58 | 0.20% |
| K RADIAL† | 15482.3 | 13.34 mg/L | 0.075 | 13.34 mg/L | 0.075 | 0.56% |
| Mg RADIAL† | 49266.9 | 144.0 mg/L | 0.69 | 144.0 mg/L | 0.69 | 0.48% |
| Na RADIAL† | 11365919.3 | 865.3 mg/L | 9.22 | 865.3 mg/L | 9.22 | 1.07% |
| Mo 202.031 | 46.6 | 0.002 mg/L | 0.0002 | 0.002 mg/L | 0.0002 | 13.65% |

**Sequence No.: 45**
**Sample ID: SEQ-CCV4**
**Analyst: KV**
**Logged In Analyst (Original) : administrator**
**Initial Sample Wt:**
**Dilution:**

**Autosampler Location: 3**
**Date Collected: 9/12/2016 6:49:18 PM**
**Data Type: Reprocessed on 9/13/2016 6:59:37 AM**

**Initial Sample Vol:**
**Sample Prep Vol:**

**Mean Data: SEQ-CCV4**

| Analyte | Mean Corrected Intensity | Calib. Conc. | Calib. Units | Std.Dev. | Sample Conc. | Sample Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 14583360.3 | 4.742 | mg/L | 0.1046 | | | | 2.21% |
| Y RADIAL | 223300.4 | 4.864 | mg/L | 0.0244 | | | | 0.50% |
| As 188.979† | 480.1 | 0.2542 | mg/L | 0.00837 | 0.2542 | mg/L | 0.00837 | 3.29% |
| Tl 190.801† | 666.8 | 0.2294 | mg/L | 0.00643 | 0.2294 | mg/L | 0.00643 | 2.80% |
| Se 196.026† | 243.1 | 0.2550 | mg/L | 0.01126 | 0.2550 | mg/L | 0.01126 | 4.42% |
| Zn 206.200† | 117504.1 | 2.576 | mg/L | 0.0658 | 2.576 | mg/L | 0.0658 | 2.55% |
| Sb 206.836† | 857.7 | 0.2496 | mg/L | 0.00381 | 0.2496 | mg/L | 0.00381 | 1.53% |
| Pb 220.353† | 2779.7 | 0.2562 | mg/L | 0.00759 | 0.2562 | mg/L | 0.00759 | 2.96% |
| Cd 226.502† | 18522.5 | 0.1259 | mg/L | 0.00251 | 0.1259 | mg/L | 0.00251 | 1.99% |
| Co 228.616† | 111083.3 | 2.590 | mg/L | 0.0606 | 2.590 | mg/L | 0.0606 | 2.34% |
| Ni 232.003† | 61668.1 | 2.548 | mg/L | 0.0601 | 2.548 | mg/L | 0.0601 | 2.36% |
| Ba 233.527† | 1026647.2 | 10.37 | mg/L | 0.202 | 10.37 | mg/L | 0.202 | 1.95% |
| Mn 257.610† | 2468179.5 | 2.573 | mg/L | 0.0497 | 2.573 | mg/L | 0.0497 | 1.93% |
| Cr 267.716† | 149996.6 | 1.037 | mg/L | 0.0230 | 1.037 | mg/L | 0.0230 | 2.22% |
| Fe 273.955† | 140450.5 | 5.169 | mg/L | 0.1225 | 5.169 | mg/L | 0.1225 | 2.37% |
| Mg 279.077† | 566006.2 | 25.53 | mg/L | 0.466 | 25.53 | mg/L | 0.466 | 1.83% |
| V 292.402† | 730588.9 | 2.528 | mg/L | 0.0562 | 2.528 | mg/L | 0.0562 | 2.22% |
| Al 308.215† | 281818.6 | 10.09 | mg/L | 0.254 | 10.09 | mg/L | 0.254 | 2.52% |
| Be 313.107† | 1107384.4 | 0.2539 | mg/L | 0.00582 | 0.2539 | mg/L | 0.00582 | 2.29% |
| Cu 324.752† | 343560.5 | 1.293 | mg/L | 0.0295 | 1.293 | mg/L | 0.0295 | 2.28% |
| Ag 338.289† | 193639.4 | 1.301 | mg/L | 0.0282 | 1.301 | mg/L | 0.0282 | 2.17% |
| Na 330.237† | 24072.8 | 24.26 | mg/L | 0.580 | 24.26 | mg/L | 0.580 | 2.39% |
| Ca 227.546† | 9557.9 | 25.63 | mg/L | 0.597 | 25.63 | mg/L | 0.597 | 2.33% |
| Al RADIAL† | 19224.1 | 9.993 | mg/L | 0.0705 | 9.993 | mg/L | 0.0705 | 0.71% |
| Fe RADIAL† | 1923.2 | 5.222 | mg/L | 0.0327 | 5.222 | mg/L | 0.0327 | 0.63% |
| Ca RADIAL† | 116860.3 | 25.37 | mg/L | 0.053 | 25.37 | mg/L | 0.053 | 0.21% |
| K RADIAL† | 5998.9 | 5.168 | mg/L | 0.0422 | 5.168 | mg/L | 0.0422 | 0.82% |
| Mg RADIAL† | 8960.7 | 26.20 | mg/L | 0.113 | 26.20 | mg/L | 0.113 | 0.43% |
| Na RADIAL† | 351044.8 | 26.73 | mg/L | 0.139 | 26.73 | mg/L | 0.139 | 0.52% |
| Mo 202.031 | 28362.7 | 1.039 | mg/L | 0.0061 | 1.039 | mg/L | 0.0061 | 0.58% |

**Sequence No.: 46**
**Sample ID: SEQ-CCB4**
**Analyst: KV**
**Logged In Analyst (Original) : administrator**
**Initial Sample Wt:**
**Dilution:**

**Autosampler Location: 4**
**Date Collected: 9/12/2016 6:57:25 PM**
**Data Type: Reprocessed on 9/13/2016 6:59:38 AM**

**Initial Sample Vol:**
**Sample Prep Vol:**

**Mean Data: SEQ-CCB4**

| Analyte | Mean Corrected Intensity | Conc. | Calib. Units | Std.Dev. | Sample Conc. | Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 15112014.1 | 4.914 | mg/L | 0.0186 | | | | 0.38% |
| Y RADIAL | 228507.8 | 4.978 | mg/L | 0.1358 | | | | 2.73% |
| As 188.979† | -22.0 | -0.0116 | mg/L | 0.00231 | -0.0116 | mg/L | 0.00231 | 19.83% |
| Tl 190.801† | -11.0 | -0.0038 | mg/L | 0.00196 | -0.0038 | mg/L | 0.00196 | 51.92% |
| Se 196.026† | 2.9 | 0.0030 | mg/L | 0.00686 | 0.0030 | mg/L | 0.00686 | 229.23% |
| Zn 206.200† | -227.8 | -0.0050 | mg/L | 0.00002 | -0.0050 | mg/L | 0.00002 | 0.35% |
| Sb 206.836† | 1.2 | 0.0004 | mg/L | 0.00260 | 0.0004 | mg/L | 0.00260 | 730.89% |
| Pb 220.353† | -2.3 | -0.0002 | mg/L | 0.00033 | -0.0002 | mg/L | 0.00033 | 145.56% |
| Cd 226.502† | -36.6 | -0.0002 | mg/L | 0.00004 | -0.0002 | mg/L | 0.00004 | 15.75% |
| Co 228.616† | -1.3 | 0.0000 | mg/L | 0.00027 | 0.0000 | mg/L | 0.00027 | 918.50% |
| Ni 232.003† | -48.2 | -0.0020 | mg/L | 0.00077 | -0.0020 | mg/L | 0.00077 | 38.65% |
| Ba 233.527† | 2.5 | 0.0000 | mg/L | 0.00003 | 0.0000 | mg/L | 0.00003 | 120.76% |
| Mn 257.610† | -88.6 | -0.0001 | mg/L | 0.00002 | -0.0001 | mg/L | 0.00002 | 17.05% |
| Cr 267.716† | 43.7 | 0.0003 | mg/L | 0.00012 | 0.0003 | mg/L | 0.00012 | 38.28% |
| Fe 273.955† | -93.5 | -0.0034 | mg/L | 0.00041 | -0.0034 | mg/L | 0.00041 | 11.79% |
| Mg 279.077† | 9.3 | 0.0004 | mg/L | 0.00310 | 0.0004 | mg/L | 0.00310 | 736.05% |
| V 292.402† | -19.1 | -0.0001 | mg/L | 0.00018 | -0.0001 | mg/L | 0.00018 | 269.69% |
| Al 308.215† | -2995.2 | -0.1072 | mg/L | 0.00310 | -0.1072 | mg/L | 0.00310 | 2.89% |
| Be 313.107† | -374.7 | -0.0001 | mg/L | 0.00003 | -0.0001 | mg/L | 0.00003 | 39.38% |
| Cu 324.752† | -115.2 | -0.0004 | mg/L | 0.00016 | -0.0004 | mg/L | 0.00016 | 37.32% |
| Ag 338.289† | 11.8 | 0.0001 | mg/L | 0.00010 | 0.0001 | mg/L | 0.00010 | 127.57% |
| Na 330.237† | 247.6 | 0.2490 | mg/L | 0.04576 | 0.2490 | mg/L | 0.04576 | 18.37% |
| Ca 227.546† | 4.1 | 0.0108 | mg/L | 0.02620 | 0.0108 | mg/L | 0.02620 | 242.64% |
| Al RADIAL† | -250.4 | -0.1302 | mg/L | 0.00094 | -0.1302 | mg/L | 0.00094 | 0.72% |
| Fe RADIAL† | -0.0 | -0.0001 | mg/L | 0.01094 | -0.0001 | mg/L | 0.01094 | >999.9% |
| Ca RADIAL† | 211.9 | 0.0460 | mg/L | 0.01202 | 0.0460 | mg/L | 0.01202 | 26.13% |
| K RADIAL† | -2.3 | -0.0020 | mg/L | 0.03067 | -0.0020 | mg/L | 0.03067 | >999.9% |
| Mg RADIAL† | 0.4 | 0.0012 | mg/L | 0.01323 | 0.0012 | mg/L | 0.01323 | >999.9% |
| Na RADIAL† | 3798.1 | 0.2892 | mg/L | 0.03249 | 0.2892 | mg/L | 0.03249 | 11.24% |
| Mo 202.031 | 11.4 | 0.000 | mg/L | 0.0005 | 0.000 | mg/L | 0.0005 | 117.68% |

**Sequence No.: 47**
**Sample ID: 16I0241-01**
**Analyst: KV**
**Logged In Analyst (Original) : administrator**
**Initial Sample Wt:**
**Dilution:**

**Autosampler Location: 39**
**Date Collected: 9/12/2016 7:02:30 PM**
**Data Type: Reprocessed on 9/13/2016 6:59:38 AM**

**Initial Sample Vol:**
**Sample Prep Vol:**

**Mean Data: 16I0241-01**

| Analyte | Mean Corrected Intensity | Conc. | Calib. Units | Std.Dev. | Sample Conc. | Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 15194812.4 | 4.941 | mg/L | 0.0486 | | | | 0.98% |
| Y RADIAL | 238983.1 | 5.206 | mg/L | 0.0870 | | | | 1.67% |
| As 188.979† | -4.6 | -0.0024 | mg/L | 0.00036 | -0.0024 | mg/L | 0.00036 | 14.68% |
| Tl 190.801† | -4.9 | -0.0017 | mg/L | 0.00229 | -0.0017 | mg/L | 0.00229 | 136.57% |
| Se 196.026† | -4.2 | -0.0043 | mg/L | 0.00224 | -0.0043 | mg/L | 0.00224 | 51.95% |
| Zn 206.200† | 18753.8 | 0.4111 | mg/L | 0.00925 | 0.4111 | mg/L | 0.00925 | 2.25% |
| Sb 206.836† | 10.8 | 0.0031 | mg/L | 0.00189 | 0.0031 | mg/L | 0.00189 | 60.19% |
| Pb 220.353† | -22.9 | -0.0007 | mg/L | 0.00202 | -0.0007 | mg/L | 0.00202 | 280.25% |
| Cd 226.502† | 1.1 | 0.0000 | mg/L | 0.00008 | 0.0000 | mg/L | 0.00008 | >999.9% |
| Co 228.616† | -8.0 | -0.0002 | mg/L | 0.00016 | -0.0002 | mg/L | 0.00016 | 86.58% |
| Ni 232.003† | 34.8 | 0.0014 | mg/L | 0.00057 | 0.0014 | mg/L | 0.00057 | 39.19% |
| Ba 233.527† | 34441.4 | 0.3478 | mg/L | 0.00636 | 0.3478 | mg/L | 0.00636 | 1.83% |
| Mn 257.610† | 3942.7 | 0.0041 | mg/L | 0.00007 | 0.0041 | mg/L | 0.00007 | 1.59% |
| Cr 267.716† | 144.0 | 0.0010 | mg/L | 0.00034 | 0.0010 | mg/L | 0.00034 | 34.46% |
| Fe 273.955† | 2569.2 | 0.0946 | mg/L | 0.00117 | 0.0946 | mg/L | 0.00117 | 1.23% |
| Mg 279.077† | 617612.4 | 27.86 | mg/L | 0.544 | 27.86 | mg/L | 0.544 | 1.95% |
| V 292.402† | 33.5 | 0.0001 | mg/L | 0.00028 | 0.0001 | mg/L | 0.00028 | 251.94% |
| Al 308.215† | -5738.4 | -0.2089 | mg/L | 0.00288 | -0.2089 | mg/L | 0.00288 | 1.38% |
| Be 313.107† | 41.8 | 0.0000 | mg/L | 0.00003 | 0.0000 | mg/L | 0.00003 | 307.74% |
| Cu 324.752† | 17694.0 | 0.0666 | mg/L | 0.00138 | 0.0666 | mg/L | 0.00138 | 2.07% |
| Ag 338.289† | 49.7 | -0.0008 | mg/L | 0.00085 | -0.0008 | mg/L | 0.00085 | 106.21% |
| Na 330.237† | 67143.2 | 67.63 | mg/L | 1.511 | 67.63 | mg/L | 1.511 | 2.23% |
| Ca 227.546† | 36343.2 | 97.26 | mg/L | 2.067 | 97.26 | mg/L | 2.067 | 2.12% |
| Al RADIAL† | -409.7 | -0.2160 | mg/L | 0.00340 | -0.2160 | mg/L | 0.00340 | 1.57% |
| Fe RADIAL† | 35.7 | 0.0970 | mg/L | 0.00941 | 0.0970 | mg/L | 0.00941 | 9.70% |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Ca RADIAL† | 463348.9 | 100.6 | mg/L | 0.13 | 100.6 mg/L | 0.13 | 0.13% |
| K RADIAL† | 8530.7 | 7.349 | mg/L | 0.1947 | 7.349 mg/L | 0.1947 | 2.65% |
| Mg RADIAL† | 9360.3 | 27.37 | mg/L | 0.566 | 27.37 mg/L | 0.566 | 2.07% |
| Na RADIAL† | 1039737.8 | 79.16 | mg/L | 0.108 | 79.16 mg/L | 0.108 | 0.14% |
| Mo 202.031 | 75.7 | 0.003 | mg/L | 0.0004 | 0.003 mg/L | 0.0004 | 13.27% |

**Sequence No.: 48**
**Sample ID: 16I0241-02**
**Analyst: KV**
**Logged In Analyst (Original) : administrator**
**Initial Sample Wt:**
**Dilution:**

**Autosampler Location: 40**
**Date Collected: 9/12/2016 7:07:37 PM**
**Data Type: Reprocessed on 9/13/2016 6:59:39 AM**

**Initial Sample Vol:**
**Sample Prep Vol:**

**Mean Data: 16I0241-02**

| Analyte | Mean Corrected Intensity | Conc. | Calib. Units | Std.Dev. | Sample Conc. | Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 14151183.5 | 4.601 | mg/L | 0.0806 | | | | 1.75% |
| Y RADIAL | 230192.6 | 5.014 | mg/L | 0.0633 | | | | 1.26% |
| As 188.979† | -13.0 | -0.0069 | mg/L | 0.00290 | -0.0069 | mg/L | 0.00290 | 42.05% |
| Tl 190.801† | -7.8 | -0.0027 | mg/L | 0.00280 | -0.0027 | mg/L | 0.00280 | 103.83% |
| Se 196.026† | -0.4 | -0.0004 | mg/L | 0.00805 | -0.0004 | mg/L | 0.00805 | >999.9% |
| Zn 206.200† | 12492.4 | 0.2738 | mg/L | 0.00620 | 0.2738 | mg/L | 0.00620 | 2.26% |
| Sb 206.836† | 8.8 | 0.0025 | mg/L | 0.00222 | 0.0025 | mg/L | 0.00222 | 87.09% |
| Pb 220.353† | 5.5 | 0.0016 | mg/L | 0.00093 | 0.0016 | mg/L | 0.00093 | 59.49% |
| Cd 226.502† | -20.4 | -0.0001 | mg/L | 0.00006 | -0.0001 | mg/L | 0.00006 | 43.64% |
| Co 228.616† | -15.0 | -0.0003 | mg/L | 0.00050 | -0.0003 | mg/L | 0.00050 | 143.02% |
| Ni 232.003† | -43.4 | -0.0018 | mg/L | 0.00103 | -0.0018 | mg/L | 0.00103 | 57.66% |
| Ba 233.527† | 23337.5 | 0.2357 | mg/L | 0.00439 | 0.2357 | mg/L | 0.00439 | 1.86% |
| Mn 257.610† | 1927.2 | 0.0020 | mg/L | 0.00004 | 0.0020 | mg/L | 0.00004 | 1.96% |
| Cr 267.716† | 129.6 | 0.0009 | mg/L | 0.00039 | 0.0009 | mg/L | 0.00039 | 43.61% |
| Fe 273.955† | 964.5 | 0.0355 | mg/L | 0.00166 | 0.0355 | mg/L | 0.00166 | 4.67% |
| Mg 279.077† | 430068.2 | 19.40 | mg/L | 0.372 | 19.40 | mg/L | 0.372 | 1.92% |
| V 292.402† | 11.6 | 0.0000 | mg/L | 0.00032 | 0.0000 | mg/L | 0.00032 | 829.71% |
| Al 308.215† | -4747.8 | -0.1726 | mg/L | 0.00463 | -0.1726 | mg/L | 0.00463 | 2.69% |
| Be 313.107† | -798.7 | -0.0002 | mg/L | 0.00002 | -0.0002 | mg/L | 0.00002 | 8.76% |
| Cu 324.752† | 15991.4 | 0.0602 | mg/L | 0.00131 | 0.0602 | mg/L | 0.00131 | 2.18% |
| Ag 338.289† | 15.9 | -0.0008 | mg/L | 0.00055 | -0.0008 | mg/L | 0.00055 | 72.30% |
| Na 330.237† | 136945.0 | 137.8 | mg/L | 2.40 | 137.8 | mg/L | 2.40 | 1.74% |
| Ca 227.546† | 28149.6 | 75.33 | mg/L | 1.129 | 75.33 | mg/L | 1.129 | 1.50% |
| Al RADIAL† | -411.5 | -0.2162 | mg/L | 0.00212 | -0.2162 | mg/L | 0.00212 | 0.98% |
| Fe RADIAL† | 14.6 | 0.0396 | mg/L | 0.00455 | 0.0396 | mg/L | 0.00455 | 11.49% |
| Ca RADIAL† | 353335.5 | 76.70 | mg/L | 0.151 | 76.70 | mg/L | 0.151 | 0.20% |
| K RADIAL† | 5898.8 | 5.082 | mg/L | 0.0354 | 5.082 | mg/L | 0.0354 | 0.70% |
| Mg RADIAL† | 6472.2 | 18.92 | mg/L | 0.148 | 18.92 | mg/L | 0.148 | 0.78% |
| Na RADIAL† | 1915931.1 | 145.9 | mg/L | 2.04 | 145.9 | mg/L | 2.04 | 1.40% |
| Mo 202.031 | 133.6 | 0.005 | mg/L | 0.0003 | 0.005 | mg/L | 0.0003 | 6.10% |

**Sequence No.: 49**
**Sample ID: 16I0241-03**
**Analyst: KV**
**Logged In Analyst (Original) : administrator**
**Initial Sample Wt:**
**Dilution:**

**Autosampler Location: 41**
**Date Collected: 9/12/2016 7:12:43 PM**
**Data Type: Reprocessed on 9/13/2016 6:59:40 AM**

**Initial Sample Vol:**
**Sample Prep Vol:**

**Mean Data: 16I0241-03**

| Analyte | Mean Corrected Intensity | Conc. | Calib. Units | Std.Dev. | Sample Conc. | Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 14620928.3 | 4.754 | mg/L | 0.0348 | | | | 0.73% |
| Y RADIAL | 231363.3 | 5.040 | mg/L | 0.0372 | | | | 0.74% |
| As 188.979† | -7.3 | -0.0038 | mg/L | 0.00376 | -0.0038 | mg/L | 0.00376 | 98.38% |
| Tl 190.801† | 4.0 | 0.0014 | mg/L | 0.00365 | 0.0014 | mg/L | 0.00365 | 266.65% |
| Se 196.026† | 6.4 | 0.0067 | mg/L | 0.00256 | 0.0067 | mg/L | 0.00256 | 38.04% |
| Zn 206.200† | 10685.0 | 0.2342 | mg/L | 0.00258 | 0.2342 | mg/L | 0.00258 | 1.10% |
| Sb 206.836† | -0.2 | 0.0000 | mg/L | 0.00373 | 0.0000 | mg/L | 0.00373 | >999.9% |
| Pb 220.353† | 25.7 | 0.0032 | mg/L | 0.00091 | 0.0032 | mg/L | 0.00091 | 28.25% |
| Cd 226.502† | -6.1 | -0.0001 | mg/L | 0.00005 | -0.0001 | mg/L | 0.00005 | 88.71% |
| Co 228.616† | -3.8 | -0.0001 | mg/L | 0.00033 | -0.0001 | mg/L | 0.00033 | 387.15% |
| Ni 232.003† | -26.1 | -0.0011 | mg/L | 0.00023 | -0.0011 | mg/L | 0.00023 | 21.09% |

| | | | | | | |
|---|---|---|---|---|---|---|
| Ba 233.527† | 21899.8 | 0.2212 mg/L | 0.00149 | 0.2212 mg/L | 0.00149 | 0.68% |
| Mn 257.610† | 149302.6 | 0.1556 mg/L | 0.00151 | 0.1556 mg/L | 0.00151 | 0.97% |
| Cr 267.716† | 218.4 | 0.0015 mg/L | 0.00013 | 0.0015 mg/L | 0.00013 | 8.68% |
| Fe 273.955† | 3399.4 | 0.1251 mg/L | 0.00236 | 0.1251 mg/L | 0.00236 | 1.89% |
| Mg 279.077† | 441612.7 | 19.92 mg/L | 0.200 | 19.92 mg/L | 0.200 | 1.00% |
| V 292.402† | -7.4 | 0.0000 mg/L | 0.00009 | 0.0000 mg/L | 0.00009 | 270.98% |
| Al 308.215† | -4803.6 | -0.1743 mg/L | 0.00495 | -0.1743 mg/L | 0.00495 | 2.84% |
| Be 313.107† | -484.1 | -0.0001 mg/L | 0.00001 | -0.0001 mg/L | 0.00001 | 8.02% |
| Cu 324.752† | 20326.6 | 0.0765 mg/L | 0.00078 | 0.0765 mg/L | 0.00078 | 1.02% |
| Ag 338.289† | -37.3 | -0.0010 mg/L | 0.00035 | -0.0010 mg/L | 0.00035 | 36.37% |
| Na 330.237† | 132237.1 | 133.1 mg/L | 1.39 | 133.1 mg/L | 1.39 | 1.05% |
| Ca 227.546† | 23248.3 | 62.22 mg/L | 0.762 | 62.22 mg/L | 0.762 | 1.22% |
| Al RADIAL† | -393.2 | -0.2063 mg/L | 0.01052 | -0.2063 mg/L | 0.01052 | 5.10% |
| Fe RADIAL† | 47.4 | 0.1288 mg/L | 0.01238 | 0.1288 mg/L | 0.01238 | 9.61% |
| Ca RADIAL† | 296913.6 | 64.45 mg/L | 0.041 | 64.45 mg/L | 0.041 | 0.06% |
| K RADIAL† | 8286.0 | 7.139 mg/L | 0.0663 | 7.139 mg/L | 0.0663 | 0.93% |
| Mg RADIAL† | 6979.5 | 20.41 mg/L | 0.150 | 20.41 mg/L | 0.150 | 0.73% |
| Na RADIAL† | 1943844.3 | 148.0 mg/L | 2.91 | 148.0 mg/L | 2.91 | 1.97% |
| Mo 202.031 | 83.4 | 0.003 mg/L | 0.0002 | 0.003 mg/L | 0.0002 | 6.01% |

**Sequence No.: 50**
**Sample ID: 16I0242-01**
**Analyst: KV**
**Logged In Analyst (Original) : administrator**
**Initial Sample Wt:**
**Dilution:**

**Autosampler Location: 42**
**Date Collected: 9/12/2016 7:17:49 PM**
**Data Type: Reprocessed on 9/13/2016 6:59:41 AM**

**Initial Sample Vol:**
**Sample Prep Vol:**

**Mean Data: 16I0242-01**

| Analyte | Mean Corrected Intensity | Calib. Conc. | Calib. Units | Std.Dev. | Sample Conc. | Sample Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 14527413.8 | 4.724 | mg/L | 0.0971 | | | | 2.06% |
| Y RADIAL | 248029.0 | 5.403 | mg/L | 0.1418 | | | | 2.62% |
| As 188.979† | -13.7 | -0.0072 | mg/L | 0.00295 | -0.0072 | mg/L | 0.00295 | 41.10% |
| Tl 190.801† | -8.9 | -0.0030 | mg/L | 0.00447 | -0.0030 | mg/L | 0.00447 | 148.81% |
| Se 196.026† | 6.5 | 0.0072 | mg/L | 0.00755 | 0.0072 | mg/L | 0.00755 | 105.53% |
| Zn 206.200† | 288.0 | 0.0063 | mg/L | 0.00042 | 0.0063 | mg/L | 0.00042 | 6.61% |
| Sb 206.836† | 8.9 | 0.0026 | mg/L | 0.00226 | 0.0026 | mg/L | 0.00226 | 87.22% |
| Pb 220.353† | -22.1 | -0.0007 | mg/L | 0.00093 | -0.0007 | mg/L | 0.00093 | 134.59% |
| Cd 226.502† | 29.4 | 0.0001 | mg/L | 0.00011 | 0.0001 | mg/L | 0.00011 | 108.66% |
| Co 228.616† | 114.4 | 0.0027 | mg/L | 0.00019 | 0.0027 | mg/L | 0.00019 | 7.11% |
| Ni 232.003† | -1.8 | 0.0000 | mg/L | 0.00142 | 0.0000 | mg/L | 0.00142 | >999.9% |
| Ba 233.527† | 10087.8 | 0.1019 | mg/L | 0.00207 | 0.1019 | mg/L | 0.00207 | 2.04% |
| Mn 257.610† | 833143.9 | 0.8684 | mg/L | 0.02713 | 0.8684 | mg/L | 0.02713 | 3.12% |
| Cr 267.716† | 102.9 | 0.0007 | mg/L | 0.00012 | 0.0007 | mg/L | 0.00012 | 16.99% |
| Fe 273.955† | 24075.9 | 0.8860 | mg/L | 0.02543 | 0.8860 | mg/L | 0.02543 | 2.87% |
| Mg 279.077† | 3079652.5 | 138.9 | mg/L | 4.56 | 138.9 | mg/L | 4.56 | 3.28% |
| V 292.402† | -2.5 | -0.0001 | mg/L | 0.00019 | -0.0001 | mg/L | 0.00019 | 350.49% |
| Al 308.215† | -4996.9 | -0.1864 | mg/L | 0.00771 | -0.1864 | mg/L | 0.00771 | 4.14% |
| Be 313.107† | -789.1 | -0.0002 | mg/L | 0.00008 | -0.0002 | mg/L | 0.00008 | 43.79% |
| Cu 324.752† | 2039.7 | 0.0077 | mg/L | 0.00012 | 0.0077 | mg/L | 0.00012 | 1.55% |
| Ag 338.289† | 45.7 | -0.0008 | mg/L | 0.00028 | -0.0008 | mg/L | 0.00028 | 33.01% |
| Na 330.237† | 1517560.5 | 1526 | mg/L | 48.7 | 1526 | mg/L | 48.7 | 3.19% |
| Ca 227.546† | 42063.5 | 112.6 | mg/L | 3.50 | 112.6 | mg/L | 3.50 | 3.11% |
| Al RADIAL† | -426.4 | -0.2246 | mg/L | 0.02082 | -0.2246 | mg/L | 0.02082 | 9.27% |
| Fe RADIAL† | 336.7 | 0.9140 | mg/L | 0.04106 | 0.9140 | mg/L | 0.04106 | 4.49% |
| Ca RADIAL† | 474285.2 | 103.0 | mg/L | 0.14 | 103.0 | mg/L | 0.14 | 0.13% |
| K RADIAL† | 44243.8 | 38.12 | mg/L | 0.459 | 38.12 | mg/L | 0.459 | 1.21% |
| Mg RADIAL† | 45820.4 | 134.0 | mg/L | 1.01 | 134.0 | mg/L | 1.01 | 0.76% |
| Na RADIAL† | 14348912.1 | 1092 | mg/L | 34.7 | 1092 | mg/L | 34.7 | 3.18% |
| Mo 202.031 | 117.2 | 0.004 | mg/L | 0.0003 | 0.004 | mg/L | 0.0003 | 7.11% |

**Sequence No.: 51**
**Sample ID: 16I0281-01**
**Analyst: KV**
**Logged In Analyst (Original) : administrator**
**Initial Sample Wt:**
**Dilution:**

**Autosampler Location: 43**
**Date Collected: 9/12/2016 7:23:07 PM**
**Data Type: Reprocessed on 9/13/2016 6:59:41 AM**

**Initial Sample Vol:**
**Sample Prep Vol:**

**Mean Data: 16I0281-01**

| Analyte | Mean Corrected Intensity | Calib. Conc. | Units | Std.Dev. | Sample Conc. | Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 13937024.9 | 4.532 | mg/L | 0.0505 | | | | 1.12% |
| Y RADIAL | 230216.0 | 5.015 | mg/L | 0.0892 | | | | 1.78% |
| As 188.979† | -4.9 | -0.0025 | mg/L | 0.00277 | -0.0025 | mg/L | 0.00277 | 109.43% |
| Tl 190.801† | -19.0 | -0.0065 | mg/L | 0.00237 | -0.0065 | mg/L | 0.00237 | 36.36% |
| Se 196.026† | 2.2 | 0.0025 | mg/L | 0.00569 | 0.0025 | mg/L | 0.00569 | 229.80% |
| Zn 206.200† | 616.2 | 0.0135 | mg/L | 0.00033 | 0.0135 | mg/L | 0.00033 | 2.41% |
| Sb 206.836† | 9.7 | 0.0028 | mg/L | 0.00210 | 0.0028 | mg/L | 0.00210 | 74.88% |
| Pb 220.353† | -42.1 | -0.0009 | mg/L | 0.00115 | -0.0009 | mg/L | 0.00115 | 126.76% |
| Cd 226.502† | -20.6 | -0.0002 | mg/L | 0.00016 | -0.0002 | mg/L | 0.00016 | 89.53% |
| Co 228.616† | 5.0 | 0.0001 | mg/L | 0.00010 | 0.0001 | mg/L | 0.00010 | 83.65% |
| Ni 232.003† | -51.9 | -0.0021 | mg/L | 0.00083 | -0.0021 | mg/L | 0.00083 | 39.19% |
| Ba 233.527† | 35439.2 | 0.3579 | mg/L | 0.00229 | 0.3579 | mg/L | 0.00229 | 0.64% |
| Mn 257.610† | 25444.8 | 0.0266 | mg/L | 0.00027 | 0.0266 | mg/L | 0.00027 | 1.02% |
| Cr 267.716† | 229.2 | 0.0016 | mg/L | 0.00026 | 0.0016 | mg/L | 0.00026 | 16.27% |
| Fe 273.955† | 10429.6 | 0.3838 | mg/L | 0.00257 | 0.3838 | mg/L | 0.00257 | 0.67% |
| Mg 279.077† | 1737885.0 | 78.38 | mg/L | 0.627 | 78.38 | mg/L | 0.627 | 0.80% |
| V 292.402† | 279.9 | 0.0009 | mg/L | 0.00020 | 0.0009 | mg/L | 0.00020 | 21.26% |
| Al 308.215† | 2247.9 | 0.0725 | mg/L | 0.00875 | 0.0725 | mg/L | 0.00875 | 12.07% |
| Be 313.107† | -1241.8 | -0.0003 | mg/L | 0.00007 | -0.0003 | mg/L | 0.00007 | 23.92% |
| Cu 324.752† | 2538.6 | 0.0096 | mg/L | 0.00023 | 0.0096 | mg/L | 0.00023 | 2.36% |
| Ag 338.289† | 318.0 | -0.0002 | mg/L | 0.00026 | -0.0002 | mg/L | 0.00026 | 106.31% |
| Na 330.237† | 1094693.1 | 1101 | mg/L | 9.3 | 1101 | mg/L | 9.3 | 0.84% |
| Ca 227.546† | 84326.1 | 225.7 | mg/L | 1.69 | 225.7 | mg/L | 1.69 | 0.75% |
| Al RADIAL† | 40.2 | 0.0147 | mg/L | 0.01980 | 0.0147 | mg/L | 0.01980 | 134.99% |
| Fe RADIAL† | 142.9 | 0.3880 | mg/L | 0.01218 | 0.3880 | mg/L | 0.01218 | 3.14% |
| Ca RADIAL† | 973808.0 | 211.4 | mg/L | 0.44 | 211.4 | mg/L | 0.44 | 0.21% |
| K RADIAL† | 15609.6 | 13.45 | mg/L | 0.125 | 13.45 | mg/L | 0.125 | 0.93% |
| Mg RADIAL† | 25781.6 | 75.38 | mg/L | 1.178 | 75.38 | mg/L | 1.178 | 1.56% |
| Na RADIAL† | 10868753.2 | 827.5 | mg/L | 5.05 | 827.5 | mg/L | 5.05 | 0.61% |
| Mo 202.031 | 113.8 | 0.004 | mg/L | 0.0005 | 0.004 | mg/L | 0.0005 | 11.32% |

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**Sequence No.: 52**
**Sample ID: 16I0281-02**
**Analyst: KV**
**Logged In Analyst (Original) : administrator**
**Initial Sample Wt:**
**Dilution:**

**Autosampler Location: 44**
**Date Collected: 9/12/2016 7:28:23 PM**
**Data Type: Reprocessed on 9/13/2016 6:59:42 AM**

**Initial Sample Vol:**
**Sample Prep Vol:**

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**Mean Data: 16I0281-02**

| Analyte | Mean Corrected Intensity | Calib. Conc. | Units | Std.Dev. | Sample Conc. | Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 12689358.8 | 4.126 | mg/L | 0.0316 | | | | 0.77% |
| Y RADIAL | 213585.8 | 4.653 | mg/L | 0.0274 | | | | 0.59% |
| As 188.979† | -11.1 | -0.0058 | mg/L | 0.00608 | -0.0058 | mg/L | 0.00608 | 104.93% |
| Tl 190.801† | -12.1 | -0.0041 | mg/L | 0.00360 | -0.0041 | mg/L | 0.00360 | 87.51% |
| Se 196.026† | 10.7 | 0.0115 | mg/L | 0.00776 | 0.0115 | mg/L | 0.00776 | 67.47% |
| Zn 206.200† | 386.3 | 0.0085 | mg/L | 0.00023 | 0.0085 | mg/L | 0.00023 | 2.75% |
| Sb 206.836† | 10.0 | 0.0029 | mg/L | 0.00571 | 0.0029 | mg/L | 0.00571 | 196.05% |
| Pb 220.353† | -26.2 | 0.0007 | mg/L | 0.00073 | 0.0007 | mg/L | 0.00073 | 108.74% |
| Cd 226.502† | -9.5 | -0.0001 | mg/L | 0.00006 | -0.0001 | mg/L | 0.00006 | 41.62% |
| Co 228.616† | 43.5 | 0.0010 | mg/L | 0.00024 | 0.0010 | mg/L | 0.00024 | 23.54% |
| Ni 232.003† | -134.3 | -0.0055 | mg/L | 0.00067 | -0.0055 | mg/L | 0.00067 | 12.28% |
| Ba 233.527† | 35973.9 | 0.3633 | mg/L | 0.00473 | 0.3633 | mg/L | 0.00473 | 1.30% |
| Mn 257.610† | 820412.5 | 0.8551 | mg/L | 0.01117 | 0.8551 | mg/L | 0.01117 | 1.31% |
| Cr 267.716† | 389.5 | 0.0027 | mg/L | 0.00007 | 0.0027 | mg/L | 0.00007 | 2.71% |
| Fe 273.955† | 19650.9 | 0.7232 | mg/L | 0.01065 | 0.7232 | mg/L | 0.01065 | 1.47% |
| Mg 279.077† | 1815598.0 | 81.89 | mg/L | 0.967 | 81.89 | mg/L | 0.967 | 1.18% |
| V 292.402† | 546.6 | 0.0019 | mg/L | 0.00007 | 0.0019 | mg/L | 0.00007 | 3.98% |
| Al 308.215† | 3212.7 | 0.1067 | mg/L | 0.00872 | 0.1067 | mg/L | 0.00872 | 8.17% |
| Be 313.107† | -1815.1 | -0.0004 | mg/L | 0.00006 | -0.0004 | mg/L | 0.00006 | 13.85% |
| Cu 324.752† | 3150.4 | 0.0119 | mg/L | 0.00078 | 0.0119 | mg/L | 0.00078 | 6.55% |
| Ag 338.289† | 315.7 | -0.0004 | mg/L | 0.00074 | -0.0004 | mg/L | 0.00074 | 199.03% |
| Na 330.237† | 1141497.5 | 1148 | mg/L | 17.1 | 1148 | mg/L | 17.1 | 1.49% |
| Ca 227.546† | 89140.8 | 238.6 | mg/L | 2.86 | 238.6 | mg/L | 2.86 | 1.20% |
| Al RADIAL† | 41.9 | 0.0152 | mg/L | 0.00991 | 0.0152 | mg/L | 0.00991 | 65.02% |
| Fe RADIAL† | 268.5 | 0.7291 | mg/L | 0.01410 | 0.7291 | mg/L | 0.01410 | 1.93% |
| Ca RADIAL† | 1024025.3 | 222.3 | mg/L | 0.34 | 222.3 | mg/L | 0.34 | 0.15% |

| | | | | | | |
|---|---|---|---|---|---|---|
| K RADIAL† | 16356.1 | 14.09 mg/L | 0.150 | 14.09 mg/L | 0.150 | 1.06% |
| Mg RADIAL† | 26840.1 | 78.47 mg/L | 0.782 | 78.47 mg/L | 0.782 | 1.00% |
| Na RADIAL† | 11334775.9 | 862.9 mg/L | 22.02 | 862.9 mg/L | 22.02 | 2.55% |
| Mo 202.031 | 114.3 | 0.004 mg/L | 0.0004 | 0.004 mg/L | 0.0004 | 9.34% |

**Sequence No.: 53**
**Sample ID: 16I0282-01**
**Analyst: KV**
**Logged In Analyst (Original) : administrator**
**Initial Sample Wt:**
**Dilution:**

**Autosampler Location: 45**
**Date Collected: 9/12/2016 7:33:38 PM**
**Data Type: Reprocessed on 9/13/2016 6:59:43 AM**

**Initial Sample Vol:**
**Sample Prep Vol:**

**Mean Data: 16I0282-01**

| Analyte | Mean Corrected Intensity | Calib. Conc. | Calib. Units | Std.Dev. | Sample Conc. | Sample Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 15950023.2 | 5.186 | mg/L | 0.0278 | | | | 0.54% |
| Y RADIAL | 246456.3 | 5.369 | mg/L | 0.0372 | | | | 0.69% |
| As 188.979† | -4.8 | -0.0016 | mg/L | 0.00518 | -0.0016 | mg/L | 0.00518 | 322.87% |
| Tl 190.801† | 18.3 | 0.0068 | mg/L | 0.00039 | 0.0068 | mg/L | 0.00039 | 5.71% |
| Se 196.026† | -8.4 | -0.0042 | mg/L | 0.00937 | -0.0042 | mg/L | 0.00937 | 224.76% |
| Zn 206.200† | 903.6 | 0.0197 | mg/L | 0.00016 | 0.0197 | mg/L | 0.00016 | 0.83% |
| Sb 206.836† | -11.8 | -0.0035 | mg/L | 0.00056 | -0.0035 | mg/L | 0.00056 | 15.96% |
| Pb 220.353† | 1.9 | 0.0000 | mg/L | 0.00116 | 0.0000 | mg/L | 0.00116 | >999.9% |
| Cd 226.502† | 140.7 | -0.0002 | mg/L | 0.00014 | -0.0002 | mg/L | 0.00014 | 83.53% |
| Co 228.616† | 71.5 | 0.0019 | mg/L | 0.00027 | 0.0019 | mg/L | 0.00027 | 14.53% |
| Ni 232.003† | 81.4 | 0.0041 | mg/L | 0.00018 | 0.0041 | mg/L | 0.00018 | 4.53% |
| Ba 233.527† | 14541.0 | 0.1468 | mg/L | 0.00132 | 0.1468 | mg/L | 0.00132 | 0.90% |
| Mn 257.610† | 3408320.2 | 3.553 | mg/L | 0.0036 | 3.553 | mg/L | 0.0036 | 0.10% |
| Cr 267.716† | 728.9 | 0.0051 | mg/L | 0.00018 | 0.0051 | mg/L | 0.00018 | 3.46% |
| Fe 273.955† | 267625.9 | 9.849 | mg/L | 0.0066 | 9.849 | mg/L | 0.0066 | 0.07% |
| Mg 279.077† | 576267.4 | 25.99 | mg/L | 0.051 | 25.99 | mg/L | 0.051 | 0.20% |
| V 292.402† | 774.5 | 0.0022 | mg/L | 0.00007 | 0.0022 | mg/L | 0.00007 | 3.12% |
| Al 308.215† | 22046.3 | 0.7878 | mg/L | 0.01706 | 0.7878 | mg/L | 0.01706 | 2.17% |
| Be 313.107† | 689.7 | 0.0002 | mg/L | 0.00006 | 0.0002 | mg/L | 0.00006 | 38.98% |
| Cu 324.752† | 2163.5 | 0.0085 | mg/L | 0.00019 | 0.0085 | mg/L | 0.00019 | 2.26% |
| Ag 338.289† | -36.4 | -0.0006 | mg/L | 0.00024 | -0.0006 | mg/L | 0.00024 | 36.96% |
| Na 330.237† | 51371.4 | 51.77 | mg/L | 0.574 | 51.77 | mg/L | 0.574 | 1.11% |
| Ca 227.546† | 19396.6 | 52.00 | mg/L | 0.842 | 52.00 | mg/L | 0.842 | 1.62% |
| Al RADIAL† | 1453.6 | 0.7551 | mg/L | 0.00782 | 0.7551 | mg/L | 0.00782 | 1.04% |
| Fe RADIAL† | 3763.2 | 10.22 | mg/L | 0.221 | 10.22 | mg/L | 0.221 | 2.16% |
| Ca RADIAL† | 245503.0 | 53.29 | mg/L | 0.025 | 53.29 | mg/L | 0.025 | 0.05% |
| K RADIAL† | 2095.4 | 1.805 | mg/L | 0.0230 | 1.805 | mg/L | 0.0230 | 1.27% |
| Mg RADIAL† | 9079.8 | 26.54 | mg/L | 0.578 | 26.54 | mg/L | 0.578 | 2.18% |
| Na RADIAL† | 830076.7 | 63.20 | mg/L | 0.163 | 63.20 | mg/L | 0.163 | 0.26% |
| Mo 202.031 | 156.3 | 0.006 | mg/L | 0.0001 | 0.006 | mg/L | 0.0001 | 1.89% |

**Sequence No.: 54**
**Sample ID: SEQ-SRD2**
**Analyst: KV**
**Logged In Analyst (Original) : administrator**
**Initial Sample Wt:**
**Dilution:**

**Autosampler Location: 46**
**Date Collected: 9/12/2016 7:38:20 PM**
**Data Type: Reprocessed on 9/13/2016 6:59:43 AM**

**Initial Sample Vol:**
**Sample Prep Vol:**

**Mean Data: SEQ-SRD2**

| Analyte | Mean Corrected Intensity | Calib. Conc. | Calib. Units | Std.Dev. | Sample Conc. | Sample Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 15174198.3 | 4.934 | mg/L | 0.0299 | | | | 0.61% |
| Y RADIAL | 244499.6 | 5.326 | mg/L | 0.0760 | | | | 1.43% |
| As 188.979† | -15.5 | -0.0081 | mg/L | 0.00156 | -0.0081 | mg/L | 0.00156 | 19.24% |
| Tl 190.801† | -19.2 | -0.0066 | mg/L | 0.00394 | -0.0066 | mg/L | 0.00394 | 60.04% |
| Se 196.026† | -2.0 | -0.0016 | mg/L | 0.00206 | -0.0016 | mg/L | 0.00206 | 127.01% |
| Zn 206.200† | 483.8 | 0.0106 | mg/L | 0.00023 | 0.0106 | mg/L | 0.00023 | 2.16% |
| Sb 206.836† | -5.6 | -0.0016 | mg/L | 0.00282 | -0.0016 | mg/L | 0.00282 | 173.15% |
| Pb 220.353† | -16.4 | -0.0007 | mg/L | 0.00023 | -0.0007 | mg/L | 0.00023 | 32.00% |
| Cd 226.502† | -7.1 | -0.0002 | mg/L | 0.00006 | -0.0002 | mg/L | 0.00006 | 39.90% |
| Co 228.616† | 18.6 | 0.0005 | mg/L | 0.00020 | 0.0005 | mg/L | 0.00020 | 43.38% |
| Ni 232.003† | -41.6 | -0.0016 | mg/L | 0.00090 | -0.0016 | mg/L | 0.00090 | 54.54% |
| Ba 233.527† | 13054.6 | 0.1318 | mg/L | 0.00161 | 0.1318 | mg/L | 0.00161 | 1.22% |

| | | | | | | |
|---|---|---|---|---|---|---|
| Mn 257.610† | 235922.6 | 0.2460 mg/L | 0.00193 | 0.2460 mg/L | 0.00193 | 0.79% |
| Cr 267.716† | 181.8 | 0.0013 mg/L | 0.00025 | 0.0013 mg/L | 0.00025 | 19.68% |
| Fe 273.955† | 26948.8 | 0.9918 mg/L | 0.00772 | 0.9918 mg/L | 0.00772 | 0.78% |
| Mg 279.077† | 689189.4 | 31.08 mg/L | 0.267 | 31.08 mg/L | 0.267 | 0.86% |
| V 292.402† | 380.7 | 0.0013 mg/L | 0.00010 | 0.0013 mg/L | 0.00010 | 7.89% |
| Al 308.215† | 12436.3 | 0.4427 mg/L | 0.00732 | 0.4427 mg/L | 0.00732 | 1.65% |
| Be 313.107† | -352.0 | -0.0001 mg/L | 0.00007 | -0.0001 mg/L | 0.00007 | 81.93% |
| Cu 324.752† | 892.3 | 0.0034 mg/L | 0.00040 | 0.0034 mg/L | 0.00040 | 11.81% |
| Ag 338.289† | 28.0 | -0.0005 mg/L | 0.00056 | -0.0005 mg/L | 0.00056 | 122.26% |
| Na 330.237† | 173324.7 | 174.4 mg/L | 0.97 | 174.4 mg/L | 0.97 | 0.55% |
| Ca 227.546† | 21747.7 | 58.21 mg/L | 0.511 | 58.21 mg/L | 0.511 | 0.88% |
| Al RADIAL† | 781.1 | 0.4044 mg/L | 0.01298 | 0.4044 mg/L | 0.01298 | 3.21% |
| Fe RADIAL† | 372.5 | 1.011 mg/L | 0.0096 | 1.011 mg/L | 0.0096 | 0.95% |
| Ca RADIAL† | 271377.1 | 58.91 mg/L | 0.184 | 58.91 mg/L | 0.184 | 0.31% |
| K RADIAL† | 2922.9 | 2.518 mg/L | 0.0375 | 2.518 mg/L | 0.0375 | 1.49% |
| Mg RADIAL† | 10673.7 | 31.21 mg/L | 0.310 | 31.21 mg/L | 0.310 | 0.99% |
| Na RADIAL† | 2369120.0 | 180.4 mg/L | 3.53 | 180.4 mg/L | 3.53 | 1.96% |
| Mo 202.031 | 22.8 | 0.001 mg/L | 0.0003 | 0.001 mg/L | 0.0003 | 32.97% |

**Sequence No.: 55**
**Sample ID: BI60399-BLK1**
**Analyst: KV**
**Logged In Analyst (Original) : administrator**
**Initial Sample Wt:**
**Dilution:**

**Autosampler Location: 47**
**Date Collected: 9/12/2016 7:43:27 PM**
**Data Type: Reprocessed on 9/13/2016 6:59:44 AM**

**Initial Sample Vol:**
**Sample Prep Vol:**

**Mean Data: BI60399-BLK1**

| Analyte | Mean Corrected Intensity | Calib. Conc. | Units | Std.Dev. | Sample Conc. | Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 14785273.4 | 4.807 | mg/L | 0.0699 | | | | 1.45% |
| Y RADIAL | 218436.9 | 4.758 | mg/L | 0.0305 | | | | 0.64% |
| As 188.979† | -18.2 | -0.0096 | mg/L | 0.00295 | -0.0096 | mg/L | 0.00295 | 30.55% |
| Tl 190.801† | -12.3 | -0.0042 | mg/L | 0.00101 | -0.0042 | mg/L | 0.00101 | 23.76% |
| Se 196.026† | 7.0 | 0.0073 | mg/L | 0.00123 | 0.0073 | mg/L | 0.00123 | 16.93% |
| Zn 206.200† | -288.1 | -0.0063 | mg/L | 0.00022 | -0.0063 | mg/L | 0.00022 | 3.55% |
| Sb 206.836† | -1.0 | -0.0003 | mg/L | 0.00099 | -0.0003 | mg/L | 0.00099 | 339.89% |
| Pb 220.353† | 4.5 | 0.0004 | mg/L | 0.00211 | 0.0004 | mg/L | 0.00211 | 536.56% |
| Cd 226.502† | -43.1 | -0.0003 | mg/L | 0.00008 | -0.0003 | mg/L | 0.00008 | 26.14% |
| Co 228.616† | -5.8 | -0.0001 | mg/L | 0.00033 | -0.0001 | mg/L | 0.00033 | 244.21% |
| Ni 232.003† | -78.0 | -0.0032 | mg/L | 0.00099 | -0.0032 | mg/L | 0.00099 | 30.65% |
| Ba 233.527† | -31.2 | -0.0003 | mg/L | 0.00007 | -0.0003 | mg/L | 0.00007 | 22.59% |
| Mn 257.610† | -66.6 | -0.0001 | mg/L | 0.00001 | -0.0001 | mg/L | 0.00001 | 7.79% |
| Cr 267.716† | 54.9 | 0.0004 | mg/L | 0.00024 | 0.0004 | mg/L | 0.00024 | 62.10% |
| Fe 273.955† | -118.2 | -0.0044 | mg/L | 0.00041 | -0.0044 | mg/L | 0.00041 | 9.34% |
| Mg 279.077† | 97.3 | 0.0044 | mg/L | 0.00193 | 0.0044 | mg/L | 0.00193 | 43.96% |
| V 292.402† | -12.2 | 0.0000 | mg/L | 0.00016 | 0.0000 | mg/L | 0.00016 | 377.49% |
| Al 308.215† | -3859.7 | -0.1382 | mg/L | 0.00631 | -0.1382 | mg/L | 0.00631 | 4.57% |
| Be 313.107† | -395.1 | -0.0001 | mg/L | 0.00002 | -0.0001 | mg/L | 0.00002 | 17.49% |
| Cu 324.752† | -71.7 | -0.0003 | mg/L | 0.00033 | -0.0003 | mg/L | 0.00033 | 123.11% |
| Ag 338.289† | -115.7 | -0.0008 | mg/L | 0.00035 | -0.0008 | mg/L | 0.00035 | 44.86% |
| Na 330.237† | 678.3 | 0.6823 | mg/L | 0.08949 | 0.6823 | mg/L | 0.08949 | 13.12% |
| Ca 227.546† | 14.0 | 0.0375 | mg/L | 0.06217 | 0.0375 | mg/L | 0.06217 | 165.65% |
| Al RADIAL† | -318.0 | -0.1653 | mg/L | 0.00680 | -0.1653 | mg/L | 0.00680 | 4.11% |
| Fe RADIAL† | 2.0 | 0.0054 | mg/L | 0.00369 | 0.0054 | mg/L | 0.00369 | 67.97% |
| Ca RADIAL† | 260.3 | 0.0565 | mg/L | 0.00133 | 0.0565 | mg/L | 0.00133 | 2.35% |
| K RADIAL† | 15.8 | 0.0136 | mg/L | 0.02465 | 0.0136 | mg/L | 0.02465 | 180.75% |
| Mg RADIAL† | 1.6 | 0.0046 | mg/L | 0.03311 | 0.0046 | mg/L | 0.03311 | 719.26% |
| Na RADIAL† | 10962.4 | 0.8346 | mg/L | 0.02034 | 0.8346 | mg/L | 0.02034 | 2.44% |
| Mo 202.031 | 8.5 | 0.000 | mg/L | 0.0004 | 0.000 | mg/L | 0.0004 | 118.20% |

**Sequence No.: 56**
**Sample ID: BI60399-SRM1**
**Analyst: KV**
**Logged In Analyst (Original) : administrator**
**Initial Sample Wt:**
**Dilution:**

**Autosampler Location: 48**
**Date Collected: 9/12/2016 7:48:33 PM**
**Data Type: Reprocessed on 9/13/2016 6:59:45 AM**

**Initial Sample Vol:**
**Sample Prep Vol:**

**Mean Data: BI60399-SRM1**

| Analyte | Mean Corrected Intensity | Calib. Conc. | Units | Std.Dev. | Sample Conc. | Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 14938010.7 | 4.857 | mg/L | 0.0687 | | | | 1.41% |
| Y RADIAL | 237588.8 | 5.175 | mg/L | 0.0599 | | | | 1.16% |
| As 188.979† | 2547.2 | 1.358 | mg/L | 0.0210 | 1.358 | mg/L | 0.0210 | 1.55% |
| Tl 190.801† | 5064.8 | 1.747 | mg/L | 0.0287 | 1.747 | mg/L | 0.0287 | 1.64% |
| Se 196.026† | 1400.2 | 1.514 | mg/L | 0.0154 | 1.514 | mg/L | 0.0154 | 1.02% |
| Zn 206.200† | 126786.5 | 2.778 | mg/L | 0.0202 | 2.778 | mg/L | 0.0202 | 0.73% |
| Sb 206.836† | 3138.2 | 0.9121 | mg/L | 0.01220 | 0.9121 | mg/L | 0.01220 | 1.34% |
| Pb 220.353† | 24123.6 | 2.213 | mg/L | 0.0268 | 2.213 | mg/L | 0.0268 | 1.21% |
| Cd 226.502† | 195986.7 | 1.324 | mg/L | 0.0077 | 1.324 | mg/L | 0.0077 | 0.58% |
| Co 228.616† | 28454.3 | 0.6661 | mg/L | 0.00822 | 0.6661 | mg/L | 0.00822 | 1.23% |
| Ni 232.003† | 72008.9 | 2.984 | mg/L | 0.0178 | 2.984 | mg/L | 0.0178 | 0.60% |
| Ba 233.527† | 236850.1 | 2.392 | mg/L | 0.0141 | 2.392 | mg/L | 0.0141 | 0.59% |
| Mn 257.610† | 5140978.3 | 5.375 | mg/L | 0.0401 | 5.375 | mg/L | 0.0401 | 0.75% |
| Cr 267.716† | 159160.9 | 1.102 | mg/L | 0.0083 | 1.102 | mg/L | 0.0083 | 0.75% |
| Fe 273.955† | 3553174.1 | 130.8 | mg/L | 0.84 | 130.8 | mg/L | 0.84 | 0.65% |
| Mg 279.077† | 778258.7 | 35.08 | mg/L | 0.248 | 35.08 | mg/L | 0.248 | 0.71% |
| V 292.402† | 322315.4 | 1.109 | mg/L | 0.0079 | 1.109 | mg/L | 0.0079 | 0.71% |
| Al 308.215† | 2662320.1 | 95.32 | mg/L | 0.421 | 95.32 | mg/L | 0.421 | 0.44% |
| Be 313.107† | 5212453.6 | 1.195 | mg/L | 0.0039 | 1.195 | mg/L | 0.0039 | 0.32% |
| Cu 324.752† | 178503.0 | 0.6767 | mg/L | 0.00366 | 0.6767 | mg/L | 0.00366 | 0.54% |
| Ag 338.289† | 56858.7 | 0.3839 | mg/L | 0.00163 | 0.3839 | mg/L | 0.00163 | 0.43% |
| Na 330.237† | 8414.0 | 9.131 | mg/L | 0.1305 | 9.131 | mg/L | 0.1305 | 1.43% |
| Ca 227.546† | 23745.3 | 64.74 | mg/L | 0.662 | 64.74 | mg/L | 0.662 | 1.02% |
| Al RADIAL† | 169361.2 | 88.05 | mg/L | 0.255 | 88.05 | mg/L | 0.255 | 0.29% |
| Fe RADIAL† | 48351.2 | 131.3 | mg/L | 3.16 | 131.3 | mg/L | 3.16 | 2.41% |
| Ca RADIAL† | 283343.0 | 61.51 | mg/L | 0.089 | 61.51 | mg/L | 0.089 | 0.14% |
| K RADIAL† | 34015.9 | 29.31 | mg/L | 0.716 | 29.31 | mg/L | 0.716 | 2.44% |
| Mg RADIAL† | 11657.9 | 34.07 | mg/L | 0.778 | 34.07 | mg/L | 0.778 | 2.28% |
| Na RADIAL† | 89825.9 | 6.839 | mg/L | 0.0173 | 6.839 | mg/L | 0.0173 | 0.25% |
| Mo 202.031 | 21659.0 | 0.793 | mg/L | 0.0049 | 0.793 | mg/L | 0.0049 | 0.62% |

**Sequence No.: 57**
**Sample ID: SEQ-CCV5**
**Analyst: KV**
**Logged In Analyst (Original) : administrator**
**Initial Sample Wt:**
**Dilution:**

**Autosampler Location: 3**
**Date Collected: 9/12/2016 7:56:13 PM**
**Data Type: Reprocessed on 9/13/2016 6:59:45 AM**

**Initial Sample Vol:**
**Sample Prep Vol:**

**Mean Data: SEQ-CCV5**

| Analyte | Mean Corrected Intensity | Calib. Conc. | Units | Std.Dev. | Sample Conc. | Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 14086966.8 | 4.580 | mg/L | 0.0673 | | | | 1.47% |
| Y RADIAL | 218746.9 | 4.765 | mg/L | 0.0489 | | | | 1.03% |
| As 188.979† | 480.2 | 0.2542 | mg/L | 0.00781 | 0.2542 | mg/L | 0.00781 | 3.07% |
| Tl 190.801† | 654.6 | 0.2252 | mg/L | 0.00183 | 0.2252 | mg/L | 0.00183 | 0.81% |
| Se 196.026† | 230.1 | 0.2415 | mg/L | 0.00318 | 0.2415 | mg/L | 0.00318 | 1.32% |
| Zn 206.200† | 116581.3 | 2.555 | mg/L | 0.0474 | 2.555 | mg/L | 0.0474 | 1.85% |
| Sb 206.836† | 860.2 | 0.2503 | mg/L | 0.00432 | 0.2503 | mg/L | 0.00432 | 1.73% |
| Pb 220.353† | 2779.8 | 0.2562 | mg/L | 0.00623 | 0.2562 | mg/L | 0.00623 | 2.43% |
| Cd 226.502† | 18495.4 | 0.1258 | mg/L | 0.00219 | 0.1258 | mg/L | 0.00219 | 1.74% |
| Co 228.616† | 110521.1 | 2.577 | mg/L | 0.0488 | 2.577 | mg/L | 0.0488 | 1.89% |
| Ni 232.003† | 61418.9 | 2.538 | mg/L | 0.0500 | 2.538 | mg/L | 0.0500 | 1.97% |
| Ba 233.527† | 1027741.2 | 10.38 | mg/L | 0.306 | 10.38 | mg/L | 0.306 | 2.95% |
| Mn 257.610† | 2477711.9 | 2.583 | mg/L | 0.0735 | 2.583 | mg/L | 0.0735 | 2.85% |
| Cr 267.716† | 150141.2 | 1.038 | mg/L | 0.0162 | 1.038 | mg/L | 0.0162 | 1.56% |
| Fe 273.955† | 140449.3 | 5.169 | mg/L | 0.0799 | 5.169 | mg/L | 0.0799 | 1.55% |
| Mg 279.077† | 566106.3 | 25.53 | mg/L | 0.736 | 25.53 | mg/L | 0.736 | 2.88% |
| V 292.402† | 733826.7 | 2.539 | mg/L | 0.0686 | 2.539 | mg/L | 0.0686 | 2.70% |
| Al 308.215† | 282538.3 | 10.11 | mg/L | 0.175 | 10.11 | mg/L | 0.175 | 1.73% |
| Be 313.107† | 1109286.8 | 0.2544 | mg/L | 0.00695 | 0.2544 | mg/L | 0.00695 | 2.73% |
| Cu 324.752† | 344499.2 | 1.296 | mg/L | 0.0221 | 1.296 | mg/L | 0.0221 | 1.71% |
| Ag 338.289† | 193929.3 | 1.303 | mg/L | 0.0201 | 1.303 | mg/L | 0.0201 | 1.55% |
| Na 330.237† | 24090.3 | 24.28 | mg/L | 0.355 | 24.28 | mg/L | 0.355 | 1.46% |
| Ca 227.546† | 9587.7 | 25.71 | mg/L | 0.463 | 25.71 | mg/L | 0.463 | 1.80% |
| Al RADIAL† | 18934.3 | 9.842 | mg/L | 0.0528 | 9.842 | mg/L | 0.0528 | 0.54% |
| Fe RADIAL† | 1911.7 | 5.190 | mg/L | 0.0416 | 5.190 | mg/L | 0.0416 | 0.80% |
| Ca RADIAL† | 116567.5 | 25.30 | mg/L | 0.035 | 25.30 | mg/L | 0.035 | 0.14% |
| K RADIAL† | 5850.5 | 5.040 | mg/L | 0.0271 | 5.040 | mg/L | 0.0271 | 0.54% |

| | | | | | | |
|---|---|---|---|---|---|---|
| Mg RADIAL† | 8858.2 | 25.90 mg/L | 0.142 | 25.90 mg/L | 0.142 | 0.55% |
| Na RADIAL† | 350112.3 | 26.65 mg/L | 0.052 | 26.65 mg/L | 0.052 | 0.19% |
| Mo 202.031 | 27294.2 | 1.000 mg/L | 0.0047 | 1.000 mg/L | 0.0047 | 0.47% |

**Sequence No.: 58**
**Sample ID: SEQ-CCB5**
**Analyst: KV**
**Logged In Analyst (Original) : administrator**
**Initial Sample Wt:**
**Dilution:**

**Autosampler Location: 4**
**Date Collected: 9/12/2016 8:04:20 PM**
**Data Type: Reprocessed on 9/13/2016 6:59:46 AM**

**Initial Sample Vol:**
**Sample Prep Vol:**

**Mean Data: SEQ-CCB5**

| Analyte | Mean Corrected Intensity | Conc. | Calib. Units | Std.Dev. | Sample Conc. | Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 14557964.0 | 4.734 | mg/L | 0.0602 | | | | 1.27% |
| Y RADIAL | 225343.0 | 4.909 | mg/L | 0.0213 | | | | 0.43% |
| As 188.979† | -18.9 | -0.0100 | mg/L | 0.00246 | -0.0100 | mg/L | 0.00246 | 24.61% |
| Tl 190.801† | -15.1 | -0.0052 | mg/L | 0.00076 | -0.0052 | mg/L | 0.00076 | 14.74% |
| Se 196.026† | 3.4 | 0.0035 | mg/L | 0.00814 | 0.0035 | mg/L | 0.00814 | 230.72% |
| Zn 206.200† | -229.0 | -0.0050 | mg/L | 0.00023 | -0.0050 | mg/L | 0.00023 | 4.62% |
| Sb 206.836† | 2.8 | 0.0008 | mg/L | 0.00164 | 0.0008 | mg/L | 0.00164 | 202.07% |
| Pb 220.353† | -11.3 | -0.0011 | mg/L | 0.00111 | -0.0011 | mg/L | 0.00111 | 105.37% |
| Cd 226.502† | -37.3 | -0.0003 | mg/L | 0.00005 | -0.0003 | mg/L | 0.00005 | 21.30% |
| Co 228.616† | -8.7 | -0.0002 | mg/L | 0.00007 | -0.0002 | mg/L | 0.00007 | 33.59% |
| Ni 232.003† | -99.1 | -0.0041 | mg/L | 0.00075 | -0.0041 | mg/L | 0.00075 | 18.22% |
| Ba 233.527† | -13.3 | -0.0001 | mg/L | 0.00016 | -0.0001 | mg/L | 0.00016 | 121.13% |
| Mn 257.610† | -68.7 | -0.0001 | mg/L | 0.00002 | -0.0001 | mg/L | 0.00002 | 25.11% |
| Cr 267.716† | 18.5 | 0.0001 | mg/L | 0.00018 | 0.0001 | mg/L | 0.00018 | 141.41% |
| Fe 273.955† | -67.2 | -0.0025 | mg/L | 0.00048 | -0.0025 | mg/L | 0.00048 | 19.52% |
| Mg 279.077† | 7.3 | 0.0003 | mg/L | 0.00117 | 0.0003 | mg/L | 0.00117 | 360.62% |
| V 292.402† | -42.6 | -0.0001 | mg/L | 0.00008 | -0.0001 | mg/L | 0.00008 | 51.07% |
| Al 308.215† | -2880.0 | -0.1031 | mg/L | 0.00545 | -0.1031 | mg/L | 0.00545 | 5.28% |
| Be 313.107† | -495.6 | -0.0001 | mg/L | 0.00006 | -0.0001 | mg/L | 0.00006 | 52.29% |
| Cu 324.752† | 15.8 | 0.0001 | mg/L | 0.00036 | 0.0001 | mg/L | 0.00036 | 605.38% |
| Ag 338.289† | 11.8 | 0.0001 | mg/L | 0.00014 | 0.0001 | mg/L | 0.00014 | 181.73% |
| Na 330.237† | 219.6 | 0.2209 | mg/L | 0.03136 | 0.2209 | mg/L | 0.03136 | 14.19% |
| Ca 227.546† | 4.5 | 0.0120 | mg/L | 0.06046 | 0.0120 | mg/L | 0.06046 | 504.23% |
| Al RADIAL† | -253.0 | -0.1315 | mg/L | 0.00594 | -0.1315 | mg/L | 0.00594 | 4.52% |
| Fe RADIAL† | 4.6 | 0.0126 | mg/L | 0.00922 | 0.0126 | mg/L | 0.00922 | 73.33% |
| Ca RADIAL† | 180.7 | 0.0392 | mg/L | 0.00209 | 0.0392 | mg/L | 0.00209 | 5.34% |
| K RADIAL† | 21.9 | 0.0189 | mg/L | 0.06038 | 0.0189 | mg/L | 0.06038 | 319.57% |
| Mg RADIAL† | -0.8 | -0.0022 | mg/L | 0.00543 | -0.0022 | mg/L | 0.00543 | 246.34% |
| Na RADIAL† | 2232.8 | 0.1700 | mg/L | 0.00392 | 0.1700 | mg/L | 0.00392 | 2.31% |
| Mo 202.031 | 6.1 | 0.000 | mg/L | 0.0002 | 0.000 | mg/L | 0.0002 | 93.13% |

**Sequence No.: 59**
**Sample ID: 16I0040-05**
**Analyst: KV**
**Logged In Analyst (Original) : administrator**
**Initial Sample Wt:**
**Dilution:**

**Autosampler Location: 49**
**Date Collected: 9/12/2016 8:09:25 PM**
**Data Type: Reprocessed on 9/13/2016 6:59:47 AM**

**Initial Sample Vol:**
**Sample Prep Vol:**

**Mean Data: 16I0040-05**

| Analyte | Mean Corrected Intensity | Conc. | Calib. Units | Std.Dev. | Sample Conc. | Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 15131736.9 | 4.920 | mg/L | 0.0540 | | | | 1.10% |
| Y RADIAL | 238852.6 | 5.203 | mg/L | 0.0472 | | | | 0.91% |
| As 188.979† | 394.9 | 0.2222 | mg/L | 0.00551 | 0.2222 | mg/L | 0.00551 | 2.48% |
| Tl 190.801† | -131.9 | -0.0378 | mg/L | 0.00232 | -0.0378 | mg/L | 0.00232 | 6.13% |
| Se 196.026† | -38.0 | 0.0282 | mg/L | 0.00495 | 0.0282 | mg/L | 0.00495 | 17.57% |
| Zn 206.200† | 18657.7 | 0.4075 | mg/L | 0.00476 | 0.4075 | mg/L | 0.00476 | 1.17% |
| Sb 206.836† | -16.2 | -0.0063 | mg/L | 0.00258 | -0.0063 | mg/L | 0.00258 | 41.00% |
| Pb 220.353† | 3802.7 | 0.3521 | mg/L | 0.00255 | 0.3521 | mg/L | 0.00255 | 0.72% |
| Cd 226.502† | 2269.1 | -0.0010 | mg/L | 0.00022 | -0.0010 | mg/L | 0.00022 | 21.41% |
| Co 228.616† | 1983.0 | 0.0494 | mg/L | 0.00033 | 0.0494 | mg/L | 0.00033 | 0.67% |
| Ni 232.003† | 2106.1 | 0.0975 | mg/L | 0.00294 | 0.0975 | mg/L | 0.00294 | 3.01% |
| Ba 233.527† | 35866.3 | 0.3622 | mg/L | 0.00636 | 0.3622 | mg/L | 0.00636 | 1.76% |
| Mn 257.610† | 1579045.6 | 1.665 | mg/L | 0.0270 | 1.665 | mg/L | 0.0270 | 1.62% |

| | | | | | | |
|---|---|---|---|---|---|---|
| Cr 267.716† | 22361.8 | 0.1562 mg/L | 0.00194 | 0.1562 mg/L | 0.00194 | 1.24% |
| Fe 273.955† | 3961235.7 | 145.8 mg/L | 0.14 | 145.8 mg/L | 0.14 | 0.10% |
| Mg 279.077† | 372546.7 | 16.78 mg/L | 0.260 | 16.78 mg/L | 0.260 | 1.55% |
| V 292.402† | 74649.5 | 0.2508 mg/L | 0.00349 | 0.2508 mg/L | 0.00349 | 1.39% |
| Al 308.215† | 3995799.4 | 143.1 mg/L | 0.35 | 143.1 mg/L | 0.35 | 0.24% |
| Be 313.107† | 632.7 | 0.0001 mg/L | 0.00008 | 0.0001 mg/L | 0.00008 | 54.82% |
| Cu 324.752† | 66174.8 | 0.2549 mg/L | 0.00356 | 0.2549 mg/L | 0.00356 | 1.40% |
| Ag 338.289† | -3621.7 | -0.0214 mg/L | 0.00039 | -0.0214 mg/L | 0.00039 | 1.81% |
| Na 330.237† | -724.0 | -0.0252 mg/L | 0.02377 | -0.0252 mg/L | 0.02377 | 94.27% |
| Ca 227.546† | 2598.5 | 8.347 mg/L | 0.1393 | 8.347 mg/L | 0.1393 | 1.67% |
| Al RADIAL† | 269142.4 | 139.9 mg/L | 0.47 | 139.9 mg/L | 0.47 | 0.34% |
| Fe RADIAL† | 55400.9 | 150.4 mg/L | 1.17 | 150.4 mg/L | 1.17 | 0.77% |
| Ca RADIAL† | 29421.0 | 6.387 mg/L | 0.0375 | 6.387 mg/L | 0.0375 | 0.59% |
| K RADIAL† | 6822.8 | 5.878 mg/L | 0.0172 | 5.878 mg/L | 0.0172 | 0.29% |
| Mg RADIAL† | 5692.6 | 16.63 mg/L | 0.188 | 16.63 mg/L | 0.188 | 1.13% |
| Na RADIAL† | 4391.4 | 0.3343 mg/L | 0.01169 | 0.3343 mg/L | 0.01169 | 3.50% |
| Mo 202.031 | 137.4 | 0.005 mg/L | 0.0007 | 0.005 mg/L | 0.0007 | 13.08% |

**Sequence No.: 60**
**Sample ID: BI60399-DUP1**
**Analyst: KV**
**Logged In Analyst (Original) : administrator**
**Initial Sample Wt:**
**Dilution:**

**Autosampler Location: 50**
**Date Collected: 9/12/2016 8:14:04 PM**
**Data Type: Reprocessed on 9/13/2016 6:59:48 AM**

**Initial Sample Vol:**
**Sample Prep Vol:**

**Mean Data: BI60399-DUP1**

| Analyte | Mean Corrected Intensity | Calib. Conc. | Calib. Units | Std.Dev. | Sample Conc. | Sample Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 15679413.9 | 5.098 | mg/L | 0.0252 | | | | 0.49% |
| Y RADIAL | 244890.2 | 5.334 | mg/L | 0.0561 | | | | 1.05% |
| As 188.979† | 395.2 | 0.2224 | mg/L | 0.00205 | 0.2224 | mg/L | 0.00205 | 0.92% |
| Tl 190.801† | -124.4 | -0.0352 | mg/L | 0.00212 | -0.0352 | mg/L | 0.00212 | 6.01% |
| Se 196.026† | -38.3 | 0.0278 | mg/L | 0.00990 | 0.0278 | mg/L | 0.00990 | 35.59% |
| Zn 206.200† | 17957.6 | 0.3921 | mg/L | 0.00250 | 0.3921 | mg/L | 0.00250 | 0.64% |
| Sb 206.836† | -13.9 | -0.0056 | mg/L | 0.00486 | -0.0056 | mg/L | 0.00486 | 86.67% |
| Pb 220.353† | 3715.5 | 0.3439 | mg/L | 0.00041 | 0.3439 | mg/L | 0.00041 | 0.12% |
| Cd 226.502† | 2218.2 | -0.0014 | mg/L | 0.00003 | -0.0014 | mg/L | 0.00003 | 2.12% |
| Co 228.616† | 1923.9 | 0.0480 | mg/L | 0.00044 | 0.0480 | mg/L | 0.00044 | 0.92% |
| Ni 232.003† | 2177.8 | 0.1005 | mg/L | 0.00565 | 0.1005 | mg/L | 0.00565 | 5.62% |
| Ba 233.527† | 35603.2 | 0.3595 | mg/L | 0.00480 | 0.3595 | mg/L | 0.00480 | 1.33% |
| Mn 257.610† | 1568407.1 | 1.654 | mg/L | 0.0228 | 1.654 | mg/L | 0.0228 | 1.38% |
| Cr 267.716† | 21828.7 | 0.1525 | mg/L | 0.00089 | 0.1525 | mg/L | 0.00089 | 0.58% |
| Fe 273.955† | 3888711.0 | 143.1 | mg/L | 0.40 | 143.1 | mg/L | 0.40 | 0.28% |
| Mg 279.077† | 370687.2 | 16.69 | mg/L | 0.273 | 16.69 | mg/L | 0.273 | 1.64% |
| V 292.402† | 74417.8 | 0.2500 | mg/L | 0.00464 | 0.2500 | mg/L | 0.00464 | 1.86% |
| Al 308.215† | 3948203.8 | 141.4 | mg/L | 0.41 | 141.4 | mg/L | 0.41 | 0.29% |
| Be 313.107† | 663.4 | 0.0002 | mg/L | 0.00024 | 0.0002 | mg/L | 0.00024 | 154.81% |
| Cu 324.752† | 65854.1 | 0.2537 | mg/L | 0.00358 | 0.2537 | mg/L | 0.00358 | 1.41% |
| Ag 338.289† | -3606.0 | -0.0213 | mg/L | 0.00104 | -0.0213 | mg/L | 0.00104 | 4.88% |
| Na 330.237† | -789.3 | -0.0920 | mg/L | 0.02601 | -0.0920 | mg/L | 0.02601 | 28.27% |
| Ca 227.546† | 2604.4 | 8.359 | mg/L | 0.0512 | 8.359 | mg/L | 0.0512 | 0.61% |
| Al RADIAL† | 265443.1 | 138.0 | mg/L | 0.29 | 138.0 | mg/L | 0.29 | 0.21% |
| Fe RADIAL† | 55317.0 | 150.2 | mg/L | 0.36 | 150.2 | mg/L | 0.36 | 0.24% |
| Ca RADIAL† | 29005.3 | 6.296 | mg/L | 0.0329 | 6.296 | mg/L | 0.0329 | 0.52% |
| K RADIAL† | 6704.1 | 5.776 | mg/L | 0.0401 | 5.776 | mg/L | 0.0401 | 0.69% |
| Mg RADIAL† | 5660.3 | 16.53 | mg/L | 0.129 | 16.53 | mg/L | 0.129 | 0.78% |
| Na RADIAL† | 4063.7 | 0.3094 | mg/L | 0.01157 | 0.3094 | mg/L | 0.01157 | 3.74% |
| Mo 202.031 | 119.9 | 0.004 | mg/L | 0.0006 | 0.004 | mg/L | 0.0006 | 14.78% |

**Sequence No.: 61**
**Sample ID: BI60399-MS1**
**Analyst: KV**
**Logged In Analyst (Original) : administrator**
**Initial Sample Wt:**
**Dilution:**

**Autosampler Location: 51**
**Date Collected: 9/12/2016 8:18:41 PM**
**Data Type: Reprocessed on 9/13/2016 6:59:48 AM**

**Initial Sample Vol:**
**Sample Prep Vol:**

**Mean Data: BI60399-MS1**

| | Mean Corrected | Calib. | | Sample | | |
|---|---|---|---|---|---|---|

| Analyte | Intensity | Conc. | Units | Std.Dev. | Conc. | Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 14666744.2 | 4.769 | mg/L | 0.1171 | | | | 2.46% |
| Y RADIAL | 223732.7 | 4.874 | mg/L | 0.0595 | | | | 1.22% |
| As 188.979† | 3835.2 | 2.042 | mg/L | 0.0401 | 2.042 | mg/L | 0.0401 | 1.96% |
| Tl 190.801† | 3889.3 | 1.345 | mg/L | 0.0118 | 1.345 | mg/L | 0.0118 | 0.88% |
| Se 196.026† | 1695.5 | 1.837 | mg/L | 0.0363 | 1.837 | mg/L | 0.0363 | 1.98% |
| Zn 206.200† | 41347.1 | 0.9046 | mg/L | 0.02219 | 0.9046 | mg/L | 0.02219 | 2.45% |
| Sb 206.836† | 831.3 | 0.2402 | mg/L | 0.00724 | 0.2402 | mg/L | 0.00724 | 3.01% |
| Pb 220.353† | 9072.3 | 0.8353 | mg/L | 0.01907 | 0.8353 | mg/L | 0.01907 | 2.28% |
| Cd 226.502† | 9367.0 | 0.0457 | mg/L | 0.00141 | 0.0457 | mg/L | 0.00141 | 3.09% |
| Co 228.616† | 22962.9 | 0.5388 | mg/L | 0.01233 | 0.5388 | mg/L | 0.01233 | 2.29% |
| Ni 232.003† | 13626.9 | 0.5747 | mg/L | 0.01901 | 0.5747 | mg/L | 0.01901 | 3.31% |
| Ba 233.527† | 226500.7 | 2.287 | mg/L | 0.0772 | 2.287 | mg/L | 0.0772 | 3.38% |
| Mn 257.610† | 2107281.8 | 2.218 | mg/L | 0.0736 | 2.218 | mg/L | 0.0736 | 3.32% |
| Cr 267.716† | 48279.8 | 0.3355 | mg/L | 0.01084 | 0.3355 | mg/L | 0.01084 | 3.23% |
| Fe 273.955† | 4167512.4 | 153.4 | mg/L | 0.48 | 153.4 | mg/L | 0.48 | 0.32% |
| Mg 279.077† | 387627.9 | 17.46 | mg/L | 0.593 | 17.46 | mg/L | 0.593 | 3.40% |
| V 292.402† | 210055.6 | 0.7186 | mg/L | 0.02352 | 0.7186 | mg/L | 0.02352 | 3.27% |
| Al 308.215† | 4244298.4 | 152.0 | mg/L | 0.26 | 152.0 | mg/L | 0.26 | 0.17% |
| Be 313.107† | 201168.0 | 0.0461 | mg/L | 0.00122 | 0.0461 | mg/L | 0.00122 | 2.65% |
| Cu 324.752† | 137046.5 | 0.5222 | mg/L | 0.01764 | 0.5222 | mg/L | 0.01764 | 3.38% |
| Ag 338.289† | 3208.5 | 0.0248 | mg/L | 0.00120 | 0.0248 | mg/L | 0.00120 | 4.82% |
| Na 330.237† | -44.5 | 0.7328 | mg/L | 0.05605 | 0.7328 | mg/L | 0.05605 | 7.65% |
| Ca 227.546† | 2814.1 | 9.068 | mg/L | 0.2623 | 9.068 | mg/L | 0.2623 | 2.89% |
| Al RADIAL† | 287711.6 | 149.6 | mg/L | 0.47 | 149.6 | mg/L | 0.47 | 0.31% |
| Fe RADIAL† | 61297.5 | 166.4 | mg/L | 1.47 | 166.4 | mg/L | 1.47 | 0.89% |
| Ca RADIAL† | 31736.7 | 6.889 | mg/L | 0.0557 | 6.889 | mg/L | 0.0557 | 0.81% |
| K RADIAL† | 7293.3 | 6.283 | mg/L | 0.0594 | 6.283 | mg/L | 0.0594 | 0.95% |
| Mg RADIAL† | 6235.8 | 18.21 | mg/L | 0.177 | 18.21 | mg/L | 0.177 | 0.97% |
| Na RADIAL† | 2618.8 | 0.1994 | mg/L | 0.01892 | 0.1994 | mg/L | 0.01892 | 9.49% |
| Mo 202.031 | 98.6 | 0.004 | mg/L | 0.0004 | 0.004 | mg/L | 0.0004 | 10.62% |

**Sequence No.: 62**
**Sample ID: 16I0040-06**
**Analyst: KV**
**Logged In Analyst (Original) : administrator**
**Initial Sample Wt:**
**Dilution:**

**Autosampler Location: 52**
**Date Collected: 9/12/2016 8:26:19 PM**
**Data Type: Reprocessed on 9/13/2016 6:59:49 AM**

**Initial Sample Vol:**
**Sample Prep Vol:**

**Mean Data: 16I0040-06**

| Analyte | Mean Corrected Intensity | Calib. Conc. | Units | Std.Dev. | Sample Conc. | Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 15111274.6 | 4.913 | mg/L | 0.0452 | | | | 0.92% |
| Y RADIAL | 235991.1 | 5.141 | mg/L | 0.0302 | | | | 0.59% |
| As 188.979† | 185.8 | 0.1095 | mg/L | 0.00276 | 0.1095 | mg/L | 0.00276 | 2.52% |
| Tl 190.801† | -106.2 | -0.0302 | mg/L | 0.00152 | -0.0302 | mg/L | 0.00152 | 5.05% |
| Se 196.026† | -22.0 | 0.0338 | mg/L | 0.00206 | 0.0338 | mg/L | 0.00206 | 6.10% |
| Zn 206.200† | 13472.2 | 0.2940 | mg/L | 0.00234 | 0.2940 | mg/L | 0.00234 | 0.79% |
| Sb 206.836† | -16.5 | -0.0061 | mg/L | 0.00378 | -0.0061 | mg/L | 0.00378 | 61.93% |
| Pb 220.353† | 1721.2 | 0.1598 | mg/L | 0.00084 | 0.1598 | mg/L | 0.00084 | 0.53% |
| Cd 226.502† | 1687.4 | -0.0023 | mg/L | 0.00011 | -0.0023 | mg/L | 0.00011 | 4.70% |
| Co 228.616† | 1867.9 | 0.0462 | mg/L | 0.00037 | 0.0462 | mg/L | 0.00037 | 0.81% |
| Ni 232.003† | 2046.3 | 0.0934 | mg/L | 0.00381 | 0.0934 | mg/L | 0.00381 | 4.08% |
| Ba 233.527† | 26153.8 | 0.2641 | mg/L | 0.00625 | 0.2641 | mg/L | 0.00625 | 2.37% |
| Mn 257.610† | 2027121.9 | 2.129 | mg/L | 0.0229 | 2.129 | mg/L | 0.0229 | 1.08% |
| Cr 267.716† | 15236.8 | 0.1066 | mg/L | 0.00246 | 0.1066 | mg/L | 0.00246 | 2.31% |
| Fe 273.955† | 3314411.1 | 122.0 | mg/L | 1.35 | 122.0 | mg/L | 1.35 | 1.10% |
| Mg 279.077† | 257587.6 | 11.60 | mg/L | 0.310 | 11.60 | mg/L | 0.310 | 2.68% |
| V 292.402† | 57804.5 | 0.1937 | mg/L | 0.00454 | 0.1937 | mg/L | 0.00454 | 2.34% |
| Al 308.215† | 3203846.8 | 114.7 | mg/L | 1.01 | 114.7 | mg/L | 1.01 | 0.88% |
| Be 313.107† | 659.9 | 0.0002 | mg/L | 0.00007 | 0.0002 | mg/L | 0.00007 | 43.35% |
| Cu 324.752† | 40007.8 | 0.1555 | mg/L | 0.00409 | 0.1555 | mg/L | 0.00409 | 2.63% |
| Ag 338.289† | -2929.8 | -0.0172 | mg/L | 0.00111 | -0.0172 | mg/L | 0.00111 | 6.45% |
| Na 330.237† | -628.2 | -0.0478 | mg/L | 0.06018 | -0.0478 | mg/L | 0.06018 | 125.80% |
| Ca 227.546† | 785.1 | 3.262 | mg/L | 0.0194 | 3.262 | mg/L | 0.0194 | 0.60% |
| Al RADIAL† | 214612.2 | 111.6 | mg/L | 0.38 | 111.6 | mg/L | 0.38 | 0.34% |
| Fe RADIAL† | 46327.8 | 125.8 | mg/L | 2.10 | 125.8 | mg/L | 2.10 | 1.67% |
| Ca RADIAL† | 6673.0 | 1.449 | mg/L | 0.0311 | 1.449 | mg/L | 0.0311 | 2.15% |
| K RADIAL† | 4492.4 | 3.870 | mg/L | 0.0780 | 3.870 | mg/L | 0.0780 | 2.02% |
| Mg RADIAL† | 3776.3 | 11.03 | mg/L | 0.161 | 11.03 | mg/L | 0.161 | 1.46% |

| | | | | | | |
|---|---|---|---|---|---|---|
| Na RADIAL† | 1620.2 | 0.1233 mg/L | 0.00754 | 0.1233 mg/L | 0.00754 | 6.11% |
| Mo 202.031 | 288.1 | 0.011 mg/L | 0.0002 | 0.011 mg/L | 0.0002 | 1.73% |

**Sequence No.: 63**
**Sample ID: 16I0040-07**
**Analyst: KV**
**Logged In Analyst (Original) : administrator**
**Initial Sample Wt:**
**Dilution:**

**Autosampler Location: 53**
**Date Collected: 9/12/2016 8:31:01 PM**
**Data Type: Reprocessed on 9/13/2016 6:59:50 AM**

**Initial Sample Vol:**
**Sample Prep Vol:**

**Mean Data: 16I0040-07**

| Analyte | Mean Corrected Intensity | Calib. Conc. | Calib. Units | Std.Dev. | Sample Conc. | Sample Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 15114339.5 | 4.914 | mg/L | 0.0513 | | | | 1.04% |
| Y RADIAL | 239666.5 | 5.221 | mg/L | 0.0165 | | | | 0.32% |
| As 188.979† | 82.6 | 0.0517 | mg/L | 0.00264 | 0.0517 | mg/L | 0.00264 | 5.11% |
| Tl 190.801† | -88.2 | -0.0258 | mg/L | 0.00218 | -0.0258 | mg/L | 0.00218 | 8.45% |
| Se 196.026† | -17.9 | 0.0219 | mg/L | 0.01131 | 0.0219 | mg/L | 0.01131 | 51.58% |
| Zn 206.200† | 27018.3 | 0.5913 | mg/L | 0.01015 | 0.5913 | mg/L | 0.01015 | 1.72% |
| Sb 206.836† | -13.4 | -0.0048 | mg/L | 0.00207 | -0.0048 | mg/L | 0.00207 | 42.95% |
| Pb 220.353† | 7082.6 | 0.6509 | mg/L | 0.00826 | 0.6509 | mg/L | 0.00826 | 1.27% |
| Cd 226.502† | 2315.2 | 0.0059 | mg/L | 0.00012 | 0.0059 | mg/L | 0.00012 | 1.97% |
| Co 228.616† | 1545.8 | 0.0379 | mg/L | 0.00040 | 0.0379 | mg/L | 0.00040 | 1.05% |
| Ni 232.003† | 1582.3 | 0.0717 | mg/L | 0.00022 | 0.0717 | mg/L | 0.00022 | 0.31% |
| Ba 233.527† | 34856.3 | 0.3520 | mg/L | 0.00487 | 0.3520 | mg/L | 0.00487 | 1.38% |
| Mn 257.610† | 983311.0 | 1.036 | mg/L | 0.0063 | 1.036 | mg/L | 0.0063 | 0.61% |
| Cr 267.716† | 13628.7 | 0.0952 | mg/L | 0.00172 | 0.0952 | mg/L | 0.00172 | 1.81% |
| Fe 273.955† | 2423798.5 | 89.20 | mg/L | 0.594 | 89.20 | mg/L | 0.594 | 0.67% |
| Mg 279.077† | 275039.1 | 12.39 | mg/L | 0.167 | 12.39 | mg/L | 0.167 | 1.35% |
| V 292.402† | 44661.2 | 0.1500 | mg/L | 0.00248 | 0.1500 | mg/L | 0.00248 | 1.65% |
| Al 308.215† | 2183043.4 | 78.16 | mg/L | 0.457 | 78.16 | mg/L | 0.457 | 0.59% |
| Be 313.107† | 843.6 | 0.0002 | mg/L | 0.00004 | 0.0002 | mg/L | 0.00004 | 22.06% |
| Cu 324.752† | 120634.8 | 0.4574 | mg/L | 0.00694 | 0.4574 | mg/L | 0.00694 | 1.52% |
| Ag 338.289† | -2272.1 | -0.0137 | mg/L | 0.00060 | -0.0137 | mg/L | 0.00060 | 4.39% |
| Na 330.237† | 57.3 | 0.4927 | mg/L | 0.03961 | 0.4927 | mg/L | 0.03961 | 8.04% |
| Ca 227.546† | 6880.5 | 19.24 | mg/L | 0.188 | 19.24 | mg/L | 0.188 | 0.98% |
| Al RADIAL† | 145569.8 | 75.68 | mg/L | 0.159 | 75.68 | mg/L | 0.159 | 0.21% |
| Fe RADIAL† | 33168.2 | 90.05 | mg/L | 1.357 | 90.05 | mg/L | 1.357 | 1.51% |
| Ca RADIAL† | 84509.4 | 18.34 | mg/L | 0.019 | 18.34 | mg/L | 0.019 | 0.11% |
| K RADIAL† | 3348.6 | 2.885 | mg/L | 0.0416 | 2.885 | mg/L | 0.0416 | 1.44% |
| Mg RADIAL† | 4037.9 | 11.80 | mg/L | 0.185 | 11.80 | mg/L | 0.185 | 1.57% |
| Na RADIAL† | 2396.2 | 0.1824 | mg/L | 0.01368 | 0.1824 | mg/L | 0.01368 | 7.50% |
| Mo 202.031 | 53.5 | 0.002 | mg/L | 0.0006 | 0.002 | mg/L | 0.0006 | 31.59% |

