Microbac

**Laboratory Report Number:** L12050284

Shane Lowe
CH2MHILL, Inc
CH2MHILL
Richmond Heights, MO 63117

Please find enclosed the analytical results for the samples you submitted to Microbac Laboratories. Review and compilation of your report was completed by Microbac's Ohio Valley Division (OVD). If you have any questions, comments, or require further assistance regarding this report, please contact your service representative listed below.

Laboratory Contact:
Kathy Albertson – Team Chemist/Data Specialist
(740) 373-4071
Kathy.Albertson@microbac.com

*I certify that all test results meet all of the requirements of the accrediting authority listed below. All results for soil samples are reported on a 'dry-weight' basis unless specified otherwise. Analytical results for water and wastes are reported on a 'as received' basis unless specified otherwise. A statement of uncertainty for each analysis is available upon request. This laboratory report shall not be reproduced, except in full, without the written approval of Microbac Laboratories. The reported results are related only to the samples analyzed as received.*

This report was certified on May 24 2012

David E. Vandenberg

David Vandenberg – Managing Director

State of Origin: NY
Accrediting Authority: Department of Health ID:10861
QAPP: WATERLOO

Microbac

**Lab Report #:** L12050284
**Lab Project #:** 2736.061
**Project Name:** DOW WATERLOO GW
**Lab Contact:** Kathy Albertson

# Record of Sample Receipt and Inspection

## Comments/Discrepancies

This is the record of the shipment conditions and the inspection records for the samples received and reported as a sample delivery group (SDG). All of the samples were inspected and observed to conform to our receipt policies, except as noted below.

The following discrepancies were noted:

| Discrepancy | Resolution |
|---|---|
| Received 1 broken VOA for ID MW-18-050812. | |

## Coolers

| Cooler # | Temperature Gun | Temperature | COC # | Airbill # |
|---|---|---|---|---|
| 0015777 | G | 0.0 | | 1002239581210004575000872087764529 |
| 0015021 | G | 0.0 | | 1015923881210004575000795544892141 |
| 0016543 | G | 3.0 | | 34575031110000007955448921526810 |
| 0012851 | G | 0.0 | | 1015923801210004575000795544892130 |

## Inspection Checklist

| # | Question | Result |
|---|---|---|
| 1 | Were shipping coolers sealed? | Yes |
| 2 | Were custody seals intact? | Yes |
| 3 | Were cooler temperatures in range of 0-6? | Yes |
| 4 | Was ice present? | Yes |
| 5 | Were COC's received/information complete/signed and dated? | Yes |
| 6 | Were sample containers intact and match COC? | No |
| 7 | Were sample labels intact and match COC? | Yes |
| 8 | Were the correct containers and volumes received? | Yes |
| 9 | Were samples received within EPA hold times? | Yes |
| 10 | Were correct perservatives used? (water only) | Yes |
| 11 | Were pH ranges acceptable? (voa's excluded) | Yes |
| 12 | Were VOA samples free of headspace (less than 6mm)? | Yes |

Microbac

**Lab Report #:** L12050284
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**Project Name:** DOW WATERLOO GW
**Lab Contact:** Kathy Albertson

**Samples Received**

| Client ID | Laboratory ID | Date Collected | Date Received |
|---|---|---|---|
| BBLD-PIT-SSP-050812 | L12050284-01 | 05/08/2012 10:01 | 05/09/2012 11:13 |
| BBLD-PIT-SSP-050812 | L12050284-02 | 05/08/2012 10:01 | 05/09/2012 11:13 |
| PZ-07-050812 | L12050284-03 | 05/08/2012 10:10 | 05/09/2012 11:13 |
| PZ-07-050812 | L12050284-04 | 05/08/2012 10:10 | 05/09/2012 11:13 |
| MW-18-050812 | L12050284-05 | 05/08/2012 11:00 | 05/09/2012 11:13 |
| MW-18-050812 | L12050284-06 | 05/08/2012 11:00 | 05/09/2012 11:13 |
| TW-01-050812 | L12050284-07 | 05/08/2012 14:50 | 05/09/2012 11:13 |
| TW-01-050812 | L12050284-08 | 05/08/2012 14:50 | 05/09/2012 11:13 |
| TB-050812 | L12050284-09 | 05/08/2012 08:05 | 05/09/2012 11:13 |
| DUP-GW-050812 | L12050284-10 | 05/08/2012 15:00 | 05/09/2012 11:13 |
| DUP-GW-050812 | L12050284-11 | 05/08/2012 15:00 | 05/09/2012 11:13 |
| EB-050812-GW | L12050284-12 | 05/08/2012 13:10 | 05/09/2012 11:13 |

# Microbac REPORT L12050284
# PREPARED FOR CH2MHILL, Inc
# WORK ID:


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# 1.0 Summary Data

# 1.1 Narratives

**Login Number:** L12050284
**Department**: Volatiles
**Analyst:** Anthony Canter

**METHOD**

**Preparation** SW-846 5030C/5035A

**Analysis** SW-846 8260B

**HOLDING TIMES**

**Sample Preparation:** All holding times were met.

**Sample Analysis:** All holding times were met.

**PREPARATION**

Sample preparation proceeded normally.

**CALIBRATION**

**Initial Calibration:** For all compounds that yielded a %RSD greater than 15%, linear or higher order equations were applied. All acceptance criteria were met.

**Alternate Source Standards:** The percent difference was out of range for the following analytes: Dichlorodifluoromethane. Please see the applicable QC report for a detailed presentation of the failures.

**Continuing Calibration and Tune:** Recoveries out of range were observed for the following analytes: Bromomethane, Trichlorofluoromethane, Chloromethane. Please see the applicable QC report for a detailed presentation of the failures.

**BATCH QA/QC**

**Method Blank:** All acceptance criteria were met.

**Laboratory Control Sample:** Recoveries out of range were observed for the following analytes: Dichlorodifluoromethane. Please see the applicable QC report for a detailed presentation of the failures.

**Matrix Spikes:** The MS/MSD results were not associated with this sample delivery group (SDG), due to insufficient volume of sample. The laboratory included an LCS and LCS duplicate in the preparation batch in lieu of the NELAC prescribed MS/MSD. Microbac Laboratories recommends site specific MS/MSD samples to avoid possible data qualifications.

**SAMPLES**

**Internal Standards:** All acceptance criteria were met.

**Surrogates:** All acceptance criteria were met.

**Other:** Samples 01, were run at a dilution.

**Manual Integration Reason Codes**

**Reason #1: Data System Fails to Select Correct Peak.** In some cases the chromatography system selects and integrates the 'wrong peak'. In this case the analyst must correct the selection and force the system to integrate the proper peak. Other times the system may miss the peak completely.

**Reason #2: Data System Splits the Peak Incorrectly or Integrates a False Peak as a Rider Peak.** This phenomena is common at low concentrations where the signal:noise ratio is low. A single compound (peak) is incorrectly split into multiple peaks or integrated as a main peak with one or more rider peaks resulting in low area counts for the target compound.

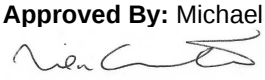
**Reason #3: Improperly Integrated Isomers and/or coeluting compounds.** This system often fails to distinguish coeluting compounds and or isomers. The integration areas and concentrations are wrong, and they must be corrected by manual integration. Prime examples are benzo(k)fluoranthene and benzo(b)fluoranthene which are often unresolved and integrated improperly when both are present at low concentrations in standards or samples.

**Reason #4: System Establishes Incorrect Baseline.** There are numerous situations in chromatography where the system establishes the baseline incorrectly. Some baseline errors will be obvious to the analyst and should be corrected via manual procedures.

**Reason #5: Miscellaneous.** Other situations involving integration errors may require in-depth review and technical judgment. These cases should be brought to the attention of the laboratory management. If the form of manual integration is not clearly covered by these four cases, then review and approval by the Managing Director or the QAO will be required.

I certify that this data package is in compliance with the terms and conditions agreed to by the client and Microbac Laboratories Inc., both technically and for completeness, except for the conditions noted above. Release of the data contained in this hard copy data package has been authorized by the Laboratory Manager or designated person, as verified by the following signature.

**Narrative ID:** 46812
**Approved By:** Michael Albertson



**Login Number:** L12050284
**Department**: Volatiles - GC
**Analyst:** Franci Bolden

**Analysis** RSK-175

**HOLDING TIMES**

**Sample Preparation:** All holding times were met.

**Sample Analysis:** All holding times were met.

**PREPARATION**

Sample preparation proceeded normally.

**CALIBRATION**

**Initial Calibration:** For all compounds that yielded a %RSD greater than 15%, linear or higher order equations were applied. All acceptance criteria were met.

**Alternate Source Standards:** All acceptance criteria were met.

**Continuing Calibration and Tune:** All acceptance criteria were met.

**BATCH QA/QC**

**Method Blank:** All acceptance criteria were met.

**Laboratory Control Sample:** All acceptance criteria were met.

**Matrix Spikes/Sample Duplicates:** The MS/MSD results were not associated with this sample delivery group (SDG), due to insufficient volume of sample. Microbac Laboratories recommends site specific MS/MSD samples to avoid possible data qualifications.

**SAMPLES**

**Samples:** Sample 03 required a dilution analysis.

**Manual Integration Reason Codes**

**Reason #1: Data System Fails to Select Correct Peak** In some cases the chromatography system selects and integrates the 'wrong peak'. In this case the analyst must correct the selection and force the system to integrate the proper peak. Other times the system may miss the peak completely.

**Reason #2: Data System Splits the Peak Incorrectly or Integrates a False Peak as a Rider Peak** This phenomena is common at low concentrations where the signal:noise ratio is low. A single compound (peak) is incorrectly split into multiple peaks or integrated as a main peak with one or more rider peaks resulting in low area counts for the target compound.

**Reason #3: Improperly Integrated Isomers and/or coeluting compounds.** This system often fails to distinguish coeluting compounds and or isomers. The integration areas and concentrations are wrong, and they must be corrected by manual integration. Prime examples are benzo(k)fluoranthene and benzo(b)fluoranthene which are often unresolved and integrated improperly when both are present at low concentrations in standards or samples.

**Reason #4: System Establishes Incorrect Baseline** There are numerous situations in chromatography where the system establishes the baseline incorrectly. Some baseline errors will be obvious to the analyst and should be corrected via manual procedures.

**Reason #5: Miscellaneous** Other situations involving integration errors may require in-depth review and technical judgment. These cases should be brought to the attention of the laboratory management. If the form of manual integration

is not clearly covered by these four cases, then review and approval by the Laboratory Director or the QA/QC Supervisor will be required.

**Narrative ID:** 46574
**Approved By:** Michael Albertson

**Login Number:** L12050284
**Department**: Semivolatiles
**Analyst:** Cassie A. Augenstein

**METHOD**

**Preparation** 3520C

**Analysis** SW-846 8270C/40 CFR 264 App. IX

**HOLDING TIMES**

**Sample Preparation:** All holding times were met.

**Sample Analysis:** All holding times were met.

**PREPARATION**

Sample preparation proceeded normally.

**CALIBRATION**

**Initial Calibration:** For all compounds that yielded a %RSD greater than 15%, linear or higher order equations were applied. All acceptance criteria were met.

**Alternate Source Standards:** The percent difference was out of range for the following analytes: 2,4-Dinitrophenol. Please see the applicable QC report for a detailed presentation of the failures.

**Continuing Calibration and Tune:** Recoveries out of range were observed for the following analytes: Benzoic Acid. Please see the applicable QC report for a detailed presentation of the failures.

**BATCH QA/QC**

**Method Blank:** All acceptance criteria were met.

**Laboratory Control Sample:** Recoveries out of range were observed for the following analytes/surrogates: bis(2-Chloroethoxy)methane, Hexachlorocyclopentadiene, Phenol-d5. Please see the applicable QC report for a detailed presentation of the failures.

**Matrix Spikes:** The client did not specify an MS/MSD for this sample delivery group.

**SAMPLES**

**Samples:** Sample 01 was analyzed at a dilution due to the appearance of the extract.

The extracts were library searched using the NIST library and the top twenty TICs found were reported. Requested acid compounds listed as TICs in the Waterloo QAPP may not have been detected due to unknown extraction efficiency and chromatographic performance.

**Internal Standards:** Sample 01 yielded areas beyond the acceptance limits for internal standard 1,4-Dichlorobenzene-d4 due to sample matrix interference.

**Surrogates:** Recoveries out of range were observed for the following surrogates due to sample matrix interference: 2-Fluorophenol, Phenol-d5. Please see the applicable QC report for a detailed presentation of the failures.

**Manual Integration Reason Codes**

**Reason #1: Data System Fails to Select Correct Peak** In some cases the chromatography system selects and integrates the 'wrong peak'. In this case the analyst must correct the selection and force the system to integrate the proper peak. Other times the system may miss the peak
completely.

**Reason #2: Data System Splits the Peak Incorrectly or Integrates a False Peak as a Rider Peak** This phenomena is common at low concentrations where the signal:noise ratio is low. A single compound (peak) is incorrectly split into multiple peaks or integrated as a main peak with one or more rider peaks resulting in low area

counts for the target compound.

**Reason #3: Improperly Integrated Isomers and/or coeluting compounds.** This system often fails to distinguish coeluting compounds and or isomers. The integration areas and concentrations are wrong, and they must be corrected by manual integration. Prime examples are benzo(k)fluoranthene and
benzo(b)fluoranthene which are often unresolved and integrated improperly when both are present at low concentrations in standards or samples.

**Reason #4: System Establishes Incorrect Baseline** There are numerous situations in chromatography where the system establishes the baseline incorrectly. Some baseline errors will be obvious to the analyst and should be corrected via manual procedures.

**Reason #5: Miscellaneous** Other situations involving integration errors may require in-depth review and technical judgment. These cases should be brought to the attention of the laboratory management. If the form of manual integration is not clearly covered by these four cases, then review and approval by the Managing Director or the QAO will be required.

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**Narrative ID:** 46854
**Approved By:** Mike Cochran

**Login Number:** L12050284
**Department**: Semivolatiles
**Analyst:** Cassie A. Augenstein

**METHOD**

**Preparation** 3510C

**Analysis** SW-846 8270C

**HOLDING TIMES**

**Sample Preparation:** All holding times were met.

**Sample Analysis:** All holding times were met.

**PREPARATION**

Sample 01 had an initial pH of approximately 4; it was adjusted with NaOH.

**CALIBRATION**

**Initial Calibration:** For all compounds that yielded a %RSD greater than 15%, linear or higher order equations were applied. All acceptance criteria were met.

**Alternate Source Standards:** All acceptance criteria were met.

**Continuing Calibration and Tune:** All acceptance criteria were met.

**BATCH QA/QC**

**Method Blank:** All acceptance criteria were met.

**Laboratory Control Sample:** All acceptance criteria were met.

**Matrix Spikes:** The MS/MSD results were not associated with this sample delivery group.

**SAMPLES**

**Samples:** All acceptance criteria were met.

**Internal Standards:** All acceptance criteria were met.

**Surrogates:** Recoveries out of range were observed for the following surrogate: 2-Fluorobiphenyl. Please see the applicable QC report for a detailed presentation of the failures.

**Manual Integration Reason Codes**

**Reason #1: Data System Fails to Select Correct Peak** In some cases the chromatography system selects and integrates the 'wrong peak'. In this case the analyst must correct the selection and force the system to integrate the proper peak. Other times the system may miss the peak completely.

**Reason #2: Data System Splits the Peak Incorrectly or Integrates a False Peak as a Rider Peak** This phenomena is common at low concentrations where the signal:noise ratio is low. A single compound (peak) is incorrectly split into multiple peaks or integrated as a main peak with one or more rider peaks resulting in low area counts for the target compound.

**Reason #3: Improperly Integrated Isomers and/or coeluting compounds.** This system often fails to distinguish coeluting compounds and or isomers. The integration areas and concentrations are wrong, and they must be corrected by manual integration. Prime examples are benzo(k)fluoranthene and benzo(b)fluoranthene which are often unresolved and integrated improperly when both are present at low concentrations in standards or samples.

**Reason #4: System Establishes Incorrect Baseline** There are numerous situations in chromatography where the system establishes the baseline incorrectly. Some baseline errors will be obvious to the analyst and should be corrected

via manual procedures.

**Reason #5: Miscellaneous** Other situations involving integration errors may require in-depth review and technical judgment. These cases should be brought to the attention of the laboratory management. If the form of manual integration is not clearly covered by these four cases, then review and approval by the Managing Director or the QAO will be required.

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**Narrative ID:** 46540
**Approved By:** Mike Cochran

**Login Number:** L12050284
**Department**: Metals
**Analyst:** Kim Rhodes

**METHOD**

**Preparation:** SW-846 3005

**Analysis:** SW-846 6010

**HOLDING TIMES**

**Sample Preparation:** All holding times were met.

**Sample Analysis:** All holding times were met.

**PREPARATION**

Sample preparation proceeded normally.

**CALIBRATION**

**Initial Calibration:** All acceptance criteria were met.

**Alternate Source Standards:** All acceptance criteria were met.

**Interference Check Standards:** All acceptance criteria were met.

**Continuing Calibration Verification:** All acceptance criteria were met.

**Continuing Calibration Blank:** All acceptance criteria were met.

**BATCH QA/QC**

**Method Blank:** All acceptance criteria were met.

**Laboratory Control Sample:** All acceptance criteria were met.

**Serial Dilution/Post Digestion Spikes:** WG397934 - All acceptance criteria were met.

**Matrix Spikes:** All acceptance criteria were met.

**SAMPLES**

**Samples:** WG397934 - Client samples 02, 03 and 04 required dilution analyses in order to obtain results for sodium within the linear range.

**Narrative ID:** 46811
**Approved By:** Maren Beery

**Login Number:** L12050284
**Department**: Metals
**Analyst:** Ji Hu

**METHOD**

**Preparation:** SW-846 3015

**Analysis:** SW-846 6020

**HOLDING TIMES**

**Sample Preparation:** All holding times were met.

**Sample Analysis:** All holding times were met.

**PREPARATION**

Sample preparation proceeded normally.

**CALIBRATION**

**Initial Calibration:** All acceptance criteria were met.

**Alternate Source Standards:** All acceptance criteria were met.

**Interference Check Standards:** All acceptance criteria were met.

**Continuing Calibration:** All acceptance criteria were met.

**Continuing Calibration Blank:** All acceptance criteria were met.

**Low Level Check:** All acceptance criteria were met.

**BATCH QA/QC**

**Method Blank:** All acceptance criteria were met.

**Laboratory Control Sample:** All acceptance criteria were met.

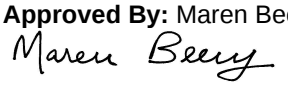
**Serial Dilution/Post Digestion Spikes:** WG398436 - The reference sample yielded a value for selenium that was less than 100 times the MDL, however, the serial dilution for selenium met the % difference criteria and so no further action was taken.

**Matrix Spikes:** All acceptance criteria were met.

**SAMPLES**

**Samples:** WG398436 - Due to high levels of nontarget analytes, client samples 01 through 11 were analyzed at dilutions for all analytes.

**Narrative ID:** 46714
**Approved By:** Maren Beery



**Login Number:** L12050284
**Department**: Metals - AA
**Analyst:** Pierce Morris

**METHOD**

**Preparation:** SW-846 7470

**Analysis:** SW-846 7470

**HOLDING TIMES**

**Sample Preparation:** All holding times were met.

**Sample Analysis:** All holding times were met.

**PREPARATION**

Sample preparation proceeded normally.

**CALIBRATION**

**Initial Calibration:** All acceptance criteria were met.

**Alternate Source Standards:** All acceptance criteria were met.

**Interference Check Standards:** All acceptance criteria were met.

**Continuing Calibration Verification:** All acceptance criteria were met.

**Continuing Calibration Blank:** All acceptance criteria were met.

**BATCH QA/QC**

**Method Blank:** All acceptance criteria were met.

**Laboratory Control Sample:** All acceptance criteria were met.

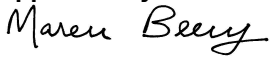
**Serial Dilution/Post Digestion Spikes:** WG397918 - All acceptance criteria were met.

**Matrix Spikes:** All acceptance criteria were met.

**SAMPLES**

**Samples:** All acceptance criteria were met.

**Narrative ID:** 46883
**Approved By:** Maren Beery



**Login Number:** L12050284
**Department**: Conventionals
**Analyst:** Deanna Hesson

**METHOD**

**Analysis** EPA 310.2 (Alkalinity)

**HOLDING TIMES**

**Sample Analysis:** All holding times were met.

**PREPARATION**

Sample preparation proceeded normally.

**BATCH QA/QC**

**Method Blank:** All acceptance criteria were met.

**Laboratory Control Sample:** All acceptance criteria were met.

**Matrix Spikes:** All acceptance criteria were met.

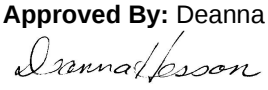
**Duplicates:** All acceptance criteria were met.

**SAMPLES**

**Samples:** All acceptance criteria were met.

I certify that this data package is in compliance with the terms and conditions agreed to by the client and Microbac Laboratories Inc., both technically and for completeness, except for the conditions noted above. Release of the data contained in this hard copy data package has been authorized by the Laboratory Manager or designated person, as verified by the following signature.

**Narrative ID:** 46943
**Approved By:** Deanna Hesson



**Login Number:** L12050284
**Department**: Conventionals
**Analyst:** Jeremy Kinney

**METHOD**

**Analysis** EPA 353.2/SM4500-NO3 F (Nitrate)

**HOLDING TIMES**

**Sample Analysis:** Nitrate is reported as the difference of nitrate-nitrite (28 day hold) and nitrite (48 hour hold). Both analysis were analyzed within the appropriate hold time. The nitrate hold time is within compliance.

**PREPARATION**

Sample preparation proceeded normally.

**BATCH QA/QC**

**Method Blank:** All acceptance criteria were met.

**Laboratory Control Sample:** All acceptance criteria were met.

**Matrix Spikes:** All acceptance criteria were met.

**Duplicates:** All acceptance criteria were met.

**SAMPLES**

**Samples:** The sample(s) were diluted to reduce matrix interference. The reporting limits are elevated accordingly.

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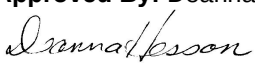
**Narrative ID:** 46946
**Approved By:** Deanna Hesson



**Login Number:** L12050284
**Department**: Conventionals
**Analyst:** Jeremy Kinney

**METHOD**

**Analysis** EPA 365.4 (Phosphorus)

**HOLDING TIMES**

**Sample Analysis:** All holding times were met.

**PREPARATION**

Sample preparation proceeded normally.

**BATCH QA/QC**

**Method Blank:** All acceptance criteria were met.

**Laboratory Control Sample:** All acceptance criteria were met.

**Matrix Spikes:** All acceptance criteria were met.

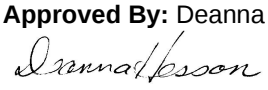
**Duplicates:** All acceptance criteria were met.

**SAMPLES**

**Samples:** All acceptance criteria were met.

I certify that this data package is in compliance with the terms and conditions agreed to by the client and Microbac Laboratories Inc., both technically and for completeness, except for the conditions noted above. Release of the data contained in this hard copy data package has been authorized by the Laboratory Manager or designated person, as verified by the following signature.

**Narrative ID:** 46944
**Approved By:** Deanna Hesson



**Login Number:** L12050284
**Department**: Conventionals
**Analyst:** Deanna Hesson

**METHOD**

**Analysis** EPA 375.4/SM426C(15th ed) (Sulfate)

**HOLDING TIMES**

**Sample Analysis:** All holding times were met.

**PREPARATION**

Sample preparation proceeded normally.

**BATCH QA/QC**

**Method Blank:** All acceptance criteria were met.

**Laboratory Control Sample:** All acceptance criteria were met.

**Duplicates:** All acceptance criteria were met.

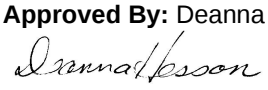
**Matrix Spikes:** All acceptance criteria were met.

**SAMPLES**

**Samples:** All acceptance criteria were met.

I certify that this data package is in compliance with the terms and conditions agreed to by the client and Microbac Laboratories Inc., both technically and for completeness, except for the conditions noted above. Release of the data contained in this hard copy data package has been authorized by the Laboratory Manager or designated person, as verified by the following signature.

**Narrative ID:** 46945
**Approved By:** Deanna Hesson



**Login Number:** L12050284
**Department**: Conventionals
**Analyst:** Deanna Hesson

**METHOD**

**Analysis** Water: EPA 415.1/SM5310C/SW846 9060 (Total Organic Carbon)
Soil: Lloyd-Khan Methodology

**HOLDING TIMES**

**Sample Analysis:** All holding times were met.

**PREPARATION**

Sample preparation proceeded normally.

**BATCH QA/QC**

**Method Blank:** All acceptance criteria were met.

**Laboratory Control Sample:** All acceptance criteria were met.

**Duplicates:** All acceptance criteria were met.

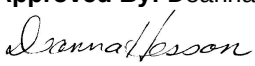
**Matrix Spikes:** All acceptance criteria were met.

**SAMPLES**

**Samples:** All acceptance criteria were met.

I certify that this data package is in compliance with the terms and conditions agreed to by the client and Microbac Laboratories Inc., both technically and for completeness, except for the conditions noted above. Release of the data contained in this hard copy data package has been authorized by the Laboratory Manager or designated person, as verified by the following signature.

**Narrative ID:** 46947
**Approved By:** Deanna Hesson



# 1.2 Certificate of Analysis

# Certificate of Analysis

| | | | | | |
|---|---|---|---|---|---|
| **Sample #:** | L12050284-01 | **PrePrep Method:** | N/A | **Instrument:** | HPMS6 |
| **Client ID:** | BBLD-PIT-SSP-050812 | **Prep Method:** | 5030B/5030C/5035A | **Prep Date:** | N/A |
| **Matrix:** | Water | **Analytical Method:** | 8260B | **Cal Date:** | 05/16/2012 20:08 |
| **Workgroup #:** | WG398312 | **Analyst:** | ADC | **Run Date:** | 05/17/2012 20:01 |
| **Collect Date:** | 05/08/2012 10:01 | **Dilution:** | 2 | **File ID:** | 6M108198 |
| **Sample Tag:** | DL03 | **Units:** | ug/L | | |

| Analyte | CAS # | Result | Qual | RL | MDL |
|---|---|---|---|---|---|
| 1,1,1-Trichloroethane | 71-55-6 | | U | 2.00 | 0.500 |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | | U | 2.00 | 0.400 |
| 1,1,2-Trichloro-1,2,2-Trifluoroethane | 76-13-1 | | U | 10.0 | 4.00 |
| 1,1,2-Trichloroethane | 79-00-5 | | U | 2.00 | 0.500 |
| 1,1-Dichloroethane | 75-34-3 | | U | 2.00 | 0.250 |
| 1,1-Dichloroethene | 75-35-4 | | U | 2.00 | 1.00 |
| 1,2,3-Trichlorobenzene | 87-61-6 | | U | 2.00 | 1.00 |
| 1,2,4-Trichlorobenzene | 120-82-1 | | U | 2.00 | 0.400 |
| 1,2-Dibromo-3-chloropropane | 96-12-8 | | U | 10.0 | 2.00 |
| 1,2-Dibromoethane | 106-93-4 | | U | 2.00 | 0.500 |
| 1,2-Dichlorobenzene | 95-50-1 | | U | 2.00 | 0.250 |
| 1,2-Dichloroethane | 107-06-2 | | U | 2.00 | 0.500 |
| cis-1,2-Dichloroethene | 156-59-2 | | U | 2.00 | 0.500 |
| trans-1,2-Dichloroethene | 156-60-5 | | U | 2.00 | 0.500 |
| 1,2-Dichloropropane | 78-87-5 | | U | 2.00 | 0.400 |
| 1,3-Dichlorobenzene | 541-73-1 | | U | 2.00 | 0.500 |
| 1,4-Dichlorobenzene | 106-46-7 | | U | 2.00 | 0.250 |
| 2-Butanone | 78-93-3 | 75.1 | | 20.0 | 5.00 |
| 2-Hexanone | 591-78-6 | | U | 20.0 | 5.00 |
| 4-Methyl-2-pentanone | 108-10-1 | 688 | E | 20.0 | 5.00 |
| Acetone | 67-64-1 | 75.8 | | 20.0 | 5.00 |
| Benzene | 71-43-2 | | U | 2.00 | 0.250 |
| Bromochloromethane | 74-97-5 | | U | 2.00 | 0.400 |
| Bromodichloromethane | 75-27-4 | | U | 2.00 | 0.500 |
| Bromoform | 75-25-2 | | U | 2.00 | 1.00 |
| Bromomethane | 74-83-9 | | U | 2.00 | 1.00 |
| Carbon disulfide | 75-15-0 | 10.8 | | 2.00 | 1.00 |
| Carbon tetrachloride | 56-23-5 | | U | 2.00 | 0.500 |
| Chlorobenzene | 108-90-7 | 0.488 | | 2.00 | 0.250 |
| Chloroethane | 75-00-3 | | U | 2.00 | 1.00 |
| Chloroform | 67-66-3 | 5.09 | | 2.00 | 0.250 |
| Chloromethane | 74-87-3 | | U | 2.00 | 1.00 |
| cis-1,3-Dichloropropene | 10061-01-5 | | U | 2.00 | 0.500 |

Certificate of Analysis

| Analyte | CAS # | Result | Qual | RL | MDL |
|---|---|---|---|---|---|
| Cyclohexane | 110-82-7 | | U | 10.0 | 2.00 |
| Dibromochloromethane | 124-48-1 | | U | 2.00 | 0.500 |
| Dichlorodifluoromethane | 75-71-8 | | U | 2.00 | 0.500 |
| Ethyl benzene | 100-41-4 | | U | 2.00 | 0.500 |
| Isopropylbenzene | 98-82-8 | | U | 2.00 | 0.500 |
| Methyl acetate | 79-20-9 | | U | 10.0 | 2.00 |
| Methyl tert-butyl ether | 1634-04-4 | | U | 2.00 | 1.00 |
| Methylcyclohexane | 108-87-2 | | U | 10.0 | 2.00 |
| Methylene chloride | 75-09-2 | 0.760 | | 10.0 | 0.500 |
| m,p-Xylene | 179601-23-1 | 1.63 | | 2.00 | 1.00 |
| o-Xylene | 95-47-6 | 1.85 | | 2.00 | 0.500 |
| Styrene | 100-42-5 | | U | 2.00 | 0.250 |
| Tetrachloroethene | 127-18-4 | | U | 2.00 | 0.500 |
| Toluene | 108-88-3 | 1.64 | | 2.00 | 0.500 |
| trans-1,3-Dichloropropene | 10061-02-6 | | U | 2.00 | 1.00 |
| Trichloroethene | 79-01-6 | | U | 2.00 | 0.500 |
| Trichlorofluoromethane | 75-69-4 | | U | 2.00 | 0.500 |
| Vinyl chloride | 75-01-4 | | U | 2.00 | 0.500 |
| Epichlorohydrin | 106-89-8 | | | 0.000 | 0.000 |

| Surrogate | Recovery | Lower Limit | Upper Limit | Q |
|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 97.0 | 80 | 120 | |
| Dibromofluoromethane | 94.6 | 86 | 118 | |
| p-Bromofluorobenzene | 108 | 86 | 115 | |
| Toluene-d8 | 106 | 88 | 110 | |

| | |
|---|---|
| E | Semiquantitative result (out of calibration range) |
| U | Not detected at or above adjusted sample detection limit. |

**Sample #:** L12050284-01
**Client ID:** BBLD-PIT-SSP-050812
**Matrix:** Water
**Workgroup #:** WG398533
**Collect Date:** 05/08/2012 10:01
**Sample Tag:** DL02

**PrePrep Method:** N/A
**Prep Method:** 5030B/5030C/5035A
**Analytical Method:** 8260B
**Analyst:** FJB
**Dilution:** 10
**Units:** ug/L

**Instrument:** HPMS6
**Prep Date:** N/A
**Cal Date:** 05/16/2012 20:08
**Run Date:** 05/19/2012 19:46
**File ID:** 6M108271

| Analyte | CAS # | Result | Qual | RL | MDL |
|---|---|---|---|---|---|
| 1,1,1-Trichloroethane | 71-55-6 | | U | 10.0 | 2.50 |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | | U | 10.0 | 2.00 |
| 1,1,2-Trichloro-1,2,2-Trifluoroethane | 76-13-1 | | U | 50.0 | 20.0 |
| 1,1,2-Trichloroethane | 79-00-5 | | U | 10.0 | 2.50 |
| 1,1-Dichloroethane | 75-34-3 | | U | 10.0 | 1.25 |

Certificate of Analysis

| Analyte | CAS # | Result | Qual | RL | MDL |
|---|---|---|---|---|---|
| 1,1-Dichloroethene | 75-35-4 | | U | 10.0 | 5.00 |
| 1,2,3-Trichlorobenzene | 87-61-6 | | U | 10.0 | 5.00 |
| 1,2,4-Trichlorobenzene | 120-82-1 | | U | 10.0 | 2.00 |
| 1,2-Dibromo-3-chloropropane | 96-12-8 | | U | 50.0 | 10.0 |
| 1,2-Dibromoethane | 106-93-4 | | U | 10.0 | 2.50 |
| 1,2-Dichlorobenzene | 95-50-1 | | U | 10.0 | 1.25 |
| 1,2-Dichloroethane | 107-06-2 | | U | 10.0 | 2.50 |
| cis-1,2-Dichloroethene | 156-59-2 | | U | 10.0 | 2.50 |
| trans-1,2-Dichloroethene | 156-60-5 | | U | 10.0 | 2.50 |
| 1,2-Dichloropropane | 78-87-5 | | U | 10.0 | 2.00 |
| 1,3-Dichlorobenzene | 541-73-1 | | U | 10.0 | 2.50 |
| 1,4-Dichlorobenzene | 106-46-7 | | U | 10.0 | 1.25 |
| 2-Butanone | 78-93-3 | 64.5 | | 100 | 25.0 |
| 2-Hexanone | 591-78-6 | | U | 100 | 25.0 |
| 4-Methyl-2-pentanone | 108-10-1 | 638 | | 100 | 25.0 |
| Acetone | 67-64-1 | 97.5 | | 100 | 25.0 |
| Benzene | 71-43-2 | | U | 10.0 | 1.25 |
| Bromochloromethane | 74-97-5 | | U | 10.0 | 2.00 |
| Bromodichloromethane | 75-27-4 | | U | 10.0 | 2.50 |
| Bromoform | 75-25-2 | | U | 10.0 | 5.00 |
| Bromomethane | 74-83-9 | | U | 10.0 | 5.00 |
| Carbon disulfide | 75-15-0 | 20.0 | | 10.0 | 5.00 |
| Carbon tetrachloride | 56-23-5 | | U | 10.0 | 2.50 |
| Chlorobenzene | 108-90-7 | 1.26 | | 10.0 | 1.25 |
| Chloroethane | 75-00-3 | | U | 10.0 | 5.00 |
| Chloroform | 67-66-3 | 10.0 | | 10.0 | 1.25 |
| Chloromethane | 74-87-3 | | U | 10.0 | 5.00 |
| cis-1,3-Dichloropropene | 10061-01-5 | | U | 10.0 | 2.50 |
| Cyclohexane | 110-82-7 | | U | 50.0 | 10.0 |
| Dibromochloromethane | 124-48-1 | | U | 10.0 | 2.50 |
| Dichlorodifluoromethane | 75-71-8 | | U | 10.0 | 2.50 |
| Ethyl benzene | 100-41-4 | | U | 10.0 | 2.50 |
| Isopropylbenzene | 98-82-8 | | U | 10.0 | 2.50 |
| Methyl acetate | 79-20-9 | | U | 50.0 | 10.0 |
| Methyl tert-butyl ether | 1634-04-4 | | U | 10.0 | 5.00 |
| Methylcyclohexane | 108-87-2 | | U | 50.0 | 10.0 |
| Methylene chloride | 75-09-2 | | U | 50.0 | 2.50 |
| m,p-Xylene | 179601-23-1 | 7.09 | | 10.0 | 5.00 |
| o-Xylene | 95-47-6 | 7.03 | | 10.0 | 2.50 |

Certificate of Analysis

| Analyte | CAS # | Result | Qual | RL | MDL |
|---|---|---|---|---|---|
| Styrene | 100-42-5 | | U | 10.0 | 1.25 |
| Tetrachloroethene | 127-18-4 | | U | 10.0 | 2.50 |
| Toluene | 108-88-3 | 4.13 | | 10.0 | 2.50 |
| trans-1,3-Dichloropropene | 10061-02-6 | | U | 10.0 | 5.00 |
| Trichloroethene | 79-01-6 | | U | 10.0 | 2.50 |
| Trichlorofluoromethane | 75-69-4 | | U | 10.0 | 2.50 |
| Vinyl chloride | 75-01-4 | | U | 10.0 | 2.50 |
| Epichlorohydrin | 106-89-8 | | | 0.000 | 0.000 |

| Surrogate | Recovery | Lower Limit | Upper Limit | Q |
|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 89.7 | 80 | 120 | |
| Dibromofluoromethane | 93.8 | 86 | 118 | |
| p-Bromofluorobenzene | 113 | 86 | 115 | |
| Toluene-d8 | 106 | 88 | 110 | |

| | |
|---|---|
| U | Not detected at or above adjusted sample detection limit. |

**Sample #:** L12050284-01 **PrePrep Method:** N/A **Instrument:** HP16
**Client ID:** BBLD-PIT-SSP-050812 **Prep Method:** 5021 **Prep Date:** N/A
**Matrix:** Water **Analytical Method:** RSK175 **Cal Date:** 04/30/2012 15:04
**Workgroup #:** WG397661 **Analyst:** FJB **Run Date:** 05/10/2012 16:56
**Collect Date:** 05/08/2012 10:01 **Dilution:** 1 **File ID:** 16G32412
**Sample Tag:** 01 **Units:** ug/L

| Analyte | CAS # | Result | Qual | RL | MDL |
|---|---|---|---|---|---|
| Methane | 74-82-8 | 393 | | 5.00 | 1.00 |
| Carbon Dioxide | 124-38-9 | 77100 | | 10000 | 2500 |

**Sample #:** L12050284-01 **PrePrep Method:** N/A **Instrument:** HPMS5
**Client ID:** BBLD-PIT-SSP-050812 **Prep Method:** 3520C **Prep Date:** 05/09/2012 14:00
**Matrix:** Water **Analytical Method:** 8270C **Cal Date:** 05/11/2012 13:10
**Workgroup #:** WG398144 **Analyst:** CAA **Run Date:** 05/14/2012 18:02
**Collect Date:** 05/08/2012 10:01 **Dilution:** 1 **File ID:** 5M66992
**Sample Tag:** DL01 **Units:** ug/L

| Analyte | CAS # | Result | Qual | RL | MDL |
|---|---|---|---|---|---|
| unknown | | 246 | | 0.000 | 0.000 |
| unknown | | 1140 | | 0.000 | 0.000 |
| unknown | | 406 | | 0.000 | 0.000 |
| unknown | | 226 | | 0.000 | 0.000 |
| Acetic acid, mercapto-, methyl est | | 566 | | 0.000 | 0.000 |
| unknown | | 746 | | 0.000 | 0.000 |

Certificate of Analysis

| Analyte | CAS # | Result | Qual | RL | MDL |
|---|---|---|---|---|---|
| unknown | | 2220 | | 0.000 | 0.000 |
| Acetic acid, mercapto- | | 511 | | 0.000 | 0.000 |
| unknown | | 173 | | 0.000 | 0.000 |
| Acetic acid, mercapto- | | 533 | | 0.000 | 0.000 |
| 3-Mercaptopropionic acid | | 1450 | | 0.000 | 0.000 |
| unknown | | 354 | | 0.000 | 0.000 |
| unknown | | 235 | | 0.000 | 0.000 |
| unknown | | 193 | | 0.000 | 0.000 |
| unknown | | 289 | | 0.000 | 0.000 |
| unknown | | 121 | | 0.000 | 0.000 |
| unknown | | 146 | | 0.000 | 0.000 |
| unknown | | 410 | | 0.000 | 0.000 |
| unknown | | 319 | | 0.000 | 0.000 |
| unknown | | 128 | | 0.000 | 0.000 |

**Sample #:** L12050284-01
**Client ID:** BBLD-PIT-SSP-050812
**Matrix:** Water
**Workgroup #:** WG398144
**Collect Date:** 05/08/2012 10:01
**Sample Tag:** DL01

**PrePrep Method:** N/A
**Prep Method:** 3520C
**Analytical Method:** 8270C
**Analyst:** CAA
**Dilution:** 2
**Units:** ug/L

**Instrument:** HPMS5
**Prep Date:** 05/09/2012 14:00
**Cal Date:** 05/11/2012 13:10
**Run Date:** 05/14/2012 18:02
**File ID:** 5M66992

| Analyte | CAS # | Result | Qual | RL | MDL |
|---|---|---|---|---|---|
| 1,1'-Biphenyl | 92-52-4 | | U | 40.0 | 5.00 |
| 1,3,5-Trinitrobenzene | 99-35-4 | | U | 10.0 | 5.00 |
| 1,3-Dinitrobenzene | 99-65-0 | | U | 10.0 | 5.00 |
| 1,4-Dioxane | 123-91-1 | | U | 20.0 | 10.0 |
| 2,4,5-Trichlorophenol | 95-95-4 | | U | 10.0 | 5.00 |
| 2,4,6-Trichlorophenol | 88-06-2 | | U | 10.0 | 5.00 |
| 2,4-Dichlorophenol | 120-83-2 | | U | 10.0 | 5.00 |
| 2,4-Dimethylphenol | 105-67-9 | | U | 10.0 | 5.00 |
| 2,4-Dinitrophenol | 51-28-5 | | U | 50.0 | 25.0 |
| 2,4-Dinitrotoluene | 121-14-2 | | U | 10.0 | 5.00 |
| 2,6-Dinitrotoluene | 606-20-2 | | U | 10.0 | 5.00 |
| 2-Chloronaphthalene | 91-58-7 | | U | 10.0 | 5.00 |
| 2-Chlorophenol | 95-57-8 | | U | 10.0 | 5.00 |
| 2-Methylnaphthalene | 91-57-6 | | U | 10.0 | 5.00 |
| 2-Methylphenol | 95-48-7 | | U | 10.0 | 5.00 |
| 2-Nitroaniline | 88-74-4 | | U | 50.0 | 25.0 |
| 2-Nitrophenol | 88-75-5 | | U | 10.0 | 5.00 |

Certificate of Analysis

| Analyte | CAS # | Result | Qual | RL | MDL |
|---|---|---|---|---|---|
| 3-Nitroaniline | 99-09-2 | | U | 50.0 | 25.0 |
| 3,3'-Dichlorobenzidine | 91-94-1 | | U | 10.0 | 5.00 |
| 3-,4-Methylphenol | 106-44-5 | 174 | | 10.0 | 5.00 |
| 4-Bromophenyl-phenylether | 101-55-3 | | U | 10.0 | 5.00 |
| 4-Chloroaniline | 106-47-8 | | U | 10.0 | 5.00 |
| 4-Nitrophenol | 100-02-7 | | U | 50.0 | 25.0 |
| Acenaphthene | 83-32-9 | | U | 10.0 | 5.00 |
| Acenaphthylene | 208-96-8 | | U | 10.0 | 5.00 |
| Anthracene | 120-12-7 | | U | 10.0 | 5.00 |
| Benzo(a)anthracene | 56-55-3 | | U | 10.0 | 5.00 |
| Benzo(a)pyrene | 50-32-8 | | U | 10.0 | 5.00 |
| Benzo(b)fluoranthene | 205-99-2 | | U | 10.0 | 5.00 |
| Benzo(g,h,i)Perylene | 191-24-2 | | U | 10.0 | 5.00 |
| Benzo(k)fluoranthene | 207-08-9 | | U | 10.0 | 5.00 |
| Benzoic acid | 65-85-0 | 114 | | 40.0 | 20.0 |
| Benzyl alcohol | 100-51-6 | | U | 10.0 | 5.00 |
| Bis(2-Chloroethyl)ether | 111-44-4 | | U | 10.0 | 5.00 |
| Bis(2-Chloroethoxy)Methane | 111-91-1 | | U | 10.0 | 5.00 |
| bis(2-Ethylhexyl)phthalate | 117-81-7 | 18.8 | | 10.0 | 5.00 |
| Butylbenzylphthalate | 85-68-7 | | U | 10.0 | 5.00 |
| Carbazole | 86-74-8 | | U | 40.0 | 5.00 |
| Chrysene | 218-01-9 | | U | 10.0 | 5.00 |
| Di-N-Butylphthalate | 84-74-2 | | U | 10.0 | 5.00 |
| Di-n-octylphthalate | 117-84-0 | | U | 10.0 | 5.00 |
| Dibenzo(a,h)Anthracene | 53-70-3 | | U | 10.0 | 5.00 |
| Dibenzofuran | 132-64-9 | | U | 10.0 | 5.00 |
| Diethylphthalate | 84-66-2 | | U | 10.0 | 5.00 |
| Dimethylphthalate | 131-11-3 | | U | 10.0 | 5.00 |
| Fluoranthene | 206-44-0 | | U | 10.0 | 5.00 |
| Fluorene | 86-73-7 | | U | 10.0 | 5.00 |
| Hexachlorobenzene | 118-74-1 | | U | 10.0 | 5.00 |
| Hexachlorobutadiene | 87-68-3 | | U | 10.0 | 5.00 |
| Hexachlorocyclopentadiene | 77-47-4 | | U | 10.0 | 5.00 |
| Hexachloroethane | 67-72-1 | | U | 10.0 | 5.00 |
| Indeno(1,2,3-cd)pyrene | 193-39-5 | | U | 10.0 | 5.00 |
| Isophorone | 78-59-1 | | U | 10.0 | 5.00 |
| N-Nitrosodiphenylamine | 86-30-6 | | U | 10.0 | 5.00 |
| Naphthalene | 91-20-3 | | U | 10.0 | 5.00 |
| Nitrobenzene | 98-95-3 | | U | 10.0 | 5.00 |

Certificate of Analysis

| Analyte | CAS # | Result | Qual | RL | MDL |
|---|---|---|---|---|---|
| Pentachlorophenol | 87-86-5 | | U | 50.0 | 25.0 |
| Phenanthrene | 85-01-8 | | U | 10.0 | 5.00 |
| Phenol | 108-95-2 | | U | 10.0 | 5.00 |
| Pyrene | 129-00-0 | | U | 10.0 | 5.00 |

| Surrogate | Recovery | Lower Limit | Upper Limit | Q |
|---|---|---|---|---|
| 2,4,6-Tribromophenol | 81.8 | 10 | 123 | |
| 2-Fluorobiphenyl | 64.0 | 43 | 116 | |
| 2-Fluorophenol | 214 | 21 | 100 | * |
| Nitrobenzene-d5 | 63.1 | 35 | 114 | |
| p-Terphenyl-d14 | 95.7 | 33 | 141 | |
| Phenol-d5 | 203 | 10 | 94 | * |

| | |
|---|---|
| U | Not detected at or above adjusted sample detection limit. |

**Sample #:** L12050284-01
**Client ID:** BBLD-PIT-SSP-050812
**Matrix:** Water
**Workgroup #:** WG397981
**Collect Date:** 05/08/2012 10:01
**Sample Tag:** 01

**PrePrep Method:** N/A
**Prep Method:** 3510C
**Analytical Method:** 8270C
**Analyst:** CAA
**Dilution:** 1
**Units:** ug/L

**Instrument:** HPMS7
**Prep Date:** 05/14/2012 12:25
**Cal Date:** 04/04/2012 12:53
**Run Date:** 05/15/2012 19:49
**File ID:** 7M55038

| Analyte | CAS # | Result | Qual | RL | MDL |
|---|---|---|---|---|---|
| 2-Methylnaphthalene | 91-57-6 | 0.150 | | 0.0556 | 0.0278 |
| Acenaphthene | 83-32-9 | | U | 0.0556 | 0.0278 |
| Acenaphthylene | 208-96-8 | | U | 0.0556 | 0.0278 |
| Anthracene | 120-12-7 | 0.0519 | | 0.0556 | 0.0278 |
| Benzo(a)anthracene | 56-55-3 | 0.214 | | 0.0556 | 0.0278 |
| Benzo(a)pyrene | 50-32-8 | 0.202 | | 0.0556 | 0.0278 |
| Benzo(b)fluoranthene | 205-99-2 | 0.232 | | 0.0556 | 0.0278 |
| Benzo(g,h,i)perylene | 191-24-2 | 0.168 | | 0.0556 | 0.0278 |
| Benzo(k)fluoranthene | 207-08-9 | 0.220 | | 0.0556 | 0.0278 |
| Chrysene | 218-01-9 | 0.274 | | 0.0556 | 0.0278 |
| Dibenzo(a,h)anthracene | 53-70-3 | 0.0619 | | 0.0556 | 0.0278 |
| Fluoranthene | 206-44-0 | 0.517 | | 0.0556 | 0.0278 |
| Fluorene | 86-73-7 | | U | 0.0556 | 0.0278 |
| Indeno(1,2,3-cd)pyrene | 193-39-5 | 0.153 | | 0.0556 | 0.0278 |
| Naphthalene | 91-20-3 | 1.74 | | 0.0556 | 0.0278 |
| Phenanthrene | 85-01-8 | 0.323 | | 0.0556 | 0.0278 |
| Pyrene | 129-00-0 | 0.374 | | 0.0556 | 0.0278 |

| Surrogate | Recovery | Lower Limit | Upper Limit | Q |
|---|---|---|---|---|
| 2-Fluorobiphenyl | 46.0 | 43 | 116 | |

| | | | | |
|---|---|---|---|---|
| Nitrobenzene-d5 | 51.8 | 35 | 114 | |
| p-Terphenyl-d14 | 67.6 | 33 | 141 | |

| | |
|---|---|
| U | Not detected at or above adjusted sample detection limit. |

**Sample #:** L12050284-01 **PrePrep Method:** N/A **Instrument:** PE-ICP2
**Client ID:** BBLD-PIT-SSP-050812 **Prep Method:** 3005A **Prep Date:** 05/14/2012 07:48
**Matrix:** Water **Analytical Method:** 6010B **Cal Date:** 05/21/2012 13:35
**Workgroup #:** WG397934 **Analyst:** KHR **Run Date:** 05/21/2012 15:04
**Collect Date:** 05/08/2012 10:01 **Dilution:** 1 **File ID:** P2.052112.150405
**Sample Tag:** 01 **Units:** mg/L

| Analyte | CAS # | Result | Qual | RL | MDL |
|---|---|---|---|---|---|
| Aluminum, Total | 7429-90-5 | 3.67 | | 0.100 | 0.0500 |
| Barium, Total | 7440-39-3 | 0.153 | | 0.0100 | 0.00250 |
| Beryllium, Total | 7440-41-7 | | U | 0.00200 | 0.000500 |
| Cadmium, Total | 7440-43-9 | 0.0216 | | 0.000500 | 0.000250 |
| Calcium, Total | 7440-70-2 | 127 | | 0.200 | 0.100 |
| Chromium, Total | 7440-47-3 | 0.161 | | 0.00500 | 0.00250 |
| Cobalt, Total | 7440-48-4 | 0.0138 | | 0.0200 | 0.00250 |
| Copper, Total | 7440-50-8 | 0.0342 | | 0.0200 | 0.00500 |
| Iron, Total | 7439-89-6 | 29.3 | | 0.100 | 0.0250 |
| Magnesium, Total | 7439-95-4 | 26.2 | | 0.500 | 0.250 |
| Manganese, Total | 7439-96-5 | 0.605 | | 0.0100 | 0.00500 |
| Nickel, Total | 7440-02-0 | 1.10 | | 0.0400 | 0.00500 |
| Potassium, Total | 7440-09-7 | 21.5 | | 1.00 | 0.250 |
| Silver, Total | 7440-22-4 | | U | 0.0100 | 0.00500 |
| Sodium, Total | 7440-23-5 | 159 | | 0.500 | 0.250 |
| Vanadium, Total | 7440-62-2 | 0.0187 | | 0.0100 | 0.00500 |
| Zinc, Total | 7440-66-6 | 3.98 | | 0.0200 | 0.00500 |

| | |
|---|---|
| U | Not detected at or above adjusted sample detection limit. |

**Sample #:** L12050284-01 **PrePrep Method:** N/A **Instrument:** ICP-MS2
**Client ID:** BBLD-PIT-SSP-050812 **Prep Method:** 3015 **Prep Date:** 05/11/2012 10:37
**Matrix:** Water **Analytical Method:** 6020 **Cal Date:** 05/18/2012 09:54
**Workgroup #:** WG398436 **Analyst:** JYH **Run Date:** 05/18/2012 11:04
**Collect Date:** 05/08/2012 10:01 **Dilution:** 2 **File ID:** NI.051812.110446
**Sample Tag:** DL01 **Units:** mg/L

| Analyte | CAS # | Result | Qual | RL | MDL |
|---|---|---|---|---|---|
| Antimony, Total | 7440-36-0 | 0.00123 | | 0.00200 | 0.00100 |
| Arsenic, Total | 7440-38-2 | 0.0159 | | 0.00200 | 0.00100 |

Certificate of Analysis

| Analyte | CAS # | Result | Qual | RL | MDL |
|---|---|---|---|---|---|
| Lead, Total | 7439-92-1 | 0.00433 | | 0.00200 | 0.00100 |
| Selenium, Total | 7782-49-2 | 0.0135 | | 0.00200 | 0.00100 |
| Thallium, Total | 7440-28-0 | | U | 0.000400 | 0.000200 |

| | |
|---|---|
| U | Not detected at or above adjusted sample detection limit. |

**Sample #:** L12050284-01 **PrePrep Method:** N/A **Instrument:** HYDRA
**Client ID:** BBLD-PIT-SSP-050812 **Prep Method:** 7470A **Prep Date:** 05/10/2012 08:28
**Matrix:** Water **Analytical Method:** 7470A **Cal Date:** 05/14/2012 11:36
**Workgroup #:** WG397918 **Analyst:** PDM **Run Date:** 05/14/2012 14:09
**Collect Date:** 05/08/2012 10:01 **Dilution:** 1 **File ID:** HY.051412.140901
**Sample Tag:** 01 **Units:** mg/L

| Analyte | CAS # | Result | Qual | RL | MDL |
|---|---|---|---|---|---|
| Mercury | 7439-97-6 | 0.000252 | | 0.000200 | 0.000100 |

**Sample #:** L12050284-01 **PrePrep Method:** N/A **Instrument:** SMARTCHEM
**Client ID:** BBLD-PIT-SSP-050812 **Prep Method:** 310.2 **Prep Date:** N/A
**Matrix:** Water **Analytical Method:** 310.2 **Cal Date:** 05/14/2012 14:48
**Workgroup #:** WG397931 **Analyst:** DIH **Run Date:** 05/14/2012 14:59
**Collect Date:** 05/08/2012 10:01 **Dilution:** 10 **File ID:** SC120514004.026
**Sample Tag:** DL01 **Units:** mg/L

| Analyte | CAS # | Result | Qual | RL | MDL |
|---|---|---|---|---|---|
| Alkalinity, Total (as CaCO3) | | 423 | | 200 | 100 |

**Sample #:** L12050284-01 **PrePrep Method:** N/A **Instrument:** SMARTCHEM
**Client ID:** BBLD-PIT-SSP-050812 **Prep Method:** 353.2 **Prep Date:** N/A
**Matrix:** Water **Analytical Method:** 353.2 **Cal Date:** 05/10/2012 14:05
**Workgroup #:** WG397682 **Analyst:** JBK **Run Date:** 05/11/2012 08:30
**Collect Date:** 05/08/2012 10:01 **Dilution:** 100 **File ID:** SC12051615262001
**Sample Tag:** **Units:** mg/L

| Analyte | CAS # | Result | Qual | RL | MDL |
|---|---|---|---|---|---|
| Nitrate (as N) | 14797-55-8 | | U | 5.00 | 2.50 |

| | |
|---|---|
| U | Not detected at or above adjusted sample detection limit. |

Certificate of Analysis

**Sample #:** L12050284-01 **PrePrep Method:** N/A **Instrument:** SMARTCHEM
**Client ID:** BBLD-PIT-SSP-050812 **Prep Method:** 365.4 **Prep Date:** N/A
**Matrix:** Water **Analytical Method:** 365.4 **Cal Date:** 05/15/2012 08:40
**Workgroup #:** WG397809 **Analyst:** JBK **Run Date:** 05/15/2012 08:56
**Collect Date:** 05/08/2012 10:01 **Dilution:** 1 **File ID:** SC120515001.033
**Sample Tag:** 01 **Units:** mg/L

| Analyte | CAS # | Result | Qual | RL | MDL |
|---|---|---|---|---|---|
| Phosphorus, Total | 7723-14-0 | 0.658 | | 0.200 | 0.100 |

**Sample #:** L12050284-01 **PrePrep Method:** N/A **Instrument:** SMARTCHEM
**Client ID:** BBLD-PIT-SSP-050812 **Prep Method:** 375.4 **Prep Date:** N/A
**Matrix:** Water **Analytical Method:** 375.4 **Cal Date:** 05/21/2012 09:22
**Workgroup #:** WG398374 **Analyst:** DIH **Run Date:** 05/21/2012 09:52
**Collect Date:** 05/08/2012 10:01 **Dilution:** 10 **File ID:** SC120521001.059
**Sample Tag:** DL01 **Units:** mg/L

| Analyte | CAS # | Result | Qual | RL | MDL |
|---|---|---|---|---|---|
| Sulfate | 14808-79-8 | 226 | | 50.0 | 25.0 |

**Sample #:** L12050284-01 **PrePrep Method:** N/A **Instrument:** TOC-VWP
**Client ID:** BBLD-PIT-SSP-050812 **Prep Method:** 415.1 **Prep Date:** N/A
**Matrix:** Water **Analytical Method:** 415.1 **Cal Date:** 12/06/2011 09:40
**Workgroup #:** WG398010 **Analyst:** DIH **Run Date:** 05/16/2012 02:11
**Collect Date:** 05/08/2012 10:01 **Dilution:** 25 **File ID:** TC05152012.048
**Sample Tag:** DL01 **Units:** mg/L

| Analyte | CAS # | Result | Qual | RL | MDL |
|---|---|---|---|---|---|
| Total Organic Carbon | | 431 | | 25.0 | 12.5 |

**Sample #:** L12050284-02 **PrePrep Method:** N/A **Instrument:** PE-ICP2
**Client ID:** BBLD-PIT-SSP-050812 **Prep Method:** 3005A **Prep Date:** 05/14/2012 07:48
**Matrix:** Water **Analytical Method:** 6010B **Cal Date:** 05/21/2012 13:35
**Workgroup #:** WG397934 **Analyst:** KHR **Run Date:** 05/21/2012 15:10
**Collect Date:** 05/08/2012 10:01 **Dilution:** 1 **File ID:** P2.052112.151006
**Sample Tag:** 01 **Units:** mg/L

| Analyte | CAS # | Result | Qual | RL | MDL |
|---|---|---|---|---|---|
| Aluminum, Dissolved | 7429-90-5 | | U | 0.100 | 0.0500 |
| Barium, Dissolved | 7440-39-3 | 1.16 | | 0.0100 | 0.00250 |
| Beryllium, Dissolved | 7440-41-7 | | U | 0.00200 | 0.000500 |

Certificate of Analysis

| Analyte | CAS # | Result | Qual | RL | MDL |
|---|---|---|---|---|---|
| Cadmium, Dissolved | 7440-43-9 | 0.000707 | | 0.000500 | 0.000250 |
| Calcium, Dissolved | 7440-70-2 | 299 | | 0.200 | 0.100 |
| Chromium, Dissolved | 7440-47-3 | 0.0559 | | 0.00500 | 0.00250 |
| Cobalt, Dissolved | 7440-48-4 | | U | 0.0200 | 0.00250 |
| Copper, Dissolved | 7440-50-8 | | U | 0.0200 | 0.00500 |
| Iron, Dissolved | 7439-89-6 | 0.106 | | 0.100 | 0.0250 |
| Magnesium, Dissolved | 7439-95-4 | 131 | | 0.500 | 0.250 |
| Manganese, Dissolved | 7439-96-5 | 0.0531 | | 0.0100 | 0.00500 |
| Nickel, Dissolved | 7440-02-0 | 0.0827 | | 0.0400 | 0.00500 |
| Potassium, Dissolved | 7440-09-7 | 84.3 | | 1.00 | 0.250 |
| Silver, Dissolved | 7440-22-4 | | U | 0.0100 | 0.00500 |
| Vanadium, Dissolved | 7440-62-2 | 0.0111 | | 0.0100 | 0.00500 |
| Zinc, Dissolved | 7440-66-6 | 0.0332 | | 0.0200 | 0.00500 |

| | |
|---|---|
| E | Semiquantitative result (out of calibration range) |
| U | Not detected at or above adjusted sample detection limit. |

**Sample #:** L12050284-02 **PrePrep Method:** N/A **Instrument:** PE-ICP2
**Client ID:** BBLD-PIT-SSP-050812 **Prep Method:** 3005A **Prep Date:** 05/14/2012 07:48
**Matrix:** Water **Analytical Method:** 6010B **Cal Date:** 05/21/2012 13:35
**Workgroup #:** WG397934 **Analyst:** KHR **Run Date:** 05/21/2012 16:39
**Collect Date:** 05/08/2012 10:01 **Dilution:** 100 **File ID:** P2.052112.163901
**Sample Tag:** DL01 **Units:** mg/L

| Analyte | CAS # | Result | Qual | RL | MDL |
|---|---|---|---|---|---|
| Sodium, Dissolved | 7440-23-5 | 595 | | 50.0 | 25.0 |

| | |
|---|---|
| U | Not detected at or above adjusted sample detection limit. |

**Sample #:** L12050284-02 **PrePrep Method:** N/A **Instrument:** ICP-MS2
**Client ID:** BBLD-PIT-SSP-050812 **Prep Method:** 3015 **Prep Date:** 05/11/2012 10:37
**Matrix:** Water **Analytical Method:** 6020 **Cal Date:** 05/18/2012 09:54
**Workgroup #:** WG398436 **Analyst:** JYH **Run Date:** 05/18/2012 11:07
**Collect Date:** 05/08/2012 10:01 **Dilution:** 2 **File ID:** NI.051812.110740
**Sample Tag:** DL01 **Units:** mg/L

| Analyte | CAS # | Result | Qual | RL | MDL |
|---|---|---|---|---|---|
| Antimony, Dissolved | 7440-36-0 | 0.00241 | | 0.00200 | 0.00100 |
| Arsenic, Dissolved | 7440-38-2 | 0.102 | | 0.00200 | 0.00100 |
| Lead, Dissolved | 7439-92-1 | | U | 0.00200 | 0.00100 |
| Selenium, Dissolved | 7782-49-2 | 0.00920 | | 0.00200 | 0.00100 |
| Thallium, Dissolved | 7440-28-0 | | U | 0.000400 | 0.000200 |

| | |
|---|---|
| U | Not detected at or above adjusted sample detection limit. |

**Sample #:** L12050284-02 **PrePrep Method:** N/A **Instrument:** HYDRA
**Client ID:** BBLD-PIT-SSP-050812 **Prep Method:** 7470A **Prep Date:** 05/10/2012 08:28
**Matrix:** Water **Analytical Method:** 7470A **Cal Date:** 05/14/2012 11:36
**Workgroup #:** WG397918 **Analyst:** PDM **Run Date:** 05/14/2012 14:10
**Collect Date:** 05/08/2012 10:01 **Dilution:** 1 **File ID:** HY.051412.141049
**Sample Tag:** 01 **Units:** mg/L

| Analyte | CAS # | Result | Qual | RL | MDL |
|---|---|---|---|---|---|
| Mercury, Dissolved | 7439-97-6 | | U | 0.000200 | 0.000100 |
| U | Not detected at or above adjusted sample detection limit. | | | | |

**Sample #:** L12050284-03 **PrePrep Method:** N/A **Instrument:** HPMS8
**Client ID:** PZ-07-050812 **Prep Method:** 5030B/5030C/5035A **Prep Date:** N/A
**Matrix:** Water **Analytical Method:** 8260B **Cal Date:** 03/27/2012 15:49
**Workgroup #:** WG398118 **Analyst:** ADC **Run Date:** 05/16/2012 16:36
**Collect Date:** 05/08/2012 10:10 **Dilution:** 1 **File ID:** 8M379116
**Sample Tag:** 01 **Units:** ug/L

| Analyte | CAS # | Result | Qual | RL | MDL |
|---|---|---|---|---|---|
| 1,1,1-Trichloroethane | 71-55-6 | | U | 1.00 | 0.250 |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | | U | 1.00 | 0.200 |
| 1,1,2-Trichloro-1,2,2-Trifluoroethane | 76-13-1 | | U | 5.00 | 2.00 |
| 1,1,2-Trichloroethane | 79-00-5 | | U | 1.00 | 0.250 |
| 1,1-Dichloroethane | 75-34-3 | | U | 1.00 | 0.125 |
| 1,1-Dichloroethene | 75-35-4 | | U | 1.00 | 0.500 |
| 1,2,3-Trichlorobenzene | 87-61-6 | | U | 1.00 | 0.500 |
| 1,2,4-Trichlorobenzene | 120-82-1 | | U | 1.00 | 0.200 |
| 1,2-Dibromo-3-chloropropane | 96-12-8 | | U | 5.00 | 1.00 |
| 1,2-Dibromoethane | 106-93-4 | | U | 1.00 | 0.250 |
| 1,2-Dichlorobenzene | 95-50-1 | | U | 1.00 | 0.125 |
| 1,2-Dichloroethane | 107-06-2 | | U | 1.00 | 0.250 |
| cis-1,2-Dichloroethene | 156-59-2 | | U | 1.00 | 0.250 |
| trans-1,2-Dichloroethene | 156-60-5 | | U | 1.00 | 0.250 |
| 1,2-Dichloropropane | 78-87-5 | | U | 1.00 | 0.200 |
| 1,3-Dichlorobenzene | 541-73-1 | | U | 1.00 | 0.250 |
| 1,4-Dichlorobenzene | 106-46-7 | | U | 1.00 | 0.125 |
| 2-Butanone | 78-93-3 | | U | 10.0 | 2.50 |
| 2-Hexanone | 591-78-6 | | U | 10.0 | 2.50 |
| 4-Methyl-2-pentanone | 108-10-1 | | U | 10.0 | 2.50 |

Certificate of Analysis

| Analyte | CAS # | Result | Qual | RL | MDL |
|---|---|---|---|---|---|
| Acetone | 67-64-1 | | U | 10.0 | 2.50 |
| Benzene | 71-43-2 | | U | 1.00 | 0.125 |
| Bromochloromethane | 74-97-5 | | U | 1.00 | 0.200 |
| Bromodichloromethane | 75-27-4 | | U | 1.00 | 0.250 |
| Bromoform | 75-25-2 | | U | 1.00 | 0.500 |
| Bromomethane | 74-83-9 | | U | 1.00 | 0.500 |
| Carbon disulfide | 75-15-0 | | U | 1.00 | 0.500 |
| Carbon tetrachloride | 56-23-5 | | U | 1.00 | 0.250 |
| Chlorobenzene | 108-90-7 | 0.863 | | 1.00 | 0.125 |
| Chloroethane | 75-00-3 | | U | 1.00 | 0.500 |
| Chloroform | 67-66-3 | | U | 1.00 | 0.125 |
| Chloromethane | 74-87-3 | | U | 1.00 | 0.500 |
| cis-1,3-Dichloropropene | 10061-01-5 | | U | 1.00 | 0.250 |
| Cyclohexane | 110-82-7 | | U | 5.00 | 1.00 |
| Dibromochloromethane | 124-48-1 | | U | 1.00 | 0.250 |
| Dichlorodifluoromethane | 75-71-8 | | U | 1.00 | 0.250 |
| Ethyl benzene | 100-41-4 | | U | 1.00 | 0.250 |
| Isopropylbenzene | 98-82-8 | | U | 1.00 | 0.250 |
| Methyl acetate | 79-20-9 | | U | 5.00 | 1.00 |
| Methyl tert-butyl ether | 1634-04-4 | | U | 1.00 | 0.500 |
| Methylcyclohexane | 108-87-2 | | U | 5.00 | 1.00 |
| Methylene chloride | 75-09-2 | | U | 5.00 | 0.250 |
| m,p-Xylene | 179601-23-1 | | U | 1.00 | 0.500 |
| o-Xylene | 95-47-6 | | U | 1.00 | 0.250 |
| Styrene | 100-42-5 | | U | 1.00 | 0.125 |
| Tetrachloroethene | 127-18-4 | | U | 1.00 | 0.250 |
| Toluene | 108-88-3 | | U | 1.00 | 0.250 |
| trans-1,3-Dichloropropene | 10061-02-6 | | U | 1.00 | 0.500 |
| Trichloroethene | 79-01-6 | | U | 1.00 | 0.250 |
| Trichlorofluoromethane | 75-69-4 | | U | 1.00 | 0.250 |
| Vinyl chloride | 75-01-4 | | U | 1.00 | 0.250 |
| Epichlorohydrin | 106-89-8 | | | 0.000 | 0.000 |

| Surrogate | Recovery | Lower Limit | Upper Limit | Q |
|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 110 | 80 | 120 | |
| Dibromofluoromethane | 105 | 86 | 118 | |
| p-Bromofluorobenzene | 99.0 | 86 | 115 | |
| Toluene-d8 | 97.1 | 88 | 110 | |

| | |
|---|---|
| U | Not detected at or above adjusted sample detection limit. |

Certificate of Analysis

**Sample #:** L12050284-03 **PrePrep Method:** N/A **Instrument:** HP16
**Client ID:** PZ-07-050812 **Prep Method:** 5021 **Prep Date:** N/A
**Matrix:** Water **Analytical Method:** RSK175 **Cal Date:** 04/30/2012 15:04
**Workgroup #:** WG397661 **Analyst:** FJB **Run Date:** 05/10/2012 17:05
**Collect Date:** 05/08/2012 10:10 **Dilution:** 1 **File ID:** 16G32413
**Sample Tag:** 01 **Units:** ug/L

| Analyte | CAS # | Result | Qual | RL | MDL |
|---|---|---|---|---|---|
| Methane | 74-82-8 | 928 | E | 5.00 | 1.00 |
| Carbon Dioxide | 124-38-9 | 33400 | | 10000 | 2500 |

| | |
|---|---|
| E | Semiquantitative result (out of calibration range) |

**Sample #:** L12050284-03 **PrePrep Method:** N/A **Instrument:** HP16
**Client ID:** PZ-07-050812 **Prep Method:** 5021 **Prep Date:** N/A
**Matrix:** Water **Analytical Method:** RSK175 **Cal Date:** 04/30/2012 15:04
**Workgroup #:** WG397786 **Analyst:** FJB **Run Date:** 05/11/2012 14:40
**Collect Date:** 05/08/2012 10:10 **Dilution:** 5 **File ID:** 16G32419
**Sample Tag:** DL01 **Units:** ug/L

| Analyte | CAS # | Result | Qual | RL | MDL |
|---|---|---|---|---|---|
| Methane | 74-82-8 | 905 | | 25.0 | 5.00 |
| Carbon Dioxide | 124-38-9 | 40100 | | 50000 | 12500 |

**Sample #:** L12050284-03 **PrePrep Method:** N/A **Instrument:** HPMS5
**Client ID:** PZ-07-050812 **Prep Method:** 3520C **Prep Date:** 05/09/2012 14:00
**Matrix:** Water **Analytical Method:** 8270C **Cal Date:** 05/11/2012 13:10
**Workgroup #:** WG398144 **Analyst:** CAA **Run Date:** 05/14/2012 15:00
**Collect Date:** 05/08/2012 10:10 **Dilution:** 1 **File ID:** 5M66987
**Sample Tag:** 01 **Units:** ug/L

| Analyte | CAS # | Result | Qual | RL | MDL |
|---|---|---|---|---|---|
| unknown | | 8.12 | | 0.000 | 0.000 |
| unknown | | 11.5 | | 0.000 | 0.000 |
| unknown | | 5.46 | | 0.000 | 0.000 |
| n-Hexadecanoic acid | | 8.58 | | 0.000 | 0.000 |
| Octadecanoic acid | | 4.98 | | 0.000 | 0.000 |

## Certificate of Analysis

| | | | | | |
|---|---|---|---|---|---|
| **Sample #:** | L12050284-03 | **PrePrep Method:** | N/A | **Instrument:** | HPMS5 |
| **Client ID:** | PZ-07-050812 | **Prep Method:** | 3520C | **Prep Date:** | 05/09/2012 14:00 |
| **Matrix:** | Water | **Analytical Method:** | 8270C | **Cal Date:** | 05/11/2012 13:10 |
| **Workgroup #:** | WG398144 | **Analyst:** | CAA | **Run Date:** | 05/14/2012 15:00 |
| **Collect Date:** | 05/08/2012 10:10 | **Dilution:** | 1 | **File ID:** | 5M66987 |
| **Sample Tag:** | 01 | **Units:** | ug/L | | |

| Analyte | CAS # | Result | Qual | RL | MDL |
|---|---|---|---|---|---|
| 1,1'-Biphenyl | 92-52-4 | | U | 21.5 | 2.69 |
| 1,3,5-Trinitrobenzene | 99-35-4 | | U | 5.38 | 2.69 |
| 1,3-Dinitrobenzene | 99-65-0 | | U | 5.38 | 2.69 |
| 1,4-Dioxane | 123-91-1 | | U | 10.8 | 5.38 |
| 2,4,5-Trichlorophenol | 95-95-4 | | U | 5.38 | 2.69 |
| 2,4,6-Trichlorophenol | 88-06-2 | | U | 5.38 | 2.69 |
| 2,4-Dichlorophenol | 120-83-2 | | U | 5.38 | 2.69 |
| 2,4-Dimethylphenol | 105-67-9 | | U | 5.38 | 2.69 |
| 2,4-Dinitrophenol | 51-28-5 | | U | 26.9 | 13.4 |
| 2,4-Dinitrotoluene | 121-14-2 | | U | 5.38 | 2.69 |
| 2,6-Dinitrotoluene | 606-20-2 | | U | 5.38 | 2.69 |
| 2-Chloronaphthalene | 91-58-7 | | U | 5.38 | 2.69 |
| 2-Chlorophenol | 95-57-8 | | U | 5.38 | 2.69 |
| 2-Methylnaphthalene | 91-57-6 | | U | 5.38 | 2.69 |
| 2-Methylphenol | 95-48-7 | | U | 5.38 | 2.69 |
| 2-Nitroaniline | 88-74-4 | | U | 26.9 | 13.4 |
| 2-Nitrophenol | 88-75-5 | | U | 5.38 | 2.69 |
| 3-Nitroaniline | 99-09-2 | | U | 26.9 | 13.4 |
| 3,3'-Dichlorobenzidine | 91-94-1 | | U | 5.38 | 2.69 |
| 3-,4-Methylphenol | 106-44-5 | | U | 5.38 | 2.69 |
| 4-Bromophenyl-phenylether | 101-55-3 | | U | 5.38 | 2.69 |
| 4-Chloroaniline | 106-47-8 | | U | 5.38 | 2.69 |
| 4-Nitrophenol | 100-02-7 | | U | 26.9 | 13.4 |
| Acenaphthene | 83-32-9 | | U | 5.38 | 2.69 |
| Acenaphthylene | 208-96-8 | | U | 5.38 | 2.69 |
| Anthracene | 120-12-7 | | U | 5.38 | 2.69 |
| Benzo(a)anthracene | 56-55-3 | | U | 5.38 | 2.69 |
| Benzo(a)pyrene | 50-32-8 | | U | 5.38 | 2.69 |
| Benzo(b)fluoranthene | 205-99-2 | | U | 5.38 | 2.69 |
| Benzo(g,h,i)Perylene | 191-24-2 | | U | 5.38 | 2.69 |
| Benzo(k)fluoranthene | 207-08-9 | | U | 5.38 | 2.69 |
| Benzoic acid | 65-85-0 | | U | 21.5 | 10.8 |
| Benzyl alcohol | 100-51-6 | | U | 5.38 | 2.69 |

Certificate of Analysis

| Analyte | CAS # | Result | Qual | RL | MDL |
|---|---|---|---|---|---|
| Bis(2-Chloroethyl)ether | 111-44-4 | | U | 5.38 | 2.69 |
| Bis(2-Chloroethoxy)Methane | 111-91-1 | | U | 5.38 | 2.69 |
| bis(2-Ethylhexyl)phthalate | 117-81-7 | | U | 5.38 | 2.69 |
| Butylbenzylphthalate | 85-68-7 | | U | 5.38 | 2.69 |
| Carbazole | 86-74-8 | | U | 21.5 | 2.69 |
| Chrysene | 218-01-9 | | U | 5.38 | 2.69 |
| Di-N-Butylphthalate | 84-74-2 | | U | 5.38 | 2.69 |
| Di-n-octylphthalate | 117-84-0 | | U | 5.38 | 2.69 |
| Dibenzo(a,h)Anthracene | 53-70-3 | | U | 5.38 | 2.69 |
| Dibenzofuran | 132-64-9 | | U | 5.38 | 2.69 |
| Diethylphthalate | 84-66-2 | | U | 5.38 | 2.69 |
| Dimethylphthalate | 131-11-3 | | U | 5.38 | 2.69 |
| Fluoranthene | 206-44-0 | | U | 5.38 | 2.69 |
| Fluorene | 86-73-7 | | U | 5.38 | 2.69 |
| Hexachlorobenzene | 118-74-1 | | U | 5.38 | 2.69 |
| Hexachlorobutadiene | 87-68-3 | | U | 5.38 | 2.69 |
| Hexachlorocyclopentadiene | 77-47-4 | | U | 5.38 | 2.69 |
| Hexachloroethane | 67-72-1 | | U | 5.38 | 2.69 |
| Indeno(1,2,3-cd)pyrene | 193-39-5 | | U | 5.38 | 2.69 |
| Isophorone | 78-59-1 | | U | 5.38 | 2.69 |
| N-Nitrosodiphenylamine | 86-30-6 | | U | 5.38 | 2.69 |
| Naphthalene | 91-20-3 | | U | 5.38 | 2.69 |
| Nitrobenzene | 98-95-3 | | U | 5.38 | 2.69 |
| Pentachlorophenol | 87-86-5 | | U | 26.9 | 13.4 |
| Phenanthrene | 85-01-8 | | U | 5.38 | 2.69 |
| Phenol | 108-95-2 | | U | 5.38 | 2.69 |
| Pyrene | 129-00-0 | | U | 5.38 | 2.69 |

| Surrogate | Recovery | Lower Limit | Upper Limit | Q |
|---|---|---|---|---|
| 2,4,6-Tribromophenol | 64.8 | 10 | 123 | |
| 2-Fluorobiphenyl | 59.4 | 43 | 116 | |
| 2-Fluorophenol | 54.1 | 21 | 100 | |
| Nitrobenzene-d5 | 61.4 | 35 | 114 | |
| p-Terphenyl-d14 | 59.9 | 33 | 141 | |
| Phenol-d5 | 53.5 | 10 | 94 | |

| | |
|---|---|
| U | Not detected at or above adjusted sample detection limit. |

## Certificate of Analysis

**Sample #:** L12050284-03 | **PrePrep Method:** N/A | **Instrument:** HPMS7
**Client ID:** PZ-07-050812 | **Prep Method:** 3510C | **Prep Date:** 05/14/2012 12:25
**Matrix:** Water | **Analytical Method:** 8270C | **Cal Date:** 04/04/2012 12:53
**Workgroup #:** WG397981 | **Analyst:** CAA | **Run Date:** 05/15/2012 11:02
**Collect Date:** 05/08/2012 10:10 | **Dilution:** 1 | **File ID:** 7M55019
**Sample Tag:** 01 | **Units:** ug/L

| Analyte | CAS # | Result | Qual | RL | MDL |
|---|---|---|---|---|---|
| 2-Methylnaphthalene | 91-57-6 | | U | 0.0538 | 0.0269 |
| Acenaphthene | 83-32-9 | 0.164 | | 0.0538 | 0.0269 |
| Acenaphthylene | 208-96-8 | | U | 0.0538 | 0.0269 |
| Anthracene | 120-12-7 | 0.203 | | 0.0538 | 0.0269 |
| Benzo(a)anthracene | 56-55-3 | 0.0606 | | 0.0538 | 0.0269 |
| Benzo(a)pyrene | 50-32-8 | 0.0274 | | 0.0538 | 0.0269 |
| Benzo(b)fluoranthene | 205-99-2 | 0.0321 | | 0.0538 | 0.0269 |
| Benzo(g,h,i)perylene | 191-24-2 | | U | 0.0538 | 0.0269 |
| Benzo(k)fluoranthene | 207-08-9 | 0.0286 | | 0.0538 | 0.0269 |
| Chrysene | 218-01-9 | 0.0690 | | 0.0538 | 0.0269 |
| Dibenzo(a,h)anthracene | 53-70-3 | | U | 0.0538 | 0.0269 |
| Fluoranthene | 206-44-0 | 0.734 | | 0.0538 | 0.0269 |
| Fluorene | 86-73-7 | 0.191 | | 0.0538 | 0.0269 |
| Indeno(1,2,3-cd)pyrene | 193-39-5 | | U | 0.0538 | 0.0269 |
| Naphthalene | 91-20-3 | | U | 0.0538 | 0.0269 |
| Phenanthrene | 85-01-8 | 0.0370 | | 0.0538 | 0.0269 |
| Pyrene | 129-00-0 | 0.470 | | 0.0538 | 0.0269 |

| Surrogate | Recovery | Lower Limit | Upper Limit | Q |
|---|---|---|---|---|
| 2-Fluorobiphenyl | 42.4 | 43 | 116 | * |
| Nitrobenzene-d5 | 46.6 | 35 | 114 | |
| p-Terphenyl-d14 | 108 | 33 | 141 | |

| | |
|---|---|
| U | Not detected at or above adjusted sample detection limit. |

**Sample #:** L12050284-03 | **PrePrep Method:** N/A | **Instrument:** PE-ICP2
**Client ID:** PZ-07-050812 | **Prep Method:** 3005A | **Prep Date:** 05/14/2012 07:48
**Matrix:** Water | **Analytical Method:** 6010B | **Cal Date:** 05/21/2012 13:35
**Workgroup #:** WG397934 | **Analyst:** KHR | **Run Date:** 05/21/2012 15:17
**Collect Date:** 05/08/2012 10:10 | **Dilution:** 1 | **File ID:** P2.052112.151716
**Sample Tag:** 01 | **Units:** mg/L

| Analyte | CAS # | Result | Qual | RL | MDL |
|---|---|---|---|---|---|
| Aluminum, Total | 7429-90-5 | | U | 0.100 | 0.0500 |
| Barium, Total | 7440-39-3 | 0.122 | | 0.0100 | 0.00250 |

Certificate of Analysis

| Analyte | CAS # | Result | Qual | RL | MDL |
|---|---|---|---|---|---|
| Beryllium, Total | 7440-41-7 | | U | 0.00200 | 0.000500 |
| Cadmium, Total | 7440-43-9 | 0.00124 | | 0.000500 | 0.000250 |
| Calcium, Total | 7440-70-2 | 155 | | 0.200 | 0.100 |
| Chromium, Total | 7440-47-3 | | U | 0.00500 | 0.00250 |
| Cobalt, Total | 7440-48-4 | | U | 0.0200 | 0.00250 |
| Copper, Total | 7440-50-8 | | U | 0.0200 | 0.00500 |
| Iron, Total | 7439-89-6 | 1.72 | | 0.100 | 0.0250 |
| Magnesium, Total | 7439-95-4 | 45.0 | | 0.500 | 0.250 |
| Manganese, Total | 7439-96-5 | 0.175 | | 0.0100 | 0.00500 |
| Nickel, Total | 7440-02-0 | | U | 0.0400 | 0.00500 |
| Potassium, Total | 7440-09-7 | 4.54 | | 1.00 | 0.250 |
| Silver, Total | 7440-22-4 | | U | 0.0100 | 0.00500 |
| Vanadium, Total | 7440-62-2 | 0.00838 | | 0.0100 | 0.00500 |
| Zinc, Total | 7440-66-6 | 0.126 | | 0.0200 | 0.00500 |

| | |
|---|---|
| U | Not detected at or above adjusted sample detection limit. |

**Sample #:** L12050284-03 **PrePrep Method:** N/A **Instrument:** PE-ICP2
**Client ID:** PZ-07-050812 **Prep Method:** 3005A **Prep Date:** 05/14/2012 07:48
**Matrix:** Water **Analytical Method:** 6010B **Cal Date:** 05/21/2012 13:35
**Workgroup #:** WG397934 **Analyst:** KHR **Run Date:** 05/21/2012 16:58
**Collect Date:** 05/08/2012 10:10 **Dilution:** 100 **File ID:** P2.052112.165850
**Sample Tag:** DL01 **Units:** mg/L

| Analyte | CAS # | Result | Qual | RL | MDL |
|---|---|---|---|---|---|
| Sodium, Total | 7440-23-5 | 219 | | 50.0 | 25.0 |

| | |
|---|---|
| U | Not detected at or above adjusted sample detection limit. |

**Sample #:** L12050284-03 **PrePrep Method:** N/A **Instrument:** ICP-MS2
**Client ID:** PZ-07-050812 **Prep Method:** 3015 **Prep Date:** 05/11/2012 10:37
**Matrix:** Water **Analytical Method:** 6020 **Cal Date:** 05/18/2012 09:54
**Workgroup #:** WG398436 **Analyst:** JYH **Run Date:** 05/18/2012 11:10
**Collect Date:** 05/08/2012 10:10 **Dilution:** 2 **File ID:** NI.051812.111033
**Sample Tag:** DL01 **Units:** mg/L

| Analyte | CAS # | Result | Qual | RL | MDL |
|---|---|---|---|---|---|
| Antimony, Total | 7440-36-0 | | U | 0.00200 | 0.00100 |
| Arsenic, Total | 7440-38-2 | 0.00158 | | 0.00200 | 0.00100 |
| Lead, Total | 7439-92-1 | | U | 0.00200 | 0.00100 |
| Selenium, Total | 7782-49-2 | 0.00326 | | 0.00200 | 0.00100 |
| Thallium, Total | 7440-28-0 | | U | 0.000400 | 0.000200 |

| | |
|---|---|
| U | Not detected at or above adjusted sample detection limit. |

**Sample #:** L12050284-03 **PrePrep Method:** N/A **Instrument:** HYDRA
**Client ID:** PZ-07-050812 **Prep Method:** 7470A **Prep Date:** 05/10/2012 08:28
**Matrix:** Water **Analytical Method:** 7470A **Cal Date:** 05/14/2012 11:36
**Workgroup #:** WG397918 **Analyst:** PDM **Run Date:** 05/14/2012 14:12
**Collect Date:** 05/08/2012 10:10 **Dilution:** 1 **File ID:** HY.051412.141233
**Sample Tag:** 01 **Units:** mg/L

| Analyte | CAS # | Result | Qual | RL | MDL |
|---|---|---|---|---|---|
| Mercury | 7439-97-6 | | U | 0.000200 | 0.000100 |
| U | Not detected at or above adjusted sample detection limit. | | | | |

**Sample #:** L12050284-03 **PrePrep Method:** N/A **Instrument:** SMARTCHEM
**Client ID:** PZ-07-050812 **Prep Method:** 310.2 **Prep Date:** N/A
**Matrix:** Water **Analytical Method:** 310.2 **Cal Date:** 05/14/2012 14:48
**Workgroup #:** WG397931 **Analyst:** DIH **Run Date:** 05/14/2012 15:00
**Collect Date:** 05/08/2012 10:10 **Dilution:** 1 **File ID:** SC120514004.027
**Sample Tag:** 01 **Units:** mg/L

| Analyte | CAS # | Result | Qual | RL | MDL |
|---|---|---|---|---|---|
| Alkalinity, Total (as CaCO3) | | 275 | | 20.0 | 10.0 |

**Sample #:** L12050284-03 **PrePrep Method:** N/A **Instrument:** SMARTCHEM
**Client ID:** PZ-07-050812 **Prep Method:** 353.2 **Prep Date:** N/A
**Matrix:** Water **Analytical Method:** 353.2 **Cal Date:** 05/10/2012 14:05
**Workgroup #:** WG397682 **Analyst:** JBK **Run Date:** 05/11/2012 08:30
**Collect Date:** 05/08/2012 10:10 **Dilution:** 1 **File ID:** SC12051615262901
**Sample Tag:** **Units:** mg/L

| Analyte | CAS # | Result | Qual | RL | MDL |
|---|---|---|---|---|---|
| Nitrate (as N) | 14797-55-8 | | U | 0.0500 | 0.0250 |
| U | Not detected at or above adjusted sample detection limit. | | | | |

**Sample #:** L12050284-03 **PrePrep Method:** N/A **Instrument:** SMARTCHEM
**Client ID:** PZ-07-050812 **Prep Method:** 365.4 **Prep Date:** N/A
**Matrix:** Water **Analytical Method:** 365.4 **Cal Date:** 05/15/2012 08:40
**Workgroup #:** WG397809 **Analyst:** JBK **Run Date:** 05/15/2012 08:57
**Collect Date:** 05/08/2012 10:10 **Dilution:** 1 **File ID:** SC120515001.034
**Sample Tag:** 01 **Units:** mg/L

Certificate of Analysis

| Analyte | CAS # | Result | Qual | RL | MDL |
|---|---|---|---|---|---|
| Phosphorus, Total | 7723-14-0 | | U | 0.200 | 0.100 |

| | |
|---|---|
| U | Not detected at or above adjusted sample detection limit. |

**Sample #:** L12050284-03 **PrePrep Method:** N/A **Instrument:** SMARTCHEM
**Client ID:** PZ-07-050812 **Prep Method:** 375.4 **Prep Date:** N/A
**Matrix:** Water **Analytical Method:** 375.4 **Cal Date:** 05/21/2012 09:22
**Workgroup #:** WG398374 **Analyst:** DIH **Run Date:** 05/21/2012 09:53
**Collect Date:** 05/08/2012 10:10 **Dilution:** 10 **File ID:** SC120521001.060
**Sample Tag:** DL01 **Units:** mg/L

| Analyte | CAS # | Result | Qual | RL | MDL |
|---|---|---|---|---|---|
| Sulfate | 14808-79-8 | 276 | | 50.0 | 25.0 |

**Sample #:** L12050284-03 **PrePrep Method:** N/A **Instrument:** TOC-VWP
**Client ID:** PZ-07-050812 **Prep Method:** 415.1 **Prep Date:** N/A
**Matrix:** Water **Analytical Method:** 415.1 **Cal Date:** 12/06/2011 09:40
**Workgroup #:** WG398501 **Analyst:** JBK **Run Date:** 05/18/2012 18:11
**Collect Date:** 05/08/2012 10:10 **Dilution:** 1 **File ID:** TC05182012.009
**Sample Tag:** 01 **Units:** mg/L

| Analyte | CAS # | Result | Qual | RL | MDL |
|---|---|---|---|---|---|
| Total Organic Carbon | | 4.06 | | 1.00 | 0.500 |

**Sample #:** L12050284-04 **PrePrep Method:** N/A **Instrument:** PE-ICP2
**Client ID:** PZ-07-050812 **Prep Method:** 3005A **Prep Date:** 05/14/2012 07:48
**Matrix:** Water **Analytical Method:** 6010B **Cal Date:** 05/21/2012 13:35
**Workgroup #:** WG397934 **Analyst:** KHR **Run Date:** 05/21/2012 15:49
**Collect Date:** 05/08/2012 10:10 **Dilution:** 1 **File ID:** P2.052112.154956
**Sample Tag:** 01 **Units:** mg/L

| Analyte | CAS # | Result | Qual | RL | MDL |
|---|---|---|---|---|---|
| Aluminum, Dissolved | 7429-90-5 | | U | 0.100 | 0.0500 |
| Barium, Dissolved | 7440-39-3 | 0.116 | | 0.0100 | 0.00250 |
| Beryllium, Dissolved | 7440-41-7 | | U | 0.00200 | 0.000500 |
| Cadmium, Dissolved | 7440-43-9 | | U | 0.000500 | 0.000250 |
| Calcium, Dissolved | 7440-70-2 | 148 | | 0.200 | 0.100 |
| Chromium, Dissolved | 7440-47-3 | | U | 0.00500 | 0.00250 |
| Cobalt, Dissolved | 7440-48-4 | | U | 0.0200 | 0.00250 |
| Copper, Dissolved | 7440-50-8 | | U | 0.0200 | 0.00500 |
| Iron, Dissolved | 7439-89-6 | 1.57 | | 0.100 | 0.0250 |

Certificate of Analysis

| Analyte | CAS # | Result | Qual | RL | MDL |
|---|---|---|---|---|---|
| Magnesium, Dissolved | 7439-95-4 | 42.6 | | 0.500 | 0.250 |
| Manganese, Dissolved | 7439-96-5 | 0.169 | | 0.0100 | 0.00500 |
| Nickel, Dissolved | 7440-02-0 | | U | 0.0400 | 0.00500 |
| Potassium, Dissolved | 7440-09-7 | 4.35 | | 1.00 | 0.250 |
| Silver, Dissolved | 7440-22-4 | | U | 0.0100 | 0.00500 |
| Vanadium, Dissolved | 7440-62-2 | 0.00519 | | 0.0100 | 0.00500 |
| Zinc, Dissolved | 7440-66-6 | | U | 0.0200 | 0.00500 |

| | |
|---|---|
| U | Not detected at or above adjusted sample detection limit. |

**Sample #:** L12050284-04 **PrePrep Method:** N/A **Instrument:** PE-ICP2
**Client ID:** PZ-07-050812 **Prep Method:** 3005A **Prep Date:** 05/14/2012 07:48
**Matrix:** Water **Analytical Method:** 6010B **Cal Date:** 05/21/2012 13:35
**Workgroup #:** WG397934 **Analyst:** KHR **Run Date:** 05/21/2012 17:18
**Collect Date:** 05/08/2012 10:10 **Dilution:** 100 **File ID:** P2.052112.171834
**Sample Tag:** DL01 **Units:** mg/L

| Analyte | CAS # | Result | Qual | RL | MDL |
|---|---|---|---|---|---|
| Sodium, Dissolved | 7440-23-5 | 243 | | 50.0 | 25.0 |

| | |
|---|---|
| U | Not detected at or above adjusted sample detection limit. |

**Sample #:** L12050284-04 **PrePrep Method:** N/A **Instrument:** ICP-MS2
**Client ID:** PZ-07-050812 **Prep Method:** 3015 **Prep Date:** 05/11/2012 10:37
**Matrix:** Water **Analytical Method:** 6020 **Cal Date:** 05/18/2012 09:54
**Workgroup #:** WG398436 **Analyst:** JYH **Run Date:** 05/18/2012 11:13
**Collect Date:** 05/08/2012 10:10 **Dilution:** 2 **File ID:** NI.051812.111326
**Sample Tag:** DL01 **Units:** mg/L

| Analyte | CAS # | Result | Qual | RL | MDL |
|---|---|---|---|---|---|
| Antimony, Dissolved | 7440-36-0 | | U | 0.00200 | 0.00100 |
| Arsenic, Dissolved | 7440-38-2 | 0.00142 | | 0.00200 | 0.00100 |
| Lead, Dissolved | 7439-92-1 | | U | 0.00200 | 0.00100 |
| Selenium, Dissolved | 7782-49-2 | 0.00275 | | 0.00200 | 0.00100 |
| Thallium, Dissolved | 7440-28-0 | 0.000205 | | 0.000400 | 0.000200 |

| | |
|---|---|
| U | Not detected at or above adjusted sample detection limit. |

Certificate of Analysis

| | | | | | |
|---|---|---|---|---|---|
| **Sample #:** | L12050284-04 | **PrePrep Method:** | N/A | **Instrument:** | HYDRA |
| **Client ID:** | PZ-07-050812 | **Prep Method:** | 7470A | **Prep Date:** | 05/10/2012 08:28 |
| **Matrix:** | Water | **Analytical Method:** | 7470A | **Cal Date:** | 05/14/2012 11:36 |
| **Workgroup #:** | WG397918 | **Analyst:** | PDM | **Run Date:** | 05/14/2012 14:14 |
| **Collect Date:** | 05/08/2012 10:10 | **Dilution:** | 1 | **File ID:** | HY.051412.141419 |
| **Sample Tag:** | 01 | **Units:** | mg/L | | |

| Analyte | CAS # | Result | Qual | RL | MDL |
|---|---|---|---|---|---|
| Mercury, Dissolved | 7439-97-6 | | U | 0.000200 | 0.000100 |

| | |
|---|---|
| U | Not detected at or above adjusted sample detection limit. |

| | | | | | |
|---|---|---|---|---|---|
| **Sample #:** | L12050284-05 | **PrePrep Method:** | N/A | **Instrument:** | HPMS8 |
| **Client ID:** | MW-18-050812 | **Prep Method:** | 5030B/5030C/5035A | **Prep Date:** | N/A |
| **Matrix:** | Water | **Analytical Method:** | 8260B | **Cal Date:** | 03/27/2012 15:49 |
| **Workgroup #:** | WG398118 | **Analyst:** | ADC | **Run Date:** | 05/16/2012 17:10 |
| **Collect Date:** | 05/08/2012 11:00 | **Dilution:** | 1 | **File ID:** | 8M379117 |
| **Sample Tag:** | 01 | **Units:** | ug/L | | |

| Analyte | CAS # | Result | Qual | RL | MDL |
|---|---|---|---|---|---|
| 1,1,1-Trichloroethane | 71-55-6 | | U | 1.00 | 0.250 |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | | U | 1.00 | 0.200 |
| 1,1,2-Trichloro-1,2,2-Trifluoroethane | 76-13-1 | | U | 5.00 | 2.00 |
| 1,1,2-Trichloroethane | 79-00-5 | | U | 1.00 | 0.250 |
| 1,1-Dichloroethane | 75-34-3 | | U | 1.00 | 0.125 |
| 1,1-Dichloroethene | 75-35-4 | | U | 1.00 | 0.500 |
| 1,2,3-Trichlorobenzene | 87-61-6 | | U | 1.00 | 0.500 |
| 1,2,4-Trichlorobenzene | 120-82-1 | | U | 1.00 | 0.200 |
| 1,2-Dibromo-3-chloropropane | 96-12-8 | | U | 5.00 | 1.00 |
| 1,2-Dibromoethane | 106-93-4 | | U | 1.00 | 0.250 |
| 1,2-Dichlorobenzene | 95-50-1 | | U | 1.00 | 0.125 |
| 1,2-Dichloroethane | 107-06-2 | | U | 1.00 | 0.250 |
| cis-1,2-Dichloroethene | 156-59-2 | | U | 1.00 | 0.250 |
| trans-1,2-Dichloroethene | 156-60-5 | | U | 1.00 | 0.250 |
| 1,2-Dichloropropane | 78-87-5 | | U | 1.00 | 0.200 |
| 1,3-Dichlorobenzene | 541-73-1 | | U | 1.00 | 0.250 |
| 1,4-Dichlorobenzene | 106-46-7 | | U | 1.00 | 0.125 |
| 2-Butanone | 78-93-3 | | U | 10.0 | 2.50 |
| 2-Hexanone | 591-78-6 | | U | 10.0 | 2.50 |
| 4-Methyl-2-pentanone | 108-10-1 | | U | 10.0 | 2.50 |
| Acetone | 67-64-1 | | U | 10.0 | 2.50 |
| Benzene | 71-43-2 | | U | 1.00 | 0.125 |

Certificate of Analysis

| Analyte | CAS # | Result | Qual | RL | MDL |
|---|---|---|---|---|---|
| Bromochloromethane | 74-97-5 | | U | 1.00 | 0.200 |
| Bromodichloromethane | 75-27-4 | | U | 1.00 | 0.250 |
| Bromoform | 75-25-2 | | U | 1.00 | 0.500 |
| Bromomethane | 74-83-9 | | U | 1.00 | 0.500 |
| Carbon disulfide | 75-15-0 | | U | 1.00 | 0.500 |
| Carbon tetrachloride | 56-23-5 | | U | 1.00 | 0.250 |
| Chlorobenzene | 108-90-7 | | U | 1.00 | 0.125 |
| Chloroethane | 75-00-3 | | U | 1.00 | 0.500 |
| Chloroform | 67-66-3 | | U | 1.00 | 0.125 |
| Chloromethane | 74-87-3 | | U | 1.00 | 0.500 |
| cis-1,3-Dichloropropene | 10061-01-5 | | U | 1.00 | 0.250 |
| Cyclohexane | 110-82-7 | | U | 5.00 | 1.00 |
| Dibromochloromethane | 124-48-1 | | U | 1.00 | 0.250 |
| Dichlorodifluoromethane | 75-71-8 | | U | 1.00 | 0.250 |
| Ethyl benzene | 100-41-4 | | U | 1.00 | 0.250 |
| Isopropylbenzene | 98-82-8 | | U | 1.00 | 0.250 |
| Methyl acetate | 79-20-9 | | U | 5.00 | 1.00 |
| Methyl tert-butyl ether | 1634-04-4 | | U | 1.00 | 0.500 |
| Methylcyclohexane | 108-87-2 | | U | 5.00 | 1.00 |
| Methylene chloride | 75-09-2 | | U | 5.00 | 0.250 |
| m,p-Xylene | 179601-23-1 | | U | 1.00 | 0.500 |
| o-Xylene | 95-47-6 | | U | 1.00 | 0.250 |
| Styrene | 100-42-5 | | U | 1.00 | 0.125 |
| Tetrachloroethene | 127-18-4 | | U | 1.00 | 0.250 |
| Toluene | 108-88-3 | | U | 1.00 | 0.250 |
| trans-1,3-Dichloropropene | 10061-02-6 | | U | 1.00 | 0.500 |
| Trichloroethene | 79-01-6 | | U | 1.00 | 0.250 |
| Trichlorofluoromethane | 75-69-4 | | U | 1.00 | 0.250 |
| Vinyl chloride | 75-01-4 | | U | 1.00 | 0.250 |
| Epichlorohydrin | 106-89-8 | | | 0.000 | 0.000 |

| Surrogate | Recovery | Lower Limit | Upper Limit | Q |
|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 113 | 80 | 120 | |
| Dibromofluoromethane | 103 | 86 | 118 | |
| p-Bromofluorobenzene | 97.2 | 86 | 115 | |
| Toluene-d8 | 97.4 | 88 | 110 | |

| | |
|---|---|
| U | Not detected at or above adjusted sample detection limit. |

Certificate of Analysis

| | | | | | |
|---|---|---|---|---|---|
| **Sample #:** | L12050284-05 | **PrePrep Method:** | N/A | **Instrument:** | HP16 |
| **Client ID:** | MW-18-050812 | **Prep Method:** | 5021 | **Prep Date:** | N/A |
| **Matrix:** | Water | **Analytical Method:** | RSK175 | **Cal Date:** | 04/30/2012 15:04 |
| **Workgroup #:** | WG397786 | **Analyst:** | FJB | **Run Date:** | 05/11/2012 16:31 |
| **Collect Date:** | 05/08/2012 11:00 | **Dilution:** | 1 | **File ID:** | 16G32431 |
| **Sample Tag:** | 01 | **Units:** | ug/L | | |

| Analyte | CAS # | Result | Qual | RL | MDL |
|---|---|---|---|---|---|
| Methane | 74-82-8 | 79.2 | | 5.00 | 1.00 |
| Carbon Dioxide | 124-38-9 | 82600 | | 10000 | 2500 |

| | | | | | |
|---|---|---|---|---|---|
| **Sample #:** | L12050284-05 | **PrePrep Method:** | N/A | **Instrument:** | HPMS5 |
| **Client ID:** | MW-18-050812 | **Prep Method:** | 3520C | **Prep Date:** | 05/09/2012 14:00 |
| **Matrix:** | Water | **Analytical Method:** | 8270C | **Cal Date:** | 05/11/2012 13:10 |
| **Workgroup #:** | WG398144 | **Analyst:** | CAA | **Run Date:** | 05/14/2012 15:36 |
| **Collect Date:** | 05/08/2012 11:00 | **Dilution:** | 1 | **File ID:** | 5M66988 |
| **Sample Tag:** | 01 | **Units:** | ug/L | | |

| Analyte | CAS # | Result | Qual | RL | MDL |
|---|---|---|---|---|---|
| 1,1'-Biphenyl | 92-52-4 | | U | 22.2 | 2.78 |
| 1,3,5-Trinitrobenzene | 99-35-4 | | U | 5.56 | 2.78 |
| 1,3-Dinitrobenzene | 99-65-0 | | U | 5.56 | 2.78 |
| 1,4-Dioxane | 123-91-1 | | U | 11.1 | 5.56 |
| 2,4,5-Trichlorophenol | 95-95-4 | | U | 5.56 | 2.78 |
| 2,4,6-Trichlorophenol | 88-06-2 | | U | 5.56 | 2.78 |
| 2,4-Dichlorophenol | 120-83-2 | | U | 5.56 | 2.78 |
| 2,4-Dimethylphenol | 105-67-9 | | U | 5.56 | 2.78 |
| 2,4-Dinitrophenol | 51-28-5 | | U | 27.8 | 13.9 |
| 2,4-Dinitrotoluene | 121-14-2 | | U | 5.56 | 2.78 |
| 2,6-Dinitrotoluene | 606-20-2 | | U | 5.56 | 2.78 |
| 2-Chloronaphthalene | 91-58-7 | | U | 5.56 | 2.78 |
| 2-Chlorophenol | 95-57-8 | | U | 5.56 | 2.78 |
| 2-Methylnaphthalene | 91-57-6 | | U | 5.56 | 2.78 |
| 2-Methylphenol | 95-48-7 | | U | 5.56 | 2.78 |
| 2-Nitroaniline | 88-74-4 | | U | 27.8 | 13.9 |
| 2-Nitrophenol | 88-75-5 | | U | 5.56 | 2.78 |
| 3-Nitroaniline | 99-09-2 | | U | 27.8 | 13.9 |
| 3,3'-Dichlorobenzidine | 91-94-1 | | U | 5.56 | 2.78 |
| 3-,4-Methylphenol | 106-44-5 | | U | 5.56 | 2.78 |
| 4-Bromophenyl-phenylether | 101-55-3 | | U | 5.56 | 2.78 |
| 4-Chloroaniline | 106-47-8 | | U | 5.56 | 2.78 |

Certificate of Analysis

| Analyte | CAS # | Result | Qual | RL | MDL |
|---|---|---|---|---|---|
| 4-Nitrophenol | 100-02-7 | | U | 27.8 | 13.9 |
| Acenaphthene | 83-32-9 | | U | 5.56 | 2.78 |
| Acenaphthylene | 208-96-8 | | U | 5.56 | 2.78 |
| Anthracene | 120-12-7 | | U | 5.56 | 2.78 |
| Benzo(a)anthracene | 56-55-3 | | U | 5.56 | 2.78 |
| Benzo(a)pyrene | 50-32-8 | | U | 5.56 | 2.78 |
| Benzo(b)fluoranthene | 205-99-2 | | U | 5.56 | 2.78 |
| Benzo(g,h,i)Perylene | 191-24-2 | | U | 5.56 | 2.78 |
| Benzo(k)fluoranthene | 207-08-9 | | U | 5.56 | 2.78 |
| Benzoic acid | 65-85-0 | | U | 22.2 | 11.1 |
| Benzyl alcohol | 100-51-6 | | U | 5.56 | 2.78 |
| Bis(2-Chloroethyl)ether | 111-44-4 | | U | 5.56 | 2.78 |
| Bis(2-Chloroethoxy)Methane | 111-91-1 | | U | 5.56 | 2.78 |
| bis(2-Ethylhexyl)phthalate | 117-81-7 | | U | 5.56 | 2.78 |
| Butylbenzylphthalate | 85-68-7 | | U | 5.56 | 2.78 |
| Carbazole | 86-74-8 | | U | 22.2 | 2.78 |
| Chrysene | 218-01-9 | | U | 5.56 | 2.78 |
| Di-N-Butylphthalate | 84-74-2 | | U | 5.56 | 2.78 |
| Di-n-octylphthalate | 117-84-0 | | U | 5.56 | 2.78 |
| Dibenzo(a,h)Anthracene | 53-70-3 | | U | 5.56 | 2.78 |
| Dibenzofuran | 132-64-9 | | U | 5.56 | 2.78 |
| Diethylphthalate | 84-66-2 | | U | 5.56 | 2.78 |
| Dimethylphthalate | 131-11-3 | | U | 5.56 | 2.78 |
| Fluoranthene | 206-44-0 | | U | 5.56 | 2.78 |
| Fluorene | 86-73-7 | | U | 5.56 | 2.78 |
| Hexachlorobenzene | 118-74-1 | | U | 5.56 | 2.78 |
| Hexachlorobutadiene | 87-68-3 | | U | 5.56 | 2.78 |
| Hexachlorocyclopentadiene | 77-47-4 | | U | 5.56 | 2.78 |
| Hexachloroethane | 67-72-1 | | U | 5.56 | 2.78 |
| Indeno(1,2,3-cd)pyrene | 193-39-5 | | U | 5.56 | 2.78 |
| Isophorone | 78-59-1 | | U | 5.56 | 2.78 |
| N-Nitrosodiphenylamine | 86-30-6 | | U | 5.56 | 2.78 |
| Naphthalene | 91-20-3 | | U | 5.56 | 2.78 |
| Nitrobenzene | 98-95-3 | | U | 5.56 | 2.78 |
| Pentachlorophenol | 87-86-5 | | U | 27.8 | 13.9 |
| Phenanthrene | 85-01-8 | | U | 5.56 | 2.78 |
| Phenol | 108-95-2 | | U | 5.56 | 2.78 |
| Pyrene | 129-00-0 | | U | 5.56 | 2.78 |

| Surrogate | Recovery | Lower Limit | Upper Limit | Q |
|---|---|---|---|---|

Certificate of Analysis

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|---|---|---|---|---|
| 2,4,6-Tribromophenol | 93.0 | 10 | 123 | |
| 2-Fluorobiphenyl | 69.6 | 43 | 116 | |
| 2-Fluorophenol | 65.1 | 21 | 100 | |
| Nitrobenzene-d5 | 67.8 | 35 | 114 | |
| p-Terphenyl-d14 | 83.8 | 33 | 141 | |
| Phenol-d5 | 66.8 | 10 | 94 | |

| | |
|---|---|
| U | Not detected at or above adjusted sample detection limit. |

**Sample #:** L12050284-05 **PrePrep Method:** N/A **Instrument:** HPMS5
**Client ID:** MW-18-050812 **Prep Method:** 3520C **Prep Date:** 05/09/2012 14:00
**Matrix:** Water **Analytical Method:** 8270C **Cal Date:** 05/11/2012 13:10
**Workgroup #:** WG398144 **Analyst:** CAA **Run Date:** 05/14/2012 15:36
**Collect Date:** 05/08/2012 11:00 **Dilution:** 1 **File ID:** 5M66988
**Sample Tag:** 01 **Units:** ug/L

| Analyte | CAS # | Result | Qual | RL | MDL |
|---|---|---|---|---|---|
| unknown | | 13.3 | | 0.000 | 0.000 |
| unknown | | 12.2 | | 0.000 | 0.000 |
| n-Hexadecanoic acid | | 10.5 | | 0.000 | 0.000 |

**Sample #:** L12050284-05 **PrePrep Method:** N/A **Instrument:** HPMS7
**Client ID:** MW-18-050812 **Prep Method:** 3510C **Prep Date:** 05/14/2012 12:25
**Matrix:** Water **Analytical Method:** 8270C **Cal Date:** 04/04/2012 12:53
**Workgroup #:** WG397981 **Analyst:** CAA **Run Date:** 05/15/2012 11:30
**Collect Date:** 05/08/2012 11:00 **Dilution:** 1 **File ID:** 7M55020
**Sample Tag:** 01 **Units:** ug/L

| Analyte | CAS # | Result | Qual | RL | MDL |
|---|---|---|---|---|---|
| 2-Methylnaphthalene | 91-57-6 | | U | 0.0556 | 0.0278 |
| Acenaphthene | 83-32-9 | | U | 0.0556 | 0.0278 |
| Acenaphthylene | 208-96-8 | | U | 0.0556 | 0.0278 |
| Anthracene | 120-12-7 | | U | 0.0556 | 0.0278 |
| Benzo(a)anthracene | 56-55-3 | | U | 0.0556 | 0.0278 |
| Benzo(a)pyrene | 50-32-8 | | U | 0.0556 | 0.0278 |
| Benzo(b)fluoranthene | 205-99-2 | | U | 0.0556 | 0.0278 |
| Benzo(g,h,i)perylene | 191-24-2 | | U | 0.0556 | 0.0278 |
| Benzo(k)fluoranthene | 207-08-9 | | U | 0.0556 | 0.0278 |
| Chrysene | 218-01-9 | | U | 0.0556 | 0.0278 |
| Dibenzo(a,h)anthracene | 53-70-3 | | U | 0.0556 | 0.0278 |
| Fluoranthene | 206-44-0 | | U | 0.0556 | 0.0278 |
| Fluorene | 86-73-7 | | U | 0.0556 | 0.0278 |

Certificate of Analysis

| Analyte | CAS # | Result | Qual | RL | MDL |
|---|---|---|---|---|---|
| Indeno(1,2,3-cd)pyrene | 193-39-5 | | U | 0.0556 | 0.0278 |
| Naphthalene | 91-20-3 | | U | 0.0556 | 0.0278 |
| Phenanthrene | 85-01-8 | | U | 0.0556 | 0.0278 |
| Pyrene | 129-00-0 | 0.0328 | | 0.0556 | 0.0278 |

| Surrogate | Recovery | Lower Limit | Upper Limit | Q |
|---|---|---|---|---|
| 2-Fluorobiphenyl | 69.7 | 43 | 116 | |
| Nitrobenzene-d5 | 81.4 | 35 | 114 | |
| p-Terphenyl-d14 | 107 | 33 | 141 | |

| | |
|---|---|
| U | Not detected at or above adjusted sample detection limit. |

**Sample #:** L12050284-05 **PrePrep Method:** N/A **Instrument:** PE-ICP2
**Client ID:** MW-18-050812 **Prep Method:** 3005A **Prep Date:** 05/14/2012 07:48
**Matrix:** Water **Analytical Method:** 6010B **Cal Date:** 05/21/2012 13:35
**Workgroup #:** WG397934 **Analyst:** KHR **Run Date:** 05/21/2012 15:56
**Collect Date:** 05/08/2012 11:00 **Dilution:** 1 **File ID:** P2.052112.155600
**Sample Tag:** 01 **Units:** mg/L

| Analyte | CAS # | Result | Qual | RL | MDL |
|---|---|---|---|---|---|
| Aluminum, Total | 7429-90-5 | | U | 0.100 | 0.0500 |
| Barium, Total | 7440-39-3 | 0.141 | | 0.0100 | 0.00250 |
| Beryllium, Total | 7440-41-7 | | U | 0.00200 | 0.000500 |
| Cadmium, Total | 7440-43-9 | | U | 0.000500 | 0.000250 |
| Calcium, Total | 7440-70-2 | 160 | | 0.200 | 0.100 |
| Chromium, Total | 7440-47-3 | | U | 0.00500 | 0.00250 |
| Cobalt, Total | 7440-48-4 | | U | 0.0200 | 0.00250 |
| Copper, Total | 7440-50-8 | | U | 0.0200 | 0.00500 |
| Iron, Total | 7439-89-6 | 15.7 | | 0.100 | 0.0250 |
| Magnesium, Total | 7439-95-4 | 29.8 | | 0.500 | 0.250 |
| Manganese, Total | 7439-96-5 | 0.287 | | 0.0100 | 0.00500 |
| Nickel, Total | 7440-02-0 | | U | 0.0400 | 0.00500 |
| Potassium, Total | 7440-09-7 | 6.67 | | 1.00 | 0.250 |
| Silver, Total | 7440-22-4 | | U | 0.0100 | 0.00500 |
| Sodium, Total | 7440-23-5 | 161 | | 0.500 | 0.250 |
| Vanadium, Total | 7440-62-2 | | U | 0.0100 | 0.00500 |
| Zinc, Total | 7440-66-6 | | U | 0.0200 | 0.00500 |

| | |
|---|---|
| U | Not detected at or above adjusted sample detection limit. |

## Certificate of Analysis

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|---|---|---|---|---|---|
| **Sample #:** | L12050284-05 | **PrePrep Method:** | N/A | **Instrument:** | ICP-MS2 |
| **Client ID:** | MW-18-050812 | **Prep Method:** | 3015 | **Prep Date:** | 05/11/2012 10:37 |
| **Matrix:** | Water | **Analytical Method:** | 6020 | **Cal Date:** | 05/18/2012 09:54 |
| **Workgroup #:** | WG398436 | **Analyst:** | JYH | **Run Date:** | 05/18/2012 11:16 |
| **Collect Date:** | 05/08/2012 11:00 | **Dilution:** | 2 | **File ID:** | NI.051812.111620 |
| **Sample Tag:** | DL01 | **Units:** | mg/L | | |

| Analyte | CAS # | Result | Qual | RL | MDL |
|---|---|---|---|---|---|
| Antimony, Total | 7440-36-0 | | U | 0.00200 | 0.00100 |
| Arsenic, Total | 7440-38-2 | 0.00154 | | 0.00200 | 0.00100 |
| Lead, Total | 7439-92-1 | | U | 0.00200 | 0.00100 |
| Selenium, Total | 7782-49-2 | 0.00278 | | 0.00200 | 0.00100 |
| Thallium, Total | 7440-28-0 | 0.000228 | | 0.000400 | 0.000200 |

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|---|---|
| U | Not detected at or above adjusted sample detection limit. |

| | | | | | |
|---|---|---|---|---|---|
| **Sample #:** | L12050284-05 | **PrePrep Method:** | N/A | **Instrument:** | HYDRA |
| **Client ID:** | MW-18-050812 | **Prep Method:** | 7470A | **Prep Date:** | 05/10/2012 08:28 |
| **Matrix:** | Water | **Analytical Method:** | 7470A | **Cal Date:** | 05/14/2012 11:36 |
| **Workgroup #:** | WG397918 | **Analyst:** | PDM | **Run Date:** | 05/14/2012 14:16 |
| **Collect Date:** | 05/08/2012 11:00 | **Dilution:** | 1 | **File ID:** | HY.051412.141614 |
| **Sample Tag:** | 01 | **Units:** | mg/L | | |

| Analyte | CAS # | Result | Qual | RL | MDL |
|---|---|---|---|---|---|
| Mercury | 7439-97-6 | | U | 0.000200 | 0.000100 |

| | |
|---|---|
| U | Not detected at or above adjusted sample detection limit. |

| | | | | | |
|---|---|---|---|---|---|
| **Sample #:** | L12050284-05 | **PrePrep Method:** | N/A | **Instrument:** | SMARTCHEM |
| **Client ID:** | MW-18-050812 | **Prep Method:** | 310.2 | **Prep Date:** | N/A |
| **Matrix:** | Water | **Analytical Method:** | 310.2 | **Cal Date:** | 05/14/2012 14:48 |
| **Workgroup #:** | WG397931 | **Analyst:** | DIH | **Run Date:** | 05/14/2012 15:00 |
| **Collect Date:** | 05/08/2012 11:00 | **Dilution:** | 2 | **File ID:** | SC120514004.028 |
| **Sample Tag:** | DL01 | **Units:** | mg/L | | |

| Analyte | CAS # | Result | Qual | RL | MDL |
|---|---|---|---|---|---|
| Alkalinity, Total (as CaCO3) | | 436 | | 40.0 | 20.0 |

Certificate of Analysis

**Sample #:** L12050284-05 **PrePrep Method:** N/A **Instrument:** SMARTCHEM
**Client ID:** MW-18-050812 **Prep Method:** 353.2 **Prep Date:** N/A
**Matrix:** Water **Analytical Method:** 353.2 **Cal Date:** 05/10/2012 14:05
**Workgroup #:** WG397682 **Analyst:** JBK **Run Date:** 05/11/2012 08:30
**Collect Date:** 05/08/2012 11:00 **Dilution:** 1 **File ID:** SC12051615263601
**Sample Tag:** **Units:** mg/L

| Analyte | CAS # | Result | Qual | RL | MDL |
|---|---|---|---|---|---|
| Nitrate (as N) | 14797-55-8 | 0.291 | | 0.0500 | 0.0250 |

**Sample #:** L12050284-05 **PrePrep Method:** N/A **Instrument:** SMARTCHEM
**Client ID:** MW-18-050812 **Prep Method:** 365.4 **Prep Date:** N/A
**Matrix:** Water **Analytical Method:** 365.4 **Cal Date:** 05/15/2012 08:40
**Workgroup #:** WG397809 **Analyst:** JBK **Run Date:** 05/15/2012 08:57
**Collect Date:** 05/08/2012 11:00 **Dilution:** 1 **File ID:** SC120515001.035
**Sample Tag:** 01 **Units:** mg/L

| Analyte | CAS # | Result | Qual | RL | MDL |
|---|---|---|---|---|---|
| Phosphorus, Total | 7723-14-0 | | U | 0.200 | 0.100 |
| U | Not detected at or above adjusted sample detection limit. | | | | |

**Sample #:** L12050284-05 **PrePrep Method:** N/A **Instrument:** SMARTCHEM
**Client ID:** MW-18-050812 **Prep Method:** 375.4 **Prep Date:** N/A
**Matrix:** Water **Analytical Method:** 375.4 **Cal Date:** 05/21/2012 09:22
**Workgroup #:** WG398374 **Analyst:** DIH **Run Date:** 05/21/2012 09:53
**Collect Date:** 05/08/2012 11:00 **Dilution:** 2 **File ID:** SC120521001.061
**Sample Tag:** DL01 **Units:** mg/L

| Analyte | CAS # | Result | Qual | RL | MDL |
|---|---|---|---|---|---|
| Sulfate | 14808-79-8 | 62.2 | | 10.0 | 5.00 |

**Sample #:** L12050284-05 **PrePrep Method:** N/A **Instrument:** TOC-VWP
**Client ID:** MW-18-050812 **Prep Method:** 415.1 **Prep Date:** N/A
**Matrix:** Water **Analytical Method:** 415.1 **Cal Date:** 12/06/2011 09:40
**Workgroup #:** WG398010 **Analyst:** DIH **Run Date:** 05/16/2012 02:56
**Collect Date:** 05/08/2012 11:00 **Dilution:** 1 **File ID:** TC05152012.052
**Sample Tag:** 01 **Units:** mg/L

| Analyte | CAS # | Result | Qual | RL | MDL |
|---|---|---|---|---|---|
| Total Organic Carbon | | 2.06 | | 1.00 | 0.500 |

## Certificate of Analysis

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|---|---|---|---|---|---|
| **Sample #:** | L12050284-06 | **PrePrep Method:** | N/A | **Instrument:** | PE-ICP2 |
| **Client ID:** | MW-18-050812 | **Prep Method:** | 3005A | **Prep Date:** | 05/14/2012 07:48 |
| **Matrix:** | Water | **Analytical Method:** | 6010B | **Cal Date:** | 05/21/2012 13:35 |
| **Workgroup #:** | WG397934 | **Analyst:** | KHR | **Run Date:** | 05/21/2012 16:01 |
| **Collect Date:** | 05/08/2012 11:00 | **Dilution:** | 1 | **File ID:** | P2.052112.160159 |
| **Sample Tag:** | 01 | **Units:** | mg/L | | |

| Analyte | CAS # | Result | Qual | RL | MDL |
|---|---|---|---|---|---|
| Aluminum, Dissolved | 7429-90-5 | | U | 0.100 | 0.0500 |
| Barium, Dissolved | 7440-39-3 | 0.145 | | 0.0100 | 0.00250 |
| Beryllium, Dissolved | 7440-41-7 | | U | 0.00200 | 0.000500 |
| Cadmium, Dissolved | 7440-43-9 | 0.000401 | | 0.000500 | 0.000250 |
| Calcium, Dissolved | 7440-70-2 | 164 | | 0.200 | 0.100 |
| Chromium, Dissolved | 7440-47-3 | | U | 0.00500 | 0.00250 |
| Cobalt, Dissolved | 7440-48-4 | | U | 0.0200 | 0.00250 |
| Copper, Dissolved | 7440-50-8 | | U | 0.0200 | 0.00500 |
| Iron, Dissolved | 7439-89-6 | 15.9 | | 0.100 | 0.0250 |
| Magnesium, Dissolved | 7439-95-4 | 30.0 | | 0.500 | 0.250 |
| Manganese, Dissolved | 7439-96-5 | 0.310 | | 0.0100 | 0.00500 |
| Nickel, Dissolved | 7440-02-0 | | U | 0.0400 | 0.00500 |
| Potassium, Dissolved | 7440-09-7 | 6.83 | | 1.00 | 0.250 |
| Silver, Dissolved | 7440-22-4 | | U | 0.0100 | 0.00500 |
| Sodium, Dissolved | 7440-23-5 | 168 | | 0.500 | 0.250 |
| Vanadium, Dissolved | 7440-62-2 | 0.00646 | | 0.0100 | 0.00500 |
| Zinc, Dissolved | 7440-66-6 | | U | 0.0200 | 0.00500 |

| | |
|---|---|
| U | Not detected at or above adjusted sample detection limit. |

| | | | | | |
|---|---|---|---|---|---|
| **Sample #:** | L12050284-06 | **PrePrep Method:** | N/A | **Instrument:** | ICP-MS2 |
| **Client ID:** | MW-18-050812 | **Prep Method:** | 3015 | **Prep Date:** | 05/11/2012 10:37 |
| **Matrix:** | Water | **Analytical Method:** | 6020 | **Cal Date:** | 05/18/2012 09:54 |
| **Workgroup #:** | WG398436 | **Analyst:** | JYH | **Run Date:** | 05/18/2012 11:19 |
| **Collect Date:** | 05/08/2012 11:00 | **Dilution:** | 2 | **File ID:** | NI.051812.111912 |
| **Sample Tag:** | DL01 | **Units:** | mg/L | | |

| Analyte | CAS # | Result | Qual | RL | MDL |
|---|---|---|---|---|---|
| Antimony, Dissolved | 7440-36-0 | | U | 0.00200 | 0.00100 |
| Arsenic, Dissolved | 7440-38-2 | 0.00137 | | 0.00200 | 0.00100 |
| Lead, Dissolved | 7439-92-1 | | U | 0.00200 | 0.00100 |
| Selenium, Dissolved | 7782-49-2 | 0.00271 | | 0.00200 | 0.00100 |
| Thallium, Dissolved | 7440-28-0 | 0.000215 | | 0.000400 | 0.000200 |

| | |
|---|---|
| U | Not detected at or above adjusted sample detection limit. |

Certificate of Analysis

| | | | | | |
|---|---|---|---|---|---|
| **Sample #:** | L12050284-06 | **PrePrep Method:** | N/A | **Instrument:** | HYDRA |
| **Client ID:** | MW-18-050812 | **Prep Method:** | 7470A | **Prep Date:** | 05/10/2012 08:28 |
| **Matrix:** | Water | **Analytical Method:** | 7470A | **Cal Date:** | 05/14/2012 11:36 |
| **Workgroup #:** | WG397918 | **Analyst:** | PDM | **Run Date:** | 05/14/2012 14:21 |
| **Collect Date:** | 05/08/2012 11:00 | **Dilution:** | 1 | **File ID:** | HY.051412.142145 |
| **Sample Tag:** | 01 | **Units:** | mg/L | | |

| Analyte | CAS # | Result | Qual | RL | MDL |
|---|---|---|---|---|---|
| Mercury, Dissolved | 7439-97-6 | | U | 0.000200 | 0.000100 |

| | |
|---|---|
| U | Not detected at or above adjusted sample detection limit. |

| | | | | | |
|---|---|---|---|---|---|
| **Sample #:** | L12050284-07 | **PrePrep Method:** | N/A | **Instrument:** | HPMS8 |
| **Client ID:** | TW-01-050812 | **Prep Method:** | 5030B/5030C/5035A | **Prep Date:** | N/A |
| **Matrix:** | Water | **Analytical Method:** | 8260B | **Cal Date:** | 03/27/2012 15:49 |
| **Workgroup #:** | WG398118 | **Analyst:** | ADC | **Run Date:** | 05/16/2012 17:43 |
| **Collect Date:** | 05/08/2012 14:50 | **Dilution:** | 1 | **File ID:** | 8M379118 |
| **Sample Tag:** | 01 | **Units:** | ug/L | | |

| Analyte | CAS # | Result | Qual | RL | MDL |
|---|---|---|---|---|---|
| 1,1,1-Trichloroethane | 71-55-6 | | U | 1.00 | 0.250 |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | | U | 1.00 | 0.200 |
| 1,1,2-Trichloro-1,2,2-Trifluoroethane | 76-13-1 | | U | 5.00 | 2.00 |
| 1,1,2-Trichloroethane | 79-00-5 | | U | 1.00 | 0.250 |
| 1,1-Dichloroethane | 75-34-3 | | U | 1.00 | 0.125 |
| 1,1-Dichloroethene | 75-35-4 | | U | 1.00 | 0.500 |
| 1,2,3-Trichlorobenzene | 87-61-6 | | U | 1.00 | 0.500 |
| 1,2,4-Trichlorobenzene | 120-82-1 | | U | 1.00 | 0.200 |
| 1,2-Dibromo-3-chloropropane | 96-12-8 | | U | 5.00 | 1.00 |
| 1,2-Dibromoethane | 106-93-4 | | U | 1.00 | 0.250 |
| 1,2-Dichlorobenzene | 95-50-1 | | U | 1.00 | 0.125 |
| 1,2-Dichloroethane | 107-06-2 | | U | 1.00 | 0.250 |
| cis-1,2-Dichloroethene | 156-59-2 | | U | 1.00 | 0.250 |
| trans-1,2-Dichloroethene | 156-60-5 | | U | 1.00 | 0.250 |
| 1,2-Dichloropropane | 78-87-5 | | U | 1.00 | 0.200 |
| 1,3-Dichlorobenzene | 541-73-1 | | U | 1.00 | 0.250 |
| 1,4-Dichlorobenzene | 106-46-7 | | U | 1.00 | 0.125 |
| 2-Butanone | 78-93-3 | | U | 10.0 | 2.50 |
| 2-Hexanone | 591-78-6 | | U | 10.0 | 2.50 |
| 4-Methyl-2-pentanone | 108-10-1 | | U | 10.0 | 2.50 |
| Acetone | 67-64-1 | | U | 10.0 | 2.50 |

Certificate of Analysis

| Analyte | CAS # | Result | Qual | RL | MDL |
|---|---|---|---|---|---|
| Benzene | 71-43-2 | | U | 1.00 | 0.125 |
| Bromochloromethane | 74-97-5 | | U | 1.00 | 0.200 |
| Bromodichloromethane | 75-27-4 | | U | 1.00 | 0.250 |
| Bromoform | 75-25-2 | | U | 1.00 | 0.500 |
| Bromomethane | 74-83-9 | | U | 1.00 | 0.500 |
| Carbon disulfide | 75-15-0 | | U | 1.00 | 0.500 |
| Carbon tetrachloride | 56-23-5 | | U | 1.00 | 0.250 |
| Chlorobenzene | 108-90-7 | | U | 1.00 | 0.125 |
| Chloroethane | 75-00-3 | | U | 1.00 | 0.500 |
| Chloroform | 67-66-3 | | U | 1.00 | 0.125 |
| Chloromethane | 74-87-3 | | U | 1.00 | 0.500 |
| cis-1,3-Dichloropropene | 10061-01-5 | | U | 1.00 | 0.250 |
| Cyclohexane | 110-82-7 | | U | 5.00 | 1.00 |
| Dibromochloromethane | 124-48-1 | | U | 1.00 | 0.250 |
| Dichlorodifluoromethane | 75-71-8 | | U | 1.00 | 0.250 |
| Ethyl benzene | 100-41-4 | | U | 1.00 | 0.250 |
| Isopropylbenzene | 98-82-8 | | U | 1.00 | 0.250 |
| Methyl acetate | 79-20-9 | | U | 5.00 | 1.00 |
| Methyl tert-butyl ether | 1634-04-4 | | U | 1.00 | 0.500 |
| Methylcyclohexane | 108-87-2 | | U | 5.00 | 1.00 |
| Methylene chloride | 75-09-2 | | U | 5.00 | 0.250 |
| m,p-Xylene | 179601-23-1 | | U | 1.00 | 0.500 |
| o-Xylene | 95-47-6 | | U | 1.00 | 0.250 |
| Styrene | 100-42-5 | | U | 1.00 | 0.125 |
| Tetrachloroethene | 127-18-4 | | U | 1.00 | 0.250 |
| Toluene | 108-88-3 | | U | 1.00 | 0.250 |
| trans-1,3-Dichloropropene | 10061-02-6 | | U | 1.00 | 0.500 |
| Trichloroethene | 79-01-6 | | U | 1.00 | 0.250 |
| Trichlorofluoromethane | 75-69-4 | | U | 1.00 | 0.250 |
| Vinyl chloride | 75-01-4 | | U | 1.00 | 0.250 |
| Epichlorohydrin | 106-89-8 | | | 0.000 | 0.000 |

| Surrogate | Recovery | Lower Limit | Upper Limit | Q |
|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 112 | 80 | 120 | |
| Dibromofluoromethane | 104 | 86 | 118 | |
| p-Bromofluorobenzene | 99.1 | 86 | 115 | |
| Toluene-d8 | 96.7 | 88 | 110 | |

| | |
|---|---|
| U | Not detected at or above adjusted sample detection limit. |

Certificate of Analysis

| | | | | | |
|---|---|---|---|---|---|
| **Sample #:** | L12050284-07 | **PrePrep Method:** | N/A | **Instrument:** | HP16 |
| **Client ID:** | TW-01-050812 | **Prep Method:** | 5021 | **Prep Date:** | N/A |
| **Matrix:** | Water | **Analytical Method:** | RSK175 | **Cal Date:** | 04/30/2012 15:04 |
| **Workgroup #:** | WG397786 | **Analyst:** | FJB | **Run Date:** | 05/11/2012 16:41 |
| **Collect Date:** | 05/08/2012 14:50 | **Dilution:** | 1 | **File ID:** | 16G32432 |
| **Sample Tag:** | 01 | **Units:** | ug/L | | |

| Analyte | CAS # | Result | Qual | RL | MDL |
|---|---|---|---|---|---|
| Methane | 74-82-8 | 617 | | 5.00 | 1.00 |
| Carbon Dioxide | 124-38-9 | 119000 | | 10000 | 2500 |

| | | | | | |
|---|---|---|---|---|---|
| **Sample #:** | L12050284-07 | **PrePrep Method:** | N/A | **Instrument:** | HPMS5 |
| **Client ID:** | TW-01-050812 | **Prep Method:** | 3520C | **Prep Date:** | 05/09/2012 14:00 |
| **Matrix:** | Water | **Analytical Method:** | 8270C | **Cal Date:** | 05/11/2012 13:10 |
| **Workgroup #:** | WG398144 | **Analyst:** | CAA | **Run Date:** | 05/14/2012 16:14 |
| **Collect Date:** | 05/08/2012 14:50 | **Dilution:** | 1 | **File ID:** | 5M66989 |
| **Sample Tag:** | 01 | **Units:** | ug/L | | |

| Analyte | CAS # | Result | Qual | RL | MDL |
|---|---|---|---|---|---|
| 1,1'-Biphenyl | 92-52-4 | | U | 20.0 | 2.50 |
| 1,3,5-Trinitrobenzene | 99-35-4 | | U | 5.00 | 2.50 |
| 1,3-Dinitrobenzene | 99-65-0 | | U | 5.00 | 2.50 |
| 1,4-Dioxane | 123-91-1 | | U | 10.0 | 5.00 |
| 2,4,5-Trichlorophenol | 95-95-4 | | U | 5.00 | 2.50 |
| 2,4,6-Trichlorophenol | 88-06-2 | | U | 5.00 | 2.50 |
| 2,4-Dichlorophenol | 120-83-2 | | U | 5.00 | 2.50 |
| 2,4-Dimethylphenol | 105-67-9 | | U | 5.00 | 2.50 |
| 2,4-Dinitrophenol | 51-28-5 | | U | 25.0 | 12.5 |
| 2,4-Dinitrotoluene | 121-14-2 | | U | 5.00 | 2.50 |
| 2,6-Dinitrotoluene | 606-20-2 | | U | 5.00 | 2.50 |
| 2-Chloronaphthalene | 91-58-7 | | U | 5.00 | 2.50 |
| 2-Chlorophenol | 95-57-8 | | U | 5.00 | 2.50 |
| 2-Methylnaphthalene | 91-57-6 | | U | 5.00 | 2.50 |
| 2-Methylphenol | 95-48-7 | | U | 5.00 | 2.50 |
| 2-Nitroaniline | 88-74-4 | | U | 25.0 | 12.5 |
| 2-Nitrophenol | 88-75-5 | | U | 5.00 | 2.50 |
| 3-Nitroaniline | 99-09-2 | | U | 25.0 | 12.5 |
| 3,3'-Dichlorobenzidine | 91-94-1 | | U | 5.00 | 2.50 |
| 3-,4-Methylphenol | 106-44-5 | | U | 5.00 | 2.50 |
| 4-Bromophenyl-phenylether | 101-55-3 | | U | 5.00 | 2.50 |
| 4-Chloroaniline | 106-47-8 | | U | 5.00 | 2.50 |

Certificate of Analysis

| Analyte | CAS # | Result | Qual | RL | MDL |
|---|---|---|---|---|---|
| 4-Nitrophenol | 100-02-7 | | U | 25.0 | 12.5 |
| Acenaphthene | 83-32-9 | | U | 5.00 | 2.50 |
| Acenaphthylene | 208-96-8 | | U | 5.00 | 2.50 |
| Anthracene | 120-12-7 | | U | 5.00 | 2.50 |
| Benzo(a)anthracene | 56-55-3 | | U | 5.00 | 2.50 |
| Benzo(a)pyrene | 50-32-8 | | U | 5.00 | 2.50 |
| Benzo(b)fluoranthene | 205-99-2 | | U | 5.00 | 2.50 |
| Benzo(g,h,i)Perylene | 191-24-2 | | U | 5.00 | 2.50 |
| Benzo(k)fluoranthene | 207-08-9 | | U | 5.00 | 2.50 |
| Benzoic acid | 65-85-0 | | U | 20.0 | 10.0 |
| Benzyl alcohol | 100-51-6 | | U | 5.00 | 2.50 |
| Bis(2-Chloroethyl)ether | 111-44-4 | | U | 5.00 | 2.50 |
| Bis(2-Chloroethoxy)Methane | 111-91-1 | | U | 5.00 | 2.50 |
| bis(2-Ethylhexyl)phthalate | 117-81-7 | | U | 5.00 | 2.50 |
| Butylbenzylphthalate | 85-68-7 | | U | 5.00 | 2.50 |
| Carbazole | 86-74-8 | | U | 20.0 | 2.50 |
| Chrysene | 218-01-9 | | U | 5.00 | 2.50 |
| Di-N-Butylphthalate | 84-74-2 | | U | 5.00 | 2.50 |
| Di-n-octylphthalate | 117-84-0 | | U | 5.00 | 2.50 |
| Dibenzo(a,h)Anthracene | 53-70-3 | | U | 5.00 | 2.50 |
| Dibenzofuran | 132-64-9 | | U | 5.00 | 2.50 |
| Diethylphthalate | 84-66-2 | | U | 5.00 | 2.50 |
| Dimethylphthalate | 131-11-3 | | U | 5.00 | 2.50 |
| Fluoranthene | 206-44-0 | | U | 5.00 | 2.50 |
| Fluorene | 86-73-7 | | U | 5.00 | 2.50 |
| Hexachlorobenzene | 118-74-1 | | U | 5.00 | 2.50 |
| Hexachlorobutadiene | 87-68-3 | | U | 5.00 | 2.50 |
| Hexachlorocyclopentadiene | 77-47-4 | | U | 5.00 | 2.50 |
| Hexachloroethane | 67-72-1 | | U | 5.00 | 2.50 |
| Indeno(1,2,3-cd)pyrene | 193-39-5 | | U | 5.00 | 2.50 |
| Isophorone | 78-59-1 | | U | 5.00 | 2.50 |
| N-Nitrosodiphenylamine | 86-30-6 | | U | 5.00 | 2.50 |
| Naphthalene | 91-20-3 | | U | 5.00 | 2.50 |
| Nitrobenzene | 98-95-3 | | U | 5.00 | 2.50 |
| Pentachlorophenol | 87-86-5 | | U | 25.0 | 12.5 |
| Phenanthrene | 85-01-8 | | U | 5.00 | 2.50 |
| Phenol | 108-95-2 | | U | 5.00 | 2.50 |
| Pyrene | 129-00-0 | | U | 5.00 | 2.50 |

| Surrogate | Recovery | Lower Limit | Upper Limit | Q |
|---|---|---|---|---|

Certificate of Analysis

| | | | | |
|---|---|---|---|---|
| 2,4,6-Tribromophenol | 92.0 | 10 | 123 | |
| 2-Fluorobiphenyl | 83.0 | 43 | 116 | |
| 2-Fluorophenol | 77.5 | 21 | 100 | |
| Nitrobenzene-d5 | 80.5 | 35 | 114 | |
| p-Terphenyl-d14 | 62.0 | 33 | 141 | |
| Phenol-d5 | 77.7 | 10 | 94 | |

| | |
|---|---|
| U | Not detected at or above adjusted sample detection limit. |

**Sample #:** L12050284-07 **PrePrep Method:** N/A **Instrument:** HPMS5
**Client ID:** TW-01-050812 **Prep Method:** 3520C **Prep Date:** 05/09/2012 14:00
**Matrix:** Water **Analytical Method:** 8270C **Cal Date:** 05/11/2012 13:10
**Workgroup #:** WG398144 **Analyst:** CAA **Run Date:** 05/14/2012 16:14
**Collect Date:** 05/08/2012 14:50 **Dilution:** 1 **File ID:** 5M66989
**Sample Tag:** 01 **Units:** ug/L

| Analyte | CAS # | Result | Qual | RL | MDL |
|---|---|---|---|---|---|
| unknown | | 6.51 | | 0.000 | 0.000 |
| unknown | | 7.83 | | 0.000 | 0.000 |
| Dodecanoic acid | | 4.64 | | 0.000 | 0.000 |
| n-Hexadecanoic acid | | 5.11 | | 0.000 | 0.000 |

**Sample #:** L12050284-07 **PrePrep Method:** N/A **Instrument:** HPMS7
**Client ID:** TW-01-050812 **Prep Method:** 3510C **Prep Date:** 05/14/2012 12:25
**Matrix:** Water **Analytical Method:** 8270C **Cal Date:** 04/04/2012 12:53
**Workgroup #:** WG397981 **Analyst:** CAA **Run Date:** 05/15/2012 11:58
**Collect Date:** 05/08/2012 14:50 **Dilution:** 1 **File ID:** 7M55021
**Sample Tag:** 01 **Units:** ug/L

| Analyte | CAS # | Result | Qual | RL | MDL |
|---|---|---|---|---|---|
| 2-Methylnaphthalene | 91-57-6 | | U | 0.0510 | 0.0255 |
| Acenaphthene | 83-32-9 | | U | 0.0510 | 0.0255 |
| Acenaphthylene | 208-96-8 | | U | 0.0510 | 0.0255 |
| Anthracene | 120-12-7 | | U | 0.0510 | 0.0255 |
| Benzo(a)anthracene | 56-55-3 | 0.0338 | | 0.0510 | 0.0255 |
| Benzo(a)pyrene | 50-32-8 | | U | 0.0510 | 0.0255 |
| Benzo(b)fluoranthene | 205-99-2 | | U | 0.0510 | 0.0255 |
| Benzo(g,h,i)perylene | 191-24-2 | | U | 0.0510 | 0.0255 |
| Benzo(k)fluoranthene | 207-08-9 | 0.0276 | | 0.0510 | 0.0255 |
| Chrysene | 218-01-9 | 0.0360 | | 0.0510 | 0.0255 |
| Dibenzo(a,h)anthracene | 53-70-3 | | U | 0.0510 | 0.0255 |
| Fluoranthene | 206-44-0 | 0.0761 | | 0.0510 | 0.0255 |

Certificate of Analysis

| Analyte | CAS # | Result | Qual | RL | MDL |
|---|---|---|---|---|---|
| Fluorene | 86-73-7 | | U | 0.0510 | 0.0255 |
| Indeno(1,2,3-cd)pyrene | 193-39-5 | | U | 0.0510 | 0.0255 |
| Naphthalene | 91-20-3 | | U | 0.0510 | 0.0255 |
| Phenanthrene | 85-01-8 | 0.0432 | | 0.0510 | 0.0255 |
| Pyrene | 129-00-0 | 0.0622 | | 0.0510 | 0.0255 |

| Surrogate | Recovery | Lower Limit | Upper Limit | Q |
|---|---|---|---|---|
| 2-Fluorobiphenyl | 76.6 | 43 | 116 | |
| Nitrobenzene-d5 | 87.9 | 35 | 114 | |
| p-Terphenyl-d14 | 96.3 | 33 | 141 | |

| | |
|---|---|
| U | Not detected at or above adjusted sample detection limit. |

**Sample #:** L12050284-07
**Client ID:** TW-01-050812
**Matrix:** Water
**Workgroup #:** WG397934
**Collect Date:** 05/08/2012 14:50
**Sample Tag:** 01

**PrePrep Method:** N/A
**Prep Method:** 3005A
**Analytical Method:** 6010B
**Analyst:** KHR
**Dilution:** 1
**Units:** mg/L

**Instrument:** PE-ICP2
**Prep Date:** 05/14/2012 07:48
**Cal Date:** 05/21/2012 13:35
**Run Date:** 05/21/2012 16:08
**File ID:** P2.052112.160803

| Analyte | CAS # | Result | Qual | RL | MDL |
|---|---|---|---|---|---|
| Aluminum, Total | 7429-90-5 | 0.148 | | 0.100 | 0.0500 |
| Barium, Total | 7440-39-3 | 0.172 | | 0.0100 | 0.00250 |
| Beryllium, Total | 7440-41-7 | | U | 0.00200 | 0.000500 |
| Cadmium, Total | 7440-43-9 | 0.000483 | | 0.000500 | 0.000250 |
| Calcium, Total | 7440-70-2 | 253 | | 0.200 | 0.100 |
| Chromium, Total | 7440-47-3 | | U | 0.00500 | 0.00250 |
| Cobalt, Total | 7440-48-4 | | U | 0.0200 | 0.00250 |
| Copper, Total | 7440-50-8 | | U | 0.0200 | 0.00500 |
| Iron, Total | 7439-89-6 | 44.3 | | 0.100 | 0.0250 |
| Magnesium, Total | 7439-95-4 | 61.5 | | 0.500 | 0.250 |
| Manganese, Total | 7439-96-5 | 0.451 | | 0.0100 | 0.00500 |
| Nickel, Total | 7440-02-0 | | U | 0.0400 | 0.00500 |
| Potassium, Total | 7440-09-7 | 10.4 | | 1.00 | 0.250 |
| Silver, Total | 7440-22-4 | | U | 0.0100 | 0.00500 |
| Sodium, Total | 7440-23-5 | 59.1 | | 0.500 | 0.250 |
| Vanadium, Total | 7440-62-2 | 0.00752 | | 0.0100 | 0.00500 |
| Zinc, Total | 7440-66-6 | 0.103 | | 0.0200 | 0.00500 |

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|---|---|
| U | Not detected at or above adjusted sample detection limit. |

Certificate of Analysis

| | | | | | |
|---|---|---|---|---|---|
| **Sample #:** | L12050284-07 | **PrePrep Method:** | N/A | **Instrument:** | ICP-MS2 |
| **Client ID:** | TW-01-050812 | **Prep Method:** | 3015 | **Prep Date:** | 05/11/2012 10:37 |
| **Matrix:** | Water | **Analytical Method:** | 6020 | **Cal Date:** | 05/18/2012 09:54 |
| **Workgroup #:** | WG398436 | **Analyst:** | JYH | **Run Date:** | 05/18/2012 11:22 |
| **Collect Date:** | 05/08/2012 14:50 | **Dilution:** | 2 | **File ID:** | NI.051812.112205 |
| **Sample Tag:** | DL01 | **Units:** | mg/L | | |

| Analyte | CAS # | Result | Qual | RL | MDL |
|---|---|---|---|---|---|
| Antimony, Total | 7440-36-0 | 0.00175 | | 0.00200 | 0.00100 |
| Arsenic, Total | 7440-38-2 | 0.00339 | | 0.00200 | 0.00100 |
| Lead, Total | 7439-92-1 | 0.0159 | | 0.00200 | 0.00100 |
| Selenium, Total | 7782-49-2 | 0.00391 | | 0.00200 | 0.00100 |
| Thallium, Total | 7440-28-0 | 0.000298 | | 0.000400 | 0.000200 |

| | | | | | |
|---|---|---|---|---|---|
| **Sample #:** | L12050284-07 | **PrePrep Method:** | N/A | **Instrument:** | HYDRA |
| **Client ID:** | TW-01-050812 | **Prep Method:** | 7470A | **Prep Date:** | 05/10/2012 08:28 |
| **Matrix:** | Water | **Analytical Method:** | 7470A | **Cal Date:** | 05/14/2012 11:36 |
| **Workgroup #:** | WG397918 | **Analyst:** | PDM | **Run Date:** | 05/14/2012 14:23 |
| **Collect Date:** | 05/08/2012 14:50 | **Dilution:** | 1 | **File ID:** | HY.051412.142328 |
| **Sample Tag:** | 01 | **Units:** | mg/L | | |

| Analyte | CAS # | Result | Qual | RL | MDL |
|---|---|---|---|---|---|
| Mercury | 7439-97-6 | | U | 0.000200 | 0.000100 |

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|---|---|
| U | Not detected at or above adjusted sample detection limit. |

| | | | | | |
|---|---|---|---|---|---|
| **Sample #:** | L12050284-07 | **PrePrep Method:** | N/A | **Instrument:** | SMARTCHEM |
| **Client ID:** | TW-01-050812 | **Prep Method:** | 310.2 | **Prep Date:** | N/A |
| **Matrix:** | Water | **Analytical Method:** | 310.2 | **Cal Date:** | 05/14/2012 14:48 |
| **Workgroup #:** | WG397931 | **Analyst:** | DIH | **Run Date:** | 05/14/2012 15:01 |
| **Collect Date:** | 05/08/2012 14:50 | **Dilution:** | 3 | **File ID:** | SC120514004.029 |
| **Sample Tag:** | DL01 | **Units:** | mg/L | | |

| Analyte | CAS # | Result | Qual | RL | MDL |
|---|---|---|---|---|---|
| Alkalinity, Total (as CaCO3) | | 661 | | 60.0 | 30.0 |

Certificate of Analysis

**Sample #:** L12050284-07 **PrePrep Method:** N/A **Instrument:** SMARTCHEM
**Client ID:** TW-01-050812 **Prep Method:** 353.2 **Prep Date:** N/A
**Matrix:** Water **Analytical Method:** 353.2 **Cal Date:** 05/10/2012 14:05
**Workgroup #:** WG397682 **Analyst:** JBK **Run Date:** 05/11/2012 08:30
**Collect Date:** 05/08/2012 14:50 **Dilution:** 1 **File ID:** SC12051615264101
**Sample Tag:** **Units:** mg/L

| Analyte | CAS # | Result | Qual | RL | MDL |
|---|---|---|---|---|---|
| Nitrate (as N) | 14797-55-8 | | U | 0.0500 | 0.0250 |
| U | Not detected at or above adjusted sample detection limit. | | | | |

**Sample #:** L12050284-07 **PrePrep Method:** N/A **Instrument:** SMARTCHEM
**Client ID:** TW-01-050812 **Prep Method:** 365.4 **Prep Date:** N/A
**Matrix:** Water **Analytical Method:** 365.4 **Cal Date:** 05/15/2012 08:40
**Workgroup #:** WG397809 **Analyst:** JBK **Run Date:** 05/15/2012 08:58
**Collect Date:** 05/08/2012 14:50 **Dilution:** 1 **File ID:** SC120515001.036
**Sample Tag:** 01 **Units:** mg/L

| Analyte | CAS # | Result | Qual | RL | MDL |
|---|---|---|---|---|---|
| Phosphorus, Total | 7723-14-0 | | U | 0.200 | 0.100 |
| U | Not detected at or above adjusted sample detection limit. | | | | |

**Sample #:** L12050284-07 **PrePrep Method:** N/A **Instrument:** SMARTCHEM
**Client ID:** TW-01-050812 **Prep Method:** 375.4 **Prep Date:** N/A
**Matrix:** Water **Analytical Method:** 375.4 **Cal Date:** 05/21/2012 09:22
**Workgroup #:** WG398374 **Analyst:** DIH **Run Date:** 05/21/2012 09:54
**Collect Date:** 05/08/2012 14:50 **Dilution:** 10 **File ID:** SC120521001.062
**Sample Tag:** DL01 **Units:** mg/L

| Analyte | CAS # | Result | Qual | RL | MDL |
|---|---|---|---|---|---|
| Sulfate | 14808-79-8 | 225 | | 50.0 | 25.0 |

**Sample #:** L12050284-07 **PrePrep Method:** N/A **Instrument:** TOC-VWP
**Client ID:** TW-01-050812 **Prep Method:** 415.1 **Prep Date:** N/A
**Matrix:** Water **Analytical Method:** 415.1 **Cal Date:** 12/06/2011 09:40
**Workgroup #:** WG398010 **Analyst:** DIH **Run Date:** 05/16/2012 03:09
**Collect Date:** 05/08/2012 14:50 **Dilution:** 3 **File ID:** TC05152012.053
**Sample Tag:** DL01 **Units:** mg/L

| Analyte | CAS # | Result | Qual | RL | MDL |
|---|---|---|---|---|---|
| Total Organic Carbon | | 5.62 | | 3.00 | 1.50 |

Certificate of Analysis

**Sample #:** L12050284-08 | **PrePrep Method:** N/A | **Instrument:** PE-ICP2
**Client ID:** TW-01-050812 | **Prep Method:** 3005A | **Prep Date:** 05/14/2012 07:48
**Matrix:** Water | **Analytical Method:** 6010B | **Cal Date:** 05/21/2012 13:35
**Workgroup #:** WG397934 | **Analyst:** KHR | **Run Date:** 05/21/2012 16:14
**Collect Date:** 05/08/2012 14:50 | **Dilution:** 1 | **File ID:** P2.052112.161403
**Sample Tag:** 01 | **Units:** mg/L

| Analyte | CAS # | Result | Qual | RL | MDL |
|---|---|---|---|---|---|
| Aluminum, Dissolved | 7429-90-5 | | U | 0.100 | 0.0500 |
| Barium, Dissolved | 7440-39-3 | 0.174 | | 0.0100 | 0.00250 |
| Beryllium, Dissolved | 7440-41-7 | | U | 0.00200 | 0.000500 |
| Cadmium, Dissolved | 7440-43-9 | | U | 0.000500 | 0.000250 |
| Calcium, Dissolved | 7440-70-2 | 260 | | 0.200 | 0.100 |
| Chromium, Dissolved | 7440-47-3 | | U | 0.00500 | 0.00250 |
| Cobalt, Dissolved | 7440-48-4 | | U | 0.0200 | 0.00250 |
| Copper, Dissolved | 7440-50-8 | | U | 0.0200 | 0.00500 |
| Iron, Dissolved | 7439-89-6 | 44.7 | | 0.100 | 0.0250 |
| Magnesium, Dissolved | 7439-95-4 | 61.2 | | 0.500 | 0.250 |
| Manganese, Dissolved | 7439-96-5 | 0.448 | | 0.0100 | 0.00500 |
| Nickel, Dissolved | 7440-02-0 | | U | 0.0400 | 0.00500 |
| Potassium, Dissolved | 7440-09-7 | 10.8 | | 1.00 | 0.250 |
| Silver, Dissolved | 7440-22-4 | | U | 0.0100 | 0.00500 |
| Sodium, Dissolved | 7440-23-5 | 64.7 | | 0.500 | 0.250 |
| Vanadium, Dissolved | 7440-62-2 | 0.00619 | | 0.0100 | 0.00500 |
| Zinc, Dissolved | 7440-66-6 | 0.0775 | | 0.0200 | 0.00500 |

| | |
|---|---|
| U | Not detected at or above adjusted sample detection limit. |

**Sample #:** L12050284-08 | **PrePrep Method:** N/A | **Instrument:** ICP-MS2
**Client ID:** TW-01-050812 | **Prep Method:** 3015 | **Prep Date:** 05/11/2012 10:37
**Matrix:** Water | **Analytical Method:** 6020 | **Cal Date:** 05/18/2012 09:54
**Workgroup #:** WG398436 | **Analyst:** JYH | **Run Date:** 05/18/2012 11:24
**Collect Date:** 05/08/2012 14:50 | **Dilution:** 2 | **File ID:** NI.051812.112458
**Sample Tag:** DL01 | **Units:** mg/L

| Analyte | CAS # | Result | Qual | RL | MDL |
|---|---|---|---|---|---|
| Antimony, Dissolved | 7440-36-0 | | U | 0.00200 | 0.00100 |
| Arsenic, Dissolved | 7440-38-2 | 0.00318 | | 0.00200 | 0.00100 |
| Lead, Dissolved | 7439-92-1 | | U | 0.00200 | 0.00100 |
| Selenium, Dissolved | 7782-49-2 | 0.00408 | | 0.00200 | 0.00100 |
| Thallium, Dissolved | 7440-28-0 | 0.000226 | | 0.000400 | 0.000200 |

| | |
|---|---|
| U | Not detected at or above adjusted sample detection limit. |

**Sample #:** L12050284-08 **PrePrep Method:** N/A **Instrument:** HYDRA
**Client ID:** TW-01-050812 **Prep Method:** 7470A **Prep Date:** 05/10/2012 08:28
**Matrix:** Water **Analytical Method:** 7470A **Cal Date:** 05/14/2012 11:36
**Workgroup #:** WG397918 **Analyst:** PDM **Run Date:** 05/14/2012 14:25
**Collect Date:** 05/08/2012 14:50 **Dilution:** 1 **File ID:** HY.051412.142511
**Sample Tag:** 01 **Units:** mg/L

| Analyte | CAS # | Result | Qual | RL | MDL |
|---|---|---|---|---|---|
| Mercury, Dissolved | 7439-97-6 | | U | 0.000200 | 0.000100 |
| U | Not detected at or above adjusted sample detection limit. | | | | |

**Sample #:** L12050284-09 **PrePrep Method:** N/A **Instrument:** HPMS8
**Client ID:** TB-050812 **Prep Method:** 5030B/5030C/5035A **Prep Date:** N/A
**Matrix:** Water **Analytical Method:** 8260B **Cal Date:** 03/27/2012 15:49
**Workgroup #:** WG398118 **Analyst:** ADC **Run Date:** 05/16/2012 14:20
**Collect Date:** 05/08/2012 08:05 **Dilution:** 1 **File ID:** 8M379112
**Sample Tag:** 01 **Units:** ug/L

| Analyte | CAS # | Result | Qual | RL | MDL |
|---|---|---|---|---|---|
| 1,1,1-Trichloroethane | 71-55-6 | | U | 1.00 | 0.250 |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | | U | 1.00 | 0.200 |
| 1,1,2-Trichloro-1,2,2-Trifluoroethane | 76-13-1 | | U | 5.00 | 2.00 |
| 1,1,2-Trichloroethane | 79-00-5 | | U | 1.00 | 0.250 |
| 1,1-Dichloroethane | 75-34-3 | | U | 1.00 | 0.125 |
| 1,1-Dichloroethene | 75-35-4 | | U | 1.00 | 0.500 |
| 1,2,3-Trichlorobenzene | 87-61-6 | | U | 1.00 | 0.500 |
| 1,2,4-Trichlorobenzene | 120-82-1 | | U | 1.00 | 0.200 |
| 1,2-Dibromo-3-chloropropane | 96-12-8 | | U | 5.00 | 1.00 |
| 1,2-Dibromoethane | 106-93-4 | | U | 1.00 | 0.250 |
| 1,2-Dichlorobenzene | 95-50-1 | | U | 1.00 | 0.125 |
| 1,2-Dichloroethane | 107-06-2 | | U | 1.00 | 0.250 |
| cis-1,2-Dichloroethene | 156-59-2 | | U | 1.00 | 0.250 |
| trans-1,2-Dichloroethene | 156-60-5 | | U | 1.00 | 0.250 |
| 1,2-Dichloropropane | 78-87-5 | | U | 1.00 | 0.200 |
| 1,3-Dichlorobenzene | 541-73-1 | | U | 1.00 | 0.250 |
| 1,4-Dichlorobenzene | 106-46-7 | | U | 1.00 | 0.125 |
| 2-Butanone | 78-93-3 | | U | 10.0 | 2.50 |
| 2-Hexanone | 591-78-6 | | U | 10.0 | 2.50 |
| 4-Methyl-2-pentanone | 108-10-1 | | U | 10.0 | 2.50 |

Certificate of Analysis

| Analyte | CAS # | Result | Qual | RL | MDL |
|---|---|---|---|---|---|
| Acetone | 67-64-1 | | U | 10.0 | 2.50 |
| Benzene | 71-43-2 | | U | 1.00 | 0.125 |
| Bromochloromethane | 74-97-5 | | U | 1.00 | 0.200 |
| Bromodichloromethane | 75-27-4 | | U | 1.00 | 0.250 |
| Bromoform | 75-25-2 | | U | 1.00 | 0.500 |
| Bromomethane | 74-83-9 | | U | 1.00 | 0.500 |
| Carbon disulfide | 75-15-0 | | U | 1.00 | 0.500 |
| Carbon tetrachloride | 56-23-5 | | U | 1.00 | 0.250 |
| Chlorobenzene | 108-90-7 | | U | 1.00 | 0.125 |
| Chloroethane | 75-00-3 | | U | 1.00 | 0.500 |
| Chloroform | 67-66-3 | | U | 1.00 | 0.125 |
| Chloromethane | 74-87-3 | | U | 1.00 | 0.500 |
| cis-1,3-Dichloropropene | 10061-01-5 | | U | 1.00 | 0.250 |
| Cyclohexane | 110-82-7 | | U | 5.00 | 1.00 |
| Dibromochloromethane | 124-48-1 | | U | 1.00 | 0.250 |
| Dichlorodifluoromethane | 75-71-8 | | U | 1.00 | 0.250 |
| Ethyl benzene | 100-41-4 | | U | 1.00 | 0.250 |
| Isopropylbenzene | 98-82-8 | | U | 1.00 | 0.250 |
| Methyl acetate | 79-20-9 | | U | 5.00 | 1.00 |
| Methyl tert-butyl ether | 1634-04-4 | | U | 1.00 | 0.500 |
| Methylcyclohexane | 108-87-2 | | U | 5.00 | 1.00 |
| Methylene chloride | 75-09-2 | | U | 5.00 | 0.250 |
| m,p-Xylene | 179601-23-1 | | U | 1.00 | 0.500 |
| o-Xylene | 95-47-6 | | U | 1.00 | 0.250 |
| Styrene | 100-42-5 | | U | 1.00 | 0.125 |
| Tetrachloroethene | 127-18-4 | | U | 1.00 | 0.250 |
| Toluene | 108-88-3 | | U | 1.00 | 0.250 |
| trans-1,3-Dichloropropene | 10061-02-6 | | U | 1.00 | 0.500 |
| Trichloroethene | 79-01-6 | | U | 1.00 | 0.250 |
| Trichlorofluoromethane | 75-69-4 | | U | 1.00 | 0.250 |
| Vinyl chloride | 75-01-4 | | U | 1.00 | 0.250 |
| Epichlorohydrin | 106-89-8 | | | 0.000 | 0.000 |

| Surrogate | Recovery | Lower Limit | Upper Limit | Q |
|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 109 | 80 | 120 | |
| Dibromofluoromethane | 102 | 86 | 118 | |
| p-Bromofluorobenzene | 101 | 86 | 115 | |
| Toluene-d8 | 97.7 | 88 | 110 | |

| | |
|---|---|
| U | Not detected at or above adjusted sample detection limit. |

# Certificate of Analysis

| | | | | | |
|---|---|---|---|---|---|
| **Sample #:** | L12050284-10 | **PrePrep Method:** | N/A | **Instrument:** | HPMS8 |
| **Client ID:** | DUP-GW-050812 | **Prep Method:** | 5030B/5030C/5035A | **Prep Date:** | N/A |
| **Matrix:** | Water | **Analytical Method:** | 8260B | **Cal Date:** | 03/27/2012 15:49 |
| **Workgroup #:** | WG398118 | **Analyst:** | ADC | **Run Date:** | 05/16/2012 18:16 |
| **Collect Date:** | 05/08/2012 15:00 | **Dilution:** | 1 | **File ID:** | 8M379119 |
| **Sample Tag:** | 01 | **Units:** | ug/L | | |

| Analyte | CAS # | Result | Qual | RL | MDL |
|---|---|---|---|---|---|
| 1,1,1-Trichloroethane | 71-55-6 | | U | 1.00 | 0.250 |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | | U | 1.00 | 0.200 |
| 1,1,2-Trichloro-1,2,2-Trifluoroethane | 76-13-1 | | U | 5.00 | 2.00 |
| 1,1,2-Trichloroethane | 79-00-5 | | U | 1.00 | 0.250 |
| 1,1-Dichloroethane | 75-34-3 | | U | 1.00 | 0.125 |
| 1,1-Dichloroethene | 75-35-4 | | U | 1.00 | 0.500 |
| 1,2,3-Trichlorobenzene | 87-61-6 | | U | 1.00 | 0.500 |
| 1,2,4-Trichlorobenzene | 120-82-1 | | U | 1.00 | 0.200 |
| 1,2-Dibromo-3-chloropropane | 96-12-8 | | U | 5.00 | 1.00 |
| 1,2-Dibromoethane | 106-93-4 | | U | 1.00 | 0.250 |
| 1,2-Dichlorobenzene | 95-50-1 | | U | 1.00 | 0.125 |
| 1,2-Dichloroethane | 107-06-2 | | U | 1.00 | 0.250 |
| cis-1,2-Dichloroethene | 156-59-2 | | U | 1.00 | 0.250 |
| trans-1,2-Dichloroethene | 156-60-5 | | U | 1.00 | 0.250 |
| 1,2-Dichloropropane | 78-87-5 | | U | 1.00 | 0.200 |
| 1,3-Dichlorobenzene | 541-73-1 | | U | 1.00 | 0.250 |
| 1,4-Dichlorobenzene | 106-46-7 | | U | 1.00 | 0.125 |
| 2-Butanone | 78-93-3 | | U | 10.0 | 2.50 |
| 2-Hexanone | 591-78-6 | | U | 10.0 | 2.50 |
| 4-Methyl-2-pentanone | 108-10-1 | | U | 10.0 | 2.50 |
| Acetone | 67-64-1 | | U | 10.0 | 2.50 |
| Benzene | 71-43-2 | | U | 1.00 | 0.125 |
| Bromochloromethane | 74-97-5 | | U | 1.00 | 0.200 |
| Bromodichloromethane | 75-27-4 | | U | 1.00 | 0.250 |
| Bromoform | 75-25-2 | | U | 1.00 | 0.500 |
| Bromomethane | 74-83-9 | | U | 1.00 | 0.500 |
| Carbon disulfide | 75-15-0 | | U | 1.00 | 0.500 |
| Carbon tetrachloride | 56-23-5 | | U | 1.00 | 0.250 |
| Chlorobenzene | 108-90-7 | | U | 1.00 | 0.125 |
| Chloroethane | 75-00-3 | | U | 1.00 | 0.500 |
| Chloroform | 67-66-3 | | U | 1.00 | 0.125 |
| Chloromethane | 74-87-3 | | U | 1.00 | 0.500 |
| cis-1,3-Dichloropropene | 10061-01-5 | | U | 1.00 | 0.250 |

Certificate of Analysis

| Analyte | CAS # | Result | Qual | RL | MDL |
|---|---|---|---|---|---|
| Cyclohexane | 110-82-7 | | U | 5.00 | 1.00 |
| Dibromochloromethane | 124-48-1 | | U | 1.00 | 0.250 |
| Dichlorodifluoromethane | 75-71-8 | | U | 1.00 | 0.250 |
| Ethyl benzene | 100-41-4 | | U | 1.00 | 0.250 |
| Isopropylbenzene | 98-82-8 | | U | 1.00 | 0.250 |
| Methyl acetate | 79-20-9 | | U | 5.00 | 1.00 |
| Methyl tert-butyl ether | 1634-04-4 | | U | 1.00 | 0.500 |
| Methylcyclohexane | 108-87-2 | | U | 5.00 | 1.00 |
| Methylene chloride | 75-09-2 | | U | 5.00 | 0.250 |
| m,p-Xylene | 179601-23-1 | | U | 1.00 | 0.500 |
| o-Xylene | 95-47-6 | | U | 1.00 | 0.250 |
| Styrene | 100-42-5 | | U | 1.00 | 0.125 |
| Tetrachloroethene | 127-18-4 | | U | 1.00 | 0.250 |
| Toluene | 108-88-3 | | U | 1.00 | 0.250 |
| trans-1,3-Dichloropropene | 10061-02-6 | | U | 1.00 | 0.500 |
| Trichloroethene | 79-01-6 | | U | 1.00 | 0.250 |
| Trichlorofluoromethane | 75-69-4 | | U | 1.00 | 0.250 |
| Vinyl chloride | 75-01-4 | | U | 1.00 | 0.250 |
| Epichlorohydrin | 106-89-8 | | | 0.000 | 0.000 |

| Surrogate | Recovery | Lower Limit | Upper Limit | Q |
|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 112 | 80 | 120 | |
| Dibromofluoromethane | 103 | 86 | 118 | |
| p-Bromofluorobenzene | 98.9 | 86 | 115 | |
| Toluene-d8 | 97.7 | 88 | 110 | |

| | |
|---|---|
| U | Not detected at or above adjusted sample detection limit. |

**Sample #:** L12050284-10
**Client ID:** DUP-GW-050812
**Matrix:** Water
**Workgroup #:** WG398144
**Collect Date:** 05/08/2012 15:00
**Sample Tag:** 01

**PrePrep Method:** N/A
**Prep Method:** 3520C
**Analytical Method:** 8270C
**Analyst:** CAA
**Dilution:** 1
**Units:** ug/L

**Instrument:** HPMS5
**Prep Date:** 05/09/2012 14:00
**Cal Date:** 05/11/2012 13:10
**Run Date:** 05/14/2012 16:50
**File ID:** 5M66990

| Analyte | CAS # | Result | Qual | RL | MDL |
|---|---|---|---|---|---|
| Ethane, 1,1,2-trichloro- | | 6.79 | | 0.000 | 0.000 |
| unknown | | 10.4 | | 0.000 | 0.000 |
| unknown | | 6.21 | | 0.000 | 0.000 |
| unknown | | 15.6 | | 0.000 | 0.000 |
| unknown | | 5.53 | | 0.000 | 0.000 |
| Ethane, 1,1,2,2-tetrachloro- | | 214 | | 0.000 | 0.000 |

Certificate of Analysis

| Analyte | CAS # | Result | Qual | RL | MDL |
|---|---|---|---|---|---|
| unknown | | 7.46 | | 0.000 | 0.000 |
| unknown | | 4.95 | | 0.000 | 0.000 |
| unknown | | 9.01 | | 0.000 | 0.000 |
| unknown | | 5.32 | | 0.000 | 0.000 |
| unknown | | 9.27 | | 0.000 | 0.000 |
| unknown | | 7.74 | | 0.000 | 0.000 |
| unknown | | 4.26 | | 0.000 | 0.000 |
| unknown | | 9.74 | | 0.000 | 0.000 |
| unknown | | 14.6 | | 0.000 | 0.000 |
| unknown | | 9.60 | | 0.000 | 0.000 |
| unknown | | 5.34 | | 0.000 | 0.000 |
| Dodecanoic acid | | 4.83 | | 0.000 | 0.000 |
| n-Hexadecanoic acid | | 4.77 | | 0.000 | 0.000 |

**Sample #:** L12050284-10
**Client ID:** DUP-GW-050812
**Matrix:** Water
**Workgroup #:** WG398144
**Collect Date:** 05/08/2012 15:00
**Sample Tag:** 01

**PrePrep Method:** N/A
**Prep Method:** 3520C
**Analytical Method:** 8270C
**Analyst:** CAA
**Dilution:** 1
**Units:** ug/L

**Instrument:** HPMS5
**Prep Date:** 05/09/2012 14:00
**Cal Date:** 05/11/2012 13:10
**Run Date:** 05/14/2012 16:50
**File ID:** 5M66990

| Analyte | CAS # | Result | Qual | RL | MDL |
|---|---|---|---|---|---|
| 1,1'-Biphenyl | 92-52-4 | | U | 20.4 | 2.55 |
| 1,3,5-Trinitrobenzene | 99-35-4 | | U | 5.10 | 2.55 |
| 1,3-Dinitrobenzene | 99-65-0 | | U | 5.10 | 2.55 |
| 1,4-Dioxane | 123-91-1 | | U | 10.2 | 5.10 |
| 2,4,5-Trichlorophenol | 95-95-4 | | U | 5.10 | 2.55 |
| 2,4,6-Trichlorophenol | 88-06-2 | | U | 5.10 | 2.55 |
| 2,4-Dichlorophenol | 120-83-2 | | U | 5.10 | 2.55 |
| 2,4-Dimethylphenol | 105-67-9 | | U | 5.10 | 2.55 |
| 2,4-Dinitrophenol | 51-28-5 | | U | 25.5 | 12.8 |
| 2,4-Dinitrotoluene | 121-14-2 | | U | 5.10 | 2.55 |
| 2,6-Dinitrotoluene | 606-20-2 | | U | 5.10 | 2.55 |
| 2-Chloronaphthalene | 91-58-7 | | U | 5.10 | 2.55 |
| 2-Chlorophenol | 95-57-8 | | U | 5.10 | 2.55 |
| 2-Methylnaphthalene | 91-57-6 | | U | 5.10 | 2.55 |
| 2-Methylphenol | 95-48-7 | | U | 5.10 | 2.55 |
| 2-Nitroaniline | 88-74-4 | | U | 25.5 | 12.8 |
| 2-Nitrophenol | 88-75-5 | | U | 5.10 | 2.55 |
| 3-Nitroaniline | 99-09-2 | | U | 25.5 | 12.8 |

Certificate of Analysis

| Analyte | CAS # | Result | Qual | RL | MDL |
|---|---|---|---|---|---|
| 3,3'-Dichlorobenzidine | 91-94-1 | | U | 5.10 | 2.55 |
| 3-,4-Methylphenol | 106-44-5 | | U | 5.10 | 2.55 |
| 4-Bromophenyl-phenylether | 101-55-3 | | U | 5.10 | 2.55 |
| 4-Chloroaniline | 106-47-8 | | U | 5.10 | 2.55 |
| 4-Nitrophenol | 100-02-7 | | U | 25.5 | 12.8 |
| Acenaphthene | 83-32-9 | | U | 5.10 | 2.55 |
| Acenaphthylene | 208-96-8 | | U | 5.10 | 2.55 |
| Anthracene | 120-12-7 | | U | 5.10 | 2.55 |
| Benzo(a)anthracene | 56-55-3 | | U | 5.10 | 2.55 |
| Benzo(a)pyrene | 50-32-8 | | U | 5.10 | 2.55 |
| Benzo(b)fluoranthene | 205-99-2 | | U | 5.10 | 2.55 |
| Benzo(g,h,i)Perylene | 191-24-2 | | U | 5.10 | 2.55 |
| Benzo(k)fluoranthene | 207-08-9 | | U | 5.10 | 2.55 |
| Benzoic acid | 65-85-0 | | U | 20.4 | 10.2 |
| Benzyl alcohol | 100-51-6 | | U | 5.10 | 2.55 |
| Bis(2-Chloroethyl)ether | 111-44-4 | | U | 5.10 | 2.55 |
| Bis(2-Chloroethoxy)Methane | 111-91-1 | | U | 5.10 | 2.55 |
| bis(2-Ethylhexyl)phthalate | 117-81-7 | | U | 5.10 | 2.55 |
| Butylbenzylphthalate | 85-68-7 | | U | 5.10 | 2.55 |
| Carbazole | 86-74-8 | | U | 20.4 | 2.55 |
| Chrysene | 218-01-9 | | U | 5.10 | 2.55 |
| Di-N-Butylphthalate | 84-74-2 | | U | 5.10 | 2.55 |
| Di-n-octylphthalate | 117-84-0 | | U | 5.10 | 2.55 |
| Dibenzo(a,h)Anthracene | 53-70-3 | | U | 5.10 | 2.55 |
| Dibenzofuran | 132-64-9 | | U | 5.10 | 2.55 |
| Diethylphthalate | 84-66-2 | | U | 5.10 | 2.55 |
| Dimethylphthalate | 131-11-3 | | U | 5.10 | 2.55 |
| Fluoranthene | 206-44-0 | | U | 5.10 | 2.55 |
| Fluorene | 86-73-7 | | U | 5.10 | 2.55 |
| Hexachlorobenzene | 118-74-1 | | U | 5.10 | 2.55 |
| Hexachlorobutadiene | 87-68-3 | | U | 5.10 | 2.55 |
| Hexachlorocyclopentadiene | 77-47-4 | | U | 5.10 | 2.55 |
| Hexachloroethane | 67-72-1 | | U | 5.10 | 2.55 |
| Indeno(1,2,3-cd)pyrene | 193-39-5 | | U | 5.10 | 2.55 |
| Isophorone | 78-59-1 | | U | 5.10 | 2.55 |
| N-Nitrosodiphenylamine | 86-30-6 | | U | 5.10 | 2.55 |
| Naphthalene | 91-20-3 | | U | 5.10 | 2.55 |
| Nitrobenzene | 98-95-3 | | U | 5.10 | 2.55 |
| Pentachlorophenol | 87-86-5 | | U | 25.5 | 12.8 |

Certificate of Analysis

| Analyte | CAS # | Result | Qual | RL | MDL |
|---|---|---|---|---|---|
| Phenanthrene | 85-01-8 | | U | 5.10 | 2.55 |
| Phenol | 108-95-2 | | U | 5.10 | 2.55 |
| Pyrene | 129-00-0 | | U | 5.10 | 2.55 |

| Surrogate | Recovery | Lower Limit | Upper Limit | Q |
|---|---|---|---|---|
| 2,4,6-Tribromophenol | 84.8 | 10 | 123 | |
| 2-Fluorobiphenyl | 81.5 | 43 | 116 | |
| 2-Fluorophenol | 68.9 | 21 | 100 | |
| Nitrobenzene-d5 | 79.5 | 35 | 114 | |
| p-Terphenyl-d14 | 81.9 | 33 | 141 | |
| Phenol-d5 | 73.3 | 10 | 94 | |

| | |
|---|---|
| U | Not detected at or above adjusted sample detection limit. |

**Sample #:** L12050284-10
**Client ID:** DUP-GW-050812
**Matrix:** Water
**Workgroup #:** WG397981
**Collect Date:** 05/08/2012 15:00
**Sample Tag:** 01

**PrePrep Method:** N/A
**Prep Method:** 3510C
**Analytical Method:** 8270C
**Analyst:** CAA
**Dilution:** 1
**Units:** ug/L

**Instrument:** HPMS7
**Prep Date:** 05/14/2012 12:25
**Cal Date:** 04/04/2012 12:53
**Run Date:** 05/15/2012 12:26
**File ID:** 7M55022

| Analyte | CAS # | Result | Qual | RL | MDL |
|---|---|---|---|---|---|
| 2-Methylnaphthalene | 91-57-6 | | U | 0.0521 | 0.0260 |
| Acenaphthene | 83-32-9 | | U | 0.0521 | 0.0260 |
| Acenaphthylene | 208-96-8 | | U | 0.0521 | 0.0260 |
| Anthracene | 120-12-7 | | U | 0.0521 | 0.0260 |
| Benzo(a)anthracene | 56-55-3 | | U | 0.0521 | 0.0260 |
| Benzo(a)pyrene | 50-32-8 | | U | 0.0521 | 0.0260 |
| Benzo(b)fluoranthene | 205-99-2 | | U | 0.0521 | 0.0260 |
| Benzo(g,h,i)perylene | 191-24-2 | | U | 0.0521 | 0.0260 |
| Benzo(k)fluoranthene | 207-08-9 | | U | 0.0521 | 0.0260 |
| Chrysene | 218-01-9 | | U | 0.0521 | 0.0260 |
| Dibenzo(a,h)anthracene | 53-70-3 | | U | 0.0521 | 0.0260 |
| Fluoranthene | 206-44-0 | 0.0366 | | 0.0521 | 0.0260 |
| Fluorene | 86-73-7 | | U | 0.0521 | 0.0260 |
| Indeno(1,2,3-cd)pyrene | 193-39-5 | | U | 0.0521 | 0.0260 |
| Naphthalene | 91-20-3 | | U | 0.0521 | 0.0260 |
| Phenanthrene | 85-01-8 | | U | 0.0521 | 0.0260 |
| Pyrene | 129-00-0 | 0.0283 | | 0.0521 | 0.0260 |

| Surrogate | Recovery | Lower Limit | Upper Limit | Q |
|---|---|---|---|---|
| 2-Fluorobiphenyl | 79.0 | 43 | 116 | |
| Nitrobenzene-d5 | 93.1 | 35 | 114 | |

| | | | | |
|---|---|---|---|---|
| p-Terphenyl-d14 | 102 | 33 | 141 | |

| | |
|---|---|
| U | Not detected at or above adjusted sample detection limit. |

**Sample #:** L12050284-10 **PrePrep Method:** N/A **Instrument:** PE-ICP2
**Client ID:** DUP-GW-050812 **Prep Method:** 3005A **Prep Date:** 05/14/2012 07:48
**Matrix:** Water **Analytical Method:** 6010B **Cal Date:** 05/21/2012 13:35
**Workgroup #:** WG397934 **Analyst:** KHR **Run Date:** 05/21/2012 16:20
**Collect Date:** 05/08/2012 15:00 **Dilution:** 1 **File ID:** P2.052112.162003
**Sample Tag:** 01 **Units:** mg/L

| Analyte | CAS # | Result | Qual | RL | MDL |
|---|---|---|---|---|---|
| Aluminum, Total | 7429-90-5 | 0.173 | | 0.100 | 0.0500 |
| Barium, Total | 7440-39-3 | 0.176 | | 0.0100 | 0.00250 |
| Beryllium, Total | 7440-41-7 | | U | 0.00200 | 0.000500 |
| Cadmium, Total | 7440-43-9 | 0.000379 | | 0.000500 | 0.000250 |
| Calcium, Total | 7440-70-2 | 250 | | 0.200 | 0.100 |
| Chromium, Total | 7440-47-3 | | U | 0.00500 | 0.00250 |
| Cobalt, Total | 7440-48-4 | | U | 0.0200 | 0.00250 |
| Copper, Total | 7440-50-8 | | U | 0.0200 | 0.00500 |
| Iron, Total | 7439-89-6 | 44.8 | | 0.100 | 0.0250 |
| Magnesium, Total | 7439-95-4 | 61.7 | | 0.500 | 0.250 |
| Manganese, Total | 7439-96-5 | 0.451 | | 0.0100 | 0.00500 |
| Nickel, Total | 7440-02-0 | | U | 0.0400 | 0.00500 |
| Potassium, Total | 7440-09-7 | 10.3 | | 1.00 | 0.250 |
| Silver, Total | 7440-22-4 | | U | 0.0100 | 0.00500 |
| Sodium, Total | 7440-23-5 | 59.0 | | 0.500 | 0.250 |
| Vanadium, Total | 7440-62-2 | 0.00715 | | 0.0100 | 0.00500 |
| Zinc, Total | 7440-66-6 | 0.103 | | 0.0200 | 0.00500 |

| | |
|---|---|
| U | Not detected at or above adjusted sample detection limit. |

**Sample #:** L12050284-10 **PrePrep Method:** N/A **Instrument:** ICP-MS2
**Client ID:** DUP-GW-050812 **Prep Method:** 3015 **Prep Date:** 05/11/2012 10:37
**Matrix:** Water **Analytical Method:** 6020 **Cal Date:** 05/18/2012 09:54
**Workgroup #:** WG398436 **Analyst:** JYH **Run Date:** 05/18/2012 11:33
**Collect Date:** 05/08/2012 15:00 **Dilution:** 2 **File ID:** NI.051812.113341
**Sample Tag:** DL01 **Units:** mg/L

| Analyte | CAS # | Result | Qual | RL | MDL |
|---|---|---|---|---|---|
| Antimony, Total | 7440-36-0 | 0.00167 | | 0.00200 | 0.00100 |
| Arsenic, Total | 7440-38-2 | 0.00318 | | 0.00200 | 0.00100 |
| Lead, Total | 7439-92-1 | 0.0165 | | 0.00200 | 0.00100 |

Certificate of Analysis

| Analyte | CAS # | Result | Qual | RL | MDL |
|---|---|---|---|---|---|
| Selenium, Total | 7782-49-2 | 0.00310 | | 0.00200 | 0.00100 |
| Thallium, Total | 7440-28-0 | 0.000249 | | 0.000400 | 0.000200 |

**Sample #:** L12050284-10 **PrePrep Method:** N/A **Instrument:** HYDRA
**Client ID:** DUP-GW-050812 **Prep Method:** 7470A **Prep Date:** 05/10/2012 08:28
**Matrix:** Water **Analytical Method:** 7470A **Cal Date:** 05/14/2012 11:36
**Workgroup #:** WG397918 **Analyst:** PDM **Run Date:** 05/14/2012 14:26
**Collect Date:** 05/08/2012 15:00 **Dilution:** 1 **File ID:** HY.051412.142658
**Sample Tag:** 01 **Units:** mg/L

| Analyte | CAS # | Result | Qual | RL | MDL |
|---|---|---|---|---|---|
| Mercury | 7439-97-6 | | U | 0.000200 | 0.000100 |

| | |
|---|---|
| U | Not detected at or above adjusted sample detection limit. |

**Sample #:** L12050284-11 **PrePrep Method:** N/A **Instrument:** PE-ICP2
**Client ID:** DUP-GW-050812 **Prep Method:** 3005A **Prep Date:** 05/14/2012 07:48
**Matrix:** Water **Analytical Method:** 6010B **Cal Date:** 05/21/2012 13:35
**Workgroup #:** WG397934 **Analyst:** KHR **Run Date:** 05/21/2012 16:26
**Collect Date:** 05/08/2012 15:00 **Dilution:** 1 **File ID:** P2.052112.162603
**Sample Tag:** 01 **Units:** mg/L

| Analyte | CAS # | Result | Qual | RL | MDL |
|---|---|---|---|---|---|
| Aluminum, Dissolved | 7429-90-5 | | U | 0.100 | 0.0500 |
| Barium, Dissolved | 7440-39-3 | 0.174 | | 0.0100 | 0.00250 |
| Beryllium, Dissolved | 7440-41-7 | | U | 0.00200 | 0.000500 |
| Cadmium, Dissolved | 7440-43-9 | 0.000363 | | 0.000500 | 0.000250 |
| Calcium, Dissolved | 7440-70-2 | 255 | | 0.200 | 0.100 |
| Chromium, Dissolved | 7440-47-3 | | U | 0.00500 | 0.00250 |
| Cobalt, Dissolved | 7440-48-4 | | U | 0.0200 | 0.00250 |
| Copper, Dissolved | 7440-50-8 | | U | 0.0200 | 0.00500 |
| Iron, Dissolved | 7439-89-6 | 44.4 | | 0.100 | 0.0250 |
| Magnesium, Dissolved | 7439-95-4 | 62.1 | | 0.500 | 0.250 |
| Manganese, Dissolved | 7439-96-5 | 0.441 | | 0.0100 | 0.00500 |
| Nickel, Dissolved | 7440-02-0 | | U | 0.0400 | 0.00500 |
| Potassium, Dissolved | 7440-09-7 | 10.5 | | 1.00 | 0.250 |
| Silver, Dissolved | 7440-22-4 | | U | 0.0100 | 0.00500 |
| Sodium, Dissolved | 7440-23-5 | 61.4 | | 0.500 | 0.250 |
| Vanadium, Dissolved | 7440-62-2 | 0.00618 | | 0.0100 | 0.00500 |
| Zinc, Dissolved | 7440-66-6 | 0.0723 | | 0.0200 | 0.00500 |

| | |
|---|---|
| U | Not detected at or above adjusted sample detection limit. |

Certificate of Analysis

**Sample #:** L12050284-11 | **PrePrep Method:** N/A | **Instrument:** ICP-MS2
**Client ID:** DUP-GW-050812 | **Prep Method:** 3015 | **Prep Date:** 05/11/2012 10:37
**Matrix:** Water | **Analytical Method:** 6020 | **Cal Date:** 05/18/2012 09:54
**Workgroup #:** WG398436 | **Analyst:** JYH | **Run Date:** 05/18/2012 11:36
**Collect Date:** 05/08/2012 15:00 | **Dilution:** 2 | **File ID:** NI.051812.113633
**Sample Tag:** DL01 | **Units:** mg/L

| Analyte | CAS # | Result | Qual | RL | MDL |
|---|---|---|---|---|---|
| Antimony, Dissolved | 7440-36-0 | 0.00104 | | 0.00200 | 0.00100 |
| Arsenic, Dissolved | 7440-38-2 | 0.00278 | | 0.00200 | 0.00100 |
| Lead, Dissolved | 7439-92-1 | | U | 0.00200 | 0.00100 |
| Selenium, Dissolved | 7782-49-2 | 0.00342 | | 0.00200 | 0.00100 |
| Thallium, Dissolved | 7440-28-0 | 0.000309 | | 0.000400 | 0.000200 |

| | |
|---|---|
| U | Not detected at or above adjusted sample detection limit. |

**Sample #:** L12050284-11 | **PrePrep Method:** N/A | **Instrument:** HYDRA
**Client ID:** DUP-GW-050812 | **Prep Method:** 7470A | **Prep Date:** 05/10/2012 08:28
**Matrix:** Water | **Analytical Method:** 7470A | **Cal Date:** 05/14/2012 11:36
**Workgroup #:** WG397918 | **Analyst:** PDM | **Run Date:** 05/14/2012 14:28
**Collect Date:** 05/08/2012 15:00 | **Dilution:** 1 | **File ID:** HY.051412.142841
**Sample Tag:** 01 | **Units:** mg/L

| Analyte | CAS # | Result | Qual | RL | MDL |
|---|---|---|---|---|---|
| Mercury, Dissolved | 7439-97-6 | | U | 0.000200 | 0.000100 |

| | |
|---|---|
| U | Not detected at or above adjusted sample detection limit. |

**Sample #:** L12050284-12 | **PrePrep Method:** N/A | **Instrument:** HPMS8
**Client ID:** EB-050812-GW | **Prep Method:** 5030B/5030C/5035A | **Prep Date:** N/A
**Matrix:** Water | **Analytical Method:** 8260B | **Cal Date:** 03/27/2012 15:49
**Workgroup #:** WG398118 | **Analyst:** ADC | **Run Date:** 05/16/2012 14:53
**Collect Date:** 05/08/2012 13:10 | **Dilution:** 1 | **File ID:** 8M379113
**Sample Tag:** 01 | **Units:** ug/L

| Analyte | CAS # | Result | Qual | RL | MDL |
|---|---|---|---|---|---|
| 1,1,1-Trichloroethane | 71-55-6 | | U | 1.00 | 0.250 |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | | U | 1.00 | 0.200 |
| 1,1,2-Trichloro-1,2,2-Trifluoroethane | 76-13-1 | | U | 5.00 | 2.00 |
| 1,1,2-Trichloroethane | 79-00-5 | | U | 1.00 | 0.250 |
| 1,1-Dichloroethane | 75-34-3 | | U | 1.00 | 0.125 |
| 1,1-Dichloroethene | 75-35-4 | | U | 1.00 | 0.500 |

Certificate of Analysis

| Analyte | CAS # | Result | Qual | RL | MDL |
|---|---|---|---|---|---|
| 1,2,3-Trichlorobenzene | 87-61-6 | | U | 1.00 | 0.500 |
| 1,2,4-Trichlorobenzene | 120-82-1 | | U | 1.00 | 0.200 |
| 1,2-Dibromo-3-chloropropane | 96-12-8 | | U | 5.00 | 1.00 |
| 1,2-Dibromoethane | 106-93-4 | | U | 1.00 | 0.250 |
| 1,2-Dichlorobenzene | 95-50-1 | | U | 1.00 | 0.125 |
| 1,2-Dichloroethane | 107-06-2 | | U | 1.00 | 0.250 |
| cis-1,2-Dichloroethene | 156-59-2 | | U | 1.00 | 0.250 |
| trans-1,2-Dichloroethene | 156-60-5 | | U | 1.00 | 0.250 |
| 1,2-Dichloropropane | 78-87-5 | | U | 1.00 | 0.200 |
| 1,3-Dichlorobenzene | 541-73-1 | | U | 1.00 | 0.250 |
| 1,4-Dichlorobenzene | 106-46-7 | | U | 1.00 | 0.125 |
| 2-Butanone | 78-93-3 | | U | 10.0 | 2.50 |
| 2-Hexanone | 591-78-6 | | U | 10.0 | 2.50 |
| 4-Methyl-2-pentanone | 108-10-1 | | U | 10.0 | 2.50 |
| Acetone | 67-64-1 | | U | 10.0 | 2.50 |
| Benzene | 71-43-2 | | U | 1.00 | 0.125 |
| Bromochloromethane | 74-97-5 | | U | 1.00 | 0.200 |
| Bromodichloromethane | 75-27-4 | | U | 1.00 | 0.250 |
| Bromoform | 75-25-2 | | U | 1.00 | 0.500 |
| Bromomethane | 74-83-9 | | U | 1.00 | 0.500 |
| Carbon disulfide | 75-15-0 | | U | 1.00 | 0.500 |
| Carbon tetrachloride | 56-23-5 | | U | 1.00 | 0.250 |
| Chlorobenzene | 108-90-7 | | U | 1.00 | 0.125 |
| Chloroethane | 75-00-3 | | U | 1.00 | 0.500 |
| Chloroform | 67-66-3 | | U | 1.00 | 0.125 |
| Chloromethane | 74-87-3 | | U | 1.00 | 0.500 |
| cis-1,3-Dichloropropene | 10061-01-5 | | U | 1.00 | 0.250 |
| Cyclohexane | 110-82-7 | | U | 5.00 | 1.00 |
| Dibromochloromethane | 124-48-1 | | U | 1.00 | 0.250 |
| Dichlorodifluoromethane | 75-71-8 | | U | 1.00 | 0.250 |
| Ethyl benzene | 100-41-4 | | U | 1.00 | 0.250 |
| Isopropylbenzene | 98-82-8 | | U | 1.00 | 0.250 |
| Methyl acetate | 79-20-9 | | U | 5.00 | 1.00 |
| Methyl tert-butyl ether | 1634-04-4 | | U | 1.00 | 0.500 |
| Methylcyclohexane | 108-87-2 | | U | 5.00 | 1.00 |
| Methylene chloride | 75-09-2 | | U | 5.00 | 0.250 |
| m,p-Xylene | 179601-23-1 | | U | 1.00 | 0.500 |
| o-Xylene | 95-47-6 | | U | 1.00 | 0.250 |
| Styrene | 100-42-5 | | U | 1.00 | 0.125 |

Certificate of Analysis

| Analyte | CAS # | Result | Qual | RL | MDL |
|---|---|---|---|---|---|
| Tetrachloroethene | 127-18-4 | | U | 1.00 | 0.250 |
| Toluene | 108-88-3 | | U | 1.00 | 0.250 |
| trans-1,3-Dichloropropene | 10061-02-6 | | U | 1.00 | 0.500 |
| Trichloroethene | 79-01-6 | | U | 1.00 | 0.250 |
| Trichlorofluoromethane | 75-69-4 | | U | 1.00 | 0.250 |
| Vinyl chloride | 75-01-4 | | U | 1.00 | 0.250 |
| Epichlorohydrin | 106-89-8 | | | 0.000 | 0.000 |

| Surrogate | Recovery | Lower Limit | Upper Limit | Q |
|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 113 | 80 | 120 | |
| Dibromofluoromethane | 104 | 86 | 118 | |
| p-Bromofluorobenzene | 99.0 | 86 | 115 | |
| Toluene-d8 | 98.4 | 88 | 110 | |

| | |
|---|---|
| U | Not detected at or above adjusted sample detection limit. |

**Sample #:** L12050284-12
**Client ID:** EB-050812-GW
**Matrix:** Water
**Workgroup #:** WG398144
**Collect Date:** 05/08/2012 13:10
**Sample Tag:** 01

**PrePrep Method:** N/A
**Prep Method:** 3520C
**Analytical Method:** 8270C
**Analyst:** CAA
**Dilution:** 1
**Units:** ug/L

**Instrument:** HPMS5
**Prep Date:** 05/09/2012 14:00
**Cal Date:** 05/11/2012 13:10
**Run Date:** 05/14/2012 17:26
**File ID:** 5M66991

| Analyte | CAS # | Result | Qual | RL | MDL |
|---|---|---|---|---|---|
| 1,1'-Biphenyl | 92-52-4 | | U | 22.0 | 2.75 |
| 1,3,5-Trinitrobenzene | 99-35-4 | | U | 5.49 | 2.75 |
| 1,3-Dinitrobenzene | 99-65-0 | | U | 5.49 | 2.75 |
| 1,4-Dioxane | 123-91-1 | | U | 11.0 | 5.49 |
| 2,4,5-Trichlorophenol | 95-95-4 | | U | 5.49 | 2.75 |
| 2,4,6-Trichlorophenol | 88-06-2 | | U | 5.49 | 2.75 |
| 2,4-Dichlorophenol | 120-83-2 | | U | 5.49 | 2.75 |
| 2,4-Dimethylphenol | 105-67-9 | | U | 5.49 | 2.75 |
| 2,4-Dinitrophenol | 51-28-5 | | U | 27.5 | 13.7 |
| 2,4-Dinitrotoluene | 121-14-2 | | U | 5.49 | 2.75 |
| 2,6-Dinitrotoluene | 606-20-2 | | U | 5.49 | 2.75 |
| 2-Chloronaphthalene | 91-58-7 | | U | 5.49 | 2.75 |
| 2-Chlorophenol | 95-57-8 | | U | 5.49 | 2.75 |
| 2-Methylnaphthalene | 91-57-6 | | U | 5.49 | 2.75 |
| 2-Methylphenol | 95-48-7 | | U | 5.49 | 2.75 |
| 2-Nitroaniline | 88-74-4 | | U | 27.5 | 13.7 |
| 2-Nitrophenol | 88-75-5 | | U | 5.49 | 2.75 |
| 3-Nitroaniline | 99-09-2 | | U | 27.5 | 13.7 |

Certificate of Analysis

| Analyte | CAS # | Result | Qual | RL | MDL |
|---|---|---|---|---|---|
| 3,3'-Dichlorobenzidine | 91-94-1 | | U | 5.49 | 2.75 |
| 3-,4-Methylphenol | 106-44-5 | | U | 5.49 | 2.75 |
| 4-Bromophenyl-phenylether | 101-55-3 | | U | 5.49 | 2.75 |
| 4-Chloroaniline | 106-47-8 | | U | 5.49 | 2.75 |
| 4-Nitrophenol | 100-02-7 | | U | 27.5 | 13.7 |
| Acenaphthene | 83-32-9 | | U | 5.49 | 2.75 |
| Acenaphthylene | 208-96-8 | | U | 5.49 | 2.75 |
| Anthracene | 120-12-7 | | U | 5.49 | 2.75 |
| Benzo(a)anthracene | 56-55-3 | | U | 5.49 | 2.75 |
| Benzo(a)pyrene | 50-32-8 | | U | 5.49 | 2.75 |
| Benzo(b)fluoranthene | 205-99-2 | | U | 5.49 | 2.75 |
| Benzo(g,h,i)Perylene | 191-24-2 | | U | 5.49 | 2.75 |
| Benzo(k)fluoranthene | 207-08-9 | | U | 5.49 | 2.75 |
| Benzoic acid | 65-85-0 | | U | 22.0 | 11.0 |
| Benzyl alcohol | 100-51-6 | | U | 5.49 | 2.75 |
| Bis(2-Chloroethyl)ether | 111-44-4 | | U | 5.49 | 2.75 |
| Bis(2-Chloroethoxy)Methane | 111-91-1 | | U | 5.49 | 2.75 |
| bis(2-Ethylhexyl)phthalate | 117-81-7 | | U | 5.49 | 2.75 |
| Butylbenzylphthalate | 85-68-7 | | U | 5.49 | 2.75 |
| Carbazole | 86-74-8 | | U | 22.0 | 2.75 |
| Chrysene | 218-01-9 | | U | 5.49 | 2.75 |
| Di-N-Butylphthalate | 84-74-2 | | U | 5.49 | 2.75 |
| Di-n-octylphthalate | 117-84-0 | | U | 5.49 | 2.75 |
| Dibenzo(a,h)Anthracene | 53-70-3 | | U | 5.49 | 2.75 |
| Dibenzofuran | 132-64-9 | | U | 5.49 | 2.75 |
| Diethylphthalate | 84-66-2 | | U | 5.49 | 2.75 |
| Dimethylphthalate | 131-11-3 | | U | 5.49 | 2.75 |
| Fluoranthene | 206-44-0 | | U | 5.49 | 2.75 |
| Fluorene | 86-73-7 | | U | 5.49 | 2.75 |
| Hexachlorobenzene | 118-74-1 | | U | 5.49 | 2.75 |
| Hexachlorobutadiene | 87-68-3 | | U | 5.49 | 2.75 |
| Hexachlorocyclopentadiene | 77-47-4 | | U | 5.49 | 2.75 |
| Hexachloroethane | 67-72-1 | | U | 5.49 | 2.75 |
| Indeno(1,2,3-cd)pyrene | 193-39-5 | | U | 5.49 | 2.75 |
| Isophorone | 78-59-1 | | U | 5.49 | 2.75 |
| N-Nitrosodiphenylamine | 86-30-6 | | U | 5.49 | 2.75 |
| Naphthalene | 91-20-3 | | U | 5.49 | 2.75 |
| Nitrobenzene | 98-95-3 | | U | 5.49 | 2.75 |
| Pentachlorophenol | 87-86-5 | | U | 27.5 | 13.7 |

Certificate of Analysis

| Analyte | CAS # | Result | Qual | RL | MDL |
|---|---|---|---|---|---|
| Phenanthrene | 85-01-8 | | U | 5.49 | 2.75 |
| Phenol | 108-95-2 | | U | 5.49 | 2.75 |
| Pyrene | 129-00-0 | | U | 5.49 | 2.75 |

| Surrogate | Recovery | Lower Limit | Upper Limit | Q |
|---|---|---|---|---|
| 2,4,6-Tribromophenol | 80.4 | 10 | 123 | |
| 2-Fluorobiphenyl | 70.0 | 43 | 116 | |
| 2-Fluorophenol | 64.6 | 21 | 100 | |
| Nitrobenzene-d5 | 71.3 | 35 | 114 | |
| p-Terphenyl-d14 | 114 | 33 | 141 | |
| Phenol-d5 | 66.8 | 10 | 94 | |

| | |
|---|---|
| U | Not detected at or above adjusted sample detection limit. |

**Sample #:** L12050284-12 **PrePrep Method:** N/A **Instrument:** HPMS5
**Client ID:** EB-050812-GW **Prep Method:** 3520C **Prep Date:** 05/09/2012 14:00
**Matrix:** Water **Analytical Method:** 8270C **Cal Date:** 05/11/2012 13:10
**Workgroup #:** WG398144 **Analyst:** CAA **Run Date:** 05/14/2012 17:26
**Collect Date:** 05/08/2012 13:10 **Dilution:** 1 **File ID:** 5M66991
**Sample Tag:** 01 **Units:** ug/L

| Analyte | CAS # | Result | Qual | RL | MDL |
|---|---|---|---|---|---|
| 2-Butanone, 4-hydroxy- | | 33.8 | | 0.000 | 0.000 |
| unknown | | 11.7 | | 0.000 | 0.000 |

**Sample #:** L12050284-12 **PrePrep Method:** N/A **Instrument:** HPMS7
**Client ID:** EB-050812-GW **Prep Method:** 3510C **Prep Date:** 05/14/2012 12:25
**Matrix:** Water **Analytical Method:** 8270C **Cal Date:** 04/04/2012 12:53
**Workgroup #:** WG397981 **Analyst:** CAA **Run Date:** 05/15/2012 12:54
**Collect Date:** 05/08/2012 13:10 **Dilution:** 1 **File ID:** 7M55023
**Sample Tag:** 01 **Units:** ug/L

| Analyte | CAS # | Result | Qual | RL | MDL |
|---|---|---|---|---|---|
| 2-Methylnaphthalene | 91-57-6 | | U | 0.0549 | 0.0275 |
| Acenaphthene | 83-32-9 | | U | 0.0549 | 0.0275 |
| Acenaphthylene | 208-96-8 | | U | 0.0549 | 0.0275 |
| Anthracene | 120-12-7 | | U | 0.0549 | 0.0275 |
| Benzo(a)anthracene | 56-55-3 | | U | 0.0549 | 0.0275 |
| Benzo(a)pyrene | 50-32-8 | | U | 0.0549 | 0.0275 |
| Benzo(b)fluoranthene | 205-99-2 | | U | 0.0549 | 0.0275 |
| Benzo(g,h,i)perylene | 191-24-2 | | U | 0.0549 | 0.0275 |
| Benzo(k)fluoranthene | 207-08-9 | | U | 0.0549 | 0.0275 |

Certificate of Analysis

| Analyte | CAS # | Result | Qual | RL | MDL |
|---|---|---|---|---|---|
| Chrysene | 218-01-9 | | U | 0.0549 | 0.0275 |
| Dibenzo(a,h)anthracene | 53-70-3 | | U | 0.0549 | 0.0275 |
| Fluoranthene | 206-44-0 | | U | 0.0549 | 0.0275 |
| Fluorene | 86-73-7 | | U | 0.0549 | 0.0275 |
| Indeno(1,2,3-cd)pyrene | 193-39-5 | | U | 0.0549 | 0.0275 |
| Naphthalene | 91-20-3 | | U | 0.0549 | 0.0275 |
| Phenanthrene | 85-01-8 | | U | 0.0549 | 0.0275 |
| Pyrene | 129-00-0 | | U | 0.0549 | 0.0275 |

| Surrogate | Recovery | Lower Limit | Upper Limit | Q |
|---|---|---|---|---|
| 2-Fluorobiphenyl | 79.1 | 43 | 116 | |
| Nitrobenzene-d5 | 92.2 | 35 | 114 | |
| p-Terphenyl-d14 | 101 | 33 | 141 | |

| | |
|---|---|
| U | Not detected at or above adjusted sample detection limit. |

**Sample #:** L12050284-12
**Client ID:** EB-050812-GW
**Matrix:** Water
**Workgroup #:** WG397934
**Collect Date:** 05/08/2012 13:10
**Sample Tag:** 01

**PrePrep Method:** N/A
**Prep Method:** 3005A
**Analytical Method:** 6010B
**Analyst:** KHR
**Dilution:** 1
**Units:** mg/L

**Instrument:** PE-ICP2
**Prep Date:** 05/14/2012 07:48
**Cal Date:** 05/21/2012 13:35
**Run Date:** 05/21/2012 16:32
**File ID:** P2.052112.163204

| Analyte | CAS # | Result | Qual | RL | MDL |
|---|---|---|---|---|---|
| Aluminum, Total | 7429-90-5 | | U | 0.100 | 0.0500 |
| Barium, Total | 7440-39-3 | | U | 0.0100 | 0.00250 |
| Beryllium, Total | 7440-41-7 | | U | 0.00200 | 0.000500 |
| Cadmium, Total | 7440-43-9 | | U | 0.000500 | 0.000250 |
| Calcium, Total | 7440-70-2 | 0.176 | | 0.200 | 0.100 |
| Chromium, Total | 7440-47-3 | | U | 0.00500 | 0.00250 |
| Cobalt, Total | 7440-48-4 | | U | 0.0200 | 0.00250 |
| Copper, Total | 7440-50-8 | | U | 0.0200 | 0.00500 |
| Iron, Total | 7439-89-6 | | U | 0.100 | 0.0250 |
| Magnesium, Total | 7439-95-4 | | U | 0.500 | 0.250 |
| Manganese, Total | 7439-96-5 | | U | 0.0100 | 0.00500 |
| Nickel, Total | 7440-02-0 | | U | 0.0400 | 0.00500 |
| Potassium, Total | 7440-09-7 | | U | 1.00 | 0.250 |
| Silver, Total | 7440-22-4 | | U | 0.0100 | 0.00500 |
| Sodium, Total | 7440-23-5 | 0.251 | | 0.500 | 0.250 |
| Vanadium, Total | 7440-62-2 | | U | 0.0100 | 0.00500 |
| Zinc, Total | 7440-66-6 | | U | 0.0200 | 0.00500 |

| | |
|---|---|
| U | Not detected at or above adjusted sample detection limit. |

Certificate of Analysis

| | | | | | |
|---|---|---|---|---|---|
| **Sample #:** | L12050284-12 | **PrePrep Method:** | N/A | **Instrument:** | ICP-MS2 |
| **Client ID:** | EB-050812-GW | **Prep Method:** | 3015 | **Prep Date:** | 05/11/2012 10:37 |
| **Matrix:** | Water | **Analytical Method:** | 6020 | **Cal Date:** | 05/18/2012 09:54 |
| **Workgroup #:** | WG398436 | **Analyst:** | JYH | **Run Date:** | 05/18/2012 11:45 |
| **Collect Date:** | 05/08/2012 13:10 | **Dilution:** | 1 | **File ID:** | NI.051812.114501 |
| **Sample Tag:** | 01 | **Units:** | mg/L | | |

| Analyte | CAS # | Result | Qual | RL | MDL |
|---|---|---|---|---|---|
| Antimony, Total | 7440-36-0 | | U | 0.00100 | 0.000500 |
| Arsenic, Total | 7440-38-2 | | U | 0.00100 | 0.000500 |
| Lead, Total | 7439-92-1 | | U | 0.00100 | 0.000500 |
| Selenium, Total | 7782-49-2 | | U | 0.00100 | 0.000500 |
| Thallium, Total | 7440-28-0 | | U | 0.000200 | 0.000100 |

| | |
|---|---|
| U | Not detected at or above adjusted sample detection limit. |

| | | | | | |
|---|---|---|---|---|---|
| **Sample #:** | L12050284-12 | **PrePrep Method:** | N/A | **Instrument:** | HYDRA |
| **Client ID:** | EB-050812-GW | **Prep Method:** | 7470A | **Prep Date:** | 05/10/2012 08:28 |
| **Matrix:** | Water | **Analytical Method:** | 7470A | **Cal Date:** | 05/14/2012 11:36 |
| **Workgroup #:** | WG397918 | **Analyst:** | PDM | **Run Date:** | 05/14/2012 14:30 |
| **Collect Date:** | 05/08/2012 13:10 | **Dilution:** | 1 | **File ID:** | HY.051412.143025 |
| **Sample Tag:** | 01 | **Units:** | mg/L | | |

| Analyte | CAS # | Result | Qual | RL | MDL |
|---|---|---|---|---|---|
| Mercury | 7439-97-6 | | U | 0.000200 | 0.000100 |

| | |
|---|---|
| U | Not detected at or above adjusted sample detection limit. |

# 2.0 Full Sample Data Package

# 2.1 Volatiles Data

# 2.1.1 Volatiles GCMS Data (8260)

# 2.1.1.1 Summary Data

**Login Number:** L12050284
**Department**: Volatiles
**Analyst:** Anthony Canter

**METHOD**

**Preparation** SW-846 5030C/5035A

**Analysis** SW-846 8260B

**HOLDING TIMES**

**Sample Preparation:** All holding times were met.

**Sample Analysis:** All holding times were met.

**PREPARATION**

Sample preparation proceeded normally.

**CALIBRATION**

**Initial Calibration:** For all compounds that yielded a %RSD greater than 15%, linear or higher order equations were applied. All acceptance criteria were met.

**Alternate Source Standards:** The percent difference was out of range for the following analytes: Dichlorodifluoromethane. Please see the applicable QC report for a detailed presentation of the failures.

**Continuing Calibration and Tune:** Recoveries out of range were observed for the following analytes: Bromomethane, Trichlorofluoromethane, Chloromethane. Please see the applicable QC report for a detailed presentation of the failures.

**BATCH QA/QC**

**Method Blank:** All acceptance criteria were met.

**Laboratory Control Sample:** Recoveries out of range were observed for the following analytes: Dichlorodifluoromethane. Please see the applicable QC report for a detailed presentation of the failures.

**Matrix Spikes:** The MS/MSD results were not associated with this sample delivery group (SDG), due to insufficient volume of sample. The laboratory included an LCS and LCS duplicate in the preparation batch in lieu of the NELAC prescribed MS/MSD. Microbac Laboratories recommends site specific MS/MSD samples to avoid possible data qualifications.

**SAMPLES**

**Internal Standards:** All acceptance criteria were met.

**Surrogates:** All acceptance criteria were met.

**Other:** Samples 01, were run at a dilution.

**Manual Integration Reason Codes**

**Reason #1: Data System Fails to Select Correct Peak.** In some cases the chromatography system selects and integrates the 'wrong peak'. In this case the analyst must correct the selection and force the system to integrate the proper peak. Other times the system may miss the peak completely.

**Reason #2: Data System Splits the Peak Incorrectly or Integrates a False Peak as a Rider Peak.** This phenomena is common at low concentrations where the signal:noise ratio is low. A single compound (peak) is incorrectly split into multiple peaks or integrated as a main peak with one or more rider peaks resulting in low area counts for the target compound.

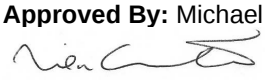
**Reason #3: Improperly Integrated Isomers and/or coeluting compounds.** This system often fails to distinguish coeluting compounds and or isomers. The integration areas and concentrations are wrong, and they must be corrected by manual integration. Prime examples are benzo(k)fluoranthene and benzo(b)fluoranthene which are often unresolved and integrated improperly when both are present at low concentrations in standards or samples.

**Reason #4: System Establishes Incorrect Baseline.** There are numerous situations in chromatography where the system establishes the baseline incorrectly. Some baseline errors will be obvious to the analyst and should be corrected via manual procedures.

**Reason #5: Miscellaneous.** Other situations involving integration errors may require in-depth review and technical judgment. These cases should be brought to the attention of the laboratory management. If the form of manual integration is not clearly covered by these four cases, then review and approval by the Managing Director or the QAO will be required.

I certify that this data package is in compliance with the terms and conditions agreed to by the client and Microbac Laboratories Inc., both technically and for completeness, except for the conditions noted above. Release of the data contained in this hard copy data package has been authorized by the Laboratory Manager or designated person, as verified by the following signature.

**Narrative ID:** 46812
**Approved By:** Michael Albertson



# Certificate of Analysis

| | | | | | |
|---|---|---|---|---|---|
| **Sample #:** | L12050284-01 | **PrePrep Method:** | N/A | **Instrument:** | HPMS6 |
| **Client ID:** | BBLD-PIT-SSP-050812 | **Prep Method:** | 5030B/5030C/5035A | **Prep Date:** | N/A |
| **Matrix:** | Water | **Analytical Method:** | 8260B | **Cal Date:** | 05/16/2012 20:08 |
| **Workgroup #:** | WG398312 | **Analyst:** | ADC | **Run Date:** | 05/17/2012 20:01 |
| **Collect Date:** | 05/08/2012 10:01 | **Dilution:** | 2 | **File ID:** | 6M108198 |
| **Sample Tag:** | DL03 | **Units:** | ug/L | | |

| Analyte | CAS # | Result | Qual | RL | MDL |
|---|---|---|---|---|---|
| 1,1,1-Trichloroethane | 71-55-6 | | U | 2.00 | 0.500 |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | | U | 2.00 | 0.400 |
| 1,1,2-Trichloro-1,2,2-Trifluoroethane | 76-13-1 | | U | 10.0 | 4.00 |
| 1,1,2-Trichloroethane | 79-00-5 | | U | 2.00 | 0.500 |
| 1,1-Dichloroethane | 75-34-3 | | U | 2.00 | 0.250 |
| 1,1-Dichloroethene | 75-35-4 | | U | 2.00 | 1.00 |
| 1,2,3-Trichlorobenzene | 87-61-6 | | U | 2.00 | 1.00 |
| 1,2,4-Trichlorobenzene | 120-82-1 | | U | 2.00 | 0.400 |
| 1,2-Dibromo-3-chloropropane | 96-12-8 | | U | 10.0 | 2.00 |
| 1,2-Dibromoethane | 106-93-4 | | U | 2.00 | 0.500 |
| 1,2-Dichlorobenzene | 95-50-1 | | U | 2.00 | 0.250 |
| 1,2-Dichloroethane | 107-06-2 | | U | 2.00 | 0.500 |
| cis-1,2-Dichloroethene | 156-59-2 | | U | 2.00 | 0.500 |
| trans-1,2-Dichloroethene | 156-60-5 | | U | 2.00 | 0.500 |
| 1,2-Dichloropropane | 78-87-5 | | U | 2.00 | 0.400 |
| 1,3-Dichlorobenzene | 541-73-1 | | U | 2.00 | 0.500 |
| 1,4-Dichlorobenzene | 106-46-7 | | U | 2.00 | 0.250 |
| 2-Butanone | 78-93-3 | 75.1 | | 20.0 | 5.00 |
| 2-Hexanone | 591-78-6 | | U | 20.0 | 5.00 |
| 4-Methyl-2-pentanone | 108-10-1 | 688 | E | 20.0 | 5.00 |
| Acetone | 67-64-1 | 75.8 | | 20.0 | 5.00 |
| Benzene | 71-43-2 | | U | 2.00 | 0.250 |
| Bromochloromethane | 74-97-5 | | U | 2.00 | 0.400 |
| Bromodichloromethane | 75-27-4 | | U | 2.00 | 0.500 |
| Bromoform | 75-25-2 | | U | 2.00 | 1.00 |
| Bromomethane | 74-83-9 | | U | 2.00 | 1.00 |
| Carbon disulfide | 75-15-0 | 10.8 | | 2.00 | 1.00 |
| Carbon tetrachloride | 56-23-5 | | U | 2.00 | 0.500 |
| Chlorobenzene | 108-90-7 | 0.488 | | 2.00 | 0.250 |
| Chloroethane | 75-00-3 | | U | 2.00 | 1.00 |
| Chloroform | 67-66-3 | 5.09 | | 2.00 | 0.250 |
| Chloromethane | 74-87-3 | | U | 2.00 | 1.00 |
| cis-1,3-Dichloropropene | 10061-01-5 | | U | 2.00 | 0.500 |

Certificate of Analysis

| Analyte | CAS # | Result | Qual | RL | MDL |
|---|---|---|---|---|---|
| Cyclohexane | 110-82-7 | | U | 10.0 | 2.00 |
| Dibromochloromethane | 124-48-1 | | U | 2.00 | 0.500 |
| Dichlorodifluoromethane | 75-71-8 | | U | 2.00 | 0.500 |
| Ethyl benzene | 100-41-4 | | U | 2.00 | 0.500 |
| Isopropylbenzene | 98-82-8 | | U | 2.00 | 0.500 |
| Methyl acetate | 79-20-9 | | U | 10.0 | 2.00 |
| Methyl tert-butyl ether | 1634-04-4 | | U | 2.00 | 1.00 |
| Methylcyclohexane | 108-87-2 | | U | 10.0 | 2.00 |
| Methylene chloride | 75-09-2 | 0.760 | | 10.0 | 0.500 |
| m,p-Xylene | 179601-23-1 | 1.63 | | 2.00 | 1.00 |
| o-Xylene | 95-47-6 | 1.85 | | 2.00 | 0.500 |
| Styrene | 100-42-5 | | U | 2.00 | 0.250 |
| Tetrachloroethene | 127-18-4 | | U | 2.00 | 0.500 |
| Toluene | 108-88-3 | 1.64 | | 2.00 | 0.500 |
| trans-1,3-Dichloropropene | 10061-02-6 | | U | 2.00 | 1.00 |
| Trichloroethene | 79-01-6 | | U | 2.00 | 0.500 |
| Trichlorofluoromethane | 75-69-4 | | U | 2.00 | 0.500 |
| Vinyl chloride | 75-01-4 | | U | 2.00 | 0.500 |
| Epichlorohydrin | 106-89-8 | | | 0.000 | 0.000 |

| Surrogate | Recovery | Lower Limit | Upper Limit | Q |
|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 97.0 | 80 | 120 | |
| Dibromofluoromethane | 94.6 | 86 | 118 | |
| p-Bromofluorobenzene | 108 | 86 | 115 | |
| Toluene-d8 | 106 | 88 | 110 | |

| | |
|---|---|
| E | Semiquantitative result (out of calibration range) |
| U | Not detected at or above adjusted sample detection limit. |

**Sample #:** L12050284-01
**Client ID:** BBLD-PIT-SSP-050812
**Matrix:** Water
**Workgroup #:** WG398533
**Collect Date:** 05/08/2012 10:01
**Sample Tag:** DL02

**PrePrep Method:** N/A
**Prep Method:** 5030B/5030C/5035A
**Analytical Method:** 8260B
**Analyst:** FJB
**Dilution:** 10
**Units:** ug/L

**Instrument:** HPMS6
**Prep Date:** N/A
**Cal Date:** 05/16/2012 20:08
**Run Date:** 05/19/2012 19:46
**File ID:** 6M108271

| Analyte | CAS # | Result | Qual | RL | MDL |
|---|---|---|---|---|---|
| 1,1,1-Trichloroethane | 71-55-6 | | U | 10.0 | 2.50 |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | | U | 10.0 | 2.00 |
| 1,1,2-Trichloro-1,2,2-Trifluoroethane | 76-13-1 | | U | 50.0 | 20.0 |
| 1,1,2-Trichloroethane | 79-00-5 | | U | 10.0 | 2.50 |
| 1,1-Dichloroethane | 75-34-3 | | U | 10.0 | 1.25 |

Certificate of Analysis

| Analyte | CAS # | Result | Qual | RL | MDL |
|---|---|---|---|---|---|
| 1,1-Dichloroethene | 75-35-4 | | U | 10.0 | 5.00 |
| 1,2,3-Trichlorobenzene | 87-61-6 | | U | 10.0 | 5.00 |
| 1,2,4-Trichlorobenzene | 120-82-1 | | U | 10.0 | 2.00 |
| 1,2-Dibromo-3-chloropropane | 96-12-8 | | U | 50.0 | 10.0 |
| 1,2-Dibromoethane | 106-93-4 | | U | 10.0 | 2.50 |
| 1,2-Dichlorobenzene | 95-50-1 | | U | 10.0 | 1.25 |
| 1,2-Dichloroethane | 107-06-2 | | U | 10.0 | 2.50 |
| cis-1,2-Dichloroethene | 156-59-2 | | U | 10.0 | 2.50 |
| trans-1,2-Dichloroethene | 156-60-5 | | U | 10.0 | 2.50 |
| 1,2-Dichloropropane | 78-87-5 | | U | 10.0 | 2.00 |
| 1,3-Dichlorobenzene | 541-73-1 | | U | 10.0 | 2.50 |
| 1,4-Dichlorobenzene | 106-46-7 | | U | 10.0 | 1.25 |
| 2-Butanone | 78-93-3 | 64.5 | | 100 | 25.0 |
| 2-Hexanone | 591-78-6 | | U | 100 | 25.0 |
| 4-Methyl-2-pentanone | 108-10-1 | 638 | | 100 | 25.0 |
| Acetone | 67-64-1 | 97.5 | | 100 | 25.0 |
| Benzene | 71-43-2 | | U | 10.0 | 1.25 |
| Bromochloromethane | 74-97-5 | | U | 10.0 | 2.00 |
| Bromodichloromethane | 75-27-4 | | U | 10.0 | 2.50 |
| Bromoform | 75-25-2 | | U | 10.0 | 5.00 |
| Bromomethane | 74-83-9 | | U | 10.0 | 5.00 |
| Carbon disulfide | 75-15-0 | 20.0 | | 10.0 | 5.00 |
| Carbon tetrachloride | 56-23-5 | | U | 10.0 | 2.50 |
| Chlorobenzene | 108-90-7 | 1.26 | | 10.0 | 1.25 |
| Chloroethane | 75-00-3 | | U | 10.0 | 5.00 |
| Chloroform | 67-66-3 | 10.0 | | 10.0 | 1.25 |
| Chloromethane | 74-87-3 | | U | 10.0 | 5.00 |
| cis-1,3-Dichloropropene | 10061-01-5 | | U | 10.0 | 2.50 |
| Cyclohexane | 110-82-7 | | U | 50.0 | 10.0 |
| Dibromochloromethane | 124-48-1 | | U | 10.0 | 2.50 |
| Dichlorodifluoromethane | 75-71-8 | | U | 10.0 | 2.50 |
| Ethyl benzene | 100-41-4 | | U | 10.0 | 2.50 |
| Isopropylbenzene | 98-82-8 | | U | 10.0 | 2.50 |
| Methyl acetate | 79-20-9 | | U | 50.0 | 10.0 |
| Methyl tert-butyl ether | 1634-04-4 | | U | 10.0 | 5.00 |
| Methylcyclohexane | 108-87-2 | | U | 50.0 | 10.0 |
| Methylene chloride | 75-09-2 | | U | 50.0 | 2.50 |
| m,p-Xylene | 179601-23-1 | 7.09 | | 10.0 | 5.00 |
| o-Xylene | 95-47-6 | 7.03 | | 10.0 | 2.50 |

Certificate of Analysis

| Analyte | CAS # | Result | Qual | RL | MDL |
|---|---|---|---|---|---|
| Styrene | 100-42-5 | | U | 10.0 | 1.25 |
| Tetrachloroethene | 127-18-4 | | U | 10.0 | 2.50 |
| Toluene | 108-88-3 | 4.13 | | 10.0 | 2.50 |
| trans-1,3-Dichloropropene | 10061-02-6 | | U | 10.0 | 5.00 |
| Trichloroethene | 79-01-6 | | U | 10.0 | 2.50 |
| Trichlorofluoromethane | 75-69-4 | | U | 10.0 | 2.50 |
| Vinyl chloride | 75-01-4 | | U | 10.0 | 2.50 |
| Epichlorohydrin | 106-89-8 | | | 0.000 | 0.000 |

| Surrogate | Recovery | Lower Limit | Upper Limit | Q |
|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 89.7 | 80 | 120 | |
| Dibromofluoromethane | 93.8 | 86 | 118 | |
| p-Bromofluorobenzene | 113 | 86 | 115 | |
| Toluene-d8 | 106 | 88 | 110 | |

| | |
|---|---|
| U | Not detected at or above adjusted sample detection limit. |

**Sample #:** L12050284-03
**Client ID:** PZ-07-050812
**Matrix:** Water
**Workgroup #:** WG398118
**Collect Date:** 05/08/2012 10:10
**Sample Tag:** 01

**PrePrep Method:** N/A
**Prep Method:** 5030B/5030C/5035A
**Analytical Method:** 8260B
**Analyst:** ADC
**Dilution:** 1
**Units:** ug/L

**Instrument:** HPMS8
**Prep Date:** N/A
**Cal Date:** 03/27/2012 15:49
**Run Date:** 05/16/2012 16:36
**File ID:** 8M379116

| Analyte | CAS # | Result | Qual | RL | MDL |
|---|---|---|---|---|---|
| 1,1,1-Trichloroethane | 71-55-6 | | U | 1.00 | 0.250 |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | | U | 1.00 | 0.200 |
| 1,1,2-Trichloro-1,2,2-Trifluoroethane | 76-13-1 | | U | 5.00 | 2.00 |
| 1,1,2-Trichloroethane | 79-00-5 | | U | 1.00 | 0.250 |
| 1,1-Dichloroethane | 75-34-3 | | U | 1.00 | 0.125 |
| 1,1-Dichloroethene | 75-35-4 | | U | 1.00 | 0.500 |
| 1,2,3-Trichlorobenzene | 87-61-6 | | U | 1.00 | 0.500 |
| 1,2,4-Trichlorobenzene | 120-82-1 | | U | 1.00 | 0.200 |
| 1,2-Dibromo-3-chloropropane | 96-12-8 | | U | 5.00 | 1.00 |
| 1,2-Dibromoethane | 106-93-4 | | U | 1.00 | 0.250 |
| 1,2-Dichlorobenzene | 95-50-1 | | U | 1.00 | 0.125 |
| 1,2-Dichloroethane | 107-06-2 | | U | 1.00 | 0.250 |
| cis-1,2-Dichloroethene | 156-59-2 | | U | 1.00 | 0.250 |
| trans-1,2-Dichloroethene | 156-60-5 | | U | 1.00 | 0.250 |
| 1,2-Dichloropropane | 78-87-5 | | U | 1.00 | 0.200 |
| 1,3-Dichlorobenzene | 541-73-1 | | U | 1.00 | 0.250 |
| 1,4-Dichlorobenzene | 106-46-7 | | U | 1.00 | 0.125 |

Certificate of Analysis

| Analyte | CAS # | Result | Qual | RL | MDL |
|---|---|---|---|---|---|
| 2-Butanone | 78-93-3 | | U | 10.0 | 2.50 |
| 2-Hexanone | 591-78-6 | | U | 10.0 | 2.50 |
| 4-Methyl-2-pentanone | 108-10-1 | | U | 10.0 | 2.50 |
| Acetone | 67-64-1 | | U | 10.0 | 2.50 |
| Benzene | 71-43-2 | | U | 1.00 | 0.125 |
| Bromochloromethane | 74-97-5 | | U | 1.00 | 0.200 |
| Bromodichloromethane | 75-27-4 | | U | 1.00 | 0.250 |
| Bromoform | 75-25-2 | | U | 1.00 | 0.500 |
| Bromomethane | 74-83-9 | | U | 1.00 | 0.500 |
| Carbon disulfide | 75-15-0 | | U | 1.00 | 0.500 |
| Carbon tetrachloride | 56-23-5 | | U | 1.00 | 0.250 |
| Chlorobenzene | 108-90-7 | 0.863 | | 1.00 | 0.125 |
| Chloroethane | 75-00-3 | | U | 1.00 | 0.500 |
| Chloroform | 67-66-3 | | U | 1.00 | 0.125 |
| Chloromethane | 74-87-3 | | U | 1.00 | 0.500 |
| cis-1,3-Dichloropropene | 10061-01-5 | | U | 1.00 | 0.250 |
| Cyclohexane | 110-82-7 | | U | 5.00 | 1.00 |
| Dibromochloromethane | 124-48-1 | | U | 1.00 | 0.250 |
| Dichlorodifluoromethane | 75-71-8 | | U | 1.00 | 0.250 |
| Ethyl benzene | 100-41-4 | | U | 1.00 | 0.250 |
| Isopropylbenzene | 98-82-8 | | U | 1.00 | 0.250 |
| Methyl acetate | 79-20-9 | | U | 5.00 | 1.00 |
| Methyl tert-butyl ether | 1634-04-4 | | U | 1.00 | 0.500 |
| Methylcyclohexane | 108-87-2 | | U | 5.00 | 1.00 |
| Methylene chloride | 75-09-2 | | U | 5.00 | 0.250 |
| m,p-Xylene | 179601-23-1 | | U | 1.00 | 0.500 |
| o-Xylene | 95-47-6 | | U | 1.00 | 0.250 |
| Styrene | 100-42-5 | | U | 1.00 | 0.125 |
| Tetrachloroethene | 127-18-4 | | U | 1.00 | 0.250 |
| Toluene | 108-88-3 | | U | 1.00 | 0.250 |
| trans-1,3-Dichloropropene | 10061-02-6 | | U | 1.00 | 0.500 |
| Trichloroethene | 79-01-6 | | U | 1.00 | 0.250 |
| Trichlorofluoromethane | 75-69-4 | | U | 1.00 | 0.250 |
| Vinyl chloride | 75-01-4 | | U | 1.00 | 0.250 |
| Epichlorohydrin | 106-89-8 | | | 0.000 | 0.000 |

| Surrogate | Recovery | Lower Limit | Upper Limit | Q |
|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 110 | 80 | 120 | |
| Dibromofluoromethane | 105 | 86 | 118 | |
| p-Bromofluorobenzene | 99.0 | 86 | 115 | |

Certificate of Analysis

| | | | | |
|---|---|---|---|---|
| Toluene-d8 | 97.1 | 88 | 110 | |

| | |
|---|---|
| U | Not detected at or above adjusted sample detection limit. |

**Sample #:** L12050284-05
**Client ID:** MW-18-050812
**Matrix:** Water
**Workgroup #:** WG398118
**Collect Date:** 05/08/2012 11:00
**Sample Tag:** 01

**PrePrep Method:** N/A
**Prep Method:** 5030B/5030C/5035A
**Analytical Method:** 8260B
**Analyst:** ADC
**Dilution:** 1
**Units:** ug/L

**Instrument:** HPMS8
**Prep Date:** N/A
**Cal Date:** 03/27/2012 15:49
**Run Date:** 05/16/2012 17:10
**File ID:** 8M379117

| Analyte | CAS # | Result | Qual | RL | MDL |
|---|---|---|---|---|---|
| 1,1,1-Trichloroethane | 71-55-6 | | U | 1.00 | 0.250 |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | | U | 1.00 | 0.200 |
| 1,1,2-Trichloro-1,2,2-Trifluoroethane | 76-13-1 | | U | 5.00 | 2.00 |
| 1,1,2-Trichloroethane | 79-00-5 | | U | 1.00 | 0.250 |
| 1,1-Dichloroethane | 75-34-3 | | U | 1.00 | 0.125 |
| 1,1-Dichloroethene | 75-35-4 | | U | 1.00 | 0.500 |
| 1,2,3-Trichlorobenzene | 87-61-6 | | U | 1.00 | 0.500 |
| 1,2,4-Trichlorobenzene | 120-82-1 | | U | 1.00 | 0.200 |
| 1,2-Dibromo-3-chloropropane | 96-12-8 | | U | 5.00 | 1.00 |
| 1,2-Dibromoethane | 106-93-4 | | U | 1.00 | 0.250 |
| 1,2-Dichlorobenzene | 95-50-1 | | U | 1.00 | 0.125 |
| 1,2-Dichloroethane | 107-06-2 | | U | 1.00 | 0.250 |
| cis-1,2-Dichloroethene | 156-59-2 | | U | 1.00 | 0.250 |
| trans-1,2-Dichloroethene | 156-60-5 | | U | 1.00 | 0.250 |
| 1,2-Dichloropropane | 78-87-5 | | U | 1.00 | 0.200 |
| 1,3-Dichlorobenzene | 541-73-1 | | U | 1.00 | 0.250 |
| 1,4-Dichlorobenzene | 106-46-7 | | U | 1.00 | 0.125 |
| 2-Butanone | 78-93-3 | | U | 10.0 | 2.50 |
| 2-Hexanone | 591-78-6 | | U | 10.0 | 2.50 |
| 4-Methyl-2-pentanone | 108-10-1 | | U | 10.0 | 2.50 |
| Acetone | 67-64-1 | | U | 10.0 | 2.50 |
| Benzene | 71-43-2 | | U | 1.00 | 0.125 |
| Bromochloromethane | 74-97-5 | | U | 1.00 | 0.200 |
| Bromodichloromethane | 75-27-4 | | U | 1.00 | 0.250 |
| Bromoform | 75-25-2 | | U | 1.00 | 0.500 |
| Bromomethane | 74-83-9 | | U | 1.00 | 0.500 |
| Carbon disulfide | 75-15-0 | | U | 1.00 | 0.500 |
| Carbon tetrachloride | 56-23-5 | | U | 1.00 | 0.250 |
| Chlorobenzene | 108-90-7 | | U | 1.00 | 0.125 |
| Chloroethane | 75-00-3 | | U | 1.00 | 0.500 |

Certificate of Analysis

| Analyte | CAS # | Result | Qual | RL | MDL |
|---|---|---|---|---|---|
| Chloroform | 67-66-3 | | U | 1.00 | 0.125 |
| Chloromethane | 74-87-3 | | U | 1.00 | 0.500 |
| cis-1,3-Dichloropropene | 10061-01-5 | | U | 1.00 | 0.250 |
| Cyclohexane | 110-82-7 | | U | 5.00 | 1.00 |
| Dibromochloromethane | 124-48-1 | | U | 1.00 | 0.250 |
| Dichlorodifluoromethane | 75-71-8 | | U | 1.00 | 0.250 |
| Ethyl benzene | 100-41-4 | | U | 1.00 | 0.250 |
| Isopropylbenzene | 98-82-8 | | U | 1.00 | 0.250 |
| Methyl acetate | 79-20-9 | | U | 5.00 | 1.00 |
| Methyl tert-butyl ether | 1634-04-4 | | U | 1.00 | 0.500 |
| Methylcyclohexane | 108-87-2 | | U | 5.00 | 1.00 |
| Methylene chloride | 75-09-2 | | U | 5.00 | 0.250 |
| m,p-Xylene | 179601-23-1 | | U | 1.00 | 0.500 |
| o-Xylene | 95-47-6 | | U | 1.00 | 0.250 |
| Styrene | 100-42-5 | | U | 1.00 | 0.125 |
| Tetrachloroethene | 127-18-4 | | U | 1.00 | 0.250 |
| Toluene | 108-88-3 | | U | 1.00 | 0.250 |
| trans-1,3-Dichloropropene | 10061-02-6 | | U | 1.00 | 0.500 |
| Trichloroethene | 79-01-6 | | U | 1.00 | 0.250 |
| Trichlorofluoromethane | 75-69-4 | | U | 1.00 | 0.250 |
| Vinyl chloride | 75-01-4 | | U | 1.00 | 0.250 |
| Epichlorohydrin | 106-89-8 | | | 0.000 | 0.000 |

| Surrogate | Recovery | Lower Limit | Upper Limit | Q |
|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 113 | 80 | 120 | |
| Dibromofluoromethane | 103 | 86 | 118 | |
| p-Bromofluorobenzene | 97.2 | 86 | 115 | |
| Toluene-d8 | 97.4 | 88 | 110 | |

| | |
|---|---|
| U | Not detected at or above adjusted sample detection limit. |

**Sample #:** L12050284-07
**Client ID:** TW-01-050812
**Matrix:** Water
**Workgroup #:** WG398118
**Collect Date:** 05/08/2012 14:50
**Sample Tag:** 01

**PrePrep Method:** N/A
**Prep Method:** 5030B/5030C/5035A
**Analytical Method:** 8260B
**Analyst:** ADC
**Dilution:** 1
**Units:** ug/L

**Instrument:** HPMS8
**Prep Date:** N/A
**Cal Date:** 03/27/2012 15:49
**Run Date:** 05/16/2012 17:43
**File ID:** 8M379118

| Analyte | CAS # | Result | Qual | RL | MDL |
|---|---|---|---|---|---|
| 1,1,1-Trichloroethane | 71-55-6 | | U | 1.00 | 0.250 |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | | U | 1.00 | 0.200 |
| 1,1,2-Trichloro-1,2,2-Trifluoroethane | 76-13-1 | | U | 5.00 | 2.00 |

Certificate of Analysis

| Analyte | CAS # | Result | Qual | RL | MDL |
|---|---|---|---|---|---|
| 1,1,2-Trichloroethane | 79-00-5 | | U | 1.00 | 0.250 |
| 1,1-Dichloroethane | 75-34-3 | | U | 1.00 | 0.125 |
| 1,1-Dichloroethene | 75-35-4 | | U | 1.00 | 0.500 |
| 1,2,3-Trichlorobenzene | 87-61-6 | | U | 1.00 | 0.500 |
| 1,2,4-Trichlorobenzene | 120-82-1 | | U | 1.00 | 0.200 |
| 1,2-Dibromo-3-chloropropane | 96-12-8 | | U | 5.00 | 1.00 |
| 1,2-Dibromoethane | 106-93-4 | | U | 1.00 | 0.250 |
| 1,2-Dichlorobenzene | 95-50-1 | | U | 1.00 | 0.125 |
| 1,2-Dichloroethane | 107-06-2 | | U | 1.00 | 0.250 |
| cis-1,2-Dichloroethene | 156-59-2 | | U | 1.00 | 0.250 |
| trans-1,2-Dichloroethene | 156-60-5 | | U | 1.00 | 0.250 |
| 1,2-Dichloropropane | 78-87-5 | | U | 1.00 | 0.200 |
| 1,3-Dichlorobenzene | 541-73-1 | | U | 1.00 | 0.250 |
| 1,4-Dichlorobenzene | 106-46-7 | | U | 1.00 | 0.125 |
| 2-Butanone | 78-93-3 | | U | 10.0 | 2.50 |
| 2-Hexanone | 591-78-6 | | U | 10.0 | 2.50 |
| 4-Methyl-2-pentanone | 108-10-1 | | U | 10.0 | 2.50 |
| Acetone | 67-64-1 | | U | 10.0 | 2.50 |
| Benzene | 71-43-2 | | U | 1.00 | 0.125 |
| Bromochloromethane | 74-97-5 | | U | 1.00 | 0.200 |
| Bromodichloromethane | 75-27-4 | | U | 1.00 | 0.250 |
| Bromoform | 75-25-2 | | U | 1.00 | 0.500 |
| Bromomethane | 74-83-9 | | U | 1.00 | 0.500 |
| Carbon disulfide | 75-15-0 | | U | 1.00 | 0.500 |
| Carbon tetrachloride | 56-23-5 | | U | 1.00 | 0.250 |
| Chlorobenzene | 108-90-7 | | U | 1.00 | 0.125 |
| Chloroethane | 75-00-3 | | U | 1.00 | 0.500 |
| Chloroform | 67-66-3 | | U | 1.00 | 0.125 |
| Chloromethane | 74-87-3 | | U | 1.00 | 0.500 |
| cis-1,3-Dichloropropene | 10061-01-5 | | U | 1.00 | 0.250 |
| Cyclohexane | 110-82-7 | | U | 5.00 | 1.00 |
| Dibromochloromethane | 124-48-1 | | U | 1.00 | 0.250 |
| Dichlorodifluoromethane | 75-71-8 | | U | 1.00 | 0.250 |
| Ethyl benzene | 100-41-4 | | U | 1.00 | 0.250 |
| Isopropylbenzene | 98-82-8 | | U | 1.00 | 0.250 |
| Methyl acetate | 79-20-9 | | U | 5.00 | 1.00 |
| Methyl tert-butyl ether | 1634-04-4 | | U | 1.00 | 0.500 |
| Methylcyclohexane | 108-87-2 | | U | 5.00 | 1.00 |
| Methylene chloride | 75-09-2 | | U | 5.00 | 0.250 |

Certificate of Analysis

| Analyte | CAS # | Result | Qual | RL | MDL |
|---|---|---|---|---|---|
| m,p-Xylene | 179601-23-1 | | U | 1.00 | 0.500 |
| o-Xylene | 95-47-6 | | U | 1.00 | 0.250 |
| Styrene | 100-42-5 | | U | 1.00 | 0.125 |
| Tetrachloroethene | 127-18-4 | | U | 1.00 | 0.250 |
| Toluene | 108-88-3 | | U | 1.00 | 0.250 |
| trans-1,3-Dichloropropene | 10061-02-6 | | U | 1.00 | 0.500 |
| Trichloroethene | 79-01-6 | | U | 1.00 | 0.250 |
| Trichlorofluoromethane | 75-69-4 | | U | 1.00 | 0.250 |
| Vinyl chloride | 75-01-4 | | U | 1.00 | 0.250 |
| Epichlorohydrin | 106-89-8 | | | 0.000 | 0.000 |

| Surrogate | Recovery | Lower Limit | Upper Limit | Q |
|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 112 | 80 | 120 | |
| Dibromofluoromethane | 104 | 86 | 118 | |
| p-Bromofluorobenzene | 99.1 | 86 | 115 | |
| Toluene-d8 | 96.7 | 88 | 110 | |

| | |
|---|---|
| U | Not detected at or above adjusted sample detection limit. |

**Sample #:** L12050284-09
**Client ID:** TB-050812
**Matrix:** Water
**Workgroup #:** WG398118
**Collect Date:** 05/08/2012 08:05
**Sample Tag:** 01

**PrePrep Method:** N/A
**Prep Method:** 5030B/5030C/5035A
**Analytical Method:** 8260B
**Analyst:** ADC
**Dilution:** 1
**Units:** ug/L

**Instrument:** HPMS8
**Prep Date:** N/A
**Cal Date:** 03/27/2012 15:49
**Run Date:** 05/16/2012 14:20
**File ID:** 8M379112

| Analyte | CAS # | Result | Qual | RL | MDL |
|---|---|---|---|---|---|
| 1,1,1-Trichloroethane | 71-55-6 | | U | 1.00 | 0.250 |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | | U | 1.00 | 0.200 |
| 1,1,2-Trichloro-1,2,2-Trifluoroethane | 76-13-1 | | U | 5.00 | 2.00 |
| 1,1,2-Trichloroethane | 79-00-5 | | U | 1.00 | 0.250 |
| 1,1-Dichloroethane | 75-34-3 | | U | 1.00 | 0.125 |
| 1,1-Dichloroethene | 75-35-4 | | U | 1.00 | 0.500 |
| 1,2,3-Trichlorobenzene | 87-61-6 | | U | 1.00 | 0.500 |
| 1,2,4-Trichlorobenzene | 120-82-1 | | U | 1.00 | 0.200 |
| 1,2-Dibromo-3-chloropropane | 96-12-8 | | U | 5.00 | 1.00 |
| 1,2-Dibromoethane | 106-93-4 | | U | 1.00 | 0.250 |
| 1,2-Dichlorobenzene | 95-50-1 | | U | 1.00 | 0.125 |
| 1,2-Dichloroethane | 107-06-2 | | U | 1.00 | 0.250 |
| cis-1,2-Dichloroethene | 156-59-2 | | U | 1.00 | 0.250 |
| trans-1,2-Dichloroethene | 156-60-5 | | U | 1.00 | 0.250 |
| 1,2-Dichloropropane | 78-87-5 | | U | 1.00 | 0.200 |

Certificate of Analysis

| Analyte | CAS # | Result | Qual | RL | MDL |
|---|---|---|---|---|---|
| 1,3-Dichlorobenzene | 541-73-1 | | U | 1.00 | 0.250 |
| 1,4-Dichlorobenzene | 106-46-7 | | U | 1.00 | 0.125 |
| 2-Butanone | 78-93-3 | | U | 10.0 | 2.50 |
| 2-Hexanone | 591-78-6 | | U | 10.0 | 2.50 |
| 4-Methyl-2-pentanone | 108-10-1 | | U | 10.0 | 2.50 |
| Acetone | 67-64-1 | | U | 10.0 | 2.50 |
| Benzene | 71-43-2 | | U | 1.00 | 0.125 |
| Bromochloromethane | 74-97-5 | | U | 1.00 | 0.200 |
| Bromodichloromethane | 75-27-4 | | U | 1.00 | 0.250 |
| Bromoform | 75-25-2 | | U | 1.00 | 0.500 |
| Bromomethane | 74-83-9 | | U | 1.00 | 0.500 |
| Carbon disulfide | 75-15-0 | | U | 1.00 | 0.500 |
| Carbon tetrachloride | 56-23-5 | | U | 1.00 | 0.250 |
| Chlorobenzene | 108-90-7 | | U | 1.00 | 0.125 |
| Chloroethane | 75-00-3 | | U | 1.00 | 0.500 |
| Chloroform | 67-66-3 | | U | 1.00 | 0.125 |
| Chloromethane | 74-87-3 | | U | 1.00 | 0.500 |
| cis-1,3-Dichloropropene | 10061-01-5 | | U | 1.00 | 0.250 |
| Cyclohexane | 110-82-7 | | U | 5.00 | 1.00 |
| Dibromochloromethane | 124-48-1 | | U | 1.00 | 0.250 |
| Dichlorodifluoromethane | 75-71-8 | | U | 1.00 | 0.250 |
| Ethyl benzene | 100-41-4 | | U | 1.00 | 0.250 |
| Isopropylbenzene | 98-82-8 | | U | 1.00 | 0.250 |
| Methyl acetate | 79-20-9 | | U | 5.00 | 1.00 |
| Methyl tert-butyl ether | 1634-04-4 | | U | 1.00 | 0.500 |
| Methylcyclohexane | 108-87-2 | | U | 5.00 | 1.00 |
| Methylene chloride | 75-09-2 | | U | 5.00 | 0.250 |
| m,p-Xylene | 179601-23-1 | | U | 1.00 | 0.500 |
| o-Xylene | 95-47-6 | | U | 1.00 | 0.250 |
| Styrene | 100-42-5 | | U | 1.00 | 0.125 |
| Tetrachloroethene | 127-18-4 | | U | 1.00 | 0.250 |
| Toluene | 108-88-3 | | U | 1.00 | 0.250 |
| trans-1,3-Dichloropropene | 10061-02-6 | | U | 1.00 | 0.500 |
| Trichloroethene | 79-01-6 | | U | 1.00 | 0.250 |
| Trichlorofluoromethane | 75-69-4 | | U | 1.00 | 0.250 |
| Vinyl chloride | 75-01-4 | | U | 1.00 | 0.250 |
| Epichlorohydrin | 106-89-8 | | | 0.000 | 0.000 |

| Surrogate | Recovery | Lower Limit | Upper Limit | Q |
|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 109 | 80 | 120 | |

Certificate of Analysis

| | | | | |
|---|---|---|---|---|
| Dibromofluoromethane | 102 | 86 | 118 | |
| p-Bromofluorobenzene | 101 | 86 | 115 | |
| Toluene-d8 | 97.7 | 88 | 110 | |

| | |
|---|---|
| U | Not detected at or above adjusted sample detection limit. |

**Sample #:** L12050284-10
**Client ID:** DUP-GW-050812
**Matrix:** Water
**Workgroup #:** WG398118
**Collect Date:** 05/08/2012 15:00
**Sample Tag:** 01

**PrePrep Method:** N/A
**Prep Method:** 5030B/5030C/5035A
**Analytical Method:** 8260B
**Analyst:** ADC
**Dilution:** 1
**Units:** ug/L

**Instrument:** HPMS8
**Prep Date:** N/A
**Cal Date:** 03/27/2012 15:49
**Run Date:** 05/16/2012 18:16
**File ID:** 8M379119

| Analyte | CAS # | Result | Qual | RL | MDL |
|---|---|---|---|---|---|
| 1,1,1-Trichloroethane | 71-55-6 | | U | 1.00 | 0.250 |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | | U | 1.00 | 0.200 |
| 1,1,2-Trichloro-1,2,2-Trifluoroethane | 76-13-1 | | U | 5.00 | 2.00 |
| 1,1,2-Trichloroethane | 79-00-5 | | U | 1.00 | 0.250 |
| 1,1-Dichloroethane | 75-34-3 | | U | 1.00 | 0.125 |
| 1,1-Dichloroethene | 75-35-4 | | U | 1.00 | 0.500 |
| 1,2,3-Trichlorobenzene | 87-61-6 | | U | 1.00 | 0.500 |
| 1,2,4-Trichlorobenzene | 120-82-1 | | U | 1.00 | 0.200 |
| 1,2-Dibromo-3-chloropropane | 96-12-8 | | U | 5.00 | 1.00 |
| 1,2-Dibromoethane | 106-93-4 | | U | 1.00 | 0.250 |
| 1,2-Dichlorobenzene | 95-50-1 | | U | 1.00 | 0.125 |
| 1,2-Dichloroethane | 107-06-2 | | U | 1.00 | 0.250 |
| cis-1,2-Dichloroethene | 156-59-2 | | U | 1.00 | 0.250 |
| trans-1,2-Dichloroethene | 156-60-5 | | U | 1.00 | 0.250 |
| 1,2-Dichloropropane | 78-87-5 | | U | 1.00 | 0.200 |
| 1,3-Dichlorobenzene | 541-73-1 | | U | 1.00 | 0.250 |
| 1,4-Dichlorobenzene | 106-46-7 | | U | 1.00 | 0.125 |
| 2-Butanone | 78-93-3 | | U | 10.0 | 2.50 |
| 2-Hexanone | 591-78-6 | | U | 10.0 | 2.50 |
| 4-Methyl-2-pentanone | 108-10-1 | | U | 10.0 | 2.50 |
| Acetone | 67-64-1 | | U | 10.0 | 2.50 |
| Benzene | 71-43-2 | | U | 1.00 | 0.125 |
| Bromochloromethane | 74-97-5 | | U | 1.00 | 0.200 |
| Bromodichloromethane | 75-27-4 | | U | 1.00 | 0.250 |
| Bromoform | 75-25-2 | | U | 1.00 | 0.500 |
| Bromomethane | 74-83-9 | | U | 1.00 | 0.500 |
| Carbon disulfide | 75-15-0 | | U | 1.00 | 0.500 |
| Carbon tetrachloride | 56-23-5 | | U | 1.00 | 0.250 |

Certificate of Analysis

| Analyte | CAS # | Result | Qual | RL | MDL |
|---|---|---|---|---|---|
| Chlorobenzene | 108-90-7 | | U | 1.00 | 0.125 |
| Chloroethane | 75-00-3 | | U | 1.00 | 0.500 |
| Chloroform | 67-66-3 | | U | 1.00 | 0.125 |
| Chloromethane | 74-87-3 | | U | 1.00 | 0.500 |
| cis-1,3-Dichloropropene | 10061-01-5 | | U | 1.00 | 0.250 |
| Cyclohexane | 110-82-7 | | U | 5.00 | 1.00 |
| Dibromochloromethane | 124-48-1 | | U | 1.00 | 0.250 |
| Dichlorodifluoromethane | 75-71-8 | | U | 1.00 | 0.250 |
| Ethyl benzene | 100-41-4 | | U | 1.00 | 0.250 |
| Isopropylbenzene | 98-82-8 | | U | 1.00 | 0.250 |
| Methyl acetate | 79-20-9 | | U | 5.00 | 1.00 |
| Methyl tert-butyl ether | 1634-04-4 | | U | 1.00 | 0.500 |
| Methylcyclohexane | 108-87-2 | | U | 5.00 | 1.00 |
| Methylene chloride | 75-09-2 | | U | 5.00 | 0.250 |
| m,p-Xylene | 179601-23-1 | | U | 1.00 | 0.500 |
| o-Xylene | 95-47-6 | | U | 1.00 | 0.250 |
| Styrene | 100-42-5 | | U | 1.00 | 0.125 |
| Tetrachloroethene | 127-18-4 | | U | 1.00 | 0.250 |
| Toluene | 108-88-3 | | U | 1.00 | 0.250 |
| trans-1,3-Dichloropropene | 10061-02-6 | | U | 1.00 | 0.500 |
| Trichloroethene | 79-01-6 | | U | 1.00 | 0.250 |
| Trichlorofluoromethane | 75-69-4 | | U | 1.00 | 0.250 |
| Vinyl chloride | 75-01-4 | | U | 1.00 | 0.250 |
| Epichlorohydrin | 106-89-8 | | | 0.000 | 0.000 |

| Surrogate | Recovery | Lower Limit | Upper Limit | Q |
|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 112 | 80 | 120 | |
| Dibromofluoromethane | 103 | 86 | 118 | |
| p-Bromofluorobenzene | 98.9 | 86 | 115 | |
| Toluene-d8 | 97.7 | 88 | 110 | |

| | |
|---|---|
| U | Not detected at or above adjusted sample detection limit. |

**Sample #:** L12050284-12
**Client ID:** EB-050812-GW
**Matrix:** Water
**Workgroup #:** WG398118
**Collect Date:** 05/08/2012 13:10
**Sample Tag:** 01

**PrePrep Method:** N/A
**Prep Method:** 5030B/5030C/5035A
**Analytical Method:** 8260B
**Analyst:** ADC
**Dilution:** 1
**Units:** ug/L

**Instrument:** HPMS8
**Prep Date:** N/A
**Cal Date:** 03/27/2012 15:49
**Run Date:** 05/16/2012 14:53
**File ID:** 8M379113

| Analyte | CAS # | Result | Qual | RL | MDL |
|---|---|---|---|---|---|
| 1,1,1-Trichloroethane | 71-55-6 | | U | 1.00 | 0.250 |

Certificate of Analysis

| Analyte | CAS # | Result | Qual | RL | MDL |
|---|---|---|---|---|---|
| 1,1,2,2-Tetrachloroethane | 79-34-5 | | U | 1.00 | 0.200 |
| 1,1,2-Trichloro-1,2,2-Trifluoroethane | 76-13-1 | | U | 5.00 | 2.00 |
| 1,1,2-Trichloroethane | 79-00-5 | | U | 1.00 | 0.250 |
| 1,1-Dichloroethane | 75-34-3 | | U | 1.00 | 0.125 |
| 1,1-Dichloroethene | 75-35-4 | | U | 1.00 | 0.500 |
| 1,2,3-Trichlorobenzene | 87-61-6 | | U | 1.00 | 0.500 |
| 1,2,4-Trichlorobenzene | 120-82-1 | | U | 1.00 | 0.200 |
| 1,2-Dibromo-3-chloropropane | 96-12-8 | | U | 5.00 | 1.00 |
| 1,2-Dibromoethane | 106-93-4 | | U | 1.00 | 0.250 |
| 1,2-Dichlorobenzene | 95-50-1 | | U | 1.00 | 0.125 |
| 1,2-Dichloroethane | 107-06-2 | | U | 1.00 | 0.250 |
| cis-1,2-Dichloroethene | 156-59-2 | | U | 1.00 | 0.250 |
| trans-1,2-Dichloroethene | 156-60-5 | | U | 1.00 | 0.250 |
| 1,2-Dichloropropane | 78-87-5 | | U | 1.00 | 0.200 |
| 1,3-Dichlorobenzene | 541-73-1 | | U | 1.00 | 0.250 |
| 1,4-Dichlorobenzene | 106-46-7 | | U | 1.00 | 0.125 |
| 2-Butanone | 78-93-3 | | U | 10.0 | 2.50 |
| 2-Hexanone | 591-78-6 | | U | 10.0 | 2.50 |
| 4-Methyl-2-pentanone | 108-10-1 | | U | 10.0 | 2.50 |
| Acetone | 67-64-1 | | U | 10.0 | 2.50 |
| Benzene | 71-43-2 | | U | 1.00 | 0.125 |
| Bromochloromethane | 74-97-5 | | U | 1.00 | 0.200 |
| Bromodichloromethane | 75-27-4 | | U | 1.00 | 0.250 |
| Bromoform | 75-25-2 | | U | 1.00 | 0.500 |
| Bromomethane | 74-83-9 | | U | 1.00 | 0.500 |
| Carbon disulfide | 75-15-0 | | U | 1.00 | 0.500 |
| Carbon tetrachloride | 56-23-5 | | U | 1.00 | 0.250 |
| Chlorobenzene | 108-90-7 | | U | 1.00 | 0.125 |
| Chloroethane | 75-00-3 | | U | 1.00 | 0.500 |
| Chloroform | 67-66-3 | | U | 1.00 | 0.125 |
| Chloromethane | 74-87-3 | | U | 1.00 | 0.500 |
| cis-1,3-Dichloropropene | 10061-01-5 | | U | 1.00 | 0.250 |
| Cyclohexane | 110-82-7 | | U | 5.00 | 1.00 |
| Dibromochloromethane | 124-48-1 | | U | 1.00 | 0.250 |
| Dichlorodifluoromethane | 75-71-8 | | U | 1.00 | 0.250 |
| Ethyl benzene | 100-41-4 | | U | 1.00 | 0.250 |
| Isopropylbenzene | 98-82-8 | | U | 1.00 | 0.250 |
| Methyl acetate | 79-20-9 | | U | 5.00 | 1.00 |
| Methyl tert-butyl ether | 1634-04-4 | | U | 1.00 | 0.500 |

Certificate of Analysis

| Analyte | CAS # | Result | Qual | RL | MDL |
|---|---|---|---|---|---|
| Methylcyclohexane | 108-87-2 | | U | 5.00 | 1.00 |
| Methylene chloride | 75-09-2 | | U | 5.00 | 0.250 |
| m,p-Xylene | 179601-23-1 | | U | 1.00 | 0.500 |
| o-Xylene | 95-47-6 | | U | 1.00 | 0.250 |
| Styrene | 100-42-5 | | U | 1.00 | 0.125 |
| Tetrachloroethene | 127-18-4 | | U | 1.00 | 0.250 |
| Toluene | 108-88-3 | | U | 1.00 | 0.250 |
| trans-1,3-Dichloropropene | 10061-02-6 | | U | 1.00 | 0.500 |
| Trichloroethene | 79-01-6 | | U | 1.00 | 0.250 |
| Trichlorofluoromethane | 75-69-4 | | U | 1.00 | 0.250 |
| Vinyl chloride | 75-01-4 | | U | 1.00 | 0.250 |
| Epichlorohydrin | 106-89-8 | | | 0.000 | 0.000 |

| Surrogate | Recovery | Lower Limit | Upper Limit | Q |
|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 113 | 80 | 120 | |
| Dibromofluoromethane | 104 | 86 | 118 | |
| p-Bromofluorobenzene | 99.0 | 86 | 115 | |
| Toluene-d8 | 98.4 | 88 | 110 | |

| | |
|---|---|
| U | Not detected at or above adjusted sample detection limit. |

# 2.1.1.2 QC Summary Data

## Example 8260 Calculations

**1.0 Calculating the Response Factor (RF) from the initial calibration (ICAL) data:**

RF = [ (Ax) (Cis) ] / [ (Ais) (Cx) ]

| where: | Example |
|---|---|
| Ax = Area of the characteristic ion for the compound being measured: | 3399156 |
| Cis = Concentration of the specific internal standard (ug/mL) | 25 |
| Ais = Area of the characteristic ion of the specific internal standard | 846471 |
| Cx = Concentration of the compound in the standard being measured (ug/mL) | 100 |
| RF = Calculated Response Factor | **1.0039** |

**2.0 Calculating the concentration ( C ) of a compound in water using the average RF: ***

Cx = [ (Ax) (Cis) (Vn)(D)] / [ (Ais) (RF) (Vs) ]

| where: | **Example** |
|---|---|
| Ax = Area of the characteristic ion for the compound being measured | **3122498** |
| Cis = Concentration of the specific internal standard (ug/L) | **25** |
| D = Dilution factor for sample as a multiplier ( 10x = 10) | **1** |
| Ais = Area of the characteristic ion of the specific internal standard | **611048** |
| RF = Average RF from the ICAL | **1.004** |
| Vs = Purge volume of sample (mL) | **10** |
| Vn = Nominal purge volume of sample (mL) ( 10.0 mL ) | **10** |
| Cx = Concentration of the compound in the sample being measured (ug/L) | **127.2428** |

**3.0 Calculating the concentration ( C ) of a compound in soil using the average RF: ***

Cx = [ (Ax) (Cis) (Wn)(D)] / [ (Ais) (RF) (Ws) ]

| where: | **Example** |
|---|---|
| Ax = Area of the characteristic ion for the compound being measured | **3122498** |
| Cis = Concentration of the specific internal standard (ug/L) | **25** |
| D = Dilution factor for sample as a multiplier ( 10x = 10) | **1** |
| Ais = Area of the characteristic ion of the specific internal standard | **611048** |
| RF = Average RF from the ICAL | **1.004** |
| Ws = Weight of sample purged (g) | **5** |
| Wn = Nominal purge weight (g) ( 5.0 g) | **5** |
| Cx = Concentration of the compound in the sample being measured (ug/L) | **127.2428** |

Dry weight correction:

| | |
|---|---|
| Percent solids (PCT_S) | **50** |
| Cd = (Cx) (100)/PCT_S | **254.4856** |

* Concentrations appearing on the instrument quantitation reports are on-column results and do not take into account initial volume, final volume, and the dilution factor.

**4.0 Concentration from Linear Regression**

**Step 1: Retrieve Curve Data From Plot, y = mx + b**

y = response ratio = response of analyte / response of IS = Ax/Ais

x = amount ratio = concentration analyte/concentration internal standard = Cx / Cis

m = slope from curve = 0.213

b = intercept from curve = - 0.00642

**Step 2: Calculate y from Quantitation Report**

y = 86550/593147 = 0.1459

**Step 3: Solve for x**

x = (y - b)/m = [( 0.1459 -( - 0.00642)]/ 0.213 = 0.7152

**Step 4: Solve for analyte concentration Cx**

Cx = Cis ( x ) = (25.0)(0.7152) = 17.88

**Example Spreadsheet Calculation:**

| | |
|---|---|
| Slope from curve, m: | **0.213** |
| Intercept from curve, b: | **-0.00642** |
| Area of analyte, Ax: | **86550** |
| Area of Internal Standard , Ais: | **593147** |
| Concentration of IS, Cis | **25.00** |
| Response Ratio: | **0.145917** |
| Amount Ratio: | **0.715195** |
| Concentration: | **17.87988** |
| Units of Internal Standard: | **ug/L** |

**5.0 Concentration from Quadratic Regression**

**Step 1 - Retrieve Curve Data from Plot, y = Ax^2 + Bx + C**
Where:
Ax^2 + Bx + (C - y) = 0
A, B, C = constants from the ICAL quadratic regression
y = Response ratio = Area of analyte/Area of internal standard (IS)
x = Amount ratio = Concentration of analyte/concentration of IS

**Step 2: Calculate y from Quantitation Report**

y = Ax/Ais

**Step 3: Solve for x using the quadratic formula**
Ax^2 + Bx + C - y = 0

$$x = \frac{b \pm \sqrt{\left(b^2 - 4a(c - y)\right)}}{2a}$$ (Two possible solutions)

**Step 4: Solve for analyte concentration Cx**

Cx = ( Cis )( Amount ratio)

**Example Spreadsheet Calculation:**

| | | |
|---|---|---|
| Value of A from plot: | **-0.00629** | |
| Value of B from plot: | **0.511** | |
| Value of C from plot: | **-0.0276** | |
| Area of unknown from quantitation report: | **293821** | |
| Area of IS from quantiation report: | **784848** | |
| Response ratio, y: | **0.374367** | |
| C - y: | **-0.40197** | |
| Root 1 - Computed amount ratio , X1: | **80.44567** | |
| Root 2 - Computed amount ratio , X2: | **0.794396** | use this solution |
| Concentration of IS, Cis: | **25.00** | |
| Concentration of analyte, Cx: | **19.86** | ug/L |

Microbac Laboratories Inc.

# Instrument Run Log

Instrument: HPMS6 Dataset: 012512
Analyst1: ADC Analyst2: NA
Method: 8260B/OVAP SOP: MSV01 Rev: 14/0
Method: 624 SOP: MSV10 Rev: 8
Method: 5030B/5030C/5035A SOP: PAT01 Rev: 13
Maintenance Log ID: 40412

Internal Standard: STD49576 Surrogate Standard: STD49251
CCV: STD49665; STD49721 LCS: STD49523; STD49518 MS/MSD: NA

Column 1 ID: RTX502.2 Column 2 ID: NA
Workgroups: WG387849; WG387881

Comments:

| File ID | Sample Information | pH | Mat | Dil | Reference | Date/Time |
|---|---|---|---|---|---|---|
| 6M105367 | WG387846-01 50ng BFB STD 8260 | NA | 1 | 1 | STD49582 | 01/25/12 08:08 |
| 6M105368 | WG387846-02 50ug/L CCV STD 8260 | NA | 1 | 1 | STD49665 | 01/25/12 08:34 |
| 6M105369 | WG387XXX-01 100ug/L A9 CCV STD 8260 | NA | 1 | 1 | STD49484 | 01/25/12 09:07 |
| 6M105370 | WG387849-01 VBLK0125 BLANK STD 826 | NA | 1 | 1 | | 01/25/12 09:40 |
| 6M105371 | WG388587-01 5ug/L 826A9FOO QC | NA | 1 | 1 | STD49721 | 01/25/12 10:12 |
| 6M105372 | WG388587-02 20ug/L 826A9FOO QC | NA | 1 | 1 | STD49721 | 01/25/12 10:45 |
| 6M105373 | WG388587-03 50ug/L 826A9FOO QC | NA | 1 | 1 | STD49721 | 01/25/12 11:17 |
| 6M105374 | WG388587-04 100ug/L 826A9FOO QC | NA | 1 | 1 | STD49721 | 01/25/12 11:49 |
| 6M105375 | WG388587-05 200ug/L 826A9FOO QC | NA | 1 | 1 | STD49721 | 01/25/12 12:22 |
| 6M105376 | WG388587-06 300ug/L 826A9FOO QC | NA | 1 | 1 | STD49721 | 01/25/12 12:55 |
| 6M105377 | WG388587-07 400ug/L 826A9FOO QC | NA | 1 | 1 | STD49721 | 01/25/12 13:27 |
| 6M105378 | WG388587-08 100ug/L ALT 826A9FOO Q | NA | 1 | 1 | STD49721 | 01/25/12 14:00 |
| 6M105379 | WG387849-02 20ug/L LCS STD 8260 | NA | 1 | 1 | STD49523 | 01/25/12 14:32 |
| 6M105380 | WG387849-03 20ug/L LCSDUP STD 8260 | NA | 1 | 1 | STD49523 | 01/25/12 15:05 |
| 6M105381 | L12010470-02 B 100X 826-SPE D1 | <2 | 1 | 100 | | 01/25/12 15:37 |
| 6M105382 | L12010470-03 B 100X 826-SPE D1 | <2 | 1 | 100 | | 01/25/12 16:09 |
| 6M105383 | L12010470-04 B 100X 826-SPE D1 | <2 | 1 | 100 | | 01/25/12 16:42 |
| 6M105384 | L12010470-05 B 100X 826-SPE D1 | <2 | 1 | 100 | | 01/25/12 17:14 |
| 6M105385 | L12010470-01 B 500X 826-SPE D1 | <2 | 1 | 500 | | 01/25/12 17:47 |
| 6M105386 | L12010534-01 B 200X 826-SPE D1 | <2 | 1 | 200 | | 01/25/12 18:19 |
| 6M105387 | L12010534-02 B 2X 826-SPE D1 | <2 | 1 | 2 | | 01/25/12 18:51 |
| 6M105388 | L12010534-03 B 2X 826-SPE D1 | <2 | 1 | 2 | | 01/25/12 19:24 |
| 6M105389 | L12010481-15 B 25X 826-SPE D1 | <2 | 1 | 25 | | 01/25/12 19:56 |
| 6M105390 | RINSE | NA | 1 | 1 | | 01/25/12 20:29 |
| 6M105391 | RINSE | NA | 1 | 1 | | 01/25/12 21:01 |
| 6M105392 | RINSE | NA | 1 | 1 | | 01/25/12 21:33 |

**Comments**

| Seq. | Rerun | Dil. | Reason | Analytes |
|---|---|---|---|---|
| 3 | | | | |
| File ID: 6M105369 | | | | |
| Not needed, DNR. | | | | |
| 19 | X | 2000 | Over Calibration Range | CIS12-DCE |

Approved: January 26, 2012

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# Instrument Run Log

| | | | | | |
|---|---|---|---|---|---|
| Instrument: | HPMS6 | Dataset: | 012512 | | |
| Analyst1: | ADC | Analyst2: | NA | | |
| Method: | 8260B/OVAP | SOP: | MSV01 | Rev: | 14/0 |
| Method: | 624 | SOP: | MSV10 | Rev: | 8 |
| Method: | 5030B/5030C/5035A | SOP: | PAT01 | Rev: | 13 |
| Maintenance Log ID: | 40412 | | | | |

Internal Standard: STD49576 Surrogate Standard: STD49251

CCV: STD49665; STD49721 LCS: STD49523; STD49518 MS/MSD: NA

Column 1 ID: RTX502.2 Column 2 ID: NA

Workgroups: WG387849; WG387881

Comments:

**Comments**

| Seq. | Rerun | Dil. | Reason | Analytes |
|---|---|---|---|---|
| File ID: 6M105385 | | | | |
| 20 | X | 500 | Over Calibration Range | TCE |
| File ID: 6M105386 | | | | |

Approved: January 26, 2012

Microbac Laboratories Inc.

# Instrument Run Log

Instrument: HPMS8 Dataset: 012512
Analyst1: ADC Analyst2: NA
Method: 8260B SOP: MSV01 Rev: 14
Method: 624 SOP: MSV10 Rev: 8
Method: 5030B/5030C/5035A SOP: PAT01 Rev: 13
Maintenance Log ID: 40490

Internal Standard: STD49574 Surrogate Standard: STD49574
CCV: STD49665 LCS: STD49523 MS/MSD: NA

Column 1 ID: RTX502.2 Column 2 ID: NA
Workgroups: WG387881(ICAL), WG387845

Comments:

| File ID | Sample Information | pH | Mat | Dil | Reference | Date/Time |
|---|---|---|---|---|---|---|
| 8M376554 | WG387844-01 50ng BFB STD 8260 | NA | 1 | 1 | STD49582 | 01/25/12 10:52 |
| 8M376555 | WG387844-02 50ug/L CCV STD 8260 | NA | 1 | 1 | STD49665 | 01/25/12 11:14 |
| 8M376556 | WG387XXX-01 100ug/L A9 CCV STD 8260 | NA | 1 | 1 | STD49484 | 01/25/12 11:43 |
| 8M376557 | WG387845-01 VBLK0125 BLANK STD 826 | NA | 1 | 1 | | 01/25/12 12:13 |
| 8M376558 | WG387881-01 5ug/L A9FOO STD | NA | 1 | 1 | STD49721 | 01/25/12 12:43 |
| 8M376559 | WG387881-02 20ug/L A9FOO STD | NA | 1 | 1 | STD49721 | 01/25/12 13:28 |
| 8M376560 | WG387881-03 50ug/L A9FOO STD | NA | 1 | 1 | STD49721 | 01/25/12 13:58 |
| 8M376561 | WG387881-04 100ug/L A9FOO STD | NA | 1 | 1 | STD49721 | 01/25/12 14:29 |
| 8M376562 | WG387881-05 200ug/L A9FOO STD | NA | 1 | 1 | STD49721 | 01/25/12 14:59 |
| 8M376563 | WG387881-06 300ug/L A9FOO STD | NA | 1 | 1 | STD49721 | 01/25/12 15:29 |
| 8M376564 | WG387881-07 400ug/L A9FOO STD | NA | 1 | 1 | STD49721 | 01/25/12 15:59 |
| 8M376565 | WG387881-08 100ug/L A9FOO ALT | NA | 1 | 1 | STD49721 | 01/25/12 16:29 |
| 8M376566 | WG387845-02 100ug/L A9FOO LCS | NA | 1 | 1 | STD49721 | 01/25/12 16:59 |
| 8M376567 | WG387845-03 100ug/L A9FOO LCSDUP | NA | 1 | 1 | STD49721 | 01/25/12 17:29 |
| 8M376568 | WG387845-04 100ug/L A9FOO P\&A | NA | 1 | 1 | STD49721 | 01/25/12 17:59 |
| 8M376569 | WG387845-05 100ug/L A9FOO P\&A | NA | 1 | 1 | STD49721 | 01/25/12 18:29 |

Approved: February 02, 2012

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Microbac Laboratories Inc.

# Instrument Run Log

Instrument: HPMS8 Dataset: 032712
Analyst1: ADC Analyst2: NA
Method: 8260B SOP: MSV01 Rev: 14
Method: 624 SOP: MSV10 Rev: 8
Method: 5030B/5030C/5035A SOP: PAT01 Rev: 13
Maintenance Log ID: 41161

Internal Standard: STD50587 Surrogate Standard: STD50587
CCV: STD50699 LCS: STD50665 MS/MSD: STD50665

Column 1 ID: RTX502.2 Column 2 ID: NA
Workgroups: WG393321 (ICAL)

Comments:

| File ID | Sample Information | pH | Mat | Dil | Reference | Date/Time |
|---|---|---|---|---|---|---|
| 8M377934 | WG393321-01 BFB 50ng 8260 | NA | 1 | 1 | STD50660 | 03/27/12 10:51 |
| 8M377935 | WG393321-02 0.3 ug/L STD 8260 | NA | 1 | 1 | STD50782 | 03/27/12 11:14 |
| 8M377936 | WG393321-03 0.4 ug/L STD 8260 | NA | 1 | 1 | STD50782 | 03/27/12 11:45 |
| 8M377937 | WG393321-04 1.0 ug/L STD 8260 | NA | 1 | 1 | STD50782 | 03/27/12 12:15 |
| 8M377938 | WG393321-05 2.0 ug/L STD 8260 | NA | 1 | 1 | STD50782 | 03/27/12 12:46 |
| 8M377939 | WG393321-06 5.0 ug/L STD 8260 | NA | 1 | 1 | STD50782 | 03/27/12 13:17 |
| 8M377940 | WG393321-07 20.0 ug/L STD 8260 | NA | 1 | 1 | STD50782 | 03/27/12 13:48 |
| 8M377941 | WG393321-08 50.0 ug/L STD 8260 | NA | 1 | 1 | STD50782 | 03/27/12 14:18 |
| 8M377942 | WG393321-09 100.0 ug/L STD 8260 | NA | 1 | 1 | STD50782 | 03/27/12 14:49 |
| 8M377943 | WG393321-10 200.0 ug/L STD 8260 | NA | 1 | 1 | STD50782 | 03/27/12 15:19 |
| 8M377944 | WG393321-11 300.0 ug/L STD 8260 | NA | 1 | 1 | STD50782 | 03/27/12 15:49 |
| 8M377945 | RINSE | NA | 1 | 1 | STD50782 | 03/27/12 16:20 |
| 8M377946 | WG393321-04 1.0 ug/L STD 8260 | NA | 1 | 1 | STD50782 | 03/27/12 16:50 |
| 8M377947 | WG393321-12 50.0 ug/L ALT SRC 8260 | NA | 1 | 1 | STD50783 | 03/27/12 17:20 |

**Comments**

| Seq. | Rerun | Dil. | Reason | Analytes |
|---|---|---|---|---|
| 13 | | | | |
| File ID: 8M377946 | | | | |
| WG393321-04 1.0 STD RR not needed | | | | |

Approved: March 30, 2012

Microbac Laboratories Inc.

# Instrument Run Log

Instrument: HPMS8 Dataset: 051612
Analyst1: ADC Analyst2: NA
Method: 8260 SOP: MSV01 Rev: 14
Method: 5030/5035 SOP: PAT01 Rev: 13

Maintenance Log ID: 41729

Internal Standard: STD51487 Surrogate Standard: STD51487
CCV: STD51468 LCS: STD51676 MS/MSD: STD51676

Column 1 ID: RTX502.2 Column 2 ID: NA
Workgroups: WG398118

Comments:

| File ID | Sample Information | pH | Mat | Dil | Reference | Date/Time |
|---|---|---|---|---|---|---|
| 8M379101 | WG398117-01 BFB 50ng 8260 | NA | 1 | 1 | STD51241 | 05/16/12 08:25 |
| 8M379102 | WG398117-02 50ug/L CCV 8260 | NA | 1 | 1 | STD51468 | 05/16/12 08:48 |
| 8M379103 | WG397XXX-01 100ug/L CCV A9 | NA | 1 | 1 | STDXXXXX | 05/16/12 09:20 |
| 8M379104 | WG398118-01 VBLK0516 BLANK 8260 | NA | 1 | 1 | | 05/16/12 09:53 |
| 8M379105 | WG398118-02 20ug/L LCS 8260 | NA | 1 | 1 | STD51372 | 05/16/12 10:26 |
| 8M379106 | L12050301-12 A MS 826-SPE | <2 | 1 | 1 | STD51372 | 05/16/12 10:59 |
| 8M379107 | L12050301-13 A MSD 826-SPE | <2 | 1 | 1 | STD51372 | 05/16/12 11:34 |
| 8M379108 | L12050304-01 10X 826-TC | NA | 17 | 10 | | 05/16/12 12:07 |
| 8M379109 | L12050309-01 10X 826-TC | NA | 17 | 10 | | 05/16/12 12:39 |
| 8M379110 | L12050312-01 10X 826-TC | NA | 17 | 10 | | 05/16/12 13:13 |
| 8M379111 | L12050301-09 A 826-SPE2 | <2 | 1 | 1 | | 05/16/12 13:46 |
| 8M379112 | L12050284-09 A 826-SPE | <2 | 1 | 1 | | 05/16/12 14:20 |
| 8M379113 | L12050284-12 A 826-SPE | <2 | 1 | 1 | | 05/16/12 14:53 |
| 8M379114 | L12050301-11 A 826-SPE2 | <2 | 1 | 1 | | 05/16/12 15:28 |
| 8M379115 | L12050284-01 A 50X 826-SPE | <2 | 1 | 50 | | 05/16/12 16:02 |
| 8M379116 | L12050284-03 A 826-SPE | <2 | 1 | 1 | | 05/16/12 16:36 |
| 8M379117 | L12050284-05 A 826-SPE | <2 | 1 | 1 | | 05/16/12 17:10 |
| 8M379118 | L12050284-07 A 826-SPE | <2 | 1 | 1 | | 05/16/12 17:43 |
| 8M379119 | L12050284-10 A 826-SPE | <2 | 1 | 1 | | 05/16/12 18:16 |
| 8M379120 | L12050301-10 A 826-SPE | <2 | 1 | 1 | | 05/16/12 18:50 |
| 8M379121 | L12050301-14 A 826-SPE | <2 | 1 | 1 | | 05/16/12 19:23 |
| 8M379122 | L12050301-15 A 826-SPE | <2 | 1 | 1 | | 05/16/12 19:56 |
| 8M379123 | L12050301-16 A 826-SPE | <2 | 1 | 1 | | 05/16/12 20:29 |
| 8M379124 | L12050301-17 A 826-SPE | <2 | 1 | 1 | | 05/16/12 21:01 |
| 8M379125 | RINSE | NA | 1 | 1 | | 05/16/12 21:34 |
| 8M379126 | RINSE | NA | 1 | 1 | | 05/16/12 22:07 |
| 8M379127 | RINSE | NA | 1 | 1 | | 05/16/12 22:39 |

**Comments**

| Seq. | Rerun | Dil. | Reason | Analytes |
|---|---|---|---|---|
| 17 | X | 2 | Analyzed too dilute | |
| File ID: 8M379115 | | | | |
| L12050284-01 | | | | |

Approved: May 18, 2012

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Microbac Laboratories Inc.

# Instrument Run Log

Instrument: HPMS8 Dataset: 051612
Analyst1: ADC Analyst2: NA
Method: 8260 SOP: MSV01 Rev: 14
Method: 5030/5035 SOP: PAT01 Rev: 13

Maintenance Log ID: 41729

Internal Standard: STD51487 Surrogate Standard: STD51487
CCV: STD51468 LCS: STD51676 MS/MSD: STD51676

Column 1 ID: RTX502.2 Column 2 ID: NA
Workgroups: WG398118

Comments:

**Comments**

| Seq. | Rerun | Dil. | Reason | Analytes |
|---|---|---|---|---|
| 25 | X | | Missed Tune | |
| File ID: 8M379123 | | | | |
| | L12050301-16 | | | |
| 26 | X | | Missed Tune | |
| File ID: 8M379124 | | | | |
| | L12050301-17 | | | |

Approved: May 18, 2012

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# Instrument Run Log

Instrument: HPMS6 Dataset: 051612
Analyst1: ADC Analyst2: NA
Method: 8260B SOP: MSV01 Rev: 14
Method: 5030B/5030C/5035A SOP: PAT01 Rev: 13

Maintenance Log ID: 41807

Internal Standard: STD51262 Surrogate Standard: STD51188
CCV: STD51468 LCS: STD51676 MS/MSD: STD51676

Column 1 ID: RTX502.2 Column 2 ID: NA
Workgroups: WG397878 (ICAL)

Comments:

| File ID | Sample Information | pH | Mat | Dil | Reference | Date/Time |
|---|---|---|---|---|---|---|
| 6M108163 | RINSE | NA | 1 | 1 | | 05/16/12 07:34 |
| 6M108164 | RINSE | NA | 1 | 1 | | 05/16/12 08:06 |
| 6M108165 | RINSE | NA | 1 | 1 | | 05/16/12 09:59 |
| 6M108166 | RINSE | NA | 1 | 1 | | 05/16/12 10:32 |
| 6M108168 | RINSE | NA | 1 | 1 | | 05/16/12 13:49 |
| 6M108169 | RINSE | NA | 1 | 1 | | 05/16/12 14:22 |
| 6M108170 | WG397878-01 50ng/L BFB STD | NA | 1 | 1 | STD51241 | 05/16/12 14:50 |
| 6M108171 | WG397878-02 0.3 ug/L STD 8260 | NA | 1 | 1 | STD51468 | 05/16/12 15:15 |
| 6M108172 | WG397878-03 0.4 ug/L STD 8260 | NA | 1 | 1 | STD51468 | 05/16/12 15:48 |
| 6M108173 | WG397878-04 1.0 ug/L STD 8260 | NA | 1 | 1 | STD51468 | 05/16/12 16:20 |
| 6M108174 | WG397878-05 2.0 ug/L STD 8260 | NA | 1 | 1 | STD51468 | 05/16/12 16:53 |
| 6M108175 | WG397878-06 5.0 ug/L STD 8260 | NA | 1 | 1 | STD51468 | 05/16/12 17:26 |
| 6M108176 | WG397878-07 20.0 ug/L STD 8260 | NA | 1 | 1 | STD51468 | 05/16/12 17:58 |
| 6M108177 | WG397878-08 50.0 ug/L STD 8260 | NA | 1 | 1 | STD51468 | 05/16/12 18:31 |
| 6M108178 | WG397878-09 100.0 ug/L STD 8260 | NA | 1 | 1 | STD51468 | 05/16/12 19:03 |
| 6M108179 | WG397878-10 200.0 ug/L STD 8260 | NA | 1 | 1 | STD51468 | 05/16/12 19:36 |
| 6M108180 | WG397878-11 300.0 ug/L STD 8260 | NA | 1 | 1 | STD51468 | 05/16/12 20:08 |
| 6M108181 | RINSE | NA | 1 | 1 | | 05/16/12 20:41 |
| 6M108182 | WG397878-12 50.0 ug/L ALT SRC | NA | 1 | 1 | STD51676 | 05/16/12 21:13 |

Approved: May 21, 2012

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Microbac Laboratories Inc.

# Instrument Run Log

Instrument: HPMS6 Dataset: 051912
Analyst1: ADC Analyst2: NA
Method: 8260B SOP: MSV01 Rev: 14
Method: 5030B/5030C/5035A SOP: PAT01 Rev: 13

Maintenance Log ID: 41810

Internal Standard: STD51262 Surrogate Standard: STD51188
CCV: STD51468 LCS: STD51676 MS/MSD: STD51676

Column 1 ID: RTX502.2 Column 2 ID: NA
Workgroups: WG398533

Comments:

| File ID | Sample Information | pH | Mat | Dil | Reference | Date/Time |
|---|---|---|---|---|---|---|
| 6M108264 | WG398532-01 BFB 50ng 8260 | NA | 1 | 1 | STD51241 | 05/19/12 15:56 |
| 6M108265 | WG398532-02 50ug/L CCV 8260 | NA | 1 | 1 | STD51468 | 05/19/12 16:22 |
| 6M108266 | WG398532-02 50ug/L CCV 8260 | NA | 1 | 1 | STD51694 | 05/19/12 17:02 |
| 6M108267 | WG398XXX-01 100ug/L CCV A9 | NA | 1 | 1 | STD51412 | 05/19/12 17:35 |
| 6M108268 | WG398533-01 VBLK0519 BLANK 8260 | NA | 1 | 1 | | 05/19/12 18:07 |
| 6M108269 | WG398533-02 20ug/L LCS 8260 | NA | 1 | 1 | STD51676 | 05/19/12 18:40 |
| 6M108270 | WG398533-03 20ug/L LCS DUP 8260 | NA | 1 | 1 | STD51676 | 05/19/12 19:13 |
| 6M108271 | L12050284-01 10X C 826-SPE D1 | <2 | 1 | 10 | | 05/19/12 19:46 |
| 6M108272 | L12050245-04 2X C 826-SPE3 D1 | <2 | 1 | 2 | | 05/19/12 20:18 |
| 6M108273 | L12050505-12 A 826-SPE | <2 | 1 | 1 | | 05/19/12 20:51 |
| 6M108274 | L12050505-11 A 826-SPE | <2 | 1 | 1 | | 05/19/12 21:24 |
| 6M108275 | L12050505-10 A 826-SPE | <2 | 1 | 1 | | 05/19/12 21:56 |
| 6M108276 | L12050442-01 10X 826-TC | NA | 17 | 10 | | 05/19/12 22:29 |
| 6M108277 | L12050469-01 10X 826-TC | NA | 17 | 10 | | 05/19/12 23:01 |
| 6M108278 | L12050505-01 A 826-SPE | 7 | 1 | 1 | | 05/19/12 23:34 |
| 6M108279 | L12050505-02 A 826-SPE | 7 | 1 | 1 | | 05/20/12 00:06 |
| 6M108280 | L12050505-03 A 826-SPE | 7 | 1 | 1 | | 05/20/12 00:39 |
| 6M108281 | L12050505-04 A 826-SPE | 7 | 1 | 1 | | 05/20/12 01:11 |
| 6M108282 | L12050505-05 A 826-SPE | <2 | 1 | 1 | | 05/20/12 01:44 |
| 6M108283 | L12050505-06 A 826-SPE | 7 | 1 | 1 | | 05/20/12 02:17 |
| 6M108284 | L12050505-07 A 826-SPE | 7 | 1 | 1 | | 05/20/12 02:49 |
| 6M108285 | L12050505-08 A 826-SPE | <2 | 1 | 1 | | 05/20/12 03:21 |
| 6M108286 | L12050505-09 A 826-SPE | 7 | 1 | 1 | | 05/20/12 03:54 |
| 6M108287 | RINSE | NA | 1 | 1 | | 05/20/12 04:26 |
| 6M108288 | RINSE | NA | 1 | 1 | | 05/20/12 04:59 |
| 6M108289 | WG398533-04 624 BLANK | NA | 2 | 1 | | 05/20/12 05:31 |
| 6M108290 | L12050519-07 A 624-SPE | <2 | 2 | 1 | | 05/20/12 06:04 |
| 6M108291 | L12050519-06 A 624-SPE | 7 | 2 | 1 | | 05/20/12 06:36 |
| 6M108292 | L12050519-05 A 624-SPE | 7 | 2 | 1 | | 05/20/12 07:09 |
| 6M108293 | L12050519-04 A 624-SPE | 7 | 2 | 1 | | 05/20/12 07:41 |
| 6M108294 | CCV | NA | 1 | 1 | | 05/20/12 08:14 |
| 6M108295 | RINSE | NA | 1 | 1 | | 05/20/12 08:46 |

Approved: May 21, 2012

Page: 1

Microbac Laboratories Inc.

# Instrument Run Log

Instrument: HPMS6 Dataset: 051912
Analyst1: ADC Analyst2: NA
Method: 8260B SOP: MSV01 Rev: 14
Method: 5030B/5030C/5035A SOP: PAT01 Rev: 13

Maintenance Log ID: 41810

Internal Standard: STD51262 Surrogate Standard: STD51188
CCV: STD51468 LCS: STD51676 MS/MSD: STD51676

Column 1 ID: RTX502.2 Column 2 ID: NA
Workgroups: WG398533

Comments:

**Comments**

| Seq. | Rerun | Dil. | Reason | Analytes |
|---|---|---|---|---|
| 22 | X | 100 | Over Calibration Range | NAP |
| File ID: 6M108285 | | | | |
| | L12050505-08 | | | |
| 23 | X | | Surrogate standard failure | |
| File ID: 6M108286 | | | | |
| | L12050505-09 | | | |

Approved: May 21, 2012

Microbac Laboratories Inc.

Data Checklist

Date: 25-JAN-2012
Analyst: ADC
Analyst: NA
Method: 8260B/624/OVAP
Instrument: HPMS6
Curve Workgroup: NA
Runlog ID: 44829
Analytical Workgroups: WG387849; WG387881

| | |
|---|---|
| System Performance Check | NA |
| BFB | X |
| Initial Calibration | X |
| Average RF | X |
| Linear Reg or Higher Order Curve | X |
| Second Source standard % Difference | X |
| Continuing Calibration /Check Standards | X |
| Project/Client Specific Requirements | X |
| Special Standards | X |
| Blanks | X |
| TCL's | X |
| Surrogates | X |
| LCS (Laboratory Control Sample) | X |
| Recoveries | X |
| Surrogates | X |
| MS/MSD/Duplicates | NA |
| Samples | X |
| TCL Hits | X |
| Spectra of TCL Hits | TMB |
| Surrogates | X |
| Internal Standards Criteria | X |
| Library Searches | NA |
| Calculations & Correct Factors | X |
| Dilutions Run | X |
| Reruns | X |
| Manual Integrations | NA |
| Case Narrative | X |
| Results Reporting/Data Qualifiers | X |
| KOBRA Workgroup Data | X |
| Check for Completeness | X |
| Primary Reviewer | TMB |
| Secondary Reviewer | MDA |
| | |
| | |
| Check for compliance with method and project specific requirements | X |
| Check the completeness of reported information | X |
| Check the information for the report narrative | X |
| Check the reasonableness of the results | X |
| | |

Primary Reviewer:
26-JAN-2012
Tiffany Bailey

Secondary Reviewer:
26-JAN-2012

CHECKLIST1 - Modified 03/05/2008
Generated: FEB-02-2012 14:41:12

Microbac Laboratories Inc.

Data Checklist

Date: 25-JAN-2012
Analyst: ADC
Analyst: NA
Method: 8260
Instrument: HPMS8
Curve Workgroup: WG387881
Runlog ID: 44940
Analytical Workgroups: WG387845

| | |
|---|---|
| System Performance Check | NA |
| BFB | X |
| Initial Calibration | X |
| Average RF | X |
| Linear Reg or Higher Order Curve | X |
| Second Source standard % Difference | X |
| Continuing Calibration /Check Standards | X |
| Project/Client Specific Requirements | X |
| Special Standards | NA |
| Blanks | X |
| TCL's | X |
| Surrogates | X |
| LCS (Laboratory Control Sample) | X |
| Recoveries | X |
| Surrogates | X |
| MS/MSD/Duplicates | X |
| Samples | NA |
| TCL Hits | NA |
| Spectra of TCL Hits | NA |
| Surrogates | NA |
| Internal Standards Criteria | X |
| Library Searches | NA |
| Calculations & Correct Factors | X |
| Dilutions Run | NA |
| Reruns | NA |
| Manual Integrations | NA |
| Case Narrative | X |
| Results Reporting/Data Qualifiers | X |
| KOBRA Workgroup Data | X |
| Check for Completeness | X |
| Primary Reviewer | ADC |
| Secondary Reviewer | MDA |
| | |
| | |
| Check for compliance with method and project specific requirements | X |
| Check the completeness of reported information | X |
| Check the information for the report narrative | X |
| Check the reasonableness of the results | X |
| | |

Primary Reviewer:
02-FEB-2012

Secondary Reviewer:
02-FEB-2012

CHECKLIST1 - Modified 03/05/2008
Generated: FEB-02-2012 15:04:22

Microbac Laboratories Inc.

Data Checklist

Date: 27-MAR-2012
Analyst: ADC
Analyst: NA
Method: 8260/624
Instrument: HPMS8
Curve Workgroup: WG393321
Runlog ID: 45930
Analytical Workgroups:

| | |
|---|---|
| System Performance Check | NA |
| BFB | X |
| Initial Calibration | X |
| Average RF | X |
| Linear Reg or Higher Order Curve | X |
| Second Source standard % Difference | X |
| Continuing Calibration /Check Standards | X |
| Project/Client Specific Requirements | X |
| Special Standards | NA |
| Blanks | X |
| TCL's | X |
| Surrogates | X |
| LCS (Laboratory Control Sample) | NA |
| Recoveries | NA |
| Surrogates | NA |
| MS/MSD/Duplicates | NA |
| Samples | NA |
| TCL Hits | NA |
| Spectra of TCL Hits | NA |
| Surrogates | NA |
| Internal Standards Criteria | NA |
| Library Searches | NA |
| Calculations & Correct Factors | NA |
| Dilutions Run | NA |
| Reruns | NA |
| Manual Integrations | NA |
| Case Narrative | X |
| Results Reporting/Data Qualifiers | X |
| KOBRA Workgroup Data | X |
| Check for Completeness | X |
| Primary Reviewer | ADC |
| Secondary Reviewer | MDA |
| | |
| | |
| Check for compliance with method and project specific requirements | X |
| Check the completeness of reported information | X |
| Check the information for the report narrative | X |
| Check the reasonableness of the results | X |
| | |

Primary Reviewer:
30-MAR-2012

Secondary Reviewer:
30-MAR-2012

CHECKLIST1 - Modified 03/05/2008
Generated: MAR-30-2012 12:40:25

Microbac Laboratories Inc.

Data Checklist

Date: 16-MAY-2012
Analyst: ADC
Analyst: NA
Method: 8260
Instrument: HPMS8
Curve Workgroup: NA
Runlog ID: 46785
Analytical Workgroups: WG398118

| | |
|---|---|
| System Performance Check | NA |
| BFB | X |
| Initial Calibration | X |
| Average RF | X |
| Linear Reg or Higher Order Curve | X |
| Second Source standard % Difference | X |
| Continuing Calibration /Check Standards | X |
| Project/Client Specific Requirements | X |
| Special Standards | NA |
| Blanks | X |
| TCL's | X |
| Surrogates | X |
| LCS (Laboratory Control Sample) | X |
| Recoveries | X |
| Surrogates | X |
| MS/MSD/Duplicates | X |
| Samples | X |
| TCL Hits | X |
| Spectra of TCL Hits | ADC |
| Surrogates | X |
| Internal Standards Criteria | X |
| Library Searches | X |
| Calculations & Correct Factors | X |
| Dilutions Run | X |
| Reruns | X |
| Manual Integrations | NA |
| Case Narrative | X |
| Results Reporting/Data Qualifiers | X |
| KOBRA Workgroup Data | X |
| Check for Completeness | X |
| Primary Reviewer | ADC |
| Secondary Reviewer | MDA |
| | |
| | |
| Check for compliance with method and project specific requirements | X |
| Check the completeness of reported information | X |
| Check the information for the report narrative | X |
| Check the reasonableness of the results | X |
| | |

Primary Reviewer:
18-MAY-2012

Secondary Reviewer:
18-MAY-2012

CHECKLIST1 - Modified 03/05/2008
Generated: MAY-18-2012 15:40:14

Microbac Laboratories Inc.

Data Checklist

Date: 16-MAY-2012
Analyst: ADC
Analyst: NA
Method: 8260
Instrument: HPMS6
Curve Workgroup: WG397878
Runlog ID: 46880
Analytical Workgroups:

| | |
|---|---|
| System Performance Check | NA |
| BFB | X |
| Initial Calibration | X |
| Average RF | X |
| Linear Reg or Higher Order Curve | X |
| Second Source standard % Difference | X |
| Continuing Calibration /Check Standards | X |
| Project/Client Specific Requirements | X |
| Special Standards | NA |
| Blanks | NA |
| TCL's | NA |
| Surrogates | NA |
| LCS (Laboratory Control Sample) | NA |
| Recoveries | NA |
| Surrogates | NA |
| MS/MSD/Duplicates | NA |
| Samples | NA |
| TCL Hits | NA |
| Spectra of TCL Hits | NA |
| Surrogates | NA |
| Internal Standards Criteria | X |
| Library Searches | NA |
| Calculations & Correct Factors | X |
| Dilutions Run | NA |
| Reruns | NA |
| Manual Integrations | NA |
| Case Narrative | X |
| Results Reporting/Data Qualifiers | X |
| KOBRA Workgroup Data | X |
| Check for Completeness | X |
| Primary Reviewer | ADC |
| Secondary Reviewer | MDA |
| | |
| | |
| Check for compliance with method and project specific requirements | X |
| Check the completeness of reported information | X |
| Check the information for the report narrative | X |
| Check the reasonableness of the results | X |
| | |

Primary Reviewer:
21-MAY-2012

Secondary Reviewer:
21-MAY-2012

CHECKLIST1 - Modified 03/05/2008
Generated: MAY-21-2012 21:40:50

Microbac Laboratories Inc.

Data Checklist

Date: 19-MAY-2012
Analyst: ADC
Analyst: NA
Method: 8260
Instrument: HPMS6
Curve Workgroup: NA
Runlog ID: 46883
Analytical Workgroups: WG398533

| | |
|---|---|
| System Performance Check | NA |
| BFB | X |
| Initial Calibration | X |
| Average RF | X |
| Linear Reg or Higher Order Curve | X |
| Second Source standard % Difference | X |
| Continuing Calibration /Check Standards | X |
| Project/Client Specific Requirements | X |
| Special Standards | NA |
| Blanks | X |
| TCL's | X |
| Surrogates | X |
| LCS (Laboratory Control Sample) | X |
| Recoveries | X |
| Surrogates | X |
| MS/MSD/Duplicates | X |
| Samples | X |
| TCL Hits | X |
| Spectra of TCL Hits | WTD |
| Surrogates | X |
| Internal Standards Criteria | X |
| Library Searches | X |
| Calculations & Correct Factors | X |
| Dilutions Run | X |
| Reruns | X |
| Manual Integrations | NA |
| Case Narrative | X |
| Results Reporting/Data Qualifiers | X |
| KOBRA Workgroup Data | X |
| Check for Completeness | X |
| Primary Reviewer | ADC |
| Secondary Reviewer | MDA |
| | |
| | |
| Check for compliance with method and project specific requirements | X |
| Check the completeness of reported information | X |
| Check the information for the report narrative | X |
| Check the reasonableness of the results | X |
| | |

Primary Reviewer:
21-MAY-2012

Secondary Reviewer:
21-MAY-2012

CHECKLIST1 - Modified 03/05/2008
Generated: MAY-21-2012 16:11:10

Microbac Laboratories Inc.

# HOLDING TIMES
# EQUIVALENT TO AFCEE FORM 9

Analytical Method: 8260B AAB#: WG398118

Login Number: L12050284

| Client ID | ID | Date Collected | TCLP Date | Time Held | Max Hold | Q | Extract Date | Time Held | Max Hold | Q | Run Date | Time Held | Max Hold | Q |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PZ-07-050812 | 03 | 05/08/12 | | | | | | | 14 | | 05/16/12 | 8.3 | 14 | |
| MW-18-050812 | 05 | 05/08/12 | | | | | | | 14 | | 05/16/12 | 8.3 | 14 | |
| TW-01-050812 | 07 | 05/08/12 | | | | | | | 14 | | 05/16/12 | 8.1 | 14 | |
| TB-050812 | 09 | 05/08/12 | | | | | | | 14 | | 05/16/12 | 8.3 | 14 | |
| DUP-GW-050812 | 10 | 05/08/12 | | | | | | | 14 | | 05/16/12 | 8.1 | 14 | |
| EB-050812-GW | 12 | 05/08/12 | | | | | | | 14 | | 05/16/12 | 8.1 | 14 | |

* = SEE PROJECT QAPP REQUIREMENTS

HOLD_TIMES - Modified 03/06/2008
PDF File ID: 2424467
Report generated 05/22/2012 09:16

Microbac Laboratories Inc.

# HOLDING TIMES
# EQUIVALENT TO AFCEE FORM 9

**Analytical Method:** 8260B **AAB#:** WG398533

**Login Number:** L12050284

| Client ID | ID | Date Collected | TCLP Date | Time Held | Max Hold | Q | Extract Date | Time Held | Max Hold | Q | Run Date | Time Held | Max Hold | Q |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| BBLD-PIT-SSP-050812 | 01 | 05/08/12 | | | | | | | 14 | | 05/19/12 | 11.4 | 14 | |

*** = SEE PROJECT QAPP REQUIREMENTS**

HOLD_TIMES - Modified 03/06/2008
PDF File ID: 2424467
Report generated 05/22/2012 09:16

Login Number: L12050284
Instrument Id: HPMS8
Workgroup (AAB#): WG398118

Method: 8260
CAL ID: HPMS8-27-MAR-12
Matrix: Water

| Sample Number | Dilution | Tag | 1 | 2 | 3 | 4 |
|---|---|---|---|---|---|---|
| L12050284-03 | 1.00 | 01 | 110 | 105 | 99.0 | 97.1 |
| L12050284-05 | 1.00 | 01 | 113 | 103 | 97.2 | 97.4 |
| L12050284-07 | 1.00 | 01 | 112 | 104 | 99.1 | 96.7 |
| L12050284-09 | 1.00 | 01 | 109 | 102 | 101 | 97.7 |
| L12050284-10 | 1.00 | 01 | 112 | 103 | 98.9 | 97.7 |
| L12050284-12 | 1.00 | 01 | 113 | 104 | 99.0 | 98.4 |
| WG398118-01 | 1.00 | 01 | 113 | 103 | 99.3 | 99.2 |
| WG398118-02 | 1.00 | 01 | 110 | 102 | 99.3 | 100 |

| Surrogates | Surrogate Limits | | |
|---|---|---|---|
| 1 - 1,2-Dichloroethane-d4 | 80 | - | 120 |
| 2 - Dibromofluoromethane | 86 | - | 118 |
| 3 - p-Bromofluorobenzene | 86 | - | 115 |
| 4 - Toluene-d8 | 88 | - | 110 |

Underline = Result out of surrogate limits

DL = surrogate diluted out
ND = surrogate not detected

SURROGATES - Modified 03/06/2008
PDF File ID: 2422038
Report generated: 05/22/2012 09:16

Login Number: L12050284
Instrument Id: HPMS6
Workgroup (AAB#): WG398533

Method: 8260
CAL ID: HPMS6-16-MAY-12
Matrix: Water

| Sample Number | Dilution | Tag | 1 | 2 | 3 | 4 |
|---|---|---|---|---|---|---|
| L12050284-01 | 10.0 | DL02 | 89.7 | 93.8 | 113 | 106 |
| WG398533-01 | 1.00 | 01 | 91.6 | 94.6 | 113 | 107 |
| WG398533-02 | 1.00 | 01 | 91.9 | 95.6 | 111 | 105 |
| WG398533-03 | 1.00 | 01 | 90.7 | 94.6 | 110 | 104 |
| WG398533-04 | 1.00 | 01 | 93.2 | 95.0 | 115 | 105 |

| Surrogates | Surrogate Limits | | |
|---|---|---|---|
| 1 - 1,2-Dichloroethane-d4 | 80 | - | 120 |
| 2 - Dibromofluoromethane | 86 | - | 118 |
| 3 - p-Bromofluorobenzene | 86 | - | 115 |
| 4 - Toluene-d8 | 88 | - | 110 |

Underline = Result out of surrogate limits

DL = surrogate diluted out
ND = surrogate not detected

SURROGATES - Modified 03/06/2008
PDF File ID: 2422038
Report generated: 05/22/2012 09:16

Microbac Laboratories Inc.

## METHOD BLANK SUMMARY

| | | | |
|---|---|---|---|
| Login Number: | L12050284 | Work Group: | WG398533 |
| Blank File ID: | 6M108268 | Blank Sample ID: | WG398533-01 |
| Prep Date: | 05/19/12 18:07 | Instrument ID: | HPMS6 |
| Analyzed Date: | 05/19/12 18:07 | Method: | 8260B |
| Analyst: | FJB | | |

This Method Blank Applies To The Following Samples:

| Client ID | Lab Sample ID | Lab File ID | Time Analyzed | TAG |
|---|---|---|---|---|
| LCS | WG398533-02 | 6M108269 | 05/19/12 18:40 | 01 |
| LCS2 | WG398533-03 | 6M108270 | 05/19/12 19:13 | 01 |
| BBLD-PIT-SSP-050812 | L12050284-01 | 6M108271 | 05/19/12 19:46 | DL02 |

Report Name: BLANK_SUMMARY
PDF File ID: 2424468
Report generated 05/22/2012 09:16

Microbac Laboratories Inc.

## METHOD BLANK SUMMARY

Login Number: L12050284
Work Group: WG398118
Blank File ID: 8M379104
Blank Sample ID: WG398118-01
Prep Date: 05/16/12 09:53
Instrument ID: HPMS8
Analyzed Date: 05/16/12 09:53
Method: 8260B
Analyst: ADC

This Method Blank Applies To The Following Samples:

| Client ID | Lab Sample ID | Lab File ID | Time Analyzed | TAG |
|---|---|---|---|---|
| LCS | WG398118-02 | 8M379105 | 05/16/12 10:26 | 01 |
| TB-050812 | L12050284-09 | 8M379112 | 05/16/12 14:20 | 01 |
| EB-050812-GW | L12050284-12 | 8M379113 | 05/16/12 14:53 | 01 |
| PZ-07-050812 | L12050284-03 | 8M379116 | 05/16/12 16:36 | 01 |
| MW-18-050812 | L12050284-05 | 8M379117 | 05/16/12 17:10 | 01 |
| TW-01-050812 | L12050284-07 | 8M379118 | 05/16/12 17:43 | 01 |
| DUP-GW-050812 | L12050284-10 | 8M379119 | 05/16/12 18:16 | 01 |

Report Name: BLANK_SUMMARY
PDF File ID: 2424468
Report generated 05/22/2012 09:16

Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number:L12050284 Prep Date:05/19/12 18:07 Sample ID:WG398533-01
Instrument ID:HPMS6 Run Date:05/19/12 18:07 Prep Method:5030B/5030C/503
File ID:6M108268 Analyst:FJB Method:8260B
Workgroup (AAB#):WG398533 Matrix:Water Units:ug/L
Contract #: Cal ID: HPMS6-16-MAY-12

| Analytes | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| 1,1,1-Trichloroethane | 0.250 | 1.00 | 0.250 | 1 | U |
| 1,1,2,2-Tetrachloroethane | 0.200 | 1.00 | 0.200 | 1 | U |
| 1,1,2-Trichloro-1,2,2-Trifluoroethane | 2.00 | 5.00 | 2.00 | 1 | U |
| 1,1,2-Trichloroethane | 0.250 | 1.00 | 0.250 | 1 | U |
| 1,1-Dichloroethane | 0.125 | 1.00 | 0.125 | 1 | U |
| 1,1-Dichloroethene | 0.500 | 1.00 | 0.500 | 1 | U |
| 1,2,3-Trichlorobenzene | 0.500 | 1.00 | 0.500 | 1 | U |
| 1,2,4-Trichlorobenzene | 0.200 | 1.00 | 0.200 | 1 | U |
| 1,2-Dibromo-3-chloropropane | 1.00 | 5.00 | 1.00 | 1 | U |
| 1,2-Dibromoethane | 0.250 | 1.00 | 0.250 | 1 | U |
| 1,2-Dichlorobenzene | 0.125 | 1.00 | 0.125 | 1 | U |
| 1,2-Dichloroethane | 0.250 | 1.00 | 0.250 | 1 | U |
| cis-1,2-Dichloroethene | 0.250 | 1.00 | 0.250 | 1 | U |
| trans-1,2-Dichloroethene | 0.250 | 1.00 | 0.250 | 1 | U |
| 1,2-Dichloropropane | 0.200 | 1.00 | 0.200 | 1 | U |
| 1,3-Dichlorobenzene | 0.250 | 1.00 | 0.250 | 1 | U |
| 1,4-Dichlorobenzene | 0.125 | 1.00 | 0.125 | 1 | U |
| 2-Butanone | 2.50 | 10.0 | 2.50 | 1 | U |
| 2-Hexanone | 2.50 | 10.0 | 2.50 | 1 | U |
| 4-Methyl-2-pentanone | 2.50 | 10.0 | 2.50 | 1 | U |
| Acetone | 2.50 | 10.0 | 2.50 | 1 | U |
| Benzene | 0.125 | 1.00 | 0.125 | 1 | U |
| Bromochloromethane | 0.200 | 1.00 | 0.200 | 1 | U |
| Bromodichloromethane | 0.250 | 1.00 | 0.250 | 1 | U |
| Bromoform | 0.500 | 1.00 | 0.500 | 1 | U |
| Bromomethane | 0.500 | 1.00 | 0.500 | 1 | U |
| Carbon disulfide | 0.500 | 1.00 | 0.500 | 1 | U |
| Carbon tetrachloride | 0.250 | 1.00 | 0.250 | 1 | U |
| Chlorobenzene | 0.125 | 1.00 | 0.125 | 1 | U |
| Chloroethane | 0.500 | 1.00 | 0.500 | 1 | U |
| Chloroform | 0.125 | 1.00 | 0.125 | 1 | U |
| Chloromethane | 0.500 | 1.00 | 0.500 | 1 | U |
| cis-1,3-Dichloropropene | 0.250 | 1.00 | 0.250 | 1 | U |
| Cyclohexane | 1.00 | 5.00 | 1.00 | 1 | U |
| Dibromochloromethane | 0.250 | 1.00 | 0.250 | 1 | U |
| Dichlorodifluoromethane | 0.250 | 1.00 | 0.250 | 1 | U |
| Ethyl benzene | 0.250 | 1.00 | 0.250 | 1 | U |
| Isopropylbenzene | 0.250 | 1.00 | 0.250 | 1 | U |
| Methyl acetate | 1.00 | 5.00 | 1.00 | 1 | U |
| Methyl tert-butyl ether | 0.500 | 1.00 | 0.500 | 1 | U |
| Methylcyclohexane | 1.00 | 5.00 | 1.00 | 1 | U |
| Methylene chloride | 0.250 | 5.00 | 0.250 | 1 | U |

Report Name:BLANK
PDF ID: 2424469
22-MAY-2012 09:16

Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number: L12050284 Prep Date: 05/19/12 18:07 Sample ID: WG398533-01
Instrument ID: HPMS6 Run Date: 05/19/12 18:07 Prep Method: 5030B/5030C/503
File ID: 6M108268 Analyst: FJB Method: 8260B
Workgroup (AAB#): WG398533 Matrix: Water Units: ug/L
Contract #: Cal ID: HPMS6-16-MAY-12

| Analytes | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| m,p-Xylene | 0.500 | 1.00 | 0.500 | 1 | U |
| o-Xylene | 0.250 | 1.00 | 0.250 | 1 | U |
| Styrene | 0.125 | 1.00 | 0.125 | 1 | U |
| Tetrachloroethene | 0.250 | 1.00 | 0.250 | 1 | U |
| Toluene | 0.250 | 1.00 | 0.250 | 1 | U |
| trans-1,3-Dichloropropene | 0.500 | 1.00 | 0.500 | 1 | U |
| Trichloroethene | 0.250 | 1.00 | 0.250 | 1 | U |
| Trichlorofluoromethane | 0.250 | 1.00 | 0.250 | 1 | U |
| Vinyl chloride | 0.250 | 1.00 | 0.250 | 1 | U |

| Surrogates | % Recovery | Surrogate Limits | Qualifier |
|---|---|---|---|
| 1,2-Dichloroethane-d4 | 91.6 | 80 - 120 | PASS |
| Dibromofluoromethane | 94.6 | 86 - 118 | PASS |
| p-Bromofluorobenzene | 113 | 86 - 115 | PASS |
| Toluene-d8 | 107 | 88 - 110 | PASS |

MDL Method Detection Limit
RL Reporting/Practical Quantitation Limit
ND Analyte Not detected at or above reporting limit
* |Analyte concentration| > RL

Report Name:BLANK
PDF ID: 2424469
22-MAY-2012 09:16

Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number:L12050284 Prep Date:05/16/12 09:53 Sample ID:WG398118-01
Instrument ID:HPMS8 Run Date:05/16/12 09:53 Prep Method:5030B/5030C/503
File ID:8M379104 Analyst:ADC Method:8260B
Workgroup (AAB#):WG398118 Matrix:Water Units:ug/L
Contract #: Cal ID: HPMS8-27-MAR-12

| Analytes | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| 1,1,1-Trichloroethane | 0.250 | 1.00 | 0.250 | 1 | U |
| 1,1,2,2-Tetrachloroethane | 0.200 | 1.00 | 0.200 | 1 | U |
| 1,1,2-Trichloro-1,2,2-Trifluoroethane | 2.00 | 5.00 | 2.00 | 1 | U |
| 1,1,2-Trichloroethane | 0.250 | 1.00 | 0.250 | 1 | U |
| 1,1-Dichloroethane | 0.125 | 1.00 | 0.125 | 1 | U |
| 1,1-Dichloroethene | 0.500 | 1.00 | 0.500 | 1 | U |
| 1,2,3-Trichlorobenzene | 0.500 | 1.00 | 0.500 | 1 | U |
| 1,2,4-Trichlorobenzene | 0.200 | 1.00 | 0.200 | 1 | U |
| 1,2-Dibromo-3-chloropropane | 1.00 | 5.00 | 1.00 | 1 | U |
| 1,2-Dibromoethane | 0.250 | 1.00 | 0.250 | 1 | U |
| 1,2-Dichlorobenzene | 0.125 | 1.00 | 0.125 | 1 | U |
| 1,2-Dichloroethane | 0.250 | 1.00 | 0.250 | 1 | U |
| cis-1,2-Dichloroethene | 0.250 | 1.00 | 0.250 | 1 | U |
| trans-1,2-Dichloroethene | 0.250 | 1.00 | 0.250 | 1 | U |
| 1,2-Dichloropropane | 0.200 | 1.00 | 0.200 | 1 | U |
| 1,3-Dichlorobenzene | 0.250 | 1.00 | 0.250 | 1 | U |
| 1,4-Dichlorobenzene | 0.125 | 1.00 | 0.125 | 1 | U |
| 2-Butanone | 2.50 | 10.0 | 2.50 | 1 | U |
| 2-Hexanone | 2.50 | 10.0 | 2.50 | 1 | U |
| 4-Methyl-2-pentanone | 2.50 | 10.0 | 2.50 | 1 | U |
| Acetone | 2.50 | 10.0 | 2.50 | 1 | U |
| Benzene | 0.125 | 1.00 | 0.125 | 1 | U |
| Bromochloromethane | 0.200 | 1.00 | 0.200 | 1 | U |
| Bromodichloromethane | 0.250 | 1.00 | 0.250 | 1 | U |
| Bromoform | 0.500 | 1.00 | 0.500 | 1 | U |
| Bromomethane | 0.500 | 1.00 | 0.500 | 1 | U |
| Carbon disulfide | 0.500 | 1.00 | 0.500 | 1 | U |
| Carbon tetrachloride | 0.250 | 1.00 | 0.250 | 1 | U |
| Chlorobenzene | 0.125 | 1.00 | 0.125 | 1 | U |
| Chloroethane | 0.500 | 1.00 | 0.500 | 1 | U |
| Chloroform | 0.125 | 1.00 | 0.125 | 1 | U |
| Chloromethane | 0.500 | 1.00 | 0.500 | 1 | U |
| cis-1,3-Dichloropropene | 0.250 | 1.00 | 0.250 | 1 | U |
| Cyclohexane | 1.00 | 5.00 | 1.00 | 1 | U |
| Dibromochloromethane | 0.250 | 1.00 | 0.250 | 1 | U |
| Dichlorodifluoromethane | 0.250 | 1.00 | 0.250 | 1 | U |
| Ethyl benzene | 0.250 | 1.00 | 0.250 | 1 | U |
| Isopropylbenzene | 0.250 | 1.00 | 0.250 | 1 | U |
| Methyl acetate | 1.00 | 5.00 | 1.00 | 1 | U |
| Methyl tert-butyl ether | 0.500 | 1.00 | 0.500 | 1 | U |
| Methylcyclohexane | 1.00 | 5.00 | 1.00 | 1 | U |
| Methylene chloride | 0.250 | 5.00 | 0.250 | 1 | U |

Report Name:BLANK
PDF ID: 2424469
22-MAY-2012 09:16

Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number: L12050284 Prep Date: 05/16/12 09:53 Sample ID: WG398118-01
Instrument ID: HPMS8 Run Date: 05/16/12 09:53 Prep Method: 5030B/5030C/503
File ID: 8M379104 Analyst: ADC Method: 8260B
Workgroup (AAB#): WG398118 Matrix: Water Units: ug/L
Contract #: Cal ID: HPMS8-27-MAR-12

| Analytes | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| m,p-Xylene | 0.500 | 1.00 | 0.500 | 1 | U |
| o-Xylene | 0.250 | 1.00 | 0.250 | 1 | U |
| Styrene | 0.125 | 1.00 | 0.125 | 1 | U |
| Tetrachloroethene | 0.250 | 1.00 | 0.250 | 1 | U |
| Toluene | 0.250 | 1.00 | 0.250 | 1 | U |
| trans-1,3-Dichloropropene | 0.500 | 1.00 | 0.500 | 1 | U |
| Trichloroethene | 0.250 | 1.00 | 0.250 | 1 | U |
| Trichlorofluoromethane | 0.250 | 1.00 | 0.250 | 1 | U |
| Vinyl chloride | 0.250 | 1.00 | 0.250 | 1 | U |

| Surrogates | % Recovery | Surrogate Limits | Qualifier |
|---|---|---|---|
| 1,2-Dichloroethane-d4 | 113 | 80 - 120 | PASS |
| Dibromofluoromethane | 103 | 86 - 118 | PASS |
| p-Bromofluorobenzene | 99.3 | 86 - 115 | PASS |
| Toluene-d8 | 99.2 | 88 - 110 | PASS |

MDL Method Detection Limit
RL Reporting/Practical Quantitation Limit
ND Analyte Not detected at or above reporting limit
* |Analyte concentration| > RL

Report Name:BLANK
PDF ID: 2424469
22-MAY-2012 09:16

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L12050284 Run Date: 05/16/2012 Sample ID: WG398118-02
Instrument ID: HPMS8 Run Time: 10:26 Prep Method: 5030B/5030C/503
File ID: 8M379105 Analyst: ADC Method: 8260B
Workgroup (AAB#): WG398118 Matrix: Water Units: ug/L
QC Key: WATERLOO Lot#: STD51676 Cal ID: HPMS8-27-MAR-12

| Analytes | Expected | Found | % Rec | LCS Limits | Q |
|---|---|---|---|---|---|
| 1,1,1-Trichloroethane | 20.0 | 23.9 | 119 | 80 - 134 | |
| 1,1,2,2-Tetrachloroethane | 20.0 | 17.8 | 89.0 | 79 - 125 | |
| 1,1,2-Trichloro-1,2,2-Trifluoroethane | 20.0 | 21.2 | 106 | 80 - 130 | |
| 1,1,2-Trichloroethane | 20.0 | 19.9 | 99.3 | 80 - 125 | |
| 1,1-Dichloroethane | 20.0 | 20.7 | 103 | 80 - 125 | |
| 1,1-Dichloroethene | 20.0 | 22.4 | 112 | 80 - 132 | |
| 1,2,3-Trichlorobenzene | 20.0 | 19.6 | 97.9 | 55 - 140 | |
| 1,2,4-Trichlorobenzene | 20.0 | 19.0 | 94.8 | 65 - 135 | |
| 1,2-Dibromo-3-chloropropane | 20.0 | 18.7 | 93.7 | 50 - 130 | |
| 1,2-Dibromoethane | 20.0 | 19.9 | 99.3 | 80 - 125 | |
| 1,2-Dichlorobenzene | 20.0 | 19.3 | 96.4 | 80 - 125 | |
| 1,2-Dichloroethane | 20.0 | 23.5 | 118 | 80 - 129 | |
| cis-1,2-Dichloroethene | 20.0 | 21.1 | 105 | 70 - 125 | |
| trans-1,2-Dichloroethene | 20.0 | 21.6 | 108 | 80 - 127 | |
| 1,2-Dichloropropane | 20.0 | 20.8 | 104 | 80 - 120 | |
| 1,3-Dichlorobenzene | 20.0 | 19.2 | 96.2 | 80 - 120 | |
| 1,4-Dichlorobenzene | 20.0 | 19.4 | 97.2 | 80 - 120 | |
| 2-Butanone | 20.0 | 20.5 | 102 | 30 - 150 | |
| 2-Hexanone | 20.0 | 18.2 | 91.0 | 55 - 130 | |
| 4-Methyl-2-pentanone | 20.0 | 19.4 | 97.0 | 64 - 140 | |
| Acetone | 20.0 | 23.1 | 116 | 40 - 142 | |
| Benzene | 20.0 | 20.6 | 103 | 80 - 121 | |
| Bromochloromethane | 20.0 | 21.1 | 106 | 65 - 130 | |
| Bromodichloromethane | 20.0 | 23.4 | 117 | 80 - 131 | |
| Bromoform | 20.0 | 21.4 | 107 | 70 - 130 | |
| Bromomethane | 20.0 | 10.8 | 54.1 | 30 - 145 | |
| Carbon disulfide | 20.0 | 23.4 | 117 | 58 - 138 | |
| Carbon tetrachloride | 20.0 | 24.5 | 123 | 65 - 140 | |
| Chlorobenzene | 20.0 | 19.8 | 98.9 | 80 - 120 | |
| Chloroethane | 20.0 | 20.6 | 103 | 60 - 135 | |
| Chloroform | 20.0 | 21.8 | 109 | 80 - 125 | |
| Chloromethane | 20.0 | 21.6 | 108 | 40 - 125 | |
| cis-1,3-Dichloropropene | 20.0 | 21.8 | 109 | 70 - 130 | |
| Cyclohexane | 20.0 | 21.6 | 108 | 80 - 130 | |
| Dibromochloromethane | 20.0 | 21.8 | 109 | 60 - 135 | |
| Dichlorodifluoromethane | 20.0 | 31.3 | 157 | 50 - 133 | * |
| Ethyl benzene | 20.0 | 20.4 | 102 | 80 - 122 | |
| Isopropylbenzene | 20.0 | 18.4 | 92.1 | 80 - 122 | |
| Methyl acetate | 20.0 | 16.1 | 80.7 | 80 - 130 | |
| Methyl tert-butyl ether | 20.0 | 21.0 | 105 | 65 - 125 | |
| Methylcyclohexane | 20.0 | 21.6 | 108 | 80 - 130 | |

LCS - Modified 03/06/2008
PDF File ID: 2422031
Report generated: 05/22/2012 08:42

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L12050284 Run Date: 05/16/2012 Sample ID: WG398118-02
Instrument ID: HPMS8 Run Time: 10:26 Prep Method: 5030B/5030C/503
File ID: 8M379105 Analyst: ADC Method: 8260B
Workgroup (AAB#): WG398118 Matrix: Water Units: ug/L
QC Key: WATERLOO Lot#: STD51676 Cal ID: HPMS8-27-MAR-12

| Analytes | Expected | Found | % Rec | LCS Limits | Q |
|---|---|---|---|---|---|
| Methylene chloride | 20.0 | 19.9 | 99.7 | 80 - 123 | |
| m,p-Xylene | 40.0 | 40.9 | 102 | 80 - 122 | |
| o-Xylene | 20.0 | 19.9 | 99.3 | 80 - 122 | |
| Styrene | 20.0 | 18.7 | 93.7 | 80 - 123 | |
| Tetrachloroethene | 20.0 | 21.3 | 106 | 80 - 124 | |
| Toluene | 20.0 | 19.2 | 95.8 | 80 - 124 | |
| trans-1,3-Dichloropropene | 20.0 | 19.0 | 94.8 | 80 - 130 | |
| Trichloroethene | 20.0 | 22.2 | 111 | 80 - 122 | |
| Trichlorofluoromethane | 20.0 | 26.3 | 132 | 62 - 151 | |
| Vinyl chloride | 20.0 | 24.7 | 124 | 65 - 140 | |

| Surrogates | % Recovery | Surrogate Limits | Qualifier |
|---|---|---|---|
| 1,2-Dichloroethane-d4 | 110 | 80 - 120 | PASS |
| Dibromofluoromethane | 102 | 86 - 118 | PASS |
| p-Bromofluorobenzene | 99.3 | 86 - 115 | PASS |
| Toluene-d8 | 100 | 88 - 110 | PASS |

* EXCEEDS %REC LIMIT

LCS - Modified 03/06/2008
PDF File ID: 2422031
Report generated: 05/22/2012 08:42

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L12050284 Analyst: FJB Prep Method: 5030B/5030C/503
Instrument ID: HPMS6 Matrix: Water Method: 8260B
Workgroup (AAB#): WG398533 Units: ug/L
QC Key: WATERLOO Lot #: STD51676

Sample ID: WG398533-02 LCS File ID: 6M108269 Run Date: 05/19/2012 18:40
Sample ID: WG398533-03 LCS2 File ID: 6M108270 Run Date: 05/19/2012 19:13

| Analytes | LCS | | | LCS2 | | | %RPD | %Rec Limits | RPD Lmt | Q |
|---|---|---|---|---|---|---|---|---|---|---|
| | Known | Found | % REC | Known | Found | % REC | | | | |
| 1,1,1-Trichloroethane | 20.0 | 19.6 | 98.1 | 20.0 | 19.3 | 96.3 | 1.83 | 80 - 134 | 30 | |
| 1,1,2,2-Tetrachloroethane | 20.0 | 22.8 | 114 | 20.0 | 22.7 | 113 | 0.481 | 79 - 125 | 30 | |
| 1,1,2-Trichloro-1,2,2-Trifluoroethane | 20.0 | 19.5 | 97.3 | 20.0 | 18.4 | 92.2 | 5.32 | 80 - 130 | 30 | |
| 1,1,2-Trichloroethane | 20.0 | 19.5 | 97.5 | 20.0 | 19.9 | 99.3 | 1.80 | 80 - 125 | 30 | |
| 1,1-Dichloroethane | 20.0 | 20.3 | 101 | 20.0 | 20.4 | 102 | 0.590 | 80 - 125 | 30 | |
| 1,1-Dichloroethene | 20.0 | 20.7 | 104 | 20.0 | 20.4 | 102 | 1.47 | 80 - 132 | 30 | |
| 1,2,3-Trichlorobenzene | 20.0 | 23.5 | 117 | 20.0 | 23.4 | 117 | 0.479 | 55 - 140 | 30 | |
| 1,2,4-Trichlorobenzene | 20.0 | 22.7 | 113 | 20.0 | 22.9 | 115 | 1.12 | 65 - 135 | 30 | |
| 1,2-Dibromo-3-chloropropane | 20.0 | 19.9 | 99.5 | 20.0 | 19.2 | 95.8 | 3.78 | 50 - 130 | 30 | |
| 1,2-Dibromoethane | 20.0 | 20.9 | 104 | 20.0 | 21.2 | 106 | 1.25 | 80 - 125 | 30 | |
| 1,2-Dichlorobenzene | 20.0 | 21.4 | 107 | 20.0 | 21.0 | 105 | 1.71 | 80 - 125 | 30 | |
| 1,2-Dichloroethane | 20.0 | 19.2 | 96.1 | 20.0 | 19.2 | 95.9 | 0.210 | 80 - 129 | 30 | |
| cis-1,2-Dichloroethene | 20.0 | 21.1 | 105 | 20.0 | 21.0 | 105 | 0.542 | 70 - 125 | 30 | |
| trans-1,2-Dichloroethene | 20.0 | 20.1 | 100 | 20.0 | 20.2 | 101 | 0.692 | 80 - 127 | 30 | |
| 1,2-Dichloropropane | 20.0 | 21.4 | 107 | 20.0 | 21.3 | 106 | 0.728 | 80 - 120 | 30 | |
| 1,3-Dichlorobenzene | 20.0 | 22.2 | 111 | 20.0 | 22.0 | 110 | 1.08 | 80 - 120 | 30 | |
| 1,4-Dichlorobenzene | 20.0 | 21.2 | 106 | 20.0 | 21.0 | 105 | 0.969 | 80 - 120 | 30 | |
| 2-Butanone | 20.0 | 20.0 | 100 | 20.0 | 19.9 | 99.5 | 0.576 | 30 - 150 | 30 | |
| 2-Hexanone | 20.0 | 19.1 | 95.4 | 20.0 | 19.1 | 95.4 | 0.0367 | 55 - 130 | 30 | |
| 4-Methyl-2-pentanone | 20.0 | 19.5 | 97.6 | 20.0 | 18.6 | 93.2 | 4.54 | 64 - 140 | 30 | |
| Acetone | 20.0 | 19.3 | 96.5 | 20.0 | 19.8 | 99.2 | 2.77 | 40 - 142 | 30 | |
| Benzene | 20.0 | 20.6 | 103 | 20.0 | 20.4 | 102 | 1.16 | 80 - 121 | 30 | |
| Bromochloromethane | 20.0 | 21.0 | 105 | 20.0 | 20.9 | 104 | 0.837 | 65 - 130 | 30 | |
| Bromodichloromethane | 20.0 | 21.3 | 106 | 20.0 | 21.0 | 105 | 1.32 | 80 - 131 | 30 | |
| Bromoform | 20.0 | 20.4 | 102 | 20.0 | 20.1 | 101 | 1.36 | 70 - 130 | 30 | |
| Bromomethane | 20.0 | 13.6 | 67.9 | 20.0 | 14.7 | 73.3 | 7.67 | 30 - 145 | 30 | |
| Carbon disulfide | 20.0 | 20.7 | 103 | 20.0 | 20.4 | 102 | 1.35 | 58 - 138 | 30 | |
| Carbon tetrachloride | 20.0 | 19.3 | 96.5 | 20.0 | 18.8 | 93.9 | 2.75 | 65 - 140 | 30 | |
| Chlorobenzene | 20.0 | 20.4 | 102 | 20.0 | 20.2 | 101 | 0.716 | 80 - 120 | 30 | |
| Chloroethane | 20.0 | 19.3 | 96.4 | 20.0 | 19.7 | 98.3 | 1.96 | 60 - 135 | 30 | |
| Chloroform | 20.0 | 20.9 | 104 | 20.0 | 20.6 | 103 | 1.31 | 80 - 125 | 30 | |
| Chloromethane | 20.0 | 17.9 | 89.7 | 20.0 | 18.0 | 89.8 | 0.0919 | 40 - 125 | 30 | |
| cis-1,3-Dichloropropene | 20.0 | 20.7 | 104 | 20.0 | 20.5 | 103 | 0.967 | 70 - 130 | 30 | |
| Cyclohexane | 20.0 | 20.7 | 104 | 20.0 | 19.3 | 96.5 | 7.21 | 80 - 130 | 30 | |
| Dibromochloromethane | 20.0 | 19.6 | 97.9 | 20.0 | 19.8 | 99.2 | 1.33 | 60 - 135 | 30 | |
| Dichlorodifluoromethane | 20.0 | 25.8 | 129 | 20.0 | 25.1 | 126 | 2.68 | 50 - 133 | 30 | |
| Ethyl benzene | 20.0 | 20.8 | 104 | 20.0 | 20.8 | 104 | 0.0930 | 80 - 122 | 30 | |
| Isopropylbenzene | 20.0 | 19.2 | 96.1 | 20.0 | 19.1 | 95.5 | 0.534 | 80 - 122 | 30 | |
| Methyl acetate | 20.0 | 16.4 | 81.9 | 20.0 | 16.3 | 81.7 | 0.166 | 80 - 130 | 30 | |
| Methyl tert-butyl ether | 20.0 | 19.7 | 98.5 | 20.0 | 19.6 | 98.0 | 0.506 | 65 - 125 | 30 | |

LCS_LCS2 - Modified 03/06/2008
PDF File ID: 2424008
Report generated: 05/22/2012 09:16

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L12050284 Analyst: FJB Prep Method: 5030B/5030C/503
Instrument ID: HPMS6 Matrix: Water Method: 8260B
Workgroup (AAB#): WG398533 Units: ug/L
QC Key: WATERLOO Lot #: STD51676

Sample ID: WG398533-02 LCS File ID: 6M108269 Run Date: 05/19/2012 18:40
Sample ID: WG398533-03 LCS2 File ID: 6M108270 Run Date: 05/19/2012 19:13

| Analytes | LCS | | | LCS2 | | | %RPD | %Rec Limits | RPD Lmt | Q |
|---|---|---|---|---|---|---|---|---|---|---|
| | Known | Found | % REC | Known | Found | % REC | | | | |
| Methylcyclohexane | 20.0 | 21.5 | 108 | 20.0 | 19.9 | 99.7 | 7.59 | 80 - 130 | 30 | |
| Methylene chloride | 20.0 | 19.8 | 99.0 | 20.0 | 19.7 | 98.3 | 0.765 | 80 - 123 | 30 | |
| m,p-Xylene | 40.0 | 35.3 | 88.2 | 40.0 | 35.1 | 87.8 | 0.432 | 80 - 122 | 30 | |
| o-Xylene | 20.0 | 17.3 | 86.6 | 20.0 | 17.4 | 86.9 | 0.371 | 80 - 122 | 30 | |
| Styrene | 20.0 | 17.8 | 89.1 | 20.0 | 17.7 | 88.4 | 0.740 | 80 - 123 | 30 | |
| Tetrachloroethene | 20.0 | 21.8 | 109 | 20.0 | 21.3 | 107 | 2.33 | 80 - 124 | 30 | |
| Toluene | 20.0 | 21.4 | 107 | 20.0 | 21.4 | 107 | 0.0940 | 80 - 124 | 30 | |
| trans-1,3-Dichloropropene | 20.0 | 18.2 | 90.9 | 20.0 | 18.0 | 89.9 | 1.16 | 80 - 130 | 30 | |
| Trichloroethene | 20.0 | 19.7 | 98.6 | 20.0 | 19.3 | 96.7 | 1.98 | 80 - 122 | 30 | |
| Trichlorofluoromethane | 20.0 | 19.1 | 95.5 | 20.0 | 18.2 | 90.9 | 4.94 | 62 - 151 | 30 | |
| Vinyl chloride | 20.0 | 18.0 | 90.2 | 20.0 | 17.5 | 87.4 | 3.21 | 65 - 140 | 30 | |

| Surogates | LCS | LCS2 | Surrogate Limits | Qualifier |
|---|---|---|---|---|
| | % Recovery | % Recovery | | |
| 1,2-Dichloroethane-d4 | 91.9 | 90.7 | 80 - 120 | PASS |
| Dibromofluoromethane | 95.6 | 94.6 | 86 - 118 | PASS |
| p-Bromofluorobenzene | 111 | 110 | 86 - 115 | PASS |
| Toluene-d8 | 105 | 104 | 88 - 110 | PASS |

* EXCEEDS %REC LIMIT

# EXCEEDS RPD LIMIT

LCS_LCS2 - Modified 03/06/2008
PDF File ID: 2424008
Report generated: 05/22/2012 09:16

Microbac Laboratories Inc.
ORGANIC INSTRUMENT CHECK

BFB

Login Number: L12050284
Instrument: HPMS6
Analyst: ADC
Workgroup: WG387846

Tune ID: WG387846-01
Run Date: 01/25/2012
Run Time: 08:08
File ID: 6M105367
Cal ID: HPMS6-29-NOV-11

| Target Mass | Rel. to Mass | Lower Limit% | Upper Limit% | Rel. Abn% | Raw Abn | Result Pass/Fail |
|---|---|---|---|---|---|---|
| 50.0 | 95.0 | 15.0 | 40.0 | 20.4 | 3936 | PASS |
| 75.0 | 95.0 | 30.0 | 60.0 | 46.9 | 9059 | PASS |
| 95.0 | 95.0 | 100 | 100 | 100 | 19320 | PASS |
| 96.0 | 95.0 | 5.00 | 9.00 | 6.53 | 1262 | PASS |
| 173 | 174 | 0 | 2.00 | 0 | 0 | PASS |
| 174 | 95.0 | 50.0 | 100 | 91.6 | 17704 | PASS |
| 175 | 174 | 5.00 | 9.00 | 6.91 | 1223 | PASS |
| 176 | 174 | 95.0 | 101 | 96.1 | 17017 | PASS |
| 177 | 176 | 5.00 | 9.00 | 5.94 | 1011 | PASS |

This check relates to the following samples:

| Lab ID | Client ID | Tag | Date Analyzed | Q |
|---|---|---|---|---|
| WG388587-01 | STD | 01 | 01/25/2012 10:12 | |
| WG388587-02 | STD | 01 | 01/25/2012 10:45 | |
| WG388587-03 | STD | 01 | 01/25/2012 11:17 | |
| WG388587-04 | STD-CCV | 01 | 01/25/2012 11:49 | |
| WG388587-05 | STD | 01 | 01/25/2012 12:22 | |
| WG388587-06 | STD | 01 | 01/25/2012 12:55 | |
| WG388587-07 | STD | 01 | 01/25/2012 13:27 | |
| WG388587-08 | SSCV | 01 | 01/25/2012 14:00 | |

* Sample past 12 hour tune limit

TUNE - Modified 03/06/2008
PDF File ID: 2424470
Report generated 05/22/2012 09:16

Microbac Laboratories Inc.
ORGANIC INSTRUMENT CHECK

BFB

Login Number: L12050284
Instrument: HPMS6
Analyst: ADC
Workgroup: WG397878

Tune ID: WG397878-01
Run Date: 05/16/2012
Run Time: 14:50
File ID: 6M108170
Cal ID: HPMS6-16-MAY-12

| Target Mass | Rel. to Mass | Lower Limit% | Upper Limit% | Rel. Abn% | Raw Abn | Result Pass/Fail |
|---|---|---|---|---|---|---|
| 50.0 | 95.0 | 15.0 | 40.0 | 25.0 | 9168 | PASS |
| 75.0 | 95.0 | 30.0 | 60.0 | 56.4 | 20719 | PASS |
| 95.0 | 95.0 | 100 | 100 | 100 | 36736 | PASS |
| 96.0 | 95.0 | 5.00 | 9.00 | 6.72 | 2469 | PASS |
| 173 | 174 | 0 | 2.00 | 0.411 | 112 | PASS |
| 174 | 95.0 | 50.0 | 100 | 74.2 | 27265 | PASS |
| 175 | 174 | 5.00 | 9.00 | 7.68 | 2095 | PASS |
| 176 | 174 | 95.0 | 101 | 98.2 | 26776 | PASS |
| 177 | 176 | 5.00 | 9.00 | 6.14 | 1644 | PASS |

This check relates to the following samples:

| Lab ID | Client ID | Tag | Date Analyzed | Q |
|---|---|---|---|---|
| WG397878-02 | STD | 01 | 05/16/2012 15:15 | |
| WG397878-03 | STD | 01 | 05/16/2012 15:48 | |
| WG397878-04 | STD | 01 | 05/16/2012 16:20 | |
| WG397878-05 | STD | 01 | 05/16/2012 16:53 | |
| WG397878-06 | STD | 01 | 05/16/2012 17:26 | |
| WG397878-07 | STD | 01 | 05/16/2012 17:58 | |
| WG397878-08 | STD-CCV | 01 | 05/16/2012 18:31 | |
| WG397878-09 | STD | 01 | 05/16/2012 19:03 | |
| WG397878-10 | STD | 01 | 05/16/2012 19:36 | |
| WG397878-11 | STD | 01 | 05/16/2012 20:08 | |
| WG397878-12 | SSCV | 01 | 05/16/2012 21:13 | |

* Sample past 12 hour tune limit

TUNE - Modified 03/06/2008
PDF File ID: 2424470
Report generated 05/22/2012 09:16

Microbac Laboratories Inc.
ORGANIC INSTRUMENT CHECK

BFB

Login Number: L12050284
Instrument: HPMS6
Analyst: FJB
Workgroup: WG398532

Tune ID: WG398532-01
Run Date: 05/19/2012
Run Time: 15:56
File ID: 6M108264
Cal ID: HPMS6-16-MAY-12

| Target Mass | Rel. to Mass | Lower Limit% | Upper Limit% | Rel. Abn% | Raw Abn | Result Pass/Fail |
|---|---|---|---|---|---|---|
| 50.0 | 95.0 | 15.0 | 40.0 | 23.9 | 3729 | PASS |
| 75.0 | 95.0 | 30.0 | 60.0 | 52.0 | 8094 | PASS |
| 95.0 | 95.0 | 100 | 100 | 100 | 15579 | PASS |
| 96.0 | 95.0 | 5.00 | 9.00 | 7.37 | 1148 | PASS |
| 173 | 174 | 0 | 2.00 | 0 | 0 | PASS |
| 174 | 95.0 | 50.0 | 100 | 70.3 | 10959 | PASS |
| 175 | 174 | 5.00 | 9.00 | 8.06 | 883 | PASS |
| 176 | 174 | 95.0 | 101 | 101 | 11033 | PASS |
| 177 | 176 | 5.00 | 9.00 | 7.17 | 791 | PASS |

This check relates to the following samples:

| Lab ID | Client ID | Tag | Date Analyzed | Q |
|---|---|---|---|---|
| WG398532-02 | CCV | 01 | 05/19/2012 17:02 | |
| WG398533-01 | BLANK | 01 | 05/19/2012 18:07 | |
| WG398533-01 | BLANK | 01 | 05/19/2012 18:07 | |
| WG398533-02 | LCS | 01 | 05/19/2012 18:40 | |
| WG398533-03 | LCS2 | 01 | 05/19/2012 19:13 | |
| L12050284-01 | BBLD-PIT-SSP-050812 | DL02 | 05/19/2012 19:46 | |
| WG398533-04 | BLANK2 | 01 | 05/20/2012 05:31 | * |
| WG398533-04 | BLANK2 | 01 | 05/20/2012 05:31 | * |

* Sample past 12 hour tune limit

TUNE - Modified 03/06/2008
PDF File ID: 2424470
Report generated 05/22/2012 09:16

Microbac Laboratories Inc.
ORGANIC INSTRUMENT CHECK

BFB

Login Number: L12050284
Instrument: HPMS8
Analyst: ADC
Workgroup: WG387844

Tune ID: WG387844-01
Run Date: 01/25/2012
Run Time: 10:52
File ID: 8M376554
Cal ID: HPMS8-12-DEC-11

| Target Mass | Rel. to Mass | Lower Limit% | Upper Limit% | Rel. Abn% | Raw Abn | Result Pass/Fail |
|---|---|---|---|---|---|---|
| 50.0 | 95.0 | 15.0 | 40.0 | 19.8 | 8808 | PASS |
| 75.0 | 95.0 | 30.0 | 60.0 | 45.0 | 19993 | PASS |
| 95.0 | 95.0 | 100 | 100 | 100 | 44392 | PASS |
| 96.0 | 95.0 | 5.00 | 9.00 | 6.71 | 2979 | PASS |
| 173 | 174 | 0 | 2.00 | 0.970 | 324 | PASS |
| 174 | 95.0 | 50.0 | 100 | 75.3 | 33405 | PASS |
| 175 | 174 | 5.00 | 9.00 | 7.47 | 2495 | PASS |
| 176 | 174 | 95.0 | 101 | 97.5 | 32579 | PASS |
| 177 | 176 | 5.00 | 9.00 | 6.44 | 2099 | PASS |

This check relates to the following samples:

| Lab ID | Client ID | Tag | Date Analyzed | Q |
|---|---|---|---|---|
| WG387881-01 | STD | 01 | 01/25/2012 12:43 | |
| WG387881-02 | STD | 01 | 01/25/2012 13:28 | |
| WG387881-03 | STD | 01 | 01/25/2012 13:58 | |
| WG387881-04 | STD-CCV | 01 | 01/25/2012 14:29 | |
| WG387881-05 | STD | 01 | 01/25/2012 14:59 | |
| WG387881-06 | STD | 01 | 01/25/2012 15:29 | |
| WG387881-07 | STD | 01 | 01/25/2012 15:59 | |
| WG387881-08 | SSCV | 01 | 01/25/2012 16:29 | |

* Sample past 12 hour tune limit

TUNE - Modified 03/06/2008
PDF File ID: 2424470
Report generated 05/22/2012 09:16

Microbac Laboratories Inc.
ORGANIC INSTRUMENT CHECK

BFB

Login Number: L12050284
Instrument: HPMS8
Analyst: ADC
Workgroup: WG393321

Tune ID: WG393321-01
Run Date: 03/27/2012
Run Time: 10:51
File ID: 8M377934
Cal ID: HPMS8 -

| Target Mass | Rel. to Mass | Lower Limit% | Upper Limit% | Rel. Abn% | Raw Abn | Result Pass/Fail |
|---|---|---|---|---|---|---|
| 50.0 | 95.0 | 15.0 | 40.0 | 18.7 | 7999 | PASS |
| 75.0 | 95.0 | 30.0 | 60.0 | 43.5 | 18673 | PASS |
| 95.0 | 95.0 | 100 | 100 | 100 | 42882 | PASS |
| 96.0 | 95.0 | 5.00 | 9.00 | 6.92 | 2967 | PASS |
| 173 | 174 | 0 | 2.00 | 0.440 | 181 | PASS |
| 174 | 95.0 | 50.0 | 100 | 95.9 | 41120 | PASS |
| 175 | 174 | 5.00 | 9.00 | 7.61 | 3128 | PASS |
| 176 | 174 | 95.0 | 101 | 96.4 | 39648 | PASS |
| 177 | 176 | 5.00 | 9.00 | 7.04 | 2790 | PASS |

This check relates to the following samples:

| Lab ID | Client ID | Tag | Date Analyzed | Q |
|---|---|---|---|---|
| WG393321-02 | STD | 01 | 03/27/2012 11:14 | |
| WG393321-03 | STD | 01 | 03/27/2012 11:45 | |
| WG393321-04 | STD | 01 | 03/27/2012 12:15 | |
| WG393321-05 | STD | 01 | 03/27/2012 12:46 | |
| WG393321-06 | STD | 01 | 03/27/2012 13:17 | |
| WG393321-07 | STD | 01 | 03/27/2012 13:48 | |
| WG393321-08 | STD-CCV | 01 | 03/27/2012 14:18 | |
| WG393321-09 | STD | 01 | 03/27/2012 14:49 | |
| WG393321-10 | STD | 01 | 03/27/2012 15:19 | |
| WG393321-11 | STD | 01 | 03/27/2012 15:49 | |
| WG393321-12 | SSCV | 01 | 03/27/2012 17:20 | |

* Sample past 12 hour tune limit

TUNE - Modified 03/06/2008
PDF File ID: 2424470
Report generated 05/22/2012 09:16

Microbac Laboratories Inc.
ORGANIC INSTRUMENT CHECK

BFB

Login Number: L12050284
Instrument: HPMS8
Analyst: ADC
Workgroup: WG398117

Tune ID: WG398117-01
Run Date: 05/16/2012
Run Time: 08:25
File ID: 8M379101
Cal ID: HPMS8-27-MAR-12

| Target Mass | Rel. to Mass | Lower Limit% | Upper Limit% | Rel. Abn% | Raw Abn | Result Pass/Fail |
|---|---|---|---|---|---|---|
| 50.0 | 95.0 | 15.0 | 40.0 | 19.7 | 7079 | PASS |
| 75.0 | 95.0 | 30.0 | 60.0 | 46.3 | 16667 | PASS |
| 95.0 | 95.0 | 100 | 100 | 100 | 35984 | PASS |
| 96.0 | 95.0 | 5.00 | 9.00 | 6.62 | 2383 | PASS |
| 173 | 174 | 0 | 2.00 | 0 | 0 | PASS |
| 174 | 95.0 | 50.0 | 100 | 94.6 | 34040 | PASS |
| 175 | 174 | 5.00 | 9.00 | 6.99 | 2378 | PASS |
| 176 | 174 | 95.0 | 101 | 96.8 | 32956 | PASS |
| 177 | 176 | 5.00 | 9.00 | 7.49 | 2467 | PASS |

This check relates to the following samples:

| Lab ID | Client ID | Tag | Date Analyzed | Q |
|---|---|---|---|---|
| WG398117-02 | CCV | 01 | 05/16/2012 08:48 | |
| WG398118-01 | BLANK | 01 | 05/16/2012 09:53 | |
| WG398118-01 | BLANK | 01 | 05/16/2012 09:53 | |
| WG398118-02 | LCS | 01 | 05/16/2012 10:26 | |
| L12050284-09 | TB-050812 | 01 | 05/16/2012 14:20 | |
| L12050284-12 | EB-050812-GW | 01 | 05/16/2012 14:53 | |
| L12050284-03 | PZ-07-050812 | 01 | 05/16/2012 16:36 | |
| L12050284-05 | MW-18-050812 | 01 | 05/16/2012 17:10 | |
| L12050284-07 | TW-01-050812 | 01 | 05/16/2012 17:43 | |
| L12050284-10 | DUP-GW-050812 | 01 | 05/16/2012 18:16 | |

* Sample past 12 hour tune limit

TUNE - Modified 03/06/2008
PDF File ID: 2424470
Report generated 05/22/2012 09:16

Calibration Table Report
Method: A9FOOWTR.M
Title: A9-FOO Water - IC: 01/25/12 - HPMS6
Last Calibration: Thu Feb 02 09:44:46 2012
Curve: WG388587
Calibration Files

| Compound | 5<br>6M105371.D | 20<br>6M105372.D | 50<br>6M105373.D | 100<br>6M105374.D | 200<br>6M105375.D | 300<br>6M105376.D | 400<br>6M105377.D | Avg | %RSD | R^2<br>LINEAR |
|---|---|---|---|---|---|---|---|---|---|---|
| Fluorobenzene | ISTD | | | | | | | | | |
| Acetonitrile | 0.018 | 0.021 | 0.024 | 0.024 | 0.024 | 0.025 | 0.025 | 0.023 | 11.902 | |
| 3-Chloro-1-propene | 0.472 | 0.497 | 0.558 | 0.566 | 0.573 | 0.567 | 0.568 | 0.543 | 7.526 | |
| 2-Chloro-1,3-butadiene | 0.409 | 0.461 | 0.530 | 0.541 | 0.554 | 0.549 | 0.549 | 0.513 | 10.953 | |
| Ethyl Acetate | 0.123 | 0.135 | 0.147 | 0.153 | 0.159 | 0.163 | 0.167 | 0.150 | 10.598 | |
| Methacrylonitrile | 0.050 | 0.054 | 0.064 | 0.065 | 0.068 | 0.070 | 0.070 | 0.063 | 12.553 | |
| Isobutyl Alcohol | | 0.006 | 0.006 | 0.007 | 0.007 | 0.007 | 0.007 | 0.007 | 7.775 | |
| 1-Butanol | | | 0.002 | 0.001 | 0.002 | 0.002 | 0.002 | 0.002 | 30.823 | FAIL |
| Methyl methacrylate | 0.107 | 0.132 | 0.158 | 0.168 | 0.176 | 0.183 | 0.184 | 0.158 | 18.144 | 1.000 |
| 2-Nitropropane | 0.030 | 0.037 | 0.043 | 0.047 | 0.050 | 0.053 | 0.055 | 0.045 | 19.886 | 0.999 |
| Chlorobenzene-d5 | ISTD | | | | | | | | | |
| 1,4-Dichlorobenzene-d4 | ISTD | | | | | | | | | |
| Cyclohexanone | | 0.017 | 0.023 | 0.025 | 0.029 | 0.032 | 0.032 | 0.026 | 22.204 | 0.998 |

Thu Feb 02 09:47:01 2012

Calibration Table Report
Method: 8260WT.M
Title: 8260B/624_WATER SOP:OVLMSV01  05/16/12 - HPMS6
Last Calibration: Thu May 17 10:54:16 2012
Curve: WG397878
Calibration Files

| Compound | 0.3<br>6M108171.D | 0.4<br>6M108172.D | 1<br>6M108173.D | 2<br>6M108174.D | 5<br>6M108175.D | 20<br>6M108176.D | 50<br>6M108177.D | 100<br>6M108178.D | 200<br>6M108179.D | 300<br>6M108180.D | Avg | %RSD | R^2<br>Linear | R^2<br>Quadratic |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Fluorobenzene | ISTD | | | | | | | | | | | | | |
| Dichlorodifluoromethane | | | 0.402 | 0.397 | 0.378 | 0.386 | 0.394 | 0.376 | 0.379 | | 0.387 | 2.671 | | |
| Chloromethane | | | 0.923 | 0.885 | 0.824 | 0.751 | 0.697 | 0.661 | 0.639 | | 0.769 | 14.486 | | |
| Vinyl Chloride | | | 0.807 | 0.742 | 0.632 | 0.521 | 0.472 | 0.385 | | | 0.593 | 27.475 | | 1.000 |
| 1,3-Butadiene | | | | | 0.413 | 0.181 | 0.158 | 0.132 | 0.107 | 0.098 | 0.181 | 64.805 | | 1.000 |
| Bromomethane | | | 0.177 | 0.183 | 0.199 | 0.215 | 0.255 | 0.266 | 0.294 | | 0.227 | 19.813 | 0.994 | |
| Chloroethane | | | 0.240 | 0.239 | 0.232 | 0.241 | 0.250 | 0.252 | 0.252 | | 0.244 | 3.191 | | |
| Trichlorofluoromethane | | 0.562 | 0.581 | 0.571 | 0.561 | 0.571 | 0.595 | 0.588 | 0.601 | | 0.579 | 2.577 | | |
| Diethyl ether | | | 0.212 | 0.226 | 0.218 | 0.225 | 0.231 | 0.262 | | 0.244 | 0.231 | 7.380 | | |
| Isoprene | | | 0.446 | 0.494 | 0.453 | 0.497 | 0.535 | 0.562 | 0.560 | | 0.507 | 9.347 | | |
| Acrolein | | | | | 0.009 | 0.012 | 0.015 | 0.018 | 0.021 | | 0.015 | 32.446 | | 1.001 |
| 1,1,2-Trichloro-1,2,2-Trifluoroet | | | 0.277 | 0.295 | 0.279 | 0.298 | 0.304 | 0.305 | 0.322 | | 0.297 | 5.282 | | |
| Acetone | | | | | 0.058 | 0.054 | 0.051 | 0.051 | 0.059 | 0.049 | 0.054 | 7.097 | | |
| 1,1-Dichloroethene | | 0.357 | 0.484 | 0.478 | 0.471 | 0.494 | 0.501 | 0.511 | 0.527 | | 0.478 | 10.914 | | |
| Tert-Butyl Alcohol | | | | 0.012 | 0.012 | 0.012 | 0.012 | 0.015 | | 0.015 | 0.013 | 12.074 | | |
| Dimethyl Sulfide | | | 0.345 | 0.349 | 0.343 | 0.375 | 0.392 | 0.412 | 0.432 | | 0.378 | 9.319 | | |
| Iodomethane | | | 0.223 | 0.256 | 0.251 | 0.297 | 0.320 | 0.334 | 0.340 | | 0.289 | 15.863 | 0.999 | |
| Methyl acetate | | | | 0.175 | 0.164 | 0.164 | 0.165 | 0.182 | 0.182 | | 0.172 | 5.161 | | |
| Methylene Chloride | | 0.276 | 0.309 | 0.287 | 0.285 | 0.295 | 0.300 | 0.319 | 0.346 | | 0.302 | 7.423 | | |
| Carbon Disulfide | | | 0.856 | 0.879 | 0.825 | 0.882 | 0.933 | 0.969 | 1.046 | | 0.913 | 8.270 | | |
| Acrylonitrile | | | | | 0.060 | 0.070 | 0.072 | 0.079 | 0.080 | 0.066 | 0.071 | 10.850 | | |
| Methyl Tert Butyl Ether | | | 0.631 | 0.614 | 0.621 | 0.656 | 0.655 | 0.698 | 0.702 | | 0.654 | 5.396 | | |
| trans-1,2-Dichloroethene | | 0.212 | 0.275 | 0.277 | 0.276 | 0.289 | 0.298 | 0.311 | 0.336 | | 0.284 | 12.607 | | |
| n-Hexane | | | 0.309 | 0.320 | 0.292 | 0.321 | 0.326 | 0.335 | 0.346 | | 0.321 | 5.428 | | |
| Diisopropyl ether | | | 1.008 | 1.068 | 1.058 | 1.078 | 1.090 | 1.149 | | 1.100 | 1.079 | 3.980 | | |
| Vinyl Acetate | | | | | 0.341 | 0.338 | 0.352 | 0.371 | 0.359 | 0.337 | 0.350 | 3.941 | | |
| 1,1-Dichloroethane | | 0.418 | 0.559 | 0.538 | 0.551 | 0.569 | 0.581 | 0.600 | 0.621 | | 0.555 | 11.035 | | |
| Ethyl-Tert-Butyl ether | | | 0.837 | 0.895 | 0.886 | 0.915 | 0.917 | 0.998 | | 0.980 | 0.918 | 6.038 | | |
| 2-Butanone | | | | | 0.077 | 0.077 | 0.073 | 0.080 | 0.074 | 0.074 | 0.076 | 3.451 | | |
| Propionitrile | | | 0.022 | 0.020 | 0.022 | 0.023 | 0.023 | 0.025 | | 0.024 | 0.023 | 6.735 | | |
| 2,2-Dichloropropane | | 0.317 | 0.429 | 0.442 | 0.420 | 0.444 | 0.456 | 0.471 | 0.490 | | 0.434 | 12.012 | | |
| cis-1,2-Dichloroethene | | 0.231 | 0.274 | 0.288 | 0.290 | 0.307 | 0.313 | 0.330 | 0.353 | | 0.298 | 12.356 | | |
| Chloroform | 0.477 | 0.419 | 0.507 | 0.522 | 0.522 | 0.543 | 0.548 | 0.563 | 0.586 | | 0.521 | 9.539 | | |
| 1-Bromopropane | | | 0.029 | 0.045 | 0.047 | 0.050 | 0.054 | 0.056 | 0.060 | 0.062 | 0.050 | 20.573 | 0.998 | |
| Bromochloromethane | | 0.112 | 0.157 | 0.150 | 0.165 | 0.171 | 0.171 | 0.179 | 0.184 | | 0.161 | 14.179 | | |
| Tetrahydrofuran | | | 0.047 | 0.047 | 0.049 | 0.049 | 0.048 | 0.053 | | 0.049 | 0.049 | 3.843 | | |
| Dibromofluoromethane | | | | | 0.271 | 0.302 | 0.311 | 0.320 | 0.327 | | 0.306 | 7.161 | | |
| 1,1,1-Trichloroethane | | | 0.418 | 0.422 | 0.434 | 0.467 | 0.496 | 0.521 | 0.571 | | 0.475 | 12.014 | | |
| Cyclohexane | | | 0.415 | 0.456 | 0.427 | 0.471 | 0.494 | 0.497 | 0.536 | | 0.471 | 8.988 | | |
| 1,1-Dichloropropene | | 0.281 | 0.377 | 0.381 | 0.391 | 0.410 | 0.422 | 0.431 | 0.458 | | 0.394 | 13.484 | | |
| Tert-Amyl-Methyl ether | | | 0.641 | 0.691 | 0.697 | 0.722 | 0.732 | 0.811 | | 0.774 | 0.724 | 7.726 | | |
| Carbon Tetrachloride | | 0.227 | 0.312 | 0.328 | 0.357 | 0.406 | 0.438 | 0.484 | 0.463 | | 0.3768 | 23.116 | 0.998 | |
| 1,2-Dichloroethane-d4 | | | | | 0.308 | 0.328 | 0.33 | 0.331 | 0.321 | | 0.3236 | 3.0181 | | |
| Heptane | | | | | | | | | | | 0 | 0 | | |
| 1,2-Dichloroethane | | 0.302 | 0.38 | 0.395 | 0.388 | 0.412 | 0.411 | 0.432 | 0.446 | | 0.3957 | 11.088 | | |
| Benzene | | 0.906 | 1.107 | 1.088 | 1.076 | 1.137 | 1.17 | 1.225 | 1.276 | | 1.123 | 9.9368 | | |
| Trichloroethene | | | 0.267 | 0.271 | 0.261 | 0.28 | 0.289 | 0.304 | 0.338 | | 0.2869 | 9.3006 | | |
| Methylcyclohexane | | | 0.33 | 0.339 | 0.325 | 0.36 | 0.369 | 0.375 | 0.406 | | 0.3577 | 7.9851 | | |
| 1,2-Dichloropropane | | 0.192 | 0.258 | 0.273 | 0.279 | 0.288 | 0.291 | 0.299 | 0.314 | | 0.2743 | 13.521 | | |
| 1,4-Dioxane | | | | 0.001 | 0.001 | 0.001 | 0.001 | 0.002 | | | 0.0011 | 43.06 | 0.991 | |
| Bromodichloromethane | | | 0.32 | 0.323 | 0.332 | 0.366 | 0.38 | 0.401 | 0.419 | | 0.363 | 10.802 | | |
| Dibromomethane | | | 0.14 | 0.146 | 0.147 | 0.155 | 0.156 | 0.166 | 0.17 | | 0.1542 | 7.0818 | | |
| 2-Chloroethyl Vinyl Ether | | | | 0.045 | 0.048 | 0.058 | 0.06 | 0.064 | 0.065 | 0.064 | 0.0576 | 14.39 | | |
| 4-Methyl-2-Pentanone | | | | | 0.053 | 0.057 | 0.059 | 0.063 | 0.06 | 0.061 | 0.0585 | 5.7107 | | |
| cis-1,3-Dichloropropene | | | 0.346 | 0.36 | 0.367 | 0.416 | 0.435 | 0.463 | 0.49 | | 0.4112 | 13.411 | | |
| Dimethyl Disulfide | | | | 0.144 | 0.166 | 0.222 | 0.25 | 0.282 | 0.316 | | 0.2301 | 28.926 | 0.992 | |
| Chlorobenzene-d5 | ISTD | | | | | | | | | | | | | |
| Toluene-d8 | | | | | 1.153 | 1.278 | 1.333 | 1.374 | 1.428 | | 1.3132 | 8.017 | | |
| Toluene | | 1.147 | 1.434 | 1.394 | 1.425 | 1.533 | 1.584 | 1.672 | 1.701 | | 1.4864 | 11.988 | | |
| Ethyl Methacrylate | | | 0.218 | 0.245 | 0.252 | 0.312 | 0.32 | 0.345 | 0.346 | | 0.2912 | 17.824 | 0.999 | |
| Paraldehyde | | | | 0.003 | 0.003 | 0.004 | 0.004 | 0.005 | | | 0.004 | 20.444 | 0.993 | |
| trans-1,3-Dichloropropene | | 0.259 | 0.332 | 0.364 | 0.409 | 0.497 | 0.515 | 0.557 | 0.571 | | 0.438 | 25.98 | | 1 |
| 1,1,2-Trichloroethane | | 0.163 | 0.237 | 0.212 | 0.245 | 0.254 | 0.249 | 0.265 | 0.271 | | 0.237 | 14.778 | 0.999 | |
| 2-Hexanone | | | | | 0.115 | 0.135 | 0.137 | 0.148 | 0.14 | 0.138 | 0.1354 | 8.22 | | |
| 1,3-Dichloropropane | | 0.32 | 0.425 | 0.415 | 0.429 | 0.466 | 0.449 | 0.475 | 0.481 | | 0.4327 | 11.886 | | |
| Tetrachloroethene | | 0.263 | 0.309 | 0.313 | 0.325 | 0.357 | 0.362 | 0.385 | 0.429 | | 0.343 | 14.964 | | |
| Dibromochloromethane | | 0.142 | 0.203 | 0.227 | 0.246 | 0.299 | 0.314 | 0.346 | | | 0.2538 | 27.818 | 0.996 | |
| 1,2-Dibromoethane | | | 0.202 | 0.22 | 0.221 | 0.25 | 0.25 | 0.267 | 0.271 | | 0.2401 | 10.87 | | |
| 1-Chlorohexane | | | 0.405 | 0.423 | 0.401 | 0.451 | 0.476 | 0.499 | 0.551 | | 0.458 | 11.911 | | |
| Chlorobenzene | | 0.781 | 0.886 | 0.912 | 0.88 | 0.964 | 1.017 | 1.09 | 1.173 | | 0.9629 | 13.121 | | |
| 1,1,1,2-Tetrachloroethane | | 0.205 | 0.269 | 0.264 | 0.282 | 0.345 | 0.388 | 0.443 | | | 0.3136 | 26.124 | | 1 |
| Ethylbenzene | | | 0.463 | 0.45 | 0.461 | 0.522 | 0.573 | 0.64 | | | 0.5183 | 14.661 | | |
| m-,p-Xylene | | 0.435 | 0.541 | 0.564 | 0.567 | 0.659 | 0.729 | 0.808 | | | 0.615 | 20.435 | 0.994 | |
| o-Xylene | | | 0.503 | 0.544 | 0.534 | 0.601 | 0.641 | 0.704 | 0.771 | | 0.614 | 15.901 | 0.994 | |
| Styrene | | | 0.807 | 0.889 | 0.899 | 1.054 | 1.138 | 1.236 | 1.299 | | 1.046 | 17.975 | 0.997 | |
| Bromoform | | | 0.094 | 0.112 | 0.124 | 0.16 | 0.179 | 0.208 | 0.219 | | 0.1566 | 30.831 | | 12 |
| Isopropylbenzene | | 1.091 | 1.314 | 1.342 | 1.377 | 1.512 | 1.615 | 1.727 | | | 1.4254 | 14.827 | | |
| 1,4-Dichlorobenzene-d4 | ISTD | | | | | | | | | | | | | |
| 1,1,2,2-Tetrachloroethane | | 0.338 | 0.531 | 0.475 | 0.494 | 0.527 | 0.517 | 0.528 | 0.518 | | 0.4909 | 13.21 | | |
| p-Bromofluorobenzene | | | | | 0.813 | 0.889 | 0.915 | 0.933 | 0.982 | | 0.9064 | 6.845 | | |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,2,3-Trichloropropane | | | 0.102 | 0.122 | 0.132 | 0.131 | 0.129 | 0.135 | 0.132 | 0.1263 | 8.9437 | |
| trans-1,4-Dichloro-2-Butene | | | 0.067 | 0.12 | 0.132 | 0.16 | 0.164 | 0.173 | 0.174 | 0.1414 | 27.455 | 1 |
| n-Propylbenzene | | 2.569 | 3.165 | 3.202 | 3.32 | 3.465 | 3.574 | 3.716 | 3.664 | 3.3343 | 11.111 | |
| Bromobenzene | 0.633 | 0.512 | 0.621 | 0.655 | 0.695 | 0.732 | 0.759 | 0.804 | | 0.6764 | 13.556 | |
| 1,3,5-Trimethylbenzene | | 1.697 | 2.105 | 2.111 | 2.151 | 2.329 | 2.47 | 2.636 | | 2.2143 | 13.681 | |
| 2-Chlorotoluene | | 1.972 | 2.369 | 2.013 | 2.391 | 2.159 | 2.635 | 2.398 | 2.92 | 2.3571 | 13.442 | |
| 4-Chlorotoluene | | 1.578 | 2.008 | 1.972 | 2.071 | 2.283 | 2.266 | 2.397 | 2.468 | 2.1304 | 13.458 | |
| a-Methylstyrene | | | | 1.195 | 1.18 | 1.319 | 1.435 | 1.548 | 1.716 | 1.3989 | 15.012 | |
| tert-Butylbenzene | | | 0.403 | 0.397 | 0.411 | 0.448 | 0.478 | 0.519 | 0.584 | 0.4628 | 14.983 | |
| 1,2,4-Trimethylbenzene | | 1.879 | 2.116 | 2.185 | 2.261 | 2.502 | 2.645 | 2.809 | | 2.3424 | 13.854 | |
| sec-Butylbenzene | | 2.095 | 2.399 | 2.408 | 2.472 | 2.67 | 2.775 | 2.935 | 3.024 | 2.5973 | 11.963 | |
| p-Isopropyltoluene | | 1.566 | 1.919 | 1.923 | 1.976 | 2.193 | 2.301 | 2.467 | | 2.0494 | 14.504 | |
| 1,3-Dichlorobenzene | | 0.986 | 1.225 | 1.191 | 1.261 | 1.331 | 1.391 | 1.495 | | 1.2684 | 12.791 | |
| 1,4-Dichlorobenzene | 1.269 | 1.094 | 1.294 | 1.28 | 1.277 | 1.378 | 1.423 | 1.538 | 1.668 | 1.3578 | 12.413 | |
| n-Butylbenzene | | 1.495 | 1.83 | 1.786 | 1.871 | 2.017 | 2.078 | 2.18 | 2.307 | 1.9454 | 13.104 | |
| 1,2-Dichlorobenzene | 1.115 | 1.009 | 1.139 | 1.104 | 1.123 | 1.191 | 1.23 | 1.327 | 1.435 | 1.1859 | 10.866 | |
| 1,2-Dibromo-3-Chloropropane | | | | 0.041 | 0.067 | 0.079 | 0.081 | 0.088 | 0.088 | 0.074 | 24.408 | 0.999 |
| 1,2,4-Trichlorobenzene | | 0.504 | 0.624 | 0.648 | 0.644 | 0.686 | 0.709 | 0.798 | | 0.659 | 13.574 | |
| Hexachlorobutadiene | | | 0.246 | 0.215 | 0.244 | 0.251 | 0.253 | 0.275 | 0.318 | 0.2574 | 12.482 | |
| Naphthalene | | | 1.035 | 1.211 | 1.279 | 1.363 | 1.339 | 1.504 | 1.524 | 1.322 | 12.831 | |
| 1,2,3-Trichlorobenzene | 0.445 | 0.449 | 0.513 | 0.557 | 0.555 | 0.583 | 0.59 | 0.664 | | 0.5447 | 13.575 | |

Mon May 21 14:24:47 2012

Calibration Table Report
Method: A9FOOWT.M
Title: A9-FOO Water - IC: 01/25/12- HPMS8
Last Calibration: Wed Feb 01 15:35:09 2012
Curve: WG387881
Calibration Files

| Compound | 5<br>8M376558.D | 20<br>8M376559.D | 50<br>8M376560.D | 100<br>8M376561.D | 200<br>8M376562.D | 300<br>8M376563.D | 400<br>8M376564.D | 500<br>8M367713.D | Avg | %RSD | Linear |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Fluorobenzene | ISTD | | | | | | | | | | |
| Acetonitrile | 0.018 | 0.017 | 0.018 | 0.019 | 0.020 | 0.019 | 0.019 | | 0.019 | 5.995 | |
| 3-Chloro-1-propene | 0.376 | 0.390 | 0.392 | 0.395 | 0.408 | 0.388 | 0.382 | | 0.390 | 2.658 | |
| 2-Chloro-1,3-butadiene | 0.465 | 0.465 | 0.468 | 0.464 | 0.475 | 0.452 | 0.445 | | 0.462 | 2.198 | |
| Ethyl Acetate | 0.125 | 0.125 | 0.128 | 0.137 | 0.138 | 0.133 | 0.126 | | 0.130 | 4.168 | |
| Methacrylonitrile | 0.053 | 0.050 | 0.054 | 0.055 | 0.056 | 0.054 | 0.053 | | 0.054 | 4.009 | |
| Isobutyl Alcohol | | 0.005 | 0.006 | 0.006 | 0.006 | 0.006 | 0.006 | | 0.006 | 7.894 | |
| 1-Butanol | | 0.001 | 0.002 | 0.003 | 0.003 | 0.003 | 0.003 | | 0.003 | 23.485 | 0.996 |
| Methyl methacrylate | 0.141 | 0.155 | 0.162 | 0.167 | 0.172 | 0.164 | 0.159 | | 0.160 | 6.259 | |
| 2-Nitropropane | 0.043 | 0.051 | 0.055 | 0.059 | 0.063 | 0.060 | 0.058 | | 0.056 | 11.690 | |
| Chlorobenzene-d5 | ISTD | | | | | | | | | | |
| 1,4-Dichlorobenzene-d4 | ISTD | | | | | | | | | | |
| Cyclohexanone | | 0.025 | 0.024 | 0.024 | 0.025 | 0.026 | 0.024 | | 0.025 | 3.783 | |

Wed Feb 01 15:40:12 2012

Calibration Table Report
Method: 8260WT.M
Title: Method 8260B/624 WTR-SOP:OVLMSV01 03/27/12 HPMS 8
Last Calibration: Wed Mar 28 08:18:24 2012
Curve: WG393321
Calibration Files

| Compound | 0.3 8M377935.D | 0.4 8M377936.D | 1 8M377937.D | 2 8M377938.D | 5 8M377939.D | 20 8M377940.D | 50 8M377941.D | 100 8M377942.D | 200 8M377943.D | 300 8M377944.D | Avg | %RSD | R^2 Linear | R^2 Quadratic |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Fluorobenzene | ISTD | | | | | | | | | | | | | |
| Dichlorodifluoromethane | | | 0.269 | 0.287 | 0.273 | 0.277 | 0.278 | 0.254 | 0.267 | | 0.272 | 3.859 | | |
| Chloromethane | | | 0.379 | 0.343 | 0.303 | 0.292 | 0.292 | 0.283 | 0.302 | | 0.313 | 11.138 | | |
| Vinyl Chloride | | 0.302 | 0.289 | 0.275 | 0.268 | 0.252 | 0.240 | 0.230 | 0.234 | | 0.261 | 10.221 | | |
| 1,3-Butadiene | | | | 0.252 | 0.226 | 0.176 | 0.162 | 0.144 | 0.150 | 0.149 | 0.180 | 23.643 | 0.999 | |
| Bromomethane | | | 0.208 | 0.217 | 0.195 | 0.199 | 0.201 | 0.198 | 0.198 | | 0.202 | 3.792 | | |
| Chloroethane | | | 0.169 | 0.177 | 0.166 | 0.169 | 0.169 | 0.163 | 0.165 | | 0.168 | 2.585 | | |
| Trichlorofluoromethane | | 0.393 | 0.387 | 0.409 | 0.385 | 0.392 | 0.371 | 0.344 | 0.406 | | 0.386 | 5.391 | | |
| Diethyl ether | | | 0.154 | 0.143 | 0.143 | 0.142 | 0.139 | 0.132 | | 0.130 | 0.140 | 5.729 | | |
| Isoprene | | | 0.336 | 0.308 | 0.305 | 0.309 | 0.303 | 0.283 | 0.280 | | 0.304 | 6.121 | | |
| Acrolein | | | | | 0.014 | 0.015 | 0.016 | 0.016 | 0.017 | 0.017 | 0.016 | 6.554 | | |
| 1,1,2-Trichloro-1,2,2-Trifluoroet | | | 0.259 | 0.237 | 0.232 | 0.232 | 0.221 | 0.211 | 0.228 | | 0.232 | 6.353 | | |
| Acetone | | | | | 0.034 | 0.037 | 0.040 | 0.037 | 0.037 | 0.036 | 0.037 | 5.697 | | |
| 1,1-Dichloroethene | | 0.320 | 0.344 | 0.346 | 0.344 | 0.339 | 0.329 | 0.308 | 0.352 | | 0.335 | 4.487 | | |
| Tert-Butyl Alcohol | | | 0.006 | 0.007 | 0.010 | 0.010 | 0.011 | 0.011 | | 0.012 | 0.010 | 21.931 | 0.997 | |
| Dimethyl Sulfide | | | 0.256 | 0.244 | 0.232 | 0.232 | 0.239 | 0.228 | 0.221 | | 0.236 | 5.015 | | |
| Iodomethane | | | 0.348 | 0.370 | 0.383 | 0.422 | 0.431 | 0.404 | 0.381 | | 0.391 | 7.543 | | |
| Methyl acetate | | | | 0.113 | 0.116 | 0.117 | 0.117 | 0.114 | 0.120 | | 0.116 | 1.988 | | |
| Methylene Chloride | | 0.240 | 0.280 | 0.262 | 0.251 | 0.243 | 0.249 | 0.235 | 0.235 | | 0.249 | 6.205 | | |
| Carbon Disulfide | | 0.529 | 0.686 | 0.665 | 0.635 | 0.666 | 0.695 | 0.657 | 0.618 | | 0.644 | 8.205 | | |
| Acrylonitrile | | | | | 0.043 | 0.050 | 0.054 | 0.051 | 0.052 | 0.049 | 0.050 | 7.847 | | |
| Methyl Tert Butyl Ether | | | 0.469 | 0.423 | 0.420 | 0.431 | 0.426 | 0.402 | 0.416 | | 0.427 | 4.867 | | |
| trans-1,2-Dichloroethene | | 0.290 | 0.315 | 0.326 | 0.328 | 0.319 | 0.322 | 0.312 | 0.320 | | 0.317 | 3.702 | | |
| n-Hexane | | | 0.312 | 0.288 | 0.285 | 0.305 | 0.294 | 0.268 | 0.271 | | 0.289 | 5.607 | | |
| Diisopropyl ether | | | 0.825 | 0.810 | 0.766 | 0.774 | 0.764 | 0.712 | | 0.695 | 0.764 | 6.181 | | |
| Vinyl Acetate | | | | | 0.242 | 0.247 | 0.253 | 0.234 | 0.255 | 0.241 | 0.245 | 3.241 | | |
| 1,1-Dichloroethane | | 0.423 | 0.400 | 0.426 | 0.414 | 0.391 | 0.401 | 0.386 | 0.397 | | 0.405 | 3.605 | | |
| Ethyl-Tert-Butyl ether | | | 0.650 | 0.656 | 0.615 | 0.636 | 0.639 | 0.596 | | 0.589 | 0.626 | 4.198 | | |
| 2-Butanone | | | | | 0.050 | 0.053 | 0.058 | 0.056 | 0.057 | 0.056 | 0.055 | 5.311 | | |
| Propionitrile | | | 0.006 | 0.013 | 0.016 | 0.018 | 0.020 | 0.018 | | 0.019 | 0.016 | 31.177 | 0.999 | |
| 2,2-Dichloropropane | | 0.361 | 0.366 | 0.347 | 0.343 | 0.337 | 0.341 | 0.329 | 0.360 | | 0.348 | 3.773 | | |
| cis-1,2-Dichloroethene | | 0.239 | 0.266 | 0.270 | 0.271 | 0.262 | 0.265 | 0.258 | 0.266 | | 0.262 | 3.809 | | |
| Chloroform | 0.466 | 0.409 | 0.417 | 0.429 | 0.421 | 0.394 | 0.407 | 0.399 | 0.412 | | 0.417 | 5.067 | | |
| 1-Bromopropane | | | 0.042 | 0.055 | 0.052 | 0.055 | 0.056 | 0.055 | 0.058 | 0.053 | 0.053 | 9.033 | | |
| Bromochloromethane | | 0.170 | 0.161 | 0.173 | 0.171 | 0.169 | 0.172 | 0.166 | 0.168 | | 0.169 | 2.397 | | |
| Tetrahydrofuran | | | 0.038 | 0.036 | 0.035 | 0.037 | 0.039 | 0.037 | | 0.037 | 0.037 | 3.524 | | |
| Dibromofluoromethane | | | | 0.280 | 0.270 | 0.247 | 0.256 | 0.249 | 0.254 | | 0.259 | 5.073 | | |
| 1,1,1-Trichloroethane | | 0.385 | 0.361 | 0.392 | 0.387 | 0.375 | 0.378 | 0.367 | 0.387 | | 0.379 | 2.881 | | |
| Cyclohexane | | | 0.396 | 0.385 | 0.376 | 0.377 | 0.375 | 0.353 | 0.358 | | 0.374 | 3.963 | | |
| 1,1-Dichloropropene | | 0.318 | 0.344 | 0.324 | 0.331 | 0.325 | 0.330 | 0.315 | 0.326 | | 0.326 | 2.710 | | |
| Tert-Amyl-Methyl ether | | | 0.541 | 0.530 | 0.507 | 0.512 | 0.520 | 0.489 | | 0.486 | 0.512 | 3.968 | | |
| Carbon Tetrachloride | | 0.34 | 0.358 | 0.381 | 0.361 | 0.348 | 0.351 | 0.341 | 0.357 | | 0.3545 | 3.6603 | | |
| 1,2-Dichloroethane-d4 | | | | | 0.207 | 0.194 | 0.2 | 0.196 | 0.201 | | 0.1997 | 2.5664 | | |
| Heptane | | | | | | | | | | | 0 | 0 | | |
| 1,2-Dichloroethane | | 0.238 | 0.257 | 0.279 | 0.257 | 0.249 | 0.258 | 0.252 | 0.263 | | 0.2566 | 4.6046 | | |
| Benzene | | 1.06 | 1.046 | 1.002 | 0.952 | 0.922 | 0.927 | 0.883 | 0.871 | | 0.958 | 7.4203 | | |
| Trichloroethene | | 0.285 | 0.33 | 0.338 | 0.323 | 0.316 | 0.32 | 0.309 | 0.312 | | 0.3167 | 5.0898 | | |
| Methylcyclohexane | | | 0.404 | 0.365 | 0.361 | 0.368 | 0.364 | 0.346 | 0.353 | | 0.366 | 5.0531 | | |
| 1,2-Dichloropropane | | 0.22 | 0.236 | 0.237 | 0.23 | 0.233 | 0.239 | 0.232 | 0.237 | | 0.2331 | 2.6045 | | |
| Bromodichloromethane | | 0.266 | 0.32 | 0.309 | 0.305 | 0.289 | 0.305 | 0.302 | 0.309 | | 0.3007 | 5.4743 | | |
| 1,4-Dioxane | | | | | | 0.001 | 0.001 | 0.001 | | 0.001 | 0.0013 | 5.1493 | fail | |
| Dibromomethane | | 0.087 | 0.126 | 0.123 | 0.123 | 0.123 | 0.13 | 0.124 | 0.13 | | 0.1207 | 11.438 | | |
| 2-Chloroethyl Vinyl Ether | | | 0.094 | 0.101 | 0.104 | 0.109 | 0.116 | 0.111 | 0.111 | 0.11 | 0.107 | 6.5203 | | |
| 4-Methyl-2-Pentanone | | | | | 0.044 | 0.048 | 0.052 | 0.049 | 0.048 | 0.049 | 0.0484 | 5.279 | | |
| cis-1,3-Dichloropropene | | 0.34 | 0.355 | 0.346 | 0.35 | 0.35 | 0.371 | 0.357 | 0.362 | | 0.3539 | 2.6624 | | |
| Dimethyl Disulfide | | | 0.343 | 0.343 | 0.365 | 0.405 | 0.435 | 0.425 | 0.428 | | 0.3919 | 10.429 | | |
| Chlorobenzene-d5 | ISTD | | | | | | | | | | | | | |
| Toluene-d8 | | | | | 1.212 | 1.157 | 1.182 | 1.121 | 1.1 | | 1.1543 | 3.9255 | | |
| Toluene | | 1.791 | 1.494 | 1.419 | 1.349 | 1.277 | 1.291 | 1.222 | 1.187 | | 1.3787 | 14.101 | | |
| Ethyl Methacrylate | | | 0.241 | 0.248 | 0.23 | 0.244 | 0.252 | 0.236 | 0.233 | | 0.2405 | 3.2848 | | |
| Paraldehyde | | | | | 0.002 | 0.004 | 0.005 | 0.004 | | 0.004 | 0.004 | 30.883 | 0.998 | |
| trans-1,3-Dichloropropene | | 0.382 | 0.405 | 0.371 | 0.379 | 0.375 | 0.393 | 0.377 | 0.378 | | 0.3825 | 2.9359 | | |
| 1,1,2-Trichloroethane | | 0.184 | 0.219 | 0.225 | 0.223 | 0.214 | 0.221 | 0.21 | 0.208 | | 0.2131 | 6.1664 | | |
| 2-Hexanone | | | | | 0.051 | 0.053 | 0.056 | 0.053 | 0.053 | 0.054 | 0.0535 | 3.3461 | | |
| 1,3-Dichloropropane | | 0.355 | 0.377 | 0.351 | 0.341 | 0.342 | 0.353 | 0.339 | 0.334 | | 0.349 | 3.8631 | | |
| Tetrachloroethene | | 0.309 | 0.311 | 0.326 | 0.325 | 0.308 | 0.31 | 0.297 | 0.3 | | 0.3108 | 3.3366 | | |
| Dibromochloromethane | | 0.26 | 0.315 | 0.32 | 0.321 | 0.314 | 0.335 | 0.322 | 0.318 | | 0.3133 | 7.2056 | | |
| 1,2-Dibromoethane | | 0.219 | 0.244 | 0.233 | 0.228 | 0.227 | 0.237 | 0.225 | 0.224 | | 0.2296 | 3.514 | | |
| 1-Chlorohexane | | 0.571 | 0.495 | 0.463 | 0.429 | 0.44 | 0.442 | 0.421 | 0.422 | | 0.4605 | 11.067 | | |
| Chlorobenzene | | 1.043 | 1.007 | 1.018 | 0.992 | 0.934 | 0.946 | 0.903 | 0.864 | | 0.9633 | 6.3899 | | |
| 1,1,1,2-Tetrachloroethane | | 0.351 | 0.364 | 0.362 | 0.351 | 0.345 | 0.357 | 0.345 | 0.33 | | 0.3506 | 3.0965 | | |
| Ethylbenzene | | 0.543 | 0.515 | 0.542 | 0.526 | 0.495 | 0.509 | 0.488 | 0.475 | | 0.5117 | 4.8711 | | |
| m-,p-Xylene | | 0.664 | 0.655 | 0.673 | 0.64 | 0.612 | 0.617 | 0.586 | 0.55 | | 0.6247 | 6.7226 | | |
| o-Xylene | | 0.671 | 0.629 | 0.655 | 0.641 | 0.614 | 0.632 | 0.6 | 0.579 | | 0.6276 | 4.6844 | | |
| Styrene | | 1.349 | 1.272 | 1.195 | 1.109 | 1.045 | 1.061 | 1.008 | 0.95 | | 1.1235 | 12.205 | | |
| Bromoform | | | 0.171 | 0.175 | 0.173 | 0.18 | 0.192 | 0.186 | 0.182 | | 0.1797 | 4.1431 | | |
| Isopropylbenzene | | 1.705 | 1.623 | 1.691 | 1.645 | 1.542 | 1.558 | 1.469 | 1.387 | | 1.5775 | 7.0053 | | |
| 1,4-Dichlorobenzene-d4 | ISTD | | | | | | | | | | | | | |
| 1,1,2,2-Tetrachloroethane | | 0.386 | 0.392 | 0.419 | 0.416 | 0.405 | 0.414 | 0.391 | 0.391 | | 0.4018 | 3.314 | | |
| p-Bromofluorobenzene | | | | | 0.827 | 0.825 | 0.827 | 0.786 | 0.779 | | 0.8087 | 2.9906 | | |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,2,3-Trichloropropane | | | 0.12 | 0.142 | 0.137 | 0.132 | 0.137 | 0.131 | 0.131 | 0.1329 | 5.0728 | |
| trans-1,4-Dichloro-2-Butene | | | 0.107 | 0.104 | 0.11 | 0.123 | 0.128 | 0.121 | 0.123 | 0.1163 | 7.9526 | |
| n-Propylbenzene | | 3.539 | 3.307 | 3.446 | 3.337 | 3.227 | 3.169 | 3.014 | 2.862 | 3.2378 | 6.8545 | |
| Bromobenzene | 0.797 | 0.773 | 0.826 | 0.844 | 0.844 | 0.808 | 0.802 | 0.782 | 0.769 | 0.8049 | 3.5278 | |
| 1,3,5-Trimethylbenzene | | 2.47 | 2.464 | 2.549 | 2.501 | 2.42 | 2.389 | 2.302 | 2.222 | 2.4146 | 4.4722 | |
| 2-Chlorotoluene | | 2.211 | 2.172 | 2.303 | 2.201 | 1.999 | 1.96 | 1.889 | 1.742 | 2.0596 | 9.3231 | |
| 4-Chlorotoluene | | 2.262 | 2.094 | 1.972 | 1.863 | 1.9 | 1.899 | 1.823 | 1.761 | 1.9469 | 8.3088 | |
| a-Methylstyrene | | | 1.483 | 1.451 | 1.368 | 1.497 | 1.463 | 1.423 | 1.365 | 1.4357 | 3.6809 | |
| tert-Butylbenzene | | 0.524 | 0.503 | 0.578 | 0.56 | 0.532 | 0.532 | 0.519 | 0.523 | 0.5339 | 4.459 | |
| 1,2,4-Trimethylbenzene | | 4.31 | 2.922 | 2.856 | 2.658 | 2.486 | 2.451 | 2.368 | 2.254 | 2.7881 | 23.568 | 0.999 |
| sec-Butylbenzene | | 3.361 | 3.024 | 3.094 | 3.003 | 2.89 | 2.849 | 2.742 | 2.657 | 2.9525 | 7.4692 | |
| p-Isopropyltoluene | | 2.753 | 2.762 | 2.802 | 2.775 | 2.633 | 2.631 | 2.524 | 2.439 | 2.6648 | 4.9336 | |
| 1,3-Dichlorobenzene | | 1.664 | 1.659 | 1.692 | 1.622 | 1.542 | 1.555 | 1.507 | 1.467 | 1.5885 | 5.1664 | |
| 1,4-Dichlorobenzene | 1.718 | 1.658 | 1.641 | 1.675 | 1.601 | 1.548 | 1.555 | 1.5 | 1.451 | 1.5942 | 5.4856 | |
| n-Butylbenzene | | 2.227 | 2.14 | 2.168 | 2.137 | 2.029 | 2.028 | 1.978 | 1.959 | 2.0832 | 4.6789 | |
| 1,2-Dichlorobenzene | 1.523 | 1.348 | 1.488 | 1.476 | 1.448 | 1.388 | 1.407 | 1.356 | 1.311 | 1.416 | 5.0772 | |
| 1,2-Dibromo-3-Chloropropane | | | | 0.06 | 0.071 | 0.068 | 0.074 | 0.07 | 0.073 | 0.0692 | 7.0271 | |
| 1,2,4-Trichlorobenzene | | 1.007 | 0.989 | 1.008 | 0.954 | 0.925 | 0.931 | 0.902 | 0.914 | 0.9535 | 4.4381 | |
| Hexachlorobutadiene | | 0.3 | 0.308 | 0.346 | 0.341 | 0.339 | 0.345 | 0.352 | 0.381 | 0.3388 | 7.4606 | |
| Naphthalene | | 1.934 | 2.055 | 1.983 | 1.905 | 1.811 | 1.841 | 1.725 | 1.674 | 1.866 | 6.9016 | |
| 1,2,3-Trichlorobenzene | 0.91 | 0.776 | 0.843 | 0.842 | 0.825 | 0.8 | 0.8 | 0.775 | 0.783 | 0.8172 | 5.3389 | |

Fri Mar 30 11:20:43 2012

Microbac Laboratories Inc.
ALTERNATE SOURCE CALIBRATION REPORT

Login Number:L12050284 Run Date:05/16/2012 Sample ID:WG397878-12
Instrument ID:HPMS6 Run Time:21:13 Method:8260B
File ID:6M108182 Analyst:ADC QC Key:WATERLOO
ICal Workgroup:WG397878 Cal ID: HPMS6 - 16-MAY-12

| Analyte | | Expected | Found | Units | RF | %D | UCL | Q |
|---|---|---|---|---|---|---|---|---|
| 1,1-Dichloroethene | CCC | 50.0 | 57.7 | ug/L | 0.551 | 15.3 | 25 | |
| 1,2-Dichloropropane | CCC | 50.0 | 57.3 | ug/L | 0.314 | 14.6 | 25 | |
| Chloroform | CCC | 50.0 | 57.8 | ug/L | 0.602 | 15.6 | 25 | |
| Ethylbenzene | CCC | 50.0 | 50.8 | ug/L | 0.613 | 1.70 | 25 | |
| Toluene | CCC | 50.0 | 57.0 | ug/L | 1.69 | 14.0 | 25 | |
| Vinyl Chloride | CCC | 50.0 | 52.1 | ug/L | 0.487 | 4.10 | 25 | |
| 1,1,2,2-Tetrachloroethane | SPCC | 50.0 | 54.8 | ug/L | 0.538 | 9.60 | 25 | |
| 1,1-Dichloroethane | SPCC | 50.0 | 55.8 | ug/L | 0.620 | 11.7 | 25 | |
| Bromoform | SPCC | 50.0 | 51.5 | ug/L | 0.190 | 2.90 | 25 | |
| Chlorobenzene | SPCC | 50.0 | 55.3 | ug/L | 1.06 | 10.6 | 25 | |
| Chloromethane | SPCC | 50.0 | 49.5 | ug/L | 0.761 | 1.00 | 25 | |
| 1,1,1-Trichloroethane | | 50.0 | 57.9 | ug/L | 0.532 | 15.7 | 25 | |
| 1,1,2-Trichloro-1,2,2-Trifluoroethane | | 50.0 | 53.5 | ug/L | 0.318 | 7.00 | 25 | |
| 1,1,2-Trichloroethane | | 50.0 | 51.2 | ug/L | 0.272 | 2.40 | 25 | |
| 1,2,3-Trichlorobenzene | | 50.0 | 60.1 | ug/L | 0.654 | 20.1 | 25 | |
| 1,2,4-Trichlorobenzene | | 50.0 | 59.0 | ug/L | 0.778 | 18.0 | 25 | |
| 1,2-Dibromo-3-Chloropropane | | 50.0 | 50.7 | ug/L | 0.0870 | 1.50 | 25 | |
| 1,2-Dibromoethane | | 50.0 | 51.0 | ug/L | 0.270 | 2.10 | 25 | |
| 1,2-Dichlorobenzene | | 50.0 | 54.6 | ug/L | 1.30 | 9.20 | 25 | |
| 1,2-Dichloroethane | | 50.0 | 55.4 | ug/L | 0.438 | 10.8 | 25 | |
| cis-1,2-Dichloroethene | | 50.0 | 56.9 | ug/L | 0.340 | 13.8 | 25 | |
| trans-1,2-Dichloroethene | | 50.0 | 55.9 | ug/L | 0.318 | 11.8 | 25 | |
| 1,3-Dichlorobenzene | | 50.0 | 57.5 | ug/L | 1.46 | 15.0 | 25 | |
| 1,4-Dichlorobenzene | | 50.0 | 54.8 | ug/L | 1.49 | 9.70 | 25 | |
| 2-Butanone | | 50.0 | 49.5 | ug/L | 0.0751 | 1.00 | 25 | |
| 2-Hexanone | | 50.0 | 52.5 | ug/L | 0.142 | 5.00 | 25 | |
| 4-Methyl-2-Pentanone | | 50.0 | 52.6 | ug/L | 0.0615 | 5.10 | 25 | |
| Acetone | | 50.0 | 49.9 | ug/L | 0.0536 | 0.100 | 25 | |
| Benzene | | 50.0 | 56.2 | ug/L | 1.26 | 12.4 | 25 | |
| Bromochloromethane | | 50.0 | 58.5 | ug/L | 0.189 | 17.0 | 25 | |
| Bromodichloromethane | | 50.0 | 52.5 | ug/L | 0.424 | 5.00 | 25 | |
| Bromomethane | | 50.0 | 54.9 | ug/L | 0.302 | 9.80 | 25 | |
| Carbon Disulfide | | 50.0 | 53.7 | ug/L | 0.980 | 7.40 | 25 | |
| Carbon Tetrachloride | | 50.0 | 52.5 | ug/L | 0.483 | 5.00 | 25 | |
| Chloroethane | | 50.0 | 55.2 | ug/L | 0.269 | 10.4 | 25 | |
| cis-1,3-Dichloropropene | | 50.0 | 49.7 | ug/L | 0.466 | 0.600 | 25 | |
| Cyclohexane | | 50.0 | 53.2 | ug/L | 0.501 | 6.30 | 25 | |
| Dibromochloromethane | | 50.0 | 51.7 | ug/L | 0.340 | 3.50 | 25 | |
| Dichlorodifluoromethane | | 50.0 | 75.3 | ug/L | 0.583 | 50.5 | 25 | * |
| Isopropylbenzene | | 50.0 | 52.2 | ug/L | 1.49 | 4.40 | 25 | |
| Methyl acetate | | 50.0 | 44.7 | ug/L | 0.154 | 10.6 | 25 | |
| Methyl Tert Butyl Ether | | 50.0 | 54.3 | ug/L | 0.710 | 8.60 | 25 | |

ALT - Modified 09/06/2007
Version 1.5 PDF File ID: 2422033
Report generated 05/22/2012 09:16

Microbac Laboratories Inc.
ALTERNATE SOURCE CALIBRATION REPORT

Login Number: L12050284 Run Date: 05/16/2012 Sample ID: WG397878-12
Instrument ID: HPMS6 Run Time: 21:13 Method: 8260B
File ID: 6M108182 Analyst: ADC QC Key: WATERLOO
ICal Workgroup: WG397878 Cal ID: HPMS6 - 16-MAY-12

| Analyte | | Expected | Found | Units | RF | %D | UCL | Q |
|---|---|---|---|---|---|---|---|---|
| Methylcyclohexane | | 50.0 | 54.6 | ug/L | 0.390 | 9.10 | 25 | |
| Methylene Chloride | | 50.0 | 54.3 | ug/L | 0.328 | 8.60 | 25 | |
| m-,p-Xylene | | 100 | 101 | ug/L | 0.767 | 0.600 | 25 | |
| o-Xylene | | 50.0 | 50.1 | ug/L | 0.672 | 0.200 | 25 | |
| Styrene | | 50.0 | 51.3 | ug/L | 1.21 | 2.60 | 25 | |
| Tetrachloroethene | | 50.0 | 58.6 | ug/L | 0.402 | 17.2 | 25 | |
| trans-1,3-Dichloropropene | | 50.0 | 47.3 | ug/L | 0.492 | 5.40 | 25 | |
| Trichloroethene | | 50.0 | 50.4 | ug/L | 0.320 | 0.700 | 25 | |
| Trichlorofluoromethane | | 50.0 | 53.8 | ug/L | 0.622 | 7.50 | 25 | |

* Exceeds %D Limit

CCC Calibration Check Compounds
SPCC System Performance Check Compounds

ALT - Modified 09/06/2007
Version 1.5 PDF File ID: 2422033
Report generated 05/22/2012 09:16

Microbac Laboratories Inc.
ALTERNATE SOURCE CALIBRATION REPORT

Login Number:L12050284 Run Date:03/27/2012 Sample ID:WG393321-12
Instrument ID:HPMS8 Run Time:17:20 Method:8260B
File ID:8M377947 Analyst:ADC QC Key:WATERLOO
ICal Workgroup:WG393321 Cal ID: HPMS8 - 27-MAR-12

| Analyte | | Expected | Found | Units | RF | %D | UCL | Q |
|---|---|---|---|---|---|---|---|---|
| 1,1-Dichloroethene | CCC | 50.0 | 48.8 | ug/L | 0.327 | 2.40 | 25 | |
| 1,2-Dichloropropane | CCC | 50.0 | 52.6 | ug/L | 0.245 | 5.20 | 25 | |
| Chloroform | CCC | 50.0 | 48.3 | ug/L | 0.403 | 3.50 | 25 | |
| Ethylbenzene | CCC | 50.0 | 51.1 | ug/L | 0.523 | 2.20 | 25 | |
| Toluene | CCC | 50.0 | 48.3 | ug/L | 1.33 | 3.30 | 25 | |
| Vinyl Chloride | CCC | 50.0 | 54.2 | ug/L | 0.283 | 8.30 | 25 | |
| 1,1,2,2-Tetrachloroethane | SPCC | 50.0 | 54.8 | ug/L | 0.440 | 9.60 | 25 | |
| 1,1-Dichloroethane | SPCC | 50.0 | 49.7 | ug/L | 0.402 | 0.700 | 25 | |
| Bromoform | SPCC | 50.0 | 52.8 | ug/L | 0.190 | 5.70 | 25 | |
| Chlorobenzene | SPCC | 50.0 | 50.1 | ug/L | 0.966 | 0.300 | 25 | |
| Chloromethane | SPCC | 50.0 | 58.0 | ug/L | 0.364 | 16.0 | 25 | |
| 1,1,1-Trichloroethane | | 50.0 | 51.0 | ug/L | 0.386 | 1.90 | 25 | |
| 1,1,2-Trichloro-1,2,2-Trifluoroethane | | 50.0 | 51.6 | ug/L | 0.239 | 3.20 | 25 | |
| 1,1,2-Trichloroethane | | 50.0 | 53.7 | ug/L | 0.229 | 7.40 | 25 | |
| 1,2,3-Trichlorobenzene | | 50.0 | 50.7 | ug/L | 0.829 | 1.50 | 25 | |
| 1,2,4-Trichlorobenzene | | 50.0 | 48.8 | ug/L | 0.930 | 2.50 | 25 | |
| 1,2-Dibromo-3-Chloropropane | | 50.0 | 53.6 | ug/L | 0.0742 | 7.30 | 25 | |
| 1,2-Dibromoethane | | 50.0 | 53.0 | ug/L | 0.243 | 5.90 | 25 | |
| 1,2-Dichlorobenzene | | 50.0 | 51.2 | ug/L | 1.45 | 2.40 | 25 | |
| 1,2-Dichloroethane | | 50.0 | 51.1 | ug/L | 0.263 | 2.30 | 25 | |
| cis-1,2-Dichloroethene | | 50.0 | 52.5 | ug/L | 0.275 | 5.10 | 25 | |
| trans-1,2-Dichloroethene | | 50.0 | 51.7 | ug/L | 0.328 | 3.50 | 25 | |
| 1,3-Dichlorobenzene | | 50.0 | 50.4 | ug/L | 1.60 | 0.900 | 25 | |
| 1,4-Dichlorobenzene | | 50.0 | 50.9 | ug/L | 1.62 | 1.80 | 25 | |
| 2-Butanone | | 50.0 | 54.8 | ug/L | 0.0602 | 9.70 | 25 | |
| 2-Hexanone | | 50.0 | 56.2 | ug/L | 0.0600 | 12.3 | 25 | |
| 4-Methyl-2-Pentanone | | 50.0 | 53.7 | ug/L | 0.0519 | 7.30 | 25 | |
| Acetone | | 50.0 | 53.8 | ug/L | 0.0397 | 7.70 | 25 | |
| Benzene | | 50.0 | 49.8 | ug/L | 0.954 | 0.400 | 25 | |
| Bromochloromethane | | 50.0 | 52.3 | ug/L | 0.177 | 4.60 | 25 | |
| Bromodichloromethane | | 50.0 | 52.2 | ug/L | 0.314 | 4.30 | 25 | |
| Bromomethane | | 50.0 | 54.8 | ug/L | 0.222 | 9.70 | 25 | |
| Carbon Disulfide | | 50.0 | 51.1 | ug/L | 0.658 | 2.20 | 25 | |
| Carbon Tetrachloride | | 50.0 | 51.2 | ug/L | 0.363 | 2.40 | 25 | |
| Chloroethane | | 50.0 | 55.8 | ug/L | 0.188 | 11.7 | 25 | |
| cis-1,3-Dichloropropene | | 50.0 | 55.8 | ug/L | 0.395 | 11.6 | 25 | |
| Cyclohexane | | 50.0 | 51.5 | ug/L | 0.385 | 2.90 | 25 | |
| Dibromochloromethane | | 50.0 | 54.5 | ug/L | 0.342 | 9.10 | 25 | |
| Dichlorodifluoromethane | | 50.0 | 77.4 | ug/L | 0.421 | 54.9 | 25 | * |
| Isopropylbenzene | | 50.0 | 44.8 | ug/L | 1.41 | 10.4 | 25 | |
| Methyl acetate | | 50.0 | 56.8 | ug/L | 0.132 | 13.7 | 25 | |
| Methyl Tert Butyl Ether | | 50.0 | 53.5 | ug/L | 0.457 | 7.00 | 25 | |

ALT - Modified 09/06/2007
Version 1.5 PDF File ID: 2422033
Report generated 05/22/2012 09:16

Microbac Laboratories Inc.
ALTERNATE SOURCE CALIBRATION REPORT

Login Number: L12050284 Run Date: 03/27/2012 Sample ID: WG393321-12
Instrument ID: HPMS8 Run Time: 17:20 Method: 8260B
File ID: 8M377947 Analyst: ADC QC Key: WATERLOO
ICal Workgroup: WG393321 Cal ID: HPMS8 - 27-MAR-12

| Analyte | | Expected | Found | Units | RF | %D | UCL | Q |
|---|---|---|---|---|---|---|---|---|
| Methylcyclohexane | | 50.0 | 51.8 | ug/L | 0.379 | 3.50 | 25 | |
| Methylene Chloride | | 50.0 | 49.7 | ug/L | 0.248 | 0.600 | 25 | |
| m-,p-Xylene | | 100 | 102 | ug/L | 0.638 | 2.10 | 25 | |
| o-Xylene | | 50.0 | 51.2 | ug/L | 0.643 | 2.40 | 25 | |
| Styrene | | 50.0 | 48.1 | ug/L | 1.08 | 3.80 | 25 | |
| Tetrachloroethene | | 50.0 | 51.1 | ug/L | 0.318 | 2.20 | 25 | |
| trans-1,3-Dichloropropene | | 50.0 | 49.1 | ug/L | 0.375 | 1.90 | 25 | |
| Trichloroethene | | 50.0 | 52.2 | ug/L | 0.331 | 4.50 | 25 | |
| Trichlorofluoromethane | | 50.0 | 52.3 | ug/L | 0.404 | 4.70 | 25 | |

* Exceeds %D Limit

CCC Calibration Check Compounds
SPCC System Performance Check Compounds

ALT - Modified 09/06/2007
Version 1.5 PDF File ID: 2422033
Report generated 05/22/2012 09:16

Microbac Laboratories Inc.
CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L12050284 Run Date: 05/16/2012 Sample ID: WG398117-02
Instrument ID: HPMS8 Run Time: 08:48 Method: 8260B
File ID: 8M379102 Analyst: ADC QC Key: WATERLOO
Workgroup (AAB#): WG398118 Cal ID: HPMS8 - 27-MAR-12
Matrix: WATER

| Analyte | | Expected | Found | UNITS | RF | %D | UCL | Q |
|---|---|---|---|---|---|---|---|---|
| 1,1-Dichloroethene | CCC | 50.0 | 51.4 | ug/L | 0.345 | 2.82 | 20 | |
| 1,2-Dichloropropane | CCC | 50.0 | 48.7 | ug/L | 0.227 | 2.67 | 20 | |
| Chloroform | CCC | 50.0 | 49.9 | ug/L | 0.417 | 0.135 | 20 | |
| Ethylbenzene | CCC | 50.0 | 48.8 | ug/L | 0.499 | 2.43 | 20 | |
| Toluene | CCC | 50.0 | 44.9 | ug/L | 1.24 | 10.2 | 20 | |
| Vinyl Chloride | CCC | 50.0 | 54.3 | ug/L | 0.284 | 8.57 | 20 | |
| 1,1,2,2-Tetrachloroethane | SPCC | 50.0 | 40.7 | ug/L | 0.327 | 18.6 | 20 | |
| 1,1-Dichloroethane | SPCC | 50.0 | 48.3 | ug/L | 0.391 | 3.49 | 20 | |
| Bromoform | SPCC | 50.0 | 49.1 | ug/L | 0.176 | 1.83 | 20 | |
| Chlorobenzene | SPCC | 50.0 | 47.3 | ug/L | 0.912 | 5.35 | 20 | |
| Chloromethane | SPCC | 50.0 | 46.4 | ug/L | 0.291 | 7.22 | 20 | |
| 1,1,1-Trichloroethane | | 50.0 | 57.3 | ug/L | 0.434 | 14.6 | 20 | |
| 1,1,2-Trichloro-1,2,2-Trifluoroethane | | 50.0 | 49.8 | ug/L | 0.231 | 0.331 | 20 | |
| 1,1,2-Trichloroethane | | 50.0 | 45.1 | ug/L | 0.192 | 9.72 | 20 | |
| 1,2,3-Trichlorobenzene | | 50.0 | 44.4 | ug/L | 0.726 | 11.1 | 20 | |
| 1,2,4-Trichlorobenzene | | 50.0 | 44.3 | ug/L | 0.845 | 11.4 | 20 | |
| 1,2-Dibromo-3-Chloropropane | | 50.0 | 43.0 | ug/L | 0.0595 | 14.0 | 20 | |
| 1,2-Dibromoethane | | 50.0 | 44.2 | ug/L | 0.203 | 11.6 | 20 | |
| 1,2-Dichlorobenzene | | 50.0 | 46.2 | ug/L | 1.31 | 7.60 | 20 | |
| 1,2-Dichloroethane | | 50.0 | 53.7 | ug/L | 0.276 | 7.47 | 20 | |
| cis-1,2-Dichloroethene | | 50.0 | 48.3 | ug/L | 0.253 | 3.36 | 20 | |
| trans-1,2-Dichloroethene | | 50.0 | 51.2 | ug/L | 0.324 | 2.42 | 20 | |
| 1,3-Dichlorobenzene | | 50.0 | 47.1 | ug/L | 1.50 | 5.87 | 20 | |
| 1,4-Dichlorobenzene | | 50.0 | 47.6 | ug/L | 1.52 | 4.74 | 20 | |
| 2-Butanone | | 50.0 | 48.0 | ug/L | 0.0527 | 4.03 | 20 | |
| 2-Hexanone | | 50.0 | 41.7 | ug/L | 0.0446 | 16.5 | 20 | |
| 4-Methyl-2-Pentanone | | 50.0 | 44.3 | ug/L | 0.0429 | 11.3 | 20 | |
| Acetone | | 50.0 | 52.2 | ug/L | 0.0385 | 4.44 | 20 | |
| Benzene | | 50.0 | 48.5 | ug/L | 0.929 | 3.03 | 20 | |
| Bromochloromethane | | 50.0 | 48.0 | ug/L | 0.162 | 4.06 | 20 | |
| Bromodichloromethane | | 50.0 | 53.9 | ug/L | 0.324 | 7.82 | 20 | |
| Bromomethane | | 50.0 | 25.3 | ug/L | 0.103 | 49.3 | 20 | * |
| Carbon Disulfide | | 50.0 | 55.1 | ug/L | 0.710 | 10.2 | 20 | |
| Carbon Tetrachloride | | 50.0 | 57.9 | ug/L | 0.411 | 15.8 | 20 | |
| Chloroethane | | 50.0 | 50.1 | ug/L | 0.169 | 0.153 | 20 | |
| cis-1,3-Dichloropropene | | 50.0 | 52.8 | ug/L | 0.374 | 5.67 | 20 | |
| Cyclohexane | | 50.0 | 51.8 | ug/L | 0.388 | 3.68 | 20 | |
| Dibromochloromethane | | 50.0 | 50.8 | ug/L | 0.318 | 1.65 | 20 | |
| Dichlorodifluoromethane | | 50.0 | 56.4 | ug/L | 0.307 | 12.9 | 20 | |
| Isopropylbenzene | | 50.0 | 49.7 | ug/L | 1.57 | 0.520 | 20 | |
| Methyl acetate | | 50.0 | 41.3 | ug/L | 0.0958 | 17.5 | 20 | |
| Methyl Tert Butyl Ether | | 50.0 | 45.6 | ug/L | 0.389 | 8.88 | 20 | |

CCV - Modified 03/05/2008
PDF File ID: 2422037
Report generated 05/22/2012 09:16

Microbac Laboratories Inc.
CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L12050284 Run Date: 05/16/2012 Sample ID: WG398117-02
Instrument ID: HPMS8 Run Time: 08:48 Method: 8260B
File ID: 8M379102 Analyst: ADC QC Key: WATERLOO
Workgroup (AAB#): WG398118 Cal ID: HPMS8 - 27-MAR-12
Matrix: WATER

| Analyte | | Expected | Found | UNITS | RF | %D | UCL | Q |
|---|---|---|---|---|---|---|---|---|
| Methylcyclohexane | | 50.0 | 51.7 | ug/L | 0.379 | 3.42 | 20 | |
| Methylene Chloride | | 50.0 | 45.8 | ug/L | 0.228 | 8.45 | 20 | |
| m-,p-Xylene | | 100 | 97.6 | ug/L | 0.610 | 2.41 | 20 | |
| o-Xylene | | 50.0 | 48.0 | ug/L | 0.603 | 3.90 | 20 | |
| Styrene | | 50.0 | 43.9 | ug/L | 0.987 | 12.2 | 20 | |
| Tetrachloroethene | | 50.0 | 50.6 | ug/L | 0.314 | 1.17 | 20 | |
| trans-1,3-Dichloropropene | | 50.0 | 48.1 | ug/L | 0.368 | 3.79 | 20 | |
| Trichloroethene | | 50.0 | 53.9 | ug/L | 0.341 | 7.74 | 20 | |
| Trichlorofluoromethane | | 50.0 | 60.1 | ug/L | 0.463 | 20.1 | 20 | * |
| 1,2-Dichloroethene | | 100 | 99.5 | ug/L | 0.289 | 0.469 | 20 | |
| Xylenes | | 150 | 146 | ug/L | 0.606 | 2.91 | 20 | |

* Exceeds %D Criteria

CCC Calibration Check Compounds
SPCC System Performance Check Compounds

CCV - Modified 03/05/2008
PDF File ID: 2422037
Report generated 05/22/2012 09:16

Microbac Laboratories Inc.
CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L12050284 Run Date: 05/19/2012 Sample ID: WG398532-02
Instrument ID: HPMS6 Run Time: 17:02 Method: 8260B
File ID: 6M108266 Analyst: FJB QC Key: WATERLOO
Workgroup (AAB#): WG398533 Cal ID: HPMS6 - 16-MAY-12
Matrix: WATER

| Analyte | | Expected | Found | UNITS | RF | %D | UCL | Q |
|---|---|---|---|---|---|---|---|---|
| 1,1-Dichloroethene | CCC | 50.0 | 52.3 | ug/L | 0.499 | 4.50 | 20 | |
| 1,2-Dichloropropane | CCC | 50.0 | 51.4 | ug/L | 0.282 | 2.77 | 20 | |
| Chloroform | CCC | 50.0 | 49.3 | ug/L | 0.514 | 1.36 | 20 | |
| Ethylbenzene | CCC | 50.0 | 52.3 | ug/L | 0.542 | 4.64 | 20 | |
| Toluene | CCC | 50.0 | 52.2 | ug/L | 1.55 | 4.41 | 20 | |
| Vinyl Chloride | CCC | 50.0 | 49.0 | ug/L | 0.464 | 1.94 | 20 | |
| 1,1,2,2-Tetrachloroethane | SPCC | 50.0 | 51.2 | ug/L | 0.502 | 2.33 | 20 | |
| 1,1-Dichloroethane | SPCC | 50.0 | 50.8 | ug/L | 0.564 | 1.66 | 20 | |
| Bromoform | SPCC | 50.0 | 49.0 | ug/L | 0.180 | 1.90 | 20 | |
| Chlorobenzene | SPCC | 50.0 | 50.8 | ug/L | 0.978 | 1.59 | 20 | |
| Chloromethane | SPCC | 50.0 | 36.7 | ug/L | 0.564 | 26.7 | 20 | * |
| 1,1,1-Trichloroethane | | 50.0 | 48.4 | ug/L | 0.461 | 3.12 | 20 | |
| 1,1,2-Trichloro-1,2,2-Trifluoroethane | | 50.0 | 49.6 | ug/L | 0.295 | 0.893 | 20 | |
| 1,1,2-Trichloroethane | | 50.0 | 46.0 | ug/L | 0.244 | 8.03 | 20 | |
| 1,2,3-Trichlorobenzene | | 50.0 | 55.2 | ug/L | 0.602 | 10.4 | 20 | |
| 1,2,4-Trichlorobenzene | | 50.0 | 57.8 | ug/L | 0.761 | 15.5 | 20 | |
| 1,2-Dibromo-3-Chloropropane | | 50.0 | 45.3 | ug/L | 0.0775 | 9.45 | 20 | |
| 1,2-Dibromoethane | | 50.0 | 50.1 | ug/L | 0.241 | 0.278 | 20 | |
| 1,2-Dichlorobenzene | | 50.0 | 51.1 | ug/L | 1.21 | 2.26 | 20 | |
| 1,2-Dichloroethane | | 50.0 | 45.5 | ug/L | 0.360 | 8.95 | 20 | |
| cis-1,2-Dichloroethene | | 50.0 | 50.8 | ug/L | 0.303 | 1.66 | 20 | |
| trans-1,2-Dichloroethene | | 50.0 | 51.0 | ug/L | 0.290 | 2.07 | 20 | |
| 1,3-Dichlorobenzene | | 50.0 | 54.7 | ug/L | 1.39 | 9.35 | 20 | |
| 1,4-Dichlorobenzene | | 50.0 | 52.1 | ug/L | 1.41 | 4.20 | 20 | |
| 2-Butanone | | 50.0 | 44.2 | ug/L | 0.0671 | 11.6 | 20 | |
| 2-Hexanone | | 50.0 | 45.5 | ug/L | 0.123 | 9.03 | 20 | |
| 4-Methyl-2-Pentanone | | 50.0 | 44.7 | ug/L | 0.0524 | 10.5 | 20 | |
| Acetone | | 50.0 | 43.6 | ug/L | 0.0467 | 12.9 | 20 | |
| Benzene | | 50.0 | 49.9 | ug/L | 1.12 | 0.127 | 20 | |
| Bromochloromethane | | 50.0 | 50.2 | ug/L | 0.162 | 0.408 | 20 | |
| Bromodichloromethane | | 50.0 | 51.5 | ug/L | 0.374 | 3.01 | 20 | |
| Bromomethane | | 50.0 | 39.5 | ug/L | 0.216 | 21.1 | 20 | * |
| Carbon Disulfide | | 50.0 | 46.4 | ug/L | 0.847 | 7.16 | 20 | |
| Carbon Tetrachloride | | 50.0 | 47.4 | ug/L | 0.435 | 5.28 | 20 | |
| Chloroethane | | 50.0 | 48.3 | ug/L | 0.236 | 3.32 | 20 | |
| cis-1,3-Dichloropropene | | 50.0 | 50.1 | ug/L | 0.412 | 0.120 | 20 | |
| Cyclohexane | | 50.0 | 46.7 | ug/L | 0.440 | 6.59 | 20 | |
| Dibromochloromethane | | 50.0 | 48.6 | ug/L | 0.320 | 2.71 | 20 | |
| Dichlorodifluoromethane | | 50.0 | 48.6 | ug/L | 0.376 | 2.89 | 20 | |
| Isopropylbenzene | | 50.0 | 53.7 | ug/L | 1.53 | 7.48 | 20 | |
| Methyl acetate | | 50.0 | 41.8 | ug/L | 0.144 | 16.4 | 20 | |
| Methyl Tert Butyl Ether | | 50.0 | 45.9 | ug/L | 0.601 | 8.17 | 20 | |

CCV - Modified 03/05/2008
PDF File ID: 2422037
Report generated 05/22/2012 09:16

Microbac Laboratories Inc.
CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L12050284 Run Date: 05/19/2012 Sample ID: WG398532-02
Instrument ID: HPMS6 Run Time: 17:02 Method: 8260B
File ID: 6M108266 Analyst: FJB QC Key: WATERLOO
Workgroup (AAB#): WG398533 Cal ID: HPMS6 - 16-MAY-12
Matrix: WATER

| Analyte | | Expected | Found | UNITS | RF | %D | UCL | Q |
|---|---|---|---|---|---|---|---|---|
| Methylcyclohexane | | 50.0 | 49.0 | ug/L | 0.351 | 2.00 | 20 | |
| Methylene Chloride | | 50.0 | 48.6 | ug/L | 0.293 | 2.90 | 20 | |
| m-,p-Xylene | | 100 | 88.7 | ug/L | 0.676 | 11.3 | 20 | |
| o-Xylene | | 50.0 | 42.8 | ug/L | 0.616 | 14.4 | 20 | |
| Styrene | | 50.0 | 43.8 | ug/L | 1.08 | 12.3 | 20 | |
| Tetrachloroethene | | 50.0 | 53.6 | ug/L | 0.368 | 7.14 | 20 | |
| trans-1,3-Dichloropropene | | 50.0 | 48.3 | ug/L | 0.504 | 3.36 | 20 | |
| Trichloroethene | | 50.0 | 47.6 | ug/L | 0.273 | 4.74 | 20 | |
| Trichlorofluoromethane | | 50.0 | 47.6 | ug/L | 0.551 | 4.72 | 20 | |
| 1,2-Dichloroethene | | 100 | 102 | ug/L | 0.297 | 1.87 | 20 | |
| Xylenes | | 150 | 132 | ug/L | 0.646 | 12.3 | 20 | |

* Exceeds %D Criteria

CCC Calibration Check Compounds
SPCC System Performance Check Compounds

CCV - Modified 03/05/2008
PDF File ID: 2422037
Report generated 05/22/2012 09:16

Microbac Laboratories Inc.

INTERNAL STANDARD AREA SUMMARY
(COMPARED TO CCV)

Login Number: L12050284
Instrument ID: HPMS8
Workgroup (AAB#): WG398118

CCV Number: WG398117-02
CAL ID: HPMS8-27-MAR-12
Matrix: WATER

| Sample Number | Dilution | Tag | IS-1 | IS-2 | IS-3 |
|---|---|---|---|---|---|
| WG398117-02 | NA | NA | 345713 | 620460 | 692088 |
| Upper Limit | NA | NA | 691426 | 1240920 | 1384176 |
| Lower Limit | NA | NA | 172857 | 310230 | 346044 |
| L12050284-03 | 1.00 | 01 | 310354 | 557062 | 615066 |
| L12050284-05 | 1.00 | 01 | 313112 | 554894 | 603095 |
| L12050284-07 | 1.00 | 01 | 310542 | 549639 | 603426 |
| L12050284-09 | 1.00 | 01 | 312845 | 574071 | 622993 |
| L12050284-10 | 1.00 | 01 | 309275 | 549323 | 602308 |
| L12050284-12 | 1.00 | 01 | 319552 | 565177 | 617702 |
| WG398118-01 | 1.00 | 01 | 331857 | 587819 | 652842 |
| WG398118-02 | 1.00 | 01 | 338514 | 594974 | 673026 |

IS-1 - 1,4-Dichlorobenzene-d4
IS-2 - Chlorobenzene-d5
IS-3 - Fluorobenzene

Underline = Response outside limits

INTERNAL_STD - Modified 03/06/2008
PDF File ID: 2424471
Report generated 05/22/2012 09:16

Microbac Laboratories Inc.

INTERNAL STANDARD AREA SUMMARY
(COMPARED TO CCV)

Login Number: L12050284
Instrument ID: HPMS6
Workgroup (AAB#): WG398533

CCV Number: WG398532-02
CAL ID: HPMS6-16-MAY-12
Matrix: WATER

| Sample Number | Dilution | Tag | IS-1 | IS-2 | IS-3 |
|---|---|---|---|---|---|
| WG398532-02 | NA | NA | 246441 | 486202 | 680254 |
| Upper Limit | NA | NA | 492882 | 972404 | 1360508 |
| Lower Limit | NA | NA | 123221 | 243101 | 340127 |
| L12050284-01 | 10.0 | DL02 | 204137 | 428432 | 592915 |
| WG398533-01 | 1.00 | 01 | 200928 | 421384 | 591297 |
| WG398533-02 | 1.00 | 01 | 226288 | 448585 | 618850 |
| WG398533-03 | 1.00 | 01 | 231976 | 460199 | 641676 |
| WG398533-04 | 1.00 | 01 | 195662 | 414652 | 576295 |

IS-1 - 1,4-Dichlorobenzene-d4
IS-2 - Chlorobenzene-d5
IS-3 - Fluorobenzene

Underline = Response outside limits

INTERNAL_STD - Modified 03/06/2008
PDF File ID: 2424471
Report generated 05/22/2012 09:16

Microbac Laboratories Inc.

INTERNAL STANDARD RETENTION TIME SUMMARY
(COMPARED TO CCV)

Login Number: L12050284
Instrument ID: HPMS8
Workgroup (AAB#): WG398118

CCV Number: WG398117-02
CAL ID: HPMS8 - 27-MAR-12
Matrix: WATER

| Sample Number | Dilution | Tag | IS-1 | IS-2 | IS-3 |
|---|---|---|---|---|---|
| WG398117-02 | NA | NA | 17.05 | 14.04 | 10.2 |
| Upper Limit | NA | NA | 17.55 | 14.54 | 10.7 |
| Lower Limit | NA | NA | 16.55 | 13.54 | 9.7 |
| L12050284-03 | 1.00 | 01 | 17.05 | 14.04 | 10.19 |
| L12050284-05 | 1.00 | 01 | 17.06 | 14.05 | 10.19 |
| L12050284-07 | 1.00 | 01 | 17.05 | 14.04 | 10.2 |
| L12050284-09 | 1.00 | 01 | 17.05 | 14.04 | 10.19 |
| L12050284-10 | 1.00 | 01 | 17.05 | 14.04 | 10.2 |
| L12050284-12 | 1.00 | 01 | 17.05 | 14.04 | 10.2 |
| WG398118-01 | 1.00 | 01 | 17.06 | 14.05 | 10.19 |
| WG398118-02 | 1.00 | 01 | 17.05 | 14.04 | 10.19 |

IS-1 - 1,4-Dichlorobenzene-d4
IS-2 - Chlorobenzene-d5
IS-3 - Fluorobenzene

Underline = Response outside limits

INTERNAL_STD_RT - Modified 03/06/2008
PDF File ID: 2424473
Report generated 05/22/2012 09:16

Microbac Laboratories Inc.