**Sequence No.: 64**
**Sample ID: 16I0040-08**
**Analyst: KV**
**Logged In Analyst (Original) : administrator**
**Initial Sample Wt:**
**Dilution:**

**Autosampler Location: 54**
**Date Collected: 9/12/2016 8:35:43 PM**
**Data Type: Reprocessed on 9/13/2016 6:59:50 AM**

**Initial Sample Vol:**
**Sample Prep Vol:**

**Mean Data: 16I0040-08**

| Analyte | Mean Corrected Intensity | Calib. Conc. | Calib. Units | Std.Dev. | Sample Conc. | Sample Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 31098285.4 | 10.11 | mg/L | 0.085 | | | | 0.84% |
| Y RADIAL | 506065.7 | 11.02 | mg/L | 0.022 | | | | 0.20% |
| As 188.979† | 366.7 | 0.2004 | mg/L | 0.00226 | 0.2004 | mg/L | 0.00226 | 1.13% |
| Tl 190.801† | -5.1 | 0.0019 | mg/L | 0.00142 | 0.0019 | mg/L | 0.00142 | 72.97% |
| Se 196.026† | -31.5 | 0.0004 | mg/L | 0.00285 | 0.0004 | mg/L | 0.00285 | 685.00% |
| Zn 206.200† | 6196.8 | 0.1351 | mg/L | 0.00060 | 0.1351 | mg/L | 0.00060 | 0.45% |
| Sb 206.836† | -44.0 | -0.0136 | mg/L | 0.00175 | -0.0136 | mg/L | 0.00175 | 12.86% |
| Pb 220.353† | 1920.3 | 0.1775 | mg/L | 0.00065 | 0.1775 | mg/L | 0.00065 | 0.37% |
| Cd 226.502† | 1156.0 | -0.0002 | mg/L | 0.00009 | -0.0002 | mg/L | 0.00009 | 41.54% |
| Co 228.616† | 784.2 | 0.0198 | mg/L | 0.00022 | 0.0198 | mg/L | 0.00022 | 1.13% |
| Ni 232.003† | 1345.9 | 0.0608 | mg/L | 0.00119 | 0.0608 | mg/L | 0.00119 | 1.97% |
| Ba 233.527† | 18089.7 | 0.1827 | mg/L | 0.00381 | 0.1827 | mg/L | 0.00381 | 2.08% |
| Mn 257.610† | 728442.5 | 0.7687 | mg/L | 0.01310 | 0.7687 | mg/L | 0.01310 | 1.70% |
| Cr 267.716† | 10461.1 | 0.0731 | mg/L | 0.00040 | 0.0731 | mg/L | 0.00040 | 0.55% |

| | | | | | | |
|---|---|---|---|---|---|---|
| Fe 273.955† | 1999041.0 | 73.57 mg/L | 1.248 | 73.57 mg/L | 1.248 | 1.70% |
| Mg 279.077† | 165216.0 | 7.440 mg/L | 0.1574 | 7.440 mg/L | 0.1574 | 2.12% |
| V 292.402† | 37481.7 | 0.1260 mg/L | 0.00231 | 0.1260 mg/L | 0.00231 | 1.83% |
| Al 308.215† | 2001539.1 | 71.66 mg/L | 1.315 | 71.66 mg/L | 1.315 | 1.84% |
| Be 313.107† | 6513.2 | 0.0015 mg/L | 0.00006 | 0.0015 mg/L | 0.00006 | 3.94% |
| Cu 324.752† | 54140.2 | 0.2066 mg/L | 0.00408 | 0.2066 mg/L | 0.00408 | 1.98% |
| Ag 338.289† | -1416.0 | -0.0081 mg/L | 0.00038 | -0.0081 mg/L | 0.00038 | 4.70% |
| Na 330.237† | -684.0 | -0.3448 mg/L | 0.01178 | -0.3448 mg/L | 0.01178 | 3.42% |
| Ca 227.546† | 869.6 | 3.009 mg/L | 0.0263 | 3.009 mg/L | 0.0263 | 0.87% |
| Al RADIAL† | 128365.9 | 66.73 mg/L | 0.299 | 66.73 mg/L | 0.299 | 0.45% |
| Fe RADIAL† | 27172.9 | 73.78 mg/L | 0.684 | 73.78 mg/L | 0.684 | 0.93% |
| Ca RADIAL† | 6538.4 | 1.419 mg/L | 0.0106 | 1.419 mg/L | 0.0106 | 0.75% |
| K RADIAL† | 2367.0 | 2.039 mg/L | 0.0299 | 2.039 mg/L | 0.0299 | 1.47% |
| Mg RADIAL† | 2404.0 | 7.021 mg/L | 0.0910 | 7.021 mg/L | 0.0910 | 1.30% |
| Na RADIAL† | 10029.7 | 0.7636 mg/L | 0.00601 | 0.7636 mg/L | 0.00601 | 0.79% |
| Mo 202.031 | 28.2 | 0.001 mg/L | 0.0004 | 0.001 mg/L | 0.0004 | 42.00% |

**Sequence No.: 65**
**Sample ID: 16I0240-79**
**Analyst: KV**
**Logged In Analyst (Original) : administrator**
**Initial Sample Wt:**
**Dilution:**

**Autosampler Location: 55**
**Date Collected: 9/12/2016 8:40:27 PM**
**Data Type: Reprocessed on 9/13/2016 6:59:51 AM**

**Initial Sample Vol:**
**Sample Prep Vol:**

**Mean Data: 16I0240-79**

| Analyte | Mean Corrected Intensity | Calib. Conc. | Calib. Units | Std.Dev. | Sample Conc. | Sample Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 15824455.6 | 5.145 | mg/L | 0.0667 | | | | 1.30% |
| Y RADIAL | 244459.1 | 5.325 | mg/L | 0.0465 | | | | 0.87% |
| As 188.979† | 36.1 | 0.0305 | mg/L | 0.00265 | 0.0305 | mg/L | 0.00265 | 8.69% |
| Tl 190.801† | -111.2 | -0.0319 | mg/L | 0.00211 | -0.0319 | mg/L | 0.00211 | 6.62% |
| Se 196.026† | -36.1 | 0.0197 | mg/L | 0.00763 | 0.0197 | mg/L | 0.00763 | 38.79% |
| Zn 206.200† | 27260.7 | 0.5963 | mg/L | 0.00728 | 0.5963 | mg/L | 0.00728 | 1.22% |
| Sb 206.836† | -23.8 | -0.0082 | mg/L | 0.00065 | -0.0082 | mg/L | 0.00065 | 7.91% |
| Pb 220.353† | 4957.6 | 0.4496 | mg/L | 0.00381 | 0.4496 | mg/L | 0.00381 | 0.85% |
| Cd 226.502† | 35204.8 | 0.2265 | mg/L | 0.00343 | 0.2265 | mg/L | 0.00343 | 1.52% |
| Co 228.616† | 2184.2 | 0.0536 | mg/L | 0.00034 | 0.0536 | mg/L | 0.00034 | 0.63% |
| Ni 232.003† | 3615.2 | 0.1583 | mg/L | 0.00085 | 0.1583 | mg/L | 0.00085 | 0.54% |
| Ba 233.527† | 43874.0 | 0.4431 | mg/L | 0.00612 | 0.4431 | mg/L | 0.00612 | 1.38% |
| Mn 257.610† | 1854483.1 | 1.949 | mg/L | 0.0256 | 1.949 | mg/L | 0.0256 | 1.31% |
| Cr 267.716† | 19843.2 | 0.1385 | mg/L | 0.00241 | 0.1385 | mg/L | 0.00241 | 1.74% |
| Fe 273.955† | 3246667.7 | 119.5 | mg/L | 0.27 | 119.5 | mg/L | 0.27 | 0.22% |
| Mg 279.077† | 485345.4 | 21.87 | mg/L | 0.306 | 21.87 | mg/L | 0.306 | 1.40% |
| V 292.402† | 56081.0 | 0.1877 | mg/L | 0.00302 | 0.1877 | mg/L | 0.00302 | 1.61% |
| Al 308.215† | 1483207.4 | 53.11 | mg/L | 0.723 | 53.11 | mg/L | 0.723 | 1.36% |
| Be 313.107† | -3358.9 | -0.0008 | mg/L | 0.00014 | -0.0008 | mg/L | 0.00014 | 17.96% |
| Cu 324.752† | 66817.1 | 0.2564 | mg/L | 0.00385 | 0.2564 | mg/L | 0.00385 | 1.50% |
| Ag 338.289† | -3422.9 | -0.0210 | mg/L | 0.00072 | -0.0210 | mg/L | 0.00072 | 3.41% |
| Na 330.237† | -240.6 | 0.3985 | mg/L | 0.07885 | 0.3985 | mg/L | 0.07885 | 19.78% |
| Ca 227.546† | 18970.4 | 51.90 | mg/L | 0.604 | 51.90 | mg/L | 0.604 | 1.16% |
| Al RADIAL† | 98993.1 | 51.47 | mg/L | 0.323 | 51.47 | mg/L | 0.323 | 0.63% |
| Fe RADIAL† | 46816.7 | 127.1 | mg/L | 0.74 | 127.1 | mg/L | 0.74 | 0.59% |
| Ca RADIAL† | 242893.9 | 52.73 | mg/L | 0.018 | 52.73 | mg/L | 0.018 | 0.03% |
| K RADIAL† | 7643.1 | 6.585 | mg/L | 0.0174 | 6.585 | mg/L | 0.0174 | 0.26% |
| Mg RADIAL† | 7693.2 | 22.48 | mg/L | 0.218 | 22.48 | mg/L | 0.218 | 0.97% |
| Na RADIAL† | 9924.5 | 0.7556 | mg/L | 0.01504 | 0.7556 | mg/L | 0.01504 | 1.99% |
| Mo 202.031 | -9.1 | 0.000 | mg/L | 0.0004 | 0.000 | mg/L | 0.0004 | 110.12% |

**Sequence No.: 66**
**Sample ID: 16I0240-80**
**Analyst: KV**
**Logged In Analyst (Original) : administrator**
**Initial Sample Wt:**
**Dilution:**

**Autosampler Location: 56**
**Date Collected: 9/12/2016 8:45:10 PM**
**Data Type: Reprocessed on 9/13/2016 6:59:52 AM**

**Initial Sample Vol:**
**Sample Prep Vol:**

**Mean Data: 16I0240-80**

| Analyte | Mean Corrected Intensity | Calib. Conc. | Calib. Units | Std.Dev. | Sample Conc. | Sample Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|

| | | | | | | |
|---|---|---|---|---|---|---|
| Y 371.029 | 15929273.7 | 5.179 mg/L | 0.0135 | | | 0.26% |
| Y RADIAL | 248922.1 | 5.422 mg/L | 0.0373 | | | 0.69% |
| As 188.979† | -14.3 | 0.0037 mg/L | 0.00255 | 0.0037 mg/L | 0.00255 | 69.17% |
| Tl 190.801† | -188.0 | -0.0584 mg/L | 0.00284 | -0.0584 mg/L | 0.00284 | 4.86% |
| Se 196.026† | -31.5 | 0.0235 mg/L | 0.00617 | 0.0235 mg/L | 0.00617 | 26.20% |
| Zn 206.200† | 13641.6 | 0.2978 mg/L | 0.00133 | 0.2978 mg/L | 0.00133 | 0.45% |
| Sb 206.836† | -46.7 | -0.0149 mg/L | 0.00265 | -0.0149 mg/L | 0.00265 | 17.79% |
| Pb 220.353† | 1544.2 | 0.1366 mg/L | 0.00118 | 0.1366 mg/L | 0.00118 | 0.86% |
| Cd 226.502† | 1828.0 | -0.0013 mg/L | 0.00047 | -0.0013 mg/L | 0.00047 | 37.28% |
| Co 228.616† | 2217.6 | 0.0543 mg/L | 0.00028 | 0.0543 mg/L | 0.00028 | 0.52% |
| Ni 232.003† | 3027.9 | 0.1339 mg/L | 0.00156 | 0.1339 mg/L | 0.00156 | 1.17% |
| Ba 233.527† | 39547.9 | 0.3994 mg/L | 0.00533 | 0.3994 mg/L | 0.00533 | 1.33% |
| Mn 257.610† | 2227592.3 | 2.338 mg/L | 0.0039 | 2.338 mg/L | 0.0039 | 0.17% |
| Cr 267.716† | 18408.4 | 0.1286 mg/L | 0.00171 | 0.1286 mg/L | 0.00171 | 1.33% |
| Fe 273.955† | 3258136.5 | 119.9 mg/L | 0.18 | 119.9 mg/L | 0.18 | 0.15% |
| Mg 279.077† | 490222.8 | 22.09 mg/L | 0.027 | 22.09 mg/L | 0.027 | 0.12% |
| V 292.402† | 50129.2 | 0.1672 mg/L | 0.00193 | 0.1672 mg/L | 0.00193 | 1.16% |
| Al 308.215† | 1609018.3 | 57.61 mg/L | 0.098 | 57.61 mg/L | 0.098 | 0.17% |
| Be 313.107† | -12193.4 | -0.0028 mg/L | 0.00017 | -0.0028 mg/L | 0.00017 | 5.99% |
| Cu 324.752† | 36044.0 | 0.1406 mg/L | 0.00146 | 0.1406 mg/L | 0.00146 | 1.04% |
| Ag 338.289† | -5067.2 | -0.0317 mg/L | 0.00059 | -0.0317 mg/L | 0.00059 | 1.85% |
| Na 330.237† | -1238.7 | -0.6493 mg/L | 0.00762 | -0.6493 mg/L | 0.00762 | 1.17% |
| Ca 227.546† | 6458.4 | 18.40 mg/L | 0.071 | 18.40 mg/L | 0.071 | 0.39% |
| Al RADIAL† | 106482.1 | 55.36 mg/L | 0.291 | 55.36 mg/L | 0.291 | 0.53% |
| Fe RADIAL† | 46071.5 | 125.1 mg/L | 1.39 | 125.1 mg/L | 1.39 | 1.11% |
| Ca RADIAL† | 80634.8 | 17.50 mg/L | 0.278 | 17.50 mg/L | 0.278 | 1.59% |
| K RADIAL† | 12767.1 | 11.00 mg/L | 0.199 | 11.00 mg/L | 0.199 | 1.81% |
| Mg RADIAL† | 7645.4 | 22.34 mg/L | 0.312 | 22.34 mg/L | 0.312 | 1.40% |
| Na RADIAL† | 9928.5 | 0.7559 mg/L | 0.01413 | 0.7559 mg/L | 0.01413 | 1.87% |
| Mo 202.031 | -41.0 | -0.002 mg/L | 0.0002 | -0.002 mg/L | 0.0002 | 14.78% |

**Sequence No.: 67**
**Sample ID: 16I0240-81**
**Analyst: KV**
**Logged In Analyst (Original) : administrator**
**Initial Sample Wt:**
**Dilution:**

**Autosampler Location: 57**
**Date Collected: 9/12/2016 8:49:53 PM**
**Data Type: Reprocessed on 9/13/2016 6:59:52 AM**

**Initial Sample Vol:**
**Sample Prep Vol:**

**Mean Data: 16I0240-81**

| Analyte | Mean Corrected Intensity | Calib. Conc. | Units | Std.Dev. | Sample Conc. | Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 17536051.6 | 5.702 | mg/L | 0.0568 | | | | 1.00% |
| Y RADIAL | 280632.2 | 6.113 | mg/L | 0.1187 | | | | 1.94% |
| As 188.979† | -1.6 | 0.0076 | mg/L | 0.00454 | 0.0076 | mg/L | 0.00454 | 59.61% |
| Tl 190.801† | -87.4 | -0.0253 | mg/L | 0.00224 | -0.0253 | mg/L | 0.00224 | 8.84% |
| Se 196.026† | -25.6 | 0.0156 | mg/L | 0.00977 | 0.0156 | mg/L | 0.00977 | 62.46% |
| Zn 206.200† | 9178.1 | 0.2002 | mg/L | 0.00256 | 0.2002 | mg/L | 0.00256 | 1.28% |
| Sb 206.836† | -45.3 | -0.0141 | mg/L | 0.00100 | -0.0141 | mg/L | 0.00100 | 7.10% |
| Pb 220.353† | 535.5 | 0.0448 | mg/L | 0.00179 | 0.0448 | mg/L | 0.00179 | 4.00% |
| Cd 226.502† | 1501.8 | -0.0001 | mg/L | 0.00026 | -0.0001 | mg/L | 0.00026 | 318.21% |
| Co 228.616† | 3206.9 | 0.0767 | mg/L | 0.00084 | 0.0767 | mg/L | 0.00084 | 1.10% |
| Ni 232.003† | 2831.9 | 0.1236 | mg/L | 0.00405 | 0.1236 | mg/L | 0.00405 | 3.27% |
| Ba 233.527† | 74690.6 | 0.7542 | mg/L | 0.00401 | 0.7542 | mg/L | 0.00401 | 0.53% |
| Mn 257.610† | 16610845.5 | 17.32 | mg/L | 0.049 | 17.32 | mg/L | 0.049 | 0.28% |
| Cr 267.716† | 15358.3 | 0.1072 | mg/L | 0.00108 | 0.1072 | mg/L | 0.00108 | 1.01% |
| Fe 273.955† | 2526957.0 | 93.00 | mg/L | 1.527 | 93.00 | mg/L | 1.527 | 1.64% |
| Mg 279.077† | 340277.9 | 15.33 | mg/L | 0.077 | 15.33 | mg/L | 0.077 | 0.50% |
| V 292.402† | 37816.4 | 0.1262 | mg/L | 0.00059 | 0.1262 | mg/L | 0.00059 | 0.47% |
| Al 308.215† | 1104505.2 | 39.55 | mg/L | 0.642 | 39.55 | mg/L | 0.642 | 1.62% |
| Be 313.107† | -9138.4 | -0.0021 | mg/L | 0.00010 | -0.0021 | mg/L | 0.00010 | 4.69% |
| Cu 324.752† | 26810.7 | 0.1046 | mg/L | 0.00053 | 0.1046 | mg/L | 0.00053 | 0.51% |
| Ag 338.289† | -4133.2 | -0.0260 | mg/L | 0.00076 | -0.0260 | mg/L | 0.00076 | 2.93% |
| Na 330.237† | -1273.7 | -0.8367 | mg/L | 0.00369 | -0.8367 | mg/L | 0.00369 | 0.44% |
| Ca 227.546† | 3562.0 | 10.37 | mg/L | 0.185 | 10.37 | mg/L | 0.185 | 1.79% |
| Al RADIAL† | 73853.2 | 38.40 | mg/L | 0.273 | 38.40 | mg/L | 0.273 | 0.71% |
| Fe RADIAL† | 34616.4 | 93.99 | mg/L | 2.582 | 93.99 | mg/L | 2.582 | 2.75% |
| Ca RADIAL† | 42358.5 | 9.195 | mg/L | 0.2932 | 9.195 | mg/L | 0.2932 | 3.19% |
| K RADIAL† | 11568.3 | 9.966 | mg/L | 0.2287 | 9.966 | mg/L | 0.2287 | 2.29% |
| Mg RADIAL† | 4971.6 | 14.53 | mg/L | 0.493 | 14.53 | mg/L | 0.493 | 3.39% |
| Na RADIAL† | 8933.9 | 0.6802 | mg/L | 0.01172 | 0.6802 | mg/L | 0.01172 | 1.72% |

| | | | | | | |
|---|---|---|---|---|---|---|
| Mo 202.031 | -1.1 | 0.000 mg/L | 0.0004 | 0.000 mg/L | 0.0004 | >999.9% |

**Sequence No.: 68**
**Sample ID: 16I0240-82**
**Analyst: KV**
**Logged In Analyst (Original) : administrator**
**Initial Sample Wt:**
**Dilution:**

**Autosampler Location: 58**
**Date Collected: 9/12/2016 8:54:40 PM**
**Data Type: Reprocessed on 9/13/2016 6:59:53 AM**

**Initial Sample Vol:**
**Sample Prep Vol:**

**Mean Data: 16I0240-82**

| Analyte | Mean Corrected Intensity | Conc. | Calib. Units | Std.Dev. | Sample Conc. | Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 17761892.8 | 5.775 | mg/L | 0.0612 | | | | 1.06% |
| Y RADIAL | 281714.0 | 6.137 | mg/L | 0.0293 | | | | 0.48% |
| As 188.979† | -1.6 | 0.0071 | mg/L | 0.00084 | 0.0071 | mg/L | 0.00084 | 11.92% |
| Tl 190.801† | -117.5 | -0.0360 | mg/L | 0.00516 | -0.0360 | mg/L | 0.00516 | 14.32% |
| Se 196.026† | -28.0 | 0.0104 | mg/L | 0.00435 | 0.0104 | mg/L | 0.00435 | 41.72% |
| Zn 206.200† | 7386.4 | 0.1610 | mg/L | 0.00174 | 0.1610 | mg/L | 0.00174 | 1.08% |
| Sb 206.836† | -47.5 | -0.0147 | mg/L | 0.00121 | -0.0147 | mg/L | 0.00121 | 8.23% |
| Pb 220.353† | 515.1 | 0.0432 | mg/L | 0.00071 | 0.0432 | mg/L | 0.00071 | 1.64% |
| Cd 226.502† | 1272.1 | -0.0010 | mg/L | 0.00021 | -0.0010 | mg/L | 0.00021 | 21.55% |
| Co 228.616† | 1773.0 | 0.0432 | mg/L | 0.00058 | 0.0432 | mg/L | 0.00058 | 1.35% |
| Ni 232.003† | 2557.7 | 0.1118 | mg/L | 0.00084 | 0.1118 | mg/L | 0.00084 | 0.75% |
| Ba 233.527† | 27905.9 | 0.2818 | mg/L | 0.00288 | 0.2818 | mg/L | 0.00288 | 1.02% |
| Mn 257.610† | 1976850.0 | 2.072 | mg/L | 0.0530 | 2.072 | mg/L | 0.0530 | 2.56% |
| Cr 267.716† | 12376.7 | 0.0865 | mg/L | 0.00093 | 0.0865 | mg/L | 0.00093 | 1.07% |
| Fe 273.955† | 2356412.9 | 86.72 | mg/L | 2.288 | 86.72 | mg/L | 2.288 | 2.64% |
| Mg 279.077† | 307667.6 | 13.86 | mg/L | 0.116 | 13.86 | mg/L | 0.116 | 0.84% |
| V 292.402† | 33607.6 | 0.1119 | mg/L | 0.00123 | 0.1119 | mg/L | 0.00123 | 1.10% |
| Al 308.215† | 1027175.8 | 36.78 | mg/L | 1.042 | 36.78 | mg/L | 1.042 | 2.83% |
| Be 313.107† | -8180.9 | -0.0019 | mg/L | 0.00014 | -0.0019 | mg/L | 0.00014 | 7.45% |
| Cu 324.752† | 22513.3 | 0.0882 | mg/L | 0.00099 | 0.0882 | mg/L | 0.00099 | 1.12% |
| Ag 338.289† | -3664.7 | -0.0230 | mg/L | 0.00028 | -0.0230 | mg/L | 0.00028 | 1.23% |
| Na 330.237† | -1206.7 | -0.7993 | mg/L | 0.05698 | -0.7993 | mg/L | 0.05698 | 7.13% |
| Ca 227.546† | 2959.0 | 8.701 | mg/L | 0.0526 | 8.701 | mg/L | 0.0526 | 0.60% |
| Al RADIAL† | 68860.9 | 35.80 | mg/L | 0.046 | 35.80 | mg/L | 0.046 | 0.13% |
| Fe RADIAL† | 32343.4 | 87.82 | mg/L | 1.208 | 87.82 | mg/L | 1.208 | 1.38% |
| Ca RADIAL† | 35892.0 | 7.791 | mg/L | 0.0960 | 7.791 | mg/L | 0.0960 | 1.23% |
| K RADIAL† | 10167.6 | 8.760 | mg/L | 0.0513 | 8.760 | mg/L | 0.0513 | 0.59% |
| Mg RADIAL† | 4542.3 | 13.27 | mg/L | 0.114 | 13.27 | mg/L | 0.114 | 0.86% |
| Na RADIAL† | 7003.8 | 0.5332 | mg/L | 0.00314 | 0.5332 | mg/L | 0.00314 | 0.59% |
| Mo 202.031 | -28.1 | -0.001 | mg/L | 0.0004 | -0.001 | mg/L | 0.0004 | 37.63% |

**Sequence No.: 69**
**Sample ID: SEQ-CCV6**
**Analyst: KV**
**Logged In Analyst (Original) : administrator**
**Initial Sample Wt:**
**Dilution:**

**Autosampler Location: 3**
**Date Collected: 9/12/2016 8:59:24 PM**
**Data Type: Reprocessed on 9/13/2016 6:59:54 AM**

**Initial Sample Vol:**
**Sample Prep Vol:**

**Mean Data: SEQ-CCV6**

| Analyte | Mean Corrected Intensity | Conc. | Calib. Units | Std.Dev. | Sample Conc. | Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 14885961.6 | 4.840 | mg/L | 0.0527 | | | | 1.09% |
| Y RADIAL | 230528.0 | 5.022 | mg/L | 0.0161 | | | | 0.32% |
| As 188.979† | 477.2 | 0.2527 | mg/L | 0.00669 | 0.2527 | mg/L | 0.00669 | 2.65% |
| Tl 190.801† | 667.8 | 0.2298 | mg/L | 0.00460 | 0.2298 | mg/L | 0.00460 | 2.00% |
| Se 196.026† | 231.5 | 0.2429 | mg/L | 0.00361 | 0.2429 | mg/L | 0.00361 | 1.49% |
| Zn 206.200† | 115555.5 | 2.533 | mg/L | 0.0679 | 2.533 | mg/L | 0.0679 | 2.68% |
| Sb 206.836† | 846.9 | 0.2464 | mg/L | 0.00327 | 0.2464 | mg/L | 0.00327 | 1.33% |
| Pb 220.353† | 2776.5 | 0.2558 | mg/L | 0.00355 | 0.2558 | mg/L | 0.00355 | 1.39% |
| Cd 226.502† | 18319.9 | 0.1246 | mg/L | 0.00326 | 0.1246 | mg/L | 0.00326 | 2.62% |
| Co 228.616† | 108941.0 | 2.540 | mg/L | 0.0722 | 2.540 | mg/L | 0.0722 | 2.84% |
| Ni 232.003† | 60225.6 | 2.489 | mg/L | 0.0699 | 2.489 | mg/L | 0.0699 | 2.81% |
| Ba 233.527† | 1025758.6 | 10.36 | mg/L | 0.176 | 10.36 | mg/L | 0.176 | 1.70% |
| Mn 257.610† | 2471767.6 | 2.577 | mg/L | 0.0435 | 2.577 | mg/L | 0.0435 | 1.69% |
| Cr 267.716† | 147937.0 | 1.023 | mg/L | 0.0240 | 1.023 | mg/L | 0.0240 | 2.34% |
| Fe 273.955† | 138811.7 | 5.109 | mg/L | 0.1249 | 5.109 | mg/L | 0.1249 | 2.45% |

| | | | | | | |
|---|---|---|---|---|---|---|
| Mg 279.077† | 570504.7 | 25.73 mg/L | 0.451 | 25.73 mg/L | 0.451 | 1.75% |
| V 292.402† | 728396.5 | 2.520 mg/L | 0.0376 | 2.520 mg/L | 0.0376 | 1.49% |
| Al 308.215† | 276960.8 | 9.914 mg/L | 0.2652 | 9.914 mg/L | 0.2652 | 2.67% |
| Be 313.107† | 1103727.5 | 0.2531 mg/L | 0.00351 | 0.2531 mg/L | 0.00351 | 1.39% |
| Cu 324.752† | 337028.9 | 1.268 mg/L | 0.0328 | 1.268 mg/L | 0.0328 | 2.59% |
| Ag 338.289† | 190256.6 | 1.278 mg/L | 0.0301 | 1.278 mg/L | 0.0301 | 2.36% |
| Na 330.237† | 23216.1 | 23.40 mg/L | 0.627 | 23.40 mg/L | 0.627 | 2.68% |
| Ca 227.546† | 9481.0 | 25.43 mg/L | 0.243 | 25.43 mg/L | 0.243 | 0.96% |
| Al RADIAL† | 18327.1 | 9.527 mg/L | 0.0305 | 9.527 mg/L | 0.0305 | 0.32% |
| Fe RADIAL† | 1922.5 | 5.220 mg/L | 0.0512 | 5.220 mg/L | 0.0512 | 0.98% |
| Ca RADIAL† | 117921.3 | 25.60 mg/L | 0.027 | 25.60 mg/L | 0.027 | 0.11% |
| K RADIAL† | 5963.8 | 5.138 mg/L | 0.0271 | 5.138 mg/L | 0.0271 | 0.53% |
| Mg RADIAL† | 8958.6 | 26.19 mg/L | 0.208 | 26.19 mg/L | 0.208 | 0.79% |
| Na RADIAL† | 342858.6 | 26.10 mg/L | 0.177 | 26.10 mg/L | 0.177 | 0.68% |
| Mo 202.031 | 28390.4 | 1.040 mg/L | 0.0219 | 1.040 mg/L | 0.0219 | 2.10% |

**Sequence No.: 70**
**Sample ID: SEQ-CCB6**
**Analyst: KV**
**Logged In Analyst (Original) : administrator**
**Initial Sample Wt:**
**Dilution:**

**Autosampler Location: 4**
**Date Collected: 9/12/2016 9:07:31 PM**
**Data Type: Reprocessed on 9/13/2016 6:59:55 AM**

**Initial Sample Vol:**
**Sample Prep Vol:**

**Mean Data: SEQ-CCB6**

| Analyte | Mean Corrected Intensity | Calib. Conc. | Units | Std.Dev. | Sample Conc. | Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 14843685.4 | 4.826 | mg/L | 0.0422 | | | | 0.87% |
| Y RADIAL | 226266.9 | 4.929 | mg/L | 0.0672 | | | | 1.36% |
| As 188.979† | -25.9 | -0.0137 | mg/L | 0.00219 | -0.0137 | mg/L | 0.00219 | 15.96% |
| Tl 190.801† | -15.0 | -0.0052 | mg/L | 0.00220 | -0.0052 | mg/L | 0.00220 | 42.70% |
| Se 196.026† | 3.2 | 0.0033 | mg/L | 0.00255 | 0.0033 | mg/L | 0.00255 | 77.26% |
| Zn 206.200† | -226.4 | -0.0050 | mg/L | 0.00036 | -0.0050 | mg/L | 0.00036 | 7.16% |
| Sb 206.836† | 14.2 | 0.0041 | mg/L | 0.00322 | 0.0041 | mg/L | 0.00322 | 77.83% |
| Pb 220.353† | 13.3 | 0.0012 | mg/L | 0.00098 | 0.0012 | mg/L | 0.00098 | 81.24% |
| Cd 226.502† | -44.8 | -0.0003 | mg/L | 0.00004 | -0.0003 | mg/L | 0.00004 | 12.28% |
| Co 228.616† | -10.2 | -0.0002 | mg/L | 0.00010 | -0.0002 | mg/L | 0.00010 | 43.74% |
| Ni 232.003† | -79.1 | -0.0033 | mg/L | 0.00111 | -0.0033 | mg/L | 0.00111 | 33.82% |
| Ba 233.527† | 3.1 | 0.0000 | mg/L | 0.00005 | 0.0000 | mg/L | 0.00005 | 151.87% |
| Mn 257.610† | -42.8 | 0.0000 | mg/L | 0.00005 | 0.0000 | mg/L | 0.00005 | 101.63% |
| Cr 267.716† | 3.9 | 0.0000 | mg/L | 0.00029 | 0.0000 | mg/L | 0.00029 | >999.9% |
| Fe 273.955† | -62.6 | -0.0023 | mg/L | 0.00127 | -0.0023 | mg/L | 0.00127 | 55.08% |
| Mg 279.077† | 18.4 | 0.0008 | mg/L | 0.00415 | 0.0008 | mg/L | 0.00415 | 501.54% |
| V 292.402† | 20.5 | 0.0001 | mg/L | 0.00006 | 0.0001 | mg/L | 0.00006 | 89.30% |
| Al 308.215† | -2835.2 | -0.1015 | mg/L | 0.00963 | -0.1015 | mg/L | 0.00963 | 9.49% |
| Be 313.107† | -427.7 | -0.0001 | mg/L | 0.00005 | -0.0001 | mg/L | 0.00005 | 48.53% |
| Cu 324.752† | -89.0 | -0.0003 | mg/L | 0.00024 | -0.0003 | mg/L | 0.00024 | 72.46% |
| Ag 338.289† | -68.5 | -0.0005 | mg/L | 0.00021 | -0.0005 | mg/L | 0.00021 | 46.11% |
| Na 330.237† | 89.5 | 0.0901 | mg/L | 0.08434 | 0.0901 | mg/L | 0.08434 | 93.62% |
| Ca 227.546† | 18.6 | 0.0497 | mg/L | 0.03367 | 0.0497 | mg/L | 0.03367 | 67.79% |
| Al RADIAL† | -248.1 | -0.1290 | mg/L | 0.00564 | -0.1290 | mg/L | 0.00564 | 4.37% |
| Fe RADIAL† | -0.1 | -0.0004 | mg/L | 0.00179 | -0.0004 | mg/L | 0.00179 | 487.40% |
| Ca RADIAL† | 194.2 | 0.0421 | mg/L | 0.00211 | 0.0421 | mg/L | 0.00211 | 5.01% |
| K RADIAL† | -50.9 | -0.0439 | mg/L | 0.05414 | -0.0439 | mg/L | 0.05414 | 123.46% |
| Mg RADIAL† | 3.1 | 0.0090 | mg/L | 0.01981 | 0.0090 | mg/L | 0.01981 | 219.20% |
| Na RADIAL† | -1621.4 | -0.1234 | mg/L | 0.02535 | -0.1234 | mg/L | 0.02535 | 20.53% |
| Mo 202.031 | 1.1 | 0.000 | mg/L | 0.0001 | 0.000 | mg/L | 0.0001 | 358.77% |

**Sequence No.: 71**
**Sample ID: 16I0240-83**
**Analyst: KV**
**Logged In Analyst (Original) : administrator**
**Initial Sample Wt:**
**Dilution:**

**Autosampler Location: 59**
**Date Collected: 9/12/2016 9:12:38 PM**
**Data Type: Reprocessed on 9/13/2016 6:59:55 AM**

**Initial Sample Vol:**
**Sample Prep Vol:**

**Mean Data: 16I0240-83**

| Analyte | Mean Corrected Intensity | Calib. Conc. | Units | Std.Dev. | Sample Conc. | Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 16866751.3 | 5.484 | mg/L | 0.0346 | | | | 0.63% |

| | | | | | | |
|---|---|---|---|---|---|---|
| Y RADIAL | 272185.2 | 5.929 mg/L | 0.0642 | | | 1.08% |
| As 188.979† | 40.3 | 0.0324 mg/L | 0.00452 | 0.0324 mg/L | 0.00452 | 13.92% |
| Tl 190.801† | -149.4 | -0.0452 mg/L | 0.00194 | -0.0452 mg/L | 0.00194 | 4.29% |
| Se 196.026† | -40.1 | 0.0141 mg/L | 0.00435 | 0.0141 mg/L | 0.00435 | 30.90% |
| Zn 206.200† | 16802.9 | 0.3671 mg/L | 0.00304 | 0.3671 mg/L | 0.00304 | 0.83% |
| Sb 206.836† | -31.8 | -0.0105 mg/L | 0.00067 | -0.0105 mg/L | 0.00067 | 6.39% |
| Pb 220.353† | 3701.6 | 0.3373 mg/L | 0.00391 | 0.3373 mg/L | 0.00391 | 1.16% |
| Cd 226.502† | 2192.1 | 0.0014 mg/L | 0.00029 | 0.0014 mg/L | 0.00029 | 21.49% |
| Co 228.616† | 2511.4 | 0.0611 mg/L | 0.00085 | 0.0611 mg/L | 0.00085 | 1.39% |
| Ni 232.003† | 3484.5 | 0.1526 mg/L | 0.00324 | 0.1526 mg/L | 0.00324 | 2.12% |
| Ba 233.527† | 41915.9 | 0.4233 mg/L | 0.00390 | 0.4233 mg/L | 0.00390 | 0.92% |
| Mn 257.610† | 2228321.9 | 2.338 mg/L | 0.0362 | 2.338 mg/L | 0.0362 | 1.55% |
| Cr 267.716† | 21096.5 | 0.1471 mg/L | 0.00150 | 0.1471 mg/L | 0.00150 | 1.02% |
| Fe 273.955† | 3406869.2 | 125.4 mg/L | 0.33 | 125.4 mg/L | 0.33 | 0.26% |
| Mg 279.077† | 885967.1 | 39.94 mg/L | 0.627 | 39.94 mg/L | 0.627 | 1.57% |
| V 292.402† | 59044.8 | 0.1981 mg/L | 0.00157 | 0.1981 mg/L | 0.00157 | 0.79% |
| Al 308.215† | 2054414.5 | 73.55 mg/L | 1.180 | 73.55 mg/L | 1.180 | 1.60% |
| Be 313.107† | -3146.1 | -0.0007 mg/L | 0.00004 | -0.0007 mg/L | 0.00004 | 6.00% |
| Cu 324.752† | 42366.9 | 0.1643 mg/L | 0.00146 | 0.1643 mg/L | 0.00146 | 0.89% |
| Ag 338.289† | -3963.1 | -0.0248 mg/L | 0.00065 | -0.0248 mg/L | 0.00065 | 2.62% |
| Na 330.237† | -926.6 | -0.3048 mg/L | 0.04961 | -0.3048 mg/L | 0.04961 | 16.27% |
| Ca 227.546† | 19814.4 | 54.14 mg/L | 0.557 | 54.14 mg/L | 0.557 | 1.03% |
| Al RADIAL† | 137240.8 | 71.35 mg/L | 0.133 | 71.35 mg/L | 0.133 | 0.19% |
| Fe RADIAL† | 45606.4 | 123.8 mg/L | 0.57 | 123.8 mg/L | 0.57 | 0.46% |
| Ca RADIAL† | 250766.9 | 54.44 mg/L | 0.067 | 54.44 mg/L | 0.067 | 0.12% |
| K RADIAL† | 7330.3 | 6.315 mg/L | 0.0590 | 6.315 mg/L | 0.0590 | 0.93% |
| Mg RADIAL† | 13211.9 | 38.61 mg/L | 0.131 | 38.61 mg/L | 0.131 | 0.34% |
| Na RADIAL† | 9171.6 | 0.6983 mg/L | 0.00918 | 0.6983 mg/L | 0.00918 | 1.31% |
| Mo 202.031 | -37.4 | -0.001 mg/L | 0.0004 | -0.001 mg/L | 0.0004 | 26.60% |

**Sequence No.: 72**
**Sample ID: 16I0240-84**
**Analyst: KV**
**Logged In Analyst (Original) : administrator**
**Initial Sample Wt:**
**Dilution:**

**Autosampler Location: 60**
**Date Collected: 9/12/2016 9:17:21 PM**
**Data Type: Reprocessed on 9/13/2016 6:59:56 AM**

**Initial Sample Vol:**
**Sample Prep Vol:**

**Mean Data: 16I0240-84**

| Analyte | Mean Corrected Intensity | Calib. Conc. | Calib. Units | Std.Dev. | Sample Conc. | Sample Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 16125753.0 | 5.243 | mg/L | 0.0336 | | | | 0.64% |
| Y RADIAL | 264529.0 | 5.762 | mg/L | 0.0503 | | | | 0.87% |
| As 188.979† | 322.4 | 0.1871 | mg/L | 0.00383 | 0.1871 | mg/L | 0.00383 | 2.05% |
| Tl 190.801† | -439.4 | -0.1417 | mg/L | 0.00180 | -0.1417 | mg/L | 0.00180 | 1.27% |
| Se 196.026† | -55.7 | 0.0258 | mg/L | 0.01807 | 0.0258 | mg/L | 0.01807 | 70.10% |
| Zn 206.200† | 19563.5 | 0.4270 | mg/L | 0.00438 | 0.4270 | mg/L | 0.00438 | 1.03% |
| Sb 206.836† | -87.3 | -0.0273 | mg/L | 0.00355 | -0.0273 | mg/L | 0.00355 | 13.00% |
| Pb 220.353† | 5736.5 | 0.5244 | mg/L | 0.00522 | 0.5244 | mg/L | 0.00522 | 0.99% |
| Cd 226.502† | 2932.1 | -0.0004 | mg/L | 0.00025 | -0.0004 | mg/L | 0.00025 | 61.63% |
| Co 228.616† | 4456.2 | 0.1078 | mg/L | 0.00096 | 0.1078 | mg/L | 0.00096 | 0.89% |
| Ni 232.003† | 5447.2 | 0.2381 | mg/L | 0.00321 | 0.2381 | mg/L | 0.00321 | 1.35% |
| Ba 233.527† | 88641.9 | 0.8951 | mg/L | 0.00697 | 0.8951 | mg/L | 0.00697 | 0.78% |
| Mn 257.610† | 5037025.4 | 5.274 | mg/L | 0.0050 | 5.274 | mg/L | 0.0050 | 0.09% |
| Cr 267.716† | 41043.7 | 0.2857 | mg/L | 0.00251 | 0.2857 | mg/L | 0.00251 | 0.88% |
| Fe 273.955† | 4987698.7 | 183.6 | mg/L | 0.15 | 183.6 | mg/L | 0.15 | 0.08% |
| Mg 279.077† | 1233925.0 | 55.62 | mg/L | 0.453 | 55.62 | mg/L | 0.453 | 0.81% |
| V 292.402† | 89136.2 | 0.2992 | mg/L | 0.00140 | 0.2992 | mg/L | 0.00140 | 0.47% |
| Al 308.215† | 3775290.2 | 135.2 | mg/L | 0.17 | 135.2 | mg/L | 0.17 | 0.13% |
| Be 313.107† | -37746.3 | -0.0087 | mg/L | 0.00012 | -0.0087 | mg/L | 0.00012 | 1.34% |
| Cu 324.752† | 59889.9 | 0.2327 | mg/L | 0.00150 | 0.2327 | mg/L | 0.00150 | 0.64% |
| Ag 338.289† | -12448.9 | -0.0803 | mg/L | 0.00075 | -0.0803 | mg/L | 0.00075 | 0.93% |
| Na 330.237† | -4471.0 | -3.602 | mg/L | 0.0074 | -3.602 | mg/L | 0.0074 | 0.21% |
| Ca 227.546† | 13248.7 | 37.14 | mg/L | 0.385 | 37.14 | mg/L | 0.385 | 1.04% |
| Al RADIAL† | 239856.2 | 124.7 | mg/L | 1.82 | 124.7 | mg/L | 1.82 | 1.46% |
| Fe RADIAL† | 68432.5 | 185.8 | mg/L | 0.41 | 185.8 | mg/L | 0.41 | 0.22% |
| Ca RADIAL† | 158833.5 | 34.48 | mg/L | 0.002 | 34.48 | mg/L | 0.002 | 0.01% |
| K RADIAL† | 31807.8 | 27.40 | mg/L | 0.068 | 27.40 | mg/L | 0.068 | 0.25% |
| Mg RADIAL† | 18040.3 | 52.72 | mg/L | 0.128 | 52.72 | mg/L | 0.128 | 0.24% |
| Na RADIAL† | 12855.9 | 0.9787 | mg/L | 0.00334 | 0.9787 | mg/L | 0.00334 | 0.34% |
| Mo 202.031 | -50.6 | -0.002 | mg/L | 0.0002 | -0.002 | mg/L | 0.0002 | 9.96% |

**Sequence No.: 73**
**Sample ID: 16I0240-85**
**Analyst: KV**
**Logged In Analyst (Original) : administrator**
**Initial Sample Wt:**
**Dilution:**

**Autosampler Location: 61**
**Date Collected: 9/12/2016 9:22:01 PM**
**Data Type: Reprocessed on 9/13/2016 6:59:57 AM**

**Initial Sample Vol:**
**Sample Prep Vol:**

**Mean Data: 16I0240-85**

| Analyte | Mean Corrected Intensity | Calib. Conc. | Calib. Units | Std.Dev. | Sample Conc. | Sample Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 15089080.6 | 4.906 | mg/L | 0.0694 | | | | 1.41% |
| Y RADIAL | 244449.1 | 5.325 | mg/L | 0.0601 | | | | 1.13% |
| As 188.979† | 66.8 | 0.0484 | mg/L | 0.00632 | 0.0484 | mg/L | 0.00632 | 13.05% |
| Tl 190.801† | -242.6 | -0.0761 | mg/L | 0.00348 | -0.0761 | mg/L | 0.00348 | 4.57% |
| Se 196.026† | -45.6 | 0.0183 | mg/L | 0.00956 | 0.0183 | mg/L | 0.00956 | 52.14% |
| Zn 206.200† | 37091.9 | 0.8116 | mg/L | 0.02589 | 0.8116 | mg/L | 0.02589 | 3.19% |
| Sb 206.836† | -64.4 | -0.0202 | mg/L | 0.00317 | -0.0202 | mg/L | 0.00317 | 15.67% |
| Pb 220.353† | 6760.4 | 0.6183 | mg/L | 0.00885 | 0.6183 | mg/L | 0.00885 | 1.43% |
| Cd 226.502† | 2496.0 | 0.0010 | mg/L | 0.00073 | 0.0010 | mg/L | 0.00073 | 73.53% |
| Co 228.616† | 3148.5 | 0.0765 | mg/L | 0.00078 | 0.0765 | mg/L | 0.00078 | 1.02% |
| Ni 232.003† | 4287.6 | 0.1874 | mg/L | 0.00360 | 0.1874 | mg/L | 0.00360 | 1.92% |
| Ba 233.527† | 76829.5 | 0.7758 | mg/L | 0.02281 | 0.7758 | mg/L | 0.02281 | 2.94% |
| Mn 257.610† | 2514562.9 | 2.640 | mg/L | 0.0300 | 2.640 | mg/L | 0.0300 | 1.14% |
| Cr 267.716† | 28459.0 | 0.1983 | mg/L | 0.00595 | 0.1983 | mg/L | 0.00595 | 3.00% |
| Fe 273.955† | 3889796.4 | 143.2 | mg/L | 0.28 | 143.2 | mg/L | 0.28 | 0.19% |
| Mg 279.077† | 1186167.4 | 53.48 | mg/L | 0.573 | 53.48 | mg/L | 0.573 | 1.07% |
| V 292.402† | 75288.3 | 0.2532 | mg/L | 0.00754 | 0.2532 | mg/L | 0.00754 | 2.98% |
| Al 308.215† | 2529889.2 | 90.57 | mg/L | 1.136 | 90.57 | mg/L | 1.136 | 1.25% |
| Be 313.107† | -18100.4 | -0.0042 | mg/L | 0.00031 | -0.0042 | mg/L | 0.00031 | 7.56% |
| Cu 324.752† | 88061.7 | 0.3371 | mg/L | 0.01036 | 0.3371 | mg/L | 0.01036 | 3.07% |
| Ag 338.289† | -6890.8 | -0.0446 | mg/L | 0.00150 | -0.0446 | mg/L | 0.00150 | 3.36% |
| Na 330.237† | -1518.5 | -0.7445 | mg/L | 0.13241 | -0.7445 | mg/L | 0.13241 | 17.79% |
| Ca 227.546† | 40830.5 | 110.6 | mg/L | 3.52 | 110.6 | mg/L | 3.52 | 3.18% |
| Al RADIAL† | 163640.5 | 85.08 | mg/L | 0.458 | 85.08 | mg/L | 0.458 | 0.54% |
| Fe RADIAL† | 53767.2 | 146.0 | mg/L | 0.95 | 146.0 | mg/L | 0.95 | 0.65% |
| Ca RADIAL† | 499593.8 | 108.4 | mg/L | 1.41 | 108.4 | mg/L | 1.41 | 1.30% |
| K RADIAL† | 16656.6 | 14.35 | mg/L | 0.038 | 14.35 | mg/L | 0.038 | 0.27% |
| Mg RADIAL† | 17656.8 | 51.61 | mg/L | 0.299 | 51.61 | mg/L | 0.299 | 0.58% |
| Na RADIAL† | 12505.3 | 0.9521 | mg/L | 0.00682 | 0.9521 | mg/L | 0.00682 | 0.72% |
| Mo 202.031 | -13.9 | -0.001 | mg/L | 0.0002 | -0.001 | mg/L | 0.0002 | 44.63% |

**Sequence No.: 74**
**Sample ID: 16I0240-86**
**Analyst: KV**
**Logged In Analyst (Original) : administrator**
**Initial Sample Wt:**
**Dilution:**

**Autosampler Location: 62**
**Date Collected: 9/12/2016 9:26:45 PM**
**Data Type: Reprocessed on 9/13/2016 6:59:57 AM**

**Initial Sample Vol:**
**Sample Prep Vol:**

**Mean Data: 16I0240-86**

| Analyte | Mean Corrected Intensity | Calib. Conc. | Calib. Units | Std.Dev. | Sample Conc. | Sample Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 15679298.4 | 5.098 | mg/L | 0.0419 | | | | 0.82% |
| Y RADIAL | 251422.3 | 5.477 | mg/L | 0.1169 | | | | 2.14% |
| As 188.979† | 82.8 | 0.0580 | mg/L | 0.01026 | 0.0580 | mg/L | 0.01026 | 17.70% |
| Tl 190.801† | -228.6 | -0.0707 | mg/L | 0.00304 | -0.0707 | mg/L | 0.00304 | 4.30% |
| Se 196.026† | -45.6 | 0.0238 | mg/L | 0.00538 | 0.0238 | mg/L | 0.00538 | 22.63% |
| Zn 206.200† | 77044.7 | 1.687 | mg/L | 0.0096 | 1.687 | mg/L | 0.0096 | 0.57% |
| Sb 206.836† | -13.1 | -0.0054 | mg/L | 0.00236 | -0.0054 | mg/L | 0.00236 | 43.24% |
| Pb 220.353† | 14285.2 | 1.307 | mg/L | 0.0120 | 1.307 | mg/L | 0.0120 | 0.92% |
| Cd 226.502† | 3445.2 | 0.0061 | mg/L | 0.00024 | 0.0061 | mg/L | 0.00024 | 3.97% |
| Co 228.616† | 3523.4 | 0.0855 | mg/L | 0.00139 | 0.0855 | mg/L | 0.00139 | 1.62% |
| Ni 232.003† | 4527.7 | 0.1982 | mg/L | 0.00376 | 0.1982 | mg/L | 0.00376 | 1.90% |
| Ba 233.527† | 109125.4 | 1.102 | mg/L | 0.0090 | 1.102 | mg/L | 0.0090 | 0.81% |
| Mn 257.610† | 2731540.4 | 2.867 | mg/L | 0.0521 | 2.867 | mg/L | 0.0521 | 1.82% |
| Cr 267.716† | 27678.3 | 0.1930 | mg/L | 0.00038 | 0.1930 | mg/L | 0.00038 | 0.20% |
| Fe 273.955† | 4096032.5 | 150.7 | mg/L | 0.36 | 150.7 | mg/L | 0.36 | 0.24% |
| Mg 279.077† | 1032002.6 | 46.52 | mg/L | 0.821 | 46.52 | mg/L | 0.821 | 1.76% |

| | | | | | | |
|---|---|---|---|---|---|---|
| V 292.402† | 80807.6 | 0.2717 mg/L | 0.00235 | 0.2717 mg/L | 0.00235 | 0.86% |
| Al 308.215† | 2422690.5 | 86.74 mg/L | 1.739 | 86.74 mg/L | 1.739 | 2.00% |
| Be 313.107† | -11980.0 | -0.0027 mg/L | 0.00020 | -0.0027 mg/L | 0.00020 | 7.33% |
| Cu 324.752† | 146724.5 | 0.5582 mg/L | 0.00471 | 0.5582 mg/L | 0.00471 | 0.84% |
| Ag 338.289† | -6018.5 | -0.0383 mg/L | 0.00179 | -0.0383 mg/L | 0.00179 | 4.66% |
| Na 330.237† | 381.7 | 1.211 mg/L | 0.1323 | 1.211 mg/L | 0.1323 | 10.93% |
| Ca 227.546† | 36398.8 | 98.83 mg/L | 1.060 | 98.83 mg/L | 1.060 | 1.07% |
| Al RADIAL† | 156620.8 | 81.43 mg/L | 0.402 | 81.43 mg/L | 0.402 | 0.49% |
| Fe RADIAL† | 58271.9 | 158.2 mg/L | 0.39 | 158.2 mg/L | 0.39 | 0.24% |
| Ca RADIAL† | 440763.2 | 95.68 mg/L | 1.791 | 95.68 mg/L | 1.791 | 1.87% |
| K RADIAL† | 16046.3 | 13.82 mg/L | 0.174 | 13.82 mg/L | 0.174 | 1.26% |
| Mg RADIAL† | 15814.0 | 46.22 mg/L | 0.154 | 46.22 mg/L | 0.154 | 0.33% |
| Na RADIAL† | 14260.5 | 1.086 mg/L | 0.0279 | 1.086 mg/L | 0.0279 | 2.57% |
| Mo 202.031 | 38.8 | 0.001 mg/L | 0.0002 | 0.001 mg/L | 0.0002 | 14.63% |

**Sequence No.: 75**
**Sample ID: 16I0240-87**
**Analyst: KV**
**Logged In Analyst (Original) : administrator**
**Initial Sample Wt:**
**Dilution:**

**Autosampler Location: 63**
**Date Collected: 9/12/2016 9:31:28 PM**
**Data Type: Reprocessed on 9/13/2016 6:59:58 AM**

**Initial Sample Vol:**
**Sample Prep Vol:**

**Mean Data: 16I0240-87**

| Analyte | Mean Corrected Intensity | Calib. Conc. | Units | Std.Dev. | Sample Conc. | Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 13942504.4 | 4.533 | mg/L | 0.0736 | | | | 1.62% |
| Y RADIAL | 219960.4 | 4.791 | mg/L | 0.0485 | | | | 1.01% |
| As 188.979† | -4.4 | 0.0083 | mg/L | 0.00397 | 0.0083 | mg/L | 0.00397 | 48.05% |
| Tl 190.801† | -176.0 | -0.0546 | mg/L | 0.00251 | -0.0546 | mg/L | 0.00251 | 4.60% |
| Se 196.026† | -23.9 | 0.0281 | mg/L | 0.00617 | 0.0281 | mg/L | 0.00617 | 22.00% |
| Zn 206.200† | 18603.6 | 0.4066 | mg/L | 0.00648 | 0.4066 | mg/L | 0.00648 | 1.59% |
| Sb 206.836† | -20.8 | -0.0073 | mg/L | 0.00341 | -0.0073 | mg/L | 0.00341 | 46.89% |
| Pb 220.353† | 3635.8 | 0.3299 | mg/L | 0.00570 | 0.3299 | mg/L | 0.00570 | 1.73% |
| Cd 226.502† | 1939.7 | 0.0003 | mg/L | 0.00025 | 0.0003 | mg/L | 0.00025 | 76.82% |
| Co 228.616† | 2497.7 | 0.0607 | mg/L | 0.00088 | 0.0607 | mg/L | 0.00088 | 1.45% |
| Ni 232.003† | 2599.3 | 0.1156 | mg/L | 0.00263 | 0.1156 | mg/L | 0.00263 | 2.28% |
| Ba 233.527† | 34692.3 | 0.3503 | mg/L | 0.00416 | 0.3503 | mg/L | 0.00416 | 1.19% |
| Mn 257.610† | 2176530.6 | 2.284 | mg/L | 0.0490 | 2.284 | mg/L | 0.0490 | 2.14% |
| Cr 267.716† | 18410.5 | 0.1285 | mg/L | 0.00188 | 0.1285 | mg/L | 0.00188 | 1.46% |
| Fe 273.955† | 3111424.4 | 114.5 | mg/L | 2.47 | 114.5 | mg/L | 2.47 | 2.16% |
| Mg 279.077† | 623785.4 | 28.12 | mg/L | 0.617 | 28.12 | mg/L | 0.617 | 2.19% |
| V 292.402† | 68046.0 | 0.2296 | mg/L | 0.00303 | 0.2296 | mg/L | 0.00303 | 1.32% |
| Al 308.215† | 1705357.3 | 61.06 | mg/L | 1.397 | 61.06 | mg/L | 1.397 | 2.29% |
| Be 313.107† | -8753.7 | -0.0020 | mg/L | 0.00008 | -0.0020 | mg/L | 0.00008 | 4.08% |
| Cu 324.752† | 40838.3 | 0.1583 | mg/L | 0.00214 | 0.1583 | mg/L | 0.00214 | 1.35% |
| Ag 338.289† | -4526.7 | -0.0283 | mg/L | 0.00094 | -0.0283 | mg/L | 0.00094 | 3.32% |
| Na 330.237† | -870.2 | -0.3065 | mg/L | 0.10560 | -0.3065 | mg/L | 0.10560 | 34.46% |
| Ca 227.546† | 9121.6 | 25.47 | mg/L | 0.304 | 25.47 | mg/L | 0.304 | 1.20% |
| Al RADIAL† | 114752.6 | 59.66 | mg/L | 0.231 | 59.66 | mg/L | 0.231 | 0.39% |
| Fe RADIAL† | 43282.4 | 117.5 | mg/L | 2.65 | 117.5 | mg/L | 2.65 | 2.26% |
| Ca RADIAL† | 114610.1 | 24.88 | mg/L | 0.571 | 24.88 | mg/L | 0.571 | 2.29% |
| K RADIAL† | 8709.2 | 7.503 | mg/L | 0.1686 | 7.503 | mg/L | 0.1686 | 2.25% |
| Mg RADIAL† | 9590.5 | 28.03 | mg/L | 0.639 | 28.03 | mg/L | 0.639 | 2.28% |
| Na RADIAL† | 6812.0 | 0.5186 | mg/L | 0.03178 | 0.5186 | mg/L | 0.03178 | 6.13% |
| Mo 202.031 | -67.0 | -0.002 | mg/L | 0.0003 | -0.002 | mg/L | 0.0003 | 11.09% |

**Sequence No.: 76**
**Sample ID: 16I0240-88**
**Analyst: KV**
**Logged In Analyst (Original) : administrator**
**Initial Sample Wt:**
**Dilution:**

**Autosampler Location: 64**
**Date Collected: 9/12/2016 9:36:11 PM**
**Data Type: Reprocessed on 9/13/2016 6:59:59 AM**

**Initial Sample Vol:**
**Sample Prep Vol:**

**Mean Data: 16I0240-88**

| Analyte | Mean Corrected Intensity | Calib. Conc. | Units | Std.Dev. | Sample Conc. | Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 15860372.9 | 5.157 | mg/L | 0.0395 | | | | 0.77% |
| Y RADIAL | 247552.9 | 5.392 | mg/L | 0.0939 | | | | 1.74% |

| | | | | | | |
|---|---|---|---|---|---|---|
| As 188.979† | 42.3 | 0.0358 mg/L | 0.00486 | 0.0358 mg/L | 0.00486 | 13.57% |
| Tl 190.801† | -163.7 | -0.0488 mg/L | 0.00447 | -0.0488 mg/L | 0.00447 | 9.17% |
| Se 196.026† | -32.9 | 0.0331 mg/L | 0.00051 | 0.0331 mg/L | 0.00051 | 1.55% |
| Zn 206.200† | 28807.9 | 0.6300 mg/L | 0.01266 | 0.6300 mg/L | 0.01266 | 2.01% |
| Sb 206.836† | -41.6 | -0.0137 mg/L | 0.00216 | -0.0137 mg/L | 0.00216 | 15.79% |
| Pb 220.353† | 7249.2 | 0.6606 mg/L | 0.00198 | 0.6606 mg/L | 0.00198 | 0.30% |
| Cd 226.502† | 13033.0 | 0.0726 mg/L | 0.00194 | 0.0726 mg/L | 0.00194 | 2.68% |
| Co 228.616† | 2606.8 | 0.0639 mg/L | 0.00065 | 0.0639 mg/L | 0.00065 | 1.02% |
| Ni 232.003† | 5086.8 | 0.2207 mg/L | 0.00276 | 0.2207 mg/L | 0.00276 | 1.25% |
| Ba 233.527† | 70585.8 | 0.7128 mg/L | 0.01379 | 0.7128 mg/L | 0.01379 | 1.93% |
| Mn 257.610† | 2541564.6 | 2.668 mg/L | 0.0468 | 2.668 mg/L | 0.0468 | 1.76% |
| Cr 267.716† | 34471.9 | 0.2399 mg/L | 0.00426 | 0.2399 mg/L | 0.00426 | 1.77% |
| Fe 273.955† | 3870549.9 | 142.4 mg/L | 0.51 | 142.4 mg/L | 0.51 | 0.36% |
| Mg 279.077† | 485751.0 | 21.88 mg/L | 0.362 | 21.88 mg/L | 0.362 | 1.66% |
| V 292.402† | 66838.9 | 0.2238 mg/L | 0.00341 | 0.2238 mg/L | 0.00341 | 1.52% |
| Al 308.215† | 2213251.8 | 79.24 mg/L | 1.439 | 79.24 mg/L | 1.439 | 1.82% |
| Be 313.107† | -5739.9 | -0.0013 mg/L | 0.00009 | -0.0013 mg/L | 0.00009 | 7.05% |
| Cu 324.752† | 147812.7 | 0.5620 mg/L | 0.00998 | 0.5620 mg/L | 0.00998 | 1.78% |
| Ag 338.289† | -4649.4 | -0.0286 mg/L | 0.00100 | -0.0286 mg/L | 0.00100 | 3.51% |
| Na 330.237† | -599.4 | 0.1203 mg/L | 0.03554 | 0.1203 mg/L | 0.03554 | 29.54% |
| Ca 227.546† | 10857.7 | 30.40 mg/L | 0.549 | 30.40 mg/L | 0.549 | 1.81% |
| Al RADIAL† | 147630.6 | 76.76 mg/L | 0.246 | 76.76 mg/L | 0.246 | 0.32% |
| Fe RADIAL† | 55101.0 | 149.6 mg/L | 5.21 | 149.6 mg/L | 5.21 | 3.48% |
| Ca RADIAL† | 141842.7 | 30.79 mg/L | 1.129 | 30.79 mg/L | 1.129 | 3.67% |
| K RADIAL† | 10367.1 | 8.931 mg/L | 0.2738 | 8.931 mg/L | 0.2738 | 3.07% |
| Mg RADIAL† | 7569.9 | 22.12 mg/L | 0.738 | 22.12 mg/L | 0.738 | 3.34% |
| Na RADIAL† | 11479.3 | 0.8739 mg/L | 0.01801 | 0.8739 mg/L | 0.01801 | 2.06% |
| Mo 202.031 | -11.3 | 0.000 mg/L | 0.0003 | 0.000 mg/L | 0.0003 | 64.13% |

**Sequence No.: 77**
**Sample ID: 16I0252-01**
**Analyst: KV**
**Logged In Analyst (Original) : administrator**
**Initial Sample Wt:**
**Dilution:**

**Autosampler Location: 65**
**Date Collected: 9/12/2016 9:40:54 PM**
**Data Type: Reprocessed on 9/13/2016 6:59:59 AM**

**Initial Sample Vol:**
**Sample Prep Vol:**

**Mean Data: 16I0252-01**

| Analyte | Mean Corrected Intensity | Calib. Conc. | Calib. Units | Std.Dev. | Sample Conc. | Sample Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 17092581.8 | 5.558 | mg/L | 0.0473 | | | | 0.85% |
| Y RADIAL | 269067.1 | 5.861 | mg/L | 0.0277 | | | | 0.47% |
| As 188.979† | 8.0 | 0.0087 | mg/L | 0.00264 | 0.0087 | mg/L | 0.00264 | 30.21% |
| Tl 190.801† | -21.7 | -0.0050 | mg/L | 0.00096 | -0.0050 | mg/L | 0.00096 | 19.29% |
| Se 196.026† | -14.9 | 0.0069 | mg/L | 0.00119 | 0.0069 | mg/L | 0.00119 | 17.16% |
| Zn 206.200† | 7459.5 | 0.1630 | mg/L | 0.00216 | 0.1630 | mg/L | 0.00216 | 1.33% |
| Sb 206.836† | 155.4 | 0.0447 | mg/L | 0.00210 | 0.0447 | mg/L | 0.00210 | 4.70% |
| Pb 220.353† | 702.0 | 0.0598 | mg/L | 0.00059 | 0.0598 | mg/L | 0.00059 | 0.99% |
| Cd 226.502† | 844.9 | 0.0003 | mg/L | 0.00014 | 0.0003 | mg/L | 0.00014 | 48.99% |
| Co 228.616† | 955.4 | 0.0233 | mg/L | 0.00033 | 0.0233 | mg/L | 0.00033 | 1.40% |
| Ni 232.003† | 30772.0 | 1.275 | mg/L | 0.0207 | 1.275 | mg/L | 0.0207 | 1.62% |
| Ba 233.527† | 4492.5 | 0.0454 | mg/L | 0.00130 | 0.0454 | mg/L | 0.00130 | 2.86% |
| Mn 257.610† | 471295.5 | 0.4976 | mg/L | 0.00569 | 0.4976 | mg/L | 0.00569 | 1.14% |
| Cr 267.716† | 385901.5 | 2.669 | mg/L | 0.0251 | 2.669 | mg/L | 0.0251 | 0.94% |
| Fe 273.955† | 1361435.5 | 50.10 | mg/L | 0.504 | 50.10 | mg/L | 0.504 | 1.01% |
| Mg 279.077† | 51277.3 | 2.305 | mg/L | 0.0362 | 2.305 | mg/L | 0.0362 | 1.57% |
| V 292.402† | 574.3 | -0.0005 | mg/L | 0.00050 | -0.0005 | mg/L | 0.00050 | 99.48% |
| Al 308.215† | 75477.3 | 2.706 | mg/L | 0.0686 | 2.706 | mg/L | 0.0686 | 2.54% |
| Be 313.107† | -49367.5 | -0.0113 | mg/L | 0.00038 | -0.0113 | mg/L | 0.00038 | 3.36% |
| Cu 324.752† | 1222228.2 | 4.599 | mg/L | 0.0475 | 4.599 | mg/L | 0.0475 | 1.03% |
| Ag 338.289† | 155275.0 | 1.044 | mg/L | 0.0202 | 1.044 | mg/L | 0.0202 | 1.93% |
| Na 330.237† | 15647.1 | 15.97 | mg/L | 0.278 | 15.97 | mg/L | 0.278 | 1.74% |
| Ca 227.546† | 2765.8 | 7.833 | mg/L | 0.0981 | 7.833 | mg/L | 0.0981 | 1.25% |
| Al RADIAL† | 4765.0 | 2.482 | mg/L | 0.0156 | 2.482 | mg/L | 0.0156 | 0.63% |
| Fe RADIAL† | 18352.1 | 49.83 | mg/L | 0.151 | 49.83 | mg/L | 0.151 | 0.30% |
| Ca RADIAL† | 33466.1 | 7.265 | mg/L | 0.0171 | 7.265 | mg/L | 0.0171 | 0.24% |
| K RADIAL† | 83.8 | 0.0722 | mg/L | 0.01743 | 0.0722 | mg/L | 0.01743 | 24.15% |
| Mg RADIAL† | 788.2 | 2.299 | mg/L | 0.0379 | 2.299 | mg/L | 0.0379 | 1.65% |
| Na RADIAL† | 295734.7 | 22.52 | mg/L | 0.267 | 22.52 | mg/L | 0.267 | 1.18% |
| Mo 202.031 | 3033.1 | 0.111 | mg/L | 0.0009 | 0.111 | mg/L | 0.0009 | 0.82% |

**Sequence No.: 78**
**Sample ID: 16I0307-01**
**Analyst: KV**
**Logged In Analyst (Original) : administrator**
**Initial Sample Wt:**
**Dilution:**

**Autosampler Location: 66**
**Date Collected: 9/12/2016 9:46:03 PM**
**Data Type: Reprocessed on 9/13/2016 7:00:00 AM**

**Initial Sample Vol:**
**Sample Prep Vol:**

**Mean Data: 16I0307-01**

| Analyte | Mean Corrected Intensity | Calib. Conc. | Units | Std.Dev. | Sample Conc. | Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 16191811.8 | 5.265 | mg/L | 0.1099 | | | | 2.09% |
| Y RADIAL | 249086.3 | 5.426 | mg/L | 0.0883 | | | | 1.63% |
| As 188.979† | 2.8 | 0.0015 | mg/L | 0.00201 | 0.0015 | mg/L | 0.00201 | 134.86% |
| Tl 190.801† | 9.3 | 0.0032 | mg/L | 0.00229 | 0.0032 | mg/L | 0.00229 | 71.40% |
| Se 196.026† | 0.4 | 0.0005 | mg/L | 0.00799 | 0.0005 | mg/L | 0.00799 | >999.9% |
| Zn 206.200† | 29736.2 | 0.6518 | mg/L | 0.01628 | 0.6518 | mg/L | 0.01628 | 2.50% |
| Sb 206.836† | -11.7 | -0.0034 | mg/L | 0.00264 | -0.0034 | mg/L | 0.00264 | 77.51% |
| Pb 220.353† | 81.4 | 0.0074 | mg/L | 0.00171 | 0.0074 | mg/L | 0.00171 | 23.02% |
| Cd 226.502† | -1.1 | 0.0000 | mg/L | 0.00002 | 0.0000 | mg/L | 0.00002 | 47.08% |
| Co 228.616† | -16.5 | -0.0004 | mg/L | 0.00014 | -0.0004 | mg/L | 0.00014 | 35.88% |
| Ni 232.003† | 112.8 | 0.0047 | mg/L | 0.00076 | 0.0047 | mg/L | 0.00076 | 16.31% |
| Ba 233.527† | 256.7 | 0.0026 | mg/L | 0.00002 | 0.0026 | mg/L | 0.00002 | 0.62% |
| Mn 257.610† | 4168.4 | 0.0044 | mg/L | 0.00011 | 0.0044 | mg/L | 0.00011 | 2.59% |
| Cr 267.716† | 137.6 | 0.0010 | mg/L | 0.00010 | 0.0010 | mg/L | 0.00010 | 10.66% |
| Fe 273.955† | 6518.2 | 0.2399 | mg/L | 0.00669 | 0.2399 | mg/L | 0.00669 | 2.79% |
| Mg 279.077† | 3796.9 | 0.1712 | mg/L | 0.00491 | 0.1712 | mg/L | 0.00491 | 2.87% |
| V 292.402† | -738.1 | -0.0026 | mg/L | 0.00013 | -0.0026 | mg/L | 0.00013 | 5.00% |
| Al 308.215† | -5403.0 | -0.1935 | mg/L | 0.00772 | -0.1935 | mg/L | 0.00772 | 3.99% |
| Be 313.107† | -4948.8 | -0.0011 | mg/L | 0.00020 | -0.0011 | mg/L | 0.00020 | 17.63% |
| Cu 324.752† | 7328.3 | 0.0276 | mg/L | 0.00098 | 0.0276 | mg/L | 0.00098 | 3.56% |
| Ag 338.289† | -11.0 | -0.0001 | mg/L | 0.00010 | -0.0001 | mg/L | 0.00010 | 108.06% |
| Na 330.237† | 2210.7 | 2.227 | mg/L | 0.0562 | 2.227 | mg/L | 0.0562 | 2.52% |
| Ca 227.546† | 755.3 | 2.023 | mg/L | 0.0321 | 2.023 | mg/L | 0.0321 | 1.59% |
| Al RADIAL† | -376.3 | -0.1957 | mg/L | 0.00629 | -0.1957 | mg/L | 0.00629 | 3.21% |
| Fe RADIAL† | 91.0 | 0.2470 | mg/L | 0.00903 | 0.2470 | mg/L | 0.00903 | 3.66% |
| Ca RADIAL† | 9225.4 | 2.003 | mg/L | 0.0362 | 2.003 | mg/L | 0.0362 | 1.81% |
| K RADIAL† | 99.3 | 0.0856 | mg/L | 0.01505 | 0.0856 | mg/L | 0.01505 | 17.59% |
| Mg RADIAL† | 59.0 | 0.1726 | mg/L | 0.03610 | 0.1726 | mg/L | 0.03610 | 20.92% |
| Na RADIAL† | 24910.6 | 1.897 | mg/L | 0.0151 | 1.897 | mg/L | 0.0151 | 0.79% |
| Mo 202.031 | 8654.2 | 0.317 | mg/L | 0.0022 | 0.317 | mg/L | 0.0022 | 0.70% |

**Sequence No.: 79**
**Sample ID: 16I0331-02**
**Analyst: KV**
**Logged In Analyst (Original) : administrator**
**Initial Sample Wt:**
**Dilution:**

**Autosampler Location: 67**
**Date Collected: 9/12/2016 9:51:09 PM**
**Data Type: Reprocessed on 9/13/2016 7:00:01 AM**

**Initial Sample Vol:**
**Sample Prep Vol:**

**Mean Data: 16I0331-02**

| Analyte | Mean Corrected Intensity | Calib. Conc. | Units | Std.Dev. | Sample Conc. | Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 15732803.2 | 5.115 | mg/L | 0.0224 | | | | 0.44% |
| Y RADIAL | 257811.1 | 5.616 | mg/L | 0.0440 | | | | 0.78% |
| As 188.979† | -20.1 | 0.0093 | mg/L | 0.00741 | 0.0093 | mg/L | 0.00741 | 79.97% |
| Tl 190.801† | -104.5 | -0.0249 | mg/L | 0.00266 | -0.0249 | mg/L | 0.00266 | 10.71% |
| Se 196.026† | -60.5 | 0.0367 | mg/L | 0.00250 | 0.0367 | mg/L | 0.00250 | 6.82% |
| Zn 206.200† | 210166.2 | 4.604 | mg/L | 0.0286 | 4.604 | mg/L | 0.0286 | 0.62% |
| Sb 206.836† | 131.7 | 0.0361 | mg/L | 0.00384 | 0.0361 | mg/L | 0.00384 | 10.65% |
| Pb 220.353† | 349648.5 | 32.07 | mg/L | 0.167 | 32.07 | mg/L | 0.167 | 0.52% |
| Cd 226.502† | 4037.0 | 0.0032 | mg/L | 0.00033 | 0.0032 | mg/L | 0.00033 | 10.13% |
| Co 228.616† | 2244.0 | 0.0570 | mg/L | 0.00049 | 0.0570 | mg/L | 0.00049 | 0.87% |
| Ni 232.003† | 5103.1 | 0.2263 | mg/L | 0.00124 | 0.2263 | mg/L | 0.00124 | 0.55% |
| Ba 233.527† | 60205.5 | 0.6080 | mg/L | 0.00353 | 0.6080 | mg/L | 0.00353 | 0.58% |
| Mn 257.610† | 2292305.8 | 2.418 | mg/L | 0.0137 | 2.418 | mg/L | 0.0137 | 0.57% |
| Cr 267.716† | 45383.6 | 0.3161 | mg/L | 0.00175 | 0.3161 | mg/L | 0.00175 | 0.55% |
| Fe 273.955† | 5708829.2 | 210.1 | mg/L | 0.36 | 210.1 | mg/L | 0.36 | 0.17% |
| Mg 279.077† | 2576469.4 | 116.2 | mg/L | 0.61 | 116.2 | mg/L | 0.61 | 0.53% |
| V 292.402† | 58757.3 | 0.1923 | mg/L | 0.00139 | 0.1923 | mg/L | 0.00139 | 0.72% |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Al 308.215† | 1178164.4 | 42.18 | mg/L | 0.167 | 42.18 | mg/L | 0.167 | 0.40% |
| Be 313.107† | -7672.9 | -0.0018 | mg/L | 0.00006 | -0.0018 | mg/L | 0.00006 | 3.36% |
| Cu 324.752† | 1258506.9 | 4.743 | mg/L | 0.0241 | 4.743 | mg/L | 0.0241 | 0.51% |
| Ag 338.289† | -402.6 | -0.0014 | mg/L | 0.00083 | -0.0014 | mg/L | 0.00083 | 59.01% |
| Na 330.237† | 10674.8 | 12.03 | mg/L | 0.266 | 12.03 | mg/L | 0.266 | 2.21% |
| Ca 227.546† | 108228.8 | 291.6 | mg/L | 1.39 | 291.6 | mg/L | 1.39 | 0.48% |
| Al RADIAL† | 74569.0 | 38.78 | mg/L | 0.142 | 38.78 | mg/L | 0.142 | 0.37% |
| Fe RADIAL† | 81472.7 | 221.2 | mg/L | 0.37 | 221.2 | mg/L | 0.37 | 0.17% |
| Ca RADIAL† | 1274032.7 | 276.6 | mg/L | 2.98 | 276.6 | mg/L | 2.98 | 1.08% |
| K RADIAL† | 5058.1 | 4.358 | mg/L | 0.0204 | 4.358 | mg/L | 0.0204 | 0.47% |
| Mg RADIAL† | 38186.7 | 111.6 | mg/L | 0.21 | 111.6 | mg/L | 0.21 | 0.19% |
| Na RADIAL† | 74303.9 | 5.657 | mg/L | 0.0506 | 5.657 | mg/L | 0.0506 | 0.90% |
| Mo 202.031 | 520.1 | 0.019 | mg/L | 0.0007 | 0.019 | mg/L | 0.0007 | 3.89% |

**Sequence No.: 80**
**Sample ID: 16I0331-03**
**Analyst: KV**
**Logged In Analyst (Original) : administrator**
**Initial Sample Wt:**
**Dilution:**

**Autosampler Location: 68**
**Date Collected: 9/12/2016 9:58:48 PM**
**Data Type: Reprocessed on 9/13/2016 7:00:02 AM**

**Initial Sample Vol:**
**Sample Prep Vol:**

**Mean Data: 16I0331-03**

| Analyte | Mean Corrected Intensity | Calib. Conc. | Units | Std.Dev. | Sample Conc. | Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 14106636.6 | 4.587 | mg/L | 0.0425 | | | | 0.93% |
| Y RADIAL | 230607.4 | 5.023 | mg/L | 0.0204 | | | | 0.41% |
| As 188.979† | 16.1 | 0.0243 | mg/L | 0.00132 | 0.0243 | mg/L | 0.00132 | 5.44% |
| Tl 190.801† | -103.4 | -0.0268 | mg/L | 0.00451 | -0.0268 | mg/L | 0.00451 | 16.82% |
| Se 196.026† | -55.0 | 0.0215 | mg/L | 0.00430 | 0.0215 | mg/L | 0.00430 | 19.96% |
| Zn 206.200† | 184234.7 | 4.037 | mg/L | 0.0817 | 4.037 | mg/L | 0.0817 | 2.02% |
| Sb 206.836† | 25.1 | 0.0055 | mg/L | 0.00121 | 0.0055 | mg/L | 0.00121 | 21.86% |
| Pb 220.353† | 46841.4 | 4.290 | mg/L | 0.0800 | 4.290 | mg/L | 0.0800 | 1.87% |
| Cd 226.502† | 3575.6 | 0.0052 | mg/L | 0.00012 | 0.0052 | mg/L | 0.00012 | 2.32% |
| Co 228.616† | 2260.9 | 0.0564 | mg/L | 0.00117 | 0.0564 | mg/L | 0.00117 | 2.07% |
| Ni 232.003† | 3646.7 | 0.1629 | mg/L | 0.00189 | 0.1629 | mg/L | 0.00189 | 1.16% |
| Ba 233.527† | 54081.1 | 0.5461 | mg/L | 0.01066 | 0.5461 | mg/L | 0.01066 | 1.95% |
| Mn 257.610† | 1548363.1 | 1.636 | mg/L | 0.0292 | 1.636 | mg/L | 0.0292 | 1.78% |
| Cr 267.716† | 30226.6 | 0.2108 | mg/L | 0.00427 | 0.2108 | mg/L | 0.00427 | 2.03% |
| Fe 273.955† | 4708209.7 | 173.3 | mg/L | 0.81 | 173.3 | mg/L | 0.81 | 0.47% |
| Mg 279.077† | 4562904.4 | 205.8 | mg/L | 3.89 | 205.8 | mg/L | 3.89 | 1.89% |
| V 292.402† | 61822.2 | 0.2052 | mg/L | 0.00416 | 0.2052 | mg/L | 0.00416 | 2.03% |
| Al 308.215† | 816993.9 | 29.24 | mg/L | 0.495 | 29.24 | mg/L | 0.495 | 1.69% |
| Be 313.107† | -7476.2 | -0.0017 | mg/L | 0.00004 | -0.0017 | mg/L | 0.00004 | 2.26% |
| Cu 324.752† | 734444.5 | 2.770 | mg/L | 0.0467 | 2.770 | mg/L | 0.0467 | 1.69% |
| Ag 338.289† | -1364.8 | -0.0105 | mg/L | 0.00086 | -0.0105 | mg/L | 0.00086 | 8.18% |
| Na 330.237† | 8679.6 | 9.958 | mg/L | 0.1442 | 9.958 | mg/L | 0.1442 | 1.45% |
| Ca 227.546† | 165379.3 | 444.1 | mg/L | 8.14 | 444.1 | mg/L | 8.14 | 1.83% |
| Al RADIAL† | 52489.3 | 27.29 | mg/L | 0.046 | 27.29 | mg/L | 0.046 | 0.17% |
| Fe RADIAL† | 64403.3 | 174.9 | mg/L | 0.38 | 174.9 | mg/L | 0.38 | 0.21% |
| Ca RADIAL† | 1960071.4 | 425.5 | mg/L | 7.95 | 425.5 | mg/L | 7.95 | 1.87% |
| K RADIAL† | 5020.0 | 4.325 | mg/L | 0.0369 | 4.325 | mg/L | 0.0369 | 0.85% |
| Mg RADIAL† | 66568.2 | 194.6 | mg/L | 0.25 | 194.6 | mg/L | 0.25 | 0.13% |
| Na RADIAL† | 48762.1 | 3.712 | mg/L | 0.0657 | 3.712 | mg/L | 0.0657 | 1.77% |
| Mo 202.031 | 337.4 | 0.012 | mg/L | 0.0002 | 0.012 | mg/L | 0.0002 | 1.87% |

**Sequence No.: 81**
**Sample ID: SEQ-CCV7**
**Analyst: KV**
**Logged In Analyst (Original) : administrator**
**Initial Sample Wt:**
**Dilution:**

**Autosampler Location: 3**
**Date Collected: 9/12/2016 10:03:27 PM**
**Data Type: Reprocessed on 9/13/2016 7:00:02 AM**

**Initial Sample Vol:**
**Sample Prep Vol:**

**Mean Data: SEQ-CCV7**

| Analyte | Mean Corrected Intensity | Calib. Conc. | Units | Std.Dev. | Sample Conc. | Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 14646886.4 | 4.762 | mg/L | 0.0460 | | | | 0.96% |
| Y RADIAL | 228404.8 | 4.975 | mg/L | 0.0171 | | | | 0.34% |
| As 188.979† | 480.6 | 0.2544 | mg/L | 0.00286 | 0.2544 | mg/L | 0.00286 | 1.12% |

| | | | | | | |
|---|---|---|---|---|---|---|
| Tl 190.801† | 670.9 | 0.2308 mg/L | 0.00183 | 0.2308 mg/L | 0.00183 | 0.79% |
| Se 196.026† | 238.0 | 0.2497 mg/L | 0.00554 | 0.2497 mg/L | 0.00554 | 2.22% |
| Zn 206.200† | 115876.6 | 2.540 mg/L | 0.0211 | 2.540 mg/L | 0.0211 | 0.83% |
| Sb 206.836† | 841.8 | 0.2450 mg/L | 0.00365 | 0.2450 mg/L | 0.00365 | 1.49% |
| Pb 220.353† | 2826.6 | 0.2604 mg/L | 0.00333 | 0.2604 mg/L | 0.00333 | 1.28% |
| Cd 226.502† | 18405.8 | 0.1252 mg/L | 0.00112 | 0.1252 mg/L | 0.00112 | 0.89% |
| Co 228.616† | 110062.9 | 2.566 mg/L | 0.0205 | 2.566 mg/L | 0.0205 | 0.80% |
| Ni 232.003† | 61059.0 | 2.523 mg/L | 0.0275 | 2.523 mg/L | 0.0275 | 1.09% |
| Ba 233.527† | 1032530.4 | 10.43 mg/L | 0.157 | 10.43 mg/L | 0.157 | 1.50% |
| Mn 257.610† | 2497890.4 | 2.604 mg/L | 0.0381 | 2.604 mg/L | 0.0381 | 1.46% |
| Cr 267.716† | 149941.0 | 1.037 mg/L | 0.0084 | 1.037 mg/L | 0.0084 | 0.81% |
| Fe 273.955† | 140405.9 | 5.167 mg/L | 0.0430 | 5.167 mg/L | 0.0430 | 0.83% |
| Mg 279.077† | 572219.8 | 25.81 mg/L | 0.432 | 25.81 mg/L | 0.432 | 1.67% |
| V 292.402† | 741775.6 | 2.567 mg/L | 0.0359 | 2.567 mg/L | 0.0359 | 1.40% |
| Al 308.215† | 281709.8 | 10.08 mg/L | 0.109 | 10.08 mg/L | 0.109 | 1.08% |
| Be 313.107† | 1125412.2 | 0.2581 mg/L | 0.00277 | 0.2581 mg/L | 0.00277 | 1.07% |
| Cu 324.752† | 343685.1 | 1.293 mg/L | 0.0133 | 1.293 mg/L | 0.0133 | 1.03% |
| Ag 338.289† | 193400.7 | 1.299 mg/L | 0.0121 | 1.299 mg/L | 0.0121 | 0.93% |
| Na 330.237† | 23859.1 | 24.05 mg/L | 0.232 | 24.05 mg/L | 0.232 | 0.97% |
| Ca 227.546† | 9522.1 | 25.53 mg/L | 0.363 | 25.53 mg/L | 0.363 | 1.42% |
| Al RADIAL† | 18337.8 | 9.532 mg/L | 0.0166 | 9.532 mg/L | 0.0166 | 0.17% |
| Fe RADIAL† | 1909.0 | 5.183 mg/L | 0.0561 | 5.183 mg/L | 0.0561 | 1.08% |
| Ca RADIAL† | 116885.7 | 25.37 mg/L | 0.010 | 25.37 mg/L | 0.010 | 0.04% |
| K RADIAL† | 5948.4 | 5.125 mg/L | 0.0665 | 5.125 mg/L | 0.0665 | 1.30% |
| Mg RADIAL† | 8852.3 | 25.88 mg/L | 0.219 | 25.88 mg/L | 0.219 | 0.85% |
| Na RADIAL† | 331901.7 | 25.27 mg/L | 0.156 | 25.27 mg/L | 0.156 | 0.62% |
| Mo 202.031 | 28276.9 | 1.036 mg/L | 0.0078 | 1.036 mg/L | 0.0078 | 0.75% |

**Sequence No.: 82**
**Sample ID: SEQ-CCB7**
**Analyst: KV**
**Logged In Analyst (Original) : administrator**
**Initial Sample Wt:**
**Dilution:**

**Autosampler Location: 4**
**Date Collected: 9/12/2016 10:11:34 PM**
**Data Type: Reprocessed on 9/13/2016 7:00:03 AM**

**Initial Sample Vol:**
**Sample Prep Vol:**

**Mean Data: SEQ-CCB7**

| Analyte | Mean Corrected Intensity | Calib. Conc. | Units | Std.Dev. | Sample Conc. | Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 14835689.3 | 4.824 | mg/L | 0.0595 | | | | 1.23% |
| Y RADIAL | 226743.5 | 4.939 | mg/L | 0.0118 | | | | 0.24% |
| As 188.979† | -0.8 | -0.0004 | mg/L | 0.00102 | -0.0004 | mg/L | 0.00102 | 239.46% |
| Tl 190.801† | 3.8 | 0.0013 | mg/L | 0.00444 | 0.0013 | mg/L | 0.00444 | 338.63% |
| Se 196.026† | 1.0 | 0.0010 | mg/L | 0.00207 | 0.0010 | mg/L | 0.00207 | 208.30% |
| Zn 206.200† | -210.1 | -0.0046 | mg/L | 0.00020 | -0.0046 | mg/L | 0.00020 | 4.32% |
| Sb 206.836† | -2.0 | -0.0006 | mg/L | 0.00174 | -0.0006 | mg/L | 0.00174 | 293.05% |
| Pb 220.353† | 46.8 | 0.0043 | mg/L | 0.00047 | 0.0043 | mg/L | 0.00047 | 10.90% |
| Cd 226.502† | -53.3 | -0.0004 | mg/L | 0.00011 | -0.0004 | mg/L | 0.00011 | 29.28% |
| Co 228.616† | -2.6 | -0.0001 | mg/L | 0.00008 | -0.0001 | mg/L | 0.00008 | 138.93% |
| Ni 232.003† | -37.0 | -0.0015 | mg/L | 0.00023 | -0.0015 | mg/L | 0.00023 | 14.80% |
| Ba 233.527† | -12.3 | -0.0001 | mg/L | 0.00007 | -0.0001 | mg/L | 0.00007 | 59.34% |
| Mn 257.610† | -96.5 | -0.0001 | mg/L | 0.00001 | -0.0001 | mg/L | 0.00001 | 12.20% |
| Cr 267.716† | 33.2 | 0.0002 | mg/L | 0.00032 | 0.0002 | mg/L | 0.00032 | 141.54% |
| Fe 273.955† | -50.0 | -0.0018 | mg/L | 0.00005 | -0.0018 | mg/L | 0.00005 | 2.74% |
| Mg 279.077† | 55.1 | 0.0025 | mg/L | 0.00147 | 0.0025 | mg/L | 0.00147 | 59.12% |
| V 292.402† | -13.0 | 0.0000 | mg/L | 0.00020 | 0.0000 | mg/L | 0.00020 | 442.57% |
| Al 308.215† | -3087.5 | -0.1105 | mg/L | 0.00526 | -0.1105 | mg/L | 0.00526 | 4.76% |
| Be 313.107† | -305.8 | -0.0001 | mg/L | 0.00008 | -0.0001 | mg/L | 0.00008 | 108.48% |
| Cu 324.752† | 32.0 | 0.0001 | mg/L | 0.00007 | 0.0001 | mg/L | 0.00007 | 57.82% |
| Ag 338.289† | -28.4 | -0.0002 | mg/L | 0.00042 | -0.0002 | mg/L | 0.00042 | 218.08% |
| Na 330.237† | -78.8 | -0.0792 | mg/L | 0.01404 | -0.0792 | mg/L | 0.01404 | 17.73% |
| Ca 227.546† | 30.6 | 0.0817 | mg/L | 0.02940 | 0.0817 | mg/L | 0.02940 | 35.96% |
| Al RADIAL† | -250.3 | -0.1301 | mg/L | 0.00356 | -0.1301 | mg/L | 0.00356 | 2.74% |
| Fe RADIAL† | -0.9 | -0.0024 | mg/L | 0.01737 | -0.0024 | mg/L | 0.01737 | 714.00% |
| Ca RADIAL† | 227.0 | 0.0493 | mg/L | 0.00623 | 0.0493 | mg/L | 0.00623 | 12.65% |
| K RADIAL† | 21.3 | 0.0184 | mg/L | 0.02746 | 0.0184 | mg/L | 0.02746 | 149.42% |
| Mg RADIAL† | -0.2 | -0.0006 | mg/L | 0.01548 | -0.0006 | mg/L | 0.01548 | >999.9% |
| Na RADIAL† | -2533.0 | -0.1928 | mg/L | 0.01642 | -0.1928 | mg/L | 0.01642 | 8.51% |
| Mo 202.031 | -2.4 | 0.000 | mg/L | 0.0002 | 0.000 | mg/L | 0.0002 | 246.52% |

**Sequence No.: 83**
**Sample ID: 16I0332-02**
**Analyst: KV**
**Logged In Analyst (Original) : administrator**
**Initial Sample Wt:**
**Dilution:**

**Autosampler Location: 69**
**Date Collected: 9/12/2016 10:16:40 PM**
**Data Type: Reprocessed on 9/13/2016 7:00:04 AM**

**Initial Sample Vol:**
**Sample Prep Vol:**

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**Mean Data: 16I0332-02**

| Analyte | Mean Corrected Intensity | Calib. Conc. | Calib. Units | Std.Dev. | Sample Conc. | Sample Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 15610322.1 | 5.076 | mg/L | 0.0227 | | | | 0.45% |
| Y RADIAL | 257643.6 | 5.612 | mg/L | 0.1089 | | | | 1.94% |
| As 188.979† | -11.0 | 0.0107 | mg/L | 0.00731 | 0.0107 | mg/L | 0.00731 | 68.15% |
| Tl 190.801† | -160.9 | -0.0461 | mg/L | 0.00273 | -0.0461 | mg/L | 0.00273 | 5.92% |
| Se 196.026† | -53.0 | 0.0275 | mg/L | 0.00571 | 0.0275 | mg/L | 0.00571 | 20.78% |
| Zn 206.200† | 441803.3 | 9.682 | mg/L | 0.1544 | 9.682 | mg/L | 0.1544 | 1.59% |
| Sb 206.836† | 107.8 | 0.0295 | mg/L | 0.00094 | 0.0295 | mg/L | 0.00094 | 3.19% |
| Pb 220.353† | 35899.2 | 3.284 | mg/L | 0.0431 | 3.284 | mg/L | 0.0431 | 1.31% |
| Cd 226.502† | 4011.0 | 0.0072 | mg/L | 0.00070 | 0.0072 | mg/L | 0.00070 | 9.66% |
| Co 228.616† | 2581.1 | 0.0640 | mg/L | 0.00075 | 0.0640 | mg/L | 0.00075 | 1.18% |
| Ni 232.003† | 4523.9 | 0.1998 | mg/L | 0.00453 | 0.1998 | mg/L | 0.00453 | 2.27% |
| Ba 233.527† | 55330.3 | 0.5587 | mg/L | 0.01039 | 0.5587 | mg/L | 0.01039 | 1.86% |
| Mn 257.610† | 1469479.6 | 1.555 | mg/L | 0.0167 | 1.555 | mg/L | 0.0167 | 1.07% |
| Cr 267.716† | 61366.2 | 0.4262 | mg/L | 0.00821 | 0.4262 | mg/L | 0.00821 | 1.93% |
| Fe 273.955† | 4897747.0 | 180.2 | mg/L | 0.37 | 180.2 | mg/L | 0.37 | 0.21% |
| Mg 279.077† | 1975291.8 | 89.06 | mg/L | 0.992 | 89.06 | mg/L | 0.992 | 1.11% |
| V 292.402† | 81664.4 | 0.2734 | mg/L | 0.00480 | 0.2734 | mg/L | 0.00480 | 1.76% |
| Al 308.215† | 1228726.2 | 43.99 | mg/L | 0.560 | 43.99 | mg/L | 0.560 | 1.27% |
| Be 313.107† | -14274.0 | -0.0033 | mg/L | 0.00016 | -0.0033 | mg/L | 0.00016 | 4.88% |
| Cu 324.752† | 1381670.6 | 5.205 | mg/L | 0.0578 | 5.205 | mg/L | 0.0578 | 1.11% |
| Ag 338.289† | -3379.2 | -0.0214 | mg/L | 0.00083 | -0.0214 | mg/L | 0.00083 | 3.88% |
| Na 330.237† | 17303.9 | 18.46 | mg/L | 0.664 | 18.46 | mg/L | 0.664 | 3.60% |
| Ca 227.546† | 81841.5 | 220.6 | mg/L | 3.79 | 220.6 | mg/L | 3.79 | 1.72% |
| Al RADIAL† | 79190.5 | 41.18 | mg/L | 0.037 | 41.18 | mg/L | 0.037 | 0.09% |
| Fe RADIAL† | 67630.4 | 183.6 | mg/L | 0.82 | 183.6 | mg/L | 0.82 | 0.45% |
| Ca RADIAL† | 973399.9 | 211.3 | mg/L | 4.32 | 211.3 | mg/L | 4.32 | 2.04% |
| K RADIAL† | 9320.7 | 8.030 | mg/L | 0.0237 | 8.030 | mg/L | 0.0237 | 0.30% |
| Mg RADIAL† | 29013.6 | 84.81 | mg/L | 0.365 | 84.81 | mg/L | 0.365 | 0.43% |
| Na RADIAL† | 55263.4 | 4.207 | mg/L | 0.0393 | 4.207 | mg/L | 0.0393 | 0.93% |
| Mo 202.031 | 574.2 | 0.021 | mg/L | 0.0006 | 0.021 | mg/L | 0.0006 | 2.77% |

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**Sequence No.: 84**
**Sample ID: 16I0332-03**
**Analyst: KV**
**Logged In Analyst (Original) : administrator**
**Initial Sample Wt:**
**Dilution:**

**Autosampler Location: 70**
**Date Collected: 9/12/2016 10:24:23 PM**
**Data Type: Reprocessed on 9/13/2016 7:00:04 AM**

**Initial Sample Vol:**
**Sample Prep Vol:**

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**Mean Data: 16I0332-03**

| Analyte | Mean Corrected Intensity | Calib. Conc. | Calib. Units | Std.Dev. | Sample Conc. | Sample Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 16550974.3 | 5.382 | mg/L | 0.0479 | | | | 0.89% |
| Y RADIAL | 275329.0 | 5.998 | mg/L | 0.0751 | | | | 1.25% |
| As 188.979† | 29.9 | 0.0300 | mg/L | 0.00226 | 0.0300 | mg/L | 0.00226 | 7.53% |
| Tl 190.801† | -140.0 | -0.0403 | mg/L | 0.00444 | -0.0403 | mg/L | 0.00444 | 11.02% |
| Se 196.026† | -45.8 | 0.0232 | mg/L | 0.00540 | 0.0232 | mg/L | 0.00540 | 23.31% |
| Zn 206.200† | 330959.2 | 7.253 | mg/L | 0.0610 | 7.253 | mg/L | 0.0610 | 0.84% |
| Sb 206.836† | 59.7 | 0.0158 | mg/L | 0.00151 | 0.0158 | mg/L | 0.00151 | 9.56% |
| Pb 220.353† | 27634.5 | 2.528 | mg/L | 0.0159 | 2.528 | mg/L | 0.0159 | 0.63% |
| Cd 226.502† | 3732.9 | 0.0082 | mg/L | 0.00048 | 0.0082 | mg/L | 0.00048 | 5.86% |
| Co 228.616† | 2677.7 | 0.0657 | mg/L | 0.00110 | 0.0657 | mg/L | 0.00110 | 1.68% |
| Ni 232.003† | 4362.7 | 0.1913 | mg/L | 0.00330 | 0.1913 | mg/L | 0.00330 | 1.72% |
| Ba 233.527† | 49339.4 | 0.4982 | mg/L | 0.00508 | 0.4982 | mg/L | 0.00508 | 1.02% |
| Mn 257.610† | 1434002.0 | 1.515 | mg/L | 0.0239 | 1.515 | mg/L | 0.0239 | 1.58% |
| Cr 267.716† | 45044.8 | 0.3131 | mg/L | 0.00360 | 0.3131 | mg/L | 0.00360 | 1.15% |
| Fe 273.955† | 4267696.3 | 157.1 | mg/L | 0.32 | 157.1 | mg/L | 0.32 | 0.20% |
| Mg 279.077† | 2249252.1 | 101.4 | mg/L | 1.65 | 101.4 | mg/L | 1.65 | 1.63% |
| V 292.402† | 72775.2 | 0.2440 | mg/L | 0.00344 | 0.2440 | mg/L | 0.00344 | 1.41% |
| Al 308.215† | 1205012.4 | 43.14 | mg/L | 0.714 | 43.14 | mg/L | 0.714 | 1.66% |

| | | | | | | |
|---|---|---|---|---|---|---|
| Be 313.107† | -12009.5 | -0.0028 mg/L | 0.00008 | -0.0028 mg/L | 0.00008 | 2.93% |
| Cu 324.752† | 689905.9 | 2.601 mg/L | 0.0441 | 2.601 mg/L | 0.0441 | 1.70% |
| Ag 338.289† | -3333.5 | -0.0217 mg/L | 0.00084 | -0.0217 mg/L | 0.00084 | 3.85% |
| Na 330.237† | 12547.0 | 13.57 mg/L | 0.078 | 13.57 mg/L | 0.078 | 0.57% |
| Ca 227.546† | 86801.2 | 233.7 mg/L | 2.88 | 233.7 mg/L | 2.88 | 1.23% |
| Al RADIAL† | 75714.2 | 39.37 mg/L | 0.021 | 39.37 mg/L | 0.021 | 0.05% |
| Fe RADIAL† | 57941.7 | 157.3 mg/L | 0.57 | 157.3 mg/L | 0.57 | 0.36% |
| Ca RADIAL† | 1021213.7 | 221.7 mg/L | 4.47 | 221.7 mg/L | 4.47 | 2.02% |
| K RADIAL† | 10013.1 | 8.626 mg/L | 0.0325 | 8.626 mg/L | 0.0325 | 0.38% |
| Mg RADIAL† | 32109.2 | 93.86 mg/L | 0.092 | 93.86 mg/L | 0.092 | 0.10% |
| Na RADIAL† | 48755.0 | 3.712 mg/L | 0.0680 | 3.712 mg/L | 0.0680 | 1.83% |
| Mo 202.031 | 617.4 | 0.023 mg/L | 0.0010 | 0.023 mg/L | 0.0010 | 4.61% |

**Sequence No.: 85**
**Sample ID: SEQ-SRD3**
**Analyst: KV**
**Logged In Analyst (Original) : administrator**
**Initial Sample Wt:**
**Dilution:**

**Autosampler Location: 71**
**Date Collected: 9/12/2016 10:29:07 PM**
**Data Type: Reprocessed on 9/13/2016 7:00:05 AM**

**Initial Sample Vol:**
**Sample Prep Vol:**

**Mean Data: SEQ-SRD3**

| Analyte | Mean Corrected Intensity | Calib. Conc. | Units | Std.Dev. | Sample Conc. | Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 17167356.2 | 5.582 | mg/L | 0.0587 | | | | 1.05% |
| Y RADIAL | 273653.9 | 5.961 | mg/L | 0.0334 | | | | 0.56% |
| As 188.979† | 81.3 | 0.0457 | mg/L | 0.00197 | 0.0457 | mg/L | 0.00197 | 4.32% |
| Tl 190.801† | -12.7 | -0.0029 | mg/L | 0.00153 | -0.0029 | mg/L | 0.00153 | 53.53% |
| Se 196.026† | -10.1 | 0.0031 | mg/L | 0.00556 | 0.0031 | mg/L | 0.00556 | 177.82% |
| Zn 206.200† | 3906.0 | 0.0853 | mg/L | 0.00111 | 0.0853 | mg/L | 0.00111 | 1.30% |
| Sb 206.836† | -12.0 | -0.0038 | mg/L | 0.00237 | -0.0038 | mg/L | 0.00237 | 62.48% |
| Pb 220.353† | 795.7 | 0.0734 | mg/L | 0.00026 | 0.0734 | mg/L | 0.00026 | 0.36% |
| Cd 226.502† | 423.5 | -0.0004 | mg/L | 0.00005 | -0.0004 | mg/L | 0.00005 | 12.52% |
| Co 228.616† | 409.1 | 0.0102 | mg/L | 0.00011 | 0.0102 | mg/L | 0.00011 | 1.08% |
| Ni 232.003† | 529.9 | 0.0240 | mg/L | 0.00113 | 0.0240 | mg/L | 0.00113 | 4.71% |
| Ba 233.527† | 7186.7 | 0.0726 | mg/L | 0.00037 | 0.0726 | mg/L | 0.00037 | 0.51% |
| Mn 257.610† | 312580.9 | 0.3297 | mg/L | 0.00320 | 0.3297 | mg/L | 0.00320 | 0.97% |
| Cr 267.716† | 4339.1 | 0.0303 | mg/L | 0.00038 | 0.0303 | mg/L | 0.00038 | 1.24% |
| Fe 273.955† | 811202.9 | 29.85 | mg/L | 0.297 | 29.85 | mg/L | 0.297 | 1.00% |
| Mg 279.077† | 76586.4 | 3.449 | mg/L | 0.0108 | 3.449 | mg/L | 0.0108 | 0.31% |
| V 292.402† | 15296.5 | 0.0514 | mg/L | 0.00040 | 0.0514 | mg/L | 0.00040 | 0.78% |
| Al 308.215† | 749052.4 | 26.82 | mg/L | 0.296 | 26.82 | mg/L | 0.296 | 1.10% |
| Be 313.107† | 720.9 | 0.0002 | mg/L | 0.00003 | 0.0002 | mg/L | 0.00003 | 15.27% |
| Cu 324.752† | 13127.9 | 0.0506 | mg/L | 0.00055 | 0.0506 | mg/L | 0.00055 | 1.08% |
| Ag 338.289† | -754.3 | -0.0045 | mg/L | 0.00022 | -0.0045 | mg/L | 0.00022 | 4.97% |
| Na 330.237† | -98.9 | 0.0421 | mg/L | 0.11233 | 0.0421 | mg/L | 0.11233 | 266.95% |
| Ca 227.546† | 576.9 | 1.823 | mg/L | 0.0672 | 1.823 | mg/L | 0.0672 | 3.69% |
| Al RADIAL† | 50985.8 | 26.51 | mg/L | 0.210 | 26.51 | mg/L | 0.210 | 0.79% |
| Fe RADIAL† | 11154.7 | 30.29 | mg/L | 0.071 | 30.29 | mg/L | 0.071 | 0.23% |
| Ca RADIAL† | 5974.5 | 1.297 | mg/L | 0.0034 | 1.297 | mg/L | 0.0034 | 0.27% |
| K RADIAL† | 1311.8 | 1.130 | mg/L | 0.0142 | 1.130 | mg/L | 0.0142 | 1.26% |
| Mg RADIAL† | 1141.0 | 3.333 | mg/L | 0.0122 | 3.333 | mg/L | 0.0122 | 0.36% |
| Na RADIAL† | 2032.6 | 0.1547 | mg/L | 0.01363 | 0.1547 | mg/L | 0.01363 | 8.81% |
| Mo 202.031 | 33.1 | 0.001 | mg/L | 0.0005 | 0.001 | mg/L | 0.0005 | 39.24% |

**Sequence No.: 86**
**Sample ID: BI60400-BLK1**
**Analyst: KV**
**Logged In Analyst (Original) : administrator**
**Initial Sample Wt:**
**Dilution:**

**Autosampler Location: 72**
**Date Collected: 9/12/2016 10:34:13 PM**
**Data Type: Reprocessed on 9/13/2016 7:00:06 AM**

**Initial Sample Vol:**
**Sample Prep Vol:**

**Mean Data: BI60400-BLK1**

| Analyte | Mean Corrected Intensity | Calib. Conc. | Units | Std.Dev. | Sample Conc. | Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 14747086.7 | 4.795 | mg/L | 0.0580 | | | | 1.21% |
| Y RADIAL | 223346.8 | 4.865 | mg/L | 0.0989 | | | | 2.03% |
| As 188.979† | -18.3 | -0.0096 | mg/L | 0.00346 | -0.0096 | mg/L | 0.00346 | 35.84% |
| Tl 190.801† | -16.7 | -0.0057 | mg/L | 0.00151 | -0.0057 | mg/L | 0.00151 | 26.30% |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Se 196.026† | 5.4 | 0.0056 | mg/L | 0.00620 | 0.0056 | mg/L | 0.00620 110.32% |
| Zn 206.200† | -238.3 | -0.0052 | mg/L | 0.00020 | -0.0052 | mg/L | 0.00020 3.79% |
| Sb 206.836† | -5.2 | -0.0015 | mg/L | 0.00110 | -0.0015 | mg/L | 0.00110 72.97% |
| Pb 220.353† | 39.6 | 0.0036 | mg/L | 0.00166 | 0.0036 | mg/L | 0.00166 45.90% |
| Cd 226.502† | -51.2 | -0.0004 | mg/L | 0.00008 | -0.0004 | mg/L | 0.00008 23.45% |
| Co 228.616† | -8.3 | -0.0002 | mg/L | 0.00007 | -0.0002 | mg/L | 0.00007 38.10% |
| Ni 232.003† | -56.6 | -0.0023 | mg/L | 0.00134 | -0.0023 | mg/L | 0.00134 57.34% |
| Ba 233.527† | -33.9 | -0.0003 | mg/L | 0.00011 | -0.0003 | mg/L | 0.00011 33.41% |
| Mn 257.610† | -100.0 | -0.0001 | mg/L | 0.00004 | -0.0001 | mg/L | 0.00004 41.16% |
| Cr 267.716† | 11.9 | 0.0001 | mg/L | 0.00027 | 0.0001 | mg/L | 0.00027 333.10% |
| Fe 273.955† | -21.6 | -0.0008 | mg/L | 0.00019 | -0.0008 | mg/L | 0.00019 23.49% |
| Mg 279.077† | 54.3 | 0.0024 | mg/L | 0.00160 | 0.0024 | mg/L | 0.00160 65.52% |
| V 292.402† | -22.0 | -0.0001 | mg/L | 0.00021 | -0.0001 | mg/L | 0.00021 279.49% |
| Al 308.215† | -3600.9 | -0.1289 | mg/L | 0.00373 | -0.1289 | mg/L | 0.00373 2.90% |
| Be 313.107† | -571.5 | -0.0001 | mg/L | 0.00007 | -0.0001 | mg/L | 0.00007 49.95% |
| Cu 324.752† | -5.3 | 0.0000 | mg/L | 0.00027 | 0.0000 | mg/L | 0.00027 >999.9% |
| Ag 338.289† | -148.6 | -0.0010 | mg/L | 0.00067 | -0.0010 | mg/L | 0.00067 66.87% |
| Na 330.237† | 61.9 | 0.0623 | mg/L | 0.02575 | 0.0623 | mg/L | 0.02575 41.34% |
| Ca 227.546† | 12.6 | 0.0336 | mg/L | 0.03440 | 0.0336 | mg/L | 0.03440 102.51% |
| Al RADIAL† | -317.5 | -0.1651 | mg/L | 0.00603 | -0.1651 | mg/L | 0.00603 3.65% |
| Fe RADIAL† | 0.9 | 0.0024 | mg/L | 0.00744 | 0.0024 | mg/L | 0.00744 314.53% |
| Ca RADIAL† | 250.3 | 0.0543 | mg/L | 0.00837 | 0.0543 | mg/L | 0.00837 15.40% |
| K RADIAL† | -40.1 | -0.0346 | mg/L | 0.02272 | -0.0346 | mg/L | 0.02272 65.72% |
| Mg RADIAL† | -1.7 | -0.0051 | mg/L | 0.01021 | -0.0051 | mg/L | 0.01021 199.89% |
| Na RADIAL† | -3159.4 | -0.2405 | mg/L | 0.04638 | -0.2405 | mg/L | 0.04638 19.28% |
| Mo 202.031 | -7.7 | 0.000 | mg/L | 0.0001 | 0.000 | mg/L | 0.0001 47.00% |

**Sequence No.: 87**
**Sample ID: BI60400-SRM1**
**Analyst: KV**
**Logged In Analyst (Original) : administrator**
**Initial Sample Wt:**
**Dilution:**

**Autosampler Location: 73**
**Date Collected: 9/12/2016 10:39:20 PM**
**Data Type: Reprocessed on 9/13/2016 7:00:07 AM**
**Initial Sample Vol:**
**Sample Prep Vol:**

**Mean Data: BI60400-SRM1**

| Analyte | Mean Corrected Intensity | Calib. Conc. | Units | Std.Dev. | Sample Conc. | Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 16719632.9 | 5.436 | mg/L | 0.0404 | | | | 0.74% |
| Y RADIAL | 272158.9 | 5.928 | mg/L | 0.0248 | | | | 0.42% |
| As 188.979† | 2435.9 | 1.298 | mg/L | 0.0094 | 1.298 | mg/L | 0.0094 | 0.72% |
| Tl 190.801† | 5019.3 | 1.731 | mg/L | 0.0397 | 1.731 | mg/L | 0.0397 | 2.29% |
| Se 196.026† | 1350.1 | 1.459 | mg/L | 0.0154 | 1.459 | mg/L | 0.0154 | 1.06% |
| Zn 206.200† | 120592.6 | 2.642 | mg/L | 0.0173 | 2.642 | mg/L | 0.0173 | 0.65% |
| Sb 206.836† | 2969.6 | 0.8630 | mg/L | 0.01398 | 0.8630 | mg/L | 0.01398 | 1.62% |
| Pb 220.353† | 22997.7 | 2.109 | mg/L | 0.0237 | 2.109 | mg/L | 0.0237 | 1.12% |
| Cd 226.502† | 186580.2 | 1.261 | mg/L | 0.0073 | 1.261 | mg/L | 0.0073 | 0.58% |
| Co 228.616† | 27059.3 | 0.6335 | mg/L | 0.00540 | 0.6335 | mg/L | 0.00540 | 0.85% |
| Ni 232.003† | 68078.5 | 2.822 | mg/L | 0.0183 | 2.822 | mg/L | 0.0183 | 0.65% |
| Ba 233.527† | 224096.6 | 2.263 | mg/L | 0.0093 | 2.263 | mg/L | 0.0093 | 0.41% |
| Mn 257.610† | 4569712.6 | 4.779 | mg/L | 0.0286 | 4.779 | mg/L | 0.0286 | 0.60% |
| Cr 267.716† | 149974.5 | 1.038 | mg/L | 0.0051 | 1.038 | mg/L | 0.0051 | 0.49% |
| Fe 273.955† | 3359706.3 | 123.6 | mg/L | 0.59 | 123.6 | mg/L | 0.59 | 0.48% |
| Mg 279.077† | 738775.2 | 33.30 | mg/L | 0.198 | 33.30 | mg/L | 0.198 | 0.59% |
| V 292.402† | 302693.7 | 1.041 | mg/L | 0.0066 | 1.041 | mg/L | 0.0066 | 0.64% |
| Al 308.215† | 2503279.2 | 89.62 | mg/L | 0.528 | 89.62 | mg/L | 0.528 | 0.59% |
| Be 313.107† | 5030051.6 | 1.153 | mg/L | 0.0038 | 1.153 | mg/L | 0.0038 | 0.33% |
| Cu 324.752† | 167490.6 | 0.6350 | mg/L | 0.00355 | 0.6350 | mg/L | 0.00355 | 0.56% |
| Ag 338.289† | 53346.0 | 0.3602 | mg/L | 0.00171 | 0.3602 | mg/L | 0.00171 | 0.47% |
| Na 330.237† | 7744.8 | 8.425 | mg/L | 0.0744 | 8.425 | mg/L | 0.0744 | 0.88% |
| Ca 227.546† | 22508.9 | 61.37 | mg/L | 0.613 | 61.37 | mg/L | 0.613 | 1.00% |
| Al RADIAL† | 159705.8 | 83.03 | mg/L | 0.176 | 83.03 | mg/L | 0.176 | 0.21% |
| Fe RADIAL† | 45974.0 | 124.8 | mg/L | 2.37 | 124.8 | mg/L | 2.37 | 1.90% |
| Ca RADIAL† | 271003.1 | 58.83 | mg/L | 0.106 | 58.83 | mg/L | 0.106 | 0.18% |
| K RADIAL† | 32130.6 | 27.68 | mg/L | 0.612 | 27.68 | mg/L | 0.612 | 2.21% |
| Mg RADIAL† | 11077.2 | 32.37 | mg/L | 0.731 | 32.37 | mg/L | 0.731 | 2.26% |
| Na RADIAL† | 84731.0 | 6.451 | mg/L | 0.0404 | 6.451 | mg/L | 0.0404 | 0.63% |
| Mo 202.031 | 23039.9 | 0.844 | mg/L | 0.0030 | 0.844 | mg/L | 0.0030 | 0.35% |

**Sequence No.: 88**

**Autosampler Location: 74**

**Sample ID: 16I0249-01**
**Analyst: KV**
**Logged In Analyst (Original) : administrator**
**Initial Sample Wt:**
**Dilution:**

**Date Collected: 9/12/2016 10:47:00 PM**
**Data Type: Reprocessed on 9/13/2016 7:00:07 AM**
**Initial Sample Vol:**
**Sample Prep Vol:**

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**Mean Data: 16I0249-01**

| Analyte | Mean Corrected Intensity | Calib. Conc. | Units | Std.Dev. | Sample Conc. | Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 15323301.3 | 4.982 | mg/L | 0.0397 | | | | 0.80% |
| Y RADIAL | 244415.4 | 5.324 | mg/L | 0.1106 | | | | 2.08% |
| As 188.979† | 36.3 | 0.0282 | mg/L | 0.00394 | 0.0282 | mg/L | 0.00394 | 13.99% |
| Tl 190.801† | -52.8 | -0.0131 | mg/L | 0.00397 | -0.0131 | mg/L | 0.00397 | 30.20% |
| Se 196.026† | -24.5 | 0.0195 | mg/L | 0.00763 | 0.0195 | mg/L | 0.00763 | 39.19% |
| Zn 206.200† | 28195.1 | 0.6170 | mg/L | 0.01228 | 0.6170 | mg/L | 0.01228 | 1.99% |
| Sb 206.836† | -12.0 | -0.0045 | mg/L | 0.00186 | -0.0045 | mg/L | 0.00186 | 41.07% |
| Pb 220.353† | 7031.9 | 0.6449 | mg/L | 0.00198 | 0.6449 | mg/L | 0.00198 | 0.31% |
| Cd 226.502† | 2236.7 | 0.0043 | mg/L | 0.00028 | 0.0043 | mg/L | 0.00028 | 6.63% |
| Co 228.616† | 3619.4 | 0.0865 | mg/L | 0.00035 | 0.0865 | mg/L | 0.00035 | 0.40% |
| Ni 232.003† | 3101.4 | 0.1351 | mg/L | 0.00467 | 0.1351 | mg/L | 0.00467 | 3.45% |
| Ba 233.527† | 96019.1 | 0.9696 | mg/L | 0.01927 | 0.9696 | mg/L | 0.01927 | 1.99% |
| Mn 257.610† | 7942246.3 | 8.290 | mg/L | 0.0230 | 8.290 | mg/L | 0.0230 | 0.28% |
| Cr 267.716† | 16034.0 | 0.1119 | mg/L | 0.00201 | 0.1119 | mg/L | 0.00201 | 1.80% |
| Fe 273.955† | 2658389.3 | 97.83 | mg/L | 0.054 | 97.83 | mg/L | 0.054 | 0.05% |
| Mg 279.077† | 611666.3 | 27.57 | mg/L | 0.020 | 27.57 | mg/L | 0.020 | 0.07% |
| V 292.402† | 47648.3 | 0.1599 | mg/L | 0.00398 | 0.1599 | mg/L | 0.00398 | 2.49% |
| Al 308.215† | 1985708.5 | 71.09 | mg/L | 0.069 | 71.09 | mg/L | 0.069 | 0.10% |
| Be 313.107† | 15491.6 | 0.0036 | mg/L | 0.00021 | 0.0036 | mg/L | 0.00021 | 5.83% |
| Cu 324.752† | 33241.6 | 0.1290 | mg/L | 0.00217 | 0.1290 | mg/L | 0.00217 | 1.69% |
| Ag 338.289† | -2521.7 | -0.0158 | mg/L | 0.00179 | -0.0158 | mg/L | 0.00179 | 11.38% |
| Na 330.237† | 690.0 | 1.227 | mg/L | 0.0148 | 1.227 | mg/L | 0.0148 | 1.20% |
| Ca 227.546† | 25801.5 | 69.96 | mg/L | 1.241 | 69.96 | mg/L | 1.241 | 1.77% |
| Al RADIAL† | 128983.5 | 67.06 | mg/L | 0.399 | 67.06 | mg/L | 0.399 | 0.60% |
| Fe RADIAL† | 36796.0 | 99.90 | mg/L | 0.894 | 99.90 | mg/L | 0.894 | 0.90% |
| Ca RADIAL† | 331348.5 | 71.93 | mg/L | 0.116 | 71.93 | mg/L | 0.116 | 0.16% |
| K RADIAL† | 8698.7 | 7.494 | mg/L | 0.0888 | 7.494 | mg/L | 0.0888 | 1.18% |
| Mg RADIAL† | 9306.6 | 27.20 | mg/L | 0.231 | 27.20 | mg/L | 0.231 | 0.85% |
| Na RADIAL† | 20669.3 | 1.574 | mg/L | 0.0128 | 1.574 | mg/L | 0.0128 | 0.81% |
| Mo 202.031 | 112.6 | 0.004 | mg/L | 0.0002 | 0.004 | mg/L | 0.0002 | 4.39% |

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**Sequence No.: 89**
**Sample ID: BI60400-DUP1**
**Analyst: KV**
**Logged In Analyst (Original) : administrator**
**Initial Sample Wt:**
**Dilution:**

**Autosampler Location: 75**
**Date Collected: 9/12/2016 10:51:43 PM**
**Data Type: Reprocessed on 9/13/2016 7:00:08 AM**
**Initial Sample Vol:**
**Sample Prep Vol:**

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**Mean Data: BI60400-DUP1**

| Analyte | Mean Corrected Intensity | Calib. Conc. | Units | Std.Dev. | Sample Conc. | Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 16130540.1 | 5.245 | mg/L | 0.0643 | | | | 1.23% |
| Y RADIAL | 260407.3 | 5.672 | mg/L | 0.0493 | | | | 0.87% |
| As 188.979† | 49.1 | 0.0346 | mg/L | 0.00102 | 0.0346 | mg/L | 0.00102 | 2.94% |
| Tl 190.801† | -59.0 | -0.0155 | mg/L | 0.00326 | -0.0155 | mg/L | 0.00326 | 21.10% |
| Se 196.026† | -24.1 | 0.0183 | mg/L | 0.01233 | 0.0183 | mg/L | 0.01233 | 67.45% |
| Zn 206.200† | 26870.4 | 0.5880 | mg/L | 0.00923 | 0.5880 | mg/L | 0.00923 | 1.57% |
| Sb 206.836† | -34.9 | -0.0111 | mg/L | 0.00335 | -0.0111 | mg/L | 0.00335 | 30.02% |
| Pb 220.353† | 6835.5 | 0.6269 | mg/L | 0.00624 | 0.6269 | mg/L | 0.00624 | 1.00% |
| Cd 226.502† | 1653.3 | 0.0007 | mg/L | 0.00018 | 0.0007 | mg/L | 0.00018 | 24.99% |
| Co 228.616† | 3497.3 | 0.0836 | mg/L | 0.00068 | 0.0836 | mg/L | 0.00068 | 0.81% |
| Ni 232.003† | 2890.1 | 0.1262 | mg/L | 0.00302 | 0.1262 | mg/L | 0.00302 | 2.39% |
| Ba 233.527† | 92917.7 | 0.9383 | mg/L | 0.01457 | 0.9383 | mg/L | 0.01457 | 1.55% |
| Mn 257.610† | 7670909.5 | 8.007 | mg/L | 0.0050 | 8.007 | mg/L | 0.0050 | 0.06% |
| Cr 267.716† | 15237.5 | 0.1063 | mg/L | 0.00198 | 0.1063 | mg/L | 0.00198 | 1.87% |
| Fe 273.955† | 2597395.0 | 95.59 | mg/L | 1.209 | 95.59 | mg/L | 1.209 | 1.26% |
| Mg 279.077† | 598281.2 | 26.97 | mg/L | 0.345 | 26.97 | mg/L | 0.345 | 1.28% |
| V 292.402† | 45490.7 | 0.1526 | mg/L | 0.00221 | 0.1526 | mg/L | 0.00221 | 1.45% |
| Al 308.215† | 1948246.1 | 69.75 | mg/L | 0.968 | 69.75 | mg/L | 0.968 | 1.39% |
| Be 313.107† | 1423.3 | 0.0003 | mg/L | 0.00016 | 0.0003 | mg/L | 0.00016 | 49.43% |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Cu 324.752† | 31604.4 | 0.1227 | mg/L | 0.00205 | 0.1227 | mg/L | 0.00205 | 1.67% |
| Ag 338.289† | -2844.3 | -0.0180 | mg/L | 0.00095 | -0.0180 | mg/L | 0.00095 | 5.27% |
| Na 330.237† | 617.4 | 1.135 | mg/L | 0.0351 | 1.135 | mg/L | 0.0351 | 3.09% |
| Ca 227.546† | 25083.2 | 68.00 | mg/L | 1.161 | 68.00 | mg/L | 1.161 | 1.71% |
| Al RADIAL† | 124291.7 | 64.62 | mg/L | 0.343 | 64.62 | mg/L | 0.343 | 0.53% |
| Fe RADIAL† | 35449.6 | 96.25 | mg/L | 0.208 | 96.25 | mg/L | 0.208 | 0.22% |
| Ca RADIAL† | 319047.5 | 69.26 | mg/L | 0.112 | 69.26 | mg/L | 0.112 | 0.16% |
| K RADIAL† | 8131.7 | 7.006 | mg/L | 0.0474 | 7.006 | mg/L | 0.0474 | 0.68% |
| Mg RADIAL† | 8962.7 | 26.19 | mg/L | 0.107 | 26.19 | mg/L | 0.107 | 0.41% |
| Na RADIAL† | 21017.9 | 1.600 | mg/L | 0.0160 | 1.600 | mg/L | 0.0160 | 1.00% |
| Mo 202.031 | 33.2 | 0.001 | mg/L | 0.0008 | 0.001 | mg/L | 0.0008 | 62.75% |

**Sequence No.: 90**
**Sample ID: BI60400-MS1**
**Analyst: KV**
**Logged In Analyst (Original) : administrator**
**Initial Sample Wt:**
**Dilution:**

**Autosampler Location: 76**
**Date Collected: 9/12/2016 10:56:27 PM**
**Data Type: Reprocessed on 9/13/2016 7:00:09 AM**

**Initial Sample Vol:**
**Sample Prep Vol:**

**Mean Data: BI60400-MS1**

| Analyte | Mean Corrected Intensity | Calib. Conc. | Units | Std.Dev. | Sample Conc. | Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 16162085.9 | 5.255 | mg/L | 0.0499 | | | | 0.95% |
| Y RADIAL | 258206.3 | 5.625 | mg/L | 0.0588 | | | | 1.05% |
| As 188.979† | 3343.6 | 1.776 | mg/L | 0.0076 | 1.776 | mg/L | 0.0076 | 0.43% |
| Tl 190.801† | 3925.5 | 1.354 | mg/L | 0.0128 | 1.354 | mg/L | 0.0128 | 0.95% |
| Se 196.026† | 1630.3 | 1.739 | mg/L | 0.0049 | 1.739 | mg/L | 0.0049 | 0.28% |
| Zn 206.200† | 46685.2 | 1.022 | mg/L | 0.0103 | 1.022 | mg/L | 0.0103 | 1.01% |
| Sb 206.836† | 795.5 | 0.2305 | mg/L | 0.00324 | 0.2305 | mg/L | 0.00324 | 1.41% |
| Pb 220.353† | 11732.5 | 1.076 | mg/L | 0.0070 | 1.076 | mg/L | 0.0070 | 0.65% |
| Cd 226.502† | 8381.3 | 0.0464 | mg/L | 0.00058 | 0.0464 | mg/L | 0.00058 | 1.25% |
| Co 228.616† | 23378.5 | 0.5471 | mg/L | 0.00312 | 0.5471 | mg/L | 0.00312 | 0.57% |
| Ni 232.003† | 14233.0 | 0.5950 | mg/L | 0.00258 | 0.5950 | mg/L | 0.00258 | 0.43% |
| Ba 233.527† | 274535.6 | 2.772 | mg/L | 0.0193 | 2.772 | mg/L | 0.0193 | 0.70% |
| Mn 257.610† | 8067349.0 | 8.420 | mg/L | 0.0230 | 8.420 | mg/L | 0.0230 | 0.27% |
| Cr 267.716† | 40709.1 | 0.2825 | mg/L | 0.00182 | 0.2825 | mg/L | 0.00182 | 0.64% |
| Fe 273.955† | 2581051.7 | 94.99 | mg/L | 0.717 | 94.99 | mg/L | 0.717 | 0.76% |
| Mg 279.077† | 589696.3 | 26.58 | mg/L | 0.205 | 26.58 | mg/L | 0.205 | 0.77% |
| V 292.402† | 173162.5 | 0.5943 | mg/L | 0.00317 | 0.5943 | mg/L | 0.00317 | 0.53% |
| Al 308.215† | 1968855.3 | 70.49 | mg/L | 0.567 | 70.49 | mg/L | 0.567 | 0.80% |
| Be 313.107† | 195769.9 | 0.0449 | mg/L | 0.00011 | 0.0449 | mg/L | 0.00011 | 0.25% |
| Cu 324.752† | 93294.6 | 0.3549 | mg/L | 0.00245 | 0.3549 | mg/L | 0.00245 | 0.69% |
| Ag 338.289† | 3998.0 | 0.0281 | mg/L | 0.00066 | 0.0281 | mg/L | 0.00066 | 2.35% |
| Na 330.237† | 1289.0 | 1.823 | mg/L | 0.0235 | 1.823 | mg/L | 0.0235 | 1.29% |
| Ca 227.546† | 26139.3 | 70.85 | mg/L | 0.382 | 70.85 | mg/L | 0.382 | 0.54% |
| Al RADIAL† | 127550.6 | 66.31 | mg/L | 0.396 | 66.31 | mg/L | 0.396 | 0.60% |
| Fe RADIAL† | 36410.9 | 98.86 | mg/L | 2.104 | 98.86 | mg/L | 2.104 | 2.13% |
| Ca RADIAL† | 320263.9 | 69.52 | mg/L | 0.071 | 69.52 | mg/L | 0.071 | 0.10% |
| K RADIAL† | 8084.3 | 6.965 | mg/L | 0.2081 | 6.965 | mg/L | 0.2081 | 2.99% |
| Mg RADIAL† | 9159.2 | 26.77 | mg/L | 0.620 | 26.77 | mg/L | 0.620 | 2.32% |
| Na RADIAL† | 20941.1 | 1.594 | mg/L | 0.0150 | 1.594 | mg/L | 0.0150 | 0.94% |
| Mo 202.031 | 26.2 | 0.001 | mg/L | 0.0003 | 0.001 | mg/L | 0.0003 | 30.27% |

**Sequence No.: 91**
**Sample ID: 16I0249-03**
**Analyst: KV**
**Logged In Analyst (Original) : administrator**
**Initial Sample Wt:**
**Dilution:**

**Autosampler Location: 77**
**Date Collected: 9/12/2016 11:04:06 PM**
**Data Type: Reprocessed on 9/13/2016 7:00:09 AM**

**Initial Sample Vol:**
**Sample Prep Vol:**

**Mean Data: 16I0249-03**

| Analyte | Mean Corrected Intensity | Calib. Conc. | Units | Std.Dev. | Sample Conc. | Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 17294701.2 | 5.623 | mg/L | 0.1319 | | | | 2.35% |
| Y RADIAL | 294101.8 | 6.406 | mg/L | 0.0847 | | | | 1.32% |
| As 188.979† | 70.1 | 0.0464 | mg/L | 0.00639 | 0.0464 | mg/L | 0.00639 | 13.78% |
| Tl 190.801† | -77.2 | -0.0213 | mg/L | 0.00396 | -0.0213 | mg/L | 0.00396 | 18.55% |
| Se 196.026† | -24.0 | 0.0217 | mg/L | 0.00296 | 0.0217 | mg/L | 0.00296 | 13.66% |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Zn 206.200† | 175542.2 | 3.847 | mg/L | 0.0820 | 3.847 | mg/L | 0.0820 | 2.13% |
| Sb 206.836† | -29.6 | -0.0097 | mg/L | 0.00376 | -0.0097 | mg/L | 0.00376 | 38.81% |
| Pb 220.353† | 70316.8 | 6.453 | mg/L | 0.1503 | 6.453 | mg/L | 0.1503 | 2.33% |
| Cd 226.502† | 2809.1 | 0.0078 | mg/L | 0.00037 | 0.0078 | mg/L | 0.00037 | 4.76% |
| Co 228.616† | 1512.8 | 0.0374 | mg/L | 0.00118 | 0.0374 | mg/L | 0.00118 | 3.15% |
| Ni 232.003† | 2480.0 | 0.1097 | mg/L | 0.00165 | 0.1097 | mg/L | 0.00165 | 1.50% |
| Ba 233.527† | 305598.7 | 3.086 | mg/L | 0.0756 | 3.086 | mg/L | 0.0756 | 2.45% |
| Mn 257.610† | 2724914.7 | 2.853 | mg/L | 0.0696 | 2.853 | mg/L | 0.0696 | 2.44% |
| Cr 267.716† | 18812.5 | 0.1311 | mg/L | 0.00334 | 0.1311 | mg/L | 0.00334 | 2.55% |
| Fe 273.955† | 2852027.8 | 105.0 | mg/L | 2.59 | 105.0 | mg/L | 2.59 | 2.47% |
| Mg 279.077† | 917223.1 | 41.35 | mg/L | 1.016 | 41.35 | mg/L | 1.016 | 2.46% |
| V 292.402† | 51258.0 | 0.1722 | mg/L | 0.00435 | 0.1722 | mg/L | 0.00435 | 2.53% |
| Al 308.215† | 1418444.2 | 50.78 | mg/L | 1.253 | 50.78 | mg/L | 1.253 | 2.47% |
| Be 313.107† | 4009.2 | 0.0009 | mg/L | 0.00004 | 0.0009 | mg/L | 0.00004 | 4.75% |
| Cu 324.752† | 175415.3 | 0.6640 | mg/L | 0.01592 | 0.6640 | mg/L | 0.01592 | 2.40% |
| Ag 338.289† | -1420.1 | -0.0117 | mg/L | 0.00052 | -0.0117 | mg/L | 0.00052 | 4.48% |
| Na 330.237† | 7216.8 | 8.107 | mg/L | 0.2887 | 8.107 | mg/L | 0.2887 | 3.56% |
| Ca 227.546† | 146031.6 | 391.7 | mg/L | 8.76 | 391.7 | mg/L | 8.76 | 2.24% |
| Al RADIAL† | 89719.6 | 46.64 | mg/L | 0.101 | 46.64 | mg/L | 0.101 | 0.22% |
| Fe RADIAL† | 38169.0 | 103.6 | mg/L | 0.25 | 103.6 | mg/L | 0.25 | 0.24% |
| Ca RADIAL† | 1726064.8 | 374.7 | mg/L | 6.23 | 374.7 | mg/L | 6.23 | 1.66% |
| K RADIAL† | 9941.3 | 8.565 | mg/L | 0.0472 | 8.565 | mg/L | 0.0472 | 0.55% |
| Mg RADIAL† | 13375.4 | 39.09 | mg/L | 0.143 | 39.09 | mg/L | 0.143 | 0.37% |
| Na RADIAL† | 45128.8 | 3.436 | mg/L | 0.0410 | 3.436 | mg/L | 0.0410 | 1.19% |
| Mo 202.031 | 59.1 | 0.002 | mg/L | 0.0005 | 0.002 | mg/L | 0.0005 | 21.52% |

**Sequence No.: 92**
**Sample ID: 16I0249-05**
**Analyst: KV**
**Logged In Analyst (Original) : administrator**
**Initial Sample Wt:**
**Dilution:**

**Autosampler Location: 78**
**Date Collected: 9/12/2016 11:11:46 PM**
**Data Type: Reprocessed on 9/13/2016 7:00:10 AM**

**Initial Sample Vol:**
**Sample Prep Vol:**

**Mean Data: 16I0249-05**

| Analyte | Mean Corrected Intensity | Calib. Conc. | Calib. Units | Std.Dev. | Sample Conc. | Sample Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 13415781.8 | 4.362 | mg/L | 0.0047 | | | | 0.11% |
| Y RADIAL | 223006.3 | 4.858 | mg/L | 0.1008 | | | | 2.07% |
| As 188.979† | 66.9 | 0.0506 | mg/L | 0.01096 | 0.0506 | mg/L | 0.01096 | 21.65% |
| Tl 190.801† | -101.1 | -0.0263 | mg/L | 0.00385 | -0.0263 | mg/L | 0.00385 | 14.66% |
| Se 196.026† | -44.8 | 0.0299 | mg/L | 0.00468 | 0.0299 | mg/L | 0.00468 | 15.63% |
| Zn 206.200† | 157998.5 | 3.462 | mg/L | 0.0737 | 3.462 | mg/L | 0.0737 | 2.13% |
| Sb 206.836† | -22.8 | -0.0084 | mg/L | 0.00324 | -0.0084 | mg/L | 0.00324 | 38.74% |
| Pb 220.353† | 89107.1 | 8.173 | mg/L | 0.1651 | 8.173 | mg/L | 0.1651 | 2.02% |
| Cd 226.502† | 3453.4 | 0.0049 | mg/L | 0.00026 | 0.0049 | mg/L | 0.00026 | 5.20% |
| Co 228.616† | 2260.1 | 0.0563 | mg/L | 0.00018 | 0.0563 | mg/L | 0.00018 | 0.32% |
| Ni 232.003† | 3602.9 | 0.1608 | mg/L | 0.00510 | 0.1608 | mg/L | 0.00510 | 3.17% |
| Ba 233.527† | 922518.1 | 9.316 | mg/L | 0.2001 | 9.316 | mg/L | 0.2001 | 2.15% |
| Mn 257.610† | 2942186.2 | 3.088 | mg/L | 0.0667 | 3.088 | mg/L | 0.0667 | 2.16% |
| Cr 267.716† | 31287.2 | 0.2181 | mg/L | 0.00438 | 0.2181 | mg/L | 0.00438 | 2.01% |
| Fe 273.955† | 4526115.0 | 166.6 | mg/L | 0.33 | 166.6 | mg/L | 0.33 | 0.20% |
| Mg 279.077† | 1222324.6 | 55.10 | mg/L | 1.182 | 55.10 | mg/L | 1.182 | 2.14% |
| V 292.402† | 69403.3 | 0.2317 | mg/L | 0.00485 | 0.2317 | mg/L | 0.00485 | 2.09% |
| Al 308.215† | 2142480.8 | 76.70 | mg/L | 1.842 | 76.70 | mg/L | 1.842 | 2.40% |
| Be 313.107† | -671.5 | -0.0002 | mg/L | 0.00008 | -0.0002 | mg/L | 0.00008 | 51.20% |
| Cu 324.752† | 162482.4 | 0.6180 | mg/L | 0.01361 | 0.6180 | mg/L | 0.01361 | 2.20% |
| Ag 338.289† | -1847.3 | -0.0133 | mg/L | 0.00130 | -0.0133 | mg/L | 0.00130 | 9.78% |
| Na 330.237† | 8361.5 | 9.572 | mg/L | 0.0647 | 9.572 | mg/L | 0.0647 | 0.68% |
| Ca 227.546† | 148947.4 | 400.1 | mg/L | 8.81 | 400.1 | mg/L | 8.81 | 2.20% |
| Al RADIAL† | 135500.0 | 70.44 | mg/L | 0.211 | 70.44 | mg/L | 0.211 | 0.30% |
| Fe RADIAL† | 62576.5 | 169.9 | mg/L | 0.12 | 169.9 | mg/L | 0.12 | 0.07% |
| Ca RADIAL† | 1756885.7 | 381.4 | mg/L | 4.06 | 381.4 | mg/L | 4.06 | 1.07% |
| K RADIAL† | 13533.8 | 11.66 | mg/L | 0.066 | 11.66 | mg/L | 0.066 | 0.57% |
| Mg RADIAL† | 18009.7 | 52.64 | mg/L | 0.170 | 52.64 | mg/L | 0.170 | 0.32% |
| Na RADIAL† | 65448.4 | 4.983 | mg/L | 0.0728 | 4.983 | mg/L | 0.0728 | 1.46% |
| Mo 202.031 | 92.8 | 0.003 | mg/L | 0.0003 | 0.003 | mg/L | 0.0003 | 9.99% |

**Sequence No.: 93**
**Sample ID: SEQ-CCV8**

**Autosampler Location: 3**
**Date Collected: 9/12/2016 11:19:25 PM**

Analyst: KV
Logged In Analyst (Original) : administrator
Initial Sample Wt:
Dilution:

Data Type: Reprocessed on 9/13/2016 7:00:11 AM
Initial Sample Vol:
Sample Prep Vol:

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Mean Data: SEQ-CCV8

| Analyte | Mean Corrected Intensity | Calib. Conc. | Calib. Units | Std.Dev. | Sample Conc. | Sample Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 14742108.9 | 4.793 | mg/L | 0.1382 | | | | 2.88% |
| Y RADIAL | 226340.0 | 4.930 | mg/L | 0.0204 | | | | 0.41% |
| As 188.979† | 473.2 | 0.2505 | mg/L | 0.00724 | 0.2505 | mg/L | 0.00724 | 2.89% |
| Tl 190.801† | 648.5 | 0.2232 | mg/L | 0.00273 | 0.2232 | mg/L | 0.00273 | 1.22% |
| Se 196.026† | 230.5 | 0.2420 | mg/L | 0.00898 | 0.2420 | mg/L | 0.00898 | 3.71% |
| Zn 206.200† | 116994.0 | 2.564 | mg/L | 0.0653 | 2.564 | mg/L | 0.0653 | 2.55% |
| Sb 206.836† | 838.1 | 0.2439 | mg/L | 0.00891 | 0.2439 | mg/L | 0.00891 | 3.65% |
| Pb 220.353† | 2786.5 | 0.2568 | mg/L | 0.01141 | 0.2568 | mg/L | 0.01141 | 4.44% |
| Cd 226.502† | 18582.3 | 0.1263 | mg/L | 0.00320 | 0.1263 | mg/L | 0.00320 | 2.53% |
| Co 228.616† | 110743.8 | 2.582 | mg/L | 0.0661 | 2.582 | mg/L | 0.0661 | 2.56% |
| Ni 232.003† | 61554.8 | 2.544 | mg/L | 0.0706 | 2.544 | mg/L | 0.0706 | 2.78% |
| Ba 233.527† | 1013678.8 | 10.24 | mg/L | 0.244 | 10.24 | mg/L | 0.244 | 2.38% |
| Mn 257.610† | 2445444.2 | 2.549 | mg/L | 0.0613 | 2.549 | mg/L | 0.0613 | 2.41% |
| Cr 267.716† | 150737.9 | 1.043 | mg/L | 0.0272 | 1.043 | mg/L | 0.0272 | 2.61% |
| Fe 273.955† | 140988.5 | 5.189 | mg/L | 0.1231 | 5.189 | mg/L | 0.1231 | 2.37% |
| Mg 279.077† | 561929.1 | 25.34 | mg/L | 0.607 | 25.34 | mg/L | 0.607 | 2.39% |
| V 292.402† | 723706.6 | 2.504 | mg/L | 0.0619 | 2.504 | mg/L | 0.0619 | 2.47% |
| Al 308.215† | 282670.8 | 10.12 | mg/L | 0.257 | 10.12 | mg/L | 0.257 | 2.54% |
| Be 313.107† | 1094525.2 | 0.2510 | mg/L | 0.00605 | 0.2510 | mg/L | 0.00605 | 2.41% |
| Cu 324.752† | 345476.5 | 1.300 | mg/L | 0.0370 | 1.300 | mg/L | 0.0370 | 2.84% |
| Ag 338.289† | 194107.9 | 1.304 | mg/L | 0.0351 | 1.304 | mg/L | 0.0351 | 2.69% |
| Na 330.237† | 23798.8 | 23.99 | mg/L | 0.639 | 23.99 | mg/L | 0.639 | 2.66% |
| Ca 227.546† | 9506.9 | 25.50 | mg/L | 0.861 | 25.50 | mg/L | 0.861 | 3.38% |
| Al RADIAL† | 19274.4 | 10.02 | mg/L | 0.068 | 10.02 | mg/L | 0.068 | 0.68% |
| Fe RADIAL† | 1985.6 | 5.391 | mg/L | 0.0576 | 5.391 | mg/L | 0.0576 | 1.07% |
| Ca RADIAL† | 117416.5 | 25.49 | mg/L | 0.026 | 25.49 | mg/L | 0.026 | 0.10% |
| K RADIAL† | 5918.8 | 5.099 | mg/L | 0.0689 | 5.099 | mg/L | 0.0689 | 1.35% |
| Mg RADIAL† | 9241.0 | 27.02 | mg/L | 0.225 | 27.02 | mg/L | 0.225 | 0.83% |
| Na RADIAL† | 351584.2 | 26.77 | mg/L | 0.207 | 26.77 | mg/L | 0.207 | 0.77% |
| Mo 202.031 | 28536.3 | 1.045 | mg/L | 0.0086 | 1.045 | mg/L | 0.0086 | 0.83% |

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Sequence No.: 94
Sample ID: SEQ-CCB8
Analyst: KV
Logged In Analyst (Original) : administrator
Initial Sample Wt:
Dilution:

Autosampler Location: 4
Date Collected: 9/12/2016 11:27:32 PM
Data Type: Reprocessed on 9/13/2016 7:00:11 AM
Initial Sample Vol:
Sample Prep Vol:

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Mean Data: SEQ-CCB8

| Analyte | Mean Corrected Intensity | Calib. Conc. | Calib. Units | Std.Dev. | Sample Conc. | Sample Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 14802422.0 | 4.813 | mg/L | 0.0863 | | | | 1.79% |
| Y RADIAL | 230610.2 | 5.023 | mg/L | 0.0151 | | | | 0.30% |
| As 188.979† | -17.2 | -0.0091 | mg/L | 0.00679 | -0.0091 | mg/L | 0.00679 | 74.54% |
| Tl 190.801† | -12.6 | -0.0043 | mg/L | 0.00123 | -0.0043 | mg/L | 0.00123 | 28.36% |
| Se 196.026† | 2.9 | 0.0030 | mg/L | 0.00483 | 0.0030 | mg/L | 0.00483 | 161.82% |
| Zn 206.200† | -218.8 | -0.0048 | mg/L | 0.00016 | -0.0048 | mg/L | 0.00016 | 3.29% |
| Sb 206.836† | 1.1 | 0.0003 | mg/L | 0.00386 | 0.0003 | mg/L | 0.00386 | >999.9% |
| Pb 220.353† | 20.4 | 0.0019 | mg/L | 0.00113 | 0.0019 | mg/L | 0.00113 | 60.76% |
| Cd 226.502† | -46.0 | -0.0003 | mg/L | 0.00015 | -0.0003 | mg/L | 0.00015 | 48.80% |
| Co 228.616† | -2.4 | -0.0001 | mg/L | 0.00019 | -0.0001 | mg/L | 0.00019 | 343.25% |
| Ni 232.003† | -62.8 | -0.0026 | mg/L | 0.00064 | -0.0026 | mg/L | 0.00064 | 24.77% |
| Ba 233.527† | -2.0 | 0.0000 | mg/L | 0.00015 | 0.0000 | mg/L | 0.00015 | 741.44% |
| Mn 257.610† | -63.9 | -0.0001 | mg/L | 0.00001 | -0.0001 | mg/L | 0.00001 | 16.81% |
| Cr 267.716† | 26.9 | 0.0002 | mg/L | 0.00030 | 0.0002 | mg/L | 0.00030 | 162.74% |
| Fe 273.955† | -80.0 | -0.0029 | mg/L | 0.00037 | -0.0029 | mg/L | 0.00037 | 12.66% |
| Mg 279.077† | 4.3 | 0.0002 | mg/L | 0.00170 | 0.0002 | mg/L | 0.00170 | 880.55% |
| V 292.402† | -63.9 | -0.0002 | mg/L | 0.00013 | -0.0002 | mg/L | 0.00013 | 57.83% |
| Al 308.215† | -2828.1 | -0.1012 | mg/L | 0.00691 | -0.1012 | mg/L | 0.00691 | 6.83% |
| Be 313.107† | -241.4 | -0.0001 | mg/L | 0.00005 | -0.0001 | mg/L | 0.00005 | 81.49% |
| Cu 324.752† | 5.6 | 0.0000 | mg/L | 0.00012 | 0.0000 | mg/L | 0.00012 | 591.71% |

| | | | | | | |
|---|---|---|---|---|---|---|
| Ag 338.289† | -0.9 | 0.0000 mg/L | 0.00088 | 0.0000 mg/L | 0.00088 | >999.9% |
| Na 330.237† | 26.6 | 0.0268 mg/L | 0.02936 | 0.0268 mg/L | 0.02936 | 109.67% |
| Ca 227.546† | 4.7 | 0.0125 mg/L | 0.04337 | 0.0125 mg/L | 0.04337 | 346.92% |
| Al RADIAL† | -257.7 | -0.1340 mg/L | 0.00685 | -0.1340 mg/L | 0.00685 | 5.11% |
| Fe RADIAL† | -0.4 | -0.0010 mg/L | 0.00848 | -0.0010 mg/L | 0.00848 | 844.11% |
| Ca RADIAL† | 199.7 | 0.0434 mg/L | 0.00197 | 0.0434 mg/L | 0.00197 | 4.54% |
| K RADIAL† | 54.1 | 0.0466 mg/L | 0.04600 | 0.0466 mg/L | 0.04600 | 98.71% |
| Mg RADIAL† | -2.6 | -0.0075 mg/L | 0.00743 | -0.0075 mg/L | 0.00743 | 98.96% |
| Na RADIAL† | -2031.7 | -0.1547 mg/L | 0.01532 | -0.1547 mg/L | 0.01532 | 9.90% |
| Mo 202.031 | 7.9 | 0.000 mg/L | 0.0003 | 0.000 mg/L | 0.0003 | 101.60% |

**Sequence No.: 95**
**Sample ID: 16I0249-07**
**Analyst: KV**
**Logged In Analyst (Original) : administrator**
**Initial Sample Wt:**
**Dilution:**

**Autosampler Location: 79**
**Date Collected: 9/12/2016 11:32:38 PM**
**Data Type: Reprocessed on 9/13/2016 7:00:12 AM**

**Initial Sample Vol:**
**Sample Prep Vol:**

**Mean Data: 16I0249-07**

| Analyte | Mean Corrected Intensity | Calib. Conc. | Calib. Units | Std.Dev. | Sample Conc. | Sample Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 15232535.8 | 4.953 | mg/L | 0.0771 | | | | 1.56% |
| Y RADIAL | 239263.6 | 5.212 | mg/L | 0.0630 | | | | 1.21% |
| As 188.979† | 84.7 | 0.0554 | mg/L | 0.00324 | 0.0554 | mg/L | 0.00324 | 5.84% |
| Tl 190.801† | -90.7 | -0.0253 | mg/L | 0.00175 | -0.0253 | mg/L | 0.00175 | 6.93% |
| Se 196.026† | -27.1 | 0.0249 | mg/L | 0.00797 | 0.0249 | mg/L | 0.00797 | 31.99% |
| Zn 206.200† | 37985.0 | 0.8314 | mg/L | 0.01568 | 0.8314 | mg/L | 0.01568 | 1.89% |
| Sb 206.836† | -14.3 | -0.0054 | mg/L | 0.00327 | -0.0054 | mg/L | 0.00327 | 60.99% |
| Pb 220.353† | 13869.0 | 1.272 | mg/L | 0.0277 | 1.272 | mg/L | 0.0277 | 2.18% |
| Cd 226.502† | 1793.5 | -0.0007 | mg/L | 0.00051 | -0.0007 | mg/L | 0.00051 | 71.15% |
| Co 228.616† | 2231.6 | 0.0545 | mg/L | 0.00029 | 0.0545 | mg/L | 0.00029 | 0.54% |
| Ni 232.003† | 2787.5 | 0.1234 | mg/L | 0.00273 | 0.1234 | mg/L | 0.00273 | 2.21% |
| Ba 233.527† | 89817.1 | 0.9070 | mg/L | 0.02034 | 0.9070 | mg/L | 0.02034 | 2.24% |
| Mn 257.610† | 3268387.4 | 3.421 | mg/L | 0.0562 | 3.421 | mg/L | 0.0562 | 1.64% |
| Cr 267.716† | 17562.6 | 0.1226 | mg/L | 0.00264 | 0.1226 | mg/L | 0.00264 | 2.15% |
| Fe 273.955† | 3050759.0 | 112.3 | mg/L | 1.81 | 112.3 | mg/L | 1.81 | 1.61% |
| Mg 279.077† | 670562.6 | 30.23 | mg/L | 0.457 | 30.23 | mg/L | 0.457 | 1.51% |
| V 292.402† | 50387.7 | 0.1685 | mg/L | 0.00385 | 0.1685 | mg/L | 0.00385 | 2.28% |
| Al 308.215† | 2145295.2 | 76.81 | mg/L | 1.256 | 76.81 | mg/L | 1.256 | 1.64% |
| Be 313.107† | 2969.5 | 0.0007 | mg/L | 0.00007 | 0.0007 | mg/L | 0.00007 | 10.88% |
| Cu 324.752† | 62036.8 | 0.2381 | mg/L | 0.00608 | 0.2381 | mg/L | 0.00608 | 2.55% |
| Ag 338.289† | -2559.5 | -0.0158 | mg/L | 0.00061 | -0.0158 | mg/L | 0.00061 | 3.87% |
| Na 330.237† | 1243.8 | 1.882 | mg/L | 0.0991 | 1.882 | mg/L | 0.0991 | 5.27% |
| Ca 227.546† | 31364.7 | 85.00 | mg/L | 1.632 | 85.00 | mg/L | 1.632 | 1.92% |
| Al RADIAL† | 142477.7 | 74.07 | mg/L | 0.313 | 74.07 | mg/L | 0.313 | 0.42% |
| Fe RADIAL† | 43413.7 | 117.9 | mg/L | 2.31 | 117.9 | mg/L | 2.31 | 1.96% |
| Ca RADIAL† | 396501.0 | 86.07 | mg/L | 0.109 | 86.07 | mg/L | 0.109 | 0.13% |
| K RADIAL† | 10773.0 | 9.281 | mg/L | 0.1654 | 9.281 | mg/L | 0.1654 | 1.78% |
| Mg RADIAL† | 10464.3 | 30.58 | mg/L | 0.588 | 30.58 | mg/L | 0.588 | 1.92% |
| Na RADIAL† | 21551.2 | 1.641 | mg/L | 0.0069 | 1.641 | mg/L | 0.0069 | 0.42% |
| Mo 202.031 | -37.0 | -0.001 | mg/L | 0.0006 | -0.001 | mg/L | 0.0006 | 40.67% |

**Sequence No.: 96**
**Sample ID: 16I0249-09**
**Analyst: KV**
**Logged In Analyst (Original) : administrator**
**Initial Sample Wt:**
**Dilution:**

**Autosampler Location: 80**
**Date Collected: 9/12/2016 11:37:21 PM**
**Data Type: Reprocessed on 9/13/2016 7:00:13 AM**

**Initial Sample Vol:**
**Sample Prep Vol:**

**Mean Data: 16I0249-09**

| Analyte | Mean Corrected Intensity | Calib. Conc. | Calib. Units | Std.Dev. | Sample Conc. | Sample Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 15874189.6 | 5.161 | mg/L | 0.0627 | | | | 1.21% |
| Y RADIAL | 247494.3 | 5.391 | mg/L | 0.0785 | | | | 1.46% |
| As 188.979† | 60.1 | 0.0424 | mg/L | 0.00603 | 0.0424 | mg/L | 0.00603 | 14.24% |
| Tl 190.801† | -83.5 | -0.0228 | mg/L | 0.00387 | -0.0228 | mg/L | 0.00387 | 16.97% |
| Se 196.026† | -26.1 | 0.0258 | mg/L | 0.00395 | 0.0258 | mg/L | 0.00395 | 15.33% |
| Zn 206.200† | 31959.9 | 0.6994 | mg/L | 0.00903 | 0.6994 | mg/L | 0.00903 | 1.29% |

| | | | | | | |
|---|---|---|---|---|---|---|
| Sb 206.836† | -24.8 | -0.0084 mg/L | 0.00503 | -0.0084 mg/L | 0.00503 | 59.56% |
| Pb 220.353† | 12028.0 | 1.103 mg/L | 0.0143 | 1.103 mg/L | 0.0143 | 1.30% |
| Cd 226.502† | 1666.7 | -0.0016 mg/L | 0.00034 | -0.0016 mg/L | 0.00034 | 22.08% |
| Co 228.616† | 2146.2 | 0.0525 mg/L | 0.00057 | 0.0525 mg/L | 0.00057 | 1.08% |
| Ni 232.003† | 2461.9 | 0.1100 mg/L | 0.00247 | 0.1100 mg/L | 0.00247 | 2.25% |
| Ba 233.527† | 90454.3 | 0.9134 mg/L | 0.01192 | 0.9134 mg/L | 0.01192 | 1.30% |
| Mn 257.610† | 2180676.8 | 2.288 mg/L | 0.0499 | 2.288 mg/L | 0.0499 | 2.18% |
| Cr 267.716† | 18095.9 | 0.1263 mg/L | 0.00192 | 0.1263 mg/L | 0.00192 | 1.52% |
| Fe 273.955† | 3048852.4 | 112.2 mg/L | 2.49 | 112.2 mg/L | 2.49 | 2.22% |
| Mg 279.077† | 569764.2 | 25.68 mg/L | 0.556 | 25.68 mg/L | 0.556 | 2.16% |
| V 292.402† | 51527.3 | 0.1724 mg/L | 0.00224 | 0.1724 mg/L | 0.00224 | 1.30% |
| Al 308.215† | 2325324.1 | 83.25 mg/L | 1.897 | 83.25 mg/L | 1.897 | 2.28% |
| Be 313.107† | 571.7 | 0.0001 mg/L | 0.00002 | 0.0001 mg/L | 0.00002 | 18.23% |
| Cu 324.752† | 53015.7 | 0.2041 mg/L | 0.00293 | 0.2041 mg/L | 0.00293 | 1.44% |
| Ag 338.289† | -2861.4 | -0.0174 mg/L | 0.00122 | -0.0174 mg/L | 0.00122 | 7.01% |
| Na 330.237† | 604.7 | 1.196 mg/L | 0.1166 | 1.196 mg/L | 0.1166 | 9.75% |
| Ca 227.546† | 15805.8 | 43.37 mg/L | 0.621 | 43.37 mg/L | 0.621 | 1.43% |
| Al RADIAL† | 154619.8 | 80.39 mg/L | 0.199 | 80.39 mg/L | 0.199 | 0.25% |
| Fe RADIAL† | 43319.0 | 117.6 mg/L | 2.90 | 117.6 mg/L | 2.90 | 2.47% |
| Ca RADIAL† | 200630.7 | 43.55 mg/L | 0.144 | 43.55 mg/L | 0.144 | 0.33% |
| K RADIAL† | 9367.3 | 8.070 mg/L | 0.1849 | 8.070 mg/L | 0.1849 | 2.29% |
| Mg RADIAL† | 8868.3 | 25.92 mg/L | 0.668 | 25.92 mg/L | 0.668 | 2.58% |
| Na RADIAL† | 16503.8 | 1.256 mg/L | 0.0205 | 1.256 mg/L | 0.0205 | 1.63% |
| Mo 202.031 | -58.0 | -0.002 mg/L | 0.0004 | -0.002 mg/L | 0.0004 | 17.01% |

**Sequence No.: 97**
**Sample ID: 16I0249-10**
**Analyst: KV**
**Logged In Analyst (Original) : administrator**
**Initial Sample Wt:**
**Dilution:**

**Autosampler Location: 81**
**Date Collected: 9/12/2016 11:42:04 PM**
**Data Type: Reprocessed on 9/13/2016 7:00:14 AM**

**Initial Sample Vol:**
**Sample Prep Vol:**

**Mean Data: 16I0249-10**

| Analyte | Mean Corrected Intensity | Calib. Conc. | Units | Std.Dev. | Sample Conc. | Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 16254086.6 | 5.285 | mg/L | 0.0598 | | | | 1.13% |
| Y RADIAL | 260720.4 | 5.679 | mg/L | 0.0221 | | | | 0.39% |
| As 188.979† | 37.9 | 0.0286 | mg/L | 0.00558 | 0.0286 | mg/L | 0.00558 | 19.51% |
| Tl 190.801† | -125.3 | -0.0383 | mg/L | 0.00469 | -0.0383 | mg/L | 0.00469 | 12.25% |
| Se 196.026† | -23.9 | 0.0180 | mg/L | 0.01143 | 0.0180 | mg/L | 0.01143 | 63.49% |
| Zn 206.200† | 72647.9 | 1.591 | mg/L | 0.0411 | 1.591 | mg/L | 0.0411 | 2.58% |
| Sb 206.836† | -28.3 | -0.0092 | mg/L | 0.00311 | -0.0092 | mg/L | 0.00311 | 33.76% |
| Pb 220.353† | 14816.1 | 1.359 | mg/L | 0.0348 | 1.359 | mg/L | 0.0348 | 2.56% |
| Cd 226.502† | 1877.6 | 0.0024 | mg/L | 0.00010 | 0.0024 | mg/L | 0.00010 | 4.44% |
| Co 228.616† | 2328.7 | 0.0563 | mg/L | 0.00013 | 0.0563 | mg/L | 0.00013 | 0.22% |
| Ni 232.003† | 3639.0 | 0.1570 | mg/L | 0.00176 | 0.1570 | mg/L | 0.00176 | 1.12% |
| Ba 233.527† | 119689.4 | 1.209 | mg/L | 0.0286 | 1.209 | mg/L | 0.0286 | 2.37% |
| Mn 257.610† | 2330411.7 | 2.441 | mg/L | 0.0553 | 2.441 | mg/L | 0.0553 | 2.26% |
| Cr 267.716† | 19714.7 | 0.1373 | mg/L | 0.00189 | 0.1373 | mg/L | 0.00189 | 1.37% |
| Fe 273.955† | 2513429.2 | 92.50 | mg/L | 2.088 | 92.50 | mg/L | 2.088 | 2.26% |
| Mg 279.077† | 1356678.3 | 61.18 | mg/L | 1.469 | 61.18 | mg/L | 1.469 | 2.40% |
| V 292.402† | 59103.7 | 0.1998 | mg/L | 0.00560 | 0.1998 | mg/L | 0.00560 | 2.80% |
| Al 308.215† | 1567190.3 | 56.10 | mg/L | 1.238 | 56.10 | mg/L | 1.238 | 2.21% |
| Be 313.107† | -6588.8 | -0.0015 | mg/L | 0.00010 | -0.0015 | mg/L | 0.00010 | 6.47% |
| Cu 324.752† | 89528.1 | 0.3406 | mg/L | 0.00839 | 0.3406 | mg/L | 0.00839 | 2.46% |
| Ag 338.289† | -3277.7 | -0.0222 | mg/L | 0.00056 | -0.0222 | mg/L | 0.00056 | 2.51% |
| Na 330.237† | 2424.8 | 3.061 | mg/L | 0.1044 | 3.061 | mg/L | 0.1044 | 3.41% |
| Ca 227.546† | 70218.7 | 188.8 | mg/L | 4.93 | 188.8 | mg/L | 4.93 | 2.61% |
| Al RADIAL† | 100809.3 | 52.41 | mg/L | 0.125 | 52.41 | mg/L | 0.125 | 0.24% |
| Fe RADIAL† | 35065.6 | 95.21 | mg/L | 0.203 | 95.21 | mg/L | 0.203 | 0.21% |
| Ca RADIAL† | 847925.6 | 184.1 | mg/L | 3.14 | 184.1 | mg/L | 3.14 | 1.71% |
| K RADIAL† | 14025.1 | 12.08 | mg/L | 0.030 | 12.08 | mg/L | 0.030 | 0.25% |
| Mg RADIAL† | 20561.5 | 60.10 | mg/L | 0.294 | 60.10 | mg/L | 0.294 | 0.49% |
| Na RADIAL† | 31039.4 | 2.363 | mg/L | 0.0341 | 2.363 | mg/L | 0.0341 | 1.44% |
| Mo 202.031 | -22.1 | -0.001 | mg/L | 0.0004 | -0.001 | mg/L | 0.0004 | 48.25% |

**Sequence No.: 98**
**Sample ID: 16I0249-11**
**Analyst: KV**

**Autosampler Location: 82**
**Date Collected: 9/12/2016 11:46:47 PM**
**Data Type: Reprocessed on 9/13/2016 7:00:14 AM**

**Logged In Analyst (Original) : administrator**
**Initial Sample Wt:** **Initial Sample Vol:**
**Dilution:** **Sample Prep Vol:**

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**Mean Data: 16I0249-11**

| Analyte | Mean Corrected Intensity | Conc. | Calib. Units | Std.Dev. | Conc. | Sample Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 14647250.9 | 4.763 | mg/L | 0.0578 | | | | 1.21% |
| Y RADIAL | 242754.0 | 5.288 | mg/L | 0.0948 | | | | 1.79% |
| As 188.979† | -1.6 | 0.0077 | mg/L | 0.00403 | 0.0077 | mg/L | 0.00403 | 52.17% |
| Tl 190.801† | -178.1 | -0.0565 | mg/L | 0.00339 | -0.0565 | mg/L | 0.00339 | 6.00% |
| Se 196.026† | -35.1 | 0.0063 | mg/L | 0.00896 | 0.0063 | mg/L | 0.00896 | 142.25% |
| Zn 206.200† | 34868.7 | 0.7633 | mg/L | 0.00482 | 0.7633 | mg/L | 0.00482 | 0.63% |
| Sb 206.836† | -29.0 | -0.0094 | mg/L | 0.00081 | -0.0094 | mg/L | 0.00081 | 8.54% |
| Pb 220.353† | 8001.9 | 0.7357 | mg/L | 0.01042 | 0.7357 | mg/L | 0.01042 | 1.42% |
| Cd 226.502† | 1679.1 | 0.0010 | mg/L | 0.00023 | 0.0010 | mg/L | 0.00023 | 23.10% |
| Co 228.616† | 2504.9 | 0.0604 | mg/L | 0.00101 | 0.0604 | mg/L | 0.00101 | 1.67% |
| Ni 232.003† | 3211.5 | 0.1393 | mg/L | 0.00193 | 0.1393 | mg/L | 0.00193 | 1.39% |
| Ba 233.527† | 62020.8 | 0.6263 | mg/L | 0.00628 | 0.6263 | mg/L | 0.00628 | 1.00% |
| Mn 257.610† | 1474649.1 | 1.549 | mg/L | 0.0325 | 1.549 | mg/L | 0.0325 | 2.09% |
| Cr 267.716† | 17786.6 | 0.1240 | mg/L | 0.00184 | 0.1240 | mg/L | 0.00184 | 1.48% |
| Fe 273.955† | 2600982.6 | 95.72 | mg/L | 2.055 | 95.72 | mg/L | 2.055 | 2.15% |
| Mg 279.077† | 2724658.6 | 122.9 | mg/L | 2.74 | 122.9 | mg/L | 2.74 | 2.23% |
| V 292.402† | 55342.3 | 0.1868 | mg/L | 0.00231 | 0.1868 | mg/L | 0.00231 | 1.24% |
| Al 308.215† | 1749737.1 | 62.64 | mg/L | 1.399 | 62.64 | mg/L | 1.399 | 2.23% |
| Be 313.107† | -9243.4 | -0.0021 | mg/L | 0.00022 | -0.0021 | mg/L | 0.00022 | 10.35% |
| Cu 324.752† | 79199.2 | 0.3017 | mg/L | 0.00384 | 0.3017 | mg/L | 0.00384 | 1.27% |
| Ag 338.289† | -3609.9 | -0.0251 | mg/L | 0.00042 | -0.0251 | mg/L | 0.00042 | 1.69% |
| Na 330.237† | 885.3 | 1.572 | mg/L | 0.1255 | 1.572 | mg/L | 0.1255 | 7.99% |
| Ca 227.546† | 94677.6 | 254.2 | mg/L | 2.06 | 254.2 | mg/L | 2.06 | 0.81% |
| Al RADIAL† | 112210.2 | 58.33 | mg/L | 0.198 | 58.33 | mg/L | 0.198 | 0.34% |
| Fe RADIAL† | 35001.3 | 95.03 | mg/L | 0.224 | 95.03 | mg/L | 0.224 | 0.24% |
| Ca RADIAL† | 1131514.7 | 245.6 | mg/L | 7.47 | 245.6 | mg/L | 7.47 | 3.04% |
| K RADIAL† | 14586.5 | 12.57 | mg/L | 0.059 | 12.57 | mg/L | 0.059 | 0.47% |
| Mg RADIAL† | 39376.8 | 115.1 | mg/L | 0.30 | 115.1 | mg/L | 0.30 | 0.26% |
| Na RADIAL† | 28502.0 | 2.170 | mg/L | 0.0331 | 2.170 | mg/L | 0.0331 | 1.53% |
| Mo 202.031 | -46.4 | -0.002 | mg/L | 0.0002 | -0.002 | mg/L | 0.0002 | 10.57% |

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**Sequence No.: 99** **Autosampler Location: 83**
**Sample ID: 16I0249-12** **Date Collected: 9/12/2016 11:51:31 PM**
**Analyst: KV** **Data Type: Reprocessed on 9/13/2016 7:00:15 AM**
**Logged In Analyst (Original) : administrator**
**Initial Sample Wt:** **Initial Sample Vol:**
**Dilution:** **Sample Prep Vol:**

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**Mean Data: 16I0249-12**

| Analyte | Mean Corrected Intensity | Conc. | Calib. Units | Std.Dev. | Conc. | Sample Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 16269335.5 | 5.290 | mg/L | 0.0082 | | | | 0.15% |
| Y RADIAL | 259505.8 | 5.653 | mg/L | 0.0779 | | | | 1.38% |
| As 188.979† | 27.8 | 0.0260 | mg/L | 0.00282 | 0.0260 | mg/L | 0.00282 | 10.88% |
| Tl 190.801† | -103.6 | -0.0294 | mg/L | 0.00360 | -0.0294 | mg/L | 0.00360 | 12.25% |
| Se 196.026† | -30.6 | 0.0246 | mg/L | 0.00828 | 0.0246 | mg/L | 0.00828 | 33.68% |
| Zn 206.200† | 82253.4 | 1.802 | mg/L | 0.0092 | 1.802 | mg/L | 0.0092 | 0.51% |
| Sb 206.836† | -5.1 | -0.0028 | mg/L | 0.00143 | -0.0028 | mg/L | 0.00143 | 51.79% |
| Pb 220.353† | 11326.0 | 1.036 | mg/L | 0.0095 | 1.036 | mg/L | 0.0095 | 0.91% |
| Cd 226.502† | 2117.2 | 0.0007 | mg/L | 0.00035 | 0.0007 | mg/L | 0.00035 | 52.28% |
| Co 228.616† | 2877.1 | 0.0697 | mg/L | 0.00048 | 0.0697 | mg/L | 0.00048 | 0.69% |
| Ni 232.003† | 3833.9 | 0.1672 | mg/L | 0.00163 | 0.1672 | mg/L | 0.00163 | 0.98% |
| Ba 233.527† | 170995.7 | 1.727 | mg/L | 0.0125 | 1.727 | mg/L | 0.0125 | 0.73% |
| Mn 257.610† | 2885847.0 | 3.024 | mg/L | 0.0349 | 3.024 | mg/L | 0.0349 | 1.15% |
| Cr 267.716† | 26718.3 | 0.1860 | mg/L | 0.00111 | 0.1860 | mg/L | 0.00111 | 0.60% |
| Fe 273.955† | 3317143.6 | 122.1 | mg/L | 1.43 | 122.1 | mg/L | 1.43 | 1.17% |
| Mg 279.077† | 742475.1 | 33.47 | mg/L | 0.383 | 33.47 | mg/L | 0.383 | 1.14% |
| V 292.402† | 67569.8 | 0.2276 | mg/L | 0.00128 | 0.2276 | mg/L | 0.00128 | 0.56% |
| Al 308.215† | 1872050.9 | 67.02 | mg/L | 0.791 | 67.02 | mg/L | 0.791 | 1.18% |
| Be 313.107† | 4067.6 | 0.0009 | mg/L | 0.00003 | 0.0009 | mg/L | 0.00003 | 3.07% |
| Cu 324.752† | 120348.4 | 0.4577 | mg/L | 0.00314 | 0.4577 | mg/L | 0.00314 | 0.69% |
| Ag 338.289† | -2877.7 | -0.0176 | mg/L | 0.00035 | -0.0176 | mg/L | 0.00035 | 1.99% |

| | | | | | | |
|---|---|---|---|---|---|---|
| Na 330.237† | 3188.3 | 3.854 mg/L | 0.0556 | 3.854 mg/L | 0.0556 | 1.44% |
| Ca 227.546† | 24777.0 | 67.43 mg/L | 0.409 | 67.43 mg/L | 0.409 | 0.61% |
| Al RADIAL† | 124453.5 | 64.70 mg/L | 0.103 | 64.70 mg/L | 0.103 | 0.16% |
| Fe RADIAL† | 46151.6 | 125.3 mg/L | 1.17 | 125.3 mg/L | 1.17 | 0.94% |
| Ca RADIAL† | 312639.8 | 67.87 mg/L | 0.064 | 67.87 mg/L | 0.064 | 0.09% |
| K RADIAL† | 11199.9 | 9.649 mg/L | 0.0699 | 9.649 mg/L | 0.0699 | 0.72% |
| Mg RADIAL† | 11322.8 | 33.09 mg/L | 0.397 | 33.09 mg/L | 0.397 | 1.20% |
| Na RADIAL† | 34192.6 | 2.603 mg/L | 0.0586 | 2.603 mg/L | 0.0586 | 2.25% |
| Mo 202.031 | -12.3 | 0.000 mg/L | 0.0005 | 0.000 mg/L | 0.0005 | 110.11% |

**Sequence No.: 100**
**Sample ID: 16I0249-13**
**Analyst: KV**
**Logged In Analyst (Original) : administrator**
**Initial Sample Wt:**
**Dilution:**

**Autosampler Location: 84**
**Date Collected: 9/12/2016 11:56:15 PM**
**Data Type: Reprocessed on 9/13/2016 7:00:16 AM**

**Initial Sample Vol:**
**Sample Prep Vol:**

**Mean Data: 16I0249-13**

| Analyte | Mean Corrected Intensity | Calib. Conc. | Units | Std.Dev. | Sample Conc. | Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 16618730.1 | 5.404 | mg/L | 0.0381 | | | | 0.71% |
| Y RADIAL | 262175.4 | 5.711 | mg/L | 0.0137 | | | | 0.24% |
| As 188.979† | 8.4 | 0.0147 | mg/L | 0.00464 | 0.0147 | mg/L | 0.00464 | 31.50% |
| Tl 190.801† | -145.8 | -0.0444 | mg/L | 0.00251 | -0.0444 | mg/L | 0.00251 | 5.66% |
| Se 196.026† | -31.9 | 0.0182 | mg/L | 0.00986 | 0.0182 | mg/L | 0.00986 | 54.16% |
| Zn 206.200† | 15418.3 | 0.3368 | mg/L | 0.00594 | 0.3368 | mg/L | 0.00594 | 1.76% |
| Sb 206.836† | -38.0 | -0.0122 | mg/L | 0.00257 | -0.0122 | mg/L | 0.00257 | 20.99% |
| Pb 220.353† | 1908.8 | 0.1726 | mg/L | 0.00318 | 0.1726 | mg/L | 0.00318 | 1.84% |
| Cd 226.502† | 1907.1 | 0.0005 | mg/L | 0.00071 | 0.0005 | mg/L | 0.00071 | 151.71% |
| Co 228.616† | 3205.0 | 0.0771 | mg/L | 0.00021 | 0.0771 | mg/L | 0.00021 | 0.27% |
| Ni 232.003† | 3931.7 | 0.1704 | mg/L | 0.00155 | 0.1704 | mg/L | 0.00155 | 0.91% |
| Ba 233.527† | 56025.6 | 0.5658 | mg/L | 0.01029 | 0.5658 | mg/L | 0.01029 | 1.82% |
| Mn 257.610† | 2608172.1 | 2.733 | mg/L | 0.0299 | 2.733 | mg/L | 0.0299 | 1.10% |
| Cr 267.716† | 22527.5 | 0.1569 | mg/L | 0.00279 | 0.1569 | mg/L | 0.00279 | 1.78% |
| Fe 273.955† | 2998623.6 | 110.4 | mg/L | 1.27 | 110.4 | mg/L | 1.27 | 1.15% |
| Mg 279.077† | 869372.2 | 39.19 | mg/L | 0.446 | 39.19 | mg/L | 0.446 | 1.14% |
| V 292.402† | 59146.0 | 0.1990 | mg/L | 0.00477 | 0.1990 | mg/L | 0.00477 | 2.40% |
| Al 308.215† | 1955064.5 | 70.00 | mg/L | 0.807 | 70.00 | mg/L | 0.807 | 1.15% |
| Be 313.107† | -374.4 | -0.0001 | mg/L | 0.00023 | -0.0001 | mg/L | 0.00023 | 263.80% |
| Cu 324.752† | 59889.5 | 0.2298 | mg/L | 0.00398 | 0.2298 | mg/L | 0.00398 | 1.73% |
| Ag 338.289† | -4800.8 | -0.0302 | mg/L | 0.00130 | -0.0302 | mg/L | 0.00130 | 4.31% |
| Na 330.237† | -542.0 | 0.0012 | mg/L | 0.03665 | 0.0012 | mg/L | 0.03665 | >999.9% |
| Ca 227.546† | 6635.0 | 18.79 | mg/L | 0.109 | 18.79 | mg/L | 0.109 | 0.58% |
| Al RADIAL† | 128505.5 | 66.81 | mg/L | 0.350 | 66.81 | mg/L | 0.350 | 0.52% |
| Fe RADIAL† | 42053.5 | 114.2 | mg/L | 2.57 | 114.2 | mg/L | 2.57 | 2.25% |
| Ca RADIAL† | 82016.4 | 17.80 | mg/L | 0.416 | 17.80 | mg/L | 0.416 | 2.34% |
| K RADIAL† | 15334.0 | 13.21 | mg/L | 0.213 | 13.21 | mg/L | 0.213 | 1.61% |
| Mg RADIAL† | 13445.8 | 39.30 | mg/L | 0.803 | 39.30 | mg/L | 0.803 | 2.04% |
| Na RADIAL† | 20319.2 | 1.547 | mg/L | 0.0150 | 1.547 | mg/L | 0.0150 | 0.97% |
| Mo 202.031 | -80.0 | -0.003 | mg/L | 0.0001 | -0.003 | mg/L | 0.0001 | 3.91% |

**Sequence No.: 101**
**Sample ID: 16I0249-14**
**Analyst: KV**
**Logged In Analyst (Original) : administrator**
**Initial Sample Wt:**
**Dilution:**

**Autosampler Location: 85**
**Date Collected: 9/13/2016 12:00:59 AM**
**Data Type: Reprocessed on 9/13/2016 7:00:16 AM**