INTERNAL STANDARD RETENTION TIME SUMMARY
(COMPARED TO CCV)

Login Number:L12050284
Instrument ID:HPMS6
Workgroup (AAB#):WG398533

CCV Number:WG398532-02
CAL ID: HPMS6-16-MAY-12
Matrix:WATER

| Sample Number | Dilution | Tag | IS-1 | IS-2 | IS-3 |
|---|---|---|---|---|---|
| WG398532-02 | NA | NA | 18.55 | 14.97 | 10.48 |
| Upper Limit | NA | NA | 19.05 | 15.47 | 10.98 |
| Lower Limit | NA | NA | 18.05 | 14.47 | 9.98 |
| L12050284-01 | 10.0 | DL02 | 18.54 | 14.97 | 10.47 |
| WG398533-01 | 1.00 | 01 | 18.54 | 14.96 | 10.47 |
| WG398533-02 | 1.00 | 01 | 18.54 | 14.97 | 10.47 |
| WG398533-03 | 1.00 | 01 | 18.54 | 14.97 | 10.47 |
| WG398533-04 | 1.00 | 01 | 18.55 | 14.97 | 10.47 |

IS-1 - 1,4-Dichlorobenzene-d4
IS-2 - Chlorobenzene-d5
IS-3 - Fluorobenzene

Underline = Response outside limits

INTERNAL_STD_RT - Modified 03/06/2008
PDF File ID: 2424473
Report generated 05/22/2012 09:16

# 2.1.1.3 Sample Data

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\051912\6M108271.D Vial: 8
Acq On : 19 May 2012 19:46 Operator: FJB
Sample : L12050284-01 10X C 826-SPE D1 Inst : HPMS6
Misc : 1,10 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 21 09:16:51 2012 Quant Results File: 8260WT.RES

Quant Method : C:\MSDCHEM\1\METHODS\8260WT.M (RTE Integrator)
Title : 8260B/624_WATER SOP:OVLMSV01 05/16/12 - HPMS6
Last Update : Thu May 17 10:54:16 2012
Response via : Initial Calibration
DataAcq Meth : 8260WT

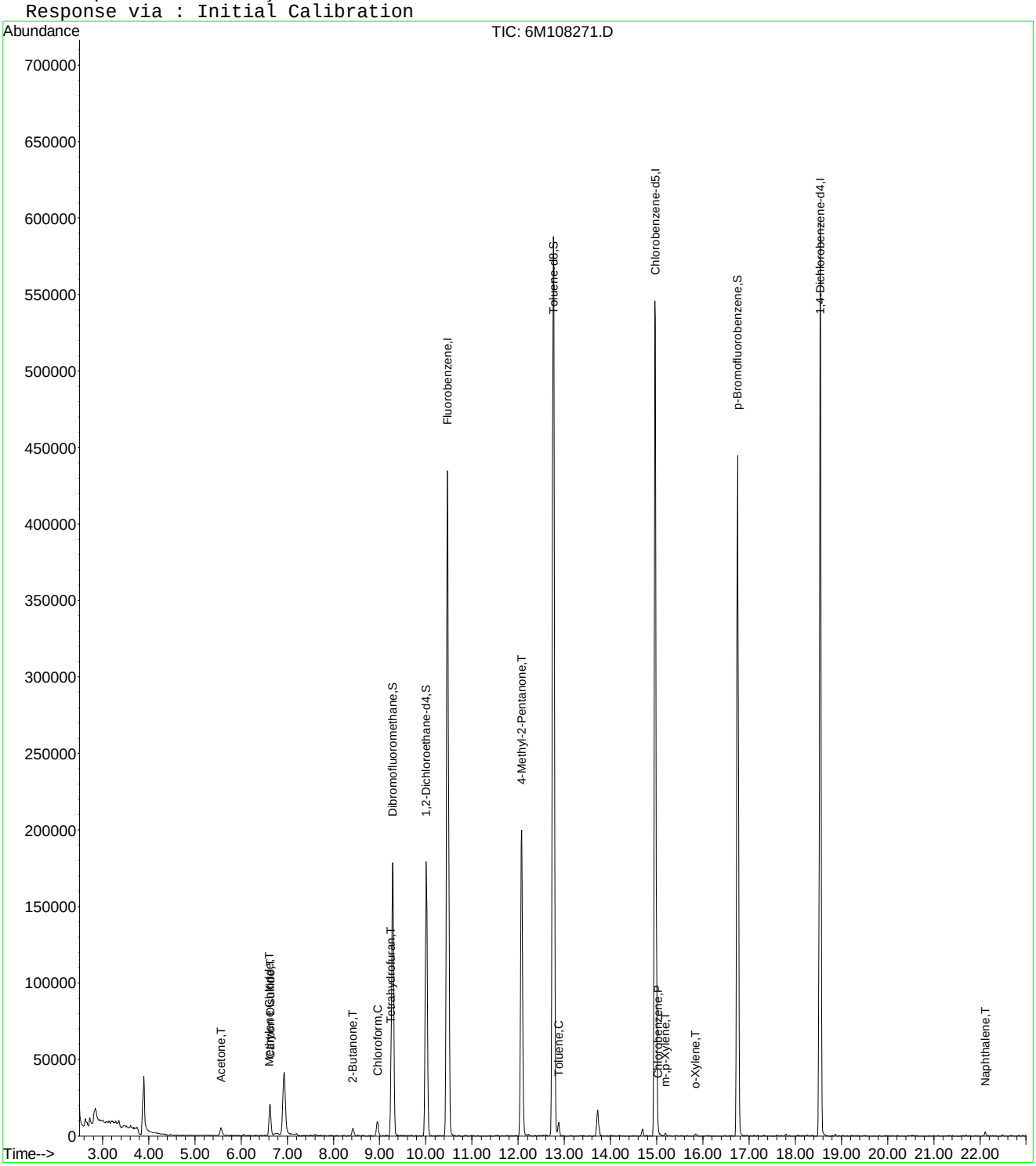
| Internal Standards | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| 1) Fluorobenzene | 10.47 | 96 | 592915 | 25.00 ug/L | 0.00 |
| 57) Chlorobenzene-d5 | 14.97 | 117 | 428432 | 25.00 ug/L | 0.01 |
| 78) 1,4-Dichlorobenzene-d4 | 18.54 | 152 | 204137 | 25.00 ug/L | 0.00 |
| **System Monitoring Compounds** | | | | | |
| 37) Dibromofluoromethane | 9.28 | 111 | 170237 | 23.4580 ug/L | 0.00 |
| Spiked Amount 25.000 | Range 86 - 118 | | Recovery = 93.84% | | |
| 43) 1,2-Dichloroethane-d4 | 10.01 | 65 | 172132 | 22.4266 ug/L | 0.00 |
| Spiked Amount 25.000 | Range 80 - 120 | | Recovery = 89.72% | | |
| 58) Toluene-d8 | 12.76 | 98 | 593806 | 26.3869 ug/L | 0.00 |
| Spiked Amount 25.000 | Range 88 - 110 | | Recovery = 105.56% | | |
| 80) p-Bromofluorobenzene | 16.75 | 95 | 210006 | 28.3750 ug/L | 0.00 |
| Spiked Amount 25.000 | Range 86 - 115 | | Recovery = 113.48% | | |
| **Target Compounds** | | | | | Qvalue |
| 4) Vinyl Chloride | 3.28 | 62 | 951 | Below Cal # | 43 |
| 13) Acetone | 5.56 | 43 | 12407 | 9.7517 ug/L | 98 |
| 19) Methylene Chloride | 6.61 | 84 | 1362 | 0.1902 ug/L | 71 |
| 20) Carbon Disulfide | 6.63 | 76 | 43245 | 1.9977 ug/L | 99 |
| 29) 2-Butanone | 8.42 | 43 | 11615 | 6.4506 ug/L | 94 |
| 33) Chloroform | 8.96 | 83 | 12400 | 1.0038 ug/L | 95 |
| 36) Tetrahydrofuran | 9.25 | 42 | 3541 | 3.0435 ug/L # | 70 |
| 54) 4-Methyl-2-Pentanone | 12.07 | 58 | 88614 | 63.8462 ug/L | 99 |
| 59) Toluene | 12.88 | 91 | 10526 | 0.4132 ug/L | 99 |
| 70) Chlorobenzene | 15.03 | 112 | 2078 | 0.1259 ug/L # | 10 |
| 73) m-,p-Xylene | 15.19 | 106 | 793 | 0.7090 ug/L # | 22 |
| 74) o-Xylene | 15.83 | 106 | 971 | 0.7025 ug/L | 98 |
| 100) Naphthalene | 22.11 | 128 | 5352 | 0.4958 ug/L # | 77 |

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

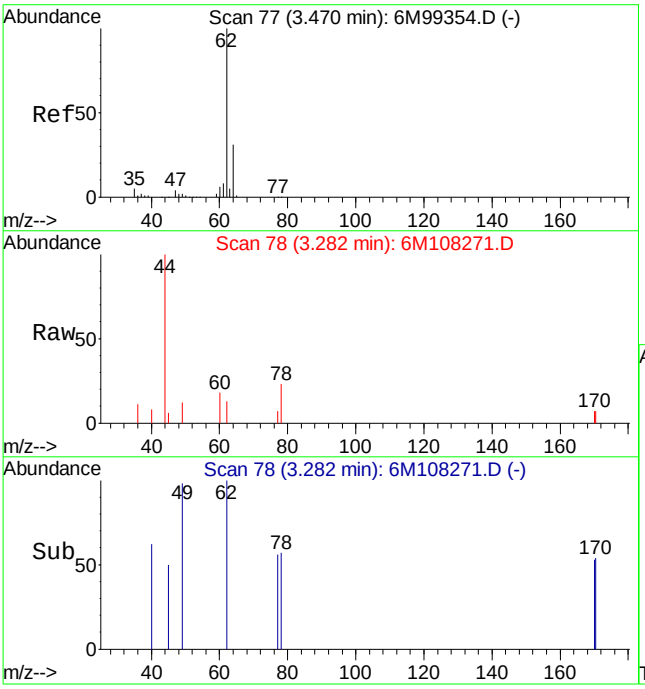
Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\051912\6M108271.D Vial: 8
Acq On : 19 May 2012 19:46 Operator: FJB
Sample : L12050284-01 10X C 826-SPE D1 Inst : HPMS6
Misc : 1,10 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 21 9:16 2012 Quant Results File: 8260WT.RES

Method : C:\MSDCHEM\1\METHODS\8260WT.M (RTE Integrator)
Title : 8260B/624_WATER SOP:OVLMSV01 05/16/12 - HPMS6
Last Update : Thu May 17 10:54:16 2012
Response via : Initial Calibration



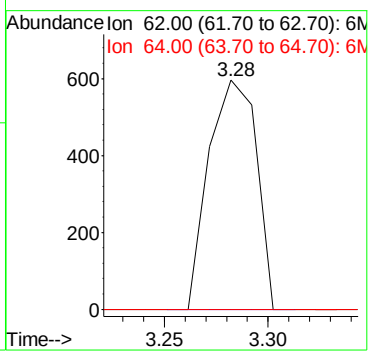

6M108271.D 8260WT.M Mon May 21 09:16:52 2012 Page 2

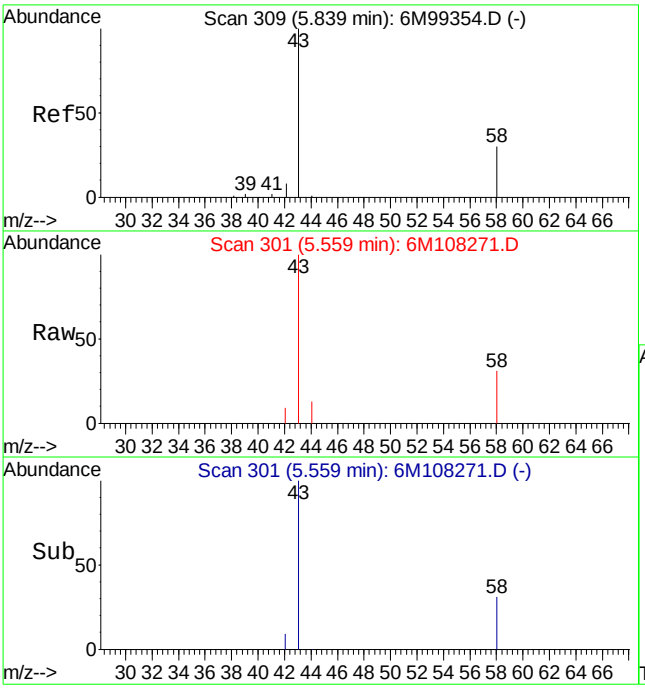



#4
Vinyl Chloride
Concen: Below Cal
RT: 3.28 min Scan# 78
Delta R.T. 0.00 min
Lab File: 6M108271.D
Acq: 19 May 2012 19:46

Tgt Ion: 62 Resp: 951

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 62 | 100 | | |
| 64 | 0.0 | 19.2 | 44.8# |

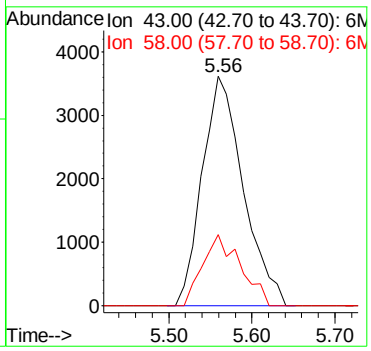


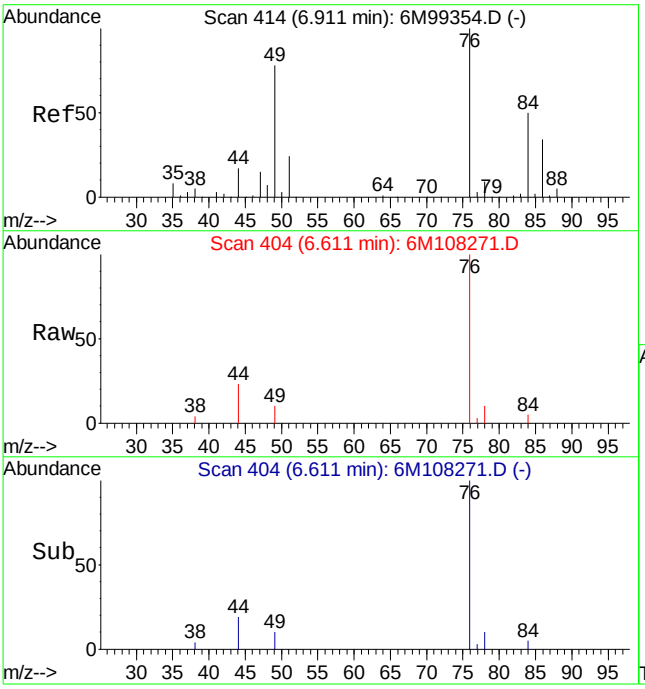




#13
Acetone
Concen: 9.75 ug/L
RT: 5.56 min Scan# 301
Delta R.T. -0.01 min
Lab File: 6M108271.D
Acq: 19 May 2012 19:46

Tgt Ion: 43 Resp: 12407

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 58 | 28.3 | 16.5 | 38.5 |

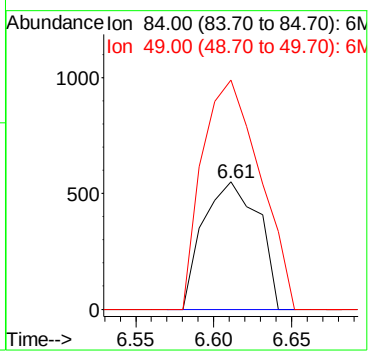


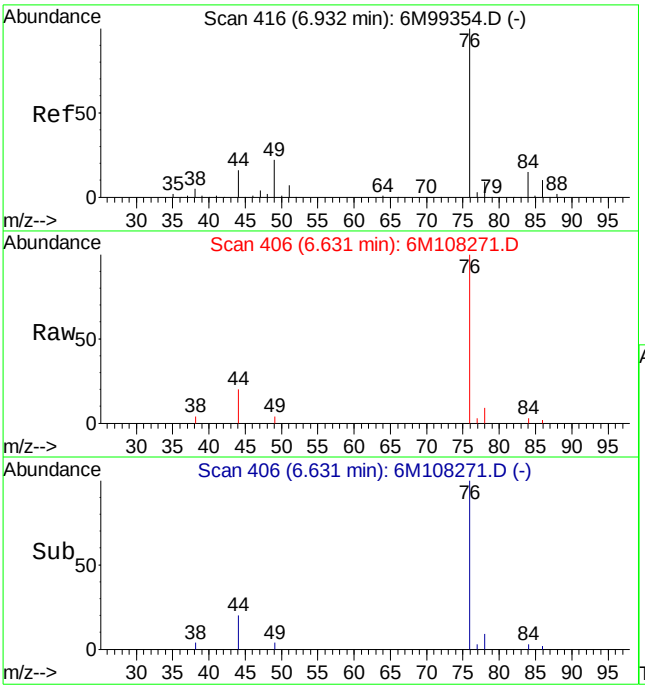



#19
Methylene Chloride
Concen: 0.19 ug/L
RT: 6.61 min Scan# 404
Delta R.T. 0.00 min
Lab File: 6M108271.D
Acq: 19 May 2012 19:46

Tgt Ion: 84 Resp: 1362

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 84 | 100 | | |
| 49 | 187.7 | 90.5 | 211.1 |

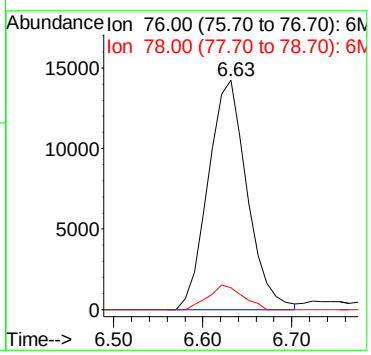


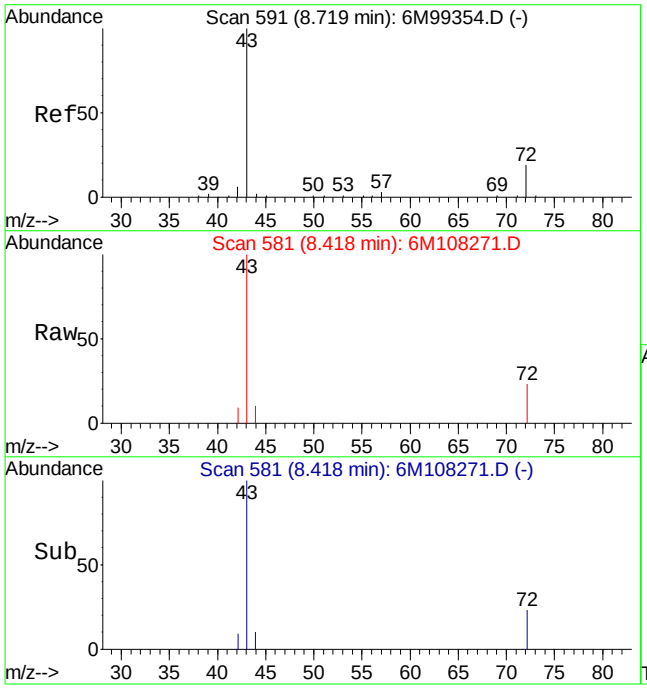




#20
Carbon Disulfide
Concen: 2.00 ug/L
RT: 6.63 min Scan# 406
Delta R.T. 0.01 min
Lab File: 6M108271.D
Acq: 19 May 2012 19:46

Tgt Ion: 76 Resp: 43245

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 76 | 100 | | |
| 78 | 9.4 | 5.5 | 12.7 |

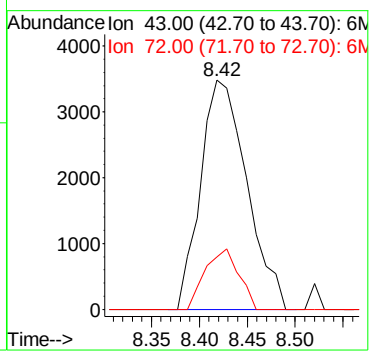


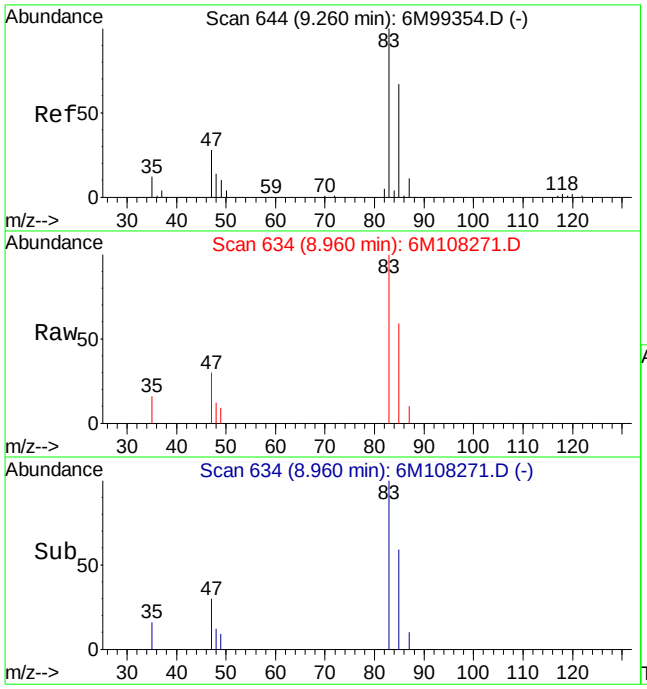



#29
2-Butanone
Concen: 6.45 ug/L
RT: 8.42 min Scan# 581
Delta R.T. 0.00 min
Lab File: 6M108271.D
Acq: 19 May 2012 19:46

Tgt Ion: 43 Resp: 11615

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 72 | 19.3 | 13.3 | 30.9 |

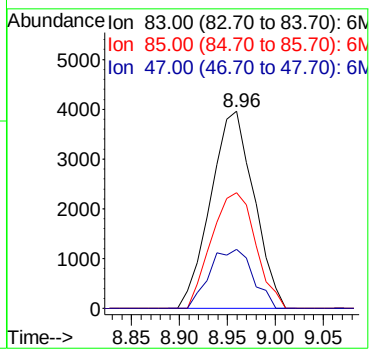


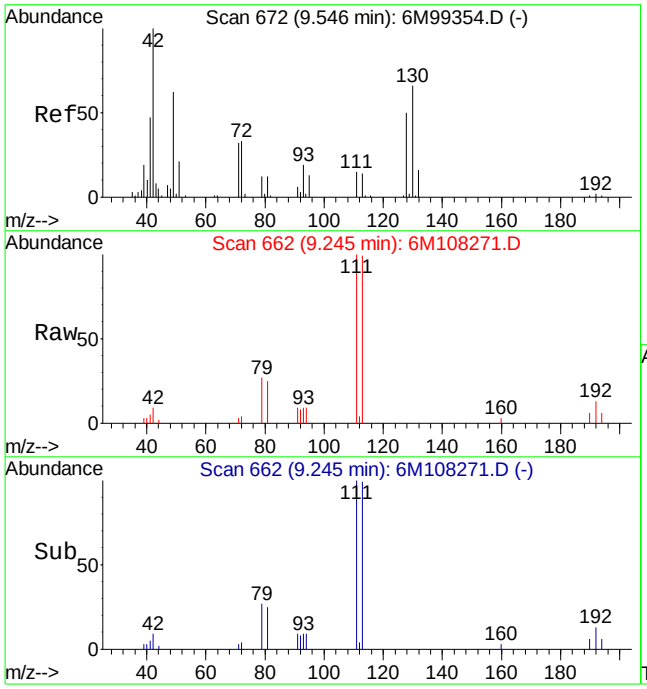




#33
Chloroform
Concen: 1.00 ug/L
RT: 8.96 min Scan# 634
Delta R.T. 0.00 min
Lab File: 6M108271.D
Acq: 19 May 2012 19:46

Tgt Ion: 83 Resp: 12400

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 83 | 100 | | |
| 85 | 59.7 | 39.3 | 91.7 |
| 47 | 30.0 | 17.8 | 41.6 |

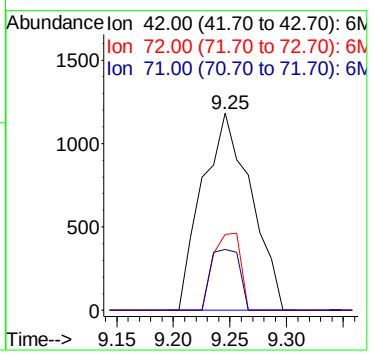


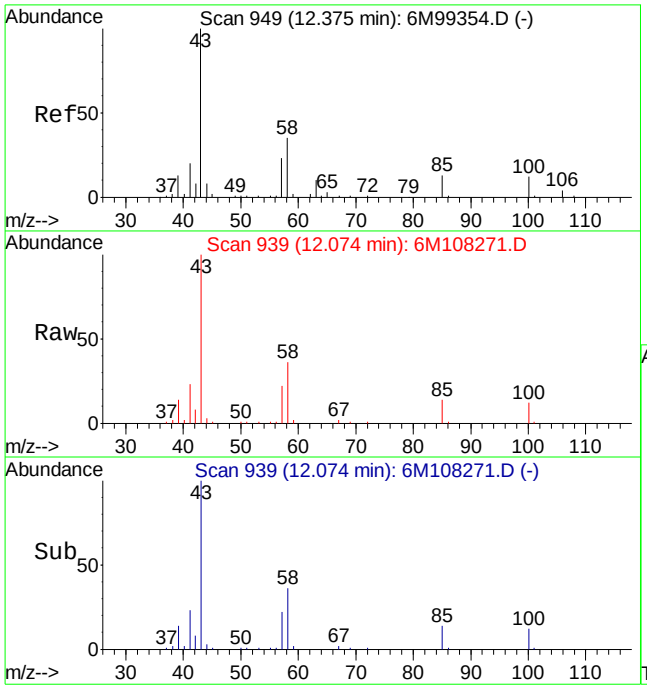



#36
Tetrahydrofuran
Concen: 3.04 ug/L
RT: 9.25 min Scan# 662
Delta R.T. 0.00 min
Lab File: 6M108271.D
Acq: 19 May 2012 19:46

Tgt Ion: 42 Resp: 3541

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 42 | 100 | | |
| 72 | 21.7 | 23.5 | 54.7# |
| 71 | 18.4 | 22.6 | 52.6# |

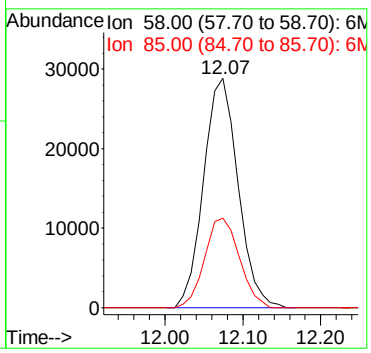


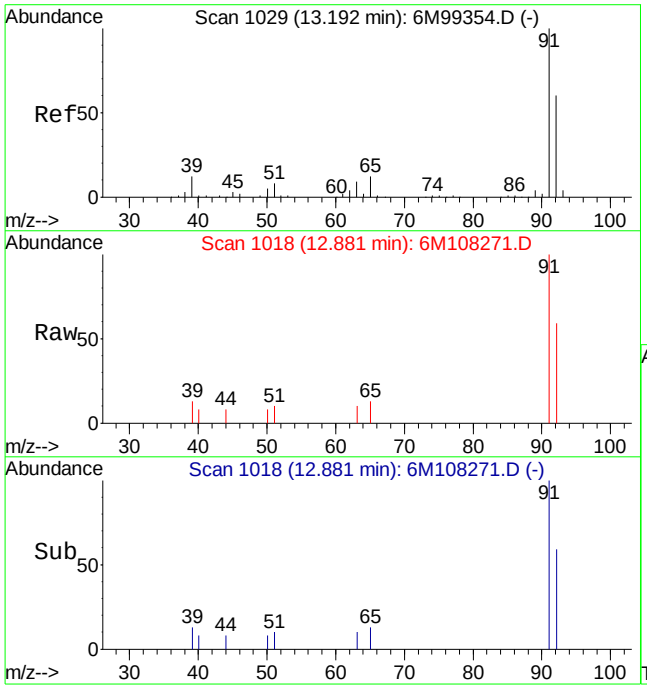




#54
4-Methyl-2-Pentanone
Concen: 63.85 ug/L
RT: 12.07 min Scan# 939
Delta R.T. 0.00 min
Lab File: 6M108271.D
Acq: 19 May 2012 19:46

Tgt Ion: 58 Resp: 88614

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 58 | 100 | | |
| 85 | 39.3 | 23.3 | 54.5 |

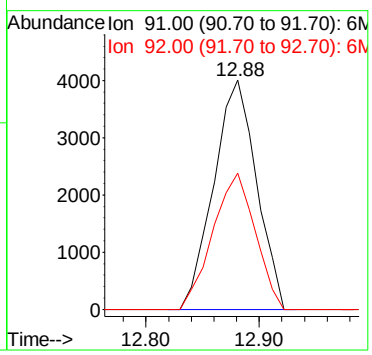


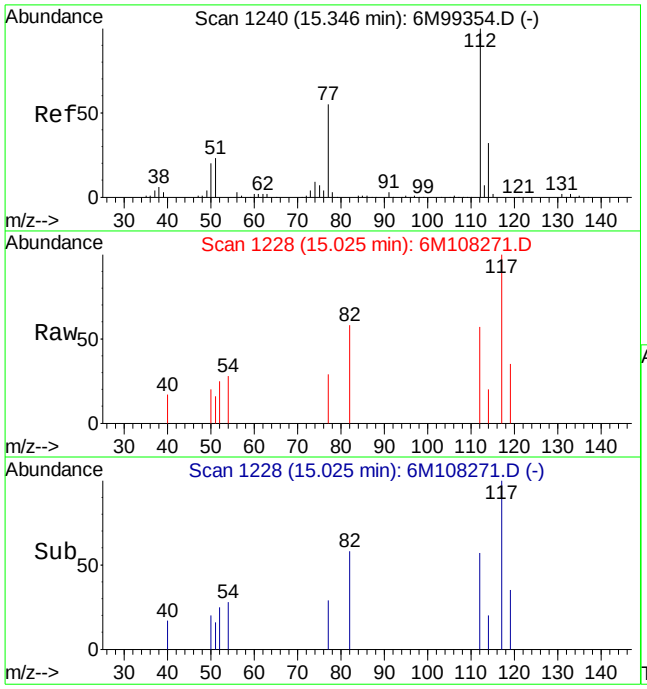



#59
Toluene
Concen: 0.41 ug/L
RT: 12.88 min Scan# 1018
Delta R.T. 0.00 min
Lab File: 6M108271.D
Acq: 19 May 2012 19:46

Tgt Ion: 91 Resp: 10526

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 91 | 100 | | |
| 92 | 58.9 | 35.6 | 83.2 |

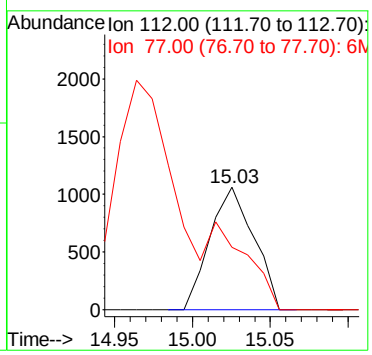


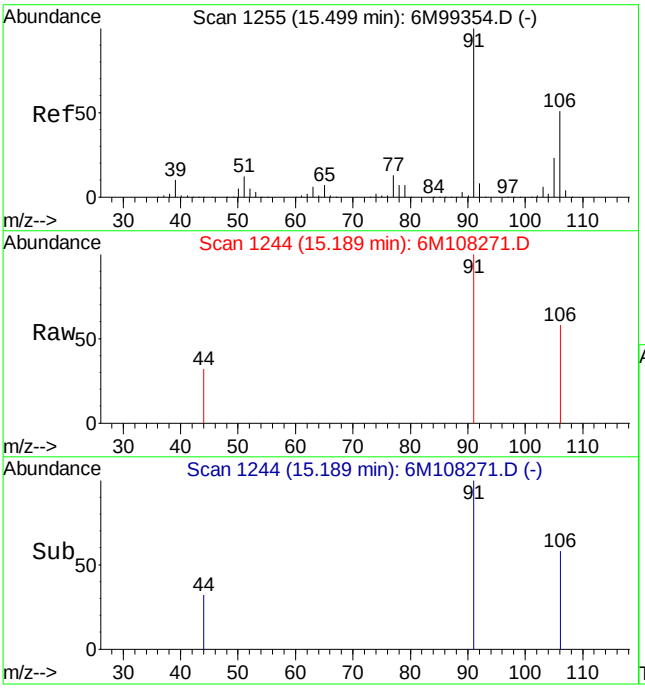




#70
Chlorobenzene
Concen: 0.13 ug/L
RT: 15.03 min Scan# 1228
Delta R.T. 0.00 min
Lab File: 6M108271.D
Acq: 19 May 2012 19:46

Tgt Ion:112 Resp: 2078

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 112 | 100 | | |
| 77 | 0.0 | 47.0 | 109.6# |

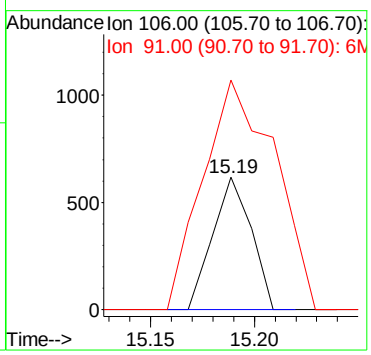


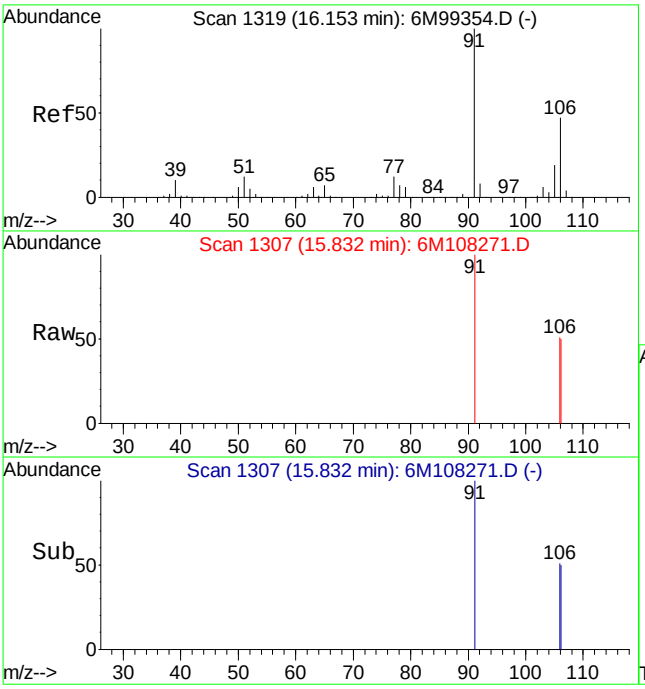



#73
m-,p-Xylene
Concen: 0.71 ug/L
RT: 15.19 min Scan# 1244
Delta R.T. 0.00 min
Lab File: 6M108271.D
Acq: 19 May 2012 19:46

Tgt Ion:106 Resp: 793

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 106 | 100 | | |
| 91 | 325.2 | 123.2 | 287.6# |

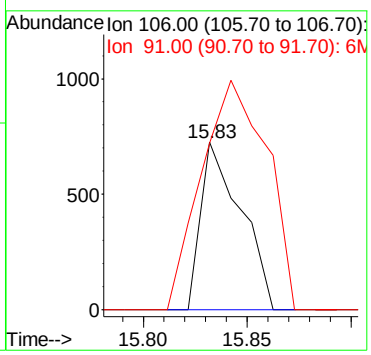


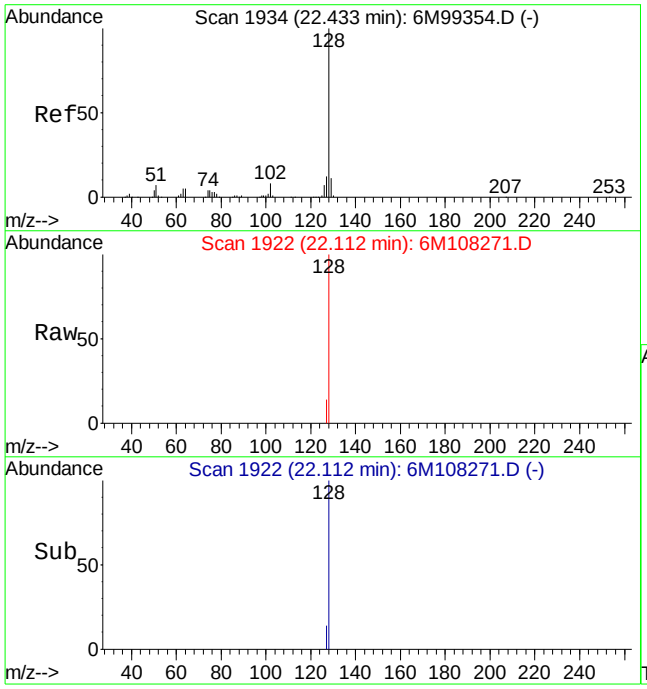




#74
o-Xylene
Concen: 0.70 ug/L
RT: 15.83 min Scan# 1307
Delta R.T. -0.01 min
Lab File: 6M108271.D
Acq: 19 May 2012 19:46

Tgt Ion:106 Resp: 971

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 106 | 100 | | |
| 91 | 224.2 | 132.2 | 308.4 |

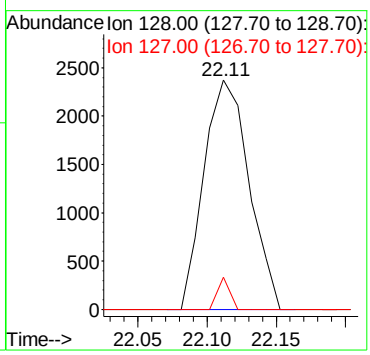





#100
Naphthalene
Concen: 0.50 ug/L
RT: 22.11 min Scan# 1922
Delta R.T. 0.00 min
Lab File: 6M108271.D
Acq: 19 May 2012 19:46

Tgt Ion:128 Resp: 5352

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 128 | 100 | | |
| 127 | 3.8 | 7.8 | 18.2# |



LSC Area Percent Report

Data File : C:\MSDCHEM\1\DATA\051912\6M108271.D Vial: 8
Acq On : 19 May 2012 19:46 Operator: FJB
Sample : L12050284-01 10X C 826-SPE D1 Inst : HPMS6
Misc : 1,10 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\1\METHODS\8260WT.M (RTE Integrator)
Title : 8260B/624_WATER SOP:OVLMSV01 05/16/12 - HPMS6
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 100 Area counts
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

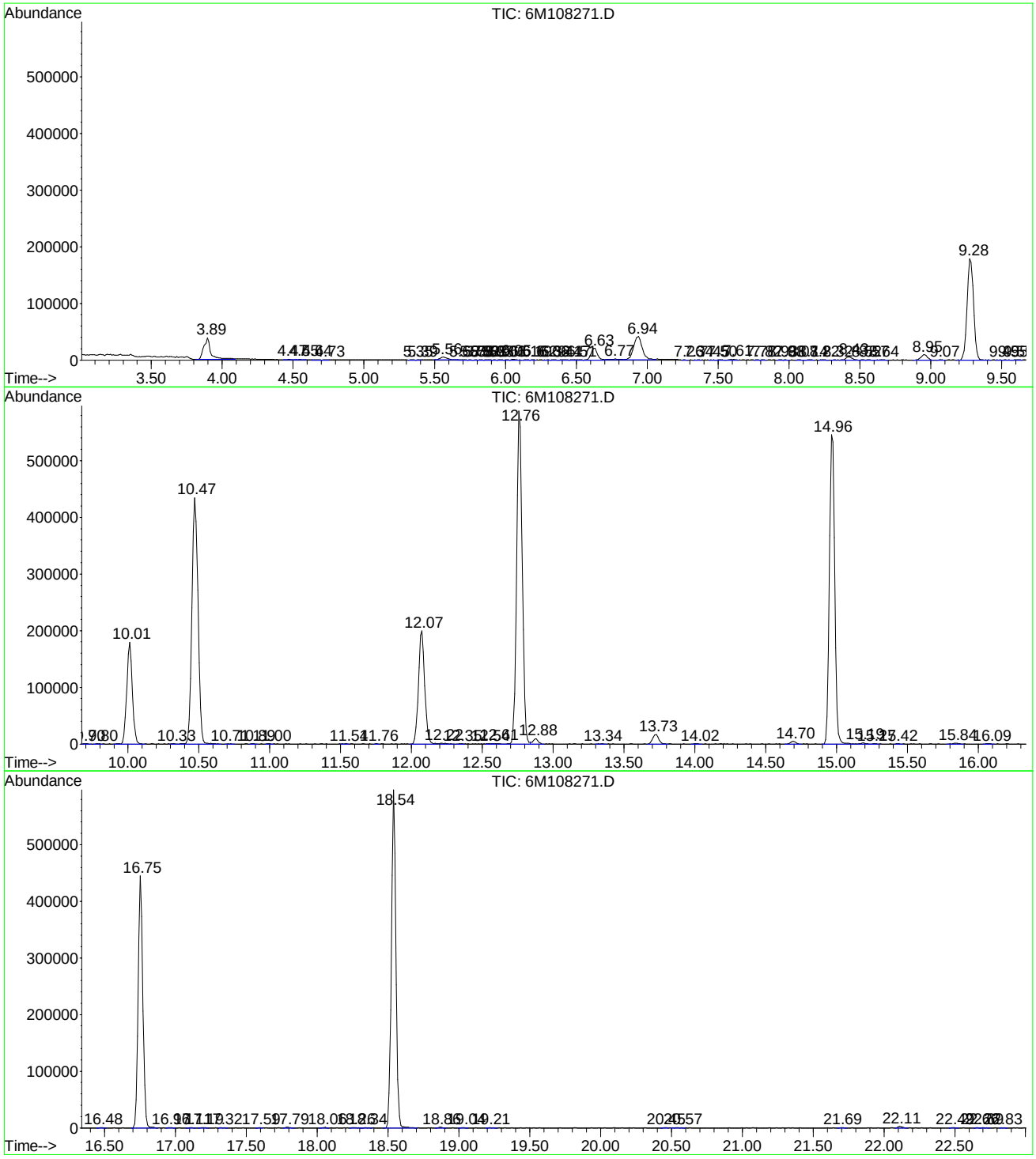
Signal : TIC

| peak # | R.T. min | first scan | max scan | last scan | PK TY | peak height | corr. area | corr. % max. | % of total |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 3.895 | 130 | 138 | 157 | rBV2 | 38306 | 132107 | 8.14% | 1.472% |
| 2 | 4.466 | 191 | 194 | 199 | rBV | 777 | 1598 | 0.10% | 0.018% |
| 3 | 4.548 | 199 | 202 | 206 | rVV | 487 | 573 | 0.04% | 0.006% |
| 4 | 4.640 | 210 | 211 | 217 | rVB | 839 | 1775 | 0.11% | 0.020% |
| 5 | 4.732 | 217 | 220 | 222 | rBV | 440 | 1290 | 0.08% | 0.014% |
| 6 | 5.355 | 277 | 281 | 282 | rBB | 400 | 897 | 0.06% | 0.010% |
| 7 | 5.386 | 282 | 284 | 286 | rBV | 481 | 1011 | 0.06% | 0.011% |
| 8 | 5.559 | 295 | 301 | 311 | rVB | 5176 | 16758 | 1.03% | 0.187% |
| 9 | 5.682 | 311 | 313 | 318 | rVB | 670 | 1531 | 0.09% | 0.017% |
| 10 | 5.753 | 318 | 320 | 321 | rBB | 418 | 496 | 0.03% | 0.006% |
| 11 | 5.784 | 322 | 323 | 325 | rBB | 696 | 615 | 0.04% | 0.007% |
| 12 | 5.825 | 325 | 327 | 329 | rBB | 435 | 707 | 0.04% | 0.008% |
| 13 | 5.876 | 329 | 332 | 335 | rBB | 388 | 1107 | 0.07% | 0.012% |
| 14 | 5.927 | 335 | 337 | 338 | rBB | 408 | 493 | 0.03% | 0.005% |
| 15 | 5.957 | 338 | 340 | 343 | rBB | 401 | 874 | 0.05% | 0.010% |
| 16 | 6.008 | 343 | 345 | 347 | rBB | 468 | 738 | 0.05% | 0.008% |
| 17 | 6.049 | 347 | 349 | 355 | rBB | 1153 | 2624 | 0.16% | 0.029% |
| 18 | 6.162 | 356 | 360 | 361 | rBB | 415 | 919 | 0.06% | 0.010% |
| 19 | 6.192 | 361 | 363 | 365 | rBB | 404 | 688 | 0.04% | 0.008% |
| 20 | 6.294 | 370 | 373 | 375 | rBB | 426 | 723 | 0.04% | 0.008% |
| 21 | 6.325 | 375 | 376 | 380 | rBB | 647 | 1034 | 0.06% | 0.012% |
| 22 | 6.407 | 381 | 384 | 388 | rBB | 392 | 1293 | 0.08% | 0.014% |
| 23 | 6.468 | 388 | 390 | 392 | rBV | 359 | 822 | 0.05% | 0.009% |
| 24 | 6.509 | 392 | 394 | 398 | rVB | 645 | 1281 | 0.08% | 0.014% |
| 25 | 6.631 | 398 | 406 | 413 | rBV | 20720 | 64259 | 3.96% | 0.716% |
| 26 | 6.774 | 413 | 420 | 426 | rBV2 | 1455 | 7756 | 0.48% | 0.086% |
| 27 | 6.938 | 426 | 436 | 448 | rBV | 40689 | 168610 | 10.39% | 1.878% |
| 28 | 7.264 | 466 | 468 | 470 | rBB | 412 | 494 | 0.03% | 0.006% |
| 29 | 7.336 | 474 | 475 | 479 | rBB | 361 | 632 | 0.04% | 0.007% |
| 30 | 7.448 | 485 | 486 | 489 | rBB | 409 | 441 | 0.03% | 0.005% |
| 31 | 7.499 | 490 | 491 | 495 | rBB | 636 | 981 | 0.06% | 0.011% |
| 32 | 7.612 | 496 | 502 | 505 | rBB2 | 984 | 3182 | 0.20% | 0.035% |
| 33 | 7.775 | 516 | 518 | 520 | rBB | 354 | 601 | 0.04% | 0.007% |
| 34 | 7.816 | 520 | 522 | 524 | rBB | 378 | 623 | 0.04% | 0.007% |
| 35 | 7.928 | 532 | 533 | 536 | rBB | 374 | 640 | 0.04% | 0.007% |
| 36 | 7.979 | 536 | 538 | 540 | rBB | 373 | 428 | 0.03% | 0.005% |
| 37 | 8.071 | 545 | 547 | 550 | rBB | 402 | 696 | 0.04% | 0.008% |
| 38 | 8.143 | 551 | 554 | 557 | rBB | 316 | 758 | 0.05% | 0.008% |
| 39 | 8.224 | 561 | 562 | 567 | rBB | 458 | 916 | 0.06% | 0.010% |
| 40 | 8.316 | 569 | 571 | 573 | rBB | 399 | 465 | 0.03% | 0.005% |
| 41 | 8.429 | 575 | 582 | 588 | rBB | 4961 | 16352 | 1.01% | 0.182% |
| 42 | 8.520 | 589 | 591 | 593 | rBB | 746 | 898 | 0.06% | 0.010% |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 43 | 8.572 | 593 | 596 | 598 | rBB | 405 | 641 | 0.04% | 0.007% |
| 44 | 8.643 | 599 | 603 | 608 | rBB | 456 | 1111 | 0.07% | 0.012% |
| 45 | 8.949 | 626 | 633 | 640 | rBB | 9422 | 29245 | 1.80% | 0.326% |
| 46 | 9.072 | 642 | 645 | 648 | rBB | 337 | 583 | 0.04% | 0.006% |
| 47 | 9.276 | 656 | 665 | 679 | rBB | 178720 | 563537 | 34.72% | 6.278% |
| 48 | 9.491 | 683 | 686 | 687 | rBB | 368 | 434 | 0.03% | 0.005% |
| 49 | 9.552 | 688 | 692 | 694 | rBB | 367 | 658 | 0.04% | 0.007% |
| 50 | 9.593 | 695 | 696 | 701 | rBB | 383 | 1032 | 0.06% | 0.011% |
| 51 | 9.705 | 704 | 707 | 710 | rBB | 387 | 837 | 0.05% | 0.009% |
| 52 | 9.797 | 712 | 716 | 718 | rBB | 356 | 613 | 0.04% | 0.007% |
| 53 | 10.011 | 726 | 737 | 747 | rBB | 179210 | 494722 | 30.48% | 5.511% |
| 54 | 10.328 | 765 | 768 | 770 | rBB | 334 | 585 | 0.04% | 0.007% |
| 55 | 10.471 | 771 | 782 | 800 | rBB | 434981 | 1303300 | 80.30% | 14.519% |
| 56 | 10.706 | 803 | 805 | 809 | rBB | 378 | 462 | 0.03% | 0.005% |
| 57 | 10.890 | 820 | 823 | 825 | rBB | 348 | 601 | 0.04% | 0.007% |
| 58 | 11.002 | 831 | 834 | 836 | rBB | 366 | 612 | 0.04% | 0.007% |
| 59 | 11.543 | 883 | 887 | 888 | rBB | 328 | 600 | 0.04% | 0.007% |
| 60 | 11.757 | 906 | 908 | 909 | rBB | 386 | 456 | 0.03% | 0.005% |
| 61 | 12.074 | 931 | 939 | 949 | rBV | 199943 | 610108 | 37.59% | 6.797% |
| 62 | 12.217 | 951 | 953 | 961 | rVB2 | 1177 | 3047 | 0.19% | 0.034% |
| 63 | 12.350 | 963 | 966 | 968 | rBB | 400 | 625 | 0.04% | 0.007% |
| 64 | 12.544 | 983 | 985 | 988 | rBV | 626 | 1471 | 0.09% | 0.016% |
| 65 | 12.605 | 988 | 991 | 995 | rVB | 840 | 1585 | 0.10% | 0.018% |
| 66 | 12.758 | 996 | 1006 | 1014 | rBV | 588107 | 1623072 | 100.00% | 18.081% |
| 67 | 12.881 | 1014 | 1018 | 1023 | rVB2 | 9141 | 22911 | 1.41% | 0.255% |
| 68 | 13.340 | 1059 | 1063 | 1066 | rBB | 334 | 577 | 0.04% | 0.006% |
| 69 | 13.728 | 1095 | 1101 | 1109 | rBB2 | 16899 | 49027 | 3.02% | 0.546% |
| 70 | 14.024 | 1125 | 1130 | 1132 | rBB2 | 389 | 878 | 0.05% | 0.010% |
| 71 | 14.698 | 1190 | 1196 | 1201 | rBB | 4688 | 11627 | 0.72% | 0.130% |
| 72 | 14.964 | 1216 | 1222 | 1238 | rBB | 545855 | 1407914 | 86.74% | 15.684% |
| 73 | 15.189 | 1240 | 1244 | 1249 | rBB | 2030 | 4188 | 0.26% | 0.047% |
| 74 | 15.270 | 1250 | 1252 | 1255 | rBB | 321 | 567 | 0.03% | 0.006% |
| 75 | 15.423 | 1266 | 1267 | 1271 | rBB | 339 | 590 | 0.04% | 0.007% |
| 76 | 15.842 | 1302 | 1308 | 1313 | rBB | 1476 | 3540 | 0.22% | 0.039% |
| 77 | 16.087 | 1327 | 1332 | 1334 | rBB | 367 | 784 | 0.05% | 0.009% |
| 78 | 16.475 | 1367 | 1370 | 1373 | rBB | 322 | 585 | 0.04% | 0.007% |
| 79 | 16.751 | 1391 | 1397 | 1409 | rBB | 445043 | 1033618 | 63.68% | 11.515% |
| 80 | 16.955 | 1415 | 1417 | 1421 | rBB | 542 | 1160 | 0.07% | 0.013% |
| 81 | 17.108 | 1429 | 1432 | 1435 | rBB | 805 | 918 | 0.06% | 0.010% |
| 82 | 17.190 | 1437 | 1440 | 1444 | rBB | 473 | 942 | 0.06% | 0.010% |
| 83 | 17.323 | 1451 | 1453 | 1457 | rBB | 660 | 791 | 0.05% | 0.009% |
| 84 | 17.588 | 1477 | 1479 | 1481 | rBB | 705 | 662 | 0.04% | 0.007% |
| 85 | 17.792 | 1496 | 1499 | 1503 | rBB | 1362 | 2469 | 0.15% | 0.028% |
| 86 | 18.058 | 1521 | 1525 | 1527 | rBB | 921 | 1157 | 0.07% | 0.013% |
| 87 | 18.262 | 1542 | 1545 | 1550 | rBB | 654 | 1294 | 0.08% | 0.014% |
| 88 | 18.344 | 1551 | 1553 | 1557 | rBB | 371 | 645 | 0.04% | 0.007% |
| 89 | 18.538 | 1565 | 1572 | 1588 | rBB | 597204 | 1334706 | 82.23% | 14.869% |
| 90 | 18.865 | 1601 | 1604 | 1608 | rBB | 1284 | 2080 | 0.13% | 0.023% |
| 91 | 19.038 | 1617 | 1621 | 1623 | rBB | 384 | 640 | 0.04% | 0.007% |
| 92 | 19.212 | 1636 | 1638 | 1643 | rBB | 349 | 621 | 0.04% | 0.007% |
| 93 | 20.447 | 1757 | 1759 | 1762 | rBB | 351 | 588 | 0.04% | 0.007% |
| 94 | 20.570 | 1764 | 1771 | 1773 | rBB | 356 | 1051 | 0.06% | 0.012% |
| 95 | 21.693 | 1879 | 1881 | 1885 | rBB | 762 | 1151 | 0.07% | 0.013% |
| 96 | 22.112 | 1919 | 1922 | 1927 | rBB | 2707 | 5738 | 0.35% | 0.064% |
| 97 | 22.490 | 1956 | 1959 | 1962 | rBB | 799 | 1084 | 0.07% | 0.012% |
| 98 | 22.663 | 1973 | 1976 | 1977 | rBB | 367 | 429 | 0.03% | 0.005% |
| 99 | 22.694 | 1978 | 1979 | 1984 | rBB | 332 | 577 | 0.04% | 0.006% |
| 100 | 22.827 | 1991 | 1992 | 1996 | rBB | 350 | 428 | 0.03% | 0.005% |

Sum of corrected areas: 8976560

```
File       : C:\MSDCHEM\1\DATA\051912\6M108271.D
Operator   : FJB
Acquired   : 19 May 2012  19:46     using AcqMethod 8260WT
Instrument :   HPMS6
Sample Name: L12050284-01 10X C 826-SPE D1
Misc Info  : 1,10
Vial Number: 8
Quant File :8260WT.RES (RTE Integrator)
```



Data File : C:\MSDCHEM\1\DATA\051912\6M108271.D Vial: 8
Acq On : 19 May 2012 19:46 Operator: FJB
Sample : L12050284-01 10X C 826-SPE D1 Inst : HPMS6
Misc : 1,10 Multiplr: 1.00
MS Integration Params: RTEINT.P

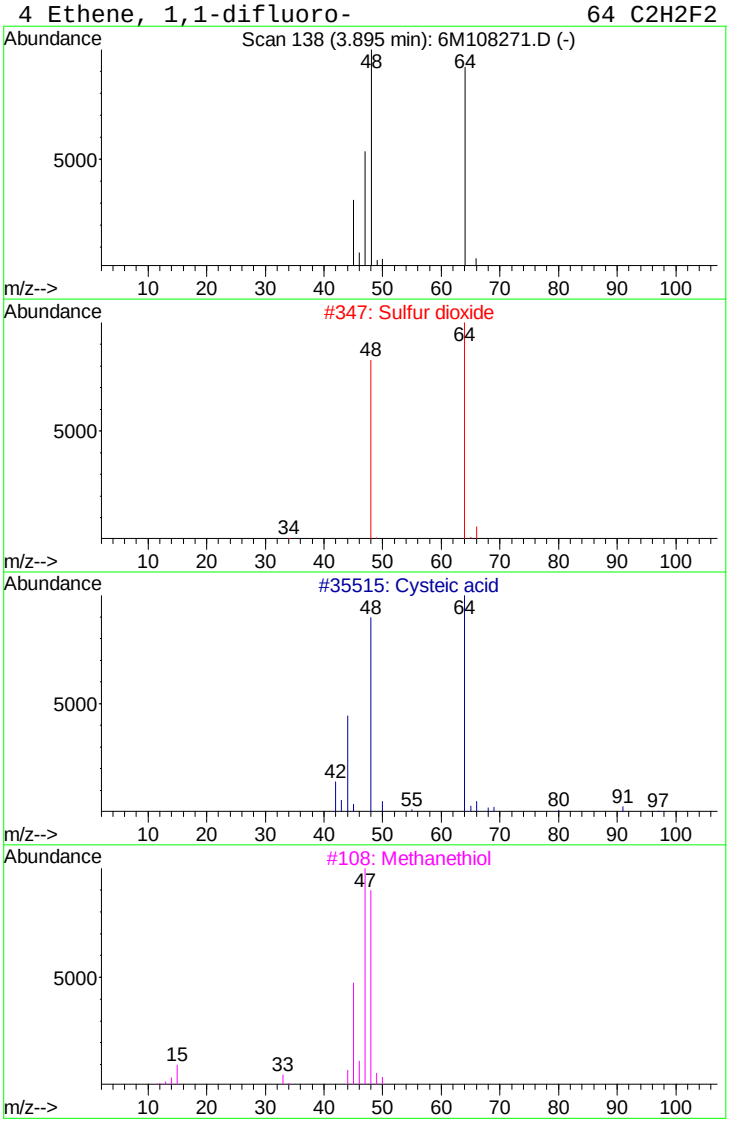
Quant Method : C:\MSDCHEM\1\METHODS\8260WT.M (RTE Integrator)
Title : 8260B/624_WATER SOP:OVLMSV01 05/16/12 - HPMS6
Library : C:\DATABASE\NIST02.L

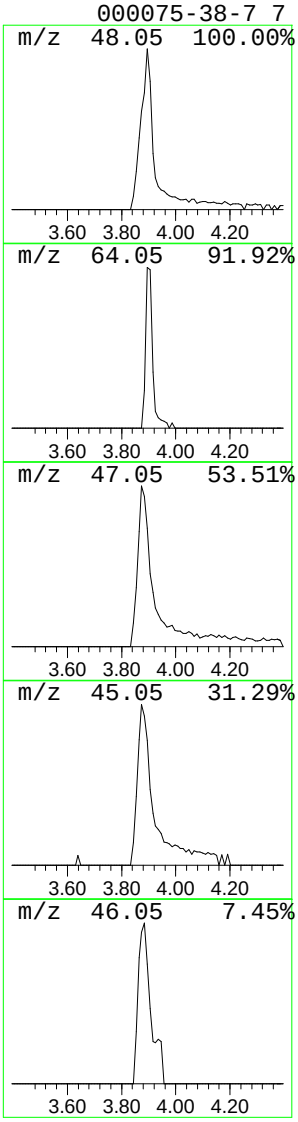
**********

Peak Number 1 Sulfur dioxide Concentration Rank 2

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 3.89 | 2.53 ug/L | 132107 | Fluorobenzene | 10.47 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Sulfur dioxide | 64 | O2S | 007446-09-5 | 56 |
| 2 | Cysteic acid | 169 | C3H7NO5S | 1000131-23-1 | 40 |
| 3 | Methanethiol | 48 | CH4S | 000074-93-1 | 9 |
| 4 | Ethene, 1,1-difluoro- | 64 | C2H2F2 | 000075-38-7 | 7 |



Data File : C:\MSDCHEM\1\DATA\051912\6M108271.D Vial: 8
Acq On : 19 May 2012 19:46 Operator: FJB
Sample : L12050284-01 10X C 826-SPE D1 Inst : HPMS6
Misc : 1,10 Multiplr: 1.00
MS Integration Params: RTEINT.P

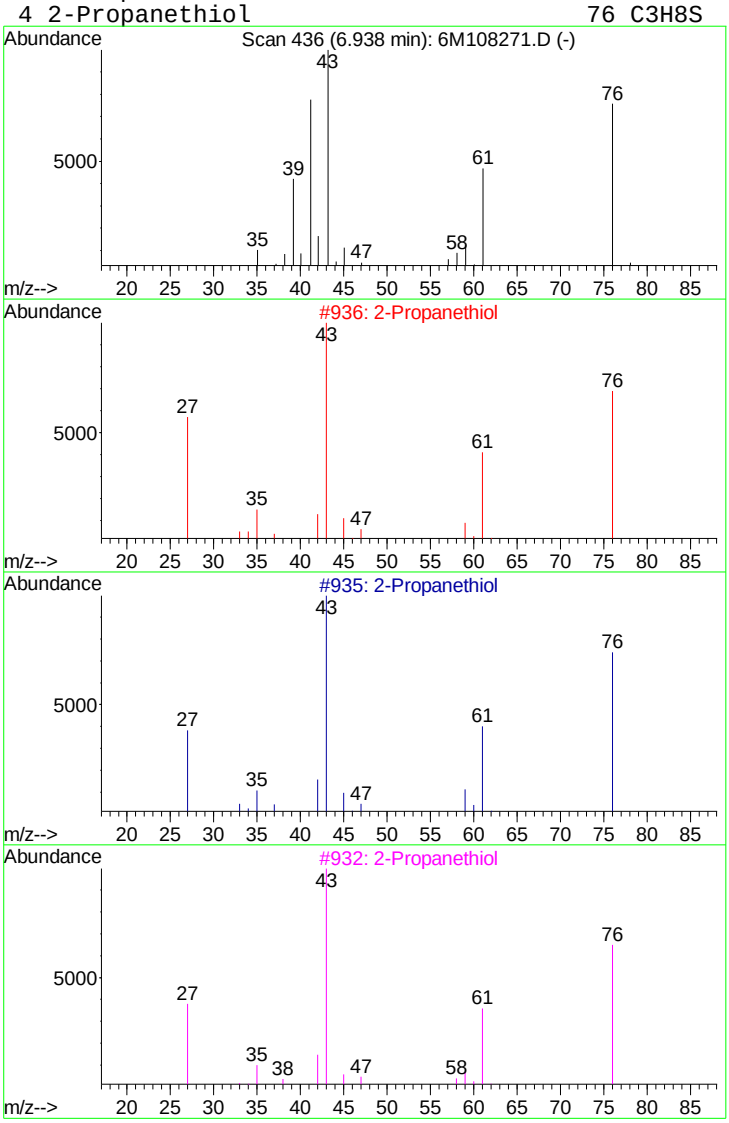
Quant Method : C:\MSDCHEM\1\METHODS\8260WT.M (RTE Integrator)
Title : 8260B/624_WATER SOP:OVLMSV01 05/16/12 - HPMS6
Library : C:\DATABASE\NIST02.L

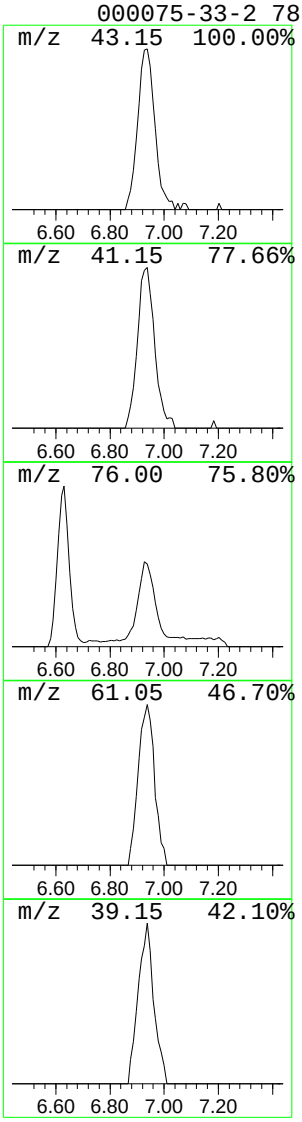
**********

Peak Number 2 2-Propanethiol Concentration Rank 1

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 6.94 | 3.23 ug/L | 168610 | Fluorobenzene | 10.47 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | 2-Propanethiol | 76 | C3H8S | 000075-33-2 | 90 |
| 2 | 2-Propanethiol | 76 | C3H8S | 000075-33-2 | 90 |
| 3 | 2-Propanethiol | 76 | C3H8S | 000075-33-2 | 90 |
| 4 | 2-Propanethiol | 76 | C3H8S | 000075-33-2 | 78 |



Tentatively Identified Compound (LSC) summary

Operator ID: FJB  Date Acquired: 19 May 2012  19:46
Data File: C:\MSDCHEM\1\DATA\051912\6M108271.D
Name: L12050284-01 10X C 826-SPE D1
Misc: 1,10
Method: C:\MSDCHEM\1\METHODS\8260WT.M (RTE Integrator)
Title: 8260B/624_WATER SOP:OVLMSV01  05/16/12 - HPMS6
Library Searched: C:\DATABASE\NIST02.L

| | | | | | Internal Standard | | | |
|---|---|---|---|---|---|---|---|---|
| TIC Top Hit name | RT | EstConc | Units | Response | # | RT | Resp | Conc |
| Sulfur dioxide | 3.89 | 2.5 | ug/L | 132107 | 1 | 10.47 | 1303300 | 25.0 |
| 2-Propanethiol | 6.94 | 3.2 | ug/L | 168610 | 1 | 10.47 | 1303300 | 25.0 |

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\051612\8M379116.D Vial: 16
Acq On : 16 May 2012 16:36 Operator: ADC
Sample : L12050284-03 A 826-SPE Inst : HPMS8
Misc : 1,1 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 18 09:51:17 2012 Quant Results File: 8260WT.RES

Quant Method : C:\MSDCHEM\1\METHODS\8260WT.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 03/27/12 HPMS 8
Last Update : Wed Mar 28 08:18:24 2012
Response via : Initial Calibration
DataAcq Meth : 8260WT

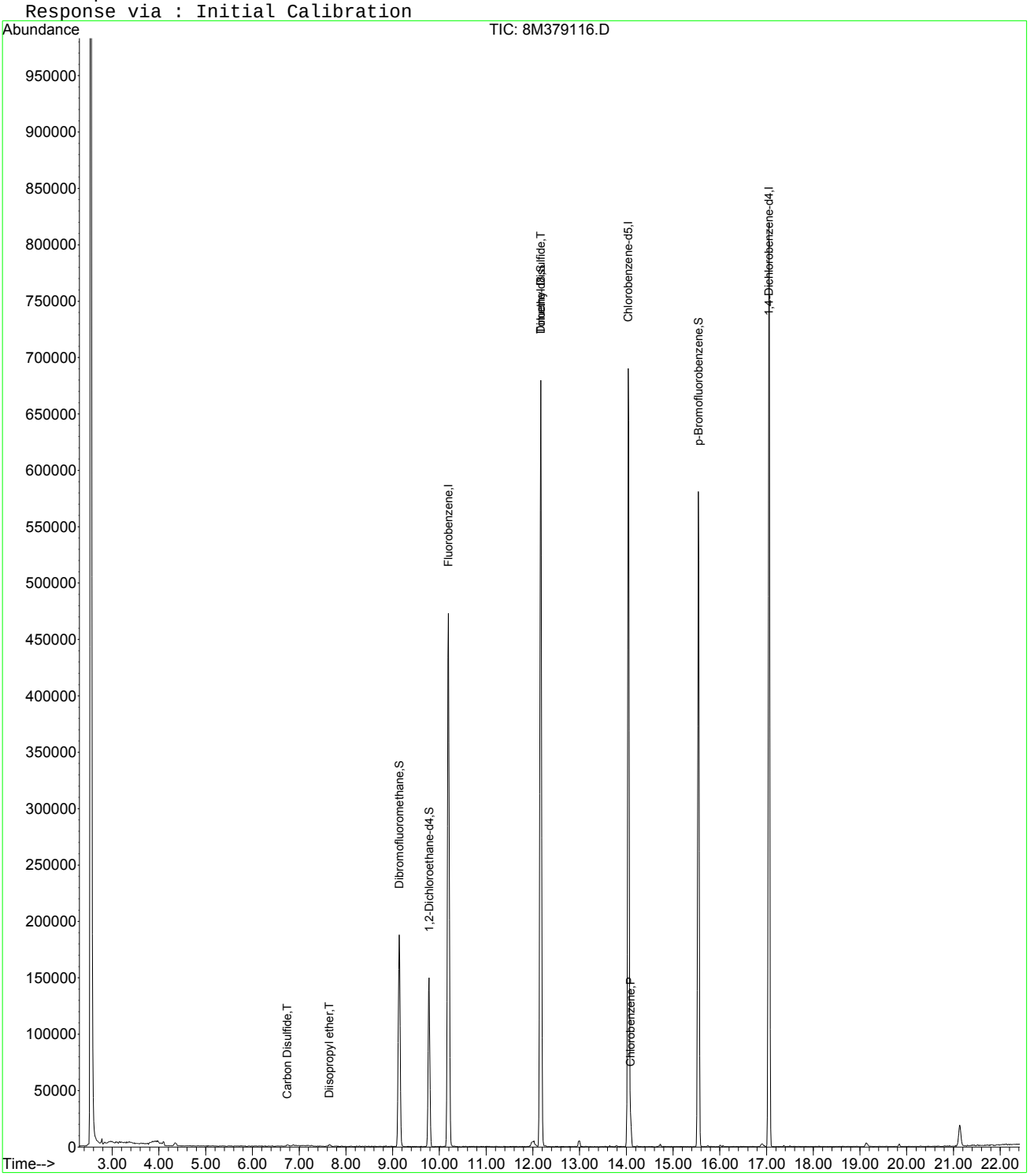
| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 1) Fluorobenzene | 10.19 | 96 | 615066 | 25.00 | ug/L | 0.01 |
| 57) Chlorobenzene-d5 | 14.04 | 117 | 557062 | 25.00 | ug/L | 0.00 |
| 78) 1,4-Dichlorobenzene-d4 | 17.05 | 152 | 310354 | 25.00 | ug/L | 0.00 |
| **System Monitoring Compounds** | | | | | | |
| 37) Dibromofluoromethane | 9.14 | 111 | 167052 | 26.1790 | ug/L | 0.00 |
| Spiked Amount 25.000 | Range 86 - 118 | | Recovery = 104.72% | | | |
| 43) 1,2-Dichloroethane-d4 | 9.78 | 65 | 134805 | 27.4340 | ug/L | 0.01 |
| Spiked Amount 25.000 | Range 80 - 120 | | Recovery = 109.72% | | | |
| 58) Toluene-d8 | 12.17 | 98 | 624342 | 24.2741 | ug/L | 0.00 |
| Spiked Amount 25.000 | Range 88 - 110 | | Recovery = 97.08% | | | |
| 80) p-Bromofluorobenzene | 15.54 | 95 | 248490 | 24.7508 | ug/L | 0.00 |
| Spiked Amount 25.000 | Range 86 - 115 | | Recovery = 99.00% | | | |
| **Target Compounds** | | | | | | Qvalue |
| 20) Carbon Disulfide | 6.74 | 76 | 2928 | 0.1848 | ug/L # | 75 |
| 25) Diisopropyl ether | 7.64 | 45 | 3369 | 0.1793 | ug/L # | 60 |
| 56) Dimethyl Disulfide | 12.17 | 94 | 17490 | 1.8141 | ug/L # | 28 |
| 70) Chlorobenzene | 14.09 | 112 | 18535 | 0.8635 | ug/L | 84 |

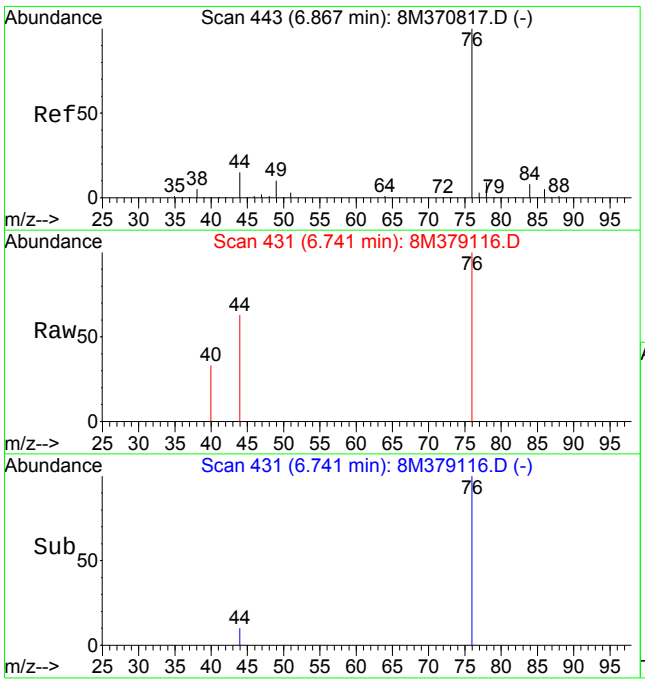
(#) = qualifier out of range (m) = manual integration
8M379116.D 8260WT.M Fri May 18 09:51:18 2012 Page 1

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\051612\8M379116.D Vial: 16
Acq On : 16 May 2012 16:36 Operator: ADC
Sample : L12050284-03 A 826-SPE Inst : HPMS8
Misc : 1,1 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 18 9:51 2012 Quant Results File: 8260WT.RES

Method : C:\MSDCHEM\1\METHODS\8260WT.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 03/27/12 HPMS 8
Last Update : Wed Mar 28 08:18:24 2012
Response via : Initial Calibration

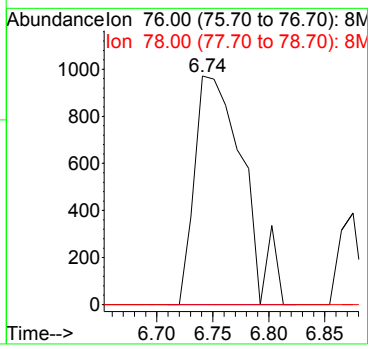


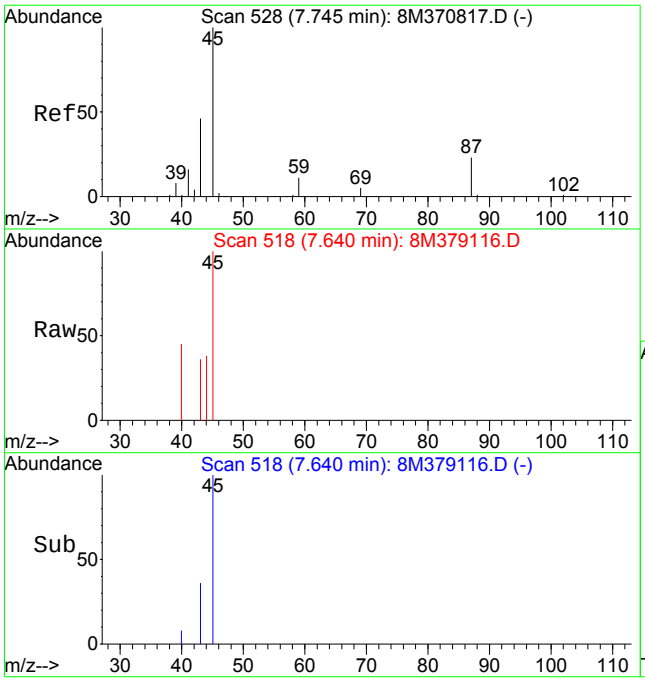



#20
Carbon Disulfide
Concen: 0.18 ug/L
RT: 6.74 min Scan# 431
Delta R.T. -0.01 min
Lab File: 8M379116.D
Acq: 16 May 2012 16:36

Tgt Ion: 76 Resp: 2928

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 76 | 100 | | |
| 78 | 0.0 | 5.5 | 12.7# |

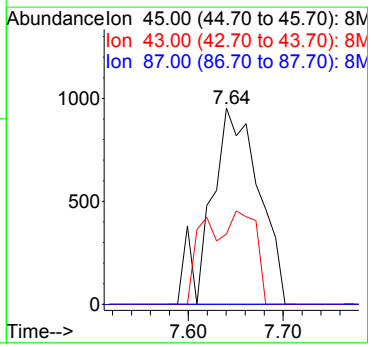


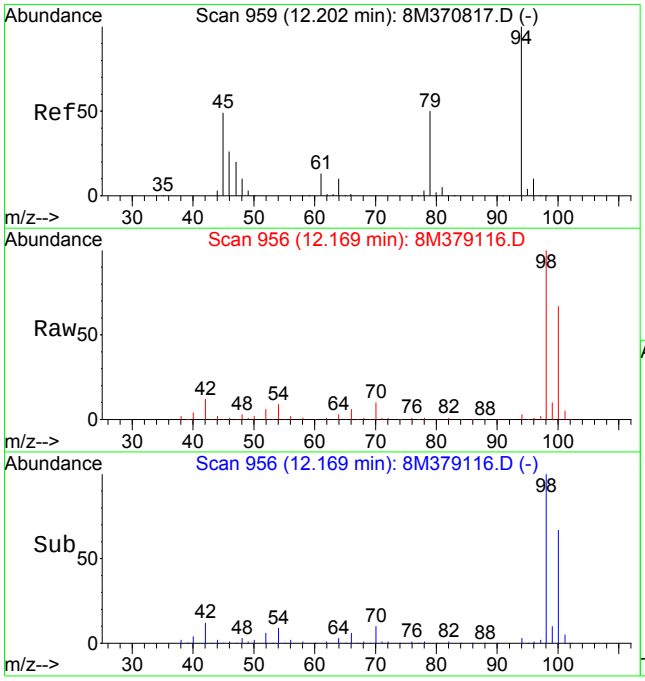




#25
Diisopropyl ether
Concen: 0.18 ug/L
RT: 7.64 min Scan# 518
Delta R.T. -0.01 min
Lab File: 8M379116.D
Acq: 16 May 2012 16:36

Tgt Ion: 45 Resp: 3369

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 45 | 100 | | |
| 43 | 23.7 | 27.8 | 64.8# |
| 87 | 0.0 | 15.4 | 35.8# |

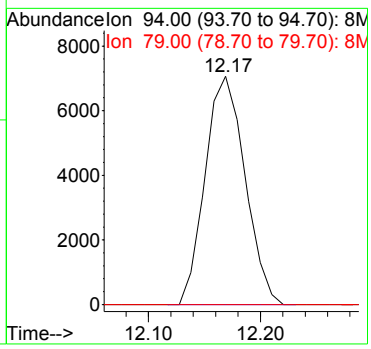


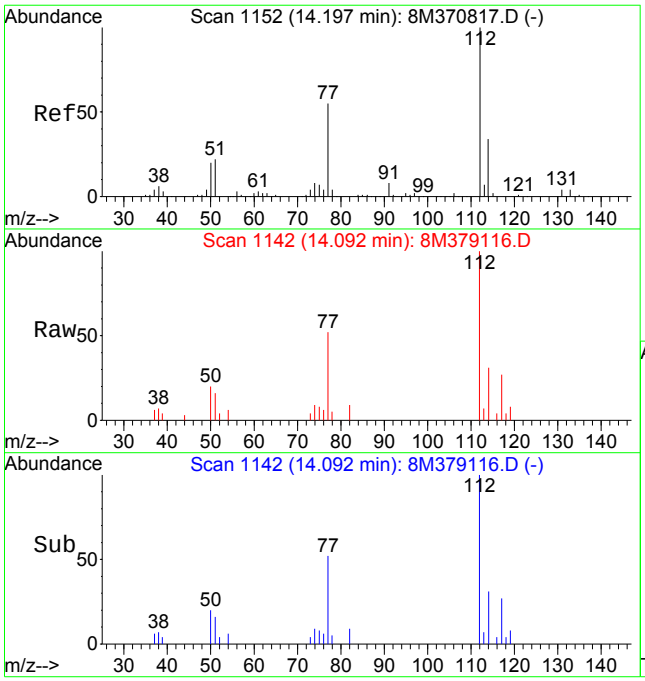



#56
Dimethyl Disulfide
Concen: 1.81 ug/L
RT: 12.17 min Scan# 956
Delta R.T. 0.08 min
Lab File: 8M379116.D
Acq: 16 May 2012 16:36

Tgt Ion: 94 Resp: 17490

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 94 | 100 | | |
| 79 | 0.0 | 29.2 | 68.0# |

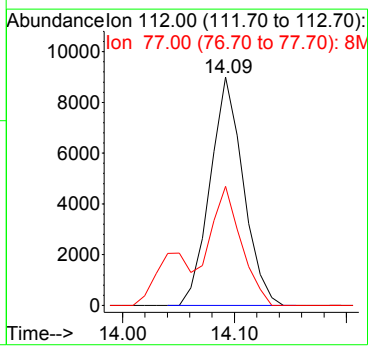



#70
Chlorobenzene
Concen: 0.86 ug/L
RT: 14.09 min Scan# 1142
Delta R.T. 0.00 min
Lab File: 8M379116.D
Acq: 16 May 2012 16:36

Tgt Ion:112 Resp: 18535

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 112 | 100 | | |
| 77 | 49.4 | 37.1 | 86.7 |



LSC Area Percent Report

Data File : K:\ORGANICS\VOLATILE\HPMS8\DATA\051612\8M379116.D Vial: 16
Acq On : 16 May 2012 16:36 Operator: ADC
Sample : L12050284-03 A 826-SPE Inst : HPMS8
Misc : 1,1 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\1\METHODS\8260WT.M (RTE Integrator)
Title : 8260B/624_WATER SOP:OVLMSV01 05/16/12 - HPMS6
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 100 Area counts
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

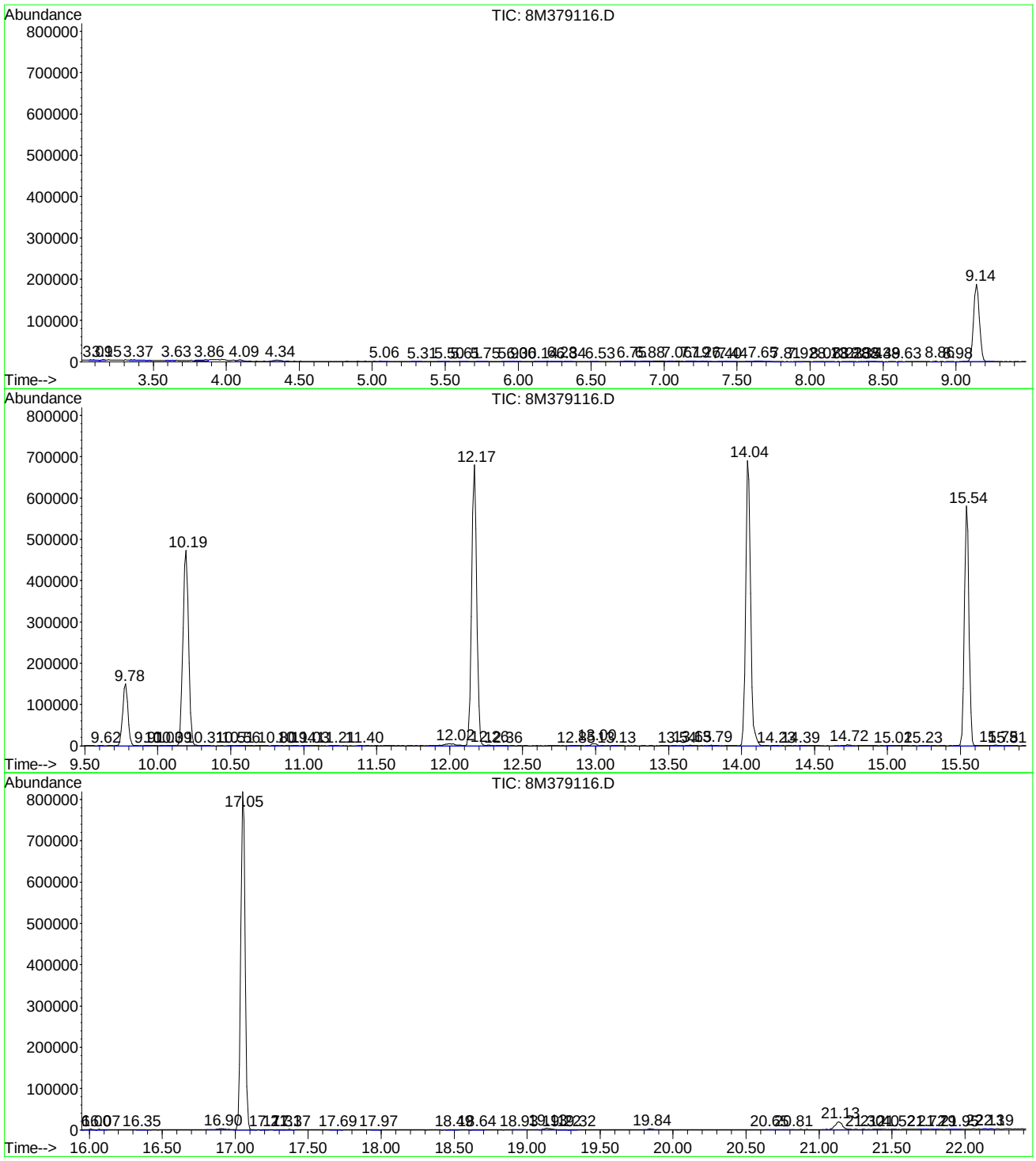
Signal : TIC

| peak # | R.T. min | first scan | max scan | last scan | PK TY | peak height | corr. area | corr. % max. | % of total |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 3.091 | 75 | 78 | 82 | rVB2 | 1299 | 3909 | 0.23% | 0.045% |
| 2 | 3.153 | 82 | 84 | 86 | rBV2 | 1631 | 2609 | 0.15% | 0.030% |
| 3 | 3.370 | 102 | 105 | 116 | rVB3 | 1880 | 9026 | 0.53% | 0.104% |
| 4 | 3.628 | 126 | 130 | 132 | rBV | 842 | 2058 | 0.12% | 0.024% |
| 5 | 3.856 | 144 | 152 | 154 | rBV4 | 2835 | 11582 | 0.68% | 0.133% |
| 6 | 4.094 | 172 | 175 | 180 | rVB | 3872 | 8876 | 0.52% | 0.102% |
| 7 | 4.342 | 194 | 199 | 205 | rVB3 | 2934 | 10361 | 0.61% | 0.119% |
| 8 | 5.055 | 267 | 268 | 273 | rBV | 825 | 1703 | 0.10% | 0.020% |
| 9 | 5.314 | 289 | 293 | 295 | rBV2 | 506 | 1643 | 0.10% | 0.019% |
| 10 | 5.500 | 306 | 311 | 313 | rBV2 | 618 | 1994 | 0.12% | 0.023% |
| 11 | 5.614 | 320 | 322 | 326 | rBV | 601 | 1765 | 0.10% | 0.020% |
| 12 | 5.748 | 332 | 335 | 339 | rBV2 | 607 | 1646 | 0.10% | 0.019% |
| 13 | 5.934 | 349 | 353 | 356 | rBV2 | 633 | 1886 | 0.11% | 0.022% |
| 14 | 5.996 | 356 | 359 | 361 | rVB2 | 587 | 1374 | 0.08% | 0.016% |
| 15 | 6.141 | 370 | 373 | 378 | rVB | 531 | 1555 | 0.09% | 0.018% |
| 16 | 6.275 | 381 | 386 | 388 | rBV2 | 732 | 1539 | 0.09% | 0.018% |
| 17 | 6.337 | 390 | 392 | 395 | rBV2 | 606 | 1272 | 0.07% | 0.015% |
| 18 | 6.534 | 407 | 411 | 412 | rBV2 | 574 | 1482 | 0.09% | 0.017% |
| 19 | 6.751 | 427 | 432 | 438 | rBV | 1222 | 3833 | 0.23% | 0.044% |
| 20 | 6.875 | 439 | 444 | 448 | rBV2 | 1207 | 3492 | 0.21% | 0.040% |
| 21 | 7.061 | 457 | 462 | 463 | rBV | 913 | 2471 | 0.15% | 0.028% |
| 22 | 7.185 | 470 | 474 | 479 | rVB3 | 735 | 2280 | 0.13% | 0.026% |
| 23 | 7.258 | 479 | 481 | 487 | rVB3 | 776 | 1546 | 0.09% | 0.018% |
| 24 | 7.402 | 492 | 495 | 497 | rBV | 546 | 1297 | 0.08% | 0.015% |
| 25 | 7.444 | 497 | 499 | 504 | rBV | 502 | 1531 | 0.09% | 0.018% |
| 26 | 7.651 | 510 | 519 | 526 | rVB3 | 1831 | 7915 | 0.47% | 0.091% |
| 27 | 7.806 | 528 | 534 | 536 | rVB2 | 861 | 3289 | 0.19% | 0.038% |
| 28 | 7.919 | 539 | 545 | 548 | rBV2 | 937 | 3294 | 0.19% | 0.038% |
| 29 | 8.074 | 554 | 560 | 561 | rBV2 | 743 | 1937 | 0.11% | 0.022% |
| 30 | 8.126 | 561 | 565 | 570 | rVB | 751 | 2617 | 0.15% | 0.030% |
| 31 | 8.230 | 573 | 575 | 579 | rBV | 851 | 2101 | 0.12% | 0.024% |
| 32 | 8.281 | 579 | 580 | 584 | rVB2 | 929 | 1836 | 0.11% | 0.021% |
| 33 | 8.354 | 584 | 587 | 590 | rBV2 | 787 | 2002 | 0.12% | 0.023% |
| 34 | 8.426 | 590 | 594 | 596 | rVV | 545 | 1602 | 0.09% | 0.018% |
| 35 | 8.488 | 598 | 600 | 604 | rVB | 950 | 1483 | 0.09% | 0.017% |
| 36 | 8.633 | 610 | 614 | 615 | rBB | 765 | 1621 | 0.10% | 0.019% |
| 37 | 8.860 | 633 | 636 | 638 | rBB | 1233 | 1782 | 0.10% | 0.020% |
| 38 | 8.984 | 642 | 648 | 651 | rBB | 870 | 2331 | 0.14% | 0.027% |
| 39 | 9.139 | 654 | 663 | 674 | rVV | 187899 | 518833 | 30.55% | 5.964% |
| 40 | 9.615 | 706 | 709 | 711 | rBB | 701 | 1238 | 0.07% | 0.014% |
| 41 | 9.780 | 717 | 725 | 734 | rBB | 150118 | 373463 | 21.99% | 4.293% |
| 42 | 9.915 | 736 | 738 | 741 | rBV | 654 | 1176 | 0.07% | 0.014% |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 43 | 10.029 | 747 | 749 | 751 | rBB | 809 | 1203 | 0.07% | 0.014% |
| 44 | 10.091 | 751 | 755 | 756 | rBV | 740 | 1307 | 0.08% | 0.015% |
| 45 | 10.194 | 756 | 765 | 775 | rVV | 473036 | 1265102 | 74.50% | 14.542% |
| 46 | 10.308 | 775 | 776 | 782 | rVB | 941 | 2380 | 0.14% | 0.027% |
| 47 | 10.515 | 792 | 796 | 797 | rBB | 756 | 1405 | 0.08% | 0.016% |
| 48 | 10.556 | 797 | 800 | 803 | rBV | 659 | 1626 | 0.10% | 0.019% |
| 49 | 10.804 | 821 | 824 | 827 | rBB | 683 | 1444 | 0.09% | 0.017% |
| 50 | 10.938 | 834 | 837 | 840 | rBB | 654 | 1200 | 0.07% | 0.014% |
| 51 | 11.032 | 841 | 846 | 847 | rBV2 | 703 | 1956 | 0.12% | 0.022% |
| 52 | 11.207 | 859 | 863 | 868 | rBB | 804 | 2166 | 0.13% | 0.025% |
| 53 | 11.404 | 877 | 882 | 883 | rBB | 792 | 1453 | 0.09% | 0.017% |
| 54 | 12.024 | 925 | 942 | 949 | rBV3 | 5549 | 30346 | 1.79% | 0.349% |
| 55 | 12.169 | 950 | 956 | 964 | rVV | 679995 | 1629173 | 95.94% | 18.727% |
| 56 | 12.262 | 964 | 965 | 970 | rVB | 1212 | 2601 | 0.15% | 0.030% |
| 57 | 12.355 | 970 | 974 | 979 | rBB | 538 | 1871 | 0.11% | 0.022% |
| 58 | 12.851 | 1018 | 1022 | 1024 | rBV | 562 | 1373 | 0.08% | 0.016% |
| 59 | 12.996 | 1029 | 1036 | 1041 | rBV5 | 5479 | 16188 | 0.95% | 0.186% |
| 60 | 13.130 | 1046 | 1049 | 1051 | rBV | 733 | 1472 | 0.09% | 0.017% |
| 61 | 13.544 | 1086 | 1089 | 1093 | rBB | 705 | 1546 | 0.09% | 0.018% |
| 62 | 13.647 | 1093 | 1099 | 1101 | rBV | 1348 | 2201 | 0.13% | 0.025% |
| 63 | 13.792 | 1108 | 1113 | 1119 | rBB | 1351 | 4039 | 0.24% | 0.046% |
| 64 | 14.040 | 1131 | 1137 | 1147 | rBV | 690310 | 1619472 | 95.37% | 18.616% |
| 65 | 14.226 | 1152 | 1155 | 1159 | rBB2 | 917 | 2439 | 0.14% | 0.028% |
| 66 | 14.392 | 1170 | 1171 | 1175 | rBV | 753 | 1326 | 0.08% | 0.015% |
| 67 | 14.723 | 1196 | 1203 | 1207 | rBB | 2480 | 6289 | 0.37% | 0.072% |
| 68 | 15.023 | 1228 | 1232 | 1234 | rBV | 444 | 1337 | 0.08% | 0.015% |
| 69 | 15.229 | 1250 | 1252 | 1258 | rBB | 546 | 1699 | 0.10% | 0.020% |
| 70 | 15.540 | 1273 | 1282 | 1289 | rBV | 581162 | 1243082 | 73.20% | 14.289% |
| 71 | 15.746 | 1298 | 1302 | 1306 | rVB2 | 1310 | 3210 | 0.19% | 0.037% |
| 72 | 15.808 | 1306 | 1308 | 1312 | rBV2 | 744 | 1620 | 0.10% | 0.019% |
| 73 | 16.005 | 1322 | 1327 | 1331 | rBB | 1764 | 4137 | 0.24% | 0.048% |
| 74 | 16.067 | 1331 | 1333 | 1338 | rBV | 1276 | 2758 | 0.16% | 0.032% |
| 75 | 16.346 | 1358 | 1360 | 1365 | rVB | 507 | 1581 | 0.09% | 0.018% |
| 76 | 16.904 | 1404 | 1414 | 1422 | rBV | 2644 | 10166 | 0.60% | 0.117% |
| 77 | 17.049 | 1422 | 1428 | 1437 | rVB | 819372 | 1698149 | 100.00% | 19.520% |
| 78 | 17.215 | 1440 | 1444 | 1445 | rBV | 458 | 1235 | 0.07% | 0.014% |
| 79 | 17.308 | 1449 | 1453 | 1455 | rBV | 501 | 1468 | 0.09% | 0.017% |
| 80 | 17.370 | 1455 | 1459 | 1462 | rVB | 1468 | 2434 | 0.14% | 0.028% |
| 81 | 17.690 | 1486 | 1490 | 1494 | rVB | 589 | 2032 | 0.12% | 0.023% |
| 82 | 17.969 | 1513 | 1517 | 1519 | rVB | 513 | 1355 | 0.08% | 0.016% |
| 83 | 18.486 | 1563 | 1567 | 1571 | rBV | 541 | 2149 | 0.13% | 0.025% |
| 84 | 18.641 | 1579 | 1582 | 1588 | rBV | 828 | 2924 | 0.17% | 0.034% |
| 85 | 18.931 | 1607 | 1610 | 1615 | rVB | 534 | 1175 | 0.07% | 0.014% |
| 86 | 19.127 | 1623 | 1629 | 1636 | rBV2 | 3180 | 10695 | 0.63% | 0.123% |
| 87 | 19.220 | 1637 | 1638 | 1644 | rVB | 810 | 2075 | 0.12% | 0.024% |
| 88 | 19.324 | 1644 | 1648 | 1650 | rBV | 546 | 1679 | 0.10% | 0.019% |
| 89 | 19.841 | 1694 | 1698 | 1704 | rVV | 2328 | 4756 | 0.28% | 0.055% |
| 90 | 20.647 | 1775 | 1776 | 1784 | rBV | 594 | 1491 | 0.09% | 0.017% |
| 91 | 20.813 | 1786 | 1792 | 1793 | rBV | 735 | 1519 | 0.09% | 0.017% |
| 92 | 21.133 | 1812 | 1823 | 1833 | rBV | 18636 | 65358 | 3.85% | 0.751% |
| 93 | 21.299 | 1837 | 1839 | 1841 | rBV | 1169 | 1831 | 0.11% | 0.021% |
| 94 | 21.402 | 1844 | 1849 | 1851 | rBV | 1084 | 2796 | 0.16% | 0.032% |
| 95 | 21.516 | 1857 | 1860 | 1862 | rBV2 | 1152 | 1908 | 0.11% | 0.022% |
| 96 | 21.723 | 1877 | 1880 | 1882 | rVB2 | 915 | 1267 | 0.07% | 0.015% |
| 97 | 21.795 | 1885 | 1887 | 1889 | rBV2 | 889 | 1489 | 0.09% | 0.017% |
| 98 | 21.950 | 1896 | 1902 | 1904 | rBV3 | 926 | 3114 | 0.18% | 0.036% |
| 99 | 22.126 | 1918 | 1919 | 1922 | rVB2 | 1372 | 2233 | 0.13% | 0.026% |
| 100 | 22.188 | 1922 | 1925 | 1926 | rBV2 | 1089 | 1912 | 0.11% | 0.022% |

Sum of corrected areas: 8699462

File : K:\ORGANICS\VOLATILE\HPMS8\DATA\051612\8M379116.D
Operator : ADC
Acquired : 16 May 2012 16:36 using AcqMethod 8260WT
Instrument : HPMS8
Sample Name: L12050284-03 A 826-SPE
Misc Info : 1,1
Vial Number: 16
Quant File :8260WT.RES (RTE Integrator)



Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\051612\8M379117.D Vial: 17
Acq On : 16 May 2012 17:10 Operator: ADC
Sample : L12050284-05 A 826-SPE Inst : HPMS8
Misc : 1,1 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 18 09:51:20 2012 Quant Results File: 8260WT.RES

Quant Method : C:\MSDCHEM\1\METHODS\8260WT.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 03/27/12 HPMS 8
Last Update : Wed Mar 28 08:18:24 2012
Response via : Initial Calibration
DataAcq Meth : 8260WT

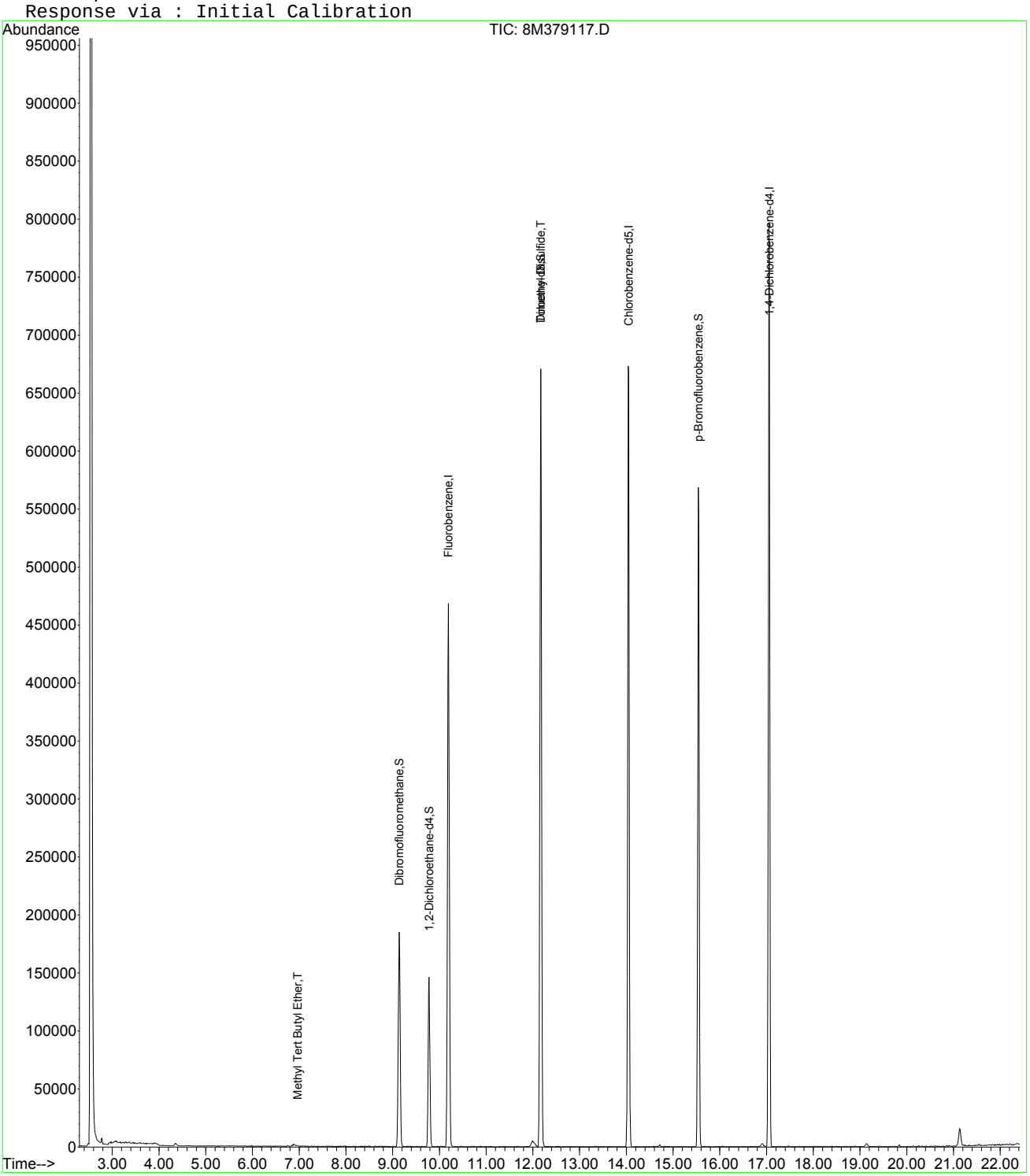
| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 1) Fluorobenzene | 10.19 | 96 | 603095 | 25.00 | ug/L | 0.01 |
| 57) Chlorobenzene-d5 | 14.05 | 117 | 554894 | 25.00 | ug/L | 0.01 |
| 78) 1,4-Dichlorobenzene-d4 | 17.06 | 152 | 313112 | 25.00 | ug/L | 0.01 |
| **System Monitoring Compounds** | | | | | | |
| 37) Dibromofluoromethane | 9.14 | 111 | 161187 | 25.7613 | ug/L | 0.00 |
| Spiked Amount 25.000 | Range 86 - 118 | | Recovery = 103.04% | | | |
| 43) 1,2-Dichloroethane-d4 | 9.78 | 65 | 135798 | 28.1847 | ug/L | 0.01 |
| Spiked Amount 25.000 | Range 80 - 120 | | Recovery = 112.72% | | | |
| 58) Toluene-d8 | 12.17 | 98 | 623723 | 24.3448 | ug/L | 0.00 |
| Spiked Amount 25.000 | Range 88 - 110 | | Recovery = 97.36% | | | |
| 80) p-Bromofluorobenzene | 15.54 | 95 | 246204 | 24.3071 | ug/L | 0.00 |
| Spiked Amount 25.000 | Range 86 - 115 | | Recovery = 97.24% | | | |
| **Target Compounds** | | | | | | Qvalue |
| 22) Methyl Tert Butyl Ether | 6.97 | 73 | 1362 | 0.1323 | ug/L # | 52 |
| 56) Dimethyl Disulfide | 12.17 | 94 | 17229 | 1.8225 | ug/L # | 28 |

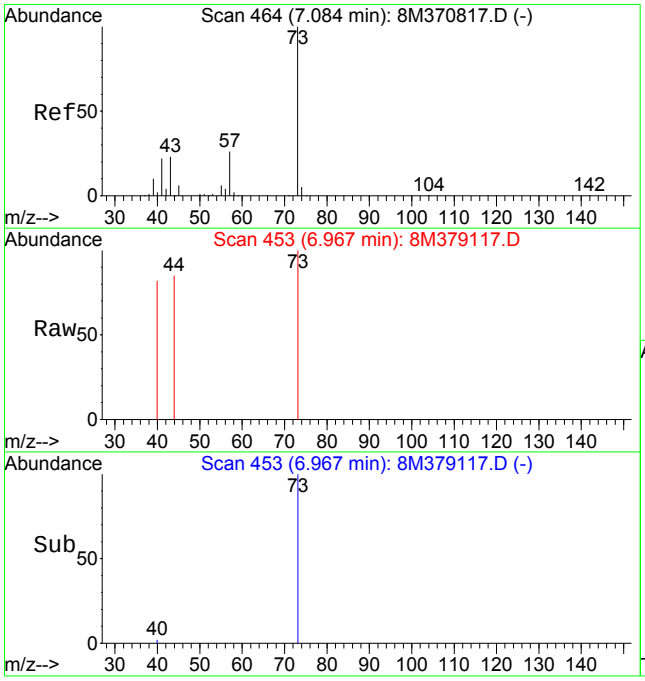
(#) = qualifier out of range (m) = manual integration
8M379117.D 8260WT.M Fri May 18 09:51:21 2012 Page 1

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\051612\8M379117.D Vial: 17
Acq On : 16 May 2012 17:10 Operator: ADC
Sample : L12050284-05 A 826-SPE Inst : HPMS8
Misc : 1,1 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 18 9:51 2012 Quant Results File: 8260WT.RES

Method : C:\MSDCHEM\1\METHODS\8260WT.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 03/27/12 HPMS 8
Last Update : Wed Mar 28 08:18:24 2012
Response via : Initial Calibration

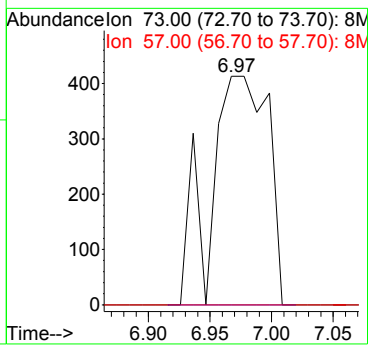


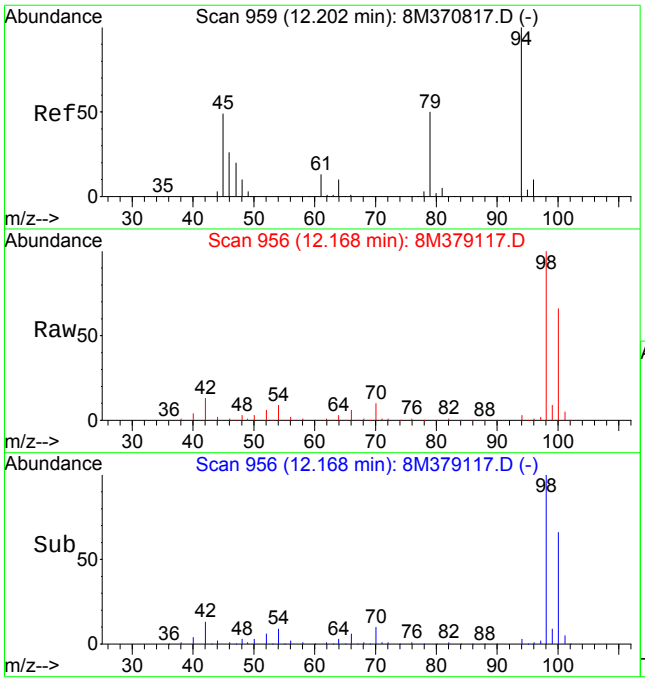



#22
Methyl Tert Butyl Ether
Concen: 0.13 ug/L
RT: 6.97 min Scan# 453
Delta R.T. -0.00 min
Lab File: 8M379117.D
Acq: 16 May 2012 17:10

Tgt Ion: 73 Resp: 1362

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 73 | 100 | | |
| 57 | 0.0 | 14.0 | 32.8# |

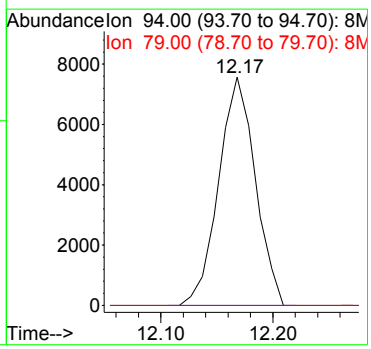



#56
Dimethyl Disulfide
Concen: 1.82 ug/L
RT: 12.17 min Scan# 956
Delta R.T. 0.08 min
Lab File: 8M379117.D
Acq: 16 May 2012 17:10

Tgt Ion: 94 Resp: 17229

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 94 | 100 | | |
| 79 | 0.0 | 29.2 | 68.0# |



LSC Area Percent Report

Data File : K:\ORGANICS\VOLATILE\HPMS8\DATA\051612\8M379117.D Vial: 17
Acq On : 16 May 2012 17:10 Operator: ADC
Sample : L12050284-05 A 826-SPE Inst : HPMS8
Misc : 1,1 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\1\METHODS\8260WT.M (RTE Integrator)
Title : 8260B/624_WATER SOP:OVLMSV01 05/16/12 - HPMS6
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 100 Area counts
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

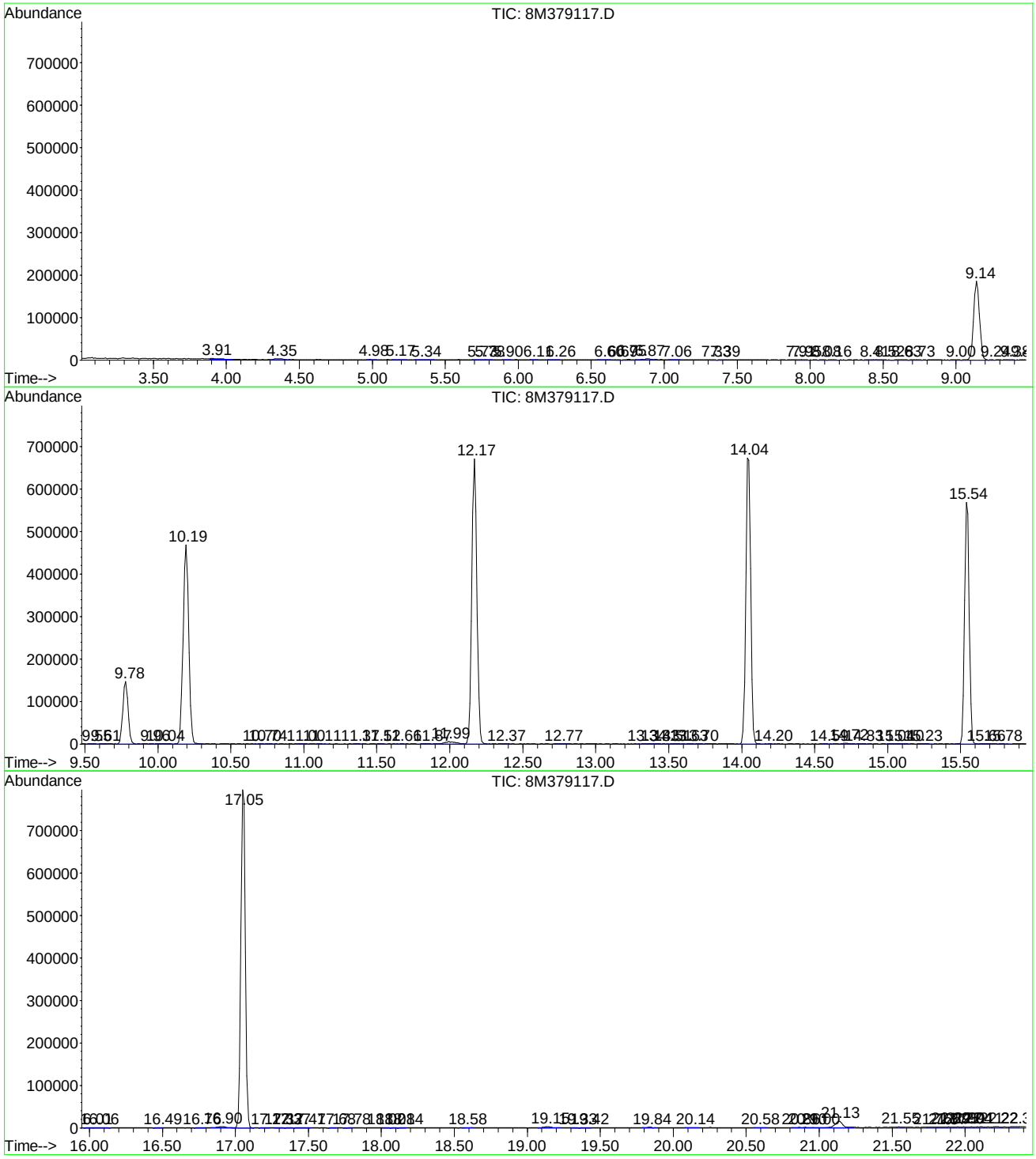
Signal : TIC

| peak # | R.T. min | first scan | max scan | last scan | PK TY | peak height | corr. area | corr. % max. | % of total |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 3.907 | 155 | 157 | 169 | rVB3 | 2541 | 10568 | 0.62% | 0.124% |
| 2 | 4.351 | 195 | 200 | 207 | rVB4 | 2335 | 7494 | 0.44% | 0.088% |
| 3 | 4.982 | 259 | 261 | 265 | rBV | 595 | 1335 | 0.08% | 0.016% |
| 4 | 5.168 | 276 | 279 | 285 | rVB | 627 | 2302 | 0.14% | 0.027% |
| 5 | 5.344 | 291 | 296 | 303 | rBV2 | 781 | 4126 | 0.24% | 0.048% |
| 6 | 5.727 | 329 | 333 | 336 | rBV2 | 448 | 1496 | 0.09% | 0.017% |
| 7 | 5.778 | 337 | 338 | 342 | rVV2 | 492 | 1288 | 0.08% | 0.015% |
| 8 | 5.902 | 349 | 350 | 354 | rBV | 598 | 1192 | 0.07% | 0.014% |
| 9 | 6.109 | 367 | 370 | 372 | rVB | 577 | 1216 | 0.07% | 0.014% |
| 10 | 6.264 | 379 | 385 | 386 | rBV2 | 505 | 1665 | 0.10% | 0.019% |
| 11 | 6.595 | 412 | 417 | 420 | rVB | 468 | 1481 | 0.09% | 0.017% |
| 12 | 6.688 | 424 | 426 | 428 | rVB | 855 | 1504 | 0.09% | 0.018% |
| 13 | 6.750 | 428 | 432 | 437 | rBV2 | 1284 | 4119 | 0.24% | 0.048% |
| 14 | 6.874 | 437 | 444 | 449 | rBV3 | 2094 | 8255 | 0.49% | 0.097% |
| 15 | 7.060 | 459 | 462 | 466 | rBV2 | 545 | 1783 | 0.10% | 0.021% |
| 16 | 7.329 | 486 | 488 | 491 | rVB | 716 | 1549 | 0.09% | 0.018% |
| 17 | 7.391 | 491 | 494 | 495 | rBV | 862 | 1242 | 0.07% | 0.015% |
| 18 | 7.908 | 543 | 544 | 547 | rVV2 | 726 | 1353 | 0.08% | 0.016% |
| 19 | 7.950 | 547 | 548 | 552 | rVB | 837 | 1970 | 0.12% | 0.023% |
| 20 | 8.084 | 558 | 561 | 564 | rBB | 667 | 1579 | 0.09% | 0.018% |
| 21 | 8.156 | 564 | 568 | 571 | rBB | 878 | 1861 | 0.11% | 0.022% |
| 22 | 8.415 | 588 | 593 | 595 | rBV2 | 838 | 2318 | 0.14% | 0.027% |
| 23 | 8.518 | 597 | 603 | 607 | rVB2 | 841 | 2639 | 0.16% | 0.031% |
| 24 | 8.632 | 608 | 614 | 618 | rBB2 | 839 | 2796 | 0.16% | 0.033% |
| 25 | 8.725 | 618 | 623 | 627 | rBB | 744 | 2880 | 0.17% | 0.034% |
| 26 | 9.004 | 645 | 650 | 653 | rBB | 785 | 1944 | 0.11% | 0.023% |
| 27 | 9.139 | 653 | 663 | 671 | rBB | 185286 | 515244 | 30.27% | 6.026% |
| 28 | 9.242 | 671 | 673 | 675 | rBB | 706 | 1108 | 0.07% | 0.013% |
| 29 | 9.376 | 683 | 686 | 689 | rVB | 853 | 1601 | 0.09% | 0.019% |
| 30 | 9.449 | 691 | 693 | 696 | rBV | 445 | 1104 | 0.06% | 0.013% |
| 31 | 9.552 | 699 | 703 | 706 | rBB | 784 | 1862 | 0.11% | 0.022% |
| 32 | 9.614 | 707 | 709 | 712 | rBV | 761 | 1382 | 0.08% | 0.016% |
| 33 | 9.780 | 719 | 725 | 735 | rBB | 146543 | 367472 | 21.59% | 4.298% |
| 34 | 9.955 | 740 | 742 | 744 | rBB | 764 | 1121 | 0.07% | 0.013% |
| 35 | 10.038 | 745 | 750 | 757 | rVB | 797 | 3184 | 0.19% | 0.037% |
| 36 | 10.193 | 757 | 765 | 777 | rBB | 468554 | 1245908 | 73.21% | 14.571% |
| 37 | 10.700 | 810 | 814 | 817 | rBB | 770 | 1590 | 0.09% | 0.019% |
| 38 | 10.741 | 817 | 818 | 823 | rBB | 795 | 1532 | 0.09% | 0.018% |
| 39 | 11.000 | 840 | 843 | 846 | rVB | 652 | 1295 | 0.08% | 0.015% |
| 40 | 11.113 | 851 | 854 | 859 | rBB | 659 | 1370 | 0.08% | 0.016% |
| 41 | 11.372 | 875 | 879 | 881 | rBB | 635 | 1327 | 0.08% | 0.016% |
| 42 | 11.517 | 891 | 893 | 897 | rBB | 415 | 1139 | 0.07% | 0.013% |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 43 | 11.661 | 904 | 907 | 910 | rBB | 747 | 1277 | 0.08% | 0.015% |
| 44 | 11.868 | 920 | 927 | 928 | rBB | 789 | 1892 | 0.11% | 0.022% |
| 45 | 11.992 | 930 | 939 | 950 | rVB2 | 5440 | 27055 | 1.59% | 0.316% |
| 46 | 12.168 | 950 | 956 | 965 | rBB | 670964 | 1618774 | 95.12% | 18.931% |
| 47 | 12.375 | 974 | 976 | 980 | rVB | 633 | 1306 | 0.08% | 0.015% |
| 48 | 12.768 | 1008 | 1014 | 1017 | rBV | 683 | 2277 | 0.13% | 0.027% |
| 49 | 13.336 | 1064 | 1069 | 1075 | rBV | 753 | 2837 | 0.17% | 0.033% |
| 50 | 13.430 | 1075 | 1078 | 1080 | rVB | 688 | 1188 | 0.07% | 0.014% |
| 51 | 13.512 | 1083 | 1086 | 1093 | rBB | 438 | 1864 | 0.11% | 0.022% |
| 52 | 13.626 | 1093 | 1097 | 1102 | rBB | 615 | 1767 | 0.10% | 0.021% |
| 53 | 13.698 | 1102 | 1104 | 1108 | rBB | 477 | 1212 | 0.07% | 0.014% |
| 54 | 14.040 | 1131 | 1137 | 1147 | rBB | 673540 | 1570391 | 92.27% | 18.365% |
| 55 | 14.205 | 1148 | 1153 | 1156 | rBB | 715 | 1275 | 0.07% | 0.015% |
| 56 | 14.588 | 1187 | 1190 | 1193 | rVB | 830 | 1251 | 0.07% | 0.015% |
| 57 | 14.722 | 1198 | 1203 | 1209 | rBB | 2020 | 5406 | 0.32% | 0.063% |
| 58 | 14.825 | 1209 | 1213 | 1216 | rBB | 880 | 1601 | 0.09% | 0.019% |
| 59 | 15.042 | 1229 | 1234 | 1237 | rBV | 680 | 1941 | 0.11% | 0.023% |
| 60 | 15.105 | 1237 | 1240 | 1244 | rVB | 493 | 1454 | 0.09% | 0.017% |
| 61 | 15.229 | 1249 | 1252 | 1259 | rBB | 421 | 1833 | 0.11% | 0.021% |
| 62 | 15.539 | 1274 | 1282 | 1290 | rBB | 568735 | 1239187 | 72.81% | 14.492% |
| 63 | 15.663 | 1290 | 1294 | 1297 | rBV | 781 | 1762 | 0.10% | 0.021% |
| 64 | 15.777 | 1303 | 1305 | 1311 | rBB | 489 | 1140 | 0.07% | 0.013% |
| 65 | 16.014 | 1323 | 1328 | 1329 | rBV | 441 | 1529 | 0.09% | 0.018% |
| 66 | 16.056 | 1329 | 1332 | 1340 | rVB | 828 | 2583 | 0.15% | 0.030% |
| 67 | 16.490 | 1369 | 1374 | 1375 | rBV | 440 | 1413 | 0.08% | 0.017% |
| 68 | 16.759 | 1396 | 1400 | 1403 | rBV | 621 | 1744 | 0.10% | 0.020% |
| 69 | 16.904 | 1407 | 1414 | 1421 | rVV | 2868 | 11748 | 0.69% | 0.137% |
| 70 | 17.048 | 1421 | 1428 | 1435 | rVB | 796729 | 1701911 | 100.00% | 19.903% |
| 71 | 17.224 | 1439 | 1445 | 1446 | rBV | 435 | 1616 | 0.09% | 0.019% |
| 72 | 17.317 | 1449 | 1454 | 1456 | rVB | 596 | 1795 | 0.11% | 0.021% |
| 73 | 17.369 | 1456 | 1459 | 1462 | rBB | 563 | 1324 | 0.08% | 0.015% |
| 74 | 17.472 | 1462 | 1469 | 1473 | rBV | 993 | 3401 | 0.20% | 0.040% |
| 75 | 17.679 | 1485 | 1489 | 1490 | rBV | 532 | 1310 | 0.08% | 0.015% |
| 76 | 17.782 | 1495 | 1499 | 1501 | rBV | 528 | 1276 | 0.07% | 0.015% |
| 77 | 18.020 | 1521 | 1522 | 1526 | rVB | 723 | 1192 | 0.07% | 0.014% |
| 78 | 18.082 | 1526 | 1528 | 1531 | rBB | 610 | 1322 | 0.08% | 0.015% |
| 79 | 18.144 | 1531 | 1534 | 1536 | rBV | 712 | 1542 | 0.09% | 0.018% |
| 80 | 18.579 | 1574 | 1576 | 1580 | rVV | 496 | 1350 | 0.08% | 0.016% |
| 81 | 19.147 | 1624 | 1631 | 1638 | rVV2 | 2857 | 10207 | 0.60% | 0.119% |
| 82 | 19.333 | 1646 | 1649 | 1651 | rVB | 749 | 1192 | 0.07% | 0.014% |
| 83 | 19.416 | 1651 | 1657 | 1659 | rBV | 967 | 2720 | 0.16% | 0.032% |
| 84 | 19.840 | 1693 | 1698 | 1701 | rVV2 | 1776 | 2390 | 0.14% | 0.028% |
| 85 | 20.140 | 1721 | 1727 | 1730 | rVV | 534 | 1261 | 0.07% | 0.015% |
| 86 | 20.584 | 1767 | 1770 | 1775 | rBV | 588 | 1525 | 0.09% | 0.018% |
| 87 | 20.864 | 1792 | 1797 | 1800 | rBV2 | 1187 | 1980 | 0.12% | 0.023% |
| 88 | 20.905 | 1800 | 1801 | 1806 | rVB | 919 | 1429 | 0.08% | 0.017% |
| 89 | 20.998 | 1806 | 1810 | 1815 | rVB2 | 612 | 2038 | 0.12% | 0.024% |
| 90 | 21.132 | 1815 | 1823 | 1833 | rBV | 15647 | 57515 | 3.38% | 0.673% |
| 91 | 21.546 | 1861 | 1863 | 1866 | rVB2 | 1237 | 2240 | 0.13% | 0.026% |
| 92 | 21.763 | 1881 | 1884 | 1888 | rVV2 | 958 | 2605 | 0.15% | 0.030% |
| 93 | 21.867 | 1888 | 1894 | 1895 | rVB3 | 948 | 2886 | 0.17% | 0.034% |
| 94 | 21.887 | 1895 | 1896 | 1898 | rBV2 | 1062 | 1412 | 0.08% | 0.017% |
| 95 | 21.949 | 1899 | 1902 | 1904 | rVV3 | 1205 | 1686 | 0.10% | 0.020% |
| 96 | 21.991 | 1904 | 1906 | 1908 | rVV2 | 1183 | 1249 | 0.07% | 0.015% |
| 97 | 22.042 | 1910 | 1911 | 1913 | rVV | 1072 | 1172 | 0.07% | 0.014% |
| 98 | 22.115 | 1914 | 1918 | 1921 | rVV4 | 1044 | 3023 | 0.18% | 0.035% |
| 99 | 22.218 | 1924 | 1928 | 1931 | rVB | 1091 | 2650 | 0.16% | 0.031% |
| 100 | 22.363 | 1936 | 1942 | 1943 | rBV2 | 1369 | 3697 | 0.22% | 0.043% |

Sum of corrected areas: 8550817

File : K:\ORGANICS\VOLATILE\HPMS8\DATA\051612\8M379117.D
Operator : ADC
Acquired : 16 May 2012 17:10 using AcqMethod 8260WT
Instrument : HPMS8
Sample Name: L12050284-05 A 826-SPE
Misc Info : 1,1
Vial Number: 17
Quant File :8260WT.RES (RTE Integrator)



Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\051612\8M379118.D Vial: 18
Acq On : 16 May 2012 17:43 Operator: ADC
Sample : L12050284-07 A 826-SPE Inst : HPMS8
Misc : 1,1 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 18 09:51:23 2012 Quant Results File: 8260WT.RES

Quant Method : C:\MSDCHEM\1\METHODS\8260WT.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 03/27/12 HPMS 8
Last Update : Wed Mar 28 08:18:24 2012
Response via : Initial Calibration
DataAcq Meth : 8260WT

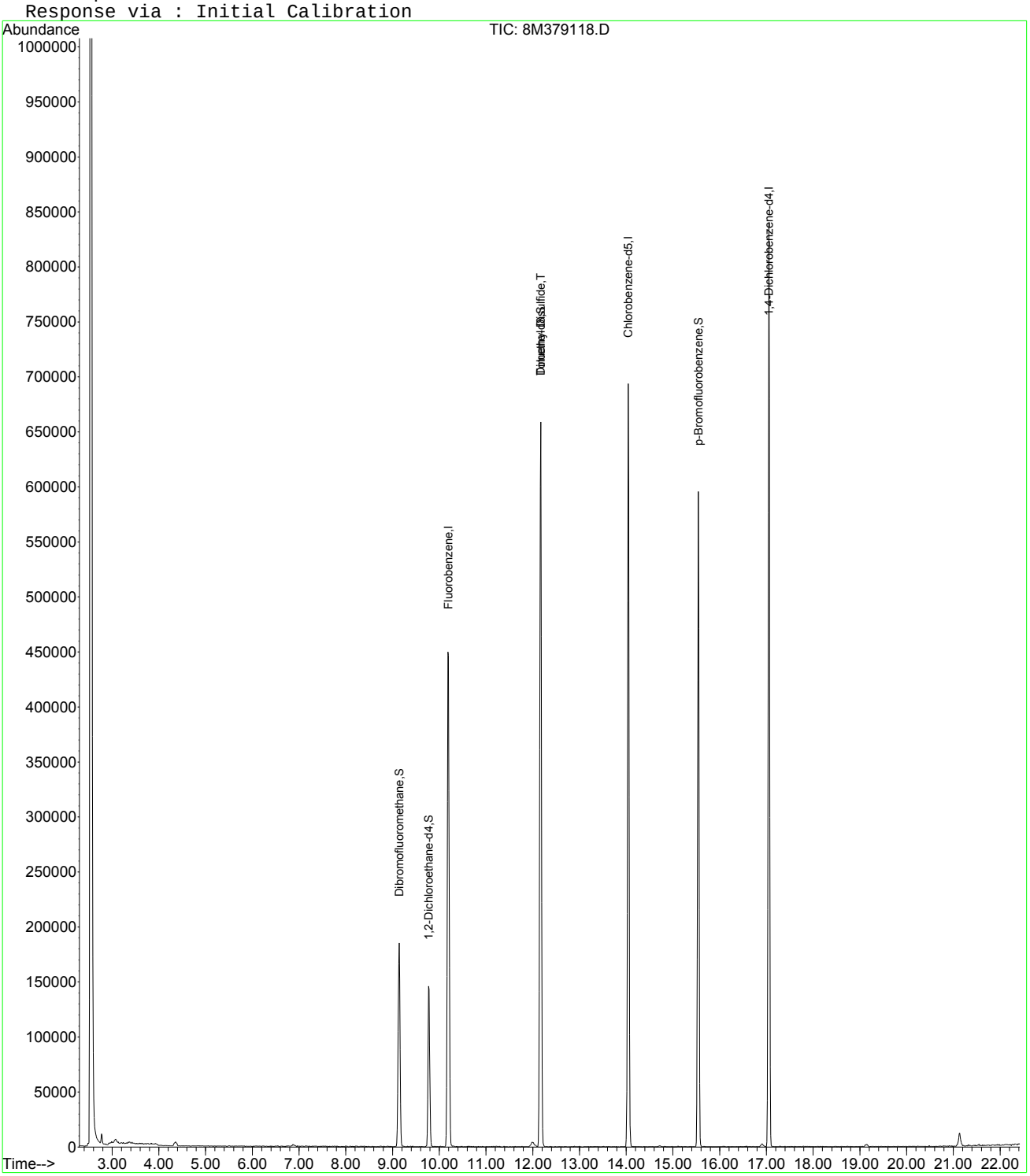
| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 1) Fluorobenzene | 10.20 | 96 | 603426 | 25.00 | ug/L | 0.01 |
| 57) Chlorobenzene-d5 | 14.04 | 117 | 549639 | 25.00 | ug/L | 0.00 |
| 78) 1,4-Dichlorobenzene-d4 | 17.05 | 152 | 310542 | 25.00 | ug/L | 0.00 |
| **System Monitoring Compounds** | | | | | | |
| 37) Dibromofluoromethane | 9.14 | 111 | 162082 | 25.8901 | ug/L | 0.00 |
| Spiked Amount 25.000 | Range 86 - 118 | | Recovery = 103.56% | | | |
| 43) 1,2-Dichloroethane-d4 | 9.77 | 65 | 135234 | 28.0522 | ug/L | 0.00 |
| Spiked Amount 25.000 | Range 80 - 120 | | Recovery = 112.20% | | | |
| 58) Toluene-d8 | 12.17 | 98 | 613258 | 24.1652 | ug/L | 0.00 |
| Spiked Amount 25.000 | Range 88 - 110 | | Recovery = 96.68% | | | |
| 80) p-Bromofluorobenzene | 15.54 | 95 | 248929 | 24.7795 | ug/L | 0.00 |
| Spiked Amount 25.000 | Range 86 - 115 | | Recovery = 99.12% | | | |
| **Target Compounds** | | | | | | Qvalue |
| 56) Dimethyl Disulfide | 12.17 | 94 | 17311 | 1.8302 | ug/L # | 28 |

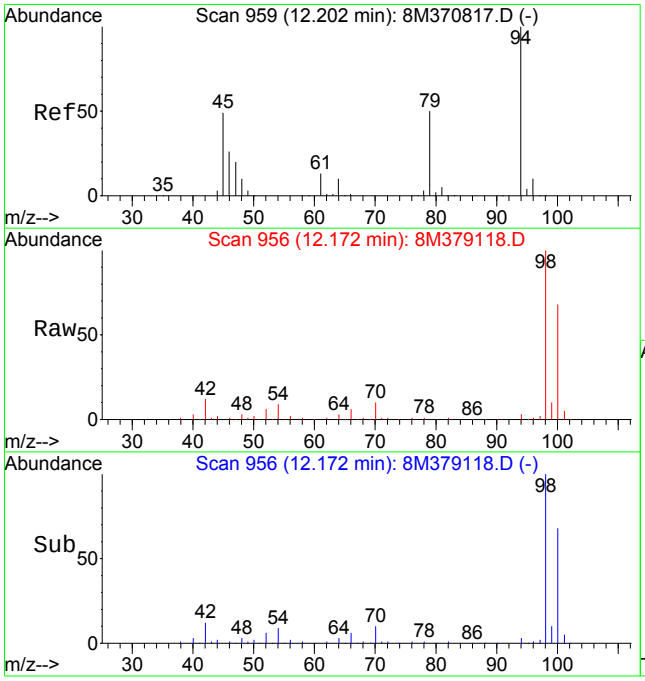
(#) = qualifier out of range (m) = manual integration
8M379118.D 8260WT.M Fri May 18 09:51:24 2012 Page 1

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\051612\8M379118.D Vial: 18
Acq On : 16 May 2012 17:43 Operator: ADC
Sample : L12050284-07 A 826-SPE Inst : HPMS8
Misc : 1,1 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 18 9:51 2012 Quant Results File: 8260WT.RES

Method : C:\MSDCHEM\1\METHODS\8260WT.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 03/27/12 HPMS 8
Last Update : Wed Mar 28 08:18:24 2012
Response via : Initial Calibration

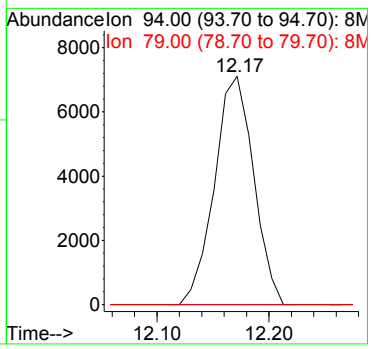





#56
Dimethyl Disulfide
Concen: 1.83 ug/L
RT: 12.17 min Scan# 956
Delta R.T. 0.09 min
Lab File: 8M379118.D
Acq: 16 May 2012 17:43

Tgt Ion: 94 Resp: 17311

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 94 | 100 | | |
| 79 | 0.0 | 29.2 | 68.0# |



LSC Area Percent Report

Data File : K:\ORGANICS\VOLATILE\HPMS8\DATA\051612\8M379118.D Vial: 18
Acq On : 16 May 2012 17:43 Operator: ADC
Sample : L12050284-07 A 826-SPE Inst : HPMS8
Misc : 1,1 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\1\METHODS\8260WT.M (RTE Integrator)
Title : 8260B/624_WATER SOP:OVLMSV01 05/16/12 - HPMS6
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 100 Area counts
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

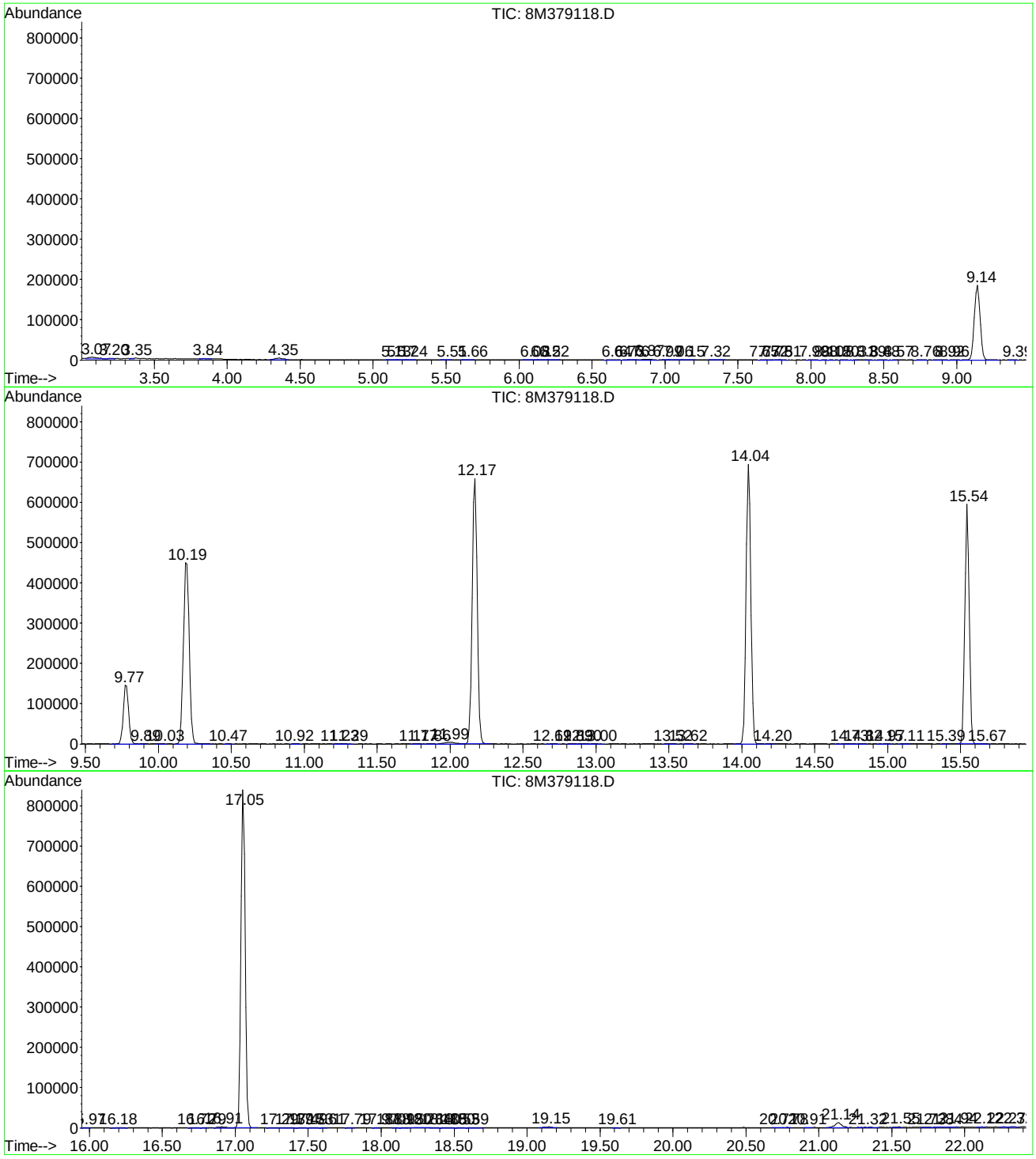
Signal : TIC

| peak # | R.T. min | first scan | max scan | last scan | PK TY | peak height | corr. area | corr. % max. | % of total |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 3.073 | 72 | 76 | 85 | rVB4 | 4183 | 16655 | 0.98% | 0.196% |
| 2 | 3.197 | 86 | 88 | 91 | rVB2 | 960 | 1939 | 0.11% | 0.023% |
| 3 | 3.352 | 101 | 103 | 104 | rBV | 1157 | 1902 | 0.11% | 0.022% |
| 4 | 3.838 | 147 | 150 | 155 | rBV3 | 1194 | 1869 | 0.11% | 0.022% |
| 5 | 4.355 | 194 | 200 | 206 | rVB3 | 3602 | 13252 | 0.78% | 0.156% |
| 6 | 5.130 | 271 | 275 | 278 | rVB2 | 671 | 2266 | 0.13% | 0.027% |
| 7 | 5.172 | 278 | 279 | 284 | rBV2 | 689 | 2025 | 0.12% | 0.024% |
| 8 | 5.244 | 284 | 286 | 290 | rBV | 626 | 1733 | 0.10% | 0.020% |
| 9 | 5.513 | 307 | 312 | 314 | rBV | 690 | 2327 | 0.14% | 0.027% |
| 10 | 5.658 | 321 | 326 | 329 | rBV2 | 498 | 1835 | 0.11% | 0.022% |
| 11 | 6.082 | 362 | 367 | 371 | rBV2 | 537 | 2509 | 0.15% | 0.029% |
| 12 | 6.154 | 371 | 374 | 378 | rVB2 | 596 | 1749 | 0.10% | 0.021% |
| 13 | 6.216 | 378 | 380 | 386 | rVB2 | 702 | 2108 | 0.12% | 0.025% |
| 14 | 6.640 | 416 | 421 | 425 | rBV2 | 1016 | 3779 | 0.22% | 0.044% |
| 15 | 6.733 | 427 | 430 | 431 | rBV2 | 882 | 1774 | 0.10% | 0.021% |
| 16 | 6.764 | 431 | 433 | 437 | rVV2 | 1067 | 3056 | 0.18% | 0.036% |
| 17 | 6.867 | 438 | 443 | 451 | rVB3 | 2332 | 9935 | 0.58% | 0.117% |
| 18 | 6.992 | 454 | 455 | 458 | rVV | 616 | 1264 | 0.07% | 0.015% |
| 19 | 7.064 | 458 | 462 | 467 | rVV2 | 601 | 2532 | 0.15% | 0.030% |
| 20 | 7.147 | 467 | 470 | 475 | rVV | 868 | 2616 | 0.15% | 0.031% |
| 21 | 7.322 | 485 | 487 | 495 | rVV2 | 544 | 2252 | 0.13% | 0.026% |
| 22 | 7.653 | 518 | 519 | 523 | rBV | 802 | 1687 | 0.10% | 0.020% |
| 23 | 7.715 | 523 | 525 | 527 | rVV | 833 | 1488 | 0.09% | 0.017% |
| 24 | 7.746 | 527 | 528 | 532 | rVV | 746 | 1791 | 0.11% | 0.021% |
| 25 | 7.808 | 532 | 534 | 537 | rVB | 915 | 1441 | 0.08% | 0.017% |
| 26 | 7.994 | 550 | 552 | 558 | rBB2 | 881 | 2639 | 0.16% | 0.031% |
| 27 | 8.098 | 559 | 562 | 564 | rBB | 765 | 1653 | 0.10% | 0.019% |
| 28 | 8.150 | 564 | 567 | 568 | rBB | 814 | 1211 | 0.07% | 0.014% |
| 29 | 8.201 | 571 | 572 | 580 | rBB | 805 | 2837 | 0.17% | 0.033% |
| 30 | 8.315 | 580 | 583 | 584 | rBV | 733 | 1347 | 0.08% | 0.016% |
| 31 | 8.387 | 589 | 590 | 594 | rVB | 734 | 1558 | 0.09% | 0.018% |
| 32 | 8.480 | 596 | 599 | 604 | rBB2 | 755 | 1981 | 0.12% | 0.023% |
| 33 | 8.573 | 604 | 608 | 610 | rBV2 | 686 | 1462 | 0.09% | 0.017% |
| 34 | 8.760 | 622 | 626 | 630 | rBB | 765 | 2521 | 0.15% | 0.030% |
| 35 | 8.925 | 634 | 642 | 644 | rVB | 731 | 2830 | 0.17% | 0.033% |
| 36 | 8.956 | 644 | 645 | 652 | rBB2 | 760 | 1829 | 0.11% | 0.022% |
| 37 | 9.142 | 652 | 663 | 677 | rBB | 185534 | 514155 | 30.25% | 6.044% |
| 38 | 9.390 | 684 | 687 | 690 | rVB | 799 | 1697 | 0.10% | 0.020% |
| 39 | 9.773 | 715 | 724 | 733 | rBB | 146271 | 372072 | 21.89% | 4.374% |
| 40 | 9.887 | 733 | 735 | 738 | rBV | 679 | 1253 | 0.07% | 0.015% |
| 41 | 10.031 | 745 | 749 | 751 | rVB | 724 | 1589 | 0.09% | 0.019% |
| 42 | 10.186 | 757 | 764 | 781 | rBB | 449953 | 1245941 | 73.31% | 14.646% |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 43 | 10.466 | 790 | 791 | 795 | rBB | 693 | 1334 | 0.08% | 0.016% |
| 44 | 10.920 | 834 | 835 | 840 | rBB | 807 | 1347 | 0.08% | 0.016% |
| 45 | 11.231 | 862 | 865 | 868 | rBV | 786 | 1979 | 0.12% | 0.023% |
| 46 | 11.293 | 868 | 871 | 875 | rVB | 757 | 1247 | 0.07% | 0.015% |
| 47 | 11.768 | 914 | 917 | 921 | rBB | 708 | 1716 | 0.10% | 0.020% |
| 48 | 11.861 | 923 | 926 | 930 | rBB | 402 | 1330 | 0.08% | 0.016% |
| 49 | 11.985 | 931 | 938 | 948 | rBV | 4530 | 23105 | 1.36% | 0.272% |
| 50 | 12.172 | 948 | 956 | 966 | rVV | 658901 | 1599906 | 94.13% | 18.807% |
| 51 | 12.689 | 1003 | 1006 | 1012 | rBB | 542 | 1396 | 0.08% | 0.016% |
| 52 | 12.833 | 1017 | 1020 | 1024 | rBB | 386 | 1268 | 0.07% | 0.015% |
| 53 | 12.895 | 1024 | 1026 | 1032 | rBB | 763 | 2045 | 0.12% | 0.024% |
| 54 | 12.999 | 1032 | 1036 | 1041 | rBB | 697 | 1621 | 0.10% | 0.019% |
| 55 | 13.516 | 1081 | 1086 | 1090 | rBB | 726 | 1941 | 0.11% | 0.023% |
| 56 | 13.619 | 1094 | 1096 | 1101 | rBB | 453 | 1363 | 0.08% | 0.016% |
| 57 | 14.043 | 1128 | 1137 | 1146 | rBV | 693942 | 1553593 | 91.41% | 18.263% |
| 58 | 14.198 | 1148 | 1152 | 1154 | rBV | 523 | 1419 | 0.08% | 0.017% |
| 59 | 14.725 | 1195 | 1203 | 1209 | rBB2 | 1085 | 4558 | 0.27% | 0.054% |
| 60 | 14.818 | 1209 | 1212 | 1216 | rBB | 664 | 1596 | 0.09% | 0.019% |
| 61 | 14.974 | 1223 | 1227 | 1232 | rBB | 638 | 1810 | 0.11% | 0.021% |
| 62 | 15.108 | 1237 | 1240 | 1244 | rBV | 905 | 1952 | 0.11% | 0.023% |
| 63 | 15.387 | 1265 | 1267 | 1270 | rBV | 634 | 1301 | 0.08% | 0.015% |
| 64 | 15.542 | 1276 | 1282 | 1292 | rVB | 595541 | 1233024 | 72.55% | 14.495% |
| 65 | 15.666 | 1292 | 1294 | 1297 | rVB | 728 | 1262 | 0.07% | 0.015% |
| 66 | 15.966 | 1321 | 1323 | 1327 | rBV | 436 | 1350 | 0.08% | 0.016% |
| 67 | 16.183 | 1341 | 1344 | 1351 | rBB | 493 | 1920 | 0.11% | 0.023% |
| 68 | 16.721 | 1392 | 1396 | 1400 | rBB | 524 | 1771 | 0.10% | 0.021% |
| 69 | 16.793 | 1400 | 1403 | 1405 | rBV | 466 | 1202 | 0.07% | 0.014% |
| 70 | 16.907 | 1409 | 1414 | 1422 | rBV | 2936 | 11526 | 0.68% | 0.135% |
| 71 | 17.052 | 1422 | 1428 | 1437 | rVB | 839583 | 1699651 | 100.00% | 19.980% |
| 72 | 17.290 | 1444 | 1451 | 1457 | rBV | 893 | 3344 | 0.20% | 0.039% |
| 73 | 17.393 | 1457 | 1461 | 1463 | rVB | 643 | 1429 | 0.08% | 0.017% |
| 74 | 17.486 | 1464 | 1470 | 1471 | rBB | 549 | 1547 | 0.09% | 0.018% |
| 75 | 17.527 | 1471 | 1474 | 1479 | rBB | 612 | 2000 | 0.12% | 0.024% |
| 76 | 17.610 | 1479 | 1482 | 1484 | rBV | 657 | 1257 | 0.07% | 0.015% |
| 77 | 17.786 | 1496 | 1499 | 1502 | rBV | 702 | 1747 | 0.10% | 0.021% |
| 78 | 17.972 | 1514 | 1517 | 1519 | rBV | 472 | 1230 | 0.07% | 0.014% |
| 79 | 18.086 | 1527 | 1528 | 1532 | rVB | 558 | 1240 | 0.07% | 0.015% |
| 80 | 18.148 | 1532 | 1534 | 1537 | rBV | 720 | 1441 | 0.08% | 0.017% |
| 81 | 18.199 | 1537 | 1539 | 1542 | rVV | 776 | 1270 | 0.07% | 0.015% |
| 82 | 18.282 | 1543 | 1547 | 1552 | rVV | 411 | 1657 | 0.10% | 0.019% |
| 83 | 18.396 | 1552 | 1558 | 1559 | rVB | 415 | 1445 | 0.09% | 0.017% |
| 84 | 18.499 | 1559 | 1568 | 1569 | rBB | 510 | 2358 | 0.14% | 0.028% |
| 85 | 18.530 | 1569 | 1571 | 1576 | rBB | 463 | 1586 | 0.09% | 0.019% |
| 86 | 18.592 | 1576 | 1577 | 1587 | rBV | 582 | 3100 | 0.18% | 0.036% |
| 87 | 19.151 | 1625 | 1631 | 1636 | rVB | 2008 | 6856 | 0.40% | 0.081% |
| 88 | 19.606 | 1673 | 1675 | 1678 | rVB | 736 | 1314 | 0.08% | 0.015% |
| 89 | 20.712 | 1779 | 1782 | 1786 | rVB2 | 653 | 1561 | 0.09% | 0.018% |
| 90 | 20.784 | 1786 | 1789 | 1791 | rBV | 859 | 1476 | 0.09% | 0.017% |
| 91 | 20.908 | 1800 | 1801 | 1806 | rBV | 756 | 1605 | 0.09% | 0.019% |
| 92 | 21.136 | 1815 | 1823 | 1830 | rBV | 12178 | 41356 | 2.43% | 0.486% |
| 93 | 21.322 | 1835 | 1841 | 1849 | rBV3 | 1376 | 3923 | 0.23% | 0.046% |
| 94 | 21.549 | 1858 | 1863 | 1865 | rBV2 | 1586 | 3159 | 0.19% | 0.037% |
| 95 | 21.725 | 1878 | 1880 | 1885 | rVB2 | 805 | 2319 | 0.14% | 0.027% |
| 96 | 21.839 | 1886 | 1891 | 1896 | rVB | 751 | 2407 | 0.14% | 0.028% |
| 97 | 21.942 | 1896 | 1901 | 1902 | rBV2 | 1213 | 1957 | 0.12% | 0.023% |
| 98 | 22.118 | 1915 | 1918 | 1920 | rBV2 | 615 | 1493 | 0.09% | 0.018% |
| 99 | 22.273 | 1930 | 1933 | 1935 | rBV2 | 1470 | 3238 | 0.19% | 0.038% |
| 100 | 22.325 | 1935 | 1938 | 1942 | rVB3 | 1255 | 3633 | 0.21% | 0.043% |

Sum of corrected areas: 8506840

File : K:\ORGANICS\VOLATILE\HPMS8\DATA\051612\8M379118.D
Operator : ADC
Acquired : 16 May 2012 17:43 using AcqMethod 8260WT
Instrument : HPMS8
Sample Name: L12050284-07 A 826-SPE
Misc Info : 1,1
Vial Number: 18
Quant File :8260WT.RES (RTE Integrator)



Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\051612\8M379112.D Vial: 12
Acq On : 16 May 2012 14:20 Operator: ADC
Sample : L12050284-09 A 826-SPE Inst : HPMS8
Misc : 1,1 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 18 09:51:04 2012 Quant Results File: 8260WT.RES

Quant Method : C:\MSDCHEM\1\METHODS\8260WT.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 03/27/12 HPMS 8
Last Update : Wed Mar 28 08:18:24 2012
Response via : Initial Calibration
DataAcq Meth : 8260WT

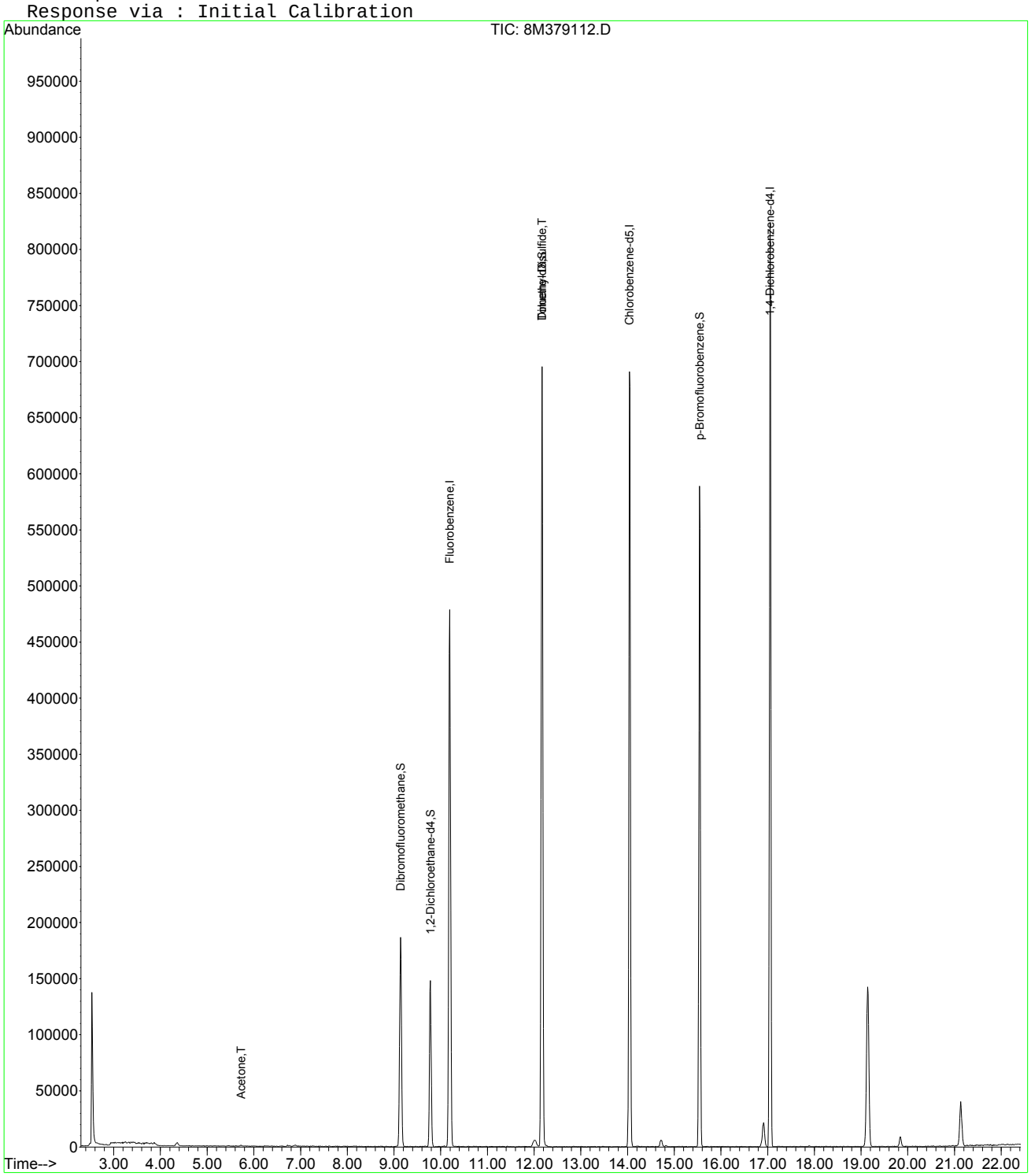
| Internal Standards | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| 1) Fluorobenzene | 10.19 | 96 | 622993 | 25.00 ug/L | 0.01 |
| 57) Chlorobenzene-d5 | 14.04 | 117 | 574071 | 25.00 ug/L | 0.00 |
| 78) 1,4-Dichlorobenzene-d4 | 17.05 | 152 | 312845 | 25.00 ug/L | 0.00 |
| **System Monitoring Compounds** | | | | | |
| 37) Dibromofluoromethane | 9.14 | 111 | 165029 | 25.5329 ug/L | 0.00 |
| Spiked Amount 25.000 | Range 86 - 118 | | Recovery = 102.12% | | |
| 43) 1,2-Dichloroethane-d4 | 9.78 | 65 | 135927 | 27.3104 ug/L | 0.01 |
| Spiked Amount 25.000 | Range 80 - 120 | | Recovery = 109.24% | | |
| 58) Toluene-d8 | 12.17 | 98 | 647632 | 24.4336 ug/L | 0.00 |
| Spiked Amount 25.000 | Range 88 - 110 | | Recovery = 97.72% | | |
| 80) p-Bromofluorobenzene | 15.54 | 95 | 256469 | 25.3421 ug/L | 0.00 |
| Spiked Amount 25.000 | Range 86 - 115 | | Recovery = 101.36% | | |
| **Target Compounds** | | | | | Qvalue |
| 13) Acetone | 5.73 | 43 | 1343 | 1.4610 ug/L # | 47 |
| 56) Dimethyl Disulfide | 12.17 | 94 | 18516 | 1.8961 ug/L # | 28 |

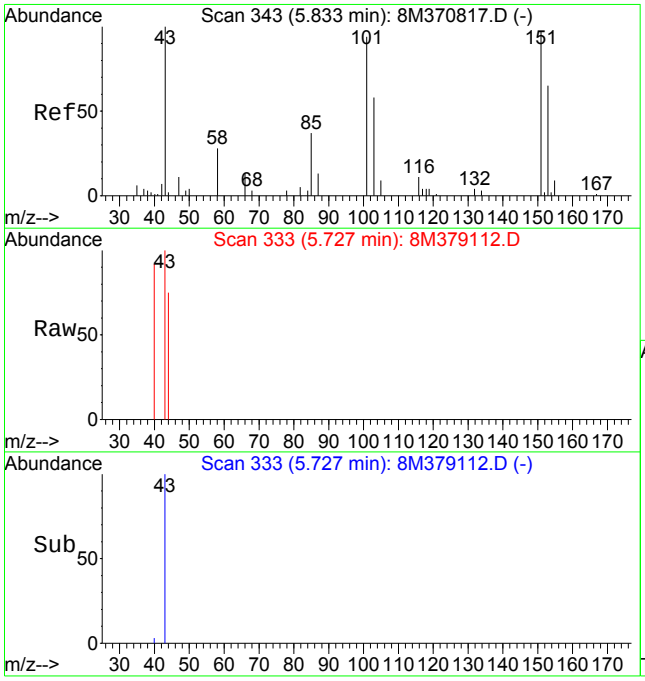
(#) = qualifier out of range (m) = manual integration
8M379112.D 8260WT.M Fri May 18 09:51:05 2012 Page 1

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\051612\8M379112.D Vial: 12
Acq On : 16 May 2012 14:20 Operator: ADC
Sample : L12050284-09 A 826-SPE Inst : HPMS8
Misc : 1,1 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 18 9:51 2012 Quant Results File: 8260WT.RES

Method : C:\MSDCHEM\1\METHODS\8260WT.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 03/27/12 HPMS 8
Last Update : Wed Mar 28 08:18:24 2012
Response via : Initial Calibration

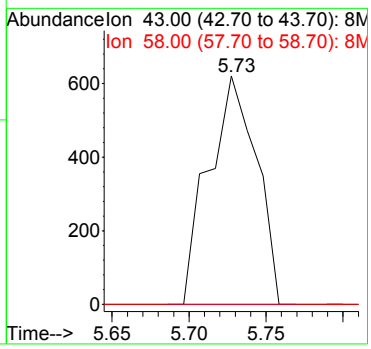


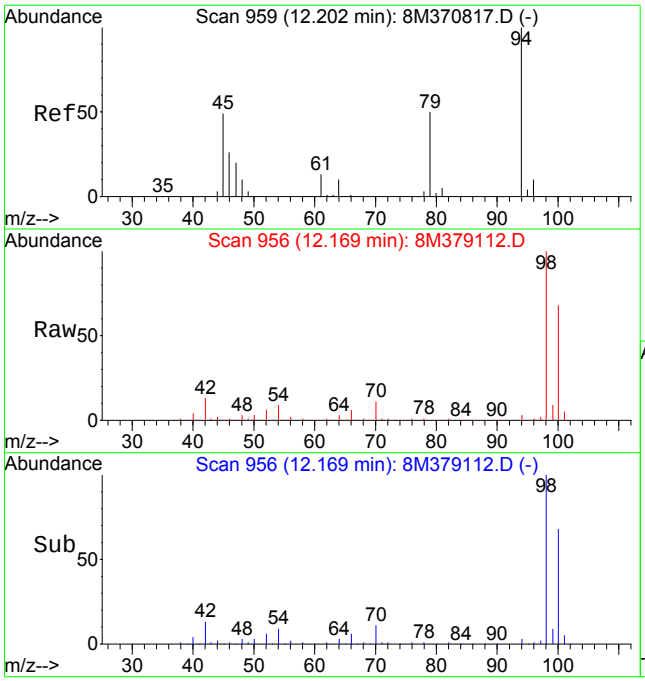



#13
Acetone
Concen: 1.46 ug/L
RT: 5.73 min Scan# 333
Delta R.T. 0.01 min
Lab File: 8M379112.D
Acq: 16 May 2012 14:20

Tgt Ion: 43 Resp: 1343

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 58 | 0.0 | 16.9 | 39.3# |

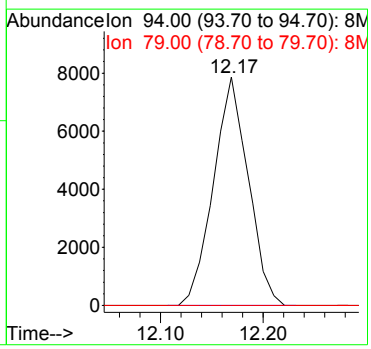



#56
Dimethyl Disulfide
Concen: 1.90 ug/L
RT: 12.17 min Scan# 956
Delta R.T. 0.08 min
Lab File: 8M379112.D
Acq: 16 May 2012 14:20

Tgt Ion: 94 Resp: 18516

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 94 | 100 | | |
| 79 | 0.0 | 29.2 | 68.0# |



LSC Area Percent Report

Data File : K:\ORGANICS\VOLATILE\HPMS8\DATA\051612\8M379112.D Vial: 12
Acq On : 16 May 2012 14:20 Operator: ADC
Sample : L12050284-09 A 826-SPE Inst : HPMS8
Misc : 1,1 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\1\METHODS\8260WT.M (RTE Integrator)
Title : 8260B/624_WATER SOP:OVLMSV01 05/16/12 - HPMS6
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 100 Area counts
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

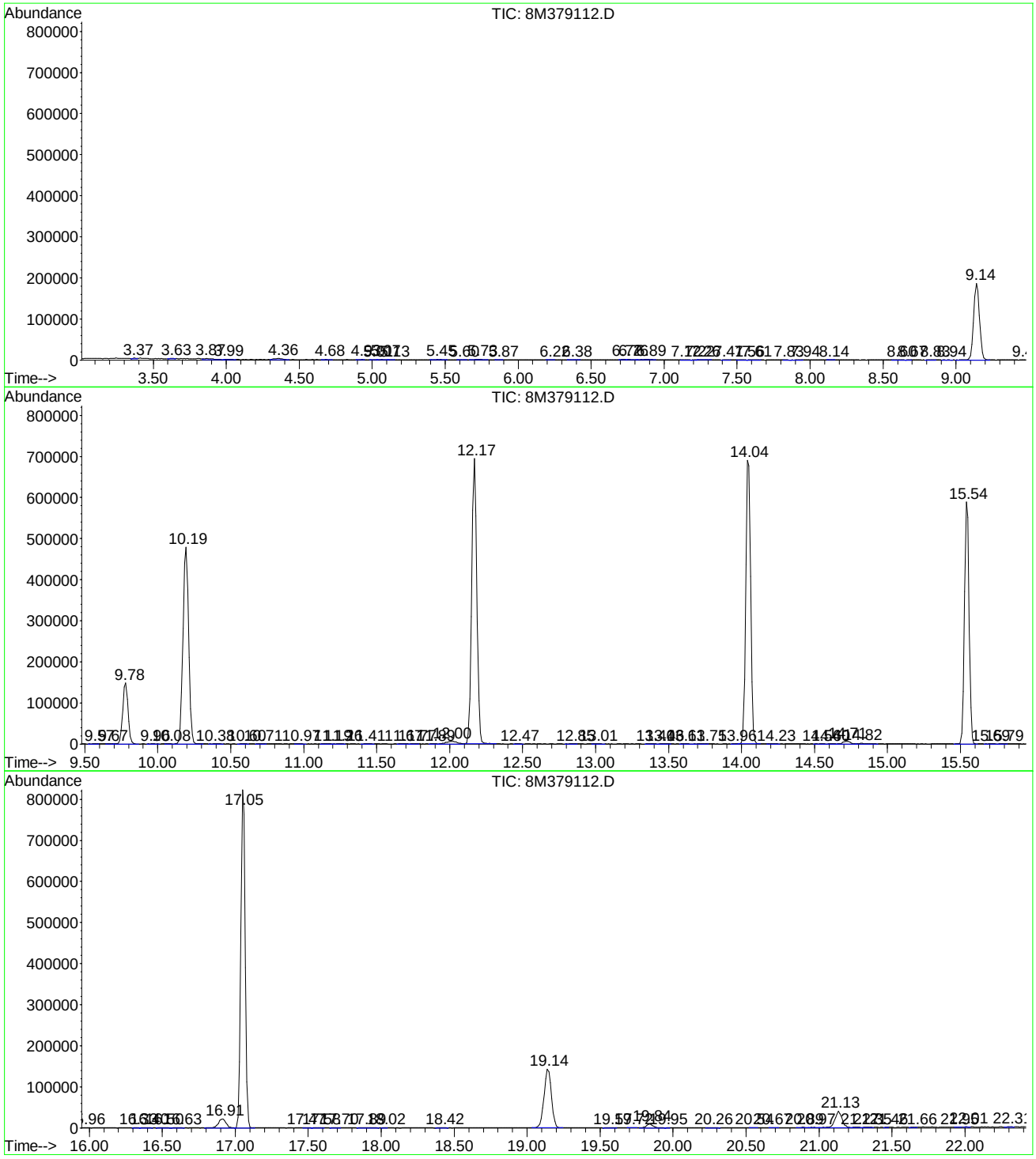
Signal : TIC

| peak # | R.T. min | first scan | max scan | last scan | PK TY | peak height | corr. area | corr. % max. | % of total |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 3.370 | 103 | 105 | 107 | rBV3 | 1394 | 2128 | 0.12% | 0.022% |
| 2 | 3.629 | 127 | 130 | 132 | rVB3 | 1227 | 2459 | 0.14% | 0.026% |
| 3 | 3.866 | 150 | 153 | 164 | rVB2 | 3155 | 10853 | 0.63% | 0.115% |
| 4 | 3.990 | 164 | 165 | 172 | rVB2 | 472 | 1430 | 0.08% | 0.015% |
| 5 | 4.363 | 195 | 201 | 207 | rBV2 | 2899 | 9873 | 0.57% | 0.104% |
| 6 | 4.683 | 229 | 232 | 236 | rBV | 684 | 1805 | 0.10% | 0.019% |
| 7 | 4.931 | 252 | 256 | 257 | rVB | 974 | 1668 | 0.10% | 0.018% |
| 8 | 5.014 | 261 | 264 | 266 | rVB2 | 617 | 1406 | 0.08% | 0.015% |
| 9 | 5.066 | 266 | 269 | 273 | rVB | 769 | 2000 | 0.12% | 0.021% |
| 10 | 5.128 | 273 | 275 | 277 | rBV | 590 | 1243 | 0.07% | 0.013% |
| 11 | 5.448 | 301 | 306 | 312 | rBV2 | 1007 | 3510 | 0.20% | 0.037% |
| 12 | 5.603 | 319 | 321 | 325 | rBV2 | 633 | 1702 | 0.10% | 0.018% |
| 13 | 5.727 | 327 | 333 | 339 | rBV2 | 1171 | 4291 | 0.25% | 0.045% |
| 14 | 5.872 | 344 | 347 | 349 | rVB | 602 | 1165 | 0.07% | 0.012% |
| 15 | 6.224 | 378 | 381 | 383 | rBV | 637 | 1180 | 0.07% | 0.012% |
| 16 | 6.379 | 392 | 396 | 400 | rVB2 | 593 | 1700 | 0.10% | 0.018% |
| 17 | 6.720 | 426 | 429 | 431 | rVV | 1378 | 2412 | 0.14% | 0.025% |
| 18 | 6.761 | 431 | 433 | 438 | rVV | 1023 | 2308 | 0.13% | 0.024% |
| 19 | 6.886 | 438 | 445 | 450 | rVV | 1332 | 5689 | 0.33% | 0.060% |
| 20 | 7.123 | 467 | 468 | 474 | rVB2 | 964 | 2929 | 0.17% | 0.031% |
| 21 | 7.216 | 474 | 477 | 478 | rBV | 855 | 1685 | 0.10% | 0.018% |
| 22 | 7.258 | 478 | 481 | 487 | rVB2 | 627 | 2255 | 0.13% | 0.024% |
| 23 | 7.413 | 494 | 496 | 500 | rBV | 836 | 2347 | 0.14% | 0.025% |
| 24 | 7.558 | 504 | 510 | 511 | rVB | 794 | 2531 | 0.15% | 0.027% |
| 25 | 7.609 | 511 | 515 | 520 | rBV2 | 850 | 3094 | 0.18% | 0.033% |
| 26 | 7.826 | 535 | 536 | 540 | rVB2 | 752 | 1146 | 0.07% | 0.012% |
| 27 | 7.940 | 540 | 547 | 548 | rBV2 | 782 | 2466 | 0.14% | 0.026% |
| 28 | 8.137 | 564 | 566 | 569 | rBV2 | 567 | 1195 | 0.07% | 0.013% |
| 29 | 8.602 | 607 | 611 | 616 | rVB2 | 745 | 2487 | 0.14% | 0.026% |
| 30 | 8.674 | 616 | 618 | 620 | rBV2 | 759 | 1144 | 0.07% | 0.012% |
| 31 | 8.829 | 629 | 633 | 636 | rBV | 794 | 2043 | 0.12% | 0.022% |
| 32 | 8.943 | 640 | 644 | 647 | rBB | 810 | 1130 | 0.07% | 0.012% |
| 33 | 9.140 | 649 | 663 | 672 | rBV | 186835 | 520705 | 30.22% | 5.504% |
| 34 | 9.460 | 691 | 694 | 700 | rBB | 764 | 1877 | 0.11% | 0.020% |
| 35 | 9.574 | 700 | 705 | 707 | rBV | 745 | 1771 | 0.10% | 0.019% |
| 36 | 9.667 | 712 | 714 | 717 | rVV | 863 | 1767 | 0.10% | 0.019% |
| 37 | 9.781 | 717 | 725 | 733 | rVB | 148317 | 374023 | 21.71% | 3.954% |
| 38 | 9.956 | 739 | 742 | 747 | rBB | 741 | 1648 | 0.10% | 0.017% |
| 39 | 10.080 | 751 | 754 | 756 | rVB | 1071 | 1763 | 0.10% | 0.019% |
| 40 | 10.194 | 757 | 765 | 776 | rBV | 479018 | 1286778 | 74.68% | 13.602% |
| 41 | 10.380 | 780 | 783 | 789 | rBB | 752 | 2234 | 0.13% | 0.024% |
| 42 | 10.597 | 799 | 804 | 806 | rBB | 821 | 1828 | 0.11% | 0.019% |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 43 | 10.711 | 811 | 815 | 818 | rBV | 811 | 2345 | 0.14% | 0.025% |
| 44 | 10.970 | 837 | 840 | 844 | rVB | 667 | 1487 | 0.09% | 0.016% |
| 45 | 11.187 | 854 | 861 | 862 | rBB | 428 | 1608 | 0.09% | 0.017% |
| 46 | 11.259 | 862 | 868 | 870 | rBB | 694 | 1696 | 0.10% | 0.018% |
| 47 | 11.414 | 881 | 883 | 889 | rBB | 728 | 1772 | 0.10% | 0.019% |
| 48 | 11.673 | 905 | 908 | 913 | rBB | 689 | 1791 | 0.10% | 0.019% |
| 49 | 11.766 | 913 | 917 | 919 | rBV | 431 | 1407 | 0.08% | 0.015% |
| 50 | 11.890 | 926 | 929 | 932 | rBB | 485 | 1233 | 0.07% | 0.013% |
| 51 | 12.004 | 932 | 940 | 949 | rBV2 | 6205 | 33354 | 1.94% | 0.353% |
| 52 | 12.169 | 950 | 956 | 970 | rVB | 695331 | 1680621 | 97.54% | 17.766% |
| 53 | 12.469 | 982 | 985 | 988 | rBB | 506 | 1161 | 0.07% | 0.012% |
| 54 | 12.851 | 1016 | 1022 | 1024 | rBV | 766 | 2093 | 0.12% | 0.022% |
| 55 | 13.006 | 1034 | 1037 | 1042 | rVB | 762 | 1697 | 0.10% | 0.018% |
| 56 | 13.399 | 1069 | 1075 | 1077 | rBB | 485 | 1677 | 0.10% | 0.018% |
| 57 | 13.461 | 1078 | 1081 | 1086 | rBV | 675 | 2128 | 0.12% | 0.022% |
| 58 | 13.606 | 1092 | 1095 | 1100 | rBB | 618 | 1480 | 0.09% | 0.016% |
| 59 | 13.751 | 1101 | 1109 | 1111 | rBV | 391 | 1885 | 0.11% | 0.020% |
| 60 | 13.958 | 1126 | 1129 | 1131 | rBV | 714 | 1383 | 0.08% | 0.015% |
| 61 | 14.040 | 1131 | 1137 | 1145 | rVV | 690775 | 1613298 | 93.63% | 17.054% |
| 62 | 14.227 | 1150 | 1155 | 1158 | rVB | 853 | 2697 | 0.16% | 0.029% |
| 63 | 14.537 | 1181 | 1185 | 1189 | rBB | 829 | 1655 | 0.10% | 0.017% |
| 64 | 14.599 | 1190 | 1191 | 1196 | rBB | 673 | 1244 | 0.07% | 0.013% |
| 65 | 14.712 | 1196 | 1202 | 1209 | rBV3 | 6160 | 23286 | 1.35% | 0.246% |
| 66 | 14.816 | 1209 | 1212 | 1223 | rVB2 | 1319 | 4887 | 0.28% | 0.052% |
| 67 | 15.540 | 1274 | 1282 | 1289 | rBB | 589058 | 1276239 | 74.07% | 13.491% |
| 68 | 15.695 | 1294 | 1297 | 1302 | rBB | 718 | 1722 | 0.10% | 0.018% |
| 69 | 15.788 | 1303 | 1306 | 1309 | rBV | 700 | 1582 | 0.09% | 0.017% |
| 70 | 15.964 | 1321 | 1323 | 1326 | rBV | 491 | 1276 | 0.07% | 0.013% |
| 71 | 16.325 | 1355 | 1358 | 1360 | rBB | 732 | 1265 | 0.07% | 0.013% |
| 72 | 16.398 | 1360 | 1365 | 1368 | rBB | 506 | 1711 | 0.10% | 0.018% |
| 73 | 16.501 | 1371 | 1375 | 1380 | rBB | 422 | 1863 | 0.11% | 0.020% |
| 74 | 16.625 | 1381 | 1387 | 1389 | rBB | 470 | 1774 | 0.10% | 0.019% |
| 75 | 16.915 | 1403 | 1415 | 1423 | rBB | 21781 | 78997 | 4.58% | 0.835% |
| 76 | 17.049 | 1423 | 1428 | 1436 | rBV | 823613 | 1723011 | 100.00% | 18.214% |
| 77 | 17.473 | 1468 | 1469 | 1474 | rVB | 496 | 1332 | 0.08% | 0.014% |
| 78 | 17.576 | 1474 | 1479 | 1482 | rBV | 601 | 2204 | 0.13% | 0.023% |
| 79 | 17.701 | 1486 | 1491 | 1493 | rBV | 735 | 1886 | 0.11% | 0.020% |
| 80 | 17.887 | 1504 | 1509 | 1518 | rBB | 1083 | 4193 | 0.24% | 0.044% |
| 81 | 18.021 | 1520 | 1522 | 1524 | rBV | 764 | 1152 | 0.07% | 0.012% |
| 82 | 18.424 | 1556 | 1561 | 1564 | rBB | 514 | 1868 | 0.11% | 0.020% |
| 83 | 19.138 | 1620 | 1630 | 1640 | rVB | 142336 | 499233 | 28.97% | 5.277% |
| 84 | 19.572 | 1667 | 1672 | 1676 | rBV | 676 | 2634 | 0.15% | 0.028% |
| 85 | 19.717 | 1683 | 1686 | 1689 | rVV | 790 | 1228 | 0.07% | 0.013% |
| 86 | 19.841 | 1691 | 1698 | 1708 | rVB2 | 9187 | 30069 | 1.75% | 0.318% |
| 87 | 19.955 | 1708 | 1709 | 1711 | rBV2 | 899 | 1144 | 0.07% | 0.012% |
| 88 | 20.265 | 1735 | 1739 | 1744 | rVB | 749 | 2607 | 0.15% | 0.028% |
| 89 | 20.544 | 1764 | 1766 | 1769 | rBV2 | 800 | 1321 | 0.08% | 0.014% |
| 90 | 20.668 | 1777 | 1778 | 1783 | rVB2 | 622 | 1600 | 0.09% | 0.017% |
| 91 | 20.885 | 1795 | 1799 | 1803 | rBV2 | 734 | 2160 | 0.13% | 0.023% |
| 92 | 20.968 | 1803 | 1807 | 1810 | rVB | 1047 | 2123 | 0.12% | 0.022% |
| 93 | 21.133 | 1810 | 1823 | 1832 | rBV | 39964 | 133858 | 7.77% | 1.415% |
| 94 | 21.268 | 1832 | 1836 | 1839 | rBV2 | 894 | 2104 | 0.12% | 0.022% |
| 95 | 21.350 | 1839 | 1844 | 1846 | rVB2 | 827 | 1843 | 0.11% | 0.019% |
| 96 | 21.464 | 1853 | 1855 | 1856 | rBV | 1179 | 1506 | 0.09% | 0.016% |
| 97 | 21.661 | 1870 | 1874 | 1875 | rBV2 | 823 | 1959 | 0.11% | 0.021% |
| 98 | 21.950 | 1900 | 1902 | 1904 | rBV2 | 732 | 1529 | 0.09% | 0.016% |
| 99 | 22.012 | 1906 | 1908 | 1910 | rBV | 598 | 1132 | 0.07% | 0.012% |
| 100 | 22.312 | 1933 | 1937 | 1939 | rBV3 | 808 | 2269 | 0.13% | 0.024% |

Sum of corrected areas: 9459947

File : K:\ORGANICS\VOLATILE\HPMS8\DATA\051612\8M379112.D
Operator : ADC
Acquired : 16 May 2012 14:20 using AcqMethod 8260WT
Instrument : HPMS8
Sample Name: L12050284-09 A 826-SPE
Misc Info : 1,1
Vial Number: 12
Quant File :8260WT.RES (RTE Integrator)



Data File : K:\ORGANICS\VOLATILE\HPMS8\DATA\051612\8M379112.D Vial: 12
Acq On : 16 May 2012 14:20 Operator: ADC
Sample : L12050284-09 A 826-SPE Inst : HPMS8
Misc : 1,1 Multiplr: 1.00
MS Integration Params: RTEINT.P

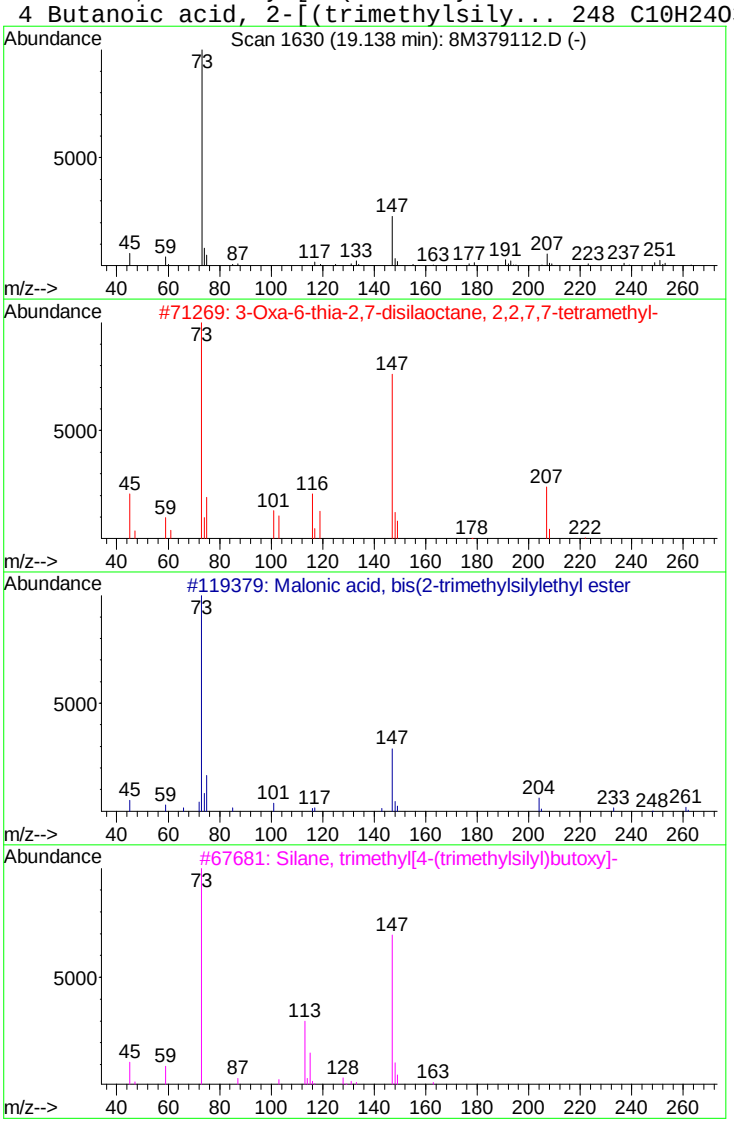
Quant Method : C:\MSDCHEM\1\METHODS\8260WT.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 03/27/12 HPMS 8
Library : C:\DATABASE\NIST02.L

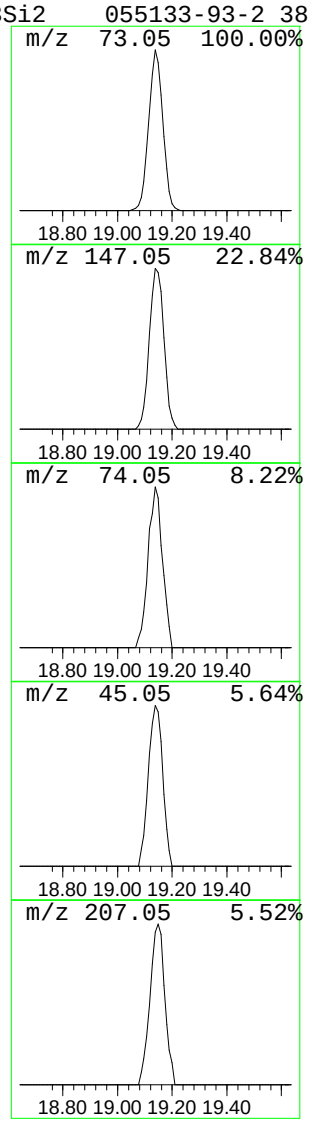
**********

Peak Number 1 3-Oxa-6-thia-2,7-disilaocta... Concentration Rank 1

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 19.14 | 7.24 ug/L | 499233 | 1,4-Dichlorobenzene-d4 | 17.05 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | 3-Oxa-6-thia-2,7-disilaoctane, 2... | 222 | C8H22OSSi2 | 078921-31-0 | 72 |
| 2 | Malonic acid, bis(2-trimethylsil... | 304 | C13H28O4Si2 | 090744-45-9 | 59 |
| 3 | Silane, trimethyl[4-(trimethylsi... | 218 | C10H26OSi2 | 007140-91-2 | 45 |
| 4 | Butanoic acid, 2-[(trimethylsily... | 248 | C10H24O3Si2 | 055133-93-2 | 38 |



Tentatively Identified Compound (LSC) summary

Operator ID: ADC  Date Acquired: 16 May 2012  14:20
Data File: K:\ORGANICS\VOLATILE\HPMS8\DATA\051612\8M379112.D
Name: L12050284-09 A 826-SPE
Misc: 1,1
Method: C:\MSDCHEM\1\METHODS\8260WT.M (RTE Integrator)
Title: 8260B/624_WATER SOP:OVLMSV01  05/16/12 - HPMS6
Library Searched: C:\DATABASE\NIST02.L

| | | | | | Internal Standard | | | |
|---|---|---|---|---|---|---|---|---|
| TIC Top Hit name | RT | EstConc | Units | Response | # | RT | Resp | Conc |
| 3-Oxa-6-thia-2,7-... | 19.14 | 7.2 | ug/L | 499233 | 3 | 17.05 | 1723010 | 25.0 |

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\051612\8M379119.D Vial: 19
Acq On : 16 May 2012 18:16 Operator: ADC
Sample : L12050284-10 A 826-SPE Inst : HPMS8
Misc : 1,1 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 18 09:52:24 2012 Quant Results File: 8260WT.RES

Quant Method : C:\MSDCHEM\1\METHODS\8260WT.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 03/27/12 HPMS 8
Last Update : Wed Mar 28 08:18:24 2012
Response via : Initial Calibration
DataAcq Meth : 8260WT

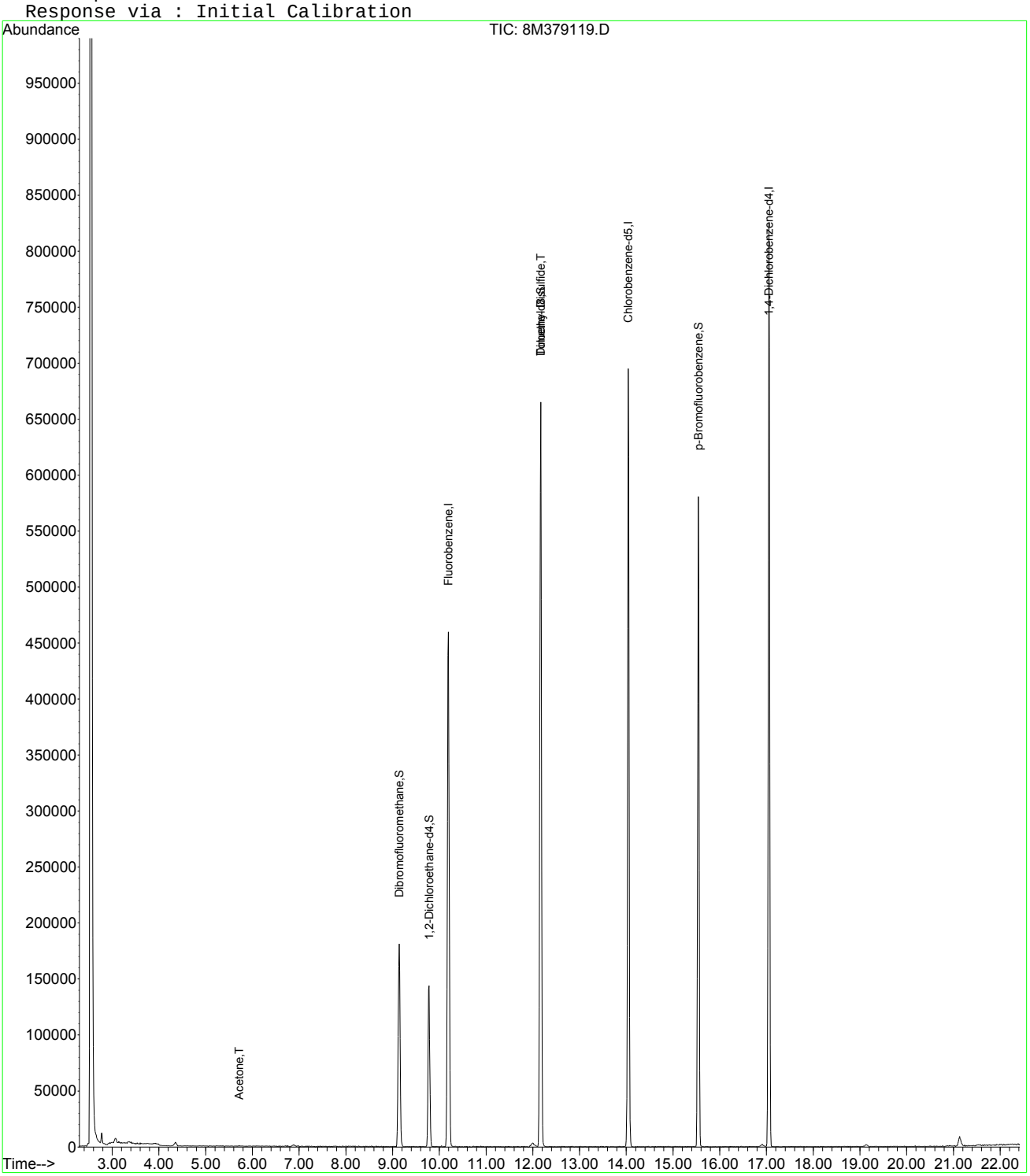
| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 1) Fluorobenzene | 10.20 | 96 | 602308 | 25.00 | ug/L | 0.01 |
| 57) Chlorobenzene-d5 | 14.04 | 117 | 549323 | 25.00 | ug/L | 0.00 |
| 78) 1,4-Dichlorobenzene-d4 | 17.05 | 152 | 309275 | 25.00 | ug/L | 0.00 |
| **System Monitoring Compounds** | | | | | | |
| 37) Dibromofluoromethane | 9.14 | 111 | 161597 | 25.8606 | ug/L | 0.00 |
| Spiked Amount 25.000 | Range 86 - 118 | | Recovery = 103.44% | | | |
| 43) 1,2-Dichloroethane-d4 | 9.78 | 65 | 134138 | 27.8765 | ug/L | 0.01 |
| Spiked Amount 25.000 | Range 80 - 120 | | Recovery = 111.52% | | | |
| 58) Toluene-d8 | 12.17 | 98 | 619356 | 24.4195 | ug/L | 0.00 |
| Spiked Amount 25.000 | Range 88 - 110 | | Recovery = 97.68% | | | |
| 80) p-Bromofluorobenzene | 15.54 | 95 | 247309 | 24.7191 | ug/L | 0.00 |
| Spiked Amount 25.000 | Range 86 - 115 | | Recovery = 98.88% | | | |
| **Target Compounds** | | | | | | Qvalue |
| 13) Acetone | 5.72 | 43 | 238 | 0.2678 | ug/L # | 47 |
| 56) Dimethyl Disulfide | 12.17 | 94 | 16976 | 1.7981 | ug/L # | 28 |

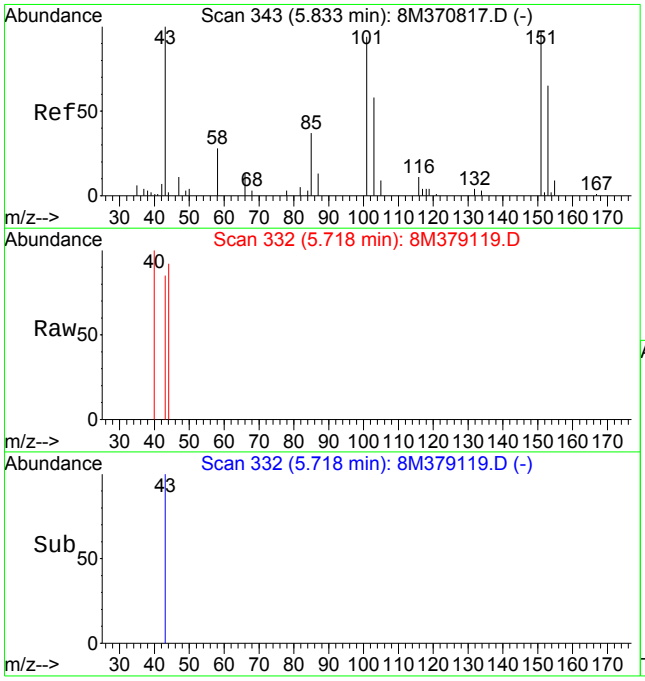
(#) = qualifier out of range (m) = manual integration
8M379119.D 8260WT.M Fri May 18 09:52:24 2012 Page 1

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\051612\8M379119.D Vial: 19
Acq On : 16 May 2012 18:16 Operator: ADC
Sample : L12050284-10 A 826-SPE Inst : HPMS8
Misc : 1,1 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 18 9:52 2012 Quant Results File: 8260WT.RES

Method : C:\MSDCHEM\1\METHODS\8260WT.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 03/27/12 HPMS 8
Last Update : Wed Mar 28 08:18:24 2012
Response via : Initial Calibration

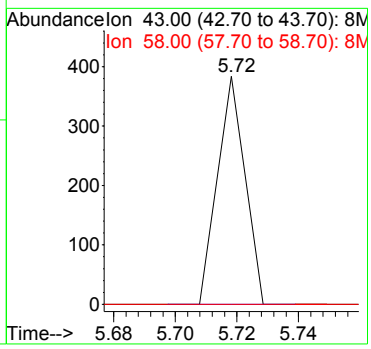


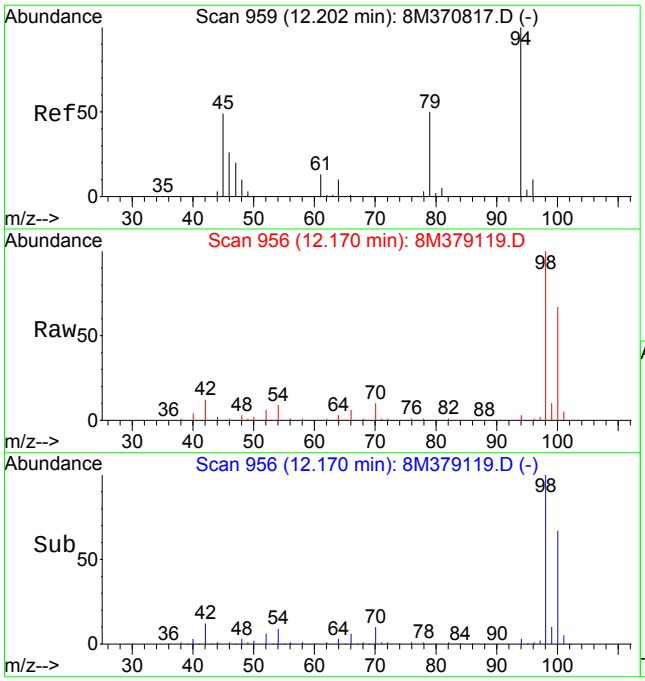



#13
Acetone
Concen: 0.27 ug/L
RT: 5.72 min Scan# 332
Delta R.T. 0.00 min
Lab File: 8M379119.D
Acq: 16 May 2012 18:16

Tgt Ion: 43 Resp: 238

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 58 | 0.0 | 16.9 | 39.3# |

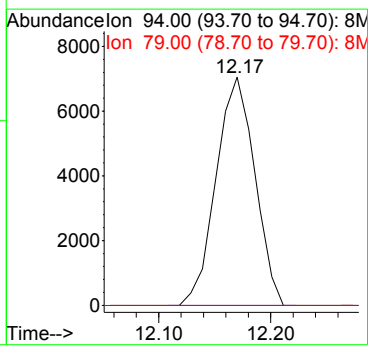



#56
Dimethyl Disulfide
Concen: 1.80 ug/L
RT: 12.17 min Scan# 956
Delta R.T. 0.08 min
Lab File: 8M379119.D
Acq: 16 May 2012 18:16

Tgt Ion: 94 Resp: 16976

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 94 | 100 | | |
| 79 | 0.0 | 29.2 | 68.0# |



LSC Area Percent Report

Data File : K:\ORGANICS\VOLATILE\HPMS8\DATA\051612\8M379119.D Vial: 19
Acq On : 16 May 2012 18:16 Operator: ADC
Sample : L12050284-10 A 826-SPE Inst : HPMS8
Misc : 1,1 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\1\METHODS\8260WT.M (RTE Integrator)
Title : 8260B/624_WATER SOP:OVLMSV01 05/16/12 - HPMS6
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 100 Area counts
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

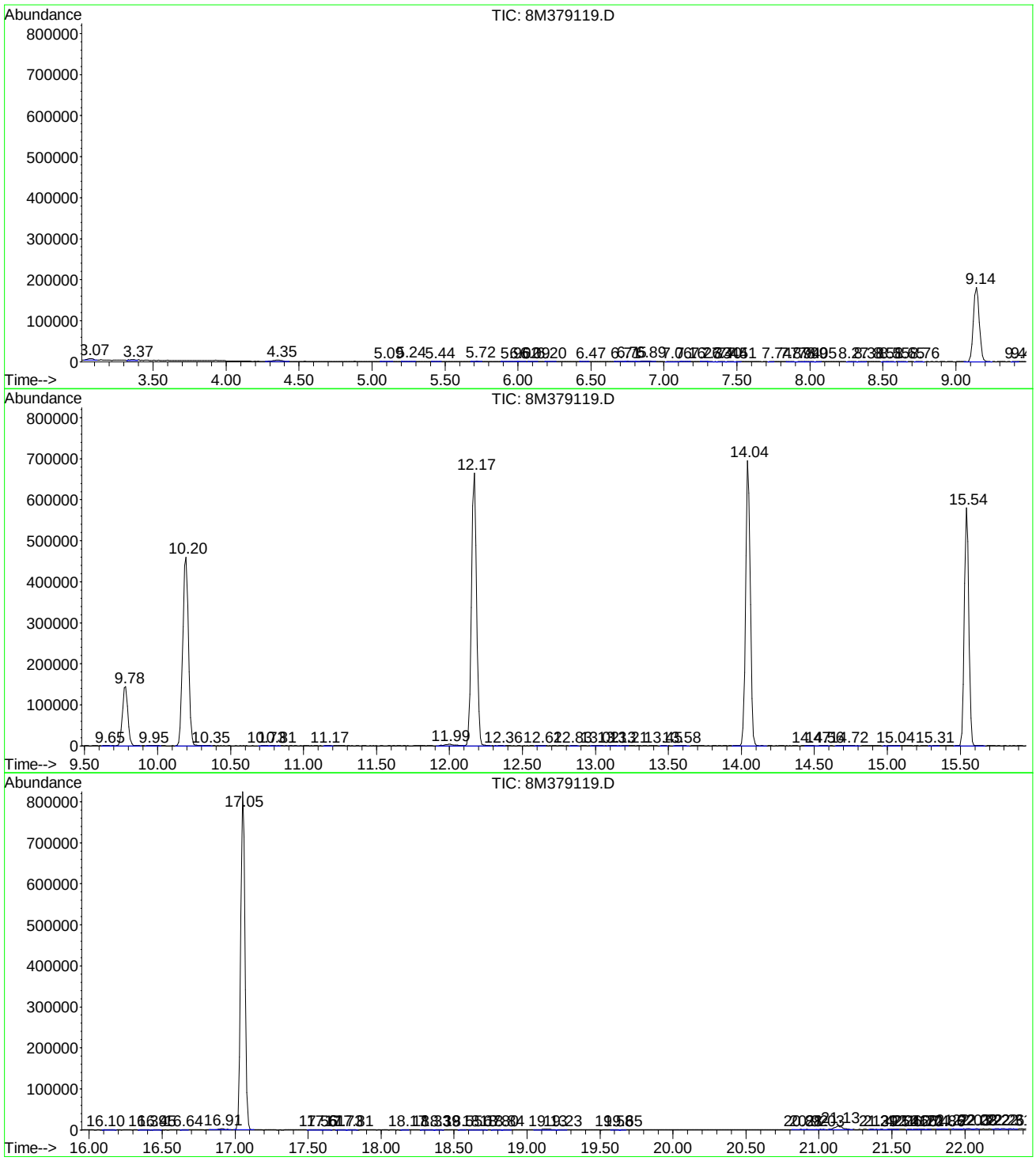
Signal : TIC

| peak # | R.T. min | first scan | max scan | last scan | PK TY | peak height | corr. area | corr. % max. | % of total |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 3.071 | 72 | 76 | 80 | rBV5 | 4175 | 11581 | 0.69% | 0.137% |
| 2 | 3.371 | 100 | 105 | 107 | rBV3 | 1740 | 5604 | 0.33% | 0.066% |
| 3 | 4.353 | 192 | 200 | 207 | rBV5 | 3462 | 11657 | 0.69% | 0.138% |
| 4 | 5.088 | 268 | 271 | 276 | rBV | 743 | 2745 | 0.16% | 0.032% |
| 5 | 5.243 | 282 | 286 | 291 | rBV2 | 680 | 2631 | 0.16% | 0.031% |
| 6 | 5.439 | 302 | 305 | 308 | rBV2 | 590 | 1683 | 0.10% | 0.020% |
| 7 | 5.718 | 328 | 332 | 335 | rBV2 | 791 | 1914 | 0.11% | 0.023% |
| 8 | 5.956 | 348 | 355 | 359 | rBV2 | 669 | 2849 | 0.17% | 0.034% |
| 9 | 6.018 | 359 | 361 | 364 | rBV | 511 | 1253 | 0.07% | 0.015% |
| 10 | 6.090 | 366 | 368 | 372 | rBV2 | 487 | 1302 | 0.08% | 0.015% |
| 11 | 6.204 | 377 | 379 | 384 | rBV2 | 526 | 1467 | 0.09% | 0.017% |
| 12 | 6.473 | 400 | 405 | 406 | rVV2 | 581 | 1507 | 0.09% | 0.018% |
| 13 | 6.711 | 423 | 428 | 430 | rBV2 | 728 | 1760 | 0.10% | 0.021% |
| 14 | 6.752 | 430 | 432 | 437 | rVV | 961 | 1485 | 0.09% | 0.018% |
| 15 | 6.887 | 437 | 445 | 450 | rVB2 | 1772 | 6391 | 0.38% | 0.076% |
| 16 | 7.062 | 457 | 462 | 466 | rBV2 | 932 | 2981 | 0.18% | 0.035% |
| 17 | 7.155 | 467 | 471 | 473 | rVV | 836 | 1713 | 0.10% | 0.020% |
| 18 | 7.259 | 480 | 481 | 485 | rVV | 638 | 1297 | 0.08% | 0.015% |
| 19 | 7.331 | 485 | 488 | 491 | rVB | 749 | 1368 | 0.08% | 0.016% |
| 20 | 7.404 | 491 | 495 | 497 | rBB | 776 | 1728 | 0.10% | 0.020% |
| 21 | 7.445 | 497 | 499 | 503 | rBB | 870 | 1884 | 0.11% | 0.022% |
| 22 | 7.507 | 503 | 505 | 507 | rBV | 819 | 1236 | 0.07% | 0.015% |
| 23 | 7.745 | 525 | 528 | 529 | rBV | 791 | 1415 | 0.08% | 0.017% |
| 24 | 7.869 | 537 | 540 | 543 | rVB | 727 | 1377 | 0.08% | 0.016% |
| 25 | 7.941 | 544 | 547 | 549 | rBV | 852 | 1900 | 0.11% | 0.022% |
| 26 | 7.993 | 549 | 552 | 556 | rVB2 | 772 | 2308 | 0.14% | 0.027% |
| 27 | 8.055 | 556 | 558 | 560 | rBV | 908 | 1778 | 0.11% | 0.021% |
| 28 | 8.272 | 577 | 579 | 584 | rBB | 927 | 1995 | 0.12% | 0.024% |
| 29 | 8.375 | 584 | 589 | 590 | rBV | 665 | 1523 | 0.09% | 0.018% |
| 30 | 8.510 | 600 | 602 | 604 | rBV | 780 | 1211 | 0.07% | 0.014% |
| 31 | 8.551 | 604 | 606 | 609 | rVB | 850 | 1618 | 0.10% | 0.019% |
| 32 | 8.655 | 611 | 616 | 617 | rVB | 912 | 1681 | 0.10% | 0.020% |
| 33 | 8.758 | 622 | 626 | 628 | rBB | 682 | 1520 | 0.09% | 0.018% |
| 34 | 9.141 | 655 | 663 | 673 | rVB2 | 181384 | 510916 | 30.26% | 6.041% |
| 35 | 9.409 | 686 | 689 | 691 | rBV | 749 | 1267 | 0.08% | 0.015% |
| 36 | 9.451 | 691 | 693 | 697 | rVB | 665 | 1267 | 0.08% | 0.015% |
| 37 | 9.647 | 709 | 712 | 715 | rBB | 676 | 1195 | 0.07% | 0.014% |
| 38 | 9.782 | 715 | 725 | 735 | rBB | 144056 | 368869 | 21.85% | 4.361% |
| 39 | 9.947 | 738 | 741 | 748 | rBB2 | 684 | 2065 | 0.12% | 0.024% |
| 40 | 10.195 | 758 | 765 | 776 | rBV | 459994 | 1243085 | 73.63% | 14.697% |
| 41 | 10.350 | 776 | 780 | 782 | rVB | 765 | 1739 | 0.10% | 0.021% |
| 42 | 10.733 | 813 | 817 | 820 | rBB | 697 | 1510 | 0.09% | 0.018% |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 43 | 10.805 | 820 | 824 | 827 | rBB | 653 | 1397 | 0.08% | 0.017% |
| 44 | 11.167 | 856 | 859 | 862 | rBB | 466 | 1215 | 0.07% | 0.014% |
| 45 | 11.994 | 931 | 939 | 949 | rBV | 3671 | 18903 | 1.12% | 0.223% |
| 46 | 12.170 | 949 | 956 | 967 | rVB | 665236 | 1608804 | 95.29% | 19.021% |
| 47 | 12.356 | 969 | 974 | 976 | rBB | 730 | 1308 | 0.08% | 0.015% |
| 48 | 12.625 | 996 | 1000 | 1003 | rBV | 675 | 1760 | 0.10% | 0.021% |
| 49 | 12.832 | 1019 | 1020 | 1025 | rBB | 647 | 1437 | 0.09% | 0.017% |
| 50 | 13.018 | 1033 | 1038 | 1042 | rBB | 661 | 2001 | 0.12% | 0.024% |
| 51 | 13.132 | 1044 | 1049 | 1051 | rBB | 511 | 1535 | 0.09% | 0.018% |
| 52 | 13.214 | 1051 | 1057 | 1058 | rBV | 418 | 1385 | 0.08% | 0.016% |
| 53 | 13.452 | 1079 | 1080 | 1084 | rBB | 647 | 1185 | 0.07% | 0.014% |
| 54 | 13.576 | 1088 | 1092 | 1098 | rBB | 416 | 1743 | 0.10% | 0.021% |
| 55 | 14.041 | 1127 | 1137 | 1149 | rBB | 695143 | 1549699 | 91.79% | 18.323% |
| 56 | 14.465 | 1175 | 1178 | 1183 | rVB | 706 | 1643 | 0.10% | 0.019% |
| 57 | 14.558 | 1184 | 1187 | 1191 | rBB | 494 | 1433 | 0.08% | 0.017% |
| 58 | 14.724 | 1195 | 1203 | 1211 | rBB | 785 | 3568 | 0.21% | 0.042% |
| 59 | 15.044 | 1227 | 1234 | 1238 | rBV | 671 | 2496 | 0.15% | 0.030% |
| 60 | 15.313 | 1257 | 1260 | 1264 | rBV | 780 | 1633 | 0.10% | 0.019% |
| 61 | 15.541 | 1274 | 1282 | 1294 | rBB | 580975 | 1233914 | 73.09% | 14.589% |
| 62 | 16.099 | 1335 | 1336 | 1344 | rBB | 614 | 2012 | 0.12% | 0.024% |
| 63 | 16.389 | 1359 | 1364 | 1367 | rBB | 433 | 1561 | 0.09% | 0.018% |
| 64 | 16.451 | 1368 | 1370 | 1374 | rBB | 708 | 1555 | 0.09% | 0.018% |
| 65 | 16.637 | 1387 | 1388 | 1392 | rBV | 788 | 1419 | 0.08% | 0.017% |
| 66 | 16.906 | 1406 | 1414 | 1420 | rVV | 2001 | 7604 | 0.45% | 0.090% |
| 67 | 17.050 | 1422 | 1428 | 1435 | rVB | 824785 | 1688319 | 100.00% | 19.962% |
| 68 | 17.557 | 1471 | 1477 | 1481 | rBV | 576 | 2440 | 0.14% | 0.029% |
| 69 | 17.609 | 1481 | 1482 | 1487 | rVB | 453 | 1203 | 0.07% | 0.014% |
| 70 | 17.733 | 1490 | 1494 | 1497 | rBB | 660 | 1585 | 0.09% | 0.019% |
| 71 | 17.805 | 1497 | 1501 | 1504 | rBB | 527 | 1427 | 0.08% | 0.017% |
| 72 | 18.167 | 1533 | 1536 | 1538 | rBV | 648 | 1433 | 0.08% | 0.017% |
| 73 | 18.332 | 1546 | 1552 | 1555 | rBB | 465 | 1944 | 0.12% | 0.023% |
| 74 | 18.394 | 1555 | 1558 | 1561 | rBB | 462 | 1276 | 0.08% | 0.015% |
| 75 | 18.549 | 1571 | 1573 | 1576 | rBV | 466 | 1315 | 0.08% | 0.016% |
| 76 | 18.674 | 1578 | 1585 | 1590 | rVB | 715 | 3290 | 0.19% | 0.039% |
| 77 | 18.798 | 1593 | 1597 | 1600 | rBB | 667 | 1647 | 0.10% | 0.019% |
| 78 | 18.839 | 1600 | 1601 | 1606 | rBV | 490 | 1575 | 0.09% | 0.019% |
| 79 | 19.128 | 1621 | 1629 | 1636 | rVB2 | 2232 | 9657 | 0.57% | 0.114% |
| 80 | 19.232 | 1636 | 1639 | 1643 | rBV | 488 | 1795 | 0.11% | 0.021% |
| 81 | 19.583 | 1672 | 1673 | 1678 | rVB | 750 | 1759 | 0.10% | 0.021% |
| 82 | 19.645 | 1678 | 1679 | 1682 | rBV | 642 | 1410 | 0.08% | 0.017% |
| 83 | 20.876 | 1792 | 1798 | 1800 | rBV2 | 989 | 2152 | 0.13% | 0.025% |
| 84 | 20.917 | 1800 | 1802 | 1808 | rVV | 993 | 1764 | 0.10% | 0.021% |
| 85 | 21.031 | 1808 | 1813 | 1814 | rVB | 972 | 2123 | 0.13% | 0.025% |
| 86 | 21.134 | 1816 | 1823 | 1832 | rBV | 8676 | 31956 | 1.89% | 0.378% |
| 87 | 21.393 | 1843 | 1848 | 1849 | rVB2 | 556 | 1271 | 0.08% | 0.015% |
| 88 | 21.424 | 1849 | 1851 | 1855 | rVB2 | 814 | 1232 | 0.07% | 0.015% |
| 89 | 21.538 | 1855 | 1862 | 1863 | rBV4 | 1324 | 4601 | 0.27% | 0.054% |
| 90 | 21.620 | 1868 | 1870 | 1872 | rBV2 | 962 | 1239 | 0.07% | 0.015% |
| 91 | 21.662 | 1872 | 1874 | 1876 | rBV2 | 1093 | 1642 | 0.10% | 0.019% |
| 92 | 21.703 | 1876 | 1878 | 1881 | rVB3 | 870 | 1506 | 0.09% | 0.018% |
| 93 | 21.744 | 1881 | 1882 | 1884 | rBV | 864 | 1190 | 0.07% | 0.014% |
| 94 | 21.858 | 1888 | 1893 | 1895 | rBV2 | 711 | 1947 | 0.12% | 0.023% |
| 95 | 21.920 | 1898 | 1899 | 1904 | rBV | 1014 | 2325 | 0.14% | 0.027% |
| 96 | 22.034 | 1904 | 1910 | 1912 | rVB3 | 1277 | 3841 | 0.23% | 0.045% |
| 97 | 22.075 | 1912 | 1914 | 1916 | rBV | 1178 | 1697 | 0.10% | 0.020% |
| 98 | 22.220 | 1925 | 1928 | 1930 | rVV4 | 1119 | 2049 | 0.12% | 0.024% |
| 99 | 22.261 | 1930 | 1932 | 1934 | rVV | 1108 | 1830 | 0.11% | 0.022% |
| 100 | 22.313 | 1935 | 1937 | 1941 | rVB3 | 932 | 1929 | 0.11% | 0.023% |

Sum of corrected areas: 8457854

File : K:\ORGANICS\VOLATILE\HPMS8\DATA\051612\8M379119.D
Operator : ADC
Acquired : 16 May 2012 18:16 using AcqMethod 8260WT
Instrument : HPMS8
Sample Name: L12050284-10 A 826-SPE
Misc Info : 1,1
Vial Number: 19
Quant File :8260WT.RES (RTE Integrator)



Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\051612\8M379113.D Vial: 13
Acq On : 16 May 2012 14:53 Operator: ADC
Sample : L12050284-12 A 826-SPE Inst : HPMS8
Misc : 1,1 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 18 09:51:07 2012 Quant Results File: 8260WT.RES

Quant Method : C:\MSDCHEM\1\METHODS\8260WT.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 03/27/12 HPMS 8
Last Update : Wed Mar 28 08:18:24 2012
Response via : Initial Calibration
DataAcq Meth : 8260WT

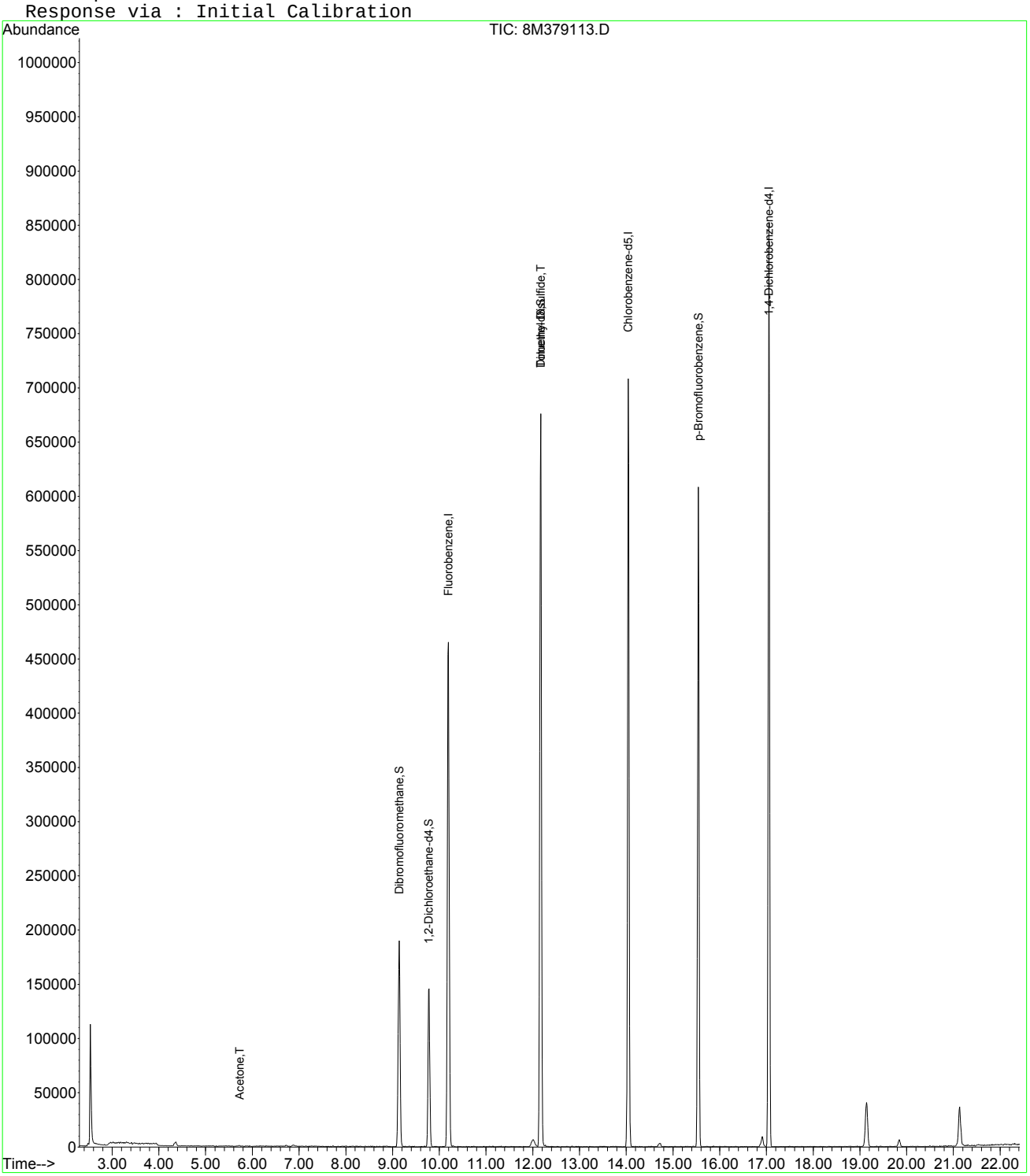
| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 1) Fluorobenzene | 10.20 | 96 | 617702 | 25.00 | ug/L | 0.01 |
| 57) Chlorobenzene-d5 | 14.04 | 117 | 565177 | 25.00 | ug/L | 0.00 |
| 78) 1,4-Dichlorobenzene-d4 | 17.05 | 152 | 319552 | 25.00 | ug/L | 0.00 |
| **System Monitoring Compounds** | | | | | | |
| 37) Dibromofluoromethane | 9.14 | 111 | 166320 | 25.9531 | ug/L | 0.00 |
| Spiked Amount 25.000 | Range 86 - 118 | | Recovery = 103.80% | | | |
| 43) 1,2-Dichloroethane-d4 | 9.77 | 65 | 139286 | 28.2250 | ug/L | 0.00 |
| Spiked Amount 25.000 | Range 80 - 120 | | Recovery = 112.92% | | | |
| 58) Toluene-d8 | 12.17 | 98 | 642243 | 24.6116 | ug/L | 0.00 |
| Spiked Amount 25.000 | Range 88 - 110 | | Recovery = 98.44% | | | |
| 80) p-Bromofluorobenzene | 15.54 | 95 | 255908 | 24.7559 | ug/L | 0.00 |
| Spiked Amount 25.000 | Range 86 - 115 | | Recovery = 99.04% | | | |
| **Target Compounds** | | | | | | Qvalue |
| 13) Acetone | 5.73 | 43 | 1009 | 1.1071 | ug/L | # 47 |
| 56) Dimethyl Disulfide | 12.17 | 94 | 17546 | 1.8122 | ug/L | # 28 |

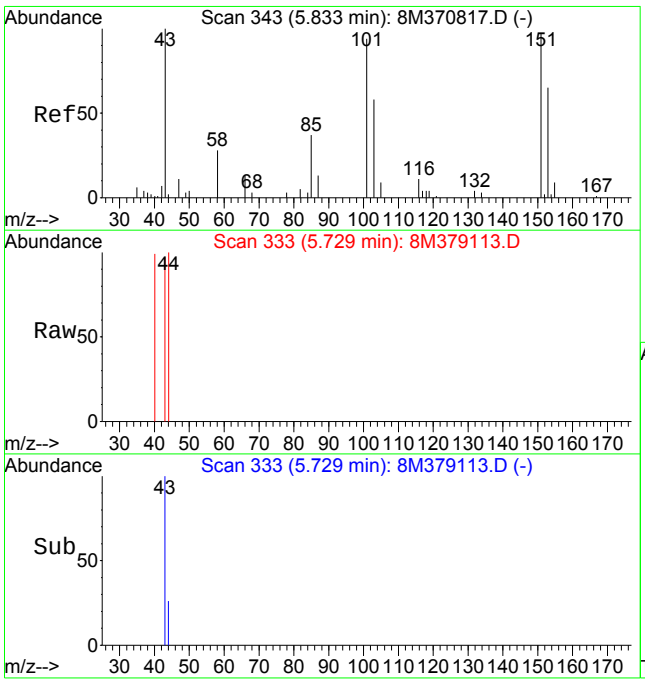
(#) = qualifier out of range (m) = manual integration
8M379113.D 8260WT.M Fri May 18 09:51:08 2012 Page 1

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\051612\8M379113.D Vial: 13
Acq On : 16 May 2012 14:53 Operator: ADC
Sample : L12050284-12 A 826-SPE Inst : HPMS8
Misc : 1,1 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 18 9:51 2012 Quant Results File: 8260WT.RES

Method : C:\MSDCHEM\1\METHODS\8260WT.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 03/27/12 HPMS 8
Last Update : Wed Mar 28 08:18:24 2012
Response via : Initial Calibration

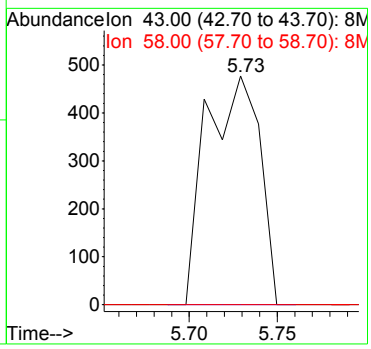


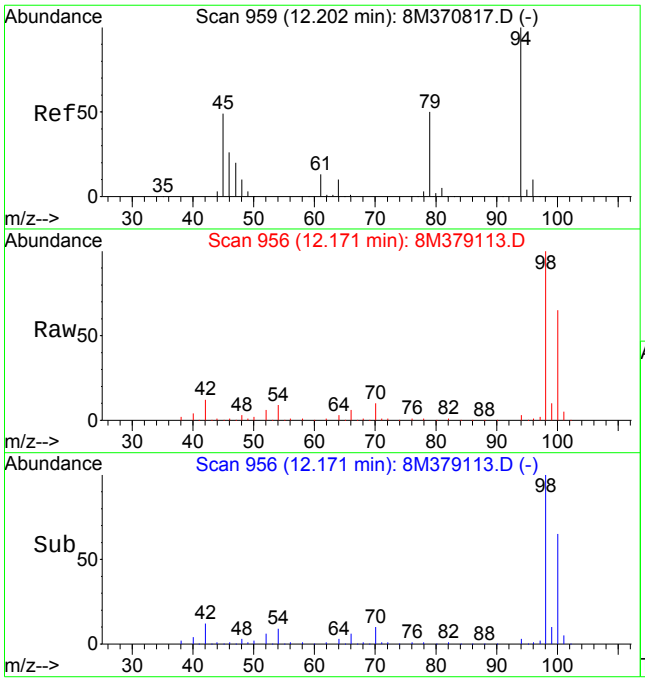



#13
Acetone
Concen: 1.11 ug/L
RT: 5.73 min Scan# 333
Delta R.T. 0.01 min
Lab File: 8M379113.D
Acq: 16 May 2012 14:53

Tgt Ion: 43 Resp: 1009

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 58 | 0.0 | 16.9 | 39.3# |

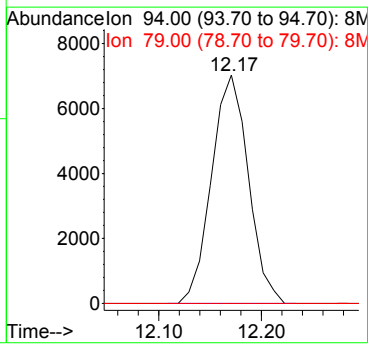



#56
Dimethyl Disulfide
Concen: 1.81 ug/L
RT: 12.17 min Scan# 956
Delta R.T. 0.09 min
Lab File: 8M379113.D
Acq: 16 May 2012 14:53

Tgt Ion: 94 Resp: 17546

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 94 | 100 | | |
| 79 | 0.0 | 29.2 | 68.0# |



LSC Area Percent Report

Data File : K:\ORGANICS\VOLATILE\HPMS8\DATA\051612\8M379113.D Vial: 13
Acq On : 16 May 2012 14:53 Operator: ADC
Sample : L12050284-12 A 826-SPE Inst : HPMS8
Misc : 1,1 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\1\METHODS\8260WT.M (RTE Integrator)
Title : 8260B/624_WATER SOP:OVLMSV01 05/16/12 - HPMS6
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 100 Area counts
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

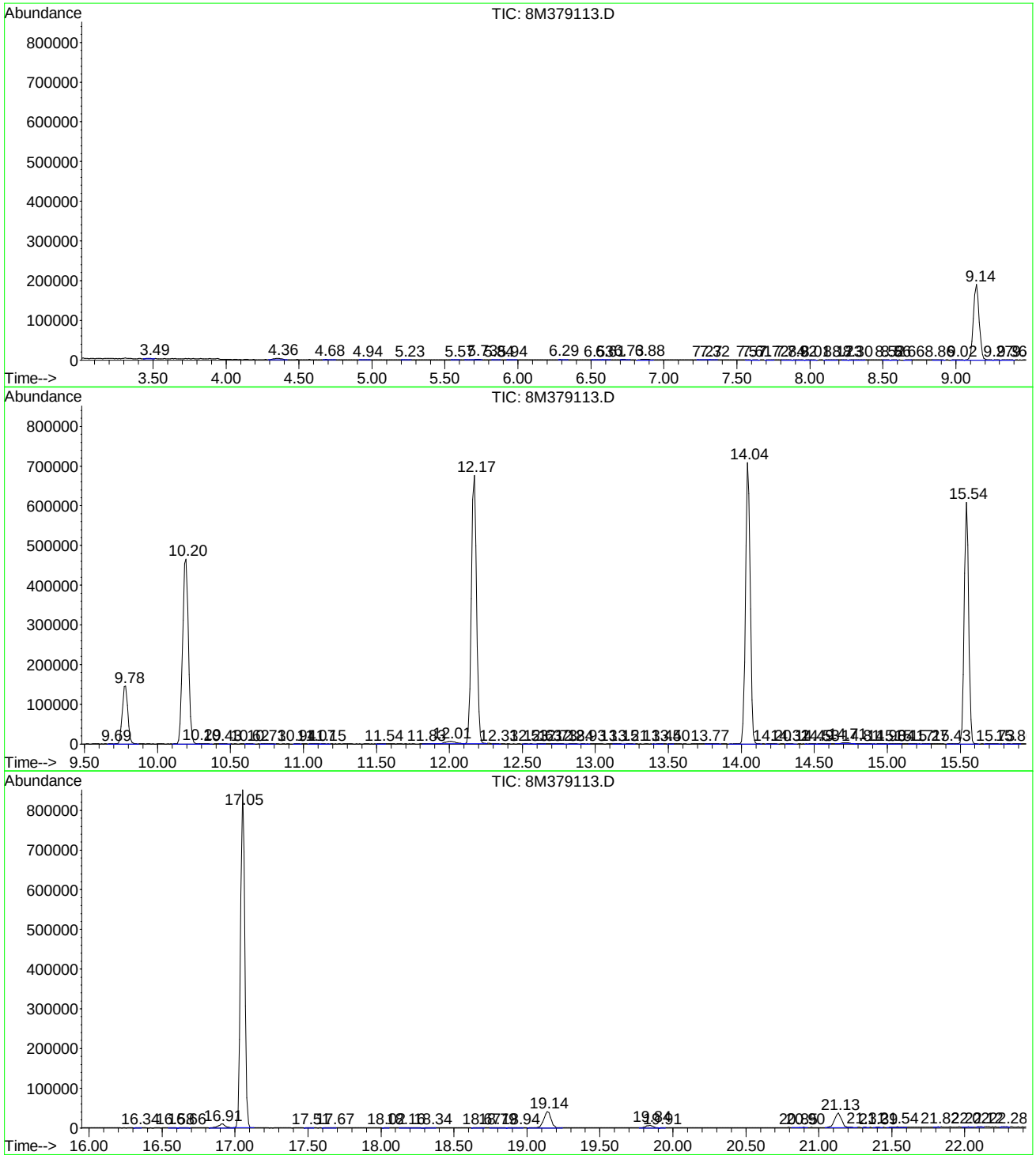
Signal : TIC

| peak # | R.T. min | first scan | max scan | last scan | PK TY | peak height | corr. area | corr. % max. | % of total |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 3.485 | 111 | 116 | 118 | rBV2 | 1326 | 4025 | 0.23% | 0.045% |
| 2 | 4.364 | 194 | 201 | 206 | rVB2 | 3739 | 12523 | 0.72% | 0.139% |
| 3 | 4.685 | 230 | 232 | 238 | rBV2 | 603 | 1378 | 0.08% | 0.015% |
| 4 | 4.943 | 254 | 257 | 261 | rBV2 | 517 | 1737 | 0.10% | 0.019% |
| 5 | 5.233 | 282 | 285 | 288 | rBV | 785 | 1305 | 0.08% | 0.014% |
| 6 | 5.574 | 315 | 318 | 320 | rVB2 | 574 | 1262 | 0.07% | 0.014% |
| 7 | 5.729 | 324 | 333 | 335 | rVB | 915 | 3458 | 0.20% | 0.038% |
| 8 | 5.843 | 342 | 344 | 347 | rBV | 587 | 1348 | 0.08% | 0.015% |
| 9 | 5.936 | 352 | 353 | 358 | rBV | 784 | 1200 | 0.07% | 0.013% |
| 10 | 6.287 | 386 | 387 | 392 | rBV2 | 905 | 1826 | 0.11% | 0.020% |
| 11 | 6.525 | 408 | 410 | 415 | rBV | 631 | 1716 | 0.10% | 0.019% |
| 12 | 6.608 | 415 | 418 | 420 | rBV | 624 | 1343 | 0.08% | 0.015% |
| 13 | 6.732 | 427 | 430 | 433 | rVB2 | 1188 | 2998 | 0.17% | 0.033% |
| 14 | 6.877 | 438 | 444 | 449 | rBV | 1903 | 8599 | 0.50% | 0.095% |
| 15 | 7.270 | 478 | 482 | 486 | rBV2 | 513 | 1828 | 0.11% | 0.020% |
| 16 | 7.321 | 486 | 487 | 491 | rVV2 | 510 | 1323 | 0.08% | 0.015% |
| 17 | 7.570 | 510 | 511 | 514 | rVB | 842 | 1240 | 0.07% | 0.014% |
| 18 | 7.611 | 514 | 515 | 519 | rBB | 725 | 1380 | 0.08% | 0.015% |
| 19 | 7.725 | 523 | 526 | 529 | rBV | 1128 | 2222 | 0.13% | 0.025% |
| 20 | 7.838 | 534 | 537 | 541 | rVB | 780 | 1993 | 0.11% | 0.022% |
| 21 | 7.921 | 541 | 545 | 549 | rBB | 849 | 2793 | 0.16% | 0.031% |
| 22 | 8.014 | 549 | 554 | 557 | rBB | 1033 | 3134 | 0.18% | 0.035% |
| 23 | 8.169 | 562 | 569 | 571 | rBV | 792 | 3293 | 0.19% | 0.036% |
| 24 | 8.231 | 574 | 575 | 578 | rVB | 902 | 1519 | 0.09% | 0.017% |
| 25 | 8.304 | 578 | 582 | 589 | rBV2 | 734 | 3310 | 0.19% | 0.037% |
| 26 | 8.521 | 601 | 603 | 606 | rVB | 765 | 1536 | 0.09% | 0.017% |
| 27 | 8.562 | 606 | 607 | 611 | rBB | 861 | 1792 | 0.10% | 0.020% |
| 28 | 8.655 | 615 | 616 | 620 | rBV | 687 | 1540 | 0.09% | 0.017% |
| 29 | 8.862 | 634 | 636 | 642 | rVB | 765 | 2676 | 0.15% | 0.030% |
| 30 | 9.017 | 646 | 651 | 655 | rBB | 560 | 1879 | 0.11% | 0.021% |
| 31 | 9.141 | 655 | 663 | 674 | rBB | 190254 | 524601 | 30.27% | 5.814% |
| 32 | 9.265 | 674 | 675 | 679 | rBB | 748 | 1275 | 0.07% | 0.014% |
| 33 | 9.358 | 679 | 684 | 688 | rBB | 768 | 2455 | 0.14% | 0.027% |
| 34 | 9.462 | 691 | 694 | 697 | rBB | 800 | 1380 | 0.08% | 0.015% |
| 35 | 9.689 | 713 | 716 | 717 | rBB | 902 | 1224 | 0.07% | 0.014% |
| 36 | 9.782 | 717 | 725 | 733 | rBB | 145905 | 379175 | 21.88% | 4.202% |
| 37 | 10.196 | 756 | 765 | 773 | rBV | 465575 | 1273598 | 73.48% | 14.115% |
| 38 | 10.289 | 773 | 774 | 782 | rVB | 1178 | 2685 | 0.15% | 0.030% |
| 39 | 10.434 | 787 | 788 | 794 | rVB | 639 | 1505 | 0.09% | 0.017% |
| 40 | 10.620 | 804 | 806 | 810 | rBB | 634 | 1242 | 0.07% | 0.014% |
| 41 | 10.733 | 814 | 817 | 824 | rBB | 699 | 2365 | 0.14% | 0.026% |
| 42 | 10.940 | 836 | 837 | 841 | rBB | 736 | 1349 | 0.08% | 0.015% |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 43 | 11.075 | 846 | 850 | 854 | rBB | 800 | 2046 | 0.12% | 0.023% |
| 44 | 11.147 | 854 | 857 | 860 | rBB | 892 | 1206 | 0.07% | 0.013% |
| 45 | 11.540 | 891 | 895 | 897 | rBV | 749 | 1573 | 0.09% | 0.017% |
| 46 | 11.829 | 922 | 923 | 929 | rVV | 438 | 1468 | 0.08% | 0.016% |
| 47 | 12.005 | 930 | 940 | 949 | rVV2 | 6700 | 35146 | 2.03% | 0.390% |
| 48 | 12.171 | 949 | 956 | 964 | rVV | 676134 | 1666463 | 96.15% | 18.469% |
| 49 | 12.326 | 968 | 971 | 973 | rVB | 690 | 1186 | 0.07% | 0.013% |
| 50 | 12.532 | 988 | 991 | 996 | rBB | 647 | 1320 | 0.08% | 0.015% |
| 51 | 12.626 | 997 | 1000 | 1003 | rBV | 487 | 1423 | 0.08% | 0.016% |
| 52 | 12.729 | 1007 | 1010 | 1017 | rVB | 826 | 2098 | 0.12% | 0.023% |
| 53 | 12.843 | 1018 | 1021 | 1025 | rBB | 942 | 2010 | 0.12% | 0.022% |
| 54 | 12.925 | 1026 | 1029 | 1032 | rBB | 727 | 1184 | 0.07% | 0.013% |
| 55 | 13.153 | 1048 | 1051 | 1054 | rVB | 458 | 1240 | 0.07% | 0.014% |
| 56 | 13.215 | 1055 | 1057 | 1062 | rBB | 768 | 1461 | 0.08% | 0.016% |
| 57 | 13.442 | 1074 | 1079 | 1081 | rBV | 716 | 1677 | 0.10% | 0.019% |
| 58 | 13.504 | 1084 | 1085 | 1088 | rBV | 749 | 1333 | 0.08% | 0.015% |
| 59 | 13.773 | 1109 | 1111 | 1119 | rVB | 837 | 2594 | 0.15% | 0.029% |
| 60 | 14.042 | 1125 | 1137 | 1146 | rBB | 708576 | 1603889 | 92.54% | 17.775% |
| 61 | 14.197 | 1149 | 1152 | 1157 | rBB | 678 | 1921 | 0.11% | 0.021% |
| 62 | 14.321 | 1162 | 1164 | 1169 | rBB | 463 | 1197 | 0.07% | 0.013% |
| 63 | 14.487 | 1175 | 1180 | 1183 | rBB | 720 | 1519 | 0.09% | 0.017% |
| 64 | 14.528 | 1183 | 1184 | 1192 | rBV | 771 | 2586 | 0.15% | 0.029% |
| 65 | 14.714 | 1195 | 1202 | 1208 | rVV4 | 3163 | 11653 | 0.67% | 0.129% |
| 66 | 14.807 | 1208 | 1211 | 1220 | rVB | 753 | 2846 | 0.16% | 0.032% |
| 67 | 14.983 | 1220 | 1228 | 1230 | rBB | 507 | 2090 | 0.12% | 0.023% |
| 68 | 15.045 | 1230 | 1234 | 1239 | rBV | 754 | 2355 | 0.14% | 0.026% |
| 69 | 15.169 | 1244 | 1246 | 1250 | rVB | 781 | 1435 | 0.08% | 0.016% |
| 70 | 15.272 | 1250 | 1256 | 1258 | rBV | 779 | 1909 | 0.11% | 0.021% |
| 71 | 15.428 | 1269 | 1271 | 1274 | rBV | 786 | 1632 | 0.09% | 0.018% |
| 72 | 15.541 | 1275 | 1282 | 1290 | rVB | 608602 | 1278463 | 73.76% | 14.169% |
| 73 | 15.727 | 1294 | 1300 | 1304 | rBB | 678 | 2421 | 0.14% | 0.027% |
| 74 | 15.862 | 1306 | 1313 | 1318 | rBV | 942 | 3179 | 0.18% | 0.035% |
| 75 | 16.337 | 1356 | 1359 | 1361 | rBV | 708 | 1409 | 0.08% | 0.016% |
| 76 | 16.575 | 1379 | 1382 | 1385 | rVB | 591 | 1428 | 0.08% | 0.016% |
| 77 | 16.658 | 1385 | 1390 | 1393 | rBB | 445 | 1662 | 0.10% | 0.018% |
| 78 | 16.906 | 1406 | 1414 | 1422 | rBV | 9640 | 33693 | 1.94% | 0.373% |
| 79 | 17.051 | 1422 | 1428 | 1435 | rVB | 851879 | 1733263 | 100.00% | 19.209% |
| 80 | 17.506 | 1469 | 1472 | 1475 | rBV | 783 | 2017 | 0.12% | 0.022% |
| 81 | 17.671 | 1481 | 1488 | 1490 | rBV | 544 | 2353 | 0.14% | 0.026% |
| 82 | 18.023 | 1521 | 1522 | 1525 | rBV | 805 | 1237 | 0.07% | 0.014% |
| 83 | 18.157 | 1532 | 1535 | 1547 | rVB | 854 | 3831 | 0.22% | 0.042% |
| 84 | 18.343 | 1548 | 1553 | 1556 | rBV | 857 | 2362 | 0.14% | 0.026% |
| 85 | 18.674 | 1580 | 1585 | 1588 | rBV | 639 | 2279 | 0.13% | 0.025% |
| 86 | 18.788 | 1592 | 1596 | 1603 | rVB | 843 | 3359 | 0.19% | 0.037% |
| 87 | 18.943 | 1603 | 1611 | 1614 | rBV | 905 | 3270 | 0.19% | 0.036% |
| 88 | 19.139 | 1617 | 1630 | 1640 | rBV | 41118 | 143739 | 8.29% | 1.593% |
| 89 | 19.843 | 1691 | 1698 | 1704 | rVB2 | 6775 | 21810 | 1.26% | 0.242% |
| 90 | 19.915 | 1704 | 1705 | 1708 | rBV | 723 | 1263 | 0.07% | 0.014% |
| 91 | 20.845 | 1792 | 1795 | 1797 | rVB | 794 | 1243 | 0.07% | 0.014% |
| 92 | 20.897 | 1797 | 1800 | 1802 | rBV2 | 912 | 1626 | 0.09% | 0.018% |
| 93 | 21.135 | 1814 | 1823 | 1835 | rBV | 36321 | 125345 | 7.23% | 1.389% |
| 94 | 21.311 | 1839 | 1840 | 1843 | rVV2 | 1253 | 1378 | 0.08% | 0.015% |
| 95 | 21.393 | 1846 | 1848 | 1852 | rVB2 | 816 | 1301 | 0.08% | 0.014% |
| 96 | 21.538 | 1855 | 1862 | 1868 | rBV3 | 1691 | 7635 | 0.44% | 0.085% |
| 97 | 21.817 | 1886 | 1889 | 1890 | rVB2 | 1175 | 1389 | 0.08% | 0.015% |
| 98 | 22.024 | 1905 | 1909 | 1912 | rVB2 | 824 | 2003 | 0.12% | 0.022% |
| 99 | 22.117 | 1914 | 1918 | 1919 | rBV2 | 1253 | 2729 | 0.16% | 0.030% |
| 100 | 22.283 | 1930 | 1934 | 1936 | rBV2 | 1467 | 3974 | 0.23% | 0.044% |

Sum of corrected areas: 9023151

File : K:\ORGANICS\VOLATILE\HPMS8\DATA\051612\8M379113.D
Operator : ADC
Acquired : 16 May 2012 14:53 using AcqMethod 8260WT
Instrument : HPMS8
Sample Name: L12050284-12 A 826-SPE
Misc Info : 1,1
Vial Number: 13
Quant File :8260WT.RES (RTE Integrator)



# 2.1.1.4 Standards Data

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\2\DATA\012512\6M105371.D Vial: 5
Acq On : 25 Jan 2012 10:12 Operator: ADC
Sample : WG388587-01 5ug/L 826A9FOO QC Inst : HPMS6
Misc : 1,1 STD49721 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Feb 02 11:00:06 2012 Quant Results File: A9FOOWTR.RES

Quant Method : C:\MSDCHEM\2\METHODS\A9FOOWTR.M (RTE Integrator)
Title : A9-FOO Water - IC: 01/25/12 - HPMS6
Last Update : Thu Feb 02 09:44:46 2012
Response via : Initial Calibration
DataAcq Meth : 8260WT

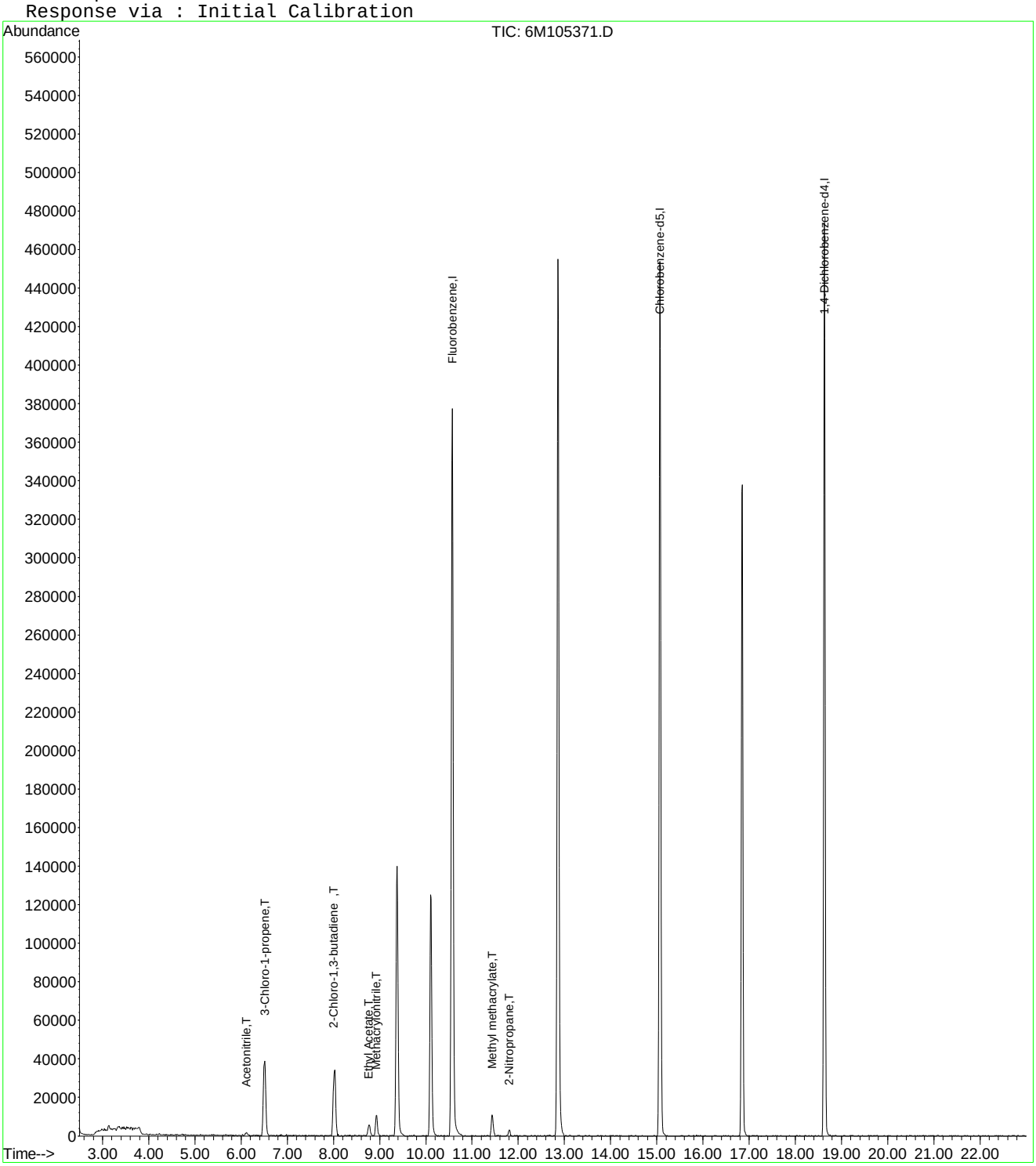
| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 1) Fluorobenzene | 10.57 | 96 | 542118 | 25.00 | ug/L | 0.00 |
| 11) Chlorobenzene-d5 | 15.06 | 117 | 382891 | 25.00 | ug/L | 0.00 |
| 12) 1,4-Dichlorobenzene-d4 | 18.63 | 152 | 182930 | 25.00 | ug/L | 0.00 |
| **Target Compounds** | | | | | | Qvalue |
| 2) Acetonitrile | 6.11 | 41 | 1900 | 3.8474 | ug/L | # 1 |
| 3) 3-Chloro-1-propene | 6.51 | 41 | 51181 | 4.3471 | ug/L | 99 |
| 4) 2-Chloro-1,3-butadiene | 8.01 | 53 | 44354 | 3.9841 | ug/L | # 29 |
| 5) Ethyl Acetate | 8.76 | 43 | 13368 | 4.1127 | ug/L | # 100 |
| 6) Methacrylonitrile | 8.93 | 67 | 5420 | 3.9672 | ug/L | 98 |
| 9) Methyl methacrylate | 11.44 | 41 | 11648 | 9.5031 | ug/L | 99 |
| 10) 2-Nitropropane | 11.80 | 43 | 3265 | 11.8335 | ug/L | 88 |

(#) = qualifier out of range (m) = manual integration
6M105371.D A9FOOWTR.M Thu Feb 02 15:11:53 2012 Page 1

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\2\DATA\012512\6M105371.D Vial: 5
Acq On : 25 Jan 2012 10:12 Operator: ADC
Sample : WG388587-01 5ug/L 826A9FOO QC Inst : HPMS6
Misc : 1,1 STD49721 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Feb 2 11:00 2012 Quant Results File: A9FOOWTR.RES

Method : C:\MSDCHEM\2\METHODS\A9FOOWTR.M (RTE Integrator)
Title : A9-FOO Water - IC: 01/25/12 - HPMS6
Last Update : Thu Feb 02 09:44:46 2012
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\2\DATA\012512\6M105372.D Vial: 6
Acq On : 25 Jan 2012 10:45 Operator: ADC
Sample : WG388587-02 20ug/L 826A9FOO QC Inst : HPMS6
Misc : 1,1 STD49721 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Feb 02 11:00:07 2012 Quant Results File: A9FOOWTR.RES

Quant Method : C:\MSDCHEM\2\METHODS\A9FOOWTR.M (RTE Integrator)
Title : A9-FOO Water - IC: 01/25/12 - HPMS6
Last Update : Thu Feb 02 09:44:46 2012
Response via : Initial Calibration
DataAcq Meth : 8260WT

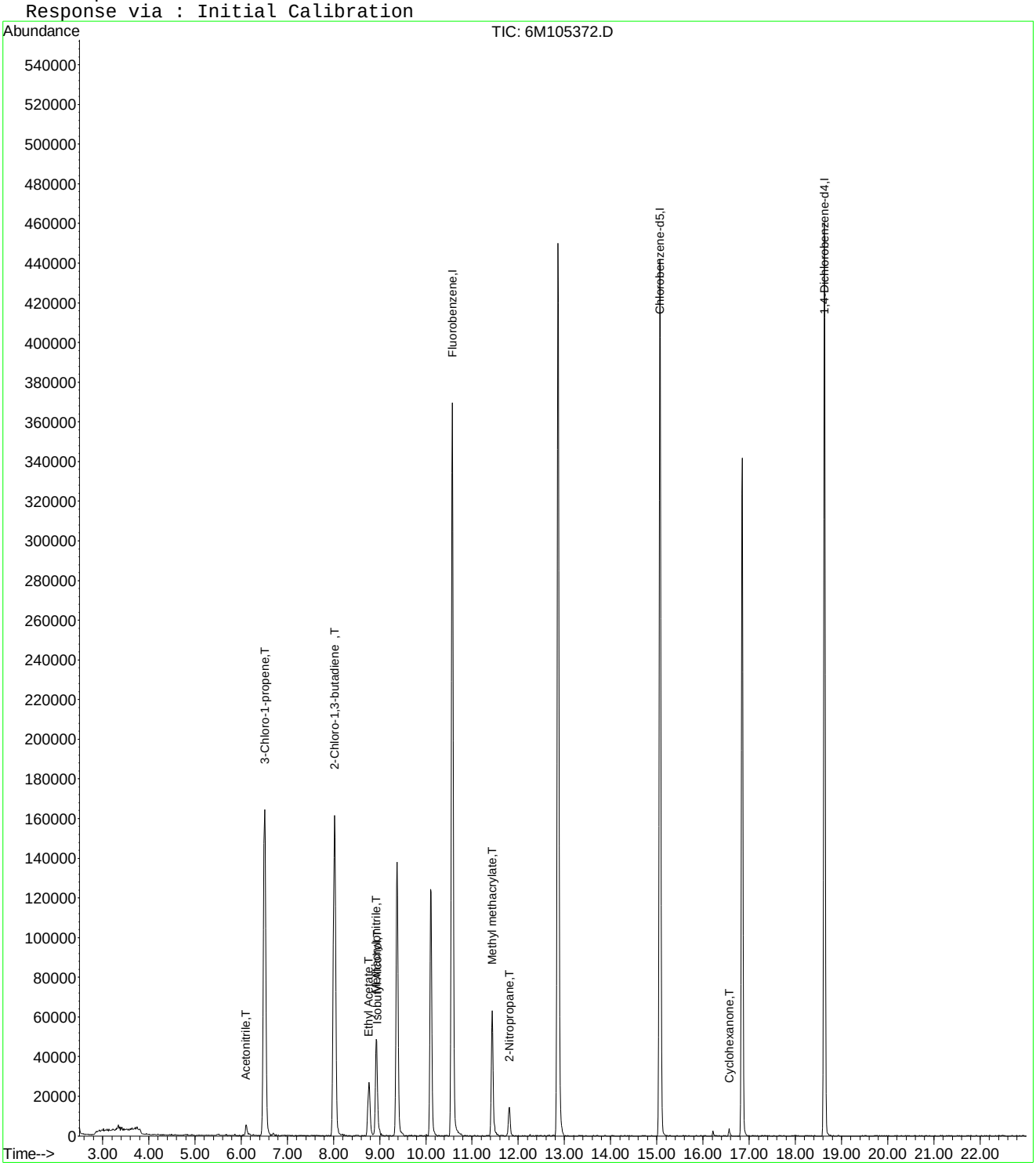
| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 1) Fluorobenzene | 10.57 | 96 | 527412 | 25.00 | ug/L | 0.00 |
| 11) Chlorobenzene-d5 | 15.06 | 117 | 368818 | 25.00 | ug/L | 0.00 |
| 12) 1,4-Dichlorobenzene-d4 | 18.63 | 152 | 180470 | 25.00 | ug/L | 0.00 |
| **Target Compounds** | | | | | | Qvalue |
| 2) Acetonitrile | 6.10 | 41 | 8738 | 18.1873 | ug/L | 92 |
| 3) 3-Chloro-1-propene | 6.51 | 41 | 209591 | 18.2980 | ug/L | 99 |
| 4) 2-Chloro-1,3-butadiene | 8.02 | 53 | 194300 | 17.9398 | ug/L | 98 |
| 5) Ethyl Acetate | 8.76 | 43 | 57089 | 18.0532 | ug/L # | 100 |
| 6) Methacrylonitrile | 8.93 | 67 | 22789 | 17.1456 | ug/L | 94 |
| 7) Isobutyl Alcohol | 8.95 | 43 | 4943 | 35.3217 | ug/L # | 89 |
| 9) Methyl methacrylate | 11.44 | 41 | 55796 | 20.8158 | ug/L | 98 |
| 10) 2-Nitropropane | 11.81 | 43 | 15582 | 22.5273 | ug/L | 92 |
| 13) Cyclohexanone | 16.56 | 55 | 2471 | 28.3472 | ug/L | 93 |

(#) = qualifier out of range (m) = manual integration
6M105372.D A9FOOWTR.M Thu Feb 02 15:11:55 2012 Page 1

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\2\DATA\012512\6M105372.D Vial: 6
Acq On : 25 Jan 2012 10:45 Operator: ADC
Sample : WG388587-02 20ug/L 826A9FOO QC Inst : HPMS6
Misc : 1,1 STD49721 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Feb 2 11:00 2012 Quant Results File: A9FOOWTR.RES

Method : C:\MSDCHEM\2\METHODS\A9FOOWTR.M (RTE Integrator)
Title : A9-FOO Water - IC: 01/25/12 - HPMS6
Last Update : Thu Feb 02 09:44:46 2012
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\2\DATA\012512\6M105373.D Vial: 7
Acq On : 25 Jan 2012 11:17 Operator: ADC
Sample : WG388587-03 50ug/L 826A9FOO QC Inst : HPMS6
Misc : 1,1 STD49721 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Feb 02 11:00:09 2012 Quant Results File: A9FOOWTR.RES

Quant Method : C:\MSDCHEM\2\METHODS\A9FOOWTR.M (RTE Integrator)
Title : A9-FOO Water - IC: 01/25/12 - HPMS6
Last Update : Thu Feb 02 09:44:46 2012
Response via : Initial Calibration
DataAcq Meth : 8260WT

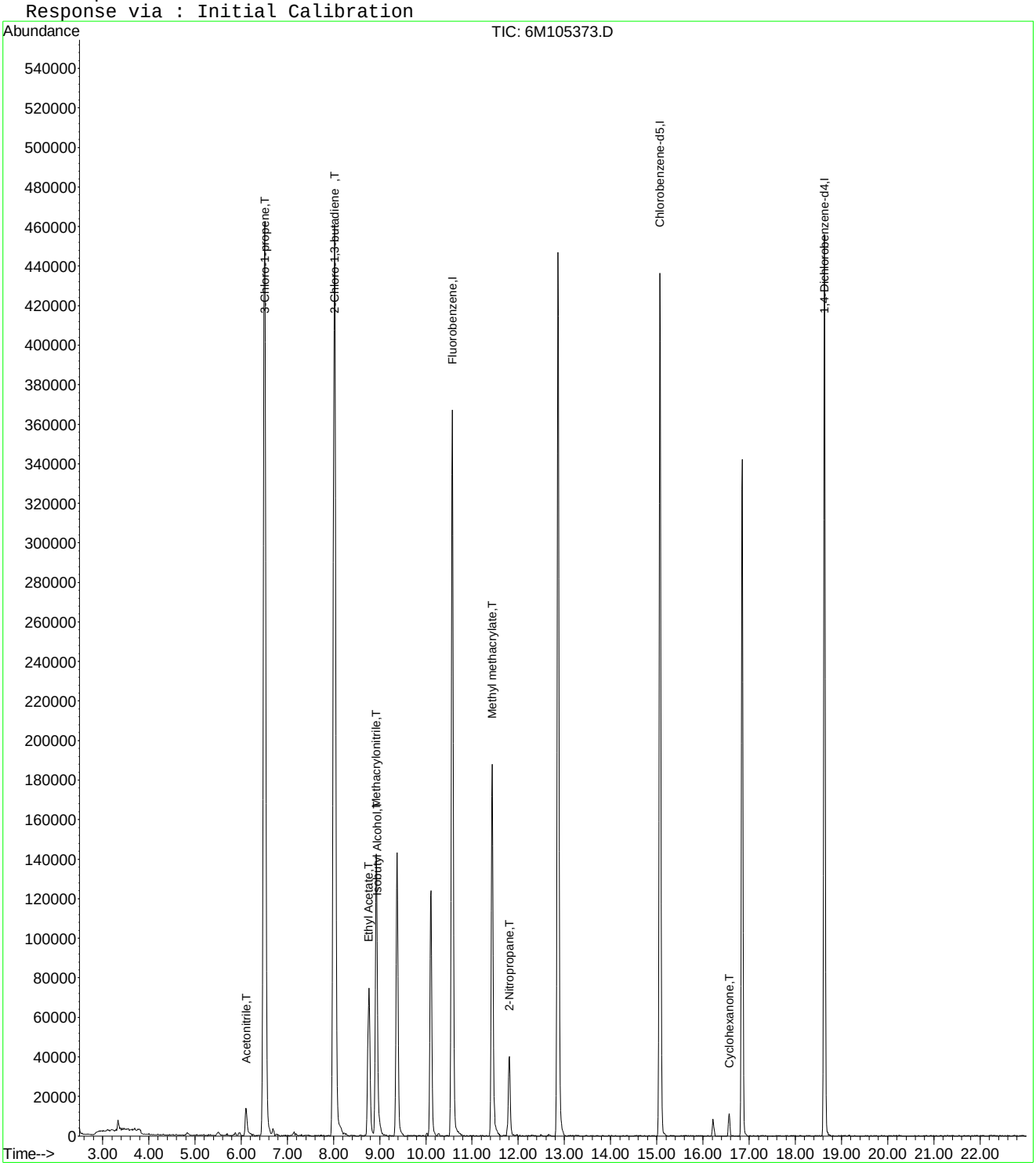
| Internal Standards | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| 1) Fluorobenzene | 10.57 | 96 | 525930 | 25.00 | ug/L | | 0.00 |
| 11) Chlorobenzene-d5 | 15.06 | 117 | 367927 | 25.00 | ug/L | | 0.00 |
| 12) 1,4-Dichlorobenzene-d4 | 18.63 | 152 | 178601 | 25.00 | ug/L | | 0.00 |
| **Target Compounds** | | | | | | | Qvalue |
| 2) Acetonitrile | 6.11 | 41 | 24875 | 51.9208 | ug/L | | 96 |
| 3) 3-Chloro-1-propene | 6.51 | 41 | 587071 | 51.3977 | ug/L | | 100 |
| 4) 2-Chloro-1,3-butadiene | 8.02 | 53 | 557757 | 51.6431 | ug/L | | 100 |
| 5) Ethyl Acetate | 8.76 | 43 | 155016 | 49.1587 | ug/L | # | 100 |
| 6) Methacrylonitrile | 8.93 | 67 | 67503 | 50.9299 | ug/L | | 98 |
| 7) Isobutyl Alcohol | 8.95 | 43 | 13279 | 95.1565 | ug/L | # | 97 |
| 9) Methyl methacrylate | 11.44 | 41 | 165950 | 48.9606 | ug/L | | 100 |
| 10) 2-Nitropropane | 11.81 | 43 | 45288 | 48.2442 | ug/L | | 97 |
| 13) Cyclohexanone | 16.57 | 55 | 8212 | 52.4388 | ug/L | | 99 |

(#) = qualifier out of range (m) = manual integration
6M105373.D A9FOOWTR.M Thu Feb 02 15:11:56 2012 Page 1

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\2\DATA\012512\6M105373.D Vial: 7
Acq On : 25 Jan 2012 11:17 Operator: ADC
Sample : WG388587-03 50ug/L 826A9FOO QC Inst : HPMS6
Misc : 1,1 STD49721 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Feb 2 11:00 2012 Quant Results File: A9FOOWTR.RES

Method : C:\MSDCHEM\2\METHODS\A9FOOWTR.M (RTE Integrator)
Title : A9-FOO Water - IC: 01/25/12 - HPMS6
Last Update : Thu Feb 02 09:44:46 2012
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\2\DATA\012512\6M105374.D Vial: 8
Acq On : 25 Jan 2012 11:49 Operator: ADC
Sample : WG388587-04 100ug/L 826A9FOO QC Inst : HPMS6
Misc : 1,1 STD49721 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Feb 02 11:00:11 2012 Quant Results File: A9FOOWTR.RES

Quant Method : C:\MSDCHEM\2\METHODS\A9FOOWTR.M (RTE Integrator)
Title : A9-FOO Water - IC: 01/25/12 - HPMS6
Last Update : Thu Feb 02 09:44:46 2012
Response via : Initial Calibration
DataAcq Meth : 8260WT

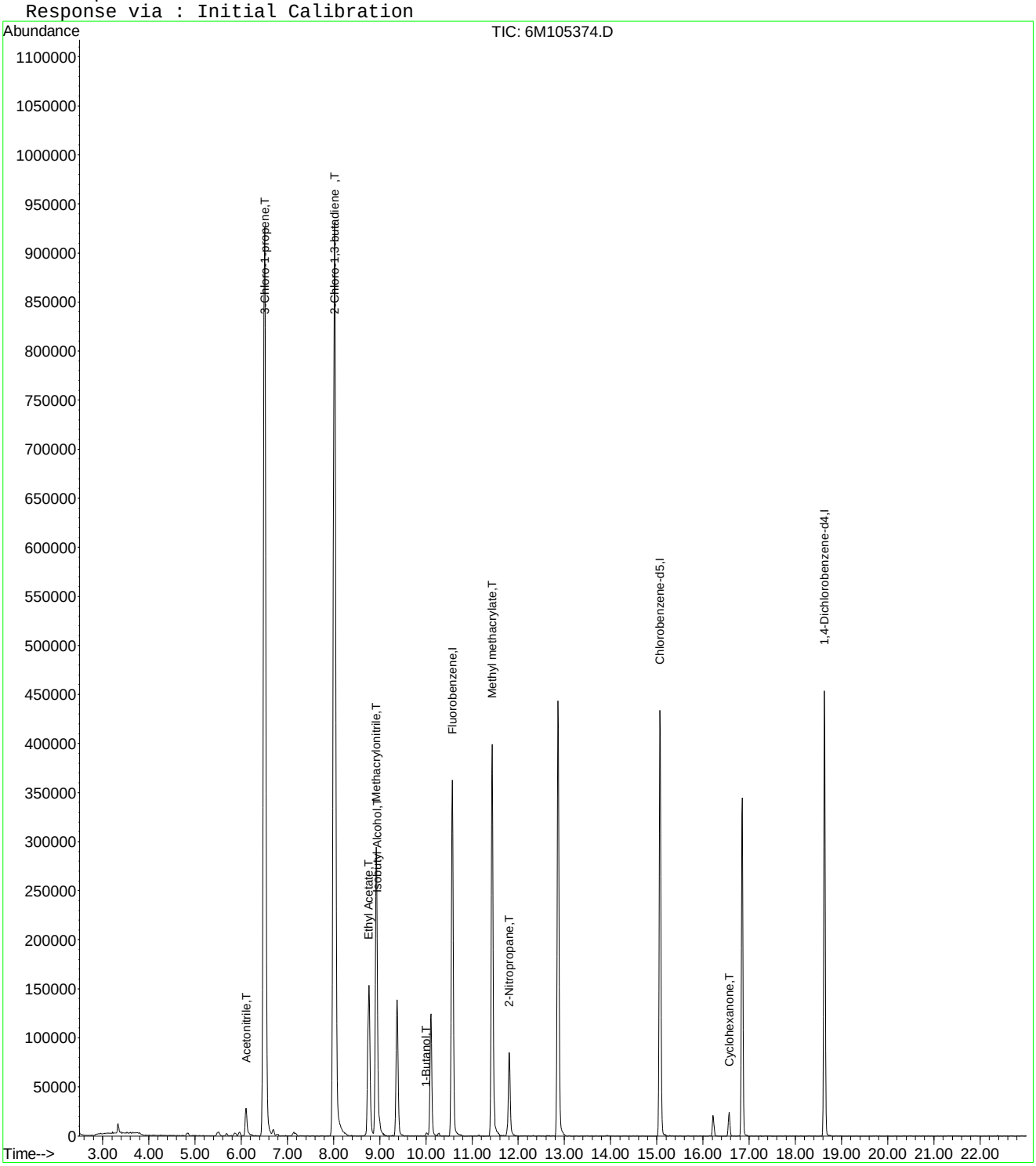
| Internal Standards | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| 1) Fluorobenzene | 10.57 | 96 | 521985 | 25.00 | ug/L | | 0.00 |
| 11) Chlorobenzene-d5 | 15.06 | 117 | 364007 | 25.00 | ug/L | | 0.00 |
| 12) 1,4-Dichlorobenzene-d4 | 18.63 | 152 | 173837 | 25.00 | ug/L | | 0.00 |
| **Target Compounds** | | | | | | | Qvalue |
| 2) Acetonitrile | 6.11 | 41 | 49127 | 103.3162 | ug/L | | 100 |
| 3) 3-Chloro-1-propene | 6.51 | 41 | 1180872 | 104.1659 | ug/L | | 100 |
| 4) 2-Chloro-1,3-butadiene | 8.02 | 53 | 1129950 | 105.4136 | ug/L | | 100 |
| 5) Ethyl Acetate | 8.76 | 43 | 319926 | 102.2217 | ug/L | # | 100 |
| 6) Methacrylonitrile | 8.93 | 67 | 135748 | 103.1936 | ug/L | | 100 |
| 7) Isobutyl Alcohol | 8.95 | 43 | 27528 | 198.7549 | ug/L | | 96 |
| 8) 1-Butanol | 10.01 | 41 | 1808 | 50.3611 | ug/L | | 100 |
| 9) Methyl methacrylate | 11.44 | 41 | 351082 | 96.8724 | ug/L | | 100 |
| 10) 2-Nitropropane | 11.80 | 43 | 98910 | 95.2434 | ug/L | | 100 |
| 13) Cyclohexanone | 16.56 | 55 | 17278 | 92.2929 | ug/L | | 100 |

(#) = qualifier out of range (m) = manual integration
6M105374.D A9FOOWTR.M Thu Feb 02 15:11:57 2012 Page 1

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\2\DATA\012512\6M105374.D Vial: 8
Acq On : 25 Jan 2012 11:49 Operator: ADC
Sample : WG388587-04 100ug/L 826A9FOO QC Inst : HPMS6
Misc : 1,1 STD49721 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Feb 2 11:00 2012 Quant Results File: A9FOOWTR.RES

Method : C:\MSDCHEM\2\METHODS\A9FOOWTR.M (RTE Integrator)
Title : A9-FOO Water - IC: 01/25/12 - HPMS6
Last Update : Thu Feb 02 09:44:46 2012
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\2\DATA\012512\6M105375.D Vial: 9
Acq On : 25 Jan 2012 12:22 Operator: ADC
Sample : WG388587-05 200ug/L 826A9FOO QC Inst : HPMS6
Misc : 1,1 STD49721 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Feb 02 11:00:12 2012 Quant Results File: A9FOOWTR.RES

Quant Method : C:\MSDCHEM\2\METHODS\A9FOOWTR.M (RTE Integrator)
Title : A9-FOO Water - IC: 01/25/12 - HPMS6
Last Update : Thu Feb 02 09:44:46 2012
Response via : Initial Calibration
DataAcq Meth : 8260WT

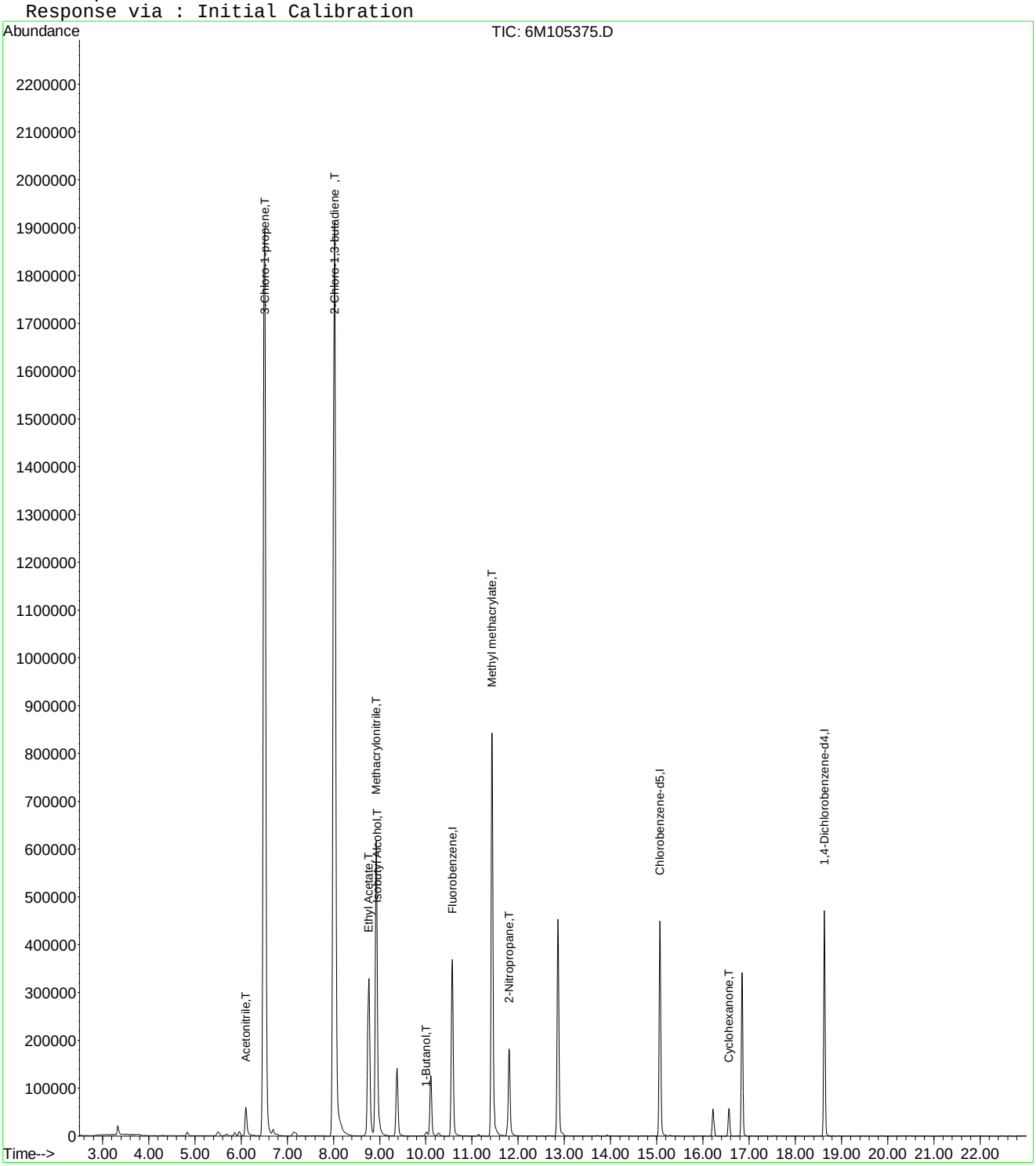
| Internal Standards | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| 1) Fluorobenzene | 10.57 | 96 | 534922 | 25.00 | ug/L | | 0.00 |
| 11) Chlorobenzene-d5 | 15.07 | 117 | 371767 | 25.00 | ug/L | | 0.00 |
| 12) 1,4-Dichlorobenzene-d4 | 18.63 | 152 | 181349 | 25.00 | ug/L | | 0.00 |
| **Target Compounds** | | | | | | | Qvalue |
| 2) Acetonitrile | 6.10 | 41 | 104721 | 214.9064 | ug/L | | 98 |
| 3) 3-Chloro-1-propene | 6.51 | 41 | 2451072 | 210.9824 | ug/L | | 99 |
| 4) 2-Chloro-1,3-butadiene | 8.02 | 53 | 2371831 | 215.9180 | ug/L | | 100 |
| 5) Ethyl Acetate | 8.77 | 43 | 681737 | 212.5582 | ug/L | # | 100 |
| 6) Methacrylonitrile | 8.93 | 67 | 292287 | 216.8185 | ug/L | | 98 |
| 7) Isobutyl Alcohol | 8.95 | 43 | 58077 | 409.1804 | ug/L | # | 92 |
| 8) 1-Butanol | 10.01 | 41 | 6913 | 187.9020 | ug/L | | 70 |
| 9) Methyl methacrylate | 11.43 | 41 | 752659 | 195.4261 | ug/L | | 99 |
| 10) 2-Nitropropane | 11.80 | 43 | 216103 | 192.7634 | ug/L | | 98 |
| 13) Cyclohexanone | 16.56 | 55 | 41618 | 189.3675 | ug/L | | 99 |

(#) = qualifier out of range (m) = manual integration
6M105375.D A9FOOWTR.M Thu Feb 02 15:11:58 2012 Page 1

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\2\DATA\012512\6M105375.D Vial: 9
Acq On : 25 Jan 2012 12:22 Operator: ADC
Sample : WG388587-05 200ug/L 826A9FOO QC Inst : HPMS6
Misc : 1,1 STD49721 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Feb 2 11:00 2012 Quant Results File: A9FOOWTR.RES

Method : C:\MSDCHEM\2\METHODS\A9FOOWTR.M (RTE Integrator)
Title : A9-FOO Water - IC: 01/25/12 - HPMS6
Last Update : Thu Feb 02 09:44:46 2012
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\2\DATA\012512\6M105376.D Vial: 10
Acq On : 25 Jan 2012 12:55 Operator: ADC
Sample : WG388587-06 300ug/L 826A9FOO QC Inst : HPMS6
Misc : 1,1 STD49721 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Feb 02 11:00:14 2012 Quant Results File: A9FOOWTR.RES

Quant Method : C:\MSDCHEM\2\METHODS\A9FOOWTR.M (RTE Integrator)
Title : A9-FOO Water - IC: 01/25/12 - HPMS6
Last Update : Thu Feb 02 09:44:46 2012
Response via : Initial Calibration
DataAcq Meth : 8260WT

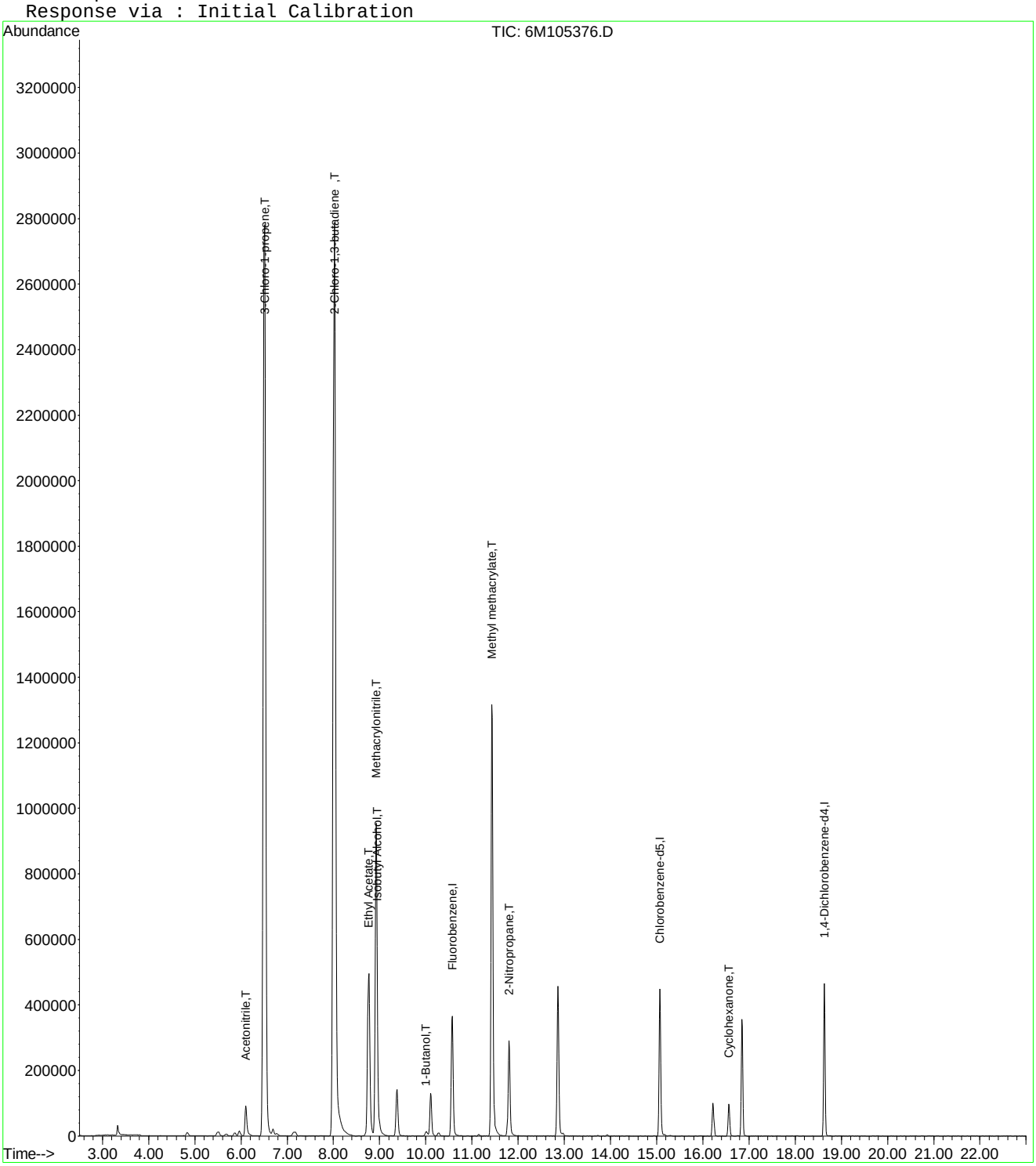
| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 1) Fluorobenzene | 10.57 | 96 | 532868 | 25.00 | ug/L | 0.00 |
| 11) Chlorobenzene-d5 | 15.07 | 117 | 367343 | 25.00 | ug/L | 0.00 |
| 12) 1,4-Dichlorobenzene-d4 | 18.63 | 152 | 176868 | 25.00 | ug/L | 0.00 |
| **Target Compounds** | | | | | | Qvalue |
| 2) Acetonitrile | 6.10 | 41 | 156947 | 323.3252 | ug/L | 98 |
| 3) 3-Chloro-1-propene | 6.51 | 41 | 3628216 | 313.5120 | ug/L | 100 |
| 4) 2-Chloro-1,3-butadiene | 8.02 | 53 | 3511500 | 320.8992 | ug/L | 100 |
| 5) Ethyl Acetate | 8.77 | 43 | 1044658 | 326.9686 | ug/L # | 100 |
| 6) Methacrylonitrile | 8.93 | 67 | 444609 | 331.0823 | ug/L | 99 |
| 7) Isobutyl Alcohol | 8.95 | 43 | 94189 | 666.1648 | ug/L | 96 |
| 8) 1-Butanol | 10.00 | 41 | 12003 | 327.5106 | ug/L | 67 |
| 9) Methyl methacrylate | 11.43 | 41 | 1170130 | 301.2810 | ug/L | 100 |
| 10) 2-Nitropropane | 11.80 | 43 | 338961 | 298.2921 | ug/L | 96 |
| 13) Cyclohexanone | 16.56 | 55 | 67793 | 304.1310 | ug/L | 99 |

(#) = qualifier out of range (m) = manual integration
6M105376.D A9FOOWTR.M Thu Feb 02 15:12:00 2012 Page 1

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\2\DATA\012512\6M105376.D Vial: 10
Acq On : 25 Jan 2012 12:55 Operator: ADC
Sample : WG388587-06 300ug/L 826A9FOO QC Inst : HPMS6
Misc : 1,1 STD49721 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Feb 2 11:00 2012 Quant Results File: A9FOOWTR.RES

Method : C:\MSDCHEM\2\METHODS\A9FOOWTR.M (RTE Integrator)
Title : A9-FOO Water - IC: 01/25/12 - HPMS6
Last Update : Thu Feb 02 09:44:46 2012
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\2\DATA\012512\6M105377.D Vial: 11
Acq On : 25 Jan 2012 13:27 Operator: ADC
Sample : WG388587-07 400ug/L 826A9FOO QC Inst : HPMS6
Misc : 1,1 STD49721 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Feb 02 11:00:16 2012 Quant Results File: A9FOOWTR.RES

Quant Method : C:\MSDCHEM\2\METHODS\A9FOOWTR.M (RTE Integrator)
Title : A9-FOO Water - IC: 01/25/12 - HPMS6
Last Update : Thu Feb 02 09:44:46 2012
Response via : Initial Calibration
DataAcq Meth : 8260WT

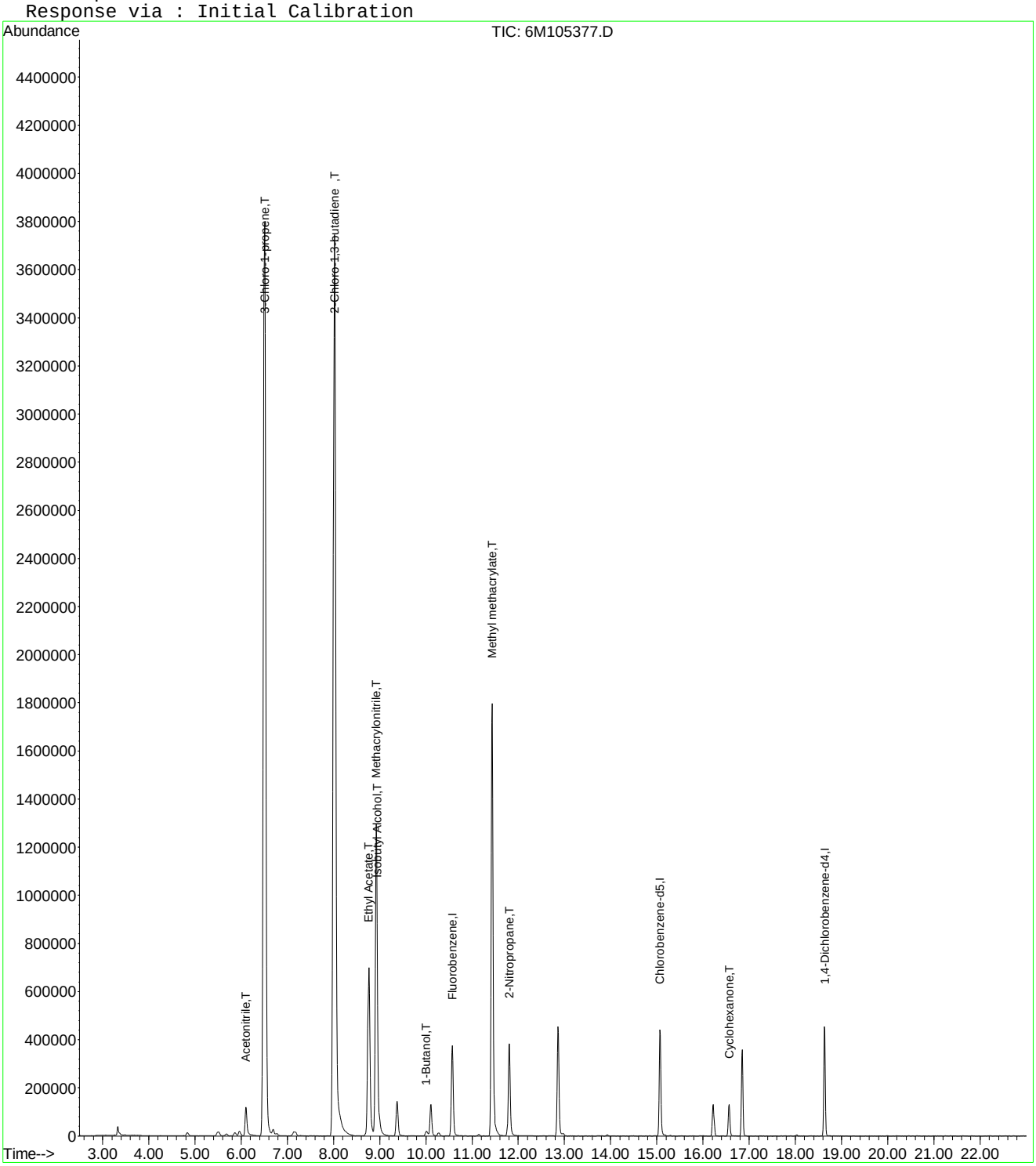
| Internal Standards | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| 1) Fluorobenzene | 10.57 | 96 | 540011 | 25.00 | ug/L | | 0.00 |
| 11) Chlorobenzene-d5 | 15.06 | 117 | 371362 | 25.00 | ug/L | | 0.00 |
| 12) 1,4-Dichlorobenzene-d4 | 18.64 | 152 | 178768 | 25.00 | ug/L | | 0.01 |
| **Target Compounds** | | | | | | | Qvalue |
| 2) Acetonitrile | 6.10 | 41 | 215914 | 438.9189 | ug/L | | 97 |
| 3) 3-Chloro-1-propene | 6.51 | 41 | 4907559 | 418.4500 | ug/L | | 99 |
| 4) 2-Chloro-1,3-butadiene | 8.02 | 53 | 4745927 | 427.9707 | ug/L | | 100 |
| 5) Ethyl Acetate | 8.76 | 43 | 1446302 | 446.6917 | ug/L | # | 100 |
| 6) Methacrylonitrile | 8.93 | 67 | 604809 | 444.4194 | ug/L | | 100 |
| 7) Isobutyl Alcohol | 8.95 | 43 | 119029 | 830.7136 | ug/L | | 87 |
| 8) 1-Butanol | 10.01 | 41 | 17098 | 460.3604 | ug/L | | 72 |
| 9) Methyl methacrylate | 11.44 | 41 | 1591710 | 402.1410 | ug/L | | 100 |
| 10) 2-Nitropropane | 11.81 | 43 | 471553 | 406.0960 | ug/L | | 94 |
| 13) Cyclohexanone | 16.56 | 55 | 92310 | 403.4226 | ug/L | | 98 |

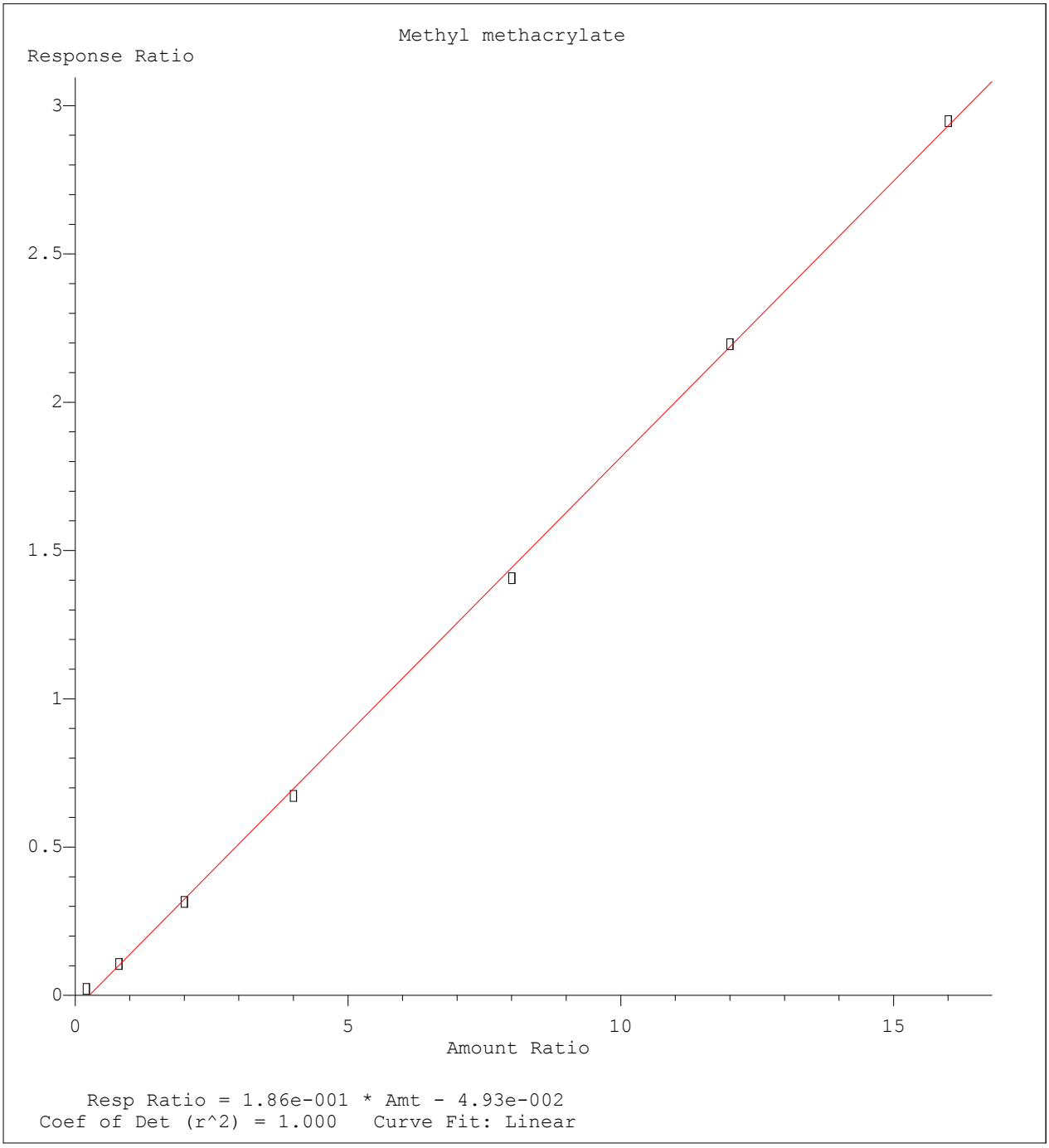
(#) = qualifier out of range (m) = manual integration
6M105377.D A9FOOWTR.M Thu Feb 02 15:12:01 2012 Page 1

Quantitation Report (Not Reviewed)

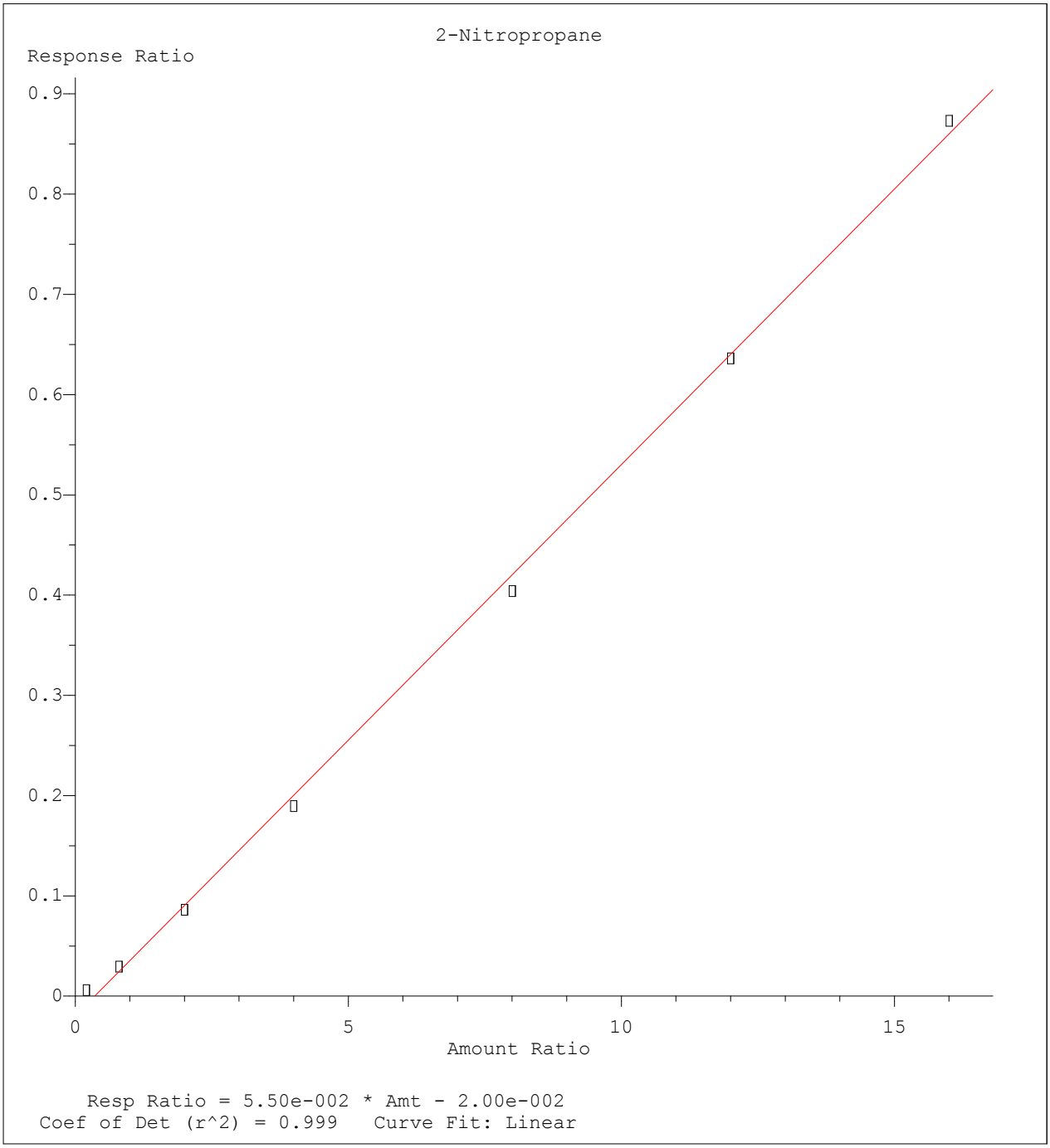
Data File : C:\MSDCHEM\2\DATA\012512\6M105377.D Vial: 11
Acq On : 25 Jan 2012 13:27 Operator: ADC
Sample : WG388587-07 400ug/L 826A9FOO QC Inst : HPMS6
Misc : 1,1 STD49721 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Feb 2 11:00 2012 Quant Results File: A9FOOWTR.RES

Method : C:\MSDCHEM\2\METHODS\A9FOOWTR.M (RTE Integrator)
Title : A9-FOO Water - IC: 01/25/12 - HPMS6
Last Update : Thu Feb 02 09:44:46 2012
Response via : Initial Calibration

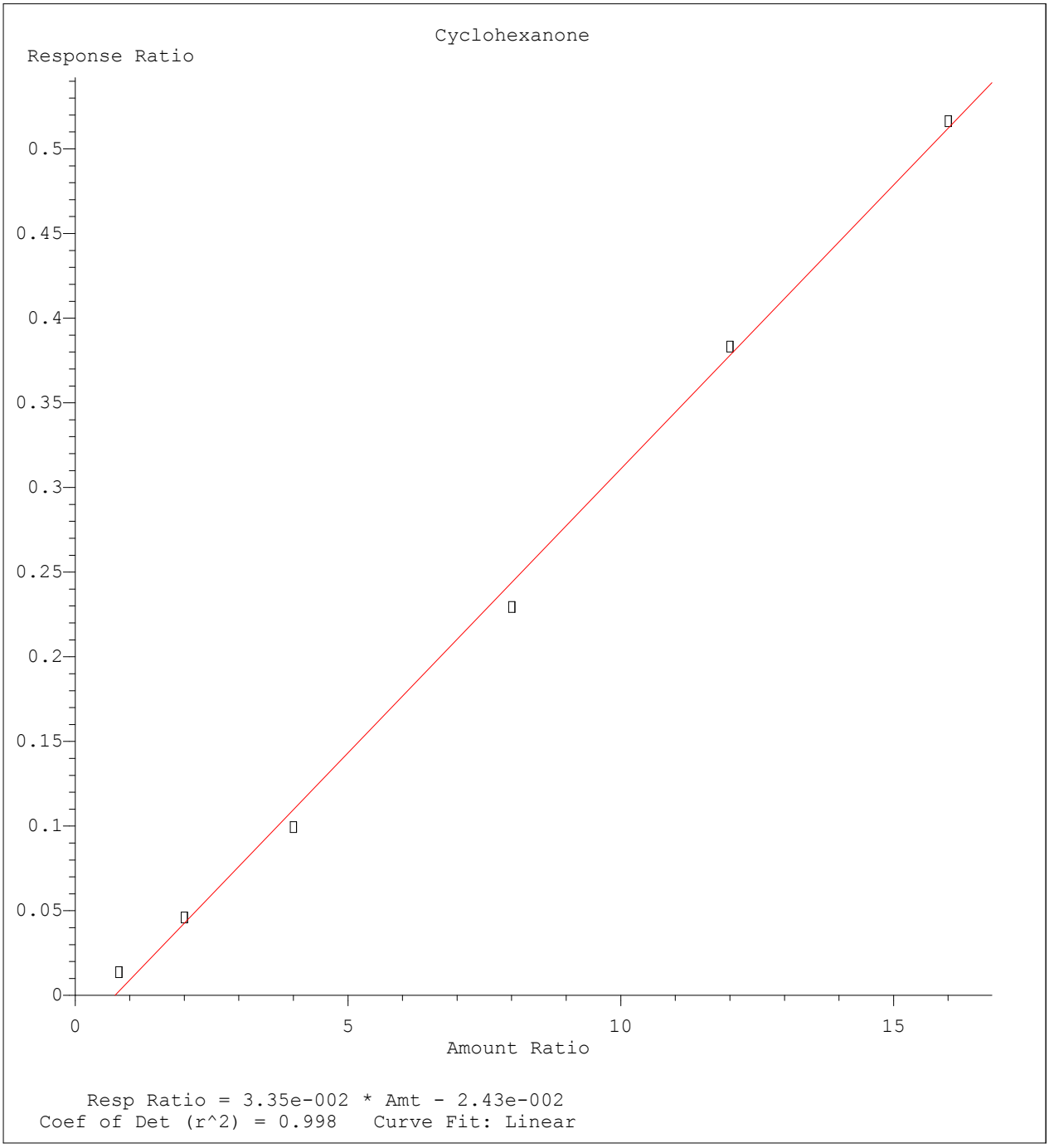





Method Name: C:\MSDCHEM\2\METHODS\A9FOOWTR.M
Calibration Table Last Updated: Thu Feb 02 09:44:46 2012




Method Name: C:\MSDCHEM\2\METHODS\A9FOOWTR.M
Calibration Table Last Updated: Thu Feb 02 09:44:46 2012




Method Name: C:\MSDCHEM\2\METHODS\A9FOOWTR.M
Calibration Table Last Updated: Thu Feb 02 09:44:46 2012

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\2\DATA\012512\6M105378.D Vial: 12
Acq On : 25 Jan 2012 14:00 Operator: ADC
Sample : WG388587-08 100ug/L ALT 826A9FOO QC Inst : HPMS6
Misc : 1,1 STD49721 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Feb 02 11:00:18 2012 Quant Results File: A9FOOWTR.RES

Quant Method : C:\MSDCHEM\2\METHODS\A9FOOWTR.M (RTE Integrator)
Title : A9-FOO Water - IC: 01/25/12 - HPMS6
Last Update : Thu Feb 02 09:44:46 2012
Response via : Initial Calibration
DataAcq Meth : 8260WT

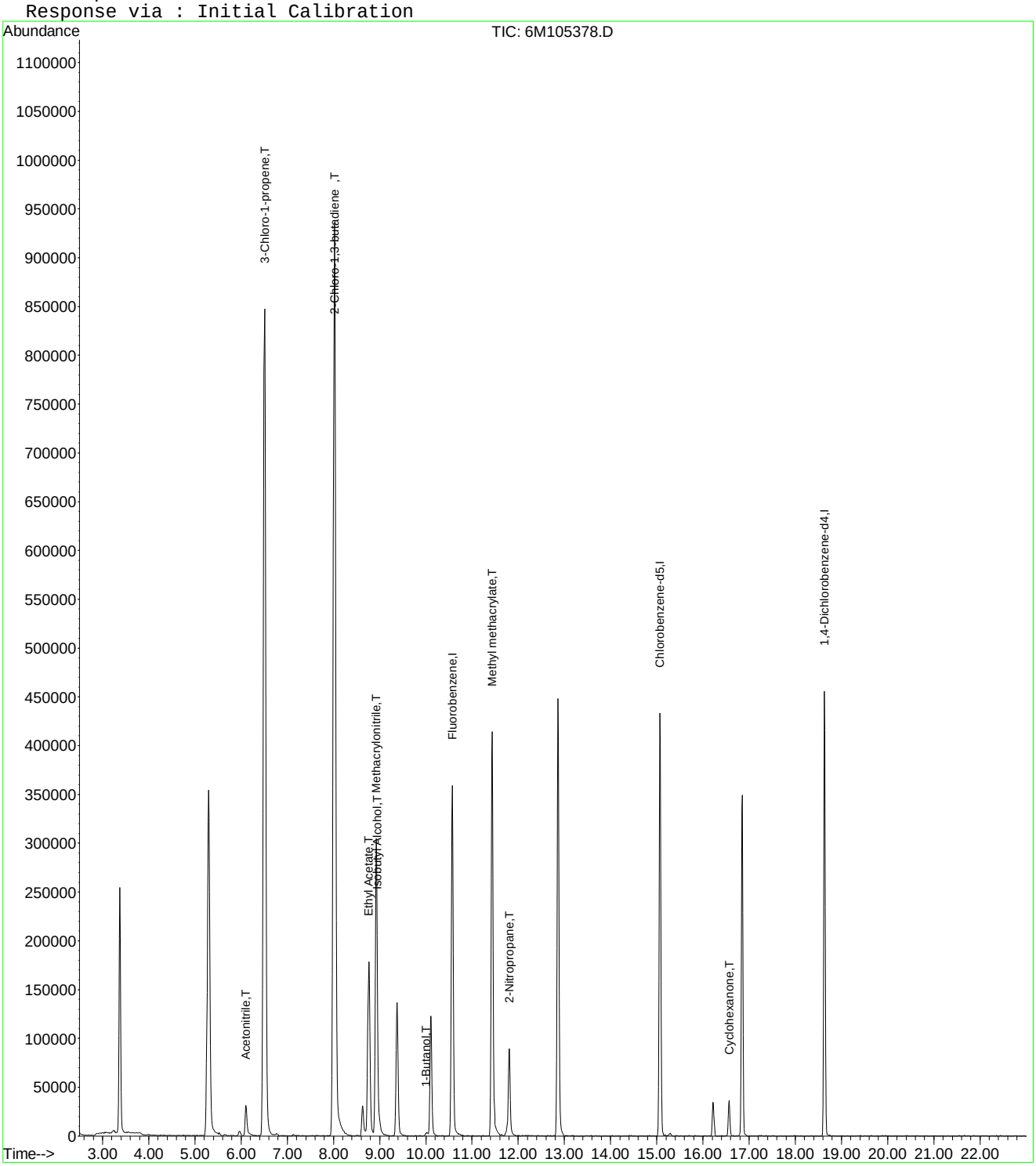
| Internal Standards | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| 1) Fluorobenzene | 10.57 | 96 | 512896 | 25.00 | ug/L | | 0.00 |
| 11) Chlorobenzene-d5 | 15.06 | 117 | 362669 | 25.00 | ug/L | | 0.00 |
| 12) 1,4-Dichlorobenzene-d4 | 18.63 | 152 | 178315 | 25.00 | ug/L | | 0.00 |
| **Target Compounds** | | | | | | | Qvalue |
| 2) Acetonitrile | 6.10 | 41 | 54059 | 115.7031 | ug/L | | 98 |
| 3) 3-Chloro-1-propene | 6.51 | 41 | 1081081 | 97.0531 | ug/L | | 100 |
| 4) 2-Chloro-1,3-butadiene | 8.02 | 53 | 1145123 | 108.7223 | ug/L | | 100 |
| 5) Ethyl Acetate | 8.76 | 43 | 375275 | 122.0315 | ug/L | # | 100 |
| 6) Methacrylonitrile | 8.93 | 67 | 141969 | 109.8352 | ug/L | | 100 |
| 7) Isobutyl Alcohol | 8.95 | 43 | 30619 | 224.9898 | ug/L | # | 99 |
| 8) 1-Butanol | 10.01 | 41 | 3160 | 89.5804 | ug/L | | 61 |
| 9) Methyl methacrylate | 11.44 | 41 | 366057 | 102.3896 | ug/L | | 100 |
| 10) 2-Nitropropane | 11.81 | 43 | 105557 | 102.6620 | ug/L | | 97 |
| 13) Cyclohexanone | 16.57 | 55 | 24853 | 122.1280 | ug/L | | 96 |

(#) = qualifier out of range (m) = manual integration
6M105378.D A9FOOWTR.M Thu Feb 02 15:12:02 2012 Page 1

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\2\DATA\012512\6M105378.D Vial: 12
Acq On : 25 Jan 2012 14:00 Operator: ADC
Sample : WG388587-08 100ug/L ALT 826A9FOO QC Inst : HPMS6
Misc : 1,1 STD49721 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Feb 2 11:00 2012 Quant Results File: A9FOOWTR.RES

Method : C:\MSDCHEM\2\METHODS\A9FOOWTR.M (RTE Integrator)
Title : A9-FOO Water - IC: 01/25/12 - HPMS6
Last Update : Thu Feb 02 09:44:46 2012
Response via : Initial Calibration



Evaluate Continuing Calibration Report

Data File : C:\MSDCHEM\2\DATA\012512\6M105378.D Vial: 12
Acq On : 25 Jan 2012 14:00 Operator: ADC
Sample : WG388587-08 100ug/L ALT 826A9FOO QC Inst : HPMS6
Misc : 1,1 STD49721 Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\MSDCHEM\2\METHODS\A9FOOWTR.M (RTE Integrator)
Title : A9-FOO Water - IC: 01/25/12 - HPMS6
Last Update : Thu Feb 02 09:44:46 2012
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 1% Max. R.T. Dev 0.50min
Max. RRF Dev : 75% Max. Rel. Area : 200%

| | | Compound | Amount | Calc. | %Dev | Area% | Dev(min) |
|---|---|---|---|---|---|---|---|
| 1 | I | Fluorobenzene | 25.000 | 25.000 | 0.0 | 98 | 0.00 |
| 2 | T | Acetonitrile | 100.000 | 115.703 | -15.7 | 110 | 0.00 |
| 3 | T | 3-Chloro-1-propene | 100.000 | 97.053 | 2.9 | 92 | 0.00 |
| 4 | T | 2-Chloro-1,3-butadiene | 100.000 | 108.722 | -8.7 | 101 | 0.00 |
| 5 | T | Ethyl Acetate | 100.000 | 122.031 | -22.0 | 117 | 0.00 |
| 6 | T | Methacrylonitrile | 100.000 | 109.835 | -9.8 | 105 | 0.00 |
| 7 | T | Isobutyl Alcohol | 200.000 | 224.990 | -12.5 | 111 | 0.00 |
| 8 | T | 1-Butanol | 100.000 | 89.580 | 10.4 | 175 | 0.00 |
| 9 | T | Methyl methacrylate | 100.000 | 102.390 | -2.4 | 104 | 0.00 |
| 10 | T | 2-Nitropropane | 100.000 | 102.662 | -2.7 | 107 | 0.01 |
| 11 | I | Chlorobenzene-d5 | 25.000 | 25.000 | 0.0 | 100 | 0.00 |
| 12 | I | 1,4-Dichlorobenzene-d4 | 25.000 | 25.000 | 0.0 | 103 | 0.00 |
| 13 | T | Cyclohexanone | 100.000 | 122.128 | -22.1 | 144 | 0.00 |

(#) = Out of Range SPCC's out = 0 CCC's out = 0
6M105378.D A9FOOWTR.M Thu Feb 02 11:06:34 2012 Page 1

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\051612\6M108171.D Vial: 2
Acq On : 16 May 2012 15:15 Operator: adc
Sample : WG397878-02 0.3 ug/L STD 8260 Inst : HPMS6
Misc : 1,1 STD51468 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 17 09:30:37 2012 Quant Results File: 8260WT.RES

Quant Method : C:\MSDCHEM\1\METHODS\8260WT.M (RTE Integrator)
Title : 8260B/624_WATER SOP:OVLMSV01 05/16/12 - HPMS6
Last Update : Thu May 17 09:26:04 2012
Response via : Initial Calibration
DataAcq Meth : 8260WT

| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 1) Fluorobenzene | 10.47 | 96 | 713202 | 25.00 | ug/L | 0.00 |
| 57) Chlorobenzene-d5 | 14.96 | 117 | 519456 | 25.00 | ug/L | 0.00 |
| 78) 1,4-Dichlorobenzene-d4 | 18.54 | 152 | 252051 | 25.00 | ug/L | 0.00 |
| **System Monitoring Compounds** | | | | | | |
| 37) Dibromofluoromethane | 0.00 | 111 | 0 | 0.0000 | ug/L | |
| Spiked Amount 25.000 | Range 86 - 118 | | Recovery = | 0.00%# | | |
| 43) 1,2-Dichloroethane-d4 | 0.00 | 65 | 0 | 0.0000 | ug/L | |
| Spiked Amount 25.000 | Range 80 - 120 | | Recovery = | 0.00%# | | |
| 58) Toluene-d8 | 12.77 | 98 | 686 | 0.0251 | ug/L | 0.01 |
| Spiked Amount 25.000 | Range 88 - 110 | | Recovery = | 0.12%# | | |
| 80) p-Bromofluorobenzene | 0.00 | 95 | 0 | 0.0000 | ug/L | |
| Spiked Amount 25.000 | Range 86 - 115 | | Recovery = | 0.00%# | | |
| **Target Compounds** | | | | | | Qvalue |
| 13) Acetone | 5.58 | 43 | 652 | 0.4260 | ug/L # | 47 |
| 14) 1,1-Dichloroethene | 5.77 | 61 | 3581 | 0.2627 | ug/L | 100 |
| 19) Methylene Chloride | 6.61 | 84 | 2536 | 0.2944 | ug/L | 84 |
| 22) Methyl Tert Butyl Ether | 6.86 | 73 | 5304 | 0.2843 | ug/L # | 53 |
| 23) trans-1,2-Dichloroethene | 7.10 | 96 | 2171 | 0.2677 | ug/L | 97 |
| 27) 1,1-Dichloroethane | 7.78 | 63 | 4559 | 0.2881 | ug/L | 81 |
| 31) 2,2-Dichloropropane | 8.65 | 77 | 3488 | 0.2819 | ug/L | 94 |
| 32) cis-1,2-Dichloroethene | 8.72 | 96 | 2122 | 0.2493 | ug/L | 93 |
| 33) Chloroform | 8.96 | 83 | 4080 | 0.2746 | ug/L | 85 |
| 35) Bromochloromethane | 9.20 | 130 | 832 | 0.1809 | ug/L | 75 |
| 36) Tetrahydrofuran | 9.24 | 42 | 1016 | 0.7260 | ug/L # | 37 |
| 38) 1,1,1-Trichloroethane | 9.57 | 97 | 3254 | 0.2399 | ug/L | 89 |
| 40) 1,1-Dichloropropene | 9.78 | 75 | 3115 | 0.2773 | ug/L | 94 |
| 42) Carbon Tetrachloride | 9.93 | 117 | 2512 | 0.5372 | ug/L # | 81 |
| 45) 1,2-Dichloroethane | 10.15 | 62 | 2750 | 0.2436 | ug/L # | 81 |
| 46) Benzene | 10.17 | 78 | 8873 | 0.2770 | ug/L | 94 |
| 47) Trichloroethene | 11.05 | 130 | 2027 | 0.2477 | ug/L | 86 |
| 49) 1,2-Dichloropropane | 11.30 | 63 | 2292 | 0.2929 | ug/L | 76 |
| 51) Bromodichloromethane | 11.64 | 83 | 2533 | 0.2446 | ug/L | 99 |
| 52) Dibromomethane | 11.74 | 93 | 643 | 0.1461 | ug/L | 88 |
| 55) cis-1,3-Dichloropropene | 12.41 | 75 | 2421 | 0.2064 | ug/L # | 70 |
| 59) Toluene | 12.88 | 91 | 8791 | 0.2846 | ug/L | 99 |
| 62) trans-1,3-Dichloropropene | 13.11 | 75 | 1507 | 0.4585 | ug/L # | 54 |
| 63) 1,1,2-Trichloroethane | 13.35 | 97 | 1165 | 0.4149 | ug/L # | 79 |
| 65) 1,3-Dichloropropane | 13.71 | 76 | 2349 | 0.2612 | ug/L | 98 |
| 66) Tetrachloroethene | 13.83 | 166 | 1775 | 0.2491 | ug/L | 96 |
| 67) Dibromochloromethane | 14.12 | 129 | 890 | 0.5114 | ug/L | 95 |
| 68) 1,2-Dibromoethane | 14.42 | 107 | 827 | 0.1658 | ug/L | 93 |
| 70) Chlorobenzene | 15.02 | 112 | 5194 | 0.2596 | ug/L | 97 |
| 71) 1,1,1,2-Tetrachloroethane | 15.07 | 131 | 1294 | 0.3923 | ug/L # | 24 |
| 72) Ethylbenzene | 15.08 | 106 | 2352 | 0.2184 | ug/L | 65 |
| 73) m-,p-Xylene | 15.19 | 106 | 6481 | 1.0553 | ug/L | 86 |
| 74) o-Xylene | 15.84 | 106 | 2868 | 0.5394 | ug/L | 69 |
| 75) Styrene | 15.89 | 104 | 4506 | 0.5590 | ug/L | 97 |
| 76) Bromoform | 16.42 | 173 | 436 | 0.8127 | ug/L # | 33 |
| 77) Isopropylbenzene | 16.35 | 105 | 8056 | 0.2720 | ug/L | 96 |
| 79) 1,1,2,2-Tetrachloroethane | 16.61 | 83 | 1060 | 0.2142 | ug/L # | 40 |
| 83) n-Propylbenzene | 16.95 | 91 | 9516 | 0.2831 | ug/L # | 93 |
| 84) Bromobenzene | 17.06 | 156 | 1916 | 0.2810 | ug/L | 99 |
| 85) 1,3,5-Trimethylbenzene | 17.19 | 105 | 6200 | 0.2777 | ug/L | 92 |

(#) = qualifier out of range (m) = manual integration
6M108171.D 8260WT.M Thu May 17 09:30:37 2012 Page 1

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\051612\6M108171.D Vial: 2
Acq On : 16 May 2012 15:15 Operator: adc
Sample : WG397878-02 0.3 ug/L STD 8260 Inst : HPMS6
Misc : 1,1 STD51468 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 17 09:30:37 2012 Quant Results File: 8260WT.RES

Quant Method : C:\MSDCHEM\1\METHODS\8260WT.M (RTE Integrator)
Title : 8260B/624_WATER SOP:OVLMSV01 05/16/12 - HPMS6
Last Update : Thu May 17 09:26:04 2012
Response via : Initial Calibration
DataAcq Meth : 8260WT

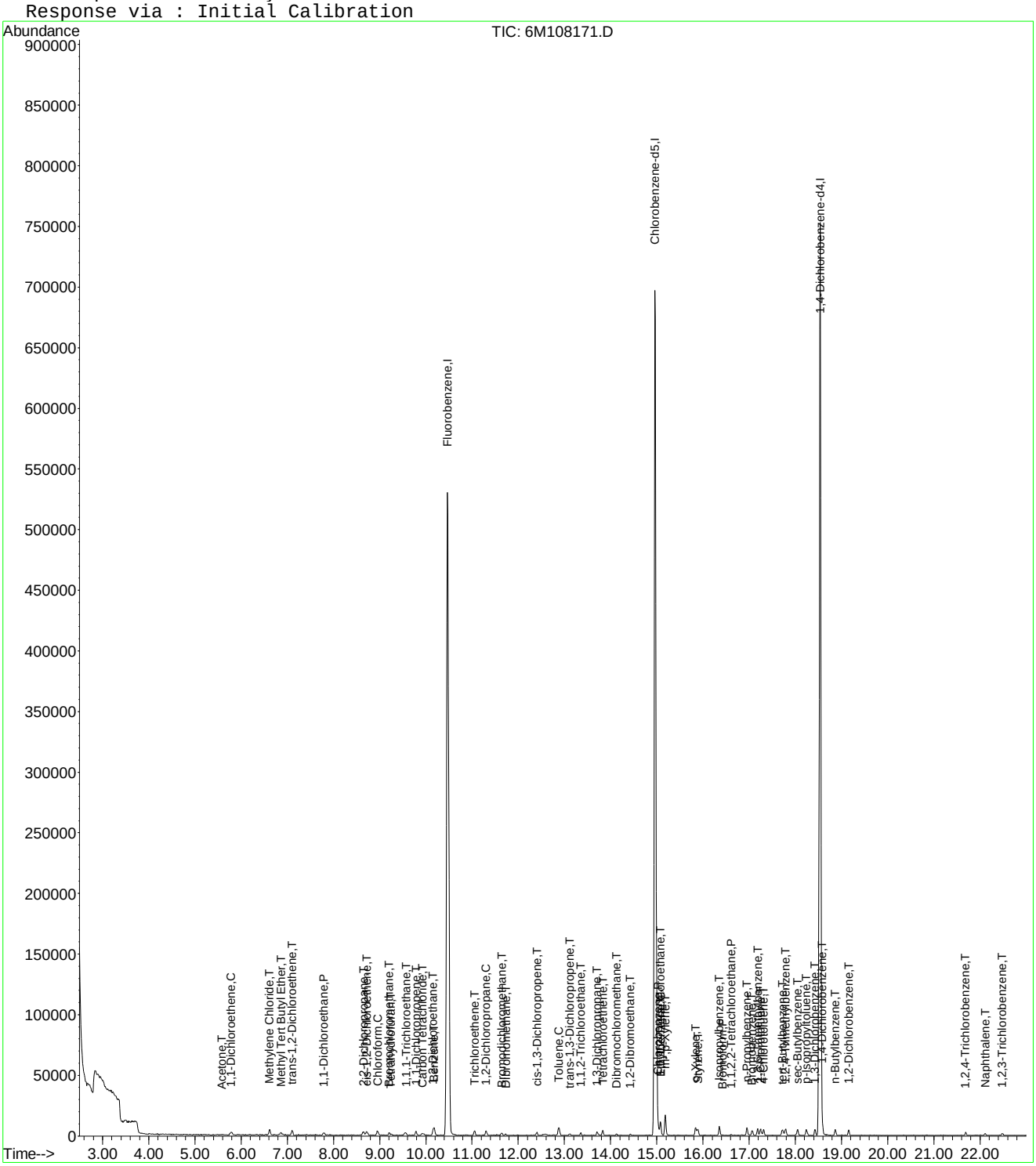
| | Compound | R.T. | QIon | Response | Conc | Unit | | Qvalue |
|---|---|---|---|---|---|---|---|---|
| 86) | 2-Chlorotoluene | 17.25 | 91 | 6060 | 0.2550 | ug/L | | 91 |
| 87) | 4-Chlorotoluene | 17.31 | 91 | 5969 | 0.2779 | ug/L | | 95 |
| 89) | tert-Butylbenzene | 17.72 | 134 | 1008 | 0.2160 | ug/L | | 86 |
| 90) | 1,2,4-Trimethylbenzene | 17.78 | 105 | 6783 | 0.2872 | ug/L | | 89 |
| 91) | sec-Butylbenzene | 18.05 | 105 | 7852 | 0.2999 | ug/L | | 84 |
| 92) | p-Isopropyltoluene | 18.24 | 119 | 5606 | 0.2713 | ug/L | | 99 |
| 93) | 1,3-Dichlorobenzene | 18.42 | 146 | 3940 | 0.3081 | ug/L | | 81 |
| 94) | 1,4-Dichlorobenzene | 18.58 | 146 | 3838 | 0.2804 | ug/L | # | 1 |
| 95) | n-Butylbenzene | 18.86 | 91 | 5598 | 0.2854 | ug/L | | 87 |
| 96) | 1,2-Dichlorobenzene | 19.16 | 146 | 3373 | 0.2821 | ug/L | | 93 |
| 98) | 1,2,4-Trichlorobenzene | 21.68 | 180 | 1935 | 0.2912 | ug/L | # | 79 |
| 100) | Naphthalene | 22.11 | 128 | 3485 | 0.2615 | ug/L | # | 67 |
| 101) | 1,2,3-Trichlorobenzene | 22.48 | 180 | 1345 | 0.2449 | ug/L | # | 85 |

(#) = qualifier out of range (m) = manual integration
6M108171.D 8260WT.M Thu May 17 09:30:37 2012 Page 2

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\051612\6M108171.D Vial: 2
Acq On : 16 May 2012 15:15 Operator: adc
Sample : WG397878-02 0.3 ug/L STD 8260 Inst : HPMS6
Misc : 1,1 STD51468 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 17 9:30 2012 Quant Results File: 8260WT.RES

Method : C:\MSDCHEM\1\METHODS\8260WT.M (RTE Integrator)
Title : 8260B/624_WATER SOP:OVLMSV01 05/16/12 - HPMS6
Last Update : Thu May 17 09:26:04 2012
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\051612\6M108172.D Vial: 3
Acq On : 16 May 2012 15:48 Operator: adc
Sample : WG397878-03 0.4 ug/L STD 8260 Inst : HPMS6
Misc : 1,1 STD51468 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 17 10:54:33 2012 Quant Results File: 8260WT.RES

Quant Method : C:\MSDCHEM\1\METHODS\8260WT.M (RTE Integrator)
Title : 8260B/624_WATER SOP:OVLMSV01 05/16/12 - HPMS6
Last Update : Thu May 17 09:26:04 2012
Response via : Initial Calibration
DataAcq Meth : 8260WT

| Internal Standards | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| 1) Fluorobenzene | 10.47 | 96 | 680267 | 25.00 | ug/L | | 0.00 |
| 57) Chlorobenzene-d5 | 14.96 | 117 | 509028 | 25.00 | ug/L | | 0.00 |
| 78) 1,4-Dichlorobenzene-d4 | 18.54 | 152 | 246422 | 25.00 | ug/L | | 0.00 |
| **System Monitoring Compounds** | | | | | | | |
| 37) Dibromofluoromethane | 0.00 | 111 | 0 | 0.0000 | ug/L | | |
| Spiked Amount 25.000 | Range 86 - 118 | | Recovery = | 0.00%# | | | |
| 43) 1,2-Dichloroethane-d4 | 0.00 | 65 | 0 | 0.0000 | ug/L | | |
| Spiked Amount 25.000 | Range 80 - 120 | | Recovery = | 0.00%# | | | |
| 58) Toluene-d8 | 0.00 | 98 | 0 | 0.0000 | ug/L | | |
| Spiked Amount 25.000 | Range 88 - 110 | | Recovery = | 0.00%# | | | |
| 80) p-Bromofluorobenzene | 0.00 | 95 | 0 | 0.0000 | ug/L | | |
| Spiked Amount 25.000 | Range 86 - 115 | | Recovery = | 0.00%# | | | |
| **Target Compounds** | | | | | | | Qvalue |
| 2) Dichlorodifluoromethane | 2.71 | 85 | 4517 | 0.4284 | ug/L | # | 76 |
| 3) Chloromethane | 3.10 | 50 | 11177 | 0.5345 | ug/L | | 98 |
| 6) Bromomethane | 4.07 | 94 | 1502 | 0.9280 | ug/L | | 99 |
| 7) Chloroethane | 4.21 | 64 | 2701 | 0.4074 | ug/L | # | 44 |
| 8) Trichlorofluoromethane | 4.68 | 101 | 6117 | 0.3884 | ug/L | # | 89 |
| 10) Isoprene | 5.25 | 67 | 3132 | 0.2271 | ug/L | | 92 |
| 12) 1,1,2-Trichloro-1,2,2-Trif | 5.50 | 101 | 2704 | 0.3343 | ug/L | # | 35 |
| 13) Acetone | 5.57 | 43 | 611 | 0.4186 | ug/L | # | 47 |
| 14) 1,1-Dichloroethene | 5.80 | 61 | 3885 | 0.2988 | ug/L | | 96 |
| 16) Dimethyl Sulfide | 6.05 | 62 | 3170 | 0.3080 | ug/L | | 95 |
| 17) Iodomethane | 6.32 | 142 | 1257 | 0.6786 | ug/L | # | 49 |
| 18) Methyl acetate | 6.36 | 43 | 945 | 0.2019 | ug/L | # | 63 |
| 19) Methylene Chloride | 6.61 | 84 | 2999 | 0.3649 | ug/L | | 89 |
| 20) Carbon Disulfide | 6.62 | 76 | 7689 | 0.3096 | ug/L | | 91 |
| 22) Methyl Tert Butyl Ether | 6.86 | 73 | 4823 | 0.2711 | ug/L | # | 62 |
| 23) trans-1,2-Dichloroethene | 7.09 | 96 | 2310 | 0.2986 | ug/L | | 94 |
| 24) n-Hexane | 7.20 | 57 | 2349 | 0.2687 | ug/L | | 85 |
| 27) 1,1-Dichloroethane | 7.79 | 63 | 4554 | 0.3017 | ug/L | | 89 |
| 31) 2,2-Dichloropropane | 8.65 | 77 | 3455 | 0.2927 | ug/L | | 95 |
| 32) cis-1,2-Dichloroethene | 8.72 | 96 | 2516 | 0.3099 | ug/L | | 86 |
| 33) Chloroform | 8.96 | 83 | 4565 | 0.3221 | ug/L | | 94 |
| 35) Bromochloromethane | 9.22 | 130 | 1214 | 0.2768 | ug/L | | 82 |
| 36) Tetrahydrofuran | 9.57 | 42 | 635 | 0.4757 | ug/L | # | 37 |
| 38) 1,1,1-Trichloroethane | 9.55 | 97 | 3802 | 0.2939 | ug/L | | 90 |
| 39) Cyclohexane | 9.57 | 56 | 3669 | 0.2863 | ug/L | | 91 |
| 40) 1,1-Dichloropropene | 9.78 | 75 | 3060 | 0.2856 | ug/L | | 83 |
| 42) Carbon Tetrachloride | 9.92 | 117 | 2466 | 0.5428 | ug/L | # | 77 |
| 45) 1,2-Dichloroethane | 10.15 | 62 | 3287 | 0.3053 | ug/L | # | 90 |
| 46) Benzene | 10.18 | 78 | 9860 | 0.3227 | ug/L | | 92 |
| 47) Trichloroethene | 11.05 | 130 | 2079 | 0.2663 | ug/L | | 93 |
| 48) Methylcyclohexane | 11.15 | 83 | 2698 | 0.2772 | ug/L | | 78 |
| 49) 1,2-Dichloropropane | 11.30 | 63 | 2094 | 0.2805 | ug/L | | 82 |
| 51) Bromodichloromethane | 11.65 | 83 | 2527 | 0.2558 | ug/L | | 99 |
| 52) Dibromomethane | 11.73 | 93 | 867 | 0.2066 | ug/L | # | 62 |
| 55) cis-1,3-Dichloropropene | 12.40 | 75 | 2766 | 0.2472 | ug/L | # | 71 |
| 56) Dimethyl Disulfide | 12.68 | 79 | 1115 | 1.8980 | ug/L | # | 51 |
| 59) Toluene | 12.88 | 91 | 9344 | 0.3087 | ug/L | | 96 |
| 60) Ethyl Methacrylate | 13.05 | 69 | 1058 | 0.7367 | ug/L | | 99 |
| 62) trans-1,3-Dichloropropene | 13.12 | 75 | 2111 | 0.5198 | ug/L | # | 54 |
| 63) 1,1,2-Trichloroethane | 13.35 | 97 | 1327 | 0.4492 | ug/L | | 96 |

(#) = qualifier out of range (m) = manual integration
6M108172.D 8260WT.M Thu May 17 10:54:34 2012 Page 1

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\051612\6M108172.D Vial: 3
Acq On : 16 May 2012 15:48 Operator: adc
Sample : WG397878-03 0.4 ug/L STD 8260 Inst : HPMS6
Misc : 1,1 STD51468 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 17 10:54:33 2012 Quant Results File: 8260WT.RES

Quant Method : C:\MSDCHEM\1\METHODS\8260WT.M (RTE Integrator)
Title : 8260B/624_WATER SOP:OVLMSV01 05/16/12 - HPMS6
Last Update : Thu May 17 09:26:04 2012
Response via : Initial Calibration
DataAcq Meth : 8260WT

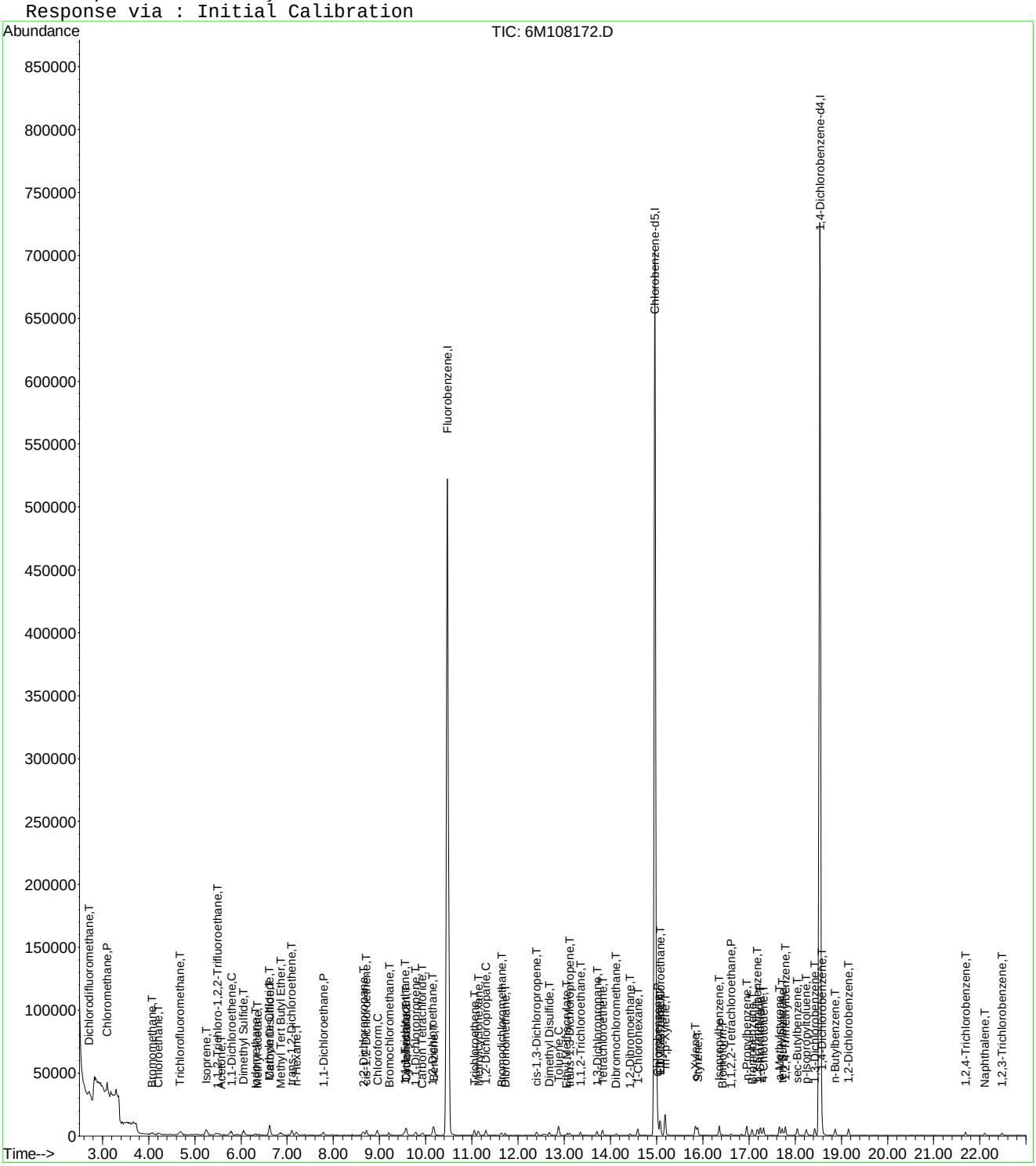
| | Compound | R.T. | QIon | Response | Conc Unit | | Qvalue |
|---|---|---|---|---|---|---|---|
| 65) | 1,3-Dichloropropane | 13.72 | 76 | 2610 | 0.2962 ug/L | | 100 |
| 66) | Tetrachloroethene | 13.83 | 166 | 2146 | 0.3073 ug/L | | 73 |
| 67) | Dibromochloromethane | 14.12 | 129 | 1160 | 0.5540 ug/L | | 90 |
| 68) | 1,2-Dibromoethane | 14.42 | 107 | 1047 | 0.2141 ug/L | | 80 |
| 69) | 1-Chlorohexane | 14.60 | 91 | 2262 | 0.2426 ug/L | | 87 |
| 70) | Chlorobenzene | 15.03 | 112 | 6362 | 0.3245 ug/L | | 86 |
| 71) | 1,1,1,2-Tetrachloroethane | 15.08 | 131 | 1671 | 0.4537 ug/L | # | 30 |
| 72) | Ethylbenzene | 15.08 | 106 | 2919 | 0.2766 ug/L | | 85 |
| 73) | m-,p-Xylene | 15.19 | 106 | 7089 | 1.1026 ug/L | | 88 |
| 74) | o-Xylene | 15.83 | 106 | 3496 | 0.8600 ug/L | | 95 |
| 75) | Styrene | 15.89 | 104 | 4942 | 0.8453 ug/L | | 97 |
| 76) | Bromoform | 16.43 | 173 | 404 | 0.8061 ug/L | # | 33 |
| 77) | Isopropylbenzene | 16.35 | 105 | 8886 | 0.3062 ug/L | | 91 |
| 79) | 1,1,2,2-Tetrachloroethane | 16.61 | 83 | 1332 | 0.2753 ug/L | | 84 |
| 83) | n-Propylbenzene | 16.96 | 91 | 10129 | 0.3082 ug/L | # | 96 |
| 84) | Bromobenzene | 17.07 | 156 | 2020 | 0.3030 ug/L | | 88 |
| 85) | 1,3,5-Trimethylbenzene | 17.18 | 105 | 6692 | 0.3066 ug/L | | 98 |
| 86) | 2-Chlorotoluene | 17.24 | 91 | 7777 | 0.3347 ug/L | # | 92 |
| 87) | 4-Chlorotoluene | 17.31 | 91 | 6222 | 0.2963 ug/L | | 99 |
| 88) | a-Methylstyrene | 17.66 | 118 | 3717 | 0.2696 ug/L | | 92 |
| 89) | tert-Butylbenzene | 17.72 | 134 | 942 | 0.2065 ug/L | | 80 |
| 90) | 1,2,4-Trimethylbenzene | 17.78 | 105 | 7409 | 0.3209 ug/L | | 85 |
| 91) | sec-Butylbenzene | 18.04 | 105 | 8260 | 0.3226 ug/L | | 91 |
| 92) | p-Isopropyltoluene | 18.24 | 119 | 6175 | 0.3057 ug/L | # | 79 |
| 93) | 1,3-Dichlorobenzene | 18.43 | 146 | 3887 | 0.3109 ug/L | | 97 |
| 94) | 1,4-Dichlorobenzene | 18.58 | 146 | 4313 | 0.3223 ug/L | # | 34 |
| 95) | n-Butylbenzene | 18.87 | 91 | 5896 | 0.3075 ug/L | | 92 |
| 96) | 1,2-Dichlorobenzene | 19.15 | 146 | 3980 | 0.3405 ug/L | | 95 |
| 98) | 1,2,4-Trichlorobenzene | 21.69 | 180 | 1987 | 0.3059 ug/L | # | 91 |
| 100) | Naphthalene | 22.10 | 128 | 3241 | 0.2487 ug/L | # | 82 |
| 101) | 1,2,3-Trichlorobenzene | 22.48 | 180 | 1771 | 0.3299 ug/L | # | 79 |

(#) = qualifier out of range (m) = manual integration
6M108172.D 8260WT.M Thu May 17 10:54:34 2012 Page 2

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\051612\6M108172.D Vial: 3
Acq On : 16 May 2012 15:48 Operator: adc
Sample : WG397878-03 0.4 ug/L STD 8260 Inst : HPMS6
Misc : 1,1 STD51468 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 17 10:54 2012 Quant Results File: 8260WT.RES

Method : C:\MSDCHEM\1\METHODS\8260WT.M (RTE Integrator)
Title : 8260B/624_WATER SOP:OVLMSV01 05/16/12 - HPMS6
Last Update : Thu May 17 10:54:16 2012
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\051612\6M108173.D Vial: 4
Acq On : 16 May 2012 16:20 Operator: adc
Sample : WG397878-04 1.0 ug/L STD 8260 Inst : HPMS6
Misc : 1,1 STD51468 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 17 10:54:36 2012 Quant Results File: 8260WT.RES

Quant Method : C:\MSDCHEM\1\METHODS\8260WT.M (RTE Integrator)
Title : 8260B/624_WATER SOP:OVLMSV01 05/16/12 - HPMS6
Last Update : Thu May 17 10:54:16 2012
Response via : Initial Calibration
DataAcq Meth : 8260WT

| Internal Standards | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| 1) Fluorobenzene | 10.47 | 96 | 684266 | 25.00 | ug/L | | 0.00 |
| 57) Chlorobenzene-d5 | 14.96 | 117 | 505754 | 25.00 | ug/L | | 0.00 |
| 78) 1,4-Dichlorobenzene-d4 | 18.54 | 152 | 245311 | 25.00 | ug/L | | 0.00 |
| **System Monitoring Compounds** | | | | | | | |
| 37) Dibromofluoromethane | 9.28 | 111 | 4590 | 0.5480 | ug/L | | 0.00 |
| Spiked Amount 25.000 | Range 86 - 118 | | Recovery = | 2.20%# | | | |
| 43) 1,2-Dichloroethane-d4 | 10.00 | 65 | 4944 | 0.5581 | ug/L | | 0.00 |
| Spiked Amount 25.000 | Range 80 - 120 | | Recovery = | 2.24%# | | | |
| 58) Toluene-d8 | 12.76 | 98 | 13702 | 0.5158 | ug/L | | 0.00 |
| Spiked Amount 25.000 | Range 88 - 110 | | Recovery = | 2.08%# | | | |
| 80) p-Bromofluorobenzene | 16.75 | 95 | 4783 | 0.5378 | ug/L | | 0.00 |
| Spiked Amount 25.000 | Range 86 - 115 | | Recovery = | 2.16%# | | | |
| **Target Compounds** | | | | | | | Qvalue |
| 2) Dichlorodifluoromethane | 2.72 | 85 | 11005 | 1.0376 | ug/L | | 90 |
| 3) Chloromethane | 3.10 | 50 | 25269 | 1.2013 | ug/L | | 100 |
| 4) Vinyl Chloride | 3.29 | 62 | 22082 | 0.8946 | ug/L | | 97 |
| 5) 1,3-Butadiene | 3.33 | 54 | 17719 | Below Cal | | | 99 |
| 6) Bromomethane | 4.07 | 94 | 4855 | 1.3659 | ug/L | | 88 |
| 7) Chloroethane | 4.22 | 64 | 6560 | 0.9838 | ug/L | | 94 |
| 8) Trichlorofluoromethane | 4.69 | 101 | 15901 | 1.0039 | ug/L | | 95 |
| 9) Diethyl ether | 5.21 | 59 | 28954 | 4.5769 | ug/L | | 98 |
| 10) Isoprene | 5.25 | 67 | 12215 | 0.8807 | ug/L | | 100 |
| 12) 1,1,2-Trichloro-1,2,2-Trif | 5.47 | 101 | 7570 | 0.9305 | ug/L | | 97 |
| 13) Acetone | 5.56 | 43 | 2647 | 1.8027 | ug/L | # | 47 |
| 14) 1,1-Dichloroethene | 5.78 | 61 | 13244 | 1.0126 | ug/L | | 95 |
| 15) Tert-Butyl Alcohol | 5.94 | 59 | 2811 | 7.8541 | ug/L | # | 57 |
| 16) Dimethyl Sulfide | 6.06 | 62 | 9443 | 0.9120 | ug/L | | 99 |
| 17) Iodomethane | 6.32 | 142 | 6091 | 1.2052 | ug/L | | 97 |
| 18) Methyl acetate | 6.35 | 43 | 4483 | 0.9523 | ug/L | # | 70 |
| 19) Methylene Chloride | 6.61 | 84 | 8451 | 1.0224 | ug/L | | 99 |
| 20) Carbon Disulfide | 6.63 | 76 | 23431 | 0.9379 | ug/L | | 96 |
| 21) Acrylonitrile | 6.81 | 53 | 1707 | 0.8767 | ug/L | # | 64 |
| 22) Methyl Tert Butyl Ether | 6.87 | 73 | 17280 | 0.9655 | ug/L | | 98 |
| 23) trans-1,2-Dichloroethene | 7.10 | 96 | 7530 | 0.9678 | ug/L | | 98 |
| 24) n-Hexane | 7.20 | 57 | 8449 | 0.9609 | ug/L | | 100 |
| 25) Diisopropyl ether | 7.59 | 45 | 137901 | 4.6710 | ug/L | | 98 |
| 26) Vinyl Acetate | 7.77 | 43 | 8450 | 0.8829 | ug/L | # | 77 |
| 27) 1,1-Dichloroethane | 7.78 | 63 | 15299 | 1.0077 | ug/L | | 89 |
| 28) Ethyl-Tert-Butyl ether | 8.23 | 59 | 114487 | 4.5560 | ug/L | | 100 |
| 29) 2-Butanone | 8.43 | 43 | 1943 | 0.9350 | ug/L | # | 54 |
| 30) Propionitrile | 8.54 | 54 | 3010 | 4.8521 | ug/L | # | 57 |
| 31) 2,2-Dichloropropane | 8.66 | 77 | 11745 | 0.9893 | ug/L | | 91 |
| 32) cis-1,2-Dichloroethene | 8.71 | 96 | 7503 | 0.9189 | ug/L | | 97 |
| 33) Chloroform | 8.95 | 83 | 13883 | 0.9738 | ug/L | | 97 |
| 34) 1-Bromopropane | 9.10 | 122 | 804 | 1.1929 | ug/L | | 99 |
| 35) Bromochloromethane | 9.20 | 130 | 4308 | 0.9765 | ug/L | | 92 |
| 36) Tetrahydrofuran | 9.24 | 42 | 6448 | 4.8022 | ug/L | | 91 |
| 38) 1,1,1-Trichloroethane | 9.55 | 97 | 11428 | 0.8781 | ug/L | | 99 |
| 39) Cyclohexane | 9.57 | 56 | 11362 | 0.8814 | ug/L | | 96 |
| 40) 1,1-Dichloropropene | 9.78 | 75 | 10312 | 0.9568 | ug/L | | 92 |
| 41) Tert-Amyl-Methyl ether | 9.92 | 73 | 87774 | 4.4289 | ug/L | | 97 |
| 42) Carbon Tetrachloride | 9.94 | 117 | 8534 | 1.0206 | ug/L | | 96 |
| 45) 1,2-Dichloroethane | 10.14 | 62 | 10409 | 0.9610 | ug/L | # | 97 |

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

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\051612\6M108173.D Vial: 4
Acq On : 16 May 2012 16:20 Operator: adc
Sample : WG397878-04 1.0 ug/L STD 8260 Inst : HPMS6
Misc : 1,1 STD51468 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 17 10:54:36 2012 Quant Results File: 8260WT.RES

Quant Method : C:\MSDCHEM\1\METHODS\8260WT.M (RTE Integrator)
Title : 8260B/624_WATER SOP:OVLMSV01 05/16/12 - HPMS6
Last Update : Thu May 17 10:54:16 2012
Response via : Initial Calibration
DataAcq Meth : 8260WT

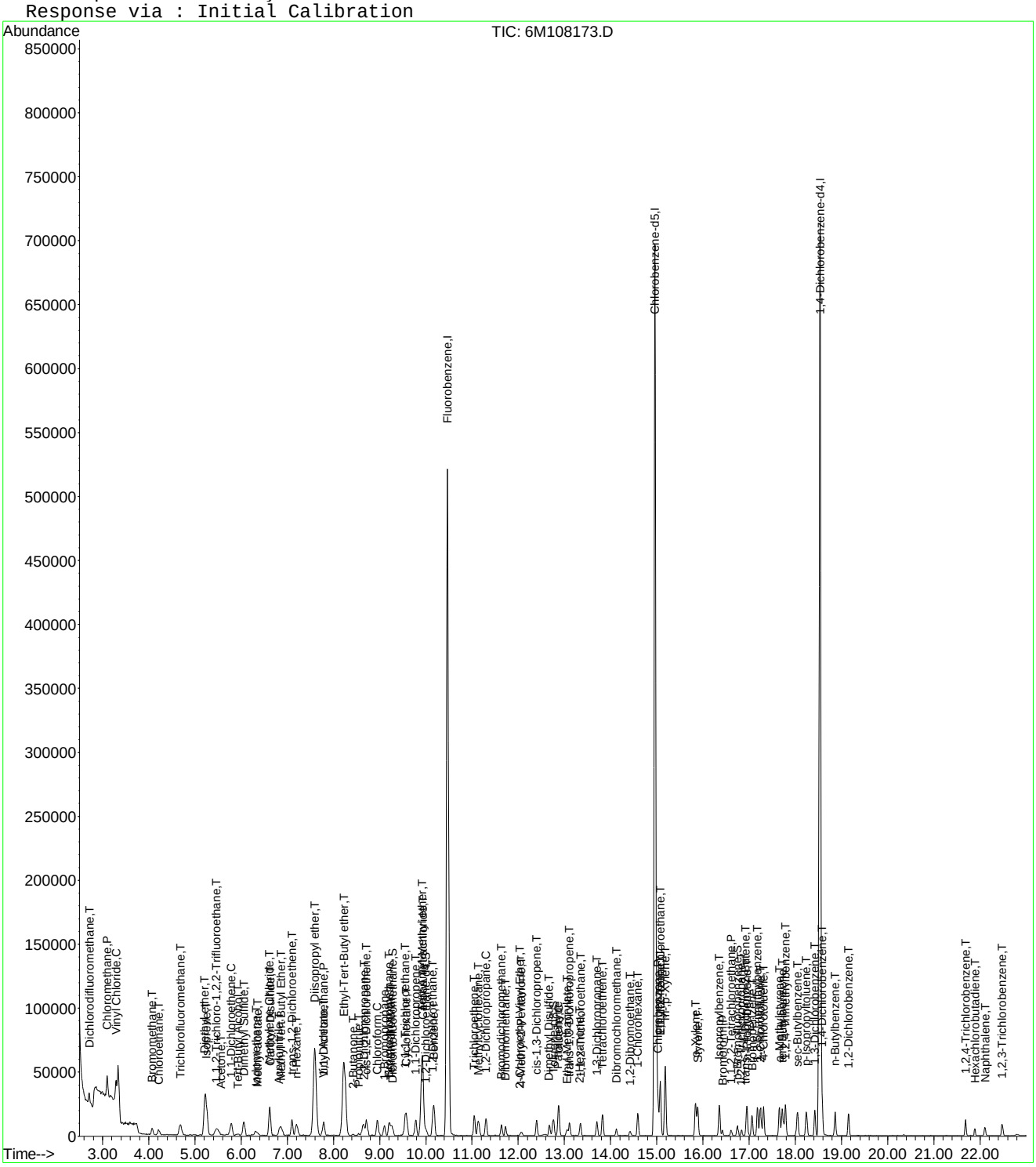
| | Compound | R.T. | QIon | Response | Conc | Unit | | Qvalue |
|---|---|---|---|---|---|---|---|---|
| 46) | Benzene | 10.17 | 78 | 30289 | 0.9854 | ug/L | | 97 |
| 47) | Trichloroethene | 11.04 | 130 | 7299 | 0.9296 | ug/L | | 99 |
| 48) | Methylcyclohexane | 11.13 | 83 | 9021 | 0.9215 | ug/L | | 100 |
| 49) | 1,2-Dichloropropane | 11.30 | 63 | 7073 | 0.9420 | ug/L | | 99 |
| 51) | Bromodichloromethane | 11.63 | 83 | 8761 | 0.8818 | ug/L | | 98 |
| 52) | Dibromomethane | 11.73 | 93 | 3837 | 0.9089 | ug/L | | 99 |
| 53) | 2-Chloroethyl Vinyl Ether | 12.03 | 63 | 827 | 0.5249 | ug/L | # | 42 |
| 54) | 4-Methyl-2-Pentanone | 12.06 | 58 | 1148 | 0.7167 | ug/L | # | 36 |
| 55) | cis-1,3-Dichloropropene | 12.40 | 75 | 9480 | 0.8423 | ug/L | | 95 |
| 56) | Dimethyl Disulfide | 12.67 | 79 | 3485 | 2.1869 | ug/L | # | 66 |
| 59) | Toluene | 12.88 | 91 | 29015 | 0.9649 | ug/L | | 97 |
| 60) | Ethyl Methacrylate | 13.05 | 69 | 4415 | 1.2226 | ug/L | | 96 |
| 61) | Paraldehyde | 12.86 | 89 | 878 | 26.1717 | ug/L | # | 100 |
| 62) | trans-1,3-Dichloropropene | 13.10 | 75 | 6709 | 0.9680 | ug/L | | 86 |
| 63) | 1,1,2-Trichloroethane | 13.35 | 97 | 4785 | 1.0930 | ug/L | | 96 |
| 64) | 2-Hexanone | 13.33 | 43 | 1935 | 0.7064 | ug/L | # | 28 |
| 65) | 1,3-Dichloropropane | 13.71 | 76 | 8606 | 0.9830 | ug/L | | 95 |
| 66) | Tetrachloroethene | 13.82 | 166 | 6250 | 0.9008 | ug/L | | 94 |
| 67) | Dibromochloromethane | 14.13 | 129 | 4103 | 0.9944 | ug/L | | 89 |
| 68) | 1,2-Dibromoethane | 14.42 | 107 | 4091 | 0.8422 | ug/L | | 94 |
| 69) | 1-Chlorohexane | 14.59 | 91 | 8203 | 0.8853 | ug/L | | 95 |
| 70) | Chlorobenzene | 15.02 | 112 | 17924 | 0.9202 | ug/L | | 94 |
| 71) | 1,1,1,2-Tetrachloroethane | 15.08 | 131 | 5444 | 1.0327 | ug/L | | 82 |
| 72) | Ethylbenzene | 15.08 | 106 | 9375 | 0.8941 | ug/L | | 96 |
| 73) | m-,p-Xylene | 15.19 | 106 | 21906 | 2.0602 | ug/L | | 90 |
| 74) | o-Xylene | 15.84 | 106 | 10178 | 1.3138 | ug/L | | 88 |
| 75) | Styrene | 15.89 | 104 | 16331 | 1.2953 | ug/L | | 95 |
| 76) | Bromoform | 16.43 | 173 | 1905 | 1.2302 | ug/L | # | 76 |
| 77) | Isopropylbenzene | 16.35 | 105 | 26579 | 0.9217 | ug/L | | 98 |
| 79) | 1,1,2,2-Tetrachloroethane | 16.61 | 83 | 5215 | 1.0826 | ug/L | | 99 |
| 81) | 1,2,3-Trichloropropane | 16.82 | 110 | 1005 | 0.8106 | ug/L | | 65 |
| 82) | trans-1,4-Dichloro-2-Buten | 16.92 | 53 | 657 | 1.0998 | ug/L | # | 26 |
| 83) | n-Propylbenzene | 16.95 | 91 | 31055 | 0.9492 | ug/L | | 95 |
| 84) | Bromobenzene | 17.07 | 156 | 6093 | 0.9181 | ug/L | | 88 |
| 85) | 1,3,5-Trimethylbenzene | 17.18 | 105 | 20660 | 0.9509 | ug/L | | 99 |
| 86) | 2-Chlorotoluene | 17.25 | 91 | 23243 | 1.0049 | ug/L | | 99 |
| 87) | 4-Chlorotoluene | 17.31 | 91 | 19705 | 0.9426 | ug/L | | 96 |
| 88) | a-Methylstyrene | 17.66 | 118 | 9732 | 0.7090 | ug/L | | 94 |
| 89) | tert-Butylbenzene | 17.72 | 134 | 3957 | 0.8714 | ug/L | | 99 |
| 90) | 1,2,4-Trimethylbenzene | 17.78 | 105 | 20765 | 0.9034 | ug/L | | 100 |
| 91) | sec-Butylbenzene | 18.05 | 105 | 23538 | 0.9236 | ug/L | | 100 |
| 92) | p-Isopropyltoluene | 18.24 | 119 | 18831 | 0.9364 | ug/L | | 98 |
| 93) | 1,3-Dichlorobenzene | 18.42 | 146 | 12024 | 0.9661 | ug/L | | 99 |
| 94) | 1,4-Dichlorobenzene | 18.58 | 146 | 12696 | 0.9529 | ug/L | | 92 |
| 95) | n-Butylbenzene | 18.86 | 91 | 17953 | 0.9405 | ug/L | | 98 |
| 96) | 1,2-Dichlorobenzene | 19.15 | 146 | 11179 | 0.9607 | ug/L | | 94 |
| 98) | 1,2,4-Trichlorobenzene | 21.69 | 180 | 6125 | 0.9472 | ug/L | | 95 |
| 99) | Hexachlorobutadiene | 21.90 | 225 | 2412 | 0.9550 | ug/L | | 81 |
| 100) | Naphthalene | 22.11 | 128 | 10154 | 0.7828 | ug/L | | 100 |
| 101) | 1,2,3-Trichlorobenzene | 22.48 | 180 | 5034 | 0.9419 | ug/L | | 96 |

(#) = qualifier out of range (m) = manual integration
6M108173.D 8260WT.M Thu May 17 10:54:36 2012 Page 2

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\051612\6M108173.D Vial: 4
Acq On : 16 May 2012 16:20 Operator: adc
Sample : WG397878-04 1.0 ug/L STD 8260 Inst : HPMS6
Misc : 1,1 STD51468 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 17 10:54 2012 Quant Results File: 8260WT.RES

Method : C:\MSDCHEM\1\METHODS\8260WT.M (RTE Integrator)
Title : 8260B/624_WATER SOP:OVLMSV01 05/16/12 - HPMS6
Last Update : Thu May 17 10:54:16 2012
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\051612\6M108174.D Vial: 5
Acq On : 16 May 2012 16:53 Operator: adc
Sample : WG397878-05 2.0 ug/L STD 8260 Inst : HPMS6
Misc : 1,1 STD51468 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 17 10:54:37 2012 Quant Results File: 8260WT.RES

Quant Method : C:\MSDCHEM\1\METHODS\8260WT.M (RTE Integrator)
Title : 8260B/624_WATER SOP:OVLMSV01 05/16/12 - HPMS6
Last Update : Thu May 17 10:54:16 2012
Response via : Initial Calibration
DataAcq Meth : 8260WT

| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 1) Fluorobenzene | 10.47 | 96 | 683155 | 25.00 | ug/L | 0.00 |
| 57) Chlorobenzene-d5 | 14.96 | 117 | 506911 | 25.00 | ug/L | 0.00 |
| 78) 1,4-Dichlorobenzene-d4 | 18.54 | 152 | 250909 | 25.00 | ug/L | 0.00 |
| **System Monitoring Compounds** | | | | | | |
| 37) Dibromofluoromethane | 9.27 | 111 | 8094 | 0.9680 | ug/L | 0.00 |
| Spiked Amount 25.000 | Range 86 - 118 | | Recovery = | 3.88%# | | |
| 43) 1,2-Dichloroethane-d4 | 10.01 | 65 | 9215 | 1.0420 | ug/L | 0.00 |
| Spiked Amount 25.000 | Range 80 - 120 | | Recovery = | 4.16%# | | |
| 58) Toluene-d8 | 12.76 | 98 | 25680 | 0.9645 | ug/L | 0.00 |
| Spiked Amount 25.000 | Range 88 - 110 | | Recovery = | 3.84%# | | |
| 80) p-Bromofluorobenzene | 16.75 | 95 | 8985 | 0.9877 | ug/L | 0.00 |
| Spiked Amount 25.000 | Range 86 - 115 | | Recovery = | 3.96%# | | |
| **Target Compounds** | | | | | | Qvalue |
| 2) Dichlorodifluoromethane | 2.71 | 85 | 21678 | 2.0472 | ug/L | 97 |
| 3) Chloromethane | 3.10 | 50 | 48358 | 2.3026 | ug/L | 99 |
| 4) Vinyl Chloride | 3.29 | 62 | 40571 | 2.1421 | ug/L | 97 |
| 5) 1,3-Butadiene | 3.33 | 54 | 30813 | Below Cal | | 93 |
| 6) Bromomethane | 4.07 | 94 | 10012 | 2.0432 | ug/L | 97 |
| 7) Chloroethane | 4.22 | 64 | 13040 | 1.9587 | ug/L | 99 |
| 8) Trichlorofluoromethane | 4.69 | 101 | 31210 | 1.9736 | ug/L | 100 |
| 9) Diethyl ether | 5.22 | 59 | 154276 | 24.4269 | ug/L | 99 |
| 10) Isoprene | 5.25 | 67 | 26996 | 1.9495 | ug/L | 99 |
| 12) 1,1,2-Trichloro-1,2,2-Trif | 5.48 | 101 | 16139 | 1.9869 | ug/L | 92 |
| 13) Acetone | 5.57 | 43 | 3591 | 2.4496 | ug/L | 80 |
| 14) 1,1-Dichloroethene | 5.78 | 61 | 26139 | 2.0018 | ug/L | 98 |
| 15) Tert-Butyl Alcohol | 5.91 | 59 | 16648 | 46.5910 | ug/L # | 92 |
| 16) Dimethyl Sulfide | 6.06 | 62 | 19071 | 1.8449 | ug/L | 94 |
| 17) Iodomethane | 6.31 | 142 | 14003 | 2.0710 | ug/L | 98 |
| 18) Methyl acetate | 6.35 | 43 | 9563 | 2.0347 | ug/L # | 82 |
| 19) Methylene Chloride | 6.62 | 84 | 15672 | 1.8991 | ug/L | 96 |
| 20) Carbon Disulfide | 6.63 | 76 | 48065 | 1.9271 | ug/L | 100 |
| 21) Acrylonitrile | 6.82 | 53 | 3060 | 1.5742 | ug/L | 94 |
| 22) Methyl Tert Butyl Ether | 6.85 | 73 | 33563 | 1.8784 | ug/L | 97 |
| 23) trans-1,2-Dichloroethene | 7.10 | 96 | 15159 | 1.9515 | ug/L | 99 |
| 24) n-Hexane | 7.20 | 57 | 17466 | 1.9896 | ug/L | 98 |
| 25) Diisopropyl ether | 7.60 | 45 | 729708 | 24.7572 | ug/L | 98 |
| 26) Vinyl Acetate | 7.78 | 43 | 18235 | 1.9084 | ug/L # | 88 |
| 27) 1,1-Dichloroethane | 7.78 | 63 | 29412 | 1.9404 | ug/L | 100 |
| 28) Ethyl-Tert-Butyl ether | 8.23 | 59 | 611225 | 24.3632 | ug/L | 99 |
| 29) 2-Butanone | 8.43 | 43 | 4353 | 2.0982 | ug/L # | 64 |
| 30) Propionitrile | 8.54 | 54 | 13925 | 22.4834 | ug/L | 96 |
| 31) 2,2-Dichloropropane | 8.65 | 77 | 24160 | 2.0383 | ug/L | 97 |
| 32) cis-1,2-Dichloroethene | 8.72 | 96 | 15746 | 1.9315 | ug/L | 100 |
| 33) Chloroform | 8.96 | 83 | 28520 | 2.0037 | ug/L | 99 |
| 34) 1-Bromopropane | 9.10 | 122 | 2463 | 2.2079 | ug/L | 99 |
| 35) Bromochloromethane | 9.21 | 130 | 8219 | 1.8660 | ug/L | 92 |
| 36) Tetrahydrofuran | 9.24 | 42 | 32268 | 24.0707 | ug/L | 99 |
| 38) 1,1,1-Trichloroethane | 9.55 | 97 | 23076 | 1.7761 | ug/L | 97 |
| 39) Cyclohexane | 9.57 | 56 | 24908 | 1.9353 | ug/L | 95 |
| 40) 1,1-Dichloropropene | 9.78 | 75 | 20809 | 1.9340 | ug/L | 90 |
| 41) Tert-Amyl-Methyl ether | 9.93 | 73 | 472278 | 23.8692 | ug/L | 98 |
| 42) Carbon Tetrachloride | 9.93 | 117 | 17945 | 1.7659 | ug/L | 96 |
| 45) 1,2-Dichloroethane | 10.14 | 62 | 21574 | 1.9951 | ug/L | 98 |

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

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\051612\6M108174.D Vial: 5
Acq On : 16 May 2012 16:53 Operator: adc
Sample : WG397878-05 2.0 ug/L STD 8260 Inst : HPMS6
Misc : 1,1 STD51468 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 17 10:54:37 2012 Quant Results File: 8260WT.RES

Quant Method : C:\MSDCHEM\1\METHODS\8260WT.M (RTE Integrator)
Title : 8260B/624_WATER SOP:OVLMSV01 05/16/12 - HPMS6
Last Update : Thu May 17 10:54:16 2012
Response via : Initial Calibration
DataAcq Meth : 8260WT

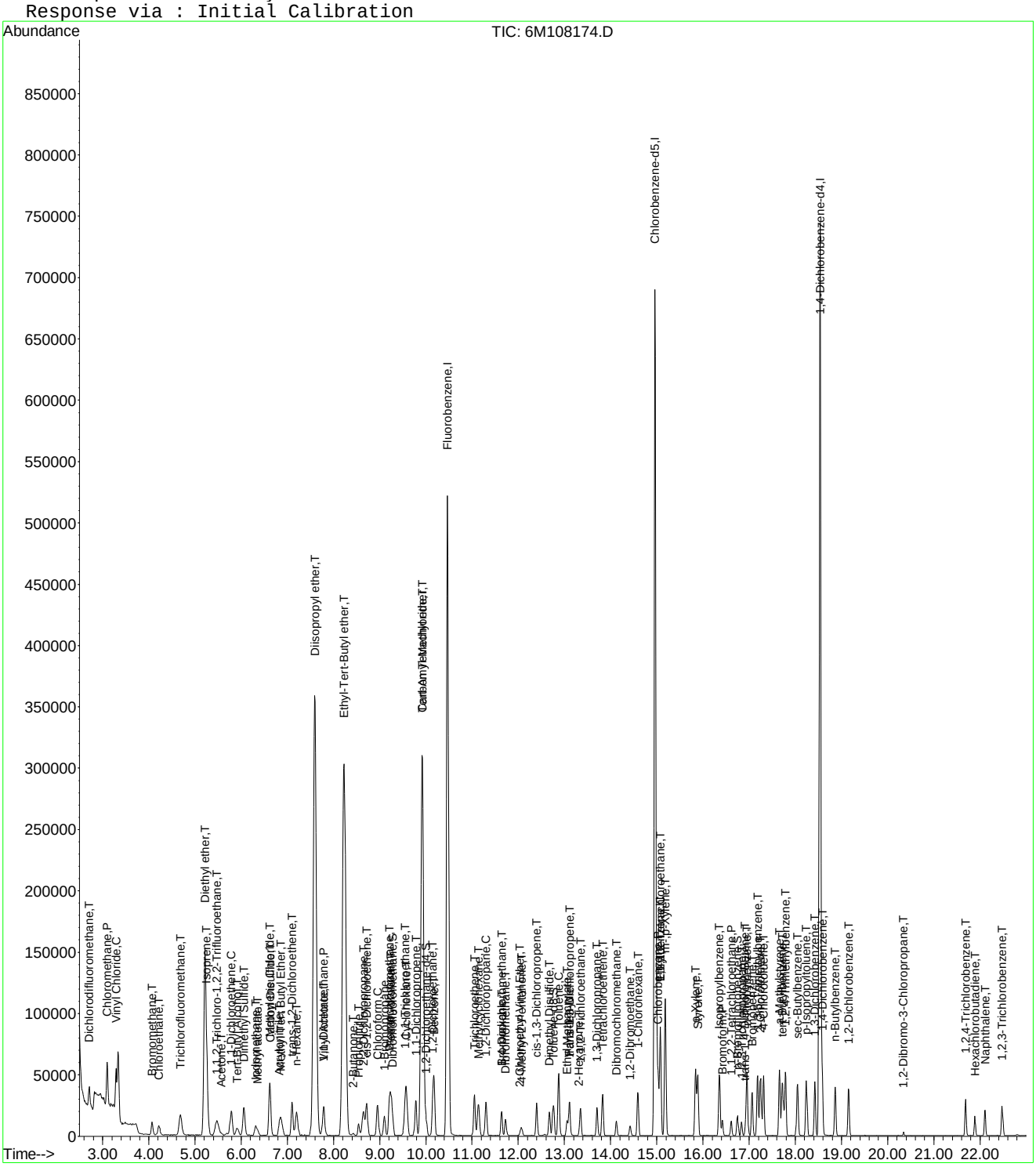
| | Compound | R.T. | QIon | Response | Conc Unit | | Qvalue |
|---|---|---|---|---|---|---|---|
| 46) | Benzene | 10.18 | 78 | 59444 | 1.9371 ug/L | | 100 |
| 47) | Trichloroethene | 11.05 | 130 | 14785 | 1.8860 ug/L | | 98 |
| 48) | Methylcyclohexane | 11.14 | 83 | 18547 | 1.8977 ug/L | | 97 |
| 49) | 1,2-Dichloropropane | 11.30 | 63 | 14903 | 1.9881 ug/L | | 98 |
| 50) | 1,4-Dioxane | 11.64 | 88 | 702 | 67.5531 ug/L | | 96 |
| 51) | Bromodichloromethane | 11.64 | 83 | 17675 | 1.7820 ug/L | | 97 |
| 52) | Dibromomethane | 11.72 | 93 | 7962 | 1.8891 ug/L | | 95 |
| 53) | 2-Chloroethyl Vinyl Ether | 12.03 | 63 | 2438 | 1.5499 ug/L | # | 56 |
| 54) | 4-Methyl-2-Pentanone | 12.07 | 58 | 2504 | 1.5658 ug/L | | 79 |
| 55) | cis-1,3-Dichloropropene | 12.40 | 75 | 19664 | 1.7500 ug/L | | 99 |
| 56) | Dimethyl Disulfide | 12.67 | 79 | 7863 | 2.7235 ug/L | | 97 |
| 59) | Toluene | 12.88 | 91 | 56529 | 1.8757 ug/L | | 97 |
| 60) | Ethyl Methacrylate | 13.05 | 69 | 9930 | 2.0160 ug/L | | 91 |
| 61) | Paraldehyde | 13.10 | 89 | 1634 | 32.7586 ug/L | # | 100 |
| 62) | trans-1,3-Dichloropropene | 13.11 | 75 | 14768 | 1.7473 ug/L | | 96 |
| 63) | 1,1,2-Trichloroethane | 13.35 | 97 | 8601 | 1.7980 ug/L | | 93 |
| 64) | 2-Hexanone | 13.31 | 43 | 3589 | 1.3073 ug/L | | 86 |
| 65) | 1,3-Dichloropropane | 13.71 | 76 | 16838 | 1.9190 ug/L | | 96 |
| 66) | Tetrachloroethene | 13.83 | 166 | 12679 | 1.8232 ug/L | | 94 |
| 67) | Dibromochloromethane | 14.12 | 129 | 9199 | 1.7519 ug/L | | 97 |
| 68) | 1,2-Dibromoethane | 14.42 | 107 | 8904 | 1.8287 ug/L | | 99 |
| 69) | 1-Chlorohexane | 14.59 | 91 | 17152 | 1.8470 ug/L | | 93 |
| 70) | Chlorobenzene | 15.02 | 112 | 36972 | 1.8937 ug/L | | 98 |
| 71) | 1,1,1,2-Tetrachloroethane | 15.07 | 131 | 10697 | 1.8287 ug/L | | 85 |
| 72) | Ethylbenzene | 15.07 | 106 | 18247 | 1.7363 ug/L | | 92 |
| 73) | m-,p-Xylene | 15.19 | 106 | 45784 | 3.5921 ug/L | | 97 |
| 74) | o-Xylene | 15.84 | 106 | 22071 | 2.1153 ug/L | | 97 |
| 75) | Styrene | 15.89 | 104 | 36044 | 2.0689 ug/L | | 99 |
| 76) | Bromoform | 16.42 | 173 | 4557 | 1.9741 ug/L | | 88 |
| 77) | Isopropylbenzene | 16.35 | 105 | 54412 | 1.8826 ug/L | | 98 |
| 79) | 1,1,2,2-Tetrachloroethane | 16.62 | 83 | 9525 | 1.9332 ug/L | | 94 |
| 81) | 1,2,3-Trichloropropane | 16.84 | 110 | 2454 | 1.9352 ug/L | | 89 |
| 82) | trans-1,4-Dichloro-2-Buten | 16.91 | 53 | 2404 | 2.0986 ug/L | | 84 |
| 83) | n-Propylbenzene | 16.95 | 91 | 64267 | 1.9205 ug/L | | 96 |
| 84) | Bromobenzene | 17.07 | 156 | 13139 | 1.9356 ug/L | | 98 |
| 85) | 1,3,5-Trimethylbenzene | 17.19 | 105 | 42370 | 1.9066 ug/L | | 100 |
| 86) | 2-Chlorotoluene | 17.25 | 91 | 40402 | 1.7079 ug/L | | 91 |
| 87) | 4-Chlorotoluene | 17.31 | 91 | 39581 | 1.8512 ug/L | | 95 |
| 88) | a-Methylstyrene | 17.66 | 118 | 23983 | 1.7082 ug/L | | 95 |
| 89) | tert-Butylbenzene | 17.72 | 134 | 7967 | 1.7153 ug/L | | 99 |
| 90) | 1,2,4-Trimethylbenzene | 17.78 | 105 | 43853 | 1.8653 ug/L | | 98 |
| 91) | sec-Butylbenzene | 18.05 | 105 | 48344 | 1.8546 ug/L | | 97 |
| 92) | p-Isopropyltoluene | 18.24 | 119 | 38600 | 1.8767 ug/L | | 97 |
| 93) | 1,3-Dichlorobenzene | 18.42 | 146 | 23897 | 1.8772 ug/L | | 98 |
| 94) | 1,4-Dichlorobenzene | 18.59 | 146 | 25696 | 1.8857 ug/L | | 77 |
| 95) | n-Butylbenzene | 18.86 | 91 | 35853 | 1.8363 ug/L | | 95 |
| 96) | 1,2-Dichlorobenzene | 19.16 | 146 | 22154 | 1.8614 ug/L | | 100 |
| 97) | 1,2-Dibromo-3-Chloropropan | 20.33 | 75 | 817 | 2.1303 ug/L | | 80 |
| 98) | 1,2,4-Trichlorobenzene | 21.69 | 180 | 13003 | 1.9660 ug/L | | 98 |
| 99) | Hexachlorobutadiene | 21.90 | 225 | 4315 | 1.6704 ug/L | | 93 |
| 100) | Naphthalene | 22.11 | 128 | 24302 | 1.8316 ug/L | | 100 |
| 101) | 1,2,3-Trichlorobenzene | 22.48 | 180 | 11184 | 2.0460 ug/L | | 97 |

(#) = qualifier out of range (m) = manual integration
6M108174.D 8260WT.M Thu May 17 10:54:37 2012 Page 2

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\051612\6M108174.D Vial: 5
Acq On : 16 May 2012 16:53 Operator: adc
Sample : WG397878-05 2.0 ug/L STD 8260 Inst : HPMS6
Misc : 1,1 STD51468 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 17 10:54 2012 Quant Results File: 8260WT.RES

Method : C:\MSDCHEM\1\METHODS\8260WT.M (RTE Integrator)
Title : 8260B/624_WATER SOP:OVLMSV01 05/16/12 - HPMS6
Last Update : Thu May 17 10:54:16 2012
Response via : Initial Calibration




6M108174.D 8260WT.M Thu May 17 10:54:38 2012 Page 3

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\051612\6M108175.D Vial: 6
Acq On : 16 May 2012 17:26 Operator: adc
Sample : WG397878-06 5.0 ug/L STD 8260 Inst : HPMS6
Misc : 1,1 STD51468 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 17 10:54:38 2012 Quant Results File: 8260WT.RES

Quant Method : C:\MSDCHEM\1\METHODS\8260WT.M (RTE Integrator)
Title : 8260B/624_WATER SOP:OVLMSV01 05/16/12 - HPMS6
Last Update : Thu May 17 10:54:16 2012
Response via : Initial Calibration
DataAcq Meth : 8260WT

| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 1) Fluorobenzene | 10.47 | 96 | 695547 | 25.00 | ug/L | 0.00 |
| 57) Chlorobenzene-d5 | 14.96 | 117 | 517532 | 25.00 | ug/L | 0.00 |
| 78) 1,4-Dichlorobenzene-d4 | 18.54 | 152 | 254218 | 25.00 | ug/L | 0.00 |
| **System Monitoring Compounds** | | | | | | |
| 37) Dibromofluoromethane | 9.27 | 111 | 18828 | 2.2116 | ug/L | 0.00 |
| Spiked Amount 25.000 | Range 86 - 118 | | Recovery = | 8.84%# | | |
| 43) 1,2-Dichloroethane-d4 | 10.01 | 65 | 21401 | 2.3769 | ug/L | 0.00 |
| Spiked Amount 25.000 | Range 80 - 120 | | Recovery = | 9.52%# | | |
| 58) Toluene-d8 | 12.76 | 98 | 59661 | 2.1947 | ug/L | 0.00 |
| Spiked Amount 25.000 | Range 88 - 110 | | Recovery = | 8.76%# | | |
| 80) p-Bromofluorobenzene | 16.75 | 95 | 20678 | 2.2435 | ug/L | 0.00 |
| Spiked Amount 25.000 | Range 86 - 115 | | Recovery = | 8.96%# | | |
| **Target Compounds** | | | | | | Qvalue |
| 2) Dichlorodifluoromethane | 2.71 | 85 | 52584 | 4.8775 | ug/L | 95 |
| 3) Chloromethane | 3.10 | 50 | 114653 | 5.3621 | ug/L | 99 |
| 4) Vinyl Chloride | 3.28 | 62 | 87960 | 5.2699 | ug/L | 99 |
| 5) 1,3-Butadiene | 3.33 | 54 | 57422 | 5.2361 | ug/L | 99 |
| 6) Bromomethane | 4.07 | 94 | 27620 | 4.2879 | ug/L | 99 |
| 7) Chloroethane | 4.22 | 64 | 32257 | 4.7590 | ug/L | 98 |
| 8) Trichlorofluoromethane | 4.68 | 101 | 78020 | 4.8457 | ug/L | 99 |
| 9) Diethyl ether | 5.22 | 59 | 303682 | 47.2261 | ug/L | 98 |
| 10) Isoprene | 5.24 | 67 | 63027 | 4.4704 | ug/L | 96 |
| 11) Acrolein | 5.47 | 56 | 1195 | 5.3356 | ug/L | 96 |
| 12) 1,1,2-Trichloro-1,2,2-Trif | 5.48 | 101 | 38846 | 4.6973 | ug/L | 100 |
| 13) Acetone | 5.57 | 43 | 8009 | 5.3661 | ug/L | 87 |
| 14) 1,1-Dichloroethene | 5.78 | 61 | 65476 | 4.9249 | ug/L | 100 |
| 15) Tert-Butyl Alcohol | 5.92 | 59 | 32990 | 90.6807 | ug/L | 96 |
| 16) Dimethyl Sulfide | 6.06 | 62 | 47703 | 4.5325 | ug/L | 96 |
| 17) Iodomethane | 6.31 | 142 | 34934 | 4.2905 | ug/L | 100 |
| 18) Methyl acetate | 6.35 | 43 | 22815 | 4.7679 | ug/L | 91 |
| 19) Methylene Chloride | 6.61 | 84 | 39652 | 4.7193 | ug/L | 98 |
| 20) Carbon Disulfide | 6.63 | 76 | 114782 | 4.5199 | ug/L | 99 |
| 21) Acrylonitrile | 6.82 | 53 | 8331 | 4.2095 | ug/L | 98 |
| 22) Methyl Tert Butyl Ether | 6.85 | 73 | 86349 | 4.7466 | ug/L | 99 |
| 23) trans-1,2-Dichloroethene | 7.10 | 96 | 38355 | 4.8497 | ug/L | 99 |
| 24) n-Hexane | 7.21 | 57 | 40688 | 4.5524 | ug/L | 98 |
| 25) Diisopropyl ether | 7.59 | 45 | 1472358 | 49.0635 | ug/L | 99 |
| 26) Vinyl Acetate | 7.77 | 43 | 47371 | 4.8694 | ug/L | 97 |
| 27) 1,1-Dichloroethane | 7.78 | 63 | 76653 | 4.9669 | ug/L | 98 |
| 28) Ethyl-Tert-Butyl ether | 8.22 | 59 | 1231969 | 48.2309 | ug/L | 100 |
| 29) 2-Butanone | 8.43 | 43 | 10716 | 5.0732 | ug/L | 94 |
| 30) Propionitrile | 8.54 | 54 | 30029 | 47.6212 | ug/L | 100 |
| 31) 2,2-Dichloropropane | 8.65 | 77 | 58421 | 4.8409 | ug/L | 93 |
| 32) cis-1,2-Dichloroethene | 8.72 | 96 | 40385 | 4.8657 | ug/L | 98 |
| 33) Chloroform | 8.96 | 83 | 72630 | 5.0119 | ug/L | 99 |
| 34) 1-Bromopropane | 9.10 | 122 | 6517 | 4.6152 | ug/L | 98 |
| 35) Bromochloromethane | 9.21 | 130 | 22929 | 5.1130 | ug/L | 99 |
| 36) Tetrahydrofuran | 9.24 | 42 | 68667 | 50.3104 | ug/L | 96 |
| 38) 1,1,1-Trichloroethane | 9.55 | 97 | 60326 | 4.5604 | ug/L | 97 |
| 39) Cyclohexane | 9.58 | 56 | 59416 | 4.5343 | ug/L | 97 |
| 40) 1,1-Dichloropropene | 9.78 | 75 | 54357 | 4.9619 | ug/L | 95 |
| 41) Tert-Amyl-Methyl ether | 9.92 | 73 | 969814 | 48.1416 | ug/L | 98 |
| 42) Carbon Tetrachloride | 9.93 | 117 | 49599 | 4.1989 | ug/L | 99 |

(#) = qualifier out of range (m) = manual integration
6M108175.D 8260WT.M Thu May 17 10:54:38 2012 Page 1

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\051612\6M108175.D Vial: 6
Acq On : 16 May 2012 17:26 Operator: adc
Sample : WG397878-06 5.0 ug/L STD 8260 Inst : HPMS6
Misc : 1,1 STD51468 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 17 10:54:38 2012 Quant Results File: 8260WT.RES

Quant Method : C:\MSDCHEM\1\METHODS\8260WT.M (RTE Integrator)
Title : 8260B/624_WATER SOP:OVLMSV01 05/16/12 - HPMS6
Last Update : Thu May 17 10:54:16 2012
Response via : Initial Calibration
DataAcq Meth : 8260WT

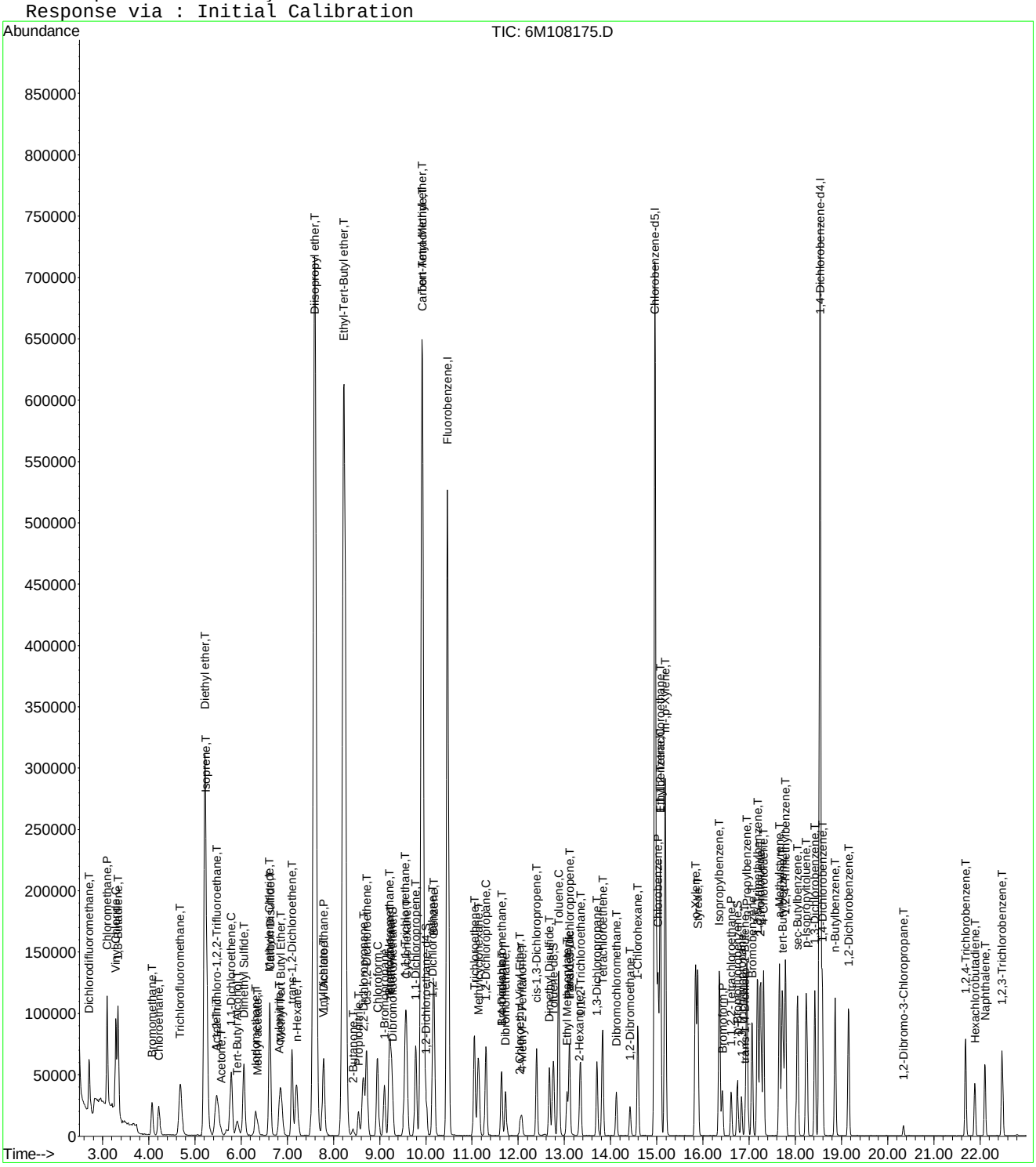
| | Compound | R.T. | QIon | Response | Conc Unit | | Qvalue |
|---|---|---|---|---|---|---|---|
| 45) | 1,2-Dichloroethane | 10.14 | 62 | 53937 | 4.8990 ug/L | | 98 |
| 46) | Benzene | 10.17 | 78 | 149654 | 4.7898 ug/L | | 100 |
| 47) | Trichloroethene | 11.05 | 130 | 36309 | 4.5492 ug/L | | 95 |
| 48) | Methylcyclohexane | 11.14 | 83 | 45251 | 4.5476 ug/L | | 99 |
| 49) | 1,2-Dichloropropane | 11.30 | 63 | 38851 | 5.0905 ug/L | | 97 |
| 50) | 1,4-Dioxane | 11.64 | 88 | 2231 | 95.0225 ug/L | # | 50 |
| 51) | Bromodichloromethane | 11.64 | 83 | 46158 | 4.5706 ug/L | | 100 |
| 52) | Dibromomethane | 11.73 | 93 | 20449 | 4.7655 ug/L | | 99 |
| 53) | 2-Chloroethyl Vinyl Ether | 12.03 | 63 | 6621 | 4.1341 ug/L | | 87 |
| 54) | 4-Methyl-2-Pentanone | 12.08 | 58 | 7372 | 4.5278 ug/L | | 89 |
| 55) | cis-1,3-Dichloropropene | 12.40 | 75 | 51121 | 4.4684 ug/L | | 99 |
| 56) | Dimethyl Disulfide | 12.68 | 79 | 23090 | 4.5373 ug/L | | 98 |
| 59) | Toluene | 12.88 | 91 | 147528 | 4.7946 ug/L | | 99 |
| 60) | Ethyl Methacrylate | 13.05 | 69 | 26102 | 4.2694 ug/L | | 94 |
| 61) | Paraldehyde | 13.10 | 89 | 3431 | 47.8424 ug/L | # | 100 |
| 62) | trans-1,3-Dichloropropene | 13.11 | 75 | 42384 | 4.3329 ug/L | | 100 |
| 63) | 1,1,2-Trichloroethane | 13.35 | 97 | 25355 | 4.8060 ug/L | | 95 |
| 64) | 2-Hexanone | 13.32 | 43 | 11855 | 4.2295 ug/L | | 94 |
| 65) | 1,3-Dichloropropane | 13.71 | 76 | 44407 | 4.9570 ug/L | | 97 |
| 66) | Tetrachloroethene | 13.83 | 166 | 33669 | 4.7422 ug/L | | 99 |
| 67) | Dibromochloromethane | 14.13 | 129 | 25453 | 4.0947 ug/L | | 100 |
| 68) | 1,2-Dibromoethane | 14.42 | 107 | 22875 | 4.6018 ug/L | | 99 |
| 69) | 1-Chlorohexane | 14.58 | 91 | 41520 | 4.3792 ug/L | | 95 |
| 70) | Chlorobenzene | 15.02 | 112 | 91106 | 4.5707 ug/L | | 92 |
| 71) | 1,1,1,2-Tetrachloroethane | 15.07 | 131 | 29215 | 4.5145 ug/L | | 95 |
| 72) | Ethylbenzene | 15.07 | 106 | 47722 | 4.4478 ug/L | | 97 |
| 73) | m-,p-Xylene | 15.19 | 106 | 117469 | 8.0456 ug/L | | 95 |
| 74) | o-Xylene | 15.84 | 106 | 55255 | 4.2794 ug/L | | 96 |
| 75) | Styrene | 15.89 | 104 | 93021 | 4.2339 ug/L | | 97 |
| 76) | Bromoform | 16.43 | 173 | 12807 | 4.2091 ug/L | | 94 |
| 77) | Isopropylbenzene | 16.35 | 105 | 142576 | 4.8318 ug/L | | 99 |
| 79) | 1,1,2,2-Tetrachloroethane | 16.61 | 83 | 25100 | 5.0280 ug/L | | 93 |
| 81) | 1,2,3-Trichloropropane | 16.84 | 110 | 6719 | 5.2297 ug/L | | 98 |
| 82) | trans-1,4-Dichloro-2-Buten | 16.91 | 53 | 6691 | 4.5206 ug/L | | 88 |
| 83) | n-Propylbenzene | 16.95 | 91 | 168825 | 4.9792 ug/L | | 98 |
| 84) | Bromobenzene | 17.07 | 156 | 35324 | 5.1361 ug/L | | 99 |
| 85) | 1,3,5-Trimethylbenzene | 17.19 | 105 | 109347 | 4.8564 ug/L | | 99 |
| 86) | 2-Chlorotoluene | 17.25 | 91 | 121582 | 5.0726 ug/L | | 98 |
| 87) | 4-Chlorotoluene | 17.31 | 91 | 105290 | 4.8604 ug/L | | 98 |
| 88) | a-Methylstyrene | 17.66 | 118 | 59986 | 4.2170 ug/L | | 96 |
| 89) | tert-Butylbenzene | 17.73 | 134 | 20876 | 4.4362 ug/L | | 96 |
| 90) | 1,2,4-Trimethylbenzene | 17.78 | 105 | 114973 | 4.8269 ug/L | | 99 |
| 91) | sec-Butylbenzene | 18.05 | 105 | 125693 | 4.7591 ug/L | | 100 |
| 92) | p-Isopropyltoluene | 18.24 | 119 | 100483 | 4.8217 ug/L | | 99 |
| 93) | 1,3-Dichlorobenzene | 18.42 | 146 | 64097 | 4.9695 ug/L | | 96 |
| 94) | 1,4-Dichlorobenzene | 18.59 | 146 | 64925 | 4.7024 ug/L | | 89 |
| 95) | n-Butylbenzene | 18.86 | 91 | 95127 | 4.8088 ug/L | | 98 |
| 96) | 1,2-Dichlorobenzene | 19.16 | 146 | 57084 | 4.7339 ug/L | | 99 |
| 97) | 1,2-Dibromo-3-Chloropropan | 20.34 | 75 | 3408 | 5.0181 ug/L | | 91 |
| 98) | 1,2,4-Trichlorobenzene | 21.69 | 180 | 32768 | 4.8900 ug/L | | 100 |
| 99) | Hexachlorobutadiene | 21.90 | 225 | 12394 | 4.7353 ug/L | | 95 |
| 100) | Naphthalene | 22.11 | 128 | 65007 | 4.8357 ug/L | | 99 |
| 101) | 1,2,3-Trichlorobenzene | 22.48 | 180 | 28240 | 5.0989 ug/L | | 98 |

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

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\051612\6M108175.D Vial: 6
Acq On : 16 May 2012 17:26 Operator: adc
Sample : WG397878-06 5.0 ug/L STD 8260 Inst : HPMS6
Misc : 1,1 STD51468 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 17 10:54 2012 Quant Results File: 8260WT.RES

Method : C:\MSDCHEM\1\METHODS\8260WT.M (RTE Integrator)
Title : 8260B/624_WATER SOP:OVLMSV01 05/16/12 - HPMS6
Last Update : Thu May 17 10:54:16 2012
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\051612\6M108176.D Vial: 7
Acq On : 16 May 2012 17:58 Operator: adc
Sample : WG397878-07 20.0 ug/L STD 8260 Inst : HPMS6
Misc : 1,1 STD51468 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 17 10:54:39 2012 Quant Results File: 8260WT.RES

Quant Method : C:\MSDCHEM\1\METHODS\8260WT.M (RTE Integrator)
Title : 8260B/624_WATER SOP:OVLMSV01 05/16/12 - HPMS6
Last Update : Thu May 17 10:54:16 2012
Response via : Initial Calibration
DataAcq Meth : 8260WT

| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 1) Fluorobenzene | 10.47 | 96 | 732975 | 25.00 | ug/L | 0.00 |
| 57) Chlorobenzene-d5 | 14.97 | 117 | 545480 | 25.00 | ug/L | 0.00 |
| 78) 1,4-Dichlorobenzene-d4 | 18.53 | 152 | 284470 | 25.00 | ug/L | 0.00 |
| **System Monitoring Compounds** | | | | | | |
| 37) Dibromofluoromethane | 9.28 | 111 | 88413 | 9.8550 | ug/L | 0.00 |
| Spiked Amount 25.000 | Range 86 - 118 | | Recovery = 39.40%# | | | |
| 43) 1,2-Dichloroethane-d4 | 10.01 | 65 | 96312 | 10.1505 | ug/L | 0.00 |
| Spiked Amount 25.000 | Range 80 - 120 | | Recovery = 40.60%# | | | |
| 58) Toluene-d8 | 12.76 | 98 | 278763 | 9.7293 | ug/L | 0.00 |
| Spiked Amount 25.000 | Range 88 - 110 | | Recovery = 38.92%# | | | |
| 80) p-Bromofluorobenzene | 16.74 | 95 | 101152 | 9.8076 | ug/L | 0.00 |
| Spiked Amount 25.000 | Range 86 - 115 | | Recovery = 39.24%# | | | |
| **Target Compounds** | | | | | | Qvalue |
| 2) Dichlorodifluoromethane | 2.71 | 85 | 226626 | 19.9476 | ug/L | 100 |
| 3) Chloromethane | 3.10 | 50 | 440343 | 19.5422 | ug/L | 100 |
| 4) Vinyl Chloride | 3.28 | 62 | 305250 | 19.5687 | ug/L | 99 |
| 5) 1,3-Butadiene | 3.31 | 54 | 106060 | 17.7131 | ug/L | 99 |
| 6) Bromomethane | 4.07 | 94 | 126360 | 16.1754 | ug/L | 99 |
| 7) Chloroethane | 4.21 | 64 | 141584 | 19.8217 | ug/L | 97 |
| 8) Trichlorofluoromethane | 4.68 | 101 | 334813 | 19.7328 | ug/L | 99 |
| 9) Diethyl ether | 5.21 | 59 | 528035 | 77.9226 | ug/L | 99 |
| 10) Isoprene | 5.24 | 67 | 291590 | 19.6261 | ug/L | 99 |
| 11) Acrolein | 5.46 | 56 | 7006 | 18.5735 | ug/L | 96 |
| 12) 1,1,2-Trichloro-1,2,2-Trif | 5.47 | 101 | 174958 | 20.0756 | ug/L | 98 |
| 13) Acetone | 5.56 | 43 | 31391 | 19.9582 | ug/L | 97 |
| 14) 1,1-Dichloroethene | 5.79 | 61 | 289380 | 20.6548 | ug/L | 99 |
| 15) Tert-Butyl Alcohol | 5.93 | 59 | 54179 | 141.3191 | ug/L | 98 |
| 16) Dimethyl Sulfide | 6.05 | 62 | 220025 | 19.8380 | ug/L | 98 |
| 17) Iodomethane | 6.31 | 142 | 173918 | 18.2559 | ug/L | 98 |
| 18) Methyl acetate | 6.36 | 43 | 96187 | 19.0746 | ug/L | 99 |
| 19) Methylene Chloride | 6.61 | 84 | 173010 | 19.5397 | ug/L | 99 |
| 20) Carbon Disulfide | 6.62 | 76 | 516953 | 19.3173 | ug/L | 99 |
| 21) Acrylonitrile | 6.82 | 53 | 41257 | 19.7821 | ug/L | 98 |
| 22) Methyl Tert Butyl Ether | 6.86 | 73 | 384377 | 20.0503 | ug/L | 99 |
| 23) trans-1,2-Dichloroethene | 7.10 | 96 | 169452 | 20.3320 | ug/L | 99 |
| 24) n-Hexane | 7.21 | 57 | 187973 | 19.9574 | ug/L | 99 |
| 25) Diisopropyl ether | 7.59 | 45 | 2527435 | 79.9213 | ug/L | 99 |
| 26) Vinyl Acetate | 7.78 | 43 | 198229 | 19.3359 | ug/L | 99 |
| 27) 1,1-Dichloroethane | 7.79 | 63 | 333384 | 20.4993 | ug/L | 99 |
| 28) Ethyl-Tert-Butyl ether | 8.23 | 59 | 2146208 | 79.7324 | ug/L | 99 |
| 29) 2-Butanone | 8.42 | 43 | 45311 | 20.3558 | ug/L | 97 |
| 30) Propionitrile | 8.53 | 54 | 53316 | 80.2332 | ug/L | 100 |
| 31) 2,2-Dichloropropane | 8.64 | 77 | 260617 | 20.4925 | ug/L | 96 |
| 32) cis-1,2-Dichloroethene | 8.72 | 96 | 180075 | 20.5881 | ug/L | 100 |
| 33) Chloroform | 8.95 | 83 | 318145 | 20.8329 | ug/L | 99 |
| 34) 1-Bromopropane | 9.10 | 122 | 29528 | 17.5263 | ug/L | 94 |
| 35) Bromochloromethane | 9.21 | 130 | 100149 | 21.1920 | ug/L | 99 |
| 36) Tetrahydrofuran | 9.24 | 42 | 115727 | 80.4603 | ug/L | 99 |
| 38) 1,1,1-Trichloroethane | 9.55 | 97 | 273850 | 19.6447 | ug/L | 98 |
| 39) Cyclohexane | 9.57 | 56 | 276455 | 20.0201 | ug/L | 99 |
| 40) 1,1-Dichloropropene | 9.78 | 75 | 240252 | 20.8110 | ug/L | 97 |
| 41) Tert-Amyl-Methyl ether | 9.92 | 73 | 1692814 | 79.7405 | ug/L | 99 |
| 42) Carbon Tetrachloride | 9.93 | 117 | 238217 | 17.9027 | ug/L | 99 |

(#) = qualifier out of range (m) = manual integration
6M108176.D 8260WT.M Thu May 17 10:54:39 2012 Page 1

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\051612\6M108176.D Vial: 7
Acq On : 16 May 2012 17:58 Operator: adc
Sample : WG397878-07 20.0 ug/L STD 8260 Inst : HPMS6
Misc : 1,1 STD51468 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 17 10:54:39 2012 Quant Results File: 8260WT.RES

Quant Method : C:\MSDCHEM\1\METHODS\8260WT.M (RTE Integrator)
Title : 8260B/624_WATER SOP:OVLMSV01 05/16/12 - HPMS6
Last Update : Thu May 17 10:54:16 2012
Response via : Initial Calibration
DataAcq Meth : 8260WT

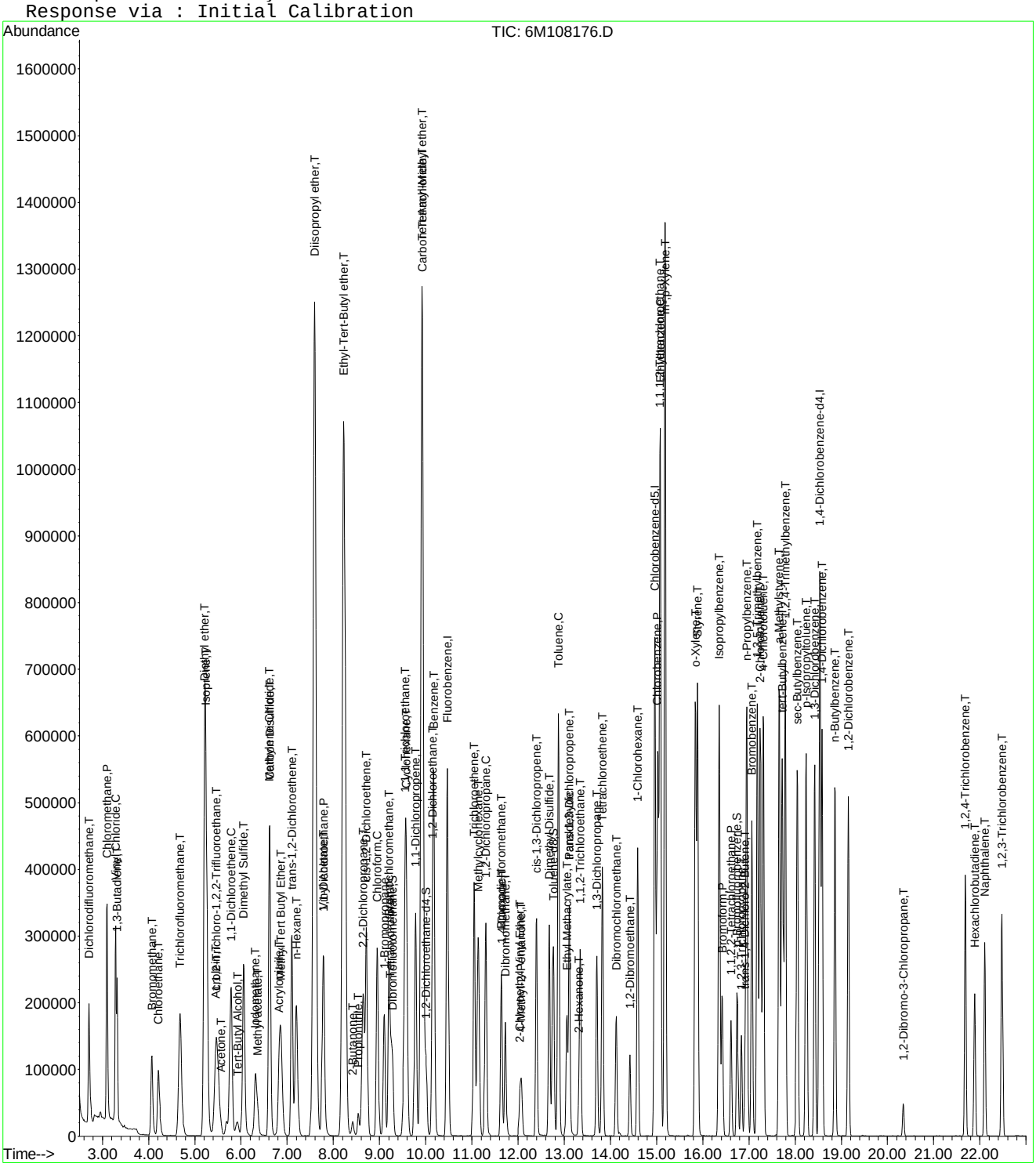
| | Compound | R.T. | QIon | Response | Conc Unit | | Qvalue |
|---|---|---|---|---|---|---|---|
| 45) | 1,2-Dichloroethane | 10.15 | 62 | 241312 | 20.7988 | ug/L | 99 |
| 46) | Benzene | 10.18 | 78 | 666565 | 20.2444 | ug/L | 100 |
| 47) | Trichloroethene | 11.04 | 130 | 164072 | 19.5071 | ug/L | 97 |
| 48) | Methylcyclohexane | 11.14 | 83 | 211221 | 20.1433 | ug/L | 99 |
| 49) | 1,2-Dichloropropane | 11.30 | 63 | 168969 | 21.0088 | ug/L | 99 |
| 50) | 1,4-Dioxane | 11.65 | 88 | 5477 | 148.7618 | ug/L | 99 |
| 51) | Bromodichloromethane | 11.64 | 83 | 214486 | 20.1542 | ug/L | 100 |
| 52) | Dibromomethane | 11.73 | 93 | 90686 | 20.0545 | ug/L | 98 |
| 53) | 2-Chloroethyl Vinyl Ether | 12.04 | 63 | 33880 | 20.0744 | ug/L | 97 |
| 54) | 4-Methyl-2-Pentanone | 12.07 | 58 | 33289 | 19.4016 | ug/L | 100 |
| 55) | cis-1,3-Dichloropropene | 12.40 | 75 | 244112 | 20.2480 | ug/L | 99 |
| 56) | Dimethyl Disulfide | 12.68 | 79 | 130347 | 16.6338 | ug/L | 99 |
| 59) | Toluene | 12.87 | 91 | 669132 | 20.6323 | ug/L | 99 |
| 60) | Ethyl Methacrylate | 13.06 | 69 | 136193 | 18.8246 | ug/L | 97 |
| 61) | Paraldehyde | 13.11 | 89 | 6972 | 75.0856 | ug/L # | 100 |
| 62) | trans-1,3-Dichloropropene | 13.11 | 75 | 216799 | 19.6171 | ug/L | 98 |
| 63) | 1,1,2-Trichloroethane | 13.34 | 97 | 110894 | 19.2995 | ug/L | 99 |
| 64) | 2-Hexanone | 13.31 | 43 | 58814 | 19.9079 | ug/L | 99 |
| 65) | 1,3-Dichloropropane | 13.71 | 76 | 203431 | 21.5450 | ug/L | 100 |
| 66) | Tetrachloroethene | 13.82 | 166 | 155730 | 20.8104 | ug/L | 99 |
| 67) | Dibromochloromethane | 14.13 | 129 | 130610 | 18.4574 | ug/L | 100 |
| 68) | 1,2-Dibromoethane | 14.42 | 107 | 109223 | 20.8466 | ug/L | 99 |
| 69) | 1-Chlorohexane | 14.59 | 91 | 196732 | 19.6867 | ug/L | 98 |
| 70) | Chlorobenzene | 15.02 | 112 | 420657 | 20.0227 | ug/L | 98 |
| 71) | 1,1,1,2-Tetrachloroethane | 15.07 | 131 | 150336 | 20.0982 | ug/L | 99 |
| 72) | Ethylbenzene | 15.08 | 106 | 227851 | 20.1480 | ug/L | 96 |
| 73) | m-,p-Xylene | 15.19 | 106 | 575459 | 35.0280 | ug/L | 97 |
| 74) | o-Xylene | 15.84 | 106 | 262079 | 17.0702 | ug/L | 99 |
| 75) | Styrene | 15.88 | 104 | 459890 | 17.4538 | ug/L | 100 |
| 76) | Bromoform | 16.43 | 173 | 69887 | 18.5542 | ug/L | 98 |
| 77) | Isopropylbenzene | 16.35 | 105 | 659676 | 21.2105 | ug/L | 100 |
| 79) | 1,1,2,2-Tetrachloroethane | 16.61 | 83 | 119834 | 21.4522 | ug/L | 99 |
| 81) | 1,2,3-Trichloropropane | 16.83 | 110 | 29793 | 20.7231 | ug/L | 96 |
| 82) | trans-1,4-Dichloro-2-Buten | 16.92 | 53 | 36453 | 19.2537 | ug/L | 94 |
| 83) | n-Propylbenzene | 16.96 | 91 | 788542 | 20.7836 | ug/L | 99 |
| 84) | Bromobenzene | 17.06 | 156 | 166522 | 21.6373 | ug/L | 100 |
| 85) | 1,3,5-Trimethylbenzene | 17.18 | 105 | 530078 | 21.0385 | ug/L | 100 |
| 86) | 2-Chlorotoluene | 17.24 | 91 | 491250 | 18.3160 | ug/L | 91 |
| 87) | 4-Chlorotoluene | 17.30 | 91 | 519624 | 21.4359 | ug/L | 96 |
| 88) | a-Methylstyrene | 17.65 | 118 | 300103 | 18.8535 | ug/L | 99 |
| 89) | tert-Butylbenzene | 17.72 | 134 | 101888 | 19.3490 | ug/L | 98 |
| 90) | 1,2,4-Trimethylbenzene | 17.78 | 105 | 569306 | 21.3593 | ug/L | 99 |
| 91) | sec-Butylbenzene | 18.04 | 105 | 607716 | 20.5628 | ug/L | 100 |
| 92) | p-Isopropyltoluene | 18.24 | 119 | 499167 | 21.4054 | ug/L | 100 |
| 93) | 1,3-Dichlorobenzene | 18.43 | 146 | 302914 | 20.9875 | ug/L | 100 |
| 94) | 1,4-Dichlorobenzene | 18.58 | 146 | 313567 | 20.2960 | ug/L | 100 |
| 95) | n-Butylbenzene | 18.86 | 91 | 458967 | 20.7339 | ug/L | 99 |
| 96) | 1,2-Dichlorobenzene | 19.15 | 146 | 271011 | 20.0845 | ug/L | 100 |
| 97) | 1,2-Dibromo-3-Chloropropan | 20.35 | 75 | 17959 | 19.1664 | ug/L | 95 |
| 98) | 1,2,4-Trichlorobenzene | 21.68 | 180 | 156085 | 20.8155 | ug/L | 99 |
| 99) | Hexachlorobutadiene | 21.89 | 225 | 57118 | 19.5021 | ug/L | 98 |
| 100) | Naphthalene | 22.10 | 128 | 310182 | 20.6199 | ug/L | 100 |
| 101) | 1,2,3-Trichlorobenzene | 22.48 | 180 | 132687 | 21.4097 | ug/L | 99 |

(#) = qualifier out of range (m) = manual integration
6M108176.D 8260WT.M Thu May 17 10:54:40 2012 Page 2

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\051612\6M108176.D Vial: 7
Acq On : 16 May 2012 17:58 Operator: adc
Sample : WG397878-07 20.0 ug/L STD 8260 Inst : HPMS6
Misc : 1,1 STD51468 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 17 10:54 2012 Quant Results File: 8260WT.RES

Method : C:\MSDCHEM\1\METHODS\8260WT.M (RTE Integrator)
Title : 8260B/624_WATER SOP:OVLMSV01 05/16/12 - HPMS6
Last Update : Thu May 17 10:54:16 2012
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\051612\6M108177.D Vial: 8
Acq On : 16 May 2012 18:31 Operator: adc
Sample : WG397878-08 50.0 ug/L STD 8260 Inst : HPMS6
Misc : 1,1 STD51468 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 17 10:54:40 2012 Quant Results File: 8260WT.RES

Quant Method : C:\MSDCHEM\1\METHODS\8260WT.M (RTE Integrator)
Title : 8260B/624_WATER SOP:OVLMSV01 05/16/12 - HPMS6
Last Update : Thu May 17 10:54:16 2012
Response via : Initial Calibration
DataAcq Meth : 8260WT

| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 1) Fluorobenzene | 10.47 | 96 | 763968 | 25.00 | ug/L | 0.00 |
| 57) Chlorobenzene-d5 | 14.96 | 117 | 583605 | 25.00 | ug/L | 0.00 |
| 78) 1,4-Dichlorobenzene-d4 | 18.54 | 152 | 309979 | 25.00 | ug/L | 0.00 |
| **System Monitoring Compounds** | | | | | | |
| 37) Dibromofluoromethane | 9.27 | 111 | 237420 | 25.3905 | ug/L | 0.00 |
| Spiked Amount 25.000 | Range 86 - 118 | | Recovery = 101.56% | | | |
| 43) 1,2-Dichloroethane-d4 | 10.01 | 65 | 251856 | 25.4666 | ug/L | 0.00 |
| Spiked Amount 25.000 | Range 80 - 120 | | Recovery = 101.88% | | | |
| 58) Toluene-d8 | 12.76 | 98 | 777901 | 25.3765 | ug/L | 0.00 |
| Spiked Amount 25.000 | Range 88 - 110 | | Recovery = 101.52% | | | |
| 80) p-Bromofluorobenzene | 16.75 | 95 | 283691 | 25.2429 | ug/L | 0.00 |
| Spiked Amount 25.000 | Range 86 - 115 | | Recovery = 100.96% | | | |
| **Target Compounds** | | | | | | Qvalue |
| 2) Dichlorodifluoromethane | 2.71 | 85 | 602707 | 50.8981 | ug/L | 100 |
| 3) Chloromethane | 3.10 | 50 | 1064250 | 45.3149 | ug/L | 100 |
| 4) Vinyl Chloride | 3.28 | 62 | 720915 | 50.0611 | ug/L | 100 |
| 5) 1,3-Butadiene | 3.31 | 54 | 241043 | 53.6460 | ug/L | 100 |
| 6) Bromomethane | 4.06 | 94 | 389208 | 46.3739 | ug/L | 100 |
| 7) Chloroethane | 4.21 | 64 | 381361 | 51.2243 | ug/L | 100 |
| 8) Trichlorofluoromethane | 4.68 | 101 | 909241 | 51.4137 | ug/L | 100 |
| 9) Diethyl ether | 5.22 | 59 | 705203 | 99.8455 | ug/L | 100 |
| 10) Isoprene | 5.24 | 67 | 816761 | 52.7437 | ug/L | 100 |
| 11) Acrolein | 5.45 | 56 | 22644 | 49.2167 | ug/L | 100 |
| 12) 1,1,2-Trichloro-1,2,2-Trif | 5.47 | 101 | 464171 | 51.1008 | ug/L | 100 |
| 13) Acetone | 5.57 | 43 | 78510 | 47.8912 | ug/L | 100 |
| 14) 1,1-Dichloroethene | 5.78 | 61 | 765869 | 52.4470 | ug/L | 100 |
| 15) Tert-Butyl Alcohol | 5.92 | 59 | 69221 | 173.2294 | ug/L | 97 |
| 16) Dimethyl Sulfide | 6.06 | 62 | 598801 | 51.7990 | ug/L | 100 |
| 17) Iodomethane | 6.31 | 142 | 489685 | 48.3964 | ug/L | 100 |
| 18) Methyl acetate | 6.35 | 43 | 251670 | 47.8834 | ug/L | 100 |
| 19) Methylene Chloride | 6.61 | 84 | 458949 | 49.7308 | ug/L | 100 |
| 20) Carbon Disulfide | 6.62 | 76 | 1424940 | 51.0865 | ug/L | 100 |
| 21) Acrylonitrile | 6.82 | 53 | 109487 | 50.3676 | ug/L | 100 |
| 22) Methyl Tert Butyl Ether | 6.85 | 73 | 1001092 | 50.1017 | ug/L | 100 |
| 23) trans-1,2-Dichloroethene | 7.10 | 96 | 455086 | 52.3892 | ug/L | 100 |
| 24) n-Hexane | 7.20 | 57 | 498667 | 50.7963 | ug/L | 100 |
| 25) Diisopropyl ether | 7.59 | 45 | 3330953 | 101.0567 | ug/L | 100 |
| 26) Vinyl Acetate | 7.77 | 43 | 530144 | 49.6142 | ug/L | 100 |
| 27) 1,1-Dichloroethane | 7.78 | 63 | 888438 | 52.4125 | ug/L | 100 |
| 28) Ethyl-Tert-Butyl ether | 8.23 | 59 | 2802043 | 99.8739 | ug/L | 100 |
| 29) 2-Butanone | 8.42 | 43 | 111005 | 47.8455 | ug/L | 100 |
| 30) Propionitrile | 8.54 | 54 | 70189 | 101.3397 | ug/L | 100 |
| 31) 2,2-Dichloropropane | 8.64 | 77 | 696158 | 52.5187 | ug/L | 100 |
| 32) cis-1,2-Dichloroethene | 8.72 | 96 | 478662 | 52.5055 | ug/L | 100 |
| 33) Chloroform | 8.96 | 83 | 837662 | 52.6267 | ug/L | 100 |
| 34) 1-Bromopropane | 9.10 | 122 | 82182 | 45.6272 | ug/L | 100 |
| 35) Bromochloromethane | 9.20 | 130 | 261601 | 53.1102 | ug/L | 100 |
| 36) Tetrahydrofuran | 9.24 | 42 | 147909 | 98.6633 | ug/L | 100 |
| 38) 1,1,1-Trichloroethane | 9.55 | 97 | 758469 | 52.2017 | ug/L | 100 |
| 39) Cyclohexane | 9.58 | 56 | 755563 | 52.4961 | ug/L | 100 |
| 40) 1,1-Dichloropropene | 9.77 | 75 | 644329 | 53.5486 | ug/L | 100 |
| 41) Tert-Amyl-Methyl ether | 9.93 | 73 | 2236078 | 101.0580 | ug/L | 100 |
| 42) Carbon Tetrachloride | 9.93 | 117 | 668983 | 47.6484 | ug/L | 100 |

(#) = qualifier out of range (m) = manual integration
6M108177.D 8260WT.M Thu May 17 10:54:41 2012 Page 1

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\051612\6M108177.D Vial: 8
Acq On : 16 May 2012 18:31 Operator: adc
Sample : WG397878-08 50.0 ug/L STD 8260 Inst : HPMS6
Misc : 1,1 STD51468 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 17 10:54:40 2012 Quant Results File: 8260WT.RES

Quant Method : C:\MSDCHEM\1\METHODS\8260WT.M (RTE Integrator)
Title : 8260B/624_WATER SOP:OVLMSV01 05/16/12 - HPMS6
Last Update : Thu May 17 10:54:16 2012
Response via : Initial Calibration
DataAcq Meth : 8260WT

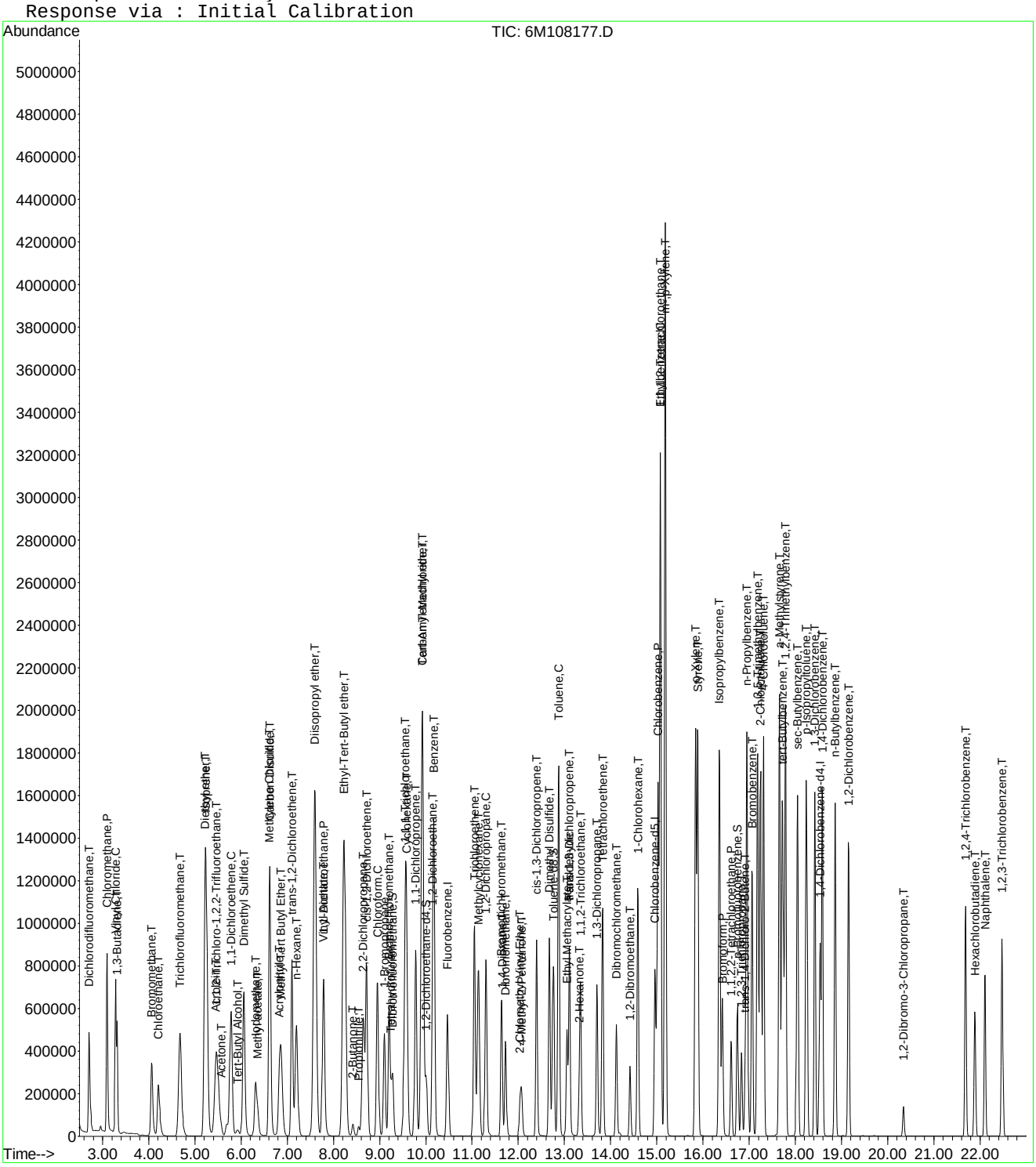
| | Compound | R.T. | QIon | Response | Conc | Unit | | Qvalue |
|---|---|---|---|---|---|---|---|---|
| 45) | 1,2-Dichloroethane | 10.14 | 62 | 627455 | 51.8866 | ug/L | | 100 |
| 46) | Benzene | 10.17 | 78 | 1787744 | 52.0934 | ug/L | | 100 |
| 47) | Trichloroethene | 11.05 | 130 | 441037 | 50.3093 | ug/L | | 100 |
| 48) | Methylcyclohexane | 11.14 | 83 | 563532 | 51.5615 | ug/L | | 100 |
| 49) | 1,2-Dichloropropane | 11.30 | 63 | 444511 | 53.0263 | ug/L | | 100 |
| 50) | 1,4-Dioxane | 11.65 | 88 | 8223 | 190.2343 | ug/L | | 100 |
| 51) | Bromodichloromethane | 11.63 | 83 | 580863 | 52.3666 | ug/L | | 100 |
| 52) | Dibromomethane | 11.72 | 93 | 238473 | 50.5971 | ug/L | | 100 |
| 53) | 2-Chloroethyl Vinyl Ether | 12.03 | 63 | 91496 | 52.0134 | ug/L | | 100 |
| 54) | 4-Methyl-2-Pentanone | 12.07 | 58 | 89530 | 50.0632 | ug/L | | 100 |
| 55) | cis-1,3-Dichloropropene | 12.40 | 75 | 665309 | 52.9457 | ug/L | | 100 |
| 56) | Dimethyl Disulfide | 12.67 | 79 | 381448 | 43.5194 | ug/L | | 100 |
| 59) | Toluene | 12.88 | 91 | 1848322 | 53.2690 | ug/L | | 100 |
| 60) | Ethyl Methacrylate | 13.05 | 69 | 373037 | 47.2803 | ug/L | | 100 |
| 61) | Paraldehyde | 13.10 | 89 | 10157 | 95.5561 | ug/L | # | 100 |
| 62) | trans-1,3-Dichloropropene | 13.10 | 75 | 601239 | 49.3973 | ug/L | | 100 |
| 63) | 1,1,2-Trichloroethane | 13.35 | 97 | 290582 | 46.9718 | ug/L | | 100 |
| 64) | 2-Hexanone | 13.32 | 43 | 159834 | 50.5678 | ug/L | | 100 |
| 65) | 1,3-Dichloropropane | 13.71 | 76 | 524443 | 51.9144 | ug/L | | 100 |
| 66) | Tetrachloroethene | 13.83 | 166 | 423068 | 52.8419 | ug/L | | 100 |
| 67) | Dibromochloromethane | 14.12 | 129 | 365966 | 47.7202 | ug/L | | 100 |
| 68) | 1,2-Dibromoethane | 14.42 | 107 | 291836 | 52.0618 | ug/L | | 100 |
| 69) | 1-Chlorohexane | 14.59 | 91 | 555477 | 51.9545 | ug/L | | 100 |
| 70) | Chlorobenzene | 15.02 | 112 | 1186766 | 52.7983 | ug/L | | 100 |
| 71) | 1,1,1,2-Tetrachloroethane | 15.07 | 131 | 452519 | 50.6798 | ug/L | | 100 |
| 72) | Ethylbenzene | 15.07 | 106 | 668523 | 55.2531 | ug/L | | 100 |
| 73) | m-,p-Xylene | 15.19 | 106 | 1702398 | 95.7098 | ug/L | | 100 |
| 74) | o-Xylene | 15.84 | 106 | 748600 | 44.5302 | ug/L | | 100 |
| 75) | Styrene | 15.89 | 104 | 1327976 | 45.9997 | ug/L | | 100 |
| 76) | Bromoform | 16.43 | 173 | 208577 | 48.6228 | ug/L | | 100 |
| 77) | Isopropylbenzene | 16.35 | 105 | 1884871 | 56.6449 | ug/L | | 100 |
| 79) | 1,1,2,2-Tetrachloroethane | 16.61 | 83 | 320221 | 52.6074 | ug/L | | 100 |
| 81) | 1,2,3-Trichloropropane | 16.83 | 110 | 80008 | 51.0715 | ug/L | | 93 |
| 82) | trans-1,4-Dichloro-2-Buten | 16.91 | 53 | 101894 | 48.2747 | ug/L | | 100 |
| 83) | n-Propylbenzene | 16.95 | 91 | 2215516 | 53.5890 | ug/L | | 100 |
| 84) | Bromobenzene | 17.07 | 156 | 470382 | 56.0901 | ug/L | | 100 |
| 85) | 1,3,5-Trimethylbenzene | 17.19 | 105 | 1531301 | 55.7751 | ug/L | | 100 |
| 86) | 2-Chlorotoluene | 17.25 | 91 | 1633642 | 55.8971 | ug/L | | 100 |
| 87) | 4-Chlorotoluene | 17.31 | 91 | 1404550 | 53.1733 | ug/L | | 100 |
| 88) | a-Methylstyrene | 17.66 | 118 | 889904 | 51.3060 | ug/L | | 100 |
| 89) | tert-Butylbenzene | 17.73 | 134 | 296571 | 51.6855 | ug/L | | 100 |
| 90) | 1,2,4-Trimethylbenzene | 17.78 | 105 | 1639644 | 56.4539 | ug/L | | 100 |
| 91) | sec-Butylbenzene | 18.05 | 105 | 1720426 | 53.4222 | ug/L | | 100 |
| 92) | p-Isopropyltoluene | 18.24 | 119 | 1426528 | 56.1385 | ug/L | | 100 |
| 93) | 1,3-Dichlorobenzene | 18.42 | 146 | 862103 | 54.8156 | ug/L | | 100 |
| 94) | 1,4-Dichlorobenzene | 18.59 | 146 | 882087 | 52.3957 | ug/L | | 100 |
| 95) | n-Butylbenzene | 18.86 | 91 | 1288045 | 53.3991 | ug/L | | 100 |
| 96) | 1,2-Dichlorobenzene | 19.16 | 146 | 762573 | 51.8631 | ug/L | | 100 |
| 97) | 1,2-Dibromo-3-Chloropropan | 20.34 | 75 | 50422 | 47.4856 | ug/L | | 100 |
| 98) | 1,2,4-Trichlorobenzene | 21.69 | 180 | 439579 | 53.7981 | ug/L | | 100 |
| 99) | Hexachlorobutadiene | 21.90 | 225 | 156869 | 49.1529 | ug/L | | 100 |
| 100) | Naphthalene | 22.11 | 128 | 830131 | 50.6433 | ug/L | | 100 |
| 101) | 1,2,3-Trichlorobenzene | 22.48 | 180 | 366009 | 54.1975 | ug/L | | 100 |

(#) = qualifier out of range (m) = manual integration
6M108177.D 8260WT.M Thu May 17 10:54:41 2012 Page 2

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\051612\6M108177.D Vial: 8
Acq On : 16 May 2012 18:31 Operator: adc
Sample : WG397878-08 50.0 ug/L STD 8260 Inst : HPMS6
Misc : 1,1 STD51468 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 17 10:54 2012 Quant Results File: 8260WT.RES

Method : C:\MSDCHEM\1\METHODS\8260WT.M (RTE Integrator)
Title : 8260B/624_WATER SOP:OVLMSV01 05/16/12 - HPMS6
Last Update : Thu May 17 10:54:16 2012
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\051612\6M108178.D Vial: 9
Acq On : 16 May 2012 19:03 Operator: adc
Sample : WG397878-09 100.0 ug/L STD 8260 Inst : HPMS6
Misc : 1,1 STD51468 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 17 10:54:41 2012 Quant Results File: 8260WT.RES

Quant Method : C:\MSDCHEM\1\METHODS\8260WT.M (RTE Integrator)
Title : 8260B/624_WATER SOP:OVLMSV01 05/16/12 - HPMS6
Last Update : Thu May 17 10:54:16 2012
Response via : Initial Calibration
DataAcq Meth : 8260WT

| Internal Standards | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| 1) Fluorobenzene | 10.47 | 96 | 788657 | 25.00 ug/L | 0.00 |
| 57) Chlorobenzene-d5 | 14.96 | 117 | 608073 | 25.00 ug/L | 0.00 |
| 78) 1,4-Dichlorobenzene-d4 | 18.54 | 152 | 328870 | 25.00 ug/L | 0.00 |
| **System Monitoring Compounds** | | | | | |
| 37) Dibromofluoromethane | 9.27 | 111 | 505113 | 52.3275 ug/L | 0.00 |
| Spiked Amount 25.000 | Range 86 - 118 | | Recovery = 209.32%# | | |
| 43) 1,2-Dichloroethane-d4 | 10.01 | 65 | 522673 | 51.1961 ug/L | 0.00 |
| Spiked Amount 25.000 | Range 80 - 120 | | Recovery = 204.80%# | | |
| 58) Toluene-d8 | 12.76 | 98 | 1671268 | 52.3259 ug/L | 0.00 |
| Spiked Amount 25.000 | Range 88 - 110 | | Recovery = 209.32%# | | |
| 80) p-Bromofluorobenzene | 16.75 | 95 | 613452 | 51.4496 ug/L | 0.00 |
| Spiked Amount 25.000 | Range 86 - 115 | | Recovery = 205.80%# | | |
| **Target Compounds** | | | | | Qvalue |
| 2) Dichlorodifluoromethane | 2.71 | 85 | 1186545 | 97.0658 ug/L | 99 |
| 3) Chloromethane | 3.10 | 50 | 2084987 | 85.9979 ug/L | 99 |
| 4) Vinyl Chloride | 3.27 | 62 | 1214270 | 100.1018 ug/L | 99 |
| 5) 1,3-Butadiene | 3.31 | 54 | 416517 | 102.4460 ug/L | 99 |
| 6) Bromomethane | 4.05 | 94 | 835247 | 95.6160 ug/L | 99 |
| 7) Chloroethane | 4.20 | 64 | 794861 | 103.4233 ug/L | 100 |
| 8) Trichlorofluoromethane | 4.67 | 101 | 1855454 | 101.6336 ug/L | 100 |
| 9) Diethyl ether | 5.22 | 59 | 1654460 | 226.9121 ug/L | 99 |
| 10) Isoprene | 5.23 | 67 | 1773779 | 110.9589 ug/L | 100 |
| 11) Acrolein | 5.46 | 56 | 55906 | 102.3833 ug/L | 91 |
| 12) 1,1,2-Trichloro-1,2,2-Trif | 5.47 | 101 | 963496 | 102.7512 ug/L | 99 |
| 13) Acetone | 5.57 | 43 | 162291 | 95.8985 ug/L | 94 |
| 14) 1,1-Dichloroethene | 5.77 | 61 | 1612941 | 106.9971 ug/L | 100 |
| 15) Tert-Butyl Alcohol | 5.95 | 59 | 186190 | 451.3642 ug/L | 97 |
| 16) Dimethyl Sulfide | 6.05 | 62 | 1298446 | 108.8053 ug/L | 98 |
| 17) Iodomethane | 6.30 | 142 | 1048791 | 99.8279 ug/L | 99 |
| 18) Methyl acetate | 6.35 | 43 | 575460 | 106.0611 ug/L | 99 |
| 19) Methylene Chloride | 6.61 | 84 | 1005018 | 105.4925 ug/L | 97 |
| 20) Carbon Disulfide | 6.62 | 76 | 3055119 | 106.1023 ug/L | 100 |
| 21) Acrylonitrile | 6.82 | 53 | 248323 | 110.6605 ug/L | 98 |
| 22) Methyl Tert Butyl Ether | 6.85 | 73 | 2202326 | 106.7694 ug/L | 100 |
| 23) trans-1,2-Dichloroethene | 7.10 | 96 | 980010 | 109.2863 ug/L | 99 |
| 24) n-Hexane | 7.19 | 57 | 1056017 | 104.2028 ug/L | 99 |
| 25) Diisopropyl ether | 7.60 | 45 | 7248040 | 213.0120 ug/L | 99 |
| 26) Vinyl Acetate | 7.77 | 43 | 1171212 | 106.1780 ug/L | 99 |
| 27) 1,1-Dichloroethane | 7.78 | 63 | 1893784 | 108.2245 ug/L | 100 |
| 28) Ethyl-Tert-Butyl ether | 8.23 | 59 | 6293504 | 217.2984 ug/L | 99 |
| 29) 2-Butanone | 8.43 | 43 | 251973 | 105.2059 ug/L | 99 |
| 30) Propionitrile | 8.54 | 54 | 157242 | 219.9206 ug/L | 99 |
| 31) 2,2-Dichloropropane | 8.64 | 77 | 1486548 | 108.6356 ug/L | 97 |
| 32) cis-1,2-Dichloroethene | 8.71 | 96 | 1040650 | 110.5777 ug/L | 97 |
| 33) Chloroform | 8.95 | 83 | 1776777 | 108.1328 ug/L | 99 |
| 34) 1-Bromopropane | 9.10 | 122 | 177901 | 94.9078 ug/L | 99 |
| 35) Bromochloromethane | 9.20 | 130 | 564440 | 111.0052 ug/L | 99 |
| 36) Tetrahydrofuran | 9.24 | 42 | 332788 | 215.0383 ug/L | 98 |
| 38) 1,1,1-Trichloroethane | 9.55 | 97 | 1642211 | 109.4871 ug/L | 99 |
| 39) Cyclohexane | 9.57 | 56 | 1566942 | 105.4621 ug/L | 99 |
| 40) 1,1-Dichloropropene | 9.77 | 75 | 1359389 | 109.4388 ug/L | 98 |
| 41) Tert-Amyl-Methyl ether | 9.93 | 73 | 5117409 | 224.0376 ug/L | 99 |
| 42) Carbon Tetrachloride | 9.93 | 117 | 1528058 | 105.0084 ug/L | 99 |

(#) = qualifier out of range (m) = manual integration
6M108178.D 8260WT.M Thu May 17 10:54:42 2012 Page 1

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\051612\6M108178.D Vial: 9
Acq On : 16 May 2012 19:03 Operator: adc
Sample : WG397878-09 100.0 ug/L STD 8260 Inst : HPMS6
Misc : 1,1 STD51468 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 17 10:54:41 2012 Quant Results File: 8260WT.RES

Quant Method : C:\MSDCHEM\1\METHODS\8260WT.M (RTE Integrator)
Title : 8260B/624_WATER SOP:OVLMSV01 05/16/12 - HPMS6
Last Update : Thu May 17 10:54:16 2012
Response via : Initial Calibration
DataAcq Meth : 8260WT

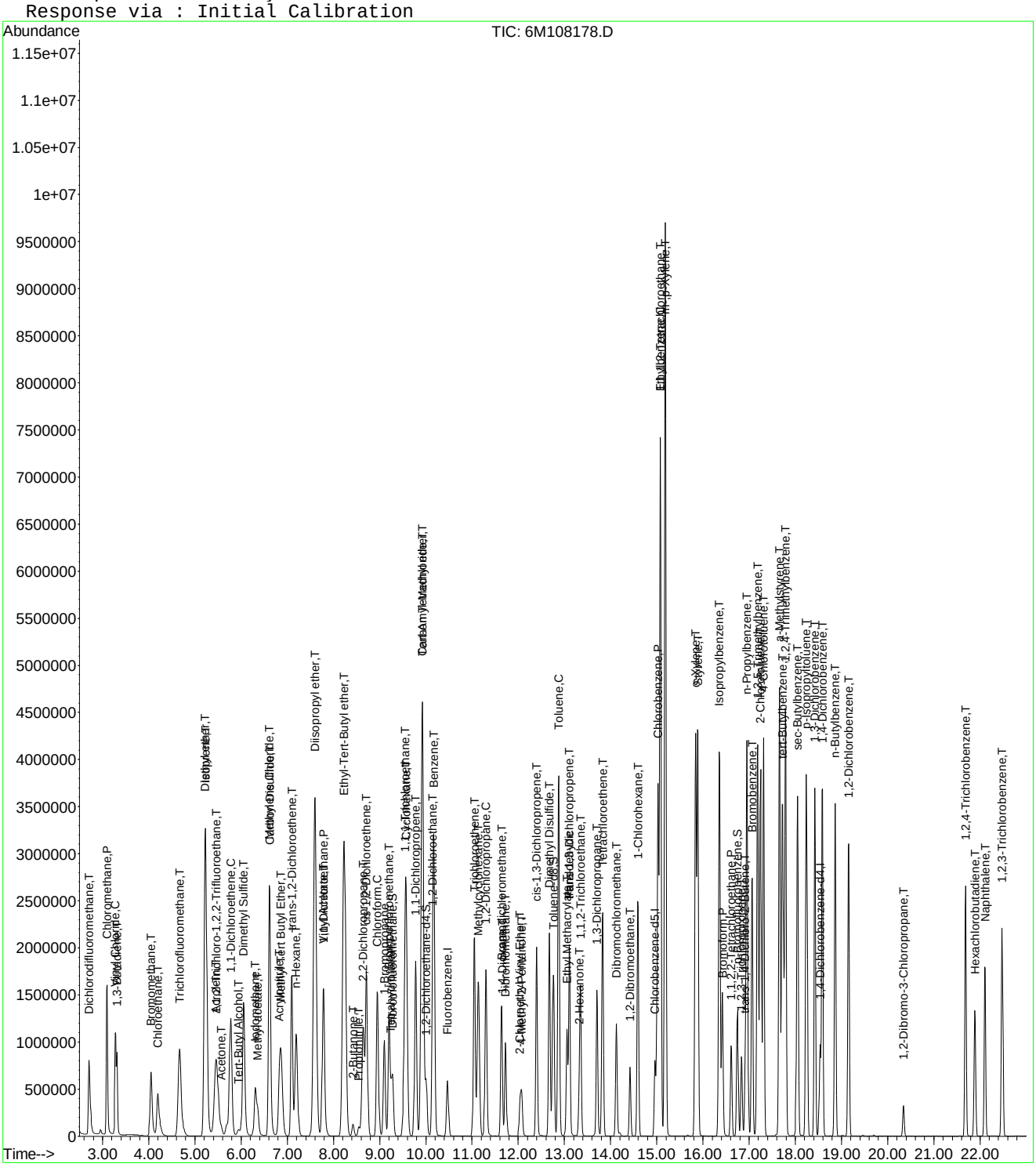
| | Compound | R.T. | QIon | Response | Conc Unit | | Qvalue |
|---|---|---|---|---|---|---|---|
| 45) | 1,2-Dichloroethane | 10.14 | 62 | 1364155 | 109.2757 ug/L | | 99 |
| 46) | Benzene | 10.17 | 78 | 3865754 | 109.1185 ug/L | | 99 |
| 47) | Trichloroethene | 11.05 | 130 | 957973 | 105.8555 ug/L | | 97 |
| 48) | Methylcyclohexane | 11.13 | 83 | 1181763 | 104.7428 ug/L | | 99 |
| 49) | 1,2-Dichloropropane | 11.30 | 63 | 942195 | 108.8771 ug/L | | 99 |
| 50) | 1,4-Dioxane | 11.65 | 88 | 22145 | 408.4284 ug/L | | 98 |
| 51) | Bromodichloromethane | 11.64 | 83 | 1264751 | 110.4518 ug/L | | 99 |
| 52) | Dibromomethane | 11.73 | 93 | 523138 | 107.5201 ug/L | | 100 |
| 53) | 2-Chloroethyl Vinyl Ether | 12.03 | 63 | 202938 | 111.7541 ug/L | | 99 |
| 54) | 4-Methyl-2-Pentanone | 12.07 | 58 | 197497 | 106.9787 ug/L | | 97 |
| 55) | cis-1,3-Dichloropropene | 12.40 | 75 | 1462099 | 112.7122 ug/L | | 100 |
| 56) | Dimethyl Disulfide | 12.67 | 79 | 890098 | 96.1528 ug/L | | 100 |
| 59) | Toluene | 12.88 | 91 | 4066345 | 112.4771 ug/L | | 100 |
| 60) | Ethyl Methacrylate | 13.05 | 69 | 838719 | 101.3482 ug/L | | 98 |
| 61) | Paraldehyde | 13.10 | 89 | 25440 | 203.7573 ug/L | # | 100 |
| 62) | trans-1,3-Dichloropropene | 13.10 | 75 | 1354172 | 102.9162 ug/L | | 99 |
| 63) | 1,1,2-Trichloroethane | 13.35 | 97 | 645577 | 99.9255 ug/L | | 99 |
| 64) | 2-Hexanone | 13.32 | 43 | 358986 | 109.0048 ug/L | | 98 |
| 65) | 1,3-Dichloropropane | 13.71 | 76 | 1156282 | 109.8543 ug/L | | 97 |
| 66) | Tetrachloroethene | 13.83 | 166 | 936865 | 112.3074 ug/L | | 99 |
| 67) | Dibromochloromethane | 14.12 | 129 | 841308 | 104.8273 ug/L | | 100 |
| 68) | 1,2-Dibromoethane | 14.42 | 107 | 649682 | 111.2359 ug/L | | 100 |
| 69) | 1-Chlorohexane | 14.59 | 91 | 1213907 | 108.9698 ug/L | | 98 |
| 70) | Chlorobenzene | 15.02 | 112 | 2650627 | 113.1792 ug/L | | 100 |
| 71) | 1,1,1,2-Tetrachloroethane | 15.07 | 131 | 1076297 | 99.7364 ug/L | | 99 |
| 72) | Ethylbenzene | 15.07 | 106 | 1557841 | 123.5739 ug/L | | 95 |
| 73) | m-,p-Xylene | 15.19 | 106 | 3929891 | 211.2618 ug/L | | 94 |
| 74) | o-Xylene | 15.84 | 106 | 1712550 | 97.0242 ug/L | | 98 |
| 75) | Styrene | 15.89 | 104 | 3007122 | 99.2074 ug/L | | 100 |
| 76) | Bromoform | 16.43 | 173 | 506024 | 104.8826 ug/L | | 98 |
| 77) | Isopropylbenzene | 16.35 | 105 | 4201258 | 121.1774 ug/L | | 99 |
| 79) | 1,1,2,2-Tetrachloroethane | 16.61 | 83 | 695137 | 107.6404 ug/L | | 100 |
| 81) | 1,2,3-Trichloropropane | 16.83 | 110 | 177783 | 106.9654 ug/L | | 92 |
| 82) | trans-1,4-Dichloro-2-Buten | 16.91 | 53 | 227893 | 100.9784 ug/L | | 94 |
| 83) | n-Propylbenzene | 16.95 | 91 | 4888730 | 111.4564 ug/L | | 99 |
| 84) | Bromobenzene | 17.07 | 156 | 1058014 | 118.9145 ug/L | | 100 |
| 85) | 1,3,5-Trimethylbenzene | 17.19 | 105 | 3467987 | 119.0598 ug/L | | 99 |
| 86) | 2-Chlorotoluene | 17.25 | 91 | 3154287 | 101.7283 ug/L | | 93 |
| 87) | 4-Chlorotoluene | 17.31 | 91 | 3152688 | 112.4981 ug/L | | 99 |
| 88) | a-Methylstyrene | 17.66 | 118 | 2036623 | 110.6735 ug/L | | 100 |
| 89) | tert-Butylbenzene | 17.73 | 134 | 682539 | 112.1179 ug/L | | 98 |
| 90) | 1,2,4-Trimethylbenzene | 17.78 | 105 | 3695381 | 119.9256 ug/L | | 98 |
| 91) | sec-Butylbenzene | 18.05 | 105 | 3860859 | 112.9999 ug/L | | 99 |
| 92) | p-Isopropyltoluene | 18.24 | 119 | 3245042 | 120.3674 ug/L | | 99 |
| 93) | 1,3-Dichlorobenzene | 18.42 | 146 | 1966473 | 117.8531 ug/L | | 100 |
| 94) | 1,4-Dichlorobenzene | 18.59 | 146 | 2022610 | 113.2413 ug/L | | 99 |
| 95) | n-Butylbenzene | 18.86 | 91 | 2867318 | 112.0435 ug/L | | 98 |
| 96) | 1,2-Dichlorobenzene | 19.16 | 146 | 1745024 | 111.8631 ug/L | | 100 |
| 97) | 1,2-Dibromo-3-Chloropropan | 20.34 | 75 | 115861 | 101.4424 ug/L | | 95 |
| 98) | 1,2,4-Trichlorobenzene | 21.69 | 180 | 1049174 | 121.0280 ug/L | | 99 |
| 99) | Hexachlorobutadiene | 21.90 | 225 | 361646 | 106.8079 ug/L | | 99 |
| 100) | Naphthalene | 22.11 | 128 | 1978569 | 113.7717 ug/L | | 100 |
| 101) | 1,2,3-Trichlorobenzene | 22.48 | 180 | 873897 | 121.9707 ug/L | | 100 |

(#) = qualifier out of range (m) = manual integration
6M108178.D 8260WT.M Thu May 17 10:54:42 2012 Page 2

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\051612\6M108178.D Vial: 9
Acq On : 16 May 2012 19:03 Operator: adc
Sample : WG397878-09 100.0 ug/L STD 8260 Inst : HPMS6
Misc : 1,1 STD51468 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 17 10:54 2012 Quant Results File: 8260WT.RES

Method : C:\MSDCHEM\1\METHODS\8260WT.M (RTE Integrator)
Title : 8260B/624_WATER SOP:OVLMSV01 05/16/12 - HPMS6
Last Update : Thu May 17 10:54:16 2012
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\051612\6M108179.D Vial: 10
Acq On : 16 May 2012 19:36 Operator: adc
Sample : WG397878-10 200.0 ug/L STD 8260 Inst : HPMS6
Misc : 1,1 STD51468 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 17 10:54:42 2012 Quant Results File: 8260WT.RES

Quant Method : C:\MSDCHEM\1\METHODS\8260WT.M (RTE Integrator)
Title : 8260B/624_WATER SOP:OVLMSV01 05/16/12 - HPMS6
Last Update : Thu May 17 10:54:16 2012
Response via : Initial Calibration
DataAcq Meth : 8260WT

| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 1) Fluorobenzene | 10.47 | 96 | 847907 | 25.00 | ug/L | 0.00 |
| 57) Chlorobenzene-d5 | 14.96 | 117 | 660064 | 25.00 | ug/L | 0.00 |
| 78) 1,4-Dichlorobenzene-d4 | 18.54 | 152 | 353666 | 25.00 | ug/L | 0.00 |
| **System Monitoring Compounds** | | | | | | |
| 37) Dibromofluoromethane | 9.28 | 111 | 1108062 | 106.7690 | ug/L | 0.00 |
| Spiked Amount 25.000 | Range 86 - 118 | | Recovery = 427.08%# | | | |
| 43) 1,2-Dichloroethane-d4 | 10.01 | 65 | 1088432 | 99.1626 | ug/L | 0.00 |
| Spiked Amount 25.000 | Range 80 - 120 | | Recovery = 396.64%# | | | |
| 58) Toluene-d8 | 12.76 | 98 | 3770777 | 108.7604 | ug/L | 0.00 |
| Spiked Amount 25.000 | Range 88 - 110 | | Recovery = 435.04%# | | | |
| 80) p-Bromofluorobenzene | 16.75 | 95 | 1388828 | 108.3130 | ug/L | 0.00 |
| Spiked Amount 25.000 | Range 86 - 115 | | Recovery = 433.24%# | | | |
| **Target Compounds** | | | | | | Qvalue |
| 2) Dichlorodifluoromethane | 2.71 | 85 | 2568629 | 195.4445 | ug/L | 98 |
| 3) Chloromethane | 3.09 | 50 | 4335497 | 166.3272 | ug/L | 98 |
| 4) Vinyl Chloride | 3.27 | 62 | 1950068 | Below Cal | | 100 |
| 5) 1,3-Butadiene | 3.30 | 54 | 722457 | 189.5012 | ug/L | 98 |
| 6) Bromomethane | 4.03 | 94 | 1989605 | 210.9595 | ug/L | 100 |
| 7) Chloroethane | 4.19 | 64 | 1710204 | 206.9736 | ug/L | 98 |
| 8) Trichlorofluoromethane | 4.66 | 101 | 4070567 | 207.3871 | ug/L | 99 |
| 9) Diethyl ether | 5.22 | 59 | 4272 | 0.5450 | ug/L | 92 |
| 10) Isoprene | 5.22 | 67 | 3797253 | 220.9388 | ug/L | 99 |
| 11) Acrolein | 5.46 | 56 | 141590 | 199.3006 | ug/L | 99 |
| 12) 1,1,2-Trichloro-1,2,2-Trif | 5.46 | 101 | 2184282 | 216.6633 | ug/L | 98 |
| 13) Acetone | 5.58 | 43 | 397175 | 218.2927 | ug/L | 98 |
| 14) 1,1-Dichloroethene | 5.76 | 61 | 3575116 | 220.5888 | ug/L | 97 |
| 15) Tert-Butyl Alcohol | 6.05 | 59 | 103951 | 234.3901 | ug/L # | 1 |
| 16) Dimethyl Sulfide | 6.05 | 62 | 2931881 | 228.5137 | ug/L | 97 |
| 17) Iodomethane | 6.30 | 142 | 2304617 | 203.4694 | ug/L | 98 |
| 18) Methyl acetate | 6.36 | 43 | 1233242 | 211.4118 | ug/L | 98 |
| 19) Methylene Chloride | 6.61 | 84 | 2346208 | 229.0627 | ug/L | 91 |
| 20) Carbon Disulfide | 6.61 | 76 | 7091546 | 229.0750 | ug/L | 99 |
| 21) Acrylonitrile | 6.83 | 53 | 545021 | 225.9066 | ug/L | 99 |
| 22) Methyl Tert Butyl Ether | 6.87 | 73 | 4760853 | 214.6792 | ug/L | 100 |
| 23) trans-1,2-Dichloroethene | 7.09 | 96 | 2280317 | 236.5214 | ug/L | 96 |
| 24) n-Hexane | 7.19 | 57 | 2349084 | 215.5992 | ug/L | 97 |
| 26) Vinyl Acetate | 7.78 | 43 | 2435550 | 205.3695 | ug/L | 97 |
| 27) 1,1-Dichloroethane | 7.78 | 63 | 4210103 | 223.7834 | ug/L | 99 |
| 29) 2-Butanone | 8.43 | 43 | 504792 | 196.0371 | ug/L | 99 |
| 30) Propionitrile | 8.44 | 54 | 754 | 0.9809 | ug/L # | 22 |
| 31) 2,2-Dichloropropane | 8.64 | 77 | 3325423 | 226.0372 | ug/L | 94 |
| 32) cis-1,2-Dichloroethene | 8.71 | 96 | 2392006 | 236.4096 | ug/L | 94 |
| 33) Chloroform | 8.95 | 83 | 3978244 | 225.1936 | ug/L | 99 |
| 34) 1-Bromopropane | 9.10 | 122 | 407629 | 201.4743 | ug/L | 99 |
| 35) Bromochloromethane | 9.20 | 130 | 1250904 | 228.8176 | ug/L | 100 |
| 36) Tetrahydrofuran | 9.24 | 42 | 1826 | 1.0975 | ug/L # | 37 |
| 38) 1,1,1-Trichloroethane | 9.55 | 97 | 3872151 | 240.1189 | ug/L | 96 |
| 39) Cyclohexane | 9.57 | 56 | 3637491 | 227.7118 | ug/L | 96 |
| 40) 1,1-Dichloropropene | 9.78 | 75 | 3108727 | 232.7823 | ug/L | 94 |
| 42) Carbon Tetrachloride | 9.93 | 117 | 3138833 | 200.3124 | ug/L | 99 |
| 45) 1,2-Dichloroethane | 10.14 | 62 | 3028058 | 225.6129 | ug/L | 98 |
| 46) Benzene | 10.18 | 78 | 8655213 | 227.2384 | ug/L | 99 |
| 47) Trichloroethene | 11.04 | 130 | 2291269 | 235.4920 | ug/L | 93 |

(#) = qualifier out of range (m) = manual integration
6M108179.D 8260WT.M Thu May 17 10:54:43 2012 Page 1

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\051612\6M108179.D Vial: 10
Acq On : 16 May 2012 19:36 Operator: adc
Sample : WG397878-10 200.0 ug/L STD 8260 Inst : HPMS6
Misc : 1,1 STD51468 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 17 10:54:42 2012 Quant Results File: 8260WT.RES

Quant Method : C:\MSDCHEM\1\METHODS\8260WT.M (RTE Integrator)
Title : 8260B/624_WATER SOP:OVLMSV01 05/16/12 - HPMS6
Last Update : Thu May 17 10:54:16 2012
Response via : Initial Calibration
DataAcq Meth : 8260WT

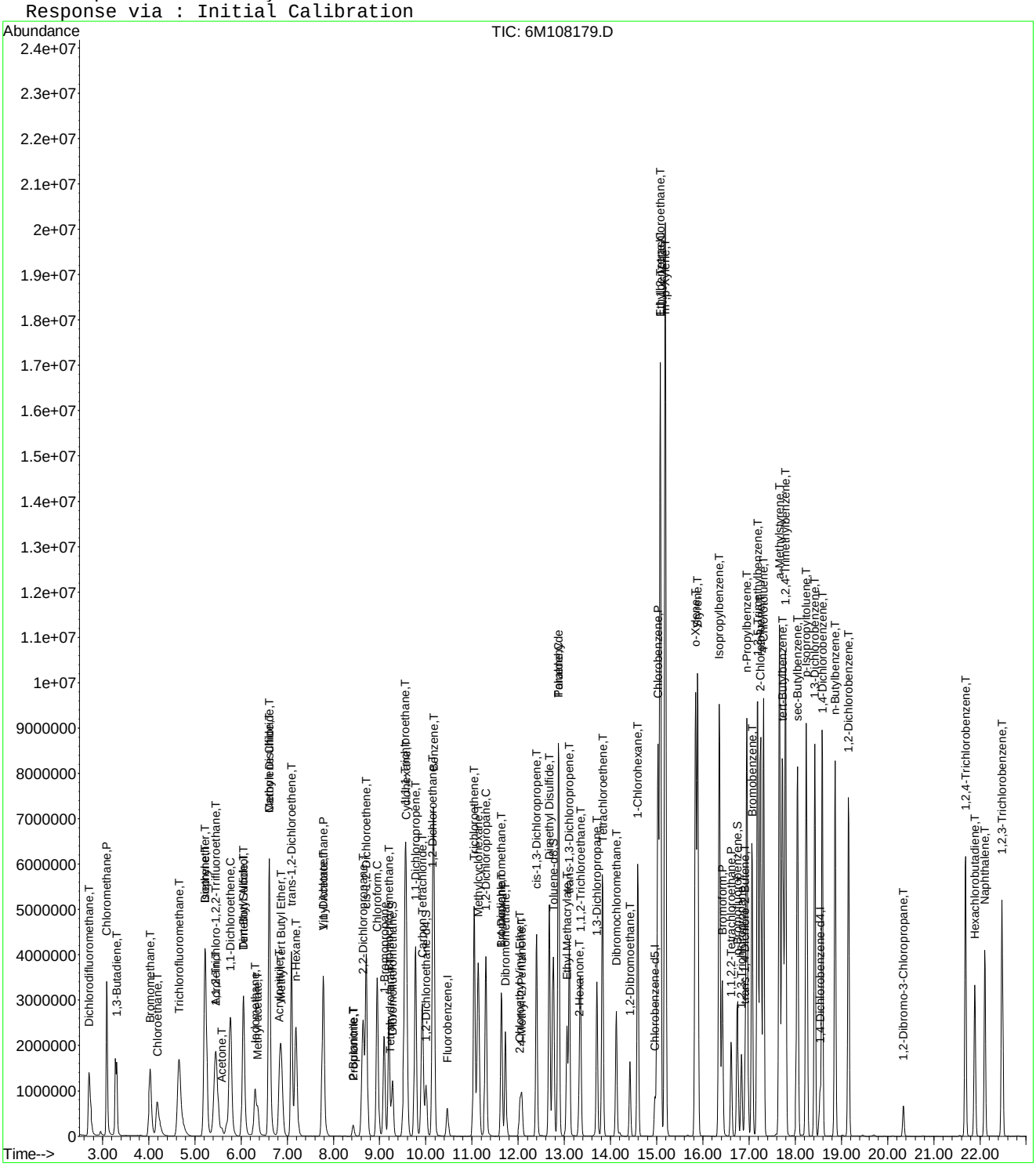
| | Compound | R.T. | QIon | Response | Conc Unit | | Qvalue |
|---|---|---|---|---|---|---|---|
| 48) | Methylcyclohexane | 11.13 | 83 | 2751731 | 226.8505 ug/L | | 98 |
| 49) | 1,2-Dichloropropane | 11.30 | 63 | 2130149 | 228.9526 ug/L | | 99 |
| 50) | 1,4-Dioxane | 11.64 | 88 | 3261 | 103.0667 ug/L | # | 22 |
| 51) | Bromodichloromethane | 11.64 | 83 | 2840160 | 230.7015 ug/L | | 99 |
| 52) | Dibromomethane | 11.73 | 93 | 1154523 | 220.7070 ug/L | | 99 |
| 53) | 2-Chloroethyl Vinyl Ether | 12.03 | 63 | 439887 | 225.3104 ug/L | | 98 |
| 54) | 4-Methyl-2-Pentanone | 12.07 | 58 | 403608 | 203.3465 ug/L | | 96 |
| 55) | cis-1,3-Dichloropropene | 12.40 | 75 | 3320900 | 238.1168 ug/L | | 100 |
| 56) | Dimethyl Disulfide | 12.68 | 79 | 2145988 | 213.4331 ug/L | | 100 |
| 59) | Toluene | 12.87 | 91 | 8984214 | 228.9336 ug/L | | 95 |
| 60) | Ethyl Methacrylate | 13.05 | 69 | 1829241 | 203.0389 ug/L | | 94 |
| 61) | Paraldehyde | 12.87 | 89 | 435147 | 2937.9397 ug/L | # | 100 |
| 62) | trans-1,3-Dichloropropene | 13.11 | 75 | 3012727 | 198.8643 ug/L | | 98 |
| 63) | 1,1,2-Trichloroethane | 13.35 | 97 | 1432543 | 204.0571 ug/L | | 99 |
| 64) | 2-Hexanone | 13.32 | 43 | 741361 | 207.3804 ug/L | | 96 |
| 65) | 1,3-Dichloropropane | 13.71 | 76 | 2539772 | 222.2888 ug/L | | 94 |
| 66) | Tetrachloroethene | 13.83 | 166 | 2264613 | 250.0892 ug/L | | 98 |
| 67) | Dibromochloromethane | 14.13 | 129 | 1935075 | 221.6922 ug/L | | 100 |
| 68) | 1,2-Dibromoethane | 14.42 | 107 | 1429281 | 225.4402 ug/L | | 100 |
| 69) | 1-Chlorohexane | 14.59 | 91 | 2907502 | 240.4420 ug/L | | 95 |
| 70) | Chlorobenzene | 15.03 | 112 | 6196204 | 243.7325 ug/L | | 99 |
| 71) | 1,1,1,2-Tetrachloroethane | 15.08 | 131 | 2672845 | 184.5208 ug/L | | 98 |
| 72) | Ethylbenzene | 15.08 | 106 | 3847355 | 281.1484 ug/L | | 78 |
| 73) | m-,p-Xylene | 15.19 | 106 | 8978208 | 443.9145 ug/L | | 73 |
| 74) | o-Xylene | 15.84 | 106 | 4069762 | 211.6669 ug/L | | 91 |
| 75) | Styrene | 15.88 | 104 | 6858999 | 207.7425 ug/L | | 99 |
| 76) | Bromoform | 16.42 | 173 | 1156962 | 198.3382 ug/L | | 98 |
| 77) | Isopropylbenzene | 16.35 | 105 | 9305265 | 247.2526 ug/L | | 95 |
| 79) | 1,1,2,2-Tetrachloroethane | 16.61 | 83 | 1466575 | 211.1738 ug/L | | 100 |
| 81) | 1,2,3-Trichloropropane | 16.83 | 110 | 374836 | 209.7130 ug/L | | 91 |
| 82) | trans-1,4-Dichloro-2-Buten | 16.91 | 53 | 491446 | 201.7743 ug/L | | 89 |
| 83) | n-Propylbenzene | 16.96 | 91 | 10365382 | 219.7481 ug/L | | 93 |
| 84) | Bromobenzene | 17.07 | 156 | 2482824 | 259.4899 ug/L | | 100 |
| 85) | 1,3,5-Trimethylbenzene | 17.19 | 105 | 7917310 | 252.7531 ug/L | | 95 |
| 86) | 2-Chlorotoluene | 17.25 | 91 | 8261031 | 247.7456 ug/L | | 97 |
| 87) | 4-Chlorotoluene | 17.31 | 91 | 6983809 | 231.7329 ug/L | | 96 |
| 88) | a-Methylstyrene | 17.66 | 118 | 4856214 | 245.3929 ug/L | | 100 |
| 89) | tert-Butylbenzene | 17.73 | 134 | 1651520 | 252.2682 ug/L | | 92 |
| 90) | 1,2,4-Trimethylbenzene | 17.78 | 105 | 8337261 | 251.5979 ug/L | | 94 |
| 91) | sec-Butylbenzene | 18.05 | 105 | 8554804 | 232.8279 ug/L | | 95 |
| 92) | p-Isopropyltoluene | 18.24 | 119 | 7417546 | 255.8467 ug/L | | 96 |
| 93) | 1,3-Dichlorobenzene | 18.43 | 146 | 4625788 | 257.7921 ug/L | | 99 |
| 94) | 1,4-Dichlorobenzene | 18.59 | 146 | 4718830 | 245.6733 ug/L | | 99 |
| 95) | n-Butylbenzene | 18.86 | 91 | 6526795 | 237.1602 ug/L | | 95 |
| 96) | 1,2-Dichlorobenzene | 19.15 | 146 | 4059832 | 242.0051 ug/L | | 99 |
| 97) | 1,2-Dibromo-3-Chloropropan | 20.34 | 75 | 249288 | 201.7573 ug/L | | 93 |
| 98) | 1,2,4-Trichlorobenzene | 21.69 | 180 | 2555342 | 274.1058 ug/L | | 99 |
| 99) | Hexachlorobutadiene | 21.89 | 225 | 900493 | 247.3039 ug/L | | 100 |
| 100) | Naphthalene | 22.10 | 128 | 4311592 | 230.5428 ug/L | | 100 |
| 101) | 1,2,3-Trichlorobenzene | 22.48 | 180 | 2054106 | 266.5933 ug/L | | 99 |

(#) = qualifier out of range (m) = manual integration
6M108179.D 8260WT.M Thu May 17 10:54:43 2012 Page 2

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\051612\6M108179.D Vial: 10
Acq On : 16 May 2012 19:36 Operator: adc
Sample : WG397878-10 200.0 ug/L STD 8260 Inst : HPMS6
Misc : 1,1 STD51468 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 17 10:54 2012 Quant Results File: 8260WT.RES

Method : C:\MSDCHEM\1\METHODS\8260WT.M (RTE Integrator)
Title : 8260B/624_WATER SOP:OVLMSV01 05/16/12 - HPMS6
Last Update : Thu May 17 10:54:16 2012
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\051612\6M108180.D Vial: 11
Acq On : 16 May 2012 20:08 Operator: adc
Sample : WG397878-11 300.0 ug/L STD 8260 Inst : HPMS6
Misc : 1,1 STD51468 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 17 10:54:43 2012 Quant Results File: 8260WT.RES