**Initial Sample Vol:**
**Sample Prep Vol:**

**Mean Data: 16I0249-14**

| Analyte | Mean Corrected Intensity | Calib. Conc. | Units | Std.Dev. | Sample Conc. | Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 17612553.1 | 5.727 | mg/L | 0.0861 | | | | 1.50% |
| Y RADIAL | 288541.2 | 6.285 | mg/L | 0.0435 | | | | 0.69% |
| As 188.979† | 30.0 | 0.0307 | mg/L | 0.00130 | 0.0307 | mg/L | 0.00130 | 4.22% |
| Tl 190.801† | -70.7 | -0.0160 | mg/L | 0.00147 | -0.0160 | mg/L | 0.00147 | 9.16% |
| Se 196.026† | -45.8 | 0.0268 | mg/L | 0.00349 | 0.0268 | mg/L | 0.00349 | 13.00% |
| Zn 206.200† | 81281.4 | 1.780 | mg/L | 0.0248 | 1.780 | mg/L | 0.0248 | 1.40% |
| Sb 206.836† | -34.8 | -0.0118 | mg/L | 0.00360 | -0.0118 | mg/L | 0.00360 | 30.49% |

| | | | | | | |
|---|---|---|---|---|---|---|
| Pb 220.353† | 22331.1 | 2.043 mg/L | 0.0223 | 2.043 mg/L | 0.0223 | 1.09% |
| Cd 226.502† | 2924.7 | 0.0018 mg/L | 0.00011 | 0.0018 mg/L | 0.00011 | 6.37% |
| Co 228.616† | 2459.1 | 0.0608 mg/L | 0.00053 | 0.0608 mg/L | 0.00053 | 0.86% |
| Ni 232.003† | 3689.4 | 0.1640 mg/L | 0.00057 | 0.1640 mg/L | 0.00057 | 0.35% |
| Ba 233.527† | 186395.0 | 1.882 mg/L | 0.0213 | 1.882 mg/L | 0.0213 | 1.13% |
| Mn 257.610† | 3624553.6 | 3.799 mg/L | 0.1131 | 3.799 mg/L | 0.1131 | 2.98% |
| Cr 267.716† | 24272.8 | 0.1695 mg/L | 0.00203 | 0.1695 mg/L | 0.00203 | 1.20% |
| Fe 273.955† | 4320972.5 | 159.0 mg/L | 4.69 | 159.0 mg/L | 4.69 | 2.95% |
| Mg 279.077† | 1022500.0 | 46.09 mg/L | 1.425 | 46.09 mg/L | 1.425 | 3.09% |
| V 292.402† | 56665.7 | 0.1878 mg/L | 0.00120 | 0.1878 mg/L | 0.00120 | 0.64% |
| Al 308.215† | 1684668.2 | 60.32 mg/L | 1.840 | 60.32 mg/L | 1.840 | 3.05% |
| Be 313.107† | 2074.0 | 0.0005 mg/L | 0.00009 | 0.0005 mg/L | 0.00009 | 18.03% |
| Cu 324.752† | 84278.8 | 0.3236 mg/L | 0.00331 | 0.3236 mg/L | 0.00331 | 1.02% |
| Ag 338.289† | -2201.0 | -0.0139 mg/L | 0.00057 | -0.0139 mg/L | 0.00057 | 4.07% |
| Na 330.237† | 4251.9 | 5.258 mg/L | 0.0270 | 5.258 mg/L | 0.0270 | 0.51% |
| Ca 227.546† | 84577.5 | 227.8 mg/L | 3.13 | 227.8 mg/L | 3.13 | 1.37% |
| Al RADIAL† | 109557.5 | 56.96 mg/L | 0.102 | 56.96 mg/L | 0.102 | 0.18% |
| Fe RADIAL† | 60935.8 | 165.4 mg/L | 0.42 | 165.4 mg/L | 0.42 | 0.26% |
| Ca RADIAL† | 1009182.3 | 219.1 mg/L | 2.07 | 219.1 mg/L | 2.07 | 0.95% |
| K RADIAL† | 10799.1 | 9.304 mg/L | 0.0369 | 9.304 mg/L | 0.0369 | 0.40% |
| Mg RADIAL† | 15600.9 | 45.59 mg/L | 0.111 | 45.59 mg/L | 0.111 | 0.24% |
| Na RADIAL† | 48325.1 | 3.679 mg/L | 0.0121 | 3.679 mg/L | 0.0121 | 0.33% |
| Mo 202.031 | -72.6 | -0.003 mg/L | 0.0006 | -0.003 mg/L | 0.0006 | 23.81% |

**Sequence No.: 102**
**Sample ID: 16I0249-15**
**Analyst: KV**
**Logged In Analyst (Original) : administrator**
**Initial Sample Wt:**
**Dilution:**

**Autosampler Location: 86**
**Date Collected: 9/13/2016 12:05:45 AM**
**Data Type: Reprocessed on 9/13/2016 7:00:17 AM**

**Initial Sample Vol:**
**Sample Prep Vol:**

**Mean Data: 16I0249-15**

| Analyte | Mean Corrected Intensity | Calib. Conc. | Units | Std.Dev. | Sample Conc. | Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 14812491.7 | 4.816 | mg/L | 0.0172 | | | | 0.36% |
| Y RADIAL | 241056.1 | 5.251 | mg/L | 0.0482 | | | | 0.92% |
| As 188.979† | 63.1 | 0.0453 | mg/L | 0.00984 | 0.0453 | mg/L | 0.00984 | 21.73% |
| Tl 190.801† | -169.0 | -0.0514 | mg/L | 0.00077 | -0.0514 | mg/L | 0.00077 | 1.50% |
| Se 196.026† | -39.8 | 0.0184 | mg/L | 0.00968 | 0.0184 | mg/L | 0.00968 | 52.70% |
| Zn 206.200† | 80801.6 | 1.770 | mg/L | 0.0168 | 1.770 | mg/L | 0.0168 | 0.95% |
| Sb 206.836† | -34.1 | -0.0113 | mg/L | 0.00164 | -0.0113 | mg/L | 0.00164 | 14.57% |
| Pb 220.353† | 23287.3 | 2.136 | mg/L | 0.0236 | 2.136 | mg/L | 0.0236 | 1.11% |
| Cd 226.502† | 2276.4 | 0.0009 | mg/L | 0.00021 | 0.0009 | mg/L | 0.00021 | 22.20% |
| Co 228.616† | 2720.8 | 0.0662 | mg/L | 0.00038 | 0.0662 | mg/L | 0.00038 | 0.57% |
| Ni 232.003† | 3429.2 | 0.1510 | mg/L | 0.00163 | 0.1510 | mg/L | 0.00163 | 1.08% |
| Ba 233.527† | 211693.5 | 2.138 | mg/L | 0.0158 | 2.138 | mg/L | 0.0158 | 0.74% |
| Mn 257.610† | 3370590.0 | 3.530 | mg/L | 0.0749 | 3.530 | mg/L | 0.0749 | 2.12% |
| Cr 267.716† | 24345.6 | 0.1697 | mg/L | 0.00056 | 0.1697 | mg/L | 0.00056 | 0.33% |
| Fe 273.955† | 3430514.8 | 126.2 | mg/L | 0.40 | 126.2 | mg/L | 0.40 | 0.32% |
| Mg 279.077† | 1044815.4 | 47.10 | mg/L | 1.024 | 47.10 | mg/L | 1.024 | 2.17% |
| V 292.402† | 68707.6 | 0.2311 | mg/L | 0.00278 | 0.2311 | mg/L | 0.00278 | 1.20% |
| Al 308.215† | 2158477.9 | 77.27 | mg/L | 1.851 | 77.27 | mg/L | 1.851 | 2.40% |
| Be 313.107† | -9238.3 | -0.0021 | mg/L | 0.00021 | -0.0021 | mg/L | 0.00021 | 9.79% |
| Cu 324.752† | 82747.6 | 0.3166 | mg/L | 0.00206 | 0.3166 | mg/L | 0.00206 | 0.65% |
| Ag 338.289† | -4257.6 | -0.0286 | mg/L | 0.00148 | -0.0286 | mg/L | 0.00148 | 5.16% |
| Na 330.237† | 3927.5 | 4.800 | mg/L | 0.0480 | 4.800 | mg/L | 0.0480 | 1.00% |
| Ca 227.546† | 89890.4 | 241.8 | mg/L | 2.77 | 241.8 | mg/L | 2.77 | 1.14% |
| Al RADIAL† | 138736.2 | 72.12 | mg/L | 0.202 | 72.12 | mg/L | 0.202 | 0.28% |
| Fe RADIAL† | 48885.7 | 132.7 | mg/L | 0.60 | 132.7 | mg/L | 0.60 | 0.45% |
| Ca RADIAL† | 1102221.8 | 239.3 | mg/L | 2.93 | 239.3 | mg/L | 2.93 | 1.22% |
| K RADIAL† | 18437.5 | 15.88 | mg/L | 0.088 | 15.88 | mg/L | 0.088 | 0.56% |
| Mg RADIAL† | 16013.3 | 46.80 | mg/L | 0.265 | 46.80 | mg/L | 0.265 | 0.57% |
| Na RADIAL† | 55907.8 | 4.256 | mg/L | 0.0177 | 4.256 | mg/L | 0.0177 | 0.42% |
| Mo 202.031 | -8.9 | 0.000 | mg/L | 0.0004 | 0.000 | mg/L | 0.0004 | 120.90% |

**Sequence No.: 103**
**Sample ID: 16I0260-01**
**Analyst: KV**
**Logged In Analyst (Original) : administrator**

**Autosampler Location: 87**
**Date Collected: 9/13/2016 12:10:28 AM**
**Data Type: Reprocessed on 9/13/2016 7:00:18 AM**

**Initial Sample Wt:** **Initial Sample Vol:**
**Dilution:** **Sample Prep Vol:**

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**Mean Data: 16I0260-01**

| Analyte | Mean Corrected Intensity | Conc. | Calib. Units | Std.Dev. | Conc. | Sample Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 15843654.6 | 5.152 | mg/L | 0.0821 | | | | 1.59% |
| Y RADIAL | 251236.3 | 5.473 | mg/L | 0.0471 | | | | 0.86% |
| As 188.979† | 55.7 | 0.0367 | mg/L | 0.00546 | 0.0367 | mg/L | 0.00546 | 14.87% |
| Tl 190.801† | -256.5 | -0.0841 | mg/L | 0.00328 | -0.0841 | mg/L | 0.00328 | 3.90% |
| Se 196.026† | -30.9 | 0.0044 | mg/L | 0.00562 | 0.0044 | mg/L | 0.00562 | 128.41% |
| Zn 206.200† | 33125.2 | 0.7253 | mg/L | 0.01683 | 0.7253 | mg/L | 0.01683 | 2.32% |
| Sb 206.836† | -56.2 | -0.0172 | mg/L | 0.00152 | -0.0172 | mg/L | 0.00152 | 8.86% |
| Pb 220.353† | 2546.8 | 0.2293 | mg/L | 0.00520 | 0.2293 | mg/L | 0.00520 | 2.27% |
| Cd 226.502† | 1337.1 | 0.0002 | mg/L | 0.00023 | 0.0002 | mg/L | 0.00023 | 102.69% |
| Co 228.616† | 1234.9 | 0.0305 | mg/L | 0.00011 | 0.0305 | mg/L | 0.00011 | 0.37% |
| Ni 232.003† | 523.7 | 0.0273 | mg/L | 0.00095 | 0.0273 | mg/L | 0.00095 | 3.46% |
| Ba 233.527† | 28181.5 | 0.2846 | mg/L | 0.00775 | 0.2846 | mg/L | 0.00775 | 2.72% |
| Mn 257.610† | 2062341.6 | 2.160 | mg/L | 0.0433 | 2.160 | mg/L | 0.0433 | 2.00% |
| Cr 267.716† | 2932.7 | 0.0211 | mg/L | 0.00042 | 0.0211 | mg/L | 0.00042 | 1.98% |
| Fe 273.955† | 2146567.7 | 79.00 | mg/L | 1.556 | 79.00 | mg/L | 1.556 | 1.97% |
| Mg 279.077† | 398975.4 | 17.98 | mg/L | 0.462 | 17.98 | mg/L | 0.462 | 2.57% |
| V 292.402† | 23075.0 | 0.0758 | mg/L | 0.00187 | 0.0758 | mg/L | 0.00187 | 2.47% |
| Al 308.215† | 778479.3 | 27.87 | mg/L | 0.555 | 27.87 | mg/L | 0.555 | 1.99% |
| Be 313.107† | 25456.8 | 0.0058 | mg/L | 0.00030 | 0.0058 | mg/L | 0.00030 | 5.17% |
| Cu 324.752† | 44118.4 | 0.1692 | mg/L | 0.00390 | 0.1692 | mg/L | 0.00390 | 2.30% |
| Ag 338.289† | -6571.7 | -0.0427 | mg/L | 0.00126 | -0.0427 | mg/L | 0.00126 | 2.95% |
| Na 330.237† | -523.5 | -0.1380 | mg/L | 0.10324 | -0.1380 | mg/L | 0.10324 | 74.82% |
| Ca 227.546† | 4918.6 | 13.88 | mg/L | 0.231 | 13.88 | mg/L | 0.231 | 1.66% |
| Al RADIAL† | 52759.8 | 27.43 | mg/L | 0.103 | 27.43 | mg/L | 0.103 | 0.38% |
| Fe RADIAL† | 29840.2 | 81.02 | mg/L | 1.418 | 81.02 | mg/L | 1.418 | 1.75% |
| Ca RADIAL† | 62299.0 | 13.52 | mg/L | 0.287 | 13.52 | mg/L | 0.287 | 2.12% |
| K RADIAL† | 22036.5 | 18.98 | mg/L | 0.264 | 18.98 | mg/L | 0.264 | 1.39% |
| Mg RADIAL† | 5845.5 | 17.08 | mg/L | 0.246 | 17.08 | mg/L | 0.246 | 1.44% |
| Na RADIAL† | 15534.9 | 1.183 | mg/L | 0.0056 | 1.183 | mg/L | 0.0056 | 0.47% |
| Mo 202.031 | -30.7 | -0.001 | mg/L | 0.0002 | -0.001 | mg/L | 0.0002 | 19.49% |

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**Sequence No.: 104** **Autosampler Location: 88**
**Sample ID: 16I0267-01** **Date Collected: 9/13/2016 12:15:11 AM**
**Analyst: KV** **Data Type: Reprocessed on 9/13/2016 7:00:18 AM**
**Logged In Analyst (Original) : administrator**
**Initial Sample Wt:** **Initial Sample Vol:**
**Dilution:** **Sample Prep Vol:**

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**Mean Data: 16I0267-01**

| Analyte | Mean Corrected Intensity | Conc. | Calib. Units | Std.Dev. | Conc. | Sample Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 16015861.4 | 5.208 | mg/L | 0.0717 | | | | 1.38% |
| Y RADIAL | 270991.9 | 5.903 | mg/L | 0.0884 | | | | 1.50% |
| As 188.979† | 67.5 | 0.0556 | mg/L | 0.00269 | 0.0556 | mg/L | 0.00269 | 4.84% |
| Tl 190.801† | -410.4 | -0.1300 | mg/L | 0.00341 | -0.1300 | mg/L | 0.00341 | 2.63% |
| Se 196.026† | -63.2 | 0.0338 | mg/L | 0.00503 | 0.0338 | mg/L | 0.00503 | 14.87% |
| Zn 206.200† | 41392.7 | 0.9051 | mg/L | 0.01543 | 0.9051 | mg/L | 0.01543 | 1.70% |
| Sb 206.836† | -70.0 | -0.0226 | mg/L | 0.00392 | -0.0226 | mg/L | 0.00392 | 17.32% |
| Pb 220.353† | 11513.0 | 1.048 | mg/L | 0.0205 | 1.048 | mg/L | 0.0205 | 1.96% |
| Cd 226.502† | 3940.0 | 0.0026 | mg/L | 0.00049 | 0.0026 | mg/L | 0.00049 | 18.90% |
| Co 228.616† | 4289.2 | 0.1046 | mg/L | 0.00190 | 0.1046 | mg/L | 0.00190 | 1.82% |
| Ni 232.003† | 5429.2 | 0.2398 | mg/L | 0.00251 | 0.2398 | mg/L | 0.00251 | 1.05% |
| Ba 233.527† | 128319.5 | 1.296 | mg/L | 0.0256 | 1.296 | mg/L | 0.0256 | 1.97% |
| Mn 257.610† | 2955804.6 | 3.109 | mg/L | 0.0783 | 3.109 | mg/L | 0.0783 | 2.52% |
| Cr 267.716† | 48554.5 | 0.3380 | mg/L | 0.00642 | 0.3380 | mg/L | 0.00642 | 1.90% |
| Fe 273.955† | 5990139.2 | 220.4 | mg/L | 5.56 | 220.4 | mg/L | 5.56 | 2.52% |
| Mg 279.077† | 1525095.8 | 68.75 | mg/L | 1.719 | 68.75 | mg/L | 1.719 | 2.50% |
| V 292.402† | 117490.3 | 0.3955 | mg/L | 0.00767 | 0.3955 | mg/L | 0.00767 | 1.94% |
| Al 308.215† | 2738055.6 | 98.03 | mg/L | 2.644 | 98.03 | mg/L | 2.644 | 2.70% |
| Be 313.107† | -42214.7 | -0.0097 | mg/L | 0.00069 | -0.0097 | mg/L | 0.00069 | 7.10% |
| Cu 324.752† | 144585.6 | 0.5527 | mg/L | 0.01105 | 0.5527 | mg/L | 0.01105 | 2.00% |
| Ag 338.289† | -11235.9 | -0.0728 | mg/L | 0.00119 | -0.0728 | mg/L | 0.00119 | 1.64% |
| Na 330.237† | -735.2 | 0.4403 | mg/L | 0.03176 | 0.4403 | mg/L | 0.03176 | 7.21% |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Ca 227.546† | 59968.0 | 162.5 | mg/L | 3.29 | 162.5 | mg/L | 3.29 | 2.03% |
| Al RADIAL† | 173838.0 | 90.38 | mg/L | 0.295 | 90.38 | mg/L | 0.295 | 0.33% |
| Fe RADIAL† | 81477.5 | 221.2 | mg/L | 0.51 | 221.2 | mg/L | 0.51 | 0.23% |
| Ca RADIAL† | 726917.6 | 157.8 | mg/L | 1.55 | 157.8 | mg/L | 1.55 | 0.98% |
| K RADIAL† | 47477.4 | 40.90 | mg/L | 0.184 | 40.90 | mg/L | 0.184 | 0.45% |
| Mg RADIAL† | 22209.4 | 64.91 | mg/L | 0.289 | 64.91 | mg/L | 0.289 | 0.45% |
| Na RADIAL† | 52695.9 | 4.012 | mg/L | 0.0598 | 4.012 | mg/L | 0.0598 | 1.49% |
| Mo 202.031 | 740.7 | 0.027 | mg/L | 0.0003 | 0.027 | mg/L | 0.0003 | 1.19% |

**Sequence No.: 105**
**Sample ID: SEQ-CCV9**
**Analyst: KV**
**Logged In Analyst (Original) : administrator**
**Initial Sample Wt:**
**Dilution:**

**Autosampler Location: 8**
**Date Collected: 9/13/2016 12:19:57 AM**
**Data Type: Reprocessed on 9/13/2016 7:00:19 AM**

**Initial Sample Vol:**
**Sample Prep Vol:**

**Mean Data: SEQ-CCV9**

| Analyte | Mean Corrected Intensity | Calib. Conc. | Calib. Units | Std.Dev. | Sample Conc. | Sample Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 15176584.0 | 4.935 | mg/L | 0.0693 | | | | 1.40% |
| Y RADIAL | 242634.7 | 5.285 | mg/L | 0.0296 | | | | 0.56% |
| As 188.979† | 487.1 | 0.2579 | mg/L | 0.00339 | 0.2579 | mg/L | 0.00339 | 1.31% |
| Tl 190.801† | 676.1 | 0.2326 | mg/L | 0.00284 | 0.2326 | mg/L | 0.00284 | 1.22% |
| Se 196.026† | 234.1 | 0.2456 | mg/L | 0.00536 | 0.2456 | mg/L | 0.00536 | 2.18% |
| Zn 206.200† | 116904.4 | 2.562 | mg/L | 0.0373 | 2.562 | mg/L | 0.0373 | 1.45% |
| Sb 206.836† | 859.8 | 0.2502 | mg/L | 0.00678 | 0.2502 | mg/L | 0.00678 | 2.71% |
| Pb 220.353† | 2806.9 | 0.2587 | mg/L | 0.00443 | 0.2587 | mg/L | 0.00443 | 1.71% |
| Cd 226.502† | 18612.4 | 0.1266 | mg/L | 0.00220 | 0.1266 | mg/L | 0.00220 | 1.74% |
| Co 228.616† | 110857.2 | 2.585 | mg/L | 0.0407 | 2.585 | mg/L | 0.0407 | 1.57% |
| Ni 232.003† | 61502.5 | 2.542 | mg/L | 0.0351 | 2.542 | mg/L | 0.0351 | 1.38% |
| Ba 233.527† | 1022577.5 | 10.33 | mg/L | 0.160 | 10.33 | mg/L | 0.160 | 1.55% |
| Mn 257.610† | 2469717.2 | 2.574 | mg/L | 0.0389 | 2.574 | mg/L | 0.0389 | 1.51% |
| Cr 267.716† | 150946.9 | 1.044 | mg/L | 0.0158 | 1.044 | mg/L | 0.0158 | 1.52% |
| Fe 273.955† | 141514.5 | 5.208 | mg/L | 0.0787 | 5.208 | mg/L | 0.0787 | 1.51% |
| Mg 279.077† | 569717.9 | 25.70 | mg/L | 0.378 | 25.70 | mg/L | 0.378 | 1.47% |
| V 292.402† | 732198.6 | 2.533 | mg/L | 0.0411 | 2.533 | mg/L | 0.0411 | 1.62% |
| Al 308.215† | 282217.3 | 10.10 | mg/L | 0.142 | 10.10 | mg/L | 0.142 | 1.41% |
| Be 313.107† | 1114293.2 | 0.2555 | mg/L | 0.00443 | 0.2555 | mg/L | 0.00443 | 1.73% |
| Cu 324.752† | 343344.5 | 1.292 | mg/L | 0.0150 | 1.292 | mg/L | 0.0150 | 1.16% |
| Ag 338.289† | 193684.5 | 1.301 | mg/L | 0.0178 | 1.301 | mg/L | 0.0178 | 1.37% |
| Na 330.237† | 23690.4 | 23.88 | mg/L | 0.463 | 23.88 | mg/L | 0.463 | 1.94% |
| Ca 227.546† | 9614.7 | 25.78 | mg/L | 0.389 | 25.78 | mg/L | 0.389 | 1.51% |
| Al RADIAL† | 19172.9 | 9.966 | mg/L | 0.0499 | 9.966 | mg/L | 0.0499 | 0.50% |
| Fe RADIAL† | 1900.3 | 5.159 | mg/L | 0.0129 | 5.159 | mg/L | 0.0129 | 0.25% |
| Ca RADIAL† | 117694.7 | 25.55 | mg/L | 0.026 | 25.55 | mg/L | 0.026 | 0.10% |
| K RADIAL† | 5918.2 | 5.099 | mg/L | 0.0490 | 5.099 | mg/L | 0.0490 | 0.96% |
| Mg RADIAL† | 8863.1 | 25.91 | mg/L | 0.066 | 25.91 | mg/L | 0.066 | 0.25% |
| Na RADIAL† | 335655.8 | 25.55 | mg/L | 0.111 | 25.55 | mg/L | 0.111 | 0.43% |
| Mo 202.031 | 29372.5 | 1.076 | mg/L | 0.0045 | 1.076 | mg/L | 0.0045 | 0.42% |

**Sequence No.: 106**
**Sample ID: SEQ-CCB9**
**Analyst: KV**
**Logged In Analyst (Original) : administrator**
**Initial Sample Wt:**
**Dilution:**

**Autosampler Location: 1**
**Date Collected: 9/13/2016 12:28:03 AM**
**Data Type: Reprocessed on 9/13/2016 7:00:20 AM**

**Initial Sample Vol:**
**Sample Prep Vol:**

**Mean Data: SEQ-CCB9**

| Analyte | Mean Corrected Intensity | Calib. Conc. | Calib. Units | Std.Dev. | Sample Conc. | Sample Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 15480097.0 | 5.033 | mg/L | 0.0654 | | | | 1.30% |
| Y RADIAL | 232730.5 | 5.070 | mg/L | 0.0696 | | | | 1.37% |
| As 188.979† | 2.4 | 0.0013 | mg/L | 0.00305 | 0.0013 | mg/L | 0.00305 | 236.84% |
| Tl 190.801† | 15.5 | 0.0053 | mg/L | 0.00127 | 0.0053 | mg/L | 0.00127 | 23.91% |
| Se 196.026† | -0.8 | -0.0008 | mg/L | 0.00424 | -0.0008 | mg/L | 0.00424 | 530.55% |
| Zn 206.200† | -95.8 | -0.0021 | mg/L | 0.00018 | -0.0021 | mg/L | 0.00018 | 8.72% |
| Sb 206.836† | -1.0 | -0.0003 | mg/L | 0.00311 | -0.0003 | mg/L | 0.00311 | >999.9% |
| Pb 220.353† | 11.3 | 0.0010 | mg/L | 0.00015 | 0.0010 | mg/L | 0.00015 | 14.37% |

| | | | | | | |
|---|---|---|---|---|---|---|
| Cd 226.502† | -19.0 | -0.0001 mg/L | 0.00012 | -0.0001 mg/L | 0.00012 | 91.41% |
| Co 228.616† | 5.9 | 0.0001 mg/L | 0.00034 | 0.0001 mg/L | 0.00034 | 243.24% |
| Ni 232.003† | 11.0 | 0.0005 mg/L | 0.00016 | 0.0005 mg/L | 0.00016 | 34.53% |
| Ba 233.527† | 5.1 | 0.0001 mg/L | 0.00014 | 0.0001 mg/L | 0.00014 | 278.25% |
| Mn 257.610† | -97.8 | -0.0001 mg/L | 0.00001 | -0.0001 mg/L | 0.00001 | 11.62% |
| Cr 267.716† | -12.4 | -0.0001 mg/L | 0.00025 | -0.0001 mg/L | 0.00025 | 296.68% |
| Fe 273.955† | 30.1 | 0.0011 mg/L | 0.00095 | 0.0011 mg/L | 0.00095 | 85.59% |
| Mg 279.077† | -5.7 | -0.0003 mg/L | 0.00204 | -0.0003 mg/L | 0.00204 | 787.89% |
| V 292.402† | -24.6 | -0.0001 mg/L | 0.00014 | -0.0001 mg/L | 0.00014 | 158.13% |
| Al 308.215† | -1492.3 | -0.0534 mg/L | 0.01055 | -0.0534 mg/L | 0.01055 | 19.74% |
| Be 313.107† | -203.6 | 0.0000 mg/L | 0.00009 | 0.0000 mg/L | 0.00009 | 197.93% |
| Cu 324.752† | -91.7 | -0.0003 mg/L | 0.00001 | -0.0003 mg/L | 0.00001 | 2.50% |
| Ag 338.289† | 28.9 | 0.0002 mg/L | 0.00016 | 0.0002 mg/L | 0.00016 | 83.63% |
| Na 330.237† | -53.6 | -0.0539 mg/L | 0.04005 | -0.0539 mg/L | 0.04005 | 74.38% |
| Ca 227.546† | 38.8 | 0.1039 mg/L | 0.01131 | 0.1039 mg/L | 0.01131 | 10.88% |
| Al RADIAL† | -91.4 | -0.0475 mg/L | 0.00455 | -0.0475 mg/L | 0.00455 | 9.57% |
| Fe RADIAL† | 3.9 | 0.0105 mg/L | 0.01352 | 0.0105 mg/L | 0.01352 | 128.40% |
| Ca RADIAL† | 83.7 | 0.0182 mg/L | 0.00632 | 0.0182 mg/L | 0.00632 | 34.76% |
| K RADIAL† | -12.4 | -0.0107 mg/L | 0.05048 | -0.0107 mg/L | 0.05048 | 473.31% |
| Mg RADIAL† | -6.4 | -0.0186 mg/L | 0.01132 | -0.0186 mg/L | 0.01132 | 60.77% |
| Na RADIAL† | -2687.7 | -0.2046 mg/L | 0.01784 | -0.2046 mg/L | 0.01784 | 8.72% |
| Mo 202.031 | 2.4 | 0.000 mg/L | 0.0004 | 0.000 mg/L | 0.0004 | 416.87% |

**Sequence No.: 107**
**Sample ID: 16I0267-02**
**Analyst: KV**
**Logged In Analyst (Original) : administrator**
**Initial Sample Wt:**
**Dilution:**

**Autosampler Location: 89**
**Date Collected: 9/13/2016 12:33:07 AM**
**Data Type: Reprocessed on 9/13/2016 7:00:21 AM**

**Initial Sample Vol:**
**Sample Prep Vol:**

**Mean Data: 16I0267-02**

| Analyte | Mean Corrected Intensity | Conc. | Calib. Units | Std.Dev. | Sample Conc. | Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 13581619.6 | 4.416 | mg/L | 0.0318 | | | | 0.72% |
| Y RADIAL | 229117.1 | 4.991 | mg/L | 0.0508 | | | | 1.02% |
| As 188.979† | 104.2 | 0.0896 | mg/L | 0.00360 | 0.0896 | mg/L | 0.00360 | 4.02% |
| Tl 190.801† | -174.2 | -0.0407 | mg/L | 0.00226 | -0.0407 | mg/L | 0.00226 | 5.55% |
| Se 196.026† | -105.9 | 0.0625 | mg/L | 0.01904 | 0.0625 | mg/L | 0.01904 | 30.46% |
| Zn 206.200† | 247017.3 | 5.411 | mg/L | 0.0617 | 5.411 | mg/L | 0.0617 | 1.14% |
| Sb 206.836† | 58.4 | 0.0131 | mg/L | 0.00302 | 0.0131 | mg/L | 0.00302 | 22.97% |
| Pb 220.353† | 87983.0 | 8.047 | mg/L | 0.1041 | 8.047 | mg/L | 0.1041 | 1.29% |
| Cd 226.502† | 10751.2 | 0.0313 | mg/L | 0.00166 | 0.0313 | mg/L | 0.00166 | 5.31% |
| Co 228.616† | 2882.9 | 0.0752 | mg/L | 0.00057 | 0.0752 | mg/L | 0.00057 | 0.76% |
| Ni 232.003† | 11918.6 | 0.5193 | mg/L | 0.00823 | 0.5193 | mg/L | 0.00823 | 1.58% |
| Ba 233.527† | 153916.0 | 1.554 | mg/L | 0.0177 | 1.554 | mg/L | 0.0177 | 1.14% |
| Mn 257.610† | 3183712.3 | 3.368 | mg/L | 0.0413 | 3.368 | mg/L | 0.0413 | 1.23% |
| Cr 267.716† | 92517.1 | 0.6436 | mg/L | 0.00729 | 0.6436 | mg/L | 0.00729 | 1.13% |
| Fe 273.955† | 9904630.0 | 364.5 | mg/L | 1.62 | 364.5 | mg/L | 1.62 | 0.44% |
| Mg 279.077† | 4586251.1 | 206.8 | mg/L | 0.76 | 206.8 | mg/L | 0.76 | 0.37% |
| V 292.402† | 404899.7 | 1.382 | mg/L | 0.0168 | 1.382 | mg/L | 0.0168 | 1.22% |
| Al 308.215† | 1562123.4 | 55.93 | mg/L | 0.836 | 55.93 | mg/L | 0.836 | 1.49% |
| Be 313.107† | -3042.0 | -0.0007 | mg/L | 0.00005 | -0.0007 | mg/L | 0.00005 | 6.69% |
| Cu 324.752† | 521021.5 | 1.975 | mg/L | 0.0313 | 1.975 | mg/L | 0.0313 | 1.58% |
| Ag 338.289† | 180144.4 | 1.213 | mg/L | 0.0159 | 1.213 | mg/L | 0.0159 | 1.31% |
| Na 330.237† | 8728.1 | 11.00 | mg/L | 0.073 | 11.00 | mg/L | 0.073 | 0.66% |
| Ca 227.546† | 181654.9 | 489.5 | mg/L | 7.12 | 489.5 | mg/L | 7.12 | 1.45% |
| Al RADIAL† | 96726.4 | 50.31 | mg/L | 0.038 | 50.31 | mg/L | 0.038 | 0.08% |
| Fe RADIAL† | 141225.4 | 383.4 | mg/L | 0.30 | 383.4 | mg/L | 0.30 | 0.08% |
| Ca RADIAL† | 2098364.2 | 455.5 | mg/L | 10.07 | 455.5 | mg/L | 10.07 | 2.21% |
| K RADIAL† | 10540.4 | 9.081 | mg/L | 0.0679 | 9.081 | mg/L | 0.0679 | 0.75% |
| Mg RADIAL† | 67390.7 | 197.0 | mg/L | 0.37 | 197.0 | mg/L | 0.37 | 0.19% |
| Na RADIAL† | 36816.4 | 2.803 | mg/L | 0.0278 | 2.803 | mg/L | 0.0278 | 0.99% |
| Mo 202.031 | 976.9 | 0.036 | mg/L | 0.0006 | 0.036 | mg/L | 0.0006 | 1.73% |

**Sequence No.: 108**
**Sample ID: 16I0269-01**
**Analyst: KV**
**Logged In Analyst (Original) : administrator**
**Initial Sample Wt:**

**Autosampler Location: 90**
**Date Collected: 9/13/2016 12:40:47 AM**
**Data Type: Reprocessed on 9/13/2016 7:00:21 AM**

**Initial Sample Vol:**

Dilution: Sample Prep Vol:

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**Mean Data: 16I0269-01**

| Analyte | Mean Corrected Intensity | Conc. | Calib. Units | Std.Dev. | Conc. | Sample Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 15833103.6 | 5.148 | mg/L | 0.0302 | | | | 0.59% |
| Y RADIAL | 252386.8 | 5.498 | mg/L | 0.0088 | | | | 0.16% |
| As 188.979† | 60.4 | 0.0445 | mg/L | 0.00431 | 0.0445 | mg/L | 0.00431 | 9.70% |
| Tl 190.801† | -160.5 | -0.0482 | mg/L | 0.00827 | -0.0482 | mg/L | 0.00827 | 17.16% |
| Se 196.026† | -31.3 | 0.0302 | mg/L | 0.01129 | 0.0302 | mg/L | 0.01129 | 37.43% |
| Zn 206.200† | 47222.2 | 1.034 | mg/L | 0.0053 | 1.034 | mg/L | 0.0053 | 0.51% |
| Sb 206.836† | 3856.7 | 1.121 | mg/L | 0.0149 | 1.121 | mg/L | 0.0149 | 1.32% |
| Pb 220.353† | 1661739.0 | 152.5 | mg/L | 0.96 | 152.5 | mg/L | 0.96 | 0.63% |
| Cd 226.502† | 2292.0 | 0.0003 | mg/L | 0.00035 | 0.0003 | mg/L | 0.00035 | 103.48% |
| Co 228.616† | 2623.5 | 0.0641 | mg/L | 0.00065 | 0.0641 | mg/L | 0.00065 | 1.01% |
| Ni 232.003† | 4926.0 | 0.2133 | mg/L | 0.00244 | 0.2133 | mg/L | 0.00244 | 1.15% |
| Ba 233.527† | 71354.9 | 0.7206 | mg/L | 0.00548 | 0.7206 | mg/L | 0.00548 | 0.76% |
| Mn 257.610† | 2034758.1 | 2.139 | mg/L | 0.0144 | 2.139 | mg/L | 0.0144 | 0.68% |
| Cr 267.716† | 24559.9 | 0.1712 | mg/L | 0.00107 | 0.1712 | mg/L | 0.00107 | 0.62% |
| Fe 273.955† | 3730389.5 | 137.3 | mg/L | 0.20 | 137.3 | mg/L | 0.20 | 0.14% |
| Mg 279.077† | 515705.8 | 23.24 | mg/L | 0.147 | 23.24 | mg/L | 0.147 | 0.63% |
| V 292.402† | 65891.1 | 0.2210 | mg/L | 0.00128 | 0.2210 | mg/L | 0.00128 | 0.58% |
| Al 308.215† | 2209264.2 | 79.10 | mg/L | 0.705 | 79.10 | mg/L | 0.705 | 0.89% |
| Be 313.107† | -6199.9 | -0.0014 | mg/L | 0.00002 | -0.0014 | mg/L | 0.00002 | 1.66% |
| Cu 324.752† | 99541.3 | 0.3800 | mg/L | 0.00217 | 0.3800 | mg/L | 0.00217 | 0.57% |
| Ag 338.289† | 7002.3 | 0.0495 | mg/L | 0.00047 | 0.0495 | mg/L | 0.00047 | 0.95% |
| Na 330.237† | -50.2 | 0.6241 | mg/L | 0.07706 | 0.6241 | mg/L | 0.07706 | 12.35% |
| Ca 227.546† | 10804.6 | 30.17 | mg/L | 0.064 | 30.17 | mg/L | 0.064 | 0.21% |
| Al RADIAL† | 145558.8 | 75.68 | mg/L | 0.148 | 75.68 | mg/L | 0.148 | 0.20% |
| Fe RADIAL† | 51301.8 | 139.3 | mg/L | 1.43 | 139.3 | mg/L | 1.43 | 1.03% |
| Ca RADIAL† | 137863.9 | 29.93 | mg/L | 0.344 | 29.93 | mg/L | 0.344 | 1.15% |
| K RADIAL† | 11037.5 | 9.509 | mg/L | 0.0548 | 9.509 | mg/L | 0.0548 | 0.58% |
| Mg RADIAL† | 7765.8 | 22.69 | mg/L | 0.286 | 22.69 | mg/L | 0.286 | 1.26% |
| Na RADIAL† | 9170.2 | 0.6981 | mg/L | 0.00501 | 0.6981 | mg/L | 0.00501 | 0.72% |
| Mo 202.031 | 75.6 | 0.003 | mg/L | 0.0001 | 0.003 | mg/L | 0.0001 | 2.45% |

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**Sequence No.: 109**
**Sample ID: 16I0269-03**
**Analyst: KV**
**Logged In Analyst (Original) : administrator**
**Initial Sample Wt:**
**Dilution:**

**Autosampler Location: 91**
**Date Collected: 9/13/2016 12:48:31 AM**
**Data Type: Reprocessed on 9/13/2016 7:00:22 AM**

**Initial Sample Vol:**
**Sample Prep Vol:**

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**Mean Data: 16I0269-03**

| Analyte | Mean Corrected Intensity | Conc. | Calib. Units | Std.Dev. | Conc. | Sample Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 16975534.4 | 5.520 | mg/L | 0.0404 | | | | 0.73% |
| Y RADIAL | 270600.1 | 5.894 | mg/L | 0.0841 | | | | 1.43% |
| As 188.979† | 49.0 | 0.0359 | mg/L | 0.00187 | 0.0359 | mg/L | 0.00187 | 5.22% |
| Tl 190.801† | -120.1 | -0.0357 | mg/L | 0.00302 | -0.0357 | mg/L | 0.00302 | 8.46% |
| Se 196.026† | -31.5 | 0.0175 | mg/L | 0.00839 | 0.0175 | mg/L | 0.00839 | 48.01% |
| Zn 206.200† | 37226.8 | 0.8149 | mg/L | 0.01012 | 0.8149 | mg/L | 0.01012 | 1.24% |
| Sb 206.836† | -18.5 | -0.0065 | mg/L | 0.00176 | -0.0065 | mg/L | 0.00176 | 27.01% |
| Pb 220.353† | 10444.1 | 0.9556 | mg/L | 0.00945 | 0.9556 | mg/L | 0.00945 | 0.99% |
| Cd 226.502† | 1781.2 | -0.0001 | mg/L | 0.00034 | -0.0001 | mg/L | 0.00034 | 343.77% |
| Co 228.616† | 2222.8 | 0.0542 | mg/L | 0.00025 | 0.0542 | mg/L | 0.00025 | 0.45% |
| Ni 232.003† | 7523.3 | 0.3187 | mg/L | 0.00257 | 0.3187 | mg/L | 0.00257 | 0.81% |
| Ba 233.527† | 53548.0 | 0.5407 | mg/L | 0.00585 | 0.5407 | mg/L | 0.00585 | 1.08% |
| Mn 257.610† | 1620315.2 | 1.703 | mg/L | 0.0143 | 1.703 | mg/L | 0.0143 | 0.84% |
| Cr 267.716† | 19851.9 | 0.1384 | mg/L | 0.00152 | 0.1384 | mg/L | 0.00152 | 1.10% |
| Fe 273.955† | 2934477.7 | 108.0 | mg/L | 0.88 | 108.0 | mg/L | 0.88 | 0.82% |
| Mg 279.077† | 544330.9 | 24.53 | mg/L | 0.223 | 24.53 | mg/L | 0.223 | 0.91% |
| V 292.402† | 51750.4 | 0.1735 | mg/L | 0.00210 | 0.1735 | mg/L | 0.00210 | 1.21% |
| Al 308.215† | 1841603.0 | 65.93 | mg/L | 0.653 | 65.93 | mg/L | 0.653 | 0.99% |
| Be 313.107† | -4841.2 | -0.0011 | mg/L | 0.00006 | -0.0011 | mg/L | 0.00006 | 5.08% |
| Cu 324.752† | 89435.7 | 0.3409 | mg/L | 0.00465 | 0.3409 | mg/L | 0.00465 | 1.36% |
| Ag 338.289† | 2802.0 | 0.0208 | mg/L | 0.00020 | 0.0208 | mg/L | 0.00020 | 0.97% |
| Na 330.237† | -186.8 | 0.3545 | mg/L | 0.04886 | 0.3545 | mg/L | 0.04886 | 13.78% |
| Ca 227.546† | 9804.1 | 27.24 | mg/L | 0.137 | 27.24 | mg/L | 0.137 | 0.50% |

| | | | | | | |
|---|---|---|---|---|---|---|
| Al RADIAL† | 119231.7 | 61.99 mg/L | 0.102 | 61.99 mg/L | 0.102 | 0.16% |
| Fe RADIAL† | 41064.5 | 111.5 mg/L | 1.07 | 111.5 mg/L | 1.07 | 0.96% |
| Ca RADIAL† | 121440.9 | 26.36 mg/L | 0.277 | 26.36 mg/L | 0.277 | 1.05% |
| K RADIAL† | 9187.5 | 7.915 mg/L | 0.1866 | 7.915 mg/L | 0.1866 | 2.36% |
| Mg RADIAL† | 8397.5 | 24.54 mg/L | 0.195 | 24.54 mg/L | 0.195 | 0.79% |
| Na RADIAL† | 9169.1 | 0.6981 mg/L | 0.02479 | 0.6981 mg/L | 0.02479 | 3.55% |
| Mo 202.031 | 2.4 | 0.000 mg/L | 0.0006 | 0.000 mg/L | 0.0006 | 626.87% |

**Sequence No.: 110**
**Sample ID: 16I0269-05**
**Analyst: KV**
**Logged In Analyst (Original) : administrator**
**Initial Sample Wt:**
**Dilution:**

**Autosampler Location: 92**
**Date Collected: 9/13/2016 12:53:14 AM**
**Data Type: Reprocessed on 9/13/2016 7:00:23 AM**

**Initial Sample Vol:**
**Sample Prep Vol:**

**Mean Data: 16I0269-05**

| Analyte | Mean Corrected Intensity | Calib. Conc. | Calib. Units | Std.Dev. | Sample Conc. | Sample Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 15647565.3 | 5.088 | mg/L | 0.0310 | | | | 0.61% |
| Y RADIAL | 242162.7 | 5.275 | mg/L | 0.0537 | | | | 1.02% |
| As 188.979† | 62.8 | 0.0479 | mg/L | 0.00211 | 0.0479 | mg/L | 0.00211 | 4.41% |
| Tl 190.801† | -159.7 | -0.0467 | mg/L | 0.00367 | -0.0467 | mg/L | 0.00367 | 7.85% |
| Se 196.026† | -37.6 | 0.0346 | mg/L | 0.00334 | 0.0346 | mg/L | 0.00334 | 9.66% |
| Zn 206.200† | 45307.6 | 0.9915 | mg/L | 0.00396 | 0.9915 | mg/L | 0.00396 | 0.40% |
| Sb 206.836† | -48.3 | -0.0157 | mg/L | 0.00421 | -0.0157 | mg/L | 0.00421 | 26.73% |
| Pb 220.353† | 20635.0 | 1.887 | mg/L | 0.0064 | 1.887 | mg/L | 0.0064 | 0.34% |
| Cd 226.502† | 2739.7 | 0.0007 | mg/L | 0.00035 | 0.0007 | mg/L | 0.00035 | 49.89% |
| Co 228.616† | 2704.5 | 0.0665 | mg/L | 0.00037 | 0.0665 | mg/L | 0.00037 | 0.56% |
| Ni 232.003† | 9900.0 | 0.4205 | mg/L | 0.00279 | 0.4205 | mg/L | 0.00279 | 0.66% |
| Ba 233.527† | 67728.1 | 0.6839 | mg/L | 0.00300 | 0.6839 | mg/L | 0.00300 | 0.44% |
| Mn 257.610† | 1990686.7 | 2.096 | mg/L | 0.0271 | 2.096 | mg/L | 0.0271 | 1.29% |
| Cr 267.716† | 33423.4 | 0.2328 | mg/L | 0.00116 | 0.2328 | mg/L | 0.00116 | 0.50% |
| Fe 273.955† | 4075281.2 | 150.0 | mg/L | 0.09 | 150.0 | mg/L | 0.09 | 0.06% |
| Mg 279.077† | 479769.7 | 21.61 | mg/L | 0.289 | 21.61 | mg/L | 0.289 | 1.34% |
| V 292.402† | 69570.1 | 0.2326 | mg/L | 0.00128 | 0.2326 | mg/L | 0.00128 | 0.55% |
| Al 308.215† | 2033145.6 | 72.80 | mg/L | 1.024 | 72.80 | mg/L | 1.024 | 1.41% |
| Be 313.107† | -3841.4 | -0.0009 | mg/L | 0.00002 | -0.0009 | mg/L | 0.00002 | 2.63% |
| Cu 324.752† | 184935.5 | 0.7022 | mg/L | 0.00283 | 0.7022 | mg/L | 0.00283 | 0.40% |
| Ag 338.289† | 2573.0 | 0.0201 | mg/L | 0.00069 | 0.0201 | mg/L | 0.00069 | 3.41% |
| Na 330.237† | 281.1 | 1.078 | mg/L | 0.0089 | 1.078 | mg/L | 0.0089 | 0.83% |
| Ca 227.546† | 14002.4 | 38.93 | mg/L | 0.225 | 38.93 | mg/L | 0.225 | 0.58% |
| Al RADIAL† | 135155.9 | 70.27 | mg/L | 0.057 | 70.27 | mg/L | 0.057 | 0.08% |
| Fe RADIAL† | 60300.4 | 163.7 | mg/L | 1.67 | 163.7 | mg/L | 1.67 | 1.02% |
| Ca RADIAL† | 174541.0 | 37.89 | mg/L | 0.036 | 37.89 | mg/L | 0.036 | 0.09% |
| K RADIAL† | 12128.0 | 10.45 | mg/L | 0.189 | 10.45 | mg/L | 0.189 | 1.81% |
| Mg RADIAL† | 7804.1 | 22.80 | mg/L | 0.273 | 22.80 | mg/L | 0.273 | 1.20% |
| Na RADIAL† | 12599.2 | 0.9592 | mg/L | 0.01061 | 0.9592 | mg/L | 0.01061 | 1.11% |
| Mo 202.031 | -34.1 | -0.001 | mg/L | 0.0007 | -0.001 | mg/L | 0.0007 | 53.26% |

**Sequence No.: 111**
**Sample ID: 16I0269-07**
**Analyst: KV**
**Logged In Analyst (Original) : administrator**
**Initial Sample Wt:**
**Dilution:**

**Autosampler Location: 93**
**Date Collected: 9/13/2016 12:57:58 AM**
**Data Type: Reprocessed on 9/13/2016 7:00:23 AM**

**Initial Sample Vol:**
**Sample Prep Vol:**

**Mean Data: 16I0269-07**

| Analyte | Mean Corrected Intensity | Calib. Conc. | Calib. Units | Std.Dev. | Sample Conc. | Sample Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 15501690.3 | 5.040 | mg/L | 0.0549 | | | | 1.09% |
| Y RADIAL | 247916.0 | 5.400 | mg/L | 0.0753 | | | | 1.39% |
| As 188.979† | 50.8 | 0.0392 | mg/L | 0.00399 | 0.0392 | mg/L | 0.00399 | 10.18% |
| Tl 190.801† | -205.6 | -0.0638 | mg/L | 0.00299 | -0.0638 | mg/L | 0.00299 | 4.68% |
| Se 196.026† | -38.2 | 0.0222 | mg/L | 0.00415 | 0.0222 | mg/L | 0.00415 | 18.72% |
| Zn 206.200† | 41721.9 | 0.9131 | mg/L | 0.01138 | 0.9131 | mg/L | 0.01138 | 1.25% |
| Sb 206.836† | -14.4 | -0.0056 | mg/L | 0.00217 | -0.0056 | mg/L | 0.00217 | 38.60% |
| Pb 220.353† | 10763.1 | 0.9842 | mg/L | 0.01698 | 0.9842 | mg/L | 0.01698 | 1.73% |
| Cd 226.502† | 2808.1 | 0.0041 | mg/L | 0.00046 | 0.0041 | mg/L | 0.00046 | 11.23% |

| | | | | | | |
|---|---|---|---|---|---|---|
| Co 228.616† | 3578.6 | 0.0863 mg/L | 0.00105 | 0.0863 mg/L | 0.00105 | 1.22% |
| Ni 232.003† | 17853.2 | 0.7473 mg/L | 0.01083 | 0.7473 mg/L | 0.01083 | 1.45% |
| Ba 233.527† | 65974.4 | 0.6662 mg/L | 0.00762 | 0.6662 mg/L | 0.00762 | 1.14% |
| Mn 257.610† | 2283086.9 | 2.397 mg/L | 0.0350 | 2.397 mg/L | 0.0350 | 1.46% |
| Cr 267.716† | 32685.5 | 0.2274 mg/L | 0.00252 | 0.2274 mg/L | 0.00252 | 1.11% |
| Fe 273.955† | 3647928.2 | 134.3 mg/L | 0.42 | 134.3 mg/L | 0.42 | 0.32% |
| Mg 279.077† | 658464.3 | 29.68 mg/L | 0.448 | 29.68 mg/L | 0.448 | 1.51% |
| V 292.402† | 73928.6 | 0.2490 mg/L | 0.00348 | 0.2490 mg/L | 0.00348 | 1.40% |
| Al 308.215† | 2222637.6 | 79.58 mg/L | 1.329 | 79.58 mg/L | 1.329 | 1.67% |
| Be 313.107† | -10450.4 | -0.0024 mg/L | 0.00015 | -0.0024 mg/L | 0.00015 | 6.38% |
| Cu 324.752† | 255251.7 | 0.9656 mg/L | 0.00998 | 0.9656 mg/L | 0.00998 | 1.03% |
| Ag 338.289† | 775.9 | 0.0075 mg/L | 0.00131 | 0.0075 mg/L | 0.00131 | 17.41% |
| Na 330.237† | -155.2 | 0.5166 mg/L | 0.10780 | 0.5166 mg/L | 0.10780 | 20.87% |
| Ca 227.546† | 13366.4 | 37.01 mg/L | 0.381 | 37.01 mg/L | 0.381 | 1.03% |
| Al RADIAL† | 146279.4 | 76.05 mg/L | 0.243 | 76.05 mg/L | 0.243 | 0.32% |
| Fe RADIAL† | 50629.6 | 137.5 mg/L | 1.77 | 137.5 mg/L | 1.77 | 1.29% |
| Ca RADIAL† | 168540.3 | 36.59 mg/L | 0.040 | 36.59 mg/L | 0.040 | 0.11% |
| K RADIAL† | 16550.3 | 14.26 mg/L | 0.206 | 14.26 mg/L | 0.206 | 1.44% |
| Mg RADIAL† | 9880.0 | 28.87 mg/L | 0.450 | 28.87 mg/L | 0.450 | 1.56% |
| Na RADIAL† | 14473.7 | 1.102 mg/L | 0.0130 | 1.102 mg/L | 0.0130 | 1.18% |
| Mo 202.031 | -5.8 | 0.000 mg/L | 0.0008 | 0.000 mg/L | 0.0008 | 361.29% |

**Sequence No.: 112**
**Sample ID: 16I0291-01**
**Analyst: KV**
**Logged In Analyst (Original) : administrator**
**Initial Sample Wt:**
**Dilution:**

**Autosampler Location: 94**
**Date Collected: 9/13/2016 1:02:42 AM**
**Data Type: Reprocessed on 9/13/2016 7:00:24 AM**

**Initial Sample Vol:**
**Sample Prep Vol:**

**Mean Data: 16I0291-01**

| Analyte | Mean Corrected Intensity | Calib. Conc. | Calib. Units | Std.Dev. | Sample Conc. | Sample Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 14802165.8 | 4.813 | mg/L | 0.0572 | | | | 1.19% |
| Y RADIAL | 230472.4 | 5.020 | mg/L | 0.1077 | | | | 2.14% |
| As 188.979† | 29.6 | 0.0277 | mg/L | 0.00417 | 0.0277 | mg/L | 0.00417 | 15.07% |
| Tl 190.801† | -57.7 | -0.0132 | mg/L | 0.00457 | -0.0132 | mg/L | 0.00457 | 34.70% |
| Se 196.026† | -33.5 | 0.0253 | mg/L | 0.00413 | 0.0253 | mg/L | 0.00413 | 16.35% |
| Zn 206.200† | 13411.1 | 0.2926 | mg/L | 0.00616 | 0.2926 | mg/L | 0.00616 | 2.11% |
| Sb 206.836† | -18.9 | -0.0069 | mg/L | 0.00048 | -0.0069 | mg/L | 0.00048 | 7.02% |
| Pb 220.353† | 997.3 | 0.0858 | mg/L | 0.00470 | 0.0858 | mg/L | 0.00470 | 5.48% |
| Cd 226.502† | 1680.3 | -0.0032 | mg/L | 0.00030 | -0.0032 | mg/L | 0.00030 | 9.35% |
| Co 228.616† | 2315.4 | 0.0568 | mg/L | 0.00090 | 0.0568 | mg/L | 0.00090 | 1.59% |
| Ni 232.003† | 2268.0 | 0.1031 | mg/L | 0.00011 | 0.1031 | mg/L | 0.00011 | 0.11% |
| Ba 233.527† | 36689.2 | 0.3705 | mg/L | 0.00136 | 0.3705 | mg/L | 0.00136 | 0.37% |
| Mn 257.610† | 3263906.4 | 3.419 | mg/L | 0.0791 | 3.419 | mg/L | 0.0791 | 2.31% |
| Cr 267.716† | 8924.5 | 0.0631 | mg/L | 0.00058 | 0.0631 | mg/L | 0.00058 | 0.92% |
| Fe 273.955† | 3452917.3 | 127.1 | mg/L | 2.92 | 127.1 | mg/L | 2.92 | 2.30% |
| Mg 279.077† | 466494.9 | 21.02 | mg/L | 0.054 | 21.02 | mg/L | 0.054 | 0.26% |
| V 292.402† | 25651.3 | 0.0821 | mg/L | 0.00064 | 0.0821 | mg/L | 0.00064 | 0.78% |
| Al 308.215† | 1675385.8 | 59.99 | mg/L | 1.355 | 59.99 | mg/L | 1.355 | 2.26% |
| Be 313.107† | 8841.9 | 0.0020 | mg/L | 0.00004 | 0.0020 | mg/L | 0.00004 | 2.21% |
| Cu 324.752† | 20148.9 | 0.0811 | mg/L | 0.00078 | 0.0811 | mg/L | 0.00078 | 0.96% |
| Ag 338.289† | -1929.0 | -0.0103 | mg/L | 0.00041 | -0.0103 | mg/L | 0.00041 | 4.02% |
| Na 330.237† | -218.7 | 0.4007 | mg/L | 0.05443 | 0.4007 | mg/L | 0.05443 | 13.58% |
| Ca 227.546† | 1058.6 | 4.026 | mg/L | 0.0683 | 4.026 | mg/L | 0.0683 | 1.70% |
| Al RADIAL† | 113139.6 | 58.83 | mg/L | 0.172 | 58.83 | mg/L | 0.172 | 0.29% |
| Fe RADIAL† | 49191.7 | 133.6 | mg/L | 2.85 | 133.6 | mg/L | 2.85 | 2.13% |
| Ca RADIAL† | 10152.7 | 2.204 | mg/L | 0.0634 | 2.204 | mg/L | 0.0634 | 2.88% |
| K RADIAL† | 10033.3 | 8.644 | mg/L | 0.1484 | 8.644 | mg/L | 0.1484 | 1.72% |
| Mg RADIAL† | 7039.6 | 20.57 | mg/L | 0.471 | 20.57 | mg/L | 0.471 | 2.29% |
| Na RADIAL† | -987.4 | -0.0752 | mg/L | 0.02832 | -0.0752 | mg/L | 0.02832 | 37.67% |
| Mo 202.031 | -127.3 | -0.005 | mg/L | 0.0003 | -0.005 | mg/L | 0.0003 | 5.40% |

**Sequence No.: 113**
**Sample ID: 16I0296-01**
**Analyst: KV**
**Logged In Analyst (Original) : administrator**
**Initial Sample Wt:**
**Dilution:**

**Autosampler Location: 95**
**Date Collected: 9/13/2016 1:07:25 AM**
**Data Type: Reprocessed on 9/13/2016 7:00:25 AM**

**Initial Sample Vol:**
**Sample Prep Vol:**

**Mean Data: 16I0296-01**

| Analyte | Mean Corrected Intensity | Calib. Conc. | Units | Std.Dev. | Sample Conc. | Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 18093894.1 | 5.883 | mg/L | 0.0553 | | | | 0.94% |
| Y RADIAL | 297793.3 | 6.487 | mg/L | 0.0210 | | | | 0.32% |
| As 188.979† | 22.9 | 0.0306 | mg/L | 0.00282 | 0.0306 | mg/L | 0.00282 | 9.23% |
| Tl 190.801† | -24.6 | 0.0018 | mg/L | 0.00339 | 0.0018 | mg/L | 0.00339 | 187.66% |
| Se 196.026† | -55.1 | 0.0349 | mg/L | 0.00735 | 0.0349 | mg/L | 0.00735 | 21.02% |
| Zn 206.200† | 33233.7 | 0.7264 | mg/L | 0.00597 | 0.7264 | mg/L | 0.00597 | 0.82% |
| Sb 206.836† | -36.0 | -0.0126 | mg/L | 0.00240 | -0.0126 | mg/L | 0.00240 | 19.08% |
| Pb 220.353† | 28070.3 | 2.571 | mg/L | 0.0257 | 2.571 | mg/L | 0.0257 | 1.00% |
| Cd 226.502† | 3143.5 | -0.0011 | mg/L | 0.00009 | -0.0011 | mg/L | 0.00009 | 8.09% |
| Co 228.616† | 3757.0 | 0.0919 | mg/L | 0.00086 | 0.0919 | mg/L | 0.00086 | 0.94% |
| Ni 232.003† | 4619.8 | 0.2052 | mg/L | 0.00157 | 0.2052 | mg/L | 0.00157 | 0.76% |
| Ba 233.527† | 95974.3 | 0.9692 | mg/L | 0.00751 | 0.9692 | mg/L | 0.00751 | 0.77% |
| Mn 257.610† | 2544008.3 | 2.678 | mg/L | 0.0246 | 2.678 | mg/L | 0.0246 | 0.92% |
| Cr 267.716† | 18340.3 | 0.1289 | mg/L | 0.00095 | 0.1289 | mg/L | 0.00095 | 0.74% |
| Fe 273.955† | 5400318.8 | 198.7 | mg/L | 1.81 | 198.7 | mg/L | 1.81 | 0.91% |
| Mg 279.077† | 910497.6 | 41.03 | mg/L | 0.438 | 41.03 | mg/L | 0.438 | 1.07% |
| V 292.402† | 39639.9 | 0.1269 | mg/L | 0.00078 | 0.1269 | mg/L | 0.00078 | 0.61% |
| Al 308.215† | 3541895.8 | 126.8 | mg/L | 1.37 | 126.8 | mg/L | 1.37 | 1.08% |
| Be 313.107† | 20940.4 | 0.0048 | mg/L | 0.00005 | 0.0048 | mg/L | 0.00005 | 1.10% |
| Cu 324.752† | 53298.4 | 0.2087 | mg/L | 0.00174 | 0.2087 | mg/L | 0.00174 | 0.84% |
| Ag 338.289† | -1304.3 | -0.0048 | mg/L | 0.00066 | -0.0048 | mg/L | 0.00066 | 13.88% |
| Na 330.237† | 1173.6 | 2.140 | mg/L | 0.0625 | 2.140 | mg/L | 0.0625 | 2.92% |
| Ca 227.546† | 4476.5 | 13.83 | mg/L | 0.150 | 13.83 | mg/L | 0.150 | 1.08% |
| Al RADIAL† | 228869.8 | 119.0 | mg/L | 0.90 | 119.0 | mg/L | 0.90 | 0.76% |
| Fe RADIAL† | 75485.1 | 204.9 | mg/L | 0.68 | 204.9 | mg/L | 0.68 | 0.33% |
| Ca RADIAL† | 48641.0 | 10.56 | mg/L | 0.009 | 10.56 | mg/L | 0.009 | 0.08% |
| K RADIAL† | 5514.2 | 4.751 | mg/L | 0.0392 | 4.751 | mg/L | 0.0392 | 0.83% |
| Mg RADIAL† | 13733.8 | 40.13 | mg/L | 0.221 | 40.13 | mg/L | 0.221 | 0.55% |
| Na RADIAL† | 15016.9 | 1.143 | mg/L | 0.0076 | 1.143 | mg/L | 0.0076 | 0.66% |
| Mo 202.031 | -178.6 | -0.007 | mg/L | 0.0001 | -0.007 | mg/L | 0.0001 | 1.60% |

**Sequence No.: 114**
**Sample ID: SEQ-SRD4**
**Analyst: KV**
**Logged In Analyst (Original) : administrator**
**Initial Sample Wt:**
**Dilution:**

**Autosampler Location: 96**
**Date Collected: 9/13/2016 1:12:12 AM**
**Data Type: Reprocessed on 9/13/2016 7:00:25 AM**

**Initial Sample Vol:**
**Sample Prep Vol:**

**Mean Data: SEQ-SRD4**

| Analyte | Mean Corrected Intensity | Calib. Conc. | Units | Std.Dev. | Sample Conc. | Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 15425396.9 | 5.016 | mg/L | 0.0786 | | | | 1.57% |
| Y RADIAL | 232590.3 | 5.067 | mg/L | 0.0270 | | | | 0.53% |
| As 188.979† | 11.2 | 0.0078 | mg/L | 0.00248 | 0.0078 | mg/L | 0.00248 | 31.78% |
| Tl 190.801† | -7.1 | -0.0014 | mg/L | 0.00137 | -0.0014 | mg/L | 0.00137 | 98.71% |
| Se 196.026† | -10.5 | -0.0015 | mg/L | 0.00414 | -0.0015 | mg/L | 0.00414 | 273.40% |
| Zn 206.200† | 6172.9 | 0.1351 | mg/L | 0.00309 | 0.1351 | mg/L | 0.00309 | 2.28% |
| Sb 206.836† | -1.9 | -0.0008 | mg/L | 0.00252 | -0.0008 | mg/L | 0.00252 | 331.08% |
| Pb 220.353† | 1497.5 | 0.1372 | mg/L | 0.00378 | 0.1372 | mg/L | 0.00378 | 2.75% |
| Cd 226.502† | 419.4 | 0.0006 | mg/L | 0.00010 | 0.0006 | mg/L | 0.00010 | 18.36% |
| Co 228.616† | 731.2 | 0.0175 | mg/L | 0.00040 | 0.0175 | mg/L | 0.00040 | 2.28% |
| Ni 232.003† | 637.5 | 0.0278 | mg/L | 0.00207 | 0.0278 | mg/L | 0.00207 | 7.44% |
| Ba 233.527† | 19352.0 | 0.1954 | mg/L | 0.00443 | 0.1954 | mg/L | 0.00443 | 2.27% |
| Mn 257.610† | 1627459.2 | 1.699 | mg/L | 0.0248 | 1.699 | mg/L | 0.0248 | 1.46% |
| Cr 267.716† | 3270.2 | 0.0228 | mg/L | 0.00075 | 0.0228 | mg/L | 0.00075 | 3.28% |
| Fe 273.955† | 534167.2 | 19.66 | mg/L | 0.293 | 19.66 | mg/L | 0.293 | 1.49% |
| Mg 279.077† | 124644.0 | 5.618 | mg/L | 0.1216 | 5.618 | mg/L | 0.1216 | 2.16% |
| V 292.402† | 9616.8 | 0.0322 | mg/L | 0.00045 | 0.0322 | mg/L | 0.00045 | 1.40% |
| Al 308.215† | 361570.8 | 12.94 | mg/L | 0.205 | 12.94 | mg/L | 0.205 | 1.58% |
| Be 313.107† | 2976.7 | 0.0007 | mg/L | 0.00004 | 0.0007 | mg/L | 0.00004 | 5.35% |
| Cu 324.752† | 6522.7 | 0.0254 | mg/L | 0.00075 | 0.0254 | mg/L | 0.00075 | 2.95% |
| Ag 338.289† | -508.6 | -0.0032 | mg/L | 0.00012 | -0.0032 | mg/L | 0.00012 | 3.77% |
| Na 330.237† | 73.2 | 0.1846 | mg/L | 0.03668 | 0.1846 | mg/L | 0.03668 | 19.87% |
| Ca 227.546† | 5043.4 | 13.69 | mg/L | 0.277 | 13.69 | mg/L | 0.277 | 2.03% |
| Al RADIAL† | 25750.1 | 13.39 | mg/L | 0.084 | 13.39 | mg/L | 0.084 | 0.63% |

| | | | | | | |
|---|---|---|---|---|---|---|
| Fe RADIAL† | 7705.6 | 20.92 mg/L | 0.195 | 20.92 mg/L | 0.195 | 0.93% |
| Ca RADIAL† | 66157.2 | 14.36 mg/L | 0.034 | 14.36 mg/L | 0.034 | 0.23% |
| K RADIAL† | 1773.9 | 1.528 mg/L | 0.0141 | 1.528 mg/L | 0.0141 | 0.92% |
| Mg RADIAL† | 1932.5 | 5.648 mg/L | 0.0314 | 5.648 mg/L | 0.0314 | 0.56% |
| Na RADIAL† | 2692.7 | 0.2050 mg/L | 0.00451 | 0.2050 mg/L | 0.00451 | 2.20% |
| Mo 202.031 | 17.1 | 0.001 mg/L | 0.0003 | 0.001 mg/L | 0.0003 | 43.47% |

**Sequence No.: 115**
**Sample ID: BI60401-BLK1**
**Analyst: KV**
**Logged In Analyst (Original) : administrator**
**Initial Sample Wt:**
**Dilution:**

**Autosampler Location: 97**
**Date Collected: 9/13/2016 1:17:19 AM**
**Data Type: Reprocessed on 9/13/2016 7:00:26 AM**

**Initial Sample Vol:**
**Sample Prep Vol:**

**Mean Data: BI60401-BLK1**

| Analyte | Mean Corrected Intensity | Calib. Conc. | Units | Std.Dev. | Sample Conc. | Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 14707546.7 | 4.782 | mg/L | 0.0230 | | | | 0.48% |
| Y RADIAL | 219135.8 | 4.773 | mg/L | 0.1143 | | | | 2.40% |
| As 188.979† | -23.4 | -0.0123 | mg/L | 0.00219 | -0.0123 | mg/L | 0.00219 | 17.76% |
| Tl 190.801† | -14.0 | -0.0048 | mg/L | 0.00058 | -0.0048 | mg/L | 0.00058 | 12.14% |
| Se 196.026† | 5.9 | 0.0062 | mg/L | 0.00737 | 0.0062 | mg/L | 0.00737 | 119.55% |
| Zn 206.200† | -218.3 | -0.0048 | mg/L | 0.00023 | -0.0048 | mg/L | 0.00023 | 4.71% |
| Sb 206.836† | -0.2 | -0.0001 | mg/L | 0.00223 | -0.0001 | mg/L | 0.00223 | >999.9% |
| Pb 220.353† | 51.9 | 0.0048 | mg/L | 0.00129 | 0.0048 | mg/L | 0.00129 | 27.03% |
| Cd 226.502† | -35.5 | -0.0002 | mg/L | 0.00012 | -0.0002 | mg/L | 0.00012 | 50.65% |
| Co 228.616† | -0.3 | 0.0000 | mg/L | 0.00013 | 0.0000 | mg/L | 0.00013 | >999.9% |
| Ni 232.003† | -22.5 | -0.0009 | mg/L | 0.00033 | -0.0009 | mg/L | 0.00033 | 35.44% |
| Ba 233.527† | -18.1 | -0.0002 | mg/L | 0.00005 | -0.0002 | mg/L | 0.00005 | 29.66% |
| Mn 257.610† | -45.8 | 0.0000 | mg/L | 0.00001 | 0.0000 | mg/L | 0.00001 | 27.84% |
| Cr 267.716† | 10.9 | 0.0001 | mg/L | 0.00021 | 0.0001 | mg/L | 0.00021 | 283.63% |
| Fe 273.955† | 10.4 | 0.0004 | mg/L | 0.00035 | 0.0004 | mg/L | 0.00035 | 90.38% |
| Mg 279.077† | 12.4 | 0.0006 | mg/L | 0.00387 | 0.0006 | mg/L | 0.00387 | 692.75% |
| V 292.402† | -16.4 | -0.0001 | mg/L | 0.00018 | -0.0001 | mg/L | 0.00018 | 326.19% |
| Al 308.215† | -549.3 | -0.0197 | mg/L | 0.00243 | -0.0197 | mg/L | 0.00243 | 12.37% |
| Be 313.107† | -380.3 | -0.0001 | mg/L | 0.00002 | -0.0001 | mg/L | 0.00002 | 26.35% |
| Cu 324.752† | -28.2 | -0.0001 | mg/L | 0.00011 | -0.0001 | mg/L | 0.00011 | 106.37% |
| Ag 338.289† | -76.8 | -0.0005 | mg/L | 0.00054 | -0.0005 | mg/L | 0.00054 | 103.92% |
| Na 330.237† | 25.3 | 0.0255 | mg/L | 0.03907 | 0.0255 | mg/L | 0.03907 | 153.12% |
| Ca 227.546† | 24.3 | 0.0650 | mg/L | 0.03532 | 0.0650 | mg/L | 0.03532 | 54.35% |
| Al RADIAL† | -67.9 | -0.0353 | mg/L | 0.00477 | -0.0353 | mg/L | 0.00477 | 13.52% |
| Fe RADIAL† | 0.4 | 0.0011 | mg/L | 0.00931 | 0.0011 | mg/L | 0.00931 | 825.23% |
| Ca RADIAL† | 263.4 | 0.0572 | mg/L | 0.01002 | 0.0572 | mg/L | 0.01002 | 17.52% |
| K RADIAL† | -6.0 | -0.0052 | mg/L | 0.01319 | -0.0052 | mg/L | 0.01319 | 255.88% |
| Mg RADIAL† | -6.0 | -0.0174 | mg/L | 0.01136 | -0.0174 | mg/L | 0.01136 | 65.28% |
| Na RADIAL† | -3750.5 | -0.2855 | mg/L | 0.04178 | -0.2855 | mg/L | 0.04178 | 14.63% |
| Mo 202.031 | -1.4 | 0.000 | mg/L | 0.0002 | 0.000 | mg/L | 0.0002 | 446.85% |

**Sequence No.: 116**
**Sample ID: BI60401-SRM1**
**Analyst: KV**
**Logged In Analyst (Original) : administrator**
**Initial Sample Wt:**
**Dilution:**

**Autosampler Location: 98**
**Date Collected: 9/13/2016 1:22:26 AM**
**Data Type: Reprocessed on 9/13/2016 7:00:27 AM**

**Initial Sample Vol:**
**Sample Prep Vol:**

**Mean Data: BI60401-SRM1**

| Analyte | Mean Corrected Intensity | Calib. Conc. | Units | Std.Dev. | Sample Conc. | Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 16658360.5 | 5.416 | mg/L | 0.0328 | | | | 0.61% |
| Y RADIAL | 268304.6 | 5.844 | mg/L | 0.0519 | | | | 0.89% |
| As 188.979† | 2283.1 | 1.217 | mg/L | 0.0129 | 1.217 | mg/L | 0.0129 | 1.06% |
| Tl 190.801† | 4762.3 | 1.642 | mg/L | 0.0359 | 1.642 | mg/L | 0.0359 | 2.18% |
| Se 196.026† | 1213.3 | 1.312 | mg/L | 0.0083 | 1.312 | mg/L | 0.0083 | 0.63% |
| Zn 206.200† | 114197.3 | 2.502 | mg/L | 0.0296 | 2.502 | mg/L | 0.0296 | 1.18% |
| Sb 206.836† | 3953.4 | 1.149 | mg/L | 0.0064 | 1.149 | mg/L | 0.0064 | 0.56% |
| Pb 220.353† | 21786.8 | 1.998 | mg/L | 0.0175 | 1.998 | mg/L | 0.0175 | 0.88% |
| Cd 226.502† | 178331.2 | 1.206 | mg/L | 0.0130 | 1.206 | mg/L | 0.0130 | 1.08% |
| Co 228.616† | 25703.2 | 0.6016 | mg/L | 0.00443 | 0.6016 | mg/L | 0.00443 | 0.74% |

| | | | | | | |
|---|---|---|---|---|---|---|
| Ni 232.003† | 65649.5 | 2.721 mg/L | 0.0214 | 2.721 mg/L | 0.0214 | 0.79% |
| Ba 233.527† | 218361.9 | 2.205 mg/L | 0.0191 | 2.205 mg/L | 0.0191 | 0.87% |
| Mn 257.610† | 4554823.0 | 4.762 mg/L | 0.1059 | 4.762 mg/L | 0.1059 | 2.22% |
| Cr 267.716† | 145686.6 | 1.009 mg/L | 0.0101 | 1.009 mg/L | 0.0101 | 1.00% |
| Fe 273.955† | 2998066.2 | 110.3 mg/L | 2.48 | 110.3 mg/L | 2.48 | 2.25% |
| Mg 279.077† | 703154.7 | 31.70 mg/L | 0.290 | 31.70 mg/L | 0.290 | 0.92% |
| V 292.402† | 292758.9 | 1.007 mg/L | 0.0126 | 1.007 mg/L | 0.0126 | 1.25% |
| Al 308.215† | 2168181.0 | 77.63 mg/L | 1.934 | 77.63 mg/L | 1.934 | 2.49% |
| Be 313.107† | 4785699.8 | 1.097 mg/L | 0.0024 | 1.097 mg/L | 0.0024 | 0.22% |
| Cu 324.752† | 161906.3 | 0.6136 mg/L | 0.00725 | 0.6136 mg/L | 0.00725 | 1.18% |
| Ag 338.289† | 52381.2 | 0.3536 mg/L | 0.00354 | 0.3536 mg/L | 0.00354 | 1.00% |
| Na 330.237† | 7894.3 | 8.522 mg/L | 0.0396 | 8.522 mg/L | 0.0396 | 0.47% |
| Ca 227.546† | 20412.9 | 55.67 mg/L | 0.372 | 55.67 mg/L | 0.372 | 0.67% |
| Al RADIAL† | 142292.1 | 73.98 mg/L | 0.339 | 73.98 mg/L | 0.339 | 0.46% |
| Fe RADIAL† | 42134.6 | 114.4 mg/L | 0.48 | 114.4 mg/L | 0.48 | 0.42% |
| Ca RADIAL† | 247498.9 | 53.73 mg/L | 0.088 | 53.73 mg/L | 0.088 | 0.16% |
| K RADIAL† | 29942.4 | 25.80 mg/L | 0.109 | 25.80 mg/L | 0.109 | 0.42% |
| Mg RADIAL† | 10424.5 | 30.47 mg/L | 0.148 | 30.47 mg/L | 0.148 | 0.49% |
| Na RADIAL† | 80181.2 | 6.104 mg/L | 0.0199 | 6.104 mg/L | 0.0199 | 0.33% |
| Mo 202.031 | 22233.7 | 0.814 mg/L | 0.0007 | 0.814 mg/L | 0.0007 | 0.08% |

**Sequence No.: 117**
**Sample ID: SEQ-CCVA**
**Analyst: KV**
**Logged In Analyst (Original) : administrator**
**Initial Sample Wt:**
**Dilution:**

**Autosampler Location: 8**
**Date Collected: 9/13/2016 1:30:14 AM**
**Data Type: Reprocessed on 9/13/2016 7:00:28 AM**

**Initial Sample Vol:**
**Sample Prep Vol:**

**Mean Data: SEQ-CCVA**

| Analyte | Mean Corrected Intensity | Calib. Conc. | Calib. Units | Calib. Std.Dev. | Sample Conc. | Sample Units | Sample Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 15114369.7 | 4.914 | mg/L | 0.0166 | | | | 0.34% |
| Y RADIAL | 238527.2 | 5.196 | mg/L | 0.0623 | | | | 1.20% |
| As 188.979† | 473.4 | 0.2506 | mg/L | 0.00353 | 0.2506 | mg/L | 0.00353 | 1.41% |
| Tl 190.801† | 678.7 | 0.2335 | mg/L | 0.00272 | 0.2335 | mg/L | 0.00272 | 1.17% |
| Se 196.026† | 233.8 | 0.2453 | mg/L | 0.00445 | 0.2453 | mg/L | 0.00445 | 1.81% |
| Zn 206.200† | 113837.4 | 2.495 | mg/L | 0.0190 | 2.495 | mg/L | 0.0190 | 0.76% |
| Sb 206.836† | 844.2 | 0.2456 | mg/L | 0.00468 | 0.2456 | mg/L | 0.00468 | 1.90% |
| Pb 220.353† | 2738.3 | 0.2523 | mg/L | 0.00256 | 0.2523 | mg/L | 0.00256 | 1.01% |
| Cd 226.502† | 18134.7 | 0.1233 | mg/L | 0.00135 | 0.1233 | mg/L | 0.00135 | 1.10% |
| Co 228.616† | 108611.1 | 2.532 | mg/L | 0.0205 | 2.532 | mg/L | 0.0205 | 0.81% |
| Ni 232.003† | 60384.4 | 2.495 | mg/L | 0.0190 | 2.495 | mg/L | 0.0190 | 0.76% |
| Ba 233.527† | 1011991.0 | 10.22 | mg/L | 0.078 | 10.22 | mg/L | 0.078 | 0.76% |
| Mn 257.610† | 2457203.6 | 2.561 | mg/L | 0.0209 | 2.561 | mg/L | 0.0209 | 0.81% |
| Cr 267.716† | 147978.8 | 1.023 | mg/L | 0.0083 | 1.023 | mg/L | 0.0083 | 0.81% |
| Fe 273.955† | 138655.2 | 5.103 | mg/L | 0.0500 | 5.103 | mg/L | 0.0500 | 0.98% |
| Mg 279.077† | 561669.2 | 25.33 | mg/L | 0.190 | 25.33 | mg/L | 0.190 | 0.75% |
| V 292.402† | 729743.7 | 2.525 | mg/L | 0.0263 | 2.525 | mg/L | 0.0263 | 1.04% |
| Al 308.215† | 277060.8 | 9.917 | mg/L | 0.0924 | 9.917 | mg/L | 0.0924 | 0.93% |
| Be 313.107† | 1110705.8 | 0.2547 | mg/L | 0.00326 | 0.2547 | mg/L | 0.00326 | 1.28% |
| Cu 324.752† | 339395.5 | 1.277 | mg/L | 0.0155 | 1.277 | mg/L | 0.0155 | 1.21% |
| Ag 338.289† | 191111.5 | 1.284 | mg/L | 0.0138 | 1.284 | mg/L | 0.0138 | 1.07% |
| Na 330.237† | 23341.0 | 23.52 | mg/L | 0.222 | 23.52 | mg/L | 0.222 | 0.95% |
| Ca 227.546† | 9383.7 | 25.16 | mg/L | 0.232 | 25.16 | mg/L | 0.232 | 0.92% |
| Al RADIAL† | 18311.5 | 9.518 | mg/L | 0.0217 | 9.518 | mg/L | 0.0217 | 0.23% |
| Fe RADIAL† | 1880.5 | 5.106 | mg/L | 0.0409 | 5.106 | mg/L | 0.0409 | 0.80% |
| Ca RADIAL† | 116788.9 | 25.35 | mg/L | 0.058 | 25.35 | mg/L | 0.058 | 0.23% |
| K RADIAL† | 5875.9 | 5.062 | mg/L | 0.0659 | 5.062 | mg/L | 0.0659 | 1.30% |
| Mg RADIAL† | 8714.8 | 25.48 | mg/L | 0.180 | 25.48 | mg/L | 0.180 | 0.71% |
| Na RADIAL† | 331062.6 | 25.20 | mg/L | 0.173 | 25.20 | mg/L | 0.173 | 0.69% |
| Mo 202.031 | 28727.1 | 1.052 | mg/L | 0.0065 | 1.052 | mg/L | 0.0065 | 0.62% |

**Sequence No.: 118**
**Sample ID: SEQ-CCBA**
**Analyst: KV**
**Logged In Analyst (Original) : administrator**
**Initial Sample Wt:**
**Dilution:**

**Autosampler Location: 1**
**Date Collected: 9/13/2016 1:38:19 AM**
**Data Type: Reprocessed on 9/13/2016 7:00:28 AM**

**Initial Sample Vol:**
**Sample Prep Vol:**

**Mean Data: SEQ-CCBA**

| Analyte | Mean Corrected Intensity | Calib. Conc. | Calib. Units | Std.Dev. | Sample Conc. | Sample Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 15487246.3 | 5.036 | mg/L | 0.0917 | | | | 1.82% |
| Y RADIAL | 239593.7 | 5.219 | mg/L | 0.0377 | | | | 0.72% |
| As 188.979† | 3.2 | 0.0017 | mg/L | 0.00501 | 0.0017 | mg/L | 0.00501 | 294.74% |
| Tl 190.801† | 13.0 | 0.0045 | mg/L | 0.00324 | 0.0045 | mg/L | 0.00324 | 72.38% |
| Se 196.026† | -0.4 | -0.0004 | mg/L | 0.00040 | -0.0004 | mg/L | 0.00040 | 95.12% |
| Zn 206.200† | -101.3 | -0.0022 | mg/L | 0.00021 | -0.0022 | mg/L | 0.00021 | 9.28% |
| Sb 206.836† | -4.0 | -0.0012 | mg/L | 0.00376 | -0.0012 | mg/L | 0.00376 | 324.88% |
| Pb 220.353† | 19.2 | 0.0018 | mg/L | 0.00085 | 0.0018 | mg/L | 0.00085 | 48.34% |
| Cd 226.502† | -4.2 | 0.0000 | mg/L | 0.00011 | 0.0000 | mg/L | 0.00011 | 390.90% |
| Co 228.616† | 11.1 | 0.0003 | mg/L | 0.00020 | 0.0003 | mg/L | 0.00020 | 76.73% |
| Ni 232.003† | 49.9 | 0.0021 | mg/L | 0.00024 | 0.0021 | mg/L | 0.00024 | 11.64% |
| Ba 233.527† | 6.1 | 0.0001 | mg/L | 0.00003 | 0.0001 | mg/L | 0.00003 | 41.92% |
| Mn 257.610† | -106.4 | -0.0001 | mg/L | 0.00002 | -0.0001 | mg/L | 0.00002 | 15.22% |
| Cr 267.716† | 35.8 | 0.0002 | mg/L | 0.00028 | 0.0002 | mg/L | 0.00028 | 112.55% |
| Fe 273.955† | -2.3 | -0.0001 | mg/L | 0.00017 | -0.0001 | mg/L | 0.00017 | 199.56% |
| Mg 279.077† | 29.3 | 0.0013 | mg/L | 0.00272 | 0.0013 | mg/L | 0.00272 | 206.16% |
| V 292.402† | 3.7 | 0.0000 | mg/L | 0.00014 | 0.0000 | mg/L | 0.00014 | >999.9% |
| Al 308.215† | -1565.0 | -0.0560 | mg/L | 0.00425 | -0.0560 | mg/L | 0.00425 | 7.59% |
| Be 313.107† | 107.1 | 0.0000 | mg/L | 0.00006 | 0.0000 | mg/L | 0.00006 | 257.56% |
| Cu 324.752† | -79.2 | -0.0003 | mg/L | 0.00006 | -0.0003 | mg/L | 0.00006 | 19.55% |
| Ag 338.289† | -42.5 | -0.0003 | mg/L | 0.00059 | -0.0003 | mg/L | 0.00059 | 206.57% |
| Na 330.237† | 5.6 | 0.0056 | mg/L | 0.08694 | 0.0056 | mg/L | 0.08694 | >999.9% |
| Ca 227.546† | 44.3 | 0.1184 | mg/L | 0.07045 | 0.1184 | mg/L | 0.07045 | 59.52% |
| Al RADIAL† | -116.1 | -0.0603 | mg/L | 0.00462 | -0.0603 | mg/L | 0.00462 | 7.66% |
| Fe RADIAL† | -2.1 | -0.0058 | mg/L | 0.00089 | -0.0058 | mg/L | 0.00089 | 15.50% |
| Ca RADIAL† | 52.2 | 0.0113 | mg/L | 0.00201 | 0.0113 | mg/L | 0.00201 | 17.72% |
| K RADIAL† | 1.9 | 0.0016 | mg/L | 0.05567 | 0.0016 | mg/L | 0.05567 | >999.9% |
| Mg RADIAL† | -6.1 | -0.0179 | mg/L | 0.02762 | -0.0179 | mg/L | 0.02762 | 154.48% |
| Na RADIAL† | -2035.8 | -0.1550 | mg/L | 0.00793 | -0.1550 | mg/L | 0.00793 | 5.12% |
| Mo 202.031 | -13.4 | 0.000 | mg/L | 0.0004 | 0.000 | mg/L | 0.0004 | 83.41% |

**Sequence No.: 119**
**Sample ID: 16I0251-03**
**Analyst: KV**
**Logged In Analyst (Original) : administrator**
**Initial Sample Wt:**
**Dilution:**

**Autosampler Location: 99**
**Date Collected: 9/13/2016 1:43:23 AM**
**Data Type: Reprocessed on 9/13/2016 7:00:29 AM**

**Initial Sample Vol:**
**Sample Prep Vol:**

**Mean Data: 16I0251-03**

| Analyte | Mean Corrected Intensity | Calib. Conc. | Calib. Units | Std.Dev. | Sample Conc. | Sample Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 16826088.1 | 5.471 | mg/L | 0.0455 | | | | 0.83% |
| Y RADIAL | 279939.9 | 6.098 | mg/L | 0.0767 | | | | 1.26% |
| As 188.979† | -21.1 | 0.0083 | mg/L | 0.00042 | 0.0083 | mg/L | 0.00042 | 5.01% |
| Tl 190.801† | -249.4 | -0.0749 | mg/L | 0.00230 | -0.0749 | mg/L | 0.00230 | 3.07% |
| Se 196.026† | -60.6 | 0.0344 | mg/L | 0.01130 | 0.0344 | mg/L | 0.01130 | 32.86% |
| Zn 206.200† | 33025.1 | 0.7217 | mg/L | 0.00301 | 0.7217 | mg/L | 0.00301 | 0.42% |
| Sb 206.836† | -81.5 | -0.0259 | mg/L | 0.00027 | -0.0259 | mg/L | 0.00027 | 1.06% |
| Pb 220.353† | 2274.8 | 0.2020 | mg/L | 0.00086 | 0.2020 | mg/L | 0.00086 | 0.42% |
| Cd 226.502† | 3436.0 | -0.0003 | mg/L | 0.00024 | -0.0003 | mg/L | 0.00024 | 72.87% |
| Co 228.616† | 3695.1 | 0.0907 | mg/L | 0.00054 | 0.0907 | mg/L | 0.00054 | 0.59% |
| Ni 232.003† | 3267.1 | 0.1501 | mg/L | 0.00245 | 0.1501 | mg/L | 0.00245 | 1.63% |
| Ba 233.527† | 55588.8 | 0.5614 | mg/L | 0.00612 | 0.5614 | mg/L | 0.00612 | 1.09% |
| Mn 257.610† | 2313337.0 | 2.439 | mg/L | 0.0264 | 2.439 | mg/L | 0.0264 | 1.08% |
| Cr 267.716† | 25336.1 | 0.1774 | mg/L | 0.00179 | 0.1774 | mg/L | 0.00179 | 1.01% |
| Fe 273.955† | 5735955.8 | 211.1 | mg/L | 0.13 | 211.1 | mg/L | 0.13 | 0.06% |
| Mg 279.077† | 1097120.4 | 49.45 | mg/L | 0.603 | 49.45 | mg/L | 0.603 | 1.22% |
| V 292.402† | 76130.2 | 0.2526 | mg/L | 0.00342 | 0.2526 | mg/L | 0.00342 | 1.35% |
| Al 308.215† | 3332734.3 | 119.3 | mg/L | 1.24 | 119.3 | mg/L | 1.24 | 1.04% |
| Be 313.107† | 361.6 | 0.0001 | mg/L | 0.00026 | 0.0001 | mg/L | 0.00026 | 307.58% |
| Cu 324.752† | 69531.8 | 0.2702 | mg/L | 0.00240 | 0.2702 | mg/L | 0.00240 | 0.89% |
| Ag 338.289† | -6853.0 | -0.0427 | mg/L | 0.00064 | -0.0427 | mg/L | 0.00064 | 1.49% |
| Na 330.237† | -24.5 | 1.060 | mg/L | 0.0192 | 1.060 | mg/L | 0.0192 | 1.81% |
| Ca 227.546† | 32453.7 | 88.79 | mg/L | 1.061 | 88.79 | mg/L | 1.061 | 1.19% |
| Al RADIAL† | 203424.7 | 105.8 | mg/L | 2.00 | 105.8 | mg/L | 2.00 | 1.89% |
| Fe RADIAL† | 79669.6 | 216.3 | mg/L | 0.34 | 216.3 | mg/L | 0.34 | 0.16% |

| | | | | | | |
|---|---|---|---|---|---|---|
| Ca RADIAL† | 386667.9 | 83.94 mg/L | 2.310 | 83.94 mg/L | 2.310 | 2.75% |
| K RADIAL† | 32380.5 | 27.90 mg/L | 0.096 | 27.90 mg/L | 0.096 | 0.34% |
| Mg RADIAL† | 15923.6 | 46.53 mg/L | 0.176 | 46.53 mg/L | 0.176 | 0.38% |
| Na RADIAL† | 35660.9 | 2.715 mg/L | 0.0484 | 2.715 mg/L | 0.0484 | 1.78% |
| Mo 202.031 | 8.3 | 0.000 mg/L | 0.0002 | 0.000 mg/L | 0.0002 | 73.06% |

**Sequence No.: 120**
**Sample ID: 16I0251-04**
**Analyst: KV**
**Logged In Analyst (Original) : administrator**
**Initial Sample Wt:**
**Dilution:**

**Autosampler Location: 100**
**Date Collected: 9/13/2016 1:48:03 AM**
**Data Type: Reprocessed on 9/13/2016 7:00:30 AM**