Quant Method : C:\MSDCHEM\1\METHODS\8260WT.M (RTE Integrator)
Title : 8260B/624_WATER SOP:OVLMSV01 05/16/12 - HPMS6
Last Update : Thu May 17 10:54:16 2012
Response via : Initial Calibration
DataAcq Meth : 8260WT

| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 1) Fluorobenzene | 10.47 | 96 | 884577 | 25.00 | ug/L | 0.00 |
| 57) Chlorobenzene-d5 | 14.96 | 117 | 651193 | 25.00 | ug/L | 0.00 |
| 78) 1,4-Dichlorobenzene-d4 | 18.54 | 152 | 318624 | 25.00 | ug/L | 0.00 |
| **System Monitoring Compounds** | | | | | | |
| 37) Dibromofluoromethane | 0.00 | 111 | 0 | 0.0000 | ug/L | |
| Spiked Amount 25.000 | Range 86 - 118 | | Recovery = | 0.00%# | | |
| 43) 1,2-Dichloroethane-d4 | 9.92 | 65 | 11756 | 1.0266 | ug/L | -0.09 |
| Spiked Amount 25.000 | Range 80 - 120 | | Recovery = | 4.12%# | | |
| 58) Toluene-d8 | 12.76 | 98 | 1622 | 0.0474 | ug/L | 0.00 |
| Spiked Amount 25.000 | Range 88 - 110 | | Recovery = | 0.20%# | | |
| 80) p-Bromofluorobenzene | 16.75 | 95 | 2482 | 0.2149 | ug/L | 0.00 |
| Spiked Amount 25.000 | Range 86 - 115 | | Recovery = | 0.84%# | | |
| **Target Compounds** | | | | | | Qvalue |
| 2) Dichlorodifluoromethane | 2.71 | 85 | 2147 | 0.1566 | ug/L | # 64 |
| 3) Chloromethane | 3.09 | 50 | 29649 | 1.0903 | ug/L | 100 |
| 4) Vinyl Chloride | 3.27 | 62 | 973 | Below Cal | # | 43 |
| 5) 1,3-Butadiene | 3.30 | 54 | 1042354 | 307.7622 | ug/L | 98 |
| 6) Bromomethane | 4.03 | 94 | 88881 | 9.7324 | ug/L | 100 |
| 9) Diethyl ether | 5.22 | 59 | 2590708 | 316.7907 | ug/L | 98 |
| 11) Acrolein | 5.46 | 56 | 176386 | 226.9884 | ug/L | 97 |
| 12) 1,1,2-Trichloro-1,2,2-Trif | 5.46 | 101 | 1602 | 0.1523 | ug/L # | 59 |
| 13) Acetone | 5.58 | 43 | 521497 | 274.7399 | ug/L | 97 |
| 15) Tert-Butyl Alcohol | 5.98 | 59 | 326263 | 705.1655 | ug/L | 95 |
| 17) Iodomethane | 6.31 | 142 | 36382 | 3.6114 | ug/L | 100 |
| 18) Methyl acetate | 6.36 | 43 | 422740 | 69.4651 | ug/L | 100 |
| 19) Methylene Chloride | 6.60 | 84 | 1773 | 0.1659 | ug/L # | 52 |
| 20) Carbon Disulfide | 6.61 | 76 | 8398 | 0.2600 | ug/L # | 75 |
| 21) Acrylonitrile | 6.83 | 53 | 698825 | 277.6493 | ug/L | 94 |
| 24) n-Hexane | 7.19 | 57 | 7495 | 0.6594 | ug/L | 87 |
| 25) Diisopropyl ether | 7.59 | 45 | 11673776 | 305.8773 | ug/L | 98 |
| 26) Vinyl Acetate | 7.78 | 43 | 3570680 | 288.6040 | ug/L | 98 |
| 28) Ethyl-Tert-Butyl ether | 8.24 | 59 | 10405956 | 320.3307 | ug/L | 97 |
| 29) 2-Butanone | 8.43 | 43 | 788510 | 293.5254 | ug/L | 98 |
| 30) Propionitrile | 8.55 | 54 | 255482 | 318.5739 | ug/L | 98 |
| 34) 1-Bromopropane | 9.10 | 122 | 656078 | 310.4486 | ug/L | 98 |
| 36) Tetrahydrofuran | 9.25 | 42 | 522277 | 300.8857 | ug/L | 97 |
| 39) Cyclohexane | 9.57 | 56 | 4344 | 0.2607 | ug/L | 87 |
| 41) Tert-Amyl-Methyl ether | 9.92 | 73 | 8216967 | 320.7265 | ug/L | 99 |
| 42) Carbon Tetrachloride | 9.92 | 117 | 386 | 0.3705 | ug/L # | 56 |
| 48) Methylcyclohexane | 11.14 | 83 | 4998 | 0.3950 | ug/L | 94 |
| 50) 1,4-Dioxane | 11.66 | 88 | 30653 | 491.2580 | ug/L | 82 |
| 53) 2-Chloroethyl Vinyl Ether | 12.03 | 63 | 678316 | 333.0310 | ug/L | 99 |
| 54) 4-Methyl-2-Pentanone | 12.07 | 58 | 643927 | 310.9755 | ug/L | 97 |
| 61) Paraldehyde | 13.11 | 89 | 32601 | 240.1876 | ug/L # | 100 |
| 64) 2-Hexanone | 13.31 | 43 | 1079635 | 306.1197 | ug/L | 97 |
| 66) Tetrachloroethene | 13.83 | 166 | 1532 | 0.1715 | ug/L | 75 |
| 69) 1-Chlorohexane | 14.59 | 91 | 3265 | 0.2737 | ug/L | 89 |
| 73) m-,p-Xylene | 15.18 | 106 | 4294 | 0.8636 | ug/L | 89 |
| 74) o-Xylene | 15.84 | 106 | 2239 | 0.7427 | ug/L | 97 |
| 75) Styrene | 15.88 | 104 | 2994 | 0.7434 | ug/L | 95 |
| 77) Isopropylbenzene | 16.35 | 105 | 8131 | 0.2190 | ug/L | 93 |
| 83) n-Propylbenzene | 16.96 | 91 | 13384 | 0.3149 | ug/L # | 98 |
| 84) Bromobenzene | 17.07 | 156 | 1213 | 0.1407 | ug/L | 76 |

(#) = qualifier out of range (m) = manual integration
6M108180.D 8260WT.M Thu May 17 10:54:44 2012 Page 1

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\051612\6M108180.D Vial: 11
Acq On : 16 May 2012 20:08 Operator: adc
Sample : WG397878-11 300.0 ug/L STD 8260 Inst : HPMS6
Misc : 1,1 STD51468 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 17 10:54:43 2012 Quant Results File: 8260WT.RES

Quant Method : C:\MSDCHEM\1\METHODS\8260WT.M (RTE Integrator)
Title : 8260B/624_WATER SOP:OVLMSV01 05/16/12 - HPMS6
Last Update : Thu May 17 10:54:16 2012
Response via : Initial Calibration
DataAcq Meth : 8260WT

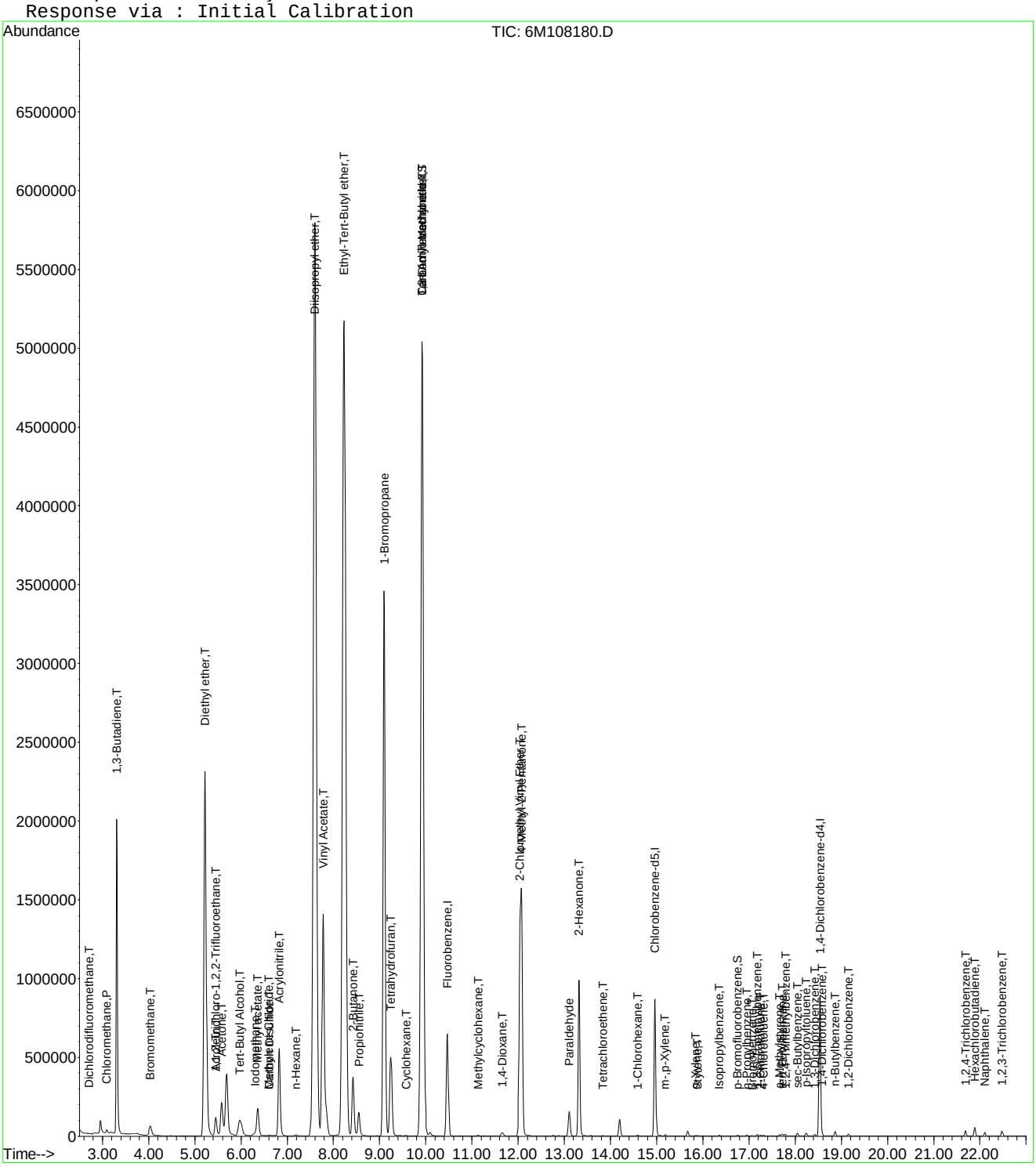
| | Compound | R.T. | QIon | Response | Conc | Unit | Qvalue |
|---|---|---|---|---|---|---|---|
| 85) | 1,3,5-Trimethylbenzene | 17.18 | 105 | 11071 | 0.3923 | ug/L | 92 |
| 86) | 2-Chlorotoluene | 17.25 | 91 | 7141 | 0.2377 | ug/L | 98 |
| 87) | 4-Chlorotoluene | 17.31 | 91 | 7052 | 0.2597 | ug/L | 94 |
| 88) | a-Methylstyrene | 17.66 | 118 | 4826 | 0.2707 | ug/L | 97 |
| 89) | tert-Butylbenzene | 17.72 | 134 | 2363 | 0.4006 | ug/L | 85 |
| 90) | 1,2,4-Trimethylbenzene | 17.79 | 105 | 12370 | 0.4144 | ug/L | 89 |
| 91) | sec-Butylbenzene | 18.05 | 105 | 22813 | 0.6892 | ug/L | 100 |
| 92) | p-Isopropyltoluene | 18.24 | 119 | 20130 | 0.7707 | ug/L | 97 |
| 93) | 1,3-Dichlorobenzene | 18.43 | 146 | 7794 | 0.4821 | ug/L | 100 |
| 94) | 1,4-Dichlorobenzene | 18.58 | 146 | 8803 | 0.5087 | ug/L | 79 |
| 95) | n-Butylbenzene | 18.87 | 91 | 27118 | 1.0937 | ug/L | 95 |
| 96) | 1,2-Dichlorobenzene | 19.15 | 146 | 9258 | 0.6126 | ug/L | 100 |
| 98) | 1,2,4-Trichlorobenzene | 21.69 | 180 | 16116 | 1.9189 | ug/L | 98 |
| 99) | Hexachlorobutadiene | 21.89 | 225 | 15788 | 4.8127 | ug/L | 98 |
| 100) | Naphthalene | 22.10 | 128 | 29947 | 1.7774 | ug/L | 100 |
| 101) | 1,2,3-Trichlorobenzene | 22.48 | 180 | 15077 | 2.1720 | ug/L | 99 |

(#) = qualifier out of range (m) = manual integration
6M108180.D 8260WT.M Thu May 17 10:54:44 2012 Page 2

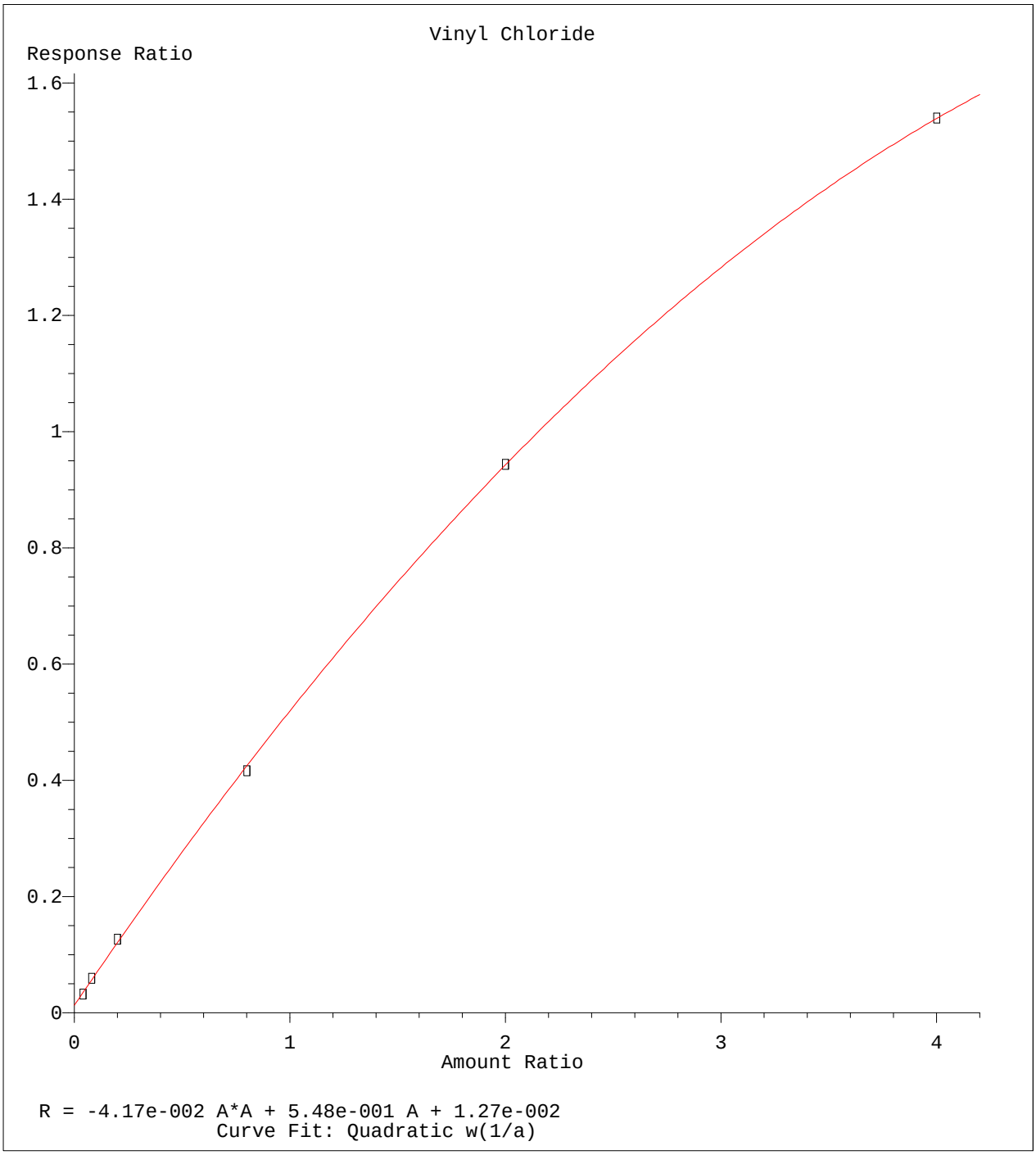
Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\051612\6M108180.D Vial: 11
Acq On : 16 May 2012 20:08 Operator: adc
Sample : WG397878-11 300.0 ug/L STD 8260 Inst : HPMS6
Misc : 1,1 STD51468 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 17 10:54 2012 Quant Results File: 8260WT.RES

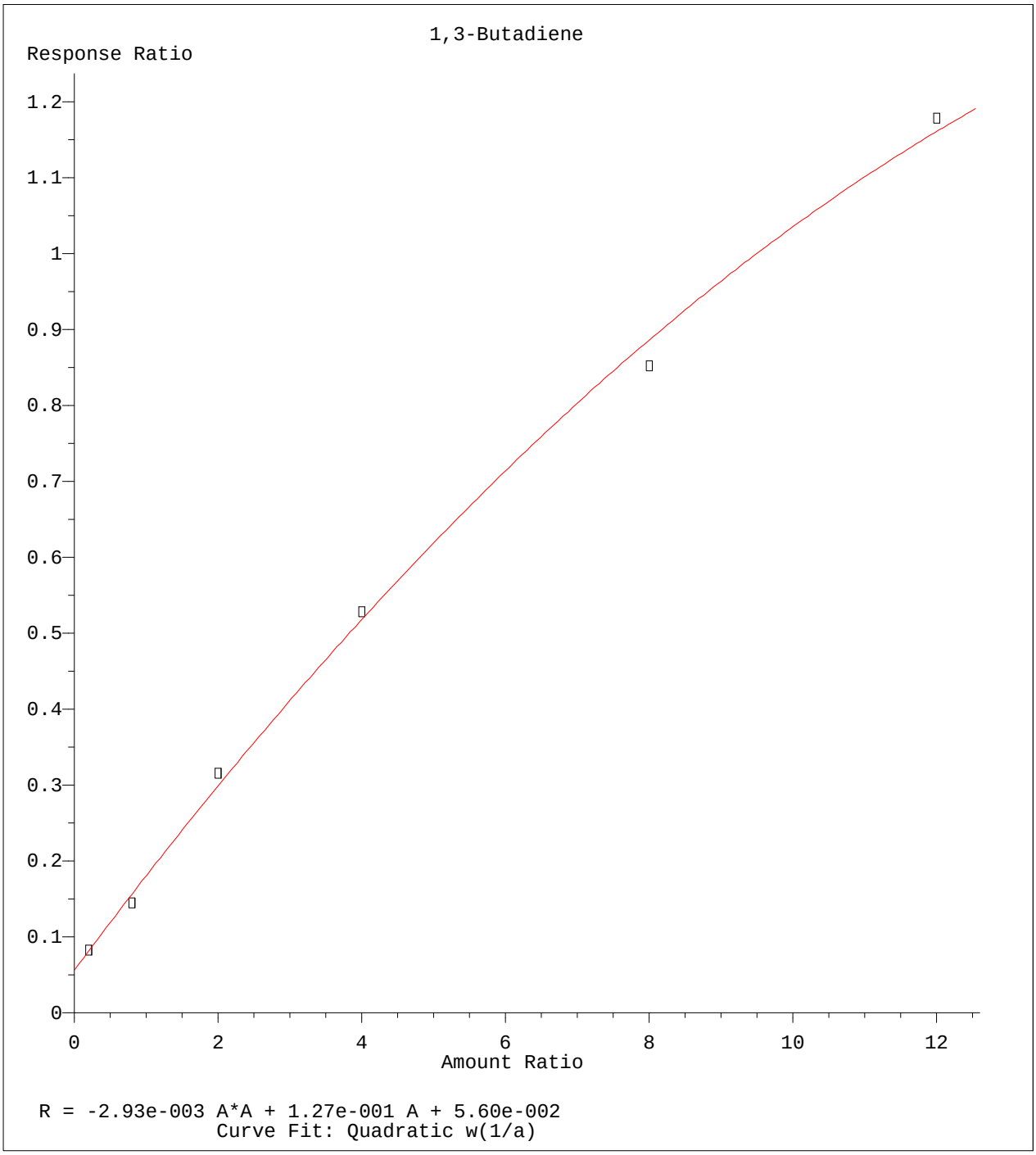
Method : C:\MSDCHEM\1\METHODS\8260WT.M (RTE Integrator)
Title : 8260B/624_WATER SOP:OVLMSV01 05/16/12 - HPMS6
Last Update : Thu May 17 10:54:16 2012
Response via : Initial Calibration



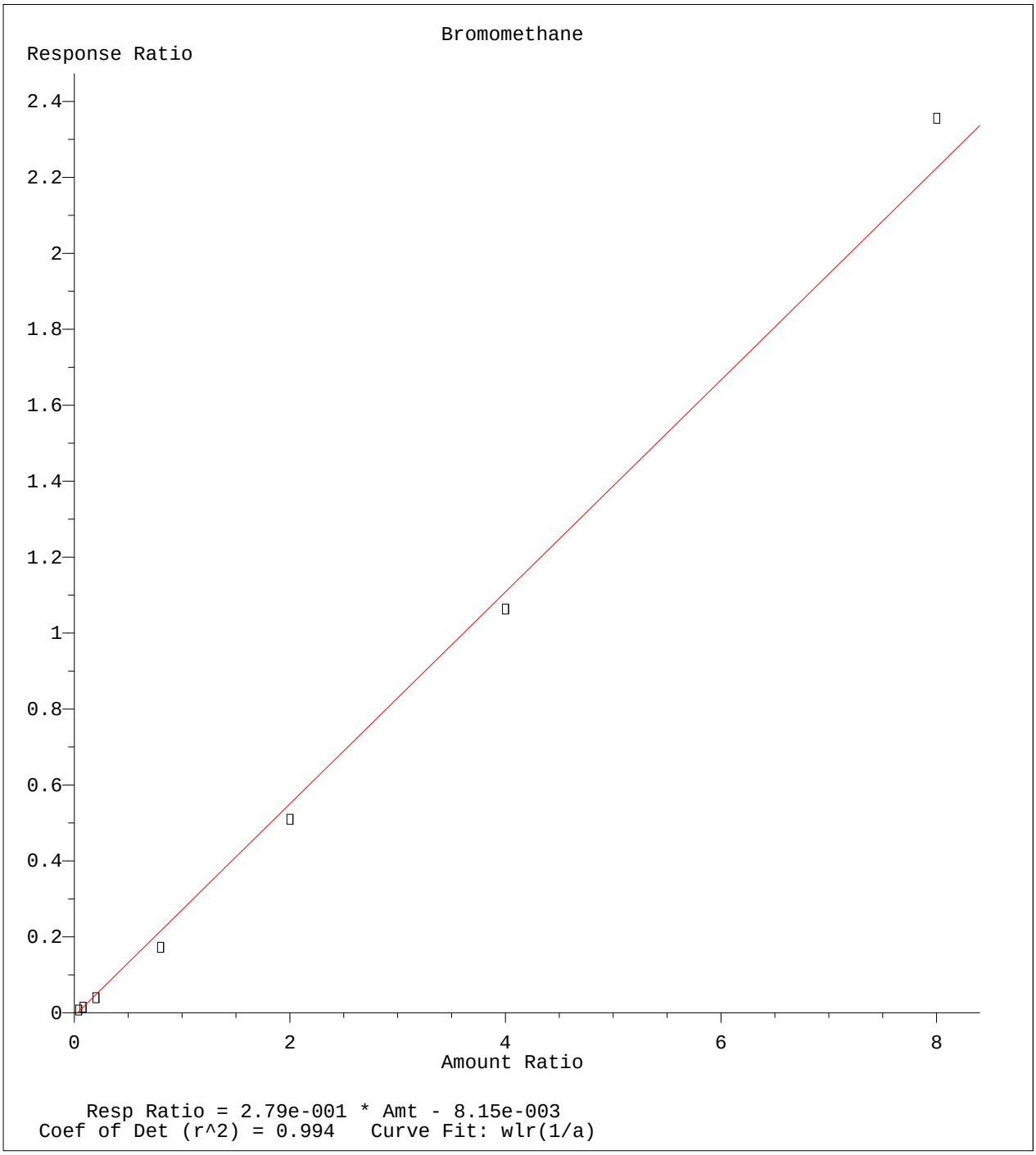

6M108180.D 8260WT.M Thu May 17 10:54:44 2012 Page 3



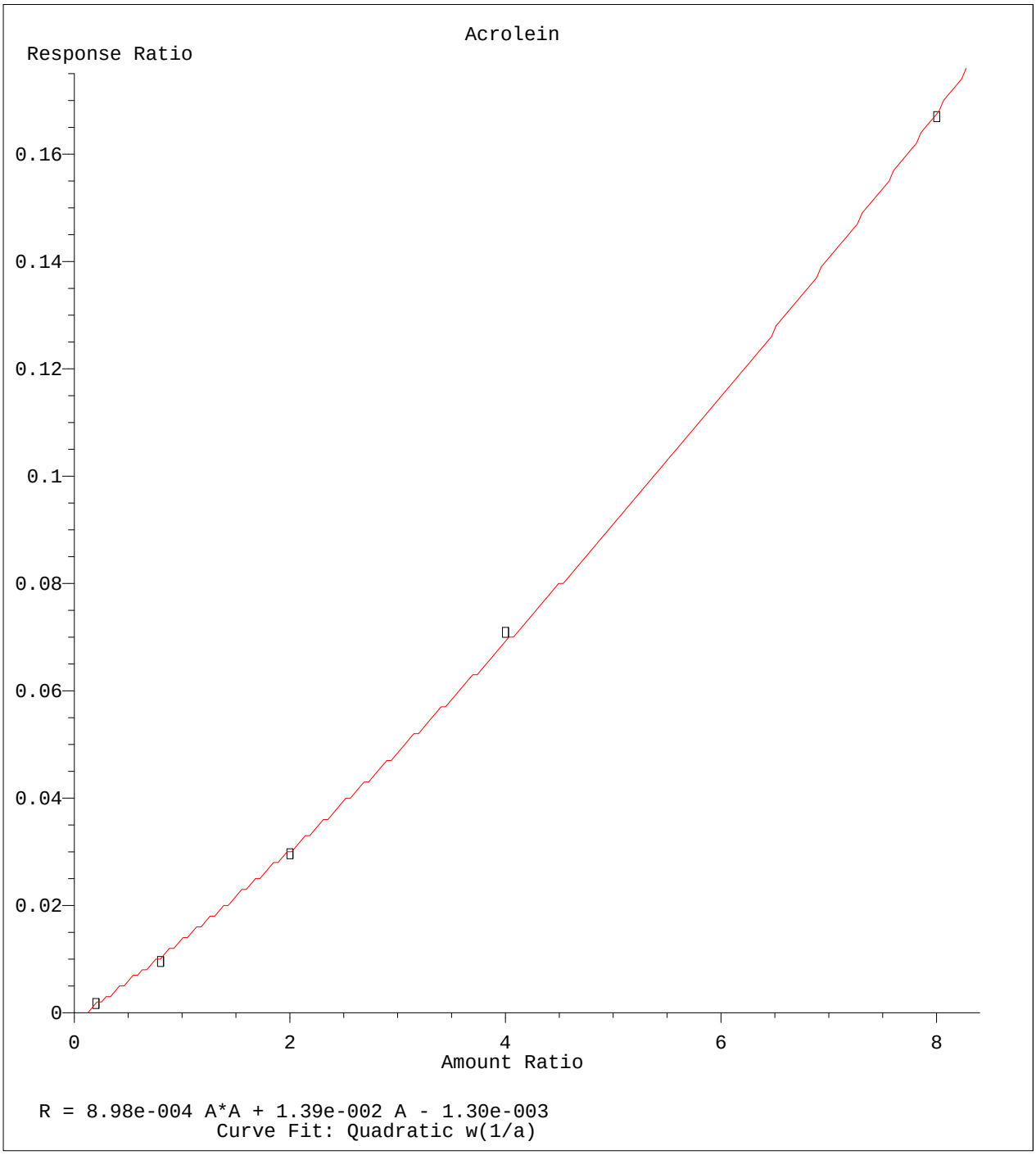

Method Name: C:\MSDCHEM\1\METHODS\8260WT.M
Calibration Table Last Updated: Thu May 17 10:54:16 2012



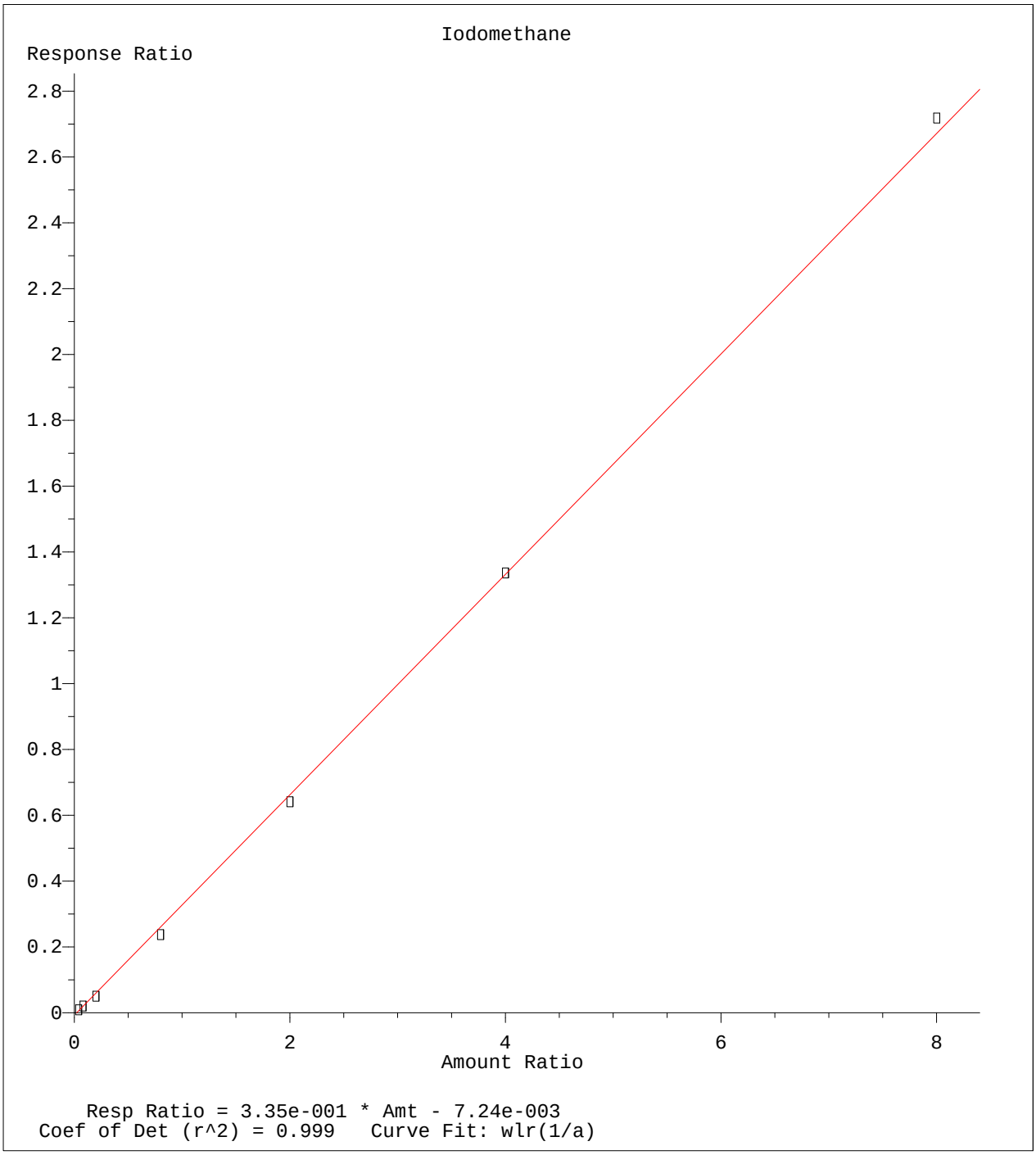

Method Name: C:\MSDCHEM\1\METHODS\8260WT.M
Calibration Table Last Updated: Thu May 17 10:54:16 2012



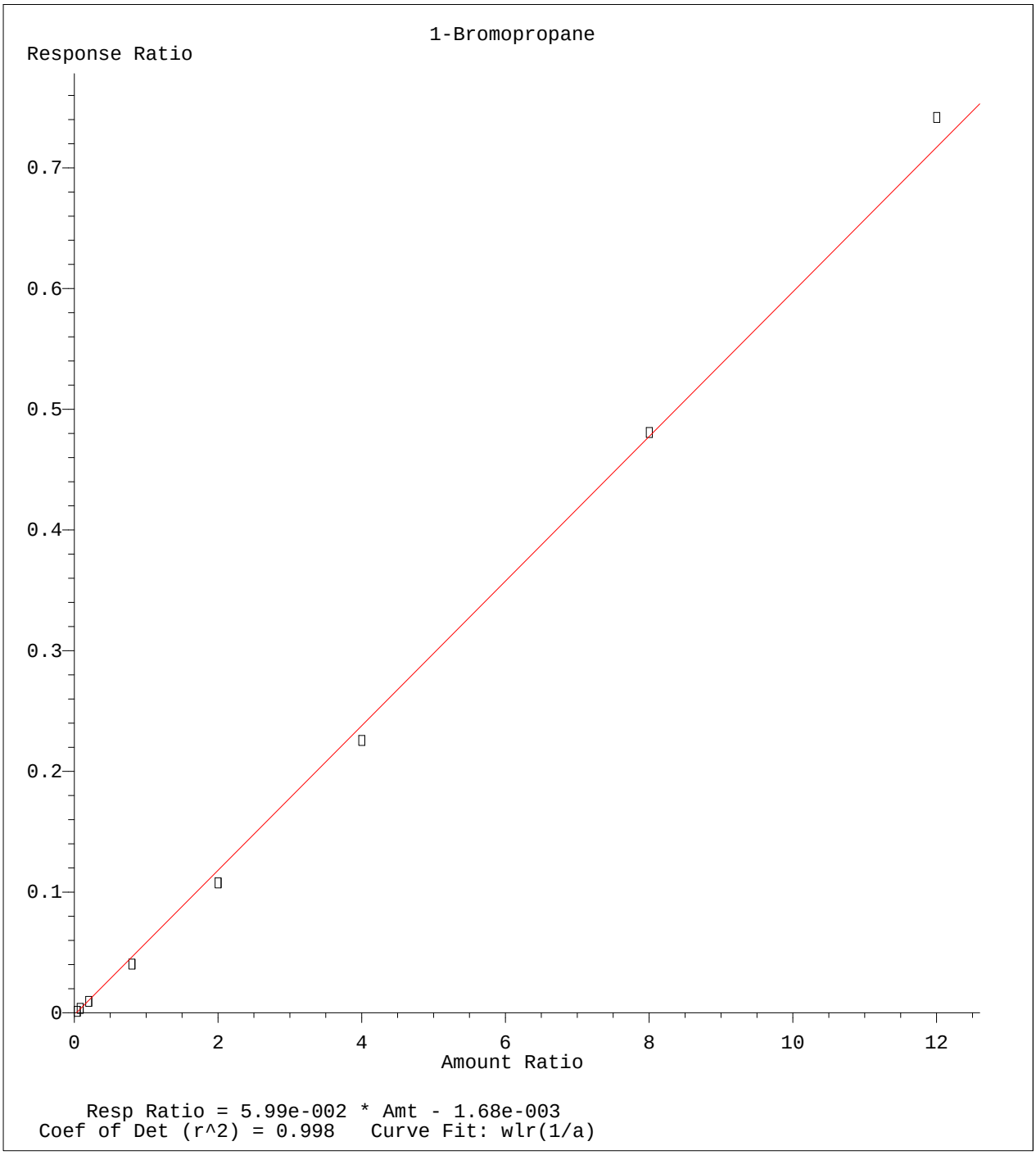

Method Name: C:\MSDCHEM\1\METHODS\8260WT.M
Calibration Table Last Updated: Thu May 17 10:54:16 2012



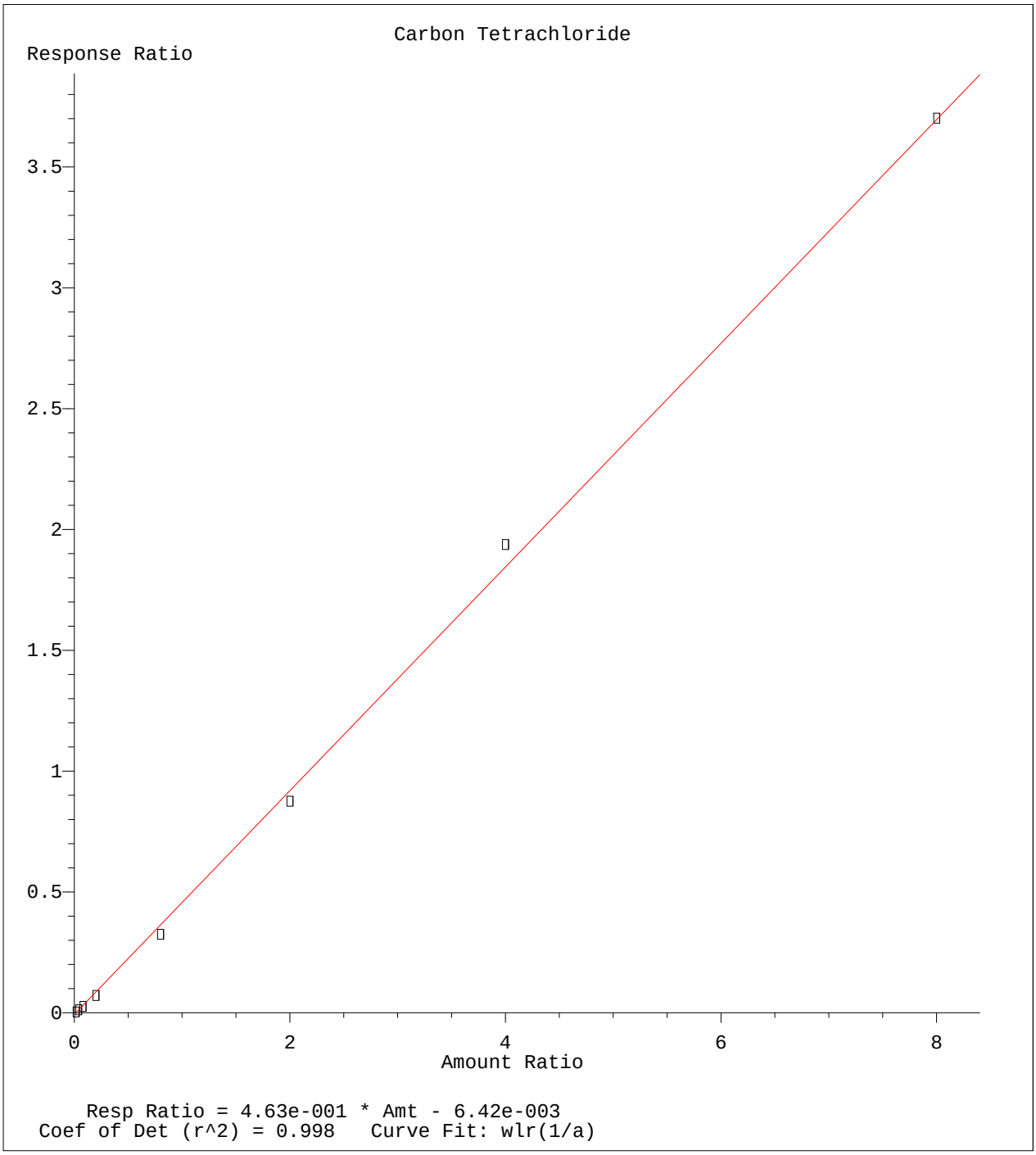

Method Name:  C:\MSDCHEM\1\METHODS\8260WT.M
Calibration Table Last Updated: Thu May 17 10:54:16 2012



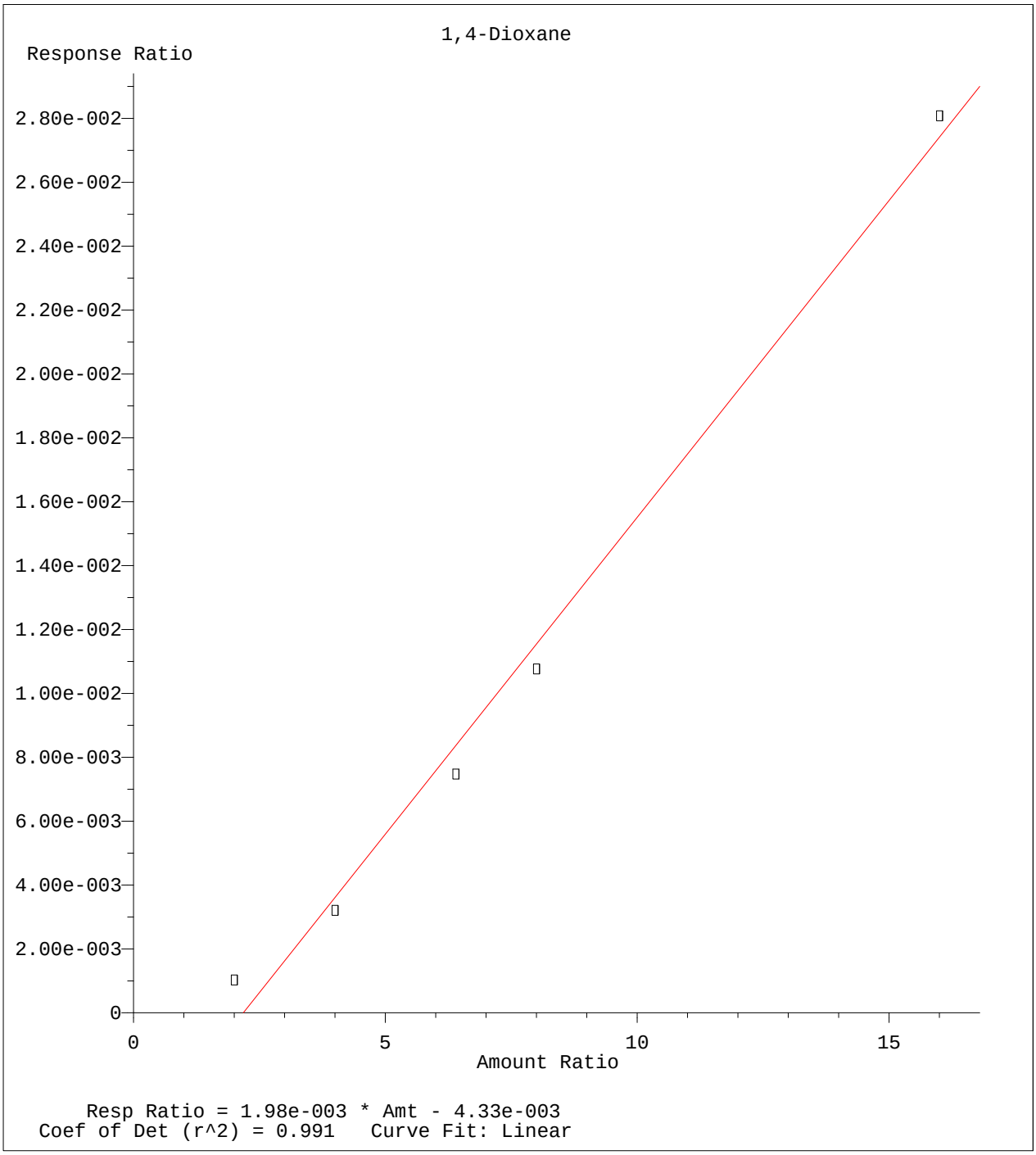

Method Name: C:\MSDCHEM\1\METHODS\8260WT.M
Calibration Table Last Updated: Thu May 17 10:54:16 2012



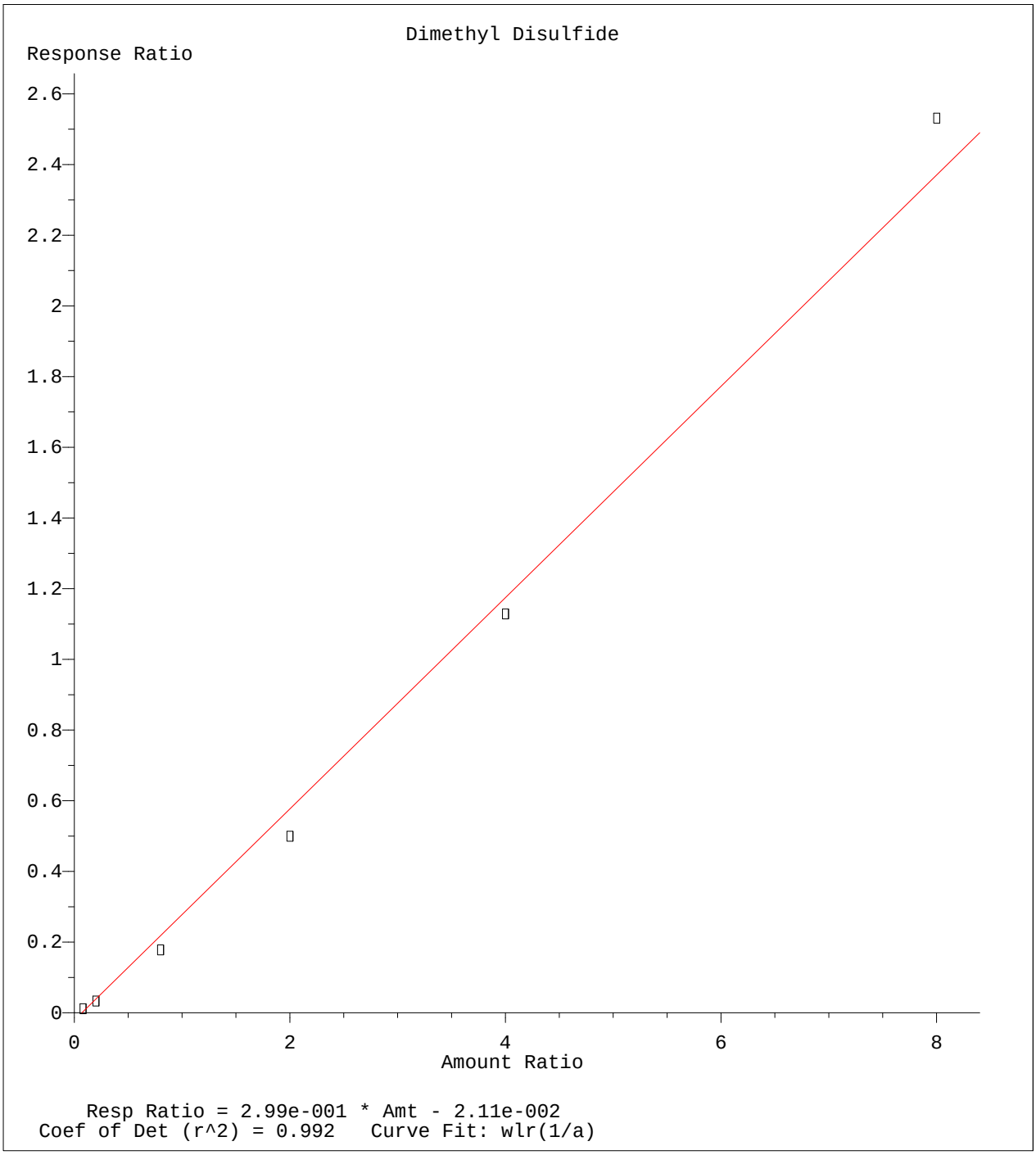

Method Name: C:\MSDCHEM\1\METHODS\8260WT.M
Calibration Table Last Updated: Thu May 17 10:54:16 2012



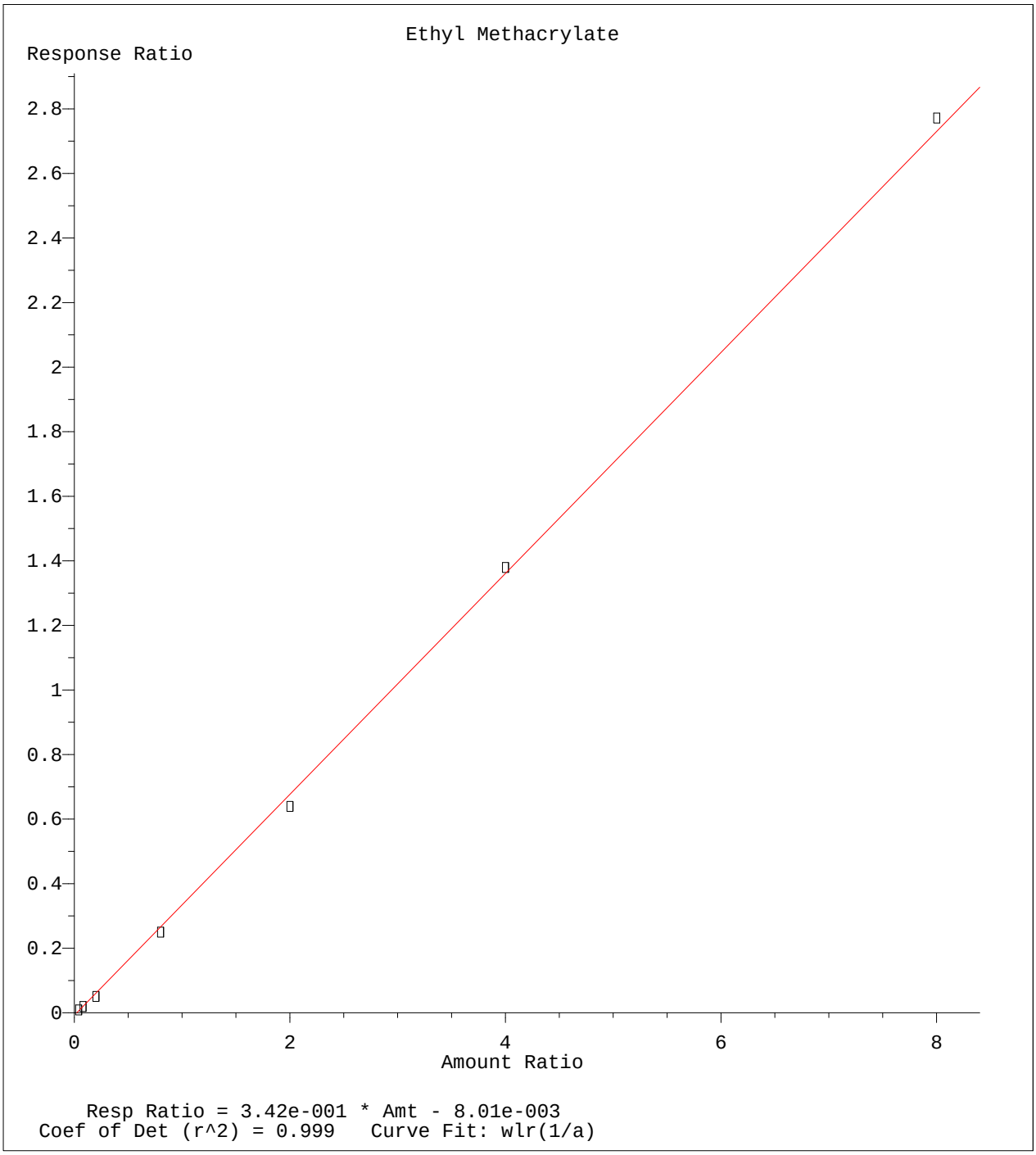

Method Name: C:\MSDCHEM\1\METHODS\8260WT.M
Calibration Table Last Updated: Thu May 17 10:54:16 2012



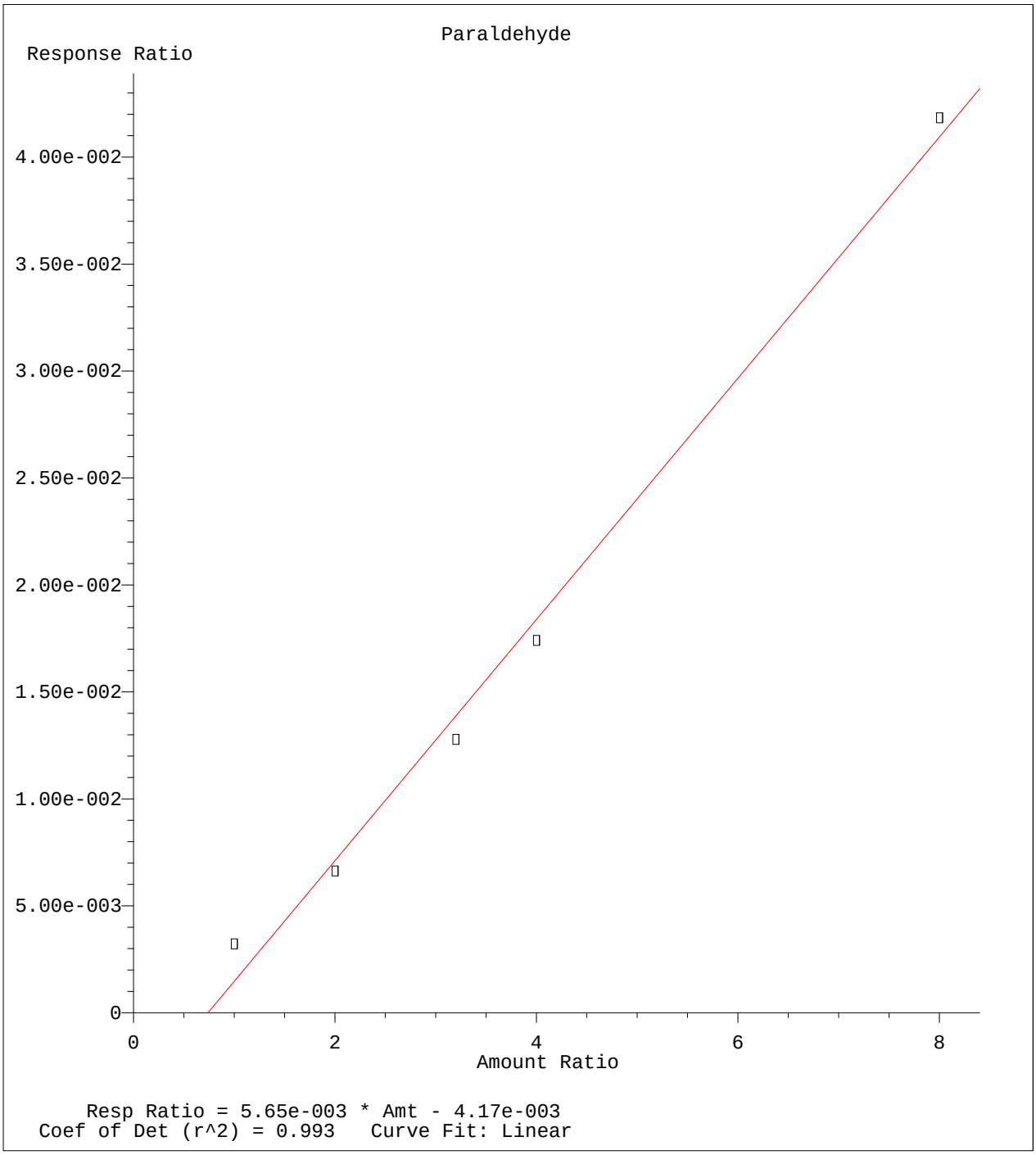

Method Name: C:\MSDCHEM\1\METHODS\8260WT.M
Calibration Table Last Updated: Thu May 17 10:54:16 2012



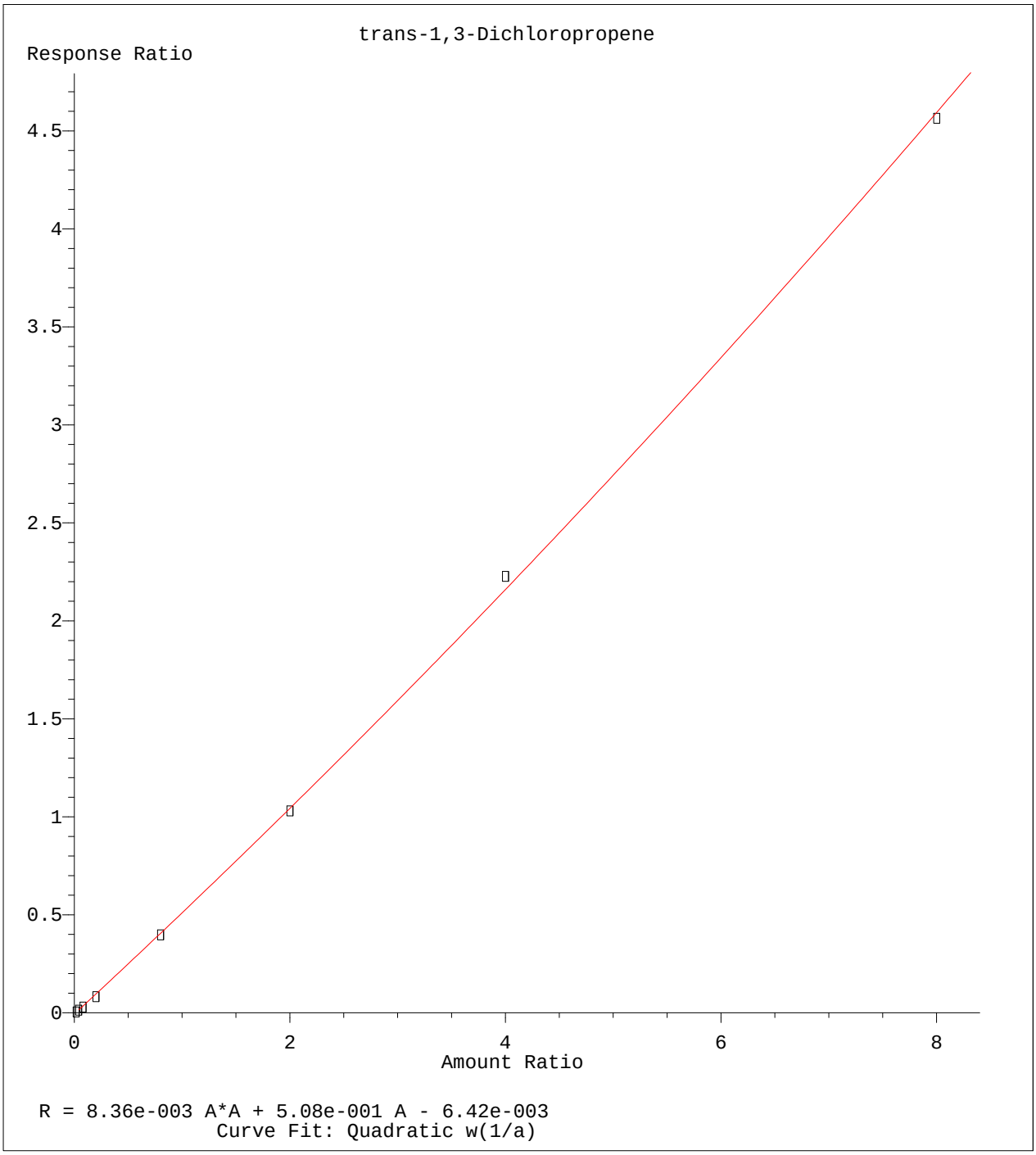

Method Name: C:\MSDCHEM\1\METHODS\8260WT.M
Calibration Table Last Updated: Thu May 17 10:54:16 2012



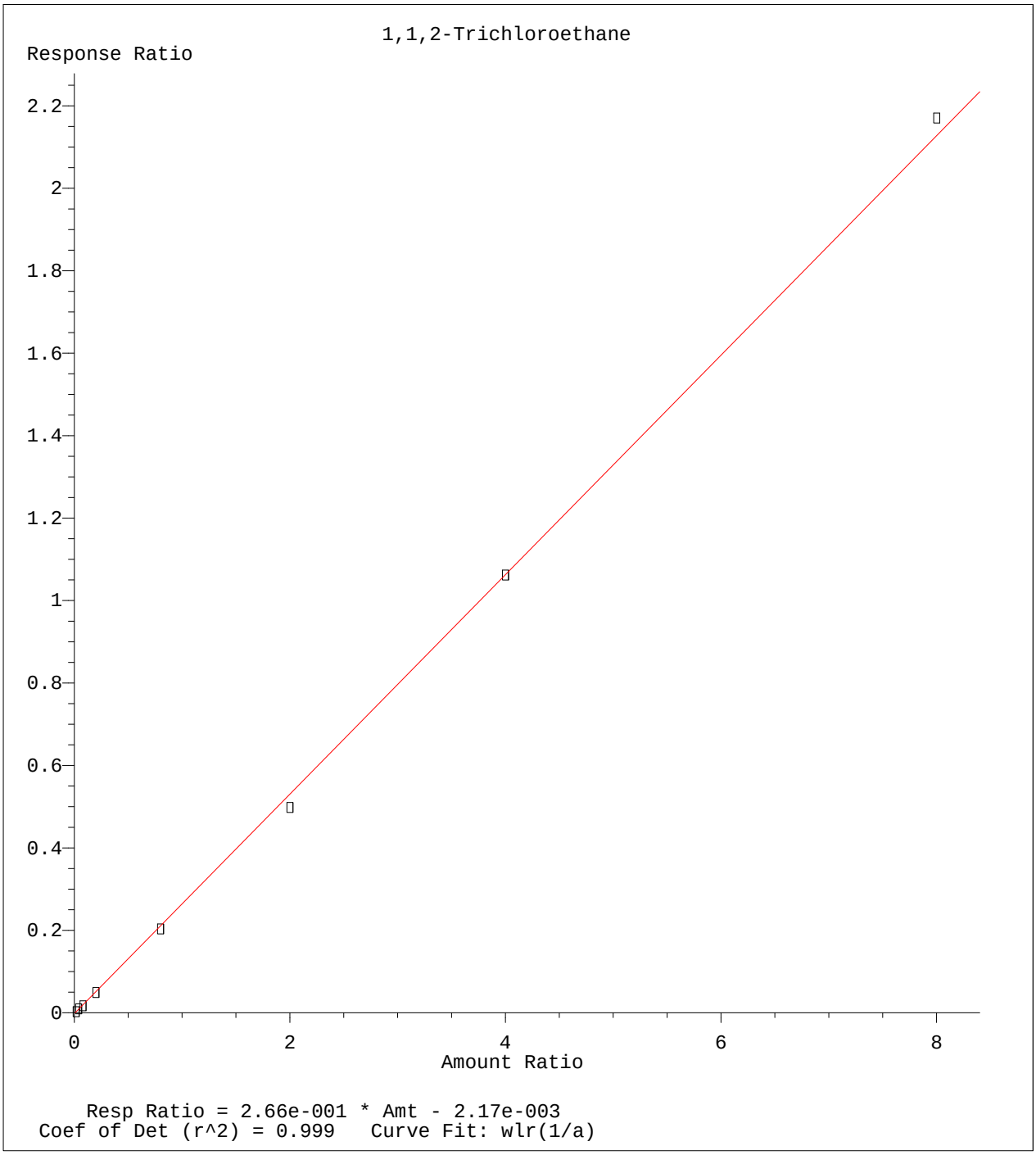

Method Name: C:\MSDCHEM\1\METHODS\8260WT.M
Calibration Table Last Updated: Thu May 17 10:54:16 2012



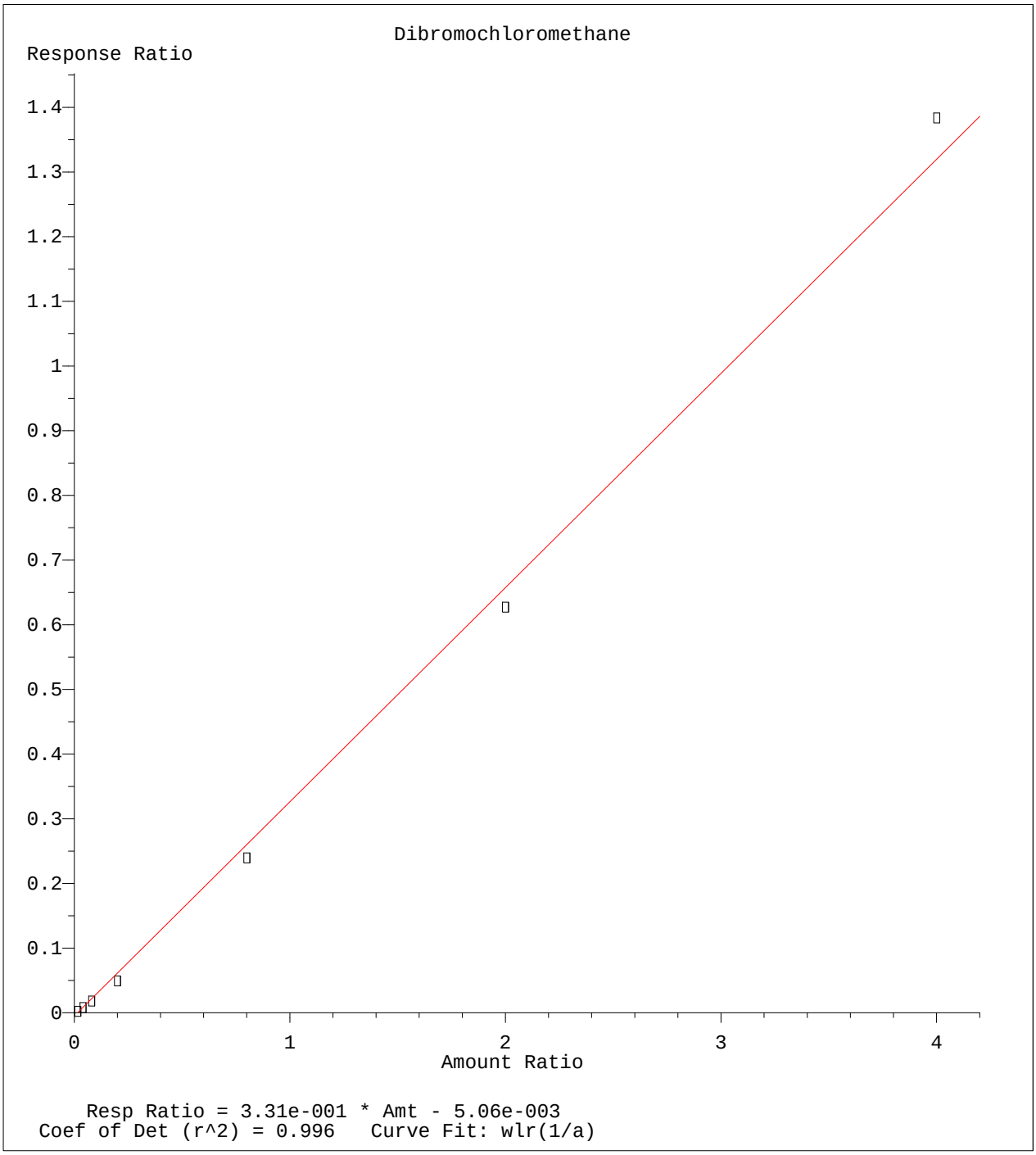

Method Name: C:\MSDCHEM\1\METHODS\8260WT.M
Calibration Table Last Updated: Thu May 17 10:54:16 2012



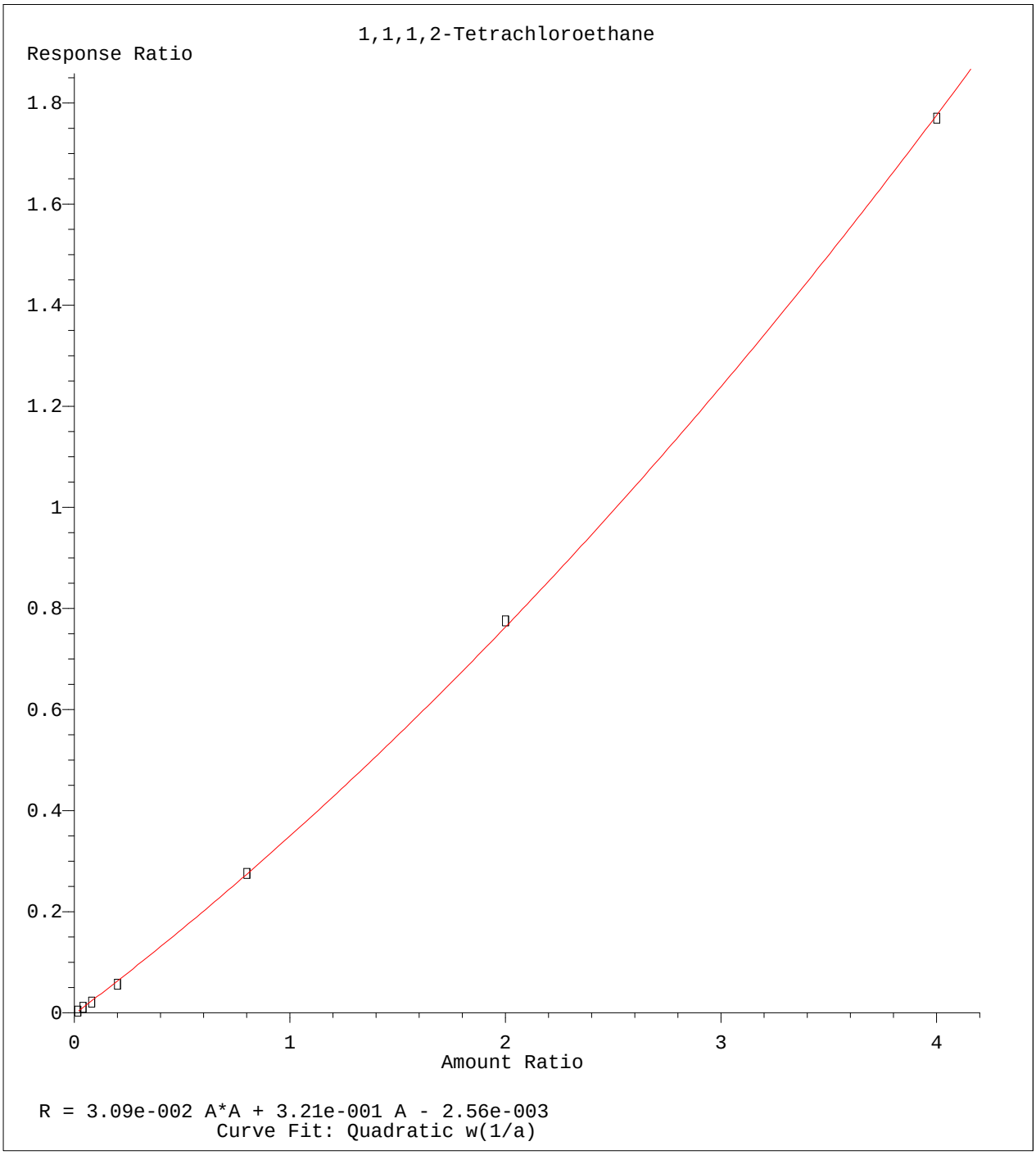

Method Name:  C:\MSDCHEM\1\METHODS\8260WT.M
Calibration Table Last Updated: Thu May 17 10:54:16 2012



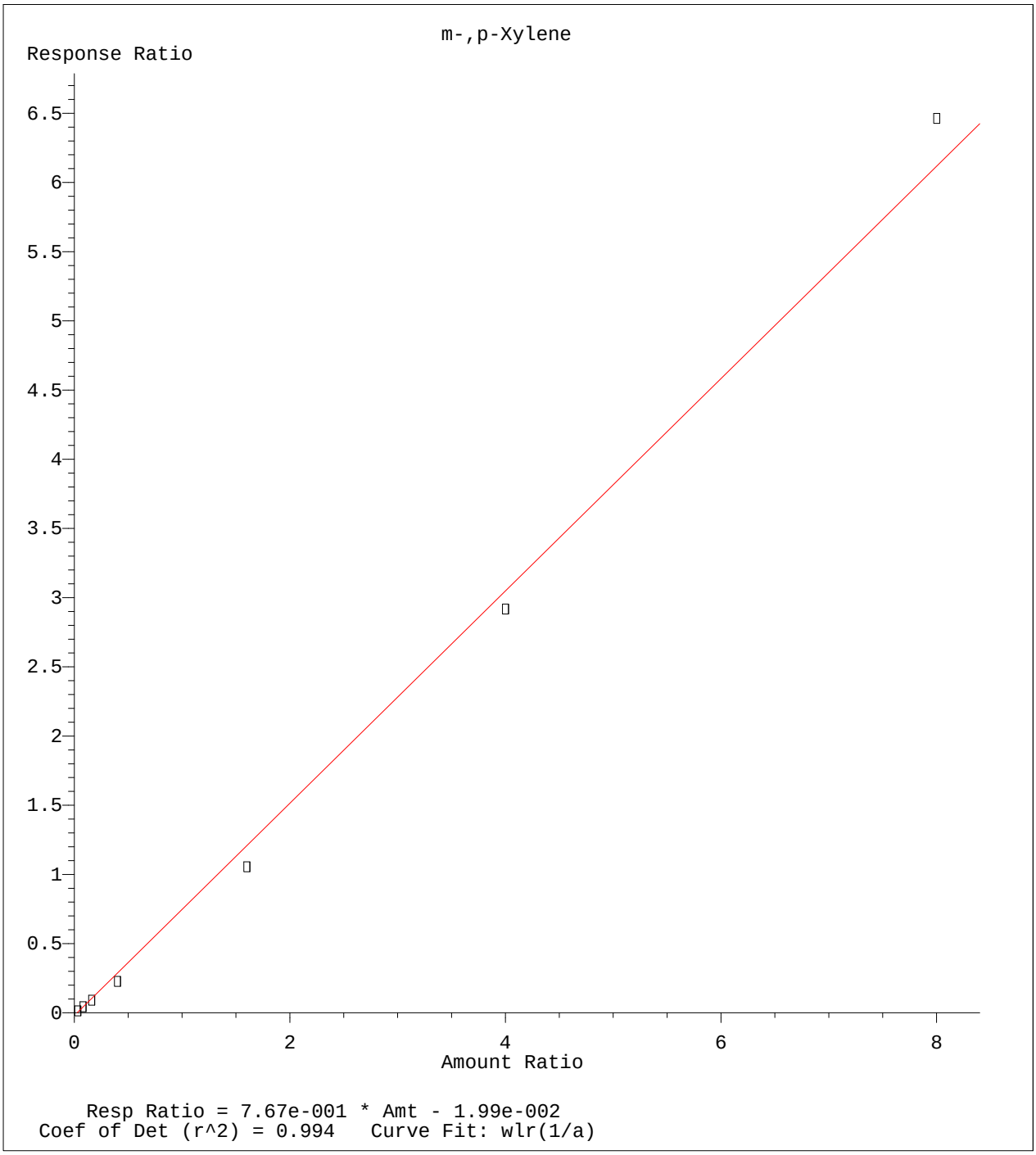

Method Name: C:\MSDCHEM\1\METHODS\8260WT.M
Calibration Table Last Updated: Thu May 17 10:54:16 2012



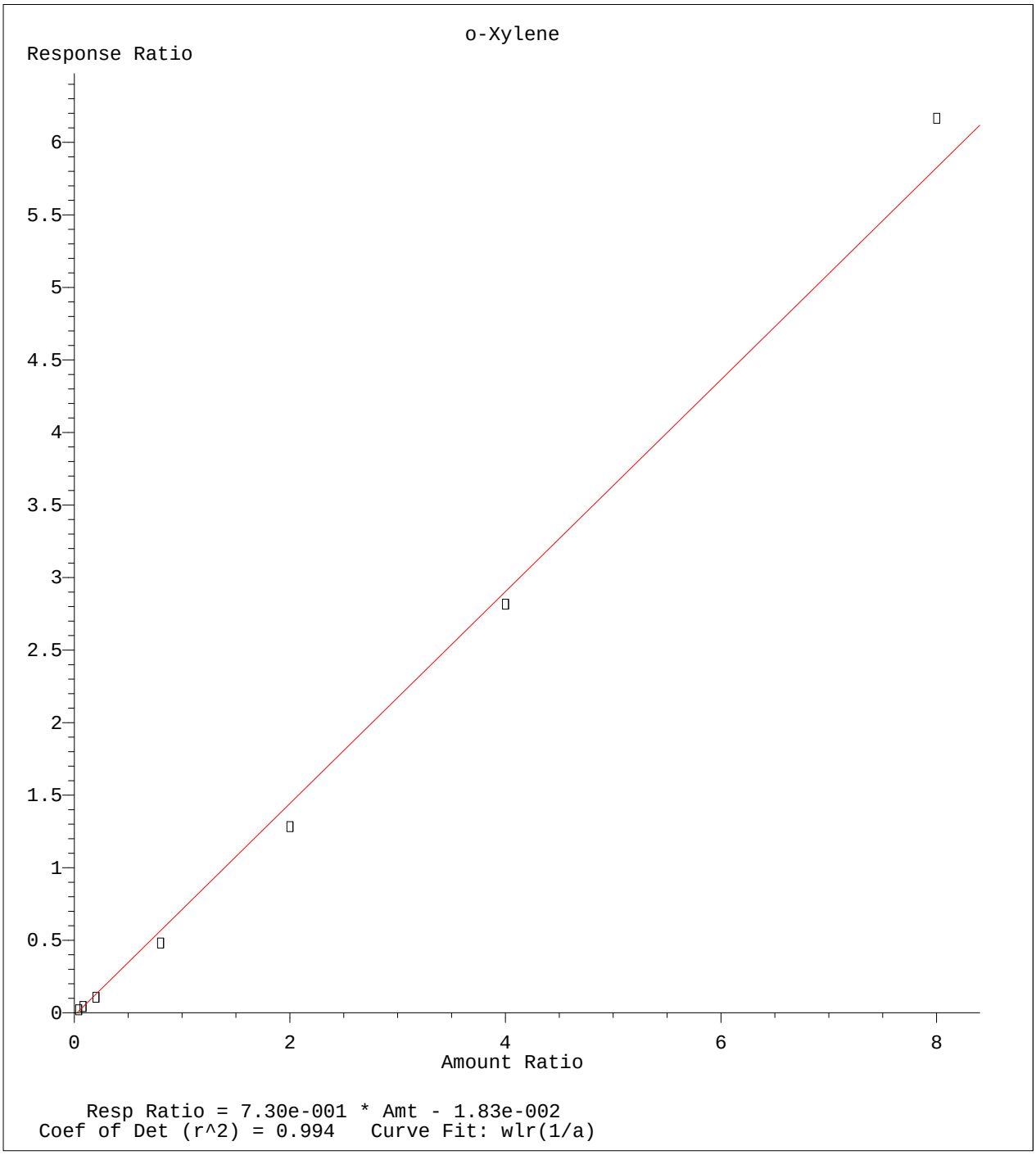

Method Name: C:\MSDCHEM\1\METHODS\8260WT.M
Calibration Table Last Updated: Thu May 17 10:54:16 2012



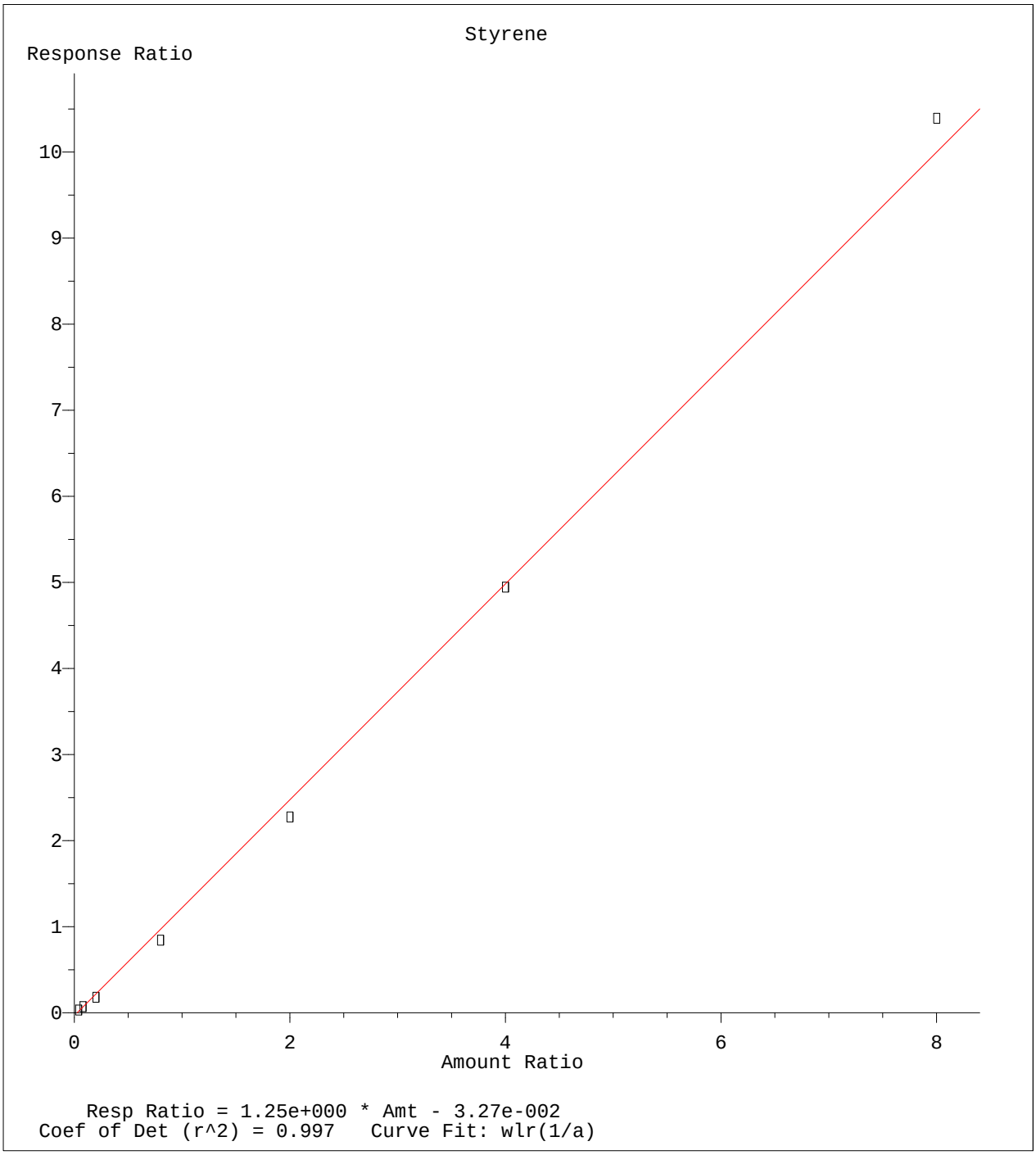

Method Name:  C:\MSDCHEM\1\METHODS\8260WT.M
Calibration Table Last Updated: Thu May 17 10:54:16 2012



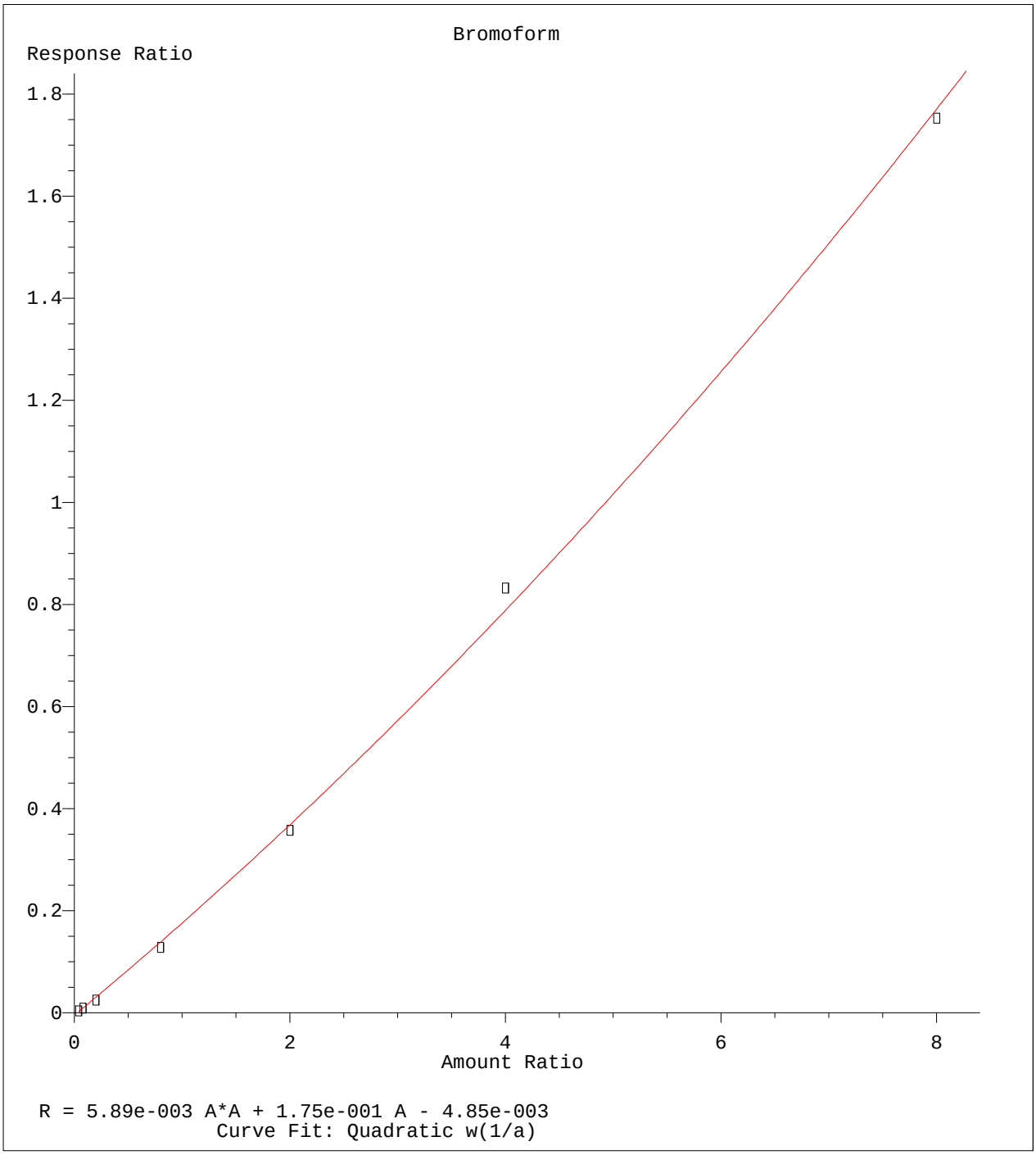

Method Name:  C:\MSDCHEM\1\METHODS\8260WT.M
Calibration Table Last Updated: Thu May 17 10:54:16 2012



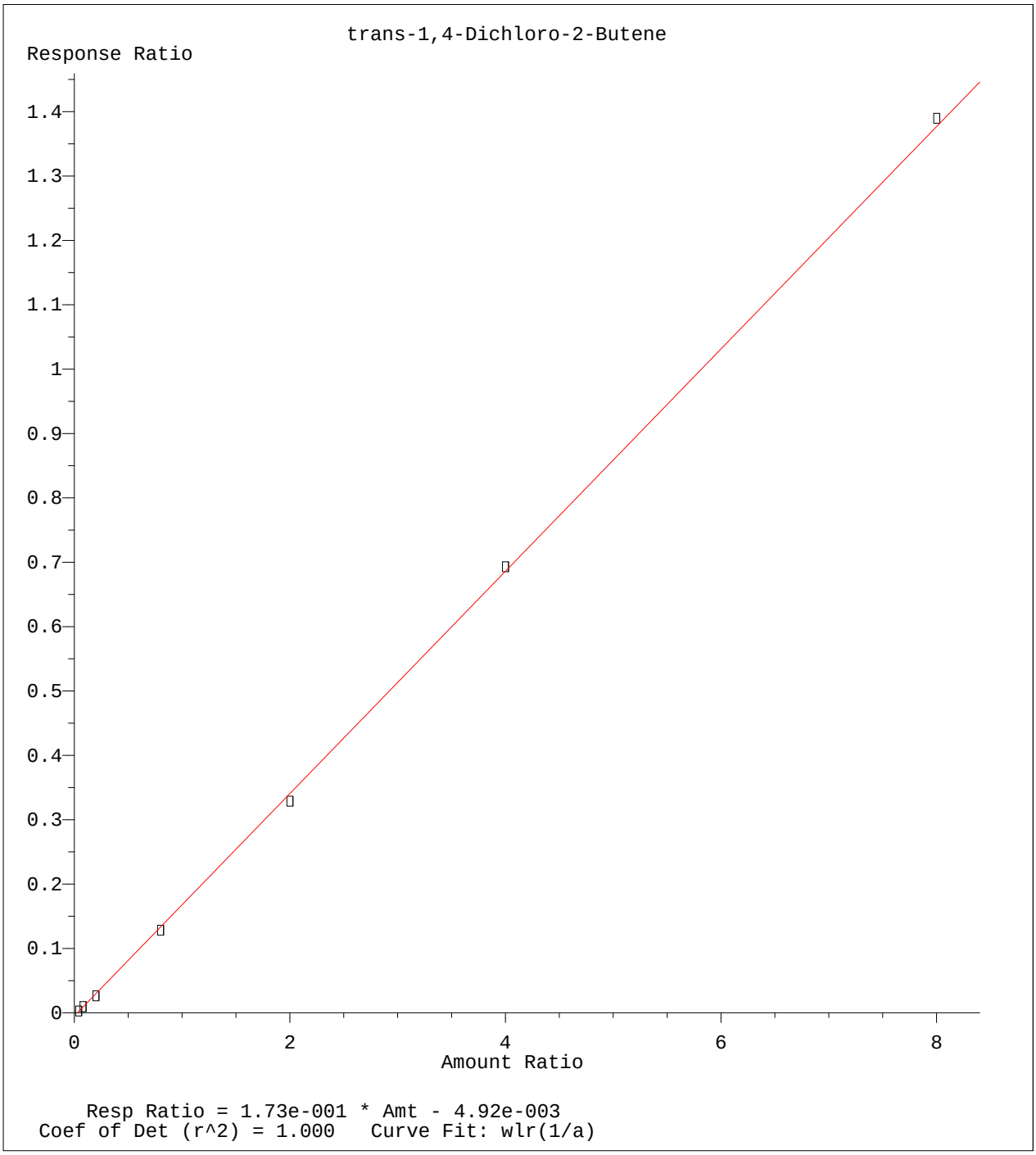

Method Name: C:\MSDCHEM\1\METHODS\8260WT.M
Calibration Table Last Updated: Thu May 17 10:54:16 2012



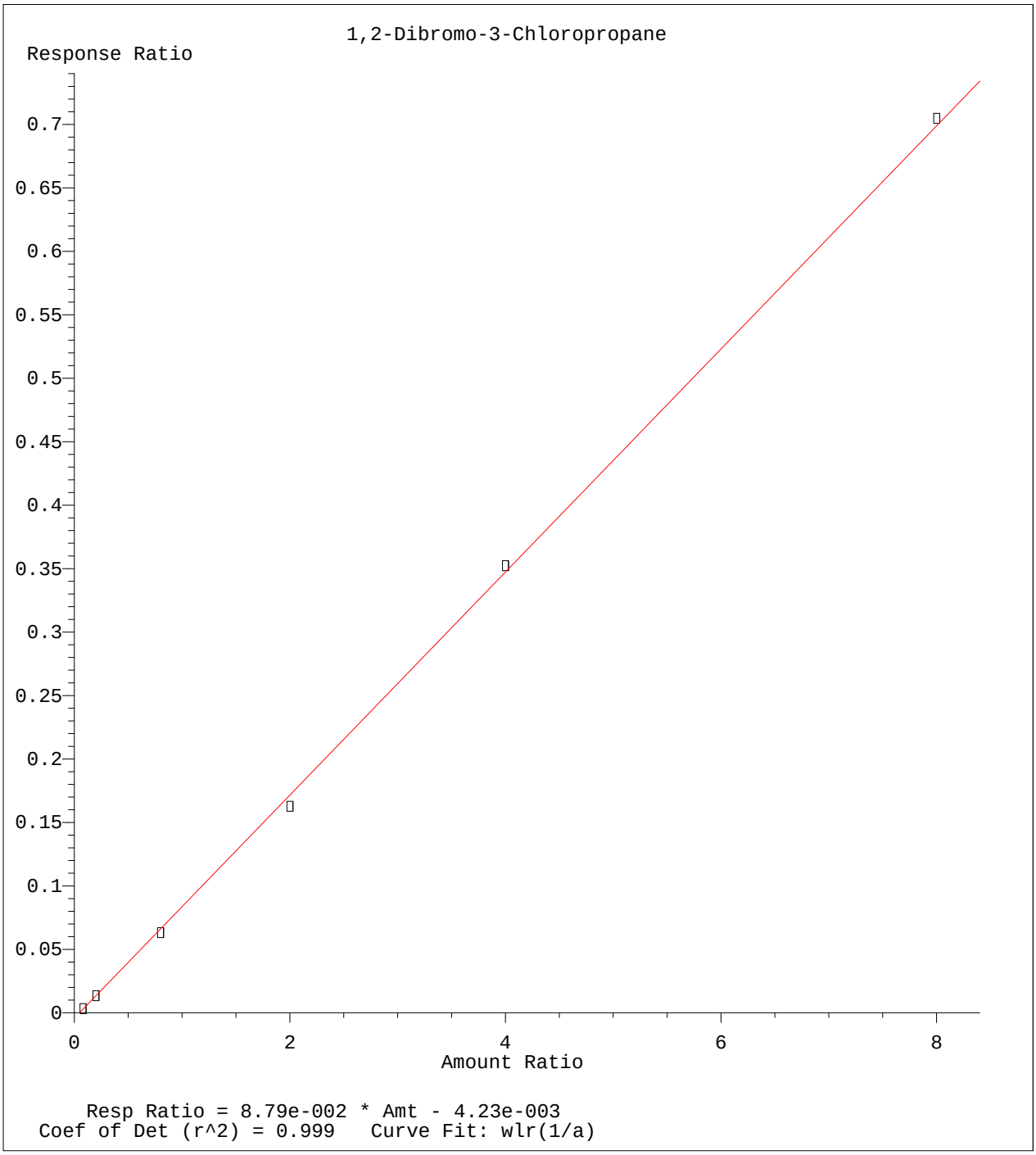

Method Name: C:\MSDCHEM\1\METHODS\8260WT.M
Calibration Table Last Updated: Thu May 17 10:54:16 2012




Method Name:  C:\MSDCHEM\1\METHODS\8260WT.M
Calibration Table Last Updated: Thu May 17 10:54:16 2012




Method Name: C:\MSDCHEM\1\METHODS\8260WT.M
Calibration Table Last Updated: Thu May 17 10:54:16 2012




Method Name: C:\MSDCHEM\1\METHODS\8260WT.M
Calibration Table Last Updated: Thu May 17 10:54:16 2012

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\051612\6M108182.D Vial: 13
Acq On : 16 May 2012 21:13 Operator: adc
Sample : WG397878-12 50.0 ug/L ALT SRC Inst : HPMS6
Misc : 1,1 STD51676 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 17 10:54:45 2012 Quant Results File: 8260WT.RES

Quant Method : C:\MSDCHEM\1\METHODS\8260WT.M (RTE Integrator)
Title : 8260B/624_WATER SOP:OVLMSV01 05/16/12 - HPMS6
Last Update : Thu May 17 10:54:16 2012
Response via : Initial Calibration
DataAcq Meth : 8260WT

| Internal Standards | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| 1) Fluorobenzene | 10.47 | 96 | 848906 | 25.00 ug/L | 0.00 |
| 57) Chlorobenzene-d5 | 14.96 | 117 | 646264 | 25.00 ug/L | 0.00 |
| 78) 1,4-Dichlorobenzene-d4 | 18.54 | 152 | 342246 | 25.00 ug/L | 0.00 |
| **System Monitoring Compounds** | | | | | |
| 37) Dibromofluoromethane | 9.28 | 111 | 266572 | 25.6557 ug/L | 0.00 |
| Spiked Amount 25.000 | Range 86 - 118 | | Recovery = 102.64% | | |
| 43) 1,2-Dichloroethane-d4 | 10.01 | 65 | 282430 | 25.7008 ug/L | 0.00 |
| Spiked Amount 25.000 | Range 80 - 120 | | Recovery = 102.80% | | |
| 58) Toluene-d8 | 12.76 | 98 | 868813 | 25.5942 ug/L | 0.00 |
| Spiked Amount 25.000 | Range 88 - 110 | | Recovery = 102.36% | | |
| 80) p-Bromofluorobenzene | 16.74 | 95 | 322748 | 26.0106 ug/L | 0.00 |
| Spiked Amount 25.000 | Range 86 - 115 | | Recovery = 104.04% | | |
| **Target Compounds** | | | | | Qvalue |
| 2) Dichlorodifluoromethane | 2.71 | 85 | 990296 | 75.2620 ug/L | 99 |
| 3) Chloromethane | 3.09 | 50 | 1291583 | 49.4920 ug/L | 99 |
| 4) Vinyl Chloride | 3.27 | 62 | 826784 | 52.0648 ug/L | 100 |
| 5) 1,3-Butadiene | 3.31 | 54 | 237827 | 45.9951 ug/L | 99 |
| 6) Bromomethane | 4.06 | 94 | 513393 | 54.9134 ug/L | 100 |
| 7) Chloroethane | 4.21 | 64 | 456520 | 55.1843 ug/L | 100 |
| 8) Trichlorofluoromethane | 4.68 | 101 | 1056327 | 53.7544 ug/L | 99 |
| 9) Diethyl ether | 5.22 | 59 | 716646 | 91.3134 ug/L | 99 |
| 10) Isoprene | 5.24 | 67 | 818413 | 47.5624 ug/L | 100 |
| 11) Acrolein | 5.45 | 56 | 30267 | 57.6690 ug/L | 95 |
| 12) 1,1,2-Trichloro-1,2,2-Trif | 5.47 | 101 | 539844 | 53.4852 ug/L | 99 |
| 13) Acetone | 5.56 | 43 | 90950 | 49.9285 ug/L | 99 |
| 14) 1,1-Dichloroethene | 5.77 | 61 | 935812 | 57.6727 ug/L | 99 |
| 15) Tert-Butyl Alcohol | 5.93 | 59 | 87223 | 196.4402 ug/L | 99 |
| 16) Dimethyl Sulfide | 6.05 | 62 | 658188 | 51.2395 ug/L | 99 |
| 17) Iodomethane | 6.31 | 142 | 587528 | 52.2134 ug/L | 98 |
| 18) Methyl acetate | 6.36 | 43 | 260927 | 44.6775 ug/L | 99 |
| 19) Methylene Chloride | 6.61 | 84 | 556729 | 54.2901 ug/L | 98 |
| 20) Carbon Disulfide | 6.62 | 76 | 1664530 | 53.7053 ug/L | 100 |
| 21) Acrylonitrile | 6.82 | 53 | 125964 | 52.1496 ug/L | 98 |
| 22) Methyl Tert Butyl Ether | 6.86 | 73 | 1205261 | 54.2844 ug/L | 100 |
| 23) trans-1,2-Dichloroethene | 7.10 | 96 | 539533 | 55.8961 ug/L | 99 |
| 24) n-Hexane | 7.19 | 57 | 549260 | 50.3518 ug/L | 99 |
| 25) Diisopropyl ether | 7.59 | 45 | 3723799 | 101.6713 ug/L | 99 |
| 26) Vinyl Acetate | 7.78 | 43 | 722391 | 60.8415 ug/L | 99 |
| 27) 1,1-Dichloroethane | 7.79 | 63 | 1051808 | 55.8419 ug/L | 100 |
| 28) Ethyl-Tert-Butyl ether | 8.23 | 59 | 3063733 | 98.2751 ug/L | 100 |
| 29) 2-Butanone | 8.42 | 43 | 127581 | 49.4881 ug/L | 98 |
| 30) Propionitrile | 8.54 | 54 | 78650 | 102.1938 ug/L | 99 |
| 31) 2,2-Dichloropropane | 8.64 | 77 | 814034 | 55.2668 ug/L | 98 |
| 32) cis-1,2-Dichloroethene | 8.72 | 96 | 576360 | 56.8965 ug/L | 97 |
| 33) Chloroform | 8.95 | 83 | 1022009 | 57.7841 ug/L | 99 |
| 34) 1-Bromopropane | 9.10 | 122 | 122993 | 61.2094 ug/L | 99 |
| 35) Bromochloromethane | 9.21 | 130 | 320080 | 58.4807 ug/L | 100 |
| 36) Tetrahydrofuran | 9.24 | 42 | 167866 | 100.7719 ug/L | 99 |
| 38) 1,1,1-Trichloroethane | 9.55 | 97 | 903036 | 55.9329 ug/L | 99 |
| 39) Cyclohexane | 9.57 | 56 | 850057 | 53.1521 ug/L | 99 |
| 40) 1,1-Dichloropropene | 9.78 | 75 | 764621 | 57.1876 ug/L | 97 |
| 41) Tert-Amyl-Methyl ether | 9.92 | 73 | 2623010 | 106.6840 ug/L | 99 |
| 42) Carbon Tetrachloride | 9.93 | 117 | 819955 | 52.5223 ug/L | 100 |

(#) = qualifier out of range (m) = manual integration
6M108182.D 8260WT.M Thu May 17 10:54:46 2012 Page 1

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\051612\6M108182.D Vial: 13
Acq On : 16 May 2012 21:13 Operator: adc
Sample : WG397878-12 50.0 ug/L ALT SRC Inst : HPMS6
Misc : 1,1 STD51676 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 17 10:54:45 2012 Quant Results File: 8260WT.RES

Quant Method : C:\MSDCHEM\1\METHODS\8260WT.M (RTE Integrator)
Title : 8260B/624_WATER SOP:OVLMSV01 05/16/12 - HPMS6
Last Update : Thu May 17 10:54:16 2012
Response via : Initial Calibration
DataAcq Meth : 8260WT

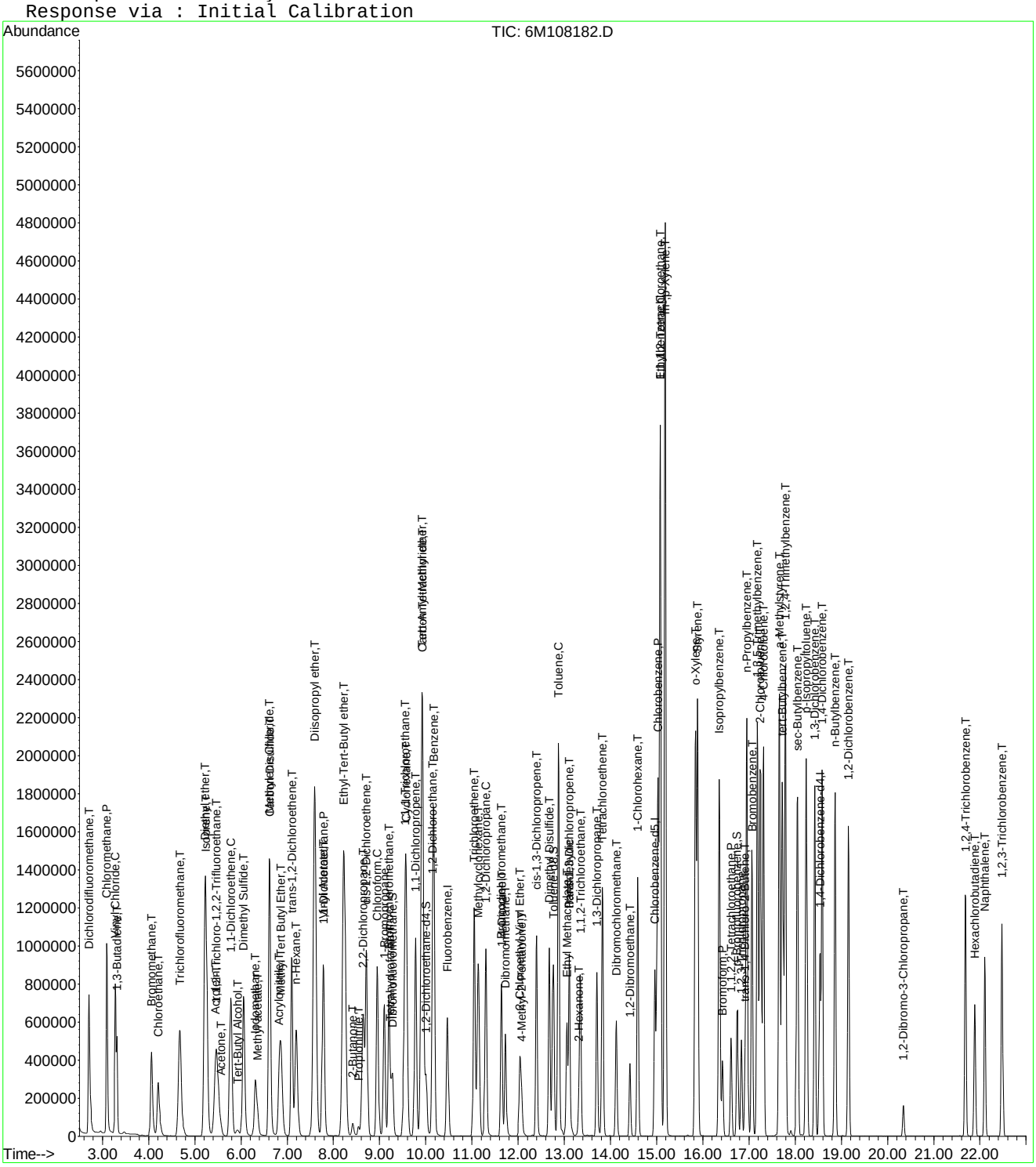
| | Compound | R.T. | QIon | Response | Conc Unit | | Qvalue |
|---|---|---|---|---|---|---|---|
| 45) | 1,2-Dichloroethane | 10.14 | 62 | 744323 | 55.3924 ug/L | | 99 |
| 46) | Benzene | 10.18 | 78 | 2142686 | 56.1890 ug/L | | 99 |
| 47) | Trichloroethene | 11.04 | 130 | 543160 | 55.7592 ug/L | | 97 |
| 48) | Methylcyclohexane | 11.14 | 83 | 662633 | 54.5626 ug/L | | 99 |
| 49) | 1,2-Dichloropropane | 11.30 | 63 | 533627 | 57.2878 ug/L | | 99 |
| 50) | 1,4-Dioxane | 11.65 | 88 | 8045 | 174.0216 ug/L | | 95 |
| 51) | Bromodichloromethane | 11.64 | 83 | 720329 | 58.4423 ug/L | | 99 |
| 52) | Dibromomethane | 11.73 | 93 | 287007 | 54.8018 ug/L | | 100 |
| 53) | 2-Chloroethyl Vinyl Ether | 12.03 | 63 | 235872 | 120.6716 ug/L | | 98 |
| 54) | 4-Methyl-2-Pentanone | 12.07 | 58 | 104449 | 52.5618 ug/L | | 96 |
| 55) | cis-1,3-Dichloropropene | 12.40 | 75 | 791293 | 56.6709 ug/L | | 100 |
| 56) | Dimethyl Disulfide | 12.68 | 79 | 409295 | 42.0847 ug/L | | 100 |
| 59) | Toluene | 12.87 | 91 | 2189356 | 56.9799 ug/L | | 100 |
| 60) | Ethyl Methacrylate | 13.06 | 69 | 452717 | 51.7600 ug/L | | 97 |
| 61) | Paraldehyde | 13.11 | 89 | 10100 | 87.6929 ug/L | # | 100 |
| 62) | trans-1,3-Dichloropropene | 13.11 | 75 | 636371 | 47.2915 ug/L | | 100 |
| 63) | 1,1,2-Trichloroethane | 13.35 | 97 | 350867 | 51.1993 ug/L | | 99 |
| 64) | 2-Hexanone | 13.31 | 43 | 183797 | 52.5113 ug/L | | 98 |
| 65) | 1,3-Dichloropropane | 13.71 | 76 | 642728 | 57.4548 ug/L | | 97 |
| 66) | Tetrachloroethene | 13.82 | 166 | 519725 | 58.6206 ug/L | | 99 |
| 67) | Dibromochloromethane | 14.13 | 129 | 439619 | 51.7339 ug/L | | 100 |
| 68) | 1,2-Dibromoethane | 14.42 | 107 | 349409 | 56.2890 ug/L | | 99 |
| 69) | 1-Chlorohexane | 14.59 | 91 | 642569 | 54.2733 ug/L | | 99 |
| 70) | Chlorobenzene | 15.03 | 112 | 1376395 | 55.2977 ug/L | | 100 |
| 71) | 1,1,1,2-Tetrachloroethane | 15.08 | 131 | 537137 | 53.7764 ug/L | | 99 |
| 72) | Ethylbenzene | 15.08 | 106 | 792541 | 59.1522 ug/L | | 99 |
| 73) | m-,p-Xylene | 15.19 | 106 | 1982493 | 100.6170 ug/L | | 100 |
| 74) | o-Xylene | 15.84 | 106 | 867898 | 46.5918 ug/L | | 100 |
| 75) | Styrene | 15.88 | 104 | 1563453 | 48.8644 ug/L | | 100 |
| 76) | Bromoform | 16.42 | 173 | 245559 | 51.4674 ug/L | | 98 |
| 77) | Isopropylbenzene | 16.35 | 105 | 1922690 | 52.1792 ug/L | | 100 |
| 79) | 1,1,2,2-Tetrachloroethane | 16.61 | 83 | 368388 | 54.8146 ug/L | | 99 |
| 81) | 1,2,3-Trichloropropane | 16.83 | 110 | 106551 | 61.6022 ug/L | | 94 |
| 82) | trans-1,4-Dichloro-2-Buten | 16.92 | 53 | 116252 | 49.8607 ug/L | | 99 |
| 83) | n-Propylbenzene | 16.96 | 91 | 2589663 | 56.7333 ug/L | | 99 |
| 84) | Bromobenzene | 17.07 | 156 | 566680 | 61.2022 ug/L | | 100 |
| 85) | 1,3,5-Trimethylbenzene | 17.18 | 105 | 1814726 | 59.8666 ug/L | | 99 |
| 86) | 2-Chlorotoluene | 17.24 | 91 | 1729320 | 53.5923 ug/L | | 94 |
| 87) | 4-Chlorotoluene | 17.31 | 91 | 1563163 | 53.5987 ug/L | | 100 |
| 88) | a-Methylstyrene | 17.66 | 118 | 1036472 | 54.1223 ug/L | | 100 |
| 89) | tert-Butylbenzene | 17.72 | 134 | 343686 | 54.2495 ug/L | | 99 |
| 90) | 1,2,4-Trimethylbenzene | 17.78 | 105 | 1987246 | 61.9712 ug/L | | 100 |
| 91) | sec-Butylbenzene | 18.05 | 105 | 1987355 | 55.8927 ug/L | | 100 |
| 92) | p-Isopropyltoluene | 18.24 | 119 | 1686288 | 60.1044 ug/L | | 100 |
| 93) | 1,3-Dichlorobenzene | 18.43 | 146 | 998340 | 57.4933 ug/L | | 100 |
| 94) | 1,4-Dichlorobenzene | 18.58 | 146 | 1019462 | 54.8466 ug/L | | 100 |
| 95) | n-Butylbenzene | 18.87 | 91 | 1520352 | 57.0875 ug/L | | 99 |
| 96) | 1,2-Dichlorobenzene | 19.15 | 146 | 886572 | 54.6117 ug/L | | 100 |
| 97) | 1,2-Dibromo-3-Chloropropan | 20.34 | 75 | 59584 | 50.7389 ug/L | | 93 |
| 98) | 1,2,4-Trichlorobenzene | 21.69 | 180 | 532210 | 58.9939 ug/L | | 99 |
| 99) | Hexachlorobutadiene | 21.89 | 225 | 184835 | 52.4553 ug/L | | 99 |
| 100) | Naphthalene | 22.10 | 128 | 1007411 | 55.6641 ug/L | | 99 |
| 101) | 1,2,3-Trichlorobenzene | 22.48 | 180 | 447785 | 60.0552 ug/L | | 99 |

(#) = qualifier out of range (m) = manual integration
6M108182.D 8260WT.M Thu May 17 10:54:46 2012 Page 2

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\051612\6M108182.D Vial: 13
Acq On : 16 May 2012 21:13 Operator: adc
Sample : WG397878-12 50.0 ug/L ALT SRC Inst : HPMS6
Misc : 1,1 STD51676 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 17 10:54 2012 Quant Results File: 8260WT.RES

Method : C:\MSDCHEM\1\METHODS\8260WT.M (RTE Integrator)
Title : 8260B/624_WATER SOP:OVLMSV01 05/16/12 - HPMS6
Last Update : Thu May 17 10:54:16 2012
Response via : Initial Calibration



Evaluate Continuing Calibration Report

Data File : C:\MSDCHEM\1\DATA\051612\6M108182.D Vial: 13
Acq On : 16 May 2012 21:13 Operator: adc
Sample : WG397878-12 50.0 ug/L ALT SRC Inst : HPMS6
Misc : 1,1 STD51676 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\1\METHODS\8260WT.M (RTE Integrator)
Title : 8260B/624_WATER SOP:OVLMSV01 05/16/12 - HPMS6
Last Update : Thu May 17 10:54:16 2012
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 : 200%

| | | Compound | Amount | Calc. | %Dev | Area% | Dev(min) |
|---|---|---|---|---|---|---|---|
| 1 | I | Fluorobenzene | 25.0000 | 25.0000 | 0.0 | 111 | 0.00 |
| 2 | T | Dichlorodifluoromethane | 50.0000 | 75.2620 | -50.5# | 164 | 0.00 |
| 3 | P | Chloromethane | 50.0000 | 49.4920 | 1.0 | 121 | 0.00 |
| 4 | C | Vinyl Chloride | 50.0000 | 52.0648 | -4.1 | 115 | 0.00 |
| 5 | T | 1,3-Butadiene | 50.0000 | 45.9951 | 8.0 | 99 | 0.00 |
| 6 | T | Bromomethane | 50.0000 | 54.9134 | -9.8 | 132 | 0.00 |
| 7 | T | Chloroethane | 50.0000 | 55.1843 | -10.4 | 120 | 0.00 |
| 8 | T | Trichlorofluoromethane | 50.0000 | 53.7544 | -7.5 | 116 | 0.00 |
| 9 | T | Diethyl ether | 100.0000 | 91.3134 | 8.7 | 102 | 0.00 |
| 10 | T | Isoprene | 50.0000 | 47.5624 | 4.9 | 100 | 0.00 |
| 11 | T | Acrolein | 50.0000 | 57.6690 | -15.3 | 134 | 0.00 |
| 12 | T | 1,1,2-Trichloro-1,2,2-Trifl | 50.0000 | 53.4852 | -7.0 | 116 | 0.00 |
| 13 | T | Acetone | 50.0000 | 49.9285 | 0.1 | 116 | 0.00 |
| 14 | C | 1,1-Dichloroethene | 50.0000 | 57.6727 | -15.3 | 122 | 0.00 |
| 15 | T | Tert-Butyl Alcohol | 200.0000 | 196.4402 | 1.8 | 118 | 0.00 |
| 16 | T | Dimethyl Sulfide | 50.0000 | 51.2395 | -2.5 | 110 | 0.00 |
| 17 | T | Iodomethane | 50.0000 | 52.2134 | -4.4 | 120 | 0.00 |
| 18 | T | Methyl acetate | 50.0000 | 44.6775 | 10.6 | 104 | 0.00 |
| 19 | T | Methylene Chloride | 50.0000 | 54.2901 | -8.6 | 121 | 0.00 |
| 20 | T | Carbon Disulfide | 50.0000 | 53.7053 | -7.4 | 117 | 0.00 |
| 21 | T | Acrylonitrile | 50.0000 | 52.1496 | -4.3 | 115 | 0.00 |
| 22 | T | Methyl Tert Butyl Ether | 50.0000 | 54.2844 | -8.6 | 120 | 0.00 |
| 23 | T | trans-1,2-Dichloroethene | 50.0000 | 55.8961 | -11.8 | 119 | 0.00 |
| 24 | T | n-Hexane | 50.0000 | 50.3518 | -0.7 | 110 | 0.00 |
| 25 | T | Diisopropyl ether | 100.0000 | 101.6713 | -1.7 | 112 | 0.00 |
| 26 | T | Vinyl Acetate | 50.0000 | 60.8415 | -21.7# | 134 | 0.00 |
| 27 | P | 1,1-Dichloroethane | 50.0000 | 55.8419 | -11.7 | 118 | 0.00 |
| 28 | T | Ethyl-Tert-Butyl ether | 100.0000 | 98.2751 | 1.7 | 109 | 0.00 |
| 29 | T | 2-Butanone | 50.0000 | 49.4881 | 1.0 | 115 | 0.00 |
| 30 | T | Propionitrile | 100.0000 | 102.1938 | -2.2 | 112 | 0.00 |
| 31 | T | 2,2-Dichloropropane | 50.0000 | 55.2668 | -10.5 | 117 | 0.00 |
| 32 | T | cis-1,2-Dichloroethene | 50.0000 | 56.8965 | -13.8 | 120 | 0.00 |
| 33 | C | Chloroform | 50.0000 | 57.7841 | -15.6 | 122 | 0.00 |
| 34 | | 1-Bromopropane | 50.0000 | 61.2094 | -22.4# | 150 | 0.00 |
| 35 | T | Bromochloromethane | 50.0000 | 58.4807 | -17.0 | 122 | 0.00 |
| 36 | T | Tetrahydrofuran | 100.0000 | 100.7719 | -0.8 | 113 | 0.00 |
| 37 | S | Dibromofluoromethane | 25.0000 | 25.6557 | -2.6 | 112 | 0.00 |
| 38 | T | 1,1,1-Trichloroethane | 50.0000 | 55.9329 | -11.9 | 119 | 0.00 |
| 39 | T | Cyclohexane | 50.0000 | 53.1521 | -6.3 | 113 | 0.00 |
| 40 | T | 1,1-Dichloropropene | 50.0000 | 57.1876 | -14.4 | 119 | 0.00 |
| 41 | T | Tert-Amyl-Methyl ether | 100.0000 | 106.6840 | -6.7 | 117 | 0.00 |
| 42 | T | Carbon Tetrachloride | 50.0000 | 52.5223 | -5.0 | 123 | 0.00 |
| 43 | S | 1,2-Dichloroethane-d4 | 25.0000 | 25.7007 | -2.8 | 112 | 0.00 |
| 44 | | Heptane | -1.0000 | 0.0000 | 0.0 | 117 | 0.00 |
| 45 | T | 1,2-Dichloroethane | 50.0000 | 55.3924 | -10.8 | 119 | 0.00 |
| 46 | T | Benzene | 50.0000 | 56.1890 | -12.4 | 120 | 0.00 |
| 47 | T | Trichloroethene | 50.0000 | 55.7592 | -11.5 | 123 | 0.00 |
| 48 | T | Methylcyclohexane | 50.0000 | 54.5626 | -9.1 | 118 | 0.00 |
| 49 | C | 1,2-Dichloropropane | 50.0000 | 57.2878 | -14.6 | 120 | 0.00 |
| 50 | T | 1,4-Dioxane | 200.0000 | 174.0216 | 13.0 | 98 | 0.00 |
| 51 | T | Bromodichloromethane | 50.0000 | 58.4423 | -16.9 | 124 | 0.00 |
| 52 | T | Dibromomethane | 50.0000 | 54.8018 | -9.6 | 120 | 0.00 |
| 53 | T | 2-Chloroethyl Vinyl Ether | 50.0000 | 120.6716 | -141.3# | 258 | 0.00 |
| 54 | T | 4-Methyl-2-Pentanone | 50.0000 | 52.5618 | -5.1 | 117 | 0.00 |

(#) = Out of Range
6M108182.D 8260WT.M Thu May 17 10:57:12 2012 Page 1

Data File : C:\MSDCHEM\1\DATA\051612\6M108182.D Vial: 13
Acq On : 16 May 2012 21:13 Operator: adc
Sample : WG397878-12 50.0 ug/L ALT SRC Inst : HPMS6
Misc : 1,1 STD51676 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\1\METHODS\8260WT.M (RTE Integrator)
Title : 8260B/624_WATER SOP:OVLMSV01 05/16/12 - HPMS6
Last Update : Thu May 17 10:54:16 2012
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 : 200%

| | | Compound | Amount | Calc. | %Dev | Area% | Dev(min) |
|---|---|---|---|---|---|---|---|
| 55 | T | cis-1,3-Dichloropropene | 50.0000 | 56.6709 | -13.3 | 119 | 0.00 |
| 56 | T | Dimethyl Disulfide | 50.0000 | 42.0847 | 15.8 | 107 | 0.00 |
| 57 | I | Chlorobenzene-d5 | 25.0000 | 25.0000 | 0.0 | 111 | 0.00 |
| 58 | S | Toluene-d8 | 25.0000 | 25.5942 | -2.4 | 112 | 0.00 |
| 59 | C | Toluene | 50.0000 | 56.9799 | -14.0 | 118 | 0.00 |
| 60 | T | Ethyl Methacrylate | 50.0000 | 51.7600 | -3.5 | 121 | 0.00 |
| 61 | | Paraldehyde | 100.0000 | 87.6929 | 12.3 | 99 | 0.00 |
| 62 | T | trans-1,3-Dichloropropene | 50.0000 | 47.2915 | 5.4 | 106 | 0.00 |
| 63 | T | 1,1,2-Trichloroethane | 50.0000 | 51.1993 | -2.4 | 121 | 0.00 |
| 64 | T | 2-Hexanone | 50.0000 | 52.5113 | -5.0 | 115 | 0.00 |
| 65 | T | 1,3-Dichloropropane | 50.0000 | 57.4548 | -14.9 | 123 | 0.00 |
| 66 | T | Tetrachloroethene | 50.0000 | 58.6206 | -17.2 | 123 | 0.00 |
| 67 | T | Dibromochloromethane | 50.0000 | 51.7339 | -3.5 | 120 | 0.00 |
| 68 | T | 1,2-Dibromoethane | 50.0000 | 56.2890 | -12.6 | 120 | 0.00 |
| 69 | T | 1-Chlorohexane | 50.0000 | 54.2733 | -8.5 | 116 | 0.00 |
| 70 | P | Chlorobenzene | 50.0000 | 55.2977 | -10.6 | 116 | 0.00 |
| 71 | T | 1,1,1,2-Tetrachloroethane | 50.0000 | 53.7764 | -7.6 | 119 | 0.00 |
| 72 | C | Ethylbenzene | 50.0000 | 59.1522 | -18.3 | 119 | 0.00 |
| 73 | T | m-,p-Xylene | 100.0000 | 100.6170 | -0.6 | 116 | 0.00 |
| 74 | T | o-Xylene | 50.0000 | 46.5918 | 6.8 | 116 | 0.00 |
| 75 | T | Styrene | 50.0000 | 48.8644 | 2.3 | 118 | 0.00 |
| 76 | P | Bromoform | 50.0000 | 51.4674 | -2.9 | 118 | 0.00 |
| 77 | T | Isopropylbenzene | 50.0000 | 52.1792 | -4.4 | 102 | 0.00 |
| 78 | I | 1,4-Dichlorobenzene-d4 | 25.0000 | 25.0000 | 0.0 | 110 | 0.00 |
| 79 | P | 1,1,2,2-Tetrachloroethane | 50.0000 | 54.8146 | -9.6 | 115 | 0.00 |
| 80 | S | p-Bromofluorobenzene | 25.0000 | 26.0106 | -4.0 | 114 | 0.00 |
| 81 | T | 1,2,3-Trichloropropane | 50.0000 | 61.6022 | -23.2# | 133 | 0.00 |
| 82 | T | trans-1,4-Dichloro-2-Butene | 50.0000 | 49.8607 | 0.3 | 114 | 0.00 |
| 83 | T | n-Propylbenzene | 50.0000 | 56.7333 | -13.5 | 117 | 0.00 |
| 84 | T | Bromobenzene | 50.0000 | 61.2022 | -22.4# | 120 | 0.00 |
| 85 | T | 1,3,5-Trimethylbenzene | 50.0000 | 59.8666 | -19.7 | 119 | 0.00 |
| 86 | T | 2-Chlorotoluene | 50.0000 | 53.5923 | -7.2 | 106 | 0.00 |
| 87 | T | 4-Chlorotoluene | 50.0000 | 53.5987 | -7.2 | 111 | 0.00 |
| 88 | T | a-Methylstyrene | 50.0000 | 54.1223 | -8.2 | 116 | 0.00 |
| 89 | T | tert-Butylbenzene | 50.0000 | 54.2495 | -8.5 | 116 | 0.00 |
| 90 | T | 1,2,4-Trimethylbenzene | 50.0000 | 61.9712 | -23.9# | 121 | 0.00 |
| 91 | T | sec-Butylbenzene | 50.0000 | 55.8927 | -11.8 | 116 | 0.00 |
| 92 | T | p-Isopropyltoluene | 50.0000 | 60.1044 | -20.2# | 118 | 0.00 |
| 93 | T | 1,3-Dichlorobenzene | 50.0000 | 57.4933 | -15.0 | 116 | 0.00 |
| 94 | T | 1,4-Dichlorobenzene | 50.0000 | 54.8466 | -9.7 | 116 | 0.00 |
| 95 | T | n-Butylbenzene | 50.0000 | 57.0875 | -14.2 | 118 | 0.00 |
| 96 | T | 1,2-Dichlorobenzene | 50.0000 | 54.6116 | -9.2 | 116 | 0.00 |
| 97 | T | 1,2-Dibromo-3-Chloropropane | 50.0000 | 50.7390 | -1.5 | 118 | 0.00 |
| 98 | T | 1,2,4-Trichlorobenzene | 50.0000 | 58.9939 | -18.0 | 121 | 0.00 |
| 99 | T | Hexachlorobutadiene | 50.0000 | 52.4553 | -4.9 | 118 | 0.00 |
| 100 | T | Naphthalene | 50.0000 | 55.6641 | -11.3 | 121 | 0.00 |
| 101 | T | 1,2,3-Trichlorobenzene | 50.0000 | 60.0552 | -20.1# | 122 | 0.00 |

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\012512\8M376558.D Vial: 5
Acq On : 25 Jan 2012 12:43 Operator: ADC
Sample : WG387881-01 5ug/L A9FOO STD Inst : HPMS8
Misc : 1,1 STD49721 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Feb 01 15:38:13 2012 Quant Results File: A9FOOWT.RES

Quant Method : C:\MSDCHEM\1\METHODS\A9FOOWT.M (RTE Integrator)
Title : A9-FOO Water - IC: 01/25/12- HPMS8
Last Update : Wed Feb 01 15:35:09 2012
Response via : Initial Calibration
DataAcq Meth : 8260WTR

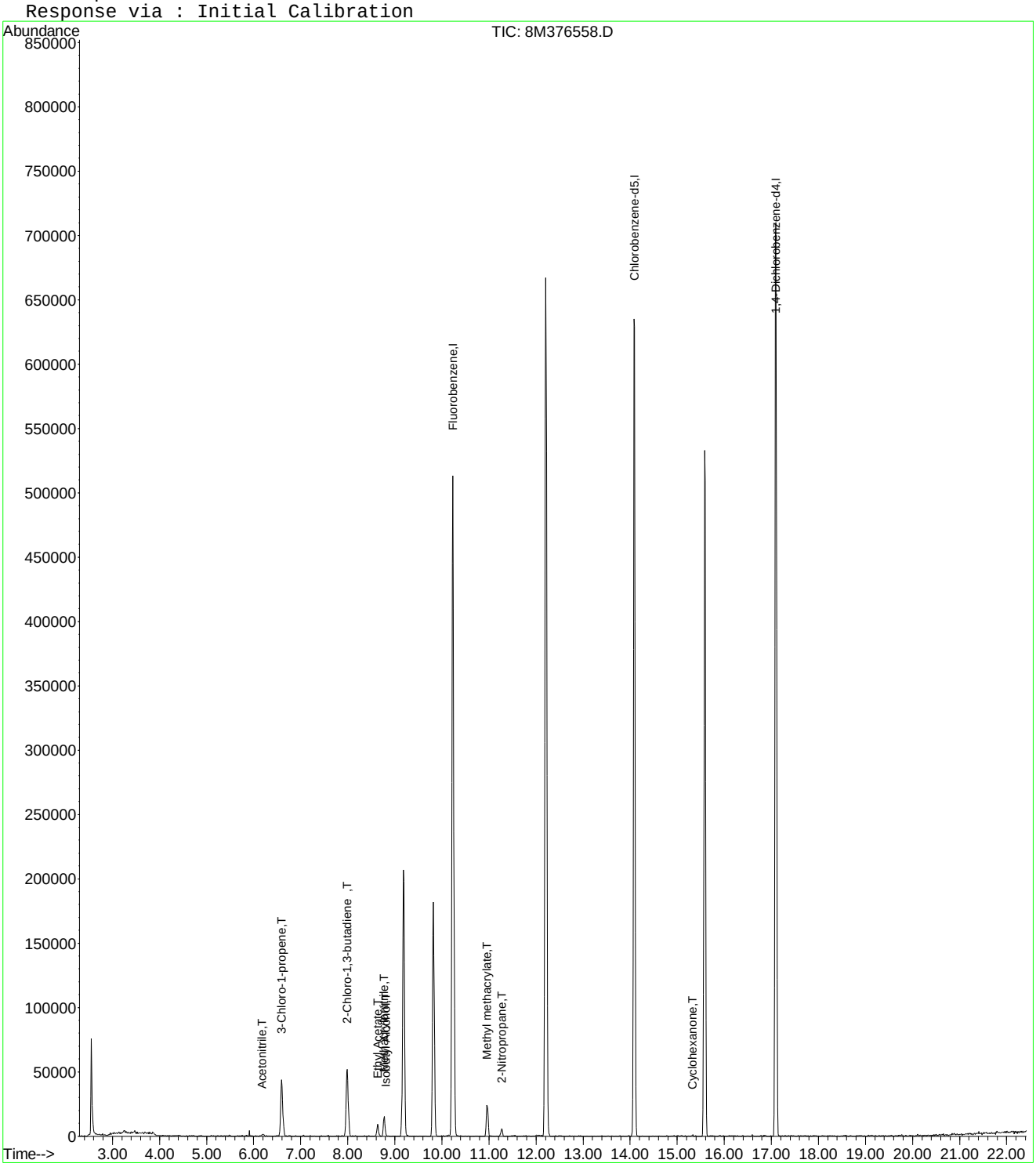
| Internal Standards | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| 1) Fluorobenzene | 10.23 | 96 | 656295 | 25.00 | ug/L | | 0.00 |
| 11) Chlorobenzene-d5 | 14.09 | 117 | 486754 | 25.00 | ug/L | | 0.00 |
| 12) 1,4-Dichlorobenzene-d4 | 17.10 | 152 | 262855 | 25.00 | ug/L | | 0.00 |
| **Target Compounds** | | | | | | | Qvalue |
| 2) Acetonitrile | 6.18 | 41 | 2309 | 4.7425 | ug/L | | 65 |
| 3) 3-Chloro-1-propene | 6.59 | 41 | 49314 | 4.8141 | ug/L | | 100 |
| 4) 2-Chloro-1,3-butadiene | 7.99 | 53 | 61015 | 5.0296 | ug/L | | 95 |
| 5) Ethyl Acetate | 8.63 | 43 | 16418 | 4.7992 | ug/L | | 95 |
| 6) Methacrylonitrile | 8.77 | 67 | 6918 | 4.9194 | ug/L | | 83 |
| 7) Isobutyl Alcohol | 8.81 | 43 | 817 | 5.5399 | ug/L | # | 11 |
| 9) Methyl methacrylate | 10.96 | 41 | 18510 | 4.4070 | ug/L | | 97 |
| 10) 2-Nitropropane | 11.27 | 43 | 5684 | 3.8971 | ug/L | | 93 |
| 13) Cyclohexanone | 15.32 | 55 | 508 | 1.9649 | ug/L | # | 31 |

(#) = qualifier out of range (m) = manual integration
8M376558.D A9FOOWT.M Wed Feb 01 15:38:15 2012 Page 1

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\012512\8M376558.D Vial: 5
Acq On : 25 Jan 2012 12:43 Operator: ADC
Sample : WG387881-01 5ug/L A9FOO STD Inst : HPMS8
Misc : 1,1 STD49721 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Feb 1 15:38 2012 Quant Results File: A9FOOWT.RES

Method : C:\MSDCHEM\1\METHODS\A9FOOWT.M (RTE Integrator)
Title : A9-FOO Water - IC: 01/25/12- HPMS8
Last Update : Wed Feb 01 15:35:09 2012
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\012512\8M376559.D Vial: 6
Acq On : 25 Jan 2012 13:28 Operator: ADC
Sample : WG387881-02 20ug/L A9FOO STD Inst : HPMS8
Misc : 1,1 STD49721 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Feb 01 15:38:15 2012 Quant Results File: A9FOOWT.RES

Quant Method : C:\MSDCHEM\1\METHODS\A9FOOWT.M (RTE Integrator)
Title : A9-FOO Water - IC: 01/25/12- HPMS8
Last Update : Wed Feb 01 15:35:09 2012
Response via : Initial Calibration
DataAcq Meth : 8260WTR

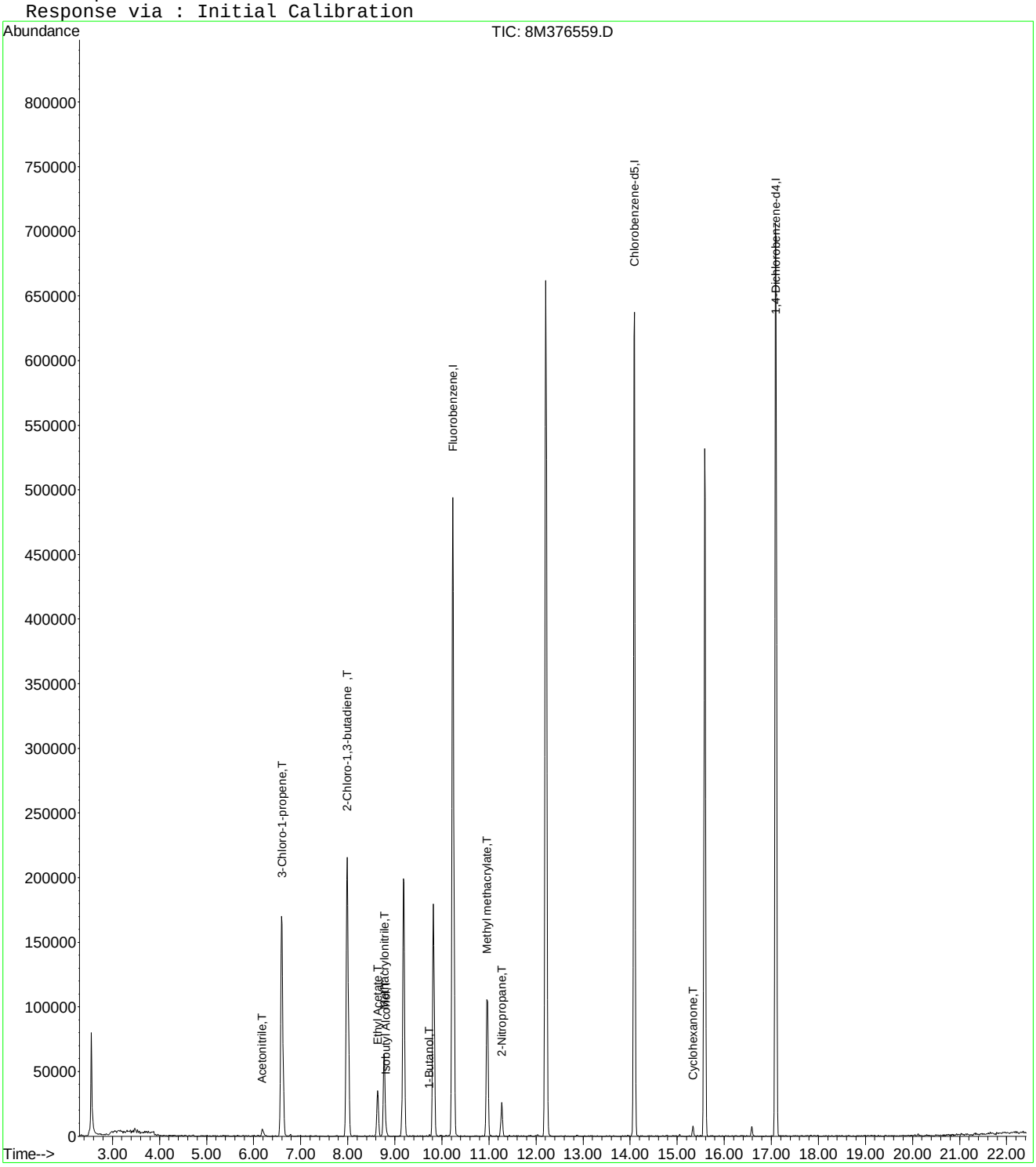
| Internal Standards | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| 1) Fluorobenzene | 10.24 | 96 | 641906 | 25.00 | ug/L | | 0.00 |
| 11) Chlorobenzene-d5 | 14.09 | 117 | 480006 | 25.00 | ug/L | | 0.00 |
| 12) 1,4-Dichlorobenzene-d4 | 17.10 | 152 | 261314 | 25.00 | ug/L | | 0.00 |
| **Target Compounds** | | | | | | | Qvalue |
| 2) Acetonitrile | 6.18 | 41 | 8633 | 18.1289 | ug/L | | 99 |
| 3) 3-Chloro-1-propene | 6.61 | 41 | 200453 | 20.0070 | ug/L | | 100 |
| 4) 2-Chloro-1,3-butadiene | 7.99 | 53 | 238952 | 20.1388 | ug/L | | 99 |
| 5) Ethyl Acetate | 8.63 | 43 | 64409 | 19.2495 | ug/L | | 98 |
| 6) Methacrylonitrile | 8.78 | 67 | 25503 | 18.5419 | ug/L | | 95 |
| 7) Isobutyl Alcohol | 8.81 | 43 | 4920 | 34.1090 | ug/L | # | 53 |
| 8) 1-Butanol | 9.73 | 56 | 710 | 18.9652 | ug/L | | 99 |
| 9) Methyl methacrylate | 10.96 | 41 | 79471 | 19.3450 | ug/L | | 98 |
| 10) 2-Nitropropane | 11.27 | 43 | 26253 | 18.4031 | ug/L | | 99 |
| 13) Cyclohexanone | 15.33 | 55 | 5242 | 20.3952 | ug/L | | 88 |

(#) = qualifier out of range (m) = manual integration
8M376559.D A9FOOWT.M Wed Feb 01 15:38:16 2012 Page 1

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\012512\8M376559.D Vial: 6
Acq On : 25 Jan 2012 13:28 Operator: ADC
Sample : WG387881-02 20ug/L A9FOO STD Inst : HPMS8
Misc : 1,1 STD49721 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Feb 1 15:38 2012 Quant Results File: A9FOOWT.RES

Method : C:\MSDCHEM\1\METHODS\A9FOOWT.M (RTE Integrator)
Title : A9-FOO Water - IC: 01/25/12- HPMS8
Last Update : Wed Feb 01 15:35:09 2012
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\012512\8M376560.D Vial: 7
Acq On : 25 Jan 2012 13:58 Operator: ADC
Sample : WG387881-03 50ug/L A9FOO STD Inst : HPMS8
Misc : 1,1 STD49721 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Feb 01 15:38:17 2012 Quant Results File: A9FOOWT.RES

Quant Method : C:\MSDCHEM\1\METHODS\A9FOOWT.M (RTE Integrator)
Title : A9-FOO Water - IC: 01/25/12- HPMS8
Last Update : Wed Feb 01 15:35:09 2012
Response via : Initial Calibration
DataAcq Meth : 8260WTR

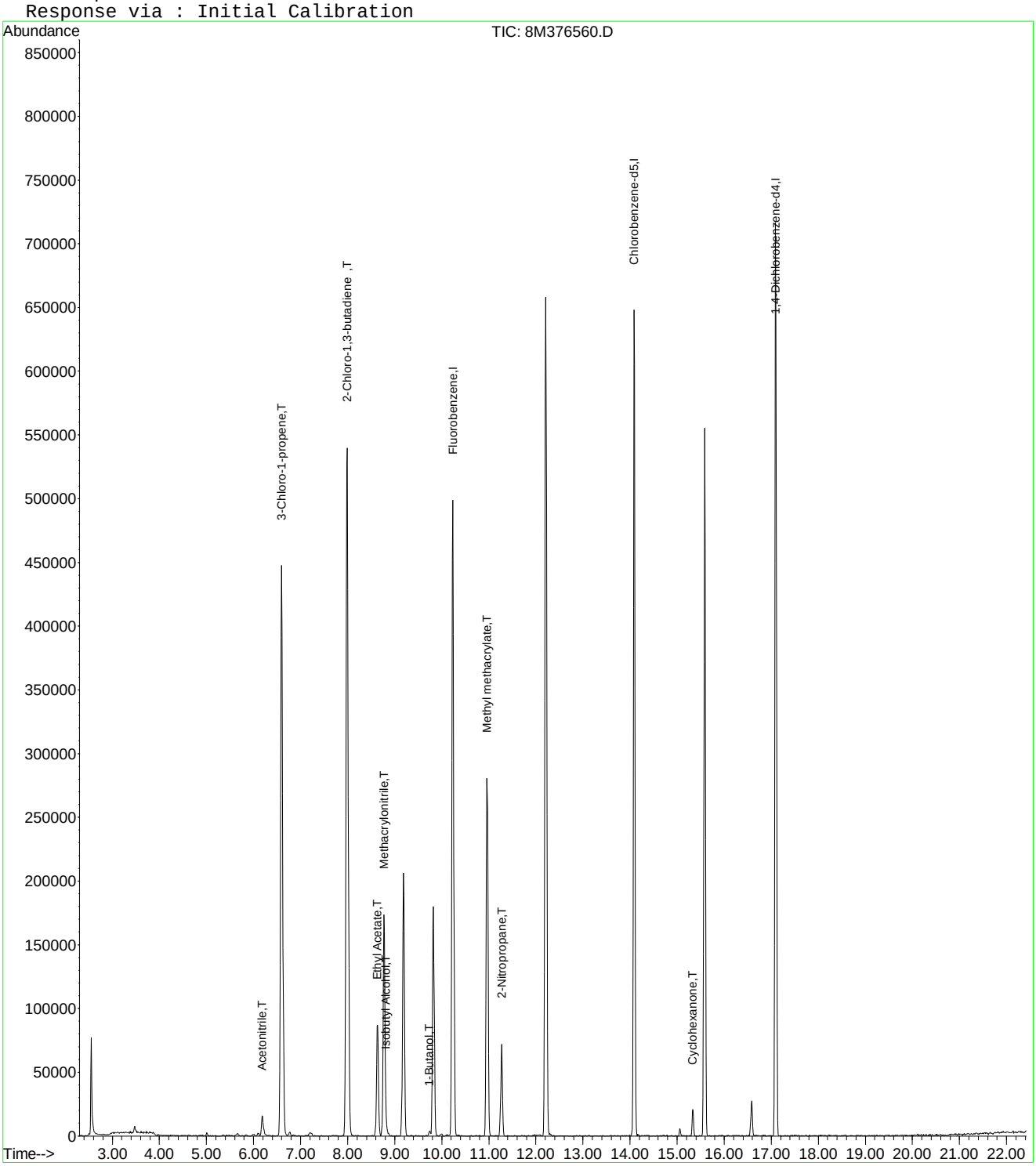
| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 1) Fluorobenzene | 10.24 | 96 | 648527 | 25.00 | ug/L | 0.00 |
| 11) Chlorobenzene-d5 | 14.08 | 117 | 482506 | 25.00 | ug/L | 0.00 |
| 12) 1,4-Dichlorobenzene-d4 | 17.09 | 152 | 263746 | 25.00 | ug/L | 0.00 |
| **Target Compounds** | | | | | | Qvalue |
| 2) Acetonitrile | 6.18 | 41 | 23521 | 48.8886 | ug/L | 95 |
| 3) 3-Chloro-1-propene | 6.60 | 41 | 508641 | 50.2487 | ug/L | 100 |
| 4) 2-Chloro-1,3-butadiene | 7.99 | 53 | 607253 | 50.6565 | ug/L | 99 |
| 5) Ethyl Acetate | 8.62 | 43 | 166201 | 49.1644 | ug/L | 100 |
| 6) Methacrylonitrile | 8.77 | 67 | 70376 | 50.6442 | ug/L | 98 |
| 7) Isobutyl Alcohol | 8.81 | 43 | 14323 | 98.2836 | ug/L | 96 |
| 8) 1-Butanol | 9.73 | 56 | 3105 | 50.3795 | ug/L | 79 |
| 9) Methyl methacrylate | 10.96 | 41 | 210106 | 50.6224 | ug/L | 99 |
| 10) 2-Nitropropane | 11.27 | 43 | 71916 | 49.8977 | ug/L | 97 |
| 13) Cyclohexanone | 15.32 | 55 | 12432 | 47.9236 | ug/L | 99 |

(#) = qualifier out of range (m) = manual integration
8M376560.D A9FOOWT.M Wed Feb 01 15:38:18 2012 Page 1

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\012512\8M376560.D Vial: 7
Acq On : 25 Jan 2012 13:58 Operator: ADC
Sample : WG387881-03 50ug/L A9FOO STD Inst : HPMS8
Misc : 1,1 STD49721 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Feb 1 15:38 2012 Quant Results File: A9FOOWT.RES

Method : C:\MSDCHEM\1\METHODS\A9FOOWT.M (RTE Integrator)
Title : A9-FOO Water - IC: 01/25/12- HPMS8
Last Update : Wed Feb 01 15:35:09 2012
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\012512\8M376561.D Vial: 8
Acq On : 25 Jan 2012 14:29 Operator: ADC
Sample : WG387881-04 100ug/L A9FOO STD Inst : HPMS8
Misc : 1,1 STD49721 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Feb 01 15:38:19 2012 Quant Results File: A9FOOWT.RES

Quant Method : C:\MSDCHEM\1\METHODS\A9FOOWT.M (RTE Integrator)
Title : A9-FOO Water - IC: 01/25/12- HPMS8
Last Update : Wed Feb 01 15:35:09 2012
Response via : Initial Calibration
DataAcq Meth : 8260WTR

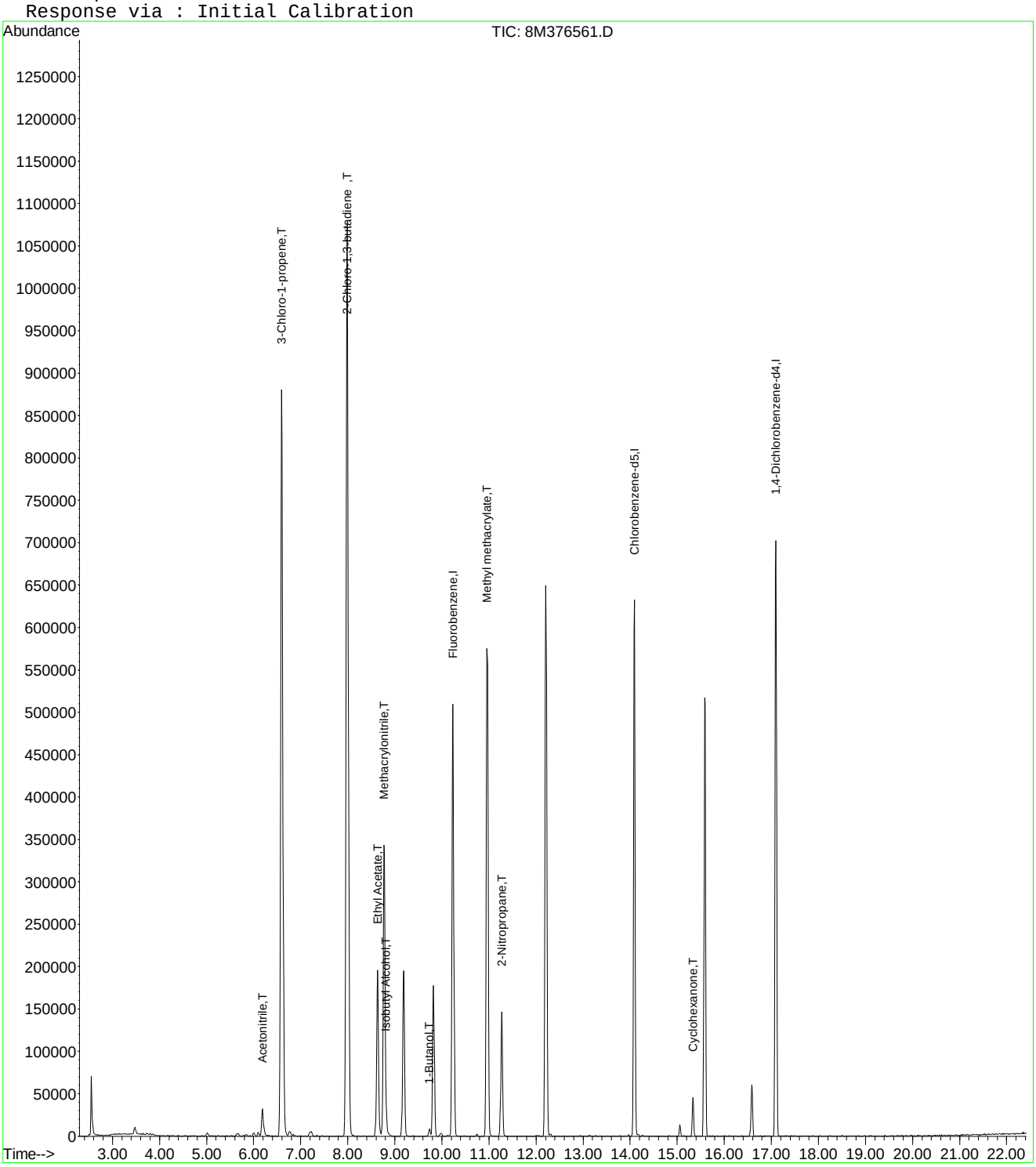
| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 1) Fluorobenzene | 10.23 | 96 | 644867 | 25.00 | ug/L | 0.00 |
| 11) Chlorobenzene-d5 | 14.09 | 117 | 466673 | 25.00 | ug/L | 0.00 |
| 12) 1,4-Dichlorobenzene-d4 | 17.10 | 152 | 256948 | 25.00 | ug/L | 0.00 |
| **Target Compounds** | | | | | | Qvalue |
| 2) Acetonitrile | 6.19 | 41 | 49584 | 103.6457 | ug/L | 100 |
| 3) 3-Chloro-1-propene | 6.60 | 41 | 1019216 | 101.2600 | ug/L | 100 |
| 4) 2-Chloro-1,3-butadiene | 7.99 | 53 | 1196904 | 100.4113 | ug/L | 100 |
| 5) Ethyl Acetate | 8.63 | 43 | 352520 | 104.8718 | ug/L | 100 |
| 6) Methacrylonitrile | 8.77 | 67 | 141285 | 102.2491 | ug/L | 100 |
| 7) Isobutyl Alcohol | 8.81 | 43 | 31160 | 215.0317 | ug/L | 100 |
| 8) 1-Butanol | 9.73 | 56 | 7250 | 105.4560 | ug/L | 100 |
| 9) Methyl methacrylate | 10.96 | 41 | 432008 | 104.6777 | ug/L | 100 |
| 10) 2-Nitropropane | 11.27 | 43 | 151905 | 105.9950 | ug/L | 100 |
| 13) Cyclohexanone | 15.33 | 55 | 24800 | 98.1298 | ug/L | 100 |

(#) = qualifier out of range (m) = manual integration
8M376561.D A9FOOWT.M Wed Feb 01 15:38:20 2012 Page 1

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\012512\8M376561.D Vial: 8
Acq On : 25 Jan 2012 14:29 Operator: ADC
Sample : WG387881-04 100ug/L A9FOO STD Inst : HPMS8
Misc : 1,1 STD49721 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Feb 1 15:38 2012 Quant Results File: A9FOOWT.RES

Method : C:\MSDCHEM\1\METHODS\A9FOOWT.M (RTE Integrator)
Title : A9-FOO Water - IC: 01/25/12- HPMS8
Last Update : Wed Feb 01 15:35:09 2012
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\012512\8M376562.D Vial: 9
Acq On : 25 Jan 2012 14:59 Operator: ADC
Sample : WG387881-05 200ug/L A9FOO STD Inst : HPMS8
Misc : 1,1 STD49721 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Feb 01 15:38:21 2012 Quant Results File: A9FOOWT.RES

Quant Method : C:\MSDCHEM\1\METHODS\A9FOOWT.M (RTE Integrator)
Title : A9-FOO Water - IC: 01/25/12- HPMS8
Last Update : Wed Feb 01 15:35:09 2012
Response via : Initial Calibration
DataAcq Meth : 8260WTR

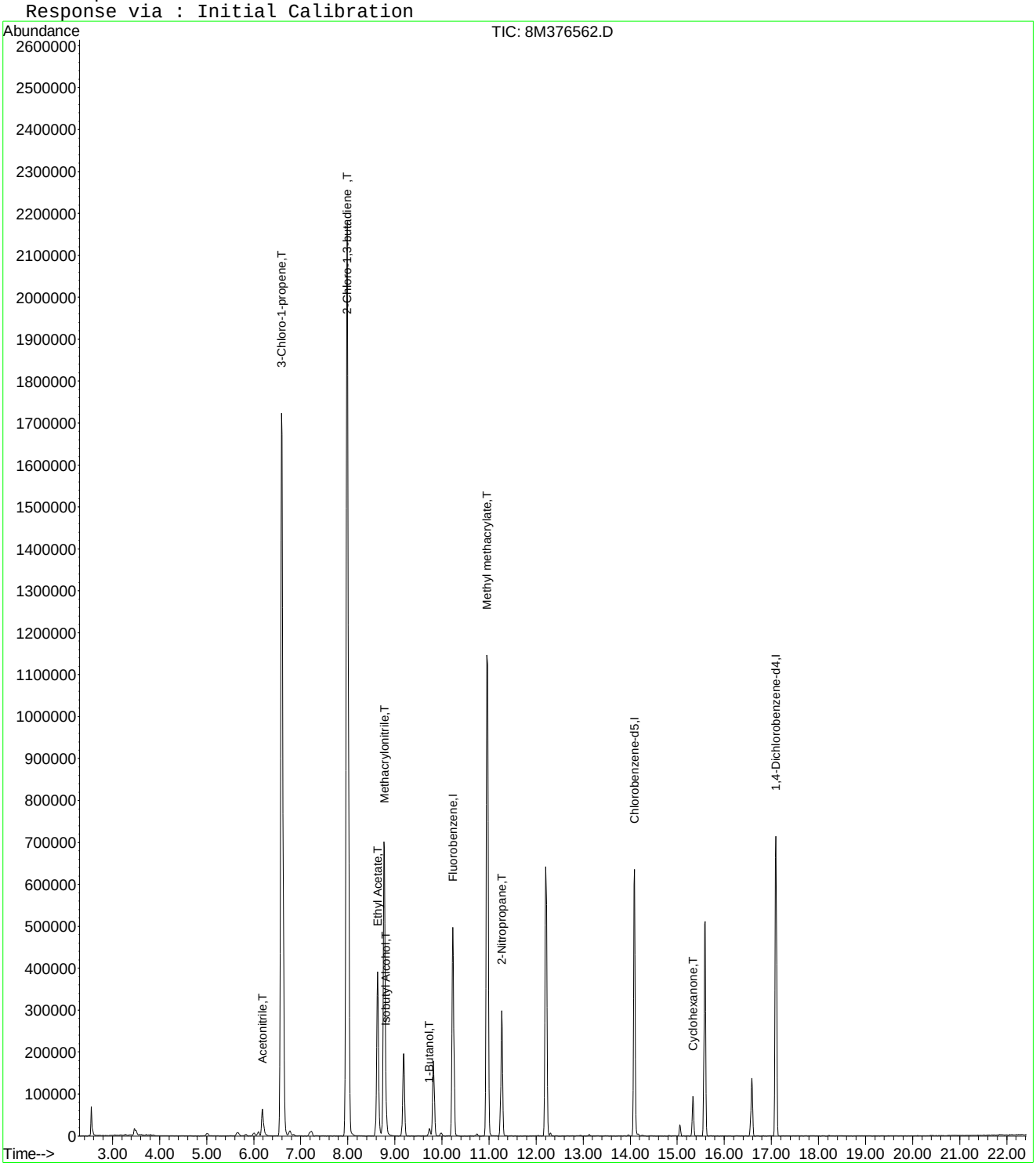
| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 1) Fluorobenzene | 10.23 | 96 | 635990 | 25.00 | ug/L | 0.00 |
| 11) Chlorobenzene-d5 | 14.09 | 117 | 471643 | 25.00 | ug/L | 0.00 |
| 12) 1,4-Dichlorobenzene-d4 | 17.10 | 152 | 259529 | 25.00 | ug/L | 0.00 |
| **Target Compounds** | | | | | | Qvalue |
| 2) Acetonitrile | 6.19 | 41 | 102381 | 216.9947 | ug/L | 99 |
| 3) 3-Chloro-1-propene | 6.59 | 41 | 2077765 | 209.3089 | ug/L | 100 |
| 4) 2-Chloro-1,3-butadiene | 7.99 | 53 | 2418154 | 205.6965 | ug/L | 99 |
| 5) Ethyl Acetate | 8.63 | 43 | 702184 | 211.8096 | ug/L | 99 |
| 6) Methacrylonitrile | 8.78 | 67 | 287125 | 210.6949 | ug/L | 100 |
| 7) Isobutyl Alcohol | 8.81 | 43 | 59100 | 413.5352 | ug/L # | 11 |
| 8) 1-Butanol | 9.73 | 56 | 13732 | 193.7587 | ug/L | 75 |
| 9) Methyl methacrylate | 10.96 | 41 | 874313 | 214.8073 | ug/L | 99 |
| 10) 2-Nitropropane | 11.27 | 43 | 318671 | 225.4632 | ug/L | 93 |
| 13) Cyclohexanone | 15.33 | 55 | 52772 | 206.7341 | ug/L | 98 |

(#) = qualifier out of range (m) = manual integration
8M376562.D A9FOOWT.M Wed Feb 01 15:38:22 2012 Page 1

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\012512\8M376562.D Vial: 9
Acq On : 25 Jan 2012 14:59 Operator: ADC
Sample : WG387881-05 200ug/L A9FOO STD Inst : HPMS8
Misc : 1,1 STD49721 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Feb 1 15:38 2012 Quant Results File: A9FOOWT.RES

Method : C:\MSDCHEM\1\METHODS\A9FOOWT.M (RTE Integrator)
Title : A9-FOO Water - IC: 01/25/12- HPMS8
Last Update : Wed Feb 01 15:35:09 2012
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\012512\8M376563.D Vial: 10
Acq On : 25 Jan 2012 15:29 Operator: ADC
Sample : WG387881-06 300ug/L A9FOO STD Inst : HPMS8
Misc : 1,1 STD49721 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Feb 01 15:38:23 2012 Quant Results File: A9FOOWT.RES

Quant Method : C:\MSDCHEM\1\METHODS\A9FOOWT.M (RTE Integrator)
Title : A9-FOO Water - IC: 01/25/12- HPMS8
Last Update : Wed Feb 01 15:35:09 2012
Response via : Initial Calibration
DataAcq Meth : 8260WTR

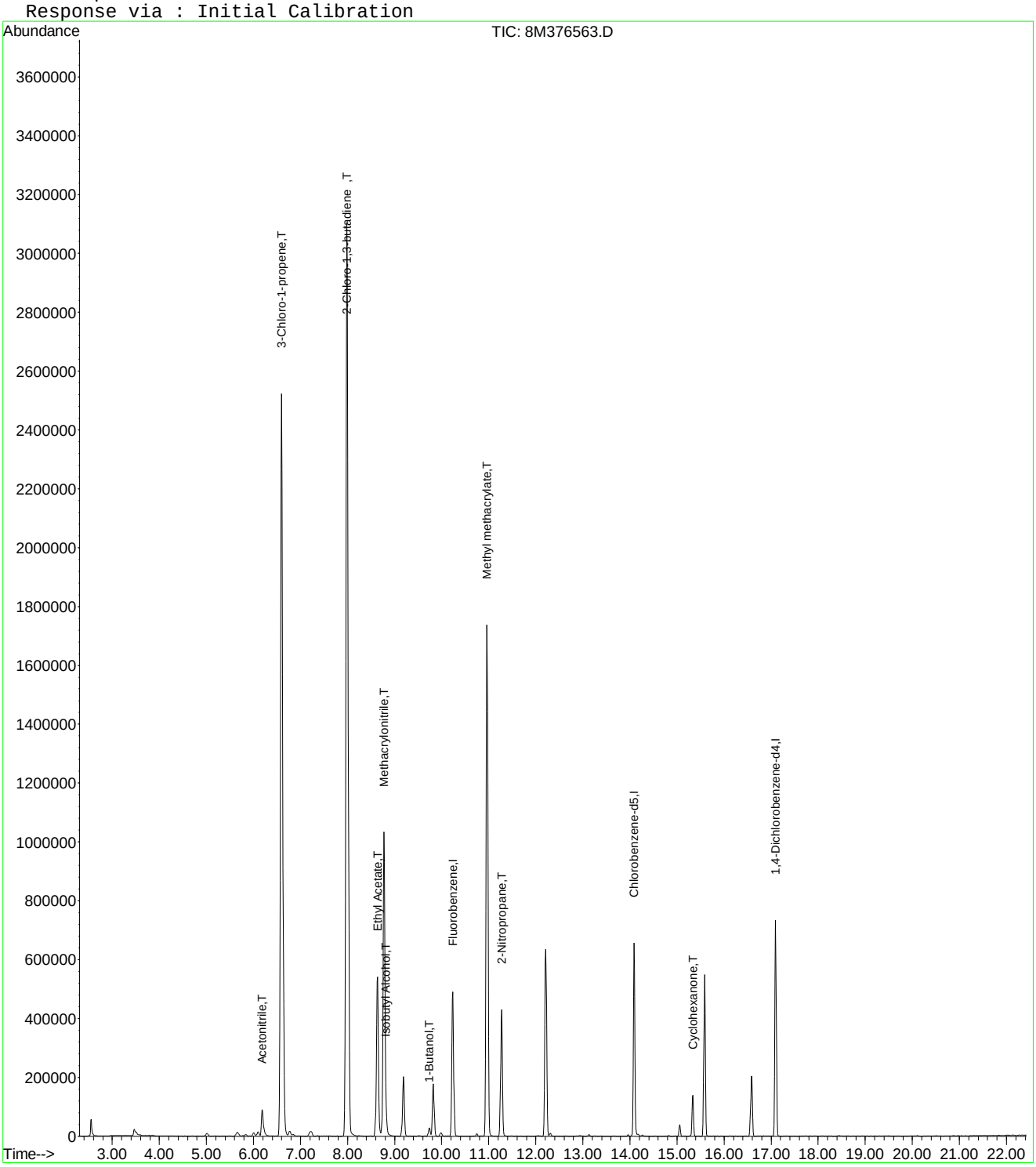
| Internal Standards | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| 1) Fluorobenzene | 10.24 | 96 | 643596 | 25.00 | ug/L | | 0.00 |
| 11) Chlorobenzene-d5 | 14.08 | 117 | 478604 | 25.00 | ug/L | | 0.00 |
| 12) 1,4-Dichlorobenzene-d4 | 17.09 | 152 | 258958 | 25.00 | ug/L | | 0.00 |
| **Target Compounds** | | | | | | | Qvalue |
| 2) Acetonitrile | 6.19 | 41 | 145734 | 305.2302 | ug/L | | 100 |
| 3) 3-Chloro-1-propene | 6.60 | 41 | 2997257 | 298.3680 | ug/L | | 100 |
| 4) 2-Chloro-1,3-butadiene | 7.98 | 53 | 3489509 | 293.3218 | ug/L | | 99 |
| 5) Ethyl Acetate | 8.64 | 43 | 1024074 | 305.2552 | ug/L | | 100 |
| 6) Methacrylonitrile | 8.77 | 67 | 420542 | 304.9506 | ug/L | | 100 |
| 7) Isobutyl Alcohol | 8.81 | 43 | 90964 | 628.9722 | ug/L | # | 11 |
| 8) 1-Butanol | 9.73 | 56 | 23466 | 320.6313 | ug/L | | 90 |
| 9) Methyl methacrylate | 10.96 | 41 | 1263842 | 306.8400 | ug/L | | 100 |
| 10) 2-Nitropropane | 11.27 | 43 | 460658 | 322.0689 | ug/L | | 97 |
| 13) Cyclohexanone | 15.34 | 55 | 79883 | 313.6314 | ug/L | | 98 |

(#) = qualifier out of range (m) = manual integration
8M376563.D A9FOOWT.M Wed Feb 01 15:38:24 2012 Page 1

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\012512\8M376563.D Vial: 10
Acq On : 25 Jan 2012 15:29 Operator: ADC
Sample : WG387881-06 300ug/L A9FOO STD Inst : HPMS8
Misc : 1,1 STD49721 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Feb 1 15:38 2012 Quant Results File: A9FOOWT.RES

Method : C:\MSDCHEM\1\METHODS\A9FOOWT.M (RTE Integrator)
Title : A9-FOO Water - IC: 01/25/12- HPMS8
Last Update : Wed Feb 01 15:35:09 2012
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\012512\8M376564.D Vial: 11
Acq On : 25 Jan 2012 15:59 Operator: ADC
Sample : WG387881-07 400ug/L A9FOO STD Inst : HPMS8
Misc : 1,1 STD49721 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Feb 01 15:38:25 2012 Quant Results File: A9FOOWT.RES

Quant Method : C:\MSDCHEM\1\METHODS\A9FOOWT.M (RTE Integrator)
Title : A9-FOO Water - IC: 01/25/12- HPMS8
Last Update : Wed Feb 01 15:35:09 2012
Response via : Initial Calibration
DataAcq Meth : 8260WTR

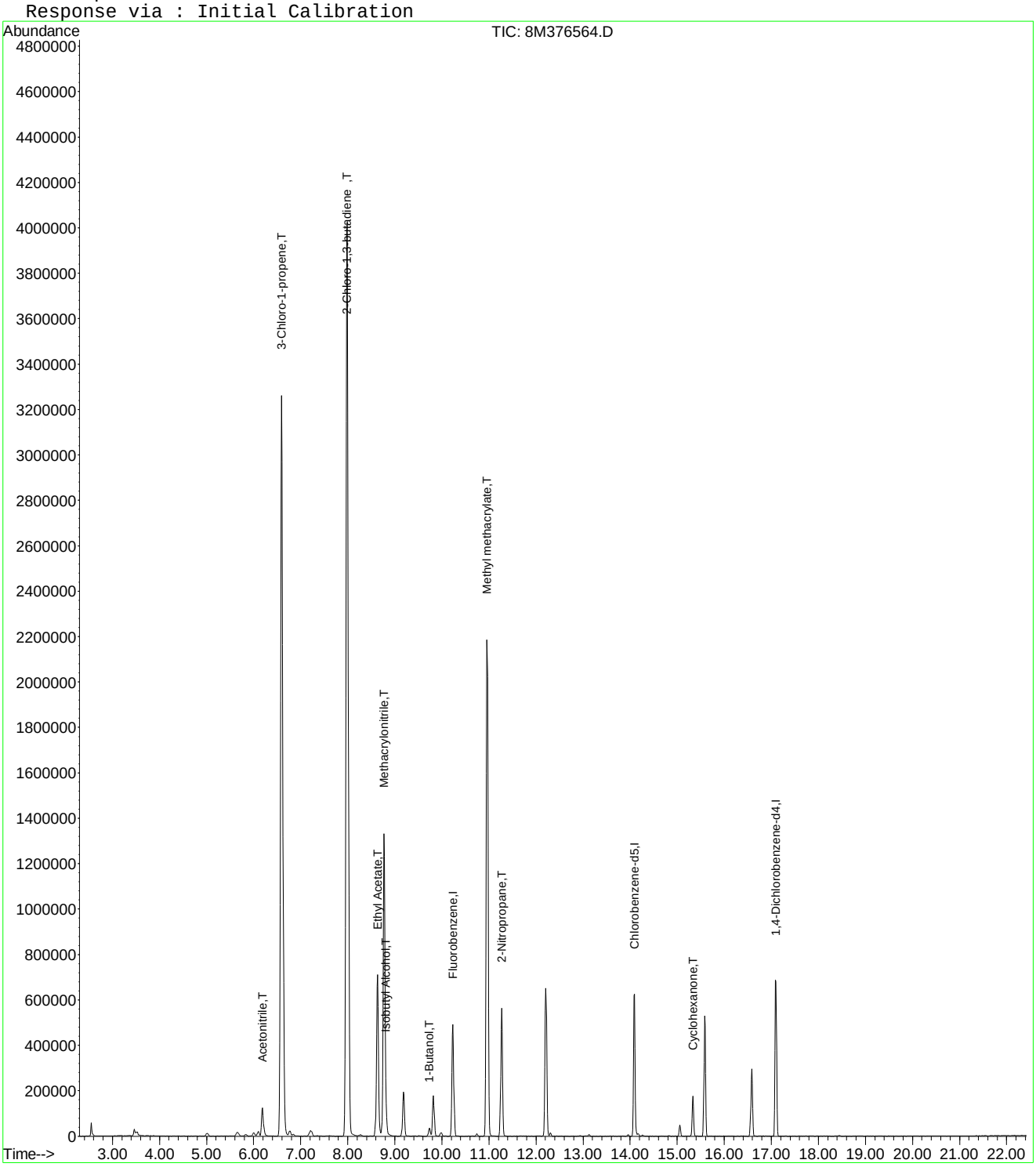
| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 1) Fluorobenzene | 10.23 | 96 | 641318 | 25.00 | ug/L | 0.00 |
| 11) Chlorobenzene-d5 | 14.09 | 117 | 477949 | 25.00 | ug/L | 0.00 |
| 12) 1,4-Dichlorobenzene-d4 | 17.10 | 152 | 257944 | 25.00 | ug/L | 0.00 |
| **Target Compounds** | | | | | | Qvalue |
| 2) Acetonitrile | 6.19 | 41 | 195716 | 411.3703 | ug/L | 97 |
| 3) 3-Chloro-1-propene | 6.60 | 41 | 3916511 | 391.2619 | ug/L | 100 |
| 4) 2-Chloro-1,3-butadiene | 7.98 | 53 | 4569564 | 385.4736 | ug/L | 99 |
| 5) Ethyl Acetate | 8.63 | 43 | 1295880 | 387.6470 | ug/L | 99 |
| 6) Methacrylonitrile | 8.77 | 67 | 540691 | 393.4677 | ug/L | 98 |
| 7) Isobutyl Alcohol | 8.81 | 43 | 116114 | 805.7242 | ug/L | 95 |
| 8) 1-Butanol | 9.73 | 56 | 27906 | 380.8093 | ug/L | 86 |
| 9) Methyl methacrylate | 10.96 | 41 | 1633999 | 398.1171 | ug/L | 100 |
| 10) 2-Nitropropane | 11.27 | 43 | 593841 | 416.6585 | ug/L | 96 |
| 13) Cyclohexanone | 15.33 | 55 | 97561 | 384.5434 | ug/L | 100 |

(#) = qualifier out of range (m) = manual integration
8M376564.D A9FOOWT.M Wed Feb 01 15:38:26 2012 Page 1

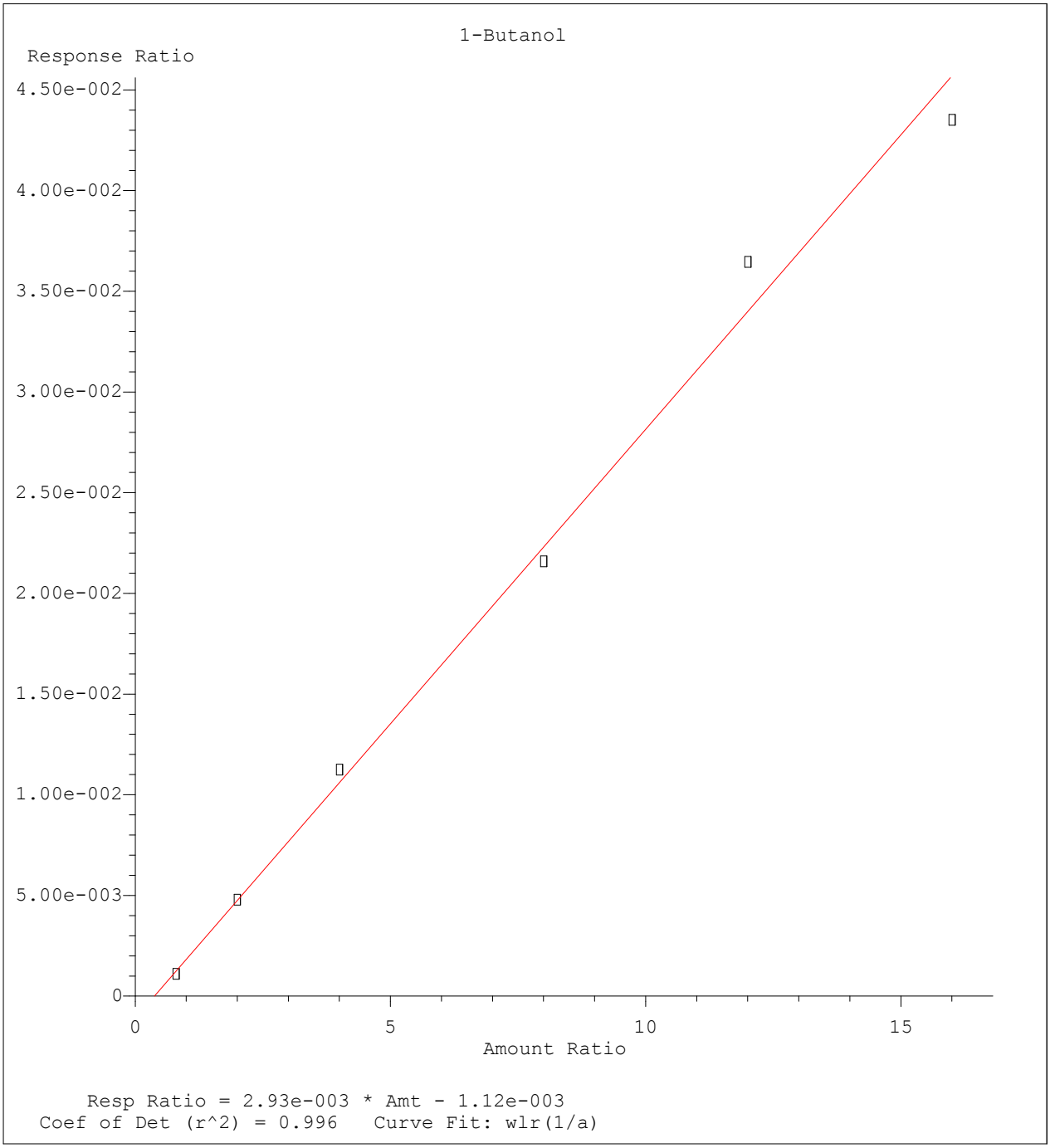
Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\012512\8M376564.D Vial: 11
Acq On : 25 Jan 2012 15:59 Operator: ADC
Sample : WG387881-07 400ug/L A9FOO STD Inst : HPMS8
Misc : 1,1 STD49721 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Feb 1 15:38 2012 Quant Results File: A9FOOWT.RES

Method : C:\MSDCHEM\1\METHODS\A9FOOWT.M (RTE Integrator)
Title : A9-FOO Water - IC: 01/25/12- HPMS8
Last Update : Wed Feb 01 15:35:09 2012
Response via : Initial Calibration




8M376564.D A9FOOWT.M Wed Feb 01 15:38:26 2012 Page 2




Method Name: C:\MSDCHEM\1\METHODS\A9FOOWT.M
Calibration Table Last Updated: Wed Feb 01 15:35:09 2012

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\012512\8M376565.D Vial: 12
Acq On : 25 Jan 2012 16:29 Operator: ADC
Sample : WG387881-08 100ug/L A9FOO ALT Inst : HPMS8
Misc : 1,1 STD49721 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Feb 01 15:38:27 2012 Quant Results File: A9FOOWT.RES

Quant Method : C:\MSDCHEM\1\METHODS\A9FOOWT.M (RTE Integrator)
Title : A9-FOO Water - IC: 01/25/12- HPMS8
Last Update : Wed Feb 01 15:35:09 2012
Response via : Initial Calibration
DataAcq Meth : 8260WTR

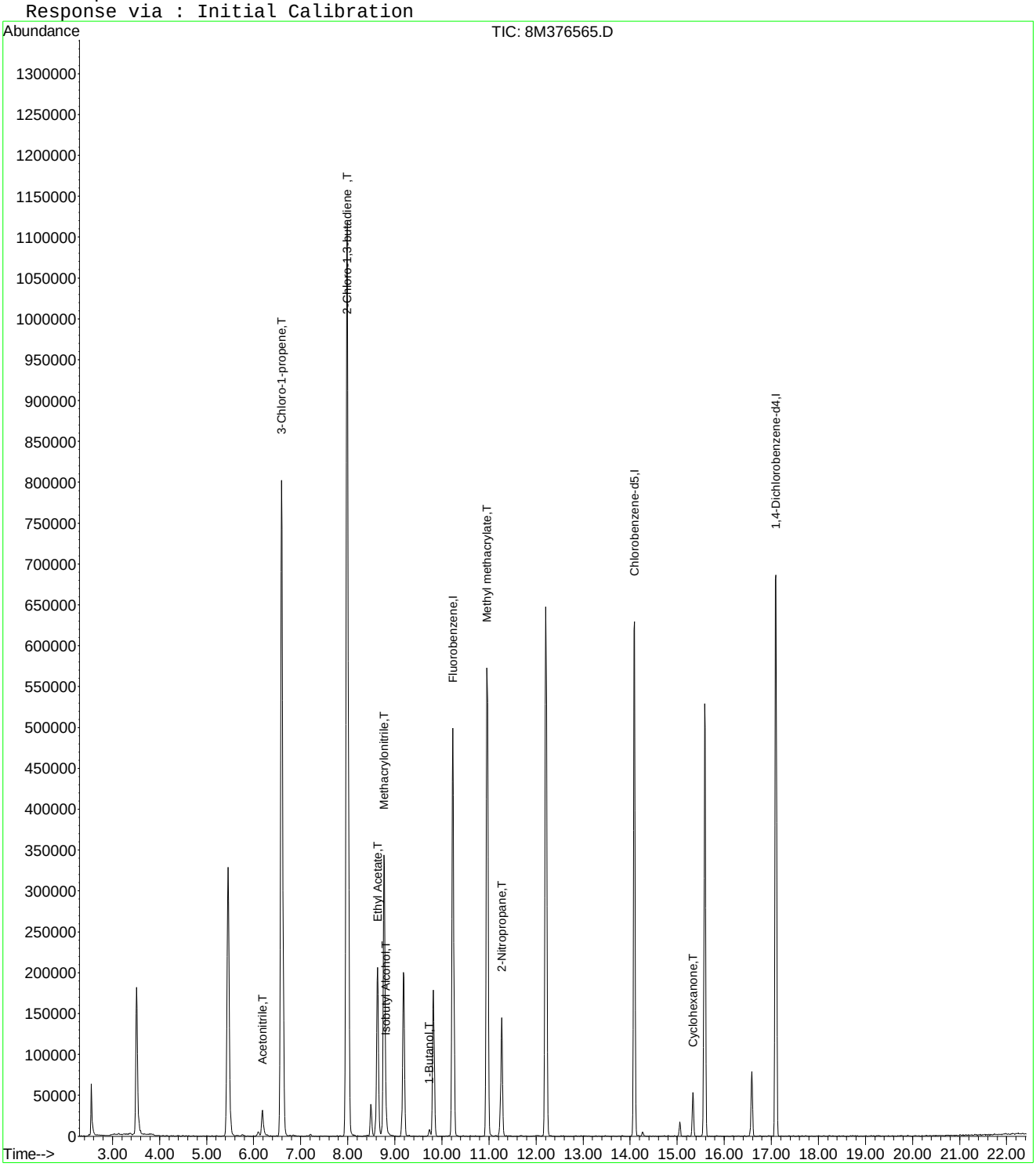
| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 1) Fluorobenzene | 10.23 | 96 | 639588 | 25.00 | ug/L | 0.00 |
| 11) Chlorobenzene-d5 | 14.09 | 117 | 475173 | 25.00 | ug/L | 0.00 |
| 12) 1,4-Dichlorobenzene-d4 | 17.10 | 152 | 258713 | 25.00 | ug/L | 0.00 |
| **Target Compounds** | | | | | | Qvalue |
| 2) Acetonitrile | 6.19 | 41 | 44826 | 94.4734 | ug/L | 93 |
| 3) 3-Chloro-1-propene | 6.59 | 41 | 937126 | 93.8727 | ug/L | 100 |
| 4) 2-Chloro-1,3-butadiene | 7.99 | 53 | 1257481 | 106.3640 | ug/L | 99 |
| 5) Ethyl Acetate | 8.63 | 43 | 386153 | 115.8255 | ug/L | 98 |
| 6) Methacrylonitrile | 8.77 | 67 | 142494 | 103.9752 | ug/L | 99 |
| 7) Isobutyl Alcohol | 8.81 | 43 | 32002 | 222.6651 | ug/L | 94 |
| 8) 1-Butanol | 9.73 | 56 | 6562 | 97.0693 | ug/L | 93 |
| 9) Methyl methacrylate | 10.96 | 41 | 422245 | 103.1565 | ug/L | 99 |
| 10) 2-Nitropropane | 11.27 | 43 | 148207 | 104.2682 | ug/L | 96 |
| 13) Cyclohexanone | 15.33 | 55 | 31305 | 123.0240 | ug/L | 97 |

(#) = qualifier out of range (m) = manual integration
8M376565.D A9FOOWT.M Wed Feb 01 15:38:28 2012 Page 1

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\012512\8M376565.D Vial: 12
Acq On : 25 Jan 2012 16:29 Operator: ADC
Sample : WG387881-08 100ug/L A9FOO ALT Inst : HPMS8
Misc : 1,1 STD49721 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Feb 1 15:38 2012 Quant Results File: A9FOOWT.RES

Method : C:\MSDCHEM\1\METHODS\A9FOOWT.M (RTE Integrator)
Title : A9-FOO Water - IC: 01/25/12- HPMS8
Last Update : Wed Feb 01 15:35:09 2012
Response via : Initial Calibration



Evaluate Continuing Calibration Report

Data File : C:\MSDCHEM\1\DATA\012512\8M376565.D Vial: 12
Acq On : 25 Jan 2012 16:29 Operator: ADC
Sample : WG387881-08 100ug/L A9FOO ALT Inst : HPMS8
Misc : 1,1 STD49721 Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\MSDCHEM\1\METHODS\A9FOOWT.M (RTE Integrator)
Title : A9-FOO Water - IC: 01/25/12- HPMS8
Last Update : Wed Feb 01 15:35:09 2012
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 1% Max. R.T. Dev 0.50min
Max. RRF Dev : 75% Max. Rel. Area : 200%

| | | Compound | Amount | Calc. | %Dev | Area% | Dev(min) |
|---|---|---|---|---|---|---|---|
| 1 | I | Fluorobenzene | 25.000 | 25.000 | 0.0 | 99 | 0.00 |
| 2 | T | Acetonitrile | 100.000 | 94.473 | 5.5 | 90 | 0.00 |
| 3 | T | 3-Chloro-1-propene | 100.000 | 93.873 | 6.1 | 92 | 0.00 |
| 4 | T | 2-Chloro-1,3-butadiene | 100.000 | 106.364 | -6.4 | 105 | 0.00 |
| 5 | T | Ethyl Acetate | 100.000 | 115.826 | -15.8 | 110 | 0.00 |
| 6 | T | Methacrylonitrile | 100.000 | 103.975 | -4.0 | 101 | 0.00 |
| 7 | T | Isobutyl Alcohol | 200.000 | 222.665 | -11.3 | 103 | 0.00 |
| 8 | T | 1-Butanol | 100.000 | 97.069 | 2.9 | 91 | 0.00 |
| 9 | T | Methyl methacrylate | 100.000 | 103.157 | -3.2 | 98 | 0.00 |
| 10 | T | 2-Nitropropane | 100.000 | 104.268 | -4.3 | 98 | 0.00 |
| 11 | I | Chlorobenzene-d5 | 25.000 | 25.000 | 0.0 | 102 | 0.00 |
| 12 | I | 1,4-Dichlorobenzene-d4 | 25.000 | 25.000 | 0.0 | 101 | 0.00 |
| 13 | T | Cyclohexanone | 100.000 | 123.024 | -23.0 | 126 | 0.00 |

(#) = Out of Range SPCC's out = 0 CCC's out = 0
8M376565.D A9FOOWT.M Wed Feb 01 15:41:50 2012 Page 1

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\2\DATA\032712\8M377935.D Vial: 2
Acq On : 27 Mar 2012 11:14 Operator: adc
Sample : WG393321-02 0.3 ug/L STD 8260 Inst : HPMS8
Misc : 1,1 STD50782 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Mar 28 08:21:06 2012 Quant Results File: 8260WT.RES

Quant Method : C:\MSDCHEM\2\METHODS\8260WT.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 03/27/12 HPMS 8
Last Update : Wed Mar 28 08:18:24 2012
Response via : Initial Calibration
DataAcq Meth : 8260WTR

| Internal Standards | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| 1) Fluorobenzene | 10.18 | 96 | 650257 | 25.00 | ug/L | | 0.00 |
| 57) Chlorobenzene-d5 | 14.04 | 117 | 530488 | 25.00 | ug/L | | 0.00 |
| 78) 1,4-Dichlorobenzene-d4 | 17.05 | 152 | 279514 | 25.00 | ug/L | | 0.00 |
| **System Monitoring Compounds** | | | | | | | |
| 37) Dibromofluoromethane | 9.13 | 111 | 1028 | 0.1524 | ug/L | | 0.00 |
| Spiked Amount 25.000 | Range 86 - 118 | | Recovery = | 0.60%# | | | |
| 43) 1,2-Dichloroethane-d4 | 9.77 | 65 | 1284 | 0.2472 | ug/L | | 0.00 |
| Spiked Amount 25.000 | Range 80 - 120 | | Recovery = | 1.00%# | | | |
| 58) Toluene-d8 | 12.17 | 98 | 3824 | 0.1561 | ug/L | | 0.00 |
| Spiked Amount 25.000 | Range 88 - 110 | | Recovery = | 0.64%# | | | |
| 80) p-Bromofluorobenzene | 15.54 | 95 | 1914 | 0.2117 | ug/L | | 0.00 |
| Spiked Amount 25.000 | Range 86 - 115 | | Recovery = | 0.84%# | | | |
| **Target Compounds** | | | | | | | Qvalue |
| 13) Acetone | 5.73 | 43 | 4434 | 4.6214 | ug/L | # | 1 |
| 14) 1,1-Dichloroethene | 5.97 | 61 | 2586 | 0.2966 | ug/L | | 86 |
| 19) Methylene Chloride | 6.73 | 84 | 2421 | 0.3732 | ug/L | | 96 |
| 23) trans-1,2-Dichloroethene | 7.17 | 61 | 2463 | 0.2992 | ug/L | | 95 |
| 27) 1,1-Dichloroethane | 7.80 | 63 | 3301 | 0.3136 | ug/L | # | 68 |
| 29) 2-Butanone | 8.36 | 43 | 1132 | 0.7929 | ug/L | # | 55 |
| 31) 2,2-Dichloropropane | 8.58 | 77 | 2668 | 0.2946 | ug/L | # | 56 |
| 32) cis-1,2-Dichloroethene | 8.63 | 96 | 2091 | 0.3068 | ug/L | | 89 |
| 33) Chloroform | 8.86 | 83 | 3634 | 0.3350 | ug/L | | 83 |
| 35) Bromochloromethane | 9.07 | 130 | 1113 | 0.2535 | ug/L | | 75 |
| 36) Tetrahydrofuran | 9.11 | 42 | 6593 | 6.8141 | ug/L | | 98 |
| 38) 1,1,1-Trichloroethane | 9.39 | 97 | 2844 | 0.2885 | ug/L | | 94 |
| 40) 1,1-Dichloropropene | 9.59 | 75 | 2834 | 0.3338 | ug/L | # | 69 |
| 42) Carbon Tetrachloride | 9.73 | 117 | 2748 | 0.2980 | ug/L | # | 92 |
| 45) 1,2-Dichloroethane | 9.89 | 62 | 1865 | 0.2794 | ug/L | # | 50 |
| 46) Benzene | 9.94 | 78 | 9216 | 0.3699 | ug/L | | 95 |
| 47) Trichloroethene | 10.69 | 130 | 2406 | 0.2921 | ug/L | | 80 |
| 49) 1,2-Dichloropropane | 10.91 | 63 | 1509 | 0.2489 | ug/L | # | 60 |
| 50) Bromodichloromethane | 11.20 | 83 | 2288 | 0.2926 | ug/L | # | 91 |
| 52) Dibromomethane | 11.27 | 93 | 854 | 0.2721 | ug/L | | 88 |
| 55) cis-1,3-Dichloropropene | 11.84 | 75 | 2372 | 0.2577 | ug/L | # | 73 |
| 59) Toluene | 12.26 | 91 | 10870 | 0.3715 | ug/L | | 85 |
| 62) trans-1,3-Dichloropropene | 12.44 | 75 | 2166 | 0.2668 | ug/L | | 84 |
| 63) 1,1,2-Trichloroethane | 12.64 | 97 | 1150 | 0.2543 | ug/L | | 68 |
| 65) 1,3-Dichloropropane | 12.95 | 76 | 2094 | 0.2828 | ug/L | | 100 |
| 66) Tetrachloroethene | 13.08 | 164 | 1675 | 0.2540 | ug/L | # | 77 |
| 67) Dibromochloromethane | 13.33 | 129 | 1662 | 0.2500 | ug/L | | 94 |
| 68) 1,2-Dibromoethane | 13.58 | 107 | 1312 | 0.2693 | ug/L | | 77 |
| 69) 1-Chlorohexane | 13.74 | 91 | 1213 | 0.1241 | ug/L | # | 16 |
| 70) Chlorobenzene | 14.09 | 112 | 6302 | 0.3083 | ug/L | | 99 |
| 71) 1,1,1,2-Tetrachloroethane | 14.12 | 131 | 2020 | 0.2715 | ug/L | | 91 |
| 72) Ethylbenzene | 14.13 | 106 | 3205 | 0.2952 | ug/L | | 50 |
| 73) m-,p-Xylene | 14.23 | 106 | 8762 | 0.6610 | ug/L | | 80 |
| 74) o-Xylene | 14.78 | 106 | 4178 | 0.3137 | ug/L | | 81 |
| 75) Styrene | 14.82 | 104 | 8895 | 0.3731 | ug/L | # | 36 |
| 76) Bromoform | 15.28 | 173 | 596 | 0.1563 | ug/L | # | 27 |
| 77) Isopropylbenzene | 15.21 | 105 | 10857 | 0.3244 | ug/L | | 93 |
| 79) 1,1,2,2-Tetrachloroethane | 15.41 | 83 | 987 | 0.2197 | ug/L | # | 79 |
| 83) n-Propylbenzene | 15.72 | 91 | 13181 | 0.3641 | ug/L | | 90 |
| 84) Bromobenzene | 15.82 | 156 | 2674 | 0.2971 | ug/L | | 91 |

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

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\2\DATA\032712\8M377935.D Vial: 2
Acq On : 27 Mar 2012 11:14 Operator: adc
Sample : WG393321-02 0.3 ug/L STD 8260 Inst : HPMS8
Misc : 1,1 STD50782 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Mar 28 08:21:06 2012 Quant Results File: 8260WT.RES

Quant Method : C:\MSDCHEM\2\METHODS\8260WT.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 03/27/12 HPMS 8
Last Update : Wed Mar 28 08:18:24 2012
Response via : Initial Calibration
DataAcq Meth : 8260WTR

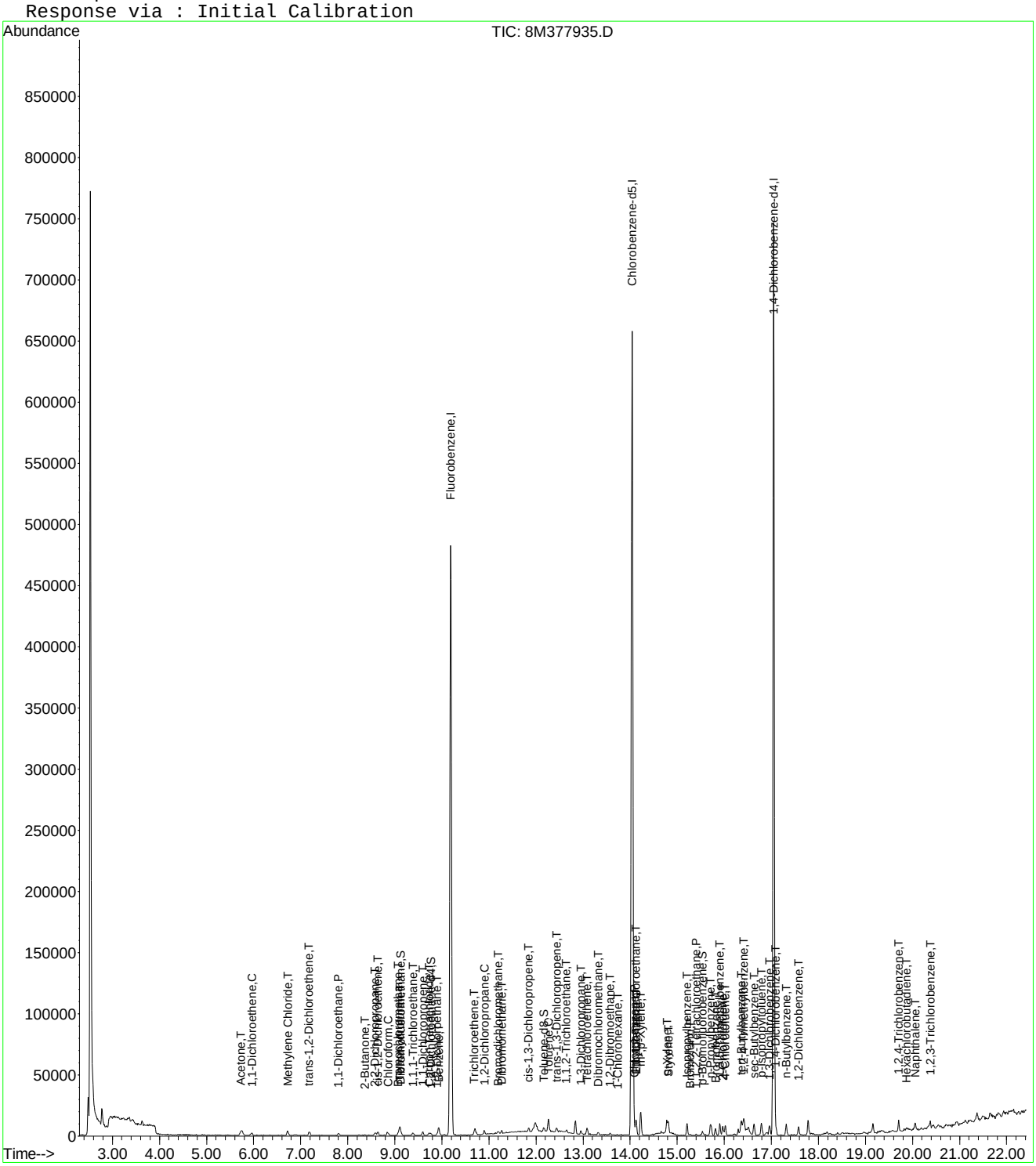
| | Compound | R.T. | QIon | Response | Conc | Unit | | Qvalue |
|---|---|---|---|---|---|---|---|---|
| 85) | 1,3,5-Trimethylbenzene | 15.90 | 105 | 8800 | 0.3260 | ug/L | | 96 |
| 86) | 2-Chlorotoluene | 15.97 | 91 | 8121 | 0.3527 | ug/L | | 92 |
| 87) | 4-Chlorotoluene | 16.02 | 91 | 7793 | 0.3580 | ug/L | | 92 |
| 89) | tert-Butylbenzene | 16.37 | 134 | 1962 | 0.3287 | ug/L | # | 73 |
| 90) | 1,2,4-Trimethylbenzene | 16.42 | 105 | 22731 | 0.4973 | ug/L | # | 51 |
| 91) | sec-Butylbenzene | 16.64 | 105 | 11971 | 0.3626 | ug/L | | 92 |
| 92) | p-Isopropyltoluene | 16.79 | 119 | 8954 | 0.3005 | ug/L | | 90 |
| 93) | 1,3-Dichlorobenzene | 16.97 | 146 | 5663 | 0.3189 | ug/L | | 90 |
| 94) | 1,4-Dichlorobenzene | 17.09 | 146 | 5763 | 0.3233 | ug/L | # | 12 |
| 95) | n-Butylbenzene | 17.32 | 91 | 9002 | 0.3865 | ug/L | # | 86 |
| 96) | 1,2-Dichlorobenzene | 17.58 | 146 | 5107 | 0.3226 | ug/L | | 95 |
| 98) | 1,2,4-Trichlorobenzene | 19.71 | 182 | 3388 | 0.3178 | ug/L | | 99 |
| 99) | Hexachlorobutadiene | 19.87 | 225 | 1111 | 0.2933 | ug/L | # | 66 |
| 100) | Naphthalene | 20.06 | 128 | 6947 | 0.3330 | ug/L | | 92 |
| 101) | 1,2,3-Trichlorobenzene | 20.38 | 180 | 3053 | 0.3341 | ug/L | # | 85 |

(#) = qualifier out of range (m) = manual integration
8M377935.D 8260WT.M Wed Mar 28 08:22:04 2012 Page 2

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\2\DATA\032712\8M377935.D Vial: 2
Acq On : 27 Mar 2012 11:14 Operator: adc
Sample : WG393321-02 0.3 ug/L STD 8260 Inst : HPMS8
Misc : 1,1 STD50782 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Mar 28 8:21 2012 Quant Results File: 8260WT.RES

Method : C:\MSDCHEM\2\METHODS\8260WT.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 03/27/12 HPMS 8
Last Update : Wed Mar 28 08:18:24 2012
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\2\DATA\032712\8M377936.D Vial: 3
Acq On : 27 Mar 2012 11:45 Operator: adc
Sample : WG393321-03 0.4 ug/L STD 8260 Inst : HPMS8
Misc : 1,1 STD50782 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Mar 28 08:21:06 2012 Quant Results File: 8260WT.RES

Quant Method : C:\MSDCHEM\2\METHODS\8260WT.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 03/27/12 HPMS 8
Last Update : Wed Mar 28 08:18:24 2012
Response via : Initial Calibration
DataAcq Meth : 8260WTR

| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 1) Fluorobenzene | 10.18 | 96 | 626398 | 25.00 | ug/L | 0.00 |
| 57) Chlorobenzene-d5 | 14.04 | 117 | 528645 | 25.00 | ug/L | 0.00 |
| 78) 1,4-Dichlorobenzene-d4 | 17.05 | 152 | 285256 | 25.00 | ug/L | 0.00 |
| **System Monitoring Compounds** | | | | | | |
| 37) Dibromofluoromethane | 9.14 | 111 | 409 | 0.0629 | ug/L | 0.00 |
| Spiked Amount 25.000 | Range 86 - 118 | | Recovery = | 0.24%# | | |
| 43) 1,2-Dichloroethane-d4 | 0.00 | 65 | 0 | 0.0000 | ug/L | |
| Spiked Amount 25.000 | Range 80 - 120 | | Recovery = | 0.00%# | | |
| 58) Toluene-d8 | 12.16 | 98 | 3197 | 0.1310 | ug/L | -0.01 |
| Spiked Amount 25.000 | Range 88 - 110 | | Recovery = | 0.52%# | | |
| 80) p-Bromofluorobenzene | 15.54 | 95 | 1073 | 0.1163 | ug/L | 0.00 |
| Spiked Amount 25.000 | Range 86 - 115 | | Recovery = | 0.48%# | | |
| **Target Compounds** | | | | | | Qvalue |
| 2) Dichlorodifluoromethane | 2.82 | 85 | 2656 | 0.3898 | ug/L # | 59 |
| 3) Chloromethane | 3.21 | 50 | 4943 | 0.6295 | ug/L | 85 |
| 4) Vinyl Chloride | 3.43 | 62 | 3029 | 0.4628 | ug/L | 83 |
| 6) Bromomethane | 4.25 | 94 | 1852 | 0.3654 | ug/L | 91 |
| 7) Chloroethane | 4.39 | 64 | 1462 | 0.3468 | ug/L # | 44 |
| 8) Trichlorofluoromethane | 4.89 | 101 | 3936 | 0.4073 | ug/L # | 83 |
| 10) Isoprene | 5.46 | 67 | 1981 | 0.2605 | ug/L | 99 |
| 12) 1,1,2-Trichloro-1,2,2-Trif | 5.67 | 101 | 1975 | 0.3403 | ug/L # | 57 |
| 13) Acetone | 5.73 | 43 | 200 | 0.2164 | ug/L # | 47 |
| 14) 1,1-Dichloroethene | 5.95 | 61 | 3206 | 0.3817 | ug/L | 77 |
| 16) Dimethyl Sulfide | 6.21 | 62 | 1832 | 0.3099 | ug/L | 100 |
| 17) Iodomethane | 6.44 | 142 | 2536 | 0.2587 | ug/L | 92 |
| 18) Methyl acetate | 6.49 | 43 | 594 | 0.2042 | ug/L # | 64 |
| 19) Methylene Chloride | 6.72 | 84 | 2404 | 0.3847 | ug/L | 85 |
| 20) Carbon Disulfide | 6.75 | 76 | 5299 | 0.3284 | ug/L # | 86 |
| 22) Methyl Tert Butyl Ether | 6.96 | 73 | 3711 | 0.3470 | ug/L # | 52 |
| 23) trans-1,2-Dichloroethene | 7.18 | 61 | 2911 | 0.3670 | ug/L | 93 |
| 24) n-Hexane | 7.31 | 57 | 2374 | 0.3280 | ug/L | 86 |
| 27) 1,1-Dichloroethane | 7.79 | 63 | 4239 | 0.4181 | ug/L # | 77 |
| 31) 2,2-Dichloropropane | 8.59 | 77 | 3620 | 0.4150 | ug/L # | 55 |
| 32) cis-1,2-Dichloroethene | 8.64 | 96 | 2400 | 0.3655 | ug/L | 94 |
| 33) Chloroform | 8.86 | 83 | 4097 | 0.3921 | ug/L | 97 |
| 35) Bromochloromethane | 9.07 | 130 | 1700 | 0.4020 | ug/L | 98 |
| 38) 1,1,1-Trichloroethane | 9.39 | 97 | 3859 | 0.4064 | ug/L | 81 |
| 39) Cyclohexane | 9.43 | 56 | 2868 | 0.3057 | ug/L # | 85 |
| 40) 1,1-Dichloropropene | 9.59 | 75 | 3187 | 0.3897 | ug/L | 92 |
| 42) Carbon Tetrachloride | 9.74 | 117 | 3410 | 0.3839 | ug/L # | 92 |
| 45) 1,2-Dichloroethane | 9.89 | 62 | 2384 | 0.3708 | ug/L # | 80 |
| 46) Benzene | 9.93 | 78 | 10624 | 0.4426 | ug/L | 93 |
| 47) Trichloroethene | 10.71 | 130 | 2852 | 0.3594 | ug/L | 93 |
| 48) Methylcyclohexane | 10.80 | 83 | 2669 | 0.2910 | ug/L | 96 |
| 49) 1,2-Dichloropropane | 10.90 | 63 | 2206 | 0.3777 | ug/L | 77 |
| 50) Bromodichloromethane | 11.20 | 83 | 2668 | 0.3541 | ug/L # | 86 |
| 52) Dibromomethane | 11.26 | 93 | 875 | 0.2894 | ug/L | 81 |
| 55) cis-1,3-Dichloropropene | 11.84 | 75 | 3410 | 0.3846 | ug/L | 93 |
| 56) Dimethyl Disulfide | 12.09 | 94 | 3062 | 0.3119 | ug/L | 99 |
| 59) Toluene | 12.26 | 91 | 15145 | 0.5195 | ug/L | 95 |
| 60) Ethyl Methacrylate | 12.39 | 69 | 1821 | 0.3581 | ug/L | 96 |
| 62) trans-1,3-Dichloropropene | 12.44 | 75 | 3234 | 0.3998 | ug/L | 85 |
| 63) 1,1,2-Trichloroethane | 12.65 | 97 | 1558 | 0.3457 | ug/L | 94 |

(#) = qualifier out of range (m) = manual integration
8M377936.D 8260WT.M Wed Mar 28 08:22:28 2012 Page 1

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\2\DATA\032712\8M377936.D Vial: 3
Acq On : 27 Mar 2012 11:45 Operator: adc
Sample : WG393321-03 0.4 ug/L STD 8260 Inst : HPMS8
Misc : 1,1 STD50782 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Mar 28 08:21:06 2012 Quant Results File: 8260WT.RES

Quant Method : C:\MSDCHEM\2\METHODS\8260WT.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 03/27/12 HPMS 8
Last Update : Wed Mar 28 08:18:24 2012
Response via : Initial Calibration
DataAcq Meth : 8260WTR

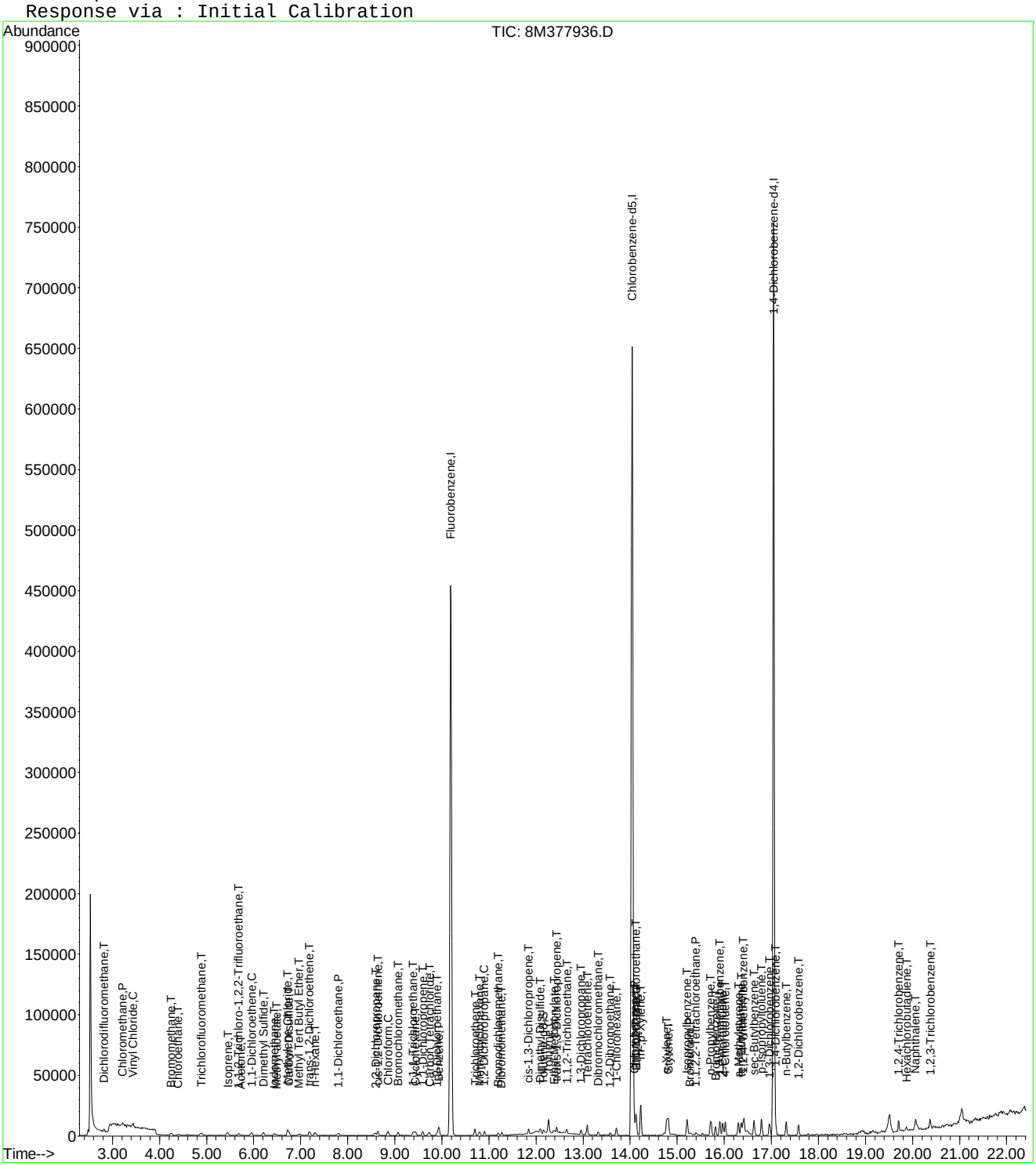
| | Compound | R.T. | QIon | Response | Conc | Unit | | Qvalue |
|---|---|---|---|---|---|---|---|---|
| 65) | 1,3-Dichloropropane | 12.95 | 76 | 3004 | 0.4071 | ug/L | | 96 |
| 66) | Tetrachloroethene | 13.09 | 164 | 2615 | 0.3980 | ug/L | | 94 |
| 67) | Dibromochloromethane | 13.33 | 129 | 2197 | 0.3317 | ug/L | | 94 |
| 68) | 1,2-Dibromoethane | 13.57 | 107 | 1851 | 0.3812 | ug/L | | 96 |
| 69) | 1-Chlorohexane | 13.71 | 91 | 4831 | 0.4961 | ug/L | # | 63 |
| 70) | Chlorobenzene | 14.09 | 112 | 8818 | 0.4329 | ug/L | | 90 |
| 71) | 1,1,1,2-Tetrachloroethane | 14.12 | 131 | 2966 | 0.4001 | ug/L | | 99 |
| 72) | Ethylbenzene | 14.13 | 106 | 4597 | 0.4248 | ug/L | | 73 |
| 73) | m-,p-Xylene | 14.23 | 106 | 11229 | 0.8500 | ug/L | | 88 |
| 74) | o-Xylene | 14.77 | 106 | 5672 | 0.4274 | ug/L | | 89 |
| 75) | Styrene | 14.81 | 104 | 11407 | 0.4802 | ug/L | | 87 |
| 76) | Bromoform | 15.27 | 173 | 1353 | 0.3560 | ug/L | # | 67 |
| 77) | Isopropylbenzene | 15.21 | 105 | 14418 | 0.4322 | ug/L | | 95 |
| 79) | 1,1,2,2-Tetrachloroethane | 15.39 | 83 | 1761 | 0.3841 | ug/L | # | 94 |
| 83) | n-Propylbenzene | 15.71 | 91 | 16154 | 0.4373 | ug/L | | 94 |
| 84) | Bromobenzene | 15.82 | 156 | 3526 | 0.3839 | ug/L | | 84 |
| 85) | 1,3,5-Trimethylbenzene | 15.90 | 105 | 11275 | 0.4092 | ug/L | | 99 |
| 86) | 2-Chlorotoluene | 15.96 | 91 | 10091 | 0.4294 | ug/L | | 94 |
| 87) | 4-Chlorotoluene | 16.01 | 91 | 10326 | 0.4648 | ug/L | | 95 |
| 88) | a-Methylstyrene | 16.30 | 118 | 5780 | 0.3528 | ug/L | | 94 |
| 89) | tert-Butylbenzene | 16.37 | 134 | 2393 | 0.3928 | ug/L | | 82 |
| 90) | 1,2,4-Trimethylbenzene | 16.41 | 105 | 19671 | 0.3638 | ug/L | # | 66 |
| 91) | sec-Butylbenzene | 16.63 | 105 | 15338 | 0.4553 | ug/L | | 91 |
| 92) | p-Isopropyltoluene | 16.79 | 119 | 12564 | 0.4132 | ug/L | | 99 |
| 93) | 1,3-Dichlorobenzene | 16.97 | 146 | 7595 | 0.4190 | ug/L | | 100 |
| 94) | 1,4-Dichlorobenzene | 17.09 | 146 | 7565 | 0.4159 | ug/L | | 92 |
| 95) | n-Butylbenzene | 17.32 | 91 | 10164 | 0.4276 | ug/L | | 95 |
| 96) | 1,2-Dichlorobenzene | 17.58 | 146 | 6153 | 0.3808 | ug/L | | 97 |
| 98) | 1,2,4-Trichlorobenzene | 19.71 | 182 | 4595 | 0.4223 | ug/L | | 83 |
| 99) | Hexachlorobutadiene | 19.88 | 225 | 1370 | 0.3544 | ug/L | | 92 |
| 100) | Naphthalene | 20.06 | 128 | 8827 | 0.4146 | ug/L | | 98 |
| 101) | 1,2,3-Trichlorobenzene | 20.38 | 180 | 3541 | 0.3798 | ug/L | | 94 |

(#) = qualifier out of range (m) = manual integration
8M377936.D 8260WT.M Wed Mar 28 08:22:28 2012 Page 2

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\2\DATA\032712\8M377936.D Vial: 3
Acq On : 27 Mar 2012 11:45 Operator: adc
Sample : WG393321-03 0.4 ug/L STD 8260 Inst : HPMS8
Misc : 1,1 STD50782 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Mar 28 8:21 2012 Quant Results File: 8260WT.RES

Method : C:\MSDCHEM\2\METHODS\8260WT.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 03/27/12 HPMS 8
Last Update : Wed Mar 28 08:18:24 2012
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\2\DATA\032712\8M377937.D Vial: 4
Acq On : 27 Mar 2012 12:15 Operator: adc
Sample : WG393321-04 1.0 ug/L STD 8260 Inst : HPMS8
Misc : 1,1 STD50782 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Mar 28 08:21:07 2012 Quant Results File: 8260WT.RES

Quant Method : C:\MSDCHEM\2\METHODS\8260WT.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 03/27/12 HPMS 8
Last Update : Wed Mar 28 08:18:24 2012
Response via : Initial Calibration
DataAcq Meth : 8260WTR

| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 1) Fluorobenzene | 10.18 | 96 | 638053 | 25.00 | ug/L | 0.00 |
| 57) Chlorobenzene-d5 | 14.04 | 117 | 545262 | 25.00 | ug/L | 0.00 |
| 78) 1,4-Dichlorobenzene-d4 | 17.05 | 152 | 296609 | 25.00 | ug/L | 0.00 |
| **System Monitoring Compounds** | | | | | | |
| 37) Dibromofluoromethane | 9.14 | 111 | 3914 | 0.5913 | ug/L | 0.00 |
| Spiked Amount 25.000 | Range 86 - 118 | | Recovery = | 2.36%# | | |
| 43) 1,2-Dichloroethane-d4 | 9.77 | 65 | 3537 | 0.6939 | ug/L | 0.00 |
| Spiked Amount 25.000 | Range 80 - 120 | | Recovery = | 2.76%# | | |
| 58) Toluene-d8 | 12.17 | 98 | 17497 | 0.6950 | ug/L | 0.00 |
| Spiked Amount 25.000 | Range 88 - 110 | | Recovery = | 2.76%# | | |
| 80) p-Bromofluorobenzene | 15.54 | 95 | 6710 | 0.6993 | ug/L | 0.00 |
| Spiked Amount 25.000 | Range 86 - 115 | | Recovery = | 2.80%# | | |
| **Target Compounds** | | | | | | Qvalue |
| 2) Dichlorodifluoromethane | 2.82 | 85 | 6858 | 0.9882 | ug/L | 99 |
| 3) Chloromethane | 3.22 | 50 | 9685 | 1.2108 | ug/L | 94 |
| 4) Vinyl Chloride | 3.43 | 62 | 7377 | 1.1066 | ug/L | 92 |
| 5) 1,3-Butadiene | 3.48 | 54 | 6040 | Below Cal # | | 73 |
| 6) Bromomethane | 4.25 | 94 | 5317 | 1.0299 | ug/L | 99 |
| 7) Chloroethane | 4.40 | 64 | 4301 | 1.0015 | ug/L # | 76 |
| 8) Trichlorofluoromethane | 4.89 | 101 | 9874 | 1.0031 | ug/L # | 96 |
| 9) Diethyl ether | 5.42 | 59 | 7838 | 2.1874 | ug/L | 92 |
| 10) Isoprene | 5.46 | 67 | 8572 | 1.1066 | ug/L | 93 |
| 11) Acrolein | 5.61 | 56 | 206 | 0.5090 | ug/L # | 10 |
| 12) 1,1,2-Trichloro-1,2,2-Trif | 5.69 | 101 | 6598 | 1.1161 | ug/L | 88 |
| 13) Acetone | 5.72 | 43 | 1528 | 1.6230 | ug/L # | 47 |
| 14) 1,1-Dichloroethene | 5.95 | 61 | 8792 | 1.0277 | ug/L | 98 |
| 15) Tert-Butyl Alcohol | 6.10 | 59 | 637 | 4.7585 | ug/L # | 57 |
| 16) Dimethyl Sulfide | 6.21 | 62 | 6542 | 1.0863 | ug/L | 98 |
| 17) Iodomethane | 6.44 | 142 | 8876 | 0.8888 | ug/L | 94 |
| 18) Methyl acetate | 6.48 | 43 | 3340 | 1.1273 | ug/L # | 64 |
| 19) Methylene Chloride | 6.72 | 84 | 7158 | 1.1244 | ug/L | 98 |
| 20) Carbon Disulfide | 6.75 | 76 | 17504 | 1.0649 | ug/L | 99 |
| 21) Acrylonitrile | 6.88 | 53 | 930 | 0.7297 | ug/L # | 47 |
| 22) Methyl Tert Butyl Ether | 6.99 | 73 | 11971 | 1.0990 | ug/L | 92 |
| 23) trans-1,2-Dichloroethene | 7.19 | 61 | 8040 | 0.9952 | ug/L | 97 |
| 24) n-Hexane | 7.30 | 57 | 7951 | 1.0786 | ug/L | 95 |
| 25) Diisopropyl ether | 7.65 | 45 | 42105 | 2.1606 | ug/L | 99 |
| 26) Vinyl Acetate | 7.78 | 43 | 6720 | 1.0736 | ug/L # | 74 |
| 27) 1,1-Dichloroethane | 7.79 | 63 | 10212 | 0.9888 | ug/L # | 94 |
| 28) Ethyl-Tert-Butyl ether | 8.22 | 59 | 33168 | 2.0768 | ug/L | 99 |
| 29) 2-Butanone | 8.36 | 43 | 1447 | 1.0329 | ug/L # | 55 |
| 31) 2,2-Dichloropropane | 8.58 | 77 | 9352 | 1.0525 | ug/L | 89 |
| 32) cis-1,2-Dichloroethene | 8.64 | 96 | 6790 | 1.0152 | ug/L | 98 |
| 33) Chloroform | 8.85 | 83 | 10640 | 0.9996 | ug/L | 97 |
| 34) 1-Bromopropane | 8.99 | 122 | 1077 | 0.7958 | ug/L | 97 |
| 35) Bromochloromethane | 9.08 | 130 | 4105 | 0.9530 | ug/L | 98 |
| 36) Tetrahydrofuran | 9.12 | 42 | 1960 | 2.0645 | ug/L # | 38 |
| 38) 1,1,1-Trichloroethane | 9.40 | 97 | 9208 | 0.9521 | ug/L | 94 |
| 39) Cyclohexane | 9.44 | 56 | 10119 | 1.0590 | ug/L | 97 |
| 40) 1,1-Dichloropropene | 9.59 | 75 | 8775 | 1.0533 | ug/L | 91 |
| 41) Tert-Amyl-Methyl ether | 9.72 | 73 | 27614 | 2.1129 | ug/L # | 99 |
| 42) Carbon Tetrachloride | 9.73 | 117 | 9136 | 1.0097 | ug/L | 98 |
| 45) 1,2-Dichloroethane | 9.89 | 62 | 6558 | 1.0013 | ug/L | 96 |

(#) = qualifier out of range (m) = manual integration
8M377937.D 8260WT.M Wed Mar 28 08:23:20 2012 Page 1

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\2\DATA\032712\8M377937.D Vial: 4
Acq On : 27 Mar 2012 12:15 Operator: adc
Sample : WG393321-04 1.0 ug/L STD 8260 Inst : HPMS8
Misc : 1,1 STD50782 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Mar 28 08:21:07 2012 Quant Results File: 8260WT.RES

Quant Method : C:\MSDCHEM\2\METHODS\8260WT.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 03/27/12 HPMS 8
Last Update : Wed Mar 28 08:18:24 2012
Response via : Initial Calibration
DataAcq Meth : 8260WTR