**Initial Sample Vol:**
**Sample Prep Vol:**

**Mean Data: 16I0251-04**

| Analyte | Mean Corrected Intensity | Calib. Conc. | Units | Std.Dev. | Sample Conc. | Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 14959030.9 | 4.864 | mg/L | 0.0646 | | | | 1.33% |
| Y RADIAL | 247522.2 | 5.392 | mg/L | 0.0417 | | | | 0.77% |
| As 188.979† | -23.6 | 0.0128 | mg/L | 0.00345 | 0.0128 | mg/L | 0.00345 | 26.93% |
| Tl 190.801† | -359.3 | -0.1094 | mg/L | 0.00893 | -0.1094 | mg/L | 0.00893 | 8.16% |
| Se 196.026† | -78.9 | 0.0446 | mg/L | 0.00425 | 0.0446 | mg/L | 0.00425 | 9.54% |
| Zn 206.200† | 59751.6 | 1.307 | mg/L | 0.0226 | 1.307 | mg/L | 0.0226 | 1.73% |
| Sb 206.836† | -98.0 | -0.0314 | mg/L | 0.00378 | -0.0314 | mg/L | 0.00378 | 12.02% |
| Pb 220.353† | 2257.1 | 0.1961 | mg/L | 0.00179 | 0.1961 | mg/L | 0.00179 | 0.91% |
| Cd 226.502† | 5198.3 | 0.0046 | mg/L | 0.00019 | 0.0046 | mg/L | 0.00019 | 4.21% |
| Co 228.616† | 7311.8 | 0.1764 | mg/L | 0.00264 | 0.1764 | mg/L | 0.00264 | 1.50% |
| Ni 232.003† | 7946.8 | 0.3480 | mg/L | 0.00249 | 0.3480 | mg/L | 0.00249 | 0.72% |
| Ba 233.527† | 109803.5 | 1.109 | mg/L | 0.0187 | 1.109 | mg/L | 0.0187 | 1.68% |
| Mn 257.610† | 8641532.1 | 9.042 | mg/L | 0.0260 | 9.042 | mg/L | 0.0260 | 0.29% |
| Cr 267.716† | 26158.2 | 0.1837 | mg/L | 0.00271 | 0.1837 | mg/L | 0.00271 | 1.48% |
| Fe 273.955† | 7518812.7 | 276.7 | mg/L | 0.74 | 276.7 | mg/L | 0.74 | 0.27% |
| Mg 279.077† | 1067183.6 | 48.09 | mg/L | 0.766 | 48.09 | mg/L | 0.766 | 1.59% |
| V 292.402† | 75983.5 | 0.2489 | mg/L | 0.00308 | 0.2489 | mg/L | 0.00308 | 1.24% |
| Al 308.215† | 3931847.6 | 140.8 | mg/L | 0.40 | 140.8 | mg/L | 0.40 | 0.28% |
| Be 313.107† | 20581.3 | 0.0047 | mg/L | 0.00026 | 0.0047 | mg/L | 0.00026 | 5.45% |
| Cu 324.752† | 166992.4 | 0.6394 | mg/L | 0.01165 | 0.6394 | mg/L | 0.01165 | 1.82% |
| Ag 338.289† | -10081.3 | -0.0622 | mg/L | 0.00078 | -0.0622 | mg/L | 0.00078 | 1.26% |
| Na 330.237† | 193.8 | 1.507 | mg/L | 0.0362 | 1.507 | mg/L | 0.0362 | 2.40% |
| Ca 227.546† | 4109.1 | 13.51 | mg/L | 0.169 | 13.51 | mg/L | 0.169 | 1.25% |
| Al RADIAL† | 251833.7 | 130.9 | mg/L | 1.45 | 130.9 | mg/L | 1.45 | 1.11% |
| Fe RADIAL† | 103622.9 | 281.3 | mg/L | 0.61 | 281.3 | mg/L | 0.61 | 0.22% |
| Ca RADIAL† | 43581.9 | 9.461 | mg/L | 0.0103 | 9.461 | mg/L | 0.0103 | 0.11% |
| K RADIAL† | 54575.5 | 47.02 | mg/L | 0.438 | 47.02 | mg/L | 0.438 | 0.93% |
| Mg RADIAL† | 15306.9 | 44.72 | mg/L | 0.143 | 44.72 | mg/L | 0.143 | 0.32% |
| Na RADIAL† | 37861.1 | 2.882 | mg/L | 0.0322 | 2.882 | mg/L | 0.0322 | 1.12% |
| Mo 202.031 | 293.9 | 0.011 | mg/L | 0.0002 | 0.011 | mg/L | 0.0002 | 1.42% |

**Sequence No.: 121**
**Sample ID: 16I0251-05**
**Analyst: KV**
**Logged In Analyst (Original) : administrator**
**Initial Sample Wt:**
**Dilution:**

**Autosampler Location: 101**
**Date Collected: 9/13/2016 1:52:43 AM**
**Data Type: Reprocessed on 9/13/2016 7:00:30 AM**

**Initial Sample Vol:**
**Sample Prep Vol:**

**Mean Data: 16I0251-05**

| Analyte | Mean Corrected Intensity | Calib. Conc. | Units | Std.Dev. | Sample Conc. | Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 17134116.3 | 5.571 | mg/L | 0.0691 | | | | 1.24% |
| Y RADIAL | 288140.5 | 6.277 | mg/L | 0.1140 | | | | 1.82% |
| As 188.979† | -1.3 | 0.0192 | mg/L | 0.00592 | 0.0192 | mg/L | 0.00592 | 30.76% |
| Tl 190.801† | -580.7 | -0.1885 | mg/L | 0.00445 | -0.1885 | mg/L | 0.00445 | 2.36% |
| Se 196.026† | -77.8 | 0.0188 | mg/L | 0.00449 | 0.0188 | mg/L | 0.00449 | 23.95% |
| Zn 206.200† | 39514.3 | 0.8639 | mg/L | 0.00785 | 0.8639 | mg/L | 0.00785 | 0.91% |
| Sb 206.836† | -149.3 | -0.0457 | mg/L | 0.00205 | -0.0457 | mg/L | 0.00205 | 4.49% |
| Pb 220.353† | 1505.4 | 0.1288 | mg/L | 0.00391 | 0.1288 | mg/L | 0.00391 | 3.04% |
| Cd 226.502† | 3644.3 | 0.0005 | mg/L | 0.00043 | 0.0005 | mg/L | 0.00043 | 78.47% |
| Co 228.616† | 4398.0 | 0.1072 | mg/L | 0.00090 | 0.1072 | mg/L | 0.00090 | 0.84% |
| Ni 232.003† | 3607.0 | 0.1645 | mg/L | 0.00256 | 0.1645 | mg/L | 0.00256 | 1.56% |

| | | | | | | |
|---|---|---|---|---|---|---|
| Ba 233.527† | 78145.5 | 0.7891 mg/L | 0.00504 | 0.7891 mg/L | 0.00504 | 0.64% |
| Mn 257.610† | 3704992.9 | 3.890 mg/L | 0.0288 | 3.890 mg/L | 0.0288 | 0.74% |
| Cr 267.716† | 19374.4 | 0.1362 mg/L | 0.00127 | 0.1362 mg/L | 0.00127 | 0.93% |
| Fe 273.955† | 5933596.2 | 218.4 mg/L | 0.31 | 218.4 mg/L | 0.31 | 0.14% |
| Mg 279.077† | 983091.5 | 44.30 mg/L | 0.316 | 44.30 mg/L | 0.316 | 0.71% |
| V 292.402† | 79328.8 | 0.2634 mg/L | 0.00211 | 0.2634 mg/L | 0.00211 | 0.80% |
| Al 308.215† | 2918764.1 | 104.5 mg/L | 0.93 | 104.5 mg/L | 0.93 | 0.89% |
| Be 313.107† | -56806.0 | -0.0130 mg/L | 0.00068 | -0.0130 mg/L | 0.00068 | 5.25% |
| Cu 324.752† | 50326.0 | 0.1982 mg/L | 0.00172 | 0.1982 mg/L | 0.00172 | 0.87% |
| Ag 338.289† | -16916.2 | -0.1096 mg/L | 0.00115 | -0.1096 mg/L | 0.00115 | 1.05% |
| Na 330.237† | -5226.9 | -4.201 mg/L | 0.0442 | -4.201 mg/L | 0.0442 | 1.05% |
| Ca 227.546† | 12497.8 | 35.42 mg/L | 0.385 | 35.42 mg/L | 0.385 | 1.09% |
| Al RADIAL† | 182838.9 | 95.07 mg/L | 0.346 | 95.07 mg/L | 0.346 | 0.36% |
| Fe RADIAL† | 81516.1 | 221.3 mg/L | 0.26 | 221.3 mg/L | 0.26 | 0.12% |
| Ca RADIAL† | 145702.4 | 31.63 mg/L | 0.054 | 31.63 mg/L | 0.054 | 0.17% |
| K RADIAL† | 49512.4 | 42.66 mg/L | 0.087 | 42.66 mg/L | 0.087 | 0.20% |
| Mg RADIAL† | 14080.5 | 41.14 mg/L | 0.071 | 41.14 mg/L | 0.071 | 0.17% |
| Na RADIAL† | 18071.4 | 1.376 mg/L | 0.0203 | 1.376 mg/L | 0.0203 | 1.48% |
| Mo 202.031 | 364.1 | 0.013 mg/L | 0.0004 | 0.013 mg/L | 0.0004 | 2.63% |

**Sequence No.: 122**
**Sample ID: 16I0251-06**
**Analyst: KV**
**Logged In Analyst (Original) : administrator**
**Initial Sample Wt:**
**Dilution:**

**Autosampler Location: 102**
**Date Collected: 9/13/2016 1:57:25 AM**
**Data Type: Reprocessed on 9/13/2016 7:00:31 AM**

**Initial Sample Vol:**
**Sample Prep Vol:**

**Mean Data: 16I0251-06**

| Analyte | Mean Corrected Intensity | Conc. | Calib. Units | Std.Dev. | Sample Conc. | Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 15097765.1 | 4.909 | mg/L | 0.0438 | | | | 0.89% |
| Y RADIAL | 238002.4 | 5.184 | mg/L | 0.0593 | | | | 1.14% |
| As 188.979† | 23.3 | 0.0300 | mg/L | 0.00437 | 0.0300 | mg/L | 0.00437 | 14.58% |
| Tl 190.801† | -290.0 | -0.0898 | mg/L | 0.01718 | -0.0898 | mg/L | 0.01718 | 19.12% |
| Se 196.026† | -56.3 | 0.0300 | mg/L | 0.00720 | 0.0300 | mg/L | 0.00720 | 24.01% |
| Zn 206.200† | 41641.4 | 0.9108 | mg/L | 0.00506 | 0.9108 | mg/L | 0.00506 | 0.56% |
| Sb 206.836† | -62.3 | -0.0201 | mg/L | 0.00290 | -0.0201 | mg/L | 0.00290 | 14.41% |
| Pb 220.353† | 5645.8 | 0.5118 | mg/L | 0.00654 | 0.5118 | mg/L | 0.00654 | 1.28% |
| Cd 226.502† | 2913.2 | -0.0017 | mg/L | 0.00063 | -0.0017 | mg/L | 0.00063 | 36.80% |
| Co 228.616† | 3697.4 | 0.0903 | mg/L | 0.00091 | 0.0903 | mg/L | 0.00091 | 1.01% |
| Ni 232.003† | 3607.4 | 0.1628 | mg/L | 0.00230 | 0.1628 | mg/L | 0.00230 | 1.42% |
| Ba 233.527† | 92664.4 | 0.9357 | mg/L | 0.00299 | 0.9357 | mg/L | 0.00299 | 0.32% |
| Mn 257.610† | 2677478.1 | 2.816 | mg/L | 0.0299 | 2.816 | mg/L | 0.0299 | 1.06% |
| Cr 267.716† | 31340.3 | 0.2187 | mg/L | 0.00119 | 0.2187 | mg/L | 0.00119 | 0.54% |
| Fe 273.955† | 4981796.3 | 183.3 | mg/L | 0.32 | 183.3 | mg/L | 0.32 | 0.17% |
| Mg 279.077† | 905315.4 | 40.80 | mg/L | 0.408 | 40.80 | mg/L | 0.408 | 1.00% |
| V 292.402† | 78675.3 | 0.2624 | mg/L | 0.00223 | 0.2624 | mg/L | 0.00223 | 0.85% |
| Al 308.215† | 3021120.4 | 108.2 | mg/L | 1.16 | 108.2 | mg/L | 1.16 | 1.07% |
| Be 313.107† | -18250.4 | -0.0042 | mg/L | 0.00037 | -0.0042 | mg/L | 0.00037 | 8.84% |
| Cu 324.752† | 69040.5 | 0.2676 | mg/L | 0.00046 | 0.2676 | mg/L | 0.00046 | 0.17% |
| Ag 338.289† | -8431.0 | -0.0529 | mg/L | 0.00163 | -0.0529 | mg/L | 0.00163 | 3.07% |
| Na 330.237† | -957.3 | -0.0333 | mg/L | 0.08566 | -0.0333 | mg/L | 0.08566 | 257.35% |
| Ca 227.546† | 7160.3 | 20.93 | mg/L | 0.226 | 20.93 | mg/L | 0.226 | 1.08% |
| Al RADIAL† | 196051.2 | 101.9 | mg/L | 0.25 | 101.9 | mg/L | 0.25 | 0.25% |
| Fe RADIAL† | 72404.2 | 196.6 | mg/L | 1.55 | 196.6 | mg/L | 1.55 | 0.79% |
| Ca RADIAL† | 89122.9 | 19.35 | mg/L | 0.141 | 19.35 | mg/L | 0.141 | 0.73% |
| K RADIAL† | 39634.7 | 34.15 | mg/L | 0.284 | 34.15 | mg/L | 0.284 | 0.83% |
| Mg RADIAL† | 14175.2 | 41.42 | mg/L | 0.301 | 41.42 | mg/L | 0.301 | 0.73% |
| Na RADIAL† | 22773.8 | 1.734 | mg/L | 0.0320 | 1.734 | mg/L | 0.0320 | 1.84% |
| Mo 202.031 | 536.0 | 0.020 | mg/L | 0.0003 | 0.020 | mg/L | 0.0003 | 1.40% |

**Sequence No.: 123**
**Sample ID: 16I0251-07**
**Analyst: KV**
**Logged In Analyst (Original) : administrator**
**Initial Sample Wt:**
**Dilution:**

**Autosampler Location: 103**
**Date Collected: 9/13/2016 2:02:10 AM**
**Data Type: Reprocessed on 9/13/2016 7:00:32 AM**

**Initial Sample Vol:**
**Sample Prep Vol:**

**Mean Data: 16I0251-07**

| Analyte | Mean Corrected Intensity | Calib. Conc. | Calib. Units | Std.Dev. | Sample Conc. | Sample Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 16994724.6 | 5.526 | mg/L | 0.0303 | | | | 0.55% |
| Y RADIAL | 270778.0 | 5.898 | mg/L | 0.0181 | | | | 0.31% |
| As 188.979† | 46.9 | 0.0367 | mg/L | 0.00319 | 0.0367 | mg/L | 0.00319 | 8.70% |
| Tl 190.801† | -201.0 | -0.0625 | mg/L | 0.00020 | -0.0625 | mg/L | 0.00020 | 0.32% |
| Se 196.026† | -44.7 | 0.0129 | mg/L | 0.00665 | 0.0129 | mg/L | 0.00665 | 51.71% |
| Zn 206.200† | 21550.3 | 0.4711 | mg/L | 0.00687 | 0.4711 | mg/L | 0.00687 | 1.46% |
| Sb 206.836† | -54.3 | -0.0172 | mg/L | 0.00256 | -0.0172 | mg/L | 0.00256 | 14.92% |
| Pb 220.353† | 2204.4 | 0.2005 | mg/L | 0.00135 | 0.2005 | mg/L | 0.00135 | 0.68% |
| Cd 226.502† | 1916.0 | -0.0014 | mg/L | 0.00032 | -0.0014 | mg/L | 0.00032 | 22.90% |
| Co 228.616† | 3036.5 | 0.0736 | mg/L | 0.00020 | 0.0736 | mg/L | 0.00020 | 0.27% |
| Ni 232.003† | 2961.2 | 0.1316 | mg/L | 0.00353 | 0.1316 | mg/L | 0.00353 | 2.68% |
| Ba 233.527† | 31939.5 | 0.3225 | mg/L | 0.00371 | 0.3225 | mg/L | 0.00371 | 1.15% |
| Mn 257.610† | 1449273.5 | 1.527 | mg/L | 0.0041 | 1.527 | mg/L | 0.0041 | 0.27% |
| Cr 267.716† | 18589.5 | 0.1299 | mg/L | 0.00127 | 0.1299 | mg/L | 0.00127 | 0.98% |
| Fe 273.955† | 3420858.6 | 125.9 | mg/L | 0.26 | 125.9 | mg/L | 0.26 | 0.20% |
| Mg 279.077† | 625514.5 | 28.19 | mg/L | 0.027 | 28.19 | mg/L | 0.027 | 0.10% |
| V 292.402† | 63715.1 | 0.2139 | mg/L | 0.00264 | 0.2139 | mg/L | 0.00264 | 1.23% |
| Al 308.215† | 2526202.8 | 90.44 | mg/L | 0.129 | 90.44 | mg/L | 0.129 | 0.14% |
| Be 313.107† | -6597.4 | -0.0015 | mg/L | 0.00028 | -0.0015 | mg/L | 0.00028 | 18.36% |
| Cu 324.752† | 50494.9 | 0.1952 | mg/L | 0.00194 | 0.1952 | mg/L | 0.00194 | 0.99% |
| Ag 338.289† | -6334.3 | -0.0401 | mg/L | 0.00113 | -0.0401 | mg/L | 0.00113 | 2.81% |
| Na 330.237† | 733.6 | 1.363 | mg/L | 0.0832 | 1.363 | mg/L | 0.0832 | 6.10% |
| Ca 227.546† | 5993.8 | 17.24 | mg/L | 0.174 | 17.24 | mg/L | 0.174 | 1.01% |
| Al RADIAL† | 166038.7 | 86.32 | mg/L | 0.165 | 86.32 | mg/L | 0.165 | 0.19% |
| Fe RADIAL† | 48532.8 | 131.8 | mg/L | 0.79 | 131.8 | mg/L | 0.79 | 0.60% |
| Ca RADIAL† | 71688.2 | 15.56 | mg/L | 0.054 | 15.56 | mg/L | 0.054 | 0.35% |
| K RADIAL† | 18552.7 | 15.98 | mg/L | 0.085 | 15.98 | mg/L | 0.085 | 0.53% |
| Mg RADIAL† | 9705.1 | 28.36 | mg/L | 0.150 | 28.36 | mg/L | 0.150 | 0.53% |
| Na RADIAL† | 48858.8 | 3.720 | mg/L | 0.0070 | 3.720 | mg/L | 0.0070 | 0.19% |
| Mo 202.031 | 50.4 | 0.002 | mg/L | 0.0004 | 0.002 | mg/L | 0.0004 | 21.06% |

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**Sequence No.: 124**
**Sample ID: 16I0251-08**
**Analyst: KV**
**Logged In Analyst (Original) : administrator**
**Initial Sample Wt:**
**Dilution:**

**Autosampler Location: 104**
**Date Collected: 9/13/2016 2:06:57 AM**
**Data Type: Reprocessed on 9/13/2016 7:00:33 AM**

**Initial Sample Vol:**
**Sample Prep Vol:**

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**Mean Data: 16I0251-08**

| Analyte | Mean Corrected Intensity | Calib. Conc. | Calib. Units | Std.Dev. | Sample Conc. | Sample Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 17807307.4 | 5.790 | mg/L | 0.0421 | | | | 0.73% |
| Y RADIAL | 289789.7 | 6.312 | mg/L | 0.0152 | | | | 0.24% |
| As 188.979† | 483.7 | 0.2723 | mg/L | 0.00359 | 0.2723 | mg/L | 0.00359 | 1.32% |
| Tl 190.801† | -323.1 | -0.1018 | mg/L | 0.00375 | -0.1018 | mg/L | 0.00375 | 3.68% |
| Se 196.026† | -57.1 | 0.0243 | mg/L | 0.00929 | 0.0243 | mg/L | 0.00929 | 38.29% |
| Zn 206.200† | 22825.0 | 0.4985 | mg/L | 0.00724 | 0.4985 | mg/L | 0.00724 | 1.45% |
| Sb 206.836† | -76.5 | -0.0242 | mg/L | 0.00111 | -0.0242 | mg/L | 0.00111 | 4.59% |
| Pb 220.353† | 1856.5 | 0.1641 | mg/L | 0.00261 | 0.1641 | mg/L | 0.00261 | 1.59% |
| Cd 226.502† | 2722.4 | -0.0018 | mg/L | 0.00028 | -0.0018 | mg/L | 0.00028 | 15.38% |
| Co 228.616† | 4659.4 | 0.1125 | mg/L | 0.00142 | 0.1125 | mg/L | 0.00142 | 1.26% |
| Ni 232.003† | 3532.7 | 0.1590 | mg/L | 0.00309 | 0.1590 | mg/L | 0.00309 | 1.95% |
| Ba 233.527† | 42050.7 | 0.4246 | mg/L | 0.00974 | 0.4246 | mg/L | 0.00974 | 2.29% |
| Mn 257.610† | 2293236.3 | 2.414 | mg/L | 0.0383 | 2.414 | mg/L | 0.0383 | 1.59% |
| Cr 267.716† | 20146.8 | 0.1412 | mg/L | 0.00326 | 0.1412 | mg/L | 0.00326 | 2.31% |
| Fe 273.955† | 4899406.4 | 180.3 | mg/L | 2.80 | 180.3 | mg/L | 2.80 | 1.55% |
| Mg 279.077† | 894331.6 | 40.31 | mg/L | 0.694 | 40.31 | mg/L | 0.694 | 1.72% |
| V 292.402† | 61681.1 | 0.2042 | mg/L | 0.00502 | 0.2042 | mg/L | 0.00502 | 2.46% |
| Al 308.215† | 2828906.9 | 101.3 | mg/L | 1.79 | 101.3 | mg/L | 1.79 | 1.77% |
| Be 313.107† | -21633.2 | -0.0050 | mg/L | 0.00027 | -0.0050 | mg/L | 0.00027 | 5.44% |
| Cu 324.752† | 40597.3 | 0.1601 | mg/L | 0.00396 | 0.1601 | mg/L | 0.00396 | 2.47% |
| Ag 338.289† | -9018.0 | -0.0570 | mg/L | 0.00115 | -0.0570 | mg/L | 0.00115 | 2.02% |
| Na 330.237† | -2039.1 | -1.181 | mg/L | 0.0227 | -1.181 | mg/L | 0.0227 | 1.92% |
| Ca 227.546† | 3964.4 | 12.28 | mg/L | 0.173 | 12.28 | mg/L | 0.173 | 1.41% |
| Al RADIAL† | 181130.7 | 94.17 | mg/L | 0.346 | 94.17 | mg/L | 0.346 | 0.37% |
| Fe RADIAL† | 68418.0 | 185.8 | mg/L | 1.04 | 185.8 | mg/L | 1.04 | 0.56% |
| Ca RADIAL† | 43750.2 | 9.497 | mg/L | 0.0140 | 9.497 | mg/L | 0.0140 | 0.15% |

| | | | | | | |
|---|---|---|---|---|---|---|
| K RADIAL† | 48290.6 | 41.60 mg/L | 0.281 | 41.60 mg/L | 0.281 | 0.67% |
| Mg RADIAL† | 13578.0 | 39.68 mg/L | 0.328 | 39.68 mg/L | 0.328 | 0.83% |
| Na RADIAL† | 22834.8 | 1.738 mg/L | 0.0157 | 1.738 mg/L | 0.0157 | 0.90% |
| Mo 202.031 | 30.8 | 0.001 mg/L | 0.0003 | 0.001 mg/L | 0.0003 | 26.19% |

**Sequence No.: 125**
**Sample ID: 16I0251-09**
**Analyst: KV**
**Logged In Analyst (Original) : administrator**
**Initial Sample Wt:**
**Dilution:**

**Autosampler Location: 105**
**Date Collected: 9/13/2016 2:11:44 AM**
**Data Type: Reprocessed on 9/13/2016 7:00:33 AM**

**Initial Sample Vol:**
**Sample Prep Vol:**

**Mean Data: 16I0251-09**

| Analyte | Mean Corrected Intensity | Calib. Conc. | Calib. Units | Std.Dev. | Sample Conc. | Sample Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 16602722.5 | 5.398 | mg/L | 0.0401 | | | | 0.74% |
| Y RADIAL | 272050.5 | 5.926 | mg/L | 0.0384 | | | | 0.65% |
| As 188.979† | -43.1 | 0.0028 | mg/L | 0.00264 | 0.0028 | mg/L | 0.00264 | 92.85% |
| Tl 190.801† | -445.7 | -0.1390 | mg/L | 0.00347 | -0.1390 | mg/L | 0.00347 | 2.50% |
| Se 196.026† | -73.6 | 0.0515 | mg/L | 0.00405 | 0.0515 | mg/L | 0.00405 | 7.85% |
| Zn 206.200† | 29561.2 | 0.6451 | mg/L | 0.00556 | 0.6451 | mg/L | 0.00556 | 0.86% |
| Sb 206.836† | -115.2 | -0.0365 | mg/L | 0.00460 | -0.0365 | mg/L | 0.00460 | 12.61% |
| Pb 220.353† | 1089.5 | 0.0890 | mg/L | 0.00171 | 0.0890 | mg/L | 0.00171 | 1.92% |
| Cd 226.502† | 4279.1 | -0.0021 | mg/L | 0.00031 | -0.0021 | mg/L | 0.00031 | 14.73% |
| Co 228.616† | 5699.1 | 0.1388 | mg/L | 0.00112 | 0.1388 | mg/L | 0.00112 | 0.81% |
| Ni 232.003† | 3702.4 | 0.1729 | mg/L | 0.00178 | 0.1729 | mg/L | 0.00178 | 1.03% |
| Ba 233.527† | 78909.4 | 0.7968 | mg/L | 0.00358 | 0.7968 | mg/L | 0.00358 | 0.45% |
| Mn 257.610† | 3595550.1 | 3.784 | mg/L | 0.0082 | 3.784 | mg/L | 0.0082 | 0.22% |
| Cr 267.716† | 27056.2 | 0.1900 | mg/L | 0.00041 | 0.1900 | mg/L | 0.00041 | 0.22% |
| Fe 273.955† | 7561521.6 | 278.3 | mg/L | 0.36 | 278.3 | mg/L | 0.36 | 0.13% |
| Mg 279.077† | 1165609.2 | 52.53 | mg/L | 0.108 | 52.53 | mg/L | 0.108 | 0.21% |
| V 292.402† | 80080.3 | 0.2629 | mg/L | 0.00040 | 0.2629 | mg/L | 0.00040 | 0.15% |
| Al 308.215† | 4071129.9 | 145.8 | mg/L | 0.25 | 145.8 | mg/L | 0.25 | 0.17% |
| Be 313.107† | -15196.0 | -0.0035 | mg/L | 0.00015 | -0.0035 | mg/L | 0.00015 | 4.36% |
| Cu 324.752† | 56794.1 | 0.2250 | mg/L | 0.00038 | 0.2250 | mg/L | 0.00038 | 0.17% |
| Ag 338.289† | -13189.7 | -0.0831 | mg/L | 0.00055 | -0.0831 | mg/L | 0.00055 | 0.66% |
| Na 330.237† | -3430.4 | -2.116 | mg/L | 0.0598 | -2.116 | mg/L | 0.0598 | 2.83% |
| Ca 227.546† | 6589.6 | 20.18 | mg/L | 0.166 | 20.18 | mg/L | 0.166 | 0.82% |
| Al RADIAL† | 256213.2 | 133.2 | mg/L | 2.42 | 133.2 | mg/L | 2.42 | 1.82% |
| Fe RADIAL† | 104808.1 | 284.6 | mg/L | 1.14 | 284.6 | mg/L | 1.14 | 0.40% |
| Ca RADIAL† | 74244.4 | 16.12 | mg/L | 0.033 | 16.12 | mg/L | 0.033 | 0.20% |
| K RADIAL† | 55664.1 | 47.96 | mg/L | 0.394 | 47.96 | mg/L | 0.394 | 0.82% |
| Mg RADIAL† | 17078.9 | 49.90 | mg/L | 0.143 | 49.90 | mg/L | 0.143 | 0.29% |
| Na RADIAL† | 23551.9 | 1.793 | mg/L | 0.0308 | 1.793 | mg/L | 0.0308 | 1.72% |
| Mo 202.031 | -25.4 | -0.001 | mg/L | 0.0003 | -0.001 | mg/L | 0.0003 | 35.66% |

**Sequence No.: 126**
**Sample ID: 16I0251-10**
**Analyst: KV**
**Logged In Analyst (Original) : administrator**
**Initial Sample Wt:**
**Dilution:**

**Autosampler Location: 106**
**Date Collected: 9/13/2016 2:16:24 AM**
**Data Type: Reprocessed on 9/13/2016 7:00:34 AM**

**Initial Sample Vol:**
**Sample Prep Vol:**

**Mean Data: 16I0251-10**

| Analyte | Mean Corrected Intensity | Calib. Conc. | Calib. Units | Std.Dev. | Sample Conc. | Sample Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 16252000.8 | 5.284 | mg/L | 0.0702 | | | | 1.33% |
| Y RADIAL | 263849.5 | 5.747 | mg/L | 0.0314 | | | | 0.55% |
| As 188.979† | 16.0 | 0.0236 | mg/L | 0.00563 | 0.0236 | mg/L | 0.00563 | 23.83% |
| Tl 190.801† | -256.5 | -0.0797 | mg/L | 0.00280 | -0.0797 | mg/L | 0.00280 | 3.51% |
| Se 196.026† | -50.2 | 0.0237 | mg/L | 0.00727 | 0.0237 | mg/L | 0.00727 | 30.62% |
| Zn 206.200† | 19604.6 | 0.4280 | mg/L | 0.00631 | 0.4280 | mg/L | 0.00631 | 1.47% |
| Sb 206.836† | -76.4 | -0.0240 | mg/L | 0.00303 | -0.0240 | mg/L | 0.00303 | 12.65% |
| Pb 220.353† | 1326.8 | 0.1211 | mg/L | 0.00120 | 0.1211 | mg/L | 0.00120 | 0.99% |
| Cd 226.502† | 2266.1 | -0.0031 | mg/L | 0.00028 | -0.0031 | mg/L | 0.00028 | 9.10% |
| Co 228.616† | 2905.8 | 0.0713 | mg/L | 0.00041 | 0.0713 | mg/L | 0.00041 | 0.57% |
| Ni 232.003† | 2247.5 | 0.1047 | mg/L | 0.00286 | 0.1047 | mg/L | 0.00286 | 2.73% |
| Ba 233.527† | 41774.8 | 0.4219 | mg/L | 0.00615 | 0.4219 | mg/L | 0.00615 | 1.46% |

| | | | | | | |
|---|---|---|---|---|---|---|
| Mn 257.610† | 2467195.2 | 2.593 mg/L | 0.0419 | 2.593 mg/L | 0.0419 | 1.62% |
| Cr 267.716† | 19760.4 | 0.1383 mg/L | 0.00225 | 0.1383 mg/L | 0.00225 | 1.63% |
| Fe 273.955† | 4413138.9 | 162.4 mg/L | 2.63 | 162.4 mg/L | 2.63 | 1.62% |
| Mg 279.077† | 620333.1 | 27.95 mg/L | 0.477 | 27.95 mg/L | 0.477 | 1.71% |
| V 292.402† | 68313.9 | 0.2280 mg/L | 0.00430 | 0.2280 mg/L | 0.00430 | 1.89% |
| Al 308.215† | 3636666.8 | 130.2 mg/L | 2.18 | 130.2 mg/L | 2.18 | 1.68% |
| Be 313.107† | -2761.2 | -0.0006 mg/L | 0.00013 | -0.0006 mg/L | 0.00013 | 19.86% |
| Cu 324.752† | 34822.2 | 0.1377 mg/L | 0.00254 | 0.1377 mg/L | 0.00254 | 1.84% |
| Ag 338.289† | -8089.7 | -0.0511 mg/L | 0.00181 | -0.0511 mg/L | 0.00181 | 3.54% |
| Na 330.237† | -2070.9 | -1.290 mg/L | 0.0354 | -1.290 mg/L | 0.0354 | 2.74% |
| Ca 227.546† | 4304.2 | 13.06 mg/L | 0.125 | 13.06 mg/L | 0.125 | 0.96% |
| Al RADIAL† | 238835.6 | 124.2 mg/L | 0.27 | 124.2 mg/L | 0.27 | 0.22% |
| Fe RADIAL† | 62170.3 | 168.8 mg/L | 1.60 | 168.8 mg/L | 1.60 | 0.95% |
| Ca RADIAL† | 51725.8 | 11.23 mg/L | 0.146 | 11.23 mg/L | 0.146 | 1.30% |
| K RADIAL† | 17259.5 | 14.87 mg/L | 0.127 | 14.87 mg/L | 0.127 | 0.85% |
| Mg RADIAL† | 9571.4 | 27.97 mg/L | 0.252 | 27.97 mg/L | 0.252 | 0.90% |
| Na RADIAL† | 13391.3 | 1.020 mg/L | 0.0075 | 1.020 mg/L | 0.0075 | 0.74% |
| Mo 202.031 | -18.8 | -0.001 mg/L | 0.0001 | -0.001 mg/L | 0.0001 | 20.36% |

**Sequence No.: 127**
**Sample ID: 16I0251-11**
**Analyst: KV**
**Logged In Analyst (Original) : administrator**
**Initial Sample Wt:**
**Dilution:**

**Autosampler Location: 107**
**Date Collected: 9/13/2016 2:21:10 AM**
**Data Type: Reprocessed on 9/13/2016 7:00:35 AM**

**Initial Sample Vol:**
**Sample Prep Vol:**

**Mean Data: 16I0251-11**

| Analyte | Mean Corrected Intensity | Calib. Conc. | Units | Std.Dev. | Sample Conc. | Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 15932309.2 | 5.180 | mg/L | 0.0230 | | | | 0.44% |
| Y RADIAL | 254252.2 | 5.538 | mg/L | 0.0605 | | | | 1.09% |
| As 188.979† | 46.9 | 0.0421 | mg/L | 0.00424 | 0.0421 | mg/L | 0.00424 | 10.07% |
| Tl 190.801† | -250.5 | -0.0765 | mg/L | 0.00477 | -0.0765 | mg/L | 0.00477 | 6.23% |
| Se 196.026† | -55.5 | 0.0288 | mg/L | 0.00180 | 0.0288 | mg/L | 0.00180 | 6.23% |
| Zn 206.200† | 20808.6 | 0.4542 | mg/L | 0.00190 | 0.4542 | mg/L | 0.00190 | 0.42% |
| Sb 206.836† | -78.5 | -0.0248 | mg/L | 0.00277 | -0.0248 | mg/L | 0.00277 | 11.18% |
| Pb 220.353† | 1728.0 | 0.1499 | mg/L | 0.00221 | 0.1499 | mg/L | 0.00221 | 1.47% |
| Cd 226.502† | 2638.2 | -0.0031 | mg/L | 0.00020 | -0.0031 | mg/L | 0.00020 | 6.27% |
| Co 228.616† | 2960.1 | 0.0730 | mg/L | 0.00059 | 0.0730 | mg/L | 0.00059 | 0.81% |
| Ni 232.003† | 2639.5 | 0.1225 | mg/L | 0.00244 | 0.1225 | mg/L | 0.00244 | 1.99% |
| Ba 233.527† | 25349.3 | 0.2560 | mg/L | 0.00204 | 0.2560 | mg/L | 0.00204 | 0.80% |
| Mn 257.610† | 1980276.5 | 2.089 | mg/L | 0.0240 | 2.089 | mg/L | 0.0240 | 1.15% |
| Cr 267.716† | 16248.7 | 0.1143 | mg/L | 0.00112 | 0.1143 | mg/L | 0.00112 | 0.98% |
| Fe 273.955† | 4902709.4 | 180.4 | mg/L | 0.20 | 180.4 | mg/L | 0.20 | 0.11% |
| Mg 279.077† | 601471.5 | 27.10 | mg/L | 0.307 | 27.10 | mg/L | 0.307 | 1.13% |
| V 292.402† | 89106.1 | 0.2987 | mg/L | 0.00361 | 0.2987 | mg/L | 0.00361 | 1.21% |
| Al 308.215† | 2395541.8 | 85.77 | mg/L | 1.001 | 85.77 | mg/L | 1.001 | 1.17% |
| Be 313.107† | -17007.9 | -0.0039 | mg/L | 0.00029 | -0.0039 | mg/L | 0.00029 | 7.38% |
| Cu 324.752† | 47301.6 | 0.1856 | mg/L | 0.00126 | 0.1856 | mg/L | 0.00126 | 0.68% |
| Ag 338.289† | -7610.4 | -0.0474 | mg/L | 0.00146 | -0.0474 | mg/L | 0.00146 | 3.09% |
| Na 330.237† | 511.1 | 1.419 | mg/L | 0.0682 | 1.419 | mg/L | 0.0682 | 4.81% |
| Ca 227.546† | 5415.6 | 16.21 | mg/L | 0.051 | 16.21 | mg/L | 0.051 | 0.32% |
| Al RADIAL† | 153995.1 | 80.07 | mg/L | 0.079 | 80.07 | mg/L | 0.079 | 0.10% |
| Fe RADIAL† | 70828.1 | 192.3 | mg/L | 1.53 | 192.3 | mg/L | 1.53 | 0.79% |
| Ca RADIAL† | 65377.1 | 14.19 | mg/L | 0.097 | 14.19 | mg/L | 0.097 | 0.68% |
| K RADIAL† | 16682.9 | 14.37 | mg/L | 0.083 | 14.37 | mg/L | 0.083 | 0.58% |
| Mg RADIAL† | 9241.6 | 27.00 | mg/L | 0.372 | 27.00 | mg/L | 0.372 | 1.38% |
| Na RADIAL† | 54063.3 | 4.116 | mg/L | 0.0330 | 4.116 | mg/L | 0.0330 | 0.80% |
| Mo 202.031 | 39.8 | 0.001 | mg/L | 0.0003 | 0.001 | mg/L | 0.0003 | 17.53% |

**Sequence No.: 128**
**Sample ID: 16I0251-12**
**Analyst: KV**
**Logged In Analyst (Original) : administrator**
**Initial Sample Wt:**
**Dilution:**

**Autosampler Location: 108**
**Date Collected: 9/13/2016 2:25:55 AM**
**Data Type: Reprocessed on 9/13/2016 7:00:35 AM**

**Initial Sample Vol:**
**Sample Prep Vol:**

**Mean Data: 16I0251-12**

| Analyte | Mean Corrected Intensity | Calib. Conc. | Units | Std.Dev. | Sample Conc. | Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 15408478.5 | 5.010 | mg/L | 0.0207 | | | | 0.41% |
| Y RADIAL | 238622.1 | 5.198 | mg/L | 0.0809 | | | | 1.56% |
| As 188.979† | 6.7 | 0.0141 | mg/L | 0.00376 | 0.0141 | mg/L | 0.00376 | 26.57% |
| Tl 190.801† | -147.8 | -0.0449 | mg/L | 0.00491 | -0.0449 | mg/L | 0.00491 | 10.94% |
| Se 196.026† | -39.7 | 0.0119 | mg/L | 0.00955 | 0.0119 | mg/L | 0.00955 | 80.28% |
| Zn 206.200† | 20414.2 | 0.4463 | mg/L | 0.00471 | 0.4463 | mg/L | 0.00471 | 1.06% |
| Sb 206.836† | -44.5 | -0.0142 | mg/L | 0.00203 | -0.0142 | mg/L | 0.00203 | 14.34% |
| Pb 220.353† | 1415.4 | 0.1265 | mg/L | 0.00136 | 0.1265 | mg/L | 0.00136 | 1.08% |
| Cd 226.502† | 1678.3 | -0.0015 | mg/L | 0.00012 | -0.0015 | mg/L | 0.00012 | 8.04% |
| Co 228.616† | 2460.5 | 0.0598 | mg/L | 0.00093 | 0.0598 | mg/L | 0.00093 | 1.56% |
| Ni 232.003† | 3077.5 | 0.1354 | mg/L | 0.00365 | 0.1354 | mg/L | 0.00365 | 2.70% |
| Ba 233.527† | 25254.9 | 0.2550 | mg/L | 0.00244 | 0.2550 | mg/L | 0.00244 | 0.96% |
| Mn 257.610† | 766946.4 | 0.8146 | mg/L | 0.00983 | 0.8146 | mg/L | 0.00983 | 1.21% |
| Cr 267.716† | 17459.6 | 0.1219 | mg/L | 0.00142 | 0.1219 | mg/L | 0.00142 | 1.16% |
| Fe 273.955† | 3030231.3 | 111.5 | mg/L | 1.37 | 111.5 | mg/L | 1.37 | 1.23% |
| Mg 279.077† | 649725.6 | 29.29 | mg/L | 0.383 | 29.29 | mg/L | 0.383 | 1.31% |
| V 292.402† | 56176.7 | 0.1885 | mg/L | 0.00167 | 0.1885 | mg/L | 0.00167 | 0.89% |
| Al 308.215† | 1863565.9 | 66.72 | mg/L | 0.779 | 66.72 | mg/L | 0.779 | 1.17% |
| Be 313.107† | -1.4 | 0.0000 | mg/L | 0.00028 | 0.0000 | mg/L | 0.00028 | >999.9% |
| Cu 324.752† | 37153.2 | 0.1445 | mg/L | 0.00163 | 0.1445 | mg/L | 0.00163 | 1.13% |
| Ag 338.289† | -4671.9 | -0.0291 | mg/L | 0.00041 | -0.0291 | mg/L | 0.00041 | 1.40% |
| Na 330.237† | -629.4 | -0.0787 | mg/L | 0.10812 | -0.0787 | mg/L | 0.10812 | 137.46% |
| Ca 227.546† | 2960.2 | 8.985 | mg/L | 0.1181 | 8.985 | mg/L | 0.1181 | 1.31% |
| Al RADIAL† | 123726.7 | 64.33 | mg/L | 0.262 | 64.33 | mg/L | 0.262 | 0.41% |
| Fe RADIAL† | 43489.4 | 118.1 | mg/L | 0.68 | 118.1 | mg/L | 0.68 | 0.58% |
| Ca RADIAL† | 35138.7 | 7.628 | mg/L | 0.0237 | 7.628 | mg/L | 0.0237 | 0.31% |
| K RADIAL† | 22538.1 | 19.42 | mg/L | 0.217 | 19.42 | mg/L | 0.217 | 1.12% |
| Mg RADIAL† | 10292.1 | 30.08 | mg/L | 0.217 | 30.08 | mg/L | 0.217 | 0.72% |
| Na RADIAL† | 11958.0 | 0.9104 | mg/L | 0.03535 | 0.9104 | mg/L | 0.03535 | 3.88% |
| Mo 202.031 | -32.9 | -0.001 | mg/L | 0.0003 | -0.001 | mg/L | 0.0003 | 27.16% |

**Sequence No.: 129**
**Sample ID: SEQ-CCVB**
**Analyst: KV**
**Logged In Analyst (Original) : administrator**
**Initial Sample Wt:**
**Dilution:**

**Autosampler Location: 8**
**Date Collected: 9/13/2016 2:30:40 AM**
**Data Type: Reprocessed on 9/13/2016 7:00:36 AM**

**Initial Sample Vol:**
**Sample Prep Vol:**

**Mean Data: SEQ-CCVB**

| Analyte | Mean Corrected Intensity | Calib. Conc. | Units | Std.Dev. | Sample Conc. | Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 14899185.5 | 4.844 | mg/L | 0.0127 | | | | 0.26% |
| Y RADIAL | 233286.8 | 5.082 | mg/L | 0.0514 | | | | 1.01% |
| As 188.979† | 472.2 | 0.2500 | mg/L | 0.00283 | 0.2500 | mg/L | 0.00283 | 1.13% |
| Tl 190.801† | 740.7 | 0.2548 | mg/L | 0.00351 | 0.2548 | mg/L | 0.00351 | 1.38% |
| Se 196.026† | 248.2 | 0.2603 | mg/L | 0.01024 | 0.2603 | mg/L | 0.01024 | 3.93% |
| Zn 206.200† | 117731.1 | 2.581 | mg/L | 0.0242 | 2.581 | mg/L | 0.0242 | 0.94% |
| Sb 206.836† | 858.4 | 0.2498 | mg/L | 0.00189 | 0.2498 | mg/L | 0.00189 | 0.76% |
| Pb 220.353† | 2824.0 | 0.2602 | mg/L | 0.00101 | 0.2602 | mg/L | 0.00101 | 0.39% |
| Cd 226.502† | 18793.6 | 0.1278 | mg/L | 0.00159 | 0.1278 | mg/L | 0.00159 | 1.24% |
| Co 228.616† | 111892.7 | 2.609 | mg/L | 0.0307 | 2.609 | mg/L | 0.0307 | 1.18% |
| Ni 232.003† | 61961.0 | 2.561 | mg/L | 0.0272 | 2.561 | mg/L | 0.0272 | 1.06% |
| Ba 233.527† | 1048376.6 | 10.59 | mg/L | 0.204 | 10.59 | mg/L | 0.204 | 1.93% |
| Mn 257.610† | 2528836.7 | 2.636 | mg/L | 0.0502 | 2.636 | mg/L | 0.0502 | 1.90% |
| Cr 267.716† | 152464.5 | 1.054 | mg/L | 0.0100 | 1.054 | mg/L | 0.0100 | 0.95% |
| Fe 273.955† | 142824.7 | 5.256 | mg/L | 0.0527 | 5.256 | mg/L | 0.0527 | 1.00% |
| Mg 279.077† | 582981.6 | 26.29 | mg/L | 0.510 | 26.29 | mg/L | 0.510 | 1.94% |
| V 292.402† | 749702.4 | 2.594 | mg/L | 0.0512 | 2.594 | mg/L | 0.0512 | 1.98% |
| Al 308.215† | 284977.2 | 10.20 | mg/L | 0.118 | 10.20 | mg/L | 0.118 | 1.15% |
| Be 313.107† | 1136430.4 | 0.2606 | mg/L | 0.00527 | 0.2606 | mg/L | 0.00527 | 2.02% |
| Cu 324.752† | 347142.9 | 1.306 | mg/L | 0.0127 | 1.306 | mg/L | 0.0127 | 0.97% |
| Ag 338.289† | 195787.1 | 1.315 | mg/L | 0.0129 | 1.315 | mg/L | 0.0129 | 0.98% |
| Na 330.237† | 23920.5 | 24.11 | mg/L | 0.223 | 24.11 | mg/L | 0.223 | 0.92% |
| Ca 227.546† | 9644.7 | 25.86 | mg/L | 0.128 | 25.86 | mg/L | 0.128 | 0.49% |
| Al RADIAL† | 18366.7 | 9.547 | mg/L | 0.0695 | 9.547 | mg/L | 0.0695 | 0.73% |
| Fe RADIAL† | 1972.0 | 5.354 | mg/L | 0.0330 | 5.354 | mg/L | 0.0330 | 0.62% |
| Ca RADIAL† | 118043.2 | 25.62 | mg/L | 0.009 | 25.62 | mg/L | 0.009 | 0.04% |
| K RADIAL† | 5913.2 | 5.094 | mg/L | 0.0746 | 5.094 | mg/L | 0.0746 | 1.46% |

| | | | | | | |
|---|---|---|---|---|---|---|
| Mg RADIAL† | 9182.5 | 26.85 mg/L | 0.174 | 26.85 mg/L | 0.174 | 0.65% |
| Na RADIAL† | 352250.0 | 26.82 mg/L | 0.174 | 26.82 mg/L | 0.174 | 0.65% |
| Mo 202.031 | 29226.7 | 1.070 mg/L | 0.0044 | 1.070 mg/L | 0.0044 | 0.42% |

**Sequence No.: 130**
**Sample ID: SEQ-CCBB**
**Analyst: KV**
**Logged In Analyst (Original) : administrator**
**Initial Sample Wt:**
**Dilution:**

**Autosampler Location: 1**
**Date Collected: 9/13/2016 2:38:47 AM**
**Data Type: Reprocessed on 9/13/2016 7:00:37 AM**

**Initial Sample Vol:**
**Sample Prep Vol:**

**Mean Data: SEQ-CCBB**

| Analyte | Mean Corrected Intensity | Calib. Conc. | Calib. Units | Std.Dev. | Sample Conc. | Sample Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 15266419.7 | 4.964 | mg/L | 0.0223 | | | | 0.45% |
| Y RADIAL | 237066.0 | 5.164 | mg/L | 0.0190 | | | | 0.37% |
| As 188.979† | -11.4 | -0.0060 | mg/L | 0.00174 | -0.0060 | mg/L | 0.00174 | 28.74% |
| Tl 190.801† | 9.1 | 0.0031 | mg/L | 0.00261 | 0.0031 | mg/L | 0.00261 | 83.50% |
| Se 196.026† | 1.5 | 0.0016 | mg/L | 0.00673 | 0.0016 | mg/L | 0.00673 | 430.03% |
| Zn 206.200† | -99.8 | -0.0022 | mg/L | 0.00017 | -0.0022 | mg/L | 0.00017 | 7.88% |
| Sb 206.836† | 0.3 | 0.0001 | mg/L | 0.00155 | 0.0001 | mg/L | 0.00155 | >999.9% |
| Pb 220.353† | 8.2 | 0.0007 | mg/L | 0.00045 | 0.0007 | mg/L | 0.00045 | 60.85% |
| Cd 226.502† | -18.9 | -0.0001 | mg/L | 0.00018 | -0.0001 | mg/L | 0.00018 | 140.73% |
| Co 228.616† | 1.2 | 0.0000 | mg/L | 0.00009 | 0.0000 | mg/L | 0.00009 | 334.85% |
| Ni 232.003† | -31.3 | -0.0013 | mg/L | 0.00051 | -0.0013 | mg/L | 0.00051 | 39.69% |
| Ba 233.527† | 8.1 | 0.0001 | mg/L | 0.00001 | 0.0001 | mg/L | 0.00001 | 7.97% |
| Mn 257.610† | -80.7 | -0.0001 | mg/L | 0.00001 | -0.0001 | mg/L | 0.00001 | 15.48% |
| Cr 267.716† | 56.7 | 0.0004 | mg/L | 0.00025 | 0.0004 | mg/L | 0.00025 | 63.79% |
| Fe 273.955† | 27.5 | 0.0010 | mg/L | 0.00026 | 0.0010 | mg/L | 0.00026 | 25.27% |
| Mg 279.077† | 5.2 | 0.0002 | mg/L | 0.00421 | 0.0002 | mg/L | 0.00421 | >999.9% |
| V 292.402† | 0.9 | 0.0000 | mg/L | 0.00008 | 0.0000 | mg/L | 0.00008 | >999.9% |
| Al 308.215† | -1341.7 | -0.0480 | mg/L | 0.00292 | -0.0480 | mg/L | 0.00292 | 6.09% |
| Be 313.107† | -202.8 | 0.0000 | mg/L | 0.00005 | 0.0000 | mg/L | 0.00005 | 106.58% |
| Cu 324.752† | -90.2 | -0.0003 | mg/L | 0.00009 | -0.0003 | mg/L | 0.00009 | 26.73% |
| Ag 338.289† | -23.3 | -0.0002 | mg/L | 0.00007 | -0.0002 | mg/L | 0.00007 | 44.87% |
| Na 330.237† | -9.6 | -0.0096 | mg/L | 0.03050 | -0.0096 | mg/L | 0.03050 | 318.85% |
| Ca 227.546† | 21.1 | 0.0565 | mg/L | 0.03231 | 0.0565 | mg/L | 0.03231 | 57.14% |
| Al RADIAL† | -84.3 | -0.0438 | mg/L | 0.00118 | -0.0438 | mg/L | 0.00118 | 2.69% |
| Fe RADIAL† | 3.1 | 0.0083 | mg/L | 0.01746 | 0.0083 | mg/L | 0.01746 | 209.73% |
| Ca RADIAL† | 57.5 | 0.0125 | mg/L | 0.00242 | 0.0125 | mg/L | 0.00242 | 19.42% |
| K RADIAL† | -28.6 | -0.0246 | mg/L | 0.03337 | -0.0246 | mg/L | 0.03337 | 135.46% |
| Mg RADIAL† | -5.9 | -0.0173 | mg/L | 0.02067 | -0.0173 | mg/L | 0.02067 | 119.22% |
| Na RADIAL† | -2420.6 | -0.1843 | mg/L | 0.00708 | -0.1843 | mg/L | 0.00708 | 3.84% |
| Mo 202.031 | 4.3 | 0.000 | mg/L | 0.0002 | 0.000 | mg/L | 0.0002 | 97.97% |

**Sequence No.: 131**
**Sample ID: 16I0251-13**
**Analyst: KV**
**Logged In Analyst (Original) : administrator**
**Initial Sample Wt:**
**Dilution:**

**Autosampler Location: 109**
**Date Collected: 9/13/2016 2:43:50 AM**
**Data Type: Reprocessed on 9/13/2016 7:00:37 AM**

**Initial Sample Vol:**
**Sample Prep Vol:**

**Mean Data: 16I0251-13**

| Analyte | Mean Corrected Intensity | Calib. Conc. | Calib. Units | Std.Dev. | Sample Conc. | Sample Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 16795881.6 | 5.461 | mg/L | 0.0745 | | | | 1.36% |
| Y RADIAL | 269166.1 | 5.863 | mg/L | 0.0947 | | | | 1.62% |
| As 188.979† | 6.7 | 0.0135 | mg/L | 0.00610 | 0.0135 | mg/L | 0.00610 | 45.05% |
| Tl 190.801† | -160.6 | -0.0496 | mg/L | 0.00303 | -0.0496 | mg/L | 0.00303 | 6.10% |
| Se 196.026† | -32.2 | 0.0166 | mg/L | 0.00730 | 0.0166 | mg/L | 0.00730 | 43.88% |
| Zn 206.200† | 25330.5 | 0.5541 | mg/L | 0.01031 | 0.5541 | mg/L | 0.01031 | 1.86% |
| Sb 206.836† | -38.9 | -0.0125 | mg/L | 0.00252 | -0.0125 | mg/L | 0.00252 | 20.21% |
| Pb 220.353† | 1340.1 | 0.1197 | mg/L | 0.00176 | 0.1197 | mg/L | 0.00176 | 1.47% |
| Cd 226.502† | 1594.2 | -0.0014 | mg/L | 0.00048 | -0.0014 | mg/L | 0.00048 | 35.57% |
| Co 228.616† | 2530.5 | 0.0613 | mg/L | 0.00063 | 0.0613 | mg/L | 0.00063 | 1.02% |
| Ni 232.003† | 2747.3 | 0.1213 | mg/L | 0.00338 | 0.1213 | mg/L | 0.00338 | 2.78% |
| Ba 233.527† | 27521.4 | 0.2779 | mg/L | 0.00520 | 0.2779 | mg/L | 0.00520 | 1.87% |
| Mn 257.610† | 753885.8 | 0.8001 | mg/L | 0.01396 | 0.8001 | mg/L | 0.01396 | 1.75% |

| | | | | | | |
|---|---|---|---|---|---|---|
| Cr 267.716† | 12664.9 | 0.0887 mg/L | 0.00142 | 0.0887 mg/L | 0.00142 | 1.60% |
| Fe 273.955† | 2969743.8 | 109.3 mg/L | 2.00 | 109.3 mg/L | 2.00 | 1.83% |
| Mg 279.077† | 551558.1 | 24.86 mg/L | 0.508 | 24.86 mg/L | 0.508 | 2.04% |
| V 292.402† | 41780.7 | 0.1390 mg/L | 0.00303 | 0.1390 mg/L | 0.00303 | 2.18% |
| Al 308.215† | 1738780.3 | 62.25 mg/L | 1.221 | 62.25 mg/L | 1.221 | 1.96% |
| Be 313.107† | 5200.7 | 0.0012 mg/L | 0.00022 | 0.0012 mg/L | 0.00022 | 18.29% |
| Cu 324.752† | 45522.0 | 0.1757 mg/L | 0.00387 | 0.1757 mg/L | 0.00387 | 2.20% |
| Ag 338.289† | -5133.9 | -0.0324 mg/L | 0.00182 | -0.0324 mg/L | 0.00182 | 5.61% |
| Na 330.237† | -445.9 | 0.0782 mg/L | 0.14768 | 0.0782 mg/L | 0.14768 | 188.93% |
| Ca 227.546† | 4389.5 | 12.75 mg/L | 0.068 | 12.75 mg/L | 0.068 | 0.53% |
| Al RADIAL† | 113842.8 | 59.19 mg/L | 0.057 | 59.19 mg/L | 0.057 | 0.10% |
| Fe RADIAL† | 40994.9 | 111.3 mg/L | 1.69 | 111.3 mg/L | 1.69 | 1.51% |
| Ca RADIAL† | 52062.5 | 11.30 mg/L | 0.225 | 11.30 mg/L | 0.225 | 1.99% |
| K RADIAL† | 22118.2 | 19.06 mg/L | 0.303 | 19.06 mg/L | 0.303 | 1.59% |
| Mg RADIAL† | 8392.9 | 24.53 mg/L | 0.443 | 24.53 mg/L | 0.443 | 1.81% |
| Na RADIAL† | 17918.8 | 1.364 mg/L | 0.0256 | 1.364 mg/L | 0.0256 | 1.88% |
| Mo 202.031 | -24.3 | -0.001 mg/L | 0.0005 | -0.001 mg/L | 0.0005 | 55.48% |

**Sequence No.: 132**
**Sample ID: 16I0314-01**
**Analyst: KV**
**Logged In Analyst (Original) : administrator**
**Initial Sample Wt:**
**Dilution:**

**Autosampler Location: 110**
**Date Collected: 9/13/2016 2:48:34 AM**
**Data Type: Reprocessed on 9/13/2016 7:00:38 AM**

**Initial Sample Vol:**
**Sample Prep Vol:**

**Mean Data: 16I0314-01**

| Analyte | Mean Corrected Intensity | Calib. Conc. | Units | Std.Dev. | Sample Conc. | Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 13171139.6 | 4.283 | mg/L | 0.0589 | | | | 1.38% |
| Y RADIAL | 216827.0 | 4.723 | mg/L | 0.0477 | | | | 1.01% |
| As 188.979† | 172.9 | 0.1338 | mg/L | 0.00231 | 0.1338 | mg/L | 0.00231 | 1.73% |
| Tl 190.801† | -181.2 | -0.0387 | mg/L | 0.00284 | -0.0387 | mg/L | 0.00284 | 7.33% |
| Se 196.026† | -112.2 | 0.0954 | mg/L | 0.00246 | 0.0954 | mg/L | 0.00246 | 2.58% |
| Zn 206.200† | 183023.0 | 4.007 | mg/L | 0.0525 | 4.007 | mg/L | 0.0525 | 1.31% |
| Sb 206.836† | -32.1 | -0.0141 | mg/L | 0.00268 | -0.0141 | mg/L | 0.00268 | 18.98% |
| Pb 220.353† | 47592.5 | 4.338 | mg/L | 0.0621 | 4.338 | mg/L | 0.0621 | 1.43% |
| Cd 226.502† | 20471.2 | 0.0880 | mg/L | 0.00186 | 0.0880 | mg/L | 0.00186 | 2.12% |
| Co 228.616† | 3024.6 | 0.0804 | mg/L | 0.00129 | 0.0804 | mg/L | 0.00129 | 1.61% |
| Ni 232.003† | 7858.5 | 0.3577 | mg/L | 0.00351 | 0.3577 | mg/L | 0.00351 | 0.98% |
| Ba 233.527† | 126450.9 | 1.277 | mg/L | 0.0143 | 1.277 | mg/L | 0.0143 | 1.12% |
| Mn 257.610† | 4367548.5 | 4.613 | mg/L | 0.0487 | 4.613 | mg/L | 0.0487 | 1.06% |
| Cr 267.716† | 26794.0 | 0.1900 | mg/L | 0.00239 | 0.1900 | mg/L | 0.00239 | 1.26% |
| Fe 273.955† | 11623128.1 | 427.8 | mg/L | 0.84 | 427.8 | mg/L | 0.84 | 0.20% |
| Mg 279.077† | 2649779.4 | 119.4 | mg/L | 1.44 | 119.4 | mg/L | 1.44 | 1.21% |
| V 292.402† | 301835.2 | 1.021 | mg/L | 0.0116 | 1.021 | mg/L | 0.0116 | 1.14% |
| Al 308.215† | 2530163.2 | 90.60 | mg/L | 0.939 | 90.60 | mg/L | 0.939 | 1.04% |
| Be 313.107† | -7345.1 | -0.0017 | mg/L | 0.00007 | -0.0017 | mg/L | 0.00007 | 4.03% |
| Cu 324.752† | 240745.7 | 0.9244 | mg/L | 0.01017 | 0.9244 | mg/L | 0.01017 | 1.10% |
| Ag 338.289† | -5184.4 | -0.0318 | mg/L | 0.00107 | -0.0318 | mg/L | 0.00107 | 3.37% |
| Na 330.237† | 10135.2 | 12.94 | mg/L | 0.147 | 12.94 | mg/L | 0.147 | 1.14% |
| Ca 227.546† | 227967.0 | 614.2 | mg/L | 7.32 | 614.2 | mg/L | 7.32 | 1.19% |
| Al RADIAL† | 159578.7 | 82.98 | mg/L | 0.271 | 82.98 | mg/L | 0.271 | 0.33% |
| Fe RADIAL† | 173562.0 | 471.2 | mg/L | 1.55 | 471.2 | mg/L | 1.55 | 0.33% |
| Ca RADIAL† | 2622490.5 | 569.3 | mg/L | 7.16 | 569.3 | mg/L | 7.16 | 1.26% |
| K RADIAL† | 13286.7 | 11.45 | mg/L | 0.015 | 11.45 | mg/L | 0.015 | 0.13% |
| Mg RADIAL† | 39966.8 | 116.8 | mg/L | 0.28 | 116.8 | mg/L | 0.28 | 0.24% |
| Na RADIAL† | 97219.5 | 7.402 | mg/L | 0.0910 | 7.402 | mg/L | 0.0910 | 1.23% |
| Mo 202.031 | -53.0 | -0.002 | mg/L | 0.0007 | -0.002 | mg/L | 0.0007 | 34.66% |

**Sequence No.: 133**
**Sample ID: 16I0314-02**
**Analyst: KV**
**Logged In Analyst (Original) : administrator**
**Initial Sample Wt:**
**Dilution:**

**Autosampler Location: 111**
**Date Collected: 9/13/2016 2:53:15 AM**
**Data Type: Reprocessed on 9/13/2016 7:00:39 AM**

**Initial Sample Vol:**
**Sample Prep Vol:**

**Mean Data: 16I0314-02**

Mean Corrected Calib. Sample

| Analyte | Intensity | Conc. | Units | Std.Dev. | Conc. | Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 15022622.1 | 4.885 | mg/L | 0.0541 | | | | 1.11% |
| Y RADIAL | 225887.4 | 4.921 | mg/L | 0.0742 | | | | 1.51% |
| As 188.979† | 61.2 | 0.0437 | mg/L | 0.00263 | 0.0437 | mg/L | 0.00263 | 6.03% |
| Tl 190.801† | -89.7 | -0.0245 | mg/L | 0.00234 | -0.0245 | mg/L | 0.00234 | 9.54% |
| Se 196.026† | -25.0 | 0.0309 | mg/L | 0.00600 | 0.0309 | mg/L | 0.00600 | 19.42% |
| Zn 206.200† | 63515.0 | 1.391 | mg/L | 0.0274 | 1.391 | mg/L | 0.0274 | 1.97% |
| Sb 206.836† | -6.9 | -0.0033 | mg/L | 0.00391 | -0.0033 | mg/L | 0.00391 | 118.34% |
| Pb 220.353† | 7995.0 | 0.7275 | mg/L | 0.01035 | 0.7275 | mg/L | 0.01035 | 1.42% |
| Cd 226.502† | 2021.6 | -0.0001 | mg/L | 0.00023 | -0.0001 | mg/L | 0.00023 | 257.04% |
| Co 228.616† | 2240.1 | 0.0549 | mg/L | 0.00042 | 0.0549 | mg/L | 0.00042 | 0.77% |
| Ni 232.003† | 2568.9 | 0.1150 | mg/L | 0.00486 | 0.1150 | mg/L | 0.00486 | 4.23% |
| Ba 233.527† | 21255.6 | 0.2146 | mg/L | 0.00335 | 0.2146 | mg/L | 0.00335 | 1.56% |
| Mn 257.610† | 1024300.1 | 1.084 | mg/L | 0.0297 | 1.084 | mg/L | 0.0297 | 2.74% |
| Cr 267.716† | 13777.2 | 0.0965 | mg/L | 0.00232 | 0.0965 | mg/L | 0.00232 | 2.40% |
| Fe 273.955† | 3105083.0 | 114.3 | mg/L | 3.17 | 114.3 | mg/L | 3.17 | 2.77% |
| Mg 279.077† | 464707.8 | 20.94 | mg/L | 0.645 | 20.94 | mg/L | 0.645 | 3.08% |
| V 292.402† | 44062.7 | 0.1462 | mg/L | 0.00334 | 0.1462 | mg/L | 0.00334 | 2.29% |
| Al 308.215† | 1386266.2 | 49.64 | mg/L | 1.376 | 49.64 | mg/L | 1.376 | 2.77% |
| Be 313.107† | -266.4 | -0.0001 | mg/L | 0.00008 | -0.0001 | mg/L | 0.00008 | 123.05% |
| Cu 324.752† | 39804.4 | 0.1548 | mg/L | 0.00359 | 0.1548 | mg/L | 0.00359 | 2.32% |
| Ag 338.289† | -3015.5 | -0.0178 | mg/L | 0.00122 | -0.0178 | mg/L | 0.00122 | 6.83% |
| Na 330.237† | 1450.4 | 2.053 | mg/L | 0.0845 | 2.053 | mg/L | 0.0845 | 4.11% |
| Ca 227.546† | 3649.1 | 10.89 | mg/L | 0.166 | 10.89 | mg/L | 0.166 | 1.52% |
| Al RADIAL† | 95192.8 | 49.50 | mg/L | 0.275 | 49.50 | mg/L | 0.275 | 0.56% |
| Fe RADIAL† | 46531.6 | 126.3 | mg/L | 2.00 | 126.3 | mg/L | 2.00 | 1.58% |
| Ca RADIAL† | 45004.8 | 9.769 | mg/L | 0.1839 | 9.769 | mg/L | 0.1839 | 1.88% |
| K RADIAL† | 12262.9 | 10.56 | mg/L | 0.157 | 10.56 | mg/L | 0.157 | 1.49% |
| Mg RADIAL† | 7727.8 | 22.58 | mg/L | 0.382 | 22.58 | mg/L | 0.382 | 1.69% |
| Na RADIAL† | 8937.1 | 0.6804 | mg/L | 0.02673 | 0.6804 | mg/L | 0.02673 | 3.93% |
| Mo 202.031 | -59.0 | -0.002 | mg/L | 0.0008 | -0.002 | mg/L | 0.0008 | 38.54% |

**Sequence No.: 134**
**Sample ID: 16I0314-03**
**Analyst: KV**
**Logged In Analyst (Original) : administrator**
**Initial Sample Wt:**
**Dilution:**

**Autosampler Location: 112**
**Date Collected: 9/13/2016 2:57:59 AM**
**Data Type: Reprocessed on 9/13/2016 7:00:40 AM**

**Initial Sample Vol:**
**Sample Prep Vol:**

**Mean Data: 16I0314-03**

| Analyte | Mean Corrected Intensity | Conc. | Calib. Units | Std.Dev. | Sample Conc. | Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 16738549.2 | 5.443 | mg/L | 0.0143 | | | | 0.26% |
| Y RADIAL | 267657.8 | 5.830 | mg/L | 0.0934 | | | | 1.60% |
| As 188.979† | 171.2 | 0.1052 | mg/L | 0.00099 | 0.1052 | mg/L | 0.00099 | 0.94% |
| Tl 190.801† | -85.9 | -0.0213 | mg/L | 0.00127 | -0.0213 | mg/L | 0.00127 | 5.94% |
| Se 196.026† | -44.0 | 0.0281 | mg/L | 0.00291 | 0.0281 | mg/L | 0.00291 | 10.37% |
| Zn 206.200† | 177434.1 | 3.888 | mg/L | 0.1174 | 3.888 | mg/L | 0.1174 | 3.02% |
| Sb 206.836† | -22.2 | -0.0081 | mg/L | 0.00214 | -0.0081 | mg/L | 0.00214 | 26.34% |
| Pb 220.353† | 16266.8 | 1.483 | mg/L | 0.0488 | 1.483 | mg/L | 0.0488 | 3.29% |
| Cd 226.502† | 3024.3 | 0.0026 | mg/L | 0.00063 | 0.0026 | mg/L | 0.00063 | 23.99% |
| Co 228.616† | 4409.9 | 0.1062 | mg/L | 0.00081 | 0.1062 | mg/L | 0.00081 | 0.76% |
| Ni 232.003† | 3725.2 | 0.1654 | mg/L | 0.00622 | 0.1654 | mg/L | 0.00622 | 3.76% |
| Ba 233.527† | 53846.8 | 0.5438 | mg/L | 0.01607 | 0.5438 | mg/L | 0.01607 | 2.96% |
| Mn 257.610† | 1799117.3 | 1.896 | mg/L | 0.0145 | 1.896 | mg/L | 0.0145 | 0.76% |
| Cr 267.716† | 14394.7 | 0.1012 | mg/L | 0.00333 | 0.1012 | mg/L | 0.00333 | 3.29% |
| Fe 273.955† | 4326143.7 | 159.2 | mg/L | 0.11 | 159.2 | mg/L | 0.11 | 0.07% |
| Mg 279.077† | 570054.7 | 25.68 | mg/L | 0.217 | 25.68 | mg/L | 0.217 | 0.84% |
| V 292.402† | 86749.4 | 0.2920 | mg/L | 0.00890 | 0.2920 | mg/L | 0.00890 | 3.05% |
| Al 308.215† | 1443318.1 | 51.68 | mg/L | 0.395 | 51.68 | mg/L | 0.395 | 0.76% |
| Be 313.107† | 577.1 | 0.0001 | mg/L | 0.00013 | 0.0001 | mg/L | 0.00013 | 100.57% |
| Cu 324.752† | 134872.1 | 0.5139 | mg/L | 0.01492 | 0.5139 | mg/L | 0.01492 | 2.90% |
| Ag 338.289† | -2811.6 | -0.0160 | mg/L | 0.00147 | -0.0160 | mg/L | 0.00147 | 9.19% |
| Na 330.237† | 5961.0 | 6.787 | mg/L | 0.1673 | 6.787 | mg/L | 0.1673 | 2.46% |
| Ca 227.546† | 12231.7 | 34.18 | mg/L | 1.036 | 34.18 | mg/L | 1.036 | 3.03% |
| Al RADIAL† | 95442.8 | 49.63 | mg/L | 0.084 | 49.63 | mg/L | 0.084 | 0.17% |
| Fe RADIAL† | 60373.9 | 163.9 | mg/L | 1.23 | 163.9 | mg/L | 1.23 | 0.75% |
| Ca RADIAL† | 152025.4 | 33.00 | mg/L | 0.051 | 33.00 | mg/L | 0.051 | 0.15% |
| K RADIAL† | 11260.2 | 9.701 | mg/L | 0.1204 | 9.701 | mg/L | 0.1204 | 1.24% |
| Mg RADIAL† | 8649.3 | 25.27 | mg/L | 0.254 | 25.27 | mg/L | 0.254 | 1.00% |

| | | | | | | |
|---|---|---|---|---|---|---|
| Na RADIAL† | 24968.9 | 1.901 mg/L | 0.0211 | 1.901 mg/L | 0.0211 | 1.11% |
| Mo 202.031 | 84.1 | 0.003 mg/L | 0.0002 | 0.003 mg/L | 0.0002 | 7.95% |

**Sequence No.: 135**
**Sample ID: 16I0314-04**
**Analyst: KV**
**Logged In Analyst (Original) : administrator**
**Initial Sample Wt:**
**Dilution:**

**Autosampler Location: 113**
**Date Collected: 9/13/2016 3:02:44 AM**
**Data Type: Reprocessed on 9/13/2016 7:00:40 AM**

**Initial Sample Vol:**
**Sample Prep Vol:**

**Mean Data: 16I0314-04**

| Analyte | Mean Corrected Intensity | Calib. Conc. | Units | Std.Dev. | Sample Conc. | Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 15456170.9 | 5.026 | mg/L | 0.1028 | | | | 2.04% |
| Y RADIAL | 243822.0 | 5.311 | mg/L | 0.1018 | | | | 1.92% |
| As 188.979† | 3.4 | 0.0137 | mg/L | 0.00327 | 0.0137 | mg/L | 0.00327 | 23.87% |
| Tl 190.801† | -82.8 | -0.0218 | mg/L | 0.00426 | -0.0218 | mg/L | 0.00426 | 19.48% |
| Se 196.026† | -34.9 | 0.0232 | mg/L | 0.00195 | 0.0232 | mg/L | 0.00195 | 8.39% |
| Zn 206.200† | 44792.5 | 0.9805 | mg/L | 0.01446 | 0.9805 | mg/L | 0.01446 | 1.48% |
| Sb 206.836† | -23.2 | -0.0081 | mg/L | 0.00212 | -0.0081 | mg/L | 0.00212 | 26.20% |
| Pb 220.353† | 4544.5 | 0.4115 | mg/L | 0.01281 | 0.4115 | mg/L | 0.01281 | 3.11% |
| Cd 226.502† | 1916.3 | -0.0015 | mg/L | 0.00014 | -0.0015 | mg/L | 0.00014 | 9.37% |
| Co 228.616† | 2852.0 | 0.0693 | mg/L | 0.00217 | 0.0693 | mg/L | 0.00217 | 3.13% |
| Ni 232.003† | 3101.3 | 0.1374 | mg/L | 0.00249 | 0.1374 | mg/L | 0.00249 | 1.81% |
| Ba 233.527† | 34733.5 | 0.3507 | mg/L | 0.00566 | 0.3507 | mg/L | 0.00566 | 1.61% |
| Mn 257.610† | 2685763.7 | 2.816 | mg/L | 0.0259 | 2.816 | mg/L | 0.0259 | 0.92% |
| Cr 267.716† | 13927.3 | 0.0976 | mg/L | 0.00125 | 0.0976 | mg/L | 0.00125 | 1.28% |
| Fe 273.955† | 3491912.2 | 128.5 | mg/L | 1.19 | 128.5 | mg/L | 1.19 | 0.92% |
| Mg 279.077† | 555033.6 | 25.01 | mg/L | 0.193 | 25.01 | mg/L | 0.193 | 0.77% |
| V 292.402† | 38717.2 | 0.1274 | mg/L | 0.00202 | 0.1274 | mg/L | 0.00202 | 1.58% |
| Al 308.215† | 1700468.1 | 60.88 | mg/L | 0.624 | 60.88 | mg/L | 0.624 | 1.03% |
| Be 313.107† | 5928.8 | 0.0014 | mg/L | 0.00009 | 0.0014 | mg/L | 0.00009 | 6.81% |
| Cu 324.752† | 168678.0 | 0.6398 | mg/L | 0.01053 | 0.6398 | mg/L | 0.01053 | 1.65% |
| Ag 338.289† | -2504.5 | -0.0143 | mg/L | 0.00145 | -0.0143 | mg/L | 0.00145 | 10.18% |
| Na 330.237† | 1621.5 | 2.251 | mg/L | 0.1935 | 2.251 | mg/L | 0.1935 | 8.59% |
| Ca 227.546† | 3014.5 | 9.250 | mg/L | 0.2784 | 9.250 | mg/L | 0.2784 | 3.01% |
| Al RADIAL† | 113591.7 | 59.06 | mg/L | 0.188 | 59.06 | mg/L | 0.188 | 0.32% |
| Fe RADIAL† | 48734.4 | 132.3 | mg/L | 2.40 | 132.3 | mg/L | 2.40 | 1.82% |
| Ca RADIAL† | 34944.5 | 7.586 | mg/L | 0.1341 | 7.586 | mg/L | 0.1341 | 1.77% |
| K RADIAL† | 11634.5 | 10.02 | mg/L | 0.138 | 10.02 | mg/L | 0.138 | 1.38% |
| Mg RADIAL† | 8556.9 | 25.00 | mg/L | 0.501 | 25.00 | mg/L | 0.501 | 2.00% |
| Na RADIAL† | 18559.0 | 1.413 | mg/L | 0.0250 | 1.413 | mg/L | 0.0250 | 1.77% |
| Mo 202.031 | -99.7 | -0.004 | mg/L | 0.0002 | -0.004 | mg/L | 0.0002 | 5.99% |

**Sequence No.: 136**
**Sample ID: BI60401-DUP1**
**Analyst: KV**
**Logged In Analyst (Original) : administrator**
**Initial Sample Wt:**
**Dilution:**

**Autosampler Location: 114**
**Date Collected: 9/13/2016 3:07:29 AM**
**Data Type: Reprocessed on 9/13/2016 7:00:41 AM**

**Initial Sample Vol:**
**Sample Prep Vol:**

**Mean Data: BI60401-DUP1**

| Analyte | Mean Corrected Intensity | Calib. Conc. | Units | Std.Dev. | Sample Conc. | Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 15988342.5 | 5.199 | mg/L | 0.0224 | | | | 0.43% |
| Y RADIAL | 253914.0 | 5.531 | mg/L | 0.0213 | | | | 0.38% |
| As 188.979† | 10.5 | 0.0172 | mg/L | 0.00299 | 0.0172 | mg/L | 0.00299 | 17.41% |
| Tl 190.801† | -65.2 | -0.0160 | mg/L | 0.00167 | -0.0160 | mg/L | 0.00167 | 10.44% |
| Se 196.026† | -32.1 | 0.0248 | mg/L | 0.00085 | 0.0248 | mg/L | 0.00085 | 3.41% |
| Zn 206.200† | 43631.4 | 0.9551 | mg/L | 0.00497 | 0.9551 | mg/L | 0.00497 | 0.52% |
| Sb 206.836† | -39.6 | -0.0129 | mg/L | 0.00424 | -0.0129 | mg/L | 0.00424 | 32.99% |
| Pb 220.353† | 4502.3 | 0.4079 | mg/L | 0.00420 | 0.4079 | mg/L | 0.00420 | 1.03% |
| Cd 226.502† | 1925.7 | -0.0011 | mg/L | 0.00040 | -0.0011 | mg/L | 0.00040 | 37.75% |
| Co 228.616† | 2836.7 | 0.0688 | mg/L | 0.00080 | 0.0688 | mg/L | 0.00080 | 1.16% |
| Ni 232.003† | 3073.3 | 0.1360 | mg/L | 0.00315 | 0.1360 | mg/L | 0.00315 | 2.32% |
| Ba 233.527† | 33934.2 | 0.3427 | mg/L | 0.00154 | 0.3427 | mg/L | 0.00154 | 0.45% |
| Mn 257.610† | 2648278.3 | 2.777 | mg/L | 0.0271 | 2.777 | mg/L | 0.0271 | 0.98% |
| Cr 267.716† | 13578.6 | 0.0952 | mg/L | 0.00052 | 0.0952 | mg/L | 0.00052 | 0.55% |

| | | | | | | |
|---|---|---|---|---|---|---|
| Fe 273.955† | 3411179.3 | 125.5 mg/L | 0.43 | 125.5 mg/L | 0.43 | 0.34% |
| Mg 279.077† | 546826.6 | 24.64 mg/L | 0.264 | 24.64 mg/L | 0.264 | 1.07% |
| V 292.402† | 37735.7 | 0.1241 mg/L | 0.00024 | 0.1241 mg/L | 0.00024 | 0.19% |
| Al 308.215† | 1683281.9 | 60.27 mg/L | 0.684 | 60.27 mg/L | 0.684 | 1.14% |
| Be 313.107† | 5867.3 | 0.0013 mg/L | 0.00005 | 0.0013 mg/L | 0.00005 | 3.84% |
| Cu 324.752† | 165451.4 | 0.6275 mg/L | 0.00062 | 0.6275 mg/L | 0.00062 | 0.10% |
| Ag 338.289† | -2439.6 | -0.0139 mg/L | 0.00066 | -0.0139 mg/L | 0.00066 | 4.76% |
| Na 330.237† | 1586.8 | 2.202 mg/L | 0.0429 | 2.202 mg/L | 0.0429 | 1.95% |
| Ca 227.546† | 3043.0 | 9.298 mg/L | 0.0713 | 9.298 mg/L | 0.0713 | 0.77% |
| Al RADIAL† | 112726.8 | 58.61 mg/L | 0.144 | 58.61 mg/L | 0.144 | 0.25% |
| Fe RADIAL† | 47583.0 | 129.2 mg/L | 3.34 | 129.2 mg/L | 3.34 | 2.59% |
| Ca RADIAL† | 33835.3 | 7.345 mg/L | 0.1888 | 7.345 mg/L | 0.1888 | 2.57% |
| K RADIAL† | 11345.7 | 9.775 mg/L | 0.2987 | 9.775 mg/L | 0.2987 | 3.06% |
| Mg RADIAL† | 8340.9 | 24.37 mg/L | 0.605 | 24.37 mg/L | 0.605 | 2.48% |
| Na RADIAL† | 19310.1 | 1.470 mg/L | 0.0103 | 1.470 mg/L | 0.0103 | 0.70% |
| Mo 202.031 | -119.2 | -0.004 mg/L | 0.0006 | -0.004 mg/L | 0.0006 | 13.37% |

**Sequence No.: 137**
**Sample ID: BI60401-MS1**
**Analyst: KV**
**Logged In Analyst (Original) : administrator**
**Initial Sample Wt:**
**Dilution:**

**Autosampler Location: 115**
**Date Collected: 9/13/2016 3:12:14 AM**
**Data Type: Reprocessed on 9/13/2016 7:00:42 AM**

**Initial Sample Vol:**
**Sample Prep Vol:**

**Mean Data: BI60401-MS1**

| Analyte | Mean Corrected Intensity | Calib. Conc. | Calib. Units | Std.Dev. | Sample Conc. | Sample Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 16412285.8 | 5.336 | mg/L | 0.0273 | | | | 0.51% |
| Y RADIAL | 256375.2 | 5.585 | mg/L | 0.1068 | | | | 1.91% |
| As 188.979† | 3072.6 | 1.635 | mg/L | 0.0181 | 1.635 | mg/L | 0.0181 | 1.10% |
| Tl 190.801† | 3642.6 | 1.258 | mg/L | 0.0142 | 1.258 | mg/L | 0.0142 | 1.13% |
| Se 196.026† | 1491.9 | 1.609 | mg/L | 0.0031 | 1.609 | mg/L | 0.0031 | 0.19% |
| Zn 206.200† | 61638.0 | 1.350 | mg/L | 0.0210 | 1.350 | mg/L | 0.0210 | 1.56% |
| Sb 206.836† | 731.2 | 0.2115 | mg/L | 0.00493 | 0.2115 | mg/L | 0.00493 | 2.33% |
| Pb 220.353† | 8940.9 | 0.8151 | mg/L | 0.00472 | 0.8151 | mg/L | 0.00472 | 0.58% |
| Cd 226.502† | 8178.7 | 0.0415 | mg/L | 0.00028 | 0.0415 | mg/L | 0.00028 | 0.68% |
| Co 228.616† | 21785.1 | 0.5106 | mg/L | 0.00272 | 0.5106 | mg/L | 0.00272 | 0.53% |
| Ni 232.003† | 13655.2 | 0.5733 | mg/L | 0.00579 | 0.5733 | mg/L | 0.00579 | 1.01% |
| Ba 233.527† | 208572.5 | 2.106 | mg/L | 0.0213 | 2.106 | mg/L | 0.0213 | 1.01% |
| Mn 257.610† | 3022662.2 | 3.167 | mg/L | 0.0298 | 3.167 | mg/L | 0.0298 | 0.94% |
| Cr 267.716† | 37901.0 | 0.2634 | mg/L | 0.00262 | 0.2634 | mg/L | 0.00262 | 1.00% |
| Fe 273.955† | 3354626.9 | 123.5 | mg/L | 0.57 | 123.5 | mg/L | 0.57 | 0.46% |
| Mg 279.077† | 538705.6 | 24.28 | mg/L | 0.262 | 24.28 | mg/L | 0.262 | 1.08% |
| V 292.402† | 159699.5 | 0.5461 | mg/L | 0.00650 | 0.5461 | mg/L | 0.00650 | 1.19% |
| Al 308.215† | 1701245.6 | 60.91 | mg/L | 0.579 | 60.91 | mg/L | 0.579 | 0.95% |
| Be 313.107† | 193475.5 | 0.0444 | mg/L | 0.00059 | 0.0444 | mg/L | 0.00059 | 1.34% |
| Cu 324.752† | 219916.8 | 0.8324 | mg/L | 0.00692 | 0.8324 | mg/L | 0.00692 | 0.83% |
| Ag 338.289† | 4058.7 | 0.0298 | mg/L | 0.00060 | 0.0298 | mg/L | 0.00060 | 2.03% |
| Na 330.237† | 2278.7 | 2.902 | mg/L | 0.0289 | 2.902 | mg/L | 0.0289 | 1.00% |
| Ca 227.546† | 2992.8 | 9.174 | mg/L | 0.0781 | 9.174 | mg/L | 0.0781 | 0.85% |
| Al RADIAL† | 113310.9 | 58.91 | mg/L | 0.046 | 58.91 | mg/L | 0.046 | 0.08% |
| Fe RADIAL† | 47998.8 | 130.3 | mg/L | 1.11 | 130.3 | mg/L | 1.11 | 0.85% |
| Ca RADIAL† | 33308.2 | 7.230 | mg/L | 0.0854 | 7.230 | mg/L | 0.0854 | 1.18% |
| K RADIAL† | 11103.4 | 9.566 | mg/L | 0.0615 | 9.566 | mg/L | 0.0615 | 0.64% |
| Mg RADIAL† | 8388.6 | 24.51 | mg/L | 0.291 | 24.51 | mg/L | 0.291 | 1.19% |
| Na RADIAL† | 19115.3 | 1.455 | mg/L | 0.0279 | 1.455 | mg/L | 0.0279 | 1.92% |
| Mo 202.031 | -120.7 | -0.004 | mg/L | 0.0005 | -0.004 | mg/L | 0.0005 | 11.46% |

**Sequence No.: 138**
**Sample ID: 16I0314-05**
**Analyst: KV**
**Logged In Analyst (Original) : administrator**
**Initial Sample Wt:**
**Dilution:**

**Autosampler Location: 116**
**Date Collected: 9/13/2016 3:19:54 AM**
**Data Type: Reprocessed on 9/13/2016 7:00:42 AM**

**Initial Sample Vol:**
**Sample Prep Vol:**

**Mean Data: 16I0314-05**

| Analyte | Mean Corrected Intensity | Calib. Conc. | Calib. Units | Std.Dev. | Sample Conc. | Sample Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|

| | | | | | | |
|---|---|---|---|---|---|---|
| Y 371.029 | 15523026.5 | 5.047 mg/L | 0.0568 | | | 1.13% |
| Y RADIAL | 259839.1 | 5.660 mg/L | 0.0567 | | | 1.00% |
| As 188.979† | 48.4 | 0.0424 mg/L | 0.00183 | 0.0424 mg/L | 0.00183 | 4.30% |
| Tl 190.801† | -140.8 | -0.0390 mg/L | 0.00309 | -0.0390 mg/L | 0.00309 | 7.92% |
| Se 196.026† | -51.4 | 0.0308 mg/L | 0.00477 | 0.0308 mg/L | 0.00477 | 15.48% |
| Zn 206.200† | 314189.6 | 6.885 mg/L | 0.0883 | 6.885 mg/L | 0.0883 | 1.28% |
| Sb 206.836† | -11.3 | -0.0052 mg/L | 0.00511 | -0.0052 mg/L | 0.00511 | 98.18% |
| Pb 220.353† | 31588.7 | 2.893 mg/L | 0.0200 | 2.893 mg/L | 0.0200 | 0.69% |
| Cd 226.502† | 6088.7 | 0.0210 mg/L | 0.00036 | 0.0210 mg/L | 0.00036 | 1.73% |
| Co 228.616† | 2228.3 | 0.0559 mg/L | 0.00065 | 0.0559 mg/L | 0.00065 | 1.17% |
| Ni 232.003† | 3579.4 | 0.1610 mg/L | 0.00197 | 0.1610 mg/L | 0.00197 | 1.22% |
| Ba 233.527† | 413191.0 | 4.173 mg/L | 0.0538 | 4.173 mg/L | 0.0538 | 1.29% |
| Mn 257.610† | 2606463.5 | 2.741 mg/L | 0.0346 | 2.741 mg/L | 0.0346 | 1.26% |
| Cr 267.716† | 39264.1 | 0.2734 mg/L | 0.00309 | 0.2734 mg/L | 0.00309 | 1.13% |
| Fe 273.955† | 4944386.3 | 182.0 mg/L | 0.45 | 182.0 mg/L | 0.45 | 0.25% |
| Mg 279.077† | 1202931.2 | 54.23 mg/L | 0.653 | 54.23 mg/L | 0.653 | 1.20% |
| V 292.402† | 49445.3 | 0.1617 mg/L | 0.00167 | 0.1617 mg/L | 0.00167 | 1.03% |
| Al 308.215† | 1761344.1 | 63.06 mg/L | 0.830 | 63.06 mg/L | 0.830 | 1.32% |
| Be 313.107† | -7250.2 | -0.0017 mg/L | 0.00012 | -0.0017 mg/L | 0.00012 | 7.23% |
| Cu 324.752† | 567053.3 | 2.140 mg/L | 0.0298 | 2.140 mg/L | 0.0298 | 1.39% |
| Ag 338.289† | -2931.9 | -0.0205 mg/L | 0.00033 | -0.0205 mg/L | 0.00033 | 1.61% |
| Na 330.237† | 12144.4 | 13.47 mg/L | 0.269 | 13.47 mg/L | 0.269 | 2.00% |
| Ca 227.546† | 158054.2 | 424.6 mg/L | 5.68 | 424.6 mg/L | 5.68 | 1.34% |
| Al RADIAL† | 110305.7 | 57.35 mg/L | 0.173 | 57.35 mg/L | 0.173 | 0.30% |
| Fe RADIAL† | 68976.8 | 187.3 mg/L | 0.45 | 187.3 mg/L | 0.45 | 0.24% |
| Ca RADIAL† | 1838829.2 | 399.2 mg/L | 3.86 | 399.2 mg/L | 3.86 | 0.97% |
| K RADIAL† | 10581.5 | 9.116 mg/L | 0.0250 | 9.116 mg/L | 0.0250 | 0.27% |
| Mg RADIAL† | 17462.5 | 51.04 mg/L | 0.077 | 51.04 mg/L | 0.077 | 0.15% |
| Na RADIAL† | 38301.9 | 2.916 mg/L | 0.0372 | 2.916 mg/L | 0.0372 | 1.28% |
| Mo 202.031 | 1264.0 | 0.046 mg/L | 0.0005 | 0.046 mg/L | 0.0005 | 0.99% |

**Sequence No.: 139**
**Sample ID: 16I0314-06**
**Analyst: KV**
**Logged In Analyst (Original) : administrator**
**Initial Sample Wt:**
**Dilution:**

**Autosampler Location: 117**
**Date Collected: 9/13/2016 3:24:34 AM**
**Data Type: Reprocessed on 9/13/2016 7:00:43 AM**

**Initial Sample Vol:**
**Sample Prep Vol:**

**Mean Data: 16I0314-06**

| Analyte | Mean Corrected Intensity | Calib. Conc. | Calib. Units | Std.Dev. | Sample Conc. | Sample Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 15177796.0 | 4.935 | mg/L | 0.0327 | | | | 0.66% |
| Y RADIAL | 239823.8 | 5.224 | mg/L | 0.0380 | | | | 0.73% |
| As 188.979† | -7.5 | 0.0051 | mg/L | 0.00356 | 0.0051 | mg/L | 0.00356 | 69.59% |
| Tl 190.801† | -69.6 | -0.0189 | mg/L | 0.00184 | -0.0189 | mg/L | 0.00184 | 9.75% |
| Se 196.026† | -26.6 | 0.0178 | mg/L | 0.00509 | 0.0178 | mg/L | 0.00509 | 28.69% |
| Zn 206.200† | 21820.9 | 0.4773 | mg/L | 0.00701 | 0.4773 | mg/L | 0.00701 | 1.47% |
| Sb 206.836† | -16.7 | -0.0059 | mg/L | 0.00098 | -0.0059 | mg/L | 0.00098 | 16.69% |
| Pb 220.353† | 442.1 | 0.0359 | mg/L | 0.00125 | 0.0359 | mg/L | 0.00125 | 3.50% |
| Cd 226.502† | 3274.3 | 0.0113 | mg/L | 0.00013 | 0.0113 | mg/L | 0.00013 | 1.20% |
| Co 228.616† | 1671.3 | 0.0411 | mg/L | 0.00021 | 0.0411 | mg/L | 0.00021 | 0.52% |
| Ni 232.003† | 2417.9 | 0.1070 | mg/L | 0.00398 | 0.1070 | mg/L | 0.00398 | 3.72% |
| Ba 233.527† | 27700.3 | 0.2797 | mg/L | 0.00437 | 0.2797 | mg/L | 0.00437 | 1.56% |
| Mn 257.610† | 2670253.0 | 2.796 | mg/L | 0.0307 | 2.796 | mg/L | 0.0307 | 1.10% |
| Cr 267.716† | 12895.7 | 0.0902 | mg/L | 0.00148 | 0.0902 | mg/L | 0.00148 | 1.64% |
| Fe 273.955† | 2655242.3 | 97.72 | mg/L | 1.034 | 97.72 | mg/L | 1.034 | 1.06% |
| Mg 279.077† | 463568.0 | 20.89 | mg/L | 0.283 | 20.89 | mg/L | 0.283 | 1.35% |
| V 292.402† | 30883.1 | 0.1018 | mg/L | 0.00243 | 0.1018 | mg/L | 0.00243 | 2.38% |
| Al 308.215† | 1159538.3 | 41.52 | mg/L | 0.489 | 41.52 | mg/L | 0.489 | 1.18% |
| Be 313.107† | 1942.6 | 0.0004 | mg/L | 0.00007 | 0.0004 | mg/L | 0.00007 | 16.76% |
| Cu 324.752† | 26014.7 | 0.1019 | mg/L | 0.00147 | 0.1019 | mg/L | 0.00147 | 1.44% |
| Ag 338.289† | -2355.5 | -0.0139 | mg/L | 0.00118 | -0.0139 | mg/L | 0.00118 | 8.53% |
| Na 330.237† | 307.4 | 0.7836 | mg/L | 0.02010 | 0.7836 | mg/L | 0.02010 | 2.56% |
| Ca 227.546† | 2838.7 | 8.495 | mg/L | 0.0867 | 8.495 | mg/L | 0.0867 | 1.02% |
| Al RADIAL† | 78513.9 | 40.82 | mg/L | 0.060 | 40.82 | mg/L | 0.060 | 0.15% |
| Fe RADIAL† | 37152.5 | 100.9 | mg/L | 1.10 | 100.9 | mg/L | 1.10 | 1.09% |
| Ca RADIAL† | 34169.7 | 7.417 | mg/L | 0.1174 | 7.417 | mg/L | 0.1174 | 1.58% |
| K RADIAL† | 10960.5 | 9.443 | mg/L | 0.1213 | 9.443 | mg/L | 0.1213 | 1.29% |
| Mg RADIAL† | 6934.6 | 20.26 | mg/L | 0.223 | 20.26 | mg/L | 0.223 | 1.10% |
| Na RADIAL† | 8232.9 | 0.6268 | mg/L | 0.01574 | 0.6268 | mg/L | 0.01574 | 2.51% |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Mo 202.031 | -71.3 | -0.003 | mg/L | 0.0006 | -0.003 | mg/L | 0.0006 24.11% |

**Sequence No.: 140**
**Sample ID: 16I0314-07**
**Analyst: KV**
**Logged In Analyst (Original) : administrator**
**Initial Sample Wt:**
**Dilution:**

**Autosampler Location: 118**
**Date Collected: 9/13/2016 3:29:19 AM**
**Data Type: Reprocessed on 9/13/2016 7:00:44 AM**

**Initial Sample Vol:**
**Sample Prep Vol:**

**Mean Data: 16I0314-07**

| Analyte | Mean Corrected Intensity | Calib. Conc. | Units | Std.Dev. | Sample Conc. | Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 14164390.9 | 4.606 | mg/L | 0.0271 | | | | 0.59% |
| Y RADIAL | 219196.6 | 4.775 | mg/L | 0.0310 | | | | 0.65% |
| As 188.979† | 70.0 | 0.0494 | mg/L | 0.00377 | 0.0494 | mg/L | 0.00377 | 7.64% |
| Tl 190.801† | -94.2 | -0.0255 | mg/L | 0.00318 | -0.0255 | mg/L | 0.00318 | 12.48% |
| Se 196.026† | -31.5 | 0.0291 | mg/L | 0.00243 | 0.0291 | mg/L | 0.00243 | 8.36% |
| Zn 206.200† | 62735.1 | 1.374 | mg/L | 0.0051 | 1.374 | mg/L | 0.0051 | 0.37% |
| Sb 206.836† | -5.0 | -0.0028 | mg/L | 0.00420 | -0.0028 | mg/L | 0.00420 | 147.62% |
| Pb 220.353† | 4925.9 | 0.4463 | mg/L | 0.00228 | 0.4463 | mg/L | 0.00228 | 0.51% |
| Cd 226.502† | 2489.9 | 0.0019 | mg/L | 0.00032 | 0.0019 | mg/L | 0.00032 | 17.03% |
| Co 228.616† | 2917.5 | 0.0709 | mg/L | 0.00039 | 0.0709 | mg/L | 0.00039 | 0.55% |
| Ni 232.003† | 3247.2 | 0.1438 | mg/L | 0.00224 | 0.1438 | mg/L | 0.00224 | 1.56% |
| Ba 233.527† | 27566.7 | 0.2784 | mg/L | 0.00169 | 0.2784 | mg/L | 0.00169 | 0.61% |
| Mn 257.610† | 1438993.0 | 1.518 | mg/L | 0.0139 | 1.518 | mg/L | 0.0139 | 0.91% |
| Cr 267.716† | 16158.2 | 0.1131 | mg/L | 0.00064 | 0.1131 | mg/L | 0.00064 | 0.56% |
| Fe 273.955† | 3589601.8 | 132.1 | mg/L | 0.27 | 132.1 | mg/L | 0.27 | 0.21% |
| Mg 279.077† | 620447.0 | 27.96 | mg/L | 0.288 | 27.96 | mg/L | 0.288 | 1.03% |
| V 292.402† | 50820.0 | 0.1690 | mg/L | 0.00075 | 0.1690 | mg/L | 0.00075 | 0.45% |
| Al 308.215† | 1745691.9 | 62.50 | mg/L | 0.634 | 62.50 | mg/L | 0.634 | 1.01% |
| Be 313.107† | 890.2 | 0.0002 | mg/L | 0.00010 | 0.0002 | mg/L | 0.00010 | 49.23% |
| Cu 324.752† | 37689.9 | 0.1473 | mg/L | 0.00075 | 0.1473 | mg/L | 0.00075 | 0.51% |
| Ag 338.289† | -3376.1 | -0.0201 | mg/L | 0.00056 | -0.0201 | mg/L | 0.00056 | 2.79% |
| Na 330.237† | 1534.4 | 2.191 | mg/L | 0.1305 | 2.191 | mg/L | 0.1305 | 5.96% |
| Ca 227.546† | 4301.4 | 12.74 | mg/L | 0.137 | 12.74 | mg/L | 0.137 | 1.08% |
| Al RADIAL† | 117613.3 | 61.15 | mg/L | 0.266 | 61.15 | mg/L | 0.266 | 0.43% |
| Fe RADIAL† | 50598.6 | 137.4 | mg/L | 0.87 | 137.4 | mg/L | 0.87 | 0.63% |
| Ca RADIAL† | 53090.1 | 11.52 | mg/L | 0.072 | 11.52 | mg/L | 0.072 | 0.62% |
| K RADIAL† | 14554.8 | 12.54 | mg/L | 0.096 | 12.54 | mg/L | 0.096 | 0.77% |
| Mg RADIAL† | 9536.6 | 27.87 | mg/L | 0.236 | 27.87 | mg/L | 0.236 | 0.85% |
| Na RADIAL† | 10538.6 | 0.8023 | mg/L | 0.01554 | 0.8023 | mg/L | 0.01554 | 1.94% |
| Mo 202.031 | -77.6 | -0.003 | mg/L | 0.0001 | -0.003 | mg/L | 0.0001 | 5.10% |

**Sequence No.: 141**
**Sample ID: SEQ-CCVC**
**Analyst: KV**
**Logged In Analyst (Original) : administrator**
**Initial Sample Wt:**
**Dilution:**

**Autosampler Location: 8**
**Date Collected: 9/13/2016 3:34:04 AM**
**Data Type: Reprocessed on 9/13/2016 7:00:44 AM**

**Initial Sample Vol:**
**Sample Prep Vol:**

**Mean Data: SEQ-CCVC**

| Analyte | Mean Corrected Intensity | Calib. Conc. | Units | Std.Dev. | Sample Conc. | Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 15158934.6 | 4.929 | mg/L | 0.0164 | | | | 0.33% |
| Y RADIAL | 240954.9 | 5.249 | mg/L | 0.1156 | | | | 2.20% |
| As 188.979† | 480.5 | 0.2544 | mg/L | 0.00505 | 0.2544 | mg/L | 0.00505 | 1.98% |
| Tl 190.801† | 661.1 | 0.2275 | mg/L | 0.00284 | 0.2275 | mg/L | 0.00284 | 1.25% |
| Se 196.026† | 228.3 | 0.2396 | mg/L | 0.00480 | 0.2396 | mg/L | 0.00480 | 2.00% |
| Zn 206.200† | 115197.6 | 2.525 | mg/L | 0.0179 | 2.525 | mg/L | 0.0179 | 0.71% |
| Sb 206.836† | 833.1 | 0.2424 | mg/L | 0.00150 | 0.2424 | mg/L | 0.00150 | 0.62% |
| Pb 220.353† | 2780.6 | 0.2562 | mg/L | 0.00187 | 0.2562 | mg/L | 0.00187 | 0.73% |
| Cd 226.502† | 18437.0 | 0.1254 | mg/L | 0.00075 | 0.1254 | mg/L | 0.00075 | 0.60% |
| Co 228.616† | 109963.4 | 2.564 | mg/L | 0.0206 | 2.564 | mg/L | 0.0206 | 0.80% |
| Ni 232.003† | 61055.4 | 2.523 | mg/L | 0.0154 | 2.523 | mg/L | 0.0154 | 0.61% |
| Ba 233.527† | 1036593.4 | 10.47 | mg/L | 0.057 | 10.47 | mg/L | 0.057 | 0.54% |
| Mn 257.610† | 2512876.5 | 2.619 | mg/L | 0.0135 | 2.619 | mg/L | 0.0135 | 0.51% |
| Cr 267.716† | 150357.2 | 1.040 | mg/L | 0.0061 | 1.040 | mg/L | 0.0061 | 0.58% |
| Fe 273.955† | 140782.8 | 5.181 | mg/L | 0.0317 | 5.181 | mg/L | 0.0317 | 0.61% |

| | | | | | | |
|---|---|---|---|---|---|---|
| Mg 279.077† | 578680.2 | 26.10 mg/L | 0.147 | 26.10 mg/L | 0.147 | 0.56% |
| V 292.402† | 748969.2 | 2.592 mg/L | 0.0113 | 2.592 mg/L | 0.0113 | 0.44% |
| Al 308.215† | 280714.8 | 10.05 mg/L | 0.069 | 10.05 mg/L | 0.069 | 0.69% |
| Be 313.107† | 1140700.0 | 0.2616 mg/L | 0.00141 | 0.2616 mg/L | 0.00141 | 0.54% |
| Cu 324.752† | 342503.0 | 1.289 mg/L | 0.0055 | 1.289 mg/L | 0.0055 | 0.42% |
| Ag 338.289† | 193122.7 | 1.297 mg/L | 0.0058 | 1.297 mg/L | 0.0058 | 0.45% |
| Na 330.237† | 23543.2 | 23.73 mg/L | 0.184 | 23.73 mg/L | 0.184 | 0.78% |
| Ca 227.546† | 9546.1 | 25.60 mg/L | 0.256 | 25.60 mg/L | 0.256 | 1.00% |
| Al RADIAL† | 18304.0 | 9.515 mg/L | 0.0368 | 9.515 mg/L | 0.0368 | 0.39% |
| Fe RADIAL† | 1918.6 | 5.209 mg/L | 0.1410 | 5.209 mg/L | 0.1410 | 2.71% |
| Ca RADIAL† | 117510.6 | 25.51 mg/L | 0.007 | 25.51 mg/L | 0.007 | 0.03% |
| K RADIAL† | 5900.2 | 5.083 mg/L | 0.1134 | 5.083 mg/L | 0.1134 | 2.23% |
| Mg RADIAL† | 8937.2 | 26.13 mg/L | 0.557 | 26.13 mg/L | 0.557 | 2.13% |
| Na RADIAL† | 339457.3 | 25.84 mg/L | 0.151 | 25.84 mg/L | 0.151 | 0.58% |
| Mo 202.031 | 29008.9 | 1.062 mg/L | 0.0086 | 1.062 mg/L | 0.0086 | 0.81% |

**Sequence No.: 142**
**Sample ID: SEQ-CCBC**
**Analyst: KV**
**Logged In Analyst (Original) : administrator**
**Initial Sample Wt:**
**Dilution:**

**Autosampler Location: 1**
**Date Collected: 9/13/2016 3:42:10 AM**
**Data Type: Reprocessed on 9/13/2016 7:00:45 AM**

**Initial Sample Vol:**
**Sample Prep Vol:**

**Mean Data: SEQ-CCBC**

| Analyte | Mean Corrected Intensity | Calib. Conc. | Units | Std.Dev. | Sample Conc. | Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 15646885.0 | 5.088 | mg/L | 0.0238 | | | | 0.47% |
| Y RADIAL | 240234.6 | 5.233 | mg/L | 0.0590 | | | | 1.13% |
| As 188.979† | -17.2 | -0.0091 | mg/L | 0.00397 | -0.0091 | mg/L | 0.00397 | 43.66% |
| Tl 190.801† | -11.8 | -0.0041 | mg/L | 0.00103 | -0.0041 | mg/L | 0.00103 | 25.35% |
| Se 196.026† | -1.8 | -0.0018 | mg/L | 0.00241 | -0.0018 | mg/L | 0.00241 | 130.16% |
| Zn 206.200† | -97.0 | -0.0021 | mg/L | 0.00005 | -0.0021 | mg/L | 0.00005 | 2.49% |
| Sb 206.836† | 1.9 | 0.0005 | mg/L | 0.00021 | 0.0005 | mg/L | 0.00021 | 38.53% |
| Pb 220.353† | 14.9 | 0.0014 | mg/L | 0.00159 | 0.0014 | mg/L | 0.00159 | 116.92% |
| Cd 226.502† | -20.6 | -0.0001 | mg/L | 0.00002 | -0.0001 | mg/L | 0.00002 | 16.85% |
| Co 228.616† | 3.1 | 0.0001 | mg/L | 0.00002 | 0.0001 | mg/L | 0.00002 | 29.95% |
| Ni 232.003† | -17.7 | -0.0007 | mg/L | 0.00064 | -0.0007 | mg/L | 0.00064 | 87.20% |
| Ba 233.527† | -0.7 | 0.0000 | mg/L | 0.00007 | 0.0000 | mg/L | 0.00007 | 990.70% |
| Mn 257.610† | -103.0 | -0.0001 | mg/L | 0.00001 | -0.0001 | mg/L | 0.00001 | 11.96% |
| Cr 267.716† | 42.4 | 0.0003 | mg/L | 0.00016 | 0.0003 | mg/L | 0.00016 | 52.95% |
| Fe 273.955† | 5.7 | 0.0002 | mg/L | 0.00055 | 0.0002 | mg/L | 0.00055 | 259.57% |
| Mg 279.077† | 34.6 | 0.0016 | mg/L | 0.00154 | 0.0016 | mg/L | 0.00154 | 98.53% |
| V 292.402† | 5.4 | 0.0000 | mg/L | 0.00013 | 0.0000 | mg/L | 0.00013 | 720.94% |
| Al 308.215† | -1438.9 | -0.0515 | mg/L | 0.00257 | -0.0515 | mg/L | 0.00257 | 4.98% |
| Be 313.107† | 149.5 | 0.0000 | mg/L | 0.00006 | 0.0000 | mg/L | 0.00006 | 185.06% |
| Cu 324.752† | -103.1 | -0.0004 | mg/L | 0.00043 | -0.0004 | mg/L | 0.00043 | 110.39% |
| Ag 338.289† | 100.3 | 0.0007 | mg/L | 0.00015 | 0.0007 | mg/L | 0.00015 | 22.17% |
| Na 330.237† | -18.0 | -0.0180 | mg/L | 0.04348 | -0.0180 | mg/L | 0.04348 | 241.22% |
| Ca 227.546† | 25.0 | 0.0671 | mg/L | 0.07057 | 0.0671 | mg/L | 0.07057 | 105.22% |
| Al RADIAL† | -92.4 | -0.0481 | mg/L | 0.00534 | -0.0481 | mg/L | 0.00534 | 11.12% |
| Fe RADIAL† | 3.9 | 0.0106 | mg/L | 0.00801 | 0.0106 | mg/L | 0.00801 | 75.82% |
| Ca RADIAL† | 71.4 | 0.0155 | mg/L | 0.00330 | 0.0155 | mg/L | 0.00330 | 21.30% |
| K RADIAL† | 1.7 | 0.0014 | mg/L | 0.02548 | 0.0014 | mg/L | 0.02548 | >999.9% |
| Mg RADIAL† | -4.5 | -0.0132 | mg/L | 0.01089 | -0.0132 | mg/L | 0.01089 | 82.56% |
| Na RADIAL† | -2763.9 | -0.2104 | mg/L | 0.01017 | -0.2104 | mg/L | 0.01017 | 4.83% |
| Mo 202.031 | 2.1 | 0.000 | mg/L | 0.0001 | 0.000 | mg/L | 0.0001 | 133.25% |

**Sequence No.: 143**
**Sample ID: 16I0321-01**
**Analyst: KV**
**Logged In Analyst (Original) : administrator**
**Initial Sample Wt:**
**Dilution:**

**Autosampler Location: 119**
**Date Collected: 9/13/2016 3:47:14 AM**
**Data Type: Reprocessed on 9/13/2016 7:00:46 AM**

**Initial Sample Vol:**
**Sample Prep Vol:**

**Mean Data: 16I0321-01**

| Analyte | Mean Corrected Intensity | Calib. Conc. | Units | Std.Dev. | Sample Conc. | Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 16831424.6 | 5.473 | mg/L | 0.0457 | | | | 0.83% |

| | | | | | | |
|---|---|---|---|---|---|---|
| Y RADIAL | 274802.6 | 5.986 mg/L | 0.1001 | | | 1.67% |
| As 188.979† | 20.4 | 0.0172 mg/L | 0.00618 | 0.0172 mg/L | 0.00618 | 35.85% |
| Tl 190.801† | -70.3 | -0.0206 mg/L | 0.00352 | -0.0206 mg/L | 0.00352 | 17.10% |
| Se 196.026† | -19.7 | 0.0119 mg/L | 0.00730 | 0.0119 mg/L | 0.00730 | 61.34% |
| Zn 206.200† | 19975.9 | 0.4371 mg/L | 0.00918 | 0.4371 mg/L | 0.00918 | 2.10% |
| Sb 206.836† | -29.8 | -0.0094 mg/L | 0.00178 | -0.0094 mg/L | 0.00178 | 18.95% |
| Pb 220.353† | 4038.6 | 0.3680 mg/L | 0.00218 | 0.3680 mg/L | 0.00218 | 0.59% |
| Cd 226.502† | 1107.3 | -0.0004 mg/L | 0.00019 | -0.0004 mg/L | 0.00019 | 52.90% |
| Co 228.616† | 1195.0 | 0.0294 mg/L | 0.00015 | 0.0294 mg/L | 0.00015 | 0.51% |
| Ni 232.003† | 881.6 | 0.0415 mg/L | 0.00225 | 0.0415 mg/L | 0.00225 | 5.42% |
| Ba 233.527† | 26501.9 | 0.2676 mg/L | 0.00391 | 0.2676 mg/L | 0.00391 | 1.46% |
| Mn 257.610† | 1050413.6 | 1.104 mg/L | 0.0164 | 1.104 mg/L | 0.0164 | 1.49% |
| Cr 267.716† | 4289.5 | 0.0304 mg/L | 0.00017 | 0.0304 mg/L | 0.00017 | 0.55% |
| Fe 273.955† | 1992410.5 | 73.32 mg/L | 1.093 | 73.32 mg/L | 1.093 | 1.49% |
| Mg 279.077† | 387608.4 | 17.47 mg/L | 0.260 | 17.47 mg/L | 0.260 | 1.49% |
| V 292.402† | 28963.7 | 0.0966 mg/L | 0.00132 | 0.0966 mg/L | 0.00132 | 1.37% |
| Al 308.215† | 829775.1 | 29.71 mg/L | 0.497 | 29.71 mg/L | 0.497 | 1.67% |
| Be 313.107† | -3898.4 | -0.0009 mg/L | 0.00008 | -0.0009 mg/L | 0.00008 | 9.32% |
| Cu 324.752† | 69536.2 | 0.2644 mg/L | 0.00375 | 0.2644 mg/L | 0.00375 | 1.42% |
| Ag 338.289† | -2192.2 | -0.0141 mg/L | 0.00059 | -0.0141 mg/L | 0.00059 | 4.16% |
| Na 330.237† | 700.1 | 1.107 mg/L | 0.0328 | 1.107 mg/L | 0.0328 | 2.97% |
| Ca 227.546† | 25789.8 | 69.66 mg/L | 1.051 | 69.66 mg/L | 1.051 | 1.51% |
| Al RADIAL† | 54235.6 | 28.20 mg/L | 0.052 | 28.20 mg/L | 0.052 | 0.19% |
| Fe RADIAL† | 26499.5 | 71.95 mg/L | 1.379 | 71.95 mg/L | 1.379 | 1.92% |
| Ca RADIAL† | 327195.1 | 71.03 mg/L | 0.053 | 71.03 mg/L | 0.053 | 0.07% |
| K RADIAL† | 4181.7 | 3.603 mg/L | 0.0644 | 3.603 mg/L | 0.0644 | 1.79% |
| Mg RADIAL† | 5685.9 | 16.62 mg/L | 0.289 | 16.62 mg/L | 0.289 | 1.74% |
| Na RADIAL† | 22228.7 | 1.692 mg/L | 0.0312 | 1.692 mg/L | 0.0312 | 1.84% |
| Mo 202.031 | 25.6 | 0.001 mg/L | 0.0002 | 0.001 mg/L | 0.0002 | 22.70% |

**Sequence No.: 144**
**Sample ID: 16I0321-02**
**Analyst: KV**
**Logged In Analyst (Original) : administrator**
**Initial Sample Wt:**
**Dilution:**

**Autosampler Location: 120**
**Date Collected: 9/13/2016 3:51:58 AM**
**Data Type: Reprocessed on 9/13/2016 7:00:47 AM**

**Initial Sample Vol:**
**Sample Prep Vol:**

**Mean Data: 16I0321-02**

| Analyte | Mean Corrected Intensity | Calib. Conc. | Calib. Units | Std.Dev. | Sample Conc. | Sample Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 16674673.6 | 5.422 | mg/L | 0.0677 | | | | 1.25% |
| Y RADIAL | 272409.0 | 5.934 | mg/L | 0.0992 | | | | 1.67% |
| As 188.979† | 3.2 | 0.0108 | mg/L | 0.00103 | 0.0108 | mg/L | 0.00103 | 9.47% |
| Tl 190.801† | -130.5 | -0.0398 | mg/L | 0.00291 | -0.0398 | mg/L | 0.00291 | 7.31% |
| Se 196.026† | -33.7 | 0.0107 | mg/L | 0.00709 | 0.0107 | mg/L | 0.00709 | 66.27% |
| Zn 206.200† | 24612.1 | 0.5385 | mg/L | 0.00728 | 0.5385 | mg/L | 0.00728 | 1.35% |
| Sb 206.836† | -28.4 | -0.0093 | mg/L | 0.00178 | -0.0093 | mg/L | 0.00178 | 19.15% |
| Pb 220.353† | 7289.2 | 0.6672 | mg/L | 0.00630 | 0.6672 | mg/L | 0.00630 | 0.94% |
| Cd 226.502† | 1613.5 | -0.0001 | mg/L | 0.00041 | -0.0001 | mg/L | 0.00041 | 289.75% |
| Co 228.616† | 2365.1 | 0.0573 | mg/L | 0.00061 | 0.0573 | mg/L | 0.00061 | 1.06% |
| Ni 232.003† | 3162.4 | 0.1378 | mg/L | 0.00083 | 0.1378 | mg/L | 0.00083 | 0.60% |
| Ba 233.527† | 71079.9 | 0.7178 | mg/L | 0.00733 | 0.7178 | mg/L | 0.00733 | 1.02% |
| Mn 257.610† | 3123378.3 | 3.268 | mg/L | 0.0140 | 3.268 | mg/L | 0.0140 | 0.43% |
| Cr 267.716† | 20317.3 | 0.1415 | mg/L | 0.00184 | 0.1415 | mg/L | 0.00184 | 1.30% |
| Fe 273.955† | 2738668.2 | 100.8 | mg/L | 0.41 | 100.8 | mg/L | 0.41 | 0.41% |
| Mg 279.077† | 840682.5 | 37.90 | mg/L | 0.085 | 37.90 | mg/L | 0.085 | 0.23% |
| V 292.402† | 57264.7 | 0.1931 | mg/L | 0.00186 | 0.1931 | mg/L | 0.00186 | 0.96% |
| Al 308.215† | 1744948.4 | 62.47 | mg/L | 0.212 | 62.47 | mg/L | 0.212 | 0.34% |
| Be 313.107† | -5012.6 | -0.0011 | mg/L | 0.00025 | -0.0011 | mg/L | 0.00025 | 21.87% |
| Cu 324.752† | 68941.8 | 0.2634 | mg/L | 0.00307 | 0.2634 | mg/L | 0.00307 | 1.17% |
| Ag 338.289† | -3897.1 | -0.0250 | mg/L | 0.00085 | -0.0250 | mg/L | 0.00085 | 3.42% |
| Na 330.237† | 386.3 | 0.9309 | mg/L | 0.04800 | 0.9309 | mg/L | 0.04800 | 5.16% |
| Ca 227.546† | 27338.6 | 74.08 | mg/L | 0.939 | 74.08 | mg/L | 0.939 | 1.27% |
| Al RADIAL† | 111805.5 | 58.13 | mg/L | 0.033 | 58.13 | mg/L | 0.033 | 0.06% |
| Fe RADIAL† | 37378.6 | 101.5 | mg/L | 2.78 | 101.5 | mg/L | 2.78 | 2.74% |
| Ca RADIAL† | 338778.9 | 73.54 | mg/L | 0.126 | 73.54 | mg/L | 0.126 | 0.17% |
| K RADIAL† | 10883.5 | 9.376 | mg/L | 0.2635 | 9.376 | mg/L | 0.2635 | 2.81% |
| Mg RADIAL† | 12581.0 | 36.77 | mg/L | 0.990 | 36.77 | mg/L | 0.990 | 2.69% |
| Na RADIAL† | 26151.8 | 1.991 | mg/L | 0.0309 | 1.991 | mg/L | 0.0309 | 1.55% |
| Mo 202.031 | -60.1 | -0.002 | mg/L | 0.0004 | -0.002 | mg/L | 0.0004 | 17.60% |

**Sequence No.: 145**
**Sample ID: SEQ-SRD5**
**Analyst: KV**
**Logged In Analyst (Original) : administrator**
**Initial Sample Wt:**
**Dilution:**

**Autosampler Location: 121**
**Date Collected: 9/13/2016 3:56:43 AM**
**Data Type: Reprocessed on 9/13/2016 7:00:47 AM**

**Initial Sample Vol:**
**Sample Prep Vol:**

**Mean Data: SEQ-SRD5**

| Analyte | Mean Corrected Intensity | Calib. Conc. | Units | Std.Dev. | Sample Conc. | Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 15674758.3 | 5.097 | mg/L | 0.0427 | | | | 0.84% |
| Y RADIAL | 241362.7 | 5.258 | mg/L | 0.0500 | | | | 0.95% |
| As 188.979† | -3.4 | 0.0009 | mg/L | 0.00016 | 0.0009 | mg/L | 0.00016 | 17.79% |
| Tl 190.801† | -3.6 | 0.0003 | mg/L | 0.00216 | 0.0003 | mg/L | 0.00216 | 812.19% |
| Se 196.026† | -6.2 | 0.0069 | mg/L | 0.00335 | 0.0069 | mg/L | 0.00335 | 48.15% |
| Zn 206.200† | 10124.8 | 0.2216 | mg/L | 0.00171 | 0.2216 | mg/L | 0.00171 | 0.77% |
| Sb 206.836† | -9.8 | -0.0032 | mg/L | 0.00077 | -0.0032 | mg/L | 0.00077 | 24.47% |
| Pb 220.353† | 1029.5 | 0.0932 | mg/L | 0.00118 | 0.0932 | mg/L | 0.00118 | 1.27% |
| Cd 226.502† | 406.4 | -0.0005 | mg/L | 0.00004 | -0.0005 | mg/L | 0.00004 | 8.82% |
| Co 228.616† | 632.1 | 0.0154 | mg/L | 0.00037 | 0.0154 | mg/L | 0.00037 | 2.42% |
| Ni 232.003† | 686.4 | 0.0304 | mg/L | 0.00254 | 0.0304 | mg/L | 0.00254 | 8.33% |
| Ba 233.527† | 7633.4 | 0.0771 | mg/L | 0.00106 | 0.0771 | mg/L | 0.00106 | 1.37% |
| Mn 257.610† | 596351.4 | 0.6254 | mg/L | 0.00563 | 0.6254 | mg/L | 0.00563 | 0.90% |
| Cr 267.716† | 3105.1 | 0.0218 | mg/L | 0.00018 | 0.0218 | mg/L | 0.00018 | 0.83% |
| Fe 273.955† | 787978.4 | 29.00 | mg/L | 0.281 | 29.00 | mg/L | 0.281 | 0.97% |
| Mg 279.077† | 128534.1 | 5.793 | mg/L | 0.0600 | 5.793 | mg/L | 0.0600 | 1.04% |
| V 292.402† | 8676.5 | 0.0285 | mg/L | 0.00031 | 0.0285 | mg/L | 0.00031 | 1.08% |
| Al 308.215† | 347986.2 | 12.46 | mg/L | 0.142 | 12.46 | mg/L | 0.142 | 1.14% |
| Be 313.107† | 1237.2 | 0.0003 | mg/L | 0.00002 | 0.0003 | mg/L | 0.00002 | 6.83% |
| Cu 324.752† | 36423.7 | 0.1382 | mg/L | 0.00125 | 0.1382 | mg/L | 0.00125 | 0.91% |
| Ag 338.289† | -604.3 | -0.0035 | mg/L | 0.00013 | -0.0035 | mg/L | 0.00013 | 3.76% |
| Na 330.237† | 363.4 | 0.5052 | mg/L | 0.05860 | 0.5052 | mg/L | 0.05860 | 11.60% |
| Ca 227.546† | 681.5 | 2.090 | mg/L | 0.0572 | 2.090 | mg/L | 0.0572 | 2.74% |
| Al RADIAL† | 24426.3 | 12.70 | mg/L | 0.051 | 12.70 | mg/L | 0.051 | 0.40% |
| Fe RADIAL† | 10974.5 | 29.80 | mg/L | 0.310 | 29.80 | mg/L | 0.310 | 1.04% |
| Ca RADIAL† | 8032.6 | 1.744 | mg/L | 0.0245 | 1.744 | mg/L | 0.0245 | 1.41% |
| K RADIAL† | 2654.8 | 2.287 | mg/L | 0.0188 | 2.287 | mg/L | 0.0188 | 0.82% |
| Mg RADIAL† | 1923.4 | 5.620 | mg/L | 0.0575 | 5.620 | mg/L | 0.0575 | 1.02% |
| Na RADIAL† | 2170.7 | 0.1653 | mg/L | 0.03155 | 0.1653 | mg/L | 0.03155 | 19.09% |
| Mo 202.031 | -30.9 | -0.001 | mg/L | 0.0004 | -0.001 | mg/L | 0.0004 | 35.80% |

**Sequence No.: 146**
**Sample ID: BI60402-BLK1**
**Analyst: KV**
**Logged In Analyst (Original) : administrator**
**Initial Sample Wt:**
**Dilution:**

**Autosampler Location: 122**
**Date Collected: 9/13/2016 4:01:51 AM**
**Data Type: Reprocessed on 9/13/2016 7:00:48 AM**

**Initial Sample Vol:**
**Sample Prep Vol:**

**Mean Data: BI60402-BLK1**

| Analyte | Mean Corrected Intensity | Calib. Conc. | Units | Std.Dev. | Sample Conc. | Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 15358120.0 | 4.994 | mg/L | 0.0286 | | | | 0.57% |
| Y RADIAL | 235795.4 | 5.136 | mg/L | 0.0615 | | | | 1.20% |
| As 188.979† | 5.9 | 0.0031 | mg/L | 0.00331 | 0.0031 | mg/L | 0.00331 | 105.77% |
| Tl 190.801† | 12.3 | 0.0042 | mg/L | 0.00066 | 0.0042 | mg/L | 0.00066 | 15.66% |
| Se 196.026† | -2.8 | -0.0029 | mg/L | 0.00399 | -0.0029 | mg/L | 0.00399 | 136.41% |
| Zn 206.200† | -182.8 | -0.0040 | mg/L | 0.00018 | -0.0040 | mg/L | 0.00018 | 4.41% |
| Sb 206.836† | -12.3 | -0.0036 | mg/L | 0.00172 | -0.0036 | mg/L | 0.00172 | 48.14% |
| Pb 220.353† | 10.4 | 0.0009 | mg/L | 0.00099 | 0.0009 | mg/L | 0.00099 | 105.08% |
| Cd 226.502† | -34.8 | -0.0002 | mg/L | 0.00010 | -0.0002 | mg/L | 0.00010 | 40.49% |
| Co 228.616† | -3.6 | -0.0001 | mg/L | 0.00002 | -0.0001 | mg/L | 0.00002 | 21.02% |
| Ni 232.003† | 3.1 | 0.0001 | mg/L | 0.00052 | 0.0001 | mg/L | 0.00052 | 400.52% |
| Ba 233.527† | -12.3 | -0.0001 | mg/L | 0.00005 | -0.0001 | mg/L | 0.00005 | 37.24% |
| Mn 257.610† | -132.6 | -0.0001 | mg/L | 0.00000 | -0.0001 | mg/L | 0.00000 | 3.01% |
| Cr 267.716† | -10.1 | -0.0001 | mg/L | 0.00018 | -0.0001 | mg/L | 0.00018 | 259.40% |
| Fe 273.955† | 2.8 | 0.0001 | mg/L | 0.00052 | 0.0001 | mg/L | 0.00052 | 516.05% |
| Mg 279.077† | -10.0 | -0.0005 | mg/L | 0.00291 | -0.0005 | mg/L | 0.00291 | 639.91% |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| V 292.402† | 18.3 | 0.0001 | mg/L | 0.00019 | 0.0001 | mg/L | 0.00019 297.66% |
| Al 308.215† | -1993.1 | -0.0714 | mg/L | 0.00090 | -0.0714 | mg/L | 0.00090 1.26% |
| Be 313.107† | -430.5 | -0.0001 | mg/L | 0.00008 | -0.0001 | mg/L | 0.00008 80.95% |
| Cu 324.752† | -158.8 | -0.0006 | mg/L | 0.00012 | -0.0006 | mg/L | 0.00012 19.41% |
| Ag 338.289† | -42.1 | -0.0003 | mg/L | 0.00021 | -0.0003 | mg/L | 0.00021 75.28% |
| Na 330.237† | -36.7 | -0.0369 | mg/L | 0.07571 | -0.0369 | mg/L | 0.07571 205.38% |
| Ca 227.546† | 44.6 | 0.1194 | mg/L | 0.03853 | 0.1194 | mg/L | 0.03853 32.27% |
| Al RADIAL† | -164.8 | -0.0857 | mg/L | 0.00596 | -0.0857 | mg/L | 0.00596 6.96% |
| Fe RADIAL† | 2.2 | 0.0060 | mg/L | 0.00556 | 0.0060 | mg/L | 0.00556 92.92% |
| Ca RADIAL† | 196.8 | 0.0427 | mg/L | 0.00378 | 0.0427 | mg/L | 0.00378 8.85% |
| K RADIAL† | 10.4 | 0.0090 | mg/L | 0.02314 | 0.0090 | mg/L | 0.02314 257.44% |
| Mg RADIAL† | 1.1 | 0.0033 | mg/L | 0.01517 | 0.0033 | mg/L | 0.01517 465.63% |
| Na RADIAL† | -3795.8 | -0.2890 | mg/L | 0.02695 | -0.2890 | mg/L | 0.02695 9.33% |
| Mo 202.031 | -10.6 | 0.000 | mg/L | 0.0006 | 0.000 | mg/L | 0.0006 147.85% |

**Sequence No.: 147**
**Sample ID: BI60402-SRM1**
**Analyst: KV**
**Logged In Analyst (Original) : administrator**
**Initial Sample Wt:**
**Dilution:**

**Autosampler Location: 123**
**Date Collected: 9/13/2016 4:06:58 AM**
**Data Type: Reprocessed on 9/13/2016 7:00:49 AM**

**Initial Sample Vol:**
**Sample Prep Vol:**

**Mean Data: BI60402-SRM1**

| Analyte | Mean Corrected Intensity | Calib. Conc. | Units | Std.Dev. | Sample Conc. | Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 15114966.2 | 4.915 | mg/L | 0.0309 | | | | 0.63% |
| Y RADIAL | 240022.6 | 5.228 | mg/L | 0.1065 | | | | 2.04% |
| As 188.979† | 2607.1 | 1.390 | mg/L | 0.0154 | 1.390 | mg/L | 0.0154 | 1.11% |
| Tl 190.801† | 5463.0 | 1.884 | mg/L | 0.0608 | 1.884 | mg/L | 0.0608 | 3.22% |
| Se 196.026† | 1388.3 | 1.503 | mg/L | 0.0122 | 1.503 | mg/L | 0.0122 | 0.81% |
| Zn 206.200† | 129476.5 | 2.837 | mg/L | 0.0153 | 2.837 | mg/L | 0.0153 | 0.54% |
| Sb 206.836† | 4497.3 | 1.308 | mg/L | 0.0200 | 1.308 | mg/L | 0.0200 | 1.53% |
| Pb 220.353† | 25004.7 | 2.293 | mg/L | 0.0354 | 2.293 | mg/L | 0.0354 | 1.54% |
| Cd 226.502† | 202157.4 | 1.366 | mg/L | 0.0083 | 1.366 | mg/L | 0.0083 | 0.61% |
| Co 228.616† | 29411.1 | 0.6885 | mg/L | 0.00958 | 0.6885 | mg/L | 0.00958 | 1.39% |
| Ni 232.003† | 73847.3 | 3.061 | mg/L | 0.0193 | 3.061 | mg/L | 0.0193 | 0.63% |
| Ba 233.527† | 244814.2 | 2.472 | mg/L | 0.0126 | 2.472 | mg/L | 0.0126 | 0.51% |
| Mn 257.610† | 5151707.9 | 5.386 | mg/L | 0.0258 | 5.386 | mg/L | 0.0258 | 0.48% |
| Cr 267.716† | 162744.2 | 1.127 | mg/L | 0.0052 | 1.127 | mg/L | 0.0052 | 0.47% |
| Fe 273.955† | 3435399.5 | 126.4 | mg/L | 0.61 | 126.4 | mg/L | 0.61 | 0.48% |
| Mg 279.077† | 782616.1 | 35.28 | mg/L | 0.206 | 35.28 | mg/L | 0.206 | 0.58% |
| V 292.402† | 324824.4 | 1.117 | mg/L | 0.0063 | 1.117 | mg/L | 0.0063 | 0.57% |
| Al 308.215† | 2476530.1 | 88.66 | mg/L | 0.427 | 88.66 | mg/L | 0.427 | 0.48% |
| Be 313.107† | 5513031.6 | 1.264 | mg/L | 0.0017 | 1.264 | mg/L | 0.0017 | 0.14% |
| Cu 324.752† | 179443.6 | 0.6803 | mg/L | 0.00382 | 0.6803 | mg/L | 0.00382 | 0.56% |
| Ag 338.289† | 58322.1 | 0.3938 | mg/L | 0.00174 | 0.3938 | mg/L | 0.00174 | 0.44% |
| Na 330.237† | 8563.8 | 9.291 | mg/L | 0.1962 | 9.291 | mg/L | 0.1962 | 2.11% |
| Ca 227.546† | 23085.9 | 62.99 | mg/L | 0.800 | 62.99 | mg/L | 0.800 | 1.27% |
| Al RADIAL† | 162034.2 | 84.24 | mg/L | 0.216 | 84.24 | mg/L | 0.216 | 0.26% |
| Fe RADIAL† | 49089.3 | 133.3 | mg/L | 2.71 | 133.3 | mg/L | 2.71 | 2.04% |
| Ca RADIAL† | 285920.2 | 62.07 | mg/L | 0.037 | 62.07 | mg/L | 0.037 | 0.06% |
| K RADIAL† | 34386.6 | 29.62 | mg/L | 0.661 | 29.62 | mg/L | 0.661 | 2.23% |
| Mg RADIAL† | 12259.6 | 35.83 | mg/L | 0.870 | 35.83 | mg/L | 0.870 | 2.43% |
| Na RADIAL† | 92639.5 | 7.053 | mg/L | 0.0130 | 7.053 | mg/L | 0.0130 | 0.18% |
| Mo 202.031 | 23039.7 | 0.844 | mg/L | 0.0077 | 0.844 | mg/L | 0.0077 | 0.91% |

**Sequence No.: 148**
**Sample ID: 16I0297-01**
**Analyst: KV**
**Logged In Analyst (Original) : administrator**
**Initial Sample Wt:**
**Dilution:**

**Autosampler Location: 124**
**Date Collected: 9/13/2016 4:14:39 AM**
**Data Type: Reprocessed on 9/13/2016 7:00:49 AM**

**Initial Sample Vol:**
**Sample Prep Vol:**

**Mean Data: 16I0297-01**

| Analyte | Mean Corrected Intensity | Calib. Conc. | Units | Std.Dev. | Sample Conc. | Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 14930709.4 | 4.855 | mg/L | 0.0350 | | | | 0.72% |
| Y RADIAL | 234341.0 | 5.105 | mg/L | 0.0481 | | | | 0.94% |

| | | | | | | |
|---|---|---|---|---|---|---|
| As 188.979† | 34.3 | 0.0321 mg/L | 0.00051 | 0.0321 mg/L | 0.00051 | 1.58% |
| Tl 190.801† | -227.4 | -0.0704 mg/L | 0.00412 | -0.0704 mg/L | 0.00412 | 5.86% |
| Se 196.026† | -46.3 | 0.0220 mg/L | 0.01014 | 0.0220 mg/L | 0.01014 | 46.10% |
| Zn 206.200† | 27009.8 | 0.5905 mg/L | 0.00806 | 0.5905 mg/L | 0.00806 | 1.37% |
| Sb 206.836† | -29.4 | -0.0102 mg/L | 0.00332 | -0.0102 mg/L | 0.00332 | 32.66% |
| Pb 220.353† | 3217.4 | 0.2894 mg/L | 0.00152 | 0.2894 mg/L | 0.00152 | 0.52% |
| Cd 226.502† | 2065.3 | -0.0030 mg/L | 0.00016 | -0.0030 mg/L | 0.00016 | 5.29% |
| Co 228.616† | 3213.1 | 0.0782 mg/L | 0.00065 | 0.0782 mg/L | 0.00065 | 0.83% |
| Ni 232.003† | 6607.7 | 0.2839 mg/L | 0.00181 | 0.2839 mg/L | 0.00181 | 0.64% |
| Ba 233.527† | 40285.0 | 0.4068 mg/L | 0.00465 | 0.4068 mg/L | 0.00465 | 1.14% |
| Mn 257.610† | 1310313.1 | 1.386 mg/L | 0.0234 | 1.386 mg/L | 0.0234 | 1.69% |
| Cr 267.716† | 55899.4 | 0.3881 mg/L | 0.00422 | 0.3881 mg/L | 0.00422 | 1.09% |
| Fe 273.955† | 4035441.7 | 148.5 mg/L | 0.54 | 148.5 mg/L | 0.54 | 0.36% |
| Mg 279.077† | 789991.9 | 35.61 mg/L | 0.575 | 35.61 mg/L | 0.575 | 1.61% |
| V 292.402† | 107464.0 | 0.3641 mg/L | 0.00504 | 0.3641 mg/L | 0.00504 | 1.39% |
| Al 308.215† | 2127661.8 | 76.18 mg/L | 1.382 | 76.18 mg/L | 1.382 | 1.81% |
| Be 313.107† | -15198.9 | -0.0035 mg/L | 0.00013 | -0.0035 mg/L | 0.00013 | 3.67% |
| Cu 324.752† | 79588.1 | 0.3056 mg/L | 0.00454 | 0.3056 mg/L | 0.00454 | 1.49% |
| Ag 338.289† | -6517.2 | -0.0409 mg/L | 0.00025 | -0.0409 mg/L | 0.00025 | 0.62% |
| Na 330.237† | 4890.9 | 5.659 mg/L | 0.0809 | 5.659 mg/L | 0.0809 | 1.43% |
| Ca 227.546† | 6801.6 | 19.60 mg/L | 0.076 | 19.60 mg/L | 0.076 | 0.39% |
| Al RADIAL† | 140592.4 | 73.10 mg/L | 0.173 | 73.10 mg/L | 0.173 | 0.24% |
| Fe RADIAL† | 57362.9 | 155.7 mg/L | 3.11 | 155.7 mg/L | 3.11 | 2.00% |
| Ca RADIAL† | 85988.0 | 18.67 mg/L | 0.390 | 18.67 mg/L | 0.390 | 2.09% |
| K RADIAL† | 17621.1 | 15.18 mg/L | 0.301 | 15.18 mg/L | 0.301 | 1.99% |
| Mg RADIAL† | 12243.2 | 35.78 mg/L | 0.782 | 35.78 mg/L | 0.782 | 2.18% |
| Na RADIAL† | 114920.7 | 8.749 mg/L | 0.1109 | 8.749 mg/L | 0.1109 | 1.27% |
| Mo 202.031 | 92.4 | 0.003 mg/L | 0.0006 | 0.003 mg/L | 0.0006 | 16.59% |

**Sequence No.: 149**
**Sample ID: 16I0297-02**
**Analyst: KV**
**Logged In Analyst (Original) : administrator**
**Initial Sample Wt:**
**Dilution:**

**Autosampler Location: 125**
**Date Collected: 9/13/2016 4:19:24 AM**
**Data Type: Reprocessed on 9/13/2016 7:00:50 AM**

**Initial Sample Vol:**
**Sample Prep Vol:**

**Mean Data: 16I0297-02**

| Analyte | Mean Corrected Intensity | Calib. Conc. | Calib. Units | Std.Dev. | Sample Conc. | Sample Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 18702193.2 | 6.081 | mg/L | 0.0731 | | | | 1.20% |
| Y RADIAL | 311480.9 | 6.785 | mg/L | 0.0496 | | | | 0.73% |
| As 188.979† | 54.0 | 0.0422 | mg/L | 0.00255 | 0.0422 | mg/L | 0.00255 | 6.04% |
| Tl 190.801† | -196.7 | -0.0600 | mg/L | 0.00288 | -0.0600 | mg/L | 0.00288 | 4.80% |
| Se 196.026† | -57.7 | 0.0085 | mg/L | 0.00994 | 0.0085 | mg/L | 0.00994 | 116.47% |
| Zn 206.200† | 35226.6 | 0.7706 | mg/L | 0.01450 | 0.7706 | mg/L | 0.01450 | 1.88% |
| Sb 206.836† | -58.3 | -0.0185 | mg/L | 0.00217 | -0.0185 | mg/L | 0.00217 | 11.73% |
| Pb 220.353† | 8686.9 | 0.7934 | mg/L | 0.01644 | 0.7934 | mg/L | 0.01644 | 2.07% |
| Cd 226.502† | 2601.2 | 0.0010 | mg/L | 0.00043 | 0.0010 | mg/L | 0.00043 | 41.67% |
| Co 228.616† | 2894.1 | 0.0707 | mg/L | 0.00076 | 0.0707 | mg/L | 0.00076 | 1.07% |
| Ni 232.003† | 4426.2 | 0.1935 | mg/L | 0.00305 | 0.1935 | mg/L | 0.00305 | 1.58% |
| Ba 233.527† | 68084.1 | 0.6875 | mg/L | 0.01270 | 0.6875 | mg/L | 0.01270 | 1.85% |
| Mn 257.610† | 1946051.9 | 2.048 | mg/L | 0.0336 | 2.048 | mg/L | 0.0336 | 1.64% |
| Cr 267.716† | 25922.4 | 0.1808 | mg/L | 0.00288 | 0.1808 | mg/L | 0.00288 | 1.59% |
| Fe 273.955† | 4085276.6 | 150.3 | mg/L | 2.55 | 150.3 | mg/L | 2.55 | 1.69% |
| Mg 279.077† | 922825.0 | 41.60 | mg/L | 0.752 | 41.60 | mg/L | 0.752 | 1.81% |
| V 292.402† | 125963.1 | 0.4283 | mg/L | 0.00707 | 0.4283 | mg/L | 0.00707 | 1.65% |
| Al 308.215† | 2212014.5 | 79.19 | mg/L | 1.347 | 79.19 | mg/L | 1.347 | 1.70% |
| Be 313.107† | -12025.6 | -0.0028 | mg/L | 0.00037 | -0.0028 | mg/L | 0.00037 | 13.52% |
| Cu 324.752† | 254147.2 | 0.9621 | mg/L | 0.01792 | 0.9621 | mg/L | 0.01792 | 1.86% |
| Ag 338.289† | -6233.6 | -0.0404 | mg/L | 0.00198 | -0.0404 | mg/L | 0.00198 | 4.91% |
| Na 330.237† | -245.3 | 0.5928 | mg/L | 0.03459 | 0.5928 | mg/L | 0.03459 | 5.83% |
| Ca 227.546† | 51876.9 | 140.2 | mg/L | 2.67 | 140.2 | mg/L | 2.67 | 1.91% |
| Al RADIAL† | 141988.9 | 73.82 | mg/L | 0.381 | 73.82 | mg/L | 0.381 | 0.52% |
| Fe RADIAL† | 56034.7 | 152.1 | mg/L | 0.67 | 152.1 | mg/L | 0.67 | 0.44% |
| Ca RADIAL† | 632050.4 | 137.2 | mg/L | 0.59 | 137.2 | mg/L | 0.59 | 0.43% |
| K RADIAL† | 20978.8 | 18.07 | mg/L | 0.127 | 18.07 | mg/L | 0.127 | 0.70% |
| Mg RADIAL† | 13700.6 | 40.04 | mg/L | 0.198 | 40.04 | mg/L | 0.198 | 0.49% |
| Na RADIAL† | 31956.7 | 2.433 | mg/L | 0.0105 | 2.433 | mg/L | 0.0105 | 0.43% |
| Mo 202.031 | 114.1 | 0.004 | mg/L | 0.0003 | 0.004 | mg/L | 0.0003 | 7.87% |

**Sequence No.: 150**
**Sample ID: 16I0297-03**
**Analyst: KV**
**Logged In Analyst (Original) : administrator**
**Initial Sample Wt:**
**Dilution:**

**Autosampler Location: 126**
**Date Collected: 9/13/2016 4:24:11 AM**
**Data Type: Reprocessed on 9/13/2016 7:00:51 AM**

**Initial Sample Vol:**
**Sample Prep Vol:**

**Mean Data: 16I0297-03**

| Analyte | Mean Corrected Intensity | Calib. Conc. | Calib. Units | Std.Dev. | Sample Conc. | Sample Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 12619469.6 | 4.103 | mg/L | 0.0213 | | | | 0.52% |
| Y RADIAL | 212465.0 | 4.628 | mg/L | 0.0412 | | | | 0.89% |
| As 188.979† | 93.4 | 0.3058 | mg/L | 0.02272 | 0.3058 | mg/L | 0.02272 | 7.43% |
| Tl 190.801† | -368.8 | 0.0157 | mg/L | 0.01482 | 0.0157 | mg/L | 0.01482 | 94.30% |
| Se 196.026† | -709.2 | 0.5451 | mg/L | 0.01965 | 0.5451 | mg/L | 0.01965 | 3.61% |
| Zn 206.200† | 525737.5 | 11.50 | mg/L | 0.092 | 11.50 | mg/L | 0.092 | 0.80% |
| Sb 206.836† | -373.8 | -0.1373 | mg/L | 0.00668 | -0.1373 | mg/L | 0.00668 | 4.87% |
| Pb 220.353† | 200824.8 | 18.15 | mg/L | 0.173 | 18.15 | mg/L | 0.173 | 0.95% |
| Cd 226.502† | 45756.1 | -0.0009 | mg/L | 0.00967 | -0.0009 | mg/L | 0.00967 | >999.9% |
| Co 228.616† | 7671.8 | 0.2385 | mg/L | 0.00619 | 0.2385 | mg/L | 0.00619 | 2.59% |
| Ni 232.003† | 64653.9 | 2.871 | mg/L | 0.0428 | 2.871 | mg/L | 0.0428 | 1.49% |
| Ba 233.527† | 1642113.4 | 16.58 | mg/L | 0.165 | 16.58 | mg/L | 0.165 | 0.99% |
| Mn 257.610† | 11723187.5 | 12.59 | mg/L | 0.021 | 12.59 | mg/L | 0.021 | 0.17% |
| Cr 267.716† | 284249.6 | 1.994 | mg/L | 0.0178 | 1.994 | mg/L | 0.0178 | 0.89% |
| Fe 273.955† | 51173110.8 | 1883 | mg/L | 6.6 | 1883 | mg/L | 6.6 | 0.35% |
| Mg 279.077† | 1321649.2 | 59.15 | mg/L | 0.590 | 59.15 | mg/L | 0.590 | 1.00% |
| V 292.402† | 4784816.8 | 16.42 | mg/L | 0.200 | 16.42 | mg/L | 0.200 | 1.22% |
| Al 308.215† | 885268.9 | 31.92 | mg/L | 0.362 | 31.92 | mg/L | 0.362 | 1.13% |
| Be 313.107† | 7234.4 | 0.0017 | mg/L | 0.00002 | 0.0017 | mg/L | 0.00002 | 1.46% |
| Cu 324.752† | 5015336.8 | 18.98 | mg/L | 0.207 | 18.98 | mg/L | 0.207 | 1.09% |
| Ag 338.289† | -15218.9 | -0.0485 | mg/L | 0.00139 | -0.0485 | mg/L | 0.00139 | 2.87% |
| Na 330.237† | 16140.4 | 29.71 | mg/L | 0.152 | 29.71 | mg/L | 0.152 | 0.51% |
| Ca 227.546† | 118783.4 | 342.5 | mg/L | 2.64 | 342.5 | mg/L | 2.64 | 0.77% |
| Al RADIAL† | 54437.9 | 28.59 | mg/L | 0.186 | 28.59 | mg/L | 0.186 | 0.65% |
| Fe RADIAL† | 1049380.7 | 2849 | mg/L | 43.4 | 2849 | mg/L | 43.4 | 1.52% |
| Ca RADIAL† | 1319149.4 | 286.4 | mg/L | 4.65 | 286.4 | mg/L | 4.65 | 1.62% |
| K RADIAL† | 3950.2 | 3.403 | mg/L | 0.0296 | 3.403 | mg/L | 0.0296 | 0.87% |
| Mg RADIAL† | 21303.0 | 62.00 | mg/L | 0.410 | 62.00 | mg/L | 0.410 | 0.66% |
| Na RADIAL† | 46793.7 | 3.563 | mg/L | 0.0312 | 3.563 | mg/L | 0.0312 | 0.88% |
| Mo 202.031 | 3926.6 | 0.144 | mg/L | 0.0022 | 0.144 | mg/L | 0.0022 | 1.52% |

**Sequence No.: 151**
**Sample ID: 16I0297-04**
**Analyst: KV**
**Logged In Analyst (Original) : administrator**
**Initial Sample Wt:**
**Dilution:**

**Autosampler Location: 127**
**Date Collected: 9/13/2016 4:31:41 AM**
**Data Type: Reprocessed on 9/13/2016 7:00:52 AM**

**Initial Sample Vol:**
**Sample Prep Vol:**

**Mean Data: 16I0297-04**

| Analyte | Mean Corrected Intensity | Calib. Conc. | Calib. Units | Std.Dev. | Sample Conc. | Sample Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 14222714.9 | 4.624 | mg/L | 0.0356 | | | | 0.77% |
| Y RADIAL | 230541.2 | 5.022 | mg/L | 0.0387 | | | | 0.77% |
| As 188.979† | -29.7 | 0.1068 | mg/L | 0.01094 | 0.1068 | mg/L | 0.01094 | 10.24% |
| Tl 190.801† | -179.3 | 0.0064 | mg/L | 0.00610 | 0.0064 | mg/L | 0.00610 | 94.63% |
| Se 196.026† | -345.1 | 0.2539 | mg/L | 0.01780 | 0.2539 | mg/L | 0.01780 | 7.01% |
| Zn 206.200† | 364102.2 | 7.967 | mg/L | 0.1396 | 7.967 | mg/L | 0.1396 | 1.75% |
| Sb 206.836† | 86.1 | 0.0114 | mg/L | 0.00793 | 0.0114 | mg/L | 0.00793 | 69.35% |
| Pb 220.353† | 1018460.9 | 93.32 | mg/L | 1.618 | 93.32 | mg/L | 1.618 | 1.73% |
| Cd 226.502† | 20608.2 | -0.0090 | mg/L | 0.00176 | -0.0090 | mg/L | 0.00176 | 19.67% |
| Co 228.616† | 7672.9 | 0.2074 | mg/L | 0.00104 | 0.2074 | mg/L | 0.00104 | 0.50% |
| Ni 232.003† | 44781.4 | 1.946 | mg/L | 0.0104 | 1.946 | mg/L | 0.0104 | 0.53% |
| Ba 233.527† | 357217.5 | 3.607 | mg/L | 0.0653 | 3.607 | mg/L | 0.0653 | 1.81% |
| Mn 257.610† | 4164386.1 | 4.517 | mg/L | 0.0718 | 4.517 | mg/L | 0.0718 | 1.59% |
| Cr 267.716† | 49084.8 | 0.3531 | mg/L | 0.00499 | 0.3531 | mg/L | 0.00499 | 1.41% |
| Fe 273.955† | 29906449.5 | 1101 | mg/L | 1.9 | 1101 | mg/L | 1.9 | 0.17% |
| Mg 279.077† | 171321.8 | 7.507 | mg/L | 0.1154 | 7.507 | mg/L | 0.1154 | 1.54% |
| V 292.402† | 86493.1 | 0.2312 | mg/L | 0.00207 | 0.2312 | mg/L | 0.00207 | 0.89% |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Al 308.215† | 1229458.4 | 44.12 | mg/L | 0.691 | 44.12 | mg/L | 0.691 | 1.57% |
| Be 313.107† | 18014.0 | 0.0041 | mg/L | 0.00001 | 0.0041 | mg/L | 0.00001 | 0.20% |
| Cu 324.752† | 1256372.2 | 4.780 | mg/L | 0.0756 | 4.780 | mg/L | 0.0756 | 1.58% |
| Ag 338.289† | 15742.3 | 0.1319 | mg/L | 0.00277 | 0.1319 | mg/L | 0.00277 | 2.10% |
| Na 330.237† | 14153.0 | 20.63 | mg/L | 0.201 | 20.63 | mg/L | 0.201 | 0.97% |
| Ca 227.546† | 37184.3 | 111.3 | mg/L | 1.77 | 111.3 | mg/L | 1.77 | 1.59% |
| Al RADIAL† | 79720.7 | 41.58 | mg/L | 0.159 | 41.58 | mg/L | 0.159 | 0.38% |
| Fe RADIAL† | 501321.0 | 1361 | mg/L | 6.5 | 1361 | mg/L | 6.5 | 0.48% |
| Ca RADIAL† | 438194.0 | 95.12 | mg/L | 0.096 | 95.12 | mg/L | 0.096 | 0.10% |
| K RADIAL† | 11350.8 | 9.779 | mg/L | 0.0515 | 9.779 | mg/L | 0.0515 | 0.53% |
| Mg RADIAL† | 2757.6 | 7.927 | mg/L | 0.0998 | 7.927 | mg/L | 0.0998 | 1.26% |
| Na RADIAL† | 82661.3 | 6.293 | mg/L | 0.0172 | 6.293 | mg/L | 0.0172 | 0.27% |
| Mo 202.031 | -297.6 | -0.011 | mg/L | 0.0002 | -0.011 | mg/L | 0.0002 | 1.99% |

**Sequence No.: 152**
**Sample ID: 16I0297-05**
**Analyst: KV**
**Logged In Analyst (Original) : administrator**
**Initial Sample Wt:**
**Dilution:**

**Autosampler Location: 128**
**Date Collected: 9/13/2016 4:39:25 AM**
**Data Type: Reprocessed on 9/13/2016 7:00:52 AM**

**Initial Sample Vol:**
**Sample Prep Vol:**

**Mean Data: 16I0297-05**

| Analyte | Mean Corrected Intensity | Calib. Conc. | Units | Std.Dev. | Sample Conc. | Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 15209559.8 | 4.945 | mg/L | 0.0725 | | | | 1.47% |
| Y RADIAL | 248224.1 | 5.407 | mg/L | 0.0510 | | | | 0.94% |
| As 188.979† | 105.3 | 0.0736 | mg/L | 0.00475 | 0.0736 | mg/L | 0.00475 | 6.46% |
| Tl 190.801† | -359.9 | -0.1137 | mg/L | 0.01967 | -0.1137 | mg/L | 0.01967 | 17.30% |
| Se 196.026† | -63.0 | 0.0244 | mg/L | 0.00945 | 0.0244 | mg/L | 0.00945 | 38.71% |
| Zn 206.200† | 21920.0 | 0.4785 | mg/L | 0.01211 | 0.4785 | mg/L | 0.01211 | 2.53% |
| Sb 206.836† | -72.5 | -0.0232 | mg/L | 0.00296 | -0.0232 | mg/L | 0.00296 | 12.80% |
| Pb 220.353† | 36840.4 | 3.376 | mg/L | 0.0830 | 3.376 | mg/L | 0.0830 | 2.46% |
| Cd 226.502† | 2967.9 | -0.0017 | mg/L | 0.00090 | -0.0017 | mg/L | 0.00090 | 52.67% |
| Co 228.616† | 5431.8 | 0.1308 | mg/L | 0.00152 | 0.1308 | mg/L | 0.00152 | 1.16% |
| Ni 232.003† | 5977.0 | 0.2609 | mg/L | 0.00227 | 0.2609 | mg/L | 0.00227 | 0.87% |
| Ba 233.527† | 63814.8 | 0.6444 | mg/L | 0.01654 | 0.6444 | mg/L | 0.01654 | 2.57% |
| Mn 257.610† | 3445364.4 | 3.617 | mg/L | 0.0771 | 3.617 | mg/L | 0.0771 | 2.13% |
| Cr 267.716† | 37030.9 | 0.2581 | mg/L | 0.00657 | 0.2581 | mg/L | 0.00657 | 2.55% |
| Fe 273.955† | 5333650.5 | 196.3 | mg/L | 0.43 | 196.3 | mg/L | 0.43 | 0.22% |
| Mg 279.077† | 1482803.7 | 66.85 | mg/L | 1.423 | 66.85 | mg/L | 1.423 | 2.13% |
| V 292.402† | 96885.3 | 0.3253 | mg/L | 0.00683 | 0.3253 | mg/L | 0.00683 | 2.10% |
| Al 308.215† | 3507470.2 | 125.6 | mg/L | 0.36 | 125.6 | mg/L | 0.36 | 0.29% |
| Be 313.107† | -33630.5 | -0.0077 | mg/L | 0.00066 | -0.0077 | mg/L | 0.00066 | 8.56% |
| Cu 324.752† | 58587.6 | 0.2284 | mg/L | 0.00564 | 0.2284 | mg/L | 0.00564 | 2.47% |
| Ag 338.289† | -11234.5 | -0.0718 | mg/L | 0.00232 | -0.0718 | mg/L | 0.00232 | 3.23% |
| Na 330.237† | 1293.9 | 2.255 | mg/L | 0.0748 | 2.255 | mg/L | 0.0748 | 3.32% |
| Ca 227.546† | 10580.8 | 30.12 | mg/L | 0.608 | 30.12 | mg/L | 0.608 | 2.02% |
| Al RADIAL† | 227796.2 | 118.4 | mg/L | 3.41 | 118.4 | mg/L | 3.41 | 2.88% |
| Fe RADIAL† | 73581.4 | 199.8 | mg/L | 0.51 | 199.8 | mg/L | 0.51 | 0.25% |
| Ca RADIAL† | 131405.6 | 28.52 | mg/L | 0.036 | 28.52 | mg/L | 0.036 | 0.13% |
| K RADIAL† | 40137.5 | 34.58 | mg/L | 0.240 | 34.58 | mg/L | 0.240 | 0.69% |
| Mg RADIAL† | 21741.8 | 63.55 | mg/L | 0.142 | 63.55 | mg/L | 0.142 | 0.22% |
| Na RADIAL† | 84445.0 | 6.429 | mg/L | 0.2018 | 6.429 | mg/L | 0.2018 | 3.14% |
| Mo 202.031 | -22.5 | -0.001 | mg/L | 0.0009 | -0.001 | mg/L | 0.0009 | 111.71% |

**Sequence No.: 153**
**Sample ID: SEQ-CCVD**
**Analyst: KV**
**Logged In Analyst (Original) : administrator**
**Initial Sample Wt:**
**Dilution:**

**Autosampler Location: 8**
**Date Collected: 9/13/2016 4:44:11 AM**
**Data Type: Reprocessed on 9/13/2016 7:00:53 AM**

**Initial Sample Vol:**
**Sample Prep Vol:**

**Mean Data: SEQ-CCVD**

| Analyte | Mean Corrected Intensity | Calib. Conc. | Units | Std.Dev. | Sample Conc. | Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 14913828.2 | 4.849 | mg/L | 0.0582 | | | | 1.20% |
| Y RADIAL | 234471.8 | 5.108 | mg/L | 0.0471 | | | | 0.92% |
| As 188.979† | 473.7 | 0.2508 | mg/L | 0.00206 | 0.2508 | mg/L | 0.00206 | 0.82% |

| | | | | | | |
|---|---|---|---|---|---|---|
| Tl 190.801† | 665.2 | 0.2289 mg/L | 0.00240 | 0.2289 mg/L | 0.00240 | 1.05% |
| Se 196.026† | 233.7 | 0.2452 mg/L | 0.00521 | 0.2452 mg/L | 0.00521 | 2.12% |
| Zn 206.200† | 115553.1 | 2.533 mg/L | 0.0144 | 2.533 mg/L | 0.0144 | 0.57% |
| Sb 206.836† | 832.4 | 0.2422 mg/L | 0.00559 | 0.2422 mg/L | 0.00559 | 2.31% |
| Pb 220.353† | 2866.3 | 0.2641 mg/L | 0.00285 | 0.2641 mg/L | 0.00285 | 1.08% |
| Cd 226.502† | 18576.8 | 0.1263 mg/L | 0.00036 | 0.1263 mg/L | 0.00036 | 0.28% |
| Co 228.616† | 110190.0 | 2.569 mg/L | 0.0120 | 2.569 mg/L | 0.0120 | 0.47% |
| Ni 232.003† | 61294.8 | 2.533 mg/L | 0.0068 | 2.533 mg/L | 0.0068 | 0.27% |
| Ba 233.527† | 1016133.2 | 10.26 mg/L | 0.127 | 10.26 mg/L | 0.127 | 1.24% |
| Mn 257.610† | 2461597.2 | 2.566 mg/L | 0.0292 | 2.566 mg/L | 0.0292 | 1.14% |
| Cr 267.716† | 151128.3 | 1.045 mg/L | 0.0064 | 1.045 mg/L | 0.0064 | 0.61% |
| Fe 273.955† | 141299.5 | 5.200 mg/L | 0.0309 | 5.200 mg/L | 0.0309 | 0.59% |
| Mg 279.077† | 567870.0 | 25.61 mg/L | 0.320 | 25.61 mg/L | 0.320 | 1.25% |
| V 292.402† | 732806.8 | 2.536 mg/L | 0.0259 | 2.536 mg/L | 0.0259 | 1.02% |
| Al 308.215† | 281545.6 | 10.08 mg/L | 0.048 | 10.08 mg/L | 0.048 | 0.48% |
| Be 313.107† | 1115082.9 | 0.2557 mg/L | 0.00225 | 0.2557 mg/L | 0.00225 | 0.88% |
| Cu 324.752† | 343915.2 | 1.294 mg/L | 0.0063 | 1.294 mg/L | 0.0063 | 0.48% |
| Ag 338.289† | 194199.5 | 1.304 mg/L | 0.0078 | 1.304 mg/L | 0.0078 | 0.60% |
| Na 330.237† | 23658.0 | 23.84 mg/L | 0.081 | 23.84 mg/L | 0.081 | 0.34% |
| Ca 227.546† | 9454.4 | 25.35 mg/L | 0.257 | 25.35 mg/L | 0.257 | 1.01% |
| Al RADIAL† | 18422.8 | 9.576 mg/L | 0.0337 | 9.576 mg/L | 0.0337 | 0.35% |
| Fe RADIAL† | 1920.8 | 5.215 mg/L | 0.0747 | 5.215 mg/L | 0.0747 | 1.43% |
| Ca RADIAL† | 117456.1 | 25.50 mg/L | 0.023 | 25.50 mg/L | 0.023 | 0.09% |
| K RADIAL† | 5912.8 | 5.094 mg/L | 0.0670 | 5.094 mg/L | 0.0670 | 1.31% |
| Mg RADIAL† | 8938.3 | 26.13 mg/L | 0.353 | 26.13 mg/L | 0.353 | 1.35% |
| Na RADIAL† | 342238.8 | 26.06 mg/L | 0.246 | 26.06 mg/L | 0.246 | 0.94% |
| Mo 202.031 | 28652.5 | 1.049 mg/L | 0.0182 | 1.049 mg/L | 0.0182 | 1.74% |

**Sequence No.: 154**
**Sample ID: SEQ-CCBD**
**Analyst: KV**
**Logged In Analyst (Original) : administrator**
**Initial Sample Wt:**
**Dilution:**

**Autosampler Location: 1**
**Date Collected: 9/13/2016 4:52:18 AM**
**Data Type: Reprocessed on 9/13/2016 7:00:54 AM**

**Initial Sample Vol:**
**Sample Prep Vol:**

**Mean Data: SEQ-CCBD**

| Analyte | Mean Corrected Intensity | Calib. Conc. | Calib. Units | Std.Dev. | Sample Conc. | Sample Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 15351868.8 | 4.992 | mg/L | 0.0394 | | | | 0.79% |
| Y RADIAL | 230598.0 | 5.023 | mg/L | 0.0595 | | | | 1.18% |
| As 188.979† | -19.8 | -0.0105 | mg/L | 0.00520 | -0.0105 | mg/L | 0.00520 | 49.65% |
| Tl 190.801† | -5.0 | -0.0017 | mg/L | 0.00091 | -0.0017 | mg/L | 0.00091 | 53.43% |
| Se 196.026† | 4.3 | 0.0044 | mg/L | 0.00439 | 0.0044 | mg/L | 0.00439 | 99.30% |
| Zn 206.200† | -97.1 | -0.0021 | mg/L | 0.00017 | -0.0021 | mg/L | 0.00017 | 8.12% |
| Sb 206.836† | -0.5 | -0.0001 | mg/L | 0.00151 | -0.0001 | mg/L | 0.00151 | >999.9% |
| Pb 220.353† | 44.2 | 0.0041 | mg/L | 0.00083 | 0.0041 | mg/L | 0.00083 | 20.44% |
| Cd 226.502† | -19.7 | -0.0001 | mg/L | 0.00005 | -0.0001 | mg/L | 0.00005 | 34.65% |
| Co 228.616† | 8.1 | 0.0002 | mg/L | 0.00008 | 0.0002 | mg/L | 0.00008 | 40.98% |
| Ni 232.003† | -6.5 | -0.0003 | mg/L | 0.00115 | -0.0003 | mg/L | 0.00115 | 428.18% |
| Ba 233.527† | 6.9 | 0.0001 | mg/L | 0.00007 | 0.0001 | mg/L | 0.00007 | 104.97% |
| Mn 257.610† | -66.2 | -0.0001 | mg/L | 0.00000 | -0.0001 | mg/L | 0.00000 | 6.50% |
| Cr 267.716† | 50.6 | 0.0003 | mg/L | 0.00037 | 0.0003 | mg/L | 0.00037 | 106.21% |
| Fe 273.955† | 76.6 | 0.0028 | mg/L | 0.00018 | 0.0028 | mg/L | 0.00018 | 6.27% |
| Mg 279.077† | -43.1 | -0.0019 | mg/L | 0.00019 | -0.0019 | mg/L | 0.00019 | 9.94% |
| V 292.402† | 24.5 | 0.0001 | mg/L | 0.00007 | 0.0001 | mg/L | 0.00007 | 82.80% |
| Al 308.215† | -1478.7 | -0.0529 | mg/L | 0.00604 | -0.0529 | mg/L | 0.00604 | 11.40% |
| Be 313.107† | 77.6 | 0.0000 | mg/L | 0.00007 | 0.0000 | mg/L | 0.00007 | 370.88% |
| Cu 324.752† | -29.9 | -0.0001 | mg/L | 0.00007 | -0.0001 | mg/L | 0.00007 | 59.72% |
| Ag 338.289† | 51.1 | 0.0003 | mg/L | 0.00033 | 0.0003 | mg/L | 0.00033 | 95.37% |
| Na 330.237† | -13.9 | -0.0139 | mg/L | 0.06015 | -0.0139 | mg/L | 0.06015 | 431.68% |
| Ca 227.546† | 24.2 | 0.0648 | mg/L | 0.04764 | 0.0648 | mg/L | 0.04764 | 73.55% |
| Al RADIAL† | -94.0 | -0.0488 | mg/L | 0.00742 | -0.0488 | mg/L | 0.00742 | 15.20% |
| Fe RADIAL† | -0.5 | -0.0013 | mg/L | 0.01311 | -0.0013 | mg/L | 0.01311 | 982.84% |
| Ca RADIAL† | 62.6 | 0.0136 | mg/L | 0.00337 | 0.0136 | mg/L | 0.00337 | 24.78% |
| K RADIAL† | 19.6 | 0.0169 | mg/L | 0.01369 | 0.0169 | mg/L | 0.01369 | 80.98% |
| Mg RADIAL† | 3.1 | 0.0091 | mg/L | 0.02537 | 0.0091 | mg/L | 0.02537 | 278.57% |
| Na RADIAL† | -3832.2 | -0.2918 | mg/L | 0.02558 | -0.2918 | mg/L | 0.02558 | 8.77% |
| Mo 202.031 | 2.7 | 0.000 | mg/L | 0.0002 | 0.000 | mg/L | 0.0002 | 170.45% |

**Sequence No.: 155**
**Sample ID: 16I0297-06**
**Analyst: KV**
**Logged In Analyst (Original) : administrator**
**Initial Sample Wt:**
**Dilution:**

**Autosampler Location: 129**
**Date Collected: 9/13/2016 4:57:22 AM**
**Data Type: Reprocessed on 9/13/2016 7:00:54 AM**

**Initial Sample Vol:**
**Sample Prep Vol:**

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**Mean Data: 16I0297-06**

| Analyte | Mean Corrected Intensity | Conc. | Calib. Units | Std.Dev. | Sample Conc. | Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 14965490.9 | 4.866 | mg/L | 0.0186 | | | | 0.38% |
| Y RADIAL | 245987.9 | 5.358 | mg/L | 0.1021 | | | | 1.91% |
| As 188.979† | 44.3 | 0.0438 | mg/L | 0.00712 | 0.0438 | mg/L | 0.00712 | 16.25% |
| Tl 190.801† | -249.2 | -0.0743 | mg/L | 0.00128 | -0.0743 | mg/L | 0.00128 | 1.73% |
| Se 196.026† | -60.9 | 0.0390 | mg/L | 0.00085 | 0.0390 | mg/L | 0.00085 | 2.19% |
| Zn 206.200† | 28077.8 | 0.6132 | mg/L | 0.00152 | 0.6132 | mg/L | 0.00152 | 0.25% |
| Sb 206.836† | -65.5 | -0.0214 | mg/L | 0.00178 | -0.0214 | mg/L | 0.00178 | 8.34% |
| Pb 220.353† | 8376.7 | 0.7591 | mg/L | 0.00187 | 0.7591 | mg/L | 0.00187 | 0.25% |
| Cd 226.502† | 3609.7 | -0.0003 | mg/L | 0.00012 | -0.0003 | mg/L | 0.00012 | 36.51% |
| Co 228.616† | 3328.1 | 0.0824 | mg/L | 0.00028 | 0.0824 | mg/L | 0.00028 | 0.34% |
| Ni 232.003† | 4587.7 | 0.2055 | mg/L | 0.00385 | 0.2055 | mg/L | 0.00385 | 1.88% |
| Ba 233.527† | 58696.5 | 0.5927 | mg/L | 0.00546 | 0.5927 | mg/L | 0.00546 | 0.92% |
| Mn 257.610† | 2610777.5 | 2.750 | mg/L | 0.0234 | 2.750 | mg/L | 0.0234 | 0.85% |
| Cr 267.716† | 28819.7 | 0.2016 | mg/L | 0.00094 | 0.2016 | mg/L | 0.00094 | 0.47% |
| Fe 273.955† | 5984846.1 | 220.3 | mg/L | 0.09 | 220.3 | mg/L | 0.09 | 0.04% |
| Mg 279.077† | 1076745.5 | 48.53 | mg/L | 0.407 | 48.53 | mg/L | 0.407 | 0.84% |
| V 292.402† | 104298.0 | 0.3496 | mg/L | 0.00320 | 0.3496 | mg/L | 0.00320 | 0.92% |
| Al 308.215† | 2416502.0 | 86.52 | mg/L | 0.778 | 86.52 | mg/L | 0.778 | 0.90% |
| Be 313.107† | -21406.0 | -0.0049 | mg/L | 0.00032 | -0.0049 | mg/L | 0.00032 | 6.44% |
| Cu 324.752† | 106814.6 | 0.4109 | mg/L | 0.00317 | 0.4109 | mg/L | 0.00317 | 0.77% |
| Ag 338.289† | -6785.7 | -0.0433 | mg/L | 0.00082 | -0.0433 | mg/L | 0.00082 | 1.90% |
| Na 330.237† | -1132.1 | 0.1118 | mg/L | 0.06623 | 0.1118 | mg/L | 0.06623 | 59.23% |
| Ca 227.546† | 75867.6 | 205.0 | mg/L | 1.46 | 205.0 | mg/L | 1.46 | 0.71% |
| Al RADIAL† | 154075.5 | 80.11 | mg/L | 0.275 | 80.11 | mg/L | 0.275 | 0.34% |
| Fe RADIAL† | 83687.2 | 227.2 | mg/L | 0.54 | 227.2 | mg/L | 0.54 | 0.24% |
| Ca RADIAL† | 927888.2 | 201.4 | mg/L | 3.94 | 201.4 | mg/L | 3.94 | 1.95% |
| K RADIAL† | 25945.8 | 22.35 | mg/L | 0.182 | 22.35 | mg/L | 0.182 | 0.82% |
| Mg RADIAL† | 15766.6 | 46.07 | mg/L | 0.207 | 46.07 | mg/L | 0.207 | 0.45% |
| Na RADIAL† | 21727.6 | 1.654 | mg/L | 0.0136 | 1.654 | mg/L | 0.0136 | 0.82% |
| Mo 202.031 | 143.1 | 0.005 | mg/L | 0.0004 | 0.005 | mg/L | 0.0004 | 7.53% |

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**Sequence No.: 156**
**Sample ID: 16I0302-01**
**Analyst: KV**
**Logged In Analyst (Original) : administrator**
**Initial Sample Wt:**
**Dilution:**

**Autosampler Location: 130**
**Date Collected: 9/13/2016 5:02:02 AM**
**Data Type: Reprocessed on 9/13/2016 7:00:55 AM**

**Initial Sample Vol:**
**Sample Prep Vol:**

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**Mean Data: 16I0302-01**

| Analyte | Mean Corrected Intensity | Conc. | Calib. Units | Std.Dev. | Sample Conc. | Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 15562691.1 | 5.060 | mg/L | 0.0936 | | | | 1.85% |
| Y RADIAL | 242701.1 | 5.287 | mg/L | 0.0458 | | | | 0.87% |
| As 188.979† | -1.9 | 0.0067 | mg/L | 0.00133 | 0.0067 | mg/L | 0.00133 | 19.84% |
| Tl 190.801† | -99.6 | -0.0300 | mg/L | 0.00339 | -0.0300 | mg/L | 0.00339 | 11.32% |
| Se 196.026† | -23.5 | 0.0140 | mg/L | 0.00862 | 0.0140 | mg/L | 0.00862 | 61.50% |
| Zn 206.200† | 70473.2 | 1.544 | mg/L | 0.0352 | 1.544 | mg/L | 0.0352 | 2.28% |
| Sb 206.836† | -6.4 | -0.0027 | mg/L | 0.00301 | -0.0027 | mg/L | 0.00301 | 109.79% |
| Pb 220.353† | 6115.4 | 0.5576 | mg/L | 0.01231 | 0.5576 | mg/L | 0.01231 | 2.21% |
| Cd 226.502† | 1460.2 | 0.0006 | mg/L | 0.00000 | 0.0006 | mg/L | 0.00000 | 0.80% |
| Co 228.616† | 1600.4 | 0.0391 | mg/L | 0.00074 | 0.0391 | mg/L | 0.00074 | 1.89% |
| Ni 232.003† | 2360.9 | 0.1035 | mg/L | 0.00318 | 0.1035 | mg/L | 0.00318 | 3.07% |
| Ba 233.527† | 45113.8 | 0.4556 | mg/L | 0.01042 | 0.4556 | mg/L | 0.01042 | 2.29% |
| Mn 257.610† | 899031.7 | 0.9480 | mg/L | 0.02022 | 0.9480 | mg/L | 0.02022 | 2.13% |
| Cr 267.716† | 27967.8 | 0.1943 | mg/L | 0.00433 | 0.1943 | mg/L | 0.00433 | 2.23% |
| Fe 273.955† | 2222866.3 | 81.81 | mg/L | 1.764 | 81.81 | mg/L | 1.764 | 2.16% |
| Mg 279.077† | 345934.8 | 15.59 | mg/L | 0.370 | 15.59 | mg/L | 0.370 | 2.37% |
| V 292.402† | 57861.3 | 0.1960 | mg/L | 0.00510 | 0.1960 | mg/L | 0.00510 | 2.60% |
| Al 308.215† | 1042706.1 | 37.33 | mg/L | 0.818 | 37.33 | mg/L | 0.818 | 2.19% |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Be 313.107† | -4711.6 | -0.0011 | mg/L | 0.00009 | -0.0011 | mg/L | 0.00009 | 8.55% |
| Cu 324.752† | 238295.9 | 0.8998 | mg/L | 0.02213 | 0.8998 | mg/L | 0.02213 | 2.46% |
| Ag 338.289† | -1028.6 | -0.0054 | mg/L | 0.00043 | -0.0054 | mg/L | 0.00043 | 8.10% |
| Na 330.237† | 1928.0 | 2.348 | mg/L | 0.1008 | 2.348 | mg/L | 0.1008 | 4.29% |
| Ca 227.546† | 4919.9 | 13.93 | mg/L | 0.262 | 13.93 | mg/L | 0.262 | 1.88% |
| Al RADIAL† | 72111.4 | 37.49 | mg/L | 0.145 | 37.49 | mg/L | 0.145 | 0.39% |
| Fe RADIAL† | 31467.5 | 85.44 | mg/L | 1.324 | 85.44 | mg/L | 1.324 | 1.55% |
| Ca RADIAL† | 63240.0 | 13.73 | mg/L | 0.201 | 13.73 | mg/L | 0.201 | 1.46% |
| K RADIAL† | 5291.2 | 4.558 | mg/L | 0.0877 | 4.558 | mg/L | 0.0877 | 1.92% |
| Mg RADIAL† | 5167.1 | 15.10 | mg/L | 0.193 | 15.10 | mg/L | 0.193 | 1.28% |
| Na RADIAL† | 16186.6 | 1.232 | mg/L | 0.0086 | 1.232 | mg/L | 0.0086 | 0.70% |
| Mo 202.031 | 28.2 | 0.001 | mg/L | 0.0003 | 0.001 | mg/L | 0.0003 | 24.87% |

**Sequence No.: 157**
**Sample ID: 16I0302-02**
**Analyst: KV**
**Logged In Analyst (Original) : administrator**
**Initial Sample Wt:**
**Dilution:**

**Autosampler Location: 131**
**Date Collected: 9/13/2016 5:06:47 AM**
**Data Type: Reprocessed on 9/13/2016 7:00:56 AM**

**Initial Sample Vol:**
**Sample Prep Vol:**

**Mean Data: 16I0302-02**

| Analyte | Mean Corrected Intensity | Calib. Conc. | Units | Std.Dev. | Sample Conc. | Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 15398124.0 | 5.007 | mg/L | 0.0750 | | | | 1.50% |
| Y RADIAL | 240751.6 | 5.244 | mg/L | 0.1060 | | | | 2.02% |
| As 188.979† | 33.5 | 0.0304 | mg/L | 0.00082 | 0.0304 | mg/L | 0.00082 | 2.68% |
| Tl 190.801† | -115.5 | -0.0326 | mg/L | 0.00159 | -0.0326 | mg/L | 0.00159 | 4.88% |
| Se 196.026† | -32.6 | 0.0297 | mg/L | 0.00463 | 0.0297 | mg/L | 0.00463 | 15.57% |
| Zn 206.200† | 95427.4 | 2.090 | mg/L | 0.0348 | 2.090 | mg/L | 0.0348 | 1.67% |
| Sb 206.836† | -21.3 | -0.0076 | mg/L | 0.00381 | -0.0076 | mg/L | 0.00381 | 49.76% |
| Pb 220.353† | 38524.8 | 3.530 | mg/L | 0.0687 | 3.530 | mg/L | 0.0687 | 1.95% |
| Cd 226.502† | 2614.5 | 0.0023 | mg/L | 0.00049 | 0.0023 | mg/L | 0.00049 | 21.06% |
| Co 228.616† | 2396.8 | 0.0588 | mg/L | 0.00077 | 0.0588 | mg/L | 0.00077 | 1.31% |
| Ni 232.003† | 3409.1 | 0.1508 | mg/L | 0.00291 | 0.1508 | mg/L | 0.00291 | 1.93% |
| Ba 233.527† | 89885.4 | 0.9077 | mg/L | 0.01778 | 0.9077 | mg/L | 0.01778 | 1.96% |
| Mn 257.610† | 2605809.4 | 2.734 | mg/L | 0.0266 | 2.734 | mg/L | 0.0266 | 0.97% |
| Cr 267.716† | 21377.8 | 0.1493 | mg/L | 0.00232 | 0.1493 | mg/L | 0.00232 | 1.56% |
| Fe 273.955† | 3617055.8 | 133.1 | mg/L | 0.31 | 133.1 | mg/L | 0.31 | 0.23% |
| Mg 279.077† | 545061.5 | 24.56 | mg/L | 0.253 | 24.56 | mg/L | 0.253 | 1.03% |
| V 292.402† | 100000.9 | 0.3390 | mg/L | 0.00678 | 0.3390 | mg/L | 0.00678 | 2.00% |
| Al 308.215† | 2066704.3 | 74.00 | mg/L | 0.777 | 74.00 | mg/L | 0.777 | 1.05% |
| Be 313.107† | 3221.0 | 0.0007 | mg/L | 0.00002 | 0.0007 | mg/L | 0.00002 | 2.74% |
| Cu 324.752† | 263704.6 | 0.9976 | mg/L | 0.01754 | 0.9976 | mg/L | 0.01754 | 1.76% |
| Ag 338.289† | 222.3 | 0.0042 | mg/L | 0.00060 | 0.0042 | mg/L | 0.00060 | 14.34% |
| Na 330.237† | 2299.3 | 2.980 | mg/L | 0.0894 | 2.980 | mg/L | 0.0894 | 3.00% |
| Ca 227.546† | 4936.2 | 14.48 | mg/L | 0.256 | 14.48 | mg/L | 0.256 | 1.77% |
| Al RADIAL† | 137153.7 | 71.31 | mg/L | 0.153 | 71.31 | mg/L | 0.153 | 0.21% |
| Fe RADIAL† | 52074.3 | 141.4 | mg/L | 3.48 | 141.4 | mg/L | 3.48 | 2.46% |
| Ca RADIAL† | 61035.9 | 13.25 | mg/L | 0.363 | 13.25 | mg/L | 0.363 | 2.74% |
| K RADIAL† | 9903.0 | 8.532 | mg/L | 0.2591 | 8.532 | mg/L | 0.2591 | 3.04% |
| Mg RADIAL† | 8458.9 | 24.72 | mg/L | 0.501 | 24.72 | mg/L | 0.501 | 2.03% |
| Na RADIAL† | 11057.2 | 0.8418 | mg/L | 0.04048 | 0.8418 | mg/L | 0.04048 | 4.81% |
| Mo 202.031 | -27.4 | -0.001 | mg/L | 0.0001 | -0.001 | mg/L | 0.0001 | 13.79% |