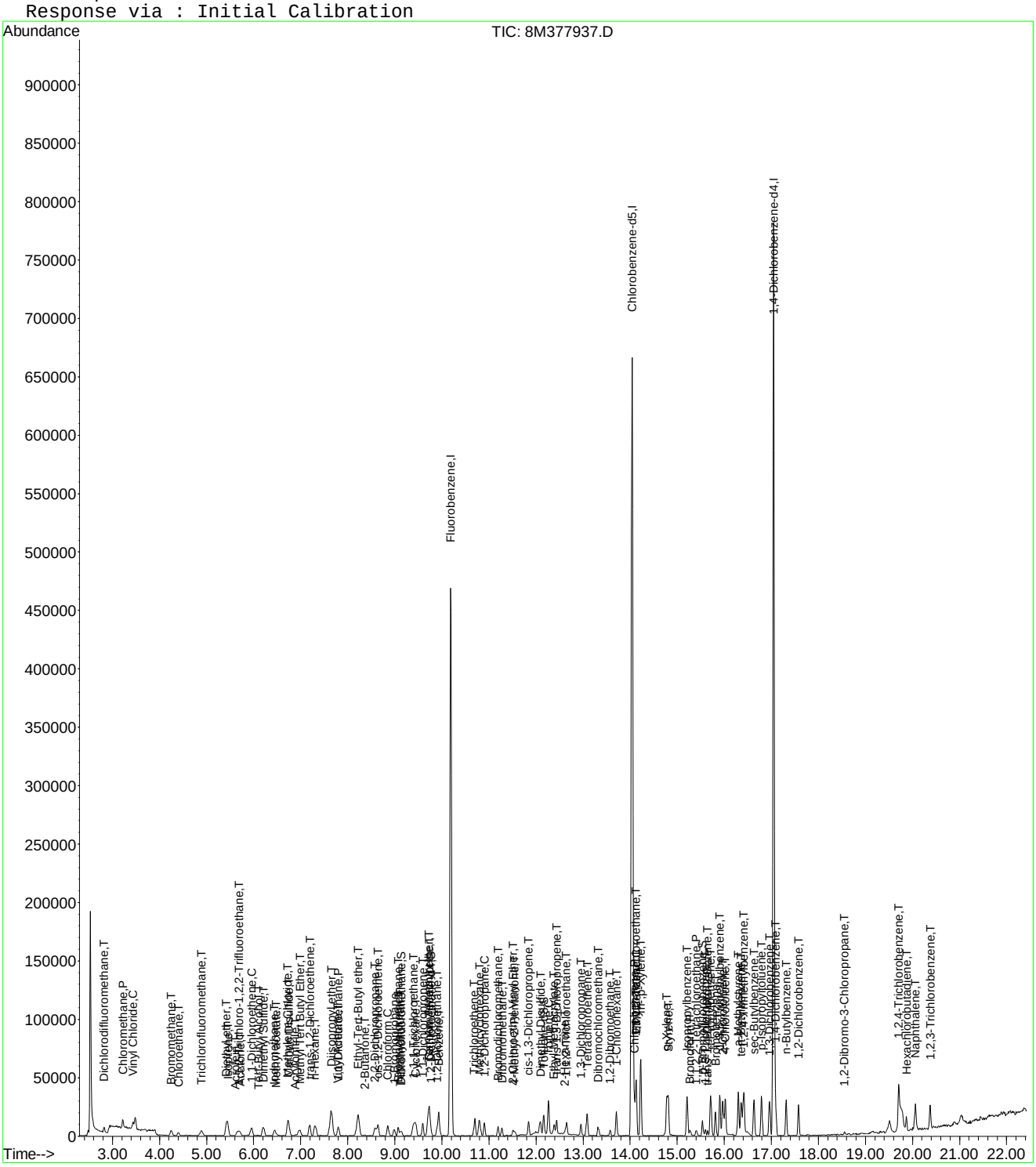
| | Compound | R.T. | QIon | Response | Conc | Unit | | Qvalue |
|---|---|---|---|---|---|---|---|---|
| 46) | Benzene | 9.93 | 78 | 26693 | 1.0917 | ug/L | | 96 |
| 47) | Trichloroethene | 10.69 | 130 | 8435 | 1.0436 | ug/L | | 95 |
| 48) | Methylcyclohexane | 10.80 | 83 | 10318 | 1.1045 | ug/L | | 98 |
| 49) | 1,2-Dichloropropane | 10.91 | 63 | 6029 | 1.0135 | ug/L | | 99 |
| 50) | Bromodichloromethane | 11.20 | 83 | 8166 | 1.0642 | ug/L | # | 90 |
| 52) | Dibromomethane | 11.28 | 93 | 3205 | 1.0407 | ug/L | | 97 |
| 53) | 2-Chloroethyl Vinyl Ether | 11.52 | 63 | 2403 | 0.8803 | ug/L | | 80 |
| 54) | 4-Methyl-2-Pentanone | 11.54 | 58 | 1124 | 0.9101 | ug/L | # | 47 |
| 55) | cis-1,3-Dichloropropene | 11.84 | 75 | 9050 | 1.0020 | ug/L | | 94 |
| 56) | Dimethyl Disulfide | 12.10 | 94 | 8743 | 0.8742 | ug/L | | 91 |
| 59) | Toluene | 12.26 | 91 | 32585 | 1.0836 | ug/L | | 99 |
| 60) | Ethyl Methacrylate | 12.37 | 69 | 5265 | 1.0037 | ug/L | | 91 |
| 62) | trans-1,3-Dichloropropene | 12.44 | 75 | 8841 | 1.0597 | ug/L | | 94 |
| 63) | 1,1,2-Trichloroethane | 12.64 | 97 | 4782 | 1.0287 | ug/L | | 99 |
| 64) | 2-Hexanone | 12.61 | 58 | 841 | 0.7214 | ug/L | # | 32 |
| 65) | 1,3-Dichloropropane | 12.95 | 76 | 8216 | 1.0795 | ug/L | | 99 |
| 66) | Tetrachloroethene | 13.09 | 164 | 6778 | 1.0000 | ug/L | | 97 |
| 67) | Dibromochloromethane | 13.33 | 129 | 6866 | 1.0049 | ug/L | | 100 |
| 68) | 1,2-Dibromoethane | 13.57 | 107 | 5329 | 1.0641 | ug/L | | 92 |
| 69) | 1-Chlorohexane | 13.71 | 91 | 10795 | 1.0748 | ug/L | | 94 |
| 70) | Chlorobenzene | 14.09 | 112 | 21963 | 1.0453 | ug/L | | 75 |
| 71) | 1,1,1,2-Tetrachloroethane | 14.12 | 131 | 7947 | 1.0393 | ug/L | | 96 |
| 72) | Ethylbenzene | 14.13 | 106 | 11229 | 1.0061 | ug/L | | 84 |
| 73) | m-,p-Xylene | 14.23 | 106 | 28587 | 2.0980 | ug/L | | 92 |
| 74) | o-Xylene | 14.77 | 106 | 13719 | 1.0023 | ug/L | | 92 |
| 75) | Styrene | 14.82 | 104 | 27739 | 1.1320 | ug/L | | 98 |
| 76) | Bromoform | 15.27 | 173 | 3729 | 0.9514 | ug/L | | 90 |
| 77) | Isopropylbenzene | 15.21 | 105 | 35401 | 1.0290 | ug/L | | 97 |
| 79) | 1,1,2,2-Tetrachloroethane | 15.40 | 83 | 4656 | 0.9768 | ug/L | # | 92 |
| 81) | 1,2,3-Trichloropropane | 15.59 | 110 | 1428 | 0.9056 | ug/L | | 70 |
| 82) | trans-1,4-Dichloro-2-Buten | 15.64 | 53 | 1267 | 0.9182 | ug/L | | 82 |
| 83) | n-Propylbenzene | 15.71 | 91 | 39237 | 1.0214 | ug/L | | 97 |
| 84) | Bromobenzene | 15.82 | 156 | 9795 | 1.0257 | ug/L | | 92 |
| 85) | 1,3,5-Trimethylbenzene | 15.90 | 105 | 29229 | 1.0203 | ug/L | | 99 |
| 86) | 2-Chlorotoluene | 15.97 | 91 | 25764 | 1.0544 | ug/L | | 96 |
| 87) | 4-Chlorotoluene | 16.01 | 91 | 24848 | 1.0757 | ug/L | | 95 |
| 88) | a-Methylstyrene | 16.29 | 118 | 17597 | 1.0330 | ug/L | | 98 |
| 89) | tert-Butylbenzene | 16.36 | 134 | 5969 | 0.9424 | ug/L | | 74 |
| 90) | 1,2,4-Trimethylbenzene | 16.42 | 105 | 34667 | 0.8811 | ug/L | | 87 |
| 91) | sec-Butylbenzene | 16.63 | 105 | 35873 | 1.0241 | ug/L | | 99 |
| 92) | p-Isopropyltoluene | 16.79 | 119 | 32768 | 1.0364 | ug/L | | 97 |
| 93) | 1,3-Dichlorobenzene | 16.97 | 146 | 19685 | 1.0445 | ug/L | | 97 |
| 94) | 1,4-Dichlorobenzene | 17.09 | 146 | 19470 | 1.0294 | ug/L | | 76 |
| 95) | n-Butylbenzene | 17.32 | 91 | 25384 | 1.0271 | ug/L | | 98 |
| 96) | 1,2-Dichlorobenzene | 17.58 | 146 | 17652 | 1.0507 | ug/L | | 100 |
| 97) | 1,2-Dibromo-3-Chloropropan | 18.55 | 75 | 720 | 0.8775 | ug/L | | 91 |
| 98) | 1,2,4-Trichlorobenzene | 19.71 | 182 | 11730 | 1.0368 | ug/L | | 97 |
| 99) | Hexachlorobutadiene | 19.88 | 225 | 3649 | 0.9078 | ug/L | | 98 |
| 100) | Naphthalene | 20.06 | 128 | 24384 | 1.1014 | ug/L | | 99 |
| 101) | 1,2,3-Trichlorobenzene | 20.38 | 180 | 10004 | 1.0318 | ug/L | | 98 |

(#) = qualifier out of range (m) = manual integration
8M377937.D 8260WT.M Wed Mar 28 08:23:20 2012 Page 2

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\2\DATA\032712\8M377937.D Vial: 4
Acq On : 27 Mar 2012 12:15 Operator: adc
Sample : WG393321-04 1.0 ug/L STD 8260 Inst : HPMS8
Misc : 1,1 STD50782 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Mar 28 8:21 2012 Quant Results File: 8260WT.RES

Method : C:\MSDCHEM\2\METHODS\8260WT.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 03/27/12 HPMS 8
Last Update : Wed Mar 28 08:18:24 2012
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\2\DATA\032712\8M377938.D Vial: 5
Acq On : 27 Mar 2012 12:46 Operator: adc
Sample : WG393321-05 2.0 ug/L STD 8260 Inst : HPMS8
Misc : 1,1 STD50782 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Mar 28 08:21:07 2012 Quant Results File: 8260WT.RES

Quant Method : C:\MSDCHEM\2\METHODS\8260WT.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 03/27/12 HPMS 8
Last Update : Wed Mar 28 08:18:24 2012
Response via : Initial Calibration
DataAcq Meth : 8260WTR

| Internal Standards | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| 1) Fluorobenzene | 10.19 | 96 | 631725 | 25.00 | ug/L | | 0.00 |
| 57) Chlorobenzene-d5 | 14.04 | 117 | 529182 | 25.00 | ug/L | | 0.00 |
| 78) 1,4-Dichlorobenzene-d4 | 17.05 | 152 | 285440 | 25.00 | ug/L | | 0.00 |
| **System Monitoring Compounds** | | | | | | | |
| 37) Dibromofluoromethane | 9.13 | 111 | 7080 | 1.0803 | ug/L | | 0.00 |
| Spiked Amount 25.000 | Range 86 - 118 | | Recovery = | 4.32%# | | | |
| 43) 1,2-Dichloroethane-d4 | 9.77 | 65 | 5968 | 1.1825 | ug/L | | 0.00 |
| Spiked Amount 25.000 | Range 80 - 120 | | Recovery = | 4.72%# | | | |
| 58) Toluene-d8 | 12.16 | 98 | 30704 | 1.2567 | ug/L | | 0.00 |
| Spiked Amount 25.000 | Range 88 - 110 | | Recovery = | 5.04%# | | | |
| 80) p-Bromofluorobenzene | 15.54 | 95 | 11544 | 1.2502 | ug/L | | 0.00 |
| Spiked Amount 25.000 | Range 86 - 115 | | Recovery = | 5.00%# | | | |
| **Target Compounds** | | | | | | | Qvalue |
| 2) Dichlorodifluoromethane | 2.82 | 85 | 14521 | 2.1133 | ug/L | | 95 |
| 3) Chloromethane | 3.22 | 50 | 17327 | 2.1879 | ug/L | | 95 |
| 4) Vinyl Chloride | 3.43 | 62 | 13917 | 2.1085 | ug/L | | 99 |
| 5) 1,3-Butadiene | 3.48 | 54 | 12744 | 1.4903 | ug/L | # | 68 |
| 6) Bromomethane | 4.25 | 94 | 10952 | 2.1426 | ug/L | | 96 |
| 7) Chloroethane | 4.41 | 64 | 8927 | 2.0995 | ug/L | | 98 |
| 8) Trichlorofluoromethane | 4.88 | 101 | 20645 | 2.1183 | ug/L | | 97 |
| 9) Diethyl ether | 5.42 | 59 | 14498 | 4.0866 | ug/L | | 96 |
| 10) Isoprene | 5.44 | 67 | 15552 | 2.0278 | ug/L | | 99 |
| 11) Acrolein | 5.63 | 56 | 1174 | 2.9299 | ug/L | | 70 |
| 12) 1,1,2-Trichloro-1,2,2-Trif | 5.68 | 101 | 11993 | 2.0490 | ug/L | | 100 |
| 13) Acetone | 5.72 | 43 | 2022 | 2.1693 | ug/L | # | 67 |
| 14) 1,1-Dichloroethene | 5.95 | 61 | 17461 | 2.0616 | ug/L | | 97 |
| 15) Tert-Butyl Alcohol | 6.07 | 59 | 1480 | 7.6882 | ug/L | # | 57 |
| 16) Dimethyl Sulfide | 6.21 | 62 | 12352 | 2.0716 | ug/L | | 93 |
| 17) Iodomethane | 6.44 | 142 | 18697 | 1.8910 | ug/L | | 99 |
| 18) Methyl acetate | 6.47 | 43 | 5725 | 1.9517 | ug/L | # | 89 |
| 19) Methylene Chloride | 6.72 | 84 | 13240 | 2.1007 | ug/L | | 95 |
| 20) Carbon Disulfide | 6.74 | 76 | 33631 | 2.0666 | ug/L | | 99 |
| 21) Acrylonitrile | 6.89 | 53 | 1796 | 1.4234 | ug/L | | 95 |
| 22) Methyl Tert Butyl Ether | 6.96 | 73 | 21385 | 1.9829 | ug/L | | 99 |
| 23) trans-1,2-Dichloroethene | 7.19 | 61 | 16469 | 2.0590 | ug/L | | 99 |
| 24) n-Hexane | 7.30 | 57 | 14579 | 1.9976 | ug/L | | 99 |
| 25) Diisopropyl ether | 7.64 | 45 | 81825 | 4.2409 | ug/L | | 98 |
| 26) Vinyl Acetate | 7.79 | 43 | 11958 | 1.9295 | ug/L | | 93 |
| 27) 1,1-Dichloroethane | 7.80 | 63 | 21508 | 2.1035 | ug/L | | 96 |
| 28) Ethyl-Tert-Butyl ether | 8.21 | 59 | 66322 | 4.1944 | ug/L | | 98 |
| 29) 2-Butanone | 8.36 | 43 | 2429 | 1.7512 | ug/L | # | 55 |
| 30) Propionitrile | 8.45 | 54 | 1265 | 4.0164 | ug/L | # | 56 |
| 31) 2,2-Dichloropropane | 8.58 | 77 | 17554 | 1.9953 | ug/L | | 99 |
| 32) cis-1,2-Dichloroethene | 8.64 | 96 | 13641 | 2.0600 | ug/L | | 96 |
| 33) Chloroform | 8.85 | 83 | 21669 | 2.0562 | ug/L | | 97 |
| 34) 1-Bromopropane | 9.00 | 122 | 2761 | 2.0605 | ug/L | | 90 |
| 35) Bromochloromethane | 9.07 | 130 | 8765 | 2.0552 | ug/L | | 97 |
| 36) Tetrahydrofuran | 9.11 | 42 | 3659 | 3.8926 | ug/L | | 99 |
| 38) 1,1,1-Trichloroethane | 9.38 | 97 | 19802 | 2.0680 | ug/L | | 99 |
| 39) Cyclohexane | 9.43 | 56 | 19478 | 2.0588 | ug/L | | 99 |
| 40) 1,1-Dichloropropene | 9.59 | 75 | 16358 | 1.9833 | ug/L | | 98 |
| 41) Tert-Amyl-Methyl ether | 9.72 | 73 | 53574 | 4.1403 | ug/L | # | 98 |
| 42) Carbon Tetrachloride | 9.73 | 117 | 19232 | 2.1468 | ug/L | | 95 |

(#) = qualifier out of range (m) = manual integration
8M377938.D 8260WT.M Wed Mar 28 08:23:53 2012 Page 1

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\2\DATA\032712\8M377938.D Vial: 5
Acq On : 27 Mar 2012 12:46 Operator: adc
Sample : WG393321-05 2.0 ug/L STD 8260 Inst : HPMS8
Misc : 1,1 STD50782 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Mar 28 08:21:07 2012 Quant Results File: 8260WT.RES

Quant Method : C:\MSDCHEM\2\METHODS\8260WT.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 03/27/12 HPMS 8
Last Update : Wed Mar 28 08:18:24 2012
Response via : Initial Calibration
DataAcq Meth : 8260WTR

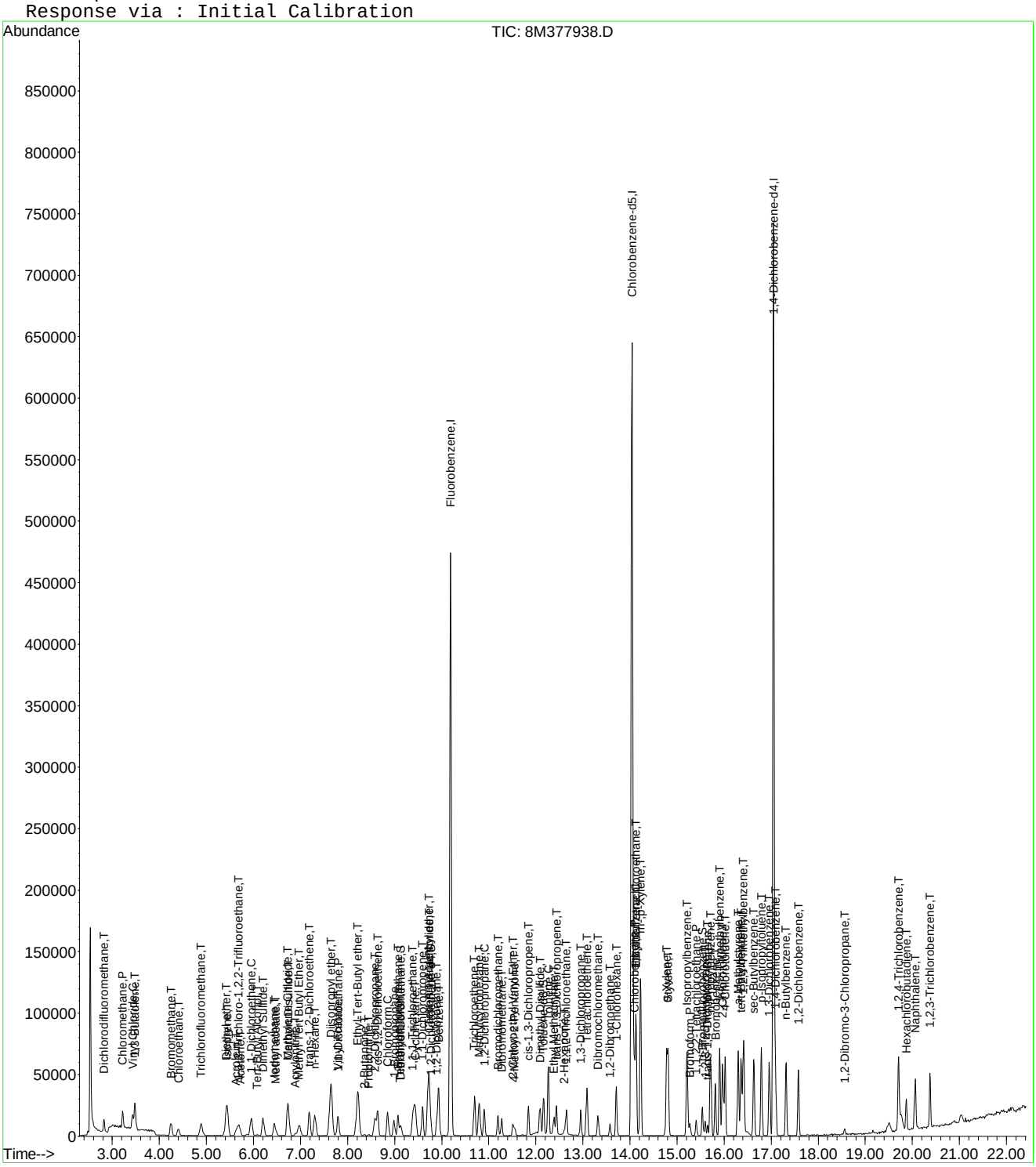
| | Compound | R.T. | QIon | Response | Conc | Unit | Qvalue |
|---|---|---|---|---|---|---|---|
| 45) | 1,2-Dichloroethane | 9.89 | 62 | 14096 | 2.1739 | ug/L | 95 |
| 46) | Benzene | 9.94 | 78 | 50618 | 2.0910 | ug/L | 98 |
| 47) | Trichloroethene | 10.69 | 130 | 17092 | 2.1358 | ug/L | 98 |
| 48) | Methylcyclohexane | 10.80 | 83 | 18455 | 1.9953 | ug/L | 97 |
| 49) | 1,2-Dichloropropane | 10.91 | 63 | 11976 | 2.0333 | ug/L | 97 |
| 50) | Bromodichloromethane | 11.20 | 83 | 15626 | 2.0567 | ug/L | 98 |
| 52) | Dibromomethane | 11.27 | 93 | 6227 | 2.0422 | ug/L | 95 |
| 53) | 2-Chloroethyl Vinyl Ether | 11.52 | 63 | 5092 | 1.8841 | ug/L | 100 |
| 54) | 4-Methyl-2-Pentanone | 11.54 | 58 | 1854 | 1.5162 | ug/L | 83 |
| 55) | cis-1,3-Dichloropropene | 11.84 | 75 | 17506 | 1.9577 | ug/L | 100 |
| 56) | Dimethyl Disulfide | 12.09 | 94 | 17327 | 1.7498 | ug/L | 98 |
| 59) | Toluene | 12.26 | 91 | 60058 | 2.0579 | ug/L | 99 |
| 60) | Ethyl Methacrylate | 12.38 | 69 | 10485 | 2.0596 | ug/L | 96 |
| 62) | trans-1,3-Dichloropropene | 12.44 | 75 | 15700 | 1.9390 | ug/L | 98 |
| 63) | 1,1,2-Trichloroethane | 12.65 | 97 | 9513 | 2.1086 | ug/L | 97 |
| 64) | 2-Hexanone | 12.61 | 58 | 1809 | 1.5988 | ug/L | 75 |
| 65) | 1,3-Dichloropropane | 12.95 | 76 | 14861 | 2.0119 | ug/L | 97 |
| 66) | Tetrachloroethene | 13.08 | 164 | 13788 | 2.0961 | ug/L | 98 |
| 67) | Dibromochloromethane | 13.32 | 129 | 13567 | 2.0460 | ug/L | 99 |
| 68) | 1,2-Dibromoethane | 13.58 | 107 | 9859 | 2.0286 | ug/L | 96 |
| 69) | 1-Chlorohexane | 13.71 | 91 | 19613 | 2.0121 | ug/L | 99 |
| 70) | Chlorobenzene | 14.09 | 112 | 43086 | 2.1130 | ug/L | 89 |
| 71) | 1,1,1,2-Tetrachloroethane | 14.13 | 131 | 15321 | 2.0645 | ug/L | 97 |
| 72) | Ethylbenzene | 14.13 | 106 | 22945 | 2.1183 | ug/L | 93 |
| 73) | m-,p-Xylene | 14.22 | 106 | 57004 | 4.3107 | ug/L | 97 |
| 74) | o-Xylene | 14.78 | 106 | 27709 | 2.0859 | ug/L | 92 |
| 75) | Styrene | 14.81 | 104 | 50591 | 2.1274 | ug/L | 97 |
| 76) | Bromoform | 15.27 | 173 | 7402 | 1.9458 | ug/L | 90 |
| 77) | Isopropylbenzene | 15.21 | 105 | 71591 | 2.1441 | ug/L | 99 |
| 79) | 1,1,2,2-Tetrachloroethane | 15.41 | 83 | 9564 | 2.0849 | ug/L | 98 |
| 81) | 1,2,3-Trichloropropane | 15.60 | 110 | 3232 | 2.1298 | ug/L | 96 |
| 82) | trans-1,4-Dichloro-2-Buten | 15.65 | 53 | 2377 | 1.7900 | ug/L | 83 |
| 83) | n-Propylbenzene | 15.72 | 91 | 78684 | 2.1285 | ug/L | 98 |
| 84) | Bromobenzene | 15.82 | 156 | 19278 | 2.0977 | ug/L | 99 |
| 85) | 1,3,5-Trimethylbenzene | 15.90 | 105 | 58212 | 2.1115 | ug/L | 99 |
| 86) | 2-Chlorotoluene | 15.97 | 91 | 52579 | 2.2359 | ug/L | 95 |
| 87) | 4-Chlorotoluene | 16.02 | 91 | 45035 | 2.0259 | ug/L | 96 |
| 88) | a-Methylstyrene | 16.30 | 118 | 33132 | 2.0211 | ug/L | 100 |
| 89) | tert-Butylbenzene | 16.36 | 134 | 13188 | 2.1636 | ug/L | 97 |
| 90) | 1,2,4-Trimethylbenzene | 16.41 | 105 | 65222 | 2.0859 | ug/L | 92 |
| 91) | sec-Butylbenzene | 16.63 | 105 | 70655 | 2.0959 | ug/L | 99 |
| 92) | p-Isopropyltoluene | 16.79 | 119 | 63980 | 2.1028 | ug/L | 98 |
| 93) | 1,3-Dichlorobenzene | 16.96 | 146 | 38629 | 2.1298 | ug/L | 99 |
| 94) | 1,4-Dichlorobenzene | 17.09 | 146 | 38251 | 2.1015 | ug/L | 85 |
| 95) | n-Butylbenzene | 17.31 | 91 | 49515 | 2.0818 | ug/L | 99 |
| 96) | 1,2-Dichlorobenzene | 17.58 | 146 | 33714 | 2.0853 | ug/L | 99 |
| 97) | 1,2-Dibromo-3-Chloropropan | 18.56 | 75 | 1372 | 1.7376 | ug/L | 82 |
| 98) | 1,2,4-Trichlorobenzene | 19.71 | 182 | 23008 | 2.1133 | ug/L | 96 |
| 99) | Hexachlorobutadiene | 19.87 | 225 | 7896 | 2.0412 | ug/L | 95 |
| 100) | Naphthalene | 20.06 | 128 | 45287 | 2.1256 | ug/L | 98 |
| 101) | 1,2,3-Trichlorobenzene | 20.37 | 180 | 19221 | 2.0600 | ug/L | 98 |

(#) = qualifier out of range (m) = manual integration
8M377938.D 8260WT.M Wed Mar 28 08:23:53 2012 Page 2

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\2\DATA\032712\8M377938.D Vial: 5
Acq On : 27 Mar 2012 12:46 Operator: adc
Sample : WG393321-05 2.0 ug/L STD 8260 Inst : HPMS8
Misc : 1,1 STD50782 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Mar 28 8:21 2012 Quant Results File: 8260WT.RES

Method : C:\MSDCHEM\2\METHODS\8260WT.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 03/27/12 HPMS 8
Last Update : Wed Mar 28 08:18:24 2012
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\2\DATA\032712\8M377939.D Vial: 6
Acq On : 27 Mar 2012 13:17 Operator: adc
Sample : WG393321-06 5.0 ug/L STD 8260 Inst : HPMS8
Misc : 1,1 STD50782 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Mar 28 08:21:07 2012 Quant Results File: 8260WT.RES

Quant Method : C:\MSDCHEM\2\METHODS\8260WT.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 03/27/12 HPMS 8
Last Update : Wed Mar 28 08:18:24 2012
Response via : Initial Calibration
DataAcq Meth : 8260WTR

| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 1) Fluorobenzene | 10.19 | 96 | 650112 | 25.00 | ug/L | 0.00 |
| 57) Chlorobenzene-d5 | 14.04 | 117 | 551628 | 25.00 | ug/L | 0.00 |
| 78) 1,4-Dichlorobenzene-d4 | 17.05 | 152 | 295177 | 25.00 | ug/L | 0.00 |
| **System Monitoring Compounds** | | | | | | |
| 37) Dibromofluoromethane | 9.13 | 111 | 17585 | 2.6072 | ug/L | 0.00 |
| Spiked Amount 25.000 | Range 86 - 118 | | Recovery = 10.44%# | | | |
| 43) 1,2-Dichloroethane-d4 | 9.77 | 65 | 13459 | 2.5914 | ug/L | 0.00 |
| Spiked Amount 25.000 | Range 80 - 120 | | Recovery = 10.36%# | | | |
| 58) Toluene-d8 | 12.16 | 98 | 66859 | 2.6251 | ug/L | 0.00 |
| Spiked Amount 25.000 | Range 88 - 110 | | Recovery = 10.52%# | | | |
| 80) p-Bromofluorobenzene | 15.53 | 95 | 24412 | 2.5566 | ug/L | 0.00 |
| Spiked Amount 25.000 | Range 86 - 115 | | Recovery = 10.24%# | | | |
| **Target Compounds** | | | | | | Qvalue |
| 2) Dichlorodifluoromethane | 2.82 | 85 | 35466 | 5.0156 | ug/L | 99 |
| 3) Chloromethane | 3.22 | 50 | 39338 | 4.8269 | ug/L | 95 |
| 4) Vinyl Chloride | 3.42 | 62 | 34837 | 5.1288 | ug/L | 95 |
| 5) 1,3-Butadiene | 3.48 | 54 | 29443 | 5.7316 | ug/L | 94 |
| 6) Bromomethane | 4.24 | 94 | 25307 | 4.8110 | ug/L | 99 |
| 7) Chloroethane | 4.41 | 64 | 21608 | 4.9382 | ug/L | 96 |
| 8) Trichlorofluoromethane | 4.88 | 101 | 50012 | 4.9865 | ug/L | 99 |
| 9) Diethyl ether | 5.41 | 59 | 37257 | 10.2048 | ug/L | 98 |
| 10) Isoprene | 5.45 | 67 | 39717 | 5.0321 | ug/L | 100 |
| 11) Acrolein | 5.61 | 56 | 3748 | 9.0890 | ug/L | 86 |
| 12) 1,1,2-Trichloro-1,2,2-Trif | 5.67 | 101 | 30227 | 5.0181 | ug/L | 100 |
| 13) Acetone | 5.72 | 43 | 4398 | 4.5849 | ug/L | 98 |
| 14) 1,1-Dichloroethene | 5.96 | 61 | 44722 | 5.1308 | ug/L | 100 |
| 15) Tert-Butyl Alcohol | 6.08 | 59 | 4969 | 19.2389 | ug/L # | 68 |
| 16) Dimethyl Sulfide | 6.21 | 62 | 30110 | 4.9070 | ug/L | 100 |
| 17) Iodomethane | 6.44 | 142 | 49777 | 4.8921 | ug/L | 99 |
| 18) Methyl acetate | 6.47 | 43 | 15069 | 4.9918 | ug/L # | 92 |
| 19) Methylene Chloride | 6.72 | 84 | 32663 | 5.0358 | ug/L | 95 |
| 20) Carbon Disulfide | 6.74 | 76 | 82612 | 4.9328 | ug/L | 100 |
| 21) Acrylonitrile | 6.89 | 53 | 5536 | 4.2633 | ug/L | 97 |
| 22) Methyl Tert Butyl Ether | 6.97 | 73 | 54611 | 4.9206 | ug/L | 99 |
| 23) trans-1,2-Dichloroethene | 7.19 | 61 | 42586 | 5.1738 | ug/L | 99 |
| 24) n-Hexane | 7.30 | 57 | 37012 | 4.9278 | ug/L | 96 |
| 25) Diisopropyl ether | 7.64 | 45 | 199134 | 10.0291 | ug/L | 99 |
| 26) Vinyl Acetate | 7.78 | 43 | 31434 | 4.9287 | ug/L | 97 |
| 27) 1,1-Dichloroethane | 7.80 | 63 | 53810 | 5.1137 | ug/L | 99 |
| 28) Ethyl-Tert-Butyl ether | 8.21 | 59 | 159937 | 9.8287 | ug/L | 100 |
| 29) 2-Butanone | 8.36 | 43 | 6473 | 4.5349 | ug/L | 86 |
| 30) Propionitrile | 8.45 | 54 | 4281 | 10.1224 | ug/L # | 80 |
| 31) 2,2-Dichloropropane | 8.58 | 77 | 44582 | 4.9243 | ug/L | 99 |
| 32) cis-1,2-Dichloroethene | 8.64 | 96 | 35194 | 5.1646 | ug/L | 99 |
| 33) Chloroform | 8.85 | 83 | 54741 | 5.0476 | ug/L | 98 |
| 34) 1-Bromopropane | 8.99 | 122 | 6709 | 4.8652 | ug/L | 91 |
| 35) Bromochloromethane | 9.07 | 130 | 22255 | 5.0708 | ug/L | 95 |
| 36) Tetrahydrofuran | 9.11 | 42 | 9220 | 9.5313 | ug/L | 97 |
| 38) 1,1,1-Trichloroethane | 9.39 | 97 | 50301 | 5.1045 | ug/L | 99 |
| 39) Cyclohexane | 9.43 | 56 | 48828 | 5.0152 | ug/L | 98 |
| 40) 1,1-Dichloropropene | 9.60 | 75 | 42980 | 5.0636 | ug/L | 99 |
| 41) Tert-Amyl-Methyl ether | 9.72 | 73 | 131791 | 9.8969 | ug/L | 100 |
| 42) Carbon Tetrachloride | 9.73 | 117 | 46970 | 5.0947 | ug/L | 99 |

(#) = qualifier out of range (m) = manual integration
8M377939.D 8260WT.M Wed Mar 28 08:26:37 2012 Page 1

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\2\DATA\032712\8M377939.D Vial: 6
Acq On : 27 Mar 2012 13:17 Operator: adc
Sample : WG393321-06 5.0 ug/L STD 8260 Inst : HPMS8
Misc : 1,1 STD50782 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Mar 28 08:21:07 2012 Quant Results File: 8260WT.RES

Quant Method : C:\MSDCHEM\2\METHODS\8260WT.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 03/27/12 HPMS 8
Last Update : Wed Mar 28 08:18:24 2012
Response via : Initial Calibration
DataAcq Meth : 8260WTR

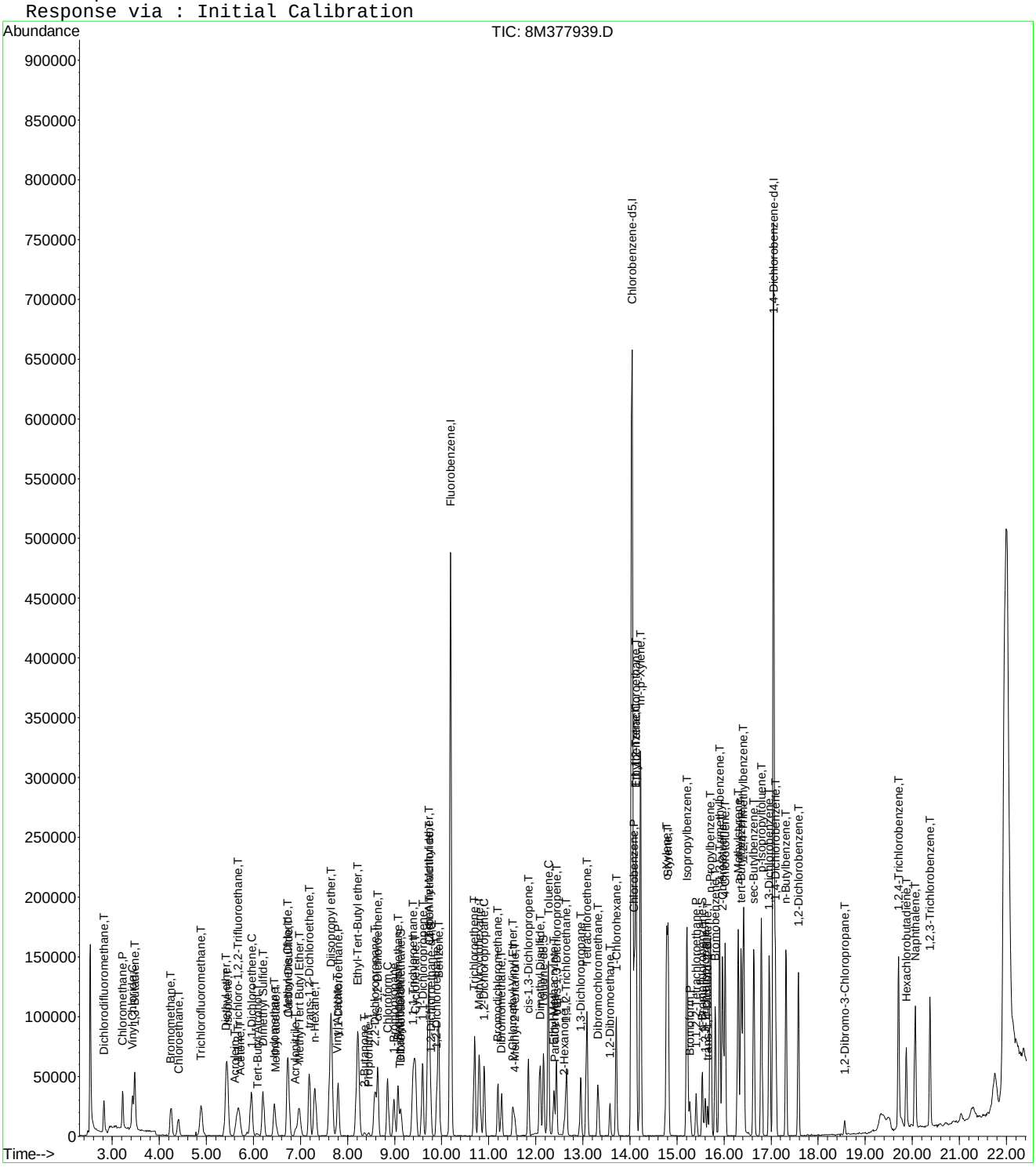
| | Compound | R.T. | QIon | Response | Conc | Unit | Qvalue |
|---|---|---|---|---|---|---|---|
| 45) | 1,2-Dichloroethane | 9.89 | 62 | 33464 | 5.0148 | ug/L | 99 |
| 46) | Benzene | 9.94 | 78 | 123801 | 4.9695 | ug/L | 98 |
| 47) | Trichloroethene | 10.69 | 130 | 42032 | 5.1037 | ug/L | 99 |
| 48) | Methylcyclohexane | 10.80 | 83 | 46930 | 4.9304 | ug/L | 97 |
| 49) | 1,2-Dichloropropane | 10.90 | 63 | 29883 | 4.9301 | ug/L | 97 |
| 50) | Bromodichloromethane | 11.19 | 83 | 39670 | 5.0737 | ug/L | 94 |
| 52) | Dibromomethane | 11.26 | 93 | 15972 | 5.0900 | ug/L | 97 |
| 53) | 2-Chloroethyl Vinyl Ether | 11.51 | 63 | 13491 | 4.8506 | ug/L | 97 |
| 54) | 4-Methyl-2-Pentanone | 11.55 | 58 | 5768 | 4.5836 | ug/L | 89 |
| 55) | cis-1,3-Dichloropropene | 11.84 | 75 | 45505 | 4.9449 | ug/L | 98 |
| 56) | Dimethyl Disulfide | 12.09 | 94 | 47417 | 4.6532 | ug/L | 99 |
| 59) | Toluene | 12.26 | 91 | 148843 | 4.8926 | ug/L | 100 |
| 60) | Ethyl Methacrylate | 12.38 | 69 | 25427 | 4.7914 | ug/L | 100 |
| 61) | Paraldehyde | 12.40 | 89 | 396 | 9.3963 | ug/L | 90 |
| 62) | trans-1,3-Dichloropropene | 12.44 | 75 | 41820 | 4.9548 | ug/L | 98 |
| 63) | 1,1,2-Trichloroethane | 12.65 | 97 | 24636 | 5.2385 | ug/L | 96 |
| 64) | 2-Hexanone | 12.61 | 58 | 5607 | 4.7538 | ug/L | 96 |
| 65) | 1,3-Dichloropropane | 12.95 | 76 | 37593 | 4.8822 | ug/L | 98 |
| 66) | Tetrachloroethene | 13.08 | 164 | 35910 | 5.2371 | ug/L | 98 |
| 67) | Dibromochloromethane | 13.32 | 129 | 35442 | 5.1275 | ug/L | 98 |
| 68) | 1,2-Dibromoethane | 13.58 | 107 | 25152 | 4.9646 | ug/L | 98 |
| 69) | 1-Chlorohexane | 13.71 | 91 | 47371 | 4.6620 | ug/L | 100 |
| 70) | Chlorobenzene | 14.08 | 112 | 109407 | 5.1471 | ug/L | 98 |
| 71) | 1,1,1,2-Tetrachloroethane | 14.13 | 131 | 38713 | 5.0042 | ug/L | 97 |
| 72) | Ethylbenzene | 14.13 | 106 | 58058 | 5.1420 | ug/L | 99 |
| 73) | m-,p-Xylene | 14.22 | 106 | 141277 | 10.2488 | ug/L | 96 |
| 74) | o-Xylene | 14.78 | 106 | 70707 | 5.1062 | ug/L | 96 |
| 75) | Styrene | 14.81 | 104 | 122351 | 4.9355 | ug/L | 98 |
| 76) | Bromoform | 15.27 | 173 | 19075 | 4.8104 | ug/L | 98 |
| 77) | Isopropylbenzene | 15.21 | 105 | 181474 | 5.2138 | ug/L | 98 |
| 79) | 1,1,2,2-Tetrachloroethane | 15.41 | 83 | 24587 | 5.1831 | ug/L | 98 |
| 81) | 1,2,3-Trichloropropane | 15.59 | 110 | 8108 | 5.1668 | ug/L | 97 |
| 82) | trans-1,4-Dichloro-2-Buten | 15.65 | 53 | 6467 | 4.7094 | ug/L | 87 |
| 83) | n-Propylbenzene | 15.71 | 91 | 197025 | 5.1539 | ug/L | 98 |
| 84) | Bromobenzene | 15.81 | 156 | 49811 | 5.2414 | ug/L | 99 |
| 85) | 1,3,5-Trimethylbenzene | 15.90 | 105 | 147633 | 5.1784 | ug/L | 99 |
| 86) | 2-Chlorotoluene | 15.97 | 91 | 129952 | 5.3440 | ug/L | 98 |
| 87) | 4-Chlorotoluene | 16.02 | 91 | 109974 | 4.7841 | ug/L | 99 |
| 88) | a-Methylstyrene | 16.30 | 118 | 80756 | 4.7638 | ug/L | 98 |
| 89) | tert-Butylbenzene | 16.36 | 134 | 33048 | 5.2429 | ug/L | 95 |
| 90) | 1,2,4-Trimethylbenzene | 16.41 | 105 | 156933 | 5.3583 | ug/L | 96 |
| 91) | sec-Butylbenzene | 16.63 | 105 | 177308 | 5.0862 | ug/L | 98 |
| 92) | p-Isopropyltoluene | 16.79 | 119 | 163824 | 5.2068 | ug/L | 98 |
| 93) | 1,3-Dichlorobenzene | 16.96 | 146 | 95745 | 5.1048 | ug/L | 99 |
| 94) | 1,4-Dichlorobenzene | 17.09 | 146 | 94525 | 5.0219 | ug/L | 94 |
| 95) | n-Butylbenzene | 17.31 | 91 | 126150 | 5.1289 | ug/L | 100 |
| 96) | 1,2-Dichlorobenzene | 17.58 | 146 | 85471 | 5.1123 | ug/L | 100 |
| 97) | 1,2-Dibromo-3-Chloropropan | 18.56 | 75 | 4162 | 5.0972 | ug/L | 91 |
| 98) | 1,2,4-Trichlorobenzene | 19.71 | 182 | 56297 | 5.0004 | ug/L | 99 |
| 99) | Hexachlorobutadiene | 19.87 | 225 | 20105 | 5.0259 | ug/L | 98 |
| 100) | Naphthalene | 20.06 | 128 | 112483 | 5.1054 | ug/L | 99 |
| 101) | 1,2,3-Trichlorobenzene | 20.37 | 180 | 48723 | 5.0497 | ug/L | 99 |

(#) = qualifier out of range (m) = manual integration
8M377939.D 8260WT.M Wed Mar 28 08:26:37 2012 Page 2

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\2\DATA\032712\8M377939.D Vial: 6
Acq On : 27 Mar 2012 13:17 Operator: adc
Sample : WG393321-06 5.0 ug/L STD 8260 Inst : HPMS8
Misc : 1,1 STD50782 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Mar 28 8:21 2012 Quant Results File: 8260WT.RES

Method : C:\MSDCHEM\2\METHODS\8260WT.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 03/27/12 HPMS 8
Last Update : Wed Mar 28 08:18:24 2012
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\2\DATA\032712\8M377940.D Vial: 7
Acq On : 27 Mar 2012 13:48 Operator: adc
Sample : WG393321-07 20.0 ug/L STD 8260 Inst : HPMS8
Misc : 1,1 STD50782 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Mar 28 08:26:54 2012 Quant Results File: 8260WT.RES

Quant Method : C:\MSDCHEM\2\METHODS\8260WT.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 03/27/12 HPMS 8
Last Update : Wed Mar 28 08:18:24 2012
Response via : Initial Calibration
DataAcq Meth : 8260WTR

| Internal Standards | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| 1) Fluorobenzene | 10.18 | 96 | 658958 | 25.00 ug/L | 0.00 |
| 57) Chlorobenzene-d5 | 14.04 | 117 | 551915 | 25.00 ug/L | 0.00 |
| 78) 1,4-Dichlorobenzene-d4 | 17.05 | 152 | 291488 | 25.00 ug/L | 0.00 |
| **System Monitoring Compounds** | | | | | |
| 37) Dibromofluoromethane | 9.14 | 111 | 65071 | 9.5182 ug/L | 0.00 |
| Spiked Amount 25.000 | Range 86 - 118 | | Recovery = 38.08%# | | |
| 43) 1,2-Dichloroethane-d4 | 9.77 | 65 | 51143 | 9.7148 ug/L | 0.00 |
| Spiked Amount 25.000 | Range 80 - 120 | | Recovery = 38.84%# | | |
| 58) Toluene-d8 | 12.17 | 98 | 255470 | 10.0252 ug/L | 0.00 |
| Spiked Amount 25.000 | Range 88 - 110 | | Recovery = 40.12%# | | |
| 80) p-Bromofluorobenzene | 15.54 | 95 | 96219 | 10.2042 ug/L | 0.00 |
| Spiked Amount 25.000 | Range 86 - 115 | | Recovery = 40.80%# | | |
| **Target Compounds** | | | | | Qvalue |
| 2) Dichlorodifluoromethane | 2.82 | 85 | 145852 | 20.3494 ug/L | 100 |
| 3) Chloromethane | 3.21 | 50 | 154167 | 18.6627 ug/L | 99 |
| 4) Vinyl Chloride | 3.42 | 62 | 132611 | 19.2614 ug/L | 99 |
| 5) 1,3-Butadiene | 3.46 | 54 | 92981 | 21.9114 ug/L | 99 |
| 6) Bromomethane | 4.25 | 94 | 105091 | 19.7100 ug/L | 100 |
| 7) Chloroethane | 4.40 | 64 | 89320 | 20.1386 ug/L | 100 |
| 8) Trichlorofluoromethane | 4.89 | 101 | 206471 | 20.3100 ug/L | 99 |
| 9) Diethyl ether | 5.42 | 59 | 299643 | 80.9711 ug/L | 99 |
| 10) Isoprene | 5.45 | 67 | 163145 | 20.3929 ug/L | 100 |
| 11) Acrolein | 5.61 | 56 | 15869 | 37.9662 ug/L | 94 |
| 12) 1,1,2-Trichloro-1,2,2-Trif | 5.68 | 101 | 122526 | 20.0680 ug/L | 98 |
| 13) Acetone | 5.72 | 43 | 19393 | 19.9456 ug/L | 96 |
| 14) 1,1-Dichloroethene | 5.95 | 61 | 178585 | 20.2136 ug/L | 99 |
| 15) Tert-Butyl Alcohol | 6.08 | 59 | 43153 | 145.2888 ug/L | 94 |
| 16) Dimethyl Sulfide | 6.20 | 62 | 122405 | 19.6806 ug/L | 97 |
| 17) Iodomethane | 6.44 | 142 | 222340 | 21.5584 ug/L | 99 |
| 18) Methyl acetate | 6.48 | 43 | 61739 | 20.1772 ug/L | 97 |
| 19) Methylene Chloride | 6.72 | 84 | 128209 | 19.5011 ug/L | 99 |
| 20) Carbon Disulfide | 6.75 | 76 | 351063 | 20.6806 ug/L | 100 |
| 21) Acrylonitrile | 6.90 | 53 | 26531 | 20.1573 ug/L | 100 |
| 22) Methyl Tert Butyl Ether | 6.97 | 73 | 227317 | 20.2070 ug/L | 99 |
| 23) trans-1,2-Dichloroethene | 7.18 | 61 | 168148 | 20.1540 ug/L | 99 |
| 24) n-Hexane | 7.31 | 57 | 160706 | 21.1093 ug/L | 98 |
| 25) Diisopropyl ether | 7.64 | 45 | 1632609 | 81.1201 ug/L | 100 |
| 26) Vinyl Acetate | 7.78 | 43 | 130351 | 20.1640 ug/L | 100 |
| 27) 1,1-Dichloroethane | 7.79 | 63 | 206258 | 19.3381 ug/L | 100 |
| 28) Ethyl-Tert-Butyl ether | 8.22 | 59 | 1340096 | 81.2484 ug/L | 99 |
| 29) 2-Butanone | 8.36 | 43 | 28040 | 19.3806 ug/L | 97 |
| 30) Propionitrile | 8.45 | 54 | 36997 | 76.1582 ug/L | 97 |
| 31) 2,2-Dichloropropane | 8.58 | 77 | 177674 | 19.3614 ug/L | 100 |
| 32) cis-1,2-Dichloroethene | 8.64 | 96 | 138125 | 19.9971 ug/L | 98 |
| 33) Chloroform | 8.85 | 83 | 207579 | 18.8838 ug/L | 100 |
| 34) 1-Bromopropane | 8.99 | 122 | 28757 | 20.5738 ug/L | 98 |
| 35) Bromochloromethane | 9.07 | 130 | 89176 | 20.0458 ug/L | 98 |
| 36) Tetrahydrofuran | 9.11 | 42 | 77081 | 78.6136 ug/L | 98 |
| 38) 1,1,1-Trichloroethane | 9.39 | 97 | 197584 | 19.7814 ug/L | 100 |
| 39) Cyclohexane | 9.44 | 56 | 198713 | 20.1361 ug/L | 99 |
| 40) 1,1-Dichloropropene | 9.59 | 75 | 171147 | 19.8926 ug/L | 100 |
| 41) Tert-Amyl-Methyl ether | 9.72 | 73 | 1080161 | 80.0265 ug/L | 99 |
| 42) Carbon Tetrachloride | 9.73 | 117 | 183251 | 19.6100 ug/L | 99 |

(#) = qualifier out of range (m) = manual integration
8M377940.D 8260WT.M Wed Mar 28 08:26:55 2012 Page 1

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\2\DATA\032712\8M377940.D Vial: 7
Acq On : 27 Mar 2012 13:48 Operator: adc
Sample : WG393321-07 20.0 ug/L STD 8260 Inst : HPMS8
Misc : 1,1 STD50782 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Mar 28 08:26:54 2012 Quant Results File: 8260WT.RES

Quant Method : C:\MSDCHEM\2\METHODS\8260WT.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 03/27/12 HPMS 8
Last Update : Wed Mar 28 08:18:24 2012
Response via : Initial Calibration
DataAcq Meth : 8260WTR

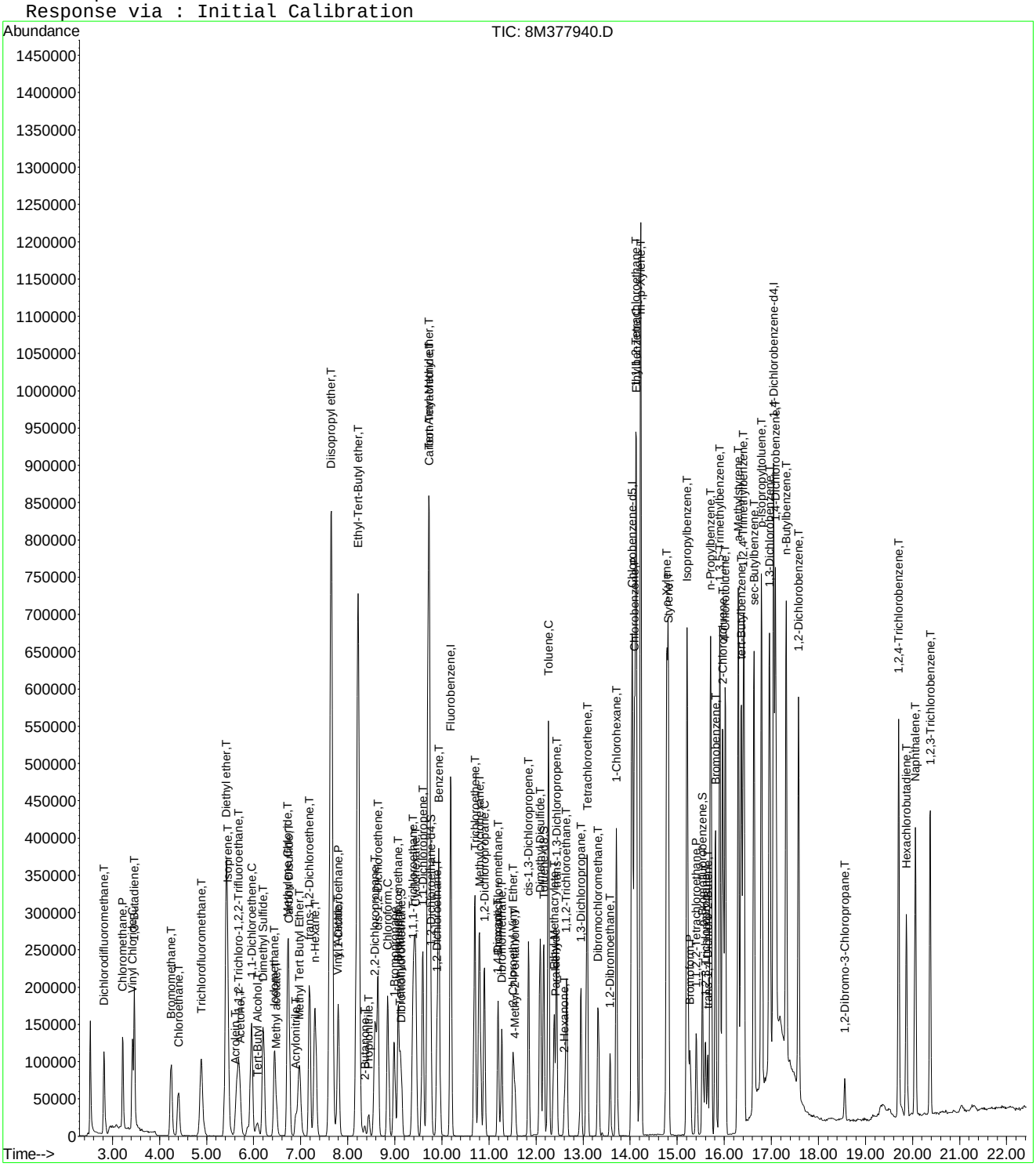
| | Compound | R.T. | QIon | Response | Conc | Unit | Qvalue |
|---|---|---|---|---|---|---|---|
| 45) | 1,2-Dichloroethane | 9.89 | 62 | 131379 | 19.4236 | ug/L | 99 |
| 46) | Benzene | 9.94 | 78 | 486251 | 19.2566 | ug/L | 99 |
| 47) | Trichloroethene | 10.70 | 130 | 166438 | 19.9382 | ug/L | 99 |
| 48) | Methylcyclohexane | 10.80 | 83 | 194100 | 20.1181 | ug/L | 99 |
| 49) | 1,2-Dichloropropane | 10.91 | 63 | 122795 | 19.9869 | ug/L | 100 |
| 50) | Bromodichloromethane | 11.20 | 83 | 152088 | 19.1906 | ug/L | 100 |
| 51) | 1,4-Dioxane | 11.19 | 88 | 5332 | 151.3927 | ug/L | 90 |
| 52) | Dibromomethane | 11.27 | 93 | 64680 | 20.3357 | ug/L | 99 |
| 53) | 2-Chloroethyl Vinyl Ether | 11.52 | 63 | 57551 | 20.4145 | ug/L | 98 |
| 54) | 4-Methyl-2-Pentanone | 11.55 | 58 | 25405 | 19.9171 | ug/L | 98 |
| 55) | cis-1,3-Dichloropropene | 11.84 | 75 | 184708 | 19.8023 | ug/L | 100 |
| 56) | Dimethyl Disulfide | 12.09 | 94 | 213257 | 20.6467 | ug/L | 99 |
| 59) | Toluene | 12.26 | 91 | 563918 | 18.5269 | ug/L | 100 |
| 60) | Ethyl Methacrylate | 12.39 | 69 | 107652 | 20.2750 | ug/L | 100 |
| 61) | Paraldehyde | 12.42 | 89 | 7654 | 80.6298 | ug/L | 73 |
| 62) | trans-1,3-Dichloropropene | 12.44 | 75 | 165517 | 19.5999 | ug/L | 99 |
| 63) | 1,1,2-Trichloroethane | 12.64 | 97 | 94503 | 20.0843 | ug/L | 98 |
| 64) | 2-Hexanone | 12.60 | 58 | 23616 | 20.0121 | ug/L | 100 |
| 65) | 1,3-Dichloropropane | 12.95 | 76 | 150848 | 19.5806 | ug/L | 99 |
| 66) | Tetrachloroethene | 13.09 | 164 | 135857 | 19.8031 | ug/L | 99 |
| 67) | Dibromochloromethane | 13.32 | 129 | 138740 | 20.0614 | ug/L | 99 |
| 68) | 1,2-Dibromoethane | 13.57 | 107 | 100227 | 19.7729 | ug/L | 99 |
| 69) | 1-Chlorohexane | 13.71 | 91 | 194400 | 19.1219 | ug/L | 99 |
| 70) | Chlorobenzene | 14.09 | 112 | 412531 | 19.3977 | ug/L | 99 |
| 71) | 1,1,1,2-Tetrachloroethane | 14.12 | 131 | 152408 | 19.6908 | ug/L | 100 |
| 72) | Ethylbenzene | 14.13 | 106 | 218738 | 19.3627 | ug/L | 97 |
| 73) | m-,p-Xylene | 14.23 | 106 | 540568 | 39.1946 | ug/L | 99 |
| 74) | o-Xylene | 14.77 | 106 | 271084 | 19.5664 | ug/L | 98 |
| 75) | Styrene | 14.82 | 104 | 461535 | 18.6082 | ug/L | 99 |
| 76) | Bromoform | 15.27 | 173 | 79255 | 19.9762 | ug/L | 97 |
| 77) | Isopropylbenzene | 15.21 | 105 | 680772 | 19.5486 | ug/L | 100 |
| 79) | 1,1,2,2-Tetrachloroethane | 15.40 | 83 | 94344 | 20.1402 | ug/L | 99 |
| 81) | 1,2,3-Trichloropropane | 15.60 | 110 | 30839 | 19.9008 | ug/L | 89 |
| 82) | trans-1,4-Dichloro-2-Buten | 15.65 | 53 | 28623 | 21.1077 | ug/L | 98 |
| 83) | n-Propylbenzene | 15.71 | 91 | 752502 | 19.9334 | ug/L | 99 |
| 84) | Bromobenzene | 15.82 | 156 | 188409 | 20.0763 | ug/L | 100 |
| 85) | 1,3,5-Trimethylbenzene | 15.90 | 105 | 564424 | 20.0484 | ug/L | 100 |
| 86) | 2-Chlorotoluene | 15.97 | 91 | 466198 | 19.4139 | ug/L | 99 |
| 87) | 4-Chlorotoluene | 16.01 | 91 | 443045 | 19.5172 | ug/L | 99 |
| 88) | a-Methylstyrene | 16.29 | 118 | 349168 | 20.8583 | ug/L | 99 |
| 89) | tert-Butylbenzene | 16.37 | 134 | 124075 | 19.9331 | ug/L | 98 |
| 90) | 1,2,4-Trimethylbenzene | 16.41 | 105 | 579739 | 21.0882 | ug/L | 99 |
| 91) | sec-Butylbenzene | 16.64 | 105 | 673947 | 19.5772 | ug/L | 99 |
| 92) | p-Isopropyltoluene | 16.79 | 119 | 613957 | 19.7604 | ug/L | 99 |
| 93) | 1,3-Dichlorobenzene | 16.97 | 146 | 359656 | 19.4185 | ug/L | 97 |
| 94) | 1,4-Dichlorobenzene | 17.09 | 146 | 361083 | 19.4261 | ug/L | 99 |
| 95) | n-Butylbenzene | 17.32 | 91 | 473080 | 19.4774 | ug/L | 99 |
| 96) | 1,2-Dichlorobenzene | 17.58 | 146 | 323648 | 19.6033 | ug/L | 98 |
| 97) | 1,2-Dibromo-3-Chloropropan | 18.56 | 75 | 15918 | 19.7415 | ug/L | 91 |
| 98) | 1,2,4-Trichlorobenzene | 19.71 | 182 | 215694 | 19.4008 | ug/L | 99 |
| 99) | Hexachlorobutadiene | 19.87 | 225 | 79006 | 20.0002 | ug/L | 99 |
| 100) | Naphthalene | 20.06 | 128 | 422223 | 19.4064 | ug/L | 100 |
| 101) | 1,2,3-Trichlorobenzene | 20.38 | 180 | 186604 | 19.5844 | ug/L | 99 |

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

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\2\DATA\032712\8M377940.D Vial: 7
Acq On : 27 Mar 2012 13:48 Operator: adc
Sample : WG393321-07 20.0 ug/L STD 8260 Inst : HPMS8
Misc : 1,1 STD50782 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Mar 28 8:26 2012 Quant Results File: 8260WT.RES

Method : C:\MSDCHEM\2\METHODS\8260WT.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 03/27/12 HPMS 8
Last Update : Wed Mar 28 08:18:24 2012
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\032712\8M377941.D Vial: 8
Acq On : 27 Mar 2012 14:18 Operator: adc
Sample : WG393321-08 50.0 ug/L STD 8260 Inst : HPMS8
Misc : 1,1 STD50782 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Mar 28 08:26:56 2012 Quant Results File: 8260WT.RES

Quant Method : C:\MSDCHEM\2\METHODS\8260WT.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 03/27/12 HPMS 8
Last Update : Wed Mar 28 08:18:24 2012
Response via : Initial Calibration
DataAcq Meth : 8260WTR

| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 1) Fluorobenzene | 10.18 | 96 | 645452 | 25.00 | ug/L | 0.00 |
| 57) Chlorobenzene-d5 | 14.04 | 117 | 545860 | 25.00 | ug/L | 0.00 |
| 78) 1,4-Dichlorobenzene-d4 | 17.05 | 152 | 297011 | 25.00 | ug/L | 0.00 |
| **System Monitoring Compounds** | | | | | | |
| 37) Dibromofluoromethane | 9.14 | 111 | 165041 | 24.6463 | ug/L | 0.00 |
| Spiked Amount 25.000 | Range 86 - 118 | | Recovery = 98.60% | | | |
| 43) 1,2-Dichloroethane-d4 | 9.77 | 65 | 129320 | 25.0788 | ug/L | 0.00 |
| Spiked Amount 25.000 | Range 80 - 120 | | Recovery = 100.32% | | | |
| 58) Toluene-d8 | 12.17 | 98 | 645095 | 25.5957 | ug/L | 0.00 |
| Spiked Amount 25.000 | Range 88 - 110 | | Recovery = 102.40% | | | |
| 80) p-Bromofluorobenzene | 15.54 | 95 | 245500 | 25.5515 | ug/L | 0.00 |
| Spiked Amount 25.000 | Range 86 - 115 | | Recovery = 102.20% | | | |
| **Target Compounds** | | | | | | Qvalue |
| 2) Dichlorodifluoromethane | 2.82 | 85 | 358360 | 51.0450 | ug/L | 100 |
| 3) Chloromethane | 3.21 | 50 | 376343 | 46.5115 | ug/L | 100 |
| 4) Vinyl Chloride | 3.42 | 62 | 309746 | 45.9311 | ug/L | 100 |
| 5) 1,3-Butadiene | 3.46 | 54 | 209636 | 52.9301 | ug/L | 100 |
| 6) Bromomethane | 4.24 | 94 | 259975 | 49.7791 | ug/L | 100 |
| 7) Chloroethane | 4.39 | 64 | 218083 | 50.1992 | ug/L | 100 |
| 8) Trichlorofluoromethane | 4.88 | 101 | 479111 | 48.1151 | ug/L | 100 |
| 9) Diethyl ether | 5.42 | 59 | 359285 | 99.1195 | ug/L | 100 |
| 10) Isoprene | 5.44 | 67 | 391000 | 49.8971 | ug/L | 100 |
| 11) Acrolein | 5.61 | 56 | 41636 | 101.6976 | ug/L | 100 |
| 12) 1,1,2-Trichloro-1,2,2-Trif | 5.66 | 101 | 285773 | 47.7850 | ug/L | 100 |
| 13) Acetone | 5.72 | 43 | 51984 | 54.5841 | ug/L | 100 |
| 14) 1,1-Dichloroethene | 5.94 | 61 | 425297 | 49.1455 | ug/L | 100 |
| 15) Tert-Butyl Alcohol | 6.09 | 59 | 54997 | 188.2622 | ug/L | 100 |
| 16) Dimethyl Sulfide | 6.20 | 62 | 308796 | 50.6879 | ug/L | 100 |
| 17) Iodomethane | 6.44 | 142 | 556886 | 55.1263 | ug/L | 100 |
| 18) Methyl acetate | 6.48 | 43 | 150526 | 50.2234 | ug/L | 100 |
| 19) Methylene Chloride | 6.72 | 84 | 321299 | 49.8935 | ug/L | 100 |
| 20) Carbon Disulfide | 6.75 | 76 | 897752 | 53.9918 | ug/L | 100 |
| 21) Acrylonitrile | 6.90 | 53 | 69556 | 53.9520 | ug/L | 100 |
| 22) Methyl Tert Butyl Ether | 6.97 | 73 | 550168 | 49.9296 | ug/L | 100 |
| 23) trans-1,2-Dichloroethene | 7.18 | 61 | 415851 | 50.8863 | ug/L | 100 |
| 24) n-Hexane | 7.30 | 57 | 378932 | 50.8155 | ug/L | 100 |
| 25) Diisopropyl ether | 7.65 | 45 | 1971520 | 100.0095 | ug/L | 100 |
| 26) Vinyl Acetate | 7.78 | 43 | 326467 | 51.5580 | ug/L | 100 |
| 27) 1,1-Dichloroethane | 7.79 | 63 | 517336 | 49.5188 | ug/L | 100 |
| 28) Ethyl-Tert-Butyl ether | 8.22 | 59 | 1649675 | 102.1107 | ug/L | 100 |
| 29) 2-Butanone | 8.36 | 43 | 74286 | 52.4193 | ug/L | 100 |
| 30) Propionitrile | 8.45 | 54 | 50353 | 105.2952 | ug/L | 100 |
| 31) 2,2-Dichloropropane | 8.59 | 77 | 440655 | 49.0235 | ug/L | 100 |
| 32) cis-1,2-Dichloroethene | 8.64 | 96 | 341607 | 50.4912 | ug/L | 100 |
| 33) Chloroform | 8.85 | 83 | 525306 | 48.7878 | ug/L | 100 |
| 34) 1-Bromopropane | 8.98 | 122 | 72454 | 52.9208 | ug/L | 100 |
| 35) Bromochloromethane | 9.07 | 130 | 222661 | 51.0992 | ug/L | 100 |
| 36) Tetrahydrofuran | 9.11 | 42 | 101409 | 105.5894 | ug/L | 100 |
| 38) 1,1,1-Trichloroethane | 9.39 | 97 | 488432 | 49.9232 | ug/L | 100 |
| 39) Cyclohexane | 9.43 | 56 | 483887 | 50.0595 | ug/L | 100 |
| 40) 1,1-Dichloropropene | 9.59 | 75 | 425849 | 50.5327 | ug/L | 100 |
| 41) Tert-Amyl-Methyl ether | 9.72 | 73 | 1342188 | 101.5202 | ug/L | 100 |
| 42) Carbon Tetrachloride | 9.73 | 117 | 452904 | 49.4800 | ug/L | 100 |
| 45) 1,2-Dichloroethane | 9.89 | 62 | 332637 | 50.2076 | ug/L | 100 |

(#) = qualifier out of range (m) = manual integration
8M377941.D 8260WT.M Tue May 15 08:50:31 2012 Page 1

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\032712\8M377941.D Vial: 8
Acq On : 27 Mar 2012 14:18 Operator: adc
Sample : WG393321-08 50.0 ug/L STD 8260 Inst : HPMS8
Misc : 1,1 STD50782 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Mar 28 08:26:56 2012 Quant Results File: 8260WT.RES

Quant Method : C:\MSDCHEM\2\METHODS\8260WT.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 03/27/12 HPMS 8
Last Update : Wed Mar 28 08:18:24 2012
Response via : Initial Calibration
DataAcq Meth : 8260WTR

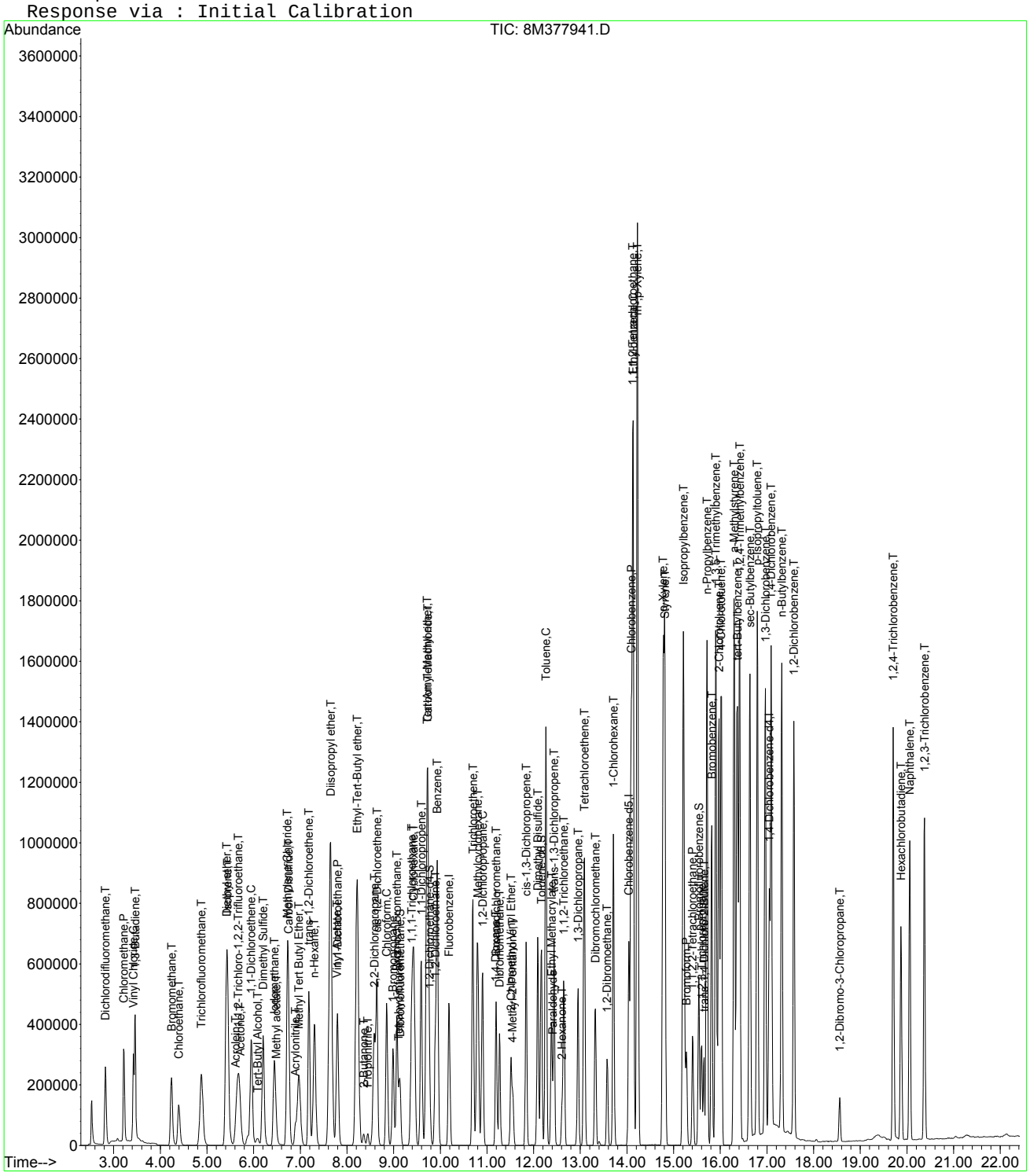
| | Compound | R.T. | QIon | Response | Conc | Unit | Qvalue |
|---|---|---|---|---|---|---|---|
| 46) | Benzene | 9.93 | 78 | 1197087 | 48.3993 | ug/L | 100 |
| 47) | Trichloroethene | 10.70 | 130 | 413168 | 50.5304 | ug/L | 100 |
| 48) | Methylcyclohexane | 10.80 | 83 | 470126 | 49.7472 | ug/L | 100 |
| 49) | 1,2-Dichloropropane | 10.91 | 63 | 309013 | 51.3495 | ug/L | 100 |
| 50) | Bromodichloromethane | 11.20 | 83 | 393424 | 50.6813 | ug/L | 100 |
| 51) | 1,4-Dioxane | 11.19 | 88 | 6791 | 196.8531 | ug/L | 100 |
| 52) | Dibromomethane | 11.27 | 93 | 168112 | 53.9611 | ug/L | 100 |
| 53) | 2-Chloroethyl Vinyl Ether | 11.52 | 63 | 149884 | 54.2793 | ug/L | 100 |
| 54) | 4-Methyl-2-Pentanone | 11.55 | 58 | 67629 | 54.1295 | ug/L | 100 |
| 55) | cis-1,3-Dichloropropene | 11.84 | 75 | 478335 | 52.3547 | ug/L | 100 |
| 56) | Dimethyl Disulfide | 12.09 | 94 | 561147 | 55.4648 | ug/L | 100 |
| 59) | Toluene | 12.26 | 91 | 1409592 | 46.8244 | ug/L | 100 |
| 60) | Ethyl Methacrylate | 12.39 | 69 | 274885 | 52.3457 | ug/L | 100 |
| 61) | Paraldehyde | 12.41 | 89 | 10484 | 109.5470 | ug/L | 100 |
| 62) | trans-1,3-Dichloropropene | 12.44 | 75 | 428724 | 51.3311 | ug/L | 100 |
| 63) | 1,1,2-Trichloroethane | 12.64 | 97 | 241421 | 51.8772 | ug/L | 100 |
| 64) | 2-Hexanone | 12.60 | 58 | 61486 | 52.6810 | ug/L | 100 |
| 65) | 1,3-Dichloropropane | 12.95 | 76 | 385826 | 50.6370 | ug/L | 100 |
| 66) | Tetrachloroethene | 13.09 | 164 | 338467 | 49.8836 | ug/L | 100 |
| 67) | Dibromochloromethane | 13.33 | 129 | 365911 | 53.4965 | ug/L | 100 |
| 68) | 1,2-Dibromoethane | 13.57 | 107 | 258444 | 51.5517 | ug/L | 100 |
| 69) | 1-Chlorohexane | 13.71 | 91 | 482005 | 47.9376 | ug/L | 100 |
| 70) | Chlorobenzene | 14.09 | 112 | 1032836 | 49.1038 | ug/L | 100 |
| 71) | 1,1,1,2-Tetrachloroethane | 14.12 | 131 | 389414 | 50.8696 | ug/L | 100 |
| 72) | Ethylbenzene | 14.13 | 106 | 555627 | 49.7296 | ug/L | 100 |
| 73) | m-,p-Xylene | 14.23 | 106 | 1346622 | 98.7216 | ug/L | 100 |
| 74) | o-Xylene | 14.77 | 106 | 690232 | 50.3724 | ug/L | 100 |
| 75) | Styrene | 14.82 | 104 | 1157806 | 47.1983 | ug/L | 100 |
| 76) | Bromoform | 15.27 | 173 | 209155 | 53.3024 | ug/L | 100 |
| 77) | Isopropylbenzene | 15.21 | 105 | 1701146 | 49.3907 | ug/L | 100 |
| 79) | 1,1,2,2-Tetrachloroethane | 15.40 | 83 | 245951 | 51.5283 | ug/L | 100 |
| 81) | 1,2,3-Trichloropropane | 15.60 | 110 | 81185 | 51.4154 | ug/L | 100 |
| 82) | trans-1,4-Dichloro-2-Buten | 15.65 | 53 | 75771 | 54.8373 | ug/L | 100 |
| 83) | n-Propylbenzene | 15.71 | 91 | 1882433 | 48.9376 | ug/L | 100 |
| 84) | Bromobenzene | 15.82 | 156 | 476522 | 49.8327 | ug/L | 100 |
| 85) | 1,3,5-Trimethylbenzene | 15.90 | 105 | 1418867 | 49.4611 | ug/L | 100 |
| 86) | 2-Chlorotoluene | 15.97 | 91 | 1164321 | 47.5842 | ug/L | 100 |
| 87) | 4-Chlorotoluene | 16.01 | 91 | 1127938 | 48.7645 | ug/L | 100 |
| 88) | a-Methylstyrene | 16.29 | 118 | 868777 | 50.9331 | ug/L | 100 |
| 89) | tert-Butylbenzene | 16.37 | 134 | 316128 | 49.8428 | ug/L | 100 |
| 90) | 1,2,4-Trimethylbenzene | 16.42 | 105 | 1455994 | 52.5348 | ug/L | 100 |
| 91) | sec-Butylbenzene | 16.63 | 105 | 1692615 | 48.2538 | ug/L | 100 |
| 92) | p-Isopropyltoluene | 16.79 | 119 | 1562677 | 49.3600 | ug/L | 100 |
| 93) | 1,3-Dichlorobenzene | 16.97 | 146 | 923760 | 48.9481 | ug/L | 100 |
| 94) | 1,4-Dichlorobenzene | 17.09 | 146 | 923928 | 48.7826 | ug/L | 100 |
| 95) | n-Butylbenzene | 17.32 | 91 | 1204638 | 48.6745 | ug/L | 100 |
| 96) | 1,2-Dichlorobenzene | 17.58 | 146 | 835657 | 49.6743 | ug/L | 100 |
| 97) | 1,2-Dibromo-3-Chloropropan | 18.56 | 75 | 43784 | 53.2912 | ug/L | 100 |
| 98) | 1,2,4-Trichlorobenzene | 19.71 | 182 | 552746 | 48.7927 | ug/L | 100 |
| 99) | Hexachlorobutadiene | 19.87 | 225 | 205121 | 50.9604 | ug/L | 100 |
| 100) | Naphthalene | 20.06 | 128 | 1093329 | 49.3177 | ug/L | 100 |
| 101) | 1,2,3-Trichlorobenzene | 20.38 | 180 | 475318 | 48.9579 | ug/L | 100 |

(#) = qualifier out of range (m) = manual integration
8M377941.D 8260WT.M Tue May 15 08:50:31 2012 Page 2

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\032712\8M377941.D Vial: 8
Acq On : 27 Mar 2012 14:18 Operator: adc
Sample : WG393321-08 50.0 ug/L STD 8260 Inst : HPMS8
Misc : 1,1 STD50782 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Mar 28 8:26 2012 Quant Results File: 8260WT.RES

Method : C:\MSDCHEM\1\METHODS\8260WT.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 03/27/12 HPMS 8
Last Update : Wed Mar 28 08:18:24 2012
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\2\DATA\032712\8M377942.D Vial: 9
Acq On : 27 Mar 2012 14:49 Operator: adc
Sample : WG393321-09 100.0 ug/L STD 8260 Inst : HPMS8
Misc : 1,1 STD50782 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Mar 28 08:26:58 2012 Quant Results File: 8260WT.RES

Quant Method : C:\MSDCHEM\2\METHODS\8260WT.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 03/27/12 HPMS 8
Last Update : Wed Mar 28 08:18:24 2012
Response via : Initial Calibration
DataAcq Meth : 8260WTR

| Internal Standards | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| 1) Fluorobenzene | 10.18 | 96 | 634310 | 25.00 ug/L | 0.00 |
| 57) Chlorobenzene-d5 | 14.04 | 117 | 532594 | 25.00 ug/L | 0.00 |
| 78) 1,4-Dichlorobenzene-d4 | 17.05 | 152 | 288699 | 25.00 ug/L | 0.00 |
| **System Monitoring Compounds** | | | | | |
| 37) Dibromofluoromethane | 9.14 | 111 | 315635 | 47.9631 ug/L | 0.00 |
| Spiked Amount 25.000 | Range 86 - 118 | | Recovery = 191.84%# | | |
| 43) 1,2-Dichloroethane-d4 | 9.77 | 65 | 248319 | 49.0020 ug/L | 0.00 |
| Spiked Amount 25.000 | Range 80 - 120 | | Recovery = 196.00%# | | |
| 58) Toluene-d8 | 12.17 | 98 | 1193976 | 48.5539 ug/L | 0.00 |
| Spiked Amount 25.000 | Range 88 - 110 | | Recovery = 194.20%# | | |
| 80) p-Bromofluorobenzene | 15.54 | 95 | 453918 | 48.6037 ug/L | 0.00 |
| Spiked Amount 25.000 | Range 86 - 115 | | Recovery = 194.40%# | | |
| **Target Compounds** | | | | | Qvalue |
| 2) Dichlorodifluoromethane | 2.82 | 85 | 643914 | 93.3305 ug/L | 98 |
| 3) Chloromethane | 3.21 | 50 | 718868 | 90.4041 ug/L | 99 |
| 4) Vinyl Chloride | 3.42 | 62 | 583252 | 88.0076 ug/L | 100 |
| 5) 1,3-Butadiene | 3.45 | 54 | 366515 | 95.6583 ug/L | 99 |
| 6) Bromomethane | 4.23 | 94 | 501584 | 97.7286 ug/L | 99 |
| 7) Chloroethane | 4.39 | 64 | 413704 | 96.9007 ug/L | 100 |
| 8) Trichlorofluoromethane | 4.87 | 101 | 871606 | 89.0692 ug/L | 99 |
| 9) Diethyl ether | 5.42 | 59 | 668232 | 187.5900 ug/L | 99 |
| 10) Isoprene | 5.44 | 67 | 718510 | 93.3025 ug/L | 99 |
| 11) Acrolein | 5.61 | 56 | 79130 | 196.6733 ug/L | 92 |
| 12) 1,1,2-Trichloro-1,2,2-Trif | 5.66 | 101 | 535282 | 91.0785 ug/L | 98 |
| 13) Acetone | 5.73 | 43 | 94895 | 101.3917 ug/L | 100 |
| 14) 1,1-Dichloroethene | 5.94 | 61 | 780567 | 91.7834 ug/L | 100 |
| 15) Tert-Butyl Alcohol | 6.10 | 59 | 113388 | 392.1247 ug/L | 93 |
| 16) Dimethyl Sulfide | 6.20 | 62 | 577264 | 96.4206 ug/L | 100 |
| 17) Iodomethane | 6.44 | 142 | 1025366 | 103.2843 ug/L | 100 |
| 18) Methyl acetate | 6.48 | 43 | 289123 | 98.1611 ug/L | 99 |
| 19) Methylene Chloride | 6.72 | 84 | 595600 | 94.1135 ug/L | 99 |
| 20) Carbon Disulfide | 6.74 | 76 | 1667643 | 102.0556 ug/L | 99 |
| 21) Acrylonitrile | 6.90 | 53 | 130119 | 102.7013 ug/L | 100 |
| 22) Methyl Tert Butyl Ether | 6.97 | 73 | 1020779 | 94.2665 ug/L | 100 |
| 23) trans-1,2-Dichloroethene | 7.18 | 61 | 791835 | 98.5962 ug/L | 99 |
| 24) n-Hexane | 7.30 | 57 | 679485 | 92.7209 ug/L | 99 |
| 25) Diisopropyl ether | 7.64 | 45 | 3610618 | 186.3734 ug/L | 100 |
| 26) Vinyl Acetate | 7.78 | 43 | 592784 | 95.2612 ug/L | 100 |
| 27) 1,1-Dichloroethane | 7.79 | 63 | 978793 | 95.3347 ug/L | 100 |
| 28) Ethyl-Tert-Butyl ether | 8.22 | 59 | 3025459 | 190.5577 ug/L | 100 |
| 29) 2-Butanone | 8.36 | 43 | 141525 | 101.6201 ug/L | 98 |
| 30) Propionitrile | 8.45 | 54 | 93595 | 197.9564 ug/L | 100 |
| 31) 2,2-Dichloropropane | 8.58 | 77 | 834811 | 94.5053 ug/L | 100 |
| 32) cis-1,2-Dichloroethene | 8.64 | 96 | 654810 | 98.4842 ug/L | 100 |
| 33) Chloroform | 8.85 | 83 | 1013205 | 95.7543 ug/L | 99 |
| 34) 1-Bromopropane | 8.98 | 122 | 138790 | 103.1537 ug/L | 99 |
| 35) Bromochloromethane | 9.07 | 130 | 420976 | 98.3082 ug/L | 100 |
| 36) Tetrahydrofuran | 9.11 | 42 | 187968 | 199.1545 ug/L | 98 |
| 38) 1,1,1-Trichloroethane | 9.39 | 97 | 930211 | 96.7480 ug/L | 100 |
| 39) Cyclohexane | 9.43 | 56 | 896845 | 94.4110 ug/L | 100 |
| 40) 1,1-Dichloropropene | 9.59 | 75 | 798872 | 96.4620 ug/L | 100 |
| 41) Tert-Amyl-Methyl ether | 9.72 | 73 | 2479928 | 190.8712 ug/L | 100 |
| 42) Carbon Tetrachloride | 9.73 | 117 | 865909 | 96.2628 ug/L | 99 |

(#) = qualifier out of range (m) = manual integration
8M377942.D 8260WT.M Wed Mar 28 08:26:58 2012 Page 1

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\2\DATA\032712\8M377942.D Vial: 9
Acq On : 27 Mar 2012 14:49 Operator: adc
Sample : WG393321-09 100.0 ug/L STD 8260 Inst : HPMS8
Misc : 1,1 STD50782 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Mar 28 08:26:58 2012 Quant Results File: 8260WT.RES

Quant Method : C:\MSDCHEM\2\METHODS\8260WT.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 03/27/12 HPMS 8
Last Update : Wed Mar 28 08:18:24 2012
Response via : Initial Calibration
DataAcq Meth : 8260WTR

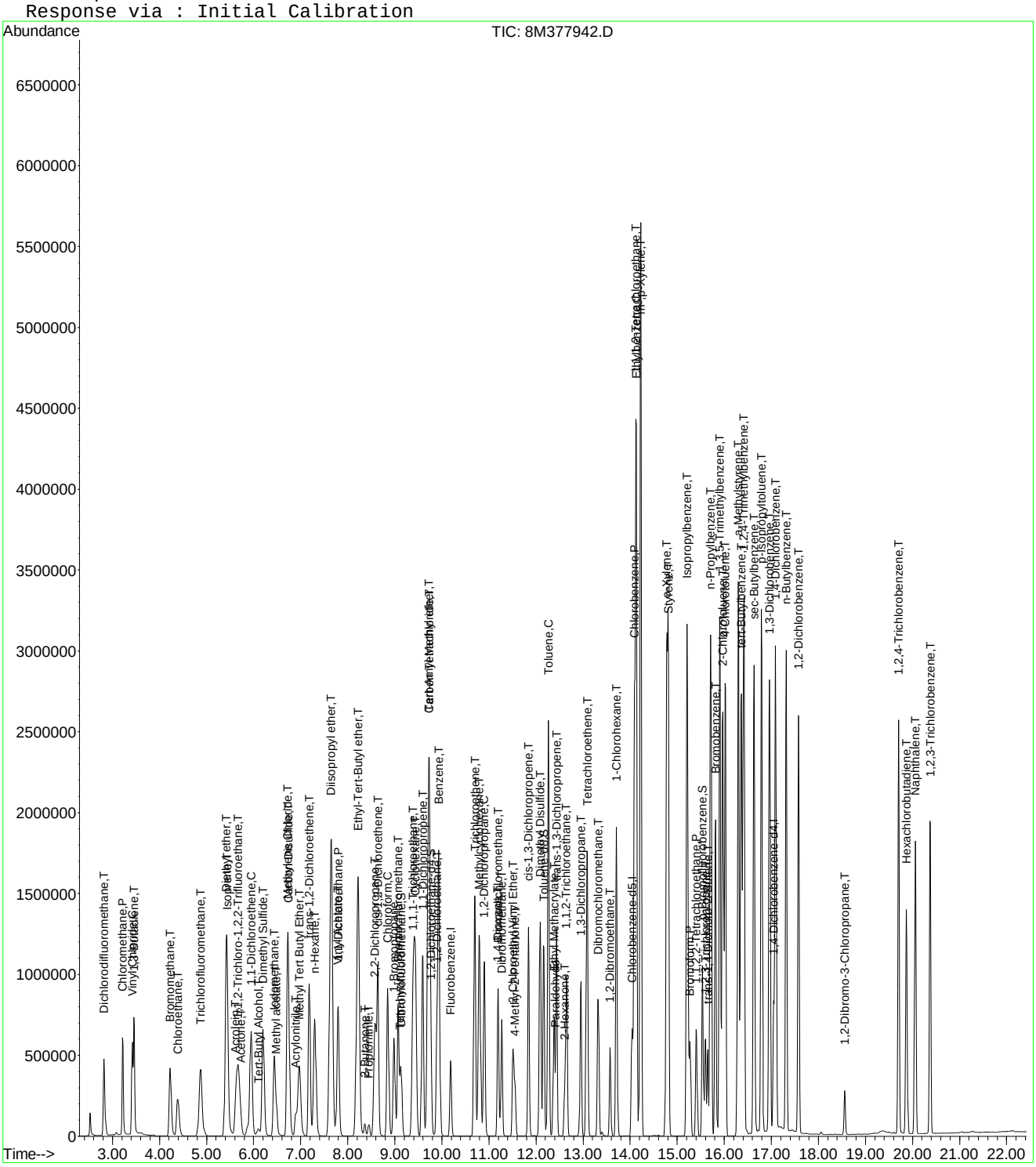
| | Compound | R.T. | QIon | Response | Conc | Unit | Qvalue |
|---|---|---|---|---|---|---|---|
| 45) | 1,2-Dichloroethane | 9.89 | 62 | 638140 | 98.0115 | ug/L | 99 |
| 46) | Benzene | 9.94 | 78 | 2241221 | 92.2063 | ug/L | 99 |
| 47) | Trichloroethene | 10.70 | 130 | 784268 | 97.6008 | ug/L | 99 |
| 48) | Methylcyclohexane | 10.79 | 83 | 878558 | 94.5992 | ug/L | 99 |
| 49) | 1,2-Dichloropropane | 10.90 | 63 | 589718 | 99.7163 | ug/L | 99 |
| 50) | Bromodichloromethane | 11.20 | 83 | 766711 | 100.5034 | ug/L | 99 |
| 51) | 1,4-Dioxane | 11.19 | 88 | 13563 | 400.0615 | ug/L | 100 |
| 52) | Dibromomethane | 11.27 | 93 | 314495 | 102.7208 | ug/L | 97 |
| 53) | 2-Chloroethyl Vinyl Ether | 11.52 | 63 | 280584 | 103.3962 | ug/L | 99 |
| 54) | 4-Methyl-2-Pentanone | 11.55 | 58 | 123808 | 100.8352 | ug/L | 99 |
| 55) | cis-1,3-Dichloropropene | 11.84 | 75 | 905884 | 100.8924 | ug/L | 99 |
| 56) | Dimethyl Disulfide | 12.09 | 94 | 1078902 | 108.5139 | ug/L | 100 |
| 59) | Toluene | 12.26 | 91 | 2603197 | 88.6280 | ug/L | 99 |
| 60) | Ethyl Methacrylate | 12.39 | 69 | 501933 | 97.9628 | ug/L | 100 |
| 61) | Paraldehyde | 12.41 | 89 | 18470 | 193.3626 | ug/L | 96 |
| 62) | trans-1,3-Dichloropropene | 12.44 | 75 | 803175 | 98.5594 | ug/L | 100 |
| 63) | 1,1,2-Trichloroethane | 12.64 | 97 | 447598 | 98.5768 | ug/L | 100 |
| 64) | 2-Hexanone | 12.61 | 58 | 113352 | 99.5388 | ug/L | 98 |
| 65) | 1,3-Dichloropropane | 12.95 | 76 | 721531 | 97.0546 | ug/L | 100 |
| 66) | Tetrachloroethene | 13.09 | 164 | 632990 | 95.6144 | ug/L | 99 |
| 67) | Dibromochloromethane | 13.33 | 129 | 686056 | 102.8003 | ug/L | 100 |
| 68) | 1,2-Dibromoethane | 13.57 | 107 | 479528 | 98.0338 | ug/L | 99 |
| 69) | 1-Chlorohexane | 13.71 | 91 | 897553 | 91.4892 | ug/L | 100 |
| 70) | Chlorobenzene | 14.09 | 112 | 1923670 | 93.7345 | ug/L | 99 |
| 71) | 1,1,1,2-Tetrachloroethane | 14.12 | 131 | 734197 | 98.2979 | ug/L | 100 |
| 72) | Ethylbenzene | 14.13 | 106 | 1039818 | 95.3837 | ug/L | 98 |
| 73) | m-,p-Xylene | 14.23 | 106 | 2498146 | 187.7022 | ug/L | 97 |
| 74) | o-Xylene | 14.77 | 106 | 1278214 | 95.6062 | ug/L | 100 |
| 75) | Styrene | 14.82 | 104 | 2146484 | 89.6816 | ug/L | 99 |
| 76) | Bromoform | 15.27 | 173 | 396095 | 103.4576 | ug/L | 98 |
| 77) | Isopropylbenzene | 15.21 | 105 | 3129942 | 93.1376 | ug/L | 99 |
| 79) | 1,1,2,2-Tetrachloroethane | 15.40 | 83 | 451565 | 97.3296 | ug/L | 100 |
| 81) | 1,2,3-Trichloropropane | 15.60 | 110 | 151170 | 98.4941 | ug/L | 98 |
| 82) | trans-1,4-Dichloro-2-Buten | 15.65 | 53 | 139478 | 103.8499 | ug/L | 86 |
| 83) | n-Propylbenzene | 15.71 | 91 | 3480880 | 93.0977 | ug/L | 100 |
| 84) | Bromobenzene | 15.82 | 156 | 902946 | 97.1449 | ug/L | 99 |
| 85) | 1,3,5-Trimethylbenzene | 15.90 | 105 | 2658545 | 95.3440 | ug/L | 99 |
| 86) | 2-Chlorotoluene | 15.97 | 91 | 2181549 | 91.7239 | ug/L | 99 |
| 87) | 4-Chlorotoluene | 16.01 | 91 | 2105711 | 93.6579 | ug/L | 99 |
| 88) | a-Methylstyrene | 16.29 | 118 | 1643611 | 99.1331 | ug/L | 100 |
| 89) | tert-Butylbenzene | 16.37 | 134 | 599025 | 97.1655 | ug/L | 99 |
| 90) | 1,2,4-Trimethylbenzene | 16.42 | 105 | 2734043 | 101.8439 | ug/L | 99 |
| 91) | sec-Butylbenzene | 16.64 | 105 | 3166789 | 92.8794 | ug/L | 99 |
| 92) | p-Isopropyltoluene | 16.79 | 119 | 2914703 | 94.7169 | ug/L | 99 |
| 93) | 1,3-Dichlorobenzene | 16.97 | 146 | 1740775 | 94.8956 | ug/L | 99 |
| 94) | 1,4-Dichlorobenzene | 17.09 | 146 | 1732433 | 94.1046 | ug/L | 100 |
| 95) | n-Butylbenzene | 17.32 | 91 | 2284175 | 94.9515 | ug/L | 99 |
| 96) | 1,2-Dichlorobenzene | 17.58 | 146 | 1565626 | 95.7457 | ug/L | 99 |
| 97) | 1,2-Dibromo-3-Chloropropan | 18.56 | 75 | 80547 | 100.8595 | ug/L | 96 |
| 98) | 1,2,4-Trichlorobenzene | 19.71 | 182 | 1041709 | 94.6026 | ug/L | 99 |
| 99) | Hexachlorobutadiene | 19.87 | 225 | 406092 | 103.7946 | ug/L | 99 |
| 100) | Naphthalene | 20.06 | 128 | 1991719 | 92.4289 | ug/L | 100 |
| 101) | 1,2,3-Trichlorobenzene | 20.38 | 180 | 894723 | 94.8100 | ug/L | 99 |

(#) = qualifier out of range (m) = manual integration
8M377942.D 8260WT.M Wed Mar 28 08:26:59 2012 Page 2

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\2\DATA\032712\8M377942.D Vial: 9
Acq On : 27 Mar 2012 14:49 Operator: adc
Sample : WG393321-09 100.0 ug/L STD 8260 Inst : HPMS8
Misc : 1,1 STD50782 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Mar 28 8:26 2012 Quant Results File: 8260WT.RES

Method : C:\MSDCHEM\2\METHODS\8260WT.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 03/27/12 HPMS 8
Last Update : Wed Mar 28 08:18:24 2012
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\2\DATA\032712\8M377943.D Vial: 10
Acq On : 27 Mar 2012 15:19 Operator: adc
Sample : WG393321-10 200.0 ug/L STD 8260 Inst : HPMS8
Misc : 1,1 STD50782 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Mar 28 08:26:59 2012 Quant Results File: 8260WT.RES

Quant Method : C:\MSDCHEM\2\METHODS\8260WT.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 03/27/12 HPMS 8
Last Update : Wed Mar 28 08:18:24 2012
Response via : Initial Calibration
DataAcq Meth : 8260WTR

| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 1) Fluorobenzene | 10.18 | 96 | 629120 | 25.00 | ug/L | 0.00 |
| 57) Chlorobenzene-d5 | 14.04 | 117 | 528582 | 25.00 | ug/L | 0.00 |
| 78) 1,4-Dichlorobenzene-d4 | 17.05 | 152 | 280754 | 25.00 | ug/L | 0.00 |
| **System Monitoring Compounds** | | | | | | |
| 37) Dibromofluoromethane | 9.13 | 111 | 639588 | 97.9920 | ug/L | 0.00 |
| Spiked Amount 25.000 | Range 86 - 118 | | Recovery = 391.96%# | | | |
| 43) 1,2-Dichloroethane-d4 | 9.77 | 65 | 507017 | 100.8776 | ug/L | 0.00 |
| Spiked Amount 25.000 | Range 80 - 120 | | Recovery = 403.52%# | | | |
| 58) Toluene-d8 | 12.16 | 98 | 2324762 | 95.2556 | ug/L | 0.00 |
| Spiked Amount 25.000 | Range 88 - 110 | | Recovery = 381.04%# | | | |
| 80) p-Bromofluorobenzene | 15.54 | 95 | 874452 | 96.2824 | ug/L | 0.00 |
| Spiked Amount 25.000 | Range 86 - 115 | | Recovery = 385.12%# | | | |
| **Target Compounds** | | | | | | Qvalue |
| 2) Dichlorodifluoromethane | 2.82 | 85 | 1341694 | 196.0727 | ug/L | 98 |
| 3) Chloromethane | 3.22 | 50 | 1518052 | 192.4837 | ug/L | 99 |
| 4) Vinyl Chloride | 3.42 | 62 | 1175984 | 178.9094 | ug/L | 100 |
| 5) 1,3-Butadiene | 3.45 | 54 | 752650 | 200.1092 | ug/L | 100 |
| 6) Bromomethane | 4.21 | 94 | 995932 | 195.6482 | ug/L | 99 |
| 7) Chloroethane | 4.37 | 64 | 830961 | 196.2392 | ug/L | 100 |
| 8) Trichlorofluoromethane | 4.86 | 101 | 2045344 | 210.7375 | ug/L | 99 |
| 9) Diethyl ether | 5.42 | 59 | 1330740 | 376.6549 | ug/L | 99 |
| 10) Isoprene | 5.42 | 67 | 1409164 | 184.4974 | ug/L | 99 |
| 11) Acrolein | 5.61 | 56 | 170650 | 427.6402 | ug/L | 93 |
| 12) 1,1,2-Trichloro-1,2,2-Trif | 5.65 | 101 | 1149420 | 197.1877 | ug/L | 99 |
| 13) Acetone | 5.74 | 43 | 186828 | 201.2653 | ug/L | 98 |
| 14) 1,1-Dichloroethene | 5.94 | 61 | 1770522 | 209.9053 | ug/L | 100 |
| 15) Tert-Butyl Alcohol | 6.14 | 59 | 260961 | 906.5042 | ug/L # | 81 |
| 16) Dimethyl Sulfide | 6.19 | 62 | 1109799 | 186.8993 | ug/L | 99 |
| 17) Iodomethane | 6.43 | 142 | 1917953 | 194.7876 | ug/L | 100 |
| 18) Methyl acetate | 6.48 | 43 | 602298 | 206.1751 | ug/L | 99 |
| 19) Methylene Chloride | 6.71 | 84 | 1182979 | 188.4700 | ug/L | 99 |
| 20) Carbon Disulfide | 6.73 | 76 | 3111317 | 191.9756 | ug/L | 99 |
| 21) Acrylonitrile | 6.90 | 53 | 262355 | 208.7818 | ug/L | 98 |
| 22) Methyl Tert Butyl Ether | 6.97 | 73 | 2091725 | 194.7593 | ug/L | 99 |
| 23) trans-1,2-Dichloroethene | 7.18 | 61 | 1611386 | 202.2986 | ug/L | 99 |
| 24) n-Hexane | 7.29 | 57 | 1363634 | 187.6133 | ug/L | 100 |
| 25) Diisopropyl ether | 7.65 | 45 | 6993004 | 363.9437 | ug/L | 99 |
| 26) Vinyl Acetate | 7.79 | 43 | 1282119 | 207.7380 | ug/L | 100 |
| 27) 1,1-Dichloroethane | 7.80 | 63 | 1997573 | 196.1692 | ug/L | 100 |
| 28) Ethyl-Tert-Butyl ether | 8.22 | 59 | 5930339 | 376.6022 | ug/L | 99 |
| 29) 2-Butanone | 8.36 | 43 | 286649 | 207.5223 | ug/L | 98 |
| 30) Propionitrile | 8.46 | 54 | 186896 | 397.1858 | ug/L | 99 |
| 31) 2,2-Dichloropropane | 8.58 | 77 | 1811725 | 206.7894 | ug/L | 99 |
| 32) cis-1,2-Dichloroethene | 8.63 | 96 | 1336728 | 202.7040 | ug/L | 99 |
| 33) Chloroform | 8.85 | 83 | 2074385 | 197.6599 | ug/L | 99 |
| 34) 1-Bromopropane | 8.99 | 122 | 291415 | 218.3768 | ug/L | 99 |
| 35) Bromochloromethane | 9.07 | 130 | 843378 | 198.5742 | ug/L | 100 |
| 36) Tetrahydrofuran | 9.11 | 42 | 376377 | 402.0661 | ug/L | 97 |
| 38) 1,1,1-Trichloroethane | 9.39 | 97 | 1949108 | 204.3923 | ug/L | 100 |
| 39) Cyclohexane | 9.43 | 56 | 1802279 | 191.2913 | ug/L | 99 |
| 40) 1,1-Dichloropropene | 9.58 | 75 | 1639803 | 199.6361 | ug/L | 99 |
| 41) Tert-Amyl-Methyl ether | 9.72 | 73 | 4852855 | 376.5883 | ug/L | 99 |
| 42) Carbon Tetrachloride | 9.73 | 117 | 1794265 | 201.1134 | ug/L | 100 |

(#) = qualifier out of range (m) = manual integration
8M377943.D 8260WT.M Wed Mar 28 08:27:00 2012 Page 1

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\2\DATA\032712\8M377943.D Vial: 10
Acq On : 27 Mar 2012 15:19 Operator: adc
Sample : WG393321-10 200.0 ug/L STD 8260 Inst : HPMS8
Misc : 1,1 STD50782 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Mar 28 08:26:59 2012 Quant Results File: 8260WT.RES

Quant Method : C:\MSDCHEM\2\METHODS\8260WT.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 03/27/12 HPMS 8
Last Update : Wed Mar 28 08:18:24 2012
Response via : Initial Calibration
DataAcq Meth : 8260WTR

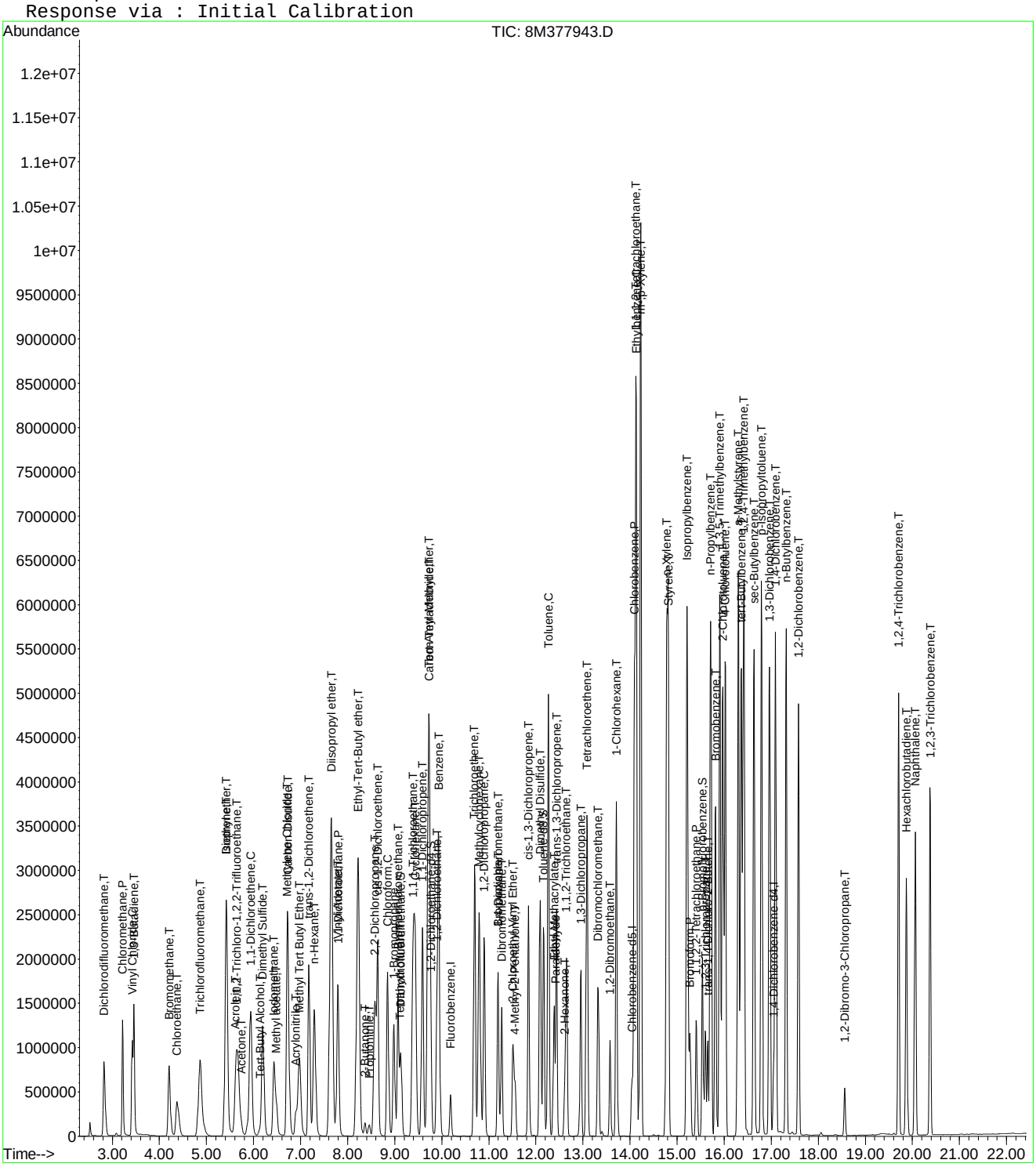
| | Compound | R.T. | QIon | Response | Conc | Unit | Qvalue |
|---|---|---|---|---|---|---|---|
| 45) | 1,2-Dichloroethane | 9.90 | 62 | 1325593 | 205.2765 | ug/L | 99 |
| 46) | Benzene | 9.94 | 78 | 4385066 | 181.8946 | ug/L | 98 |
| 47) | Trichloroethene | 10.69 | 130 | 1571261 | 197.1538 | ug/L | 99 |
| 48) | Methylcyclohexane | 10.79 | 83 | 1777684 | 192.9922 | ug/L | 99 |
| 49) | 1,2-Dichloropropane | 10.90 | 63 | 1191907 | 203.2039 | ug/L | 99 |
| 50) | Bromodichloromethane | 11.20 | 83 | 1557448 | 205.8404 | ug/L | 100 |
| 51) | 1,4-Dioxane | 11.20 | 88 | 30711 | 913.3411 | ug/L | 95 |
| 52) | Dibromomethane | 11.27 | 93 | 651959 | 214.7004 | ug/L | 99 |
| 53) | 2-Chloroethyl Vinyl Ether | 11.51 | 63 | 558009 | 207.3246 | ug/L | 100 |
| 54) | 4-Methyl-2-Pentanone | 11.55 | 58 | 241565 | 198.3652 | ug/L | 99 |
| 55) | cis-1,3-Dichloropropene | 11.84 | 75 | 1821213 | 204.5100 | ug/L | 98 |
| 56) | Dimethyl Disulfide | 12.09 | 94 | 2156585 | 218.6946 | ug/L | 99 |
| 59) | Toluene | 12.26 | 91 | 5020418 | 172.2216 | ug/L | 98 |
| 60) | Ethyl Methacrylate | 12.39 | 69 | 984425 | 193.5895 | ug/L | 100 |
| 61) | Paraldehyde | 12.42 | 89 | 38366 | 398.6829 | ug/L | 96 |
| 62) | trans-1,3-Dichloropropene | 12.44 | 75 | 1598301 | 197.6198 | ug/L | 100 |
| 63) | 1,1,2-Trichloroethane | 12.65 | 97 | 881044 | 195.5097 | ug/L | 100 |
| 64) | 2-Hexanone | 12.61 | 58 | 223334 | 197.6068 | ug/L | 97 |
| 65) | 1,3-Dichloropropane | 12.96 | 76 | 1413819 | 191.6192 | ug/L | 100 |
| 66) | Tetrachloroethene | 13.08 | 164 | 1268896 | 193.1240 | ug/L | 99 |
| 67) | Dibromochloromethane | 13.32 | 129 | 1346431 | 203.2839 | ug/L | 99 |
| 68) | 1,2-Dibromoethane | 13.58 | 107 | 947175 | 195.1084 | ug/L | 99 |
| 69) | 1-Chlorohexane | 13.71 | 91 | 1785215 | 183.3514 | ug/L | 99 |
| 70) | Chlorobenzene | 14.09 | 112 | 3655014 | 179.4493 | ug/L | 96 |
| 71) | 1,1,1,2-Tetrachloroethane | 14.12 | 131 | 1397415 | 188.5129 | ug/L | 99 |
| 72) | Ethylbenzene | 14.13 | 106 | 2007326 | 185.5319 | ug/L | 94 |
| 73) | m-,p-Xylene | 14.23 | 106 | 4651220 | 352.1295 | ug/L | 93 |
| 74) | o-Xylene | 14.78 | 106 | 2449837 | 184.6305 | ug/L | 97 |
| 75) | Styrene | 14.82 | 104 | 4017393 | 169.1234 | ug/L | 96 |
| 76) | Bromoform | 15.27 | 173 | 770750 | 202.8433 | ug/L | 100 |
| 77) | Isopropylbenzene | 15.21 | 105 | 5863585 | 175.8069 | ug/L | 97 |
| 79) | 1,1,2,2-Tetrachloroethane | 15.41 | 83 | 877899 | 194.5758 | ug/L | 99 |
| 81) | 1,2,3-Trichloropropane | 15.60 | 110 | 294885 | 197.5681 | ug/L | 98 |
| 82) | trans-1,4-Dichloro-2-Buten | 15.65 | 53 | 275400 | 210.8549 | ug/L | 87 |
| 83) | n-Propylbenzene | 15.72 | 91 | 6428640 | 176.8025 | ug/L | 97 |
| 84) | Bromobenzene | 15.82 | 156 | 1726344 | 190.9875 | ug/L | 100 |
| 85) | 1,3,5-Trimethylbenzene | 15.90 | 105 | 4989950 | 184.0199 | ug/L | 97 |
| 86) | 2-Chlorotoluene | 15.97 | 91 | 3912323 | 169.1499 | ug/L | 94 |
| 87) | 4-Chlorotoluene | 16.02 | 91 | 3956154 | 180.9415 | ug/L | 98 |
| 88) | a-Methylstyrene | 16.30 | 118 | 3065761 | 190.1416 | ug/L | 98 |
| 89) | tert-Butylbenzene | 16.37 | 134 | 1175024 | 195.9896 | ug/L | 97 |
| 90) | 1,2,4-Trimethylbenzene | 16.42 | 105 | 5062082 | 194.2441 | ug/L | 96 |
| 91) | sec-Butylbenzene | 16.64 | 105 | 5967052 | 179.9614 | ug/L | 97 |
| 92) | p-Isopropyltoluene | 16.79 | 119 | 5478541 | 183.0702 | ug/L | 97 |
| 93) | 1,3-Dichlorobenzene | 16.97 | 146 | 3293917 | 184.6442 | ug/L | 97 |
| 94) | 1,4-Dichlorobenzene | 17.09 | 146 | 3258373 | 182.0014 | ug/L | 98 |
| 95) | n-Butylbenzene | 17.32 | 91 | 4399810 | 188.0728 | ug/L | 97 |
| 96) | 1,2-Dichlorobenzene | 17.58 | 146 | 2944153 | 185.1446 | ug/L | 97 |
| 97) | 1,2-Dibromo-3-Chloropropan | 18.56 | 75 | 163132 | 210.0516 | ug/L | 99 |
| 98) | 1,2,4-Trichlorobenzene | 19.71 | 182 | 2053145 | 191.7325 | ug/L | 98 |
| 99) | Hexachlorobutadiene | 19.87 | 225 | 854767 | 224.6556 | ug/L | 100 |
| 100) | Naphthalene | 20.06 | 128 | 3760751 | 179.4624 | ug/L | 99 |
| 101) | 1,2,3-Trichlorobenzene | 20.38 | 180 | 1759420 | 191.7142 | ug/L | 99 |

(#) = qualifier out of range (m) = manual integration
8M377943.D 8260WT.M Wed Mar 28 08:27:00 2012 Page 2

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\2\DATA\032712\8M377943.D Vial: 10
Acq On : 27 Mar 2012 15:19 Operator: adc
Sample : WG393321-10 200.0 ug/L STD 8260 Inst : HPMS8
Misc : 1,1 STD50782 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Mar 28 8:26 2012 Quant Results File: 8260WT.RES

Method : C:\MSDCHEM\2\METHODS\8260WT.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 03/27/12 HPMS 8
Last Update : Wed Mar 28 08:18:24 2012
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\2\DATA\032712\8M377944.D Vial: 11
Acq On : 27 Mar 2012 15:49 Operator: adc
Sample : WG393321-11 300.0 ug/L STD 8260 Inst : HPMS8
Misc : 1,1 STD50782 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Mar 28 08:27:01 2012 Quant Results File: 8260WT.RES

Quant Method : C:\MSDCHEM\2\METHODS\8260WT.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 03/27/12 HPMS 8
Last Update : Wed Mar 28 08:18:24 2012
Response via : Initial Calibration
DataAcq Meth : 8260WTR

| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 1) Fluorobenzene | 10.18 | 96 | 620267 | 25.00 | ug/L | 0.00 |
| 57) Chlorobenzene-d5 | 14.04 | 117 | 523100 | 25.00 | ug/L | 0.00 |
| 78) 1,4-Dichlorobenzene-d4 | 17.05 | 152 | 289880 | 25.00 | ug/L | 0.00 |
| **System Monitoring Compounds** | | | | | | |
| 37) Dibromofluoromethane | 9.13 | 111 | 207 | 0.0322 | ug/L | 0.00 |
| Spiked Amount 25.000 | Range 86 - 118 | | Recovery = | 0.12%# | | |
| 43) 1,2-Dichloroethane-d4 | 9.72 | 65 | 4294 | 0.8665 | ug/L | -0.05 |
| Spiked Amount 25.000 | Range 80 - 120 | | Recovery = | 3.48%# | | |
| 58) Toluene-d8 | 12.16 | 98 | 3274 | 0.1356 | ug/L | 0.00 |
| Spiked Amount 25.000 | Range 88 - 110 | | Recovery = | 0.56%# | | |
| 80) p-Bromofluorobenzene | 15.54 | 95 | 3182 | 0.3393 | ug/L | 0.00 |
| Spiked Amount 25.000 | Range 86 - 115 | | Recovery = | 1.36%# | | |
| **Target Compounds** | | | | | | Qvalue |
| 2) Dichlorodifluoromethane | 2.82 | 85 | 1211 | 0.1795 | ug/L | # 43 |
| 3) Chloromethane | 3.21 | 50 | 9891 | 1.2720 | ug/L | 94 |
| 4) Vinyl Chloride | 3.42 | 62 | 1011 | 0.1560 | ug/L | # 43 |
| 5) 1,3-Butadiene | 3.45 | 54 | 1105915 | 299.1691 | ug/L | 99 |
| 6) Bromomethane | 4.21 | 94 | 39099 | 7.7905 | ug/L | 100 |
| 8) Trichlorofluoromethane | 4.86 | 101 | 1213 | 0.1268 | ug/L | # 66 |
| 9) Diethyl ether | 5.42 | 59 | 964402 | 276.8620 | ug/L | 100 |
| 10) Isoprene | 5.41 | 67 | 1225 | 0.1627 | ug/L | 97 |
| 11) Acrolein | 5.61 | 56 | 253175 | 643.4991 | ug/L | 92 |
| 12) 1,1,2-Trichloro-1,2,2-Trif | 5.67 | 101 | 1462 | 0.2544 | ug/L | # 43 |
| 13) Acetone | 5.74 | 43 | 267373 | 292.1456 | ug/L | 97 |
| 14) 1,1-Dichloroethene | 5.94 | 61 | 1504 | 0.1809 | ug/L | 94 |
| 15) Tert-Butyl Alcohol | 6.12 | 59 | 179906 | 634.6388 | ug/L | 93 |
| 17) Iodomethane | 6.44 | 142 | 30415 | 3.1330 | ug/L | 95 |
| 18) Methyl acetate | 6.48 | 43 | 230478 | 80.0219 | ug/L | 100 |
| 19) Methylene Chloride | 6.71 | 84 | 4152 | 0.6709 | ug/L | 96 |
| 20) Carbon Disulfide | 6.73 | 76 | 7207 | 0.4510 | ug/L | # 83 |
| 21) Acrylonitrile | 6.90 | 53 | 367778 | 296.8546 | ug/L | 93 |
| 22) Methyl Tert Butyl Ether | 6.99 | 73 | 2860 | 0.2701 | ug/L | # 52 |
| 23) trans-1,2-Dichloroethene | 7.19 | 61 | 2649 | 0.3373 | ug/L | 99 |
| 24) n-Hexane | 7.29 | 57 | 21013 | 2.9323 | ug/L | 97 |
| 25) Diisopropyl ether | 7.65 | 45 | 5175040 | 273.1737 | ug/L | 99 |
| 26) Vinyl Acetate | 7.78 | 43 | 1795541 | 295.0786 | ug/L | 100 |
| 27) 1,1-Dichloroethane | 7.80 | 63 | 2650 | 0.2640 | ug/L | # 50 |
| 28) Ethyl-Tert-Butyl ether | 8.22 | 59 | 4381051 | 282.1867 | ug/L | 100 |
| 29) 2-Butanone | 8.36 | 43 | 417461 | 306.5386 | ug/L | 98 |
| 30) Propionitrile | 8.46 | 54 | 139247 | 300.4767 | ug/L | 99 |
| 31) 2,2-Dichloropropane | 8.57 | 77 | 1988 | 0.2301 | ug/L | # 41 |
| 32) cis-1,2-Dichloroethene | 8.64 | 96 | 1881 | 0.2893 | ug/L | # 1 |
| 33) Chloroform | 8.85 | 83 | 2388 | 0.2308 | ug/L | 96 |
| 34) 1-Bromopropane | 8.98 | 122 | 390930 | 297.1313 | ug/L | 99 |
| 35) Bromochloromethane | 9.07 | 130 | 836 | 0.1996 | ug/L | # 70 |
| 36) Tetrahydrofuran | 9.11 | 42 | 278860 | 302.1450 | ug/L | 98 |
| 38) 1,1,1-Trichloroethane | 9.39 | 97 | 2418 | 0.2572 | ug/L | 79 |
| 39) Cyclohexane | 9.43 | 56 | 3362 | 0.3619 | ug/L | # 65 |
| 40) 1,1-Dichloropropene | 9.58 | 75 | 4252 | 0.5250 | ug/L | # 66 |
| 41) Tert-Amyl-Methyl ether | 9.72 | 73 | 3616771 | 284.6724 | ug/L | 100 |
| 42) Carbon Tetrachloride | 9.73 | 117 | 2466 | 0.2804 | ug/L | # 92 |
| 45) 1,2-Dichloroethane | 9.88 | 62 | 1749 | 0.2747 | ug/L | # 39 |
| 46) Benzene | 9.93 | 78 | 9084 | 0.3822 | ug/L | 97 |

(#) = qualifier out of range (m) = manual integration
8M377944.D 8260WT.M Wed Mar 28 08:27:01 2012 Page 1

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\2\DATA\032712\8M377944.D Vial: 11
Acq On : 27 Mar 2012 15:49 Operator: adc
Sample : WG393321-11 300.0 ug/L STD 8260 Inst : HPMS8
Misc : 1,1 STD50782 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Mar 28 08:27:01 2012 Quant Results File: 8260WT.RES

Quant Method : C:\MSDCHEM\2\METHODS\8260WT.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 03/27/12 HPMS 8
Last Update : Wed Mar 28 08:18:24 2012
Response via : Initial Calibration
DataAcq Meth : 8260WTR

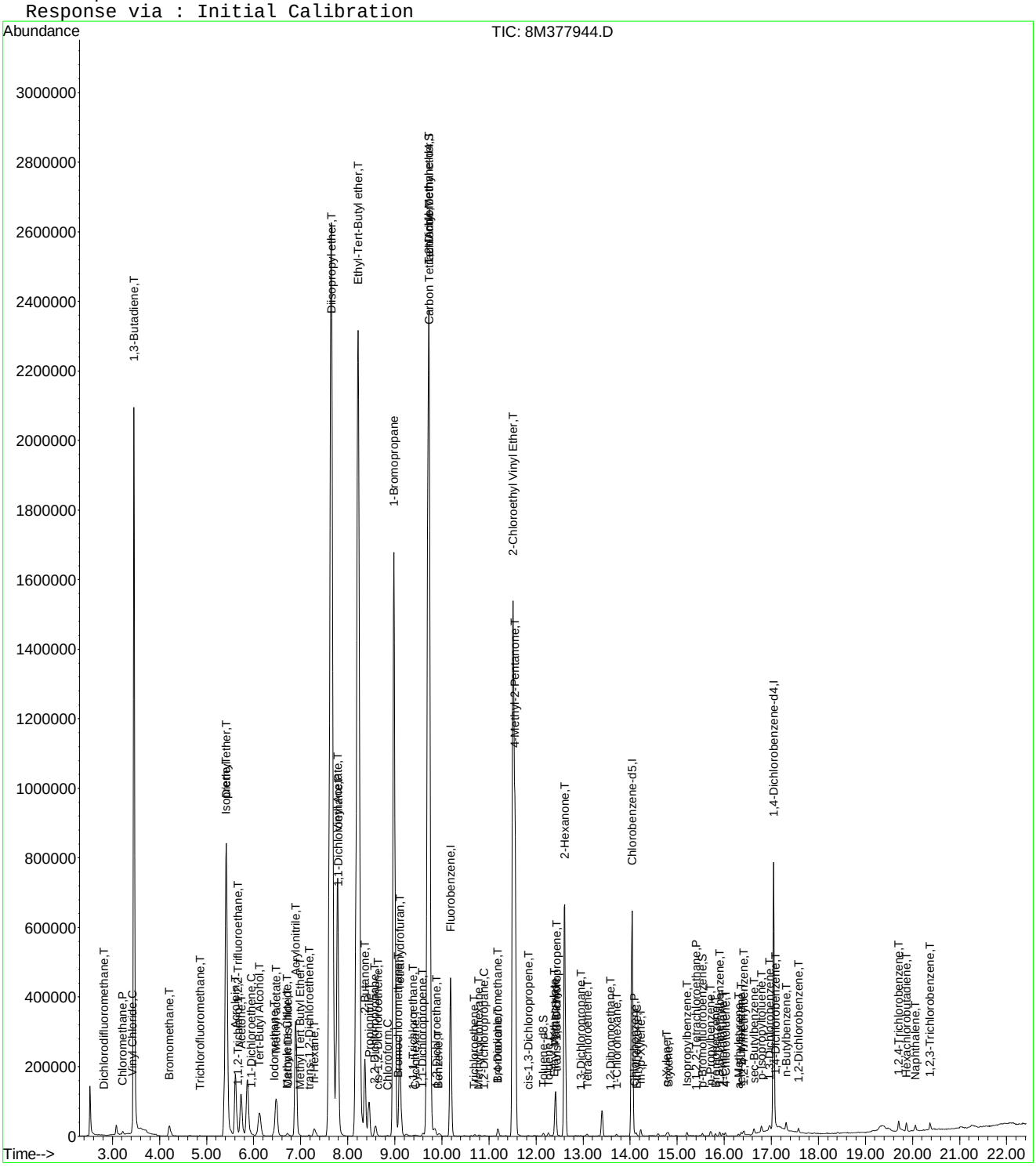
| | Compound | R.T. | QIon | Response | Conc | Unit | | Qvalue |
|---|---|---|---|---|---|---|---|---|
| 47) | Trichloroethene | 10.69 | 130 | 2671 | 0.3399 | ug/L | | 90 |
| 48) | Methylcyclohexane | 10.78 | 83 | 3230 | 0.3557 | ug/L | | 93 |
| 49) | 1,2-Dichloropropane | 10.90 | 63 | 1267 | 0.2191 | ug/L | # | 34 |
| 50) | Bromodichloromethane | 11.19 | 83 | 1304 | 0.1748 | ug/L | # | 15 |
| 51) | 1,4-Dioxane | 11.19 | 88 | 21271 | 641.6257 | ug/L | | 94 |
| 53) | 2-Chloroethyl Vinyl Ether | 11.52 | 63 | 820448 | 309.1829 | ug/L | | 99 |
| 54) | 4-Methyl-2-Pentanone | 11.55 | 58 | 361873 | 301.3995 | ug/L | | 99 |
| 55) | cis-1,3-Dichloropropene | 11.84 | 75 | 2189 | 0.2493 | ug/L | # | 59 |
| 59) | Toluene | 12.26 | 91 | 13100 | 0.4541 | ug/L | | 96 |
| 60) | Ethyl Methacrylate | 12.39 | 69 | 1060 | 0.2106 | ug/L | # | 1 |
| 61) | Paraldehyde | 12.42 | 89 | 28155 | 297.0642 | ug/L | # | 42 |
| 62) | trans-1,3-Dichloropropene | 12.44 | 75 | 1508 | 0.1884 | ug/L | # | 42 |
| 64) | 2-Hexanone | 12.61 | 58 | 339429 | 303.4755 | ug/L | # | 31 |
| 65) | 1,3-Dichloropropane | 12.95 | 76 | 1233 | 0.1689 | ug/L | | 79 |
| 66) | Tetrachloroethene | 13.09 | 164 | 2466 | 0.3793 | ug/L | | 92 |
| 68) | 1,2-Dibromoethane | 13.59 | 107 | 849 | 0.1767 | ug/L | | 97 |
| 69) | 1-Chlorohexane | 13.72 | 91 | 2997 | 0.3110 | ug/L | | 98 |
| 70) | Chlorobenzene | 14.09 | 112 | 8743 | 0.4338 | ug/L | | 91 |
| 72) | Ethylbenzene | 14.14 | 106 | 3203 | 0.2991 | ug/L | | 59 |
| 73) | m-,p-Xylene | 14.23 | 106 | 9069 | 0.6938 | ug/L | | 91 |
| 74) | o-Xylene | 14.77 | 106 | 4274 | 0.3255 | ug/L | | 99 |
| 75) | Styrene | 14.82 | 104 | 7723 | 0.3285 | ug/L | | 97 |
| 77) | Isopropylbenzene | 15.21 | 105 | 11668 | 0.3535 | ug/L | | 99 |
| 79) | 1,1,2,2-Tetrachloroethane | 15.41 | 83 | 1217 | 0.2612 | ug/L | # | 83 |
| 83) | n-Propylbenzene | 15.72 | 91 | 17845 | 0.4753 | ug/L | | 95 |
| 84) | Bromobenzene | 15.82 | 156 | 3386 | 0.3628 | ug/L | | 93 |
| 85) | 1,3,5-Trimethylbenzene | 15.90 | 105 | 11115 | 0.3970 | ug/L | | 98 |
| 86) | 2-Chlorotoluene | 15.97 | 91 | 9328 | 0.3906 | ug/L | | 91 |
| 87) | 4-Chlorotoluene | 16.03 | 91 | 9569 | 0.4239 | ug/L | | 92 |
| 88) | a-Methylstyrene | 16.30 | 118 | 3291 | 0.1977 | ug/L | | 91 |
| 89) | tert-Butylbenzene | 16.36 | 134 | 2630 | 0.4249 | ug/L | | 87 |
| 90) | 1,2,4-Trimethylbenzene | 16.42 | 105 | 18193 | 0.2969 | ug/L | | 73 |
| 91) | sec-Butylbenzene | 16.64 | 105 | 19694 | 0.5753 | ug/L | | 95 |
| 92) | p-Isopropyltoluene | 16.79 | 119 | 16678 | 0.5398 | ug/L | | 96 |
| 93) | 1,3-Dichlorobenzene | 16.97 | 146 | 8673 | 0.4709 | ug/L | # | 73 |
| 94) | 1,4-Dichlorobenzene | 17.09 | 146 | 9232 | 0.4994 | ug/L | | 89 |
| 95) | n-Butylbenzene | 17.32 | 91 | 18972 | 0.7854 | ug/L | | 95 |
| 96) | 1,2-Dichlorobenzene | 17.58 | 146 | 7643 | 0.4655 | ug/L | | 88 |
| 98) | 1,2,4-Trichlorobenzene | 19.71 | 182 | 9972 | 0.9019 | ug/L | | 93 |
| 99) | Hexachlorobutadiene | 19.87 | 225 | 7548 | 1.9214 | ug/L | | 99 |
| 100) | Naphthalene | 20.06 | 128 | 18457 | 0.8530 | ug/L | | 98 |
| 101) | 1,2,3-Trichlorobenzene | 20.37 | 180 | 9316 | 0.9832 | ug/L | | 96 |

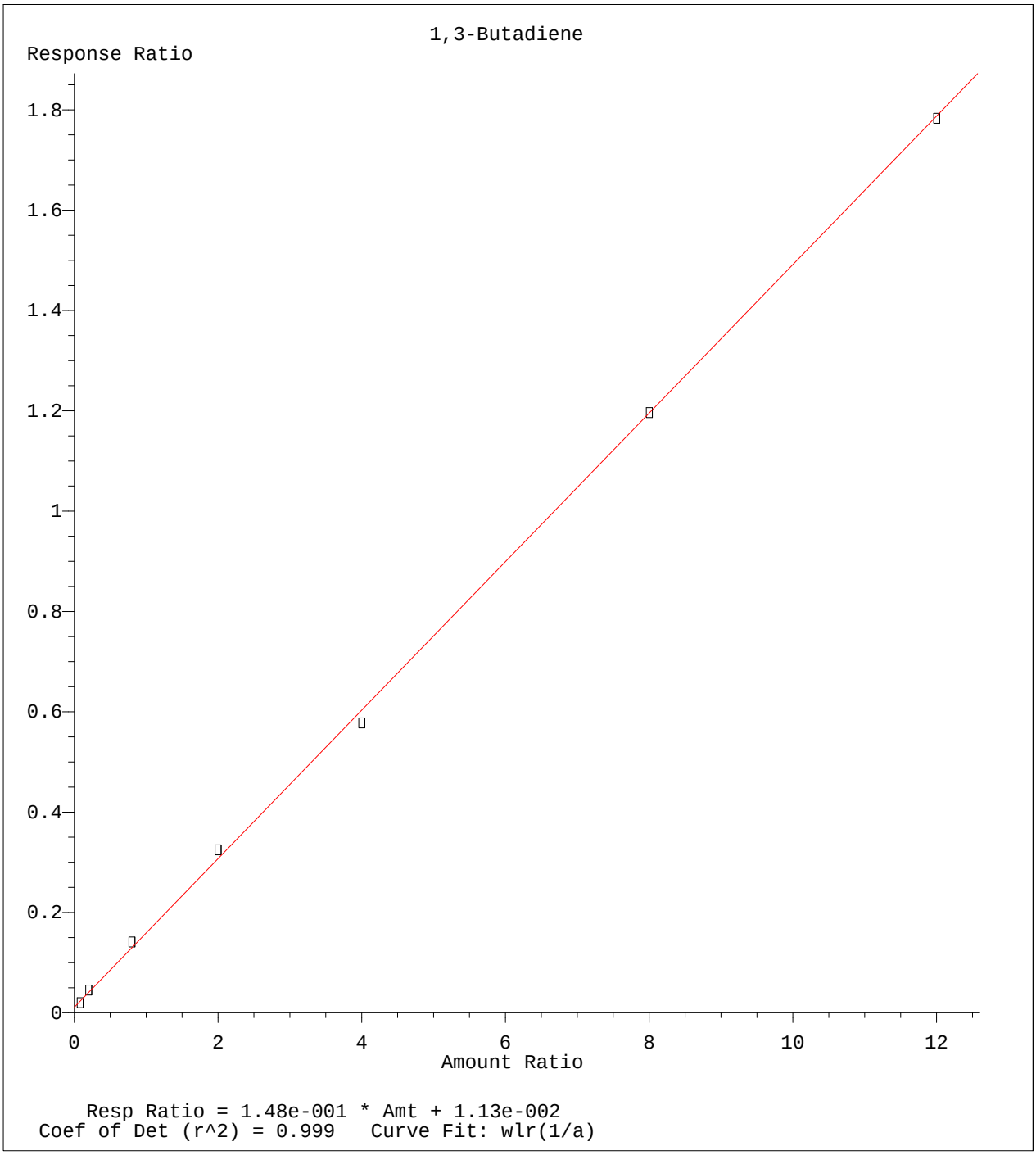
(#) = qualifier out of range (m) = manual integration
8M377944.D 8260WT.M Wed Mar 28 08:27:02 2012 Page 2

Quantitation Report (Not Reviewed)

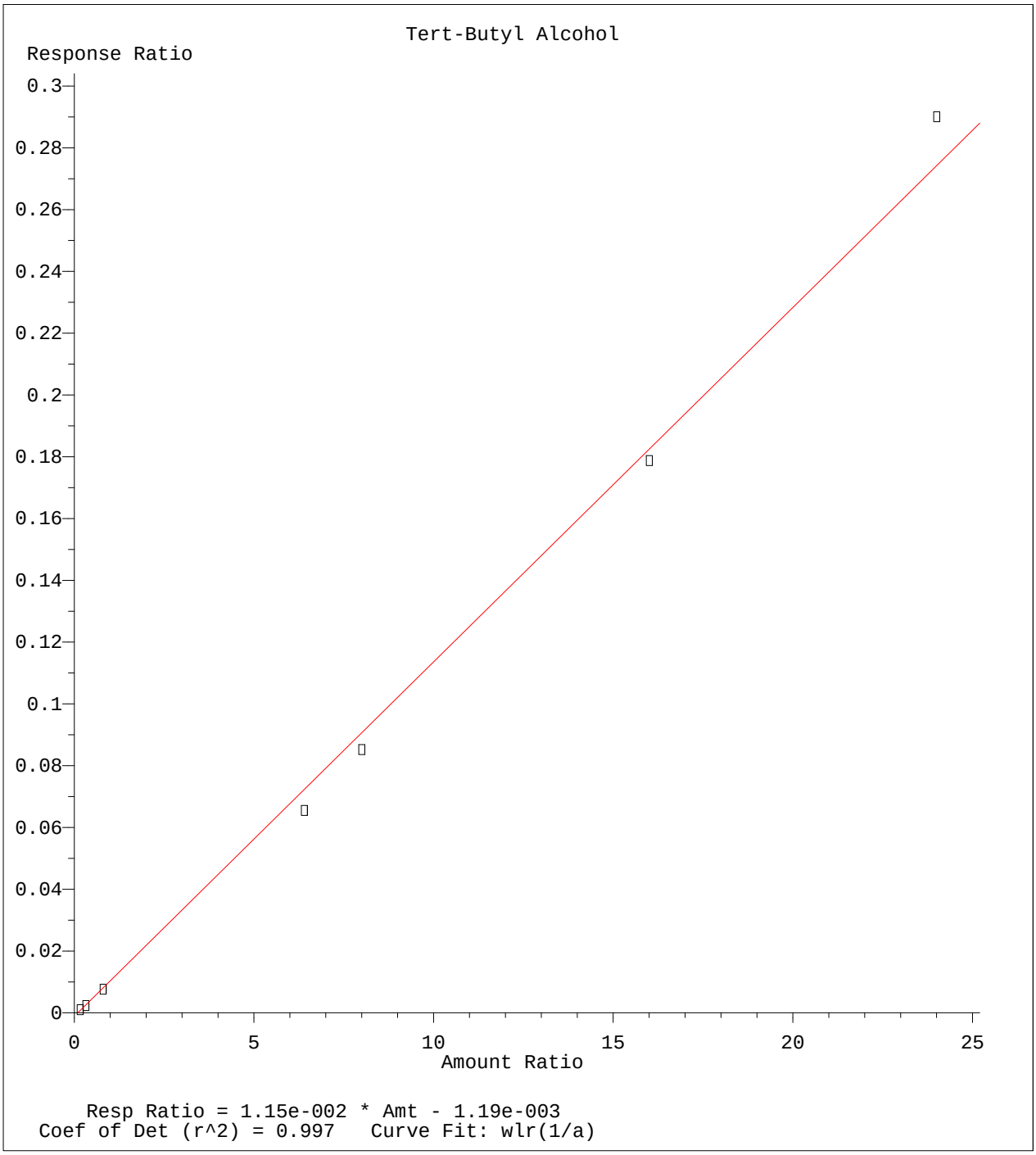
Data File : C:\MSDCHEM\2\DATA\032712\8M377944.D Vial: 11
Acq On : 27 Mar 2012 15:49 Operator: adc
Sample : WG393321-11 300.0 ug/L STD 8260 Inst : HPMS8
Misc : 1,1 STD50782 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Mar 28 8:27 2012 Quant Results File: 8260WT.RES

Method : C:\MSDCHEM\2\METHODS\8260WT.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 03/27/12 HPMS 8
Last Update : Wed Mar 28 08:18:24 2012
Response via : Initial Calibration

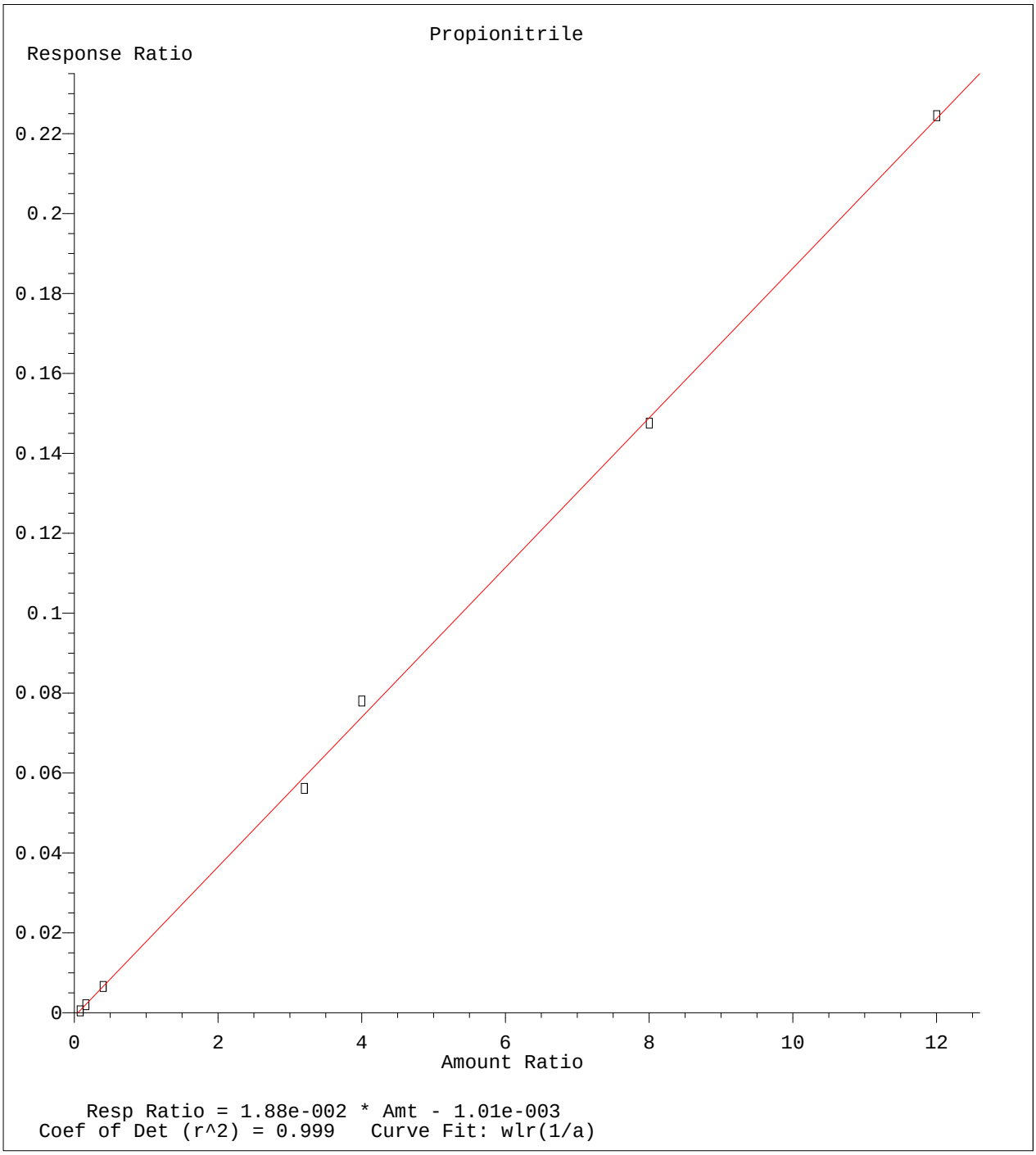




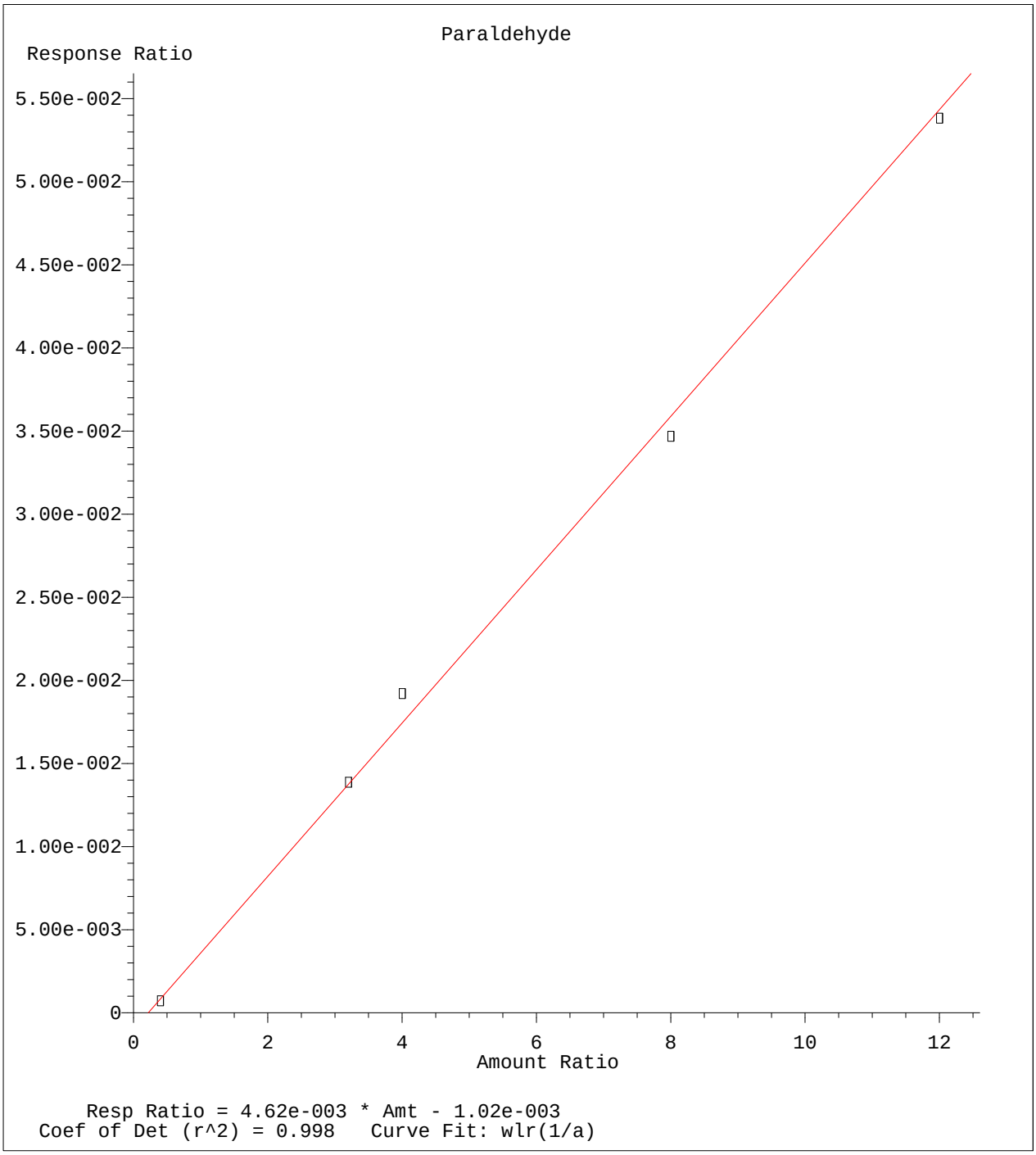

Method Name: C:\MSDCHEM\2\METHODS\8260WT.M
Calibration Table Last Updated: Wed Mar 28 08:18:24 2012



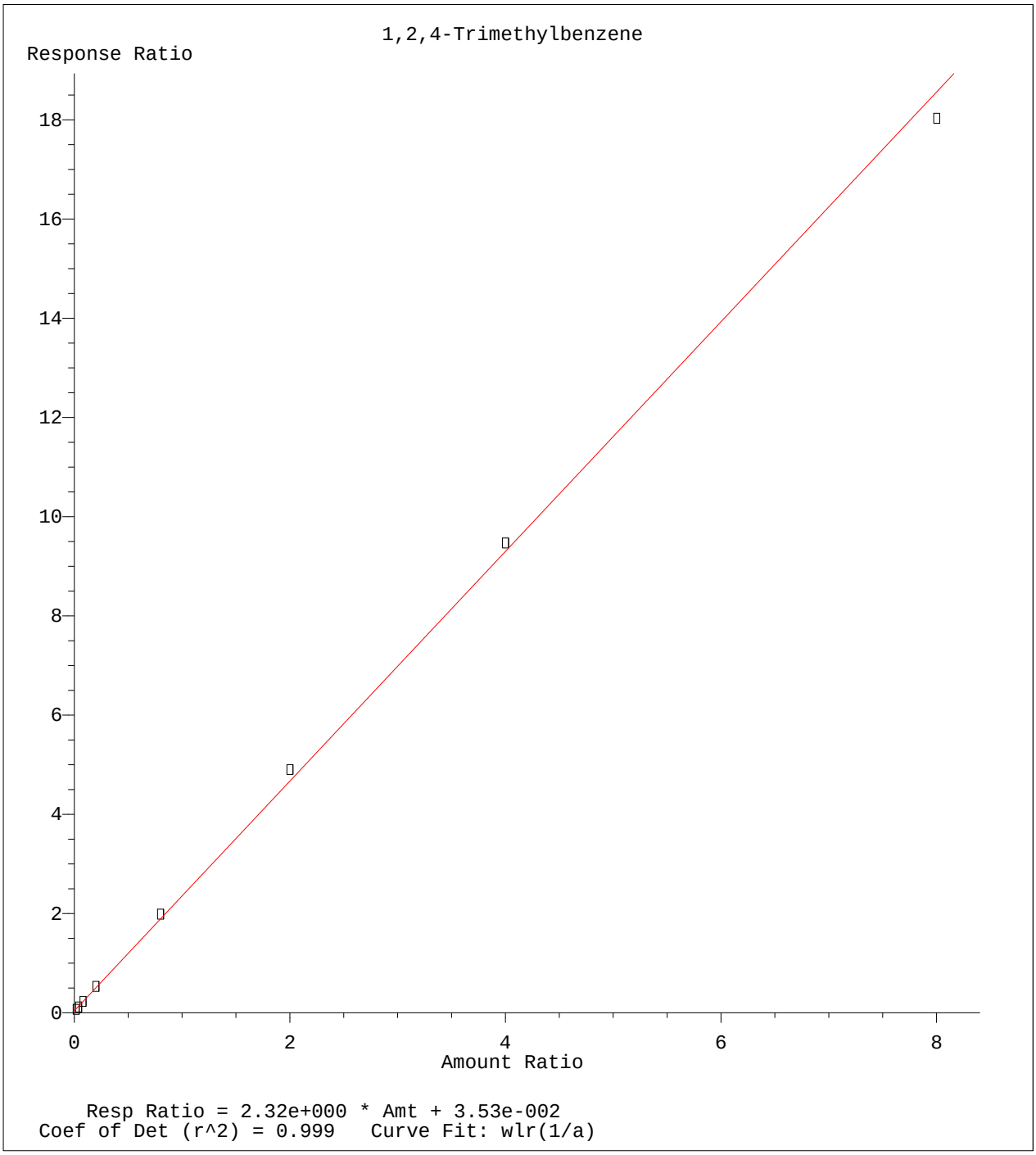

Method Name: C:\MSDCHEM\2\METHODS\8260WT.M
Calibration Table Last Updated: Wed Mar 28 08:18:24 2012




Method Name: C:\MSDCHEM\2\METHODS\8260WT.M
Calibration Table Last Updated: Wed Mar 28 08:18:24 2012




Method Name: C:\MSDCHEM\2\METHODS\8260WT.M
Calibration Table Last Updated: Wed Mar 28 08:18:24 2012




Method Name:  C:\MSDCHEM\2\METHODS\8260WT.M
Calibration Table Last Updated: Wed Mar 28 08:18:24 2012

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\2\DATA\032712\8M377947.D Vial: 14
Acq On : 27 Mar 2012 17:20 Operator: adc
Sample : WG393321-12 50.0 ug/L ALT SRC 8260 Inst : HPMS8
Misc : 1,1 STD50783 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Mar 28 08:27:02 2012 Quant Results File: 8260WT.RES

Quant Method : C:\MSDCHEM\2\METHODS\8260WT.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 03/27/12 HPMS 8
Last Update : Wed Mar 28 08:18:24 2012
Response via : Initial Calibration
DataAcq Meth : 8260WTR

| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 1) Fluorobenzene | 10.19 | 96 | 641347 | 25.00 | ug/L | 0.00 |
| 57) Chlorobenzene-d5 | 14.04 | 117 | 533633 | 25.00 | ug/L | 0.00 |
| 78) 1,4-Dichlorobenzene-d4 | 17.05 | 152 | 288543 | 25.00 | ug/L | 0.00 |
| **System Monitoring Compounds** | | | | | | |
| 37) Dibromofluoromethane | 9.13 | 111 | 160083 | 24.0589 | ug/L | 0.00 |
| Spiked Amount 25.000 | Range 86 - 118 | | Recovery = 96.24% | | | |
| 43) 1,2-Dichloroethane-d4 | 9.77 | 65 | 126102 | 24.6113 | ug/L | 0.00 |
| Spiked Amount 25.000 | Range 80 - 120 | | Recovery = 98.44% | | | |
| 58) Toluene-d8 | 12.16 | 98 | 625101 | 25.3707 | ug/L | 0.00 |
| Spiked Amount 25.000 | Range 88 - 110 | | Recovery = 101.48% | | | |
| 80) p-Bromofluorobenzene | 15.54 | 95 | 233558 | 25.0219 | ug/L | 0.00 |
| Spiked Amount 25.000 | Range 86 - 115 | | Recovery = 100.08% | | | |
| **Target Compounds** | | | | | | Qvalue |
| 2) Dichlorodifluoromethane | 2.82 | 85 | 540229 | 77.4430 | ug/L | 98 |
| 3) Chloromethane | 3.22 | 50 | 466508 | 58.0239 | ug/L | 99 |
| 4) Vinyl Chloride | 3.42 | 62 | 362849 | 54.1500 | ug/L | 100 |
| 5) 1,3-Butadiene | 3.46 | 54 | 116154 | 28.6672 | ug/L | 99 |
| 6) Bromomethane | 4.23 | 94 | 284635 | 54.8498 | ug/L | 99 |
| 7) Chloroethane | 4.40 | 64 | 241083 | 55.8486 | ug/L | 99 |
| 8) Trichlorofluoromethane | 4.88 | 101 | 517814 | 52.3347 | ug/L | 99 |
| 9) Diethyl ether | 5.41 | 59 | 323025 | 89.6865 | ug/L | 98 |
| 10) Isoprene | 5.44 | 67 | 379566 | 48.7480 | ug/L | 100 |
| 11) Acrolein | 5.62 | 56 | 54480 | 133.9213 | ug/L | 94 |
| 12) 1,1,2-Trichloro-1,2,2-Trif | 5.68 | 101 | 306503 | 51.5794 | ug/L | 100 |
| 13) Acetone | 5.72 | 43 | 50957 | 53.8482 | ug/L | 99 |
| 14) 1,1-Dichloroethene | 5.95 | 61 | 419424 | 48.7771 | ug/L | 100 |
| 15) Tert-Butyl Alcohol | 6.08 | 59 | 53032 | 182.7741 | ug/L | 98 |
| 16) Dimethyl Sulfide | 6.21 | 62 | 296704 | 49.0148 | ug/L | 99 |
| 17) Iodomethane | 6.44 | 142 | 318748 | 31.7549 | ug/L | 100 |
| 18) Methyl acetate | 6.47 | 43 | 169282 | 56.8429 | ug/L | 98 |
| 19) Methylene Chloride | 6.72 | 84 | 318173 | 49.7243 | ug/L | 99 |
| 20) Carbon Disulfide | 6.74 | 76 | 844228 | 51.0978 | ug/L | 100 |
| 21) Acrylonitrile | 6.89 | 53 | 69071 | 53.9187 | ug/L | 99 |
| 22) Methyl Tert Butyl Ether | 6.97 | 73 | 585810 | 53.5046 | ug/L | 100 |
| 23) trans-1,2-Dichloroethene | 7.19 | 61 | 420107 | 51.7361 | ug/L | 100 |
| 24) n-Hexane | 7.30 | 57 | 381860 | 51.5360 | ug/L | 98 |
| 25) Diisopropyl ether | 7.64 | 45 | 1934489 | 98.7591 | ug/L | 100 |
| 26) Vinyl Acetate | 7.79 | 43 | 285604 | 45.3934 | ug/L | 100 |
| 27) 1,1-Dichloroethane | 7.80 | 63 | 515550 | 49.6637 | ug/L | 100 |
| 28) Ethyl-Tert-Butyl ether | 8.21 | 59 | 1553820 | 96.7931 | ug/L | 100 |
| 29) 2-Butanone | 8.36 | 43 | 77234 | 54.8483 | ug/L | 100 |
| 30) Propionitrile | 8.45 | 54 | 48457 | 102.0215 | ug/L | 99 |
| 31) 2,2-Dichloropropane | 8.58 | 77 | 444280 | 49.7431 | ug/L | 99 |
| 32) cis-1,2-Dichloroethene | 8.64 | 96 | 353213 | 52.5408 | ug/L | 99 |
| 33) Chloroform | 8.85 | 83 | 516384 | 48.2661 | ug/L | 100 |
| 34) 1-Bromopropane | 8.99 | 122 | 78530 | 57.7259 | ug/L | 99 |
| 35) Bromochloromethane | 9.07 | 130 | 226534 | 52.3208 | ug/L | 99 |
| 36) Tetrahydrofuran | 9.11 | 42 | 93062 | 97.5185 | ug/L | 96 |
| 38) 1,1,1-Trichloroethane | 9.39 | 97 | 495477 | 50.9674 | ug/L | 100 |
| 39) Cyclohexane | 9.43 | 56 | 494387 | 51.4731 | ug/L | 99 |
| 40) 1,1-Dichloropropene | 9.59 | 75 | 433208 | 51.7350 | ug/L | 100 |
| 41) Tert-Amyl-Methyl ether | 9.72 | 73 | 1327143 | 101.0247 | ug/L | 100 |
| 42) Carbon Tetrachloride | 9.73 | 117 | 465732 | 51.2072 | ug/L | 99 |

(#) = qualifier out of range (m) = manual integration
8M377947.D 8260WT.M Wed Mar 28 08:27:03 2012 Page 1

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\2\DATA\032712\8M377947.D Vial: 14
Acq On : 27 Mar 2012 17:20 Operator: adc
Sample : WG393321-12 50.0 ug/L ALT SRC 8260 Inst : HPMS8
Misc : 1,1 STD50783 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Mar 28 08:27:02 2012 Quant Results File: 8260WT.RES

Quant Method : C:\MSDCHEM\2\METHODS\8260WT.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 03/27/12 HPMS 8
Last Update : Wed Mar 28 08:18:24 2012
Response via : Initial Calibration
DataAcq Meth : 8260WTR

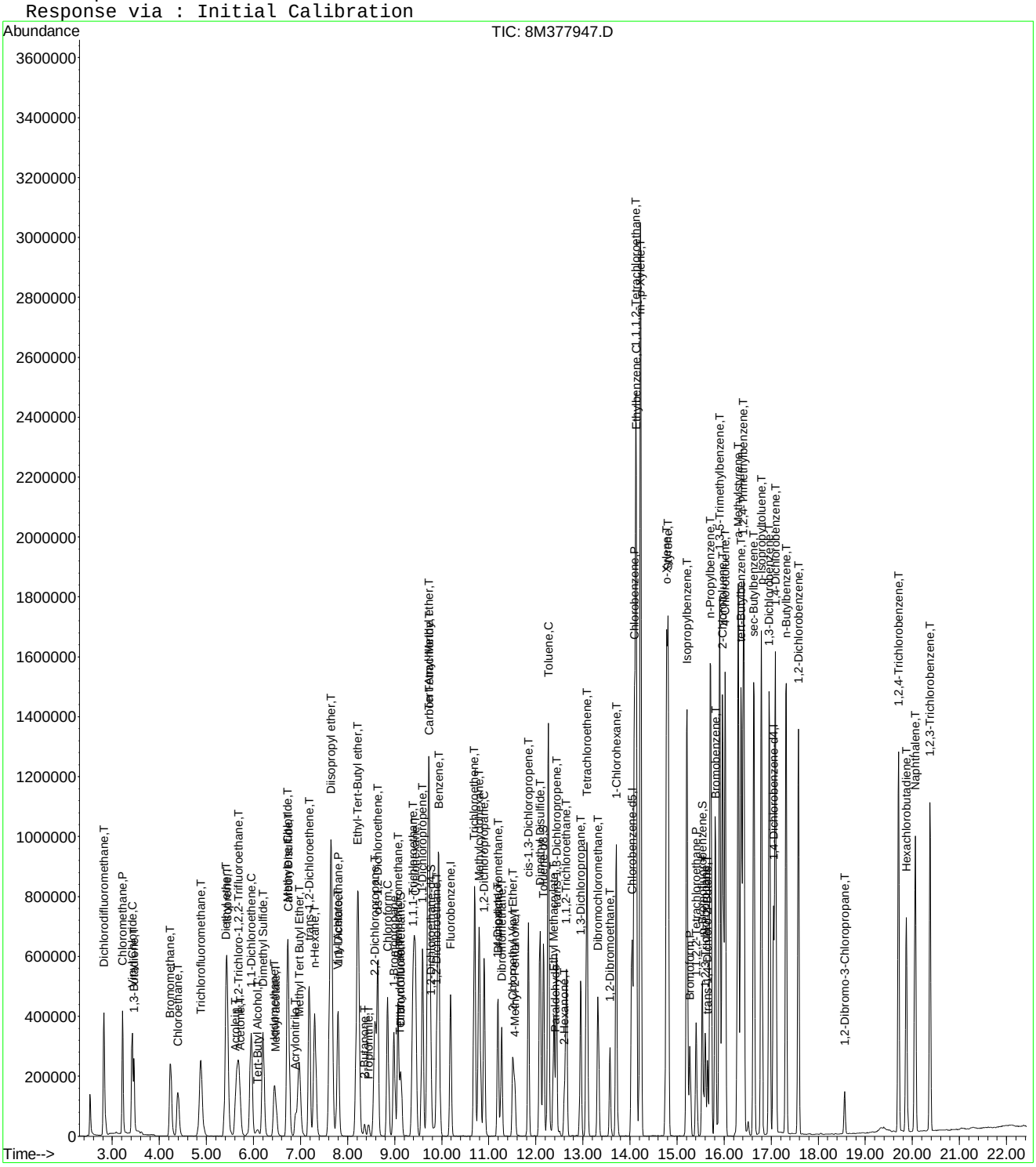
| | Compound | R.T. | QIon | Response | Conc | Unit | Qvalue |
|---|---|---|---|---|---|---|---|
| 45) | 1,2-Dichloroethane | 9.89 | 62 | 336687 | 51.1441 | ug/L | 99 |
| 46) | Benzene | 9.94 | 78 | 1223523 | 49.7848 | ug/L | 100 |
| 47) | Trichloroethene | 10.69 | 130 | 424349 | 52.2301 | ug/L | 100 |
| 48) | Methylcyclohexane | 10.80 | 83 | 486163 | 51.7735 | ug/L | 98 |
| 49) | 1,2-Dichloropropane | 10.90 | 63 | 314619 | 52.6157 | ug/L | 100 |
| 50) | Bromodichloromethane | 11.20 | 83 | 402435 | 52.1739 | ug/L | 99 |
| 51) | 1,4-Dioxane | 11.19 | 88 | 6195 | 180.7261 | ug/L | 96 |
| 52) | Dibromomethane | 11.27 | 93 | 164235 | 53.0541 | ug/L | 99 |
| 53) | 2-Chloroethyl Vinyl Ether | 11.51 | 63 | 139662 | 50.9012 | ug/L | 99 |
| 54) | 4-Methyl-2-Pentanone | 11.55 | 58 | 66620 | 53.6632 | ug/L | 98 |
| 55) | cis-1,3-Dichloropropene | 11.84 | 75 | 506362 | 55.7770 | ug/L | 99 |
| 56) | Dimethyl Disulfide | 12.09 | 94 | 562321 | 55.9366 | ug/L | 100 |
| 59) | Toluene | 12.26 | 91 | 1422653 | 48.3411 | ug/L | 100 |
| 60) | Ethyl Methacrylate | 12.38 | 69 | 279605 | 54.4645 | ug/L | 98 |
| 61) | Paraldehyde | 12.41 | 89 | 7849 | 85.1829 | ug/L | 80 |
| 62) | trans-1,3-Dichloropropene | 12.44 | 75 | 400529 | 49.0541 | ug/L | 99 |
| 63) | 1,1,2-Trichloroethane | 12.65 | 97 | 244198 | 53.6763 | ug/L | 100 |
| 64) | 2-Hexanone | 12.61 | 58 | 64083 | 56.1642 | ug/L | 97 |
| 65) | 1,3-Dichloropropane | 12.95 | 76 | 391868 | 52.6084 | ug/L | 99 |
| 66) | Tetrachloroethene | 13.08 | 164 | 338912 | 51.0936 | ug/L | 99 |
| 67) | Dibromochloromethane | 13.32 | 129 | 364714 | 54.5432 | ug/L | 100 |
| 68) | 1,2-Dibromoethane | 13.58 | 107 | 259604 | 52.9696 | ug/L | 99 |
| 69) | 1-Chlorohexane | 13.71 | 91 | 468914 | 47.7042 | ug/L | 100 |
| 70) | Chlorobenzene | 14.09 | 112 | 1031073 | 50.1432 | ug/L | 99 |
| 71) | 1,1,1,2-Tetrachloroethane | 14.13 | 131 | 390031 | 52.1176 | ug/L | 99 |
| 72) | Ethylbenzene | 14.14 | 106 | 558064 | 51.0922 | ug/L | 99 |
| 73) | m-,p-Xylene | 14.22 | 106 | 1361797 | 102.1216 | ug/L | 100 |
| 74) | o-Xylene | 14.78 | 106 | 685809 | 51.1964 | ug/L | 98 |
| 75) | Styrene | 14.81 | 104 | 1154075 | 48.1242 | ug/L | 100 |
| 76) | Bromoform | 15.27 | 173 | 202660 | 52.8305 | ug/L | 99 |
| 77) | Isopropylbenzene | 15.21 | 105 | 1508341 | 44.7963 | ug/L | 100 |
| 79) | 1,1,2,2-Tetrachloroethane | 15.41 | 83 | 254177 | 54.8146 | ug/L | 99 |
| 81) | 1,2,3-Trichloropropane | 15.59 | 110 | 83040 | 54.1336 | ug/L | 99 |
| 82) | trans-1,4-Dichloro-2-Buten | 15.65 | 53 | 63419 | 47.2449 | ug/L | 91 |
| 83) | n-Propylbenzene | 15.71 | 91 | 1872385 | 50.1049 | ug/L | 99 |
| 84) | Bromobenzene | 15.82 | 156 | 482499 | 51.9385 | ug/L | 100 |
| 85) | 1,3,5-Trimethylbenzene | 15.90 | 105 | 1473106 | 52.8589 | ug/L | 100 |
| 86) | 2-Chlorotoluene | 15.97 | 91 | 1254669 | 52.7815 | ug/L | 99 |
| 87) | 4-Chlorotoluene | 16.02 | 91 | 1064522 | 47.3735 | ug/L | 100 |
| 88) | a-Methylstyrene | 16.30 | 118 | 868179 | 52.3918 | ug/L | 100 |
| 89) | tert-Butylbenzene | 16.36 | 134 | 316761 | 51.4083 | ug/L | 98 |
| 90) | 1,2,4-Trimethylbenzene | 16.41 | 105 | 1480858 | 55.0179 | ug/L | 99 |
| 91) | sec-Butylbenzene | 16.63 | 105 | 1716186 | 50.3616 | ug/L | 100 |
| 92) | p-Isopropyltoluene | 16.79 | 119 | 1491694 | 48.5007 | ug/L | 99 |
| 93) | 1,3-Dichlorobenzene | 16.96 | 146 | 924519 | 50.4260 | ug/L | 99 |
| 94) | 1,4-Dichlorobenzene | 17.09 | 146 | 936244 | 50.8837 | ug/L | 99 |
| 95) | n-Butylbenzene | 17.32 | 91 | 1219846 | 50.7356 | ug/L | 99 |
| 96) | 1,2-Dichlorobenzene | 17.58 | 146 | 836591 | 51.1893 | ug/L | 99 |
| 97) | 1,2-Dibromo-3-Chloropropan | 18.56 | 75 | 42816 | 53.6424 | ug/L | 95 |
| 98) | 1,2,4-Trichlorobenzene | 19.71 | 182 | 536783 | 48.7742 | ug/L | 100 |
| 99) | Hexachlorobutadiene | 19.87 | 225 | 214743 | 54.9166 | ug/L | 98 |
| 100) | Naphthalene | 20.06 | 128 | 1093034 | 50.7514 | ug/L | 99 |
| 101) | 1,2,3-Trichlorobenzene | 20.37 | 180 | 478516 | 50.7337 | ug/L | 99 |

(#) = qualifier out of range (m) = manual integration
8M377947.D 8260WT.M Wed Mar 28 08:27:03 2012 Page 2

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\2\DATA\032712\8M377947.D Vial: 14
Acq On : 27 Mar 2012 17:20 Operator: adc
Sample : WG393321-12 50.0 ug/L ALT SRC 8260 Inst : HPMS8
Misc : 1,1 STD50783 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Mar 28 8:27 2012 Quant Results File: 8260WT.RES

Method : C:\MSDCHEM\2\METHODS\8260WT.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 03/27/12 HPMS 8
Last Update : Wed Mar 28 08:18:24 2012
Response via : Initial Calibration



Data File : C:\MSDCHEM\2\DATA\032712\8M377947.D Vial: 14
Acq On : 27 Mar 2012 17:20 Operator: adc
Sample : WG393321-12 50.0 ug/L ALT SRC 8260 Inst : HPMS8
Misc : 1,1 STD50783 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\2\METHODS\8260WT.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 03/27/12 HPMS 8
Last Update : Wed Mar 28 08:18:24 2012
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 150%

| | | Compound | Amount | Calc. | %Dev | Area% | Dev(min) |
|---|---|---|---|---|---|---|---|
| 1 | I | Fluorobenzene | 25.0000 | 25.0000 | 0.0 | 99 | 0.00 |
| 2 | T | Dichlorodifluoromethane | 50.0000 | 77.4430 | -54.9# | 151 | 0.00 |
| 3 | P | Chloromethane | 50.0000 | 58.0239 | -16.0 | 124 | 0.00 |
| 4 | C | Vinyl Chloride | 50.0000 | 54.1500 | -8.3 | 117 | 0.00 |
| 5 | T | 1,3-Butadiene | 50.0000 | 28.6672 | 42.7# | 55 | 0.00 |
| 6 | T | Bromomethane | 50.0000 | 54.8498 | -9.7 | 109 | 0.00 |
| 7 | T | Chloroethane | 50.0000 | 55.8486 | -11.7 | 111 | 0.00 |
| 8 | T | Trichlorofluoromethane | 50.0000 | 52.3347 | -4.7 | 108 | 0.00 |
| 9 | T | Diethyl ether | 100.0000 | 89.6865 | 10.3 | 90 | 0.00 |
| 10 | T | Isoprene | 50.0000 | 48.7480 | 2.5 | 97 | 0.00 |
| 11 | T | Acrolein | 100.0000 | 133.9213 | -33.9# | 131 | 0.00 |
| 12 | T | 1,1,2-Trichloro-1,2,2-Trifl | 50.0000 | 51.5794 | -3.2 | 107 | 0.01 |
| 13 | T | Acetone | 50.0000 | 53.8482 | -7.7 | 98 | 0.00 |
| 14 | C | 1,1-Dichloroethene | 50.0000 | 48.7771 | 2.4 | 99 | 0.00 |
| 15 | T | Tert-Butyl Alcohol | 200.0000 | 182.7740 | 8.6 | 96 | 0.00 |
| 16 | T | Dimethyl Sulfide | 50.0000 | 49.0148 | 2.0 | 96 | 0.00 |
| 17 | T | Iodomethane | 50.0000 | 31.7549 | 36.5# | 57 | 0.00 |
| 18 | T | Methyl acetate | 50.0000 | 56.8429 | -13.7 | 112 | 0.00 |
| 19 | T | Methylene Chloride | 50.0000 | 49.7243 | 0.6 | 99 | 0.00 |
| 20 | T | Carbon Disulfide | 50.0000 | 51.0978 | -2.2 | 94 | 0.00 |
| 21 | T | Acrylonitrile | 50.0000 | 53.9187 | -7.8 | 99 | 0.00 |
| 22 | T | Methyl Tert Butyl Ether | 50.0000 | 53.5046 | -7.0 | 106 | 0.00 |
| 23 | T | trans-1,2-Dichloroethene | 50.0000 | 51.7361 | -3.5 | 101 | 0.00 |
| 24 | T | n-Hexane | 50.0000 | 51.5360 | -3.1 | 101 | 0.00 |
| 25 | T | Diisopropyl ether | 100.0000 | 98.7591 | 1.2 | 98 | 0.00 |
| 26 | T | Vinyl Acetate | 50.0000 | 45.3933 | 9.2 | 87 | 0.00 |
| 27 | P | 1,1-Dichloroethane | 50.0000 | 49.6637 | 0.7 | 100 | 0.00 |
| 28 | T | Ethyl-Tert-Butyl ether | 100.0000 | 96.7931 | 3.2 | 94 | 0.00 |
| 29 | T | 2-Butanone | 50.0000 | 54.8483 | -9.7 | 104 | 0.00 |
| 30 | T | Propionitrile | 100.0000 | 102.0215 | -2.0 | 96 | 0.00 |
| 31 | T | 2,2-Dichloropropane | 50.0000 | 49.7431 | 0.5 | 101 | 0.00 |
| 32 | T | cis-1,2-Dichloroethene | 50.0000 | 52.5408 | -5.1 | 103 | 0.00 |
| 33 | C | Chloroform | 50.0000 | 48.2661 | 3.5 | 98 | 0.00 |
| 34 | | 1-Bromopropane | 50.0000 | 57.7259 | -15.5 | 108 | 0.00 |
| 35 | T | Bromochloromethane | 50.0000 | 52.3208 | -4.6 | 102 | 0.00 |
| 36 | T | Tetrahydrofuran | 100.0000 | 97.5185 | 2.5 | 92 | 0.00 |
| 37 | S | Dibromofluoromethane | 25.0000 | 24.0589 | 3.8 | 97 | 0.00 |
| 38 | T | 1,1,1-Trichloroethane | 50.0000 | 50.9674 | -1.9 | 101 | 0.00 |
| 39 | T | Cyclohexane | 50.0000 | 51.4731 | -2.9 | 102 | 0.00 |
| 40 | T | 1,1-Dichloropropene | 50.0000 | 51.7350 | -3.5 | 102 | 0.00 |
| 41 | T | Tert-Amyl-Methyl ether | 100.0000 | 101.0247 | -1.0 | 99 | 0.00 |
| 42 | T | Carbon Tetrachloride | 50.0000 | 51.2072 | -2.4 | 103 | 0.00 |
| 43 | S | 1,2-Dichloroethane-d4 | 25.0000 | 24.6113 | 1.6 | 98 | 0.00 |
| 44 | | Heptane | 50.0000 | 0.0000 | 100.0# | 0 | -2.46# |
| 45 | T | 1,2-Dichloroethane | 50.0000 | 51.1441 | -2.3 | 101 | 0.00 |
| 46 | T | Benzene | 50.0000 | 49.7848 | 0.4 | 102 | 0.00 |
| 47 | T | Trichloroethene | 50.0000 | 52.2300 | -4.5 | 103 | 0.00 |
| 48 | T | Methylcyclohexane | 50.0000 | 51.7735 | -3.5 | 103 | 0.00 |
| 49 | C | 1,2-Dichloropropane | 50.0000 | 52.6157 | -5.2 | 102 | 0.00 |
| 50 | T | Bromodichloromethane | 50.0000 | 52.1739 | -4.3 | 102 | 0.00 |
| 51 | T | 1,4-Dioxane | 200.0000 | 180.7261 | 9.6 | 91 | 0.00 |
| 52 | T | Dibromomethane | 50.0000 | 53.0541 | -6.1 | 98 | 0.00 |
| 53 | T | 2-Chloroethyl Vinyl Ether | 50.0000 | 50.9012 | -1.8 | 93 | 0.00 |
| 54 | T | 4-Methyl-2-Pentanone | 50.0000 | 53.6632 | -7.3 | 99 | 0.00 |

(#) = Out of Range
8M377947.D 8260WT.M Wed Mar 28 08:30:45 2012 Page 1

Data File : C:\MSDCHEM\2\DATA\032712\8M377947.D Vial: 14
Acq On : 27 Mar 2012 17:20 Operator: adc
Sample : WG393321-12 50.0 ug/L ALT SRC 8260 Inst : HPMS8
Misc : 1,1 STD50783 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\2\METHODS\8260WT.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 03/27/12 HPMS 8
Last Update : Wed Mar 28 08:18:24 2012
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 150%

| | | Compound | Amount | Calc. | %Dev | Area% | Dev(min) |
|---|---|---|---|---|---|---|---|
| 55 | T | cis-1,3-Dichloropropene | 50.0000 | 55.7770 | -11.6 | 106 | 0.00 |
| 56 | T | Dimethyl Disulfide | 50.0000 | 55.9366 | -11.9 | 100 | 0.00 |
| 57 | I | Chlorobenzene-d5 | 25.0000 | 25.0000 | 0.0 | 98 | 0.00 |
| 58 | S | Toluene-d8 | 25.0000 | 25.3707 | -1.5 | 97 | 0.00 |
| 59 | C | Toluene | 50.0000 | 48.3411 | 3.3 | 101 | 0.00 |
| 60 | T | Ethyl Methacrylate | 50.0000 | 54.4645 | -8.9 | 102 | 0.00 |
| 61 | | Paraldehyde | 100.0000 | 85.1829 | 14.8 | 75 | 0.00 |
| 62 | T | trans-1,3-Dichloropropene | 50.0000 | 49.0541 | 1.9 | 93 | 0.00 |
| 63 | T | 1,1,2-Trichloroethane | 50.0000 | 53.6763 | -7.4 | 101 | 0.00 |
| 64 | T | 2-Hexanone | 50.0000 | 56.1642 | -12.3 | 104 | 0.00 |
| 65 | T | 1,3-Dichloropropane | 50.0000 | 52.6084 | -5.2 | 102 | 0.00 |
| 66 | T | Tetrachloroethene | 50.0000 | 51.0936 | -2.2 | 100 | 0.00 |
| 67 | T | Dibromochloromethane | 50.0000 | 54.5433 | -9.1 | 100 | 0.00 |
| 68 | T | 1,2-Dibromoethane | 50.0000 | 52.9696 | -5.9 | 100 | 0.00 |
| 69 | T | 1-Chlorohexane | 50.0000 | 47.7042 | 4.6 | 97 | 0.00 |
| 70 | P | Chlorobenzene | 50.0000 | 50.1432 | -0.3 | 100 | 0.00 |
| 71 | T | 1,1,1,2-Tetrachloroethane | 50.0000 | 52.1176 | -4.2 | 100 | 0.00 |
| 72 | C | Ethylbenzene | 50.0000 | 51.0922 | -2.2 | 100 | 0.00 |
| 73 | T | m-,p-Xylene | 100.0000 | 102.1216 | -2.1 | 101 | 0.00 |
| 74 | T | o-Xylene | 50.0000 | 51.1964 | -2.4 | 99 | 0.00 |
| 75 | T | Styrene | 50.0000 | 48.1242 | 3.8 | 100 | 0.00 |
| 76 | P | Bromoform | 50.0000 | 52.8305 | -5.7 | 97 | 0.00 |
| 77 | T | Isopropylbenzene | 50.0000 | 44.7963 | 10.4 | 89 | 0.00 |
| 78 | I | 1,4-Dichlorobenzene-d4 | 25.0000 | 25.0000 | 0.0 | 97 | 0.00 |
| 79 | P | 1,1,2,2-Tetrachloroethane | 50.0000 | 54.8145 | -9.6 | 103 | 0.00 |
| 80 | S | p-Bromofluorobenzene | 25.0000 | 25.0220 | -0.1 | 95 | 0.00 |
| 81 | T | 1,2,3-Trichloropropane | 50.0000 | 54.1336 | -8.3 | 102 | 0.00 |
| 82 | T | trans-1,4-Dichloro-2-Butene | 50.0000 | 47.2449 | 5.5 | 84 | 0.00 |
| 83 | T | n-Propylbenzene | 50.0000 | 50.1049 | -0.2 | 99 | 0.00 |
| 84 | T | Bromobenzene | 50.0000 | 51.9385 | -3.9 | 101 | 0.00 |
| 85 | T | 1,3,5-Trimethylbenzene | 50.0000 | 52.8589 | -5.7 | 104 | 0.00 |
| 86 | T | 2-Chlorotoluene | 50.0000 | 52.7815 | -5.6 | 108 | 0.00 |
| 87 | T | 4-Chlorotoluene | 50.0000 | 47.3735 | 5.3 | 94 | 0.00 |
| 88 | T | a-Methylstyrene | 50.0000 | 52.3918 | -4.8 | 100 | 0.00 |
| 89 | T | tert-Butylbenzene | 50.0000 | 51.4083 | -2.8 | 100 | 0.00 |
| 90 | T | 1,2,4-Trimethylbenzene | 50.0000 | 55.0179 | -10.0 | 102 | 0.00 |
| 91 | T | sec-Butylbenzene | 50.0000 | 50.3616 | -0.7 | 101 | 0.00 |
| 92 | T | p-Isopropyltoluene | 50.0000 | 48.5007 | 3.0 | 95 | 0.00 |
| 93 | T | 1,3-Dichlorobenzene | 50.0000 | 50.4260 | -0.9 | 100 | 0.00 |
| 94 | T | 1,4-Dichlorobenzene | 50.0000 | 50.8837 | -1.8 | 101 | 0.00 |
| 95 | T | n-Butylbenzene | 50.0000 | 50.7356 | -1.5 | 101 | 0.00 |
| 96 | T | 1,2-Dichlorobenzene | 50.0000 | 51.1893 | -2.4 | 100 | 0.00 |
| 97 | T | 1,2-Dibromo-3-Chloropropane | 50.0000 | 53.6424 | -7.3 | 98 | 0.00 |
| 98 | T | 1,2,4-Trichlorobenzene | 50.0000 | 48.7742 | 2.5 | 97 | 0.00 |
| 99 | T | Hexachlorobutadiene | 50.0000 | 54.9166 | -9.8 | 105 | 0.00 |
| 100 | T | Naphthalene | 50.0000 | 50.7514 | -1.5 | 100 | 0.00 |
| 101 | T | 1,2,3-Trichlorobenzene | 50.0000 | 50.7337 | -1.5 | 101 | 0.00 |

(#) = Out of Range SPCC's out = 0 CCC's out = 0
8M377947.D 8260WT.M Wed Mar 28 08:30:45 2012 Page 2

Quantitation Report (Not Reviewed)

Data File : C:\MSDchem\1\data\051912\6M108266.D Vial: 3
Acq On : 19 May 2012 17:02 Operator: FJB
Sample : WG398532-02 50ug/L CCV 8260 Inst : HPMS6
Misc : 1,1 STD51694 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 19 17:25:20 2012 Quant Results File: 8260WT.RES

Quant Method : C:\MSDCHEM\1\METHODS\8260WT.M (RTE Integrator)
Title : 8260B/624_WATER SOP:OVLMSV01 05/16/12 - HPMS6
Last Update : Thu May 17 10:54:16 2012
Response via : Initial Calibration
DataAcq Meth : 8260WT

| Internal Standards | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| 1) Fluorobenzene | 10.48 | 96 | 680254 | 25.00 ug/L | 0.01 |
| 57) Chlorobenzene-d5 | 14.97 | 117 | 486202 | 25.00 ug/L | 0.01 |
| 78) 1,4-Dichlorobenzene-d4 | 18.55 | 152 | 246441 | 25.00 ug/L | 0.01 |
| **System Monitoring Compounds** | | | | | |
| 37) Dibromofluoromethane | 9.28 | 111 | 198041 | 23.7856 ug/L | 0.01 |
| Spiked Amount 25.000 | Range 86 - 118 | | Recovery = 95.16% | | |
| 43) 1,2-Dichloroethane-d4 | 10.01 | 65 | 196671 | 22.3339 ug/L | 0.00 |
| Spiked Amount 25.000 | Range 80 - 120 | | Recovery = 89.32% | | |
| 58) Toluene-d8 | 12.77 | 98 | 674577 | 26.4144 ug/L | 0.01 |
| Spiked Amount 25.000 | Range 88 - 110 | | Recovery = 105.64% | | |
| 80) p-Bromofluorobenzene | 16.75 | 95 | 243730 | 27.2786 ug/L | 0.00 |
| Spiked Amount 25.000 | Range 86 - 115 | | Recovery = 109.12% | | |
| **Target Compounds** | | | | | Qvalue |
| 2) Dichlorodifluoromethane | 2.71 | 85 | 511983 | 48.5573 ug/L | 98 |
| 3) Chloromethane | 3.10 | 50 | 766630 | 36.6596 ug/L | 100 |
| 4) Vinyl Chloride | 3.28 | 62 | 631198 | 49.0325 ug/L | 99 |
| 5) 1,3-Butadiene | 3.32 | 54 | 213067 | 53.1452 ug/L | 99 |
| 6) Bromomethane | 4.07 | 94 | 294043 | 39.4572 ug/L | 100 |
| 7) Chloroethane | 4.22 | 64 | 320444 | 48.3388 ug/L | 98 |
| 8) Trichlorofluoromethane | 4.68 | 101 | 750178 | 47.6396 ug/L | 100 |
| 9) Diethyl ether | 5.22 | 59 | 537322 | 85.4384 ug/L | 100 |
| 10) Isoprene | 5.25 | 67 | 674238 | 48.8982 ug/L | 100 |
| 11) Acrolein | 5.46 | 56 | 10291 | 27.4979 ug/L | 96 |
| 12) 1,1,2-Trichloro-1,2,2-Trif | 5.48 | 101 | 400794 | 49.5536 ug/L | 99 |
| 13) Acetone | 5.56 | 43 | 63590 | 43.5636 ug/L | 97 |
| 14) 1,1-Dichloroethene | 5.78 | 61 | 679396 | 52.2509 ug/L | 98 |
| 15) Tert-Butyl Alcohol | 5.93 | 59 | 67835 | 190.6521 ug/L | 94 |
| 16) Dimethyl Sulfide | 6.06 | 62 | 435640 | 42.3225 ug/L | 97 |
| 17) Iodomethane | 6.31 | 142 | 422121 | 46.8703 ug/L | 94 |
| 18) Methyl acetate | 6.35 | 43 | 195693 | 41.8151 ug/L | 99 |
| 19) Methylene Chloride | 6.61 | 84 | 398968 | 48.5515 ug/L | 97 |
| 20) Carbon Disulfide | 6.63 | 76 | 1152844 | 46.4178 ug/L | 100 |
| 21) Acrylonitrile | 6.82 | 53 | 92344 | 47.7091 ug/L | 98 |
| 22) Methyl Tert Butyl Ether | 6.85 | 73 | 816941 | 45.9169 ug/L | 99 |
| 23) trans-1,2-Dichloroethene | 7.10 | 96 | 394756 | 51.0365 ug/L | 98 |
| 24) n-Hexane | 7.20 | 57 | 465623 | 53.2672 ug/L | 98 |
| 25) Diisopropyl ether | 7.59 | 45 | 2660560 | 90.6512 ug/L | 99 |
| 26) Vinyl Acetate | 7.77 | 43 | 459279 | 48.2717 ug/L | 99 |
| 27) 1,1-Dichloroethane | 7.78 | 63 | 767221 | 50.8315 ug/L | 100 |
| 28) Ethyl-Tert-Butyl ether | 8.23 | 59 | 2175468 | 87.0831 ug/L | 100 |
| 29) 2-Butanone | 8.42 | 43 | 91303 | 44.1965 ug/L | 98 |
| 30) Propionitrile | 8.54 | 54 | 55707 | 90.3284 ug/L | 99 |
| 31) 2,2-Dichloropropane | 8.65 | 77 | 649750 | 55.0499 ug/L | 95 |
| 32) cis-1,2-Dichloroethene | 8.72 | 96 | 412625 | 50.8318 ug/L | 99 |
| 33) Chloroform | 8.96 | 83 | 699004 | 49.3198 ug/L | 99 |
| 34) 1-Bromopropane | 9.11 | 122 | 70050 | 43.7076 ug/L | 100 |
| 35) Bromochloromethane | 9.21 | 130 | 220189 | 50.2040 ug/L | 100 |
| 36) Tetrahydrofuran | 9.24 | 42 | 115255 | 86.3426 ug/L | 99 |
| 38) 1,1,1-Trichloroethane | 9.55 | 97 | 626677 | 48.4390 ug/L | 98 |
| 39) Cyclohexane | 9.58 | 56 | 598561 | 46.7056 ug/L | 99 |
| 40) 1,1-Dichloropropene | 9.79 | 75 | 552656 | 51.5821 ug/L | 96 |
| 41) Tert-Amyl-Methyl ether | 9.93 | 73 | 1732130 | 87.9161 ug/L | 99 |
| 42) Carbon Tetrachloride | 9.93 | 117 | 592021 | 47.3581 ug/L | 100 |

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

Quantitation Report (Not Reviewed)

Data File : C:\MSDchem\1\data\051912\6M108266.D Vial: 3
Acq On : 19 May 2012 17:02 Operator: FJB
Sample : WG398532-02 50ug/L CCV 8260 Inst : HPMS6
Misc : 1,1 STD51694 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 19 17:25:20 2012 Quant Results File: 8260WT.RES

Quant Method : C:\MSDCHEM\1\METHODS\8260WT.M (RTE Integrator)
Title : 8260B/624_WATER SOP:OVLMSV01 05/16/12 - HPMS6
Last Update : Thu May 17 10:54:16 2012
Response via : Initial Calibration
DataAcq Meth : 8260WT

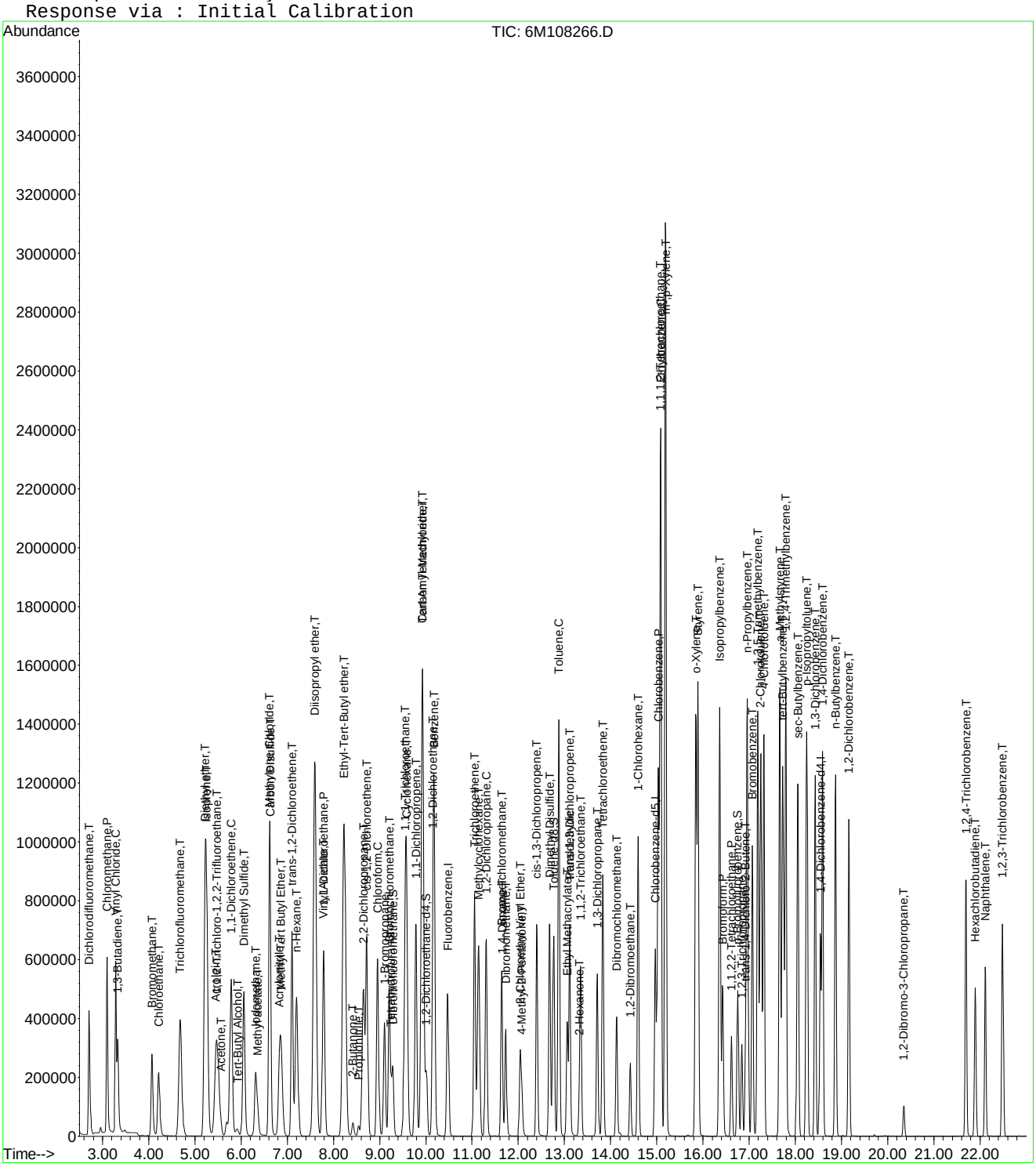
| | Compound | R.T. | QIon | Response | Conc Unit | | Qvalue |
|---|---|---|---|---|---|---|---|
| 45) | 1,2-Dichloroethane | 10.15 | 62 | 490224 | 45.5273 | ug/L | 98 |
| 46) | Benzene | 10.18 | 78 | 1525939 | 49.9365 | ug/L | 100 |
| 47) | Trichloroethene | 11.05 | 130 | 371777 | 47.6277 | ug/L | 95 |
| 48) | Methylcyclohexane | 11.14 | 83 | 476873 | 49.0020 | ug/L | 99 |
| 49) | 1,2-Dichloropropane | 11.31 | 63 | 383563 | 51.3865 | ug/L | 97 |
| 50) | 1,4-Dioxane | 11.65 | 88 | 8454 | 211.2042 | ug/L | 97 |
| 51) | Bromodichloromethane | 11.64 | 83 | 508689 | 51.5035 | ug/L | 100 |
| 52) | Dibromomethane | 11.74 | 93 | 197377 | 47.0313 | ug/L | 100 |
| 53) | 2-Chloroethyl Vinyl Ether | 12.04 | 63 | 163614 | 104.4570 | ug/L | 97 |
| 54) | 4-Methyl-2-Pentanone | 12.07 | 58 | 71234 | 44.7344 | ug/L | 99 |
| 55) | cis-1,3-Dichloropropene | 12.40 | 75 | 560116 | 50.0598 | ug/L | 99 |
| 56) | Dimethyl Disulfide | 12.69 | 79 | 318884 | 40.9664 | ug/L | 99 |
| 59) | Toluene | 12.88 | 91 | 1509085 | 52.2051 | ug/L | 99 |
| 60) | Ethyl Methacrylate | 13.06 | 69 | 313779 | 47.7313 | ug/L | 96 |
| 61) | Paraldehyde | 13.11 | 89 | 8396 | 94.9567 | ug/L # | 100 |
| 62) | trans-1,3-Dichloropropene | 13.11 | 75 | 489571 | 48.3208 | ug/L | 99 |
| 63) | 1,1,2-Trichloroethane | 13.35 | 97 | 236965 | 45.9829 | ug/L | 99 |
| 64) | 2-Hexanone | 13.32 | 43 | 119773 | 45.4848 | ug/L | 99 |
| 65) | 1,3-Dichloropropane | 13.72 | 76 | 430790 | 51.1868 | ug/L | 96 |
| 66) | Tetrachloroethene | 13.83 | 166 | 357327 | 53.5718 | ug/L | 97 |
| 67) | Dibromochloromethane | 14.14 | 129 | 310838 | 48.6442 | ug/L | 100 |
| 68) | 1,2-Dibromoethane | 14.43 | 107 | 234149 | 50.1390 | ug/L | 100 |
| 69) | 1-Chlorohexane | 14.59 | 91 | 487147 | 54.6915 | ug/L | 97 |
| 70) | Chlorobenzene | 15.03 | 112 | 951207 | 50.7963 | ug/L | 99 |
| 71) | 1,1,1,2-Tetrachloroethane | 15.07 | 131 | 363415 | 49.1086 | ug/L | 99 |
| 72) | Ethylbenzene | 15.09 | 106 | 527367 | 52.3185 | ug/L | 99 |
| 73) | m-,p-Xylene | 15.20 | 106 | 1314022 | 88.7225 | ug/L | 98 |
| 74) | o-Xylene | 15.85 | 106 | 598945 | 42.7904 | ug/L | 100 |
| 75) | Styrene | 15.89 | 104 | 1053401 | 43.8298 | ug/L | 98 |
| 76) | Bromoform | 16.43 | 173 | 175403 | 49.0484 | ug/L | 98 |
| 77) | Isopropylbenzene | 16.36 | 105 | 1489739 | 53.7392 | ug/L | 100 |
| 79) | 1,1,2,2-Tetrachloroethane | 16.62 | 83 | 247600 | 51.1643 | ug/L | 98 |
| 81) | 1,2,3-Trichloropropane | 16.84 | 110 | 67891 | 54.5100 | ug/L | 91 |
| 82) | trans-1,4-Dichloro-2-Buten | 16.92 | 53 | 89303 | 53.1448 | ug/L | 93 |
| 83) | n-Propylbenzene | 16.96 | 91 | 1823157 | 55.4682 | ug/L | 100 |
| 84) | Bromobenzene | 17.07 | 156 | 370542 | 55.5766 | ug/L | 99 |
| 85) | 1,3,5-Trimethylbenzene | 17.19 | 105 | 1218287 | 55.8147 | ug/L | 99 |
| 86) | 2-Chlorotoluene | 17.25 | 91 | 1085058 | 46.6987 | ug/L | 90 |
| 87) | 4-Chlorotoluene | 17.32 | 91 | 1160586 | 55.2654 | ug/L | 96 |
| 88) | a-Methylstyrene | 17.67 | 118 | 691049 | 50.1133 | ug/L | 100 |
| 89) | tert-Butylbenzene | 17.73 | 134 | 235246 | 51.5681 | ug/L | 99 |
| 90) | 1,2,4-Trimethylbenzene | 17.79 | 105 | 1281503 | 55.4988 | ug/L | 99 |
| 91) | sec-Butylbenzene | 18.06 | 105 | 1379965 | 53.8981 | ug/L | 100 |
| 92) | p-Isopropyltoluene | 18.25 | 119 | 1180852 | 58.4515 | ug/L | 100 |
| 93) | 1,3-Dichlorobenzene | 18.43 | 146 | 683638 | 54.6752 | ug/L | 99 |
| 94) | 1,4-Dichlorobenzene | 18.59 | 146 | 697345 | 52.1017 | ug/L | 99 |
| 95) | n-Butylbenzene | 18.87 | 91 | 1055321 | 55.0309 | ug/L | 99 |
| 96) | 1,2-Dichlorobenzene | 19.16 | 146 | 597689 | 51.1296 | ug/L | 100 |
| 97) | 1,2-Dibromo-3-Chloropropan | 20.34 | 75 | 38174 | 45.2772 | ug/L | 92 |
| 98) | 1,2,4-Trichlorobenzene | 21.70 | 180 | 375210 | 57.7596 | ug/L | 100 |
| 99) | Hexachlorobutadiene | 21.90 | 225 | 143109 | 56.4024 | ug/L | 99 |
| 100) | Naphthalene | 22.11 | 128 | 633440 | 48.6071 | ug/L | 99 |
| 101) | 1,2,3-Trichlorobenzene | 22.49 | 180 | 296489 | 55.2224 | ug/L | 99 |

(#) = qualifier out of range (m) = manual integration
6M108266.D 8260WT.M Sat May 19 17:25:20 2012 Page 2

Quantitation Report (Not Reviewed)

Data File : C:\MSDchem\1\data\051912\6M108266.D Vial: 3
Acq On : 19 May 2012 17:02 Operator: FJB
Sample : WG398532-02 50ug/L CCV 8260 Inst : HPMS6
Misc : 1,1 STD51694 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 19 17:25 2012 Quant Results File: 8260WT.RES

Method : C:\MSDCHEM\1\METHODS\8260WT.M (RTE Integrator)
Title : 8260B/624_WATER SOP:OVLMSV01 05/16/12 - HPMS6
Last Update : Thu May 17 10:54:16 2012
Response via : Initial Calibration



Data File : C:\MSDCHEM\1\DATA\051912\6M108266.D Vial: 3
Acq On : 19 May 2012 17:02 Operator: FJB
Sample : WG398532-02 50ug/L CCV 8260 Inst : HPMS6
Misc : 1,1 STD51694 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\1\METHODS\8260WT.M (RTE Integrator)
Title : 8260B/624_WATER SOP:OVLMSV01 05/16/12 - HPMS6
Last Update : Thu May 17 10:54:16 2012
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 : 200%

| | | Compound | AvgRF | CCRF | %Dev | Area% | Dev(min) |
|---|---|---|---|---|---|---|---|
| 1 | I | Fluorobenzene | 1.0000 | 1.0000 | 0.0 | 89 | 0.01 |
| 2 | T | Dichlorodifluoromethane | 0.3875 | 0.3763 | 2.9 | 85 | 0.00 |
| 3 | P | Chloromethane | 0.7685 | 0.5635 | 26.7# | 72 | 0.00 |
| 4 | C | Vinyl Chloride | 0.5931 | 0.4639 | 21.8# | 88 | 0.00 |
| 5 | T | 1,3-Butadiene | 0.1814 | 0.1566 | 13.6 | 88 | 0.01 |
| 6 | T | Bromomethane | 0.2271 | 0.2161 | 4.8 | 76 | 0.01 |
| 7 | T | Chloroethane | 0.2436 | 0.2355 | 3.3 | 84 | 0.01 |
| 8 | T | Trichlorofluoromethane | 0.5787 | 0.5514 | 4.7 | 83 | 0.00 |
| 9 | T | Diethyl ether | 0.2311 | 0.1975 | 14.6 | 76 | 0.00 |
| 10 | T | Isoprene | 0.5067 | 0.4956 | 2.2 | 83 | 0.01 |
| 11 | T | Acrolein | 0.0148 | 0.0076 | 48.9# | 45# | 0.00 |
| 12 | T | 1,1,2-Trichloro-1,2,2-Trifl | 0.2973 | 0.2946 | 0.9 | 86 | 0.01 |
| 13 | T | Acetone | 0.0537 | 0.0467 | 12.9 | 81 | 0.00 |
| 14 | C | 1,1-Dichloroethene | 0.4779 | 0.4994 | -4.5 | 89 | 0.00 |
| 15 | T | Tert-Butyl Alcohol | 0.0131 | 0.0125 | 4.7 | 92 | 0.00 |
| 16 | T | Dimethyl Sulfide | 0.3783 | 0.3202 | 15.4 | 73 | 0.00 |
| 17 | T | Iodomethane | 0.2887 | 0.3103 | -7.5 | 86 | 0.00 |
| 18 | T | Methyl acetate | 0.1720 | 0.1438 | 16.4 | 78 | 0.00 |
| 19 | T | Methylene Chloride | 0.3020 | 0.2933 | 2.9 | 87 | 0.00 |
| 20 | T | Carbon Disulfide | 0.9128 | 0.8474 | 7.2 | 81 | 0.01 |
| 21 | T | Acrylonitrile | 0.0711 | 0.0679 | 4.6 | 84 | 0.00 |
| 22 | T | Methyl Tert Butyl Ether | 0.6539 | 0.6005 | 8.2 | 82 | 0.00 |
| 23 | T | trans-1,2-Dichloroethene | 0.2843 | 0.2902 | -2.1 | 87 | 0.00 |
| 24 | T | n-Hexane | 0.3212 | 0.3422 | -6.5 | 93 | 0.00 |
| 25 | T | Diisopropyl ether | 1.0786 | 0.9778 | 9.3 | 80 | 0.00 |
| 26 | T | Vinyl Acetate | 0.3497 | 0.3376 | 3.5 | 85 | 0.00 |
| 27 | P | 1,1-Dichloroethane | 0.5547 | 0.5639 | -1.7 | 86 | 0.00 |
| 28 | T | Ethyl-Tert-Butyl ether | 0.9181 | 0.7995 | 12.9 | 78 | 0.00 |
| 29 | T | 2-Butanone | 0.0759 | 0.0671 | 11.6 | 82 | 0.00 |
| 30 | T | Propionitrile | 0.0227 | 0.0205 | 9.7 | 79 | 0.00 |
| 31 | T | 2,2-Dichloropropane | 0.4338 | 0.4776 | -10.1 | 93 | 0.01 |
| 32 | T | cis-1,2-Dichloroethene | 0.2983 | 0.3033 | -1.7 | 86 | 0.00 |
| 33 | C | Chloroform | 0.5209 | 0.5138 | 1.4 | 83 | 0.00 |
| 34 | | 1-Bromopropane | 0.0505 | 0.0515 | -2.0 | 85 | 0.01 |
| 35 | T | Bromochloromethane | 0.1612 | 0.1618 | -0.4 | 84 | 0.01 |
| 36 | T | Tetrahydrofuran | 0.0491 | 0.0424 | 13.7 | 78 | 0.00 |
| 37 | S | Dibromofluoromethane | 0.3060 | 0.2911 | 4.9 | 83 | 0.01 |
| 38 | T | 1,1,1-Trichloroethane | 0.4755 | 0.4606 | 3.1 | 83 | 0.00 |
| 39 | T | Cyclohexane | 0.4710 | 0.4400 | 6.6 | 79 | 0.00 |
| 40 | T | 1,1-Dichloropropene | 0.3937 | 0.4062 | -3.2 | 86 | 0.01 |
| 41 | T | Tert-Amyl-Methyl ether | 0.7241 | 0.6366 | 12.1 | 77 | 0.00 |
| 42 | T | Carbon Tetrachloride | 0.3768 | 0.4351 | -15.5 | 88 | 0.00 |
| 43 | S | 1,2-Dichloroethane-d4 | 0.3236 | 0.2891 | 10.7 | 78 | 0.00 |
| 44 | | Heptane | 0.0000 | 0.0000 | 0.0 | 75 | 0.00 |
| 45 | T | 1,2-Dichloroethane | 0.3957 | 0.3603 | 8.9 | 78 | 0.01 |
| 46 | T | Benzene | 1.1230 | 1.1216 | 0.1 | 85 | 0.01 |
| 47 | T | Trichloroethene | 0.2869 | 0.2733 | 4.7 | 84 | 0.00 |
| 48 | T | Methylcyclohexane | 0.3577 | 0.3505 | 2.0 | 85 | 0.00 |
| 49 | C | 1,2-Dichloropropane | 0.2743 | 0.2819 | -2.8 | 86 | 0.01 |
| 50 | T | 1,4-Dioxane | 0.0011 | 0.0015 | -38.4# | 103 | 0.00 |
| 51 | T | Bromodichloromethane | 0.3630 | 0.3739 | -3.0 | 88 | 0.01 |
| 52 | T | Dibromomethane | 0.1542 | 0.1451 | 5.9 | 83 | 0.01 |
| 53 | T | 2-Chloroethyl Vinyl Ether | 0.0576 | 0.1203 | -108.9# | 179 | 0.01 |
| 54 | T | 4-Methyl-2-Pentanone | 0.0585 | 0.0524 | 10.5 | 80 | 0.00 |

(#) = Out of Range
6M108266.D 8260WT.M Sat May 19 18:51:14 2012 Page 1

Data File : C:\MSDCHEM\1\DATA\051912\6M108266.D Vial: 3
Acq On : 19 May 2012 17:02 Operator: FJB
Sample : WG398532-02 50ug/L CCV 8260 Inst : HPMS6
Misc : 1,1 STD51694 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\1\METHODS\8260WT.M (RTE Integrator)
Title : 8260B/624_WATER SOP:OVLMSV01 05/16/12 - HPMS6
Last Update : Thu May 17 10:54:16 2012
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 : 200%

| | | Compound | AvgRF | CCRF | %Dev | Area% | Dev(min) |
|---|---|---|---|---|---|---|---|
| 55 | T | cis-1,3-Dichloropropene | 0.4112 | 0.4117 | -0.1 | 84 | 0.00 |
| 56 | T | Dimethyl Disulfide | 0.2301 | 0.2344 | -1.9 | 84 | 0.01 |
| 57 | I | Chlorobenzene-d5 | 1.0000 | 1.0000 | 0.0 | 83 | 0.01 |
| 58 | S | Toluene-d8 | 1.3132 | 1.3874 | -5.7 | 87 | 0.01 |
| 59 | C | Toluene | 1.4864 | 1.5519 | -4.4 | 82 | 0.00 |
| 60 | T | Ethyl Methacrylate | 0.2912 | 0.3227 | -10.8 | 84 | 0.01 |
| 61 | | Paraldehyde | 0.0040 | 0.0043 | -7.5 | 83 | 0.01 |
| 62 | T | trans-1,3-Dichloropropene | 0.4380 | 0.5035 | -15.0 | 81 | 0.01 |
| 63 | T | 1,1,2-Trichloroethane | 0.2370 | 0.2437 | -2.8 | 82 | 0.00 |
| 64 | T | 2-Hexanone | 0.1354 | 0.1232 | 9.0 | 75 | 0.00 |
| 65 | T | 1,3-Dichloropropane | 0.4327 | 0.4430 | -2.4 | 82 | 0.01 |
| 66 | T | Tetrachloroethene | 0.3430 | 0.3675 | -7.1 | 84 | 0.00 |
| 67 | T | Dibromochloromethane | 0.2538 | 0.3197 | -25.9# | 85 | 0.01 |
| 68 | T | 1,2-Dibromoethane | 0.2401 | 0.2408 | -0.3 | 80 | 0.01 |
| 69 | T | 1-Chlorohexane | 0.4580 | 0.5010 | -9.4 | 88 | 0.00 |
| 70 | P | Chlorobenzene | 0.9629 | 0.9782 | -1.6 | 80 | 0.01 |
| 71 | T | 1,1,1,2-Tetrachloroethane | 0.3136 | 0.3737 | -19.2 | 80 | 0.00 |
| 72 | C | Ethylbenzene | 0.5183 | 0.5423 | -4.6 | 79 | 0.01 |
| 73 | T | m-,p-Xylene | 0.6150 | 0.6757 | -9.9 | 77 | 0.01 |
| 74 | T | o-Xylene | 0.6140 | 0.6159 | -0.3 | 80 | 0.01 |
| 75 | T | Styrene | 1.0459 | 1.0833 | -3.6 | 79 | 0.00 |
| 76 | P | Bromoform | 0.1566 | 0.1804 | -15.2 | 84 | 0.00 |
| 77 | T | Isopropylbenzene | 1.4254 | 1.5320 | -7.5 | 79 | 0.01 |
| 78 | I | 1,4-Dichlorobenzene-d4 | 1.0000 | 1.0000 | 0.0 | 80 | 0.01 |
| 79 | P | 1,1,2,2-Tetrachloroethane | 0.4909 | 0.5023 | -2.3 | 77 | 0.01 |
| 80 | S | p-Bromofluorobenzene | 0.9064 | 0.9890 | -9.1 | 86 | 0.00 |
| 81 | T | 1,2,3-Trichloropropane | 0.1263 | 0.1377 | -9.0 | 85 | 0.01 |
| 82 | T | trans-1,4-Dichloro-2-Butene | 0.1414 | 0.1812 | -28.1# | 88 | 0.01 |
| 83 | T | n-Propylbenzene | 3.3343 | 3.6990 | -10.9 | 82 | 0.01 |
| 84 | T | Bromobenzene | 0.6764 | 0.7518 | -11.2 | 79 | 0.00 |
| 85 | T | 1,3,5-Trimethylbenzene | 2.2143 | 2.4718 | -11.6 | 80 | 0.00 |
| 86 | T | 2-Chlorotoluene | 2.3571 | 2.2015 | 6.6 | 66 | 0.00 |
| 87 | T | 4-Chlorotoluene | 2.1304 | 2.3547 | -10.5 | 83 | 0.01 |
| 88 | T | a-Methylstyrene | 1.3989 | 1.4021 | -0.2 | 78 | 0.01 |
| 89 | T | tert-Butylbenzene | 0.4628 | 0.4773 | -3.1 | 79 | 0.00 |
| 90 | T | 1,2,4-Trimethylbenzene | 2.3424 | 2.6000 | -11.0 | 78 | 0.01 |
| 91 | T | sec-Butylbenzene | 2.5973 | 2.7998 | -7.8 | 80 | 0.01 |
| 92 | T | p-Isopropyltoluene | 2.0494 | 2.3958 | -16.9 | 83 | 0.01 |
| 93 | T | 1,3-Dichlorobenzene | 1.2684 | 1.3870 | -9.4 | 79 | 0.01 |
| 94 | T | 1,4-Dichlorobenzene | 1.3578 | 1.4148 | -4.2 | 79 | 0.00 |
| 95 | T | n-Butylbenzene | 1.9454 | 2.1411 | -10.1 | 82 | 0.01 |
| 96 | T | 1,2-Dichlorobenzene | 1.1859 | 1.2126 | -2.3 | 78 | 0.00 |
| 97 | T | 1,2-Dibromo-3-Chloropropane | 0.0740 | 0.0775 | -4.6 | 76 | 0.00 |
| 98 | T | 1,2,4-Trichlorobenzene | 0.6590 | 0.7613 | -15.5 | 85 | 0.01 |
| 99 | T | Hexachlorobutadiene | 0.2574 | 0.2904 | -12.8 | 91 | 0.00 |
| 100 | T | Naphthalene | 1.3220 | 1.2852 | 2.8 | 76 | 0.00 |
| 101 | T | 1,2,3-Trichlorobenzene | 0.5446 | 0.6015 | -10.4 | 81 | 0.01 |

(#) = Out of Range SPCC's out = 0 CCC's out = 1
6M108266.D 8260WT.M Sat May 19 18:51:14 2012 Page 2

Evaluate Continuing Calibration Report

Data File : C:\MSDCHEM\1\DATA\051912\6M108266.D Vial: 3
Acq On : 19 May 2012 17:02 Operator: FJB
Sample : WG398532-02 50ug/L CCV 8260 Inst : HPMS6
Misc : 1,1 STD51694 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\1\METHODS\8260WT.M (RTE Integrator)
Title : 8260B/624_WATER SOP:OVLMSV01 05/16/12 - HPMS6
Last Update : Thu May 17 10:54:16 2012
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 : 200%

| | | Compound | Amount | Calc. | %Dev | Area% | Dev(min) |
|---|---|---|---|---|---|---|---|
| 1 | I | Fluorobenzene | 25.0000 | 25.0000 | 0.0 | 89 | 0.01 |
| 2 | T | Dichlorodifluoromethane | 50.0000 | 48.5573 | 2.9 | 85 | 0.00 |
| 3 | P | Chloromethane | 50.0000 | 36.6596 | 26.7# | 72 | 0.00 |
| 4 | C | Vinyl Chloride | 50.0000 | 49.0324 | 1.9 | 88 | 0.00 |
| 5 | T | 1,3-Butadiene | 50.0000 | 53.1452 | -6.3 | 88 | 0.01 |
| 6 | T | Bromomethane | 50.0000 | 39.4572 | 21.1# | 76 | 0.01 |
| 7 | T | Chloroethane | 50.0000 | 48.3388 | 3.3 | 84 | 0.01 |
| 8 | T | Trichlorofluoromethane | 50.0000 | 47.6396 | 4.7 | 83 | 0.00 |
| 9 | T | Diethyl ether | 100.0000 | 85.4384 | 14.6 | 76 | 0.00 |
| 10 | T | Isoprene | 50.0000 | 48.8982 | 2.2 | 83 | 0.01 |
| 11 | T | Acrolein | 50.0000 | 27.4979 | 45.0# | 45 | 0.00 |
| 12 | T | 1,1,2-Trichloro-1,2,2-Trifl | 50.0000 | 49.5536 | 0.9 | 86 | 0.01 |
| 13 | T | Acetone | 50.0000 | 43.5636 | 12.9 | 81 | 0.00 |
| 14 | C | 1,1-Dichloroethene | 50.0000 | 52.2509 | -4.5 | 89 | 0.00 |
| 15 | T | Tert-Butyl Alcohol | 200.0000 | 190.6521 | 4.7 | 92 | 0.00 |
| 16 | T | Dimethyl Sulfide | 50.0000 | 42.3225 | 15.4 | 73 | 0.00 |
| 17 | T | Iodomethane | 50.0000 | 46.8703 | 6.3 | 86 | 0.00 |
| 18 | T | Methyl acetate | 50.0000 | 41.8151 | 16.4 | 78 | 0.00 |
| 19 | T | Methylene Chloride | 50.0000 | 48.5515 | 2.9 | 87 | 0.00 |
| 20 | T | Carbon Disulfide | 50.0000 | 46.4178 | 7.2 | 81 | 0.01 |
| 21 | T | Acrylonitrile | 50.0000 | 47.7091 | 4.6 | 84 | 0.00 |
| 22 | T | Methyl Tert Butyl Ether | 50.0000 | 45.9170 | 8.2 | 82 | 0.00 |
| 23 | T | trans-1,2-Dichloroethene | 50.0000 | 51.0365 | -2.1 | 87 | 0.00 |
| 24 | T | n-Hexane | 50.0000 | 53.2672 | -6.5 | 93 | 0.00 |
| 25 | T | Diisopropyl ether | 100.0000 | 90.6512 | 9.3 | 80 | 0.00 |
| 26 | T | Vinyl Acetate | 50.0000 | 48.2717 | 3.5 | 85 | 0.00 |
| 27 | P | 1,1-Dichloroethane | 50.0000 | 50.8315 | -1.7 | 86 | 0.00 |
| 28 | T | Ethyl-Tert-Butyl ether | 100.0000 | 87.0831 | 12.9 | 78 | 0.00 |
| 29 | T | 2-Butanone | 50.0000 | 44.1965 | 11.6 | 82 | 0.00 |
| 30 | T | Propionitrile | 100.0000 | 90.3284 | 9.7 | 79 | 0.00 |
| 31 | T | 2,2-Dichloropropane | 50.0000 | 55.0499 | -10.1 | 93 | 0.01 |
| 32 | T | cis-1,2-Dichloroethene | 50.0000 | 50.8318 | -1.7 | 86 | 0.00 |
| 33 | C | Chloroform | 50.0000 | 49.3198 | 1.4 | 83 | 0.00 |
| 34 | | 1-Bromopropane | 50.0000 | 43.7076 | 12.6 | 85 | 0.01 |
| 35 | T | Bromochloromethane | 50.0000 | 50.2040 | -0.4 | 84 | 0.01 |
| 36 | T | Tetrahydrofuran | 100.0000 | 86.3426 | 13.7 | 78 | 0.00 |
| 37 | S | Dibromofluoromethane | 25.0000 | 23.7856 | 4.9 | 83 | 0.01 |
| 38 | T | 1,1,1-Trichloroethane | 50.0000 | 48.4390 | 3.1 | 83 | 0.00 |
| 39 | T | Cyclohexane | 50.0000 | 46.7056 | 6.6 | 79 | 0.00 |
| 40 | T | 1,1-Dichloropropene | 50.0000 | 51.5821 | -3.2 | 86 | 0.01 |
| 41 | T | Tert-Amyl-Methyl ether | 100.0000 | 87.9161 | 12.1 | 77 | 0.00 |
| 42 | T | Carbon Tetrachloride | 50.0000 | 47.3581 | 5.3 | 88 | 0.00 |
| 43 | S | 1,2-Dichloroethane-d4 | 25.0000 | 22.3339 | 10.7 | 78 | 0.00 |
| 44 | | Heptane | -1.0000 | 0.0000 | 0.0 | 75 | 0.00 |
| 45 | T | 1,2-Dichloroethane | 50.0000 | 45.5273 | 8.9 | 78 | 0.01 |
| 46 | T | Benzene | 50.0000 | 49.9365 | 0.1 | 85 | 0.01 |
| 47 | T | Trichloroethene | 50.0000 | 47.6277 | 4.7 | 84 | 0.00 |
| 48 | T | Methylcyclohexane | 50.0000 | 49.0020 | 2.0 | 85 | 0.00 |
| 49 | C | 1,2-Dichloropropane | 50.0000 | 51.3865 | -2.8 | 86 | 0.01 |
| 50 | T | 1,4-Dioxane | 200.0000 | 211.2042 | -5.6 | 103 | 0.00 |
| 51 | T | Bromodichloromethane | 50.0000 | 51.5035 | -3.0 | 88 | 0.01 |
| 52 | T | Dibromomethane | 50.0000 | 47.0313 | 5.9 | 83 | 0.01 |
| 53 | T | 2-Chloroethyl Vinyl Ether | 50.0000 | 104.4570 | -108.9# | 179 | 0.01 |
| 54 | T | 4-Methyl-2-Pentanone | 50.0000 | 44.7344 | 10.5 | 80 | 0.00 |

(#) = Out of Range
6M108266.D 8260WT.M Sat May 19 18:51:15 2012 Page 1

Data File : C:\MSDCHEM\1\DATA\051912\6M108266.D Vial: 3
Acq On : 19 May 2012 17:02 Operator: FJB
Sample : WG398532-02 50ug/L CCV 8260 Inst : HPMS6
Misc : 1,1 STD51694 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\1\METHODS\8260WT.M (RTE Integrator)
Title : 8260B/624_WATER SOP:OVLMSV01 05/16/12 - HPMS6
Last Update : Thu May 17 10:54:16 2012
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 : 200%

| | | Compound | Amount | Calc. | %Dev | Area% | Dev(min) |
|---|---|---|---|---|---|---|---|
| 55 | T | cis-1,3-Dichloropropene | 50.0000 | 50.0598 | -0.1 | 84 | 0.00 |
| 56 | T | Dimethyl Disulfide | 50.0000 | 40.9664 | 18.1 | 84 | 0.01 |
| 57 | I | Chlorobenzene-d5 | 25.0000 | 25.0000 | 0.0 | 83 | 0.01 |
| 58 | S | Toluene-d8 | 25.0000 | 26.4144 | -5.7 | 87 | 0.01 |
| 59 | C | Toluene | 50.0000 | 52.2051 | -4.4 | 82 | 0.00 |
| 60 | T | Ethyl Methacrylate | 50.0000 | 47.7313 | 4.5 | 84 | 0.01 |
| 61 | | Paraldehyde | 100.0000 | 94.9567 | 5.0 | 83 | 0.01 |
| 62 | T | trans-1,3-Dichloropropene | 50.0000 | 48.3208 | 3.4 | 81 | 0.01 |
| 63 | T | 1,1,2-Trichloroethane | 50.0000 | 45.9829 | 8.0 | 82 | 0.00 |
| 64 | T | 2-Hexanone | 50.0000 | 45.4848 | 9.0 | 75 | 0.00 |
| 65 | T | 1,3-Dichloropropane | 50.0000 | 51.1868 | -2.4 | 82 | 0.01 |
| 66 | T | Tetrachloroethene | 50.0000 | 53.5718 | -7.1 | 84 | 0.00 |
| 67 | T | Dibromochloromethane | 50.0000 | 48.6442 | 2.7 | 85 | 0.01 |
| 68 | T | 1,2-Dibromoethane | 50.0000 | 50.1390 | -0.3 | 80 | 0.01 |
| 69 | T | 1-Chlorohexane | 50.0000 | 54.6915 | -9.4 | 88 | 0.00 |
| 70 | P | Chlorobenzene | 50.0000 | 50.7963 | -1.6 | 80 | 0.01 |
| 71 | T | 1,1,1,2-Tetrachloroethane | 50.0000 | 49.1086 | 1.8 | 80 | 0.00 |
| 72 | C | Ethylbenzene | 50.0000 | 52.3185 | -4.6 | 79 | 0.01 |
| 73 | T | m-,p-Xylene | 100.0000 | 88.7225 | 11.3 | 77 | 0.01 |
| 74 | T | o-Xylene | 50.0000 | 42.7903 | 14.4 | 80 | 0.01 |
| 75 | T | Styrene | 50.0000 | 43.8298 | 12.3 | 79 | 0.00 |
| 76 | P | Bromoform | 50.0000 | 49.0484 | 1.9 | 84 | 0.00 |
| 77 | T | Isopropylbenzene | 50.0000 | 53.7392 | -7.5 | 79 | 0.01 |
| 78 | I | 1,4-Dichlorobenzene-d4 | 25.0000 | 25.0000 | 0.0 | 80 | 0.01 |
| 79 | P | 1,1,2,2-Tetrachloroethane | 50.0000 | 51.1643 | -2.3 | 77 | 0.01 |
| 80 | S | p-Bromofluorobenzene | 25.0000 | 27.2786 | -9.1 | 86 | 0.00 |
| 81 | T | 1,2,3-Trichloropropane | 50.0000 | 54.5101 | -9.0 | 85 | 0.01 |
| 82 | T | trans-1,4-Dichloro-2-Butene | 50.0000 | 53.1448 | -6.3 | 88 | 0.01 |
| 83 | T | n-Propylbenzene | 50.0000 | 55.4682 | -10.9 | 82 | 0.01 |
| 84 | T | Bromobenzene | 50.0000 | 55.5766 | -11.2 | 79 | 0.00 |
| 85 | T | 1,3,5-Trimethylbenzene | 50.0000 | 55.8147 | -11.6 | 80 | 0.00 |
| 86 | T | 2-Chlorotoluene | 50.0000 | 46.6987 | 6.6 | 66 | 0.00 |
| 87 | T | 4-Chlorotoluene | 50.0000 | 55.2654 | -10.5 | 83 | 0.01 |
| 88 | T | a-Methylstyrene | 50.0000 | 50.1133 | -0.2 | 78 | 0.01 |
| 89 | T | tert-Butylbenzene | 50.0000 | 51.5681 | -3.1 | 79 | 0.00 |
| 90 | T | 1,2,4-Trimethylbenzene | 50.0000 | 55.4988 | -11.0 | 78 | 0.01 |
| 91 | T | sec-Butylbenzene | 50.0000 | 53.8981 | -7.8 | 80 | 0.01 |
| 92 | T | p-Isopropyltoluene | 50.0000 | 58.4515 | -16.9 | 83 | 0.01 |
| 93 | T | 1,3-Dichlorobenzene | 50.0000 | 54.6752 | -9.4 | 79 | 0.01 |
| 94 | T | 1,4-Dichlorobenzene | 50.0000 | 52.1017 | -4.2 | 79 | 0.00 |
| 95 | T | n-Butylbenzene | 50.0000 | 55.0309 | -10.1 | 82 | 0.01 |
| 96 | T | 1,2-Dichlorobenzene | 50.0000 | 51.1296 | -2.3 | 78 | 0.00 |
| 97 | T | 1,2-Dibromo-3-Chloropropane | 50.0000 | 45.2772 | 9.4 | 76 | 0.00 |
| 98 | T | 1,2,4-Trichlorobenzene | 50.0000 | 57.7596 | -15.5 | 85 | 0.01 |
| 99 | T | Hexachlorobutadiene | 50.0000 | 56.4024 | -12.8 | 91 | 0.00 |
| 100 | T | Naphthalene | 50.0000 | 48.6071 | 2.8 | 76 | 0.00 |
| 101 | T | 1,2,3-Trichlorobenzene | 50.0000 | 55.2224 | -10.4 | 81 | 0.01 |