**Sequence No.: 158**
**Sample ID: 16I0302-03**
**Analyst: KV**
**Logged In Analyst (Original) : administrator**
**Initial Sample Wt:**
**Dilution:**

**Autosampler Location: 132**
**Date Collected: 9/13/2016 5:11:33 AM**
**Data Type: Reprocessed on 9/13/2016 7:00:56 AM**

**Initial Sample Vol:**
**Sample Prep Vol:**

**Mean Data: 16I0302-03**

| Analyte | Mean Corrected Intensity | Calib. Conc. | Units | Std.Dev. | Sample Conc. | Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 16676772.7 | 5.422 | mg/L | 0.0334 | | | | 0.62% |
| Y RADIAL | 260670.7 | 5.678 | mg/L | 0.0348 | | | | 0.61% |
| As 188.979† | 20.0 | 0.0194 | mg/L | 0.00081 | 0.0194 | mg/L | 0.00081 | 4.16% |
| Tl 190.801† | -103.8 | -0.0308 | mg/L | 0.00207 | -0.0308 | mg/L | 0.00207 | 6.71% |

| | | | | | | |
|---|---|---|---|---|---|---|
| Se 196.026† | -22.6 | 0.0205 mg/L | 0.01005 | 0.0205 mg/L | 0.01005 | 48.96% |
| Zn 206.200† | 56869.6 | 1.246 mg/L | 0.0201 | 1.246 mg/L | 0.0201 | 1.61% |
| Sb 206.836† | -9.5 | -0.0038 mg/L | 0.00039 | -0.0038 mg/L | 0.00039 | 10.46% |
| Pb 220.353† | 6069.5 | 0.5521 mg/L | 0.00311 | 0.5521 mg/L | 0.00311 | 0.56% |
| Cd 226.502† | 1688.6 | 0.0008 mg/L | 0.00031 | 0.0008 mg/L | 0.00031 | 39.21% |
| Co 228.616† | 1795.9 | 0.0439 mg/L | 0.00035 | 0.0439 mg/L | 0.00035 | 0.81% |
| Ni 232.003† | 2302.7 | 0.1020 mg/L | 0.00191 | 0.1020 mg/L | 0.00191 | 1.88% |
| Ba 233.527† | 62545.6 | 0.6316 mg/L | 0.00983 | 0.6316 mg/L | 0.00983 | 1.56% |
| Mn 257.610† | 1810335.5 | 1.899 mg/L | 0.0109 | 1.899 mg/L | 0.0109 | 0.57% |
| Cr 267.716† | 26331.9 | 0.1831 mg/L | 0.00266 | 0.1831 mg/L | 0.00266 | 1.45% |
| Fe 273.955† | 2529827.8 | 93.10 mg/L | 0.575 | 93.10 mg/L | 0.575 | 0.62% |
| Mg 279.077† | 378935.0 | 17.08 mg/L | 0.243 | 17.08 mg/L | 0.243 | 1.42% |
| V 292.402† | 61572.5 | 0.2082 mg/L | 0.00287 | 0.2082 mg/L | 0.00287 | 1.38% |
| Al 308.215† | 1041671.7 | 37.30 mg/L | 0.274 | 37.30 mg/L | 0.274 | 0.73% |
| Be 313.107† | -8752.6 | -0.0020 mg/L | 0.00014 | -0.0020 mg/L | 0.00014 | 7.14% |
| Cu 324.752† | 167606.5 | 0.6344 mg/L | 0.01029 | 0.6344 mg/L | 0.01029 | 1.62% |
| Ag 338.289† | -2456.0 | -0.0148 mg/L | 0.00002 | -0.0148 mg/L | 0.00002 | 0.16% |
| Na 330.237† | 1638.6 | 2.123 mg/L | 0.0061 | 2.123 mg/L | 0.0061 | 0.29% |
| Ca 227.546† | 8416.2 | 23.39 mg/L | 0.119 | 23.39 mg/L | 0.119 | 0.51% |
| Al RADIAL† | 69864.2 | 36.33 mg/L | 0.082 | 36.33 mg/L | 0.082 | 0.23% |
| Fe RADIAL† | 36000.3 | 97.74 mg/L | 1.192 | 97.74 mg/L | 1.192 | 1.22% |
| Ca RADIAL† | 103198.3 | 22.40 mg/L | 0.018 | 22.40 mg/L | 0.018 | 0.08% |
| K RADIAL† | 5063.3 | 4.362 mg/L | 0.1028 | 4.362 mg/L | 0.1028 | 2.36% |
| Mg RADIAL† | 5702.2 | 16.66 mg/L | 0.179 | 16.66 mg/L | 0.179 | 1.07% |
| Na RADIAL† | 24580.9 | 1.871 mg/L | 0.0136 | 1.871 mg/L | 0.0136 | 0.73% |
| Mo 202.031 | 58.8 | 0.002 mg/L | 0.0001 | 0.002 mg/L | 0.0001 | 6.64% |

**Sequence No.: 159**
**Sample ID: 16I0302-04**
**Analyst: KV**
**Logged In Analyst (Original) : administrator**
**Initial Sample Wt:**
**Dilution:**

**Autosampler Location: 133**
**Date Collected: 9/13/2016 5:16:19 AM**
**Data Type: Reprocessed on 9/13/2016 7:00:57 AM**

**Initial Sample Vol:**
**Sample Prep Vol:**

**Mean Data: 16I0302-04**

| Analyte | Mean Corrected Intensity | Calib. Conc. | Calib. Units | Std.Dev. | Sample Conc. | Sample Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 17547526.2 | 5.706 | mg/L | 0.0939 | | | | 1.65% |
| Y RADIAL | 277938.4 | 6.054 | mg/L | 0.0674 | | | | 1.11% |
| As 188.979† | -5.8 | 0.0061 | mg/L | 0.00354 | 0.0061 | mg/L | 0.00354 | 58.56% |
| Tl 190.801† | -140.5 | -0.0432 | mg/L | 0.00178 | -0.0432 | mg/L | 0.00178 | 4.12% |
| Se 196.026† | -32.3 | 0.0121 | mg/L | 0.00537 | 0.0121 | mg/L | 0.00537 | 44.33% |
| Zn 206.200† | 30765.4 | 0.6733 | mg/L | 0.01188 | 0.6733 | mg/L | 0.01188 | 1.76% |
| Sb 206.836† | -22.6 | -0.0076 | mg/L | 0.00311 | -0.0076 | mg/L | 0.00311 | 40.90% |
| Pb 220.353† | 3945.0 | 0.3555 | mg/L | 0.00611 | 0.3555 | mg/L | 0.00611 | 1.72% |
| Cd 226.502† | 1478.2 | -0.0011 | mg/L | 0.00011 | -0.0011 | mg/L | 0.00011 | 9.86% |
| Co 228.616† | 1859.1 | 0.0455 | mg/L | 0.00064 | 0.0455 | mg/L | 0.00064 | 1.41% |
| Ni 232.003† | 1910.3 | 0.0860 | mg/L | 0.00250 | 0.0860 | mg/L | 0.00250 | 2.90% |
| Ba 233.527† | 24010.4 | 0.2425 | mg/L | 0.00406 | 0.2425 | mg/L | 0.00406 | 1.67% |
| Mn 257.610† | 1409252.0 | 1.482 | mg/L | 0.0229 | 1.482 | mg/L | 0.0229 | 1.54% |
| Cr 267.716† | 22968.5 | 0.1599 | mg/L | 0.00300 | 0.1599 | mg/L | 0.00300 | 1.88% |
| Fe 273.955† | 2639933.7 | 97.15 | mg/L | 1.495 | 97.15 | mg/L | 1.495 | 1.54% |
| Mg 279.077† | 358801.1 | 16.17 | mg/L | 0.278 | 16.17 | mg/L | 0.278 | 1.72% |
| V 292.402† | 60650.2 | 0.2048 | mg/L | 0.00359 | 0.2048 | mg/L | 0.00359 | 1.75% |
| Al 308.215† | 789764.4 | 28.28 | mg/L | 0.463 | 28.28 | mg/L | 0.463 | 1.64% |
| Be 313.107† | -10696.0 | -0.0025 | mg/L | 0.00007 | -0.0025 | mg/L | 0.00007 | 2.89% |
| Cu 324.752† | 114469.3 | 0.4346 | mg/L | 0.00761 | 0.4346 | mg/L | 0.00761 | 1.75% |
| Ag 338.289† | -2666.7 | -0.0160 | mg/L | 0.00061 | -0.0160 | mg/L | 0.00061 | 3.83% |
| Na 330.237† | -41.1 | 0.4430 | mg/L | 0.11727 | 0.4430 | mg/L | 0.11727 | 26.47% |
| Ca 227.546† | 5402.1 | 15.35 | mg/L | 0.277 | 15.35 | mg/L | 0.277 | 1.80% |
| Al RADIAL† | 52272.6 | 27.18 | mg/L | 0.079 | 27.18 | mg/L | 0.079 | 0.29% |
| Fe RADIAL† | 37410.4 | 101.6 | mg/L | 0.90 | 101.6 | mg/L | 0.90 | 0.88% |
| Ca RADIAL† | 65096.7 | 14.13 | mg/L | 0.161 | 14.13 | mg/L | 0.161 | 1.14% |
| K RADIAL† | 3701.2 | 3.189 | mg/L | 0.0170 | 3.189 | mg/L | 0.0170 | 0.53% |
| Mg RADIAL† | 5391.1 | 15.75 | mg/L | 0.211 | 15.75 | mg/L | 0.211 | 1.34% |
| Na RADIAL† | 15560.2 | 1.185 | mg/L | 0.0212 | 1.185 | mg/L | 0.0212 | 1.79% |
| Mo 202.031 | -46.1 | -0.002 | mg/L | 0.0004 | -0.002 | mg/L | 0.0004 | 26.24% |

**Sequence No.: 160**

**Autosampler Location: 134**

**Sample ID: 16I0302-05**
**Analyst: KV**
**Logged In Analyst (Original) : administrator**
**Initial Sample Wt:**
**Dilution:**

**Date Collected: 9/13/2016 5:21:03 AM**
**Data Type: Reprocessed on 9/13/2016 7:00:58 AM**

**Initial Sample Vol:**
**Sample Prep Vol:**

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**Mean Data: 16I0302-05**

| Analyte | Mean Corrected Intensity | Calib. Conc. | Units | Std.Dev. | Sample Conc. | Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 16101461.8 | 5.235 | mg/L | 0.0476 | | | | 0.91% |
| Y RADIAL | 251683.0 | 5.482 | mg/L | 0.0788 | | | | 1.44% |
| As 188.979† | 9.4 | 0.0193 | mg/L | 0.00160 | 0.0193 | mg/L | 0.00160 | 8.27% |
| Tl 190.801† | -162.1 | -0.0478 | mg/L | 0.00291 | -0.0478 | mg/L | 0.00291 | 6.10% |
| Se 196.026† | -38.9 | 0.0314 | mg/L | 0.00356 | 0.0314 | mg/L | 0.00356 | 11.34% |
| Zn 206.200† | 161059.1 | 3.529 | mg/L | 0.0735 | 3.529 | mg/L | 0.0735 | 2.08% |
| Sb 206.836† | 58.5 | 0.0154 | mg/L | 0.00256 | 0.0154 | mg/L | 0.00256 | 16.65% |
| Pb 220.353† | 37511.3 | 3.433 | mg/L | 0.0695 | 3.433 | mg/L | 0.0695 | 2.02% |
| Cd 226.502† | 2628.9 | 0.0004 | mg/L | 0.00107 | 0.0004 | mg/L | 0.00107 | 256.88% |
| Co 228.616† | 2811.6 | 0.0689 | mg/L | 0.00075 | 0.0689 | mg/L | 0.00075 | 1.09% |
| Ni 232.003† | 30972.2 | 1.291 | mg/L | 0.0220 | 1.291 | mg/L | 0.0220 | 1.71% |
| Ba 233.527† | 56498.2 | 0.5705 | mg/L | 0.01218 | 0.5705 | mg/L | 0.01218 | 2.13% |
| Mn 257.610† | 2542556.9 | 2.670 | mg/L | 0.0206 | 2.670 | mg/L | 0.0206 | 0.77% |
| Cr 267.716† | 84098.1 | 0.5832 | mg/L | 0.01038 | 0.5832 | mg/L | 0.01038 | 1.78% |
| Fe 273.955† | 4091730.4 | 150.6 | mg/L | 0.21 | 150.6 | mg/L | 0.21 | 0.14% |
| Mg 279.077† | 437375.3 | 19.70 | mg/L | 0.133 | 19.70 | mg/L | 0.133 | 0.68% |
| V 292.402† | 98506.6 | 0.3329 | mg/L | 0.00665 | 0.3329 | mg/L | 0.00665 | 2.00% |
| Al 308.215† | 1466522.1 | 52.51 | mg/L | 0.367 | 52.51 | mg/L | 0.367 | 0.70% |
| Be 313.107† | -9324.8 | -0.0021 | mg/L | 0.00015 | -0.0021 | mg/L | 0.00015 | 6.94% |
| Cu 324.752† | 1419668.8 | 5.347 | mg/L | 0.0379 | 5.347 | mg/L | 0.0379 | 0.71% |
| Ag 338.289† | 37523.6 | 0.2551 | mg/L | 0.00477 | 0.2551 | mg/L | 0.00477 | 1.87% |
| Na 330.237† | 4767.8 | 5.551 | mg/L | 0.0583 | 5.551 | mg/L | 0.0583 | 1.05% |
| Ca 227.546† | 6597.8 | 19.07 | mg/L | 0.253 | 19.07 | mg/L | 0.253 | 1.33% |
| Al RADIAL† | 98234.5 | 51.08 | mg/L | 0.222 | 51.08 | mg/L | 0.222 | 0.44% |
| Fe RADIAL† | 58734.7 | 159.5 | mg/L | 3.10 | 159.5 | mg/L | 3.10 | 1.94% |
| Ca RADIAL† | 79431.1 | 17.24 | mg/L | 0.021 | 17.24 | mg/L | 0.021 | 0.12% |
| K RADIAL† | 6780.6 | 5.842 | mg/L | 0.1207 | 5.842 | mg/L | 0.1207 | 2.07% |
| Mg RADIAL† | 6822.0 | 19.93 | mg/L | 0.287 | 19.93 | mg/L | 0.287 | 1.44% |
| Na RADIAL† | 20063.2 | 1.527 | mg/L | 0.0213 | 1.527 | mg/L | 0.0213 | 1.39% |
| Mo 202.031 | 3.9 | 0.000 | mg/L | 0.0002 | 0.000 | mg/L | 0.0002 | 155.68% |

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**Sequence No.: 161**
**Sample ID: 16I0302-06**
**Analyst: KV**
**Logged In Analyst (Original) : administrator**
**Initial Sample Wt:**
**Dilution:**

**Autosampler Location: 135**
**Date Collected: 9/13/2016 5:28:50 AM**
**Data Type: Reprocessed on 9/13/2016 7:00:59 AM**

**Initial Sample Vol:**
**Sample Prep Vol:**

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**Mean Data: 16I0302-06**

| Analyte | Mean Corrected Intensity | Calib. Conc. | Units | Std.Dev. | Sample Conc. | Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 15796120.9 | 5.136 | mg/L | 0.0345 | | | | 0.67% |
| Y RADIAL | 245182.9 | 5.341 | mg/L | 0.0968 | | | | 1.81% |
| As 188.979† | -4.3 | 0.0046 | mg/L | 0.00346 | 0.0046 | mg/L | 0.00346 | 75.40% |
| Tl 190.801† | -90.7 | -0.0274 | mg/L | 0.00185 | -0.0274 | mg/L | 0.00185 | 6.78% |
| Se 196.026† | -21.4 | 0.0121 | mg/L | 0.00694 | 0.0121 | mg/L | 0.00694 | 57.39% |
| Zn 206.200† | 29383.2 | 0.6433 | mg/L | 0.00652 | 0.6433 | mg/L | 0.00652 | 1.01% |
| Sb 206.836† | -14.1 | -0.0049 | mg/L | 0.00132 | -0.0049 | mg/L | 0.00132 | 27.21% |
| Pb 220.353† | 3509.2 | 0.3176 | mg/L | 0.00281 | 0.3176 | mg/L | 0.00281 | 0.89% |
| Cd 226.502† | 1134.6 | -0.0006 | mg/L | 0.00028 | -0.0006 | mg/L | 0.00028 | 43.05% |
| Co 228.616† | 1377.3 | 0.0337 | mg/L | 0.00062 | 0.0337 | mg/L | 0.00062 | 1.83% |
| Ni 232.003† | 2036.5 | 0.0895 | mg/L | 0.00034 | 0.0895 | mg/L | 0.00034 | 0.38% |
| Ba 233.527† | 21638.7 | 0.2185 | mg/L | 0.00271 | 0.2185 | mg/L | 0.00271 | 1.24% |
| Mn 257.610† | 601680.9 | 0.6370 | mg/L | 0.00808 | 0.6370 | mg/L | 0.00808 | 1.27% |
| Cr 267.716† | 42565.7 | 0.2951 | mg/L | 0.00267 | 0.2951 | mg/L | 0.00267 | 0.90% |
| Fe 273.955† | 2001598.7 | 73.66 | mg/L | 0.918 | 73.66 | mg/L | 0.918 | 1.25% |
| Mg 279.077† | 299431.2 | 13.49 | mg/L | 0.149 | 13.49 | mg/L | 0.149 | 1.10% |
| V 292.402† | 44871.6 | 0.1515 | mg/L | 0.00125 | 0.1515 | mg/L | 0.00125 | 0.83% |
| Al 308.215† | 660280.0 | 23.64 | mg/L | 0.296 | 23.64 | mg/L | 0.296 | 1.25% |
| Be 313.107† | -7792.5 | -0.0018 | mg/L | 0.00004 | -0.0018 | mg/L | 0.00004 | 2.38% |

| | | | | | | |
|---|---|---|---|---|---|---|
| Cu 324.752† | 144691.4 | 0.5473 mg/L | 0.00517 | 0.5473 mg/L | 0.00517 | 0.95% |
| Ag 338.289† | -2304.8 | -0.0141 mg/L | 0.00084 | -0.0141 mg/L | 0.00084 | 5.94% |
| Na 330.237† | 518.0 | 0.8855 mg/L | 0.05752 | 0.8855 mg/L | 0.05752 | 6.50% |
| Ca 227.546† | 4052.2 | 11.52 mg/L | 0.044 | 11.52 mg/L | 0.044 | 0.38% |
| Al RADIAL† | 45986.2 | 23.91 mg/L | 0.142 | 23.91 mg/L | 0.142 | 0.59% |
| Fe RADIAL† | 28108.3 | 76.32 mg/L | 1.905 | 76.32 mg/L | 1.905 | 2.50% |
| Ca RADIAL† | 51820.0 | 11.25 mg/L | 0.269 | 11.25 mg/L | 0.269 | 2.39% |
| K RADIAL† | 3770.7 | 3.248 mg/L | 0.0572 | 3.248 mg/L | 0.0572 | 1.76% |
| Mg RADIAL† | 4487.0 | 13.11 mg/L | 0.371 | 13.11 mg/L | 0.371 | 2.83% |
| Na RADIAL† | 13351.3 | 1.016 mg/L | 0.0225 | 1.016 mg/L | 0.0225 | 2.21% |
| Mo 202.031 | 66.1 | 0.002 mg/L | 0.0003 | 0.002 mg/L | 0.0003 | 10.50% |

**Sequence No.: 162**
**Sample ID: 16I0319-01**
**Analyst: KV**
**Logged In Analyst (Original) : administrator**
**Initial Sample Wt:**
**Dilution:**

**Autosampler Location: 136**
**Date Collected: 9/13/2016 5:33:35 AM**
**Data Type: Reprocessed on 9/13/2016 7:00:59 AM**

**Initial Sample Vol:**
**Sample Prep Vol:**

**Mean Data: 16I0319-01**

| Analyte | Mean Corrected Intensity | Calib. Conc. | Units | Std.Dev. | Sample Conc. | Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 16059266.1 | 5.222 | mg/L | 0.0604 | | | | 1.16% |
| Y RADIAL | 257650.7 | 5.612 | mg/L | 0.0305 | | | | 0.54% |
| As 188.979† | 153.9 | 0.1082 | mg/L | 0.00349 | 0.1082 | mg/L | 0.00349 | 3.23% |
| Tl 190.801† | -60.1 | -0.0058 | mg/L | 0.00373 | -0.0058 | mg/L | 0.00373 | 64.94% |
| Se 196.026† | -77.9 | 0.0532 | mg/L | 0.00452 | 0.0532 | mg/L | 0.00452 | 8.50% |
| Zn 206.200† | 10340.7 | 0.2237 | mg/L | 0.00501 | 0.2237 | mg/L | 0.00501 | 2.24% |
| Sb 206.836† | -53.0 | -0.0184 | mg/L | 0.00283 | -0.0184 | mg/L | 0.00283 | 15.34% |
| Pb 220.353† | 864.9 | 0.0599 | mg/L | 0.00184 | 0.0599 | mg/L | 0.00184 | 3.07% |
| Cd 226.502† | 3853.7 | -0.0065 | mg/L | 0.00032 | -0.0065 | mg/L | 0.00032 | 4.96% |
| Co 228.616† | 1075.4 | 0.0313 | mg/L | 0.00056 | 0.0313 | mg/L | 0.00056 | 1.78% |
| Ni 232.003† | 1715.6 | 0.0918 | mg/L | 0.00232 | 0.0918 | mg/L | 0.00232 | 2.53% |
| Ba 233.527† | 19615.3 | 0.1981 | mg/L | 0.00345 | 0.1981 | mg/L | 0.00345 | 1.74% |
| Mn 257.610† | 436500.8 | 0.4937 | mg/L | 0.00602 | 0.4937 | mg/L | 0.00602 | 1.22% |
| Cr 267.716† | 40155.1 | 0.2807 | mg/L | 0.00314 | 0.2807 | mg/L | 0.00314 | 1.12% |
| Fe 273.955† | 7669304.0 | 282.2 | mg/L | 0.70 | 282.2 | mg/L | 0.70 | 0.25% |
| Mg 279.077† | 375069.2 | 16.87 | mg/L | 0.232 | 16.87 | mg/L | 0.232 | 1.38% |
| V 292.402† | 123465.5 | 0.4123 | mg/L | 0.00595 | 0.4123 | mg/L | 0.00595 | 1.44% |
| Al 308.215† | 2303349.5 | 82.48 | mg/L | 1.142 | 82.48 | mg/L | 1.142 | 1.38% |
| Be 313.107† | 22858.9 | 0.0052 | mg/L | 0.00005 | 0.0052 | mg/L | 0.00005 | 0.93% |
| Cu 324.752† | 35104.5 | 0.1440 | mg/L | 0.00167 | 0.1440 | mg/L | 0.00167 | 1.16% |
| Ag 338.289† | -2443.8 | -0.0105 | mg/L | 0.00015 | -0.0105 | mg/L | 0.00015 | 1.40% |
| Na 330.237† | -778.4 | 0.6029 | mg/L | 0.04563 | 0.6029 | mg/L | 0.04563 | 7.57% |
| Ca 227.546† | 2375.9 | 8.984 | mg/L | 0.0802 | 8.984 | mg/L | 0.0802 | 0.89% |
| Al RADIAL† | 152102.1 | 79.10 | mg/L | 0.237 | 79.10 | mg/L | 0.237 | 0.30% |
| Fe RADIAL† | 109819.7 | 298.2 | mg/L | 1.08 | 298.2 | mg/L | 1.08 | 0.36% |
| Ca RADIAL† | 22280.0 | 4.836 | mg/L | 0.1076 | 4.836 | mg/L | 0.1076 | 2.22% |
| K RADIAL† | 42984.6 | 37.03 | mg/L | 0.126 | 37.03 | mg/L | 0.126 | 0.34% |
| Mg RADIAL† | 5796.8 | 16.92 | mg/L | 0.265 | 16.92 | mg/L | 0.265 | 1.56% |
| Na RADIAL† | 693.7 | 0.0528 | mg/L | 0.00664 | 0.0528 | mg/L | 0.00664 | 12.58% |
| Mo 202.031 | -305.5 | -0.011 | mg/L | 0.0007 | -0.011 | mg/L | 0.0007 | 6.41% |

**Sequence No.: 163**
**Sample ID: 16I0326-01**
**Analyst: KV**
**Logged In Analyst (Original) : administrator**
**Initial Sample Wt:**
**Dilution:**

**Autosampler Location: 137**
**Date Collected: 9/13/2016 5:38:23 AM**
**Data Type: Reprocessed on 9/13/2016 7:01:00 AM**

**Initial Sample Vol:**
**Sample Prep Vol:**

**Mean Data: 16I0326-01**

| Analyte | Mean Corrected Intensity | Calib. Conc. | Units | Std.Dev. | Sample Conc. | Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 16655709.1 | 5.416 | mg/L | 0.0845 | | | | 1.56% |
| Y RADIAL | 274606.0 | 5.982 | mg/L | 0.0972 | | | | 1.63% |
| As 188.979† | 35.6 | 0.0413 | mg/L | 0.00811 | 0.0413 | mg/L | 0.00811 | 19.65% |
| Tl 190.801† | -326.4 | -0.0997 | mg/L | 0.00762 | -0.0997 | mg/L | 0.00762 | 7.64% |
| Se 196.026† | -69.8 | 0.0398 | mg/L | 0.01035 | 0.0398 | mg/L | 0.01035 | 25.97% |

| | | | | | | |
|---|---|---|---|---|---|---|
| Zn 206.200† | 38587.2 | 0.8433 mg/L | 0.01579 | 0.8433 mg/L | 0.01579 | 1.87% |
| Sb 206.836† | -103.5 | -0.0327 mg/L | 0.00412 | -0.0327 mg/L | 0.00412 | 12.62% |
| Pb 220.353† | 2439.0 | 0.2145 mg/L | 0.00267 | 0.2145 mg/L | 0.00267 | 1.25% |
| Cd 226.502† | 3613.5 | -0.0028 mg/L | 0.00087 | -0.0028 mg/L | 0.00087 | 31.42% |
| Co 228.616† | 4749.7 | 0.1160 mg/L | 0.00156 | 0.1160 mg/L | 0.00156 | 1.34% |
| Ni 232.003† | 3874.7 | 0.1776 mg/L | 0.00123 | 0.1776 mg/L | 0.00123 | 0.69% |
| Ba 233.527† | 83140.4 | 0.8396 mg/L | 0.01659 | 0.8396 mg/L | 0.01659 | 1.98% |
| Mn 257.610† | 2362079.2 | 2.494 mg/L | 0.0265 | 2.494 mg/L | 0.0265 | 1.06% |
| Cr 267.716† | 24865.8 | 0.1745 mg/L | 0.00389 | 0.1745 mg/L | 0.00389 | 2.23% |
| Fe 273.955† | 6474667.1 | 238.3 mg/L | 2.54 | 238.3 mg/L | 2.54 | 1.07% |
| Mg 279.077† | 1088040.5 | 49.03 mg/L | 0.551 | 49.03 mg/L | 0.551 | 1.12% |
| V 292.402† | 83119.9 | 0.2752 mg/L | 0.00558 | 0.2752 mg/L | 0.00558 | 2.03% |
| Al 308.215† | 3643491.9 | 130.5 mg/L | 1.41 | 130.5 mg/L | 1.41 | 1.08% |
| Be 313.107† | -16938.7 | -0.0039 mg/L | 0.00010 | -0.0039 mg/L | 0.00010 | 2.63% |
| Cu 324.752† | 82990.9 | 0.3222 mg/L | 0.00642 | 0.3222 mg/L | 0.00642 | 1.99% |
| Ag 338.289† | -10497.6 | -0.0657 mg/L | 0.00200 | -0.0657 mg/L | 0.00200 | 3.04% |
| Na 330.237† | -2204.9 | -1.045 mg/L | 0.0714 | -1.045 mg/L | 0.0714 | 6.83% |
| Ca 227.546† | 6649.7 | 20.03 mg/L | 0.071 | 20.03 mg/L | 0.071 | 0.35% |
| Al RADIAL† | 228998.4 | 119.1 mg/L | 2.54 | 119.1 mg/L | 2.54 | 2.13% |
| Fe RADIAL† | 91934.6 | 249.6 mg/L | 0.69 | 249.6 mg/L | 0.69 | 0.28% |
| Ca RADIAL† | 75110.8 | 16.30 mg/L | 0.031 | 16.30 mg/L | 0.031 | 0.19% |
| K RADIAL† | 53423.4 | 46.03 mg/L | 0.287 | 46.03 mg/L | 0.287 | 0.62% |
| Mg RADIAL† | 16621.5 | 48.57 mg/L | 0.149 | 48.57 mg/L | 0.149 | 0.31% |
| Na RADIAL† | 19726.6 | 1.502 mg/L | 0.0176 | 1.502 mg/L | 0.0176 | 1.17% |
| Mo 202.031 | -168.6 | -0.006 mg/L | 0.0003 | -0.006 mg/L | 0.0003 | 4.09% |

**Sequence No.: 164**
**Sample ID: 16I0326-02**
**Analyst: KV**
**Logged In Analyst (Original) : administrator**
**Initial Sample Wt:**
**Dilution:**

**Autosampler Location: 138**
**Date Collected: 9/13/2016 5:43:10 AM**
**Data Type: Reprocessed on 9/13/2016 7:01:01 AM**

**Initial Sample Vol:**
**Sample Prep Vol:**

**Mean Data: 16I0326-02**

| Analyte | Mean Corrected Intensity | Calib. Conc. | Calib. Units | Std.Dev. | Sample Conc. | Sample Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 16272273.8 | 5.291 | mg/L | 0.0493 | | | | 0.93% |
| Y RADIAL | 255795.8 | 5.572 | mg/L | 0.0592 | | | | 1.06% |
| As 188.979† | -3.4 | 0.0048 | mg/L | 0.00224 | 0.0048 | mg/L | 0.00224 | 47.06% |
| Tl 190.801† | -124.7 | -0.0392 | mg/L | 0.00084 | -0.0392 | mg/L | 0.00084 | 2.14% |
| Se 196.026† | -20.1 | 0.0119 | mg/L | 0.00233 | 0.0119 | mg/L | 0.00233 | 19.59% |
| Zn 206.200† | 14271.2 | 0.3121 | mg/L | 0.00495 | 0.3121 | mg/L | 0.00495 | 1.58% |
| Sb 206.836† | -37.9 | -0.0118 | mg/L | 0.00052 | -0.0118 | mg/L | 0.00052 | 4.40% |
| Pb 220.353† | 889.3 | 0.0789 | mg/L | 0.00204 | 0.0789 | mg/L | 0.00204 | 2.59% |
| Cd 226.502† | 1020.6 | -0.0011 | mg/L | 0.00022 | -0.0011 | mg/L | 0.00022 | 20.87% |
| Co 228.616† | 989.0 | 0.0246 | mg/L | 0.00070 | 0.0246 | mg/L | 0.00070 | 2.86% |
| Ni 232.003† | 918.0 | 0.0430 | mg/L | 0.00146 | 0.0430 | mg/L | 0.00146 | 3.40% |
| Ba 233.527† | 11334.8 | 0.1145 | mg/L | 0.00190 | 0.1145 | mg/L | 0.00190 | 1.66% |
| Mn 257.610† | 1289301.2 | 1.353 | mg/L | 0.0217 | 1.353 | mg/L | 0.0217 | 1.60% |
| Cr 267.716† | 4662.0 | 0.0330 | mg/L | 0.00052 | 0.0330 | mg/L | 0.00052 | 1.58% |
| Fe 273.955† | 1901369.9 | 69.97 | mg/L | 1.152 | 69.97 | mg/L | 1.152 | 1.65% |
| Mg 279.077† | 275179.9 | 12.40 | mg/L | 0.067 | 12.40 | mg/L | 0.067 | 0.54% |
| V 292.402† | 13561.9 | 0.0433 | mg/L | 0.00103 | 0.0433 | mg/L | 0.00103 | 2.38% |
| Al 308.215† | 955236.8 | 34.20 | mg/L | 0.606 | 34.20 | mg/L | 0.606 | 1.77% |
| Be 313.107† | 1162.1 | 0.0003 | mg/L | 0.00014 | 0.0003 | mg/L | 0.00014 | 51.37% |
| Cu 324.752† | 10142.8 | 0.0411 | mg/L | 0.00044 | 0.0411 | mg/L | 0.00044 | 1.06% |
| Ag 338.289† | -3181.0 | -0.0201 | mg/L | 0.00081 | -0.0201 | mg/L | 0.00081 | 4.05% |
| Na 330.237† | 349.3 | 0.7023 | mg/L | 0.03814 | 0.7023 | mg/L | 0.03814 | 5.43% |
| Ca 227.546† | 4691.3 | 13.21 | mg/L | 0.103 | 13.21 | mg/L | 0.103 | 0.78% |
| Al RADIAL† | 65370.9 | 33.99 | mg/L | 0.067 | 33.99 | mg/L | 0.067 | 0.20% |
| Fe RADIAL† | 26878.6 | 72.98 | mg/L | 0.893 | 72.98 | mg/L | 0.893 | 1.22% |
| Ca RADIAL† | 61223.8 | 13.29 | mg/L | 0.147 | 13.29 | mg/L | 0.147 | 1.10% |
| K RADIAL† | 14620.5 | 12.60 | mg/L | 0.140 | 12.60 | mg/L | 0.140 | 1.11% |
| Mg RADIAL† | 4178.3 | 12.21 | mg/L | 0.089 | 12.21 | mg/L | 0.089 | 0.73% |
| Na RADIAL† | 21190.4 | 1.613 | mg/L | 0.0185 | 1.613 | mg/L | 0.0185 | 1.15% |
| Mo 202.031 | 162.0 | 0.006 | mg/L | 0.0003 | 0.006 | mg/L | 0.0003 | 5.24% |

**Sequence No.: 165**
**Sample ID: SEQ-CCVE**

**Autosampler Location: 8**
**Date Collected: 9/13/2016 5:47:55 AM**

Analyst: KV
Logged In Analyst (Original) : administrator
Initial Sample Wt:
Dilution:

Data Type: Reprocessed on 9/13/2016 7:01:01 AM
Initial Sample Vol:
Sample Prep Vol:

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Mean Data: SEQ-CCVE

| Analyte | Mean Corrected Intensity | Calib. Conc. | Units | Std.Dev. | Sample Conc. | Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 15234043.2 | 4.953 | mg/L | 0.0200 | | | | 0.40% |
| Y RADIAL | 241277.6 | 5.256 | mg/L | 0.0587 | | | | 1.12% |
| As 188.979† | 461.2 | 0.2442 | mg/L | 0.00143 | 0.2442 | mg/L | 0.00143 | 0.58% |
| Tl 190.801† | 682.7 | 0.2349 | mg/L | 0.00407 | 0.2349 | mg/L | 0.00407 | 1.73% |
| Se 196.026† | 234.7 | 0.2462 | mg/L | 0.00243 | 0.2462 | mg/L | 0.00243 | 0.99% |
| Zn 206.200† | 114475.9 | 2.509 | mg/L | 0.0199 | 2.509 | mg/L | 0.0199 | 0.79% |
| Sb 206.836† | 823.6 | 0.2397 | mg/L | 0.00372 | 0.2397 | mg/L | 0.00372 | 1.55% |
| Pb 220.353† | 2762.2 | 0.2545 | mg/L | 0.00387 | 0.2545 | mg/L | 0.00387 | 1.52% |
| Cd 226.502† | 18409.4 | 0.1252 | mg/L | 0.00107 | 0.1252 | mg/L | 0.00107 | 0.85% |
| Co 228.616† | 109117.2 | 2.544 | mg/L | 0.0219 | 2.544 | mg/L | 0.0219 | 0.86% |
| Ni 232.003† | 60558.8 | 2.503 | mg/L | 0.0152 | 2.503 | mg/L | 0.0152 | 0.61% |
| Ba 233.527† | 1021687.7 | 10.32 | mg/L | 0.049 | 10.32 | mg/L | 0.049 | 0.47% |
| Mn 257.610† | 2471901.7 | 2.577 | mg/L | 0.0130 | 2.577 | mg/L | 0.0130 | 0.50% |
| Cr 267.716† | 149519.1 | 1.034 | mg/L | 0.0073 | 1.034 | mg/L | 0.0073 | 0.71% |
| Fe 273.955† | 139600.8 | 5.138 | mg/L | 0.0407 | 5.138 | mg/L | 0.0407 | 0.79% |
| Mg 279.077† | 571647.7 | 25.78 | mg/L | 0.130 | 25.78 | mg/L | 0.130 | 0.50% |
| V 292.402† | 734695.6 | 2.542 | mg/L | 0.0172 | 2.542 | mg/L | 0.0172 | 0.68% |
| Al 308.215† | 276719.9 | 9.905 | mg/L | 0.0835 | 9.905 | mg/L | 0.0835 | 0.84% |
| Be 313.107† | 1118874.8 | 0.2566 | mg/L | 0.00204 | 0.2566 | mg/L | 0.00204 | 0.79% |
| Cu 324.752† | 338134.7 | 1.272 | mg/L | 0.0090 | 1.272 | mg/L | 0.0090 | 0.71% |
| Ag 338.289† | 191554.5 | 1.287 | mg/L | 0.0094 | 1.287 | mg/L | 0.0094 | 0.73% |
| Na 330.237† | 23075.2 | 23.26 | mg/L | 0.202 | 23.26 | mg/L | 0.202 | 0.87% |
| Ca 227.546† | 9337.8 | 25.04 | mg/L | 0.182 | 25.04 | mg/L | 0.182 | 0.73% |
| Al RADIAL† | 18371.1 | 9.549 | mg/L | 0.0253 | 9.549 | mg/L | 0.0253 | 0.26% |
| Fe RADIAL† | 1898.6 | 5.155 | mg/L | 0.0537 | 5.155 | mg/L | 0.0537 | 1.04% |
| Ca RADIAL† | 117947.3 | 25.60 | mg/L | 0.031 | 25.60 | mg/L | 0.031 | 0.12% |
| K RADIAL† | 5942.8 | 5.120 | mg/L | 0.0420 | 5.120 | mg/L | 0.0420 | 0.82% |
| Mg RADIAL† | 8856.5 | 25.89 | mg/L | 0.217 | 25.89 | mg/L | 0.217 | 0.84% |
| Na RADIAL† | 334446.5 | 25.46 | mg/L | 0.092 | 25.46 | mg/L | 0.092 | 0.36% |
| Mo 202.031 | 28978.3 | 1.061 | mg/L | 0.0072 | 1.061 | mg/L | 0.0072 | 0.68% |

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Sequence No.: 166
Sample ID: SEQ-CCBE
Analyst: KV
Logged In Analyst (Original) : administrator
Initial Sample Wt:
Dilution:

Autosampler Location: 1
Date Collected: 9/13/2016 5:56:02 AM
Data Type: Reprocessed on 9/13/2016 7:01:02 AM
Initial Sample Vol:
Sample Prep Vol:

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Mean Data: SEQ-CCBE

| Analyte | Mean Corrected Intensity | Calib. Conc. | Units | Std.Dev. | Sample Conc. | Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 15328911.6 | 4.984 | mg/L | 0.0357 | | | | 0.72% |
| Y RADIAL | 238936.7 | 5.205 | mg/L | 0.0687 | | | | 1.32% |
| As 188.979† | -3.3 | -0.0017 | mg/L | 0.00383 | -0.0017 | mg/L | 0.00383 | 220.71% |
| Tl 190.801† | 4.2 | 0.0014 | mg/L | 0.00148 | 0.0014 | mg/L | 0.00148 | 102.87% |
| Se 196.026† | 3.7 | 0.0039 | mg/L | 0.00340 | 0.0039 | mg/L | 0.00340 | 88.04% |
| Zn 206.200† | -102.4 | -0.0022 | mg/L | 0.00014 | -0.0022 | mg/L | 0.00014 | 6.12% |
| Sb 206.836† | -14.1 | -0.0041 | mg/L | 0.00084 | -0.0041 | mg/L | 0.00084 | 20.41% |
| Pb 220.353† | 23.1 | 0.0021 | mg/L | 0.00141 | 0.0021 | mg/L | 0.00141 | 66.63% |
| Cd 226.502† | -22.3 | -0.0002 | mg/L | 0.00017 | -0.0002 | mg/L | 0.00017 | 109.42% |
| Co 228.616† | 7.5 | 0.0002 | mg/L | 0.00011 | 0.0002 | mg/L | 0.00011 | 62.54% |
| Ni 232.003† | 17.8 | 0.0007 | mg/L | 0.00055 | 0.0007 | mg/L | 0.00055 | 75.01% |
| Ba 233.527† | 3.5 | 0.0000 | mg/L | 0.00004 | 0.0000 | mg/L | 0.00004 | 124.55% |
| Mn 257.610† | -122.0 | -0.0001 | mg/L | 0.00001 | -0.0001 | mg/L | 0.00001 | 4.18% |
| Cr 267.716† | -5.5 | 0.0000 | mg/L | 0.00018 | 0.0000 | mg/L | 0.00018 | 481.90% |
| Fe 273.955† | 34.9 | 0.0013 | mg/L | 0.00067 | 0.0013 | mg/L | 0.00067 | 52.08% |
| Mg 279.077† | -37.1 | -0.0017 | mg/L | 0.00439 | -0.0017 | mg/L | 0.00439 | 262.37% |
| V 292.402† | 19.2 | 0.0001 | mg/L | 0.00013 | 0.0001 | mg/L | 0.00013 | 198.67% |
| Al 308.215† | -1306.9 | -0.0468 | mg/L | 0.00806 | -0.0468 | mg/L | 0.00806 | 17.22% |
| Be 313.107† | -143.3 | 0.0000 | mg/L | 0.00006 | 0.0000 | mg/L | 0.00006 | 196.06% |
| Cu 324.752† | -19.3 | -0.0001 | mg/L | 0.00010 | -0.0001 | mg/L | 0.00010 | 141.15% |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Ag 338.289† | 17.8 | 0.0001 | mg/L | 0.00052 | 0.0001 | mg/L | 0.00052 434.10% |
| Na 330.237† | -6.0 | -0.0060 | mg/L | 0.10332 | -0.0060 | mg/L | 0.10332 >999.9% |
| Ca 227.546† | 19.5 | 0.0523 | mg/L | 0.02968 | 0.0523 | mg/L | 0.02968 56.74% |
| Al RADIAL† | -103.6 | -0.0539 | mg/L | 0.00868 | -0.0539 | mg/L | 0.00868 16.11% |
| Fe RADIAL† | 2.3 | 0.0064 | mg/L | 0.01033 | 0.0064 | mg/L | 0.01033 162.41% |
| Ca RADIAL† | 54.4 | 0.0118 | mg/L | 0.00385 | 0.0118 | mg/L | 0.00385 32.62% |
| K RADIAL† | 11.6 | 0.0100 | mg/L | 0.05514 | 0.0100 | mg/L | 0.05514 551.73% |
| Mg RADIAL† | 1.5 | 0.0042 | mg/L | 0.02519 | 0.0042 | mg/L | 0.02519 592.93% |
| Na RADIAL† | -2894.8 | -0.2204 | mg/L | 0.02356 | -0.2204 | mg/L | 0.02356 10.69% |
| Mo 202.031 | 0.9 | 0.000 | mg/L | 0.0003 | 0.000 | mg/L | 0.0003 907.53% |

**Sequence No.: 167**
**Sample ID: 16I0326-03**
**Analyst: KV**
**Logged In Analyst (Original) : administrator**
**Initial Sample Wt:**
**Dilution:**

**Autosampler Location: 139**
**Date Collected: 9/13/2016 6:01:05 AM**
**Data Type: Reprocessed on 9/13/2016 7:01:03 AM**
**Initial Sample Vol:**
**Sample Prep Vol:**

**Mean Data: 16I0326-03**

| Analyte | Mean Corrected Intensity | Calib. Conc. | Units | Std.Dev. | Sample Conc. | Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 16215859.2 | 5.273 | mg/L | 0.0580 | | | | 1.10% |
| Y RADIAL | 262313.0 | 5.714 | mg/L | 0.0444 | | | | 0.78% |
| As 188.979† | 177.6 | 0.1223 | mg/L | 0.00275 | 0.1223 | mg/L | 0.00275 | 2.25% |
| Tl 190.801† | -541.3 | -0.1702 | mg/L | 0.00499 | -0.1702 | mg/L | 0.00499 | 2.93% |
| Se 196.026† | -90.3 | 0.0486 | mg/L | 0.00490 | 0.0486 | mg/L | 0.00490 | 10.09% |
| Zn 206.200† | 31847.4 | 0.6949 | mg/L | 0.01224 | 0.6949 | mg/L | 0.01224 | 1.76% |
| Sb 206.836† | -124.8 | -0.0396 | mg/L | 0.00252 | -0.0396 | mg/L | 0.00252 | 6.38% |
| Pb 220.353† | 1984.2 | 0.1695 | mg/L | 0.00260 | 0.1695 | mg/L | 0.00260 | 1.53% |
| Cd 226.502† | 4357.9 | -0.0050 | mg/L | 0.00044 | -0.0050 | mg/L | 0.00044 | 8.78% |
| Co 228.616† | 5310.5 | 0.1304 | mg/L | 0.00210 | 0.1304 | mg/L | 0.00210 | 1.61% |
| Ni 232.003† | 2999.6 | 0.1461 | mg/L | 0.00534 | 0.1461 | mg/L | 0.00534 | 3.66% |
| Ba 233.527† | 88288.3 | 0.8916 | mg/L | 0.01281 | 0.8916 | mg/L | 0.01281 | 1.44% |
| Mn 257.610† | 3302120.9 | 3.482 | mg/L | 0.0497 | 3.482 | mg/L | 0.0497 | 1.43% |
| Cr 267.716† | 23896.0 | 0.1684 | mg/L | 0.00271 | 0.1684 | mg/L | 0.00271 | 1.61% |
| Fe 273.955† | 7950996.2 | 292.6 | mg/L | 0.69 | 292.6 | mg/L | 0.69 | 0.24% |
| Mg 279.077† | 1390482.2 | 62.66 | mg/L | 0.997 | 62.66 | mg/L | 0.997 | 1.59% |
| V 292.402† | 90676.4 | 0.2980 | mg/L | 0.00526 | 0.2980 | mg/L | 0.00526 | 1.77% |
| Al 308.215† | 4381016.7 | 156.9 | mg/L | 0.48 | 156.9 | mg/L | 0.48 | 0.31% |
| Be 313.107† | -45246.9 | -0.0104 | mg/L | 0.00018 | -0.0104 | mg/L | 0.00018 | 1.70% |
| Cu 324.752† | 51338.1 | 0.2058 | mg/L | 0.00297 | 0.2058 | mg/L | 0.00297 | 1.44% |
| Ag 338.289† | -16256.9 | -0.1031 | mg/L | 0.00300 | -0.1031 | mg/L | 0.00300 | 2.91% |
| Na 330.237† | -4799.6 | -3.345 | mg/L | 0.1078 | -3.345 | mg/L | 0.1078 | 3.22% |
| Ca 227.546† | 6847.3 | 21.16 | mg/L | 0.364 | 21.16 | mg/L | 0.364 | 1.72% |
| Al RADIAL† | 280499.5 | 145.8 | mg/L | 1.94 | 145.8 | mg/L | 1.94 | 1.33% |
| Fe RADIAL† | 116577.4 | 316.5 | mg/L | 1.08 | 316.5 | mg/L | 1.08 | 0.34% |
| Ca RADIAL† | 75967.6 | 16.49 | mg/L | 0.015 | 16.49 | mg/L | 0.015 | 0.09% |
| K RADIAL† | 72149.1 | 62.16 | mg/L | 0.453 | 62.16 | mg/L | 0.453 | 0.73% |
| Mg RADIAL† | 21146.4 | 61.79 | mg/L | 0.244 | 61.79 | mg/L | 0.244 | 0.39% |
| Na RADIAL† | 18022.0 | 1.372 | mg/L | 0.0069 | 1.372 | mg/L | 0.0069 | 0.51% |
| Mo 202.031 | -8.9 | 0.000 | mg/L | 0.0004 | 0.000 | mg/L | 0.0004 | 135.65% |

**Sequence No.: 168**
**Sample ID: 16I0326-04**
**Analyst: KV**
**Logged In Analyst (Original) : administrator**
**Initial Sample Wt:**
**Dilution:**

**Autosampler Location: 140**
**Date Collected: 9/13/2016 6:05:47 AM**
**Data Type: Reprocessed on 9/13/2016 7:01:03 AM**
**Initial Sample Vol:**
**Sample Prep Vol:**

**Mean Data: 16I0326-04**

| Analyte | Mean Corrected Intensity | Calib. Conc. | Units | Std.Dev. | Sample Conc. | Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 16197895.8 | 5.267 | mg/L | 0.0082 | | | | 0.16% |
| Y RADIAL | 253746.6 | 5.527 | mg/L | 0.1567 | | | | 2.84% |
| As 188.979† | 21.6 | 0.0188 | mg/L | 0.00254 | 0.0188 | mg/L | 0.00254 | 13.55% |
| Tl 190.801† | -146.2 | -0.0462 | mg/L | 0.00266 | -0.0462 | mg/L | 0.00266 | 5.76% |
| Se 196.026† | -24.9 | 0.0107 | mg/L | 0.00695 | 0.0107 | mg/L | 0.00695 | 64.70% |
| Zn 206.200† | 17102.0 | 0.3740 | mg/L | 0.00276 | 0.3740 | mg/L | 0.00276 | 0.74% |

| | | | | | | |
|---|---|---|---|---|---|---|
| Sb 206.836† | -34.0 | -0.0107 mg/L | 0.00114 | -0.0107 mg/L | 0.00114 | 10.61% |
| Pb 220.353† | 554.3 | 0.0485 mg/L | 0.00196 | 0.0485 mg/L | 0.00196 | 4.05% |
| Cd 226.502† | 1124.9 | -0.0013 mg/L | 0.00029 | -0.0013 mg/L | 0.00029 | 23.14% |
| Co 228.616† | 1779.7 | 0.0432 mg/L | 0.00037 | 0.0432 mg/L | 0.00037 | 0.85% |
| Ni 232.003† | 1998.4 | 0.0883 mg/L | 0.00204 | 0.0883 mg/L | 0.00204 | 2.31% |
| Ba 233.527† | 17701.7 | 0.1788 mg/L | 0.00104 | 0.1788 mg/L | 0.00104 | 0.58% |
| Mn 257.610† | 1476901.0 | 1.550 mg/L | 0.0123 | 1.550 mg/L | 0.0123 | 0.79% |
| Cr 267.716† | 9048.9 | 0.0634 mg/L | 0.00036 | 0.0634 mg/L | 0.00036 | 0.57% |
| Fe 273.955† | 2082140.1 | 76.63 mg/L | 0.598 | 76.63 mg/L | 0.598 | 0.78% |
| Mg 279.077† | 380502.8 | 17.15 mg/L | 0.141 | 17.15 mg/L | 0.141 | 0.82% |
| V 292.402† | 35059.7 | 0.1173 mg/L | 0.00008 | 0.1173 mg/L | 0.00008 | 0.07% |
| Al 308.215† | 1245733.3 | 44.60 mg/L | 0.394 | 44.60 mg/L | 0.394 | 0.88% |
| Be 313.107† | -2454.8 | -0.0006 mg/L | 0.00007 | -0.0006 mg/L | 0.00007 | 12.42% |
| Cu 324.752† | 30448.5 | 0.1178 mg/L | 0.00044 | 0.1178 mg/L | 0.00044 | 0.37% |
| Ag 338.289† | -3672.2 | -0.0231 mg/L | 0.00012 | -0.0231 mg/L | 0.00012 | 0.53% |
| Na 330.237† | -481.3 | -0.0996 mg/L | 0.03792 | -0.0996 mg/L | 0.03792 | 38.07% |
| Ca 227.546† | 2806.1 | 8.242 mg/L | 0.0298 | 8.242 mg/L | 0.0298 | 0.36% |
| Al RADIAL† | 84151.2 | 43.75 mg/L | 0.263 | 43.75 mg/L | 0.263 | 0.60% |
| Fe RADIAL† | 29985.0 | 81.41 mg/L | 1.073 | 81.41 mg/L | 1.073 | 1.32% |
| Ca RADIAL† | 34750.2 | 7.543 mg/L | 0.0985 | 7.543 mg/L | 0.0985 | 1.31% |
| K RADIAL† | 13802.5 | 11.89 mg/L | 0.156 | 11.89 mg/L | 0.156 | 1.31% |
| Mg RADIAL† | 6072.8 | 17.75 mg/L | 0.279 | 17.75 mg/L | 0.279 | 1.57% |
| Na RADIAL† | 9610.4 | 0.7317 mg/L | 0.03984 | 0.7317 mg/L | 0.03984 | 5.45% |
| Mo 202.031 | 30.3 | 0.001 mg/L | 0.0001 | 0.001 mg/L | 0.0001 | 7.52% |

**Sequence No.: 169**
**Sample ID: BI60402-DUP1**
**Analyst: KV**
**Logged In Analyst (Original) : administrator**
**Initial Sample Wt:**
**Dilution:**

**Autosampler Location: 141**
**Date Collected: 9/13/2016 6:10:36 AM**
**Data Type: Reprocessed on 9/13/2016 7:01:04 AM**

**Initial Sample Vol:**
**Sample Prep Vol:**

**Mean Data: BI60402-DUP1**

| Analyte | Mean Corrected Intensity | Calib. Conc. | Calib. Units | Std.Dev. | Sample Conc. | Sample Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 15158091.0 | 4.929 | mg/L | 0.0670 | | | | 1.36% |
| Y RADIAL | 240231.6 | 5.233 | mg/L | 0.0109 | | | | 0.21% |
| As 188.979† | 35.3 | 0.0263 | mg/L | 0.00792 | 0.0263 | mg/L | 0.00792 | 30.11% |
| Tl 190.801† | -158.0 | -0.0501 | mg/L | 0.00606 | -0.0501 | mg/L | 0.00606 | 12.11% |
| Se 196.026† | -26.7 | 0.0104 | mg/L | 0.00991 | 0.0104 | mg/L | 0.00991 | 94.93% |
| Zn 206.200† | 18363.5 | 0.4017 | mg/L | 0.00782 | 0.4017 | mg/L | 0.00782 | 1.95% |
| Sb 206.836† | -35.6 | -0.0112 | mg/L | 0.00253 | -0.0112 | mg/L | 0.00253 | 22.56% |
| Pb 220.353† | 617.3 | 0.0544 | mg/L | 0.00163 | 0.0544 | mg/L | 0.00163 | 2.99% |
| Cd 226.502† | 1162.2 | -0.0014 | mg/L | 0.00022 | -0.0014 | mg/L | 0.00022 | 15.83% |
| Co 228.616† | 1911.7 | 0.0463 | mg/L | 0.00093 | 0.0463 | mg/L | 0.00093 | 2.00% |
| Ni 232.003† | 2181.3 | 0.0961 | mg/L | 0.00273 | 0.0961 | mg/L | 0.00273 | 2.85% |
| Ba 233.527† | 19075.5 | 0.1926 | mg/L | 0.00366 | 0.1926 | mg/L | 0.00366 | 1.90% |
| Mn 257.610† | 1607185.5 | 1.686 | mg/L | 0.0120 | 1.686 | mg/L | 0.0120 | 0.71% |
| Cr 267.716† | 9832.1 | 0.0688 | mg/L | 0.00166 | 0.0688 | mg/L | 0.00166 | 2.42% |
| Fe 273.955† | 2267414.4 | 83.45 | mg/L | 0.545 | 83.45 | mg/L | 0.545 | 0.65% |
| Mg 279.077† | 427805.4 | 19.28 | mg/L | 0.377 | 19.28 | mg/L | 0.377 | 1.96% |
| V 292.402† | 37606.1 | 0.1259 | mg/L | 0.00286 | 0.1259 | mg/L | 0.00286 | 2.27% |
| Al 308.215† | 1358324.7 | 48.63 | mg/L | 0.317 | 48.63 | mg/L | 0.317 | 0.65% |
| Be 313.107† | -3274.5 | -0.0008 | mg/L | 0.00013 | -0.0008 | mg/L | 0.00013 | 17.46% |
| Cu 324.752† | 33084.4 | 0.1278 | mg/L | 0.00276 | 0.1278 | mg/L | 0.00276 | 2.16% |
| Ag 338.289† | -4110.8 | -0.0260 | mg/L | 0.00159 | -0.0260 | mg/L | 0.00159 | 6.10% |
| Na 330.237† | -536.2 | -0.1380 | mg/L | 0.07311 | -0.1380 | mg/L | 0.07311 | 52.97% |
| Ca 227.546† | 3002.9 | 8.801 | mg/L | 0.1266 | 8.801 | mg/L | 0.1266 | 1.44% |
| Al RADIAL† | 90495.0 | 47.05 | mg/L | 0.140 | 47.05 | mg/L | 0.140 | 0.30% |
| Fe RADIAL† | 31272.3 | 84.91 | mg/L | 1.364 | 84.91 | mg/L | 1.364 | 1.61% |
| Ca RADIAL† | 37446.5 | 8.129 | mg/L | 0.1304 | 8.129 | mg/L | 0.1304 | 1.60% |
| K RADIAL† | 14897.4 | 12.83 | mg/L | 0.250 | 12.83 | mg/L | 0.250 | 1.95% |
| Mg RADIAL† | 6345.7 | 18.54 | mg/L | 0.248 | 18.54 | mg/L | 0.248 | 1.34% |
| Na RADIAL† | 9442.8 | 0.7189 | mg/L | 0.01522 | 0.7189 | mg/L | 0.01522 | 2.12% |
| Mo 202.031 | 39.8 | 0.001 | mg/L | 0.0005 | 0.001 | mg/L | 0.0005 | 32.25% |

**Sequence No.: 170**
**Sample ID: BI60402-MS1**
**Analyst: KV**

**Autosampler Location: 142**
**Date Collected: 9/13/2016 6:15:20 AM**
**Data Type: Reprocessed on 9/13/2016 7:01:05 AM**

**Logged In Analyst (Original) : administrator**
**Initial Sample Wt:** **Initial Sample Vol:**
**Dilution:** **Sample Prep Vol:**

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**Mean Data: BI60402-MS1**

| Analyte | Mean Corrected Intensity | Calib. Conc. | Units | Std.Dev. | Sample Conc. | Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 15717703.9 | 5.111 | mg/L | 0.0258 | | | | 0.50% |
| Y RADIAL | 249644.6 | 5.438 | mg/L | 0.0824 | | | | 1.51% |
| As 188.979† | 3470.7 | 1.841 | mg/L | 0.0122 | 1.841 | mg/L | 0.0122 | 0.66% |
| Tl 190.801† | 4409.2 | 1.519 | mg/L | 0.0203 | 1.519 | mg/L | 0.0203 | 1.34% |
| Se 196.026† | 1716.7 | 1.820 | mg/L | 0.0177 | 1.820 | mg/L | 0.0177 | 0.97% |
| Zn 206.200† | 39502.3 | 0.8651 | mg/L | 0.00557 | 0.8651 | mg/L | 0.00557 | 0.64% |
| Sb 206.836† | 804.9 | 0.2334 | mg/L | 0.00578 | 0.2334 | mg/L | 0.00578 | 2.47% |
| Pb 220.353† | 5690.2 | 0.5202 | mg/L | 0.00443 | 0.5202 | mg/L | 0.00443 | 0.85% |
| Cd 226.502† | 8244.8 | 0.0474 | mg/L | 0.00033 | 0.0474 | mg/L | 0.00033 | 0.70% |
| Co 228.616† | 23178.1 | 0.5421 | mg/L | 0.00391 | 0.5421 | mg/L | 0.00391 | 0.72% |
| Ni 232.003† | 14109.4 | 0.5886 | mg/L | 0.00350 | 0.5886 | mg/L | 0.00350 | 0.60% |
| Ba 233.527† | 213942.6 | 2.160 | mg/L | 0.0273 | 2.160 | mg/L | 0.0273 | 1.27% |
| Mn 257.610† | 1992288.9 | 2.087 | mg/L | 0.0271 | 2.087 | mg/L | 0.0271 | 1.30% |
| Cr 267.716† | 36806.4 | 0.2553 | mg/L | 0.00343 | 0.2553 | mg/L | 0.00343 | 1.34% |
| Fe 273.955† | 2169546.6 | 79.84 | mg/L | 1.055 | 79.84 | mg/L | 1.055 | 1.32% |
| Mg 279.077† | 392579.7 | 17.69 | mg/L | 0.225 | 17.69 | mg/L | 0.225 | 1.27% |
| V 292.402† | 172668.9 | 0.5935 | mg/L | 0.00700 | 0.5935 | mg/L | 0.00700 | 1.18% |
| Al 308.215† | 1338964.2 | 47.94 | mg/L | 0.611 | 47.94 | mg/L | 0.611 | 1.28% |
| Be 313.107† | 207033.9 | 0.0475 | mg/L | 0.00069 | 0.0475 | mg/L | 0.00069 | 1.44% |
| Cu 324.752† | 97810.1 | 0.3712 | mg/L | 0.00484 | 0.3712 | mg/L | 0.00484 | 1.30% |
| Ag 338.289† | 3255.3 | 0.0234 | mg/L | 0.00044 | 0.0234 | mg/L | 0.00044 | 1.87% |
| Na 330.237† | 240.1 | 0.6238 | mg/L | 0.02054 | 0.6238 | mg/L | 0.02054 | 3.29% |
| Ca 227.546† | 2836.2 | 8.321 | mg/L | 0.0172 | 8.321 | mg/L | 0.0172 | 0.21% |
| Al RADIAL† | 90305.3 | 46.95 | mg/L | 0.171 | 46.95 | mg/L | 0.171 | 0.36% |
| Fe RADIAL† | 29815.5 | 80.95 | mg/L | 1.743 | 80.95 | mg/L | 1.743 | 2.15% |
| Ca RADIAL† | 34799.6 | 7.554 | mg/L | 0.1487 | 7.554 | mg/L | 0.1487 | 1.97% |
| K RADIAL† | 13871.2 | 11.95 | mg/L | 0.241 | 11.95 | mg/L | 0.241 | 2.01% |
| Mg RADIAL† | 5984.5 | 17.49 | mg/L | 0.323 | 17.49 | mg/L | 0.323 | 1.85% |
| Na RADIAL† | 9714.9 | 0.7396 | mg/L | 0.02916 | 0.7396 | mg/L | 0.02916 | 3.94% |
| Mo 202.031 | 21.3 | 0.001 | mg/L | 0.0003 | 0.001 | mg/L | 0.0003 | 37.35% |

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**Sequence No.: 171** **Autosampler Location: 143**
**Sample ID: 16I0326-05** **Date Collected: 9/13/2016 6:23:00 AM**
**Analyst: KV** **Data Type: Reprocessed on 9/13/2016 7:01:06 AM**
**Logged In Analyst (Original) : administrator**
**Initial Sample Wt:** **Initial Sample Vol:**
**Dilution:** **Sample Prep Vol:**

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**Mean Data: 16I0326-05**

| Analyte | Mean Corrected Intensity | Calib. Conc. | Units | Std.Dev. | Sample Conc. | Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 15586702.6 | 5.068 | mg/L | 0.0267 | | | | 0.53% |
| Y RADIAL | 248617.8 | 5.416 | mg/L | 0.0364 | | | | 0.67% |
| As 188.979† | 53.8 | 0.0435 | mg/L | 0.00334 | 0.0435 | mg/L | 0.00334 | 7.67% |
| Tl 190.801† | -296.0 | -0.0934 | mg/L | 0.00770 | -0.0934 | mg/L | 0.00770 | 8.24% |
| Se 196.026† | -54.4 | 0.0190 | mg/L | 0.00945 | 0.0190 | mg/L | 0.00945 | 49.79% |
| Zn 206.200† | 30524.6 | 0.6674 | mg/L | 0.00956 | 0.6674 | mg/L | 0.00956 | 1.43% |
| Sb 206.836† | -71.4 | -0.0225 | mg/L | 0.00303 | -0.0225 | mg/L | 0.00303 | 13.46% |
| Pb 220.353† | 3794.1 | 0.3467 | mg/L | 0.00384 | 0.3467 | mg/L | 0.00384 | 1.11% |
| Cd 226.502† | 2724.9 | 0.0002 | mg/L | 0.00050 | 0.0002 | mg/L | 0.00050 | 296.73% |
| Co 228.616† | 3913.8 | 0.0948 | mg/L | 0.00064 | 0.0948 | mg/L | 0.00064 | 0.68% |
| Ni 232.003† | 3990.6 | 0.1766 | mg/L | 0.00265 | 0.1766 | mg/L | 0.00265 | 1.50% |
| Ba 233.527† | 48541.0 | 0.4902 | mg/L | 0.00594 | 0.4902 | mg/L | 0.00594 | 1.21% |
| Mn 257.610† | 3195499.7 | 3.352 | mg/L | 0.0293 | 3.352 | mg/L | 0.0293 | 0.88% |
| Cr 267.716† | 27137.3 | 0.1893 | mg/L | 0.00255 | 0.1893 | mg/L | 0.00255 | 1.35% |
| Fe 273.955† | 4351984.2 | 160.2 | mg/L | 0.38 | 160.2 | mg/L | 0.38 | 0.23% |
| Mg 279.077† | 953012.7 | 42.96 | mg/L | 0.436 | 42.96 | mg/L | 0.436 | 1.02% |
| V 292.402† | 95919.7 | 0.3235 | mg/L | 0.00322 | 0.3235 | mg/L | 0.00322 | 1.00% |
| Al 308.215† | 3399790.5 | 121.7 | mg/L | 1.11 | 121.7 | mg/L | 1.11 | 0.91% |
| Be 313.107† | -16360.3 | -0.0038 | mg/L | 0.00018 | -0.0038 | mg/L | 0.00018 | 4.87% |
| Cu 324.752† | 71152.0 | 0.2743 | mg/L | 0.00313 | 0.2743 | mg/L | 0.00313 | 1.14% |
| Ag 338.289† | -9377.1 | -0.0599 | mg/L | 0.00152 | -0.0599 | mg/L | 0.00152 | 2.53% |

| | | | | | | |
|---|---|---|---|---|---|---|
| Na 330.237† | -1487.1 | -0.6931 mg/L | 0.07950 | -0.6931 mg/L | 0.07950 | 11.47% |
| Ca 227.546† | 10050.4 | 28.42 mg/L | 0.247 | 28.42 mg/L | 0.247 | 0.87% |
| Al RADIAL† | 222239.4 | 115.5 mg/L | 0.22 | 115.5 mg/L | 0.22 | 0.19% |
| Fe RADIAL† | 61760.7 | 167.7 mg/L | 0.64 | 167.7 mg/L | 0.64 | 0.38% |
| Ca RADIAL† | 121478.2 | 26.37 mg/L | 0.052 | 26.37 mg/L | 0.052 | 0.20% |
| K RADIAL† | 21953.7 | 18.91 mg/L | 0.096 | 18.91 mg/L | 0.096 | 0.51% |
| Mg RADIAL† | 14618.6 | 42.72 mg/L | 0.149 | 42.72 mg/L | 0.149 | 0.35% |
| Na RADIAL† | 24997.7 | 1.903 mg/L | 0.0275 | 1.903 mg/L | 0.0275 | 1.44% |
| Mo 202.031 | 166.6 | 0.006 mg/L | 0.0004 | 0.006 mg/L | 0.0004 | 6.72% |

**Sequence No.: 172**
**Sample ID: 16I0326-06**
**Analyst: KV**
**Logged In Analyst (Original) : administrator**
**Initial Sample Wt:**
**Dilution:**

**Autosampler Location: 144**
**Date Collected: 9/13/2016 6:27:46 AM**
**Data Type: Reprocessed on 9/13/2016 7:01:06 AM**

**Initial Sample Vol:**
**Sample Prep Vol:**

**Mean Data: 16I0326-06**

| Analyte | Mean Corrected Intensity | Calib. Conc. | Units | Std.Dev. | Sample Conc. | Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 14764995.0 | 4.801 | mg/L | 0.0516 | | | | 1.07% |
| Y RADIAL | 232101.7 | 5.056 | mg/L | 0.1034 | | | | 2.05% |
| As 188.979† | 17.0 | 0.0196 | mg/L | 0.00516 | 0.0196 | mg/L | 0.00516 | 26.33% |
| Tl 190.801† | -289.3 | -0.0935 | mg/L | 0.00640 | -0.0935 | mg/L | 0.00640 | 6.84% |
| Se 196.026† | -31.5 | 0.0204 | mg/L | 0.00789 | 0.0204 | mg/L | 0.00789 | 38.74% |
| Zn 206.200† | 9806.6 | 0.2138 | mg/L | 0.00136 | 0.2138 | mg/L | 0.00136 | 0.63% |
| Sb 206.836† | -44.0 | -0.0140 | mg/L | 0.00112 | -0.0140 | mg/L | 0.00112 | 8.00% |
| Pb 220.353† | 326.5 | 0.0265 | mg/L | 0.00198 | 0.0265 | mg/L | 0.00198 | 7.50% |
| Cd 226.502† | 1658.2 | -0.0017 | mg/L | 0.00040 | -0.0017 | mg/L | 0.00040 | 24.27% |
| Co 228.616† | 2434.5 | 0.0592 | mg/L | 0.00043 | 0.0592 | mg/L | 0.00043 | 0.72% |
| Ni 232.003† | 1603.0 | 0.0745 | mg/L | 0.00131 | 0.0745 | mg/L | 0.00131 | 1.76% |
| Ba 233.527† | 34612.4 | 0.3495 | mg/L | 0.00656 | 0.3495 | mg/L | 0.00656 | 1.88% |
| Mn 257.610† | 2287065.5 | 2.399 | mg/L | 0.0475 | 2.399 | mg/L | 0.0475 | 1.98% |
| Cr 267.716† | 13619.7 | 0.0954 | mg/L | 0.00206 | 0.0954 | mg/L | 0.00206 | 2.16% |
| Fe 273.955† | 3006918.7 | 110.7 | mg/L | 2.21 | 110.7 | mg/L | 2.21 | 2.00% |
| Mg 279.077† | 769464.3 | 34.69 | mg/L | 0.689 | 34.69 | mg/L | 0.689 | 1.99% |
| V 292.402† | 53026.8 | 0.1776 | mg/L | 0.00409 | 0.1776 | mg/L | 0.00409 | 2.30% |
| Al 308.215† | 1824730.8 | 65.33 | mg/L | 1.334 | 65.33 | mg/L | 1.334 | 2.04% |
| Be 313.107† | -27233.2 | -0.0062 | mg/L | 0.00039 | -0.0062 | mg/L | 0.00039 | 6.23% |
| Cu 324.752† | 20401.4 | 0.0815 | mg/L | 0.00176 | 0.0815 | mg/L | 0.00176 | 2.16% |
| Ag 338.289† | -7764.0 | -0.0500 | mg/L | 0.00099 | -0.0500 | mg/L | 0.00099 | 1.98% |
| Na 330.237† | -2191.0 | -1.638 | mg/L | 0.1257 | -1.638 | mg/L | 0.1257 | 7.67% |
| Ca 227.546† | 6737.9 | 19.09 | mg/L | 0.162 | 19.09 | mg/L | 0.162 | 0.85% |
| Al RADIAL† | 119484.1 | 62.12 | mg/L | 0.232 | 62.12 | mg/L | 0.232 | 0.37% |
| Fe RADIAL† | 43502.4 | 118.1 | mg/L | 2.02 | 118.1 | mg/L | 2.02 | 1.71% |
| Ca RADIAL† | 84601.5 | 18.36 | mg/L | 0.301 | 18.36 | mg/L | 0.301 | 1.64% |
| K RADIAL† | 25284.3 | 21.78 | mg/L | 0.390 | 21.78 | mg/L | 0.390 | 1.79% |
| Mg RADIAL† | 12244.0 | 35.79 | mg/L | 0.665 | 35.79 | mg/L | 0.665 | 1.86% |
| Na RADIAL† | 13689.2 | 1.042 | mg/L | 0.0358 | 1.042 | mg/L | 0.0358 | 3.44% |
| Mo 202.031 | -97.4 | -0.004 | mg/L | 0.0004 | -0.004 | mg/L | 0.0004 | 10.59% |

**Sequence No.: 173**
**Sample ID: 16I0326-07**
**Analyst: KV**
**Logged In Analyst (Original) : administrator**
**Initial Sample Wt:**
**Dilution:**

**Autosampler Location: 145**
**Date Collected: 9/13/2016 6:32:32 AM**
**Data Type: Reprocessed on 9/13/2016 7:01:07 AM**

**Initial Sample Vol:**
**Sample Prep Vol:**

**Mean Data: 16I0326-07**

| Analyte | Mean Corrected Intensity | Calib. Conc. | Units | Std.Dev. | Sample Conc. | Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 12974447.3 | 4.219 | mg/L | 0.0399 | | | | 0.95% |
| Y RADIAL | 217257.7 | 4.733 | mg/L | 0.0977 | | | | 2.06% |
| As 188.979† | 206.0 | 0.1248 | mg/L | 0.00464 | 0.1248 | mg/L | 0.00464 | 3.72% |
| Tl 190.801† | -328.1 | -0.1039 | mg/L | 0.00113 | -0.1039 | mg/L | 0.00113 | 1.09% |
| Se 196.026† | -51.0 | 0.0265 | mg/L | 0.00710 | 0.0265 | mg/L | 0.00710 | 26.76% |
| Zn 206.200† | 54434.0 | 1.191 | mg/L | 0.0180 | 1.191 | mg/L | 0.0180 | 1.51% |
| Sb 206.836† | -10.1 | -0.0048 | mg/L | 0.00472 | -0.0048 | mg/L | 0.00472 | 99.20% |

| | | | | | | |
|---|---|---|---|---|---|---|
| Pb 220.353† | 12263.1 | 1.128 mg/L | 0.0123 | 1.128 mg/L | 0.0123 | 1.09% |
| Cd 226.502† | 4263.5 | 0.0097 mg/L | 0.00031 | 0.0097 mg/L | 0.00031 | 3.18% |
| Co 228.616† | 3206.3 | 0.0785 mg/L | 0.00051 | 0.0785 mg/L | 0.00051 | 0.65% |
| Ni 232.003† | 3698.2 | 0.1652 mg/L | 0.00336 | 0.1652 mg/L | 0.00336 | 2.03% |
| Ba 233.527† | 79544.1 | 0.8033 mg/L | 0.01251 | 0.8033 mg/L | 0.01251 | 1.56% |
| Mn 257.610† | 2487093.9 | 2.615 mg/L | 0.0403 | 2.615 mg/L | 0.0403 | 1.54% |
| Cr 267.716† | 60847.4 | 0.4226 mg/L | 0.00662 | 0.4226 mg/L | 0.00662 | 1.57% |
| Fe 273.955† | 4748197.2 | 174.7 mg/L | 0.49 | 174.7 mg/L | 0.49 | 0.28% |
| Mg 279.077† | 1161989.9 | 52.38 mg/L | 0.769 | 52.38 mg/L | 0.769 | 1.47% |
| V 292.402† | 121699.1 | 0.4123 mg/L | 0.00540 | 0.4123 mg/L | 0.00540 | 1.31% |
| Al 308.215† | 3244715.4 | 116.2 mg/L | 1.74 | 116.2 mg/L | 1.74 | 1.50% |
| Be 313.107† | -21635.4 | -0.0050 mg/L | 0.00036 | -0.0050 mg/L | 0.00036 | 7.27% |
| Cu 324.752† | 194804.5 | 0.7398 mg/L | 0.01160 | 0.7398 mg/L | 0.01160 | 1.57% |
| Ag 338.289† | -7572.4 | -0.0528 mg/L | 0.00089 | -0.0528 mg/L | 0.00089 | 1.68% |
| Na 330.237† | 5648.3 | 6.971 mg/L | 0.0332 | 6.971 mg/L | 0.0332 | 0.48% |
| Ca 227.546† | 185482.4 | 498.0 mg/L | 6.05 | 498.0 mg/L | 6.05 | 1.21% |
| Al RADIAL† | 204519.3 | 106.3 mg/L | 0.56 | 106.3 mg/L | 0.56 | 0.53% |
| Fe RADIAL† | 65079.7 | 176.7 mg/L | 0.81 | 176.7 mg/L | 0.81 | 0.46% |
| Ca RADIAL† | 2211219.3 | 480.0 mg/L | 11.80 | 480.0 mg/L | 11.80 | 2.46% |
| K RADIAL† | 23048.6 | 19.86 mg/L | 0.063 | 19.86 mg/L | 0.063 | 0.32% |
| Mg RADIAL† | 16911.2 | 49.42 mg/L | 0.190 | 49.42 mg/L | 0.190 | 0.38% |
| Na RADIAL† | 109241.0 | 8.317 mg/L | 0.1748 | 8.317 mg/L | 0.1748 | 2.10% |
| Mo 202.031 | 153.8 | 0.006 mg/L | 0.0004 | 0.006 mg/L | 0.0004 | 6.80% |

**Sequence No.: 174**
**Sample ID: SEQ-SRD6**
**Analyst: KV**
**Logged In Analyst (Original) : administrator**
**Initial Sample Wt:**
**Dilution:**

**Autosampler Location: 146**
**Date Collected: 9/13/2016 6:37:13 AM**
**Data Type: Reprocessed on 9/13/2016 7:01:08 AM**

**Initial Sample Vol:**
**Sample Prep Vol:**

**Mean Data: SEQ-SRD6**

| Analyte | Mean Corrected Intensity | Conc. | Calib. Units | Std.Dev. | Sample Conc. | Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 16689387.4 | 5.427 | mg/L | 0.0759 | | | | 1.40% |
| Y RADIAL | 260963.2 | 5.685 | mg/L | 0.0327 | | | | 0.58% |
| As 188.979† | -0.2 | 0.0012 | mg/L | 0.00091 | 0.0012 | mg/L | 0.00091 | 72.94% |
| Tl 190.801† | -17.3 | -0.0052 | mg/L | 0.00104 | -0.0052 | mg/L | 0.00104 | 20.01% |
| Se 196.026† | -5.2 | 0.0013 | mg/L | 0.00325 | 0.0013 | mg/L | 0.00325 | 254.41% |
| Zn 206.200† | 3479.6 | 0.0761 | mg/L | 0.00177 | 0.0761 | mg/L | 0.00177 | 2.33% |
| Sb 206.836† | -14.4 | -0.0044 | mg/L | 0.00258 | -0.0044 | mg/L | 0.00258 | 59.32% |
| Pb 220.353† | 111.1 | 0.0098 | mg/L | 0.00098 | 0.0098 | mg/L | 0.00098 | 9.97% |
| Cd 226.502† | 196.5 | -0.0003 | mg/L | 0.00007 | -0.0003 | mg/L | 0.00007 | 23.52% |
| Co 228.616† | 350.6 | 0.0085 | mg/L | 0.00024 | 0.0085 | mg/L | 0.00024 | 2.81% |
| Ni 232.003† | 493.9 | 0.0214 | mg/L | 0.00236 | 0.0214 | mg/L | 0.00236 | 11.02% |
| Ba 233.527† | 3414.1 | 0.0345 | mg/L | 0.00074 | 0.0345 | mg/L | 0.00074 | 2.13% |
| Mn 257.610† | 284054.7 | 0.2979 | mg/L | 0.00296 | 0.2979 | mg/L | 0.00296 | 0.99% |
| Cr 267.716† | 1781.3 | 0.0125 | mg/L | 0.00023 | 0.0125 | mg/L | 0.00023 | 1.85% |
| Fe 273.955† | 402926.4 | 14.83 | mg/L | 0.135 | 14.83 | mg/L | 0.135 | 0.91% |
| Mg 279.077† | 72582.8 | 3.271 | mg/L | 0.0339 | 3.271 | mg/L | 0.0339 | 1.04% |
| V 292.402† | 6569.9 | 0.0220 | mg/L | 0.00022 | 0.0220 | mg/L | 0.00022 | 1.02% |
| Al 308.215† | 221619.9 | 7.935 | mg/L | 0.0766 | 7.935 | mg/L | 0.0766 | 0.97% |
| Be 313.107† | 498.3 | 0.0001 | mg/L | 0.00002 | 0.0001 | mg/L | 0.00002 | 16.09% |
| Cu 324.752† | 5320.7 | 0.0206 | mg/L | 0.00037 | 0.0206 | mg/L | 0.00037 | 1.80% |
| Ag 338.289† | -787.4 | -0.0050 | mg/L | 0.00051 | -0.0050 | mg/L | 0.00051 | 10.27% |
| Na 330.237† | -118.5 | -0.0494 | mg/L | 0.04153 | -0.0494 | mg/L | 0.04153 | 84.10% |
| Ca 227.546† | 557.6 | 1.625 | mg/L | 0.0305 | 1.625 | mg/L | 0.0305 | 1.88% |
| Al RADIAL† | 16138.1 | 8.390 | mg/L | 0.1100 | 8.390 | mg/L | 0.1100 | 1.31% |
| Fe RADIAL† | 5435.8 | 14.76 | mg/L | 0.177 | 14.76 | mg/L | 0.177 | 1.20% |
| Ca RADIAL† | 6678.0 | 1.450 | mg/L | 0.0217 | 1.450 | mg/L | 0.0217 | 1.50% |
| K RADIAL† | 2614.3 | 2.252 | mg/L | 0.0256 | 2.252 | mg/L | 0.0256 | 1.14% |
| Mg RADIAL† | 1105.2 | 3.230 | mg/L | 0.0434 | 3.230 | mg/L | 0.0434 | 1.34% |
| Na RADIAL† | 1167.8 | 0.0889 | mg/L | 0.00837 | 0.0889 | mg/L | 0.00837 | 9.41% |
| Mo 202.031 | -0.7 | 0.000 | mg/L | 0.0003 | 0.000 | mg/L | 0.0003 | >999.9% |

**Sequence No.: 175**
**Sample ID: SEQ-CCVF**
**Analyst: KV**
**Logged In Analyst (Original) : administrator**

**Autosampler Location: 8**
**Date Collected: 9/13/2016 6:42:16 AM**
**Data Type: Reprocessed on 9/13/2016 7:01:08 AM**

**Initial Sample Wt:** **Initial Sample Vol:**
**Dilution:** **Sample Prep Vol:**

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**Mean Data: SEQ-CCVF**

| Analyte | Mean Corrected Intensity | Calib. Conc. | Units | Std.Dev. | Sample Conc. | Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 14684819.9 | 4.775 | mg/L | 0.0253 | | | | 0.53% |
| Y RADIAL | 233675.7 | 5.090 | mg/L | 0.0903 | | | | 1.77% |
| As 188.979† | 465.9 | 0.2467 | mg/L | 0.00096 | 0.2467 | mg/L | 0.00096 | 0.39% |
| Tl 190.801† | 670.9 | 0.2308 | mg/L | 0.00350 | 0.2308 | mg/L | 0.00350 | 1.52% |
| Se 196.026† | 227.8 | 0.2390 | mg/L | 0.00810 | 0.2390 | mg/L | 0.00810 | 3.39% |
| Zn 206.200† | 115715.0 | 2.536 | mg/L | 0.0361 | 2.536 | mg/L | 0.0361 | 1.42% |
| Sb 206.836† | 843.1 | 0.2453 | mg/L | 0.00149 | 0.2453 | mg/L | 0.00149 | 0.61% |
| Pb 220.353† | 2755.9 | 0.2540 | mg/L | 0.00441 | 0.2540 | mg/L | 0.00441 | 1.74% |
| Cd 226.502† | 18488.5 | 0.1257 | mg/L | 0.00160 | 0.1257 | mg/L | 0.00160 | 1.28% |
| Co 228.616† | 110407.6 | 2.574 | mg/L | 0.0361 | 2.574 | mg/L | 0.0361 | 1.40% |
| Ni 232.003† | 61559.1 | 2.544 | mg/L | 0.0348 | 2.544 | mg/L | 0.0348 | 1.37% |
| Ba 233.527† | 1005176.4 | 10.15 | mg/L | 0.090 | 10.15 | mg/L | 0.090 | 0.89% |
| Mn 257.610† | 2439298.2 | 2.543 | mg/L | 0.0196 | 2.543 | mg/L | 0.0196 | 0.77% |
| Cr 267.716† | 151240.1 | 1.046 | mg/L | 0.0156 | 1.046 | mg/L | 0.0156 | 1.50% |
| Fe 273.955† | 141051.3 | 5.191 | mg/L | 0.0756 | 5.191 | mg/L | 0.0756 | 1.46% |
| Mg 279.077† | 561681.7 | 25.33 | mg/L | 0.248 | 25.33 | mg/L | 0.248 | 0.98% |
| V 292.402† | 726635.4 | 2.514 | mg/L | 0.0235 | 2.514 | mg/L | 0.0235 | 0.93% |
| Al 308.215† | 280694.2 | 10.05 | mg/L | 0.157 | 10.05 | mg/L | 0.157 | 1.56% |
| Be 313.107† | 1105018.2 | 0.2534 | mg/L | 0.00246 | 0.2534 | mg/L | 0.00246 | 0.97% |
| Cu 324.752† | 344243.4 | 1.295 | mg/L | 0.0193 | 1.295 | mg/L | 0.0193 | 1.49% |
| Ag 338.289† | 194573.5 | 1.307 | mg/L | 0.0168 | 1.307 | mg/L | 0.0168 | 1.28% |
| Na 330.237† | 23532.4 | 23.72 | mg/L | 0.415 | 23.72 | mg/L | 0.415 | 1.75% |
| Ca 227.546† | 9425.6 | 25.28 | mg/L | 0.242 | 25.28 | mg/L | 0.242 | 0.96% |
| Al RADIAL† | 19018.7 | 9.886 | mg/L | 0.1946 | 9.886 | mg/L | 0.1946 | 1.97% |
| Fe RADIAL† | 1901.4 | 5.162 | mg/L | 0.1099 | 5.162 | mg/L | 0.1099 | 2.13% |
| Ca RADIAL† | 117202.0 | 25.44 | mg/L | 0.015 | 25.44 | mg/L | 0.015 | 0.06% |
| K RADIAL† | 5870.5 | 5.058 | mg/L | 0.1133 | 5.058 | mg/L | 0.1133 | 2.24% |
| Mg RADIAL† | 8847.0 | 25.86 | mg/L | 0.547 | 25.86 | mg/L | 0.547 | 2.12% |
| Na RADIAL† | 337266.6 | 25.68 | mg/L | 0.108 | 25.68 | mg/L | 0.108 | 0.42% |
| Mo 202.031 | 28250.9 | 1.035 | mg/L | 0.0139 | 1.035 | mg/L | 0.0139 | 1.35% |

---

**Sequence No.: 176** **Autosampler Location: 1**
**Sample ID: SEQ-CCBF** **Date Collected: 9/13/2016 6:50:22 AM**
**Analyst: KV** **Data Type: Reprocessed on 9/13/2016 7:01:09 AM**
**Logged In Analyst (Original) : administrator**
**Initial Sample Wt:** **Initial Sample Vol:**
**Dilution:** **Sample Prep Vol:**

---

**Mean Data: SEQ-CCBF**

| Analyte | Mean Corrected Intensity | Calib. Conc. | Units | Std.Dev. | Sample Conc. | Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 15147515.2 | 4.925 | mg/L | 0.1128 | | | | 2.29% |
| Y RADIAL | 231914.3 | 5.052 | mg/L | 0.0716 | | | | 1.42% |
| As 188.979† | -6.3 | -0.0033 | mg/L | 0.00487 | -0.0033 | mg/L | 0.00487 | 146.57% |
| Tl 190.801† | 3.0 | 0.0010 | mg/L | 0.00089 | 0.0010 | mg/L | 0.00089 | 87.06% |
| Se 196.026† | -6.2 | -0.0064 | mg/L | 0.00549 | -0.0064 | mg/L | 0.00549 | 85.45% |
| Zn 206.200† | -133.6 | -0.0029 | mg/L | 0.00023 | -0.0029 | mg/L | 0.00023 | 7.98% |
| Sb 206.836† | 2.5 | 0.0007 | mg/L | 0.00177 | 0.0007 | mg/L | 0.00177 | 245.11% |
| Pb 220.353† | -2.4 | -0.0002 | mg/L | 0.00150 | -0.0002 | mg/L | 0.00150 | 643.14% |
| Cd 226.502† | -25.0 | -0.0002 | mg/L | 0.00003 | -0.0002 | mg/L | 0.00003 | 18.82% |
| Co 228.616† | -7.3 | -0.0002 | mg/L | 0.00030 | -0.0002 | mg/L | 0.00030 | 177.32% |
| Ni 232.003† | -1.0 | 0.0000 | mg/L | 0.00127 | 0.0000 | mg/L | 0.00127 | >999.9% |
| Ba 233.527† | -6.8 | -0.0001 | mg/L | 0.00007 | -0.0001 | mg/L | 0.00007 | 101.31% |
| Mn 257.610† | -97.0 | -0.0001 | mg/L | 0.00002 | -0.0001 | mg/L | 0.00002 | 23.81% |
| Cr 267.716† | 20.4 | 0.0001 | mg/L | 0.00033 | 0.0001 | mg/L | 0.00033 | 234.14% |
| Fe 273.955† | -5.7 | -0.0002 | mg/L | 0.00055 | -0.0002 | mg/L | 0.00055 | 259.52% |
| Mg 279.077† | -14.8 | -0.0007 | mg/L | 0.00090 | -0.0007 | mg/L | 0.00090 | 134.58% |
| V 292.402† | -53.9 | -0.0002 | mg/L | 0.00014 | -0.0002 | mg/L | 0.00014 | 77.64% |
| Al 308.215† | -2049.7 | -0.0734 | mg/L | 0.00980 | -0.0734 | mg/L | 0.00980 | 13.35% |
| Be 313.107† | -105.9 | 0.0000 | mg/L | 0.00005 | 0.0000 | mg/L | 0.00005 | 205.60% |
| Cu 324.752† | -32.1 | -0.0001 | mg/L | 0.00018 | -0.0001 | mg/L | 0.00018 | 153.15% |
| Ag 338.289† | -3.2 | 0.0000 | mg/L | 0.00086 | 0.0000 | mg/L | 0.00086 | >999.9% |
| Na 330.237† | -71.0 | -0.0713 | mg/L | 0.08873 | -0.0713 | mg/L | 0.08873 | 124.38% |

| | | | | | | |
|---|---|---|---|---|---|---|
| Ca 227.546† | 21.3 | 0.0569 mg/L | 0.02048 | 0.0569 mg/L | 0.02048 | 35.99% |
| Al RADIAL† | -138.7 | -0.0721 mg/L | 0.00834 | -0.0721 mg/L | 0.00834 | 11.56% |
| Fe RADIAL† | 1.7 | 0.0047 mg/L | 0.00876 | 0.0047 mg/L | 0.00876 | 185.15% |
| Ca RADIAL† | 113.9 | 0.0247 mg/L | 0.00759 | 0.0247 mg/L | 0.00759 | 30.68% |
| K RADIAL† | 8.6 | 0.0074 mg/L | 0.02561 | 0.0074 mg/L | 0.02561 | 345.34% |
| Mg RADIAL† | -1.3 | -0.0037 mg/L | 0.00807 | -0.0037 mg/L | 0.00807 | 218.82% |
| Na RADIAL† | -3840.9 | -0.2924 mg/L | 0.03647 | -0.2924 mg/L | 0.03647 | 12.47% |
| Mo 202.031 | 9.4 | 0.000 mg/L | 0.0002 | 0.000 mg/L | 0.0002 | 66.25% |

York Analytical Laboratories, Inc.
SDG: 16I0260
CLASS: HG
METHOD: EPA 7473

# DATA PACKAGE COVER PAGE

## EPA 7473

| | | | |
|---|---|---|---|
| Laboratory: | York Analytical Laboratories, Inc. | SDG: | 16I0260 |
| Client: | Langan Engineering & Environmental Services (NYC) | Project: | 170301202 450 Union Street |

| Client Sample Id: | Lab Sample Id: |
|---|---|
| V01_0-1.5 | 16I0260-01 |

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in computer-readable data submitted on diskette has been autorized by the Laboratory Manager or the Manager's designee, as verified by the following signatures.

Signature:

Name: Benjamin Gulizia

Date: 9/30/2016

Title: Laboratory Director

**FORM I** **INORGANIC ANALYSIS DATA SHEET**

**EPA 7473**

**V01_0-1.5**

Laboratory: York Analytical Laboratories, Inc. SDG: 16I0260

Client: Langan Engineering & Environmental Services (NYC) Project: 170301202 450 Union Street

Matrix: Soil Laboratory ID: 16I0260-01 File ID: QBHgDMA80-02 091316A-068

Sampled: 09/07/16 13:00 Prepared: 09/13/16 06:21 Analyzed: 09/13/16 16:37

Solids: 96.56 Preparation: EPA 7473 soil Initial/Final: 0.2 g / 0.2 g

Batch: BI60438 Sequence: Calibration: Instrument: MileStone

| CAS NO. | Analyte | Concentration (mg/kg dry) | Dilution Factor | Q | Method |
|---|---|---|---|---|---|
| 7439-97-6 | Mercury | 0.0311 | 1 | U | EPA 7473 |

**Form 2A**

# CONTINUING CALIBRATION VERIFICATION (Hg)

Lab Name: York Analytical Laboratories, Inc. SDG: 16I0260

Client: Langan Engineering & Environmental Services (NYC) Project: 170301202 450 Union Street

I Cal Source: Inorganic Ventures Sequence: QBHg091316A

C Cal Source: Absolute Standards Concentration units: ug/kG

| | | CCV 3 | | | CCV 4 | | | CCV 5 | |
|---|---|---|---|---|---|---|---|---|---|
| Analyte | TRUE | FOUND | %R(1) | TRUE | FOUND | % R(1) | TRUE | FOUND | % R(1) |
| Mercury | 20.0000 | 20.7072 | 103.5 | 20.0000 | 20.6930 | 103.5 | 20.0000 | 20.7151 | 103.6 |

(1) Control Limits Hg 80-120 %

**Form 3**

# BLANKS

| | | | |
|---|---|---|---|
| Lab Name: | York Analytical Laboratories, Inc | SDG: | 16I0260 |
| Client: | Langan Engineering & Environmental Services (NYC) | Project: | 170301202 450 Union Street |
| Preparation Blank Matrix: | Soil | Prep Blank ID: | BI60438-BLK1 |
| Prep. Blank Conc. Units: | mg/kg | Sequence ID: | QBHg091316A |

| | Continuing Calibration Blanks (mg/kg) | | | | | | | | Preparation Blank | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Analyte | 3 | C | 4 | C | 5 | C | | | Result | C | M |
| Mercury | 0.03 | U | 0.03 | U | 0.03 | U | | | 0.03 | U | CV |

**FORM IV** **PREPARATION BATCH SUMMARY**

**EPA 7473**

Laboratory: York Analytical Laboratories, Inc. SDG: 16I0260

Client: Langan Engineering & Environmental Services (NYC) Project: 170301202 450 Union Street

Batch: BI60438 Batch Matrix: Soil Preparation: EPA 7473 soil

| SAMPLE NAME | LAB SAMPLE ID | LAB FILE ID | DATE PREPARED | OBSERVATIONS |
|---|---|---|---|---|
| V01_0-1.5 | 16I0260-01 | HgDMA80-02 091316A- | 09/13/16 06:21 | |
| Blank | BI60438-BLK1 | HgDMA80-02 091316A- | 09/13/16 06:21 | |
| Reference | BI60438-SRM1 | HgDMA80-02 091316A- | 09/13/16 06:21 | |

# FORM V ANALYSIS BATCH (SEQUENCE) SUMMARY

## EPA 7473

Laboratory: York Analytical Laboratories, Inc. SDG: 16I0260

Client: Langan Engineering & Environmental Services (NYC) Project: 170301202 450 Union Street

Sequence: Instrument:

Calibration:

| Sample Name | Lab Sample ID | Lab File ID | Analysis Date/Time |
|---|---|---|---|
| Blank | BI60438-BLK1 | QBHgDMA80-02 091316A-042 | 09/13/16 12:55 |
| Reference | BI60438-SRM1 | QBHgDMA80-02 091316A-043 | 09/13/16 13:04 |
| V01_0-1.5 | 16I0260-01 | QBHgDMA80-02 091316A-065 | 09/13/16 16:37 |

# Sample listing "QBHgDMA80-02 091316A.d80"

Created by "Service"
14.09.2016 06:58:26



| Pos Nr. | Samplename Remark | Amount Date | State Date | Height | Hg [ng] | Concentr. [µg/kg] | Σ | Cal-Factor |
|---|---|---|---|---|---|---|---|---|
| 1 (1) | mb | 0.1000 g 13.09.16 06:57 | ✔ 13.09.16 06:31 | 0.0014 | 0.0099 | 0.0987 | | 1.0000 |
| 2 (2) | CCV-1 | 0.2000 g 13.09.16 06:58 | ✔ 13.09.16 06:38 | 0.7580 | 20.4138 | 102.0692 | | 1.0000 |
| 3 (3) | mb | 0.1000 g 13.09.16 06:58 | ✔ 13.09.16 06:47 | 0.0274 | 0.1928 | 1.9282 | | 1.0000 |
| 4 (4) | CCB-1 | 0.1000 g 13.09.16 06:58 | ✔ 13.09.16 06:56 | 0.0115 | 0.0811 | 0.8108 | | 1.0000 |
| 5 (5) | BI60437-BLK1 | 0.2000 g 13.09.16 06:58 | ✔ 13.09.16 07:05 | 0.0078 | 0.0552 | 0.2758 | | 1.0000 |
| 6 (6) | BI60437-SRM1 | 0.0224 g 13.09.16 06:58 | ✔ 13.09.16 07:14 | 0.1148 | 157.7128 | 7040.749 | | 1.0000 |
| - (7) | auto BV (1) | 0.0000 g 13.09.16 07:50 | ✔ B 13.09.16 07:23 | 0.0789 | 0.5562 | | | 1.0000 |
| 7 (8) | mb | 0.1000 g 13.09.16 08:09 | ✔ 13.09.16 07:42 | 0.0336 | 0.2369 | 2.3688 | | 1.0000 |
| 8 (9) | 16I0240-73 | 0.2105 g 13.09.16 08:54 | ✔ 13.09.16 08:29 | 0.2784 | 6.9786 | 33.1524 | | 1.0000 |
| 9 (10) | BI60437-DUP1 | 0.1987 g 13.09.16 08:54 | ✔ 13.09.16 08:36 | 0.2535 | 6.2811 | 31.6111 | | 1.0000 |
| 10 (11) | BI60437-MS1 | 0.1822 g 13.09.16 09:13 | ✔ 13.09.16 08:47 | 0.0868 | 116.3528 | 638.5994 | | 1.0000 |
| - (12) | auto BV (1) | 0.0000 g 13.09.16 09:21 | ✔ B 13.09.16 08:54 | 0.1416 | 0.9981 | | | 1.0000 |
| 11 (13) | CCV-2 | 0.2000 g 13.09.16 09:21 | ✔ 13.09.16 08:57 | 0.7696 | 20.7384 | 103.6921 | | 1.0000 |
| 12 (14) | mb | 0.1000 g 13.09.16 09:22 | ✔ 13.09.16 09:06 | 0.0281 | 0.1981 | 1.9811 | | 1.0000 |
| 13 (15) | CCB-2 | 0.1000 g 13.09.16 09:22 | ✔ 13.09.16 09:15 | 0.0135 | 0.0952 | 0.9518 | | 1.0000 |
| 14 (16) | 16I0240-74 | 0.2128 g 13.09.16 09:29 | ✔ 13.09.16 09:24 | 0.0270 | 28.0197 | 131.6716 | | 1.0000 |
| 15 (17) | 16I0240-75 | 0.2038 g 13.09.16 09:29 | ✔ 13.09.16 09:33 | 0.6028 | 16.0665 | 78.8347 | | 1.0000 |
| 16 (18) | 16I0240-76 | 0.2151 g 13.09.16 09:29 | ✔ 13.09.16 09:42 | 0.6085 | 16.2251 | 75.4305 | | 1.0000 |
| 17 (19) | 16I0240-77 | 0.2036 g 13.09.16 09:29 | ✔ 13.09.16 09:50 | 0.8417 | 22.7592 | 111.7837 | | 1.0000 |
| 18 (20) | 16I0240-78 | 0.2474 g 13.09.16 09:29 | ✔ 13.09.16 09:59 | 0.7155 | 19.2238 | 77.7031 | | 1.0000 |
| 19 (21) | 16I0240-79 | 0.2352 g 13.09.16 09:29 | ✔ 13.09.16 10:08 | 0.7237 | 19.4543 | 82.7137 | | 1.0000 |
| 20 (22) | 16I0240-80 | 0.2102 g 13.09.16 09:29 | ✔ 13.09.16 10:17 | 0.2513 | 6.2196 | 29.5890 | | 1.0000 |
| 21 (23) | 16I0240-81 | 0.1993 g 13.09.16 09:29 | ✔ 13.09.16 10:26 | 0.1985 | 1.3994 | 7.0217 | | 1.0000 |
| 22 (24) | 16I0240-82 | 0.2234 g 13.09.16 09:29 | ✔ 13.09.16 10:35 | 0.1944 | 1.3705 | 6.1348 | | 1.0000 |
| 23 (25) | 16I0240-83 | 0.2528 g 13.09.16 09:29 | ✔ 13.09.16 10:44 | 0.6926 | 18.5823 | 73.5060 | | 1.0000 |
| 24 (26) | 16I0240-84 | 0.2044 g 13.09.16 09:29 | ✔ 13.09.16 10:53 | 0.4431 | 3.1239 | 15.2831 | | 1.0000 |
| 25 (27) | 16I0240-85 | 0.2879 g 13.09.16 09:29 | ✔ 13.09.16 11:02 | 0.0291 | 31.1217 | 108.0991 | | 1.0000 |
| 26 (28) | 16I0240-86 | 0.2350 g 13.09.16 09:29 | ✔ 13.09.16 11:11 | 0.0442 | 53.4266 | 227.3471 | | 1.0000 |

# Sample listing "QBHgDMA80-02 091316A.d80"



Created by "Service"
14.09.2016 06:58:26

| Pos<br>Nr. | Samplename<br>Remark | Amount<br>Date | State<br>Date | Height | Hg<br>[ng] | Concentr.<br>[µg/kg] | Σ | Cal-<br>Factor |
|---|---|---|---|---|---|---|---|---|
| 27<br>(29) | 16I0240-87 | 0.2265 g<br>13.09.16 09:29 | ✓<br>13.09.16 11:20 | 0.4185 | 10.9036 | 48.1396 | | 1.0000 |
| 28<br>(30) | 16I0240-88 | 0.2031 g<br>13.09.16 09:29 | ✓<br>13.09.16 11:29 | 0.7773 | 20.9545 | 103.1735 | | 1.0000 |
| 29<br>(31) | 16I0249-09 | 0.1806 g<br>13.09.16 09:36 | ✓<br>13.09.16 11:38 | 0.1457 | 203.3565 | 1126.004 | | 1.0000 |
| -<br>(32) | auto BV (1) | 0.0000 g<br>13.09.16 12:14 | ✓ B<br>13.09.16 11:47 | 0.1498 | 1.0559 | | | 1.0000 |
| 30<br>(33) | 16I0249-10 | 0.2540 g<br>13.09.16 09:36 | ✓<br>13.09.16 11:51 | 0.0955 | 129.2039 | 508.6769 | | 1.0000 |
| -<br>(34) | auto BV (1) | 0.0000 g<br>13.09.16 12:26 | ✓ B<br>13.09.16 11:59 | 0.1063 | 0.7494 | | | 1.0000 |
| 31<br>(35) | 16I0249-11 | 0.2427 g<br>13.09.16 09:46 | ✓<br>13.09.16 12:03 | 0.1188 | 163.6214 | 674.1712 | | 1.0000 |
| -<br>(36) | auto BV (1) | 0.0000 g<br>13.09.16 12:38 | ✓ B<br>13.09.16 12:11 | 0.1601 | 1.1287 | | | 1.0000 |
| 32<br>(37) | 16I0249-12 | 0.2156 g<br>13.09.16 09:51 | ✓<br>13.09.16 12:14 | 0.1008 | 137.0328 | 635.5881 | | 1.0000 |
| -<br>(38) | auto BV (1) | 0.0000 g<br>13.09.16 12:50 | ✓ B<br>13.09.16 12:23 | 0.1167 | 0.8227 | | | 1.0000 |
| 33<br>(39) | CCV-3 | 0.2000 g<br>13.09.16 12:57 | ✓<br>13.09.16 12:30 | 0.7685 | 20.7072 | 103.5358 | | 1.0000 |
| 34<br>(40) | mb | 0.1000 g<br>13.09.16 12:57 | ✓<br>13.09.16 12:37 | 0.0284 | 0.2002 | 2.0022 | | 1.0000 |
| 35<br>(41) | CCB-3 | 0.1000 g<br>13.09.16 12:57 | ✓<br>13.09.16 12:46 | 0.0132 | 0.0934 | 0.9341 | | 1.0000 |
| 36<br>(42) | BI60438-BLK1 | 0.2000 g<br>13.09.16 12:57 | ✓<br>13.09.16 12:55 | 0.0096 | 0.0677 | 0.3384 | | 1.0000 |
| 37<br>(43) | BI60438-SRM1 | 0.0201 g<br>13.09.16 12:57 | ✓<br>13.09.16 13:04 | 0.0944 | 127.5791 | 6347.218 | | 1.0000 |
| -<br>(44) | auto BV (1) | 0.0000 g<br>13.09.16 13:40 | ✓ B<br>13.09.16 13:13 | 0.0911 | 0.6421 | | | 1.0000 |
| 38<br>(45) | mb | 0.1000 g<br>13.09.16 13:51 | ✓<br>13.09.16 13:25 | 0.0295 | 0.2080 | 2.0798 | | 1.0000 |
| 39<br>(46) | 16I0249-13 | 0.2152 g<br>13.09.16 13:51 | ✓<br>13.09.16 13:32 | 0.7691 | 20.7243 | 96.3026 | | 1.0000 |
| 40<br>(47) | BI60438-DUP1 | 0.1905 g<br>13.09.16 13:51 | ✓<br>13.09.16 13:41 | 0.7065 | 18.9710 | 99.5853 | | 1.0000 |
| 1<br>(48) | BI60438-MS1 | 0.2196 g<br>13.09.16 14:17 | ✓<br>13.09.16 13:51 | 0.0953 | 128.9085 | 587.0151 | | 1.0000 |
| -<br>(49) | auto BV (1) | 0.0000 g<br>13.09.16 14:26 | ✓ B<br>13.09.16 13:59 | 0.1953 | 1.3767 | | | 1.0000 |
| 2<br>(50) | CCV-4 | 0.2000 g<br>13.09.16 14:28 | ✓<br>13.09.16 14:02 | 0.7680 | 20.6930 | 103.4650 | | 1.0000 |
| 3<br>(51) | mb | 0.1000 g<br>13.09.16 14:28 | ✓<br>13.09.16 14:11 | 0.0352 | 0.2479 | 2.4792 | | 1.0000 |
| 4<br>(52) | CCB-4 | 0.1000 g<br>13.09.16 14:28 | ✓<br>13.09.16 14:21 | 0.0167 | 0.1174 | 1.1745 | | 1.0000 |
| 5<br>(53) | 16I0249-14 | 0.2002 g<br>13.09.16 14:30 | ✓<br>13.09.16 14:29 | 0.1578 | 221.2299 | 1105.044 | | 1.0000 |
| -<br>(54) | auto BV (1) | 0.0000 g<br>13.09.16 15:05 | ✓ B<br>13.09.16 14:38 | 0.2712 | 1.9118 | | | 1.0000 |
| 6<br>(55) | 16I0249-15 | 0.1834 g<br>13.09.16 14:30 | ✓<br>13.09.16 14:41 | 0.0402 | 47.5180 | 259.0948 | | 1.0000 |
| 7<br>(56) | 16I0251-03 | 0.2126 g<br>13.09.16 14:31 | ✓<br>13.09.16 14:50 | 0.2991 | 7.5588 | 35.5539 | | 1.0000 |

# Sample listing "QBHgDMA80-02 091316A.d80"



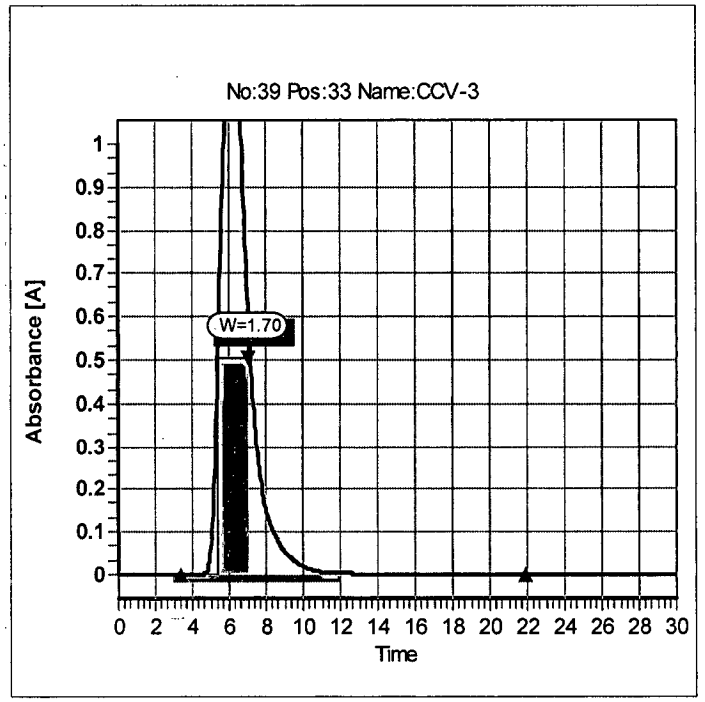
Created by "Service"
14.09.2016 06:58:26

| Pos<br>Nr. | Samplename<br>Remark | Amount<br>Date | State<br>Date | Height | Hg<br>[ng] | Concentr.<br>[µg/kg] | Σ | Cal-<br>Factor |
|---|---|---|---|---|---|---|---|---|
| 8<br>(57) | 16I0251-04 | 0.2122 g<br>13.09.16 14:31 | ✔<br>13.09.16 14:59 | 0.0526 | 0.3708 | 1.7476 | | 1.0000 |
| 9<br>(58) | 16I0251-05 | 0.2100 g<br>13.09.16 14:31 | ✔<br>13.09.16 15:08 | 0.2057 | 1.4502 | 6.9057 | | 1.0000 |
| 10<br>(59) | 16I0251-06 | 0.1894 g<br>13.09.16 14:31 | ✔<br>13.09.16 15:17 | 0.2273 | 5.5464 | 29.2843 | | 1.0000 |
| 11<br>(60) | 16I0251-07 | 0.2232 g<br>13.09.16 14:31 | ✔<br>13.09.16 15:26 | 0.0693 | 0.4887 | 2.1897 | | 1.0000 |
| 12<br>(61) | 16I0251-08 | 0.2657 g<br>13.09.16 14:31 | ✔<br>13.09.16 15:35 | 0.1019 | 0.7184 | 2.7038 | | 1.0000 |
| 13<br>(62) | 16I0251-09 | 0.2315 g<br>13.09.16 14:31 | ✔<br>13.09.16 15:44 | 0.3483 | 2.4555 | 10.6070 | | 1.0000 |
| 14<br>(63) | 16I0251-10 | 0.1921 g<br>13.09.16 14:31 | ✔<br>13.09.16 15:53 | 0.4873 | 3.4355 | 17.8838 | | 1.0000 |
| 15<br>(64) | 16I0251-11 | 0.1765 g<br>13.09.16 14:31 | ✔<br>13.09.16 16:02 | 0.1734 | 1.2225 | 6.9262 | | 1.0000 |
| 16<br>(65) | 16I0251-12 | 0.2759 g<br>13.09.16 14:31 | ✔<br>13.09.16 16:11 | 0.1367 | 0.9637 | 3.4931 | | 1.0000 |
| 17<br>(66) | 16I0251-13 | 0.2287 g<br>13.09.16 14:31 | ✔<br>13.09.16 16:19 | 0.1274 | 0.8979 | 3.9262 | | 1.0000 |
| 18<br>(67) | 16I0252-01 | 0.2208 g<br>13.09.16 14:38 | ✔<br>13.09.16 16:28 | 0.1432 | 1.0096 | 4.5723 | | 1.0000 |
| 19<br>(68) | 16I0260-01 | 0.2402 g<br>13.09.16 14:38 | ✔<br>13.09.16 16:37 | 0.2609 | 6.4899 | 27.0189 | | 1.0000 |
| 20<br>(69) | 16I0267-01 | 0.1948 g<br>13.09.16 14:38 | ✔<br>13.09.16 16:46 | 0.2736 | 392.2829 | 2013.772 | | 1.0000 |
| -<br>(70) | auto BV (1) | 0.0000 g<br>13.09.16 17:22 | ✔ B<br>13.09.16 16:55 | 0.2736 | 1.9286 | | | 1.0000 |
| 21<br>(71) | 16I0267-02 | 0.2490 g<br>13.09.16 14:38 | ✔<br>13.09.16 16:59 | 0.1632 | 229.2065 | 920.5079 | | 1.0000 |
| -<br>(72) | auto BV (1) | 0.0000 g<br>13.09.16 17:34 | ✔ B<br>13.09.16 17:07 | 0.3701 | 2.6089 | | | 1.0000 |
| -<br>(73) | auto BV (2) | 0.0000 g<br>13.09.16 17:38 | ✔ B<br>13.09.16 17:11 | 0.0386 | 0.2721 | | | 1.0000 |
| 22<br>(74) | 16I0269-01 | 0.2166 g<br>13.09.16 14:47 | ✔<br>13.09.16 17:14 | 0.0932 | 125.8065 | 580.8242 | | 1.0000 |
| -<br>(75) | auto BV (1) | 0.0000 g<br>13.09.16 17:50 | ✔ B<br>13.09.16 17:23 | 0.1411 | 0.9946 | | | 1.0000 |
| 23<br>(76) | 16I0269-03 | 0.2021 g<br>13.09.16 14:47 | ✔<br>13.09.16 17:26 | 0.0594 | 75.8791 | 375.4533 | | 1.0000 |
| 24<br>(77) | mb | 0.1000 g<br>14.09.16 06:50 | ✔<br>14.09.16 06:23 | 0.0018 | 0.0124 | 0.1242 | | 1.0000 |
| 25<br>(78) | CCV-5 | 0.2000 g<br>14.09.16 06:50 | ✔<br>14.09.16 06:30 | 0.7687 | 20.7151 | 103.5753 | | 1.0000 |
| 26<br>(79) | mb | 0.1000 g<br>14.09.16 06:50 | ✔<br>14.09.16 06:39 | 0.0173 | 0.1220 | 1.2197 | | 1.0000 |
| 27<br>(80) | CCB-5 | 0.1000 g<br>14.09.16 06:50 | ✔<br>14.09.16 06:48 | 0.0090 | 0.0635 | 0.6345 | | 1.0000 |

# DMA Result Report

Created by: Service
9/15/2016 10:33:53 AM

**Signal curve** C:\Documents and




**Parameters**

| | |
|---|---|
| Position | 39 |
| Remarks | |
| Method File | Soil m80 27.10.2015 |
| Temperature | |
| Max. start T | 250 |
| Purge time | 250 |
| Amalgamator heating time | 12 |
| Signal recording time | 30 |
| Weight of sample | 0.2000 g |
| Calibration file | cal Soil DMA80-01 102815.c80 28.10.2015 08:39:54 |
| Calibration factor | 1.0000 |

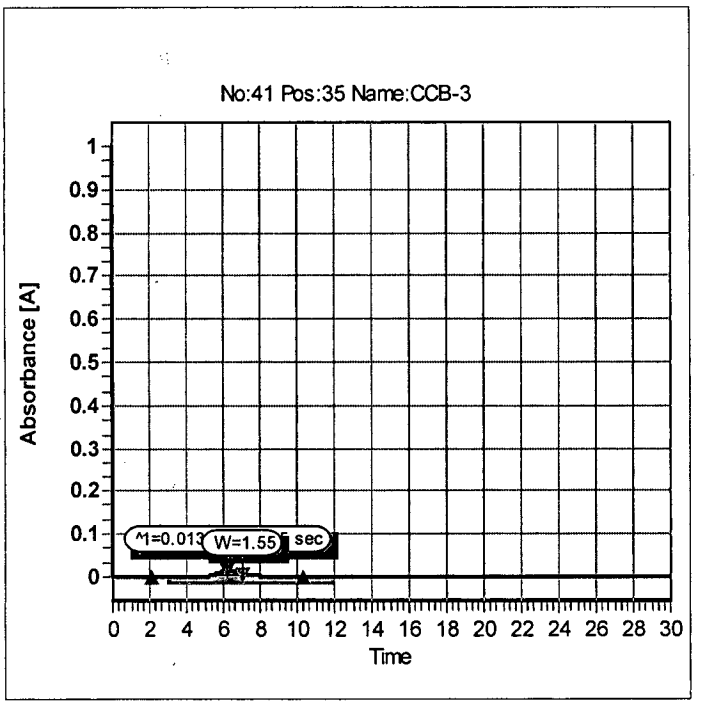
**Results**

| | |
|---|---|
| Status | o.k. |
| Height | 0.7685 |
| Concentration | 103.5358 [µg/kg] |
| Absolute amout of Hg | 20.7072 ng |

# DMA Result Report

Created by: Service
9/15/2016 10:34:00 AM

**Signal curve** C:\Documents and




**Parameters**

| | | |
|---|---|---|
| Position | 41 | |
| Remarks | | |
| Method File | Soil:m80 | 27.10.2015 |
| Temperature | | |
| Max. start T | 250 | |
| Purge time | 250 | |
| Amalgamator heating time | 12 | |
| Signal recording time | 30 | |
| Weight of sample | 0.1000 | g |
| Calibration file | ical Soil DMA80-01 102815.c80 | 28.10.2015 08:39:54 |
| Calibration factor | 1.0000 | |

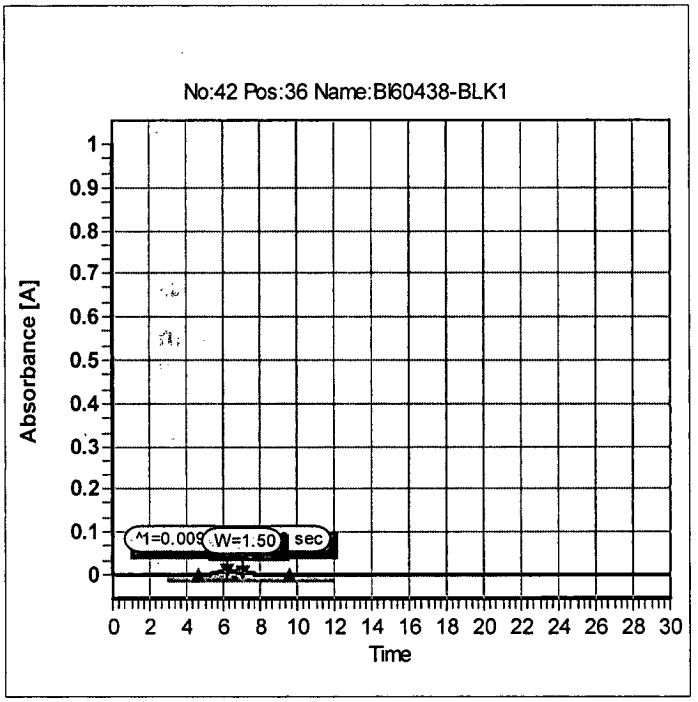
**Results**

| | | |
|---|---|---|
| Status | o.k. | |
| Height | 0.0132 | |
| Concentration | 0.9341 | [µg/kg] |
| Absolute amout of Hg | 0.0934 | ng |

# DMA Result Report

Created by: Service
9/15/2016 10:34:06 AM

**Signal curve** C:\Documents and




**Parameters**

| | |
|---|---|
| Position | 42 |
| Remarks | |
| Method File | Soil.m80 27.10.2015 |
| Temperature | |
| Max. start T | 250 |
| Purge time | 250 |
| Amalgamator heating time | 12 |
| Signal recording time | 30 |
| Weight of sample | 0.2000 g |
| Calibration file | cal\Soil\DMA80-01 102815.c80 28.10.2015 08:39:54 |
| Calibration factor | 1.0000 |

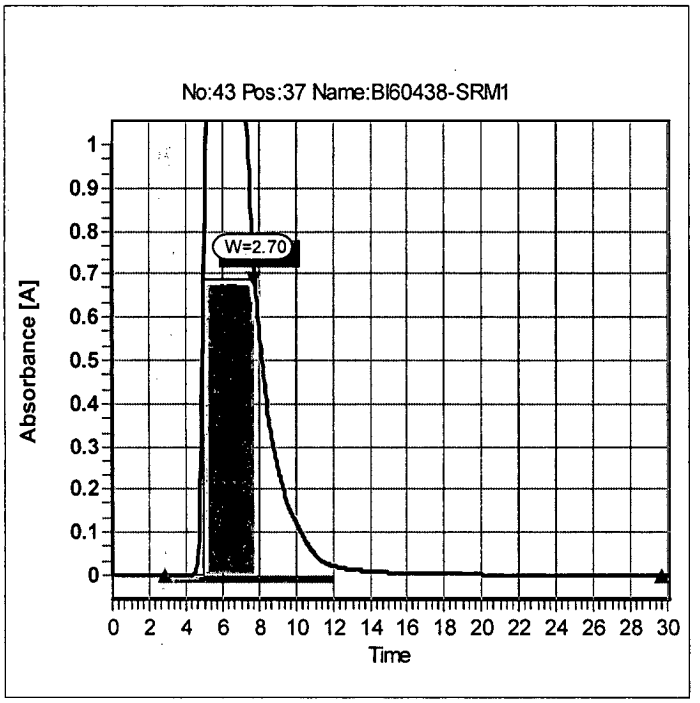
**Results**

| | |
|---|---|
| Status | o.k. |
| Height | 0.0096 |
| Concentration | 0.3384 [µg/kg] |
| Absolute amout of Hg | 0.0677 ng |

# DMA Result Report

Created by: Service
9/15/2016 10:34:13 AM

**Signal curve** C:\Documents and




**Parameters**

| | |
|---|---|
| Position | 43 |
| Remarks | |
| Method File | Soil!m80 27.10.2015 |
| Temperature | |
| Max. start T | 250 |
| Purge time | 250 |
| Amalgamator heating time | 12 |
| Signal recording time | 30 |
| Weight of sample | 0.0201 g |
| Calibration file | cal\Soil\DMA80-01_102815.c80 28.10.2015 08:39:54 |
| Calibration factor | 1.0000 |

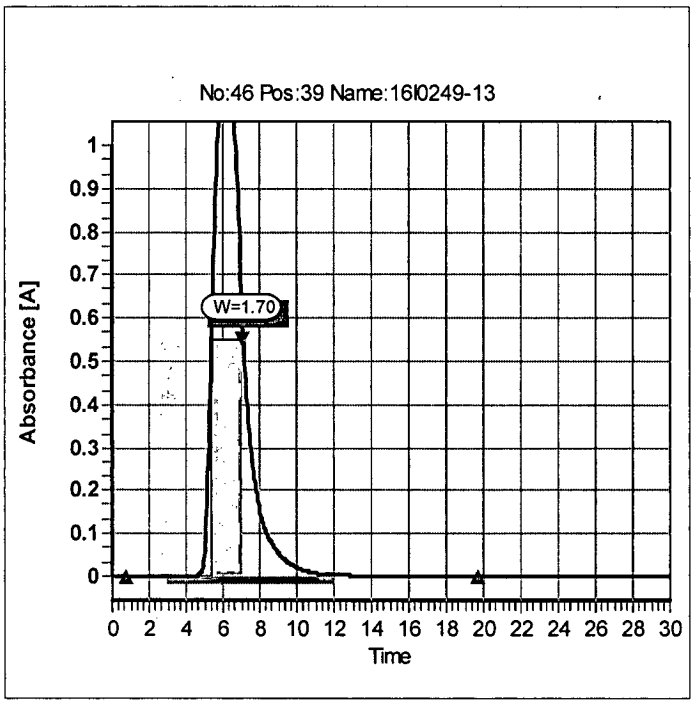
**Results**

| | |
|---|---|
| Status | o.k. |
| Height | 0.0944 |
| Concentration | 6.347.2183 [µg/kg] |
| Absolute amout of Hg | 127.5791 ng |

# DMA Result Report

Created by: Service
9/15/2016 10:34:20 AM

**Signal curve** C:\Documents and




**Parameters**

| | | |
|---|---|---|
| Position | 46 | |
| Remarks | | |
| Method File | Soil.m80 | 27.10.2015 |
| Temperature | | |
| Max. start T | 250 | |
| Purge time | 250 | |
| Amalgamator heating time | 12 | |
| Signal recording time | 30 | |
| Weight of sample | 0.2152 | g |
| Calibration file | ical Soil DMA80-01 102815.c80 | 28.10.2015 08:39:54 |
| Calibration factor | 1.0000 | |

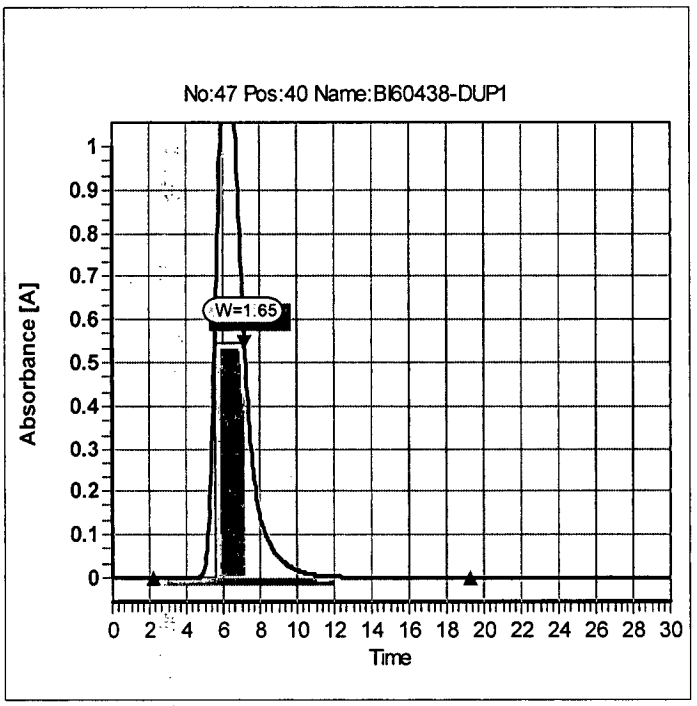
**Results**

| | | |
|---|---|---|
| Status | o.k. | |
| Height | 0.7691 | |
| Concentration | 96.3026 | [µg/kg] |
| Absolute amout of Hg | 20.7243 | ng |

# DMA Result Report

Created by: Service
9/15/2016 10:34:26 AM

**Signal curve** C:\Documents and




**Parameters**

| | |
|---|---|
| Position | 47 |
| Remarks | |
| Method File | Soil.m80 27.10.2015 |
| Temperature | |
| Max. start T | 250 |
| Purge time | 250 |
| Amalgamator heating time | 12 |
| Signal recording time | 30 |
| Weight of sample | 0.1905 g |
| Calibration file | cal\Soil\DMA80-01 102815.c80 28.10.2015 08:39:54 |
| Calibration factor | 1.0000 |

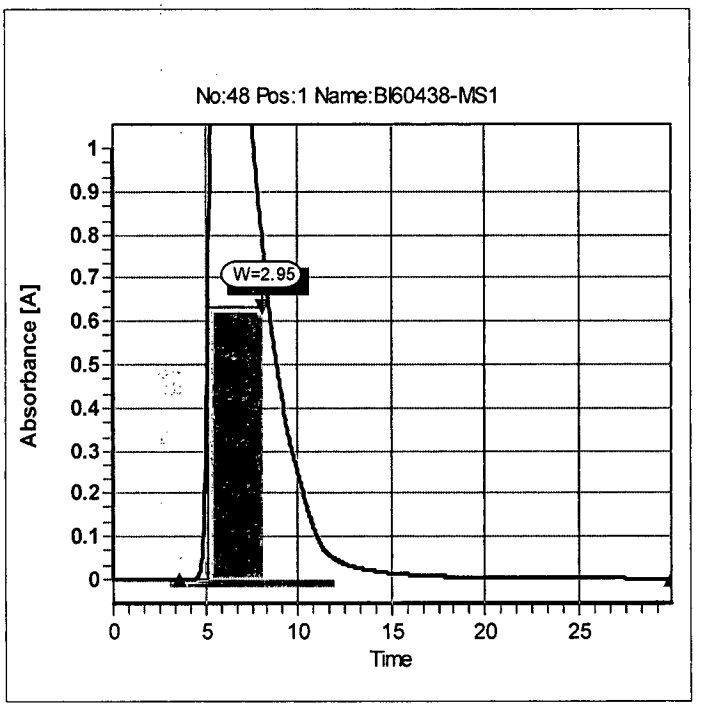
**Results**

| | |
|---|---|
| Status | o.k. |
| Height | 0.7065 |
| Concentration | 99.5853 [µg/kg] |
| Absolute amout of Hg | 18.9710 ng |

# DMA Result Report

Created by: Service
9/15/2016 10:34:32 AM

**Signal curve** C:\Documents and




**Parameters**

| | |
|---|---|
| Position | 48 |
| Remarks | |
| Method File | Soil!m80 27.10.2015 |
| Temperature | |
| Max. start T | 250 |
| Purge time | 250 |
| Amalgamator heating time | 12 |
| Signal recording time | 30 |
| Weight of sample | 0.2196 g |
| Calibration file | cal\Soil\DMA80-01 102815.c80 28.10.2015 08:39:54 |
| Calibration factor | 1.0000 |

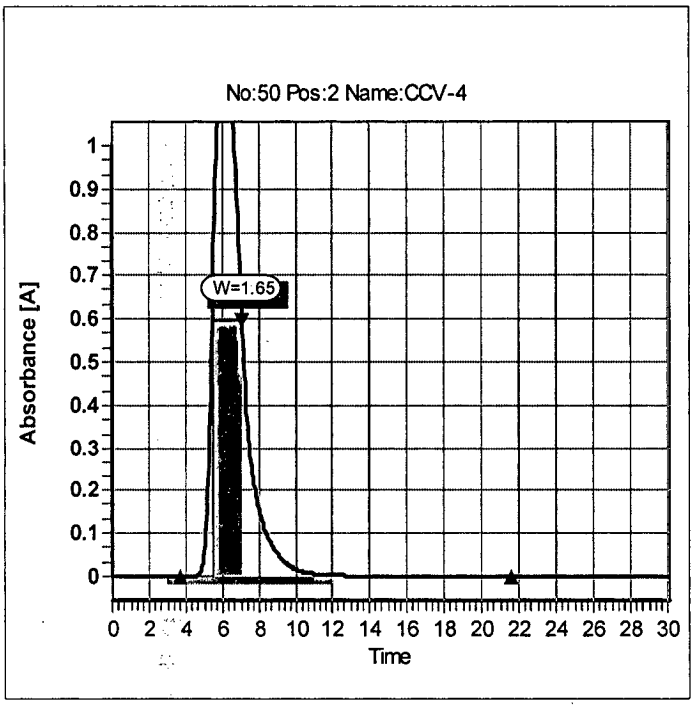
**Results**

| | |
|---|---|
| Status | o.k. |
| Height | 0.0953 |
| Concentration | 587.0151 [µg/kg] |
| Absolute amout of Hg | 128.9085 ng |

# DMA Result Report

Created by: Service
9/15/2016 10:34:38 AM

**Signal curve** C:\Documents and




**Parameters**

| | |
|---|---|
| Position | 50 |
| Remarks | |
| Method File | Soil!m80 27.10.2015 |
| Temperature | |
| Max. start T | 250 |
| Purge time | 250 |
| Amalgamator heating time | 12 |
| Signal recording time | 30 |
| Weight of sample | 0.2000 g |
| Calibration file | cal\Soil\DMA80-01_102815.c80 28.10.2015 08:39:54 |
| Calibration factor | 1.0000 |

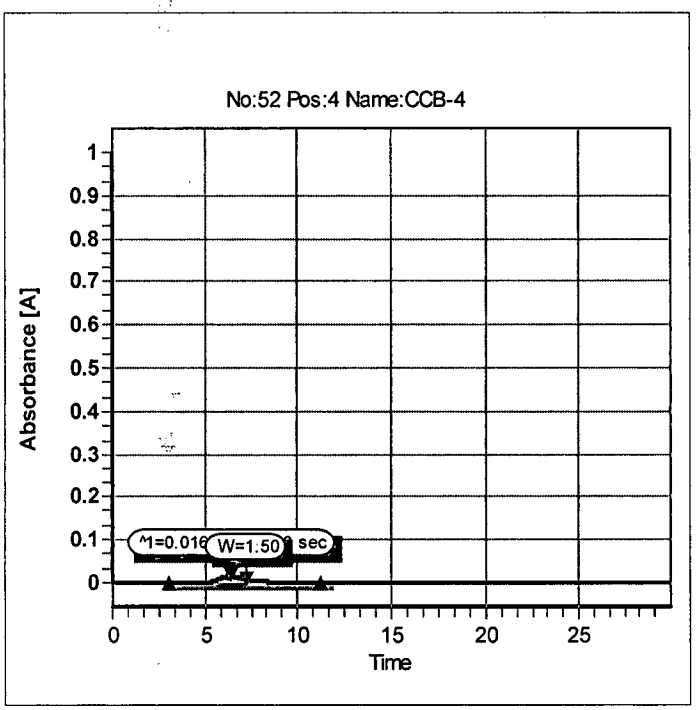
**Results**

| | |
|---|---|
| Status | o.k. |
| Height | 0.7680 |
| Concentration | 103.4650 [µg/kg] |
| Absolute amout of Hg | 20.6930 ng |

# DMA Result Report

Created by: Service
9/15/2016 10:34:43 AM

**Signal curve** C:\Documents and




**Parameters**

| | | |
|---|---|---|
| Position | 52 | |
| Remarks | | |
| Method File | Soil.m80 | 27.10.2015 |
| Temperature | | |
| Max. start T | 250 | |
| Purge time | 250 | |
| Amalgamator heating time | 12 | |
| Signal recording time | 30 | |
| Weight of sample | 0.1000 | g |
| Calibration file | cal\Soil\DMA80-01_102815.c80 | 28.10.2015 08:39:54 |
| Calibration factor | 1.0000 | |

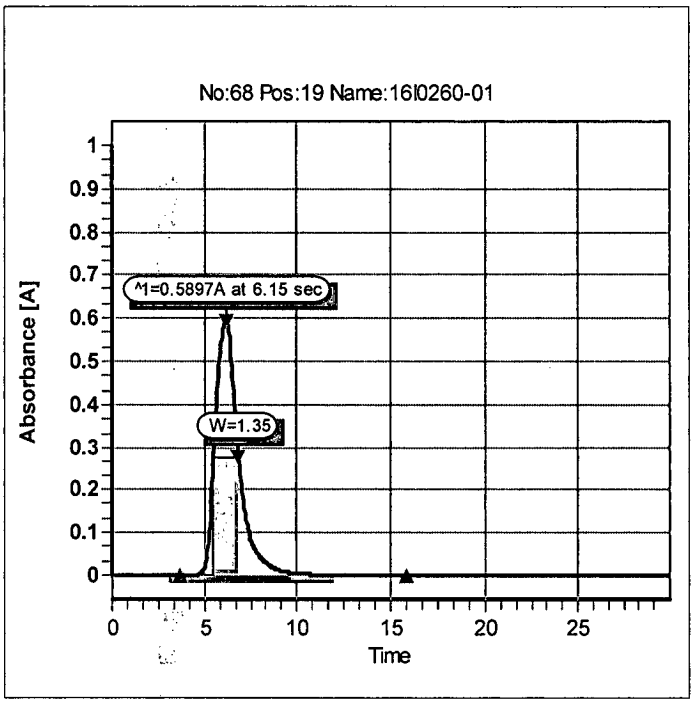
**Results**

| | | |
|---|---|---|
| Status | o.k. | |
| Height | 0.0167 | |
| Concentration | 1.1745 | [µg/kg] |
| Absolute amout of Hg | 0.1174 | ng |

# DMA Result Report

Created by: Service
9/15/2016 10:34:55 AM

**Signal curve** C:\Documents and




**Parameters**

| | | |
|---|---|---|
| Position | 68 | |
| Remarks | | |
| Method File | Soil.m80 | 27.10.2015 |
| Temperature | | |
| Max. start T | 250 | |
| Purge time | 250 | |
| Amalgamator heating time | 12 | |
| Signal recording time | 30 | |
| Weight of sample | 0.2402 | g |
| Calibration file | ical Soil DMA80-01 102815.c80 | 28.10.2015 08:39:54 |
| Calibration factor | 1.0000 | |

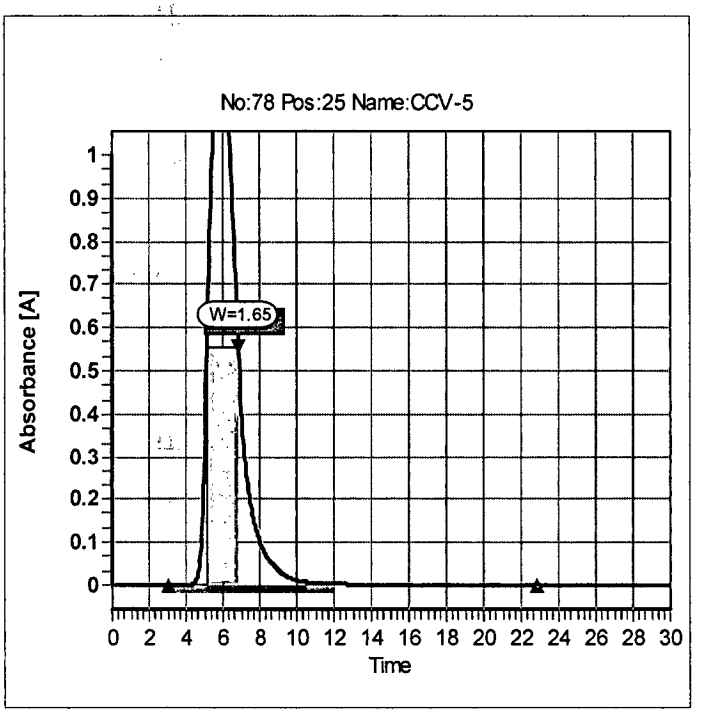
**Results**

| | | |
|---|---|---|
| Status | o.k. | |
| Height | 0.2609 | |
| Concentration | 27.0189 | [µg/kg] |
| Absolute amout of Hg | 6.4899 | ng |

# DMA Result Report

Created by: Service
9/15/2016 10:35:01 AM

**Signal curve** C:\Documents and




**Parameters**

| | | |
|---|---|---|
| Position | 78 | |
| Remarks | | |
| Method File | Soil.m80 | 27.10.2015 |
| Temperature | | |
| Max. start T | 250 | |
| Purge time | 250 | |
| Amalgamator heating time | 12 | |
| Signal recording time | 30 | |
| Weight of sample | 0.2000 | g |
| Calibration file | ical Soil DMA80-01 102815.c80 | 28.10.2015 08:39:54 |
| Calibration factor | 1.0000 | |

**Results**

| | | |
|---|---|---|
| Status | o.k. | |
| Height | 0.7687 | |
| Concentration | 103.5753 | [µg/kg] |
| Absolute amout of Hg | 20.7151 | ng |

# DMA Result Report

Created by: Service
9/15/2016 10:35:07 AM

**Signal curve** C:\Documents and

**Parameters**

| | | |
|---|---|---|
| Position | 80 | |
| Remarks | | |
| Method File | Soil.m80 | 27.10.2015 |
| Temperature | | |
| Max. start T | 250 | |
| Purge time | 250 | |
| Amalgamator heating time | 12 | |
| Signal recording time | 30 | |
| Weight of sample | 0.1000 | g |
| Calibration file | ical Soil DMA80-01 102815.c80 | 28.10.2015 08:39:54 |
| Calibration factor | 1.0000 | |

**Results**

| | | |
|---|---|---|
| Status | o.k. | |
| Height | 0.0090 | |
| Concentration | 0.6345 | [µg/kg] |
| Absolute amout of Hg | 0.0635 | ng |

# PREPARATION BENCH SHEET

## BI60438

**York Analytical Laboratories, Inc.**

**Printed: 9/15/2016 11:55:31AM**

**Matrix: Soil**

**(No Surrogate)**

| Lab Number | Analysis | Prepared | By | Initial (g) | Final (g) | Spike ID | Source ID | ul Spike | ul Surrogate | Preparation | Sample Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 16I0249-13 | Mercury by 7473 | 09/13/2016 06:2 | ALD | 0.2 | 0.2 | | | | | EPA 7473 soil | |
| 16I0249-14 | Mercury by 7473 | 09/13/2016 06:2 | ALD | 0.2 | 0.2 | | | | | EPA 7473 soil | |
| 16I0249-15 | Mercury by 7473 | 09/13/2016 06:2 | ALD | 0.2 | 0.2 | | | | | EPA 7473 soil | |
| 16I0251-03 | Mercury by 7473 | 09/13/2016 06:2 | ALD | 0.2 | 0.2 | | | | | EPA 7473 soil | |
| 16I0251-04 | Mercury by 7473 | 09/13/2016 06:2 | ALD | 0.2 | 0.2 | | | | | EPA 7473 soil | |
| 16I0251-05 | Mercury by 7473 | 09/13/2016 06:2 | ALD | 0.2 | 0.2 | | | | | EPA 7473 soil | |
| 16I0251-06 | Mercury by 7473 | 09/13/2016 06:2 | ALD | 0.2 | 0.2 | | | | | EPA 7473 soil | |
| 16I0251-07 | Mercury by 7473 | 09/13/2016 06:2 | ALD | 0.2 | 0.2 | | | | | EPA 7473 soil | |
| 16I0251-08 | Mercury by 7473 | 09/13/2016 06:2 | ALD | 0.2 | 0.2 | | | | | EPA 7473 soil | |
| 16I0251-09 | Mercury by 7473 | 09/13/2016 06:2 | ALD | 0.2 | 0.2 | | | | | EPA 7473 soil | |
| 16I0251-10 | Mercury by 7473 | 09/13/2016 06:2 | ALD | 0.2 | 0.2 | | | | | EPA 7473 soil | |
| 16I0251-11 | Mercury by 7473 | 09/13/2016 06:2 | ALD | 0.2 | 0.2 | | | | | EPA 7473 soil | |
| 16I0251-12 | Mercury by 7473 | 09/13/2016 06:2 | ALD | 0.2 | 0.2 | | | | | EPA 7473 soil | |
| 16I0251-13 | Mercury by 7473 | 09/13/2016 06:2 | ALD | 0.2 | 0.2 | | | | | EPA 7473 soil | |
| 16I0252-01 | Mercury by 7473 | 09/13/2016 06:2 | ALD | 0.2 | 0.2 | | | | | EPA 7473 soil | |
| 16I0260-01 | Mercury by 7473 | 09/13/2016 06:2 | ALD | 0.2 | 0.2 | | | | | EPA 7473 soil | |
| 16I0267-01 | Mercury by 7473 | 09/13/2016 06:2 | ALD | 0.2 | 0.2 | | | | | EPA 7473 soil | |
| 16I0267-02 | Mercury by 7473 | 09/13/2016 06:2 | ALD | 0.2 | 0.2 | | | | | EPA 7473 soil | |
| 16I0269-01 | Mercury by 7473 | 09/13/2016 06:2 | ALD | 0.2 | 0.2 | | | | | EPA 7473 soil | |
| 16I0269-03 | Mercury by 7473 | 09/13/2016 06:2 | ALD | 0.2 | 0.2 | | | | | EPA 7473 soil | |
| BI60438-BLK1 | QC | 09/13/2016 06:2 | ALD | 0.2 | 0.2 | | | | | EPA 7473 soil | |
| BI60438-DUP1 | QC | 09/13/2016 06:2 | ALD | 0.2 | 0.2 | | 16I0249-13 | | | EPA 7473 soil | |
| BI60438-MS1 | QC | 09/13/2016 06:2 | ALD | 0.2 | 0.2 | Y15J150 | 16I0249-13 | 100 | | EPA 7473 soil | |



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# PREPARATION BENCH SHEET

BI60438

**York Analytical Laboratories, Inc.**

**Printed: 9/15/2016 11:55:31AM**

**Matrix: Soil**

**(No Surrogate)**

| Lab Number | Analysis | Prepared | By | Initial (g) | Final (g) | Spike ID | Source ID | ul Spike | ul Surrogate | Preparation | Sample Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|
| BI60438-SRM1 | QC | 09/13/2016 06:2 | ALD | 0.02 | 0.02 | Y14L104 | | 0.02 | | EPA 7473 soil | |

Batch Comments:

York Analytical Laboratories, Inc.
SDG: 16I0260
CLASS: WET
METHOD: Calculation

# DATA PACKAGE COVER PAGE

## Calculation

Laboratory: York Analytical Laboratories, Inc.
SDG: 16I0260

Client: Langan Engineering & Environmental Services (NYC)
Project: 170301202 450 Union Street

| Client Sample Id: | Lab Sample Id: |
|---|---|
| V01_0-1.5 | 16I0260-01 |

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in computer-readable data submitted on diskette has been autorized by the Laboratory Manager or the Manager's designee, as verified by the following signatures.

Signature:

Name: Benjamin Gulizia

Date: 9/30/2016

Title: Laboratory Director

**FORM I** **INORGANIC ANALYSIS DATA SHEET**

**Calculation**

**V01_0-1.5**

Laboratory: York Analytical Laboratories, Inc. SDG: 16I0260

Client: Langan Engineering & Environmental Services (NYC) Project: 170301202 450 Union Street

Matrix: Soil Laboratory ID: 16I0260-01 File ID:

Sampled: 09/07/16 13:00 Prepared: 09/15/16 12:18 Analyzed: 09/15/16 14:24

Solids: 96.56 Preparation: Analysis Preparation Initial/Final: 2.5 g / 100 mL

Batch: BI60647 Sequence: Calibration: Instrument: Inst

| CAS NO. | Analyte | Concentration (mg/kg) | Dilution Factor | Q | Method |
|---|---|---|---|---|---|
| 16065-83-1 | Chromium, Trivalent | 2.18 | 1 | | Calculation |

**FORM IV** **PREPARATION BATCH SUMMARY**

**Calculation**

Laboratory: York Analytical Laboratories, Inc. SDG: 16I0260

Client: Langan Engineering & Environmental Services (NYC) Project: 170301202 450 Union Street

Batch: BI60647 Batch Matrix: Soil Preparation: Analysis Preparation

| SAMPLE NAME | LAB SAMPLE ID | LAB FILE ID | DATE PREPARED | OBSERVATIONS |
|---|---|---|---|---|
| V01_0-1.5 | 16I0260-01 | | 09/15/16 12:18 | |

# HOLDING TIME SUMMARY

## Calculation

Laboratory: York Analytical Laboratories, Inc. SDG: 16I0260

Client: Langan Engineering & Environmental Services (NYC) Project: 170301202 450 Union Street

| Sample Name | Date Collected | Date Received | Date Prepared | Days to Prep | Max Days to Prep | Date Analyzed | Days to Analysis | Max Days to Analysis | Q |
|---|---|---|---|---|---|---|---|---|---|
| V01_0-1.5 | 09/07/16 13:00 | 09/08/16 18:45 | 09/15/16 12:18 | 7.97 | 30.00 | 09/15/16 14:24 | 8.06 | 30.00 | |

# METHOD DETECTION AND REPORTING LIMITS

## Calculation

**Laboratory:** York Analytical Laboratories, Inc. **SDG:** 16I0260

**Client:** Langan Engineering & Environmental Services (NYC) **Project:** 170301202 450 Union Street

**Matrix:** Soil **Instrument:**

| Analyte | LOD | LOQ | Units |
|---|---|---|---|
| Chromium, Trivalent | 0.250 | 0.500 | mg/kg |

York Analytical Laboratories, Inc.
SDG: 16I0260
CLASS: WET
METHOD: EPA 7196A

# DATA PACKAGE COVER PAGE

## EPA 7196A

Laboratory: York Analytical Laboratories, Inc. SDG: 16I0260

Client: Langan Engineering & Environmental Services (NYC) Project: 170301202 450 Union Street

| Client Sample Id: | Lab Sample Id: |
|---|---|
| V01_0-1.5 | 16I0260-01 |

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in computer-readable data submitted on diskette has been autorized by the Laboratory Manager or the Manager's designee, as verified by the following signatures.

Signature:

Name: Benjamin Gulizia

Date: 9/30/2016

Title: Laboratory Director

**FORM I** **INORGANIC ANALYSIS DATA SHEET**

**EPA 7196A**

**V01_0-1.5**

Laboratory: York Analytical Laboratories, Inc. SDG: 16I0260

Client: Langan Engineering & Environmental Services (NYC) Project: 170301202 450 Union Street

Matrix: Soil Laboratory ID: 16I0260-01 File ID:

Sampled: 09/07/16 13:00 Prepared: 09/09/16 07:50 Analyzed: 09/09/16 15:13

Solids: 96.56 Preparation: EPA SW846-3060 Initial/Final: 2.5 g / 100 mL

Batch: BI60331 Sequence: Calibration: Instrument: Inst

| CAS NO. | Analyte | Concentration (mg/kg dry) | Dilution Factor | Q | Method |
|---|---|---|---|---|---|
| 18540-29-9 | Chromium, Hexavalent | 0.518 | 1 | U | EPA 7196A |

# CALIBRATION CURVE

ANALYSIS: Hexavalent Chromium

METHOD: Colorimetric

DATE: 3/18/2016

| ppm | µg/100 ml | Absorbance |
|---|---|---|
| 0.01 | 1 | 0.008 |
| 0.05 | 5 | 0.039 |
| 0.1 | 10 | 0.082 |
| 0.25 | 25 | 0.202 |
| 0.5 | 50 | 0.426 |
| 0.75 | 75 | 0.594 |

WAVELENGTH: 540 nm

LIGHT PATH: 1 cm

FILTER: NO

| | |
|---|---|
| SLOPE | 1.237187 |
| | |
| INTERCEPT | -0.001907 |
| | |
| CORRELATION | 0.997799 |

| | |
|---|---|
| ICV Concentration (ppm) | 0.5 |
| ICV Absorbance | 0.422 |
| ICV Calculated Conc. (ppm) | 0.52 |
| ICV Percent Recovery | 104.04 |

ANALYST: Carlos Santos

**FORM I**

# METHOD BLANK DATA SHEET

## EPA 7196A

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | York Analytical Laboratories, Inc. | | | SDG: | 16I0260 |
| Client: | Langan Engineering & Environmental Services (NYC) | | | Project: | 170301202 450 Union Street |
| Matrix: | Soil | Laboratory ID: | BI60331-BLK1 | File ID: | |
| Prepared: | 09/09/16 07:50 | Preparation: | EPA SW846-3060 | Initial/Final: | 2.5 g / 100 mL |
| Analyzed: | 09/09/16 15:13 | Instrument: | Inst | | |
| Batch: | BI60331 | Sequence: | | Calibration: | |

| CAS NO. | COMPOUND | CONC. (mg/kg wet) | Q |
|---|---|---|---|
| 18540-29-9 | Chromium, Hexavalent | 0.500 | U |

**FORM IV** **PREPARATION BATCH SUMMARY**

**EPA 7196A**

Laboratory: York Analytical Laboratories, Inc. SDG: 16I0260

Client: Langan Engineering & Environmental Services (NYC) Project: 170301202 450 Union Street

Batch: BI60331 Batch Matrix: Soil Preparation: EPA SW846-3060

| SAMPLE NAME | LAB SAMPLE ID | LAB FILE ID | DATE PREPARED | OBSERVATIONS |
|---|---|---|---|---|
| V01_0-1.5 | 16I0260-01 | | 09/09/16 07:50 | |
| Blank | BI60331-BLK1 | | 09/09/16 07:50 | |
| Reference | BI60331-SRM1 | | 09/09/16 07:50 | |

# HOLDING TIME SUMMARY

## EPA 7196A

Laboratory: York Analytical Laboratories, Inc. SDG: 16I0260

Client: Langan Engineering & Environmental Services (NYC) Project: 170301202 450 Union Street

| Sample Name | Date Collected | Date Received | Date Prepared | Days to Prep | Max Days to Prep | Date Analyzed | Days to Analysis | Max Days to Analysis | Q |
|---|---|---|---|---|---|---|---|---|---|
| V01_0-1.5 | 09/07/16 13:00 | 09/08/16 18:45 | 09/09/16 07:50 | 1.78 | 30.00 | 09/09/16 15:13 | 0.31 | 7.00 | |

# METHOD DETECTION AND REPORTING LIMITS

## EPA 7196A

**Laboratory:** York Analytical Laboratories, Inc. **SDG:** 16I0260

**Client:** Langan Engineering & Environmental Services (NYC) **Project:** 170301202 450 Union Street

**Matrix:** Soil **Instrument:**

| Analyte | LOD | LOQ | Units |
|---|---|---|---|
| Chromium, Hexavalent | 0.350 | 0.500 | mg/kg |

**PREPARATION BENCH SHEET**

BI60331

**York Analytical Laboratories, Inc.**

**Printed: 9/30/2016 10:47:48AM**

**Matrix: Soil** **(No Surrogate)**

| Lab Number | Analysis | Prepared | By | Initial (g) | Final (mL) | Spike ID | Source ID | ul Spike | ul Surrogate | Preparation | Sample Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 16I0122-03 | Chromium, Hexavalent, NJDEP | 09/09/2016 07:50 | LAB | 1 | 100 | | | | | EPA SW846-3060 | |
| 16I0248-01 | Chromium, Hexavalent | 09/09/2016 07:50 | LAB | 2.5 | 100 | | | | | EPA SW846-3060 | |
| 16I0248-02 | Chromium, Hexavalent | 09/09/2016 07:50 | LAB | 2.5 | 100 | | | | | EPA SW846-3060 | |
| 16I0248-03 | Chromium, Hexavalent | 09/09/2016 07:50 | LAB | 2.5 | 100 | | | | | EPA SW846-3060 | |
| 16I0248-04 | Chromium, Hexavalent | 09/09/2016 07:50 | LAB | 2.5 | 100 | | | | | EPA SW846-3060 | |
| 16I0248-05 | Chromium, Hexavalent | 09/09/2016 07:50 | LAB | 2.5 | 100 | | | | | EPA SW846-3060 | |
| 16I0248-06 | Chromium, Hexavalent | 09/09/2016 07:50 | LAB | 2.5 | 100 | | | | | EPA SW846-3060 | |
| 16I0248-07 | Chromium, Hexavalent | 09/09/2016 07:50 | LAB | 2.5 | 100 | | | | | EPA SW846-3060 | |
| 16I0249-10 | Chromium, Hexavalent | 09/09/2016 07:50 | LAB | 2.5 | 100 | | | | | EPA SW846-3060 | |
| 16I0249-10 | Chromium, Hexavalent, NJDEP | 09/09/2016 07:50 | LAB | 2.5 | 100 | | | | | EPA SW846-3060 | Added for BatchQC in: BI60331 |
| 16I0249-11 | Chromium, Hexavalent | 09/09/2016 07:50 | LAB | 2.5 | 100 | | | | | EPA SW846-3060 | |
| 16I0249-12 | Chromium, Hexavalent | 09/09/2016 07:50 | LAB | 2.5 | 100 | | | | | EPA SW846-3060 | |
| 16I0249-13 | Chromium, Hexavalent | 09/09/2016 07:50 | LAB | 2.5 | 100 | | | | | EPA SW846-3060 | |
| 16I0249-14 | Chromium, Hexavalent | 09/09/2016 07:50 | LAB | 2.5 | 100 | | | | | EPA SW846-3060 | |
| 16I0249-15 | Chromium, Hexavalent | 09/09/2016 07:50 | LAB | 2.5 | 100 | | | | | EPA SW846-3060 | |
| 16I0260-01 | Chromium, Hexavalent | 09/09/2016 07:50 | LAB | 2.5 | 100 | | | | | EPA SW846-3060 | |
| 16I0269-01 | Chromium, Hexavalent | 09/09/2016 07:50 | LAB | 2.5 | 100 | | | | | EPA SW846-3060 | |
| 16I0269-03 | Chromium, Hexavalent | 09/09/2016 07:50 | LAB | 2.5 | 100 | | | | | EPA SW846-3060 | |
| 16I0269-05 | Chromium, Hexavalent | 09/09/2016 07:50 | LAB | 2.5 | 100 | | | | | EPA SW846-3060 | |
| 16I0269-07 | Chromium, Hexavalent | 09/09/2016 07:50 | LAB | 2.5 | 100 | | | | | EPA SW846-3060 | |
| BI60331-BLK1 | QC | 09/09/2016 07:50 | LAB | 2.5 | 100 | | | | | EPA SW846-3060 | |
| BI60331-DUP1 | QC | 09/09/2016 07:50 | LAB | 2.5 | 100 | | 16I0249-10 | | | EPA SW846-3060 | |
| BI60331-MS1 | QC | 09/09/2016 07:50 | LAB | 2.5 | 100 | Y16D120 | 16I0249-10 | 1000 | | EPA SW846-3060 | |

**PREPARATION BENCH SHEET**

BI60331

**York Analytical Laboratories, Inc.**

**Printed: 9/30/2016 10:47:48AM**

**Matrix: Soil** **(No Surrogate)**

| Lab Number | Analysis | Prepared | By | Initial (g) | Final (mL) | Spike ID | Source ID | ul Spike | ul Surrogate | Preparation | Sample Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|
| BI60331-SRM1 | QC | 09/09/2016 07:50 | LAB | 2.5 | 100 | Y16D129 | | 250 | | EPA SW846-3060 | |

Batch Comments:

# HEXAVALENT CHROMIUM (CR+6)

DATE: 090916
ANALYST: LAB
BATCH: BIG0531

MATRIX: SOIL

| SAMPLE I.D. | DIL | ABS | ENTER IN LIMS ↓ mg/l from Curve | mg/kg | QA/QC |
|---|---|---|---|---|---|
| Method Blank (<0.1mg/L_____) | | 0.003 | | | |
| CCV (90-110%) | | 0.382 | 0.471 | | 94 % |
| LCS (80-120%) | | 0.158 | 0.194 | 77.6 | 72 % |
| 1 16I0122-03 | 5 | 0.155 | 0.190 | | |
| 2 248-01 | | ND | | | |
| 3 -02 | | | | | |
| 4 -03 | | | | | |
| 5 -04 | | | | | |
| 6 -05 | | | | | |
| 7 -06 | | | | | |
| 8 -07 | | | | | |
| 9 249-10 | | | | | |
| 10 -11 | | | | | |
| 11 -12 | | | | | |
| 12 -13 | | | | | |
| 13 -14 | | | | | |
| 14 -15 | | | | | |
| 15 266-01 | | | | | |
| 16 269-01 | | | | | |
| 17 -03 | | | | | |
| 18 -05 | | | | | |
| 19 -07 | | | | | |
| 20 | | | | | |
| DUP (≤35% RPD) 249-16 | | ND | | | 0.0 RPD |
| Spike (75-125%) | | 0.293 | 0.369 | | 72 % |
| CCV (90-110%) | | 0.382 | 0.471 | | 94 % |

| Calibration Date | Slope | y-intercept |
|---|---|---|
| 031816 | 1.237187 | -0.001907 |

| STANDARD/REAGENT | DATE PREPARED | EXPIRATION DATE | TRACEABILITY |
|---|---|---|---|
| CCV @ 0.5 mg/L | Make daily upon analysis | | Page A |
| SPK @ 0.5 mg/L | Make daily upon analysis | | Page A |
| LCS @ 69 mg/kg | Make daily upon analysis | | Page B |
| Diphenylcarbazide Solution | 090816 | 6 months | Page C |
| Sulfuric Acid (Conc) | - | - | Page C |
| Digestion Solution | 090916 | | Page D |
| Magnesium Chloride | - | - | Page D |
| Antifoam | - | - | Page D |
| Phosphate Buffer | 082316 | | Page E |
| 5M Nitric Acid | 090916 | | Page E |
| Ottawa Sand -For Soil Method Blanks Only | - | - | Page E |

00076

York Analytical Laboratories, Inc.
SDG: 16I0260
CLASS: WET
METHOD: EPA 9014/9010C

# DATA PACKAGE COVER PAGE

## EPA 9014/9010C

Laboratory: York Analytical Laboratories, Inc. SDG: 16I0260

Client: Langan Engineering & Environmental Services (NYC) Project: 170301202 450 Union Street

| Client Sample Id: | Lab Sample Id: |
|---|---|
| V01_0-1.5 | 16I0260-01 |

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in computer-readable data submitted on diskette has been autorized by the Laboratory Manager or the Manager's designee, as verified by the following signatures.

Signature:

Name: Benjamin Gulizia

Date: 9/30/2016

Title: Laboratory Director

**FORM I** **INORGANIC ANALYSIS DATA SHEET**

**EPA 9014/9010C**

**V01_0-1.5**

Laboratory: York Analytical Laboratories, Inc. SDG: 16I0260

Client: Langan Engineering & Environmental Services (NYC) Project: 170301202 450 Union Street

Matrix: Soil Laboratory ID: 16I0260-01 File ID:

Sampled: 09/07/16 13:00 Prepared: 09/09/16 07:53 Analyzed: 09/09/16 13:16

Solids: 96.56 Preparation: Analysis Preparation Soil Initial/Final: 1 g / 50 mL

Batch: BI60315 Sequence: Calibration: Instrument: Inst

| CAS NO. | Analyte | Concentration (mg/kg dry) | Dilution Factor | Q | Method |
|---|---|---|---|---|---|
| 57-12-5 | Cyanide, total | 0.518 | 1 | U | EPA 9014/9010C |

# CALIBRATION CURVE

ANALYSIS: Cyanide

METHOD: Distillation

DATE: 4/20/2016

| STD PPM | Absorbance |
|---|---|
| 0.01 | 0.048 |
| 0.025 | 0.102 |
| 0.05 | 0.199 |
| 0.1 | 0.386 |
| 0.2 | 0.735 |

WAVELENGTH: 578 nm

LIGHT PATH: 1 cm

FILTER:NO

| | |
|---|---|
| SLOPE | 0.276030 |
| INTERCEPT | -0.004153 |
| CORRELATION | 0.999793 |

| | | |
|---|---|---|
| ICV Concentration (ppm) | | 0.1 |
| ICV Absorbance | | 0.37 |
| ICV Calculated Conc. (ppm) | | 0.10 |
| ICV Percent Recovery | | 100.00 |

ANALYST: TONY DECARLO

**FORM I**

# METHOD BLANK DATA SHEET

## EPA 9014/9010C

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | York Analytical Laboratories, Inc. | | | SDG: | 16I0260 |
| Client: | Langan Engineering & Environmental Services (NYC) | | | Project: | 170301202 450 Union Street |
| Matrix: | Soil | Laboratory ID: | BI60315-BLK1 | File ID: | |
| Prepared: | 09/09/16 07:53 | Preparation: | Analysis Preparation Soil | Initial/Final: | 1 g / 50 mL |
| Analyzed: | 09/09/16 13:16 | Instrument: | Inst | | |
| Batch: | BI60315 | Sequence: | | Calibration: | |

| CAS NO. | COMPOUND | CONC. (mg/kg wet) | Q |
|---|---|---|---|
| 57-12-5 | Cyanide, total | 0.500 | U |

**FORM IV**

# PREPARATION BATCH SUMMARY

## EPA 9014/9010C

Laboratory: York Analytical Laboratories, Inc. SDG: 16I0260

Client: Langan Engineering & Environmental Services (NYC) Project: 170301202 450 Union Street

Batch: BI60315 Batch Matrix: Soil Preparation: Analysis Preparation Soil

| SAMPLE NAME | LAB SAMPLE ID | LAB FILE ID | DATE PREPARED | OBSERVATIONS |
|---|---|---|---|---|
| V01_0-1.5 | 16I0260-01 | | 09/09/16 07:53 | |
| Blank | BI60315-BLK1 | | 09/09/16 07:53 | |
| Reference | BI60315-SRM1 | | 09/09/16 07:53 | |

# HOLDING TIME SUMMARY

## EPA 9014/9010C

Laboratory: York Analytical Laboratories, Inc. SDG: 16I0260

Client: Langan Engineering & Environmental Services (NYC) Project: 170301202 450 Union Street

| Sample Name | Date Collected | Date Received | Date Prepared | Days to Prep | Max Days to Prep | Date Analyzed | Days to Analysis | Max Days to Analysis | Q |
|---|---|---|---|---|---|---|---|---|---|
| V01_0-1.5 | 09/07/16 13:00 | 09/08/16 18:45 | 09/09/16 07:53 | 1.79 | 14.00 | 09/09/16 13:16 | 2.01 | 14.00 | |

# METHOD DETECTION AND REPORTING LIMITS

## EPA 9014/9010C

**Laboratory:** York Analytical Laboratories, Inc. **SDG:** 16I0260

**Client:** Langan Engineering & Environmental Services (NYC) **Project:** 170301202 450 Union Street

**Matrix:** Soil **Instrument:**

| Analyte | LOD | LOQ | Units |
|---|---|---|---|
| Cyanide, total | 0.500 | 0.500 | mg/kg |

**PREPARATION BENCH SHEET**

BI60315

**York Analytical Laboratories, Inc.**

**Printed: 9/30/2016 10:48:31AM**

**Matrix: Soil** **(No Surrogate)**

| Lab Number | Analysis | Prepared | By | Initial (g) | Final (mL) | Spike ID | Source ID | ul Spike | ul Surrogate | Preparation | Sample Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 16I0213-01 | Cyanide, Total | 09/09/2016 07:53 | AD | 1 | 50 | | | | | Analysis Preparation Soil | |
| 16I0248-01 | Cyanide, Total | 09/09/2016 07:53 | AD | 1 | 50 | | | | | Analysis Preparation Soil | |
| 16I0248-02 | Cyanide, Total | 09/09/2016 07:53 | AD | 1 | 50 | | | | | Analysis Preparation Soil | |
| 16I0248-03 | Cyanide, Total | 09/09/2016 07:53 | AD | 1 | 50 | | | | | Analysis Preparation Soil | |
| 16I0248-04 | Cyanide, Total | 09/09/2016 07:53 | AD | 1 | 50 | | | | | Analysis Preparation Soil | |
| 16I0248-05 | Cyanide, Total | 09/09/2016 07:53 | AD | 1 | 50 | | | | | Analysis Preparation Soil | |
| 16I0248-06 | Cyanide, Total | 09/09/2016 07:53 | AD | 1 | 50 | | | | | Analysis Preparation Soil | |
| 16I0248-07 | Cyanide, Total | 09/09/2016 07:53 | AD | 1 | 50 | | | | | Analysis Preparation Soil | |
| 16I0249-10 | Cyanide, Total | 09/09/2016 07:53 | AD | 1 | 50 | | | | | Analysis Preparation Soil | |
| 16I0249-11 | Cyanide, Total | 09/09/2016 07:53 | AD | 1 | 50 | | | | | Analysis Preparation Soil | |
| 16I0249-12 | Cyanide, Total | 09/09/2016 07:53 | AD | 1 | 50 | | | | | Analysis Preparation Soil | |
| 16I0249-13 | Cyanide, Total | 09/09/2016 07:53 | AD | 1 | 50 | | | | | Analysis Preparation Soil | |
| 16I0249-14 | Cyanide, Total | 09/09/2016 07:53 | AD | 1 | 50 | | | | | Analysis Preparation Soil | |
| 16I0249-15 | Cyanide, Total | 09/09/2016 07:53 | AD | 1 | 50 | | | | | Analysis Preparation Soil | |
| 16I0260-01 | Cyanide, Total | 09/09/2016 07:53 | AD | 1 | 50 | | | | | Analysis Preparation Soil | |
| 16I0269-01 | Cyanide, Total | 09/09/2016 07:53 | AD | 1 | 50 | | | | | Analysis Preparation Soil | |
| 16I0269-03 | Cyanide, Total | 09/09/2016 07:53 | AD | 1 | 50 | | | | | Analysis Preparation Soil | |
| 16I0269-05 | Cyanide, Total | 09/09/2016 07:53 | AD | 1 | 50 | | | | | Analysis Preparation Soil | |
| 16I0269-07 | Cyanide, Total | 09/09/2016 07:53 | AD | 1 | 50 | | | | | Analysis Preparation Soil | |
| BI60315-BLK1 | QC | 09/09/2016 07:53 | AD | 1 | 50 | | | | | Analysis Preparation Soil | |
| BI60315-DUP1 | QC | 09/09/2016 07:53 | AD | 1 | 50 | | 16I0213-01 | | | Analysis Preparation Soil | |
| BI60315-MS1 | QC | 09/09/2016 07:53 | AD | 1 | 50 | Y16D086 | 16I0213-01 | 100 | | Analysis Preparation Soil | |
| BI60315-SRM1 | QC | 09/09/2016 07:53 | AD | 0.1 | 50 | Y15K051 | | 100 | | Analysis Preparation Soil | |

**PREPARATION BENCH SHEET**

BI60315

**York Analytical Laboratories, Inc.**

**Printed: 9/30/2016 10:48:31AM**

**Matrix: Soil** **(No Surrogate)**

| Lab Number | Analysis | Prepared | By | Initial (g) | Final (mL) | Spike ID | Source ID | ul Spike | ul Surrogate | Preparation | Sample Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|

Batch Comments:

Date: 9-9-16
Analyst: AD
Batch: BI60315

# Total or Amenable Cyanide

Reactive Batch: BI60488 BI60487

Slope: 0.276030
Intercept: -0.004153
Sample Matrix: Soils

| SAMPLE ID | S⁻ | Dilution | Abs. | CN⁻ mg/l | CN⁻ mg/kg | Reactive | QA/QC | Run/Position 1 | Run/Position 2 |
|---|---|---|---|---|---|---|---|---|---|
| Blank (<50% low std abs 0.048) | NO | | 0.001 | ND | | | | 1 | |
| CCV (85-115%) | | | 0.352 | 0.093 | | | 93 % | | |
| LCS | | | 0.406 | 0.108 | 54.0 | | 101 % | 2 | |
| 1) 16I0213-01 | | | 0.038 | ND | | | | 3 | |
| 2) 248-01 | | | 0.015 | | | | | 4 | |
| 3) 02 | | | 0.016 | | | | | 7 | |
| 4) 03 | | | 0.009 | | | | | 8 | |
| 5) 04 | | | 0.008 | | | | | 9 | |
| 6) 05 | | | 0.009 | | | | | 10 | |
| 7) 06 | | | 0.011 | | | | | 11 | |
| 8) 07 | | | 0.013 | | | | | 12 | |
| 9) 249-10 | | | 0.015 | | | NO | | | 1 |
| 10) -11 | | | 0.015 | | | | | | 2 |
| 11) -12 | | | 0.034 | ND | | | | | 3 |
| 12) -13 | | | 0.018 | | | | | | 4 |
| 13) -14 | | | 0.016 | | | | | | 5 |
| 14) -15 | | | 0.016 | | | | | | 6 |
| 15) 260-01 | | | 0.017 | | | | | | 7 |
| 16) 269-01 | | | 0.095 | 0.022 | | | | | 8 |
| 17) 03 | | | 0.118 | 0.028 | | | | | 9 |
| 18) 05 | | | 0.175 | 0.044 | | | | | 10 |
| 19) 07 | | | 0.410 | 0.109 | | | | | 11 |
| 20) | | | | | | | | | |
| DUP 213-01 | NO | | 0.038 | ND | | | 0.0 RPD | 4 | |
| SPK | | | 0.606 | 0.163 | | | 81.5 % | 5 | |
| CCV (85-115%) | | | 0.350 | 0.092 | | | 92 % | | |

| Standard/Reagent | Date Made | Expiration Date | Traceability |
|---|---|---|---|
| CCV @ 0.10 ppm | Make daily upon analysis | — | Pages A, B |
| SPK @ 0.20 ppm | Make daily upon analysis | — | Pages A, B |
| LCS @ 53.9 ppm | Make daily upon analysis | — | Pages C, D |
| 0.1 N NaOH | 090716 | 030716-17 | Page E |
| Sulfamic acid | 082316 | 022317 | Page F |
| 1:1 $H_2SO_4$ | 081516 | 021517 | Page G |
| Magnesium chloride | 090616 | 030617 | Page H |
| Sodium phosphate buffer | 090816 | 030817 | Page I |
| Chloramine T | Make daily upon analysis | — | Page J |
| Pyridine barbituric acid | 090916 | 091216 | Pages K |
| Sulfide Check Buffer | 060316 | 120316 | Page L |

BD 9/9/16

York Analytical Laboratories, Inc.
SDG: 16I0260
CLASS: WET
METHOD: SM 2540G

# DATA PACKAGE COVER PAGE

## SM 2540G

Laboratory: York Analytical Laboratories, Inc. SDG: 16I0260

Client: Langan Engineering & Environmental Services (NYC) Project: 170301202 450 Union Street

| Client Sample Id: | Lab Sample Id: |
|---|---|
| V01_0-1.5 | 16I0260-01 |

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in computer-readable data submitted on diskette has been autorized by the Laboratory Manager or the Manager's designee, as verified by the following signatures.

Signature:

Name: Benjamin Gulizia

Date: 9/30/2016

Title: Laboratory Director

**FORM I** **INORGANIC ANALYSIS DATA SHEET**

**SM 2540G**

**V01_0-1.5**

Laboratory: York Analytical Laboratories, Inc. SDG: 16I0260

Client: Langan Engineering & Environmental Services (NYC) Project: 170301202 450 Union Street

Matrix: Soil Laboratory ID: 16I0260-01 File ID:

Sampled: 09/07/16 13:00 Prepared: 09/14/16 09:17 Analyzed: 09/14/16 16:45

Solids: 96.56 Preparation: % Solids Prep Initial/Final: 5 g / 5 g

Batch: BI60541 Sequence: Calibration: Instrument: Inst

| CAS NO. | Analyte | Concentration (%) | Dilution Factor | Q | Method |
|---|---|---|---|---|---|
| solids | % Solids | 96.6 | 1 | | SM 2540G |

**FORM IV** **PREPARATION BATCH SUMMARY**

**SM 2540G**

Laboratory: York Analytical Laboratories, Inc. SDG: 16I0260

Client: Langan Engineering & Environmental Services (NYC) Project: 170301202 450 Union Street

Batch: BI60541 Batch Matrix: Soil Preparation: % Solids Prep

| SAMPLE NAME | LAB SAMPLE ID | LAB FILE ID | DATE PREPARED | OBSERVATIONS |
|---|---|---|---|---|
| V01_0-1.5 | 16I0260-01 | | 09/14/16 09:17 | |

# HOLDING TIME SUMMARY

## SM 2540G

Laboratory: York Analytical Laboratories, Inc. SDG: 16I0260

Client: Langan Engineering & Environmental Services (NYC) Project: 170301202 450 Union Street

| Sample Name | Date Collected | Date Received | Date Prepared | Days to Prep | Max Days to Prep | Date Analyzed | Days to Analysis | Max Days to Analysis | Q |
|---|---|---|---|---|---|---|---|---|---|
| V01_0-1.5 | 09/07/16 13:00 | 09/08/16 18:45 | 09/14/16 09:17 | 6.85 | 28.00 | 09/14/16 16:45 | 7.16 | 28.00 | |

# METHOD DETECTION AND REPORTING LIMITS

## SM 2540G

**Laboratory:** York Analytical Laboratories, Inc. **SDG:** 16I0260

**Client:** Langan Engineering & Environmental Services (NYC) **Project:** 170301202 450 Union Street

**Matrix:** Soil **Instrument:**

| Analyte | LOD | LOQ | Units |
|---|---|---|---|
| % Solids | 0.100 | 0.100 | % |

**PREPARATION BENCH SHEET**

BI60541

**York Analytical Laboratories, Inc.**

**Printed: 9/30/2016 11:04:50AM**

**Matrix: Soil** **(No Surrogate)**

| Lab Number | Analysis | Prepared | By | Initial (g) | Final (g) | Spike ID | Source ID | ul Spike | ul Surrogate | Preparation | Sample Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 16I0232-01 | Total Solids | 09/14/2016 09:17 | LAB | 5 | 5 | | | | | % Solids Prep | |
| 16I0236-01 | Total Solids | 09/14/2016 09:17 | LAB | 5 | 5 | | | | | % Solids Prep | |
| 16I0236-02 | Total Solids | 09/14/2016 09:17 | LAB | 5 | 5 | | | | | % Solids Prep | |
| 16I0236-03 | Total Solids | 09/14/2016 09:17 | LAB | 5 | 5 | | | | | % Solids Prep | |
| 16I0236-04 | Total Solids | 09/14/2016 09:17 | LAB | 5 | 5 | | | | | % Solids Prep | |
| 16I0236-05 | Total Solids | 09/14/2016 09:17 | LAB | 5 | 5 | | | | | % Solids Prep | |
| 16I0249-15 | Total Solids | 09/14/2016 09:17 | LAB | 5 | 5 | | | | | % Solids Prep | |
| 16I0252-01 | Total Solids | 09/14/2016 09:17 | LAB | 5 | 5 | | | | | % Solids Prep | |
| 16I0260-01 | Total Solids | 09/14/2016 09:17 | LAB | 5 | 5 | | | | | % Solids Prep | |
| 16I0267-01 | Total Solids | 09/14/2016 09:17 | LAB | 5 | 5 | | | | | % Solids Prep | |
| 16I0267-02 | Total Solids | 09/14/2016 09:17 | LAB | 5 | 5 | | | | | % Solids Prep | |
| 16I0267-03 | Total Solids | 09/14/2016 09:17 | LAB | 5 | 5 | | | | | % Solids Prep | |
| 16I0267-04 | Total Solids | 09/14/2016 09:17 | LAB | 5 | 5 | | | | | % Solids Prep | |
| 16I0269-02 | Total Solids | 09/14/2016 09:17 | LAB | 5 | 5 | | | | | % Solids Prep | |
| 16I0269-04 | Total Solids | 09/14/2016 09:17 | LAB | 5 | 5 | | | | | % Solids Prep | |
| 16I0269-06 | Total Solids | 09/14/2016 09:17 | LAB | 5 | 5 | | | | | % Solids Prep | |
| 16I0269-08 | Total Solids | 09/14/2016 09:17 | LAB | 5 | 5 | | | | | % Solids Prep | |
| 16I0329-01 | Total Solids | 09/14/2016 09:17 | LAB | 5 | 5 | | | | | % Solids Prep | 4 day firm |
| 16I0413-01 | Total Solids | 09/14/2016 09:17 | LAB | 5 | 5 | | | | | % Solids Prep | |
| 16I0413-02 | Total Solids | 09/14/2016 09:17 | LAB | 5 | 5 | | | | | % Solids Prep | |
| BI60541-DUP1 | QC | 09/14/2016 09:17 | LAB | 5 | 5 | | 16I0413-02 | | | % Solids Prep | |

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**PREPARATION BENCH SHEET**

BI60541

**York Analytical Laboratories, Inc.**

**Printed: 9/30/2016 11:04:50AM**

**Matrix: Soil** **(No Surrogate)**

| Lab Number | Analysis | Prepared | By | Initial (g) | Final (g) | Spike ID | Source ID | ul Spike | ul Surrogate | Preparation | Sample Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|

Batch Comments:

YORK
ANALYTICAL LABORATORIES, INC.

# TOTAL SOLIDS ELECTRONIC LOG

| Sample No. | Analyte | Analysis Date | Analyst | Batch ID | Init. Result | Final Result | Units | Prep. Units |
|---|---|---|---|---|---|---|---|---|
| 16I0260-01 | % Solids | 9/14/2016 4:45:58PM | LAB | BI60541 | 96.56 | 96.6 | % | g |
| 16I0260-01 | Final Wt. | 9/14/2016 4:45:58PM | LAB | BI60541 | 6.26 | 6.26 | % | g |
| 16I0260-01 | Initial Wt. | 9/14/2016 4:45:58PM | LAB | BI60541 | 6.44 | 6.44 | % | g |
| 16I0260-01 | Tare Wt. | 9/14/2016 4:45:58PM | LAB | BI60541 | 1.30 | 1.30 | % | g |
| 16I0413-02 | % Solids | 9/14/2016 4:45:58PM | LAB | BI60541 | 97.61 | 97.6 | % | g |
| 16I0413-02 | Final Wt. | 9/14/2016 4:45:58PM | LAB | BI60541 | 3.59 | 3.59 | % | g |
| 16I0413-02 | Initial Wt. | 9/14/2016 4:45:58PM | LAB | BI60541 | 3.64 | 3.64 | % | g |
| 16I0413-02 | Tare Wt. | 9/14/2016 4:45:58PM | LAB | BI60541 | 1.29 | 1.29 | % | g |
| BI60541-DUP1 | % Solids | 9/14/2016 4:45:58PM | LAB | BI60541 | 94.34 | 94.3 | % | g |
| BI60541-DUP1 | Final Wt. | 9/14/2016 4:45:58PM | LAB | BI60541 | 3.50 | 3.50 | % | g |
| BI60541-DUP1 | Initial Wt. | 9/14/2016 4:45:58PM | LAB | BI60541 | 3.63 | 3.63 | % | g |
| BI60541-DUP1 | Tare Wt. | 9/14/2016 4:45:58PM | LAB | BI60541 | 1.29 | 1.29 | % | g |

Note: Units for Tare, Initial and Final Wts. are in grams