(#) = Out of Range SPCC's out = 0 CCC's out = 0
6M108266.D 8260WT.M Sat May 19 18:51:16 2012 Page 2

Quantitation Report (Not Reviewed)

Data File : C:\MSDchem\1\data\051612\8M379102.D Vial: 2
Acq On : 16 May 2012 8:48 Operator: ADC
Sample : WG398117-02 50ug/L CCV 8260 Inst : HPMS8
Misc : 1,1 STD51468 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 16 09:10:41 2012 Quant Results File: 8260WT.RES

Quant Method : C:\MSDCHEM\1\METHODS\8260WT.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 03/27/12 HPMS 8
Last Update : Wed Mar 28 08:18:24 2012
Response via : Initial Calibration
DataAcq Meth : 8260WT

| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 1) Fluorobenzene | 10.20 | 96 | 692088 | 25.00 | ug/L | 0.01 |
| 57) Chlorobenzene-d5 | 14.04 | 117 | 620460 | 25.00 | ug/L | 0.00 |
| 78) 1,4-Dichlorobenzene-d4 | 17.05 | 152 | 345713 | 25.00 | ug/L | 0.00 |
| **System Monitoring Compounds** | | | | | | |
| 37) Dibromofluoromethane | 9.14 | 111 | 179446 | 24.9917 | ug/L | 0.00 |
| Spiked Amount 25.000 | Range 86 - 118 | | Recovery = 99.96% | | | |
| 43) 1,2-Dichloroethane-d4 | 9.77 | 65 | 149146 | 26.9747 | ug/L | 0.00 |
| Spiked Amount 25.000 | Range 80 - 120 | | Recovery = 107.88% | | | |
| 58) Toluene-d8 | 12.17 | 98 | 713921 | 24.9207 | ug/L | 0.00 |
| Spiked Amount 25.000 | Range 88 - 110 | | Recovery = 99.68% | | | |
| 80) p-Bromofluorobenzene | 15.54 | 95 | 279372 | 24.9807 | ug/L | 0.00 |
| Spiked Amount 25.000 | Range 86 - 115 | | Recovery = 99.92% | | | |
| **Target Compounds** | | | | | | Qvalue |
| 2) Dichlorodifluoromethane | 2.82 | 85 | 424773 | 56.4278 | ug/L | 100 |
| 3) Chloromethane | 3.23 | 50 | 402461 | 46.3877 | ug/L | 99 |
| 4) Vinyl Chloride | 3.42 | 62 | 392535 | 54.2853 | ug/L | 99 |
| 5) 1,3-Butadiene | 3.47 | 54 | 309130 | 73.5106 | ug/L | 99 |
| 6) Bromomethane | 4.24 | 94 | 141830 | 25.3272 | ug/L | 99 |
| 7) Chloroethane | 4.40 | 64 | 233268 | 50.0763 | ug/L | 97 |
| 8) Trichlorofluoromethane | 4.88 | 101 | 641412 | 60.0737 | ug/L | 99 |
| 9) Diethyl ether | 5.42 | 59 | 340568 | 87.6247 | ug/L | 98 |
| 10) Isoprene | 5.44 | 67 | 442829 | 52.7032 | ug/L | 94 |
| 11) Acrolein | 5.62 | 56 | 17969 | 40.9325 | ug/L | 92 |
| 12) 1,1,2-Trichloro-1,2,2-Trif | 5.67 | 101 | 319563 | 49.8345 | ug/L | 97 |
| 13) Acetone | 5.73 | 43 | 53328 | 52.2221 | ug/L | 95 |
| 14) 1,1-Dichloroethene | 5.96 | 61 | 477026 | 51.4087 | ug/L | 94 |
| 15) Tert-Butyl Alcohol | 6.09 | 59 | 55020 | 175.8227 | ug/L | 100 |
| 16) Dimethyl Sulfide | 6.21 | 62 | 364214 | 55.7561 | ug/L | 92 |
| 17) Iodomethane | 6.44 | 142 | 334621 | 30.8922 | ug/L | 95 |
| 18) Methyl acetate | 6.48 | 43 | 132571 | 41.2521 | ug/L | 98 |
| 19) Methylene Chloride | 6.72 | 84 | 316072 | 45.7745 | ug/L | 94 |
| 20) Carbon Disulfide | 6.75 | 76 | 982374 | 55.0999 | ug/L | 99 |
| 21) Acrylonitrile | 6.90 | 53 | 63391 | 45.8567 | ug/L | 97 |
| 22) Methyl Tert Butyl Ether | 6.97 | 73 | 538269 | 45.5581 | ug/L | 98 |
| 23) trans-1,2-Dichloroethene | 7.19 | 61 | 448750 | 51.2118 | ug/L | 96 |
| 24) n-Hexane | 7.31 | 57 | 443928 | 55.5201 | ug/L | 96 |
| 25) Diisopropyl ether | 7.65 | 45 | 2147166 | 101.5800 | ug/L | 97 |
| 26) Vinyl Acetate | 7.79 | 43 | 330463 | 48.6724 | ug/L | 97 |
| 27) 1,1-Dichloroethane | 7.81 | 63 | 540539 | 48.2533 | ug/L | 99 |
| 28) Ethyl-Tert-Butyl ether | 8.22 | 59 | 1727556 | 99.7258 | ug/L | 99 |
| 29) 2-Butanone | 8.37 | 43 | 72918 | 47.9867 | ug/L | 95 |
| 30) Propionitrile | 8.45 | 54 | 47062 | 91.9548 | ug/L | 96 |
| 31) 2,2-Dichloropropane | 8.59 | 77 | 530974 | 55.0911 | ug/L | 100 |
| 32) cis-1,2-Dichloroethene | 8.65 | 96 | 350534 | 48.3194 | ug/L | 92 |
| 33) Chloroform | 8.85 | 83 | 576479 | 49.9327 | ug/L | 99 |
| 34) 1-Bromopropane | 9.00 | 122 | 79625 | 54.2396 | ug/L | 100 |
| 35) Bromochloromethane | 9.08 | 130 | 224131 | 47.9705 | ug/L | 100 |
| 36) Tetrahydrofuran | 9.11 | 42 | 102535 | 99.5677 | ug/L | 97 |
| 38) 1,1,1-Trichloroethane | 9.39 | 97 | 601315 | 57.3196 | ug/L | 99 |
| 39) Cyclohexane | 9.44 | 56 | 537286 | 51.8383 | ug/L | 100 |
| 40) 1,1-Dichloropropene | 9.60 | 75 | 478736 | 52.9804 | ug/L | 97 |
| 41) Tert-Amyl-Methyl ether | 9.72 | 73 | 1315118 | 92.7697 | ug/L | 96 |
| 42) Carbon Tetrachloride | 9.73 | 117 | 568458 | 57.9195 | ug/L | 100 |
| 45) 1,2-Dichloroethane | 9.90 | 62 | 381719 | 53.7335 | ug/L | 98 |

(#) = qualifier out of range (m) = manual integration
8M379102.D 8260WT.M Wed May 16 09:10:41 2012 Page 1

Quantitation Report (Not Reviewed)

Data File : C:\MSDchem\1\data\051612\8M379102.D Vial: 2
Acq On : 16 May 2012 8:48 Operator: ADC
Sample : WG398117-02 50ug/L CCV 8260 Inst : HPMS8
Misc : 1,1 STD51468 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 16 09:10:41 2012 Quant Results File: 8260WT.RES

Quant Method : C:\MSDCHEM\1\METHODS\8260WT.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 03/27/12 HPMS 8
Last Update : Wed Mar 28 08:18:24 2012
Response via : Initial Calibration
DataAcq Meth : 8260WT

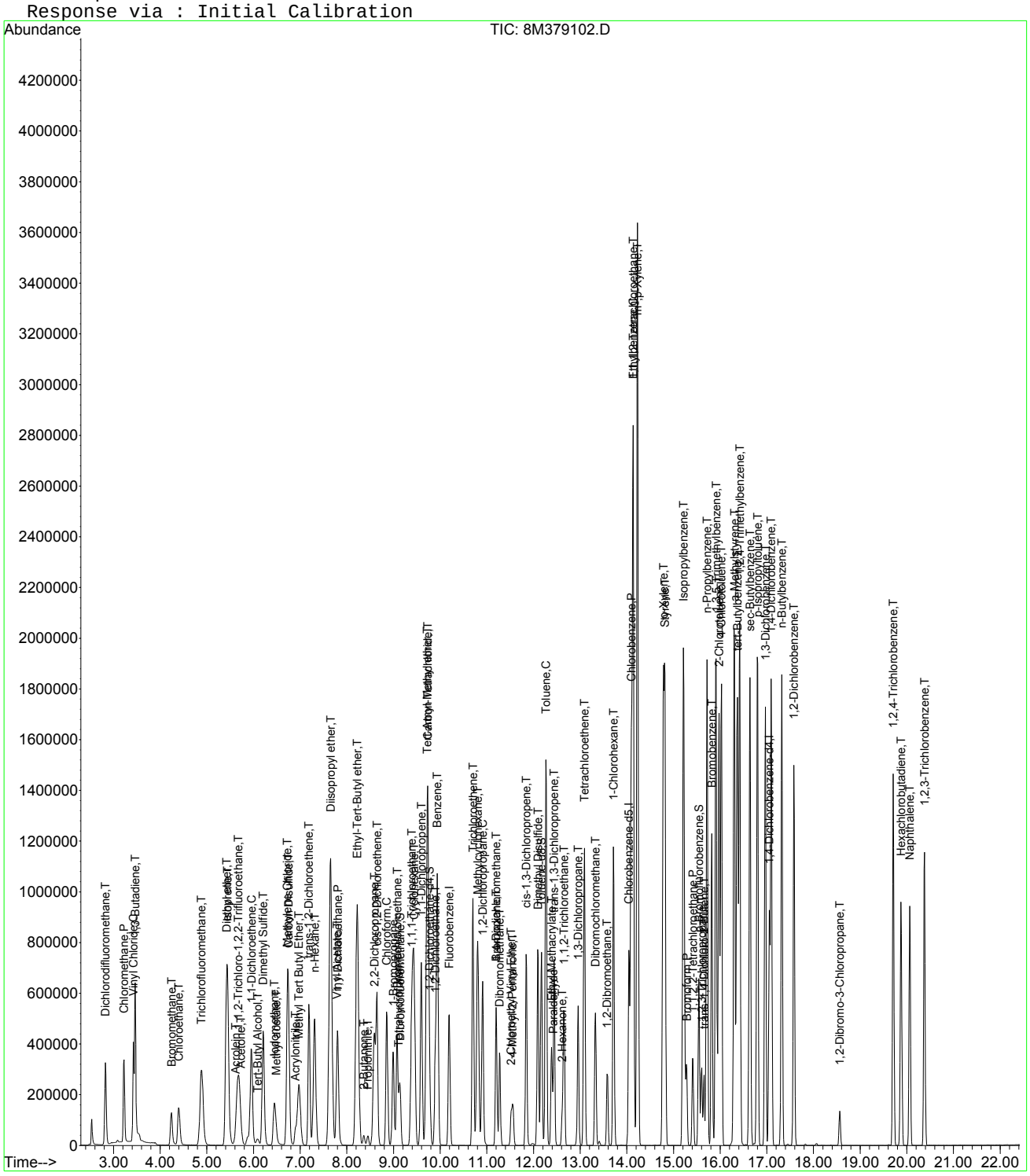
| | Compound | R.T. | QIon | Response | Conc | Unit | Qvalue |
|---|---|---|---|---|---|---|---|
| 46) | Benzene | 9.94 | 78 | 1285906 | 48.4870 | ug/L | 97 |
| 47) | Trichloroethene | 10.70 | 130 | 472283 | 53.8681 | ug/L | 99 |
| 48) | Methylcyclohexane | 10.81 | 83 | 523983 | 51.7100 | ug/L | 98 |
| 49) | 1,2-Dichloropropane | 10.91 | 63 | 314024 | 48.6659 | ug/L | 89 |
| 50) | Bromodichloromethane | 11.20 | 83 | 448739 | 53.9117 | ug/L | 99 |
| 51) | 1,4-Dioxane | 11.20 | 88 | 6532 | 176.5865 | ug/L | 84 |
| 52) | Dibromomethane | 11.27 | 93 | 163700 | 49.0042 | ug/L | 98 |
| 53) | 2-Chloroethyl Vinyl Ether | 11.52 | 63 | 62072 | 20.9642 | ug/L | 99 |
| 54) | 4-Methyl-2-Pentanone | 11.55 | 58 | 59390 | 44.3320 | ug/L | 98 |
| 55) | cis-1,3-Dichloropropene | 11.84 | 75 | 517610 | 52.8358 | ug/L | 100 |
| 56) | Dimethyl Disulfide | 12.10 | 94 | 612153 | 56.4292 | ug/L | 97 |
| 59) | Toluene | 12.26 | 91 | 1537080 | 44.9203 | ug/L | 100 |
| 60) | Ethyl Methacrylate | 12.39 | 69 | 241413 | 40.4444 | ug/L | 91 |
| 61) | Paraldehyde | 12.42 | 89 | 9914 | 92.0616 | ug/L | 99 |
| 62) | trans-1,3-Dichloropropene | 12.44 | 75 | 456699 | 48.1061 | ug/L | 99 |
| 63) | 1,1,2-Trichloroethane | 12.66 | 97 | 238787 | 45.1419 | ug/L | 99 |
| 64) | 2-Hexanone | 12.62 | 58 | 55366 | 41.7339 | ug/L | 95 |
| 65) | 1,3-Dichloropropane | 12.96 | 76 | 378348 | 43.6853 | ug/L | 92 |
| 66) | Tetrachloroethene | 13.09 | 164 | 390151 | 50.5873 | ug/L | 98 |
| 67) | Dibromochloromethane | 13.33 | 129 | 395131 | 50.8228 | ug/L | 99 |
| 68) | 1,2-Dibromoethane | 13.58 | 107 | 251900 | 44.2051 | ug/L | 99 |
| 69) | 1-Chlorohexane | 13.71 | 91 | 518833 | 45.3962 | ug/L | 94 |
| 70) | Chlorobenzene | 14.09 | 112 | 1131474 | 47.3256 | ug/L | 97 |
| 71) | 1,1,1,2-Tetrachloroethane | 14.14 | 131 | 444931 | 51.1337 | ug/L | 100 |
| 72) | Ethylbenzene | 14.14 | 106 | 619562 | 48.7848 | ug/L | 98 |
| 73) | m-,p-Xylene | 14.23 | 106 | 1513132 | 97.5913 | ug/L | 98 |
| 74) | o-Xylene | 14.79 | 106 | 748386 | 48.0497 | ug/L | 96 |
| 75) | Styrene | 14.82 | 104 | 1224538 | 43.9168 | ug/L | 95 |
| 76) | Bromoform | 15.28 | 173 | 218938 | 49.0870 | ug/L | 99 |
| 77) | Isopropylbenzene | 15.21 | 105 | 1947313 | 49.7402 | ug/L | 100 |
| 79) | 1,1,2,2-Tetrachloroethane | 15.42 | 83 | 226008 | 40.6797 | ug/L | 99 |
| 81) | 1,2,3-Trichloropropane | 15.60 | 110 | 73093 | 39.7695 | ug/L | 94 |
| 82) | trans-1,4-Dichloro-2-Buten | 15.66 | 53 | 70597 | 43.8951 | ug/L | 91 |
| 83) | n-Propylbenzene | 15.72 | 91 | 2084784 | 46.5630 | ug/L | 100 |
| 84) | Bromobenzene | 15.82 | 156 | 528699 | 47.5003 | ug/L | 98 |
| 85) | 1,3,5-Trimethylbenzene | 15.91 | 105 | 1619757 | 48.5097 | ug/L | 99 |
| 86) | 2-Chlorotoluene | 15.98 | 91 | 1316607 | 46.2278 | ug/L | 99 |
| 87) | 4-Chlorotoluene | 16.03 | 91 | 1322658 | 49.1273 | ug/L | 98 |
| 88) | a-Methylstyrene | 16.31 | 118 | 958407 | 48.2724 | ug/L | 98 |
| 89) | tert-Butylbenzene | 16.37 | 134 | 365364 | 49.4905 | ug/L | 92 |
| 90) | 1,2,4-Trimethylbenzene | 16.42 | 105 | 1638717 | 50.7856 | ug/L | 99 |
| 91) | sec-Butylbenzene | 16.64 | 105 | 1935605 | 47.4074 | ug/L | 99 |
| 92) | p-Isopropyltoluene | 16.80 | 119 | 1755583 | 47.6414 | ug/L | 100 |
| 93) | 1,3-Dichlorobenzene | 16.97 | 146 | 1033886 | 47.0658 | ug/L | 99 |
| 94) | 1,4-Dichlorobenzene | 17.09 | 146 | 1049986 | 47.6286 | ug/L | 100 |
| 95) | n-Butylbenzene | 17.32 | 91 | 1384615 | 48.0653 | ug/L | 100 |
| 96) | 1,2-Dichlorobenzene | 17.58 | 146 | 904647 | 46.1998 | ug/L | 99 |
| 97) | 1,2-Dibromo-3-Chloropropan | 18.56 | 75 | 41143 | 43.0222 | ug/L | 96 |
| 98) | 1,2,4-Trichlorobenzene | 19.71 | 182 | 584371 | 44.3175 | ug/L | 100 |
| 99) | Hexachlorobutadiene | 19.87 | 225 | 276099 | 58.9311 | ug/L | 99 |
| 100) | Naphthalene | 20.06 | 128 | 1038229 | 40.2348 | ug/L | 99 |
| 101) | 1,2,3-Trichlorobenzene | 20.38 | 180 | 502188 | 44.4387 | ug/L | 99 |

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

Quantitation Report (Not Reviewed)

Data File : C:\MSDchem\1\data\051612\8M379102.D Vial: 2
Acq On : 16 May 2012 8:48 Operator: ADC
Sample : WG398117-02 50ug/L CCV 8260 Inst : HPMS8
Misc : 1,1 STD51468 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 16 9:10 2012 Quant Results File: 8260WT.RES

Method : C:\MSDCHEM\1\METHODS\8260WT.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 03/27/12 HPMS 8
Last Update : Wed Mar 28 08:18:24 2012
Response via : Initial Calibration



Evaluate Continuing Calibration Report

Data File : C:\MSDCHEM\1\DATA\051612\8M379102.D Vial: 2
Acq On : 16 May 2012 8:48 Operator: ADC
Sample : WG398117-02 50ug/L CCV 8260 Inst : HPMS8
Misc : 1,1 STD51468 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\1\METHODS\8260WT.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 03/27/12 HPMS 8
Last Update : Wed Mar 28 08:18:24 2012
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 150%

| | | Compound | AvgRF | CCRF | %Dev | Area% | Dev(min) |
|---|---|---|---|---|---|---|---|
| 1 | I | Fluorobenzene | 1.0000 | 1.0000 | 0.0 | 107 | 0.01 |
| 2 | T | Dichlorodifluoromethane | 0.2719 | 0.3069 | -12.9 | 119 | 0.00 |
| 3 | P | Chloromethane | 0.3134 | 0.2908 | 7.2 | 107 | 0.01 |
| 4 | C | Vinyl Chloride | 0.2612 | 0.2836 | -8.6 | 127 | 0.00 |
| 5 | T | 1,3-Butadiene | 0.1800 | 0.2233 | -24.1 | 147 | 0.00 |
| 6 | T | Bromomethane | 0.2023 | 0.1025 | 49.3# | 55 | 0.00 |
| 7 | T | Chloroethane | 0.1683 | 0.1685 | -0.1 | 107 | 0.00 |
| 8 | T | Trichlorofluoromethane | 0.3857 | 0.4634 | -20.1 | 134 | 0.00 |
| 9 | T | Diethyl ether | 0.1404 | 0.1230 | 12.4 | 95 | 0.00 |
| 10 | T | Isoprene | 0.3035 | 0.3199 | -5.4 | 113 | 0.00 |
| 11 | T | Acrolein | 0.0159 | 0.0065 | 59.1# | 43# | 0.00 |
| 12 | T | 1,1,2-Trichloro-1,2,2-Trifl | 0.2316 | 0.2309 | 0.3 | 112 | 0.00 |
| 13 | T | Acetone | 0.0369 | 0.0385 | -4.4 | 103 | 0.01 |
| 14 | C | 1,1-Dichloroethene | 0.3352 | 0.3446 | -2.8 | 112 | 0.01 |
| 15 | T | Tert-Butyl Alcohol | 0.0096 | 0.0099 | -3.4 | 100 | 0.00 |
| 16 | T | Dimethyl Sulfide | 0.2360 | 0.2631 | -11.5 | 118 | 0.00 |
| 17 | T | Iodomethane | 0.3913 | 0.2417 | 38.2# | 60 | 0.00 |
| 18 | T | Methyl acetate | 0.1161 | 0.0958 | 17.5 | 88 | 0.00 |
| 19 | T | Methylene Chloride | 0.2494 | 0.2284 | 8.5 | 98 | 0.00 |
| 20 | T | Carbon Disulfide | 0.6440 | 0.7097 | -10.2 | 109 | 0.00 |
| 21 | T | Acrylonitrile | 0.0499 | 0.0458 | 8.3 | 91 | 0.00 |
| 22 | T | Methyl Tert Butyl Ether | 0.4268 | 0.3889 | 8.9 | 98 | 0.00 |
| 23 | T | trans-1,2-Dichloroethene | 0.3165 | 0.3242 | -2.4 | 108 | 0.00 |
| 24 | T | n-Hexane | 0.2888 | 0.3207 | -11.0 | 117 | 0.01 |
| 25 | T | Diisopropyl ether | 0.7635 | 0.7756 | -1.6 | 109 | 0.00 |
| 26 | T | Vinyl Acetate | 0.2453 | 0.2387 | 2.7 | 101 | 0.00 |
| 27 | P | 1,1-Dichloroethane | 0.4047 | 0.3905 | 3.5 | 104 | 0.01 |
| 28 | T | Ethyl-Tert-Butyl ether | 0.6258 | 0.6240 | 0.3 | 105 | 0.00 |
| 29 | T | 2-Butanone | 0.0549 | 0.0527 | 4.0 | 98 | 0.00 |
| 30 | T | Propionitrile | 0.0156 | 0.0170 | -9.1 | 93 | 0.00 |
| 31 | T | 2,2-Dichloropropane | 0.3482 | 0.3836 | -10.2 | 120 | 0.00 |
| 32 | T | cis-1,2-Dichloroethene | 0.2621 | 0.2532 | 3.4 | 103 | 0.00 |
| 33 | C | Chloroform | 0.4170 | 0.4165 | 0.1 | 110 | 0.00 |
| 34 | | 1-Bromopropane | 0.0530 | 0.0575 | -8.5 | 110 | 0.01 |
| 35 | T | Bromochloromethane | 0.1688 | 0.1619 | 4.1 | 101 | 0.01 |
| 36 | T | Tetrahydrofuran | 0.0372 | 0.0370 | 0.4 | 101 | 0.00 |
| 37 | S | Dibromofluoromethane | 0.2594 | 0.2593 | 0.0 | 109 | 0.00 |
| 38 | T | 1,1,1-Trichloroethane | 0.3790 | 0.4344 | -14.6 | 123 | 0.00 |
| 39 | T | Cyclohexane | 0.3744 | 0.3882 | -3.7 | 111 | 0.01 |
| 40 | T | 1,1-Dichloropropene | 0.3264 | 0.3459 | -6.0 | 112 | 0.00 |
| 41 | T | Tert-Amyl-Methyl ether | 0.5121 | 0.4750 | 7.2 | 98 | 0.00 |
| 42 | T | Carbon Tetrachloride | 0.3545 | 0.4107 | -15.8 | 126 | 0.00 |
| 43 | S | 1,2-Dichloroethane-d4 | 0.1997 | 0.2155 | -7.9 | 115 | 0.00 |
| 44 | | Heptane | 0.0000 | 0.0000 | 0.0 | 0# | -2.46# |
| 45 | T | 1,2-Dichloroethane | 0.2566 | 0.2758 | -7.5 | 115 | 0.00 |
| 46 | T | Benzene | 0.9580 | 0.9290 | 3.0 | 107 | 0.00 |
| 47 | T | Trichloroethene | 0.3167 | 0.3412 | -7.7 | 114 | 0.00 |
| 48 | T | Methylcyclohexane | 0.3660 | 0.3786 | -3.4 | 111 | 0.00 |
| 49 | C | 1,2-Dichloropropane | 0.2331 | 0.2269 | 2.7 | 102 | 0.00 |
| 50 | T | Bromodichloromethane | 0.3007 | 0.3242 | -7.8 | 114 | 0.00 |
| 51 | T | 1,4-Dioxane | 0.0013 | 0.0012 | 11.9 | 96 | 0.01 |
| 52 | T | Dibromomethane | 0.1207 | 0.1183 | 2.0 | 97 | 0.00 |
| 53 | T | 2-Chloroethyl Vinyl Ether | 0.1070 | 0.0448 | 58.1# | 41# | 0.00 |
| 54 | T | 4-Methyl-2-Pentanone | 0.0484 | 0.0429 | 11.3 | 88 | 0.00 |
| 55 | T | cis-1,3-Dichloropropene | 0.3539 | 0.3740 | -5.7 | 108 | 0.00 |

(#) = Out of Range
8M379102.D 8260WT.M Wed May 16 09:33:53 2012 Page 1

Evaluate Continuing Calibration Report

Data File : C:\MSDCHEM\1\DATA\051612\8M379102.D Vial: 2
Acq On : 16 May 2012 8:48 Operator: ADC
Sample : WG398117-02 50ug/L CCV 8260 Inst : HPMS8
Misc : 1,1 STD51468 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\1\METHODS\8260WT.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 03/27/12 HPMS 8
Last Update : Wed Mar 28 08:18:24 2012
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 150%

| | | Compound | AvgRF | CCRF | %Dev | Area% | Dev(min) |
|---|---|---|---|---|---|---|---|
| 56 | T | Dimethyl Disulfide | 0.3919 | 0.4422 | -12.9 | 109 | 0.01 |
| 57 | I | Chlorobenzene-d5 | 1.0000 | 1.0000 | 0.0 | 114 | 0.00 |
| 58 | S | Toluene-d8 | 1.1543 | 1.1506 | 0.3 | 111 | 0.00 |
| 59 | C | Toluene | 1.3787 | 1.2387 | 10.2 | 109 | 0.00 |
| 60 | T | Ethyl Methacrylate | 0.2405 | 0.1945 | 19.1 | 88 | 0.00 |
| 61 | | Paraldehyde | 0.0040 | 0.0040 | -1.0 | 95 | 0.01 |
| 62 | T | trans-1,3-Dichloropropene | 0.3825 | 0.3680 | 3.8 | 107 | 0.00 |
| 63 | T | 1,1,2-Trichloroethane | 0.2131 | 0.1924 | 9.7 | 99 | 0.01 |
| 64 | T | 2-Hexanone | 0.0534 | 0.0446 | 16.5 | 90 | 0.01 |
| 65 | T | 1,3-Dichloropropane | 0.3490 | 0.3049 | 12.6 | 98 | 0.00 |
| 66 | T | Tetrachloroethene | 0.3108 | 0.3144 | -1.2 | 115 | 0.00 |
| 67 | T | Dibromochloromethane | 0.3133 | 0.3184 | -1.6 | 108 | 0.00 |
| 68 | T | 1,2-Dibromoethane | 0.2296 | 0.2030 | 11.6 | 97 | 0.00 |
| 69 | T | 1-Chlorohexane | 0.4605 | 0.4181 | 9.2 | 108 | 0.00 |
| 70 | P | Chlorobenzene | 0.9633 | 0.9118 | 5.3 | 110 | 0.00 |
| 71 | T | 1,1,1,2-Tetrachloroethane | 0.3506 | 0.3585 | -2.3 | 114 | 0.01 |
| 72 | C | Ethylbenzene | 0.5117 | 0.4993 | 2.4 | 112 | 0.00 |
| 73 | T | m-,p-Xylene | 0.6247 | 0.6097 | 2.4 | 112 | 0.00 |
| 74 | T | o-Xylene | 0.6276 | 0.6031 | 3.9 | 108 | 0.01 |
| 75 | T | Styrene | 1.1235 | 0.9868 | 12.2 | 106 | 0.00 |
| 76 | P | Bromoform | 0.1797 | 0.1764 | 1.8 | 105 | 0.01 |
| 77 | T | Isopropylbenzene | 1.5775 | 1.5693 | 0.5 | 114 | 0.00 |
| 78 | I | 1,4-Dichlorobenzene-d4 | 1.0000 | 1.0000 | 0.0 | 116 | 0.00 |
| 79 | P | 1,1,2,2-Tetrachloroethane | 0.4018 | 0.3269 | 18.6 | 92 | 0.01 |
| 80 | S | p-Bromofluorobenzene | 0.8087 | 0.8081 | 0.1 | 114 | 0.00 |
| 81 | T | 1,2,3-Trichloropropane | 0.1329 | 0.1057 | 20.5 | 90 | 0.00 |
| 82 | T | trans-1,4-Dichloro-2-Butene | 0.1163 | 0.1021 | 12.2 | 93 | 0.00 |
| 83 | T | n-Propylbenzene | 3.2378 | 3.0152 | 6.9 | 111 | 0.00 |
| 84 | T | Bromobenzene | 0.8049 | 0.7647 | 5.0 | 111 | 0.00 |
| 85 | T | 1,3,5-Trimethylbenzene | 2.4146 | 2.3426 | 3.0 | 114 | 0.01 |
| 86 | T | 2-Chlorotoluene | 2.0596 | 1.9042 | 7.5 | 113 | 0.00 |
| 87 | T | 4-Chlorotoluene | 1.9469 | 1.9129 | 1.7 | 117 | 0.01 |
| 88 | T | a-Methylstyrene | 1.4357 | 1.3861 | 3.5 | 110 | 0.01 |
| 89 | T | tert-Butylbenzene | 0.5339 | 0.5284 | 1.0 | 116 | 0.00 |
| 90 | T | 1,2,4-Trimethylbenzene | 2.7881 | 2.3701 | 15.0 | 113 | 0.00 |
| 91 | T | sec-Butylbenzene | 2.9525 | 2.7994 | 5.2 | 114 | 0.00 |
| 92 | T | p-Isopropyltoluene | 2.6648 | 2.5391 | 4.7 | 112 | 0.01 |
| 93 | T | 1,3-Dichlorobenzene | 1.5885 | 1.4953 | 5.9 | 112 | 0.00 |
| 94 | T | 1,4-Dichlorobenzene | 1.5942 | 1.5186 | 4.7 | 114 | 0.00 |
| 95 | T | n-Butylbenzene | 2.0832 | 2.0025 | 3.9 | 115 | 0.00 |
| 96 | T | 1,2-Dichlorobenzene | 1.4160 | 1.3084 | 7.6 | 108 | 0.00 |
| 97 | T | 1,2-Dibromo-3-Chloropropane | 0.0692 | 0.0595 | 14.0 | 94 | 0.00 |
| 98 | T | 1,2,4-Trichlorobenzene | 0.9535 | 0.8452 | 11.4 | 106 | 0.00 |
| 99 | T | Hexachlorobutadiene | 0.3388 | 0.3993 | -17.9 | 135 | 0.00 |
| 100 | T | Naphthalene | 1.8660 | 1.5016 | 19.5 | 95 | 0.00 |
| 101 | T | 1,2,3-Trichlorobenzene | 0.8172 | 0.7263 | 11.1 | 106 | 0.00 |

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Evaluate Continuing Calibration Report

Data File : C:\MSDCHEM\1\DATA\051612\8M379102.D Vial: 2
Acq On : 16 May 2012 8:48 Operator: ADC
Sample : WG398117-02 50ug/L CCV 8260 Inst : HPMS8
Misc : 1,1 STD51468 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\1\METHODS\8260WT.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 03/27/12 HPMS 8
Last Update : Wed Mar 28 08:18:24 2012
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 150%

| | | Compound | Amount | Calc. | %Dev | Area% | Dev(min) |
|---|---|---|---|---|---|---|---|
| 1 | I | Fluorobenzene | 25.0000 | 25.0000 | 0.0 | 107 | 0.01 |
| 2 | T | Dichlorodifluoromethane | 50.0000 | 56.4278 | -12.9 | 119 | 0.00 |
| 3 | P | Chloromethane | 50.0000 | 46.3877 | 7.2 | 107 | 0.01 |
| 4 | C | Vinyl Chloride | 50.0000 | 54.2853 | -8.6 | 127 | 0.00 |
| 5 | T | 1,3-Butadiene | 50.0000 | 73.5106 | -47.0# | 147 | 0.00 |
| 6 | T | Bromomethane | 50.0000 | 25.3272 | 49.3# | 55 | 0.00 |
| 7 | T | Chloroethane | 50.0000 | 50.0763 | -0.2 | 107 | 0.00 |
| 8 | T | Trichlorofluoromethane | 50.0000 | 60.0737 | -20.1 | 134 | 0.00 |
| 9 | T | Diethyl ether | 100.0000 | 87.6247 | 12.4 | 95 | 0.00 |
| 10 | T | Isoprene | 50.0000 | 52.7032 | -5.4 | 113 | 0.00 |
| 11 | T | Acrolein | 100.0000 | 40.9325 | 59.1# | 43 | 0.00 |
| 12 | T | 1,1,2-Trichloro-1,2,2-Trifl | 50.0000 | 49.8345 | 0.3 | 112 | 0.00 |
| 13 | T | Acetone | 50.0000 | 52.2221 | -4.4 | 103 | 0.01 |
| 14 | C | 1,1-Dichloroethene | 50.0000 | 51.4087 | -2.8 | 112 | 0.01 |
| 15 | T | Tert-Butyl Alcohol | 200.0000 | 175.8228 | 12.1 | 100 | 0.00 |
| 16 | T | Dimethyl Sulfide | 50.0000 | 55.7561 | -11.5 | 118 | 0.00 |
| 17 | T | Iodomethane | 50.0000 | 30.8922 | 38.2# | 60 | 0.00 |
| 18 | T | Methyl acetate | 50.0000 | 41.2520 | 17.5 | 88 | 0.00 |
| 19 | T | Methylene Chloride | 50.0000 | 45.7745 | 8.5 | 98 | 0.00 |
| 20 | T | Carbon Disulfide | 50.0000 | 55.0999 | -10.2 | 109 | 0.00 |
| 21 | T | Acrylonitrile | 50.0000 | 45.8567 | 8.3 | 91 | 0.00 |
| 22 | T | Methyl Tert Butyl Ether | 50.0000 | 45.5581 | 8.9 | 98 | 0.00 |
| 23 | T | trans-1,2-Dichloroethene | 50.0000 | 51.2118 | -2.4 | 108 | 0.00 |
| 24 | T | n-Hexane | 50.0000 | 55.5201 | -11.0 | 117 | 0.01 |
| 25 | T | Diisopropyl ether | 100.0000 | 101.5800 | -1.6 | 109 | 0.00 |
| 26 | T | Vinyl Acetate | 50.0000 | 48.6724 | 2.7 | 101 | 0.00 |
| 27 | P | 1,1-Dichloroethane | 50.0000 | 48.2533 | 3.5 | 104 | 0.01 |
| 28 | T | Ethyl-Tert-Butyl ether | 100.0000 | 99.7258 | 0.3 | 105 | 0.00 |
| 29 | T | 2-Butanone | 50.0000 | 47.9868 | 4.0 | 98 | 0.00 |
| 30 | T | Propionitrile | 100.0000 | 91.9548 | 8.0 | 93 | 0.00 |
| 31 | T | 2,2-Dichloropropane | 50.0000 | 55.0911 | -10.2 | 120 | 0.00 |
| 32 | T | cis-1,2-Dichloroethene | 50.0000 | 48.3194 | 3.4 | 103 | 0.00 |
| 33 | C | Chloroform | 50.0000 | 49.9327 | 0.1 | 110 | 0.00 |
| 34 | | 1-Bromopropane | 50.0000 | 54.2396 | -8.5 | 110 | 0.01 |
| 35 | T | Bromochloromethane | 50.0000 | 47.9705 | 4.1 | 101 | 0.01 |
| 36 | T | Tetrahydrofuran | 100.0000 | 99.5677 | 0.4 | 101 | 0.00 |
| 37 | S | Dibromofluoromethane | 25.0000 | 24.9917 | 0.0 | 109 | 0.00 |
| 38 | T | 1,1,1-Trichloroethane | 50.0000 | 57.3196 | -14.6 | 123 | 0.00 |
| 39 | T | Cyclohexane | 50.0000 | 51.8383 | -3.7 | 111 | 0.01 |
| 40 | T | 1,1-Dichloropropene | 50.0000 | 52.9804 | -6.0 | 112 | 0.00 |
| 41 | T | Tert-Amyl-Methyl ether | 100.0000 | 92.7698 | 7.2 | 98 | 0.00 |
| 42 | T | Carbon Tetrachloride | 50.0000 | 57.9195 | -15.8 | 126 | 0.00 |
| 43 | S | 1,2-Dichloroethane-d4 | 25.0000 | 26.9747 | -7.9 | 115 | 0.00 |
| 44 | | Heptane | 50.0000 | 0.0000 | 100.0# | 0 | -2.46# |
| 45 | T | 1,2-Dichloroethane | 50.0000 | 53.7335 | -7.5 | 115 | 0.00 |
| 46 | T | Benzene | 50.0000 | 48.4870 | 3.0 | 107 | 0.00 |
| 47 | T | Trichloroethene | 50.0000 | 53.8681 | -7.7 | 114 | 0.00 |
| 48 | T | Methylcyclohexane | 50.0000 | 51.7100 | -3.4 | 111 | 0.00 |
| 49 | C | 1,2-Dichloropropane | 50.0000 | 48.6659 | 2.7 | 102 | 0.00 |
| 50 | T | Bromodichloromethane | 50.0000 | 53.9117 | -7.8 | 114 | 0.00 |
| 51 | T | 1,4-Dioxane | 200.0000 | 176.5865 | 11.7 | 96 | 0.01 |
| 52 | T | Dibromomethane | 50.0000 | 49.0042 | 2.0 | 97 | 0.00 |
| 53 | T | 2-Chloroethyl Vinyl Ether | 50.0000 | 20.9642 | 58.1# | 41 | 0.00 |
| 54 | T | 4-Methyl-2-Pentanone | 50.0000 | 44.3320 | 11.3 | 88 | 0.00 |
| 55 | T | cis-1,3-Dichloropropene | 50.0000 | 52.8358 | -5.7 | 108 | 0.00 |

(#) = Out of Range
8M379102.D 8260WT.M Wed May 16 09:33:50 2012 Page 1

Evaluate Continuing Calibration Report

Data File : C:\MSDCHEM\1\DATA\051612\8M379102.D Vial: 2
Acq On : 16 May 2012 8:48 Operator: ADC
Sample : WG398117-02 50ug/L CCV 8260 Inst : HPMS8
Misc : 1,1 STD51468 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\1\METHODS\8260WT.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 03/27/12 HPMS 8
Last Update : Wed Mar 28 08:18:24 2012
Response via : Multiple Level Calibration

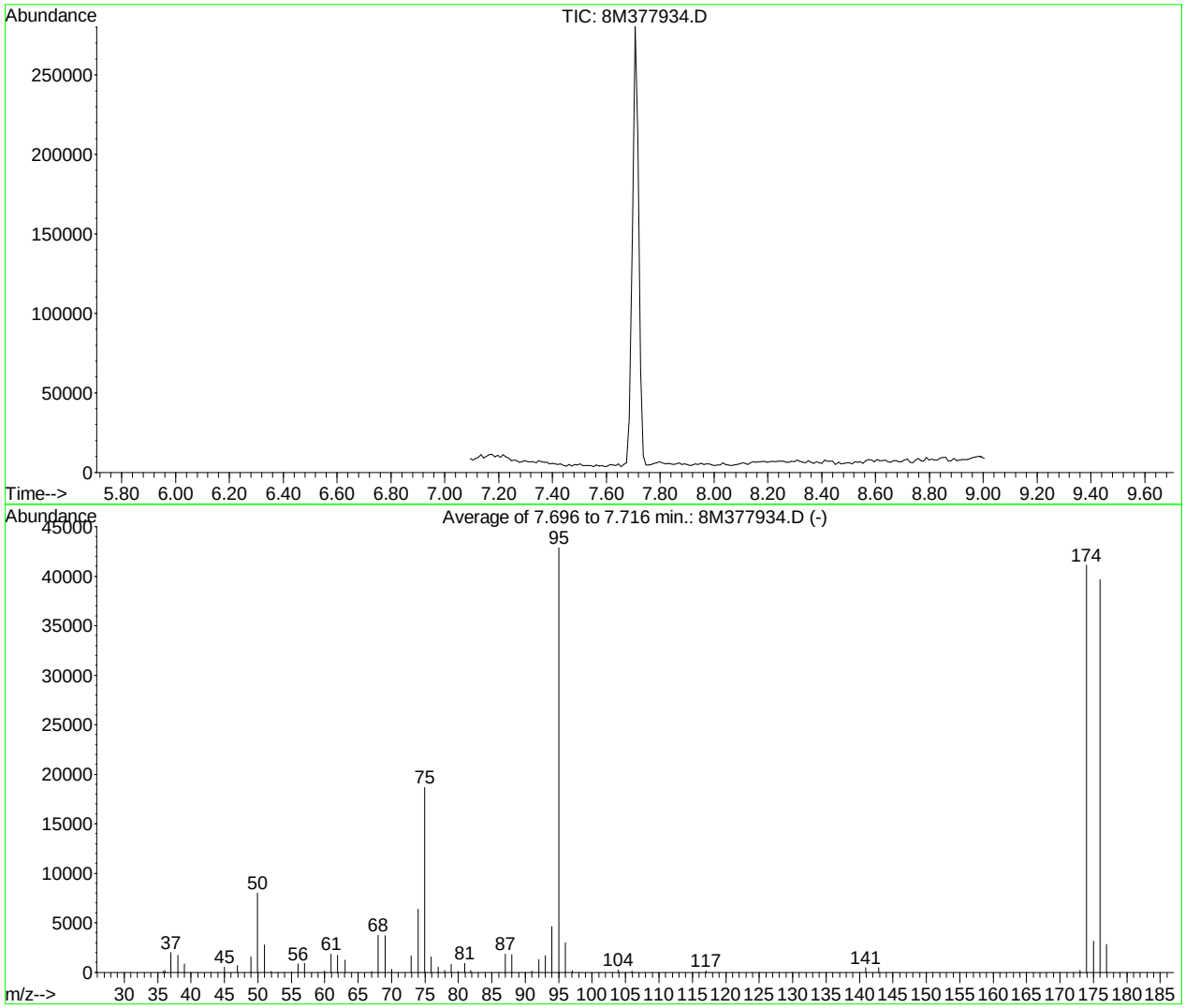
Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 150%

| | | Compound | Amount | Calc. | %Dev | Area% | Dev(min) |
|---|---|---|---|---|---|---|---|
| 56 | T | Dimethyl Disulfide | 50.0000 | 56.4292 | -12.9 | 109 | 0.01 |
| 57 | I | Chlorobenzene-d5 | 25.0000 | 25.0000 | 0.0 | 114 | 0.00 |
| 58 | S | Toluene-d8 | 25.0000 | 24.9207 | 0.3 | 111 | 0.00 |
| 59 | C | Toluene | 50.0000 | 44.9203 | 10.2 | 109 | 0.00 |
| 60 | T | Ethyl Methacrylate | 50.0000 | 40.4444 | 19.1 | 88 | 0.00 |
| 61 | | Paraldehyde | 100.0000 | 92.0616 | 7.9 | 95 | 0.01 |
| 62 | T | trans-1,3-Dichloropropene | 50.0000 | 48.1062 | 3.8 | 107 | 0.00 |
| 63 | T | 1,1,2-Trichloroethane | 50.0000 | 45.1419 | 9.7 | 99 | 0.01 |
| 64 | T | 2-Hexanone | 50.0000 | 41.7339 | 16.5 | 90 | 0.01 |
| 65 | T | 1,3-Dichloropropane | 50.0000 | 43.6853 | 12.6 | 98 | 0.00 |
| 66 | T | Tetrachloroethene | 50.0000 | 50.5873 | -1.2 | 115 | 0.00 |
| 67 | T | Dibromochloromethane | 50.0000 | 50.8228 | -1.6 | 108 | 0.00 |
| 68 | T | 1,2-Dibromoethane | 50.0000 | 44.2051 | 11.6 | 97 | 0.00 |
| 69 | T | 1-Chlorohexane | 50.0000 | 45.3962 | 9.2 | 108 | 0.00 |
| 70 | P | Chlorobenzene | 50.0000 | 47.3256 | 5.3 | 110 | 0.00 |
| 71 | T | 1,1,1,2-Tetrachloroethane | 50.0000 | 51.1337 | -2.3 | 114 | 0.01 |
| 72 | C | Ethylbenzene | 50.0000 | 48.7848 | 2.4 | 112 | 0.00 |
| 73 | T | m-,p-Xylene | 100.0000 | 97.5913 | 2.4 | 112 | 0.00 |
| 74 | T | o-Xylene | 50.0000 | 48.0497 | 3.9 | 108 | 0.01 |
| 75 | T | Styrene | 50.0000 | 43.9168 | 12.2 | 106 | 0.00 |
| 76 | P | Bromoform | 50.0000 | 49.0870 | 1.8 | 105 | 0.01 |
| 77 | T | Isopropylbenzene | 50.0000 | 49.7402 | 0.5 | 114 | 0.00 |
| 78 | I | 1,4-Dichlorobenzene-d4 | 25.0000 | 25.0000 | 0.0 | 116 | 0.00 |
| 79 | P | 1,1,2,2-Tetrachloroethane | 50.0000 | 40.6797 | 18.6 | 92 | 0.01 |
| 80 | S | p-Bromofluorobenzene | 25.0000 | 24.9807 | 0.1 | 114 | 0.00 |
| 81 | T | 1,2,3-Trichloropropane | 50.0000 | 39.7695 | 20.5 | 90 | 0.00 |
| 82 | T | trans-1,4-Dichloro-2-Butene | 50.0000 | 43.8951 | 12.2 | 93 | 0.00 |
| 83 | T | n-Propylbenzene | 50.0000 | 46.5630 | 6.9 | 111 | 0.00 |
| 84 | T | Bromobenzene | 50.0000 | 47.5003 | 5.0 | 111 | 0.00 |
| 85 | T | 1,3,5-Trimethylbenzene | 50.0000 | 48.5097 | 3.0 | 114 | 0.01 |
| 86 | T | 2-Chlorotoluene | 50.0000 | 46.2278 | 7.5 | 113 | 0.00 |
| 87 | T | 4-Chlorotoluene | 50.0000 | 49.1273 | 1.7 | 117 | 0.01 |
| 88 | T | a-Methylstyrene | 50.0000 | 48.2724 | 3.5 | 110 | 0.01 |
| 89 | T | tert-Butylbenzene | 50.0000 | 49.4905 | 1.0 | 116 | 0.00 |
| 90 | T | 1,2,4-Trimethylbenzene | 50.0000 | 50.7856 | -1.6 | 113 | 0.00 |
| 91 | T | sec-Butylbenzene | 50.0000 | 47.4074 | 5.2 | 114 | 0.00 |
| 92 | T | p-Isopropyltoluene | 50.0000 | 47.6414 | 4.7 | 112 | 0.01 |
| 93 | T | 1,3-Dichlorobenzene | 50.0000 | 47.0658 | 5.9 | 112 | 0.00 |
| 94 | T | 1,4-Dichlorobenzene | 50.0000 | 47.6286 | 4.7 | 114 | 0.00 |
| 95 | T | n-Butylbenzene | 50.0000 | 48.0652 | 3.9 | 115 | 0.00 |
| 96 | T | 1,2-Dichlorobenzene | 50.0000 | 46.1998 | 7.6 | 108 | 0.00 |
| 97 | T | 1,2-Dibromo-3-Chloropropane | 50.0000 | 43.0222 | 14.0 | 94 | 0.00 |
| 98 | T | 1,2,4-Trichlorobenzene | 50.0000 | 44.3175 | 11.4 | 106 | 0.00 |
| 99 | T | Hexachlorobutadiene | 50.0000 | 58.9311 | -17.9 | 135 | 0.00 |
| 100 | T | Naphthalene | 50.0000 | 40.2348 | 19.5 | 95 | 0.00 |
| 101 | T | 1,2,3-Trichlorobenzene | 50.0000 | 44.4387 | 11.1 | 106 | 0.00 |

(#) = Out of Range SPCC's out = 0 CCC's out = 0
8M379102.D 8260WT.M Wed May 16 09:33:50 2012 Page 2

# 2.1.1.5 Raw QC Data

Data File : C:\MSDCHEM\2\DATA\032712\8M377934.D Vial: 1
Acq On : 27 Mar 2012 10:51 Operator: adc
Sample : WG393321-01 BFB 50ng 8260 Inst : HPMS8
Misc : 1,1 STD50660 Multiplr: 1.00
MS Integration Params: RTEINT.P
Method : C:\MSDCHEM\2\METHODS\8260WT.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 03/27/12 HPMS 8

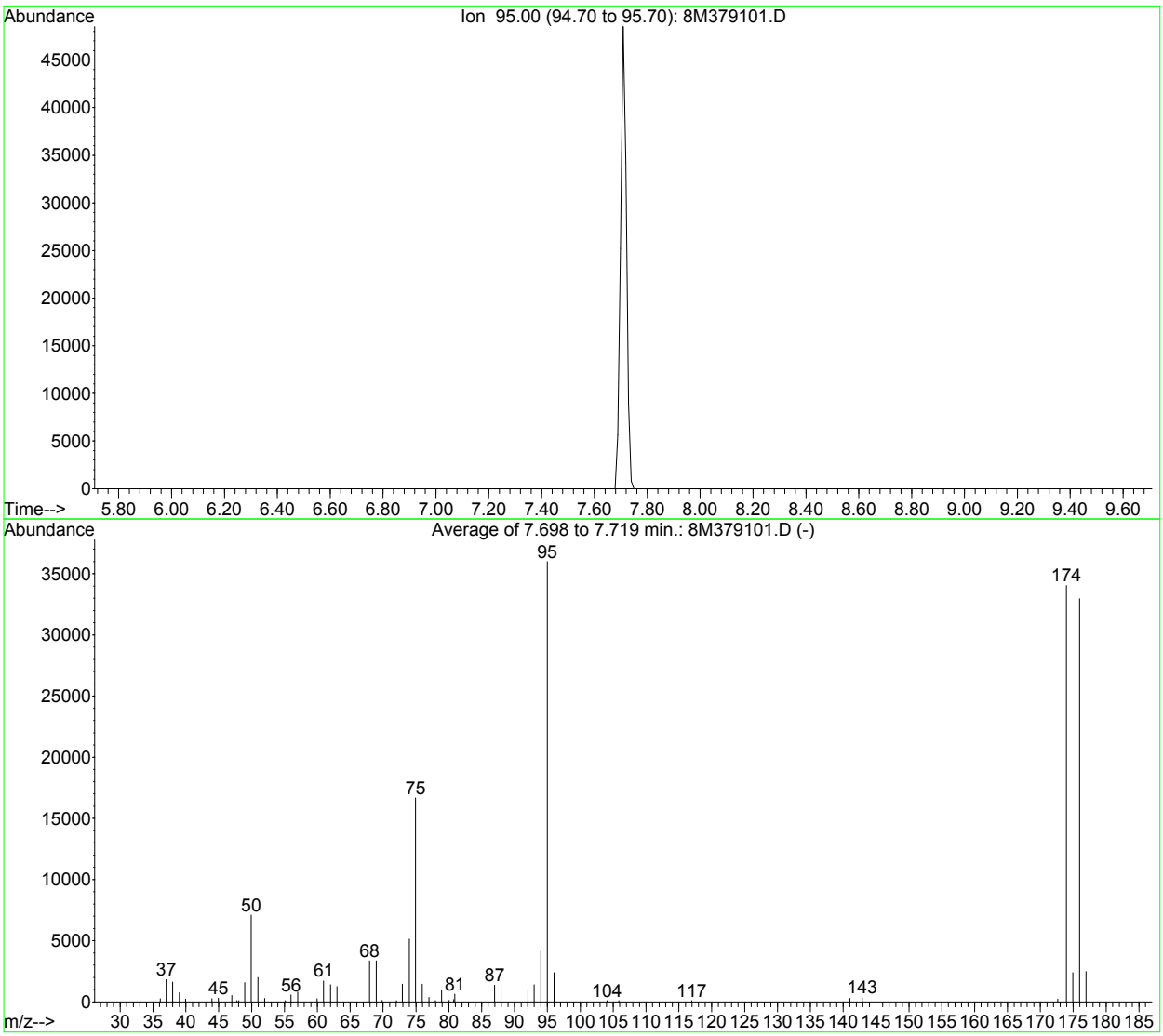



AutoFind: Scans 60, 61, 62; Background Corrected with Scan 55

| Target Mass | Rel. to Mass | Lower Limit% | Upper Limit% | Rel. Abn% | Raw Abn | Result Pass/Fail |
|---|---|---|---|---|---|---|
| 50 | 95 | 15 | 40 | 18.7 | 7999 | PASS |
| 75 | 95 | 30 | 60 | 43.5 | 18673 | PASS |
| 95 | 95 | 100 | 100 | 100.0 | 42882 | PASS |
| 96 | 95 | 5 | 9 | 6.9 | 2967 | PASS |
| 173 | 174 | 0.00 | 2 | 0.4 | 181 | PASS |
| 174 | 95 | 50 | 100 | 95.9 | 41120 | PASS |
| 175 | 174 | 5 | 9 | 7.6 | 3128 | PASS |
| 176 | 174 | 95 | 101 | 96.4 | 39648 | PASS |
| 177 | 176 | 5 | 9 | 7.0 | 2790 | PASS |

8M377934.D 8260WT.M Wed Mar 28 08:34:44 2012

Data File : C:\MSDCHEM\1\DATA\051612\8M379101.D Vial: 1
Acq On : 16 May 2012 8:25 Operator: ADC
Sample : WG398117-01 BFB 50ng 8260 Inst : HPMS8
Misc : 1,1 STD51241 Multiplr: 1.00
MS Integration Params: RTEINT.P
Method : C:\MSDCHEM\1\METHODS\8260WT.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 03/27/12 HPMS 8

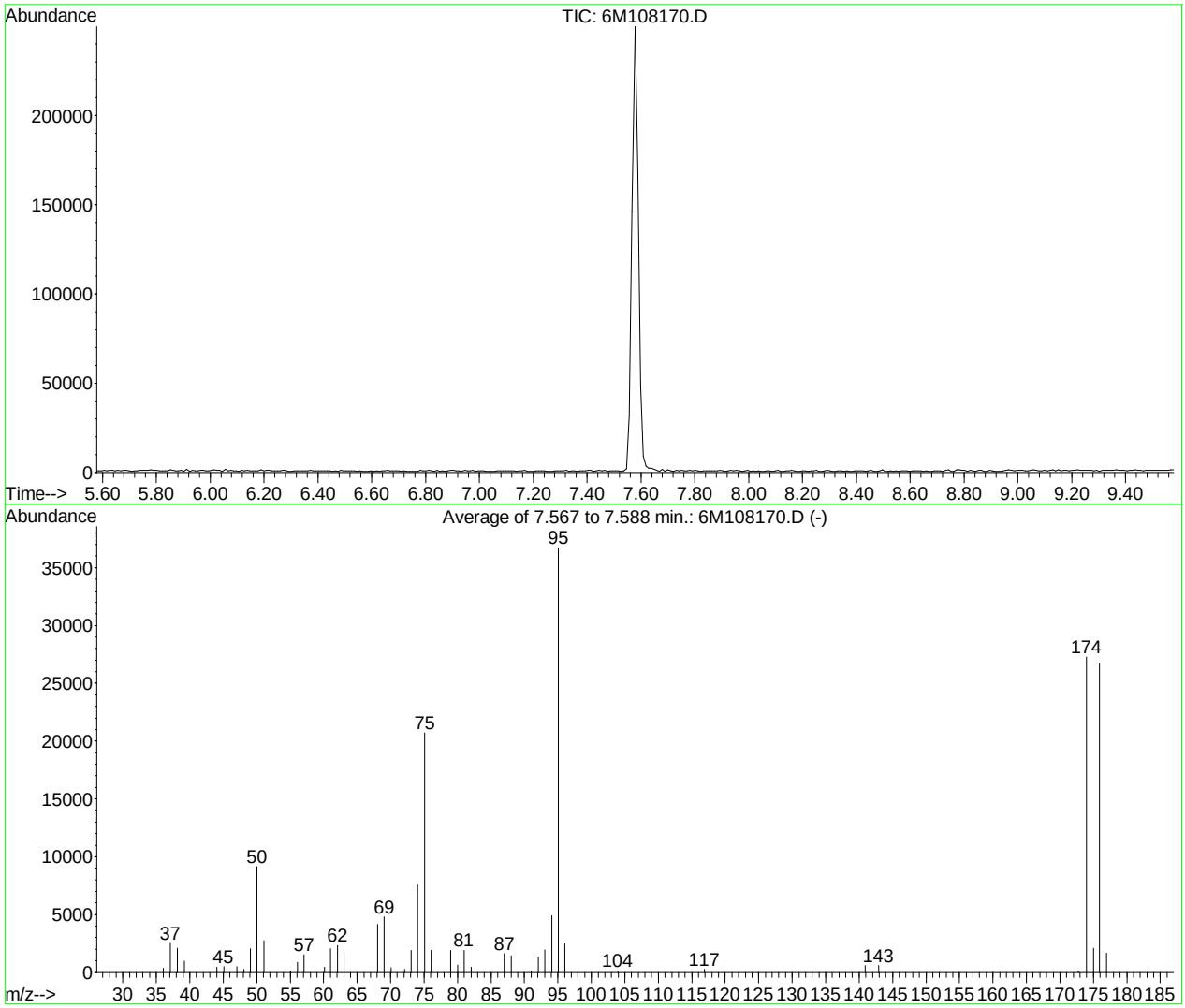



AutoFind: Scans 60, 61, 62; Background Corrected with Scan 56

| Target Mass | Rel. to Mass | Lower Limit% | Upper Limit% | Rel. Abn% | Raw Abn | Result Pass/Fail |
|---|---|---|---|---|---|---|
| 50 | 95 | 15 | 40 | 19.7 | 7079 | PASS |
| 75 | 95 | 30 | 60 | 46.3 | 16667 | PASS |
| 95 | 95 | 100 | 100 | 100.0 | 35984 | PASS |
| 96 | 95 | 5 | 9 | 6.6 | 2383 | PASS |
| 173 | 174 | 0.00 | 2 | 0.0 | 0 | PASS |
| 174 | 95 | 50 | 100 | 94.6 | 34040 | PASS |
| 175 | 174 | 5 | 9 | 7.0 | 2378 | PASS |
| 176 | 174 | 95 | 101 | 96.8 | 32956 | PASS |
| 177 | 176 | 5 | 9 | 7.5 | 2467 | PASS |

8M379101.D 8260WT.M Wed May 16 09:34:09 2012

Data File : C:\MSDCHEM\1\DATA\051612\6M108170.D Vial: 1
Acq On : 16 May 2012 14:50 Operator: adc
Sample : WG397878-01 50ng/L BFB STD Inst : HPMS6
Misc : 1,1 STD51241 Multiplr: 1.00
MS Integration Params: RTEINT.P
Method : C:\MSDCHEM\1\METHODS\8260WT.M (RTE Integrator)
Title : 8260B/624_WATER SOP:OVLMSV01 05/16/12 - HPMS6

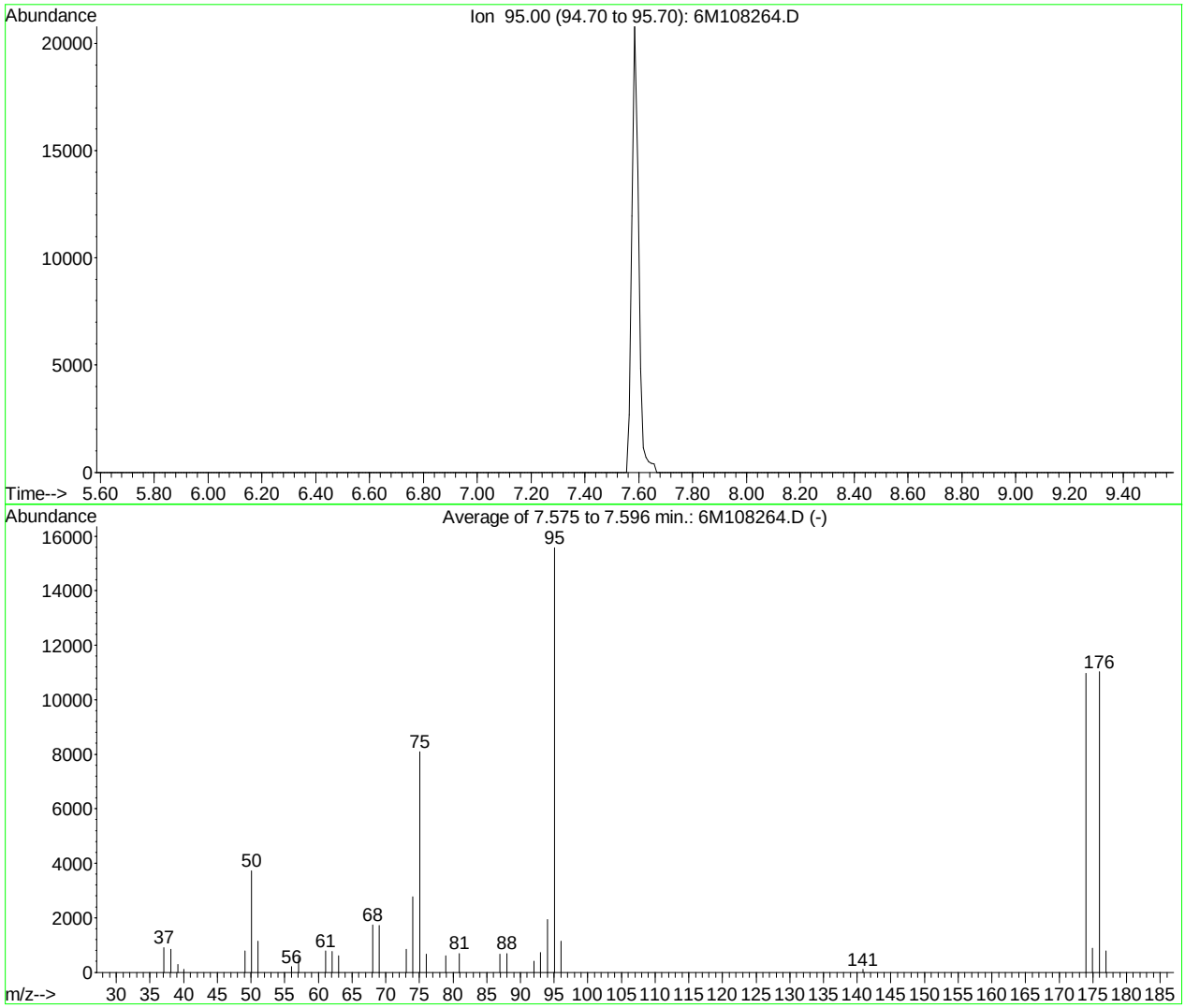



AutoFind: Scans 243, 244, 245; Background Corrected with Scan 238

| Target Mass | Rel. to Mass | Lower Limit% | Upper Limit% | Rel. Abn% | Raw Abn | Result Pass/Fail |
|---|---|---|---|---|---|---|
| 50 | 95 | 15 | 40 | 25.0 | 9168 | PASS |
| 75 | 95 | 30 | 60 | 56.4 | 20719 | PASS |
| 95 | 95 | 100 | 100 | 100.0 | 36736 | PASS |
| 96 | 95 | 5 | 9 | 6.7 | 2469 | PASS |
| 173 | 174 | 0.00 | 2 | 0.4 | 112 | PASS |
| 174 | 95 | 50 | 100 | 74.2 | 27265 | PASS |
| 175 | 174 | 5 | 9 | 7.7 | 2095 | PASS |
| 176 | 174 | 95 | 101 | 98.2 | 26776 | PASS |
| 177 | 176 | 5 | 9 | 6.1 | 1644 | PASS |

6M108170.D 8260WT.M Mon May 21 14:40:38 2012

Data File : C:\MSDCHEM\1\DATA\051912\6M108264.D Vial: 1
Acq On : 19 May 2012 15:56 Operator: FJB
Sample : WG398532-01 BFB 50ng 8260 Inst : HPMS6
Misc : 1,1 STD51241 Multiplr: 1.00
MS Integration Params: rteint.p
Method : C:\MSDCHEM\1\METHODS\BFB.M (RTE Integrator)
Title : SOP: OVL MSV01




AutoFind: Scans 244, 245, 246; Background Corrected with Scan 240

| Target Mass | Rel. to Mass | Lower Limit% | Upper Limit% | Rel. Abn% | Raw Abn | Result Pass/Fail |
|---|---|---|---|---|---|---|
| 50 | 95 | 15 | 40 | 23.9 | 3729 | PASS |
| 75 | 95 | 30 | 60 | 52.0 | 8094 | PASS |
| 95 | 95 | 100 | 100 | 100.0 | 15579 | PASS |
| 96 | 95 | 5 | 9 | 7.4 | 1148 | PASS |
| 173 | 174 | 0.00 | 2 | 0.0 | 0 | PASS |
| 174 | 95 | 50 | 100 | 70.3 | 10959 | PASS |
| 175 | 174 | 5 | 9 | 8.1 | 883 | PASS |
| 176 | 174 | 95 | 101 | 100.7 | 11033 | PASS |
| 177 | 176 | 5 | 9 | 7.2 | 791 | PASS |

6M108264.D BFB.M Sat May 19 18:50:46 2012

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\051912\6M108268.D Vial: 5
Acq On : 19 May 2012 18:07 Operator: FJB
Sample : WG398533-01 VBLK0519 BLANK 8260 Inst : HPMS6
Misc : 1,1 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 21 09:16:50 2012 Quant Results File: 8260WT.RES

Quant Method : C:\MSDCHEM\1\METHODS\8260WT.M (RTE Integrator)
Title : 8260B/624_WATER SOP:OVLMSV01 05/16/12 - HPMS6
Last Update : Thu May 17 10:54:16 2012
Response via : Initial Calibration
DataAcq Meth : 8260WT

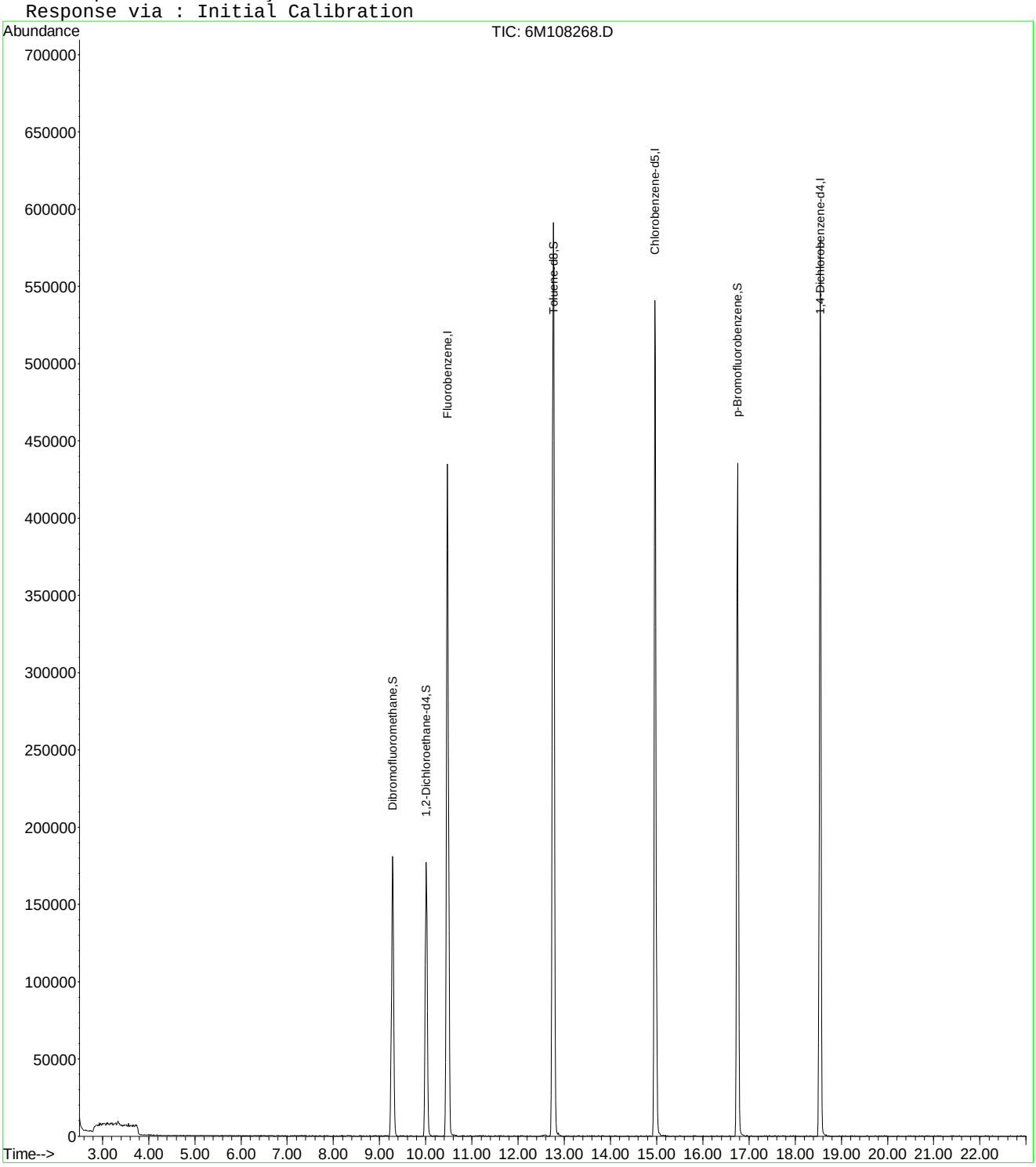
| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 1) Fluorobenzene | 10.47 | 96 | 591297 | 25.00 | ug/L | 0.00 |
| 57) Chlorobenzene-d5 | 14.96 | 117 | 421384 | 25.00 | ug/L | 0.00 |
| 78) 1,4-Dichlorobenzene-d4 | 18.54 | 152 | 200928 | 25.00 | ug/L | 0.00 |
| **System Monitoring Compounds** | | | | | | |
| 37) Dibromofluoromethane | 9.28 | 111 | 171127 | 23.6452 | ug/L | 0.00 |
| Spiked Amount 25.000 | Range 86 - 118 | | Recovery = 94.60% | | | |
| 43) 1,2-Dichloroethane-d4 | 10.01 | 65 | 175221 | 22.8915 | ug/L | 0.00 |
| Spiked Amount 25.000 | Range 80 - 120 | | Recovery = 91.56% | | | |
| 58) Toluene-d8 | 12.76 | 98 | 590068 | 26.6594 | ug/L | 0.00 |
| Spiked Amount 25.000 | Range 88 - 110 | | Recovery = 106.64% | | | |
| 80) p-Bromofluorobenzene | 16.75 | 95 | 205093 | 28.1537 | ug/L | 0.00 |
| Spiked Amount 25.000 | Range 86 - 115 | | Recovery = 112.60% | | | |
| **Target Compounds** | | | | | | Qvalue |

(#) = qualifier out of range (m) = manual integration
6M108268.D 8260WT.M Mon May 21 09:16:51 2012 Page 1

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\051912\6M108268.D Vial: 5
Acq On : 19 May 2012 18:07 Operator: FJB
Sample : WG398533-01 VBLK0519 BLANK 8260 Inst : HPMS6
Misc : 1,1 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 21 9:16 2012 Quant Results File: 8260WT.RES

Method : C:\MSDCHEM\1\METHODS\8260WT.M (RTE Integrator)
Title : 8260B/624_WATER SOP:OVLMSV01 05/16/12 - HPMS6
Last Update : Thu May 17 10:54:16 2012
Response via : Initial Calibration




6M108268.D 8260WT.M Mon May 21 09:16:51 2012 Page 2

LSC Area Percent Report

Data File : C:\MSDCHEM\1\DATA\051912\6M108268.D Vial: 5
Acq On : 19 May 2012 18:07 Operator: FJB
Sample : WG398533-01 VBLK0519 BLANK 8260 Inst : HPMS6
Misc : 1,1 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\1\METHODS\8260WT.M (RTE Integrator)
Title : 8260B/624_WATER SOP:OVLMSV01 05/16/12 - HPMS6
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 100 Area counts
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

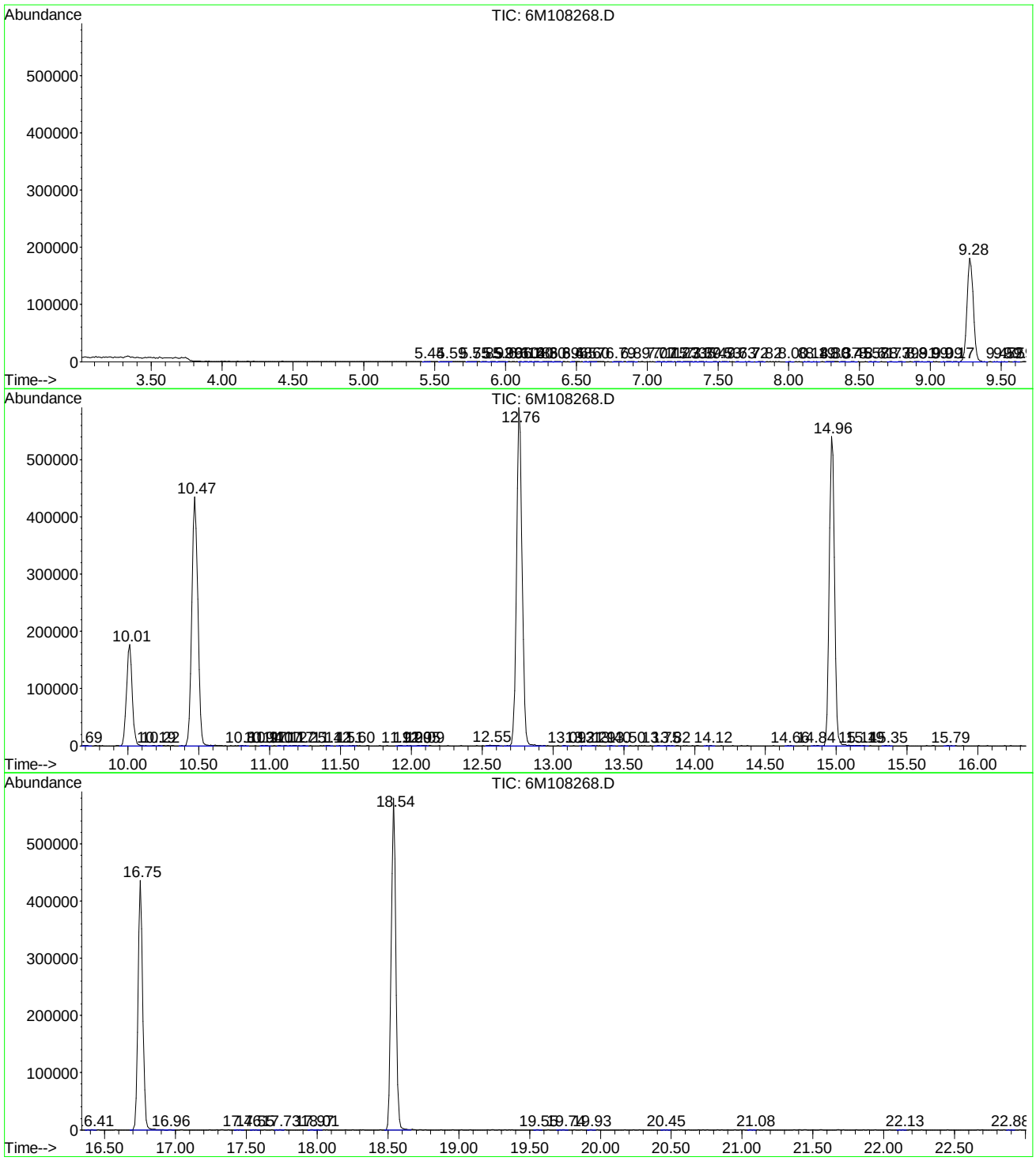
Signal : TIC

| peak # | R.T. min | first scan | max scan | last scan | PK TY | peak height | corr. area | corr. % max. | % of total |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 5.438 | 287 | 289 | 292 | rBV | 437 | 1158 | 0.07% | 0.015% |
| 2 | 5.591 | 298 | 304 | 307 | rBV | 693 | 2168 | 0.13% | 0.028% |
| 3 | 5.754 | 317 | 320 | 324 | rBV | 390 | 1559 | 0.10% | 0.020% |
| 4 | 5.846 | 327 | 329 | 332 | rBB | 428 | 954 | 0.06% | 0.012% |
| 5 | 5.917 | 333 | 336 | 338 | rBB | 426 | 900 | 0.06% | 0.012% |
| 6 | 5.989 | 338 | 343 | 345 | rBB | 420 | 1334 | 0.08% | 0.017% |
| 7 | 6.101 | 353 | 354 | 356 | rBB | 414 | 478 | 0.03% | 0.006% |
| 8 | 6.142 | 356 | 358 | 360 | rBB | 440 | 656 | 0.04% | 0.008% |
| 9 | 6.183 | 360 | 362 | 363 | rBB | 335 | 405 | 0.03% | 0.005% |
| 10 | 6.203 | 363 | 364 | 368 | rBB | 432 | 937 | 0.06% | 0.012% |
| 11 | 6.295 | 369 | 373 | 377 | rBB | 362 | 1478 | 0.09% | 0.019% |
| 12 | 6.387 | 377 | 382 | 383 | rBB | 407 | 1119 | 0.07% | 0.014% |
| 13 | 6.479 | 389 | 391 | 392 | rBV | 353 | 611 | 0.04% | 0.008% |
| 14 | 6.571 | 398 | 400 | 401 | rBB | 354 | 402 | 0.02% | 0.005% |
| 15 | 6.602 | 401 | 403 | 407 | rBV | 424 | 1342 | 0.08% | 0.017% |
| 16 | 6.785 | 418 | 421 | 425 | rBB | 435 | 1389 | 0.09% | 0.018% |
| 17 | 6.888 | 428 | 431 | 435 | rBB | 433 | 1094 | 0.07% | 0.014% |
| 18 | 7.071 | 448 | 449 | 452 | rBB | 411 | 664 | 0.04% | 0.009% |
| 19 | 7.112 | 452 | 453 | 455 | rBB | 400 | 443 | 0.03% | 0.006% |
| 20 | 7.153 | 455 | 457 | 460 | rBB | 396 | 883 | 0.05% | 0.011% |
| 21 | 7.235 | 462 | 465 | 466 | rBB | 378 | 662 | 0.04% | 0.009% |
| 22 | 7.306 | 466 | 472 | 474 | rBB | 619 | 1590 | 0.10% | 0.021% |
| 23 | 7.347 | 474 | 476 | 477 | rBB | 376 | 452 | 0.03% | 0.006% |
| 24 | 7.388 | 477 | 480 | 485 | rBB | 652 | 1303 | 0.08% | 0.017% |
| 25 | 7.490 | 486 | 490 | 491 | rBB | 377 | 614 | 0.04% | 0.008% |
| 26 | 7.531 | 493 | 494 | 498 | rBB | 360 | 817 | 0.05% | 0.011% |
| 27 | 7.633 | 503 | 504 | 507 | rBB | 362 | 406 | 0.03% | 0.005% |
| 28 | 7.725 | 508 | 513 | 515 | rBB | 365 | 629 | 0.04% | 0.008% |
| 29 | 7.817 | 517 | 522 | 523 | rBB | 349 | 805 | 0.05% | 0.010% |
| 30 | 8.001 | 538 | 540 | 543 | rBB | 365 | 445 | 0.03% | 0.006% |
| 31 | 8.144 | 550 | 554 | 556 | rBB | 340 | 582 | 0.04% | 0.008% |
| 32 | 8.195 | 556 | 559 | 561 | rBB | 636 | 590 | 0.04% | 0.008% |
| 33 | 8.297 | 565 | 569 | 571 | rBV | 368 | 1240 | 0.08% | 0.016% |
| 34 | 8.368 | 575 | 576 | 581 | rBB | 379 | 823 | 0.05% | 0.011% |
| 35 | 8.450 | 582 | 584 | 587 | rBB | 323 | 574 | 0.04% | 0.007% |
| 36 | 8.572 | 595 | 596 | 598 | rBB | 691 | 614 | 0.04% | 0.008% |
| 37 | 8.613 | 598 | 600 | 602 | rBB | 345 | 400 | 0.02% | 0.005% |
| 38 | 8.726 | 608 | 611 | 613 | rBB | 349 | 401 | 0.02% | 0.005% |
| 39 | 8.787 | 614 | 617 | 620 | rBB | 365 | 631 | 0.04% | 0.008% |
| 40 | 8.909 | 626 | 629 | 634 | rBB | 419 | 1128 | 0.07% | 0.015% |
| 41 | 8.991 | 635 | 637 | 639 | rBB | 333 | 403 | 0.02% | 0.005% |
| 42 | 9.093 | 645 | 647 | 653 | rBB | 352 | 1027 | 0.06% | 0.013% |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 43 | 9.175 | 653 | 655 | 657 | rBB | 365 | 631 | 0.04% | 0.008% |
| 44 | 9.277 | 658 | 665 | 677 | rBB | 181068 | 553859 | 34.24% | 7.166% |
| 45 | 9.471 | 681 | 684 | 686 | rBB | 377 | 437 | 0.03% | 0.006% |
| 46 | 9.522 | 686 | 689 | 691 | rBB | 346 | 415 | 0.03% | 0.005% |
| 47 | 9.594 | 695 | 696 | 699 | rBB | 404 | 458 | 0.03% | 0.006% |
| 48 | 9.665 | 700 | 703 | 704 | rBB | 344 | 395 | 0.02% | 0.005% |
| 49 | 9.686 | 704 | 705 | 710 | rBB | 329 | 769 | 0.05% | 0.010% |
| 50 | 10.012 | 730 | 737 | 750 | rBB | 177297 | 496401 | 30.69% | 6.422% |
| 51 | 10.186 | 751 | 754 | 755 | rBB | 338 | 396 | 0.02% | 0.005% |
| 52 | 10.217 | 756 | 757 | 759 | rBB | 364 | 413 | 0.03% | 0.005% |
| 53 | 10.472 | 771 | 782 | 795 | rBV | 435225 | 1293452 | 79.96% | 16.735% |
| 54 | 10.809 | 813 | 815 | 819 | rBB | 381 | 657 | 0.04% | 0.009% |
| 55 | 10.942 | 827 | 828 | 830 | rBB | 342 | 396 | 0.02% | 0.005% |
| 56 | 10.972 | 830 | 831 | 834 | rBB | 329 | 401 | 0.02% | 0.005% |
| 57 | 11.074 | 839 | 841 | 842 | rBB | 433 | 453 | 0.03% | 0.006% |
| 58 | 11.115 | 843 | 845 | 847 | rBB | 341 | 396 | 0.02% | 0.005% |
| 59 | 11.166 | 847 | 850 | 855 | rBB | 363 | 1053 | 0.07% | 0.014% |
| 60 | 11.248 | 856 | 858 | 860 | rBB | 414 | 464 | 0.03% | 0.006% |
| 61 | 11.421 | 872 | 875 | 877 | rBB | 319 | 570 | 0.04% | 0.007% |
| 62 | 11.513 | 880 | 884 | 886 | rBB | 345 | 412 | 0.03% | 0.005% |
| 63 | 11.595 | 887 | 892 | 893 | rBB | 330 | 584 | 0.04% | 0.008% |
| 64 | 11.912 | 921 | 923 | 927 | rBB | 341 | 593 | 0.04% | 0.008% |
| 65 | 11.993 | 928 | 931 | 933 | rBB | 346 | 406 | 0.03% | 0.005% |
| 66 | 12.055 | 934 | 937 | 938 | rBB | 327 | 399 | 0.02% | 0.005% |
| 67 | 12.085 | 938 | 940 | 943 | rBB | 338 | 792 | 0.05% | 0.010% |
| 68 | 12.555 | 983 | 986 | 994 | rBB | 838 | 3635 | 0.22% | 0.047% |
| 69 | 12.759 | 996 | 1006 | 1024 | rBV | 591499 | 1617681 | 100.00% | 20.930% |
| 70 | 13.086 | 1036 | 1038 | 1040 | rBB | 355 | 403 | 0.02% | 0.005% |
| 71 | 13.208 | 1048 | 1050 | 1054 | rBB | 345 | 403 | 0.02% | 0.005% |
| 72 | 13.290 | 1055 | 1058 | 1059 | rBB | 409 | 439 | 0.03% | 0.006% |
| 73 | 13.402 | 1067 | 1069 | 1072 | rBB | 335 | 397 | 0.02% | 0.005% |
| 74 | 13.505 | 1075 | 1079 | 1081 | rBB | 340 | 395 | 0.02% | 0.005% |
| 75 | 13.750 | 1100 | 1103 | 1105 | rBB | 352 | 426 | 0.03% | 0.006% |
| 76 | 13.821 | 1106 | 1110 | 1113 | rBB | 361 | 819 | 0.05% | 0.011% |
| 77 | 14.117 | 1134 | 1139 | 1141 | rBB | 332 | 592 | 0.04% | 0.008% |
| 78 | 14.659 | 1190 | 1192 | 1196 | rBB | 369 | 417 | 0.03% | 0.005% |
| 79 | 14.842 | 1208 | 1210 | 1215 | rBB | 325 | 578 | 0.04% | 0.007% |
| 80 | 14.965 | 1216 | 1222 | 1238 | rBV | 540934 | 1377741 | 85.17% | 17.825% |
| 81 | 15.138 | 1238 | 1239 | 1243 | rVB | 766 | 1128 | 0.07% | 0.015% |
| 82 | 15.190 | 1243 | 1244 | 1247 | rBB | 760 | 689 | 0.04% | 0.009% |
| 83 | 15.353 | 1257 | 1260 | 1264 | rBB | 315 | 573 | 0.04% | 0.007% |
| 84 | 15.792 | 1300 | 1303 | 1307 | rBB | 360 | 621 | 0.04% | 0.008% |
| 85 | 16.415 | 1359 | 1364 | 1366 | rBB | 336 | 580 | 0.04% | 0.008% |
| 86 | 16.752 | 1390 | 1397 | 1414 | rBB | 435650 | 1018454 | 62.96% | 13.177% |
| 87 | 16.956 | 1415 | 1417 | 1420 | rBB | 614 | 589 | 0.04% | 0.008% |
| 88 | 17.456 | 1462 | 1466 | 1468 | rBB | 370 | 441 | 0.03% | 0.006% |
| 89 | 17.548 | 1473 | 1475 | 1479 | rBB | 426 | 461 | 0.03% | 0.006% |
| 90 | 17.732 | 1490 | 1493 | 1496 | rBB | 382 | 635 | 0.04% | 0.008% |
| 91 | 17.967 | 1513 | 1516 | 1517 | rBB | 346 | 414 | 0.03% | 0.005% |
| 92 | 18.008 | 1518 | 1520 | 1522 | rBB | 393 | 425 | 0.03% | 0.005% |
| 93 | 18.539 | 1566 | 1572 | 1584 | rBV | 580175 | 1305729 | 80.72% | 16.894% |
| 94 | 19.550 | 1669 | 1671 | 1674 | rBB | 335 | 409 | 0.03% | 0.005% |
| 95 | 19.744 | 1685 | 1690 | 1692 | rBB | 347 | 586 | 0.04% | 0.008% |
| 96 | 19.928 | 1706 | 1708 | 1711 | rBB | 338 | 404 | 0.02% | 0.005% |
| 97 | 20.448 | 1757 | 1759 | 1763 | rBB | 370 | 419 | 0.03% | 0.005% |
| 98 | 21.082 | 1817 | 1821 | 1822 | rBB | 330 | 573 | 0.04% | 0.007% |
| 99 | 22.133 | 1920 | 1924 | 1926 | rBB | 329 | 403 | 0.02% | 0.005% |
| 100 | 22.879 | 1996 | 1997 | 2001 | rBB | 336 | 402 | 0.02% | 0.005% |

Sum of corrected areas: 7729173

File : C:\MSDCHEM\1\DATA\051912\6M108268.D
Operator : FJB
Acquired : 19 May 2012 18:07 using AcqMethod 8260WT
Instrument : HPMS6
Sample Name: WG398533-01 VBLK0519 BLANK 8260
Misc Info : 1,1
Vial Number: 5
Quant File :8260WT.RES (RTE Integrator)



Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\051612\8M379104.D Vial: 4
Acq On : 16 May 2012 9:53 Operator: ADC
Sample : WG398118-01 VBLK0516 BLANK 8260 Inst : HPMS8
Misc : 1,1 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 18 09:50:57 2012 Quant Results File: 8260WT.RES

Quant Method : C:\MSDCHEM\1\METHODS\8260WT.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 03/27/12 HPMS 8
Last Update : Wed Mar 28 08:18:24 2012
Response via : Initial Calibration
DataAcq Meth : 8260WT

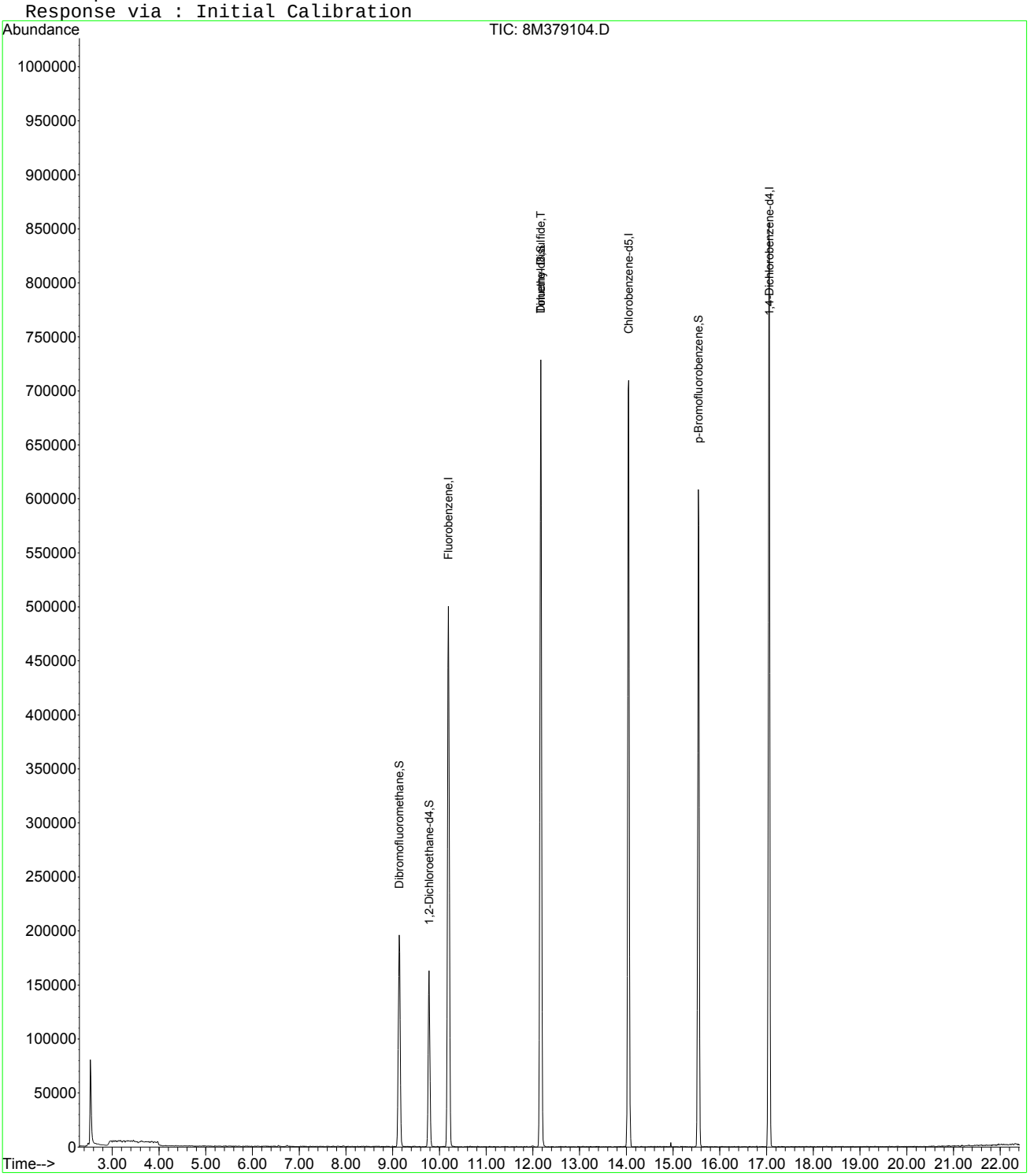
| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 1) Fluorobenzene | 10.19 | 96 | 652842 | 25.00 | ug/L | 0.01 |
| 57) Chlorobenzene-d5 | 14.05 | 117 | 587819 | 25.00 | ug/L | 0.01 |
| 78) 1,4-Dichlorobenzene-d4 | 17.06 | 152 | 331857 | 25.00 | ug/L | 0.01 |
| **System Monitoring Compounds** | | | | | | |
| 37) Dibromofluoromethane | 9.14 | 111 | 174196 | 25.7190 | ug/L | 0.00 |
| Spiked Amount 25.000 | Range 86 - 118 | | Recovery = 102.88% | | | |
| 43) 1,2-Dichloroethane-d4 | 9.78 | 65 | 146691 | 28.1255 | ug/L | 0.01 |
| Spiked Amount 25.000 | Range 80 - 120 | | Recovery = 112.52% | | | |
| 58) Toluene-d8 | 12.17 | 98 | 673125 | 24.8014 | ug/L | 0.00 |
| Spiked Amount 25.000 | Range 88 - 110 | | Recovery = 99.20% | | | |
| 80) p-Bromofluorobenzene | 15.54 | 95 | 266471 | 24.8219 | ug/L | 0.00 |
| Spiked Amount 25.000 | Range 86 - 115 | | Recovery = 99.28% | | | |
| **Target Compounds** | | | | | | Qvalue |
| 56) Dimethyl Disulfide | 12.17 | 94 | 18713 | 1.8287 | ug/L # | 28 |

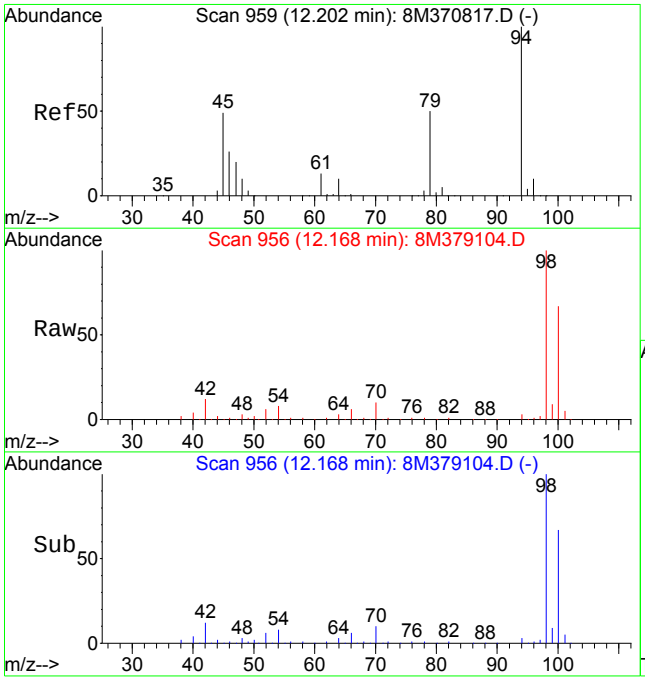
(#) = qualifier out of range (m) = manual integration
8M379104.D 8260WT.M Fri May 18 09:50:58 2012 Page 1

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\051612\8M379104.D Vial: 4
Acq On : 16 May 2012 9:53 Operator: ADC
Sample : WG398118-01 VBLK0516 BLANK 8260 Inst : HPMS8
Misc : 1,1 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 18 9:50 2012 Quant Results File: 8260WT.RES

Method : C:\MSDCHEM\1\METHODS\8260WT.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 03/27/12 HPMS 8
Last Update : Wed Mar 28 08:18:24 2012
Response via : Initial Calibration

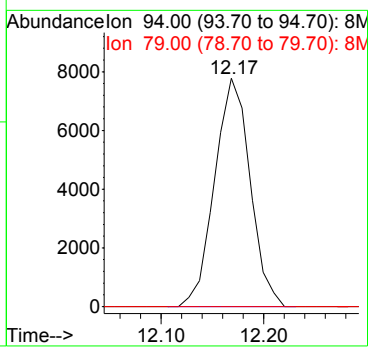





#56
Dimethyl Disulfide
Concen: 1.83 ug/L
RT: 12.17 min Scan# 956
Delta R.T. 0.08 min
Lab File: 8M379104.D
Acq: 16 May 2012 9:53

Tgt Ion: 94 Resp: 18713

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 94 | 100 | | |
| 79 | 0.0 | 29.2 | 68.0# |



LSC Area Percent Report

Data File : K:\ORGANICS\VOLATILE\HPMS8\DATA\051612\8M379104.D Vial: 4
Acq On : 16 May 2012 9:53 Operator: ADC
Sample : WG398118-01 VBLK0516 BLANK 8260 Inst : HPMS8
Misc : 1,1 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\1\METHODS\8260WT.M (RTE Integrator)
Title : 8260B/624_WATER SOP:OVLMSV01 05/16/12 - HPMS6
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 100 Area counts
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

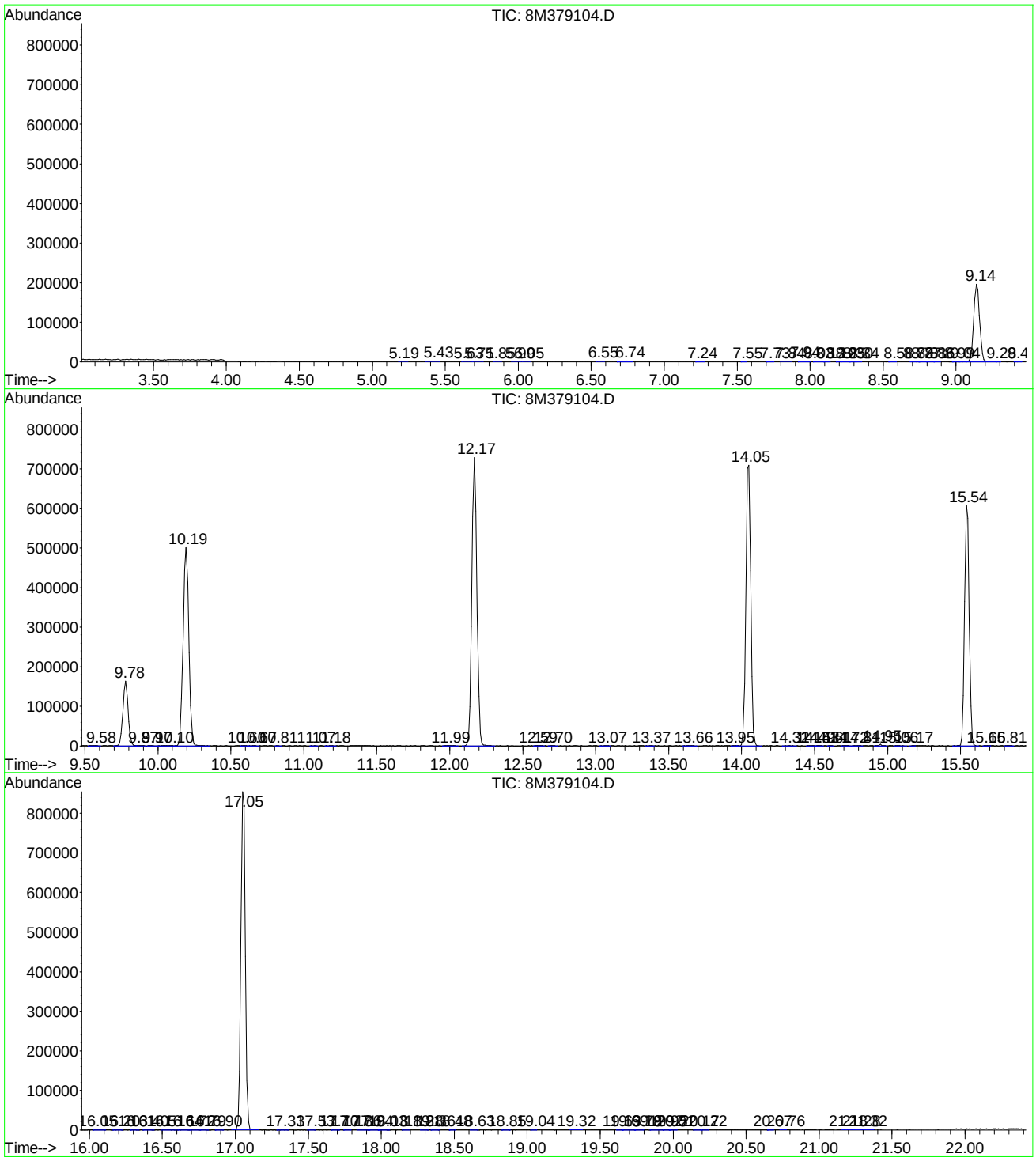
Signal : TIC

| peak # | R.T. min | first scan | max scan | last scan | PK TY | peak height | corr. area | corr. % max. | % of total |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 5.189 | 280 | 281 | 286 | rBV2 | 741 | 1632 | 0.09% | 0.018% |
| 2 | 5.427 | 298 | 304 | 307 | rVB2 | 810 | 2372 | 0.13% | 0.026% |
| 3 | 5.634 | 322 | 324 | 329 | rBV | 575 | 1459 | 0.08% | 0.016% |
| 4 | 5.706 | 329 | 331 | 336 | rVB2 | 587 | 1240 | 0.07% | 0.014% |
| 5 | 5.851 | 343 | 345 | 348 | rBV2 | 606 | 1037 | 0.06% | 0.012% |
| 6 | 5.985 | 355 | 358 | 361 | rBV | 581 | 1117 | 0.06% | 0.012% |
| 7 | 6.048 | 362 | 364 | 367 | rBV | 545 | 1044 | 0.06% | 0.012% |
| 8 | 6.554 | 411 | 413 | 416 | rBV2 | 1198 | 1900 | 0.10% | 0.021% |
| 9 | 6.740 | 425 | 431 | 435 | rBV2 | 1515 | 4917 | 0.27% | 0.055% |
| 10 | 7.237 | 477 | 479 | 483 | rBV2 | 824 | 2222 | 0.12% | 0.025% |
| 11 | 7.547 | 507 | 509 | 511 | rBV | 445 | 987 | 0.05% | 0.011% |
| 12 | 7.733 | 524 | 527 | 529 | rBV | 899 | 2052 | 0.11% | 0.023% |
| 13 | 7.836 | 533 | 537 | 540 | rVB | 483 | 1592 | 0.09% | 0.018% |
| 14 | 7.940 | 545 | 547 | 553 | rBV | 1222 | 3298 | 0.18% | 0.037% |
| 15 | 8.033 | 555 | 556 | 562 | rBB | 848 | 2060 | 0.11% | 0.023% |
| 16 | 8.115 | 562 | 564 | 566 | rBV | 609 | 1236 | 0.07% | 0.014% |
| 17 | 8.188 | 570 | 571 | 574 | rBV | 815 | 1234 | 0.07% | 0.014% |
| 18 | 8.250 | 574 | 577 | 579 | rVB | 676 | 1430 | 0.08% | 0.016% |
| 19 | 8.302 | 579 | 582 | 583 | rBB | 697 | 856 | 0.05% | 0.010% |
| 20 | 8.343 | 583 | 586 | 587 | rBV | 670 | 1249 | 0.07% | 0.014% |
| 21 | 8.581 | 605 | 609 | 610 | rBV | 683 | 1532 | 0.08% | 0.017% |
| 22 | 8.715 | 619 | 622 | 625 | rVB2 | 768 | 1559 | 0.09% | 0.017% |
| 23 | 8.767 | 625 | 627 | 630 | rBB2 | 783 | 1036 | 0.06% | 0.012% |
| 24 | 8.808 | 630 | 631 | 635 | rBB2 | 688 | 1072 | 0.06% | 0.012% |
| 25 | 8.860 | 635 | 636 | 639 | rBV | 743 | 1356 | 0.07% | 0.015% |
| 26 | 8.994 | 647 | 649 | 651 | rBB | 935 | 1000 | 0.06% | 0.011% |
| 27 | 9.036 | 652 | 653 | 656 | rBB | 804 | 874 | 0.05% | 0.010% |
| 28 | 9.139 | 656 | 663 | 676 | rBB | 196325 | 546497 | 30.20% | 6.083% |
| 29 | 9.284 | 676 | 677 | 679 | rBV | 662 | 849 | 0.05% | 0.009% |
| 30 | 9.428 | 688 | 691 | 693 | rBV | 791 | 1357 | 0.07% | 0.015% |
| 31 | 9.584 | 700 | 706 | 708 | rBB | 668 | 1544 | 0.09% | 0.017% |
| 32 | 9.780 | 717 | 725 | 732 | rBV | 163173 | 399555 | 22.08% | 4.447% |
| 33 | 9.873 | 732 | 734 | 738 | rVB | 714 | 1285 | 0.07% | 0.014% |
| 34 | 9.966 | 739 | 743 | 745 | rBB | 729 | 1151 | 0.06% | 0.013% |
| 35 | 10.101 | 746 | 756 | 757 | rBB | 684 | 2428 | 0.13% | 0.027% |
| 36 | 10.194 | 757 | 765 | 780 | rBB | 500740 | 1349134 | 74.55% | 15.016% |
| 37 | 10.597 | 801 | 804 | 806 | rBB | 650 | 1053 | 0.06% | 0.012% |
| 38 | 10.669 | 806 | 811 | 813 | rBB | 691 | 1467 | 0.08% | 0.016% |
| 39 | 10.814 | 824 | 825 | 828 | rBB | 773 | 908 | 0.05% | 0.010% |
| 40 | 11.072 | 847 | 850 | 852 | rBB | 764 | 956 | 0.05% | 0.011% |
| 41 | 11.176 | 857 | 860 | 864 | rBB | 494 | 1081 | 0.06% | 0.012% |
| 42 | 11.993 | 935 | 939 | 945 | rBB | 1084 | 3342 | 0.18% | 0.037% |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 43 | 12.168 | 948 | 956 | 969 | rBB | 728708 | 1750894 | 96.74% | 19.488% |
| 44 | 12.592 | 995 | 997 | 1002 | rBB | 672 | 1433 | 0.08% | 0.016% |
| 45 | 12.696 | 1005 | 1007 | 1011 | rBB | 659 | 992 | 0.05% | 0.011% |
| 46 | 13.068 | 1039 | 1043 | 1046 | rBB | 759 | 1394 | 0.08% | 0.016% |
| 47 | 13.368 | 1069 | 1072 | 1075 | rBB | 838 | 1400 | 0.08% | 0.016% |
| 48 | 13.657 | 1094 | 1100 | 1103 | rBB | 362 | 1245 | 0.07% | 0.014% |
| 49 | 13.947 | 1126 | 1128 | 1130 | rBV | 757 | 1313 | 0.07% | 0.015% |
| 50 | 14.050 | 1130 | 1138 | 1146 | rVB | 709814 | 1667783 | 92.15% | 18.563% |
| 51 | 14.319 | 1160 | 1164 | 1169 | rBB | 711 | 1234 | 0.07% | 0.014% |
| 52 | 14.495 | 1176 | 1181 | 1182 | rBB | 420 | 1149 | 0.06% | 0.013% |
| 53 | 14.526 | 1182 | 1184 | 1187 | rBB | 681 | 1099 | 0.06% | 0.012% |
| 54 | 14.609 | 1190 | 1192 | 1194 | rBB | 750 | 915 | 0.05% | 0.010% |
| 55 | 14.722 | 1199 | 1203 | 1205 | rBB | 657 | 1239 | 0.07% | 0.014% |
| 56 | 14.805 | 1206 | 1211 | 1213 | rBB | 700 | 1480 | 0.08% | 0.016% |
| 57 | 14.950 | 1221 | 1225 | 1229 | rBB | 4184 | 3867 | 0.21% | 0.043% |
| 58 | 15.064 | 1234 | 1236 | 1242 | rBB | 358 | 1037 | 0.06% | 0.012% |
| 59 | 15.167 | 1244 | 1246 | 1248 | rBV | 697 | 925 | 0.05% | 0.010% |
| 60 | 15.539 | 1273 | 1282 | 1290 | rBB | 608770 | 1325978 | 73.27% | 14.758% |
| 61 | 15.663 | 1293 | 1294 | 1298 | rBV | 479 | 1213 | 0.07% | 0.014% |
| 62 | 15.808 | 1307 | 1308 | 1313 | rBB | 421 | 1140 | 0.06% | 0.013% |
| 63 | 16.046 | 1329 | 1331 | 1337 | rBB | 648 | 1689 | 0.09% | 0.019% |
| 64 | 16.201 | 1342 | 1346 | 1348 | rBB | 424 | 917 | 0.05% | 0.010% |
| 65 | 16.315 | 1354 | 1357 | 1359 | rBB | 749 | 863 | 0.05% | 0.010% |
| 66 | 16.397 | 1362 | 1365 | 1369 | rBB | 642 | 1246 | 0.07% | 0.014% |
| 67 | 16.511 | 1374 | 1376 | 1384 | rBB | 358 | 1420 | 0.08% | 0.016% |
| 68 | 16.635 | 1385 | 1388 | 1392 | rBB | 670 | 1323 | 0.07% | 0.015% |
| 69 | 16.718 | 1393 | 1396 | 1399 | rBB | 374 | 1049 | 0.06% | 0.012% |
| 70 | 16.790 | 1400 | 1403 | 1405 | rBB | 921 | 956 | 0.05% | 0.011% |
| 71 | 16.904 | 1410 | 1414 | 1415 | rBB | 473 | 961 | 0.05% | 0.011% |
| 72 | 17.049 | 1421 | 1428 | 1438 | rVV | 855127 | 1809820 | 100.00% | 20.144% |
| 73 | 17.328 | 1451 | 1455 | 1458 | rBB | 674 | 1118 | 0.06% | 0.012% |
| 74 | 17.535 | 1471 | 1475 | 1476 | rBB | 532 | 1019 | 0.06% | 0.011% |
| 75 | 17.700 | 1487 | 1491 | 1492 | rBB | 471 | 952 | 0.05% | 0.011% |
| 76 | 17.772 | 1495 | 1498 | 1500 | rBV | 504 | 1274 | 0.07% | 0.014% |
| 77 | 17.855 | 1504 | 1506 | 1511 | rVB | 679 | 1573 | 0.09% | 0.018% |
| 78 | 17.938 | 1512 | 1514 | 1518 | rBB | 840 | 1497 | 0.08% | 0.017% |
| 79 | 18.031 | 1518 | 1523 | 1525 | rBB | 485 | 1204 | 0.07% | 0.013% |
| 80 | 18.186 | 1534 | 1538 | 1539 | rBV | 405 | 1060 | 0.06% | 0.012% |
| 81 | 18.279 | 1546 | 1547 | 1551 | rVB | 691 | 1343 | 0.07% | 0.015% |
| 82 | 18.362 | 1553 | 1555 | 1558 | rBB | 575 | 1084 | 0.06% | 0.012% |
| 83 | 18.476 | 1565 | 1566 | 1569 | rBV | 741 | 1107 | 0.06% | 0.012% |
| 84 | 18.631 | 1579 | 1581 | 1584 | rVB | 768 | 1127 | 0.06% | 0.013% |
| 85 | 18.848 | 1600 | 1602 | 1605 | rBB | 723 | 1129 | 0.06% | 0.013% |
| 86 | 19.044 | 1619 | 1621 | 1623 | rBV | 424 | 989 | 0.05% | 0.011% |
| 87 | 19.323 | 1645 | 1648 | 1653 | rBV | 469 | 970 | 0.05% | 0.011% |
| 88 | 19.634 | 1676 | 1678 | 1680 | rVB | 771 | 1127 | 0.06% | 0.013% |
| 89 | 19.685 | 1680 | 1683 | 1688 | rBB | 806 | 2156 | 0.12% | 0.024% |
| 90 | 19.778 | 1688 | 1692 | 1694 | rBV | 762 | 1798 | 0.10% | 0.020% |
| 91 | 19.923 | 1698 | 1706 | 1707 | rBB | 592 | 2060 | 0.11% | 0.023% |
| 92 | 19.954 | 1707 | 1709 | 1711 | rBB | 554 | 953 | 0.05% | 0.011% |
| 93 | 20.006 | 1711 | 1714 | 1716 | rBV | 566 | 1389 | 0.08% | 0.015% |
| 94 | 20.171 | 1727 | 1730 | 1732 | rBB | 717 | 1454 | 0.08% | 0.016% |
| 95 | 20.223 | 1732 | 1735 | 1737 | rBV | 691 | 1553 | 0.09% | 0.017% |
| 96 | 20.668 | 1776 | 1778 | 1780 | rBV | 1020 | 1722 | 0.10% | 0.019% |
| 97 | 20.761 | 1784 | 1787 | 1788 | rVB | 734 | 934 | 0.05% | 0.010% |
| 98 | 21.184 | 1825 | 1828 | 1833 | rBV2 | 1411 | 4000 | 0.22% | 0.045% |
| 99 | 21.278 | 1833 | 1837 | 1838 | rVV | 695 | 1835 | 0.10% | 0.020% |
| 100 | 21.319 | 1839 | 1841 | 1846 | rVB2 | 950 | 2253 | 0.12% | 0.025% |

Sum of corrected areas: 8984624

File : K:\ORGANICS\VOLATILE\HPMS8\DATA\051612\8M379104.D
Operator : ADC
Acquired : 16 May 2012 9:53 using AcqMethod 8260WT
Instrument : HPMS8
Sample Name: WG398118-01 VBLK0516 BLANK 8260
Misc Info : 1,1
Vial Number: 4
Quant File :8260WT.RES (RTE Integrator)



Quantitation Report (Not Reviewed)

Data File : C:\MSDchem\1\data\051912\6M108269.D Vial: 6
Acq On : 19 May 2012 18:40 Operator: FJB
Sample : WG398533-02 20ug/L LCS 8260 Inst : HPMS6
Misc : 1,1 STD51676 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 19 19:03:21 2012 Quant Results File: 8260WT.RES

Quant Method : C:\MSDCHEM\1\METHODS\8260WT.M (RTE Integrator)
Title : 8260B/624_WATER SOP:OVLMSV01 05/16/12 - HPMS6
Last Update : Thu May 17 10:54:16 2012
Response via : Initial Calibration
DataAcq Meth : 8260WT

| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 1) Fluorobenzene | 10.47 | 96 | 618850 | 25.00 | ug/L | 0.00 |
| 57) Chlorobenzene-d5 | 14.97 | 117 | 448585 | 25.00 | ug/L | 0.00 |
| 78) 1,4-Dichlorobenzene-d4 | 18.54 | 152 | 226288 | 25.00 | ug/L | 0.00 |
| **System Monitoring Compounds** | | | | | | |
| 37) Dibromofluoromethane | 9.28 | 111 | 181000 | 23.8959 | ug/L | 0.00 |
| Spiked Amount 25.000 | Range 86 - 118 | | Recovery = 95.60% | | | |
| 43) 1,2-Dichloroethane-d4 | 10.01 | 65 | 184111 | 22.9821 | ug/L | 0.00 |
| Spiked Amount 25.000 | Range 80 - 120 | | Recovery = 91.92% | | | |
| 58) Toluene-d8 | 12.76 | 98 | 620984 | 26.3549 | ug/L | 0.00 |
| Spiked Amount 25.000 | Range 88 - 110 | | Recovery = 105.40% | | | |
| 80) p-Bromofluorobenzene | 16.75 | 95 | 226931 | 27.6603 | ug/L | 0.00 |
| Spiked Amount 25.000 | Range 86 - 115 | | Recovery = 110.64% | | | |
| **Target Compounds** | | | | | | Qvalue |
| 2) Dichlorodifluoromethane | 2.71 | 85 | 247503 | 25.8027 | ug/L | 98 |
| 3) Chloromethane | 3.09 | 50 | 341248 | 17.9373 | ug/L | 99 |
| 4) Vinyl Chloride | 3.27 | 62 | 239429 | 18.0472 | ug/L | 100 |
| 5) 1,3-Butadiene | 3.31 | 54 | 66398 | 10.1677 | ug/L | 97 |
| 6) Bromomethane | 4.06 | 94 | 88737 | 13.5770 | ug/L | 98 |
| 7) Chloroethane | 4.21 | 64 | 116228 | 19.2726 | ug/L | 99 |
| 8) Trichlorofluoromethane | 4.68 | 101 | 273516 | 19.0929 | ug/L | 99 |
| 9) Diethyl ether | 5.21 | 59 | 494694 | 86.4651 | ug/L | 100 |
| 10) Isoprene | 5.24 | 67 | 227165 | 18.1095 | ug/L | 99 |
| 11) Acrolein | 5.46 | 56 | 7921 | 23.8113 | ug/L | 99 |
| 12) 1,1,2-Trichloro-1,2,2-Trif | 5.47 | 101 | 143146 | 19.4544 | ug/L | 98 |
| 13) Acetone | 5.56 | 43 | 25638 | 19.3065 | ug/L | 99 |
| 14) 1,1-Dichloroethene | 5.78 | 61 | 245132 | 20.7232 | ug/L | 99 |
| 15) Tert-Butyl Alcohol | 5.92 | 59 | 68192 | 210.6721 | ug/L | 94 |
| 16) Dimethyl Sulfide | 6.05 | 62 | 186085 | 19.8719 | ug/L | 99 |
| 17) Iodomethane | 6.31 | 142 | 123002 | 15.3801 | ug/L | 96 |
| 18) Methyl acetate | 6.36 | 43 | 69703 | 16.3718 | ug/L | 100 |
| 19) Methylene Chloride | 6.61 | 84 | 148089 | 19.8095 | ug/L | 98 |
| 20) Carbon Disulfide | 6.62 | 76 | 467261 | 20.6804 | ug/L | 100 |
| 21) Acrylonitrile | 6.82 | 53 | 34507 | 19.5968 | ug/L | 98 |
| 22) Methyl Tert Butyl Ether | 6.86 | 73 | 318709 | 19.6908 | ug/L | 100 |
| 23) trans-1,2-Dichloroethene | 7.10 | 96 | 141217 | 20.0690 | ug/L | 100 |
| 24) n-Hexane | 7.19 | 57 | 169613 | 21.3290 | ug/L | 100 |
| 25) Diisopropyl ether | 7.59 | 45 | 2645743 | 99.0909 | ug/L | 99 |
| 26) Vinyl Acetate | 7.78 | 43 | 238806 | 27.5897 | ug/L | 99 |
| 27) 1,1-Dichloroethane | 7.79 | 63 | 278425 | 20.2771 | ug/L | 100 |
| 28) Ethyl-Tert-Butyl ether | 8.23 | 59 | 2104334 | 92.5937 | ug/L | 99 |
| 29) 2-Butanone | 8.42 | 43 | 37605 | 20.0094 | ug/L | 99 |
| 30) Propionitrile | 8.54 | 54 | 56227 | 100.2179 | ug/L | 98 |
| 31) 2,2-Dichloropropane | 8.64 | 77 | 229184 | 21.3442 | ug/L | 97 |
| 32) cis-1,2-Dichloroethene | 8.72 | 96 | 155698 | 21.0838 | ug/L | 96 |
| 33) Chloroform | 8.95 | 83 | 269326 | 20.8884 | ug/L | 98 |
| 34) 1-Bromopropane | 9.10 | 122 | 31868 | 22.2080 | ug/L | 99 |
| 35) Bromochloromethane | 9.21 | 130 | 83983 | 21.0484 | ug/L | 99 |
| 36) Tetrahydrofuran | 9.25 | 42 | 117394 | 96.6711 | ug/L | 99 |
| 38) 1,1,1-Trichloroethane | 9.55 | 97 | 230893 | 19.6177 | ug/L | 100 |
| 39) Cyclohexane | 9.57 | 56 | 241752 | 20.7356 | ug/L | 99 |
| 40) 1,1-Dichloropropene | 9.78 | 75 | 201981 | 20.7224 | ug/L | 96 |
| 41) Tert-Amyl-Methyl ether | 9.92 | 73 | 1788465 | 99.7824 | ug/L | 99 |
| 42) Carbon Tetrachloride | 9.93 | 117 | 217065 | 19.2939 | ug/L | 99 |

(#) = qualifier out of range (m) = manual integration
6M108269.D 8260WT.M Sat May 19 19:03:22 2012 Page 1

Quantitation Report (Not Reviewed)

Data File : C:\MSDchem\1\data\051912\6M108269.D Vial: 6
Acq On : 19 May 2012 18:40 Operator: FJB
Sample : WG398533-02 20ug/L LCS 8260 Inst : HPMS6
Misc : 1,1 STD51676 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 19 19:03:21 2012 Quant Results File: 8260WT.RES

Quant Method : C:\MSDCHEM\1\METHODS\8260WT.M (RTE Integrator)
Title : 8260B/624_WATER SOP:OVLMSV01 05/16/12 - HPMS6
Last Update : Thu May 17 10:54:16 2012
Response via : Initial Calibration
DataAcq Meth : 8260WT

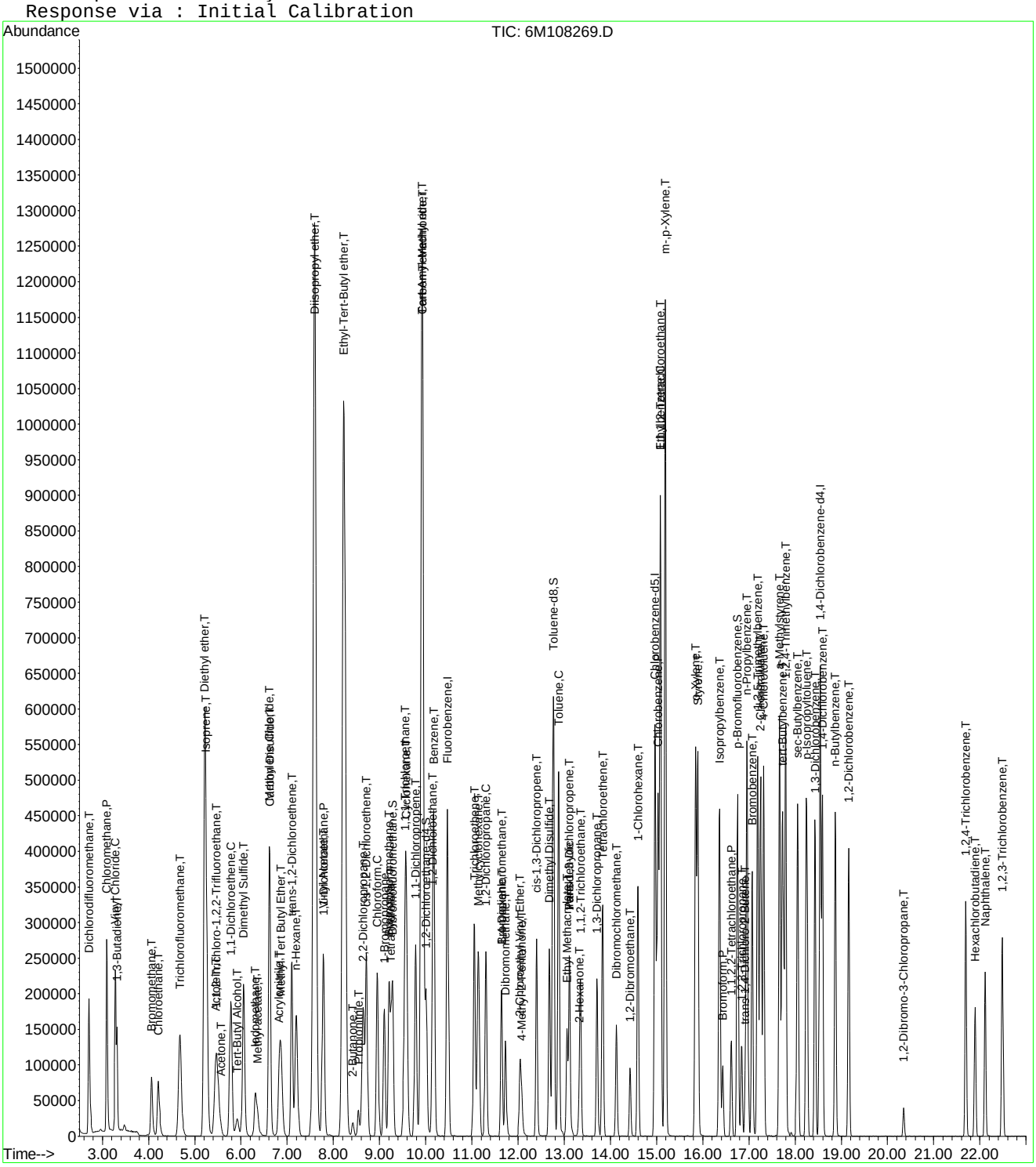
| | Compound | R.T. | QIon | Response | Conc | Unit | | Qvalue |
|---|---|---|---|---|---|---|---|---|
| 45) | 1,2-Dichloroethane | 10.15 | 62 | 188238 | 19.2163 | ug/L | | 99 |
| 46) | Benzene | 10.18 | 78 | 573646 | 20.6353 | ug/L | | 100 |
| 47) | Trichloroethene | 11.05 | 130 | 140054 | 19.7223 | ug/L | | 96 |
| 48) | Methylcyclohexane | 11.14 | 83 | 190390 | 21.5051 | ug/L | | 99 |
| 49) | 1,2-Dichloropropane | 11.30 | 63 | 145540 | 21.4329 | ug/L | | 96 |
| 50) | 1,4-Dioxane | 11.65 | 88 | 5790 | 172.4989 | ug/L | | 99 |
| 51) | Bromodichloromethane | 11.65 | 83 | 191357 | 21.2968 | ug/L | | 100 |
| 52) | Dibromomethane | 11.73 | 93 | 74417 | 19.4916 | ug/L | | 100 |
| 53) | 2-Chloroethyl Vinyl Ether | 12.03 | 63 | 61280 | 43.0053 | ug/L | | 98 |
| 54) | 4-Methyl-2-Pentanone | 12.08 | 58 | 28266 | 19.5121 | ug/L | | 99 |
| 55) | cis-1,3-Dichloropropene | 12.40 | 75 | 210731 | 20.7026 | ug/L | | 98 |
| 56) | Dimethyl Disulfide | 12.68 | 79 | 111402 | 16.8163 | ug/L | | 99 |
| 59) | Toluene | 12.88 | 91 | 570435 | 21.3883 | ug/L | | 99 |
| 60) | Ethyl Methacrylate | 13.06 | 69 | 118210 | 19.8358 | ug/L | | 97 |
| 61) | Paraldehyde | 13.11 | 89 | 6847 | 86.0777 | ug/L | # | 100 |
| 62) | trans-1,3-Dichloropropene | 13.11 | 75 | 164921 | 18.1866 | ug/L | | 100 |
| 63) | 1,1,2-Trichloroethane | 13.35 | 97 | 92171 | 19.5037 | ug/L | | 100 |
| 64) | 2-Hexanone | 13.32 | 43 | 46333 | 19.0708 | ug/L | | 98 |
| 65) | 1,3-Dichloropropane | 13.71 | 76 | 172198 | 22.1765 | ug/L | | 95 |
| 66) | Tetrachloroethene | 13.83 | 166 | 134274 | 21.8190 | ug/L | | 98 |
| 67) | Dibromochloromethane | 14.13 | 129 | 114042 | 19.5735 | ug/L | | 99 |
| 68) | 1,2-Dibromoethane | 14.42 | 107 | 89996 | 20.8871 | ug/L | | 99 |
| 69) | 1-Chlorohexane | 14.60 | 91 | 174305 | 21.2100 | ug/L | | 99 |
| 70) | Chlorobenzene | 15.03 | 112 | 352005 | 20.3741 | ug/L | | 99 |
| 71) | 1,1,1,2-Tetrachloroethane | 15.08 | 131 | 131505 | 21.2769 | ug/L | | 98 |
| 72) | Ethylbenzene | 15.08 | 106 | 193329 | 20.7879 | ug/L | | 97 |
| 73) | m-,p-Xylene | 15.19 | 106 | 476628 | 35.2742 | ug/L | | 97 |
| 74) | o-Xylene | 15.84 | 106 | 218780 | 17.3185 | ug/L | | 100 |
| 75) | Styrene | 15.89 | 104 | 386285 | 17.8131 | ug/L | | 98 |
| 76) | Bromoform | 16.44 | 173 | 63610 | 20.4133 | ug/L | | 97 |
| 77) | Isopropylbenzene | 16.36 | 105 | 491366 | 19.2114 | ug/L | | 100 |
| 79) | 1,1,2,2-Tetrachloroethane | 16.62 | 83 | 101214 | 22.7776 | ug/L | | 98 |
| 81) | 1,2,3-Trichloropropane | 16.84 | 110 | 28090 | 24.5622 | ug/L | | 93 |
| 82) | trans-1,4-Dichloro-2-Buten | 16.92 | 53 | 29678 | 19.6889 | ug/L | | 94 |
| 83) | n-Propylbenzene | 16.96 | 91 | 676400 | 22.4117 | ug/L | | 100 |
| 84) | Bromobenzene | 17.07 | 156 | 142572 | 23.2884 | ug/L | | 99 |
| 85) | 1,3,5-Trimethylbenzene | 17.19 | 105 | 458241 | 22.8636 | ug/L | | 100 |
| 86) | 2-Chlorotoluene | 17.25 | 91 | 416876 | 19.5394 | ug/L | | 93 |
| 87) | 4-Chlorotoluene | 17.31 | 91 | 414465 | 21.4939 | ug/L | | 99 |
| 88) | a-Methylstyrene | 17.66 | 118 | 258372 | 20.4052 | ug/L | | 95 |
| 89) | tert-Butylbenzene | 17.73 | 134 | 87160 | 20.8079 | ug/L | | 99 |
| 90) | 1,2,4-Trimethylbenzene | 17.79 | 105 | 497020 | 23.4417 | ug/L | | 99 |
| 91) | sec-Butylbenzene | 18.05 | 105 | 517304 | 22.0040 | ug/L | | 100 |
| 92) | p-Isopropyltoluene | 18.25 | 119 | 428968 | 23.1247 | ug/L | | 100 |
| 93) | 1,3-Dichlorobenzene | 18.44 | 146 | 255184 | 22.2264 | ug/L | | 99 |
| 94) | 1,4-Dichlorobenzene | 18.59 | 146 | 260602 | 21.2047 | ug/L | | 99 |
| 95) | n-Butylbenzene | 18.87 | 91 | 398613 | 22.6373 | ug/L | | 100 |
| 96) | 1,2-Dichlorobenzene | 19.16 | 146 | 229442 | 21.3757 | ug/L | | 98 |
| 97) | 1,2-Dibromo-3-Chloropropan | 20.35 | 75 | 14872 | 19.9033 | ug/L | | 94 |
| 98) | 1,2,4-Trichlorobenzene | 21.69 | 180 | 135249 | 22.6744 | ug/L | | 98 |
| 99) | Hexachlorobutadiene | 21.90 | 225 | 51203 | 21.9775 | ug/L | | 98 |
| 100) | Naphthalene | 22.11 | 128 | 253091 | 21.1506 | ug/L | | 99 |
| 101) | 1,2,3-Trichlorobenzene | 22.49 | 180 | 115829 | 23.4950 | ug/L | | 100 |

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

Quantitation Report (Not Reviewed)

Data File : C:\MSDchem\1\data\051912\6M108269.D Vial: 6
Acq On : 19 May 2012 18:40 Operator: FJB
Sample : WG398533-02 20ug/L LCS 8260 Inst : HPMS6
Misc : 1,1 STD51676 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 19 19:03 2012 Quant Results File: 8260WT.RES

Method : C:\MSDCHEM\1\METHODS\8260WT.M (RTE Integrator)
Title : 8260B/624_WATER SOP:OVLMSV01 05/16/12 - HPMS6
Last Update : Thu May 17 10:54:16 2012
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : C:\MSDchem\1\data\051612\8M379105.D Vial: 5
Acq On : 16 May 2012 10:26 Operator: ADC
Sample : WG398118-02 20ug/L LCS 8260 Inst : HPMS8
Misc : 1,1 STD51372 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 16 10:49:01 2012 Quant Results File: 8260WT.RES

Quant Method : C:\MSDCHEM\1\METHODS\8260WT.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 03/27/12 HPMS 8
Last Update : Wed Mar 28 08:18:24 2012
Response via : Initial Calibration
DataAcq Meth : 8260WT

| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 1) Fluorobenzene | 10.19 | 96 | 673026 | 25.00 | ug/L | 0.01 |
| 57) Chlorobenzene-d5 | 14.04 | 117 | 594974 | 25.00 | ug/L | 0.00 |
| 78) 1,4-Dichlorobenzene-d4 | 17.05 | 152 | 338514 | 25.00 | ug/L | 0.00 |
| **System Monitoring Compounds** | | | | | | |
| 37) Dibromofluoromethane | 9.14 | 111 | 177712 | 25.4512 | ug/L | 0.00 |
| Spiked Amount 25.000 | Range 86 - 118 | | Recovery = 101.80% | | | |
| 43) 1,2-Dichloroethane-d4 | 9.78 | 65 | 147954 | 27.5170 | ug/L | 0.01 |
| Spiked Amount 25.000 | Range 80 - 120 | | Recovery = 110.08% | | | |
| 58) Toluene-d8 | 12.17 | 98 | 687185 | 25.0150 | ug/L | 0.00 |
| Spiked Amount 25.000 | Range 88 - 110 | | Recovery = 100.04% | | | |
| 80) p-Bromofluorobenzene | 15.54 | 95 | 271872 | 24.8270 | ug/L | 0.00 |
| Spiked Amount 25.000 | Range 86 - 115 | | Recovery = 99.32% | | | |
| **Target Compounds** | | | | | | Qvalue |
| 2) Dichlorodifluoromethane | 2.82 | 85 | 229386 | 31.3352 | ug/L | 99 |
| 3) Chloromethane | 3.23 | 50 | 182538 | 21.6353 | ug/L | 99 |
| 4) Vinyl Chloride | 3.42 | 62 | 173799 | 24.7161 | ug/L | 100 |
| 5) 1,3-Butadiene | 3.46 | 54 | 118286 | 27.7626 | ug/L | 98 |
| 6) Bromomethane | 4.25 | 94 | 58900 | 10.8159 | ug/L | 100 |
| 7) Chloroethane | 4.40 | 64 | 93444 | 20.6281 | ug/L | 96 |
| 8) Trichlorofluoromethane | 4.89 | 101 | 273528 | 26.3438 | ug/L | 100 |
| 9) Diethyl ether | 5.42 | 59 | 335450 | 88.7523 | ug/L | 99 |
| 10) Isoprene | 5.45 | 67 | 164665 | 20.1526 | ug/L | 94 |
| 11) Acrolein | 5.61 | 56 | 26843 | 62.8789 | ug/L | 93 |
| 12) 1,1,2-Trichloro-1,2,2-Trif | 5.68 | 101 | 132262 | 21.2099 | ug/L | 97 |
| 13) Acetone | 5.73 | 43 | 22982 | 23.1428 | ug/L | 87 |
| 14) 1,1-Dichloroethene | 5.95 | 61 | 201940 | 22.3793 | ug/L | 94 |
| 15) Tert-Butyl Alcohol | 6.08 | 59 | 53939 | 177.2293 | ug/L | 97 |
| 16) Dimethyl Sulfide | 6.20 | 62 | 146943 | 23.1320 | ug/L | 94 |
| 17) Iodomethane | 6.44 | 142 | 130294 | 12.3694 | ug/L | 92 |
| 18) Methyl acetate | 6.48 | 43 | 50466 | 16.1482 | ug/L | 98 |
| 19) Methylene Chloride | 6.72 | 84 | 133899 | 19.9409 | ug/L | 95 |
| 20) Carbon Disulfide | 6.75 | 76 | 405593 | 23.3934 | ug/L | 100 |
| 21) Acrylonitrile | 6.90 | 53 | 25647 | 19.0784 | ug/L | 97 |
| 22) Methyl Tert Butyl Ether | 6.97 | 73 | 241764 | 21.0420 | ug/L | 98 |
| 23) trans-1,2-Dichloroethene | 7.19 | 61 | 183822 | 21.5721 | ug/L | 98 |
| 24) n-Hexane | 7.31 | 57 | 173156 | 22.2692 | ug/L | 97 |
| 25) Diisopropyl ether | 7.65 | 45 | 2185423 | 106.3182 | ug/L | 98 |
| 26) Vinyl Acetate | 7.78 | 43 | 178023 | 26.9628 | ug/L | 97 |
| 27) 1,1-Dichloroethane | 7.81 | 63 | 225328 | 20.6845 | ug/L | 99 |
| 28) Ethyl-Tert-Butyl ether | 8.22 | 59 | 1725100 | 102.4046 | ug/L | 99 |
| 29) 2-Butanone | 8.36 | 43 | 30257 | 20.4758 | ug/L | 96 |
| 30) Propionitrile | 8.45 | 54 | 48185 | 96.7443 | ug/L | 99 |
| 31) 2,2-Dichloropropane | 8.59 | 77 | 217385 | 23.1936 | ug/L | 99 |
| 32) cis-1,2-Dichloroethene | 8.64 | 96 | 148753 | 21.0856 | ug/L | 95 |
| 33) Chloroform | 8.86 | 83 | 244433 | 21.7716 | ug/L | 99 |
| 34) 1-Bromopropane | 8.99 | 122 | 40079 | 28.0746 | ug/L | 100 |
| 35) Bromochloromethane | 9.08 | 130 | 95928 | 21.1129 | ug/L | 100 |
| 36) Tetrahydrofuran | 9.11 | 42 | 90853 | 90.7226 | ug/L | 99 |
| 38) 1,1,1-Trichloroethane | 9.40 | 97 | 243557 | 23.8743 | ug/L | 100 |
| 39) Cyclohexane | 9.44 | 56 | 217715 | 21.6005 | ug/L | 99 |
| 40) 1,1-Dichloropropene | 9.59 | 75 | 193820 | 22.0571 | ug/L | 98 |
| 41) Tert-Amyl-Methyl ether | 9.72 | 73 | 1406740 | 102.0434 | ug/L | 96 |
| 42) Carbon Tetrachloride | 9.74 | 117 | 233913 | 24.5081 | ug/L | 100 |
| 45) 1,2-Dichloroethane | 9.89 | 62 | 162552 | 23.5301 | ug/L | 97 |

(#) = qualifier out of range (m) = manual integration
8M379105.D 8260WT.M Wed May 16 10:49:01 2012 Page 1

Data File : C:\MSDchem\1\data\051612\8M379105.D Vial: 5
Acq On : 16 May 2012 10:26 Operator: ADC
Sample : WG398118-02 20ug/L LCS 8260 Inst : HPMS8
Misc : 1,1 STD51372 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 16 10:49:01 2012 Quant Results File: 8260WT.RES

Quant Method : C:\MSDCHEM\1\METHODS\8260WT.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 03/27/12 HPMS 8
Last Update : Wed Mar 28 08:18:24 2012
Response via : Initial Calibration
DataAcq Meth : 8260WT

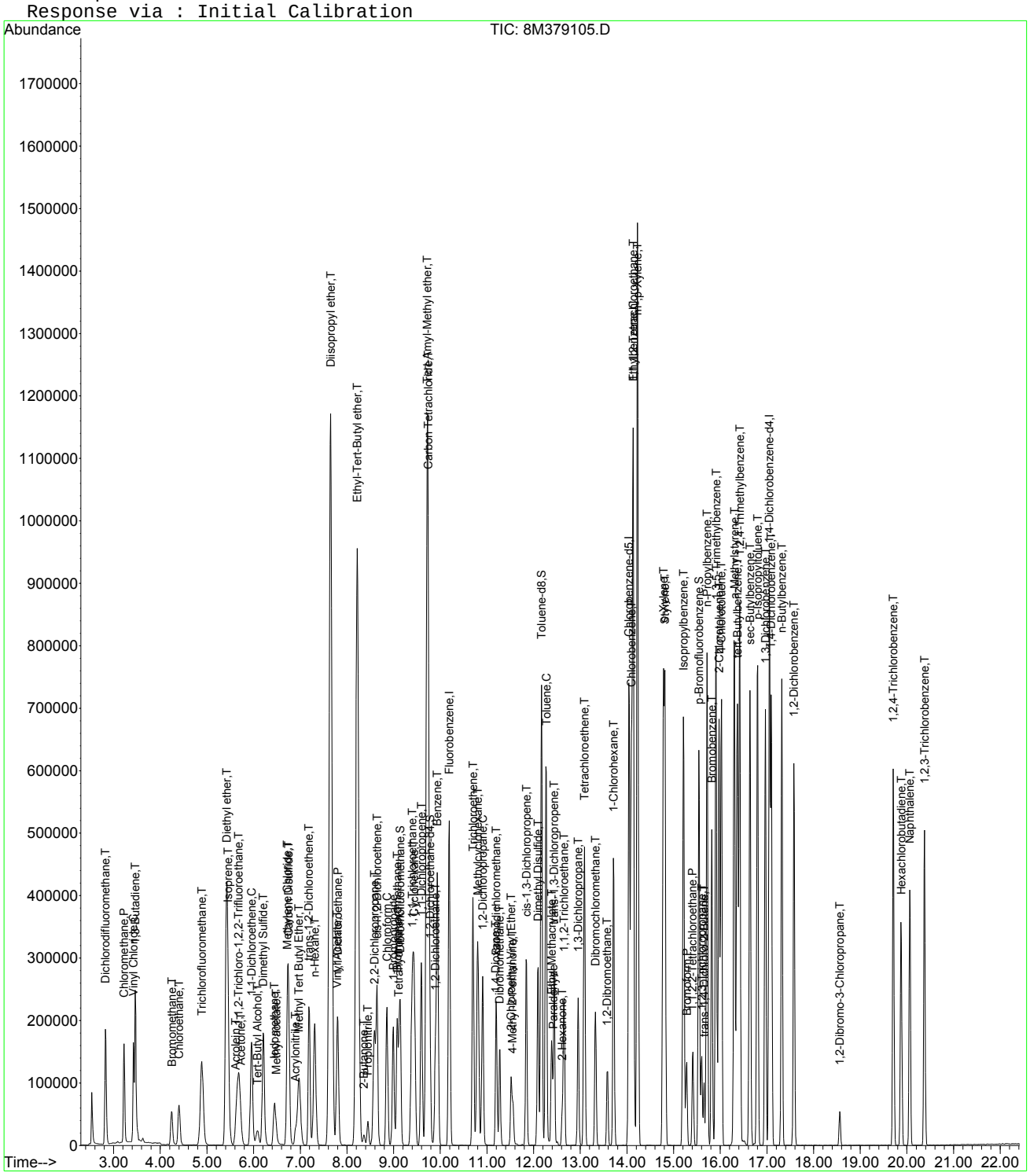
| | Compound | R.T. | QIon | Response | Conc | Unit | Qvalue |
|---|---|---|---|---|---|---|---|
| 46) | Benzene | 9.94 | 78 | 531851 | 20.6222 | ug/L | 97 |
| 47) | Trichloroethene | 10.70 | 130 | 189669 | 22.2461 | ug/L | 99 |
| 48) | Methylcyclohexane | 10.80 | 83 | 212372 | 21.5518 | ug/L | 98 |
| 49) | 1,2-Dichloropropane | 10.91 | 63 | 130498 | 20.7967 | ug/L | 89 |
| 50) | Bromodichloromethane | 11.20 | 83 | 189072 | 23.3586 | ug/L | 99 |
| 51) | 1,4-Dioxane | 11.19 | 88 | 5851 | 162.6563 | ug/L | 99 |
| 52) | Dibromomethane | 11.27 | 93 | 70277 | 21.6335 | ug/L | 97 |
| 53) | 2-Chloroethyl Vinyl Ether | 11.52 | 63 | 52729 | 18.3131 | ug/L | 96 |
| 54) | 4-Methyl-2-Pentanone | 11.55 | 58 | 25276 | 19.4018 | ug/L | 96 |
| 55) | cis-1,3-Dichloropropene | 11.85 | 75 | 207780 | 21.8102 | ug/L | 100 |
| 56) | Dimethyl Disulfide | 12.10 | 94 | 227003 | 21.5181 | ug/L | 97 |
| 59) | Toluene | 12.27 | 91 | 628467 | 19.1533 | ug/L | 98 |
| 60) | Ethyl Methacrylate | 12.39 | 69 | 107015 | 18.6964 | ug/L | 93 |
| 61) | Paraldehyde | 12.42 | 89 | 7097 | 70.1220 | ug/L | 77 |
| 62) | trans-1,3-Dichloropropene | 12.44 | 75 | 172668 | 18.9670 | ug/L | 98 |
| 63) | 1,1,2-Trichloroethane | 12.65 | 97 | 100772 | 19.8667 | ug/L | 99 |
| 64) | 2-Hexanone | 12.61 | 58 | 23159 | 18.2046 | ug/L | 92 |
| 65) | 1,3-Dichloropropane | 12.95 | 76 | 160955 | 19.3805 | ug/L | 91 |
| 66) | Tetrachloroethene | 13.09 | 164 | 157244 | 21.2617 | ug/L | 96 |
| 67) | Dibromochloromethane | 13.33 | 129 | 162891 | 21.8489 | ug/L | 100 |
| 68) | 1,2-Dibromoethane | 13.58 | 107 | 108517 | 19.8590 | ug/L | 98 |
| 69) | 1-Chlorohexane | 13.71 | 91 | 208034 | 18.9820 | ug/L | 93 |
| 70) | Chlorobenzene | 14.09 | 112 | 453272 | 19.7709 | ug/L | 98 |
| 71) | 1,1,1,2-Tetrachloroethane | 14.13 | 131 | 180141 | 21.5895 | ug/L | 99 |
| 72) | Ethylbenzene | 14.13 | 106 | 248506 | 20.4057 | ug/L | 95 |
| 73) | m-,p-Xylene | 14.23 | 106 | 608001 | 40.8935 | ug/L | 96 |
| 74) | o-Xylene | 14.78 | 106 | 296508 | 19.8526 | ug/L | 94 |
| 75) | Styrene | 14.82 | 104 | 500816 | 18.7306 | ug/L | 97 |
| 76) | Bromoform | 15.28 | 173 | 91609 | 21.4190 | ug/L | 99 |
| 77) | Isopropylbenzene | 15.21 | 105 | 691232 | 18.4124 | ug/L | 98 |
| 79) | 1,1,2,2-Tetrachloroethane | 15.41 | 83 | 96849 | 17.8028 | ug/L | 97 |
| 81) | 1,2,3-Trichloropropane | 15.60 | 110 | 34876 | 19.3794 | ug/L | 92 |
| 82) | trans-1,4-Dichloro-2-Buten | 15.65 | 53 | 27047 | 17.1747 | ug/L | 90 |
| 83) | n-Propylbenzene | 15.72 | 91 | 850663 | 19.4033 | ug/L | 99 |
| 84) | Bromobenzene | 15.82 | 156 | 218734 | 20.0698 | ug/L | 96 |
| 85) | 1,3,5-Trimethylbenzene | 15.91 | 105 | 655472 | 20.0480 | ug/L | 98 |
| 86) | 2-Chlorotoluene | 15.97 | 91 | 523576 | 18.7744 | ug/L | 99 |
| 87) | 4-Chlorotoluene | 16.03 | 91 | 530605 | 20.1273 | ug/L | 97 |
| 88) | a-Methylstyrene | 16.30 | 118 | 395944 | 20.3668 | ug/L | 98 |
| 89) | tert-Butylbenzene | 16.37 | 134 | 145463 | 20.1228 | ug/L | 90 |
| 90) | 1,2,4-Trimethylbenzene | 16.42 | 105 | 687596 | 21.5450 | ug/L | 98 |
| 91) | sec-Butylbenzene | 16.64 | 105 | 767820 | 19.2056 | ug/L | 99 |
| 92) | p-Isopropyltoluene | 16.80 | 119 | 712366 | 19.7426 | ug/L | 98 |
| 93) | 1,3-Dichlorobenzene | 16.97 | 146 | 413775 | 19.2370 | ug/L | 100 |
| 94) | 1,4-Dichlorobenzene | 17.09 | 146 | 419447 | 19.4312 | ug/L | 100 |
| 95) | n-Butylbenzene | 17.32 | 91 | 560888 | 19.8846 | ug/L | 100 |
| 96) | 1,2-Dichlorobenzene | 17.58 | 146 | 369756 | 19.2848 | ug/L | 100 |
| 97) | 1,2-Dibromo-3-Chloropropan | 18.56 | 75 | 17549 | 18.7408 | ug/L | 93 |
| 98) | 1,2,4-Trichlorobenzene | 19.71 | 182 | 244803 | 18.9602 | ug/L | 99 |
| 99) | Hexachlorobutadiene | 19.88 | 225 | 105962 | 23.0977 | ug/L | 98 |
| 100) | Naphthalene | 20.06 | 128 | 456304 | 18.0594 | ug/L | 100 |
| 101) | 1,2,3-Trichlorobenzene | 20.38 | 180 | 216626 | 19.5769 | ug/L | 99 |

(#) = qualifier out of range (m) = manual integration
8M379105.D 8260WT.M Wed May 16 10:49:01 2012 Page 2

Quantitation Report (Not Reviewed)

Data File : C:\MSDchem\1\data\051612\8M379105.D Vial: 5
Acq On : 16 May 2012 10:26 Operator: ADC
Sample : WG398118-02 20ug/L LCS 8260 Inst : HPMS8
Misc : 1,1 STD51372 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 16 10:49 2012 Quant Results File: 8260WT.RES

Method : C:\MSDCHEM\1\METHODS\8260WT.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 03/27/12 HPMS 8
Last Update : Wed Mar 28 08:18:24 2012
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : C:\MSDchem\1\data\051912\6M108270.D Vial: 7
Acq On : 19 May 2012 19:13 Operator: FJB
Sample : WG398533-03 20ug/L LCS DUP 8260 Inst : HPMS6
Misc : 1,1 STD51676 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 19 19:36:50 2012 Quant Results File: 8260WT.RES

Quant Method : C:\MSDCHEM\1\METHODS\8260WT.M (RTE Integrator)
Title : 8260B/624_WATER SOP:OVLMSV01 05/16/12 - HPMS6
Last Update : Thu May 17 10:54:16 2012
Response via : Initial Calibration
DataAcq Meth : 8260WT

| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 1) Fluorobenzene | 10.47 | 96 | 641676 | 25.00 | ug/L | 0.00 |
| 57) Chlorobenzene-d5 | 14.97 | 117 | 460199 | 25.00 | ug/L | 0.01 |
| 78) 1,4-Dichlorobenzene-d4 | 18.54 | 152 | 231976 | 25.00 | ug/L | 0.00 |
| **System Monitoring Compounds** | | | | | | |
| 37) Dibromofluoromethane | 9.28 | 111 | 185841 | 23.6622 | ug/L | 0.00 |
| Spiked Amount 25.000 | Range 86 - 118 | | Recovery = 94.64% | | | |
| 43) 1,2-Dichloroethane-d4 | 10.01 | 65 | 188427 | 22.6841 | ug/L | 0.00 |
| Spiked Amount 25.000 | Range 80 - 120 | | Recovery = 90.72% | | | |
| 58) Toluene-d8 | 12.76 | 98 | 630662 | 26.0902 | ug/L | 0.00 |
| Spiked Amount 25.000 | Range 88 - 110 | | Recovery = 104.36% | | | |
| 80) p-Bromofluorobenzene | 16.75 | 95 | 231197 | 27.4894 | ug/L | 0.00 |
| Spiked Amount 25.000 | Range 86 - 115 | | Recovery = 109.96% | | | |
| **Target Compounds** | | | | | | Qvalue |
| 2) Dichlorodifluoromethane | 2.71 | 85 | 249842 | 25.1200 | ug/L | 98 |
| 3) Chloromethane | 3.10 | 50 | 354160 | 17.9538 | ug/L | 99 |
| 4) Vinyl Chloride | 3.28 | 62 | 241104 | 17.4772 | ug/L | 100 |
| 5) 1,3-Butadiene | 3.31 | 54 | 65330 | 9.0711 | ug/L | 98 |
| 6) Bromomethane | 4.06 | 94 | 99767 | 14.6600 | ug/L | 99 |
| 7) Chloroethane | 4.21 | 64 | 122906 | 19.6550 | ug/L | 99 |
| 8) Trichlorofluoromethane | 4.68 | 101 | 269944 | 18.1733 | ug/L | 100 |
| 9) Diethyl ether | 5.22 | 59 | 510450 | 86.0453 | ug/L | 100 |
| 10) Isoprene | 5.24 | 67 | 226403 | 17.4067 | ug/L | 100 |
| 11) Acrolein | 5.45 | 56 | 7819 | 22.8284 | ug/L | 99 |
| 12) 1,1,2-Trichloro-1,2,2-Trif | 5.48 | 101 | 140733 | 18.4461 | ug/L | 99 |
| 13) Acetone | 5.57 | 43 | 27331 | 19.8493 | ug/L | 100 |
| 14) 1,1-Dichloroethene | 5.78 | 61 | 250467 | 20.4210 | ug/L | 98 |
| 15) Tert-Butyl Alcohol | 5.92 | 59 | 70562 | 210.2393 | ug/L | 95 |
| 16) Dimethyl Sulfide | 6.05 | 62 | 194662 | 20.0484 | ug/L | 99 |
| 17) Iodomethane | 6.30 | 142 | 126437 | 15.2519 | ug/L | 98 |
| 18) Methyl acetate | 6.36 | 43 | 72154 | 16.3446 | ug/L | 99 |
| 19) Methylene Chloride | 6.61 | 84 | 152381 | 19.6585 | ug/L | 99 |
| 20) Carbon Disulfide | 6.62 | 76 | 478004 | 20.4033 | ug/L | 100 |
| 21) Acrylonitrile | 6.83 | 53 | 35863 | 19.6424 | ug/L | 99 |
| 22) Methyl Tert Butyl Ether | 6.87 | 73 | 328796 | 19.5913 | ug/L | 98 |
| 23) trans-1,2-Dichloroethene | 7.10 | 96 | 147443 | 20.2084 | ug/L | 98 |
| 24) n-Hexane | 7.20 | 57 | 164742 | 19.9795 | ug/L | 98 |
| 25) Diisopropyl ether | 7.59 | 45 | 2707178 | 97.7851 | ug/L | 99 |
| 26) Vinyl Acetate | 7.77 | 43 | 243592 | 27.1415 | ug/L | 100 |
| 27) 1,1-Dichloroethane | 7.78 | 63 | 290403 | 20.3971 | ug/L | 99 |
| 28) Ethyl-Tert-Butyl ether | 8.23 | 59 | 2152395 | 91.3395 | ug/L | 99 |
| 29) 2-Butanone | 8.42 | 43 | 38768 | 19.8944 | ug/L | 98 |
| 30) Propionitrile | 8.54 | 54 | 58980 | 101.3852 | ug/L | 99 |
| 31) 2,2-Dichloropropane | 8.64 | 77 | 236670 | 21.2573 | ug/L | 96 |
| 32) cis-1,2-Dichloroethene | 8.72 | 96 | 160568 | 20.9698 | ug/L | 98 |
| 33) Chloroform | 8.96 | 83 | 275618 | 20.6160 | ug/L | 99 |
| 34) 1-Bromopropane | 9.10 | 122 | 32963 | 22.1557 | ug/L | 98 |
| 35) Bromochloromethane | 9.20 | 130 | 86355 | 20.8730 | ug/L | 100 |
| 36) Tetrahydrofuran | 9.25 | 42 | 118832 | 94.3743 | ug/L | 100 |
| 38) 1,1,1-Trichloroethane | 9.55 | 97 | 235072 | 19.2623 | ug/L | 99 |
| 39) Cyclohexane | 9.57 | 56 | 233231 | 19.2931 | ug/L | 99 |
| 40) 1,1-Dichloropropene | 9.78 | 75 | 205121 | 20.2960 | ug/L | 96 |
| 41) Tert-Amyl-Methyl ether | 9.92 | 73 | 1810711 | 97.4299 | ug/L | 100 |
| 42) Carbon Tetrachloride | 9.93 | 117 | 218863 | 18.7713 | ug/L | 99 |

(#) = qualifier out of range (m) = manual integration
6M108270.D 8260WT.M Sat May 19 19:36:50 2012 Page 1

Quantitation Report (Not Reviewed)

Data File : C:\MSDchem\1\data\051912\6M108270.D Vial: 7
Acq On : 19 May 2012 19:13 Operator: FJB
Sample : WG398533-03 20ug/L LCS DUP 8260 Inst : HPMS6
Misc : 1,1 STD51676 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 19 19:36:50 2012 Quant Results File: 8260WT.RES

Quant Method : C:\MSDCHEM\1\METHODS\8260WT.M (RTE Integrator)
Title : 8260B/624_WATER SOP:OVLMSV01 05/16/12 - HPMS6
Last Update : Thu May 17 10:54:16 2012
Response via : Initial Calibration
DataAcq Meth : 8260WT

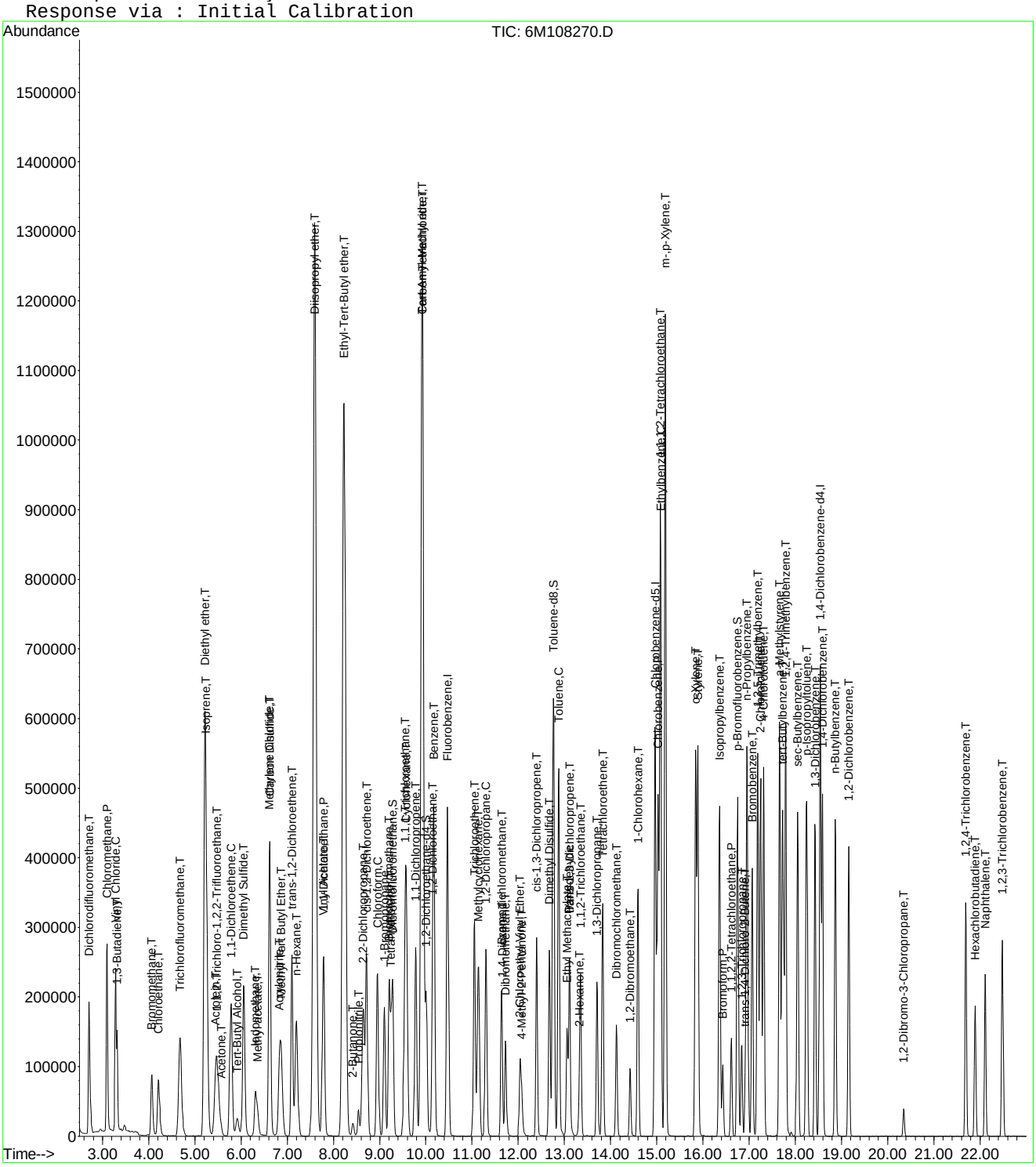
| | Compound | R.T. | QIon | Response | Conc | Unit | | Qvalue |
|---|---|---|---|---|---|---|---|---|
| 45) | 1,2-Dichloroethane | 10.14 | 62 | 194771 | 19.1759 | ug/L | | 99 |
| 46) | Benzene | 10.17 | 78 | 587965 | 20.3980 | ug/L | | 100 |
| 47) | Trichloroethene | 11.05 | 130 | 142367 | 19.3349 | ug/L | | 95 |
| 48) | Methylcyclohexane | 11.13 | 83 | 182979 | 19.9328 | ug/L | | 98 |
| 49) | 1,2-Dichloropropane | 11.30 | 63 | 149814 | 21.2775 | ug/L | | 98 |
| 50) | 1,4-Dioxane | 11.66 | 88 | 6325 | 178.8111 | ug/L | | 93 |
| 51) | Bromodichloromethane | 11.64 | 83 | 195820 | 21.0183 | ug/L | | 100 |
| 52) | Dibromomethane | 11.73 | 93 | 76761 | 19.3904 | ug/L | | 98 |
| 53) | 2-Chloroethyl Vinyl Ether | 12.03 | 63 | 61654 | 41.7286 | ug/L | | 98 |
| 54) | 4-Methyl-2-Pentanone | 12.07 | 58 | 28007 | 18.6456 | ug/L | | 96 |
| 55) | cis-1,3-Dichloropropene | 12.40 | 75 | 216400 | 20.5033 | ug/L | | 98 |
| 56) | Dimethyl Disulfide | 12.68 | 79 | 114455 | 16.6787 | ug/L | | 100 |
| 59) | Toluene | 12.88 | 91 | 584654 | 21.3682 | ug/L | | 98 |
| 60) | Ethyl Methacrylate | 13.05 | 69 | 122083 | 19.9648 | ug/L | | 96 |
| 61) | Paraldehyde | 13.11 | 89 | 6910 | 84.9781 | ug/L | # | 100 |
| 62) | trans-1,3-Dichloropropene | 13.12 | 75 | 167175 | 17.9761 | ug/L | | 99 |
| 63) | 1,1,2-Trichloroethane | 13.35 | 97 | 96289 | 19.8572 | ug/L | | 98 |
| 64) | 2-Hexanone | 13.32 | 43 | 47550 | 19.0778 | ug/L | | 99 |
| 65) | 1,3-Dichloropropane | 13.71 | 76 | 173823 | 21.8208 | ug/L | | 96 |
| 66) | Tetrachloroethene | 13.83 | 166 | 134580 | 21.3168 | ug/L | | 99 |
| 67) | Dibromochloromethane | 14.13 | 129 | 118593 | 19.8357 | ug/L | | 99 |
| 68) | 1,2-Dibromoethane | 14.42 | 107 | 93492 | 21.1509 | ug/L | | 100 |
| 69) | 1-Chlorohexane | 14.60 | 91 | 174930 | 20.7489 | ug/L | | 99 |
| 70) | Chlorobenzene | 15.02 | 112 | 358541 | 20.2287 | ug/L | | 99 |
| 71) | 1,1,1,2-Tetrachloroethane | 15.08 | 131 | 133496 | 21.0713 | ug/L | | 98 |
| 72) | Ethylbenzene | 15.09 | 106 | 198150 | 20.7686 | ug/L | | 97 |
| 73) | m-,p-Xylene | 15.19 | 106 | 486820 | 35.1221 | ug/L | | 98 |
| 74) | o-Xylene | 15.84 | 106 | 225309 | 17.3828 | ug/L | | 99 |
| 75) | Styrene | 15.89 | 104 | 393253 | 17.6817 | ug/L | | 99 |
| 76) | Bromoform | 16.43 | 173 | 64323 | 20.1381 | ug/L | | 97 |
| 77) | Isopropylbenzene | 16.36 | 105 | 501402 | 19.1090 | ug/L | | 99 |
| 79) | 1,1,2,2-Tetrachloroethane | 16.62 | 83 | 103260 | 22.6683 | ug/L | | 98 |
| 81) | 1,2,3-Trichloropropane | 16.84 | 110 | 28723 | 24.4999 | ug/L | | 92 |
| 82) | trans-1,4-Dichloro-2-Buten | 16.91 | 53 | 30143 | 19.5137 | ug/L | | 93 |
| 83) | n-Propylbenzene | 16.95 | 91 | 688648 | 22.2581 | ug/L | | 99 |
| 84) | Bromobenzene | 17.07 | 156 | 145728 | 23.2203 | ug/L | | 100 |
| 85) | 1,3,5-Trimethylbenzene | 17.19 | 105 | 465741 | 22.6680 | ug/L | | 100 |
| 86) | 2-Chlorotoluene | 17.25 | 91 | 427145 | 19.5298 | ug/L | | 94 |
| 87) | 4-Chlorotoluene | 17.31 | 91 | 426131 | 21.5570 | ug/L | | 99 |
| 88) | a-Methylstyrene | 17.66 | 118 | 261404 | 20.1385 | ug/L | | 94 |
| 89) | tert-Butylbenzene | 17.73 | 134 | 87798 | 20.4462 | ug/L | | 99 |
| 90) | 1,2,4-Trimethylbenzene | 17.79 | 105 | 502056 | 23.0986 | ug/L | | 100 |
| 91) | sec-Butylbenzene | 18.05 | 105 | 515235 | 21.3787 | ug/L | | 100 |
| 92) | p-Isopropyltoluene | 18.25 | 119 | 435532 | 22.9029 | ug/L | | 99 |
| 93) | 1,3-Dichlorobenzene | 18.44 | 146 | 258780 | 21.9869 | ug/L | | 99 |
| 94) | 1,4-Dichlorobenzene | 18.59 | 146 | 264576 | 21.0002 | ug/L | | 100 |
| 95) | n-Butylbenzene | 18.86 | 91 | 402958 | 22.3230 | ug/L | | 100 |
| 96) | 1,2-Dichlorobenzene | 19.16 | 146 | 231227 | 21.0138 | ug/L | | 100 |
| 97) | 1,2-Dibromo-3-Chloropropan | 20.34 | 75 | 14644 | 19.1652 | ug/L | | 92 |
| 98) | 1,2,4-Trichlorobenzene | 21.69 | 180 | 140207 | 22.9292 | ug/L | | 99 |
| 99) | Hexachlorobutadiene | 21.90 | 225 | 52100 | 21.8142 | ug/L | | 99 |
| 100) | Naphthalene | 22.11 | 128 | 253448 | 20.6611 | ug/L | | 99 |
| 101) | 1,2,3-Trichlorobenzene | 22.49 | 180 | 118173 | 23.3827 | ug/L | | 99 |

(#) = qualifier out of range (m) = manual integration
6M108270.D 8260WT.M Sat May 19 19:36:50 2012 Page 2

Quantitation Report (Not Reviewed)

Data File : C:\MSDchem\1\data\051912\6M108270.D Vial: 7
Acq On : 19 May 2012 19:13 Operator: FJB
Sample : WG398533-03 20ug/L LCS DUP 8260 Inst : HPMS6
Misc : 1,1 STD51676 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 19 19:36 2012 Quant Results File: 8260WT.RES

Method : C:\MSDCHEM\1\METHODS\8260WT.M (RTE Integrator)
Title : 8260B/624_WATER SOP:OVLMSV01 05/16/12 - HPMS6
Last Update : Thu May 17 10:54:16 2012
Response via : Initial Calibration



# 2.1.2 RSK 175

# 2.1.2.1 Summary Data

**Login Number:** L12050284
**Department**: Volatiles - GC
**Analyst:** Franci Bolden

**Analysis** RSK-175

**HOLDING TIMES**

**Sample Preparation:** All holding times were met.

**Sample Analysis:** All holding times were met.

**PREPARATION**

Sample preparation proceeded normally.

**CALIBRATION**

**Initial Calibration:** For all compounds that yielded a %RSD greater than 15%, linear or higher order equations were applied. All acceptance criteria were met.

**Alternate Source Standards:** All acceptance criteria were met.

**Continuing Calibration and Tune:** All acceptance criteria were met.

**BATCH QA/QC**

**Method Blank:** All acceptance criteria were met.

**Laboratory Control Sample:** All acceptance criteria were met.

**Matrix Spikes/Sample Duplicates:** The MS/MSD results were not associated with this sample delivery group (SDG), due to insufficient volume of sample. Microbac Laboratories recommends site specific MS/MSD samples to avoid possible data qualifications.

**SAMPLES**

**Samples:** Sample 03 required a dilution analysis.

**Manual Integration Reason Codes**

**Reason #1: Data System Fails to Select Correct Peak** In some cases the chromatography system selects and integrates the 'wrong peak'. In this case the analyst must correct the selection and force the system to integrate the proper peak. Other times the system may miss the peak completely.

**Reason #2: Data System Splits the Peak Incorrectly or Integrates a False Peak as a Rider Peak** This phenomena is common at low concentrations where the signal:noise ratio is low. A single compound (peak) is incorrectly split into multiple peaks or integrated as a main peak with one or more rider peaks resulting in low area counts for the target compound.

**Reason #3: Improperly Integrated Isomers and/or coeluting compounds.** This system often fails to distinguish coeluting compounds and or isomers. The integration areas and concentrations are wrong, and they must be corrected by manual integration. Prime examples are benzo(k)fluoranthene and benzo(b)fluoranthene which are often unresolved and integrated improperly when both are present at low concentrations in standards or samples.

**Reason #4: System Establishes Incorrect Baseline** There are numerous situations in chromatography where the system establishes the baseline incorrectly. Some baseline errors will be obvious to the analyst and should be corrected via manual procedures.

**Reason #5: Miscellaneous** Other situations involving integration errors may require in-depth review and technical judgment. These cases should be brought to the attention of the laboratory management. If the form of manual integration

is not clearly covered by these four cases, then review and approval by the Laboratory Director or the QA/QC Supervisor will be required.

**Narrative ID:** 46574
**Approved By:** Michael Albertson

# Certificate of Analysis

**Sample #:** L12050284-01 **PrePrep Method:** N/A **Instrument:** HP16
**Client ID:** BBLD-PIT-SSP-050812 **Prep Method:** 5021 **Prep Date:** N/A
**Matrix:** Water **Analytical Method:** RSK175 **Cal Date:** 04/30/2012 15:04
**Workgroup #:** WG397661 **Analyst:** FJB **Run Date:** 05/10/2012 16:56
**Collect Date:** 05/08/2012 10:01 **Dilution:** 1 **File ID:** 16G32412
**Sample Tag:** 01 **Units:** ug/L

| Analyte | CAS # | Result | Qual | RL | MDL |
|---|---|---|---|---|---|
| Methane | 74-82-8 | 393 | | 5.00 | 1.00 |
| Carbon Dioxide | 124-38-9 | 77100 | | 10000 | 2500 |

**Sample #:** L12050284-03 **PrePrep Method:** N/A **Instrument:** HP16
**Client ID:** PZ-07-050812 **Prep Method:** 5021 **Prep Date:** N/A
**Matrix:** Water **Analytical Method:** RSK175 **Cal Date:** 04/30/2012 15:04
**Workgroup #:** WG397661 **Analyst:** FJB **Run Date:** 05/10/2012 17:05
**Collect Date:** 05/08/2012 10:10 **Dilution:** 1 **File ID:** 16G32413
**Sample Tag:** 01 **Units:** ug/L

| Analyte | CAS # | Result | Qual | RL | MDL |
|---|---|---|---|---|---|
| Methane | 74-82-8 | 928 | E | 5.00 | 1.00 |
| Carbon Dioxide | 124-38-9 | 33400 | | 10000 | 2500 |

| | |
|---|---|
| E | Semiquantitative result (out of calibration range) |

**Sample #:** L12050284-03 **PrePrep Method:** N/A **Instrument:** HP16
**Client ID:** PZ-07-050812 **Prep Method:** 5021 **Prep Date:** N/A
**Matrix:** Water **Analytical Method:** RSK175 **Cal Date:** 04/30/2012 15:04
**Workgroup #:** WG397786 **Analyst:** FJB **Run Date:** 05/11/2012 14:40
**Collect Date:** 05/08/2012 10:10 **Dilution:** 5 **File ID:** 16G32419
**Sample Tag:** DL01 **Units:** ug/L

| Analyte | CAS # | Result | Qual | RL | MDL |
|---|---|---|---|---|---|
| Methane | 74-82-8 | 905 | | 25.0 | 5.00 |
| Carbon Dioxide | 124-38-9 | 40100 | | 50000 | 12500 |

**Sample #:** L12050284-05 **PrePrep Method:** N/A **Instrument:** HP16
**Client ID:** MW-18-050812 **Prep Method:** 5021 **Prep Date:** N/A
**Matrix:** Water **Analytical Method:** RSK175 **Cal Date:** 04/30/2012 15:04
**Workgroup #:** WG397786 **Analyst:** FJB **Run Date:** 05/11/2012 16:31
**Collect Date:** 05/08/2012 11:00 **Dilution:** 1 **File ID:** 16G32431
**Sample Tag:** 01 **Units:** ug/L

Certificate of Analysis

| Analyte | CAS # | Result | Qual | RL | MDL |
|---|---|---|---|---|---|
| Methane | 74-82-8 | 79.2 | | 5.00 | 1.00 |
| Carbon Dioxide | 124-38-9 | 82600 | | 10000 | 2500 |

**Sample #:** L12050284-07
**Client ID:** TW-01-050812
**Matrix:** Water
**Workgroup #:** WG397786
**Collect Date:** 05/08/2012 14:50
**Sample Tag:** 01

**PrePrep Method:** N/A
**Prep Method:** 5021
**Analytical Method:** RSK175
**Analyst:** FJB
**Dilution:** 1
**Units:** ug/L

**Instrument:** HP16
**Prep Date:** N/A
**Cal Date:** 04/30/2012 15:04
**Run Date:** 05/11/2012 16:41
**File ID:** 16G32432

| Analyte | CAS # | Result | Qual | RL | MDL |
|---|---|---|---|---|---|
| Methane | 74-82-8 | 617 | | 5.00 | 1.00 |
| Carbon Dioxide | 124-38-9 | 119000 | | 10000 | 2500 |

# 2.1.2.2 QC Summary Data

## RSK-175 - Example Calculation for Methane

**1.0 Linear Calibration Models**

**Option A - Average RF Method**

| ICAL_x | ICAL_r | | RF |
|---|---|---|---|
| 1.67 | 19901 | | 11917 |
| 6.67 | 69174 | | 10371 |
| 16.7 | 176923 | | 10594 |
| 66.7 | 685135 | | 10272 |
| 133 | 1324853 | | 9961 |
| 300 | 2845104 | | 9484 |
| | | **Average RF:** | **10433** |

Where:
ICAL_x = the ICAL concentration
ICAL_r = the ICAL response (area)
RF = calibration factor = ICAL_r / ICAL_x

**Option B - Agilent Linear Regression Constant**

| ICAL_x | ICAL_r | [ICAL_r}^2 | [ICAL-x][ICAL-r] |
|---|---|---|---|
| 1.67 | 19901 | 396049801 | 33235 |
| 6.67 | 69174 | 4785042276 | 461391 |
| 16.7 | 176923 | 31301747929 | 2954614 |
| 66.7 | 685135 | 4.6941E+11 | 45698505 |
| 133 | 1324853 | 1.75524E+12 | 176205449 |
| 300 | 2845104 | 8.09462E+12 | 853531200 |
| **Summation:** | | **1.03557E+13** | **1078884393** |

**Agilent Linear Regression Constant :** **9598.567853**
(1.03557E+13)/1078884393)

**2.0 Calculate the concentration in extract, Cx**

| | |
|---|---|
| **Where:** | |
| **y = area response of methane from quant report** | **1157414** |
| **a = average RF (or Agilent regression constant)** | **10433.00** |
| **Cx = y/a** | **110.9377935** |

**3.0 Calculate the concentration in sample**

**Cs = Cx (MW/Tf) (HS/S) (DF)**

| Where: | | |
|---|---|---|
| Cx = Concentration in extract | **110.9377935** | umol/mol |
| MW = molecular weight of analyte | **16.04** | ug/umol |
| TF = temperature factor = (22.4 )(313/273) | **25.68** | L/mol |
| HS = headspace volume | **0.015** | L |
| S = sample volume remaining after headspace removal | **0.00547** | L |
| DF = dilution factor | **2** | |
| Cs = calculated sample concentration | **380.034301** | ug/L |

## RSK-175 - Example Calculation for Carbon Dioxide

**ICAL Plot - Quadratic Regression ( y = Ax^2 + Bx +C )**

**Ax^2 + Bx + (C - y) = 0**

**Step 1 - Calculate the concentration in extract, Cx**

| | | |
|---|---|---|
| Data from quadratic regression plot: | | |
| Value of A from plot: | **0.916** | |
| Value of B from plot: | **1540** | |
| Value of C from plot: | **0** | |
| Response for methane from quantitation report (y): | **8763828** | |
| Value of C - y | **-8763828** | |
| Solving for Cx using the quadratic formula: | | |
| Root 1 - Computed Cx1: | **2364.716284** | umol/mol |
| Root 2 - Computed Cx2: | **-4045.938991** | |

**Step 2 - Calculate the concentration in sample**

Cs = Cx (MW/Tf) (HS/S) (DF)

Where:

| | | |
|---|---|---|
| Cx = Concentration in extract : | **2364.716284** | umol/mol |
| MW = molecular weight of analyte: | **44.0** | ug/umol |
| TF = temperature factor = (22.4 )(313/273): | **25.68** | L/mol |
| HS = initial headspace volume (extraction log): | **0.015** | L |
| S = final volume (extraction log): | **0.00547** | L |
| DF = dilution factor: | **10** | |
| Cs = calculated sample concentration: | **111106.798** | ug/L |

**Other Notes:**

Temperature of headspace = 40 C = 313 K

| **Analyte** | **MW (g/mol)** |
|---|---|
| Methane | 16.04 |
| Ethane | 30.07 |
| Ethene | 28.05 |
| Propane | 44.1 |
| Carbon Dioxide | 44.0 |

Microbac Laboratories Inc.

# Instrument Run Log

Instrument: HP16 Dataset: 043012
Analyst1: MDA Analyst2: NA
Method: RSK175 SOP: RSK01 Rev: 16
Method: 5021 SOP: RSK01 Rev: 16

Maintenance Log ID:

Internal Standard: NA Surrogate Standard: NA
CCV: STD38726 LCS: STD45308 MS/MSD: STD45308

Column 1 ID: RTQBOND Column 2 ID: RTQBOND
Workgroups: WG396526, WG396527

Comments: files 16G63290 and 16G32099 not used

| File ID | Sample Information | pH | Mat | Dil | Reference | Date/Time |
|---|---|---|---|---|---|---|
| 16G32089 | WG396526-01 133umol/mol CCV RSK175 | NA | 1 | 1 | STD38726 | 04/30/12 13:15 |
| 16G32091 | WG396526-01 0.67umol/mol ICAL RSK175 | NA | 1 | 1 | STD38726 | 04/30/12 13:39 |
| 16G32092 | WG396526-02 1.67umol/mol ICAL RSK175 | NA | 1 | 1 | STD38726 | 04/30/12 13:49 |
| 16G32093 | WG396526-03 33umol/mol ICAL RSK175 | NA | 1 | 1 | STD38726 | 04/30/12 13:58 |
| 16G32094 | WG396526-04 67umol/mol ICAL RSK175 | NA | 1 | 1 | STD38726 | 04/30/12 14:07 |
| 16G32095 | WG396526-05 133umol/mol ICAL RSK175 | NA | 1 | 1 | STD38726 | 04/30/12 14:16 |
| 16G32096 | WG396526-06 333umol/mol ICAL RSK175 | NA | 1 | 1 | STD38726 | 04/30/12 14:26 |
| 16G32097 | WG396526-07 533umol/mol ICAL RSK175 | NA | 1 | 1 | STD38726 | 04/30/12 14:35 |
| 16G32098 | WG396526-08 133umol/mol ICV RSK175 | NA | 1 | 1 | STD45308 | 04/30/12 14:44 |
| 16G32100 | WG396526-02 1.67umol/mol CCV RSK175 | NA | 1 | 1 | STD38726 | 04/30/12 15:04 |
| 16G32101 | WG396526-08 133umol/mol ICV RSK175 | NA | 1 | 1 | STD45308 | 04/30/12 15:24 |
| 16G32102 | WG396526-09 133umol/mol CCV RSK175 | NA | 1 | 1 | STD38726 | 04/30/12 15:41 |
| 16G32103 | WG396527-01 BLANK RSK175 | NA | 1 | 1 | | 04/30/12 15:51 |
| 16G32104 | WG396527-02 67umol/mol LCS RSK175 | NA | 1 | 1 | STD45308 | 04/30/12 16:00 |
| 16G32105 | L12040681-01 A RSK175 | <2 | 1 | 1 | | 04/30/12 16:14 |
| 16G32106 | L12040898-03 A RSK175EXT | 7 | 1 | 1 | | 04/30/12 16:24 |
| 16G32107 | L12040898-05 A RSK175EXT | 7 | 1 | 1 | | 04/30/12 16:33 |
| 16G32108 | L12040898-08 A RSK175EXT | 7 | 1 | 1 | | 04/30/12 16:43 |
| 16G32109 | L12040898-10 A RSK175EXT | 7 | 1 | 1 | | 04/30/12 16:52 |
| 16G32110 | L12040898-12 A RSK175EXT | 7 | 1 | 1 | | 04/30/12 17:01 |
| 16G32111 | L12040898-01 A RSK175EXT | 7 | 1 | 1 | | 04/30/12 17:11 |
| 16G32112 | RINSE | NA | 1 | 1 | | 04/30/12 17:20 |
| 16G32113 | WG396526-10 133umol/mol CCV RSK175 | NA | 1 | 1 | STD38726 | 04/30/12 17:30 |
| 16G32114 | L12040928-01 A RSK175EXT | 7 | 1 | 1 | | 04/30/12 17:39 |
| 16G32115 | L12040928-08 MS A RSK175EXT | 7 | 1 | 1 | STD45308 | 04/30/12 17:48 |
| 16G32116 | L12040928-10 MSD A RSK175EXT | 7 | 1 | 1 | STD45308 | 04/30/12 17:58 |
| 16G32117 | L12040928-03 A RSK175EXT | 7 | 1 | 1 | | 04/30/12 18:07 |
| 16G32118 | L12040935-01 A RSK175 | <2 | 1 | 1 | | 04/30/12 18:17 |
| 16G32119 | L12040936-01 A RSK175 | <2 | 1 | 1 | | 04/30/12 18:26 |
| 16G32120 | L12040933-01 A RSK175 | <2 | 1 | 1 | | 04/30/12 18:36 |
| 16G32121 | L12040938-01 A RSK175 | <2 | 1 | 1 | | 04/30/12 18:45 |
| 16G32122 | L12040939-01 A RSK175 | <2 | 1 | 1 | | 04/30/12 18:55 |
| 16G32123 | L12040928-05 A RSK175 | 10 | 1 | 1 | | 04/30/12 19:04 |
| 16G32125 | WG396526-11 133umol/mol CCV RSK175 | NA | 1 | 1 | STD38726 | 04/30/12 19:23 |

Approved: May 01, 2012

Page: 1

Microbac Laboratories Inc.

# Instrument Run Log

Instrument: HP16 Dataset: 043012
Analyst1: MDA Analyst2: NA
Method: RSK175 SOP: RSK01 Rev: 16
Method: 5021 SOP: RSK01 Rev: 16

Maintenance Log ID:

Internal Standard: NA Surrogate Standard: NA
CCV: STD38726 LCS: STD45308 MS/MSD: STD45308

Column 1 ID: RTQBOND Column 2 ID: RTQBOND
Workgroups: WG396526, WG396527

Comments: files 16G63290 and 16G32099 not used

**Comments**

| Seq. | Rerun | Dil. | Reason | Analytes |
|---|---|---|---|---|
| 1 | | | | |
| File ID: 16G32089 | | | | |
| | dnr needs ical | | | |
| 3 | | | | |
| File ID: 16G32092 | | | | |
| | dnr rr | | | |
| 9 | | | | |
| File ID: 16G32098 | | | | |
| | dnr rr | | | |
| 18 | | | | |
| File ID: 16G32109 | | | | |
| | rr 20x methane | | | |
| 19 | | | | |
| File ID: 16G32110 | | | | |
| | rr conf methane | | | |
| 20 | | | | |
| File ID: 16G32111 | | | | |
| | rr 20x methane | | | |

Approved: May 01, 2012

Page: 2

Microbac Laboratories Inc.

# Instrument Run Log

Instrument: HP16 Dataset: 051012
Analyst1: FJB Analyst2: NA
Method: RSK175 SOP: RSK01 Rev: 16
Method: 5021 SOP: RSK01 Rev: 16

Maintenance Log ID: 41709

Internal Standard: NA Surrogate Standard: NA
CCV: STD38726 LCS: STD45308 MS/MSD: NA

Column 1 ID: RTQBOND Column 2 ID: RTQBOND
Workgroups: WG397661

Comments:

| File ID | Sample Information | pH | Mat | Dil | Reference | Date/Time |
|---|---|---|---|---|---|---|
| 16G32388 | WG397660-01 133umol/mol CCV RSK175 | NA | 1 | 1 | STD38726 | 05/10/12 13:09 |
| 16G32389 | WG397661-01 BLANK RSK175 | NA | 1 | 1 | | 05/10/12 13:24 |
| 16G32390 | WG397661-02 67umol/mol LCS RSK175 | NA | 1 | 1 | STD45308 | 05/10/12 13:33 |
| 16G32391 | WG397661-03 67umol/mol LCSD RSK175 | NA | 1 | 1 | STD45308 | 05/10/12 13:43 |
| 16G32392 | L12050226-03 B RSK175 | NA | 1 | 1 | | 05/10/12 13:52 |
| 16G32393 | L12050226-05 B RSK175 | NA | 1 | 1 | | 05/10/12 14:01 |
| 16G32394 | L12050226-07 B RSK175 | NA | 1 | 1 | | 05/10/12 14:10 |
| 16G32395 | L12050257-03 B RSK175 | <2 | 1 | 1 | | 05/10/12 14:19 |
| 16G32396 | L12050257-05 B RSK175 | <2 | 1 | 1 | | 05/10/12 14:28 |
| 16G32397 | L12050257-07 B RSK175 | <2 | 1 | 1 | | 05/10/12 14:37 |
| 16G32398 | L12050257-09 B RSK175 | <2 | 1 | 1 | | 05/10/12 14:47 |
| 16G32399 | WG397660-02 133umol/mol CCV RSK175 | NA | 1 | 1 | STD38726 | 05/10/12 14:56 |
| 16G32400 | L12050257-11 2X C RSK175 D1 | <2 | 1 | 2 | | 05/10/12 15:06 |
| 16G32401 | L12050226-01 20X B RSK175 D1 | NA | 1 | 20 | | 05/10/12 15:15 |
| 16G32402 | L12050257-01 20X B RSK175 D1 | <2 | 1 | 20 | | 05/10/12 15:24 |
| 16G32403 | L12050257-13 5X B RSK175 D1 | <2 | 1 | 5 | | 05/10/12 15:33 |
| 16G32404 | L12050245-04 100X B RSK175 D1 | <2 | 1 | 100 | | 05/10/12 15:42 |
| 16G32405 | L12050245-12 5X B RSK175 D1 | <2 | 1 | 5 | | 05/10/12 15:52 |
| 16G32406 | L12050245-14 100X B RSK175 D1 | <2 | 1 | 100 | | 05/10/12 16:01 |
| 16G32407 | L12050151-10 5X B RSK175 00 | <2 | 1 | 5 | | 05/10/12 16:10 |
| 16G32408 | L12050151-11 5X B RSK175 00 | <2 | 1 | 5 | | 05/10/12 16:19 |
| 16G32409 | L12050151-12 5X B RSK175 00 | <2 | 1 | 5 | | 05/10/12 16:28 |
| 16G32410 | WG397660-03 133umol/mol CCV RSK175 | NA | 1 | 1 | STD38726 | 05/10/12 16:37 |
| 16G32411 | L12050151-13 5X B RSK175 00 | <2 | 1 | 5 | | 05/10/12 16:46 |
| 16G32412 | L12050284-01 A RSK175EXT | NA | 1 | 1 | | 05/10/12 16:56 |
| 16G32413 | L12050284-03 A RSK175EXT | NA | 1 | 1 | | 05/10/12 17:05 |
| 16G32414 | WG397660-04 133umol/mol CCV RSK175 | NA | 1 | 1 | STD38726 | 05/10/12 17:14 |

**Comments**

| Seq. | Rerun | Dil. | Reason | Analytes |
|---|---|---|---|---|
| 7 | X | 5 | Over Calibration Range | CO2 |
| File ID: 16G32394 | | | | |
| Dilution was missed when A vial run was checked. Didn't notice B vial over the ICAL for CO2 until checking data. | | | | |

Approved: May 15, 2012

Page: 1

Microbac Laboratories Inc.

# Instrument Run Log

Instrument: HP16 Dataset: 051012
Analyst1: FJB Analyst2: NA
Method: RSK175 SOP: RSK01 Rev: 16
Method: 5021 SOP: RSK01 Rev: 16

Maintenance Log ID: 41709

Internal Standard: NA Surrogate Standard: NA
CCV: STD38726 LCS: STD45308 MS/MSD: NA

Column 1 ID: RTQBOND Column 2 ID: RTQBOND
Workgroups: WG397661

Comments:

**Comments**

| Seq. | Rerun | Dil. | Reason | Analytes |
|---|---|---|---|---|
| 26 | X | 5 | Over Calibration Range | M |
| File ID: 16G32413 | | | | |

Approved: May 15, 2012

Microbac Laboratories Inc.

# Instrument Run Log

Instrument: HP16 Dataset: 051112
Analyst1: FJB Analyst2: NA
Method: RSK175 SOP: RSK01 Rev: 16
Method: 5021 SOP: RSK01 Rev: 16

Maintenance Log ID:

Internal Standard: NA Surrogate Standard: NA
CCV: STD38726 LCS: STD45308 MS/MSD: NA

Column 1 ID: RTQBOND Column 2 ID: RTQBOND
Workgroups: Wg397786

Comments:

| File ID | Sample Information | pH | Mat | Dil | Reference | Date/Time |
|---|---|---|---|---|---|---|
| 16G32415 | WG397785-01 133umol/mol CCV RSK175 | NA | 1 | 1 | STD38726 | 05/11/12 14:00 |
| 16G32416 | WG397786-01 BLANK RSK175 | NA | 1 | 1 | | 05/11/12 14:12 |
| 16G32417 | WG397786-02 67umol/mol LCS RSK175 | NA | 1 | 1 | STD45308 | 05/11/12 14:22 |
| 16G32418 | WG397786-03 67umol/mol LCSD RSK175 | NA | 1 | 1 | STD45308 | 05/11/12 14:31 |
| 16G32419 | L12050284-03 5X B RSK175 | 7 | 1 | 5 | | 05/11/12 14:40 |
| 16G32420 | L12050335-01 A RSK175 | <2 | 1 | 1 | | 05/11/12 14:49 |
| 16G32421 | L12050260-01 A RSK175 | <2 | 1 | 1 | | 05/11/12 14:58 |
| 16G32422 | L12050275-01 A RSK175 | <2 | 1 | 1 | | 05/11/12 15:07 |
| 16G32423 | L12050276-01 A RSK175 | <2 | 1 | 1 | | 05/11/12 15:16 |
| 16G32424 | L12050277-01 A RSK175 | <2 | 1 | 1 | | 05/11/12 15:26 |
| 16G32425 | L12050278-01 A RSK175 | <2 | 1 | 1 | | 05/11/12 15:35 |
| 16G32426 | WG397785-02 133umol/mol CCV RSK175 | NA | 1 | 1 | STD38726 | 05/11/12 15:44 |
| 16G32427 | L12050280-01 A RSK175 | <2 | 1 | 1 | | 05/11/12 15:53 |
| 16G32428 | L12050279-01 A RSK175 | <2 | 1 | 1 | | 05/11/12 16:03 |
| 16G32429 | L12050299-02 A RSK175 | <2 | 1 | 1 | | 05/11/12 16:12 |
| 16G32430 | L12050299-01 A RSK175 | 5 | 1 | 1 | | 05/11/12 16:22 |
| 16G32431 | L12050284-05 A RSK175 | 7 | 1 | 1 | | 05/11/12 16:31 |
| 16G32432 | L12050284-07 A RSK175 | 7 | 1 | 1 | | 05/11/12 16:41 |
| 16G32433 | L12050317-01 A RSK175 | 7 | 1 | 1 | | 05/11/12 16:50 |
| 16G32434 | L12050317-03 A RSK175 | 7 | 1 | 1 | | 05/11/12 17:00 |
| 16G32435 | L12050317-05 A RSK175 | 7 | 1 | 1 | | 05/11/12 17:09 |
| 16G32436 | L12050317-07 A RSK175 | 7 | 1 | 1 | | 05/11/12 17:19 |
| 16G32437 | WG397785-03 133umol/mol CCV RSK175 | NA | 1 | 1 | STD38726 | 05/11/12 17:29 |
| 16G32438 | L12050317-09 A RSK175 | 7 | 1 | 1 | | 05/11/12 17:39 |
| 16G32439 | L12050317-11 A RSK175 | 7 | 1 | 1 | | 05/11/12 17:47 |
| 16G32440 | L12050285-01 A RSK175 | 7 | 1 | 1 | | 05/11/12 17:57 |
| 16G32441 | WG397785-04 133umol/mol CCV RSK175 | NA | 1 | 1 | STD38726 | 05/11/12 18:06 |

**Comments**

| Seq. | Rerun | Dil. | Reason | Analytes |
|---|---|---|---|---|
| 19 | | | | |
| File ID: 16G32433 | | | | |
| rr 10x methane | | | | |

Approved: May 15, 2012

Page: 1

Microbac Laboratories Inc.

# Instrument Run Log

Instrument: HP16 Dataset: 051112
Analyst1: FJB Analyst2: NA
Method: RSK175 SOP: RSK01 Rev: 16
Method: 5021 SOP: RSK01 Rev: 16

Maintenance Log ID:

Internal Standard: NA Surrogate Standard: NA
CCV: STD38726 LCS: STD45308 MS/MSD: NA

Column 1 ID: RTQBOND Column 2 ID: RTQBOND
Workgroups: Wg397786

Comments:

**Comments**

| Seq. | Rerun | Dil. | Reason | Analytes |
|---|---|---|---|---|
| 20 | | | | |
| File ID: 16G32434 | | | | |
| | rr 5x methane co2 | | | |
| 21 | | | | |
| File ID: 16G32435 | | | | |
| | rr st | | | |
| 26 | | | | |
| File ID: 16G32440 | | | | |
| | rr st | | | |

Approved: May 15, 2012

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**Microbac Laboratories Inc.**
**UPLOAD BATCH EXTRACTION INFORMATION**

**Batch #: B154145**

| | Initial Amount | | Nominal Amount | | Spike Amount | | Surrogate Spike Amount | | Final Amount | | Final Nominal Amount | | Temp (C) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| WG396526-01 | 15 | mL | 15 | mL | | | | | 5.47 | mL | 5.47 | mL | 40 |
| WG396526-03 | 15 | mL | 15 | mL | | | | | 5.47 | mL | 5.47 | mL | 40 |
| WG396526-04 | 15 | mL | 15 | mL | | | | | 5.47 | mL | 5.47 | mL | 40 |
| WG396526-05 | 15 | mL | 15 | mL | | | | | 5.47 | mL | 5.47 | mL | 40 |
| WG396526-06 | 15 | mL | 15 | mL | | | | | 5.47 | mL | 5.47 | mL | 40 |
| WG396526-07 | 15 | mL | 15 | mL | | | | | 5.47 | mL | 5.47 | mL | 40 |
| WG396526-02 | 15 | mL | 15 | mL | | | | | 5.47 | mL | 5.47 | mL | 40 |
| WG396526-08 | 15 | mL | 15 | mL | | | | | 5.47 | mL | 5.47 | mL | 40 |

**Microbac Laboratories Inc.**
**UPLOAD BATCH EXTRACTION INFORMATION**

**Batch #: B154157**

| | Initial Amount | | Nominal Amount | | Spike Amount | | Surrogate Spike Amount | | Final Amount | | Final Nominal Amount | | Temp (C) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| WG396526-08 | 15 | mL | 15 | mL | | | | | 5.47 | mL | 5.47 | mL | 40 |

**Microbac Laboratories Inc.**
**UPLOAD BATCH EXTRACTION INFORMATION**

**Batch #: B154624**

| | Initial Amount | | Nominal Amount | | Spike Amount | | Surrogate Spike Amount | | Final Amount | | Final Nominal Amount | | Temp (C) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| WG397660-01 | 15 | mL | 15 | mL | | | | | 5.47 | mL | 5.47 | mL | 40 |
| WG397660-02 | 15 | mL | 15 | mL | | | | | 5.47 | mL | 5.47 | mL | 40 |
| WG397660-03 | 15 | mL | 15 | mL | | | | | 5.47 | mL | 5.47 | mL | 40 |
| WG397660-04 | 15 | mL | 15 | mL | | | | | 5.47 | mL | 5.47 | mL | 40 |
| L12050151-10 | 15 | mL | 15 | mL | | | | | 5.47 | mL | 5.47 | mL | 40 |
| L12050226-07 | 15 | mL | 15 | mL | | | | | 5.47 | mL | 5.47 | mL | 40 |
| L12050257-03 | 15 | mL | 15 | mL | | | | | 5.47 | mL | 5.47 | mL | 40 |
| L12050257-07 | 15 | mL | 15 | mL | | | | | 5.47 | mL | 5.47 | mL | 40 |
| L12050257-09 | 15 | mL | 15 | mL | | | | | 5.47 | mL | 5.47 | mL | 40 |
| L12050245-14 | 15 | mL | 15 | mL | | | | | 5.47 | mL | 5.47 | mL | 40 |
| L12050226-05 | 15 | mL | 15 | mL | | | | | 5.47 | mL | 5.47 | mL | 40 |
| L12050257-11 | 15 | mL | 15 | mL | | | | | 5.47 | mL | 5.47 | mL | 40 |
| L12050284-01 | 15 | mL | 15 | mL | | | | | 5.47 | mL | 5.47 | mL | 40 |
| L12050226-03 | 15 | mL | 15 | mL | | | | | 5.47 | mL | 5.47 | mL | 40 |
| L12050226-01 | 15 | mL | 15 | mL | | | | | 5.47 | mL | 5.47 | mL | 40 |
| L12050257-13 | 15 | mL | 15 | mL | | | | | 5.47 | mL | 5.47 | mL | 40 |
| L12050245-04 | 15 | mL | 15 | mL | | | | | 5.47 | mL | 5.47 | mL | 40 |
| L12050151-11 | 15 | mL | 15 | mL | | | | | 5.47 | mL | 5.47 | mL | 40 |
| L12050151-12 | 15 | mL | 15 | mL | | | | | 5.47 | mL | 5.47 | mL | 40 |
| L12050284-03 | 15 | mL | 15 | mL | | | | | 5.47 | mL | 5.47 | mL | 40 |
| L12050257-01 | 15 | mL | 15 | mL | | | | | 5.47 | mL | 5.47 | mL | 40 |
| L12050151-13 | 15 | mL | 15 | mL | | | | | 5.47 | mL | 5.47 | mL | 40 |
| L12050257-05 | 15 | mL | 15 | mL | | | | | 5.47 | mL | 5.47 | mL | 40 |
| WG397661-03 | 15 | mL | 15 | mL | .1 | mL | | | 5.47 | mL | 5.47 | mL | 40 |
| L12050245-12 | 15 | mL | 15 | mL | | | | | 5.47 | mL | 5.47 | mL | 40 |
| WG397661-01 | 15 | mL | 15 | mL | | | | | 5.47 | mL | 5.47 | mL | 40 |
| WG397661-02 | 15 | mL | 15 | mL | .1 | mL | | | 5.47 | mL | 5.47 | mL | 40 |

**Microbac Laboratories Inc.**
**UPLOAD BATCH EXTRACTION INFORMATION**

**Batch #: B154656**

| | Initial Amount | | Nominal Amount | | Spike Amount | | Surrogate Spike Amount | | Final Amount | | Final Nominal Amount | | Temp (C) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| WG397785-01 | 15 | mL | 15 | mL | | | | | 5.47 | mL | 5.47 | mL | 40 |
| WG397785-02 | 15 | mL | 15 | mL | | | | | 5.47 | mL | 5.47 | mL | 40 |
| WG397785-03 | 15 | mL | 15 | mL | | | | | 5.47 | mL | 5.47 | mL | 40 |
| WG397785-04 | 15 | mL | 15 | mL | | | | | 5.47 | mL | 5.47 | mL | 40 |
| WG397786-01 | 15 | mL | 15 | mL | | | | | 5.47 | mL | 5.47 | mL | 40 |
| WG397786-02 | 15 | mL | 15 | mL | .1 | mL | | | 5.47 | mL | 5.47 | mL | 40 |
| L12050284-07 | 15 | mL | 15 | mL | | | | | 5.47 | mL | 5.47 | mL | 40 |
| L12050317-01 | 15 | mL | 15 | mL | | | | | 5.47 | mL | 5.47 | mL | 40 |
| L12050299-01 | 15 | mL | 15 | mL | | | | | 5.47 | mL | 5.47 | mL | 40 |
| L12050284-05 | 15 | mL | 15 | mL | | | | | 5.47 | mL | 5.47 | mL | 40 |
| L12050317-03 | 15 | mL | 15 | mL | | | | | 5.47 | mL | 5.47 | mL | 40 |
| L12050277-01 | 15 | mL | 15 | mL | | | | | 5.47 | mL | 5.47 | mL | 40 |
| L12050278-01 | 15 | mL | 15 | mL | | | | | 5.47 | mL | 5.47 | mL | 40 |
| L12050317-09 | 15 | mL | 15 | mL | | | | | 5.47 | mL | 5.47 | mL | 40 |
| L12050284-03 | 15 | mL | 15 | mL | | | | | 5.47 | mL | 5.47 | mL | 40 |
| L12050275-01 | 15 | mL | 15 | mL | | | | | 5.47 | mL | 5.47 | mL | 40 |
| L12050317-07 | 15 | mL | 15 | mL | | | | | 5.47 | mL | 5.47 | mL | 40 |
| WG397786-03 | 15 | mL | 15 | mL | .1 | mL | | | 5.47 | mL | 5.47 | mL | 40 |
| L12050335-01 | 15 | mL | 15 | mL | | | | | 5.47 | mL | 5.47 | mL | 40 |
| L12050260-01 | 15 | mL | 15 | mL | | | | | 5.47 | mL | 5.47 | mL | 40 |
| L12050276-01 | 15 | mL | 15 | mL | | | | | 5.47 | mL | 5.47 | mL | 40 |
| L12050280-01 | 15 | mL | 15 | mL | | | | | 5.47 | mL | 5.47 | mL | 40 |
| L12050285-01 | 15 | mL | 15 | mL | | | | | 5.47 | mL | 5.47 | mL | 40 |
| L12050299-02 | 15 | mL | 15 | mL | | | | | 5.47 | mL | 5.47 | mL | 40 |
| L12050317-11 | 15 | mL | 15 | mL | | | | | 5.47 | mL | 5.47 | mL | 40 |
| L12050317-05 | 15 | mL | 15 | mL | | | | | 5.47 | mL | 5.47 | mL | 40 |
| L12050279-01 | 15 | mL | 15 | mL | | | | | 5.47 | mL | 5.47 | mL | 40 |

**Microbac Laboratories Inc.**
**UPLOAD BATCH EXTRACTION INFORMATION**

**Batch #: B154657**

| | Initial Amount | | Nominal Amount | | Spike Amount | | Surrogate Spike Amount | | Final Amount | | Final Nominal Amount | | Temp (C) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| L12050284-03 | 15 | mL | 15 | mL | | | | | 5.47 | mL | 5.47 | mL | 40 |

# Microbac Laboratories Inc.

## Data Checklist

Date: 30-APR-2012
Analyst: MDA
Analyst: NA
Method: RSK175
Instrument: HP16
Curve Workgroup: NA
Runlog ID: 46475
Analytical Workgroups: WG396526, WG396527

| | |
|---|---|
| Initial Calibration | X |
| Average RF | X |
| Linear Reg or Higher Order Curve | X |
| Second Source standard % Difference | X |
| Continuing Calibration /Check Standards | X |
| Project/Client Specific Requirements | NA |
| Special Standards | NA |
| Blanks | X |
| TCL's | X |
| Surrogates | NA |
| LCS (Laboratory Control Sample) | X |
| Recoveries | X |
| Surrogates | NA |
| MS/MSD/Duplicates | X |
| Samples | X |
| Surrogates | NA |
| Calculations & Correct Factors | NA |
| Dilutions Run | NA |
| Reruns | X |
| Manual Integrations | NA |
| Case Narrative | X |
| Results Reporting/Data Qualifiers | X |
| KOBRA Workgroup Data | X |
| Check for Completeness | X |
| Primary Reviewer | MDA |
| Secondary Reviewer | FJB |
| | |
| | |
| Check for compliance with method and project specific requirements | X |
| Check the completeness of reported information | X |
| Check the information for the report narrative | X |
| Check the resonableness of the results | X |

Primary Reviewer:
01-MAY-2012

Secondary Reviewer:
01-MAY-2012

CHECKLIST1 - Modified 03/05/2008
Generated: MAY-01-2012 13:42:32

Microbac Laboratories Inc.

Data Checklist

Date: 10-MAY-2012
Analyst: FJB
Analyst: NA
Method: RSK175
Instrument: HP16
Curve Workgroup: NA
Runlog ID: 46732
Analytical Workgroups: WG397661

| | |
|---|---|
| System Performance Check | NA |
| Initial Calibration | X |
| Average RF | X |
| Linear Reg or Higher Order Curve | X |
| Second Source standard % Difference | X |
| Continuing Calibration /Check Standards | X |
| Project/Client Specific Requirements | X |
| Blanks | X |
| TCL's | X |
| LCS (Laboratory Control Sample) | X |
| Recoveries | X |
| MS/MSD/Duplicates | NA |
| Samples | X |
| TCL Hits | X |
| Calculations & Correct Factors | X |
| Dilutions Run | X |
| Reruns | X |
| Manual Integrations | NA |
| Narrative Summary | NA |
| Results Reporting/Data Qualifiers | X |
| Client Data Package Assembly | X |
| Check for Completeness | X |
| Primary Reviewer | FJB |
| Secondary Reviewer | MDA |
| | |
| | |
| Check for compliance with method and project specific requirements | X |
| Check the completeness of reported information | X |
| Check the information for the report narrative | X |
| Check the reasonableness of the results | X |

Primary Reviewer:
14-MAY-2012

Secondary Reviewer:
15-MAY-2012

CHECKLIST1 - Modified 03/05/2008
Generated: MAY-15-2012 09:45:46

Microbac Laboratories Inc.

Data Checklist

Date: 11-MAY-2012
Analyst: FJB
Analyst: NA
Method: RSK175
Instrument: HP16
Curve Workgroup: NA
Runlog ID: 46751
Analytical Workgroups: WG397786

| | |
|---|---|
| Initial Calibration | X |
| Average RF | X |
| Linear Reg or Higher Order Curve | X |
| Second Source standard % Difference | X |
| Continuing Calibration /Check Standards | X |
| Project/Client Specific Requirements | NA |
| Special Standards | NA |
| Blanks | X |
| TCL's | X |
| Surrogates | NA |
| LCS (Laboratory Control Sample) | X |
| Recoveries | X |
| Surrogates | NA |
| MS/MSD/Duplicates | NA |
| Samples | X |
| Surrogates | NA |
| Calculations & Correct Factors | X |
| Dilutions Run | X |
| Reruns | NA |
| Manual Integrations | NA |
| Case Narrative | X |
| Results Reporting/Data Qualifiers | X |
| KOBRA Workgroup Data | X |
| Check for Completeness | X |
| Primary Reviewer | FJB |
| Secondary Reviewer | MDA |
| | |
| | |
| Check for compliance with method and project specific requirements | X |
| Check the completeness of reported information | X |
| Check the information for the report narrative | X |
| Check the resonableness of the results | X |

Primary Reviewer:
15-MAY-2012

Secondary Reviewer:
15-MAY-2012

CHECKLIST1 - Modified 03/05/2008
Generated: MAY-15-2012 13:28:40

Microbac Laboratories Inc.

# HOLDING TIMES
# EQUIVALENT TO AFCEE FORM 9

Analytical Method: RSK175 AAB#: WG397661

Login Number: L12050284

| Client ID | ID | Date Collected | TCLP Date | Time Held | Max Hold | Q | Extract Date | Time Held | Max Hold | Q | Run Date | Time Held | Max Hold | Q |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| BBLD-PIT-SSP-050812 | 01 | 05/08/12 | | | | | | | 7 | | 05/10/12 | 2.3 | 7 | |
| PZ-07-050812 | 03 | 05/08/12 | | | | | | | 7 | | 05/10/12 | 2.3 | 7 | |

* = SEE PROJECT QAPP REQUIREMENTS

HOLD_TIMES - Modified 03/06/2008
PDF File ID: 2420146
Report generated 05/18/2012 07:54

Microbac Laboratories Inc.

# HOLDING TIMES
# EQUIVALENT TO AFCEE FORM 9

**Analytical Method:** RSK175 **AAB#:** WG397786

**Login Number:** L12050284

| Client ID | ID | Date Collected | TCLP Date | Time Held | Max Hold | Q | Extract Date | Time Held | Max Hold | Q | Run Date | Time Held | Max Hold | Q |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PZ-07-050812 | 03 | 05/08/12 | | | | | | | 7 | | 05/11/12 | 3.2 | 7 | |
| MW-18-050812 | 05 | 05/08/12 | | | | | | | 7 | | 05/11/12 | 3.2 | 7 | |
| TW-01-050812 | 07 | 05/08/12 | | | | | | | 7 | | 05/11/12 | 3.1 | 7 | |

* = SEE PROJECT QAPP REQUIREMENTS

HOLD_TIMES - Modified 03/06/2008
PDF File ID: 2420146
Report generated 05/18/2012 07:54

Microbac Laboratories Inc.

## METHOD BLANK SUMMARY

Login Number: L12050284
Work Group: WG397661
Blank File ID: 16G32389
Blank Sample ID: WG397661-01
Prep Date: 05/10/12 13:24
Instrument ID: HP16
Analyzed Date: 05/10/12 13:24
Method: RSK175
Analyst: FJB

This Method Blank Applies To The Following Samples:

| Client ID | Lab Sample ID | Lab File ID | Time Analyzed | TAG |
|---|---|---|---|---|
| LCS | WG397661-02 | 16G32390 | 05/10/12 13:33 | 01 |
| LCS2 | WG397661-03 | 16G32391 | 05/10/12 13:43 | 01 |
| BBLD-PIT-SSP-050812 | L12050284-01 | 16G32412 | 05/10/12 16:56 | 01 |
| PZ-07-050812 | L12050284-03 | 16G32413 | 05/10/12 17:05 | 01 |

Report Name: BLANK_SUMMARY
PDF File ID: 2420147
Report generated 05/18/2012 07:54

Microbac Laboratories Inc.

## METHOD BLANK SUMMARY

Login Number: L12050284
Work Group: WG397786
Blank File ID: 16G32416
Blank Sample ID: WG397786-01
Prep Date: 05/11/12 14:12
Instrument ID: HP16
Analyzed Date: 05/11/12 14:12
Method: RSK175
Analyst: FJB

This Method Blank Applies To The Following Samples:

| Client ID | Lab Sample ID | Lab File ID | Time Analyzed | TAG |
|---|---|---|---|---|
| LCS | WG397786-02 | 16G32417 | 05/11/12 14:22 | 01 |
| LCS2 | WG397786-03 | 16G32418 | 05/11/12 14:31 | 01 |
| PZ-07-050812 | L12050284-03 | 16G32419 | 05/11/12 14:40 | DL01 |
| MW-18-050812 | L12050284-05 | 16G32431 | 05/11/12 16:31 | 01 |
| TW-01-050812 | L12050284-07 | 16G32432 | 05/11/12 16:41 | 01 |

Report Name: BLANK_SUMMARY
PDF File ID: 2420147
Report generated 05/18/2012 07:54

Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number: L12050284 Prep Date: 05/10/12 13:24 Sample ID: WG397661-01
Instrument ID: HP16 Run Date: 05/10/12 13:24 Prep Method: 5021
File ID: 16G32389 Analyst: FJB Method: RSK175
Workgroup (AAB#): WG397661 Matrix: Water Units: ug/L
Contract #: Cal ID: HP16-30-APR-12

| Analytes | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| Methane | 1.00 | 5.0 | 1.00 | 1 | U |
| Carbon Dioxide | 2500 | 10000 | 2500 | 1 | U |

MDL Method Detection Limit
RL Reporting/Practical Quantitation Limit
ND Analyte Not detected at or above reporting limit
* |Analyte concentration| > RL

Report Name:BLANK
PDF ID: 2420148
18-MAY-2012 07:54

Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number: L12050284 Prep Date: 05/11/12 14:12 Sample ID: WG397786-01
Instrument ID: HP16 Run Date: 05/11/12 14:12 Prep Method: 5021
File ID: 16G32416 Analyst: FJB Method: RSK175
Workgroup (AAB#): WG397786 Matrix: Water Units: ug/L
Contract #: Cal ID: HP16-30-APR-12

| Analytes | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| Methane | 1.00 | 5.0 | 1.27 | 1 | J |
| Carbon Dioxide | 2500 | 10000 | 2500 | 1 | U |

MDL Method Detection Limit
RL Reporting/Practical Quantitation Limit
ND Analyte Not detected at or above reporting limit
* |Analyte concentration| > RL

Report Name:BLANK
PDF ID: 2420148
18-MAY-2012 07:54

**Microbac Laboratories Inc.**
**LABORATORY CONTROL SAMPLE (LCS)**

**Login Number:** L12050284 **Analyst:** FJB **Prep Method:** 5021
**Instrument ID:** HP16 **Matrix:** Water **Method:** RSK175
**Workgroup (AAB#):** WG397786 **Units:** ug/L
**QC Key:** WATERLOO **Lot #:** STD45308

**Sample ID:** WG397786-02 LCS **File ID:** 16G32417 **Run Date:** 05/11/2012 14:22
**Sample ID:** WG397786-03 LCS2 **File ID:** 16G32418 **Run Date:** 05/11/2012 14:31

| Analytes | LCS | | | LCS2 | | | %RPD | %Rec Limits | RPD Lmt | Q |
|---|---|---|---|---|---|---|---|---|---|---|
| | Known | Found | % REC | Known | Found | % REC | | | | |
| Methane | 116 | 112 | 96.1 | 116 | 114 | 98.2 | 2.15 | 56 - 140 | 40 | |
| Carbon Dioxide | 31300 | 27100 | 86.4 | 31300 | 31100 | 99.1 | 13.7 | 10 - 200 | 40 | |

LCS_LCS2 - Modified 03/06/2008
PDF File ID: 2413617
Report generated: 05/18/2012 07:54

**Microbac Laboratories Inc.**
**LABORATORY CONTROL SAMPLE (LCS)**

**Login Number:** L12050284 **Analyst:** FJB **Prep Method:** 5021
**Instrument ID:** HP16 **Matrix:** Water **Method:** RSK175
**Workgroup (AAB#):** WG397661 **Units:** ug/L
**QC Key:** WATERLOO **Lot #:** STD38726

**Sample ID:** WG397661-02 LCS **File ID:** 16G32390 **Run Date:** 05/10/2012 13:33
**Sample ID:** WG397661-03 LCS2 **File ID:** 16G32391 **Run Date:** 05/10/2012 13:43

| Analytes | LCS | | | LCS2 | | | %RPD | %Rec Limits | RPD Lmt | Q |
|---|---|---|---|---|---|---|---|---|---|---|
| | Known | Found | % REC | Known | Found | % REC | | | | |
| Methane | 114 | 95.1 | 83.3 | 114 | 94.2 | 82.5 | 0.887 | 56 - 140 | 40 | |
| Carbon Dioxide | 31300 | 22700 | 72.5 | 31300 | 21800 | 69.6 | 4.01 | 10 - 200 | 40 | |

LCS_LCS2 - Modified 03/06/2008
PDF File ID: 2413617
Report generated: 05/18/2012 07:54

Calibration Table Report
Method: RSK2EXT.M
Title: RSK175 HP16 (SOP: OVL RSK01) 043012
Last Calibration: Mon Apr 30 15:17:04 2012
Curve:WG396526
Calibration Files

| Compound | 0.66<br>16G32091.D | 1.67<br>16G32100.D | 33.3<br>16G32093.D | 66.6<br>16G32094.D | 133<br>16G32095.D | 333<br>16G32096.D | 533<br>16G32097.D | Avg | %RSD |
|---|---|---|---|---|---|---|---|---|---|
| methane | | 203409.458 | 166274.873 | 164502.812 | 172395.311 | 183639.278 | 197763.296 | 181331.000 | 9.070 |
| ethene | | 310720.367 | 265124.455 | 268111.375 | 281538.282 | 306679.841 | 346282.858 | 296410.000 | 10.451 |
| acetylene | | 349238.625 | 276348.807 | 255178.068 | 265686.413 | 301455.297 | | 289581.000 | 12.955 |
| ethane | 282839.208 | 323174.294 | 278994.374 | 277864.668 | 291118.608 | 316353.022 | 357350.712 | 303956.000 | 9.767 |
| propane | 398712.601 | 472806.682 | 395734.605 | 397888.898 | 418106.154 | 456661.938 | 532205.243 | 438874.000 | 11.679 |
| Signal #2 | | | | | | | | 0.000 | 0.000 |
| carbon dioxide | | 6531.748 | 4738.622 | 5195.669 | 5476.001 | 5711.500 | 6596.531 | 5708.350 | 12.930 |

Mon Apr 30 15:18:58 2012

Microbac Laboratories Inc.
ALTERNATE SOURCE CALIBRATION REPORT

Login Number: L12050284 Run Date: 04/30/2012 Sample ID: WG396526-08
Instrument ID: HP16 Run Time: 15:24 Method: RSK175
File ID: 16G32101 Analyst: MDA QC Key: WATERLOO
ICal Workgroup: WG396526 Cal ID: HP16 - 30-APR-12

| Analyte | | Expected | Found | Units | RF | %D | UCL | Q |
|---|---|---|---|---|---|---|---|---|
| methane | | 228 | 216 | ug/L | 172000 | 5.30 | 20 | |
| carbon dioxide | | 62700 | 57900 | ug/L | 5280 | 7.50 | 30 | |

* Exceeds %D Limit

ALT - Modified 09/06/2007
Version 1.5 PDF File ID: 2413618
Report generated 05/18/2012 07:54

Microbac Laboratories Inc.

CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L12050284 Run Date: 05/10/2012 Sample ID: WG397660-01

Instrument ID: HP16 Run Time: 13:09 Method: RSK175

File ID: 16G32388 Analyst: FJB QC Key: WATERLOO

Workgroup (AAB#): WG397661 Cal ID: HP16 - 30-APR-12

Matrix: WATER

| Analyte | | Expected | Found | UNITS | RF | %D | UCL | Q |
|---|---|---|---|---|---|---|---|---|
| methane | | 228 | 225 | ug/L | 179000 | 1.16 | 20 | |
| carbon dioxide | | 62700 | 69800 | ug/L | 6360 | 11.4 | 30 | |

* Exceeds %D Criteria

CCV - Modified 03/05/2008

PDF File ID: 2413619

Report generated 05/18/2012 07:54

Microbac Laboratories Inc.

CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L12050284 Run Date: 05/10/2012 Sample ID: WG397660-02

Instrument ID: HP16 Run Time: 14:56 Method: RSK175

File ID: 16G32399 Analyst: FJB QC Key: WATERLOO

Workgroup (AAB#): WG397661 Cal ID: HP16 - 30-APR-12

Matrix: WATER

| Analyte | | Expected | Found | UNITS | RF | %D | UCL | Q |
|---|---|---|---|---|---|---|---|---|
| methane | | 228 | 204 | ug/L | 162000 | 10.6 | 20 | |
| carbon dioxide | | 62700 | 53100 | ug/L | 4840 | 15.2 | 30 | |

* Exceeds %D Criteria

CCV - Modified 03/05/2008

PDF File ID: 2413619

Report generated 05/18/2012 07:54

Microbac Laboratories Inc.
CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L12050284 Run Date: 05/10/2012 Sample ID: WG397660-03
Instrument ID: HP16 Run Time: 16:37 Method: RSK175
File ID: 16G32410 Analyst: FJB QC Key: WATERLOO
Workgroup (AAB#): WG397661 Cal ID: HP16 - 30-APR-12
Matrix: WATER

| Analyte | | Expected | Found | UNITS | RF | %D | UCL | Q |
|---|---|---|---|---|---|---|---|---|
| methane | | 228 | 217 | ug/L | 172000 | 4.91 | 20 | |
| carbon dioxide | | 62700 | 52900 | ug/L | 4820 | 15.5 | 30 | |

* Exceeds %D Criteria

CCV - Modified 03/05/2008
PDF File ID: 2413619
Report generated 05/18/2012 07:54

Microbac Laboratories Inc.
CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L12050284 Run Date: 05/10/2012 Sample ID: WG397660-04
Instrument ID: HP16 Run Time: 17:14 Method: RSK175
File ID: 16G32414 Analyst: FJB QC Key: WATERLOO
Workgroup (AAB#): WG397661 Cal ID: HP16 - 30-APR-12
Matrix: WATER

| Analyte | | Expected | Found | UNITS | RF | %D | UCL | Q |
|---|---|---|---|---|---|---|---|---|
| methane | | 228 | 211 | ug/L | 168000 | 7.50 | 20 | |
| carbon dioxide | | 62700 | 48800 | ug/L | 4440 | 22.2 | 30 | |

* Exceeds %D Criteria

CCV - Modified 03/05/2008
PDF File ID: 2413619
Report generated 05/18/2012 07:54

Microbac Laboratories Inc.

CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L12050284 Run Date: 05/11/2012 Sample ID: WG397785-01

Instrument ID: HP16 Run Time: 14:00 Method: RSK175

File ID: 16G32415 Analyst: FJB QC Key: WATERLOO

Workgroup (AAB#): WG397786 Cal ID: HP16 - 30-APR-12

Matrix: WATER

| Analyte | | Expected | Found | UNITS | RF | %D | UCL | Q |
|---|---|---|---|---|---|---|---|---|
| methane | | 228 | 222 | ug/L | 176000 | 2.69 | 20 | |
| carbon dioxide | | 62700 | 64800 | ug/L | 5900 | 3.37 | 30 | |

* Exceeds %D Criteria

CCV - Modified 03/05/2008

PDF File ID: 2413619

Report generated 05/18/2012 07:54

Microbac Laboratories Inc.

CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L12050284 Run Date: 05/11/2012 Sample ID: WG397785-02

Instrument ID: HP16 Run Time: 15:44 Method: RSK175

File ID: 16G32426 Analyst: FJB QC Key: WATERLOO

Workgroup (AAB#): WG397786 Cal ID: HP16 - 30-APR-12

Matrix: WATER

| Analyte | | Expected | Found | UNITS | RF | %D | UCL | Q |
|---|---|---|---|---|---|---|---|---|
| methane | | 228 | 226 | ug/L | 180000 | 0.952 | 20 | |
| carbon dioxide | | 62700 | 55700 | ug/L | 5070 | 11.2 | 30 | |

* Exceeds %D Criteria

CCV - Modified 03/05/2008

PDF File ID: 2413619

Report generated 05/18/2012 07:54

Microbac Laboratories Inc.

CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L12050284 Run Date: 05/11/2012 Sample ID: WG397785-03

Instrument ID: HP16 Run Time: 17:29 Method: RSK175

File ID: 16G32437 Analyst: FJB QC Key: WATERLOO

Workgroup (AAB#): WG397786 Cal ID: HP16 - 30-APR-12

Matrix: WATER

| Analyte | | Expected | Found | UNITS | RF | %D | UCL | Q |
|---|---|---|---|---|---|---|---|---|
| methane | | 228 | 213 | ug/L | 169000 | 6.58 | 20 | |
| carbon dioxide | | 62700 | 53000 | ug/L | 4830 | 15.4 | 30 | |

* Exceeds %D Criteria

CCV - Modified 03/05/2008

PDF File ID: 2413619

Report generated 05/18/2012 07:54

# 2.1.2.3 Sample Data

Quantitation Report (Not Reviewed)

Signal #1 : C:\MSDchem\1\DATA\051012\16G32412.D\FID1A.CH Vial: 25
Signal #2 : C:\MSDchem\1\DATA\051012\16G32412.D\TCD2B.CH
Acq On : 10 May 2012 16:56 Operator: FJB
Sample : L12050284-01 A RSK175EXT Inst : HP16
Misc : 1,1 Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: May 10 17:01:31 2012 Quant Results File: RSK2EXT.RES

Quant Method : C:\MSDCHEM\1\METHODS\RSK2EXT.M (Chemstation Integrator)
Title : RSK175 HP16 (SOP: OVL RSK01) 043012
Last Update : Mon Apr 30 15:17:04 2012
Response via : Initial Calibration
DataAcq Meth : RSK2EXT.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

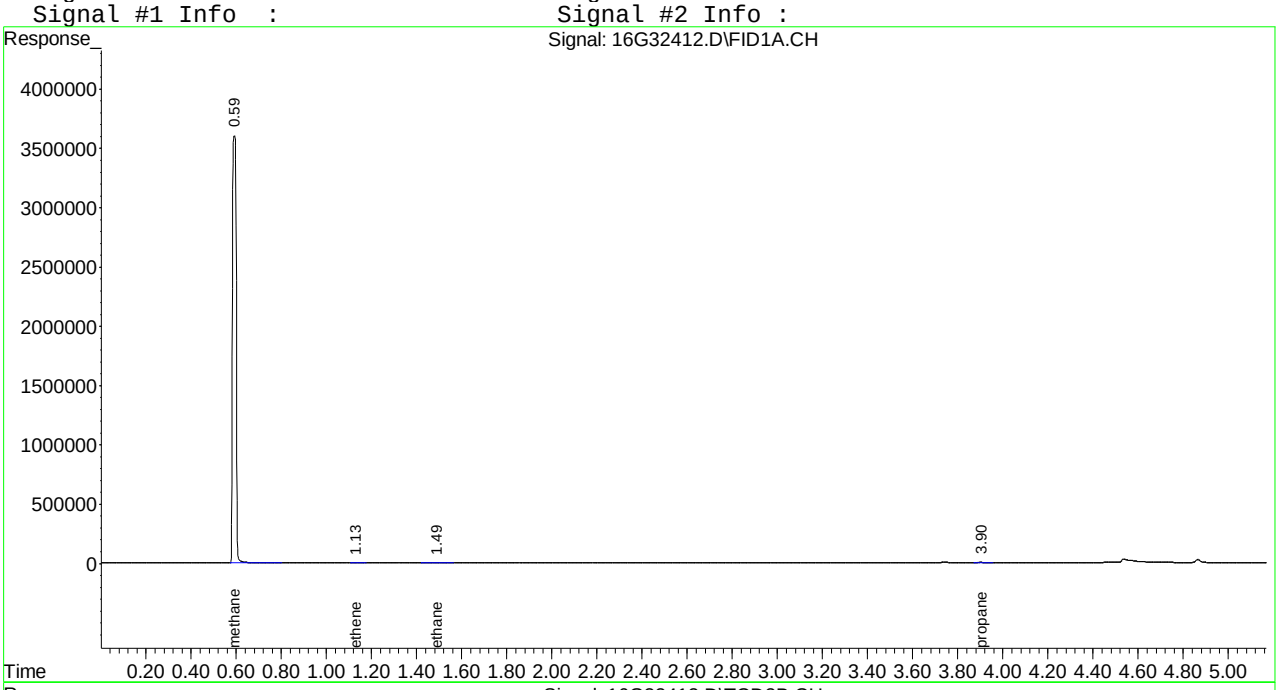
| | Compound | R.T. | Response | Conc | Units |
|---|---|---|---|---|---|
| | Target Compounds | | | | |
| 1) T | methane | 0.59 | 41655310 | 229.720 | umol/ |
| 2) T | ethene | 1.13 | 13342 | 0.045 | umol/ |
| 3) T | acetylene | 0.00 | 0 | N.D. | umol/ |
| 4) T | ethane | 1.49 | 18050 | 0.059 | umol/ |
| 5) T | propane | 3.90 | 17524 | 0.040 | umol/ |
| 7) T | carbon dioxide | 0.20 | 93602338 | 16397.456 | umol/ |

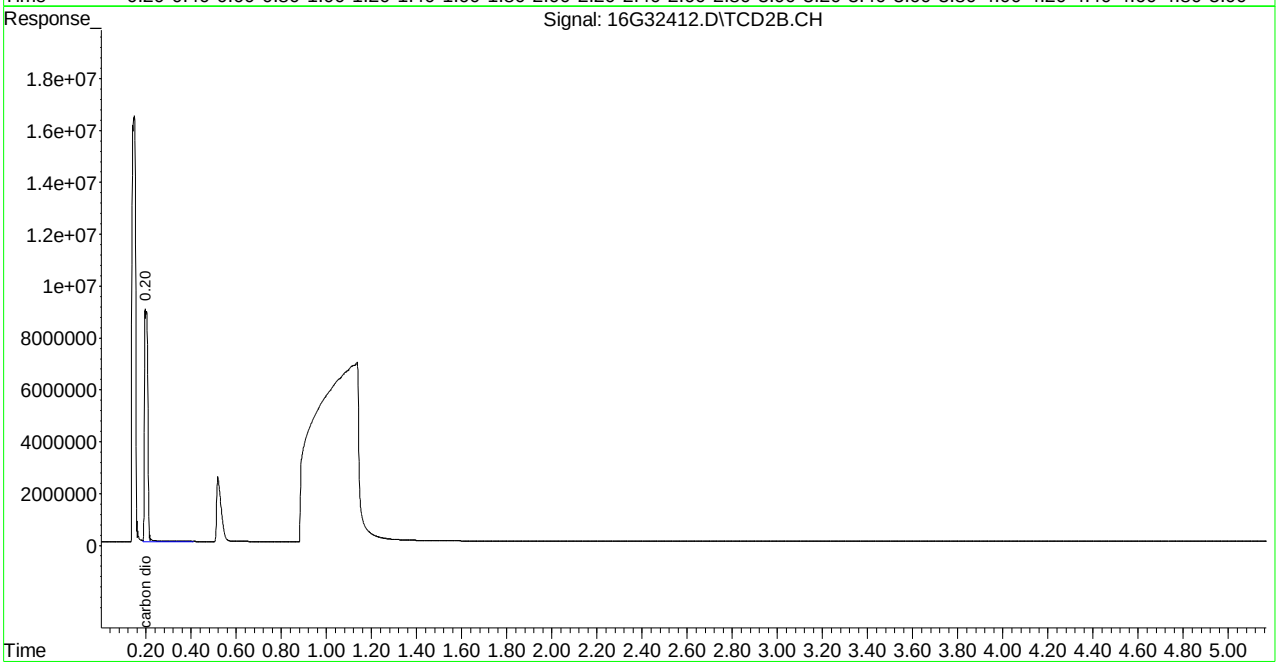
(f)=RT Delta > 1/2 Window (m)=manual int.
16G32412.D RSK2EXT.M Thu May 10 17:01:31 2012 Page 1

Signal #1 : C:\MSDchem\1\DATA\051012\16G32412.D\FID1A.CH Vial: 25
Signal #2 : C:\MSDchem\1\DATA\051012\16G32412.D\TCD2B.CH
Acq On : 10 May 2012 16:56 Operator: FJB
Sample : L12050284-01 A RSK175EXT Inst : HP16
Misc : 1,1 Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: May 10 17:01 2012 Quant Results File: RSK2EXT.RES

Quant Method : C:\MSDCHEM\1\METHODS\RSK2EXT.M (Chemstation Integrator)
Title : RSK175 HP16 (SOP: OVL RSK01) 043012
Last Update : Mon Apr 30 15:17:04 2012
Response via : Multiple Level Calibration
DataAcq Meth : RSK2EXT.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :



Quantitation Report (Not Reviewed)

Signal #1 : C:\MSDchem\1\DATA\051012\16G32413.D\FID1A.CH Vial: 26
Signal #2 : C:\MSDchem\1\DATA\051012\16G32413.D\TCD2B.CH
Acq On : 10 May 2012 17:05 Operator: FJB
Sample : L12050284-03 A RSK175EXT Inst : HP16
Misc : 1,1 Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: May 10 17:10:27 2012 Quant Results File: RSK2EXT.RES

Quant Method : C:\MSDCHEM\1\METHODS\RSK2EXT.M (Chemstation Integrator)
Title : RSK175 HP16 (SOP: OVL RSK01) 043012
Last Update : Mon Apr 30 15:17:04 2012
Response via : Initial Calibration
DataAcq Meth : RSK2EXT.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

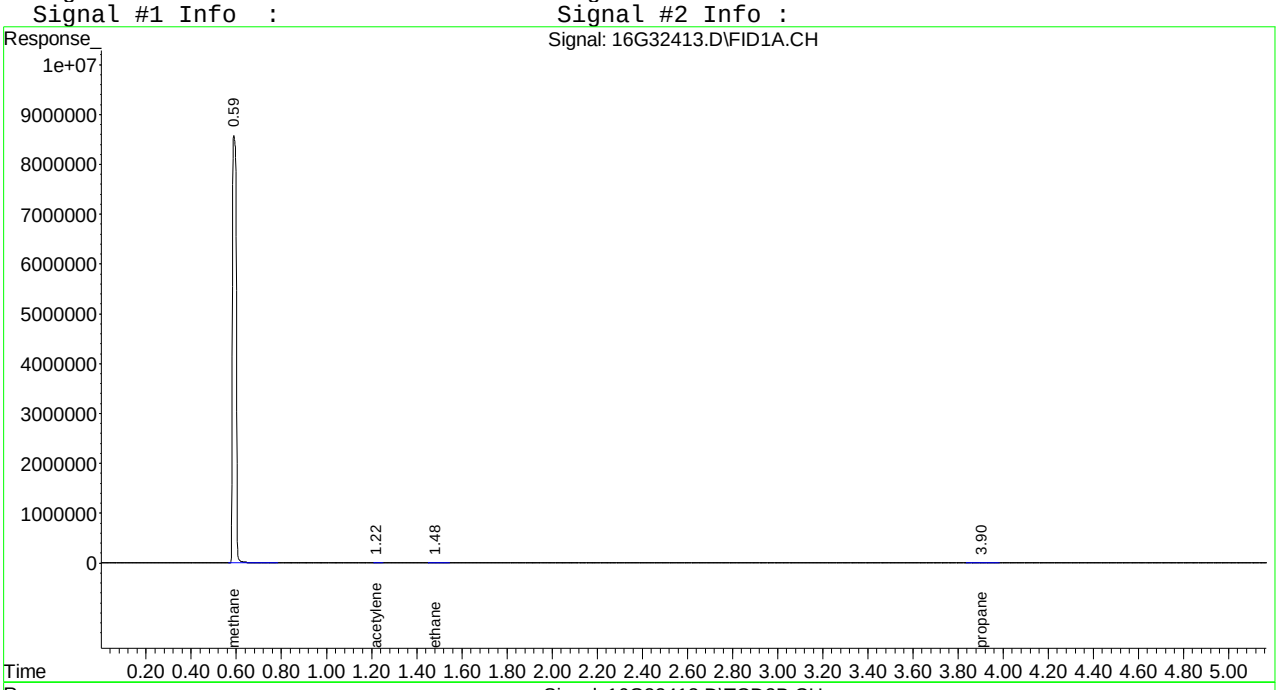
| | Compound | R.T. | Response | Conc | Units |
|---|---|---|---|---|---|
| | Target Compounds | | | | |
| 1) T | methane | 0.59 | 98206107 | 541.585 | umol/ |
| 2) T | ethene | 0.00 | 0 | N.D. | umol/ |
| 3) T | acetylene | 1.22 | 1339 | 0.005 | umol/ |
| 4) T | ethane | 1.48 | 10469 | 0.034 | umol/ |
| 5) T | propane | 3.90 | 20227 | 0.046 | umol/ |
| 7) T | carbon dioxide | 0.20 | 40591930 | 7110.980 | umol/ |

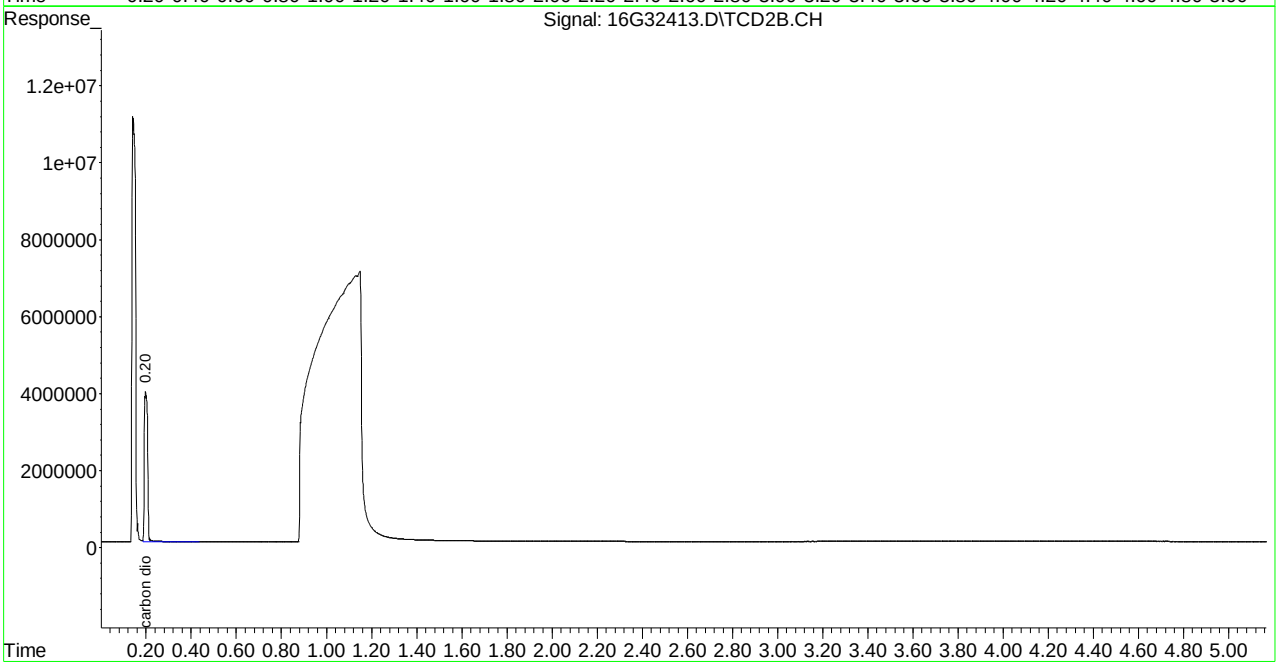
(f)=RT Delta > 1/2 Window (m)=manual int.
16G32413.D RSK2EXT.M Thu May 10 17:10:27 2012 Page 1

Signal #1 : C:\MSDchem\1\DATA\051012\16G32413.D\FID1A.CH Vial: 26
Signal #2 : C:\MSDchem\1\DATA\051012\16G32413.D\TCD2B.CH
Acq On : 10 May 2012 17:05 Operator: FJB
Sample : L12050284-03 A RSK175EXT Inst : HP16
Misc : 1,1 Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: May 10 17:10 2012 Quant Results File: RSK2EXT.RES

Quant Method : C:\MSDCHEM\1\METHODS\RSK2EXT.M (Chemstation Integrator)
Title : RSK175 HP16 (SOP: OVL RSK01) 043012
Last Update : Mon Apr 30 15:17:04 2012
Response via : Multiple Level Calibration
DataAcq Meth : RSK2EXT.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :



Quantitation Report (Not Reviewed)

Signal #1 : C:\MSDchem\1\DATA\051112\16G32419.D\FID1A.CH Vial: 5
Signal #2 : C:\MSDchem\1\DATA\051112\16G32419.D\TCD2B.CH
Acq On : 11 May 2012 14:40 Operator: FJB
Sample : L12050284-03 5X B RSK175 Inst : HP16
Misc : 1,5 Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: May 11 14:45:23 2012 Quant Results File: RSK2EXT.RES

Quant Method : C:\MSDCHEM\1\METHODS\RSK2EXT.M (Chemstation Integrator)
Title : RSK175 HP16 (SOP: OVL RSK01) 043012
Last Update : Mon Apr 30 15:17:04 2012
Response via : Initial Calibration
DataAcq Meth : RSK2EXT.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

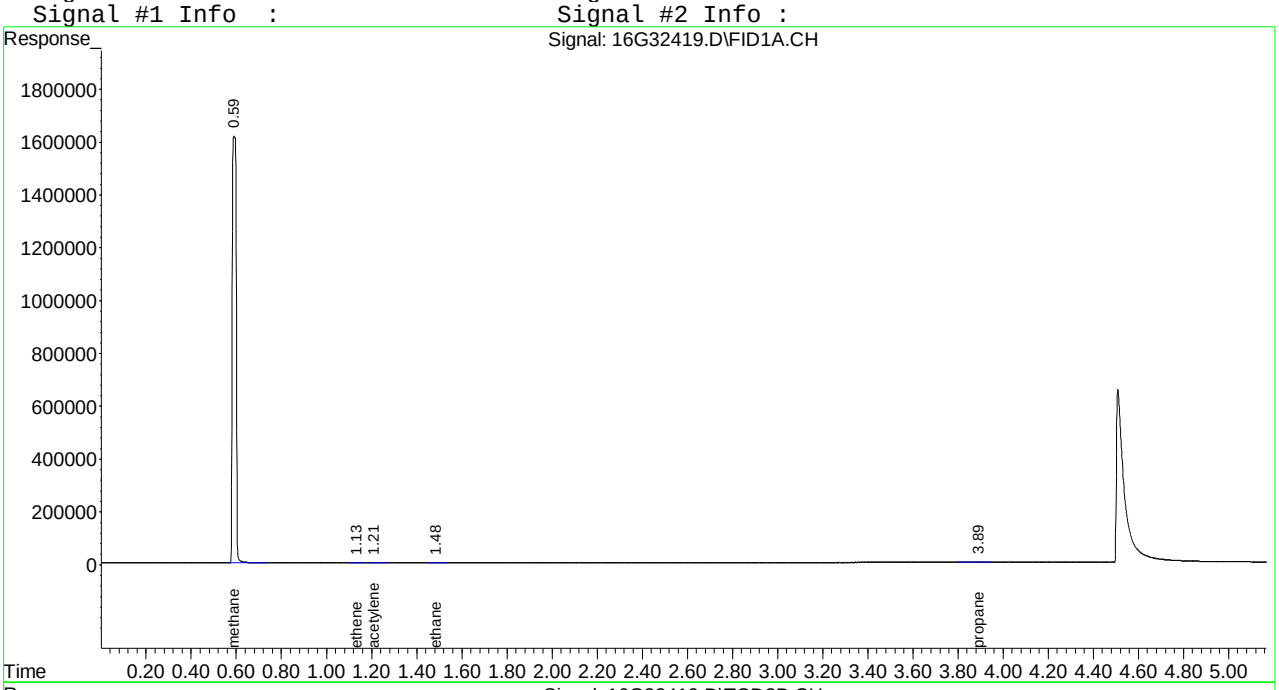
| | Compound | R.T. | Response | Conc | Units |
|---|---|---|---|---|---|
| | Target Compounds | | | | |
| 1) T | methane | 0.59 | 19171919 | 105.729 | umol/ |
| 2) T | ethene | 1.13 | 4588 | 0.015 | umol/ |
| 3) T | acetylene | 1.21 | 4015 | 0.014 | umol/ |
| 4) T | ethane | 1.48 | 6145 | 0.020 | umol/ |
| 5) T | propane | 3.89 | 6820 | 0.016 | umol/ |
| 7) T | carbon dioxide | 0.20 | 9732833 | 1705.018 | umol/ |

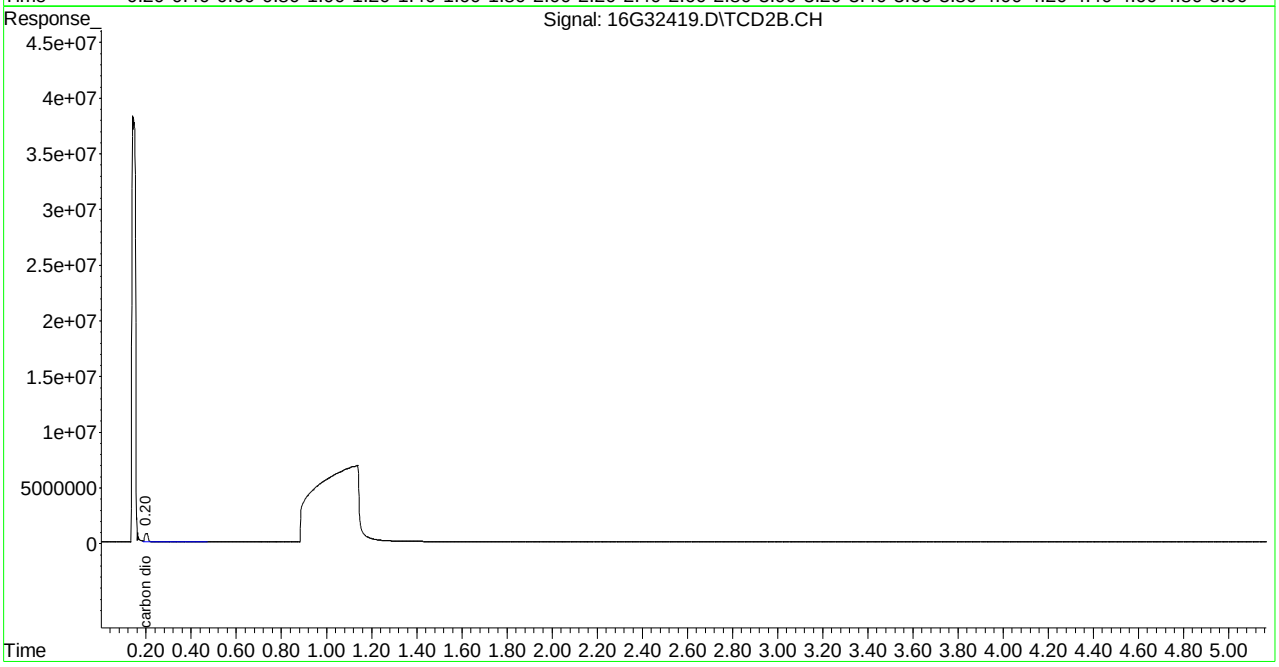
(f)=RT Delta > 1/2 Window (m)=manual int.
16G32419.D RSK2EXT.M Fri May 11 14:45:23 2012 Page 1

Signal #1 : C:\MSDchem\1\DATA\051112\16G32419.D\FID1A.CH Vial: 5
Signal #2 : C:\MSDchem\1\DATA\051112\16G32419.D\TCD2B.CH
Acq On : 11 May 2012 14:40 Operator: FJB
Sample : L12050284-03 5X B RSK175 Inst : HP16
Misc : 1,5 Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: May 11 14:45 2012 Quant Results File: RSK2EXT.RES

Quant Method : C:\MSDCHEM\1\METHODS\RSK2EXT.M (Chemstation Integrator)
Title : RSK175 HP16 (SOP: OVL RSK01) 043012
Last Update : Mon Apr 30 15:17:04 2012
Response via : Multiple Level Calibration
DataAcq Meth : RSK2EXT.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :



Quantitation Report (Not Reviewed)

Signal #1 : C:\MSDchem\1\DATA\051112\16G32431.D\FID1A.CH Vial: 17
Signal #2 : C:\MSDchem\1\DATA\051112\16G32431.D\TCD2B.CH
Acq On : 11 May 2012 16:31 Operator: FJB
Sample : L12050284-05 A RSK175 Inst : HP16
Misc : 1,1 Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: May 11 16:36:46 2012 Quant Results File: RSK2EXT.RES

Quant Method : C:\MSDCHEM\1\METHODS\RSK2EXT.M (Chemstation Integrator)
Title : RSK175 HP16 (SOP: OVL RSK01) 043012
Last Update : Mon Apr 30 15:17:04 2012
Response via : Initial Calibration
DataAcq Meth : RSK2EXT.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

| | Compound | R.T. | Response | Conc | Units |
|---|---|---|---|---|---|
| | Target Compounds | | | | |
| 1) T | methane | 0.59 | 8384000 | 46.236 | umol/ |
| 2) T | ethene | 0.00 | 0 | N.D. | umol/ |
| 3) T | acetylene | 0.00 | 0 | N.D. | umol/ |
| 4) T | ethane | 1.48 | 15994 | 0.053 | umol/ |
| 5) T | propane | 3.90 | 30216 | 0.069 | umol/ |
| 7) T | carbon dioxide | 0.20 | 100325979 | 17575.317 | umol/ |

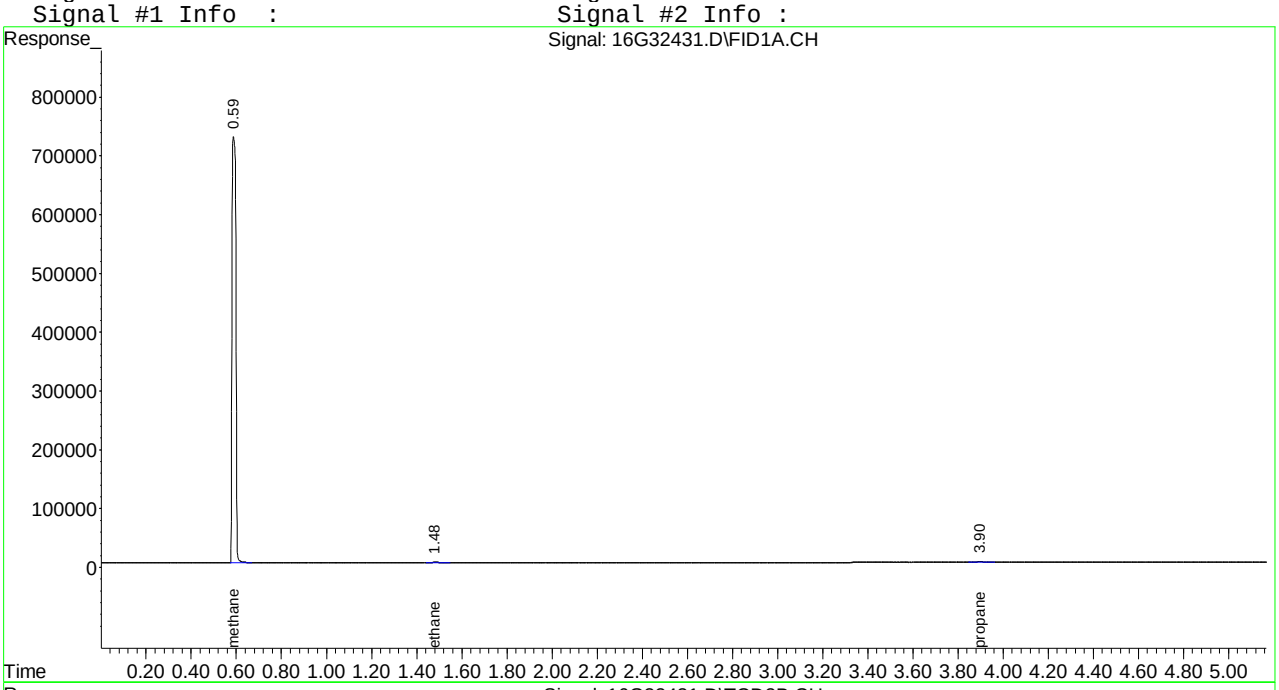
(f)=RT Delta > 1/2 Window (m)=manual int.
16G32431.D RSK2EXT.M Fri May 11 16:36:46 2012 Page 1

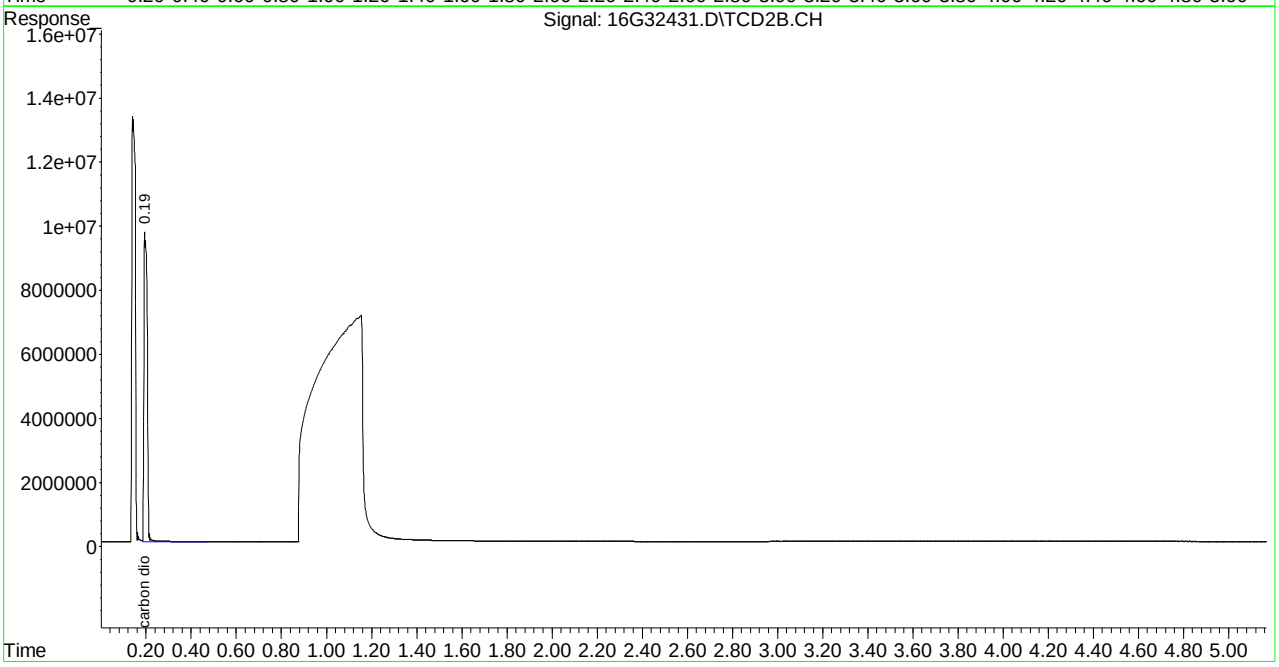
Quantitation Report (Not Reviewed)

Signal #1 : C:\MSDchem\1\DATA\051112\16G32431.D\FID1A.CH Vial: 17
Signal #2 : C:\MSDchem\1\DATA\051112\16G32431.D\TCD2B.CH
Acq On : 11 May 2012 16:31 Operator: FJB
Sample : L12050284-05 A RSK175 Inst : HP16
Misc : 1,1 Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: May 11 16:36 2012 Quant Results File: RSK2EXT.RES

Quant Method : C:\MSDCHEM\1\METHODS\RSK2EXT.M (Chemstation Integrator)
Title : RSK175 HP16 (SOP: OVL RSK01) 043012
Last Update : Mon Apr 30 15:17:04 2012
Response via : Multiple Level Calibration
DataAcq Meth : RSK2EXT.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :



Quantitation Report (Not Reviewed)

Signal #1 : C:\MSDchem\1\DATA\051112\16G32432.D\FID1A.CH Vial: 18
Signal #2 : C:\MSDchem\1\DATA\051112\16G32432.D\TCD2B.CH
Acq On : 11 May 2012 16:41 Operator: FJB
Sample : L12050284-07 A RSK175 Inst : HP16
Misc : 1,1 Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: May 11 16:46:44 2012 Quant Results File: RSK2EXT.RES

Quant Method : C:\MSDCHEM\1\METHODS\RSK2EXT.M (Chemstation Integrator)
Title : RSK175 HP16 (SOP: OVL RSK01) 043012
Last Update : Mon Apr 30 15:17:04 2012
Response via : Initial Calibration
DataAcq Meth : RSK2EXT.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

| | Compound | R.T. | Response | Conc | Units |
|---|---|---|---|---|---|
| | Target Compounds | | | | |
| 1) T | methane | 0.59 | 65321060 | 360.231 | umol/ |
| 2) T | ethene | 0.00 | 0 | N.D. | umol/ |
| 3) T | acetylene | 0.00 | 0 | N.D. | umol/ |
| 4) T | ethane | 1.49 | 65298 | 0.215 | umol/ |
| 5) T | propane | 3.90 | 52078 | 0.119 | umol/ |
| 7) T | carbon dioxide | 0.20 | 145082022 | 25415.776 | umol/ |

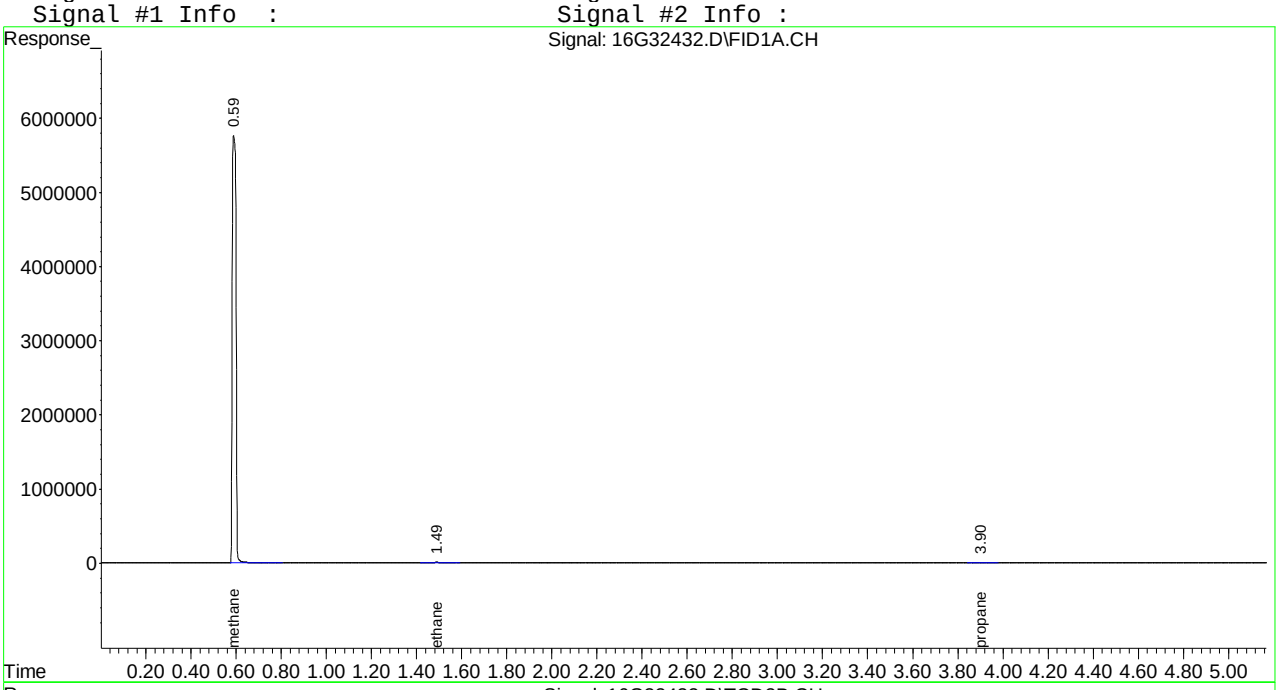
(f)=RT Delta > 1/2 Window (m)=manual int.
16G32432.D RSK2EXT.M Fri May 11 16:46:44 2012 Page 1

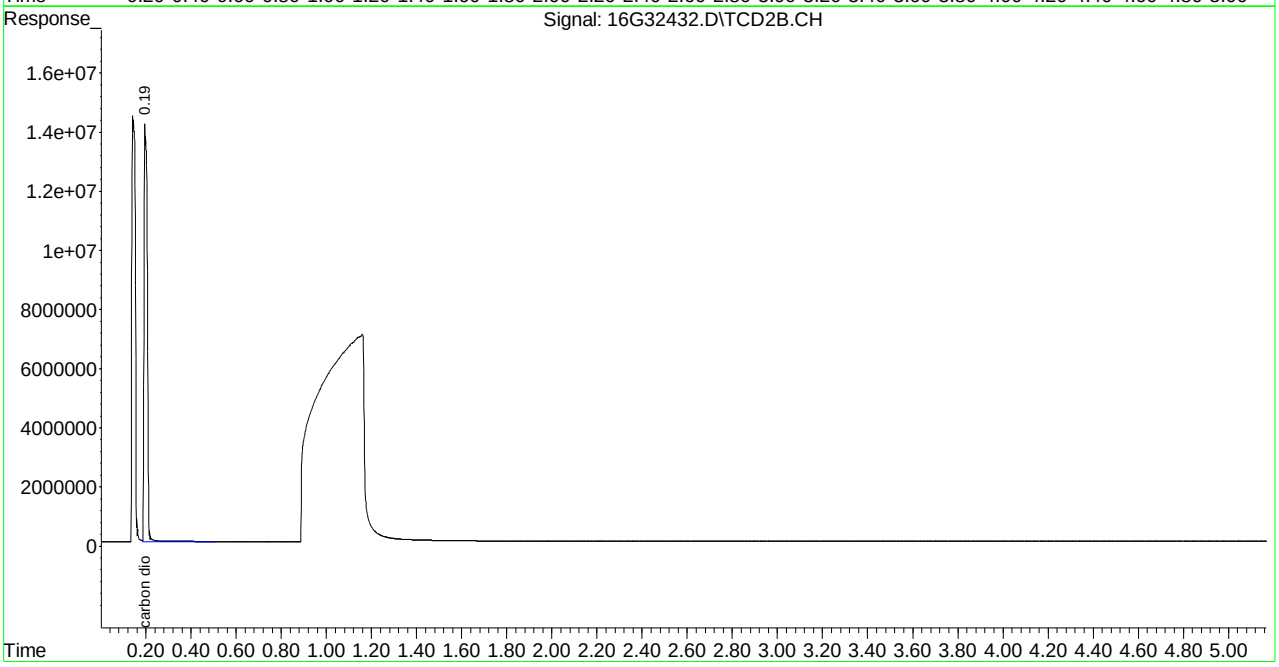
Quantitation Report (Not Reviewed)

Signal #1 : C:\MSDchem\1\DATA\051112\16G32432.D\FID1A.CH Vial: 18
Signal #2 : C:\MSDchem\1\DATA\051112\16G32432.D\TCD2B.CH
Acq On : 11 May 2012 16:41 Operator: FJB
Sample : L12050284-07 A RSK175 Inst : HP16
Misc : 1,1 Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: May 11 16:46 2012 Quant Results File: RSK2EXT.RES

Quant Method : C:\MSDCHEM\1\METHODS\RSK2EXT.M (Chemstation Integrator)
Title : RSK175 HP16 (SOP: OVL RSK01) 043012
Last Update : Mon Apr 30 15:17:04 2012
Response via : Multiple Level Calibration
DataAcq Meth : RSK2EXT.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :



# 2.1.2.4 Standards Data

Quantitation Report (Not Reviewed)

Signal #1 : C:\MSDCHEM\1\DATA\043012\16G32091.D\FID1A.CH Vial: 1
Signal #2 : C:\MSDCHEM\1\DATA\043012\16G32091.D\TCD2B.CH
Acq On : 30 Apr 2012 13:39 Operator: MDA
Sample : WG396526-01 0.67umol/mol ICAL RSK175 Inst : HP16
Misc : 1,1 STD38726 Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Apr 30 14:43:35 2012 Quant Results File: RSK2EXT.RES

Quant Method : C:\MSDCHEM\1\METHODS\RSK2EXT.M (Chemstation Integrator)
Title : RSK175 HP16 (SOP: OVL RSK01) 043012
Last Update : Mon Apr 30 14:42:42 2012
Response via : Initial Calibration
DataAcq Meth : RSK2EXT.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

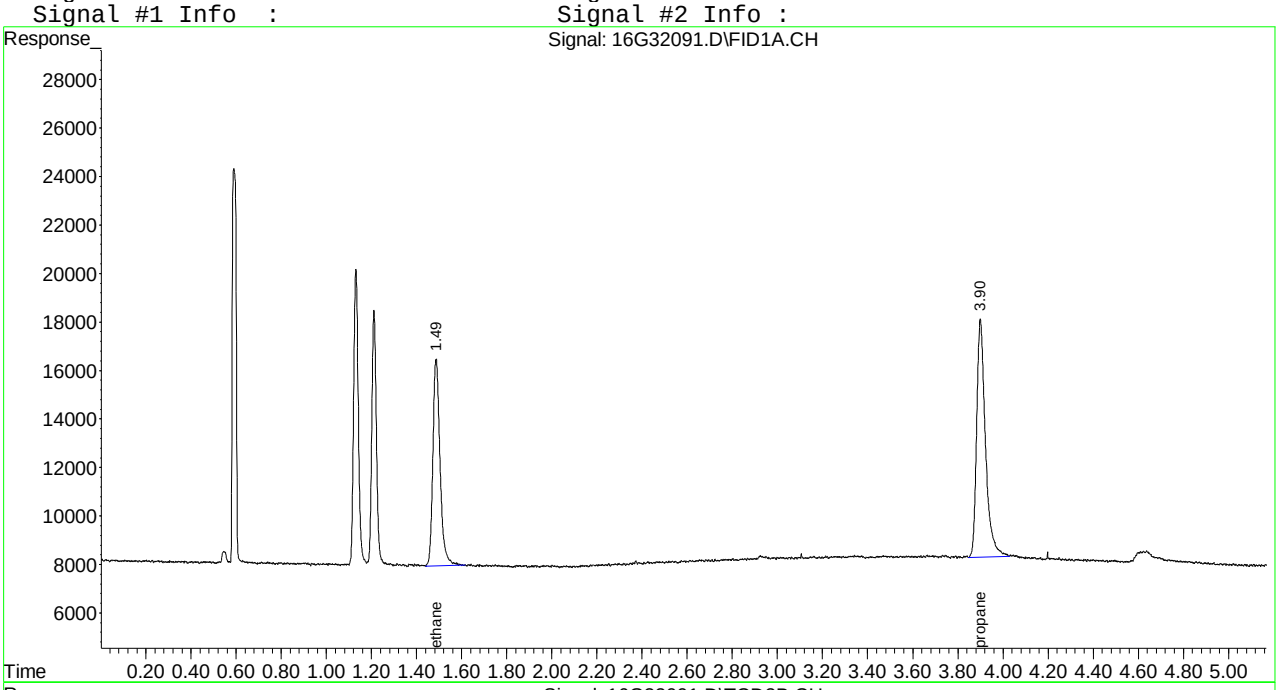
| | Compound | R.T. | Response | Conc | Units |
|---|---|---|---|---|---|
| | Target Compounds | | | | |
| 1) T | methane | 0.00 | 0 | N.D. | umol/d |
| 2) T | ethene | 0.00 | 0 | N.D. | umol/d |
| 3) T | acetylene | 0.00 | 0 | N.D. | umol/d |
| 4) T | ethane | 1.49 | 188654 | 0.648 | umol/ |
| 5) T | propane | 3.90 | 265941 | 0.638 | umol/ |
| 7) T | carbon dioxide | 0.00 | 0 | N.D. | umol/d |

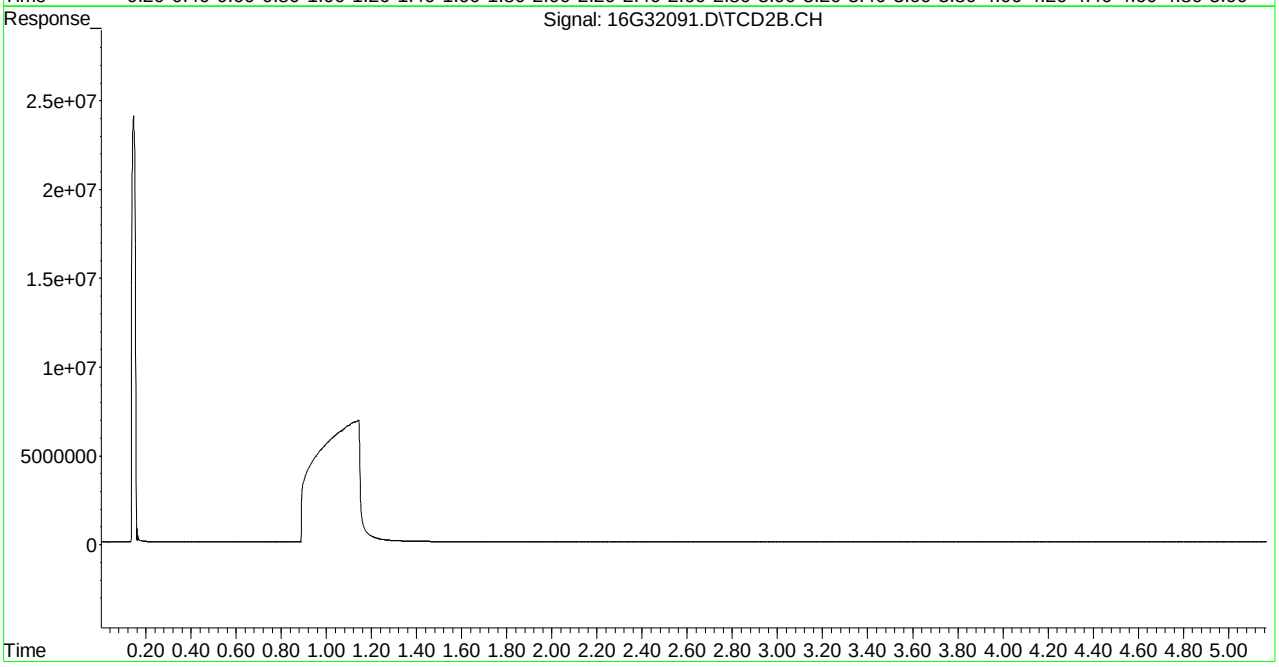
(f)=RT Delta > 1/2 Window (m)=manual int.
16G32091.D RSK2EXT.M Mon Apr 30 14:45:33 2012 Page 1

Signal #1 : C:\MSDCHEM\1\DATA\043012\16G32091.D\FID1A.CH Vial: 1
Signal #2 : C:\MSDCHEM\1\DATA\043012\16G32091.D\TCD2B.CH
Acq On : 30 Apr 2012 13:39 Operator: MDA
Sample : WG396526-01 0.67umol/mol ICAL RSK175 Inst : HP16
Misc : 1,1 STD38726 Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Apr 30 14:45 2012 Quant Results File: RSK2EXT.RES

Quant Method : C:\MSDCHEM\1\METHODS\RSK2EXT.M (Chemstation Integrator)
Title : RSK175 HP16 (SOP: OVL RSK01) 043012
Last Update : Mon Apr 30 14:42:42 2012
Response via : Multiple Level Calibration
DataAcq Meth : RSK2EXT.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :



Quantitation Report (Not Reviewed)

Signal #1 : C:\MSDchem\1\DATA\043012\16G32093.D\FID1A.CH Vial: 3
Signal #2 : C:\MSDchem\1\DATA\043012\16G32093.D\TCD2B.CH
Acq On : 30 Apr 2012 13:58 Operator: MDA
Sample : WG396526-03 33umol/mol ICAL RSK175 Inst : HP16
Misc : 1,1 STD38726 Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Apr 30 14:04:00 2012 Quant Results File: RSK2EXT.RES

Quant Method : C:\MSDCHEM\1\METHODS\RSK2EXT.M (Chemstation Integrator)
Title : RSK175 HP16 (SOP: OVL RSK01) 043012
Last Update : Mon Apr 23 16:53:59 2012
Response via : Initial Calibration
DataAcq Meth : RSK2EXT.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

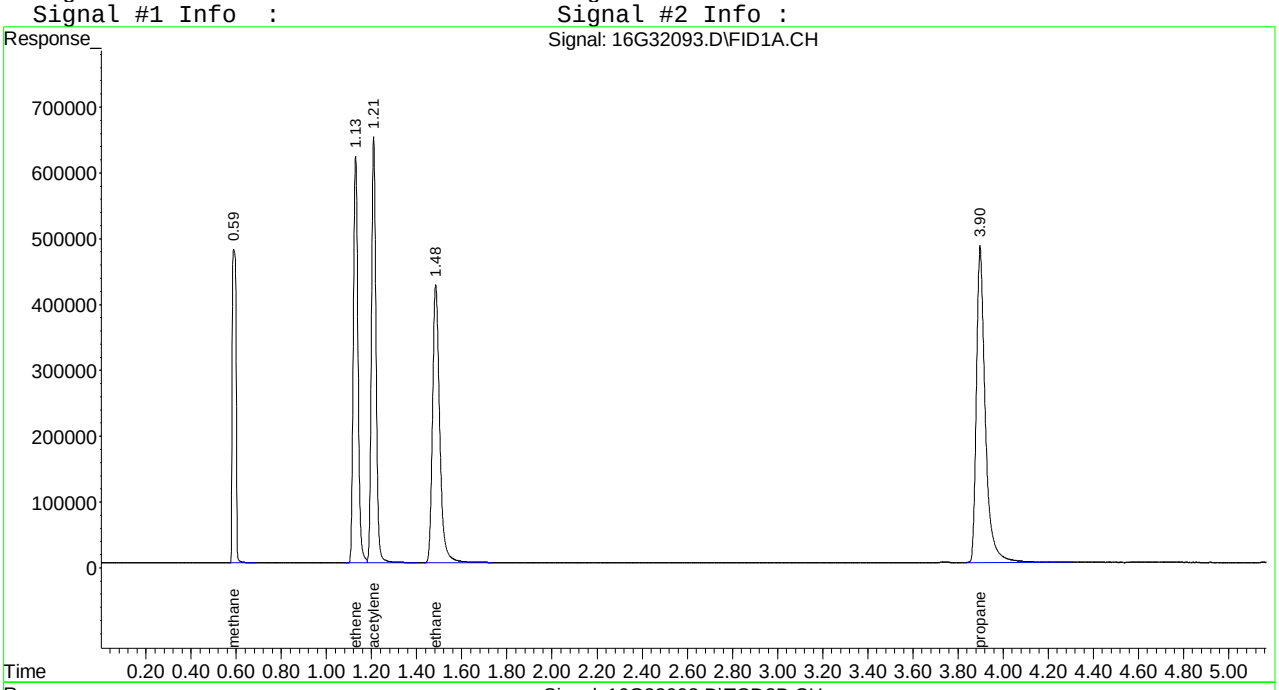
| | Compound | R.T. | Response | Conc | Units |
|---|---|---|---|---|---|
| | Target Compounds | | | | |
| 1) T | methane | 0.59 | 5543604 | 28.647 | umol/ |
| 2) T | ethene | 1.13 | 8839249 | 28.434 | umol/ |
| 3) T | acetylene | 1.21 | 9213469 | 29.702 | umol/ |
| 4) T | ethane | 1.48 | 9301672 | 29.165 | umol/ |
| 5) T | propane | 3.90 | 13193792 | 28.593 | umol/ |
| 7) T | carbon dioxide | 0.20 | 20541926 | 3441.116 | umol/ |

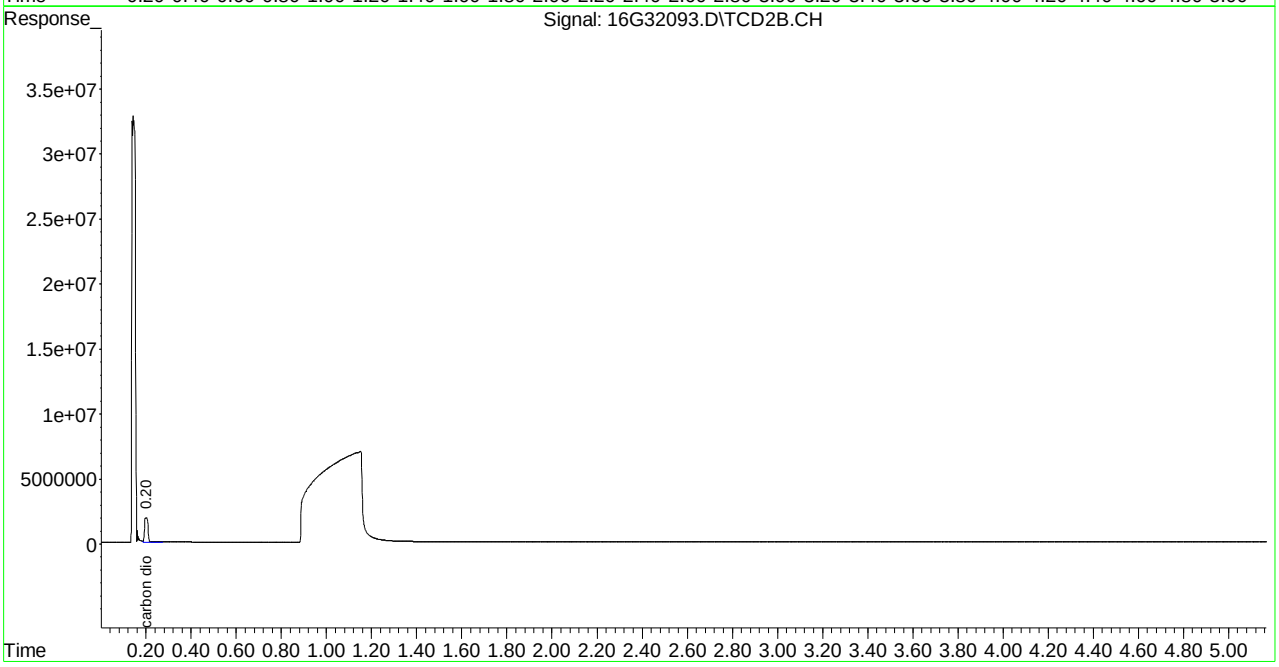
(f)=RT Delta > 1/2 Window (m)=manual int.
16G32093.D RSK2EXT.M Mon Apr 30 14:04:00 2012 Page 1

Signal #1 : C:\MSDchem\1\DATA\043012\16G32093.D\FID1A.CH Vial: 3
Signal #2 : C:\MSDchem\1\DATA\043012\16G32093.D\TCD2B.CH
Acq On : 30 Apr 2012 13:58 Operator: MDA
Sample : WG396526-03 33umol/mol ICAL RSK175 Inst : HP16
Misc : 1,1 STD38726 Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Apr 30 14:04 2012 Quant Results File: RSK2EXT.RES

Quant Method : C:\MSDCHEM\1\METHODS\RSK2EXT.M (Chemstation Integrator)
Title : RSK175 HP16 (SOP: OVL RSK01) 043012
Last Update : Mon Apr 23 16:53:59 2012
Response via : Multiple Level Calibration
DataAcq Meth : RSK2EXT.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :



Quantitation Report (Not Reviewed)

Signal #1 : C:\MSDchem\1\DATA\043012\16G32094.D\FID1A.CH Vial: 4
Signal #2 : C:\MSDchem\1\DATA\043012\16G32094.D\TCD2B.CH
Acq On : 30 Apr 2012 14:07 Operator: MDA
Sample : WG396526-04 67umol/mol ICAL RSK175 Inst : HP16
Misc : 1,1 STD38726 Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Apr 30 14:13:09 2012 Quant Results File: RSK2EXT.RES

Quant Method : C:\MSDCHEM\1\METHODS\RSK2EXT.M (Chemstation Integrator)
Title : RSK175 HP16 (SOP: OVL RSK01) 043012
Last Update : Mon Apr 23 16:53:59 2012
Response via : Initial Calibration
DataAcq Meth : RSK2EXT.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

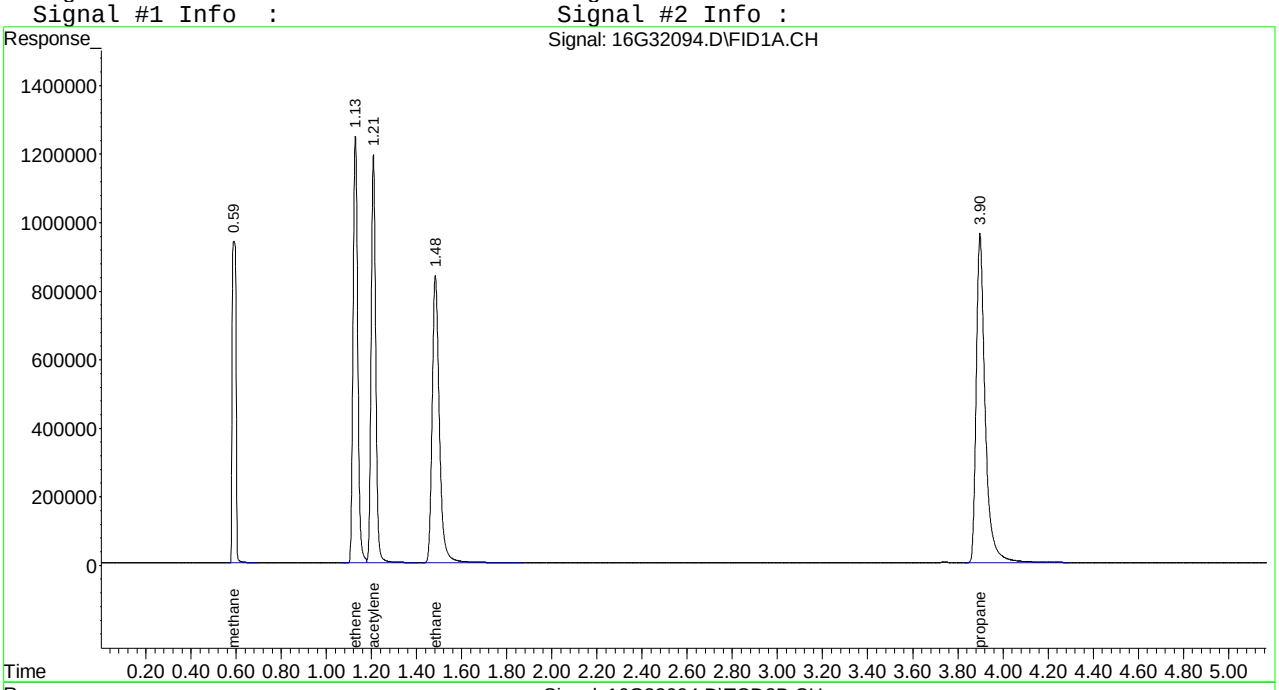
| | Compound | R.T. | Response | Conc | Units |
|---|---|---|---|---|---|
| | Target Compounds | | | | |
| 1) T | methane | 0.59 | 10967402 | 56.675 | umol/ |
| 2) T | ethene | 1.13 | 17874985 | 57.501 | umol/ |
| 3) T | acetylene | 1.21 | 17012722 | 54.845 | umol/ |
| 4) T | ethane | 1.48 | 18525237 | 58.085 | umol/ |
| 5) T | propane | 3.90 | 26527253 | 57.489 | umol/ |
| 7) T | carbon dioxide | 0.20 | 34639522 | 5802.700 | umol/ |

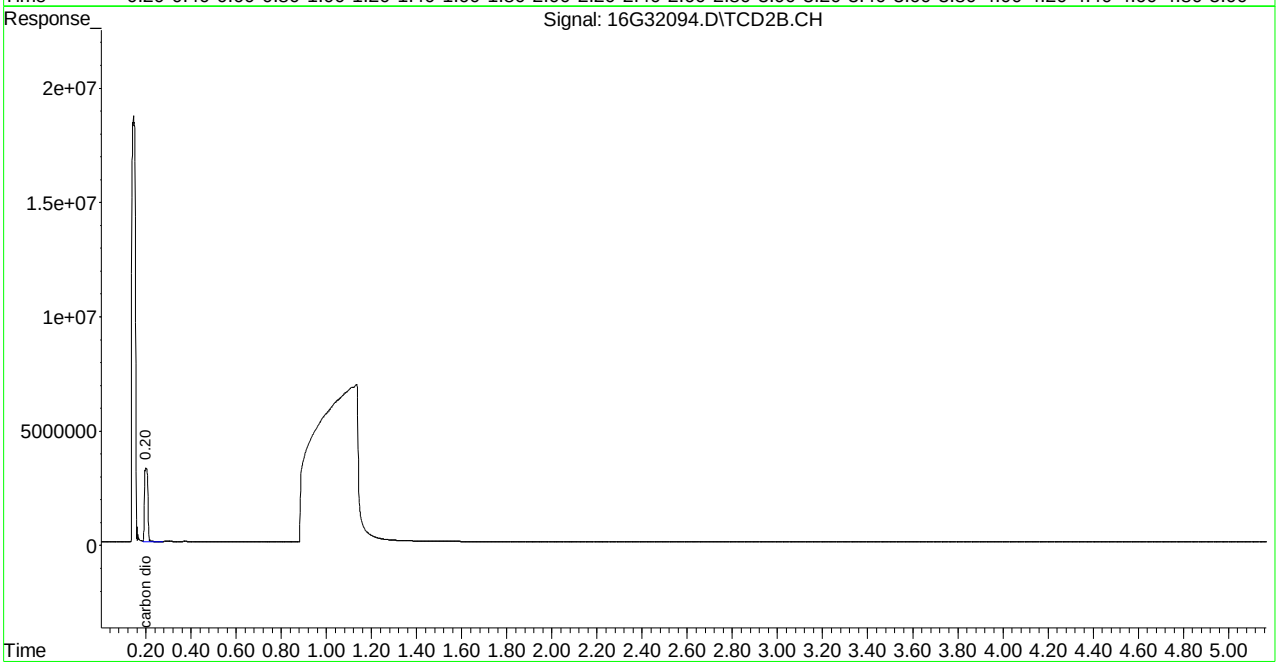
(f)=RT Delta > 1/2 Window (m)=manual int.
16G32094.D RSK2EXT.M Mon Apr 30 14:13:09 2012 Page 1

Signal #1 : C:\MSDchem\1\DATA\043012\16G32094.D\FID1A.CH Vial: 4
Signal #2 : C:\MSDchem\1\DATA\043012\16G32094.D\TCD2B.CH
Acq On : 30 Apr 2012 14:07 Operator: MDA
Sample : WG396526-04 67umol/mol ICAL RSK175 Inst : HP16
Misc : 1,1 STD38726 Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Apr 30 14:13 2012 Quant Results File: RSK2EXT.RES

Quant Method : C:\MSDCHEM\1\METHODS\RSK2EXT.M (Chemstation Integrator)
Title : RSK175 HP16 (SOP: OVL RSK01) 043012
Last Update : Mon Apr 23 16:53:59 2012
Response via : Multiple Level Calibration
DataAcq Meth : RSK2EXT.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :



Quantitation Report (Not Reviewed)

Signal #1 : C:\MSDchem\1\DATA\043012\16G32095.D\FID1A.CH Vial: 5
Signal #2 : C:\MSDchem\1\DATA\043012\16G32095.D\TCD2B.CH
Acq On : 30 Apr 2012 14:16 Operator: MDA
Sample : WG396526-05 133umol/mol ICAL RSK175 Inst : HP16
Misc : 1,1 STD38726 Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Apr 30 14:22:09 2012 Quant Results File: RSK2EXT.RES

Quant Method : C:\MSDCHEM\1\METHODS\RSK2EXT.M (Chemstation Integrator)
Title : RSK175 HP16 (SOP: OVL RSK01) 043012
Last Update : Mon Apr 23 16:53:59 2012
Response via : Initial Calibration
DataAcq Meth : RSK2EXT.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

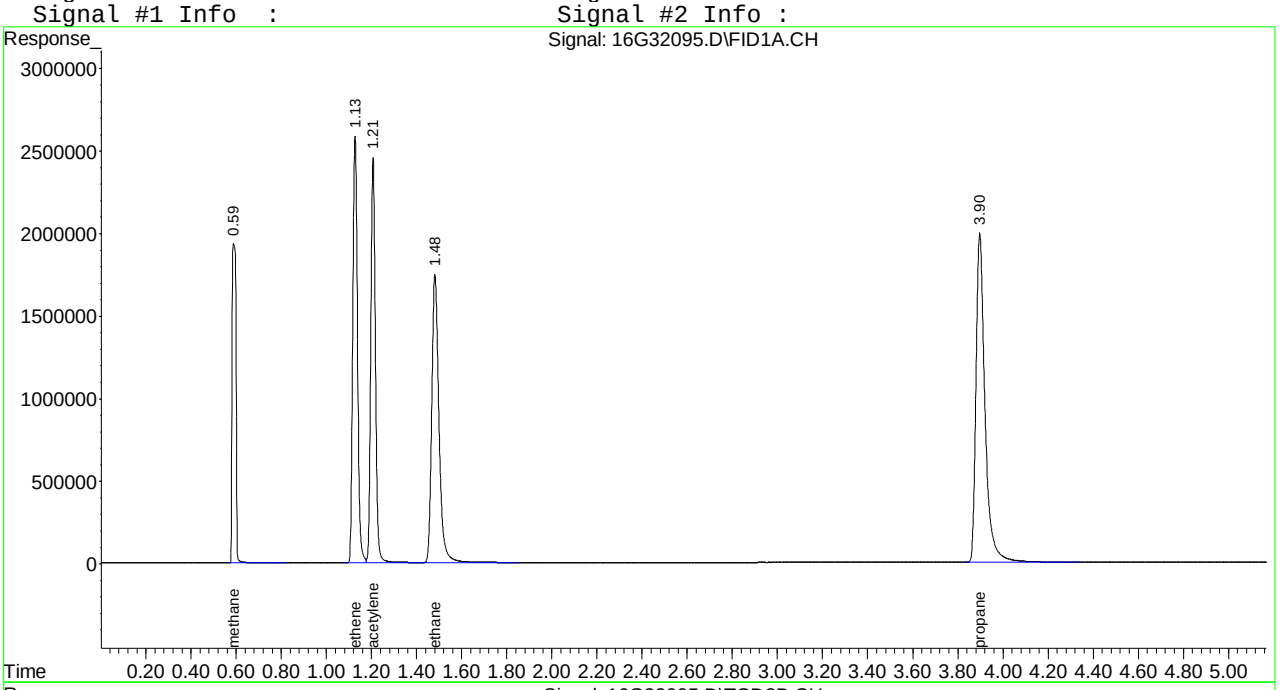
| | Compound | R.T. | Response | Conc Units |
|---|---|---|---|---|
| | Target Compounds | | | |
| 1) T | methane | 0.59 | 22928576 | 118.486 umol/ |
| 2) T | ethene | 1.13 | 37444591 | 120.453 umol/ |
| 3) T | acetylene | 1.21 | 35336293 | 113.917 umol/ |
| 4) T | ethane | 1.48 | 38718775 | 121.400 umol/ |
| 5) T | propane | 3.90 | 55608118 | 120.511 umol/ |
| 7) T | carbon dioxide | 0.20 | 73011522 | 12230.652 umol/ |

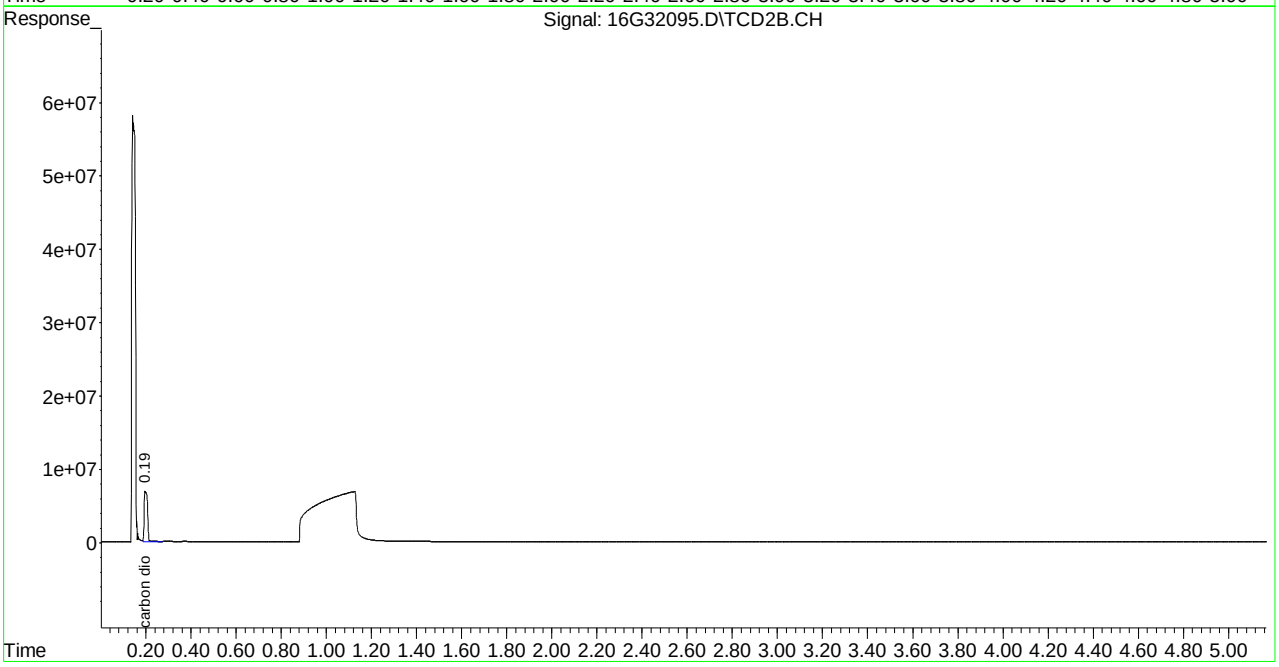
(f)=RT Delta > 1/2 Window (m)=manual int.
16G32095.D RSK2EXT.M Mon Apr 30 14:22:09 2012 Page 1

Signal #1 : C:\MSDchem\1\DATA\043012\16G32095.D\FID1A.CH Vial: 5
Signal #2 : C:\MSDchem\1\DATA\043012\16G32095.D\TCD2B.CH
Acq On : 30 Apr 2012 14:16 Operator: MDA
Sample : WG396526-05 133umol/mol ICAL RSK175 Inst : HP16
Misc : 1,1 STD38726 Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Apr 30 14:22 2012 Quant Results File: RSK2EXT.RES

Quant Method : C:\MSDCHEM\1\METHODS\RSK2EXT.M (Chemstation Integrator)
Title : RSK175 HP16 (SOP: OVL RSK01) 043012
Last Update : Mon Apr 23 16:53:59 2012
Response via : Multiple Level Calibration
DataAcq Meth : RSK2EXT.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :



Quantitation Report (Not Reviewed)

Signal #1 : C:\MSDchem\1\DATA\043012\16G32096.D\FID1A.CH Vial: 6
Signal #2 : C:\MSDchem\1\DATA\043012\16G32096.D\TCD2B.CH
Acq On : 30 Apr 2012 14:26 Operator: MDA
Sample : WG396526-06 333umol/mol ICAL RSK175 Inst : HP16
Misc : 1,1 STD38726 Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Apr 30 14:31:51 2012 Quant Results File: RSK2EXT.RES

Quant Method : C:\MSDCHEM\1\METHODS\RSK2EXT.M (Chemstation Integrator)
Title : RSK175 HP16 (SOP: OVL RSK01) 043012
Last Update : Mon Apr 23 16:53:59 2012
Response via : Initial Calibration
DataAcq Meth : RSK2EXT.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

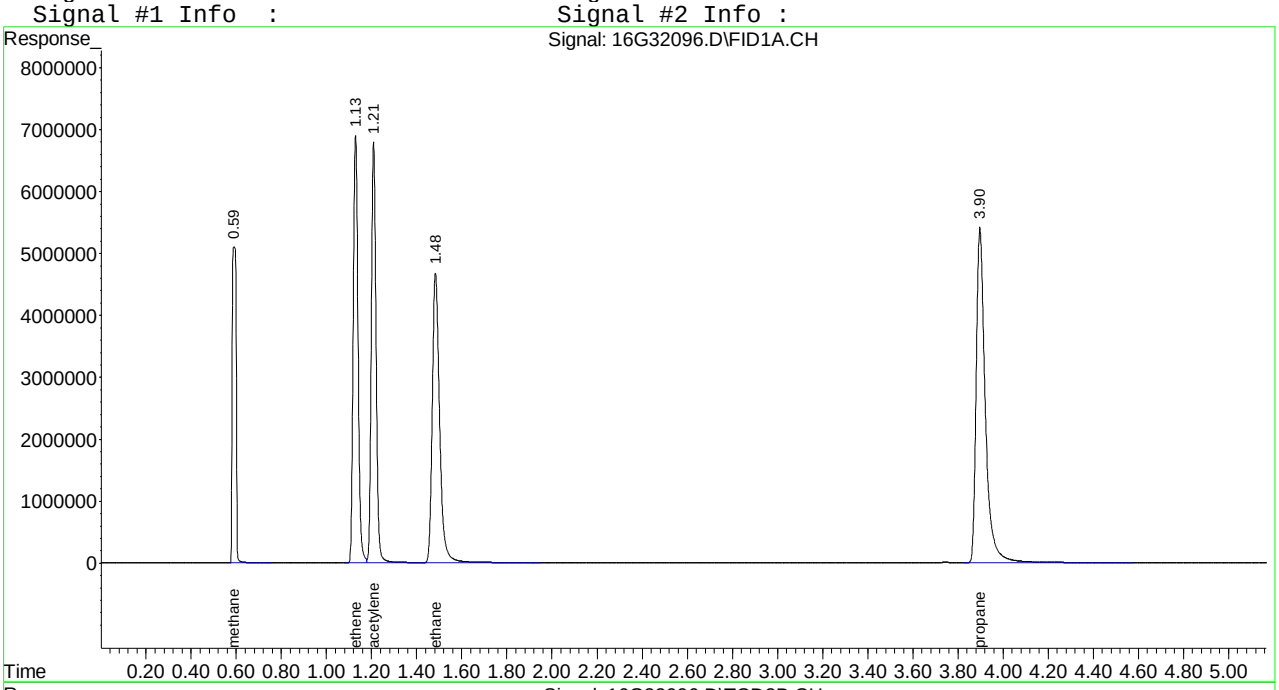
| | Compound | R.T. | Response | Conc Units |
|---|---|---|---|---|
| | Target Compounds | | | |
| 1) T | methane | 0.59 | 61151880 | 316.010 umol/ |
| 2) T | ethene | 1.13 | 102124387 | 328.518 umol/ |
| 3) T | acetylene | 1.21 | 100384614 | 323.619 umol/ |
| 4) T | ethane | 1.48 | 105345556 | 330.304 umol/ |
| 5) T | propane | 3.90 | 152068426 | 329.556 umol/ |
| 7) T | carbon dioxide | 0.20 | 190381445 | 31892.078 umol/ |

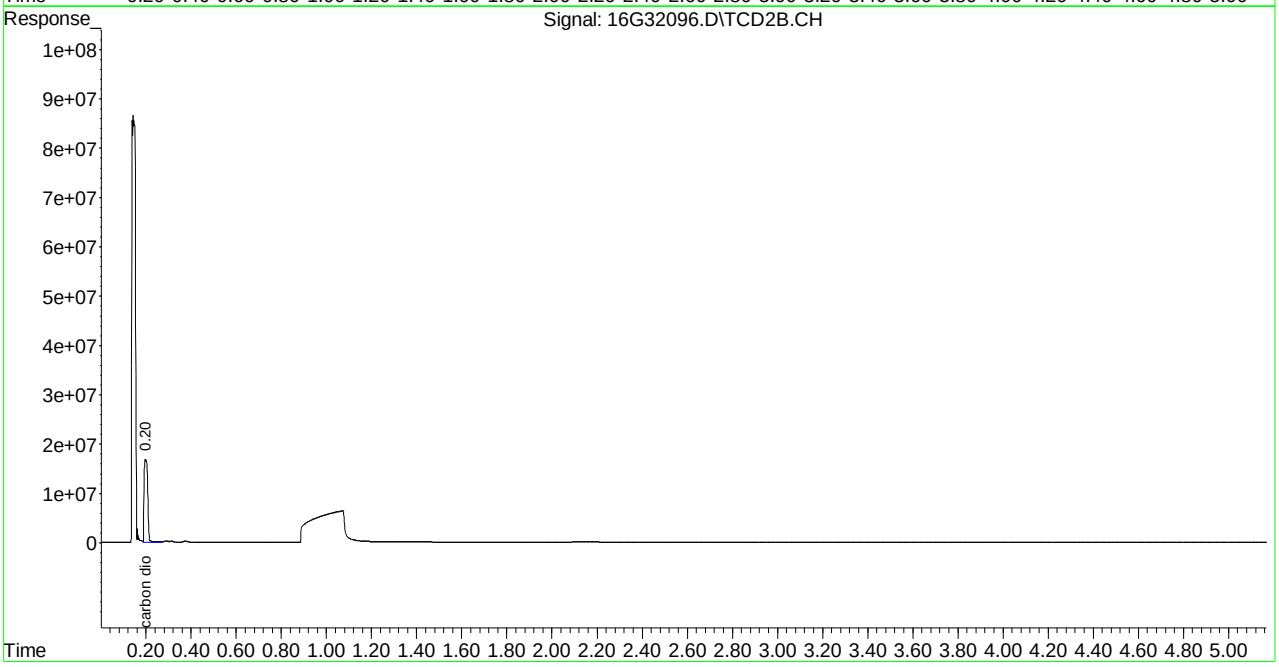
(f)=RT Delta > 1/2 Window (m)=manual int.
16G32096.D RSK2EXT.M Mon Apr 30 14:31:51 2012 Page 1

Signal #1 : C:\MSDchem\1\DATA\043012\16G32096.D\FID1A.CH Vial: 6
Signal #2 : C:\MSDchem\1\DATA\043012\16G32096.D\TCD2B.CH
Acq On : 30 Apr 2012 14:26 Operator: MDA
Sample : WG396526-06 333umol/mol ICAL RSK175 Inst : HP16
Misc : 1,1 STD38726 Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Apr 30 14:31 2012 Quant Results File: RSK2EXT.RES

Quant Method : C:\MSDCHEM\1\METHODS\RSK2EXT.M (Chemstation Integrator)
Title : RSK175 HP16 (SOP: OVL RSK01) 043012
Last Update : Mon Apr 23 16:53:59 2012
Response via : Multiple Level Calibration
DataAcq Meth : RSK2EXT.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :



Quantitation Report (Not Reviewed)

Signal #1 : C:\MSDchem\1\DATA\043012\16G32097.D\FID1A.CH Vial: 7
Signal #2 : C:\MSDchem\1\DATA\043012\16G32097.D\TCD2B.CH
Acq On : 30 Apr 2012 14:35 Operator: MDA
Sample : WG396526-07 533umol/mol ICAL RSK175 Inst : HP16
Misc : 1,1 STD38726 Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Apr 30 14:40:49 2012 Quant Results File: RSK2EXT.RES

Quant Method : C:\MSDCHEM\1\METHODS\RSK2EXT.M (Chemstation Integrator)
Title : RSK175 HP16 (SOP: OVL RSK01) 043012
Last Update : Mon Apr 23 16:53:59 2012
Response via : Initial Calibration
DataAcq Meth : RSK2EXT.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

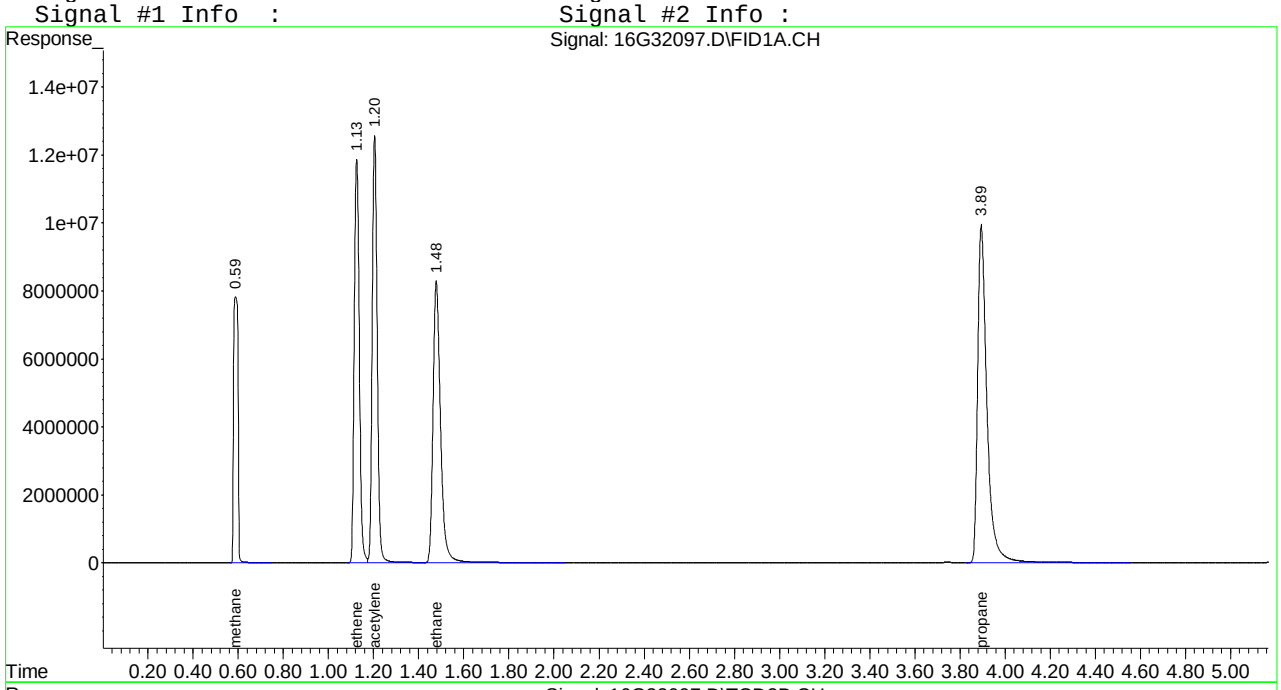
| | Compound | R.T. | Response | Conc Units |
|---|---|---|---|---|
| | Target Compounds | | | |
| 1) T | methane | 0.59 | 105407837 | 544.709 umol/ |
| 2) T | ethene | 1.13 | 184568763 | 593.729 umol/ |
| 3) T | acetylene | 1.20 | 194109593 | 625.769 umol/ |
| 4) T | ethane | 1.48 | 190467929 | 597.199 umol/ |
| 5) T | propane | 3.89 | 283665394 | 614.747 umol/ |
| 7) T | carbon dioxide | 0.19 | 351812796 | 58934.531 umol/ |

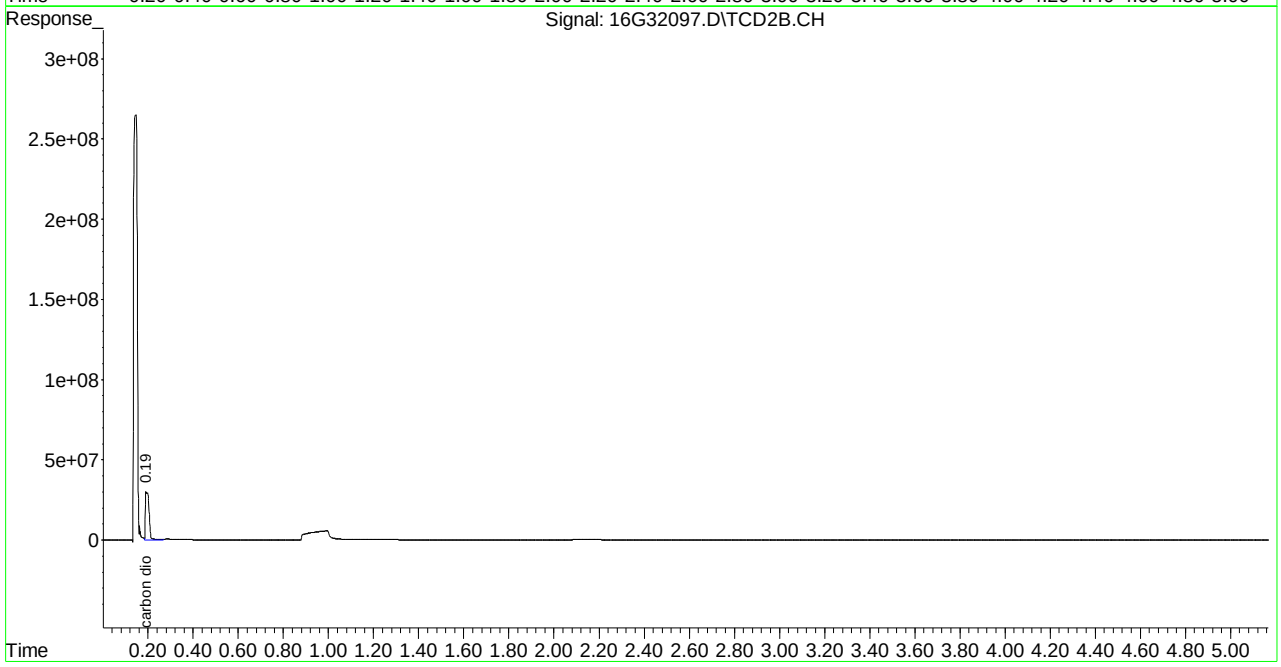
(f)=RT Delta > 1/2 Window (m)=manual int.
16G32097.D RSK2EXT.M Mon Apr 30 14:40:49 2012 Page 1

Signal #1 : C:\MSDchem\1\DATA\043012\16G32097.D\FID1A.CH Vial: 7
Signal #2 : C:\MSDchem\1\DATA\043012\16G32097.D\TCD2B.CH
Acq On : 30 Apr 2012 14:35 Operator: MDA
Sample : WG396526-07 533umol/mol ICAL RSK175 Inst : HP16
Misc : 1,1 STD38726 Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Apr 30 14:40 2012 Quant Results File: RSK2EXT.RES

Quant Method : C:\MSDCHEM\1\METHODS\RSK2EXT.M (Chemstation Integrator)
Title : RSK175 HP16 (SOP: OVL RSK01) 043012
Last Update : Mon Apr 23 16:53:59 2012
Response via : Multiple Level Calibration
DataAcq Meth : RSK2EXT.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :



Quantitation Report (Not Reviewed)

Signal #1 : C:\MSDchem\1\DATA\043012\16G32100.D\FID1A.CH Vial: 10
Signal #2 : C:\MSDchem\1\DATA\043012\16G32100.D\TCD2B.CH
Acq On : 30 Apr 2012 15:04 Operator: MDA
Sample : WG396526-02 1.67umol/mol CCV RSK175 Inst : HP16
Misc : 1,1 STD38726 Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Apr 30 15:09:45 2012 Quant Results File: RSK2EXT.RES

Quant Method : C:\MSDCHEM\1\METHODS\RSK2EXT.M (Chemstation Integrator)
Title : RSK175 HP16 (SOP: OVL RSK01) 043012
Last Update : Mon Apr 30 14:45:53 2012
Response via : Initial Calibration
DataAcq Meth : RSK2EXT.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

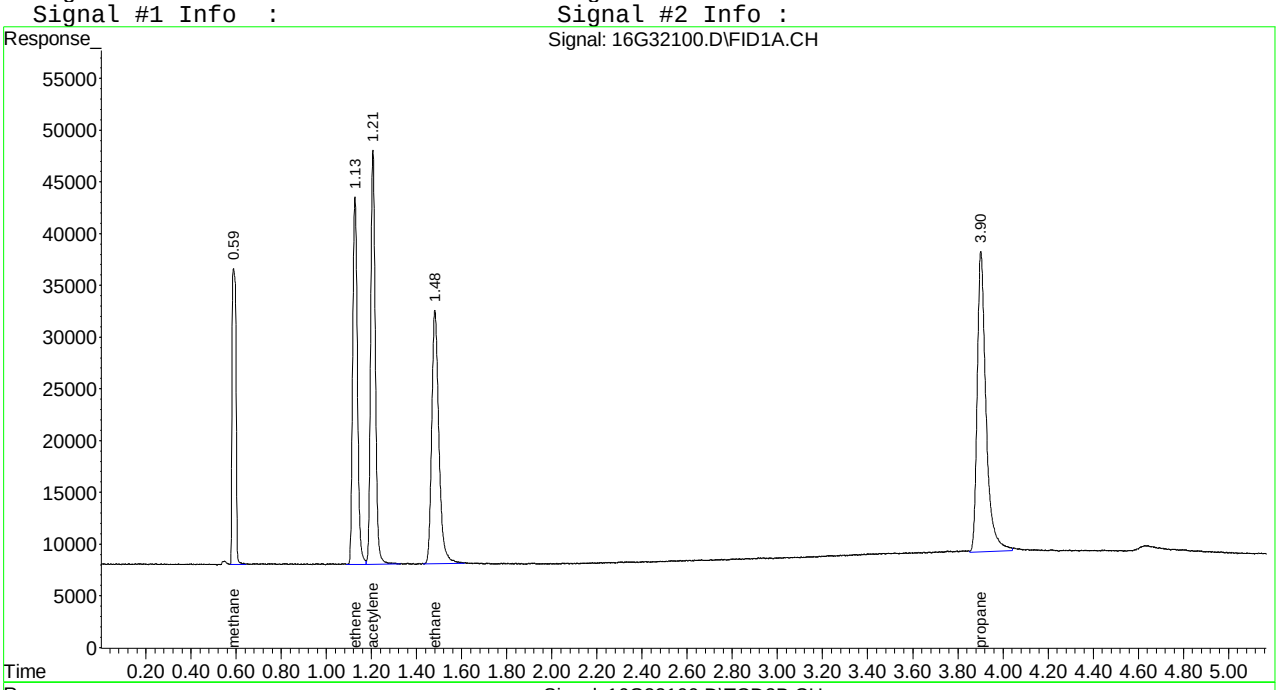
| | Compound | R.T. | Response | Conc Units |
|---|---|---|---|---|
| | Target Compounds | | | |
| 1) T | methane | 0.59 | 339694 | 1.927 umol/ |
| 2) T | ethene | 1.13 | 518903 | 1.845 umol/ |
| 3) T | acetylene | 1.21 | 583229 | 2.112 umol/ |
| 4) T | ethane | 1.48 | 539701 | 1.855 umol/ |
| 5) T | propane | 3.90 | 789587 | 1.895 umol/ |
| 7) T | carbon dioxide | 0.20 | 13063496 | 2368.342 umol/ |

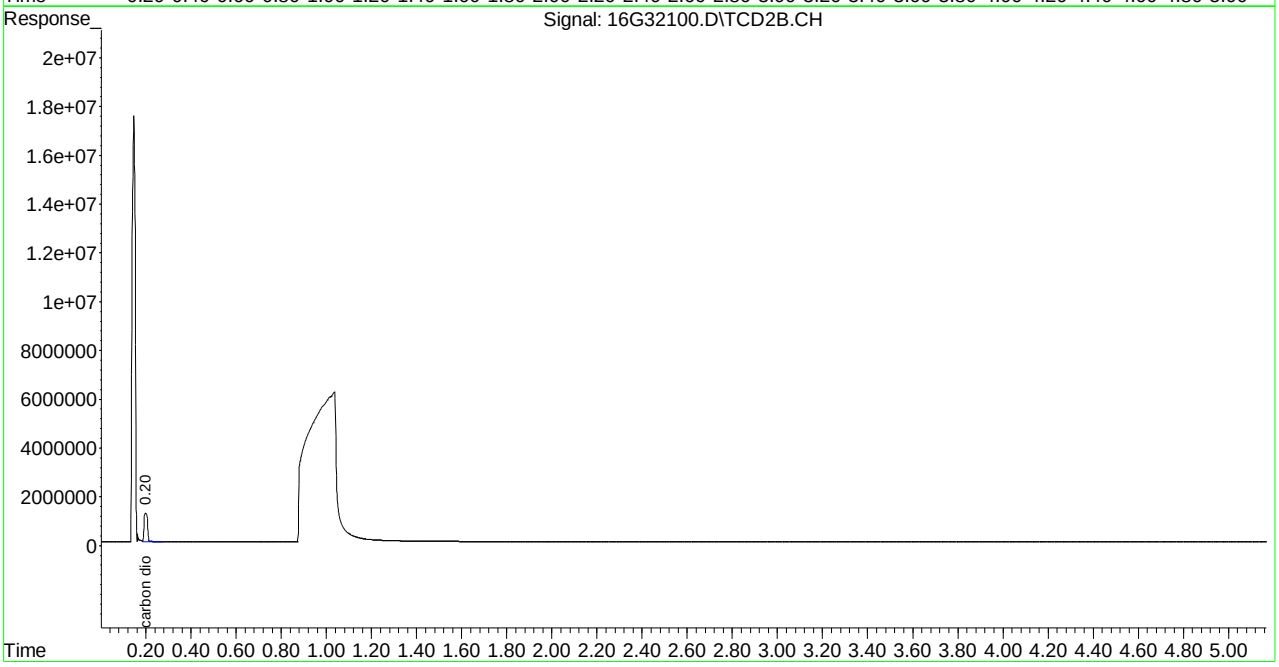
(f)=RT Delta > 1/2 Window (m)=manual int.
16G32100.D RSK2EXT.M Mon Apr 30 15:09:45 2012 Page 1

Signal #1 : C:\MSDchem\1\DATA\043012\16G32100.D\FID1A.CH Vial: 10
Signal #2 : C:\MSDchem\1\DATA\043012\16G32100.D\TCD2B.CH
Acq On : 30 Apr 2012 15:04 Operator: MDA
Sample : WG396526-02 1.67umol/mol CCV RSK175 Inst : HP16
Misc : 1,1 STD38726 Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Apr 30 15:09 2012 Quant Results File: RSK2EXT.RES

Quant Method : C:\MSDCHEM\1\METHODS\RSK2EXT.M (Chemstation Integrator)
Title : RSK175 HP16 (SOP: OVL RSK01) 043012
Last Update : Mon Apr 30 14:45:53 2012
Response via : Multiple Level Calibration
DataAcq Meth : RSK2EXT.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :



Quantitation Report (Not Reviewed)

Signal #1 : C:\MSDchem\1\DATA\043012\16G32101.D\FID1A.CH Vial: 11
Signal #2 : C:\MSDchem\1\DATA\043012\16G32101.D\TCD2B.CH
Acq On : 30 Apr 2012 15:24 Operator: MDA
Sample : WG396526-08 133umol/mol ICV RSK175 Inst : HP16
Misc : 1,1 STD45308 Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Apr 30 15:29:41 2012 Quant Results File: RSK2EXT.RES

Quant Method : C:\MSDCHEM\1\METHODS\RSK2EXT.M (Chemstation Integrator)
Title : RSK175 HP16 (SOP: OVL RSK01) 043012
Last Update : Mon Apr 30 15:17:04 2012
Response via : Initial Calibration
DataAcq Meth : RSK2EXT.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

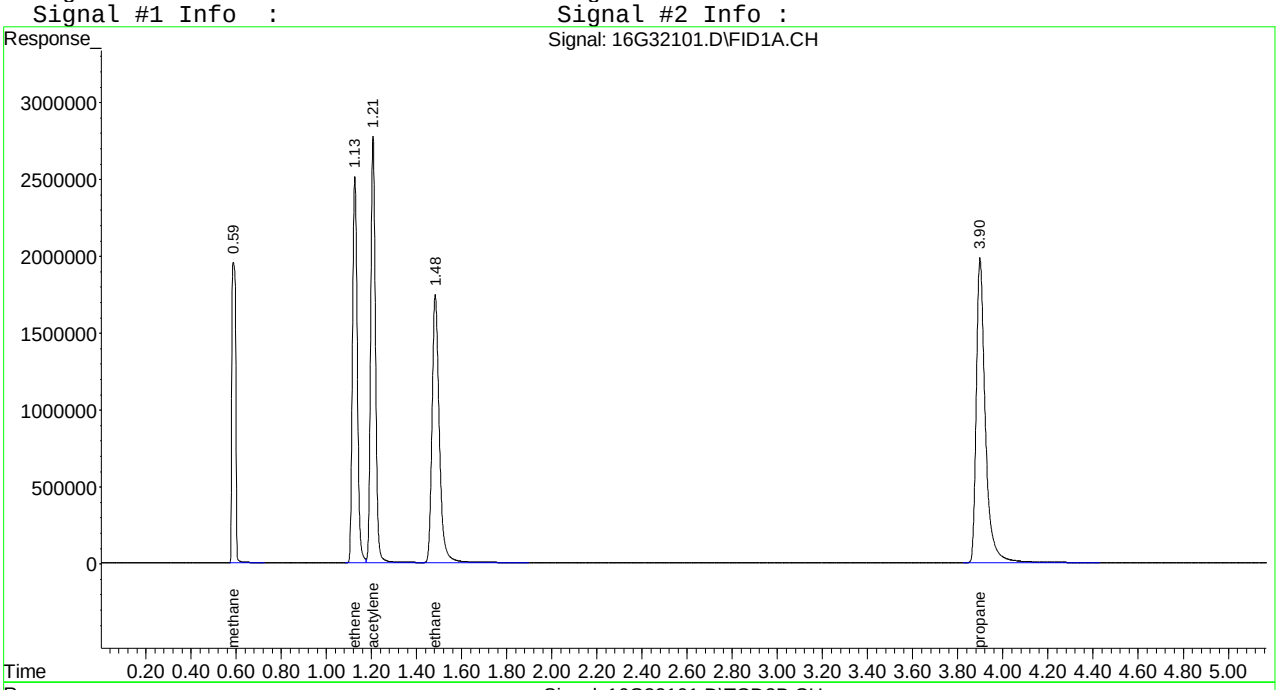
| | Compound | R.T. | Response | Conc Units |
|---|---|---|---|---|
| | Target Compounds | | | |
| 1) T | methane | 0.59 | 22836049 | 125.936 umol/ |
| 2) T | ethene | 1.13 | 37088559 | 125.126 umol/ |
| 3) T | acetylene | 1.21 | 41185177 | 142.223 umol/ |
| 4) T | ethane | 1.48 | 38937915 | 128.104 umol/ |
| 5) T | propane | 3.90 | 55298984 | 126.002 umol/ |
| 7) T | carbon dioxide | 0.20 | 70387680 | 12330.663 umol/ |

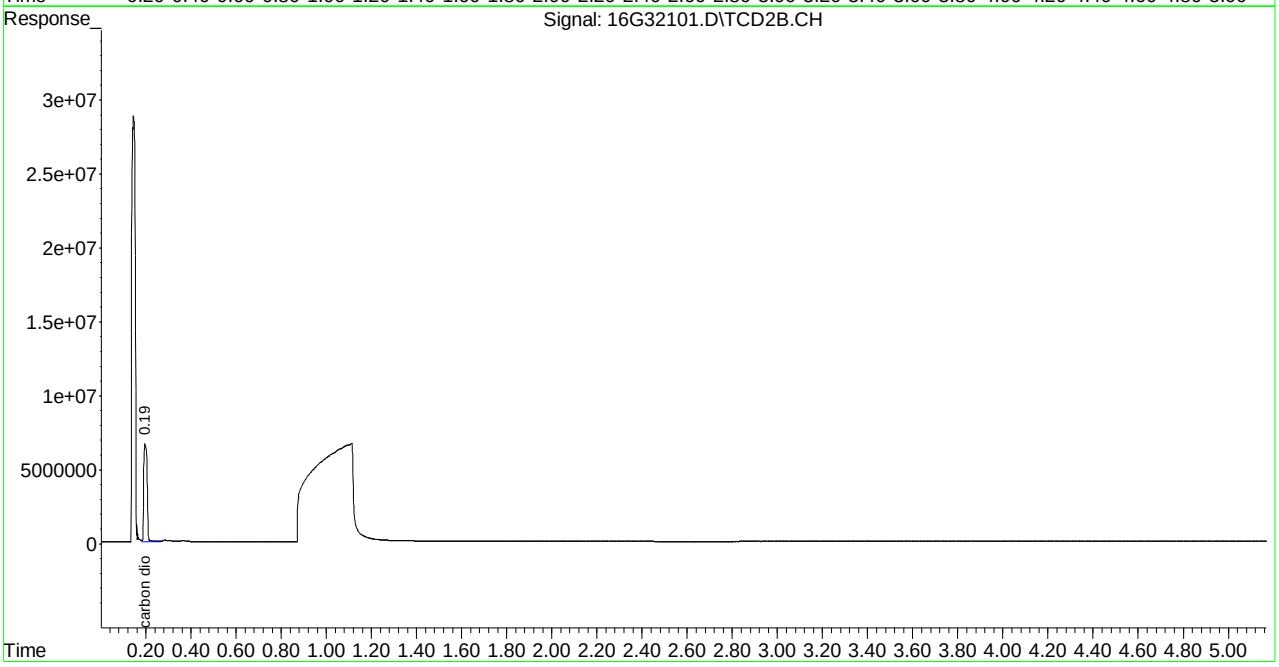
(f)=RT Delta > 1/2 Window (m)=manual int.
16G32101.D RSK2EXT.M Mon Apr 30 15:29:41 2012 Page 1

Signal #1 : C:\MSDchem\1\DATA\043012\16G32101.D\FID1A.CH Vial: 11
Signal #2 : C:\MSDchem\1\DATA\043012\16G32101.D\TCD2B.CH
Acq On : 30 Apr 2012 15:24 Operator: MDA
Sample : WG396526-08 133umol/mol ICV RSK175 Inst : HP16
Misc : 1,1 STD45308 Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: Apr 30 15:29 2012 Quant Results File: RSK2EXT.RES

Quant Method : C:\MSDCHEM\1\METHODS\RSK2EXT.M (Chemstation Integrator)
Title : RSK175 HP16 (SOP: OVL RSK01) 043012
Last Update : Mon Apr 30 15:17:04 2012
Response via : Multiple Level Calibration
DataAcq Meth : RSK2EXT.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :



Evaluate Continuing Calibration Report

Signal #1 : C:\MSDCHEM\1\DATA\043012\16G32101.D\FID1A.CH Vial: 11
Signal #2 : C:\MSDCHEM\1\DATA\043012\16G32101.D\TCD2B.CH
Acq On : 30 Apr 2012 15:24 Operator: MDA
Sample : WG396526-08 133umol/mol ICV RSK175 Inst : HP16
Misc : 1,1 STD45308 Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e

Method : C:\MSDCHEM\1\METHODS\RSK2EXT.M (Chemstation Integrator)
Title : RSK175 HP16 (SOP: OVL RSK01) 043012
Last Update : Mon Apr 30 15:17:04 2012
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 15% Max. Rel. Area : 150%

| | | Compound | Amount | Calc. | %Dev | Area% | Dev(min) |
|---|---|---|---|---|---|---|---|
| 1 | T | methane | 133.000 | 125.936 | 5.3 | 100 | 0.00 |
| 2 | T | ethene | 133.000 | 125.126 | 5.9 | 99 | 0.00 |
| 3 | T | acetylene | 133.000 | 142.223 | -6.9 | 117 | 0.00 |
| 4 | T | ethane | 133.000 | 128.104 | 3.7 | 101 | 0.00 |
| 5 | T | propane | 133.000 | 126.002 | 5.3 | 99 | 0.00 |
| | | Signal #2 | | | | | |
| 7 | T | carbon dioxide | 13333.000 | 12330.663 | 7.5 | 96 | 0.00 |

(#) = Out of Range SPCC's out = 0 CCC's out = 0
16G32101.D RSK2EXT.M Mon Apr 30 15:31:36 2012 Page 1

Signal #1 : C:\MSDCHEM\1\DATA\043012\16G32101.D\FID1A.CH Vial: 11
Signal #2 : C:\MSDCHEM\1\DATA\043012\16G32101.D\TCD2B.CH
Acq On : 30 Apr 2012 15:24 Operator: MDA
Sample : WG396526-08 133umol/mol ICV RSK175 Inst : HP16
Misc : 1,1 STD45308 Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e

Method : C:\MSDCHEM\1\METHODS\RSK2EXT.M (Chemstation Integrator)
Title : RSK175 HP16 (SOP: OVL RSK01) 043012
Last Update : Mon Apr 30 15:17:04 2012
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 15% Max. Rel. Area : 150%

| Compound | Amount | Calc. | %Dev | Area% | Dev(min) |
|---|---|---|---|---|---|

Signal #2

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Quantitation Report (Not Reviewed)

Signal #1 : C:\MSDchem\1\DATA\051012\16G32388.D\FID1A.CH Vial: 1
Signal #2 : C:\MSDchem\1\DATA\051012\16G32388.D\TCD2B.CH
Acq On : 10 May 2012 13:09 Operator: FJB
Sample : WG397660-01 133umol/mol CCV RSK175 Inst : HP16
Misc : 1,1 STD38726 Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: May 10 13:14:17 2012 Quant Results File: RSK2EXT.RES

Quant Method : C:\MSDCHEM\1\METHODS\RSK2EXT.M (Chemstation Integrator)
Title : RSK175 HP16 (SOP: OVL RSK01) 043012
Last Update : Mon Apr 30 15:17:04 2012
Response via : Initial Calibration
DataAcq Meth : RSK2EXT.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

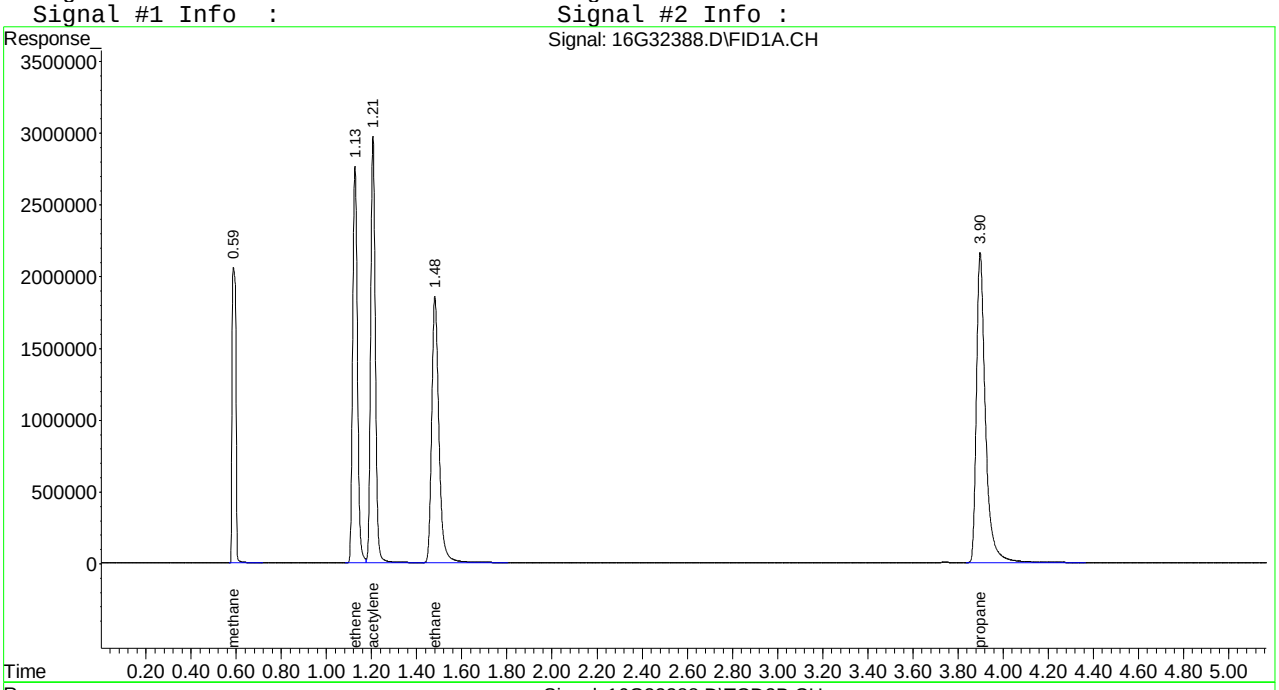
| | Compound | R.T. | Response | Conc Units |
|---|---|---|---|---|
| | Target Compounds | | | |
| 1) T | methane | 0.59 | 23837332 | 131.458 umol/ |
| 2) T | ethene | 1.13 | 40307962 | 135.987 umol/ |
| 3) T | acetylene | 1.21 | 43320686 | 149.598 umol/ |
| 4) T | ethane | 1.48 | 41263418 | 135.754 umol/ |
| 5) T | propane | 3.90 | 60344253 | 137.498 umol/ |
| 7) T | carbon dioxide | 0.20 | 84799483 | 14855.353 umol/ |

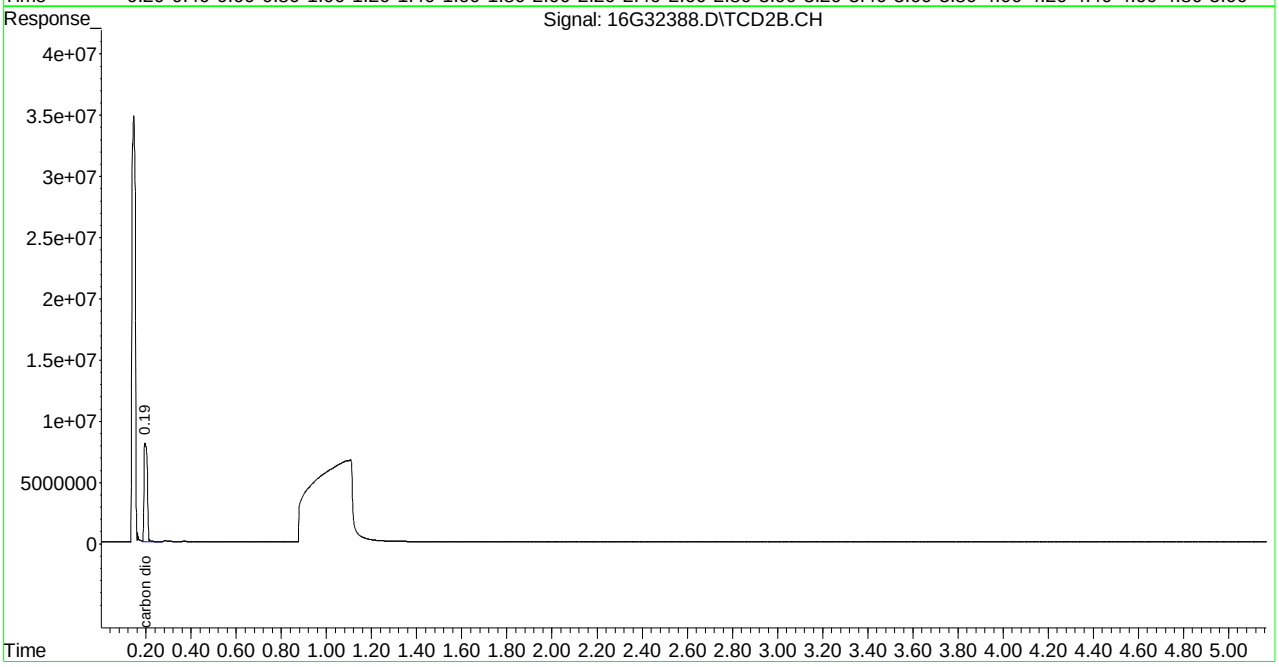
(f)=RT Delta > 1/2 Window (m)=manual int.
16G32388.D RSK2EXT.M Thu May 10 13:14:17 2012 Page 1

Signal #1 : C:\MSDchem\1\DATA\051012\16G32388.D\FID1A.CH Vial: 1
Signal #2 : C:\MSDchem\1\DATA\051012\16G32388.D\TCD2B.CH
Acq On : 10 May 2012 13:09 Operator: FJB
Sample : WG397660-01 133umol/mol CCV RSK175 Inst : HP16
Misc : 1,1 STD38726 Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: May 10 13:14 2012 Quant Results File: RSK2EXT.RES

Quant Method : C:\MSDCHEM\1\METHODS\RSK2EXT.M (Chemstation Integrator)
Title : RSK175 HP16 (SOP: OVL RSK01) 043012
Last Update : Mon Apr 30 15:17:04 2012
Response via : Multiple Level Calibration
DataAcq Meth : RSK2EXT.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :



Evaluate Continuing Calibration Report

Signal #1 : C:\MSDCHEM\1\DATA\051012\16G32388.D\FID1A.CH Vial: 1
Signal #2 : C:\MSDCHEM\1\DATA\051012\16G32388.D\TCD2B.CH
Acq On : 10 May 2012 13:09 Operator: FJB
Sample : WG397660-01 133umol/mol CCV RSK175 Inst : HP16
Misc : 1,1 STD38726 Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e

Method : C:\MSDCHEM\1\METHODS\RSK2EXT.M (Chemstation Integrator)
Title : RSK175 HP16 (SOP: OVL RSK01) 043012
Last Update : Mon Apr 30 15:17:04 2012
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 15% Max. Rel. Area : 150%

| | | Compound | Amount | Calc. | %Dev | Area% | Dev(min) |
|---|---|---|---|---|---|---|---|
| 1 | T | methane | 133.000 | 131.458 | 1.2 | 104 | 0.00 |
| 2 | T | ethene | 133.000 | 135.987 | -2.2 | 108 | 0.00 |
| 3 | T | acetylene | 133.000 | 149.598 | -12.5 | 123 | 0.00 |
| 4 | T | ethane | 133.000 | 135.754 | -2.1 | 107 | 0.00 |
| 5 | T | propane | 133.000 | 137.498 | -3.4 | 109 | 0.00 |
| | | Signal #2 | | | | | |
| 7 | T | carbon dioxide | 13333.000 | 14855.353 | -11.4 | 116 | 0.00 |

(#) = Out of Range SPCC's out = 0 CCC's out = 0
16G32388.D RSK2EXT.M Fri May 11 08:31:02 2012 Page 1

Signal #1 : C:\MSDCHEM\1\DATA\051012\16G32388.D\FID1A.CH Vial: 1
Signal #2 : C:\MSDCHEM\1\DATA\051012\16G32388.D\TCD2B.CH
Acq On : 10 May 2012 13:09 Operator: FJB
Sample : WG397660-01 133umol/mol CCV RSK175 Inst : HP16
Misc : 1,1 STD38726 Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e

Method : C:\MSDCHEM\1\METHODS\RSK2EXT.M (Chemstation Integrator)
Title : RSK175 HP16 (SOP: OVL RSK01) 043012
Last Update : Mon Apr 30 15:17:04 2012
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 15% Max. Rel. Area : 150%

| Compound | Amount | Calc. | %Dev | Area% | Dev(min) |
|---|---|---|---|---|---|

Signal #2

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Quantitation Report (Not Reviewed)

Signal #1 : C:\MSDchem\1\DATA\051012\16G32399.D\FID1A.CH Vial: 12
Signal #2 : C:\MSDchem\1\DATA\051012\16G32399.D\TCD2B.CH
Acq On : 10 May 2012 14:56 Operator: FJB
Sample : WG397660-02 133umol/mol CCV RSK175 Inst : HP16
Misc : 1,1 STD38726 Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: May 10 15:01:39 2012 Quant Results File: RSK2EXT.RES

Quant Method : C:\MSDCHEM\1\METHODS\RSK2EXT.M (Chemstation Integrator)
Title : RSK175 HP16 (SOP: OVL RSK01) 043012
Last Update : Mon Apr 30 15:17:04 2012
Response via : Initial Calibration
DataAcq Meth : RSK2EXT.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

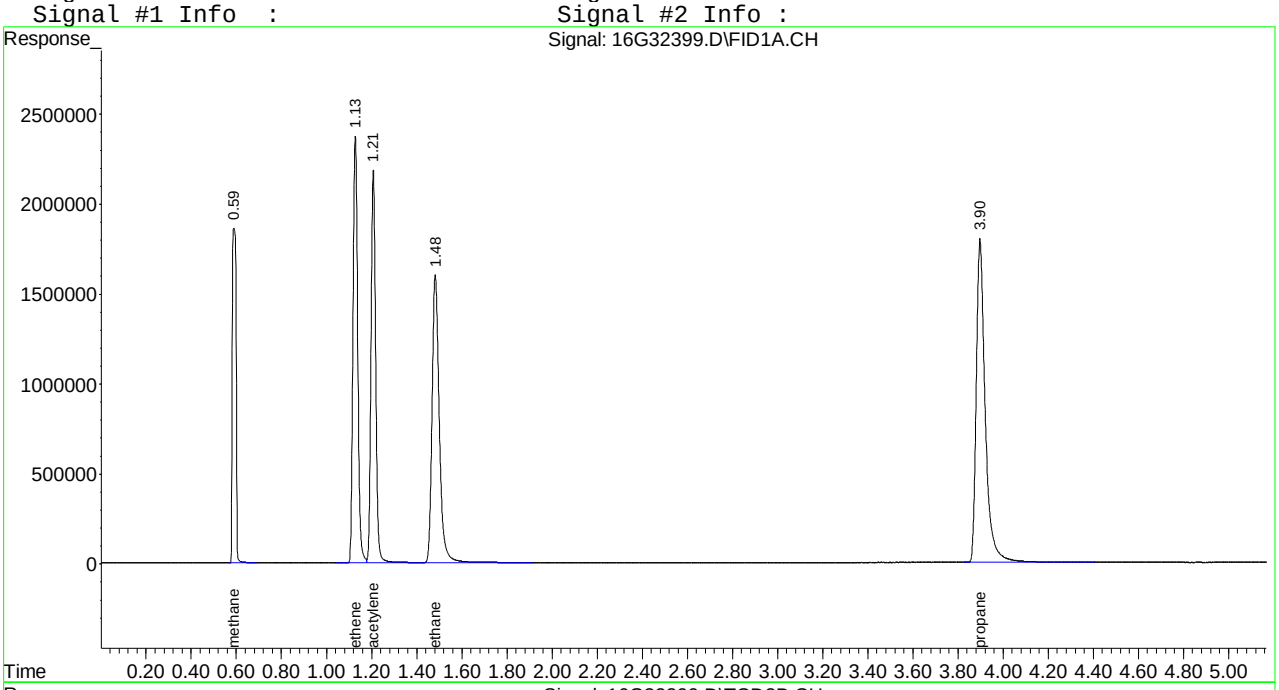
| | Compound | R.T. | Response | Conc Units |
|---|---|---|---|---|
| | Target Compounds | | | |
| 1) T | methane | 0.59 | 21567280 | 118.939 umol/ |
| 2) T | ethene | 1.13 | 34327901 | 115.812 umol/ |
| 3) T | acetylene | 1.21 | 31539478 | 108.914 umol/ |
| 4) T | ethane | 1.48 | 35542203 | 116.932 umol/ |
| 5) T | propane | 3.90 | 49779113 | 113.425 umol/ |
| 7) T | carbon dioxide | 0.20 | 64560946 | 11309.923 umol/ |

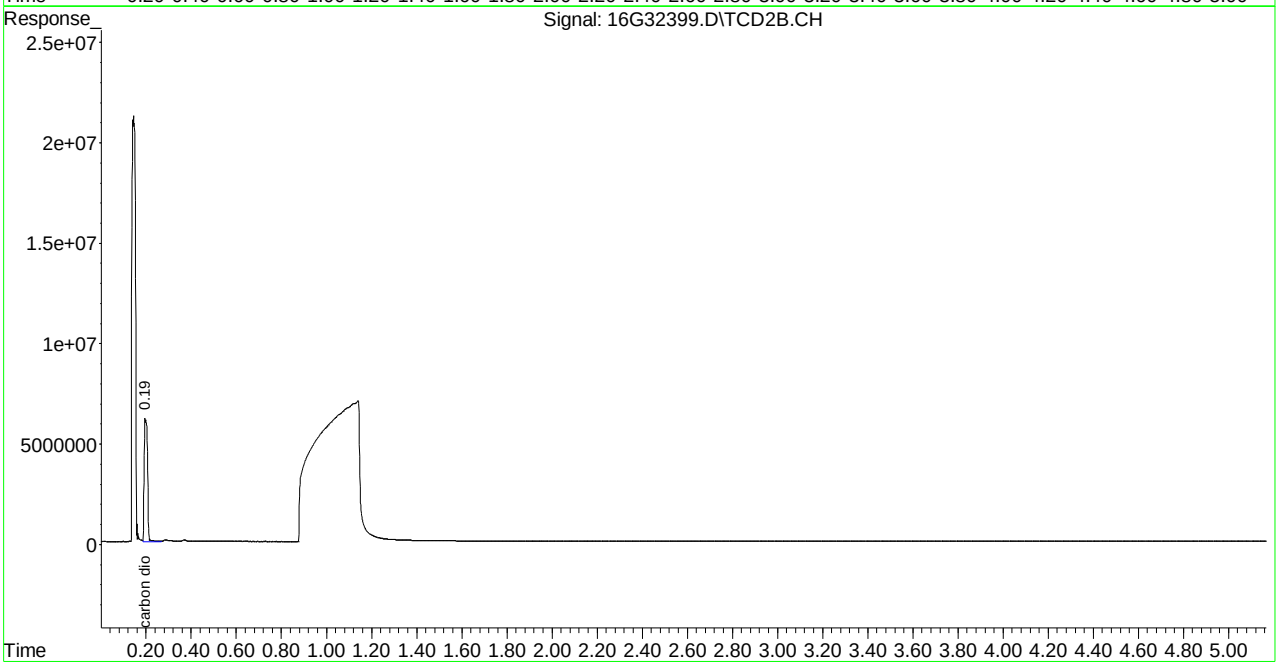
(f)=RT Delta > 1/2 Window (m)=manual int.
16G32399.D RSK2EXT.M Thu May 10 15:01:39 2012 Page 1

Signal #1 : C:\MSDchem\1\DATA\051012\16G32399.D\FID1A.CH Vial: 12
Signal #2 : C:\MSDchem\1\DATA\051012\16G32399.D\TCD2B.CH
Acq On : 10 May 2012 14:56 Operator: FJB
Sample : WG397660-02 133umol/mol CCV RSK175 Inst : HP16
Misc : 1,1 STD38726 Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: May 10 15:01 2012 Quant Results File: RSK2EXT.RES

Quant Method : C:\MSDCHEM\1\METHODS\RSK2EXT.M (Chemstation Integrator)
Title : RSK175 HP16 (SOP: OVL RSK01) 043012
Last Update : Mon Apr 30 15:17:04 2012
Response via : Multiple Level Calibration
DataAcq Meth : RSK2EXT.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :



Evaluate Continuing Calibration Report

Signal #1 : C:\MSDCHEM\1\DATA\051012\16G32399.D\FID1A.CH Vial: 12
Signal #2 : C:\MSDCHEM\1\DATA\051012\16G32399.D\TCD2B.CH
Acq On : 10 May 2012 14:56 Operator: FJB
Sample : WG397660-02 133umol/mol CCV RSK175 Inst : HP16
Misc : 1,1 STD38726 Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e

Method : C:\MSDCHEM\1\METHODS\RSK2EXT.M (Chemstation Integrator)
Title : RSK175 HP16 (SOP: OVL RSK01) 043012
Last Update : Mon Apr 30 15:17:04 2012
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 15% Max. Rel. Area : 150%

| | | Compound | Amount | Calc. | %Dev | Area% | Dev(min) |
|---|---|---|---|---|---|---|---|
| 1 | T | methane | 133.000 | 118.939 | 10.6 | 94 | 0.00 |
| 2 | T | ethene | 133.000 | 115.812 | 12.9 | 92 | 0.00 |
| 3 | T | acetylene | 133.000 | 108.914 | 18.1# | 89 | 0.00 |
| 4 | T | ethane | 133.000 | 116.932 | 12.1 | 92 | 0.00 |
| 5 | T | propane | 133.000 | 113.425 | 14.7 | 90 | 0.00 |
| | | Signal #2 | | | | | |
| 7 | T | carbon dioxide | 13333.000 | 11309.923 | 15.2# | 88 | 0.00 |

(#) = Out of Range SPCC's out = 0 CCC's out = 0
16G32399.D RSK2EXT.M Thu May 10 15:07:37 2012 Page 1

Signal #1 : C:\MSDCHEM\1\DATA\051012\16G32399.D\FID1A.CH Vial: 12
Signal #2 : C:\MSDCHEM\1\DATA\051012\16G32399.D\TCD2B.CH
Acq On : 10 May 2012 14:56 Operator: FJB
Sample : WG397660-02 133umol/mol CCV RSK175 Inst : HP16
Misc : 1,1 STD38726 Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e

Method : C:\MSDCHEM\1\METHODS\RSK2EXT.M (Chemstation Integrator)
Title : RSK175 HP16 (SOP: OVL RSK01) 043012
Last Update : Mon Apr 30 15:17:04 2012
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 15% Max. Rel. Area : 150%

| Compound | Amount | Calc. | %Dev | Area% | Dev(min) |
|---|---|---|---|---|---|

Signal #2

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Quantitation Report (Not Reviewed)

Signal #1 : C:\MSDchem\1\DATA\051012\16G32410.D\FID1A.CH Vial: 23
Signal #2 : C:\MSDchem\1\DATA\051012\16G32410.D\TCD2B.CH
Acq On : 10 May 2012 16:37 Operator: FJB
Sample : WG397660-03 133umol/mol CCV RSK175 Inst : HP16
Misc : 1,1 STD38726 Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: May 10 16:43:05 2012 Quant Results File: RSK2EXT.RES

Quant Method : C:\MSDCHEM\1\METHODS\RSK2EXT.M (Chemstation Integrator)
Title : RSK175 HP16 (SOP: OVL RSK01) 043012
Last Update : Mon Apr 30 15:17:04 2012
Response via : Initial Calibration
DataAcq Meth : RSK2EXT.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

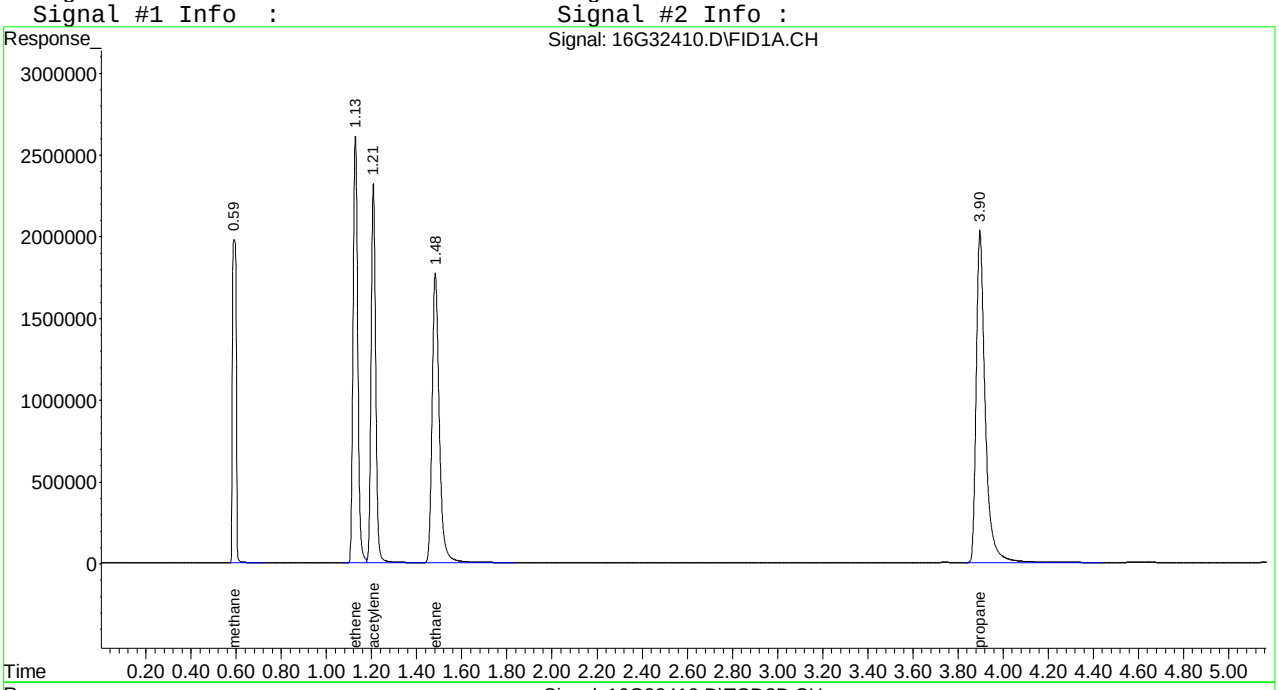
| | Compound | R.T. | Response | Conc Units |
|---|---|---|---|---|
| | Target Compounds | | | |
| 1) T | methane | 0.59 | 22933051 | 126.471 umol/ |
| 2) T | ethene | 1.13 | 37502808 | 126.524 umol/ |
| 3) T | acetylene | 1.21 | 33172845 | 114.554 umol/ |
| 4) T | ethane | 1.48 | 39050059 | 128.473 umol/ |
| 5) T | propane | 3.90 | 56341213 | 128.377 umol/ |
| 7) T | carbon dioxide | 0.20 | 64310615 | 11266.070 umol/ |

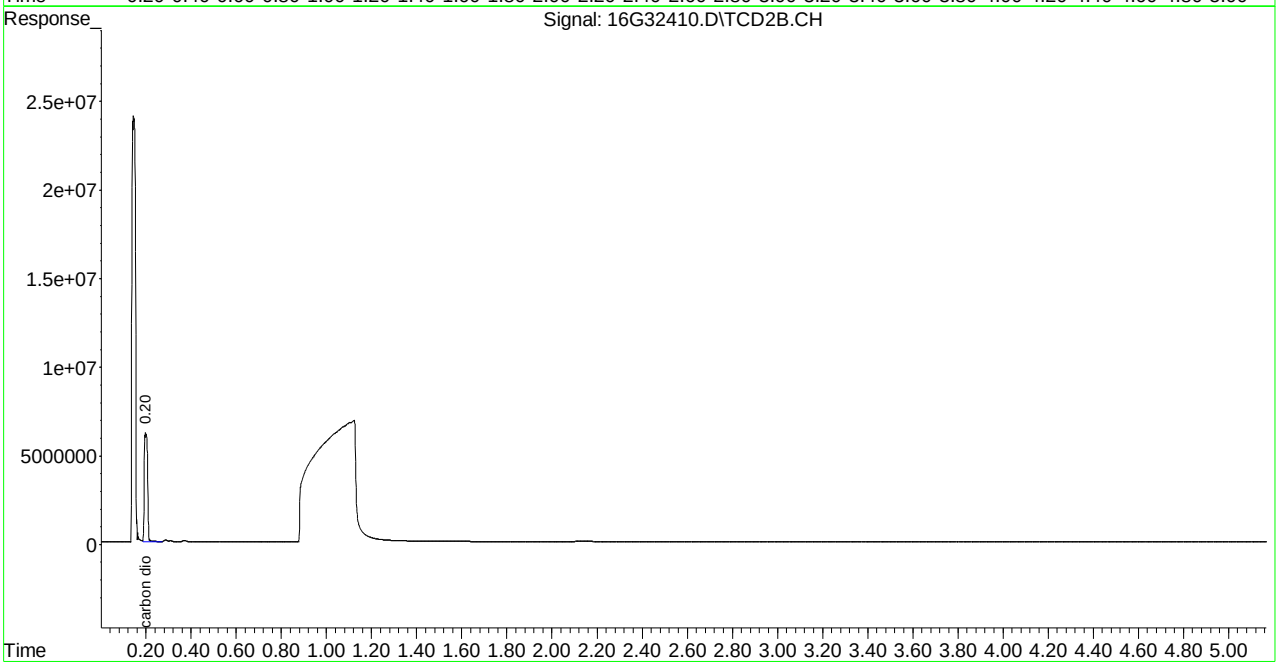
(f)=RT Delta > 1/2 Window (m)=manual int.
16G32410.D RSK2EXT.M Thu May 10 16:43:05 2012 Page 1

Signal #1 : C:\MSDchem\1\DATA\051012\16G32410.D\FID1A.CH Vial: 23
Signal #2 : C:\MSDchem\1\DATA\051012\16G32410.D\TCD2B.CH
Acq On : 10 May 2012 16:37 Operator: FJB
Sample : WG397660-03 133umol/mol CCV RSK175 Inst : HP16
Misc : 1,1 STD38726 Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: May 10 16:43 2012 Quant Results File: RSK2EXT.RES

Quant Method : C:\MSDCHEM\1\METHODS\RSK2EXT.M (Chemstation Integrator)
Title : RSK175 HP16 (SOP: OVL RSK01) 043012
Last Update : Mon Apr 30 15:17:04 2012
Response via : Multiple Level Calibration
DataAcq Meth : RSK2EXT.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :



Evaluate Continuing Calibration Report

Signal #1 : C:\MSDCHEM\1\DATA\051012\16G32410.D\FID1A.CH Vial: 23
Signal #2 : C:\MSDCHEM\1\DATA\051012\16G32410.D\TCD2B.CH
Acq On : 10 May 2012 16:37 Operator: FJB
Sample : WG397660-03 133umol/mol CCV RSK175 Inst : HP16
Misc : 1,1 STD38726 Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e

Method : C:\MSDCHEM\1\METHODS\RSK2EXT.M (Chemstation Integrator)
Title : RSK175 HP16 (SOP: OVL RSK01) 043012
Last Update : Mon Apr 30 15:17:04 2012
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 15% Max. Rel. Area : 150%

| | | Compound | Amount | Calc. | %Dev | Area% | Dev(min) |
|---|---|---|---|---|---|---|---|
| 1 | T | methane | 133.000 | 126.471 | 4.9 | 100 | 0.00 |
| 2 | T | ethene | 133.000 | 126.524 | 4.9 | 100 | 0.00 |
| 3 | T | acetylene | 133.000 | 114.554 | 13.9 | 94 | 0.00 |
| 4 | T | ethane | 133.000 | 128.473 | 3.4 | 101 | 0.00 |
| 5 | T | propane | 133.000 | 128.377 | 3.5 | 101 | 0.00 |
| | | Signal #2 | | | | | |
| 7 | T | carbon dioxide | 13333.000 | 11266.070 | 15.5# | 88 | 0.00 |

(#) = Out of Range SPCC's out = 0 CCC's out = 0
16G32410.D RSK2EXT.M Fri May 11 08:30:34 2012 Page 1

Signal #1 : C:\MSDCHEM\1\DATA\051012\16G32410.D\FID1A.CH Vial: 23
Signal #2 : C:\MSDCHEM\1\DATA\051012\16G32410.D\TCD2B.CH
Acq On : 10 May 2012 16:37 Operator: FJB
Sample : WG397660-03 133umol/mol CCV RSK175 Inst : HP16
Misc : 1,1 STD38726 Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e

Method : C:\MSDCHEM\1\METHODS\RSK2EXT.M (Chemstation Integrator)
Title : RSK175 HP16 (SOP: OVL RSK01) 043012
Last Update : Mon Apr 30 15:17:04 2012
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 15% Max. Rel. Area : 150%

| Compound | Amount | Calc. | %Dev | Area% | Dev(min) |
|---|---|---|---|---|---|

Signal #2

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Quantitation Report (Not Reviewed)

Signal #1 : C:\MSDchem\1\DATA\051012\16G32414.D\FID1A.CH Vial: 27
Signal #2 : C:\MSDchem\1\DATA\051012\16G32414.D\TCD2B.CH
Acq On : 10 May 2012 17:14 Operator: FJB
Sample : WG397660-04 133umol/mol CCV RSK175 Inst : HP16
Misc : 1,1 STD38726 Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: May 10 17:20:11 2012 Quant Results File: RSK2EXT.RES

Quant Method : C:\MSDCHEM\1\METHODS\RSK2EXT.M (Chemstation Integrator)
Title : RSK175 HP16 (SOP: OVL RSK01) 043012
Last Update : Mon Apr 30 15:17:04 2012
Response via : Initial Calibration
DataAcq Meth : RSK2EXT.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

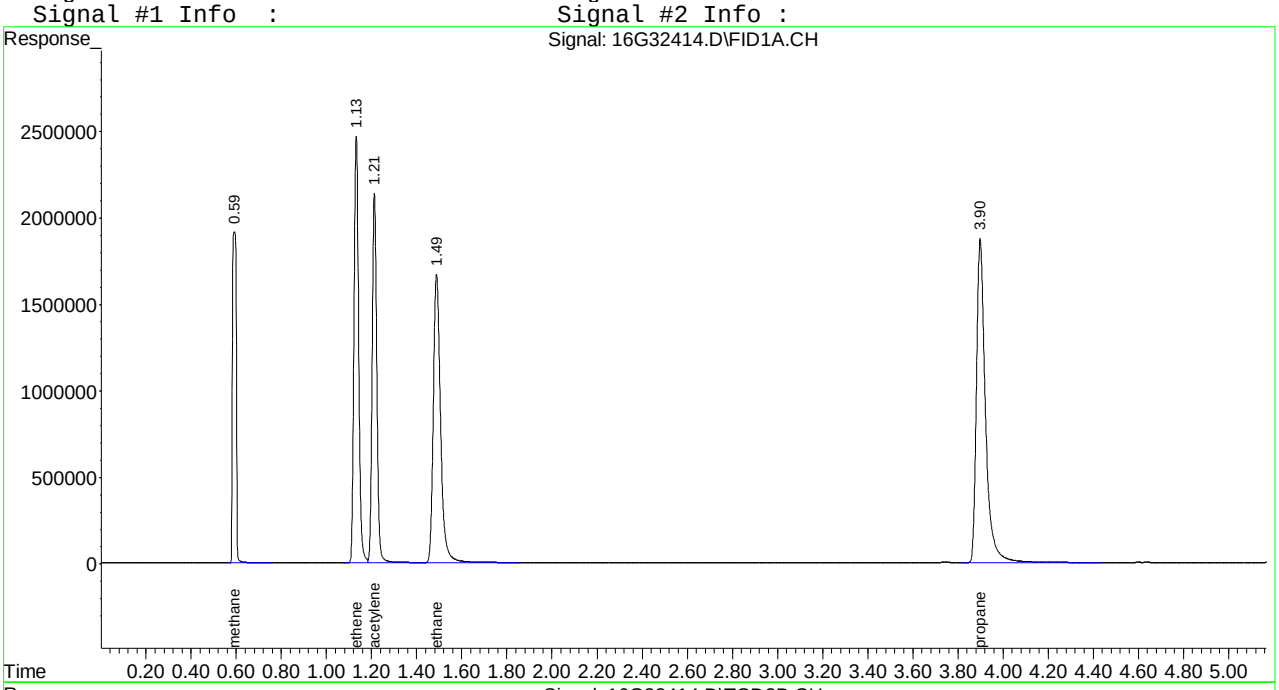
| | Compound | R.T. | Response | Conc Units |
|---|---|---|---|---|
| | Target Compounds | | | |
| 1) T | methane | 0.59 | 22307768 | 123.022 umol/ |
| 2) T | ethene | 1.13 | 35615894 | 120.158 umol/ |
| 3) T | acetylene | 1.21 | 30816363 | 106.417 umol/ |
| 4) T | ethane | 1.49 | 37045922 | 121.879 umol/ |
| 5) T | propane | 3.90 | 52179685 | 118.895 umol/ |
| 7) T | carbon dioxide | 0.20 | 59246238 | 10378.881 umol/ |

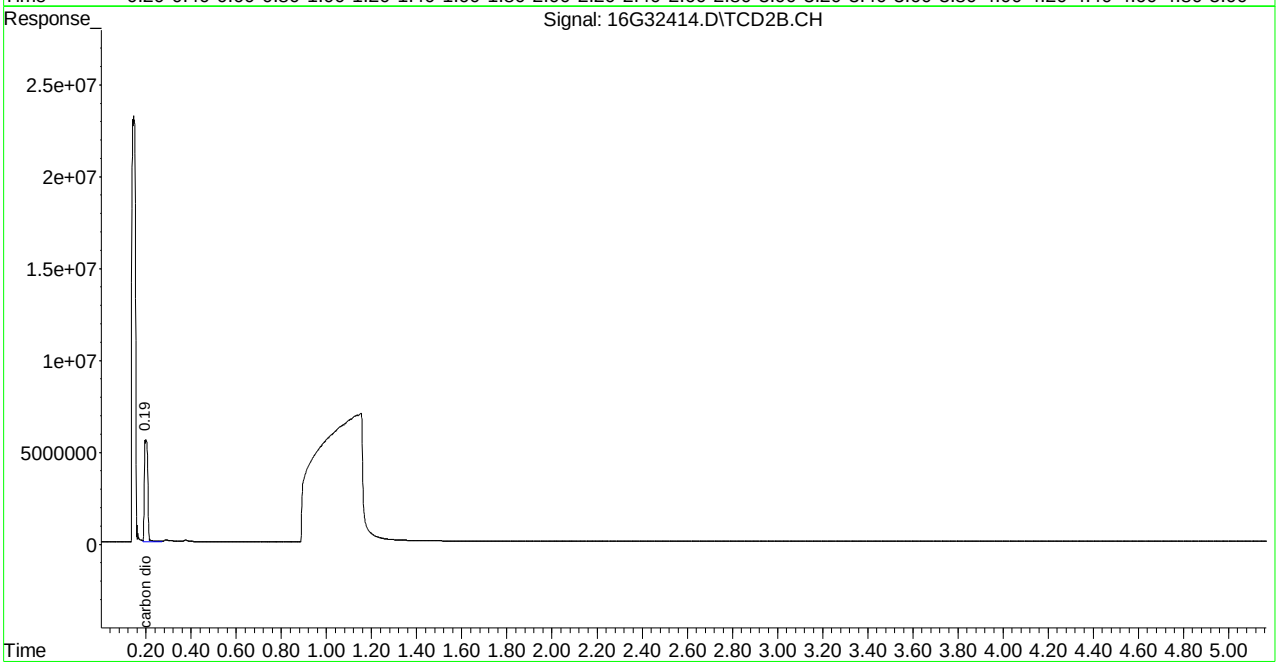
(f)=RT Delta > 1/2 Window (m)=manual int.
16G32414.D RSK2EXT.M Thu May 10 17:20:11 2012 Page 1

Signal #1 : C:\MSDchem\1\DATA\051012\16G32414.D\FID1A.CH Vial: 27
Signal #2 : C:\MSDchem\1\DATA\051012\16G32414.D\TCD2B.CH
Acq On : 10 May 2012 17:14 Operator: FJB
Sample : WG397660-04 133umol/mol CCV RSK175 Inst : HP16
Misc : 1,1 STD38726 Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: May 10 17:20 2012 Quant Results File: RSK2EXT.RES

Quant Method : C:\MSDCHEM\1\METHODS\RSK2EXT.M (Chemstation Integrator)
Title : RSK175 HP16 (SOP: OVL RSK01) 043012
Last Update : Mon Apr 30 15:17:04 2012
Response via : Multiple Level Calibration
DataAcq Meth : RSK2EXT.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :



Evaluate Continuing Calibration Report

Signal #1 : C:\MSDCHEM\1\DATA\051012\16G32414.D\FID1A.CH Vial: 27
Signal #2 : C:\MSDCHEM\1\DATA\051012\16G32414.D\TCD2B.CH
Acq On : 10 May 2012 17:14 Operator: FJB
Sample : WG397660-04 133umol/mol CCV RSK175 Inst : HP16
Misc : 1,1 STD38726 Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e

Method : C:\MSDCHEM\1\METHODS\RSK2EXT.M (Chemstation Integrator)
Title : RSK175 HP16 (SOP: OVL RSK01) 043012
Last Update : Mon Apr 30 15:17:04 2012
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 15% Max. Rel. Area : 150%

| | | Compound | Amount | Calc. | %Dev | Area% | Dev(min) |
|---|---|---|---|---|---|---|---|
| 1 | T | methane | 133.000 | 123.022 | 7.5 | 97 | 0.00 |
| 2 | T | ethene | 133.000 | 120.158 | 9.7 | 95 | 0.00 |
| 3 | T | acetylene | 133.000 | 106.417 | 20.0# | 87 | 0.00 |
| 4 | T | ethane | 133.000 | 121.879 | 8.4 | 96 | 0.00 |
| 5 | T | propane | 133.000 | 118.895 | 10.6 | 94 | 0.00 |
| | | Signal #2 | | | | | |
| 7 | T | carbon dioxide | 13333.000 | 10378.881 | 22.2# | 81 | 0.00 |

(#) = Out of Range SPCC's out = 0 CCC's out = 0
16G32414.D RSK2EXT.M Fri May 11 08:30:40 2012 Page 1

Signal #1 : C:\MSDCHEM\1\DATA\051012\16G32414.D\FID1A.CH Vial: 27
Signal #2 : C:\MSDCHEM\1\DATA\051012\16G32414.D\TCD2B.CH
Acq On : 10 May 2012 17:14 Operator: FJB
Sample : WG397660-04 133umol/mol CCV RSK175 Inst : HP16
Misc : 1,1 STD38726 Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e

Method : C:\MSDCHEM\1\METHODS\RSK2EXT.M (Chemstation Integrator)
Title : RSK175 HP16 (SOP: OVL RSK01) 043012
Last Update : Mon Apr 30 15:17:04 2012
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 15% Max. Rel. Area : 150%

| Compound | Amount | Calc. | %Dev | Area% | Dev(min) |
|---|---|---|---|---|---|

Signal #2

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Quantitation Report (Not Reviewed)

Signal #1 : C:\MSDchem\1\DATA\051112\16G32415.D\FID1A.CH Vial: 1
Signal #2 : C:\MSDchem\1\DATA\051112\16G32415.D\TCD2B.CH
Acq On : 11 May 2012 14:00 Operator: FJB
Sample : WG397785-01 133umol/mol CCV RSK175 Inst : HP16
Misc : 1,1 STD38726 Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: May 11 14:05:56 2012 Quant Results File: RSK2EXT.RES

Quant Method : C:\MSDCHEM\1\METHODS\RSK2EXT.M (Chemstation Integrator)
Title : RSK175 HP16 (SOP: OVL RSK01) 043012
Last Update : Mon Apr 30 15:17:04 2012
Response via : Initial Calibration
DataAcq Meth : RSK2EXT.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

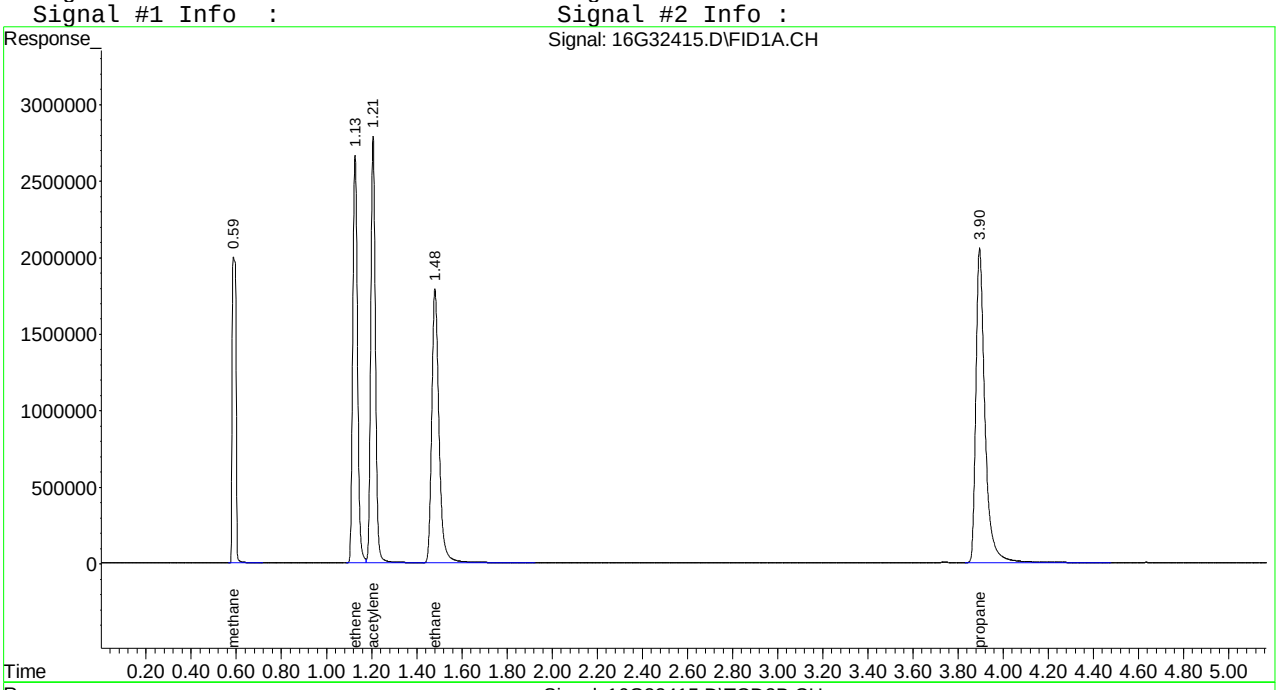
| | Compound | R.T. | Response | Conc Units |
|---|---|---|---|---|
| | Target Compounds | | | |
| 1) T | methane | 0.59 | 23467930 | 129.421 umol/ |
| 2) T | ethene | 1.13 | 38939037 | 131.369 umol/ |
| 3) T | acetylene | 1.21 | 40510300 | 139.893 umol/ |
| 4) T | ethane | 1.48 | 39942817 | 131.410 umol/ |
| 5) T | propane | 3.90 | 57534065 | 131.095 umol/ |
| 7) T | carbon dioxide | 0.20 | 78677960 | 13782.972 umol/ |

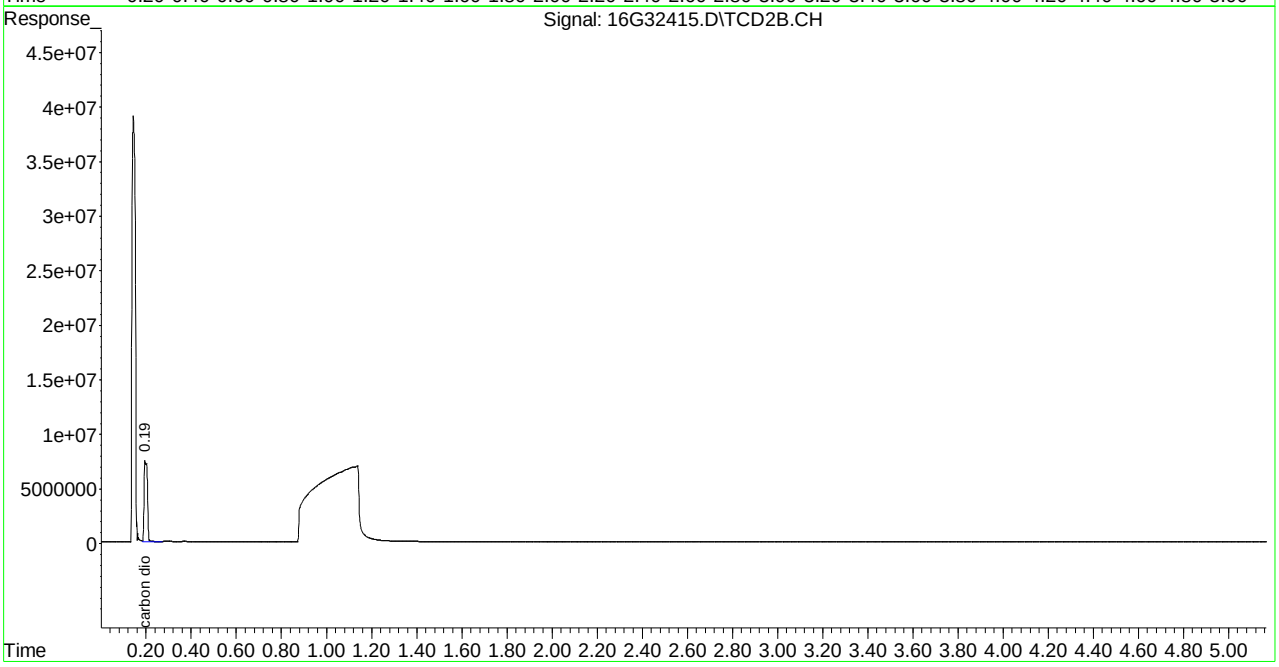
(f)=RT Delta > 1/2 Window (m)=manual int.
16G32415.D RSK2EXT.M Fri May 11 14:05:56 2012 Page 1

Signal #1 : C:\MSDchem\1\DATA\051112\16G32415.D\FID1A.CH Vial: 1
Signal #2 : C:\MSDchem\1\DATA\051112\16G32415.D\TCD2B.CH
Acq On : 11 May 2012 14:00 Operator: FJB
Sample : WG397785-01 133umol/mol CCV RSK175 Inst : HP16
Misc : 1,1 STD38726 Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: May 11 14:05 2012 Quant Results File: RSK2EXT.RES

Quant Method : C:\MSDCHEM\1\METHODS\RSK2EXT.M (Chemstation Integrator)
Title : RSK175 HP16 (SOP: OVL RSK01) 043012
Last Update : Mon Apr 30 15:17:04 2012
Response via : Multiple Level Calibration
DataAcq Meth : RSK2EXT.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :



Evaluate Continuing Calibration Report

Signal #1 : C:\MSDCHEM\1\DATA\051112\16G32415.D\FID1A.CH Vial: 1
Signal #2 : C:\MSDCHEM\1\DATA\051112\16G32415.D\TCD2B.CH
Acq On : 11 May 2012 14:00 Operator: FJB
Sample : WG397785-01 133umol/mol CCV RSK175 Inst : HP16
Misc : 1,1 STD38726 Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e

Method : C:\MSDCHEM\1\METHODS\RSK2EXT.M (Chemstation Integrator)
Title : RSK175 HP16 (SOP: OVL RSK01) 043012
Last Update : Mon Apr 30 15:17:04 2012
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 15% Max. Rel. Area : 150%

| | | Compound | Amount | Calc. | %Dev | Area% | Dev(min) |
|---|---|---|---|---|---|---|---|
| 1 | T | methane | 133.000 | 129.421 | 2.7 | 102 | 0.00 |
| 2 | T | ethene | 133.000 | 131.369 | 1.2 | 104 | 0.00 |
| 3 | T | acetylene | 133.000 | 139.893 | -5.2 | 115 | 0.00 |
| 4 | T | ethane | 133.000 | 131.410 | 1.2 | 103 | 0.00 |
| 5 | T | propane | 133.000 | 131.095 | 1.4 | 103 | 0.00 |
| | | Signal #2 | | | | | |
| 7 | T | carbon dioxide | 13333.000 | 13782.972 | -3.4 | 108 | 0.00 |

(#) = Out of Range SPCC's out = 0 CCC's out = 0
16G32415.D RSK2EXT.M Mon May 14 07:59:49 2012 Page 1

Signal #1 : C:\MSDCHEM\1\DATA\051112\16G32415.D\FID1A.CH Vial: 1
Signal #2 : C:\MSDCHEM\1\DATA\051112\16G32415.D\TCD2B.CH
Acq On : 11 May 2012 14:00 Operator: FJB
Sample : WG397785-01 133umol/mol CCV RSK175 Inst : HP16
Misc : 1,1 STD38726 Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e

Method : C:\MSDCHEM\1\METHODS\RSK2EXT.M (Chemstation Integrator)
Title : RSK175 HP16 (SOP: OVL RSK01) 043012
Last Update : Mon Apr 30 15:17:04 2012
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 15% Max. Rel. Area : 150%

| Compound | Amount | Calc. | %Dev | Area% | Dev(min) |
|---|---|---|---|---|---|

Signal #2

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Quantitation Report (Not Reviewed)

Signal #1 : C:\MSDchem\1\DATA\051112\16G32426.D\FID1A.CH Vial: 12
Signal #2 : C:\MSDchem\1\DATA\051112\16G32426.D\TCD2B.CH
Acq On : 11 May 2012 15:44 Operator: FJB
Sample : WG397785-02 133umol/mol CCV RSK175 Inst : HP16
Misc : 1,1 STD38726 Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: May 11 15:49:58 2012 Quant Results File: RSK2EXT.RES

Quant Method : C:\MSDCHEM\1\METHODS\RSK2EXT.M (Chemstation Integrator)
Title : RSK175 HP16 (SOP: OVL RSK01) 043012
Last Update : Mon Apr 30 15:17:04 2012
Response via : Initial Calibration
DataAcq Meth : RSK2EXT.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

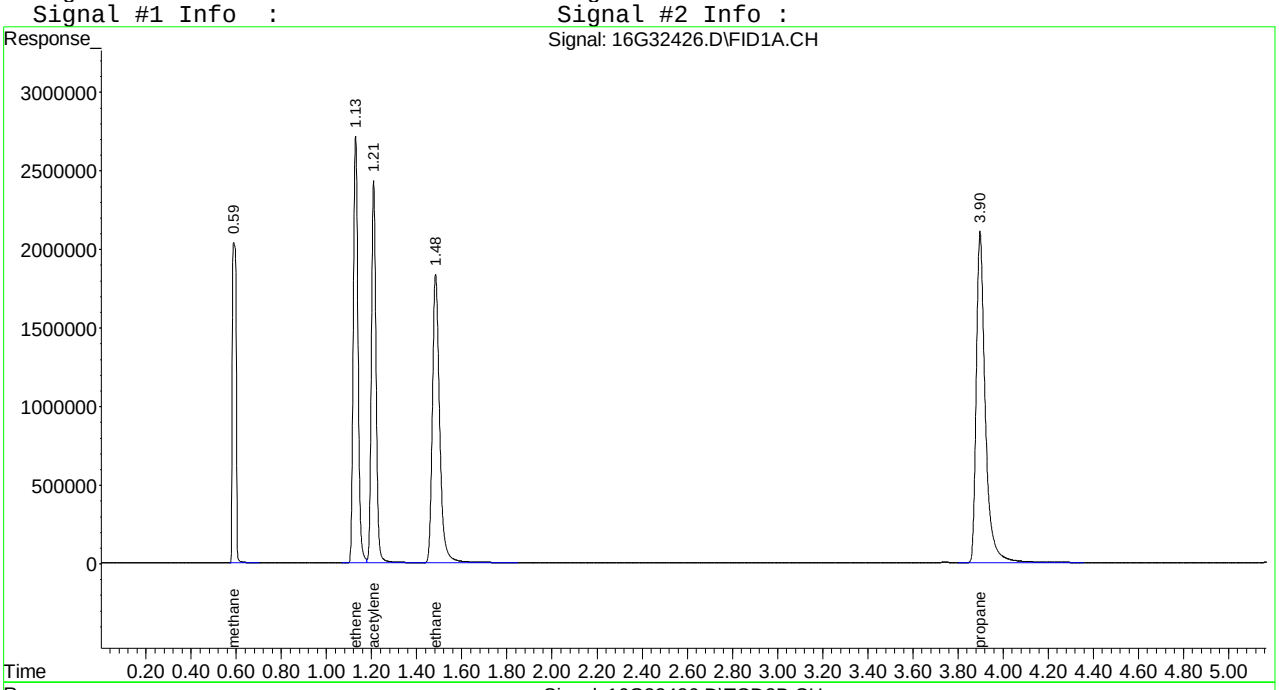
| | Compound | R.T. | Response | Conc Units |
|---|---|---|---|---|
| | Target Compounds | | | |
| 1) T | methane | 0.59 | 23887392 | 131.734 umol/ |
| 2) T | ethene | 1.13 | 39314539 | 132.636 umol/ |
| 3) T | acetylene | 1.21 | 35071825 | 121.112 umol/ |
| 4) T | ethane | 1.48 | 40769444 | 134.129 umol/ |
| 5) T | propane | 3.90 | 58648001 | 133.633 umol/ |
| 7) T | carbon dioxide | 0.20 | 67622898 | 11846.323 umol/ |

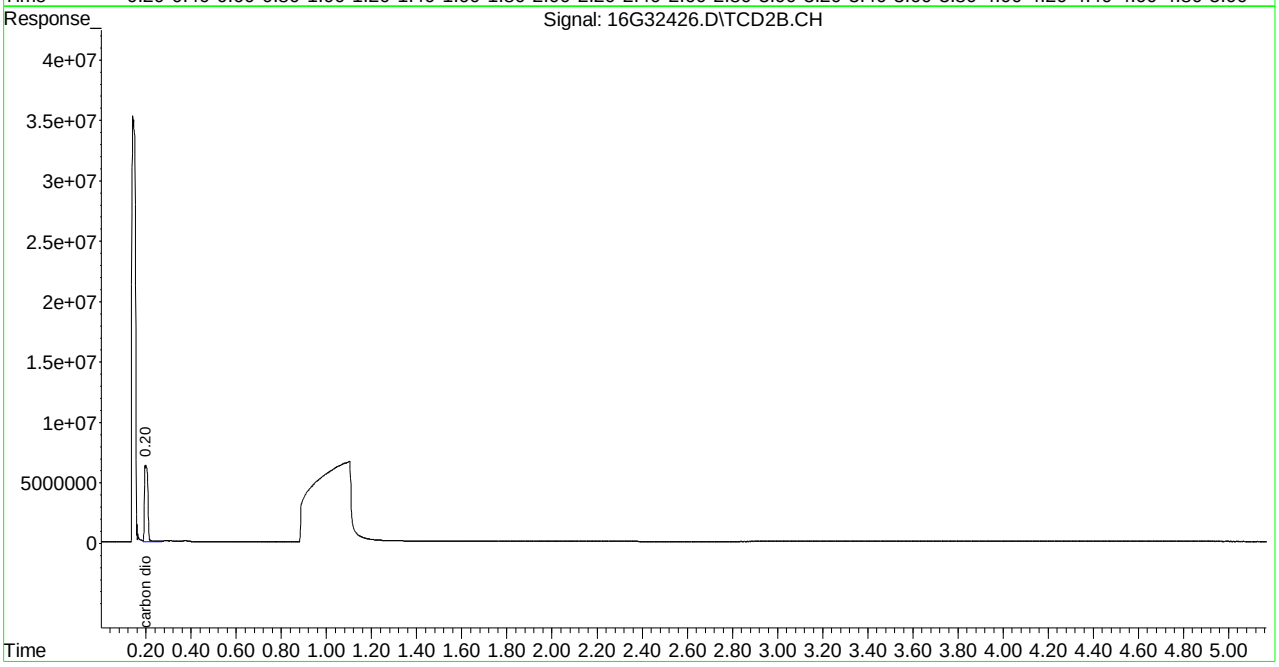
(f)=RT Delta > 1/2 Window (m)=manual int.
16G32426.D RSK2EXT.M Fri May 11 15:49:58 2012 Page 1

Signal #1 : C:\MSDchem\1\DATA\051112\16G32426.D\FID1A.CH Vial: 12
Signal #2 : C:\MSDchem\1\DATA\051112\16G32426.D\TCD2B.CH
Acq On : 11 May 2012 15:44 Operator: FJB
Sample : WG397785-02 133umol/mol CCV RSK175 Inst : HP16
Misc : 1,1 STD38726 Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: May 11 15:49 2012 Quant Results File: RSK2EXT.RES

Quant Method : C:\MSDCHEM\1\METHODS\RSK2EXT.M (Chemstation Integrator)
Title : RSK175 HP16 (SOP: OVL RSK01) 043012
Last Update : Mon Apr 30 15:17:04 2012
Response via : Multiple Level Calibration
DataAcq Meth : RSK2EXT.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :



Evaluate Continuing Calibration Report

Signal #1 : C:\MSDCHEM\1\DATA\051112\16G32426.D\FID1A.CH Vial: 12
Signal #2 : C:\MSDCHEM\1\DATA\051112\16G32426.D\TCD2B.CH
Acq On : 11 May 2012 15:44 Operator: FJB
Sample : WG397785-02 133umol/mol CCV RSK175 Inst : HP16
Misc : 1,1 STD38726 Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e

Method : C:\MSDCHEM\1\METHODS\RSK2EXT.M (Chemstation Integrator)
Title : RSK175 HP16 (SOP: OVL RSK01) 043012
Last Update : Mon Apr 30 15:17:04 2012
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 15% Max. Rel. Area : 150%

| | | Compound | Amount | Calc. | %Dev | Area% | Dev(min) |
|---|---|---|---|---|---|---|---|
| 1 | T | methane | 133.000 | 131.734 | 1.0 | 104 | 0.00 |
| 2 | T | ethene | 133.000 | 132.636 | 0.3 | 105 | 0.00 |
| 3 | T | acetylene | 133.000 | 121.112 | 8.9 | 99 | 0.00 |
| 4 | T | ethane | 133.000 | 134.129 | -0.8 | 105 | 0.00 |
| 5 | T | propane | 133.000 | 133.633 | -0.5 | 105 | 0.00 |
| | | Signal #2 | | | | | |
| 7 | T | carbon dioxide | 13333.000 | 11846.323 | 11.2 | 93 | 0.00 |

(#) = Out of Range SPCC's out = 0 CCC's out = 0
16G32426.D RSK2EXT.M Mon May 14 07:59:54 2012 Page 1

Signal #1 : C:\MSDCHEM\1\DATA\051112\16G32426.D\FID1A.CH Vial: 12
Signal #2 : C:\MSDCHEM\1\DATA\051112\16G32426.D\TCD2B.CH
Acq On : 11 May 2012 15:44 Operator: FJB
Sample : WG397785-02 133umol/mol CCV RSK175 Inst : HP16
Misc : 1,1 STD38726 Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e

Method : C:\MSDCHEM\1\METHODS\RSK2EXT.M (Chemstation Integrator)
Title : RSK175 HP16 (SOP: OVL RSK01) 043012
Last Update : Mon Apr 30 15:17:04 2012
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 15% Max. Rel. Area : 150%

| Compound | Amount | Calc. | %Dev | Area% | Dev(min) |
|---|---|---|---|---|---|

Signal #2

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Quantitation Report (Not Reviewed)

Signal #1 : C:\MSDchem\1\DATA\051112\16G32437.D\FID1A.CH Vial: 23
Signal #2 : C:\MSDchem\1\DATA\051112\16G32437.D\TCD2B.CH
Acq On : 11 May 2012 17:29 Operator: FJB
Sample : WG397785-03 133umol/mol CCV RSK175 Inst : HP16
Misc : 1,1 STD38726 Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: May 11 17:34:14 2012 Quant Results File: RSK2EXT.RES

Quant Method : C:\MSDCHEM\1\METHODS\RSK2EXT.M (Chemstation Integrator)
Title : RSK175 HP16 (SOP: OVL RSK01) 043012
Last Update : Mon Apr 30 15:17:04 2012
Response via : Initial Calibration
DataAcq Meth : RSK2EXT.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

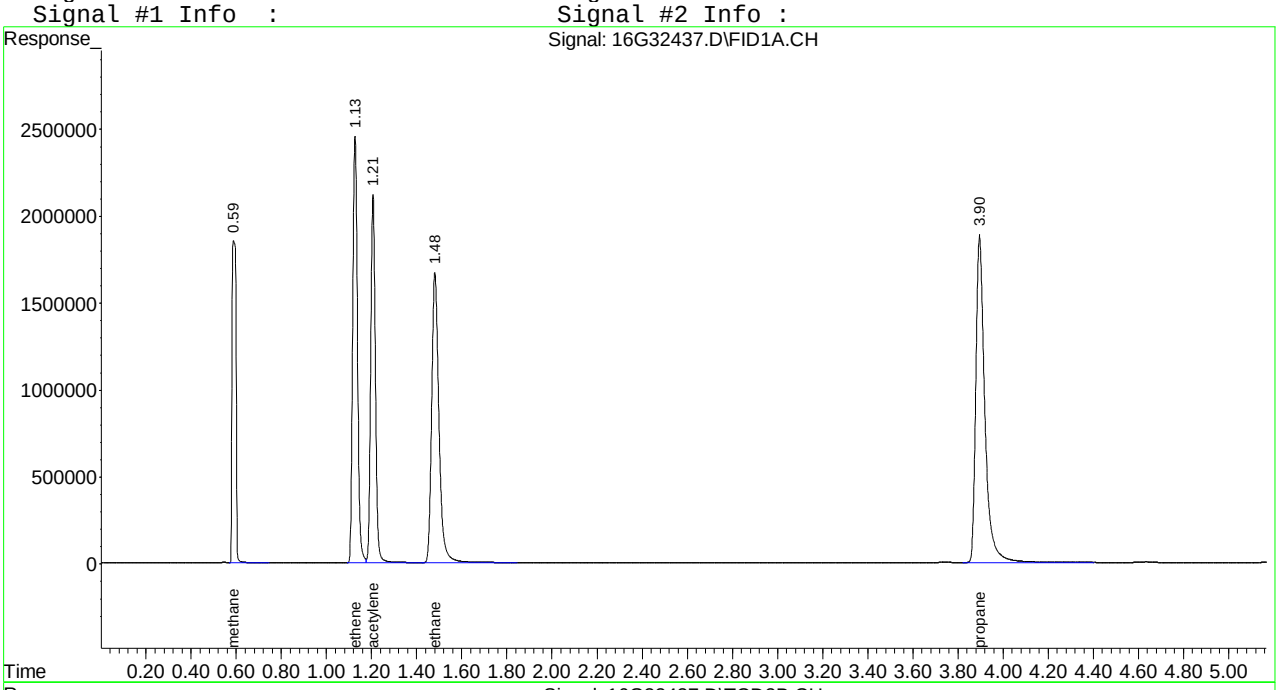
| | Compound | R.T. | Response | Conc Units |
|---|---|---|---|---|
| | Target Compounds | | | |
| 1) T | methane | 0.59 | 22529346 | 124.244 umol/ |
| 2) T | ethene | 1.13 | 35879854 | 121.048 umol/ |
| 3) T | acetylene | 1.21 | 30874745 | 106.619 umol/ |
| 4) T | ethane | 1.48 | 37287008 | 122.672 umol/ |
| 5) T | propane | 3.90 | 52358125 | 119.301 umol/ |
| 7) T | carbon dioxide | 0.20 | 64415870 | 11284.509 umol/ |

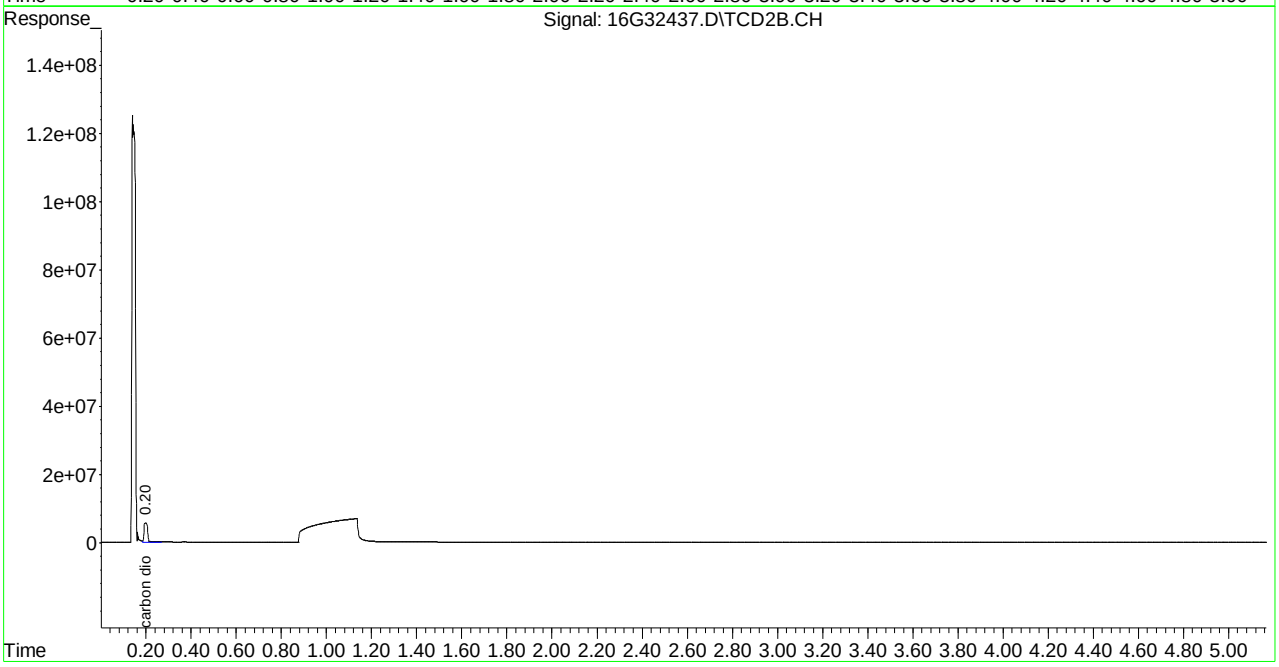
(f)=RT Delta > 1/2 Window (m)=manual int.
16G32437.D RSK2EXT.M Fri May 11 17:34:14 2012 Page 1

Signal #1 : C:\MSDchem\1\DATA\051112\16G32437.D\FID1A.CH Vial: 23
Signal #2 : C:\MSDchem\1\DATA\051112\16G32437.D\TCD2B.CH
Acq On : 11 May 2012 17:29 Operator: FJB
Sample : WG397785-03 133umol/mol CCV RSK175 Inst : HP16
Misc : 1,1 STD38726 Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: May 11 17:34 2012 Quant Results File: RSK2EXT.RES

Quant Method : C:\MSDCHEM\1\METHODS\RSK2EXT.M (Chemstation Integrator)
Title : RSK175 HP16 (SOP: OVL RSK01) 043012
Last Update : Mon Apr 30 15:17:04 2012
Response via : Multiple Level Calibration
DataAcq Meth : RSK2EXT.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :



Evaluate Continuing Calibration Report

Signal #1 : C:\MSDCHEM\1\DATA\051112\16G32437.D\FID1A.CH Vial: 23
Signal #2 : C:\MSDCHEM\1\DATA\051112\16G32437.D\TCD2B.CH
Acq On : 11 May 2012 17:29 Operator: FJB
Sample : WG397785-03 133umol/mol CCV RSK175 Inst : HP16
Misc : 1,1 STD38726 Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e

Method : C:\MSDCHEM\1\METHODS\RSK2EXT.M (Chemstation Integrator)
Title : RSK175 HP16 (SOP: OVL RSK01) 043012
Last Update : Mon Apr 30 15:17:04 2012
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 15% Max. Rel. Area : 150%

| | | Compound | Amount | Calc. | %Dev | Area% | Dev(min) |
|---|---|---|---|---|---|---|---|
| 1 | T | methane | 133.000 | 124.244 | 6.6 | 98 | 0.00 |
| 2 | T | ethene | 133.000 | 121.048 | 9.0 | 96 | 0.00 |
| 3 | T | acetylene | 133.000 | 106.619 | 19.8# | 87 | 0.00 |
| 4 | T | ethane | 133.000 | 122.672 | 7.8 | 96 | 0.00 |
| 5 | T | propane | 133.000 | 119.301 | 10.3 | 94 | 0.00 |
| | | Signal #2 | | | | | |
| 7 | T | carbon dioxide | 13333.000 | 11284.509 | 15.4# | 88 | 0.00 |

(#) = Out of Range SPCC's out = 0 CCC's out = 0
16G32437.D RSK2EXT.M Mon May 14 07:59:59 2012 Page 1

Signal #1 : C:\MSDCHEM\1\DATA\051112\16G32437.D\FID1A.CH Vial: 23
Signal #2 : C:\MSDCHEM\1\DATA\051112\16G32437.D\TCD2B.CH
Acq On : 11 May 2012 17:29 Operator: FJB
Sample : WG397785-03 133umol/mol CCV RSK175 Inst : HP16
Misc : 1,1 STD38726 Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e

Method : C:\MSDCHEM\1\METHODS\RSK2EXT.M (Chemstation Integrator)
Title : RSK175 HP16 (SOP: OVL RSK01) 043012
Last Update : Mon Apr 30 15:17:04 2012
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 15% Max. Rel. Area : 150%

| Compound | Amount | Calc. | %Dev | Area% | Dev(min) |
|---|---|---|---|---|---|

Signal #2

(#) = Out of Range SPCC's out = 0 CCC's out = 0

**Microbac Laboratories Inc.**
**Daily Retention Time Window Determination**

**Login #:** L12050284 **Run Date:** 05/10/2012 **Sample ID:** WG397660-01
**Instrument:** HP16 **Run Time:** 13:09 **Method:** RSK175
**Workgroup (AAB#):** WG397661 **File ID:** 16G32388

| RT Standard | Analysis Date | File ID | Analyst |
|---|---|---|---|
| WG388995-01 | 02/07/2012 | 16G30048 | FJB |
| WG388902-01 | 02/06/2012 | 16G30023A | FJB |
| WG388437-01 | 01/31/2012 | 16G30009 | ADC |

| Analyte | RT #1 | RT #2 | RT #3 | STD | Lower | Upper |
|---|---|---|---|---|---|---|
| METHANE | .58 | .59 | .58 | .59 | 0.560 | 0.620 |
| ETHENE | 1.12 | 1.13 | 1.11 | 1.13 | 1.100 | 1.160 |
| ETHANE | 1.47 | 1.48 | 1.46 | 1.48 | 1.450 | 1.510 |
| PROPANE | 3.89 | 3.89 | 3.89 | 3.9 | 3.870 | 3.930 |
| CARBON DIOXIDE | .2 | .2 | .19 | .2 | 0.170 | 0.230 |
| ACETYLENE | 1.2 | 1.21 | 1.19 | 1.21 | 1.180 | 1.240 |

**RT_WIN - Modified 01/06/2010**
**PDF File ID: 2413620**
**Report generated 05/18/2012 07:54**

**Microbac Laboratories Inc.**
**Daily Retention Time Window Determination**

**Login #:** L12050284 **Run Date:** 05/11/2012 **Sample ID:** WG397785-01
**Instrument:** HP16 **Run Time:** 14:00 **Method:** RSK175
**Workgroup (AAB#):** WG397786 **File ID:** 16G32415

| RT Standard | Analysis Date | File ID | Analyst |
|---|---|---|---|
| WG388995-01 | 02/07/2012 | 16G30048 | FJB |
| WG388902-01 | 02/06/2012 | 16G30023A | FJB |
| WG388437-01 | 01/31/2012 | 16G30009 | ADC |

| Analyte | RT #1 | RT #2 | RT #3 | STD | Lower | Upper |
|---|---|---|---|---|---|---|
| METHANE | .58 | .59 | .58 | .59 | 0.560 | 0.620 |
| ETHENE | 1.12 | 1.13 | 1.11 | 1.13 | 1.100 | 1.160 |
| ETHANE | 1.47 | 1.48 | 1.46 | 1.48 | 1.450 | 1.510 |
| PROPANE | 3.89 | 3.89 | 3.89 | 3.9 | 3.870 | 3.930 |
| CARBON DIOXIDE | .2 | .2 | .19 | .2 | 0.170 | 0.230 |
| ACETYLENE | 1.2 | 1.21 | 1.19 | 1.21 | 1.180 | 1.240 |

**RT_WIN - Modified 01/06/2010**
**PDF File ID: 2413620**
**Report generated 05/18/2012 07:54**

# 2.1.2.5 Raw QC Data

Quantitation Report (Not Reviewed)

Signal #1 : C:\MSDCHEM\1\DATA\051012\16G32389.D\FID1A.CH Vial: 2
Signal #2 : C:\MSDCHEM\1\DATA\051012\16G32389.D\TCD2B.CH
Acq On : 10 May 2012 13:24 Operator: FJB
Sample : WG397661-01 BLANK RSK175 Inst : HP16
Misc : 1,1 Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: May 10 13:30:10 2012 Quant Results File: RSK2EXT.RES

Quant Method : C:\MSDCHEM\1\METHODS\RSK2EXT.M (Chemstation Integrator)
Title : RSK175 HP16 (SOP: OVL RSK01) 043012
Last Update : Mon Apr 30 15:17:04 2012
Response via : Initial Calibration
DataAcq Meth : RSK2EXT.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

| | Compound | R.T. | Response | Conc | Units |
|---|---|---|---|---|---|
| | Target Compounds | | | | |
| 1) T | methane | 0.59 | 68068 | 0.375 | umol/ |
| 2) T | ethene | 0.00 | 0 | N.D. | umol/ |
| 3) T | acetylene | 0.00 | 0 | N.D. | umol/ |
| 4) T | ethane | 1.49 | 5511 | 0.018 | umol/ |
| 5) T | propane | 0.00 | 0 | N.D. | umol/ |
| 7) T | carbon dioxide | 0.00 | 0 | N.D. | umol/ |

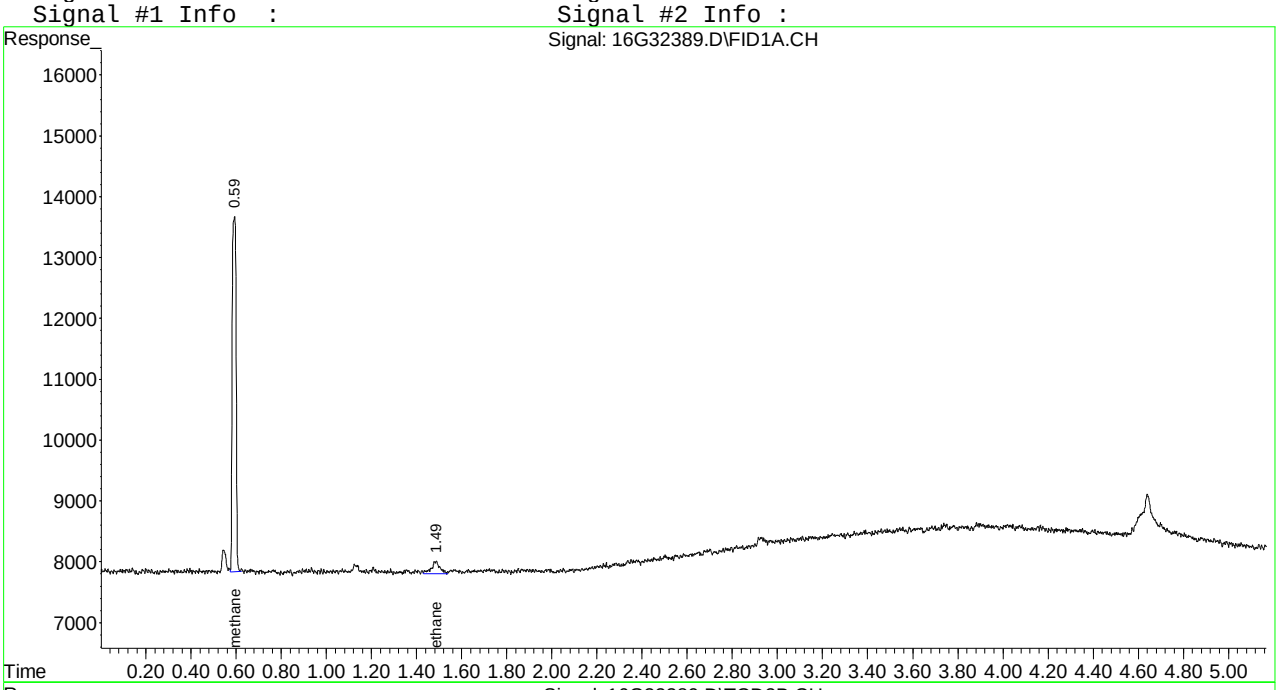
(f)=RT Delta > 1/2 Window (m)=manual int.
16G32389.D RSK2EXT.M Thu May 10 13:40:31 2012 Page 1

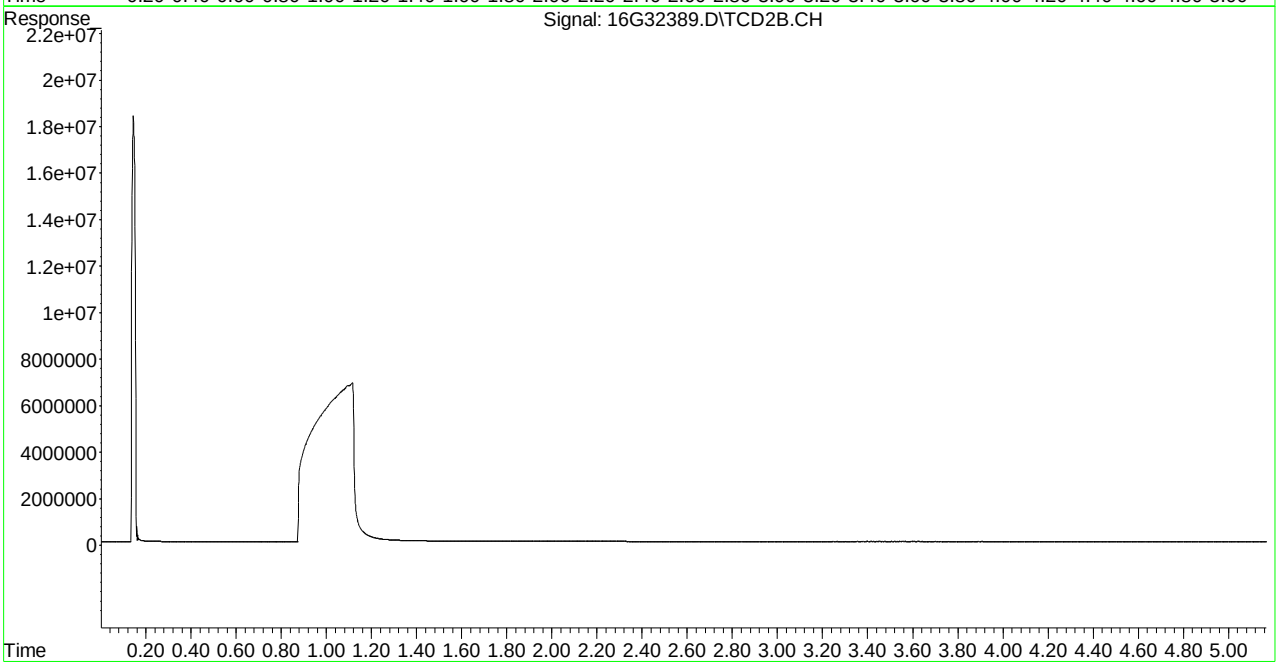
Quantitation Report (Not Reviewed)

Signal #1 : C:\MSDCHEM\1\DATA\051012\16G32389.D\FID1A.CH Vial: 2
Signal #2 : C:\MSDCHEM\1\DATA\051012\16G32389.D\TCD2B.CH
Acq On : 10 May 2012 13:24 Operator: FJB
Sample : WG397661-01 BLANK RSK175 Inst : HP16
Misc : 1,1 Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: May 10 13:30 2012 Quant Results File: RSK2EXT.RES

Quant Method : C:\MSDCHEM\1\METHODS\RSK2EXT.M (Chemstation Integrator)
Title : RSK175 HP16 (SOP: OVL RSK01) 043012
Last Update : Mon Apr 30 15:17:04 2012
Response via : Multiple Level Calibration
DataAcq Meth : RSK2EXT.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :



Quantitation Report (Not Reviewed)

Signal #1 : C:\MSDCHEM\1\DATA\051112\16G32416.D\FID1A.CH Vial: 2
Signal #2 : C:\MSDCHEM\1\DATA\051112\16G32416.D\TCD2B.CH
Acq On : 11 May 2012 14:12 Operator: FJB
Sample : WG397786-01 BLANK RSK175 Inst : HP16
Misc : 1,1 Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: May 11 14:17:56 2012 Quant Results File: RSK2EXT.RES

Quant Method : C:\MSDCHEM\1\METHODS\RSK2EXT.M (Chemstation Integrator)
Title : RSK175 HP16 (SOP: OVL RSK01) 043012
Last Update : Mon Apr 30 15:17:04 2012
Response via : Initial Calibration
DataAcq Meth : RSK2EXT.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

| | Compound | R.T. | Response | Conc | Units |
|---|---|---|---|---|---|
| | Target Compounds | | | | |
| 1) T | methane | 0.59 | 134326 | 0.741 | umol/ |
| 2) T | ethene | 1.13 | 3216 | 0.011 | umol/ |
| 3) T | acetylene | 0.00 | 0 | N.D. | umol/ |
| 4) T | ethane | 1.49 | 4346 | 0.014 | umol/ |
| 5) T | propane | 0.00 | 0 | N.D. | umol/ |
| 7) T | carbon dioxide | 0.00 | 0 | N.D. | umol/ |

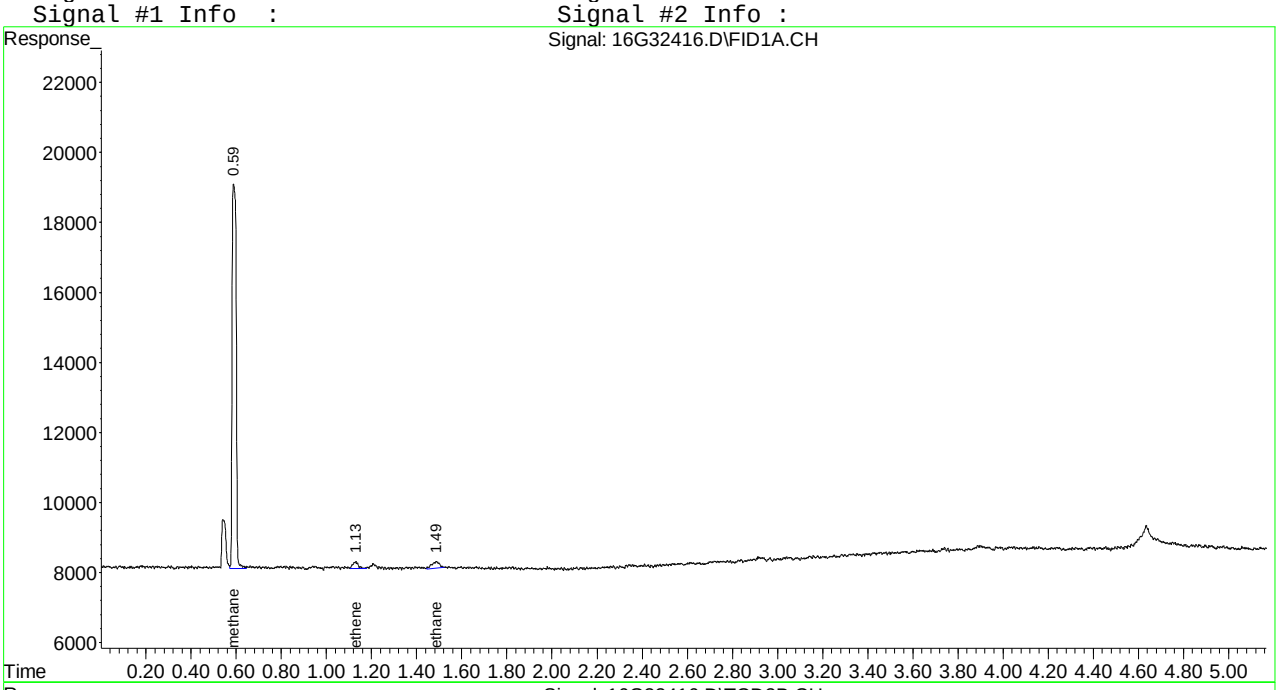
(f)=RT Delta > 1/2 Window (m)=manual int.
16G32416.D RSK2EXT.M Mon May 14 08:00:21 2012 Page 1

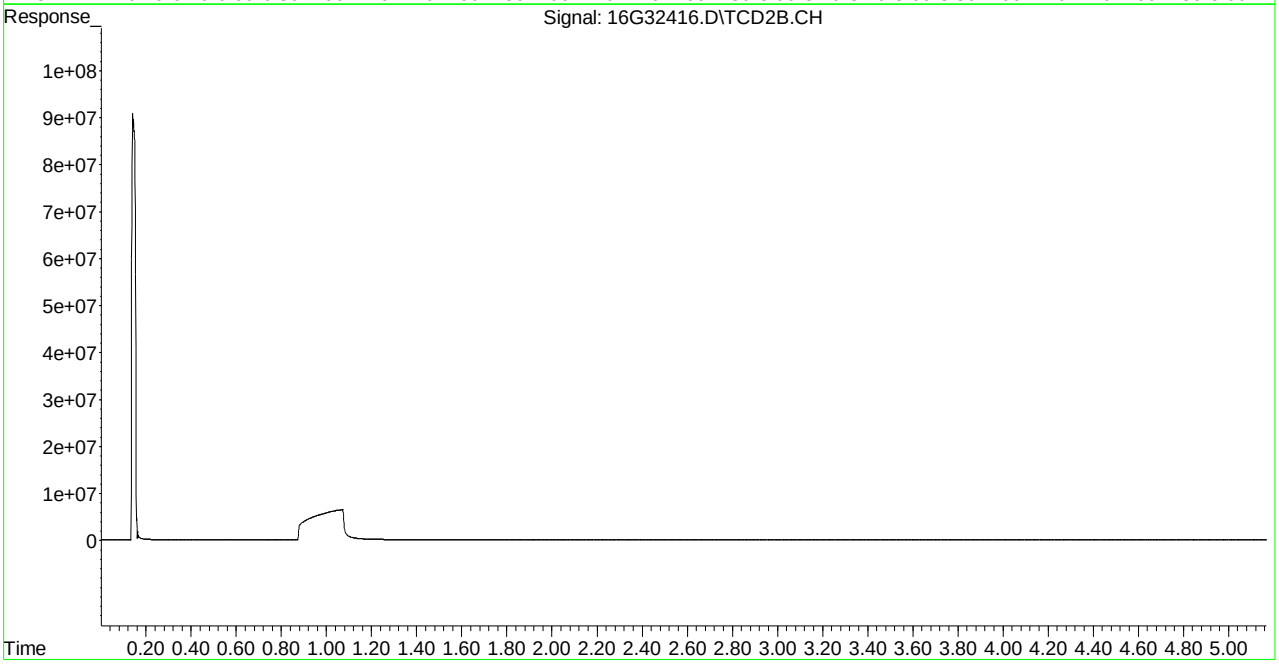
Quantitation Report (Not Reviewed)

Signal #1 : C:\MSDCHEM\1\DATA\051112\16G32416.D\FID1A.CH Vial: 2
Signal #2 : C:\MSDCHEM\1\DATA\051112\16G32416.D\TCD2B.CH
Acq On : 11 May 2012 14:12 Operator: FJB
Sample : WG397786-01 BLANK RSK175 Inst : HP16
Misc : 1,1 Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: May 11 14:17 2012 Quant Results File: RSK2EXT.RES

Quant Method : C:\MSDCHEM\1\METHODS\RSK2EXT.M (Chemstation Integrator)
Title : RSK175 HP16 (SOP: OVL RSK01) 043012
Last Update : Mon Apr 30 15:17:04 2012
Response via : Multiple Level Calibration
DataAcq Meth : RSK2EXT.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :



Quantitation Report (Not Reviewed)

Signal #1 : C:\MSDchem\1\DATA\051012\16G32390.D\FID1A.CH Vial: 3
Signal #2 : C:\MSDchem\1\DATA\051012\16G32390.D\TCD2B.CH
Acq On : 10 May 2012 13:33 Operator: FJB
Sample : WG397661-02 67umol/mol LCS RSK175 Inst : HP16
Misc : 1,1 STD45308 Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: May 10 13:39:13 2012 Quant Results File: RSK2EXT.RES

Quant Method : C:\MSDCHEM\1\METHODS\RSK2EXT.M (Chemstation Integrator)
Title : RSK175 HP16 (SOP: OVL RSK01) 043012
Last Update : Mon Apr 30 15:17:04 2012
Response via : Initial Calibration
DataAcq Meth : RSK2EXT.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

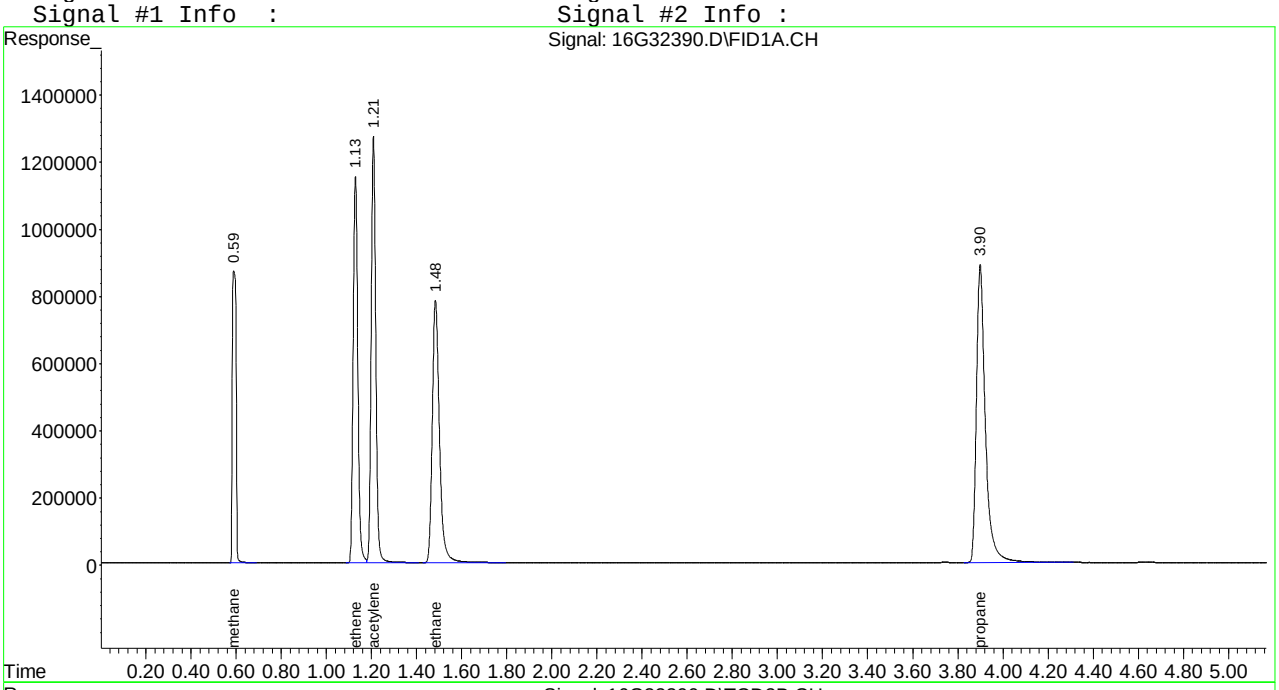
| | Compound | R.T. | Response | Conc Units |
|---|---|---|---|---|
| | Target Compounds | | | |
| 1) T | methane | 0.59 | 10064993 | 55.506 umol/ |
| 2) T | ethene | 1.13 | 16376163 | 55.248 umol/ |
| 3) T | acetylene | 1.21 | 18053806 | 62.344 umol/ |
| 4) T | ethane | 1.48 | 17186236 | 56.542 umol/ |
| 5) T | propane | 3.90 | 24505760 | 55.838 umol/ |
| 7) T | carbon dioxide | 0.20 | 27581847 | 4831.846 umol/ |

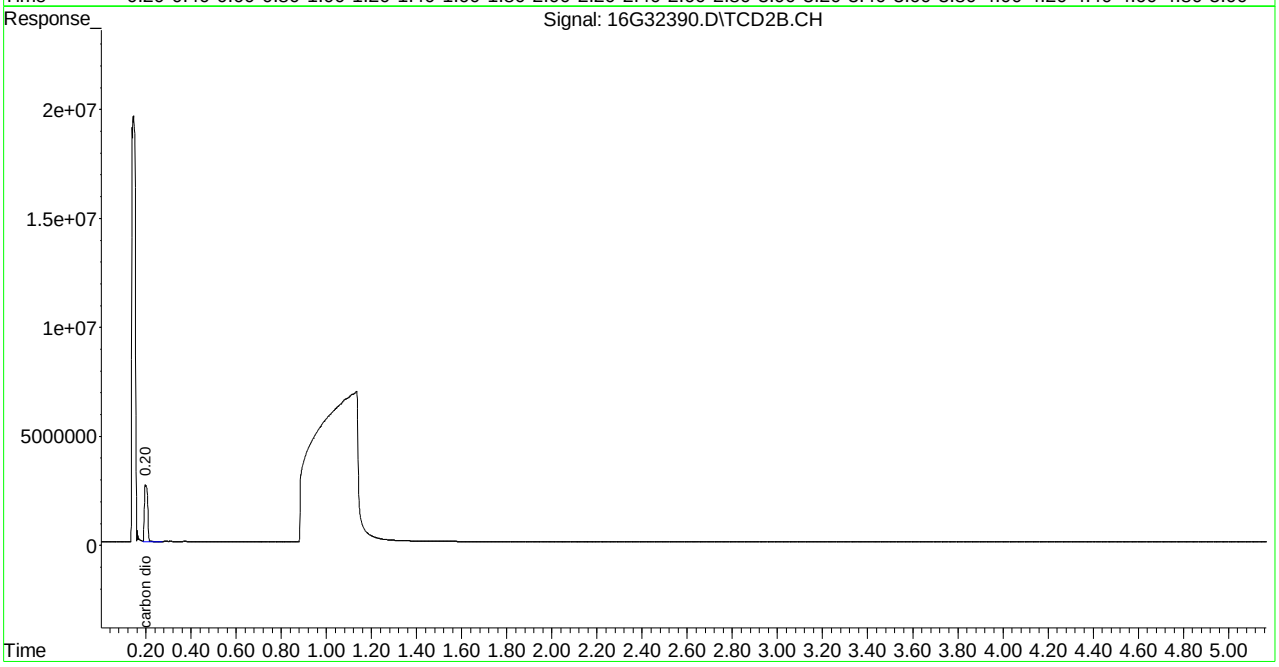
(f)=RT Delta > 1/2 Window (m)=manual int.
16G32390.D RSK2EXT.M Thu May 10 13:39:13 2012 Page 1

Signal #1 : C:\MSDchem\1\DATA\051012\16G32390.D\FID1A.CH Vial: 3
Signal #2 : C:\MSDchem\1\DATA\051012\16G32390.D\TCD2B.CH
Acq On : 10 May 2012 13:33 Operator: FJB
Sample : WG397661-02 67umol/mol LCS RSK175 Inst : HP16
Misc : 1,1 STD45308 Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: May 10 13:39 2012 Quant Results File: RSK2EXT.RES

Quant Method : C:\MSDCHEM\1\METHODS\RSK2EXT.M (Chemstation Integrator)
Title : RSK175 HP16 (SOP: OVL RSK01) 043012
Last Update : Mon Apr 30 15:17:04 2012
Response via : Multiple Level Calibration
DataAcq Meth : RSK2EXT.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :



Quantitation Report (Not Reviewed)

Signal #1 : C:\MSDchem\1\DATA\051112\16G32417.D\FID1A.CH Vial: 3
Signal #2 : C:\MSDchem\1\DATA\051112\16G32417.D\TCD2B.CH
Acq On : 11 May 2012 14:22 Operator: FJB
Sample : WG397786-02 67umol/mol LCS RSK175 Inst : HP16
Misc : 1,1 STD45308 Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: May 11 14:27:14 2012 Quant Results File: RSK2EXT.RES

Quant Method : C:\MSDCHEM\1\METHODS\RSK2EXT.M (Chemstation Integrator)
Title : RSK175 HP16 (SOP: OVL RSK01) 043012
Last Update : Mon Apr 30 15:17:04 2012
Response via : Initial Calibration
DataAcq Meth : RSK2EXT.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

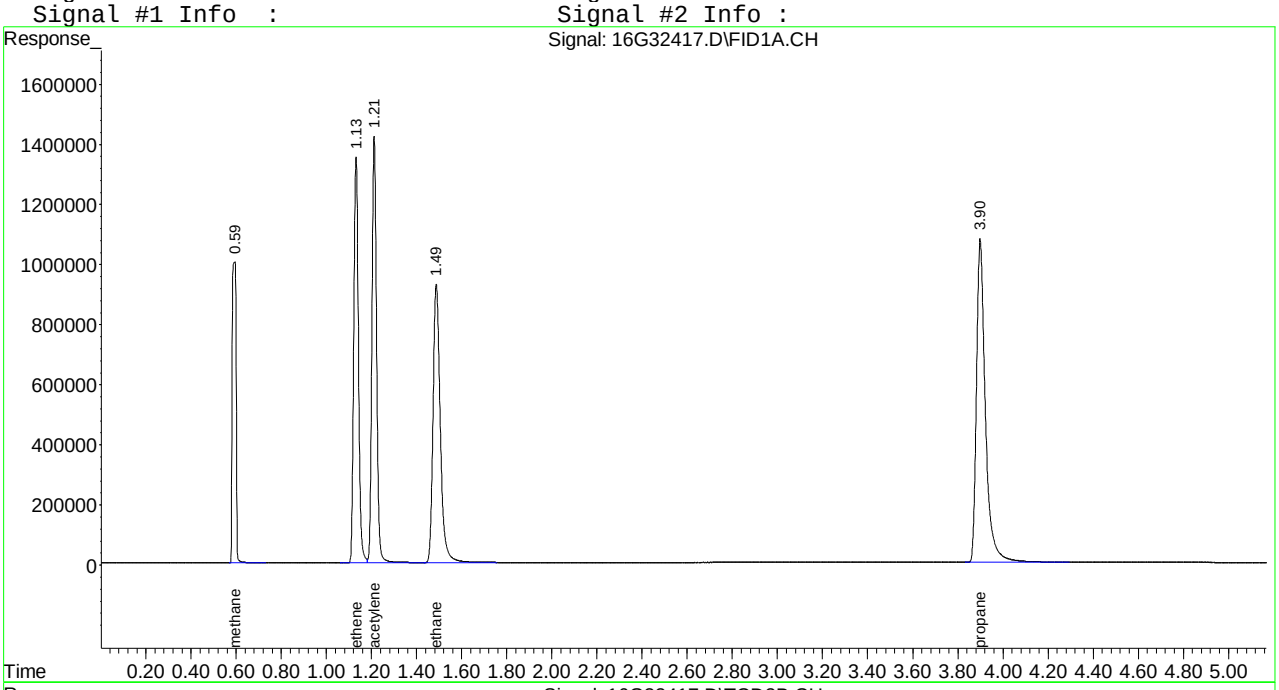
| | Compound | R.T. | Response | Conc Units |
|---|---|---|---|---|
| | Target Compounds | | | |
| 1) T | methane | 0.59 | 11850847 | 65.355 umol/ |
| 2) T | ethene | 1.13 | 19570451 | 66.025 umol/ |
| 3) T | acetylene | 1.21 | 20513704 | 70.839 umol/ |
| 4) T | ethane | 1.49 | 20625736 | 67.858 umol/ |
| 5) T | propane | 3.90 | 29738007 | 67.760 umol/ |
| 7) T | carbon dioxide | 0.20 | 32878493 | 5759.724 umol/ |

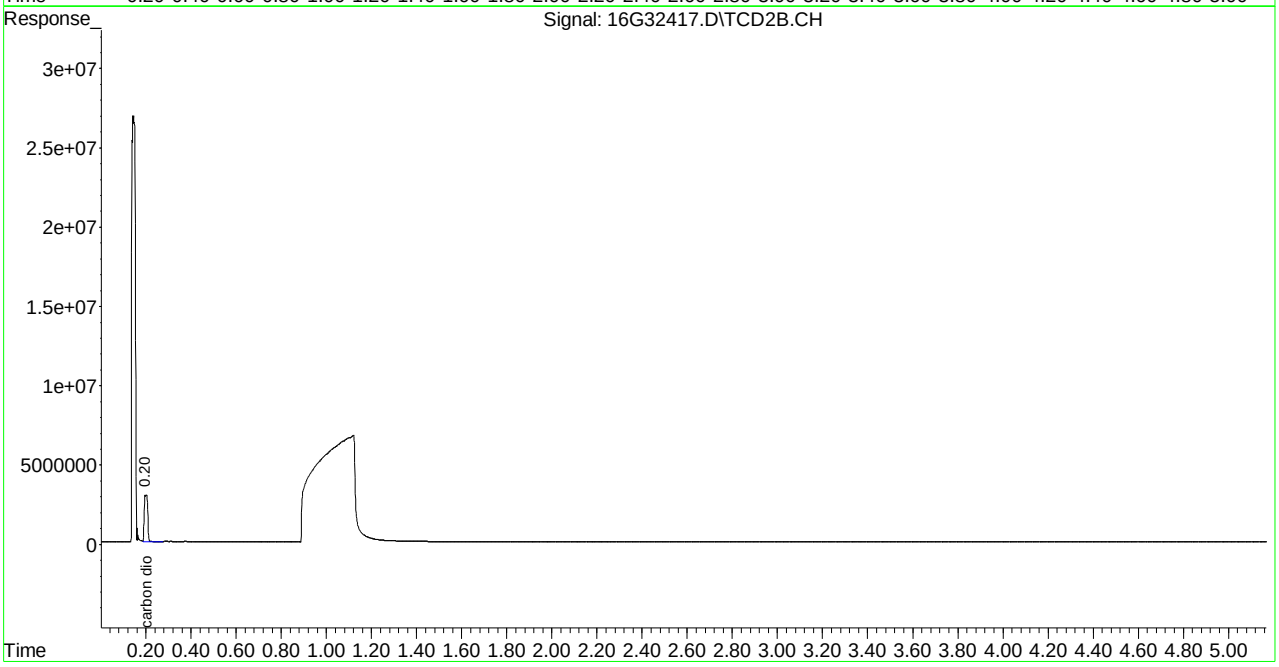
(f)=RT Delta > 1/2 Window (m)=manual int.
16G32417.D RSK2EXT.M Fri May 11 14:27:14 2012 Page 1

Signal #1 : C:\MSDchem\1\DATA\051112\16G32417.D\FID1A.CH Vial: 3
Signal #2 : C:\MSDchem\1\DATA\051112\16G32417.D\TCD2B.CH
Acq On : 11 May 2012 14:22 Operator: FJB
Sample : WG397786-02 67umol/mol LCS RSK175 Inst : HP16
Misc : 1,1 STD45308 Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: May 11 14:27 2012 Quant Results File: RSK2EXT.RES

Quant Method : C:\MSDCHEM\1\METHODS\RSK2EXT.M (Chemstation Integrator)
Title : RSK175 HP16 (SOP: OVL RSK01) 043012
Last Update : Mon Apr 30 15:17:04 2012
Response via : Multiple Level Calibration
DataAcq Meth : RSK2EXT.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :



Quantitation Report (Not Reviewed)

Signal #1 : C:\MSDchem\1\DATA\051012\16G32391.D\FID1A.CH Vial: 4
Signal #2 : C:\MSDchem\1\DATA\051012\16G32391.D\TCD2B.CH
Acq On : 10 May 2012 13:43 Operator: FJB
Sample : WG397661-03 67umol/mol LCSD RSK175 Inst : HP16
Misc : 1,1 STD45308 Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: May 10 13:48:20 2012 Quant Results File: RSK2EXT.RES

Quant Method : C:\MSDCHEM\1\METHODS\RSK2EXT.M (Chemstation Integrator)
Title : RSK175 HP16 (SOP: OVL RSK01) 043012
Last Update : Mon Apr 30 15:17:04 2012
Response via : Initial Calibration
DataAcq Meth : RSK2EXT.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

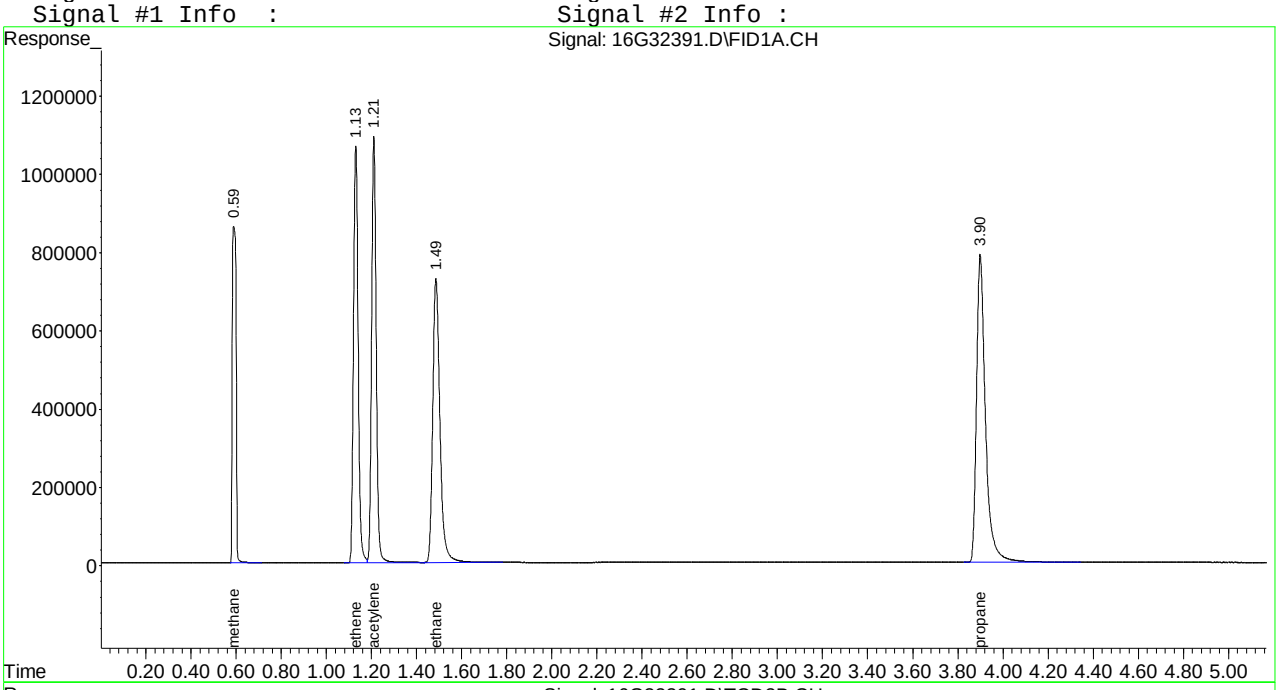
| | Compound | R.T. | Response | Conc | Units |
|---|---|---|---|---|---|
| | **Target Compounds** | | | | |
| 1) T | methane | 0.59 | 9976562 | 55.019 | umol/ |
| 2) T | ethene | 1.13 | 15262559 | 51.491 | umol/ |
| 3) T | acetylene | 1.21 | 15540801 | 53.666 | umol/ |
| 4) T | ethane | 1.49 | 16007443 | 52.664 | umol/ |
| 5) T | propane | 3.90 | 21743313 | 49.543 | umol/ |
| 7) T | carbon dioxide | 0.20 | 26496718 | 4641.751 | umol/ |

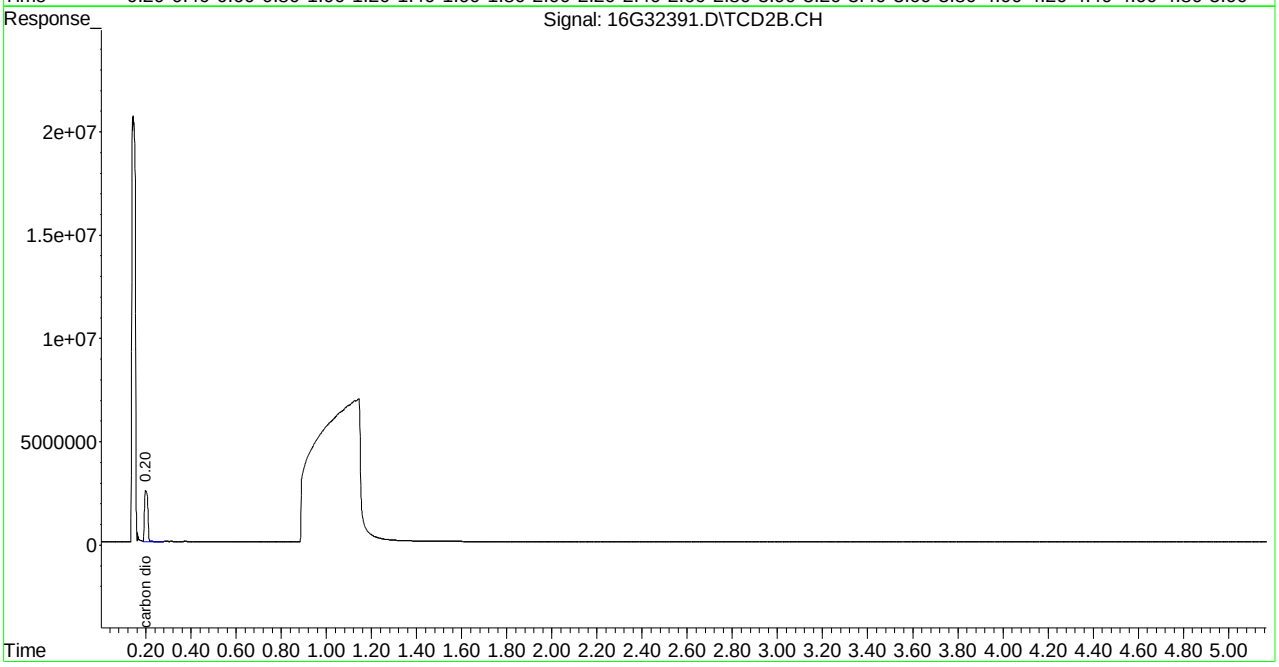
(f)=RT Delta > 1/2 Window (m)=manual int.
16G32391.D RSK2EXT.M Thu May 10 13:48:20 2012 Page 1

Signal #1 : C:\MSDchem\1\DATA\051012\16G32391.D\FID1A.CH Vial: 4
Signal #2 : C:\MSDchem\1\DATA\051012\16G32391.D\TCD2B.CH
Acq On : 10 May 2012 13:43 Operator: FJB
Sample : WG397661-03 67umol/mol LCSD RSK175 Inst : HP16
Misc : 1,1 STD45308 Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: May 10 13:48 2012 Quant Results File: RSK2EXT.RES

Quant Method : C:\MSDCHEM\1\METHODS\RSK2EXT.M (Chemstation Integrator)
Title : RSK175 HP16 (SOP: OVL RSK01) 043012
Last Update : Mon Apr 30 15:17:04 2012
Response via : Multiple Level Calibration
DataAcq Meth : RSK2EXT.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :



Quantitation Report (Not Reviewed)

Signal #1 : C:\MSDchem\1\DATA\051112\16G32418.D\FID1A.CH Vial: 4
Signal #2 : C:\MSDchem\1\DATA\051112\16G32418.D\TCD2B.CH
Acq On : 11 May 2012 14:31 Operator: FJB
Sample : WG397786-03 67umol/mol LCSD RSK175 Inst : HP16
Misc : 1,1 STD45308 Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: May 11 14:36:25 2012 Quant Results File: RSK2EXT.RES

Quant Method : C:\MSDCHEM\1\METHODS\RSK2EXT.M (Chemstation Integrator)
Title : RSK175 HP16 (SOP: OVL RSK01) 043012
Last Update : Mon Apr 30 15:17:04 2012
Response via : Initial Calibration
DataAcq Meth : RSK2EXT.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

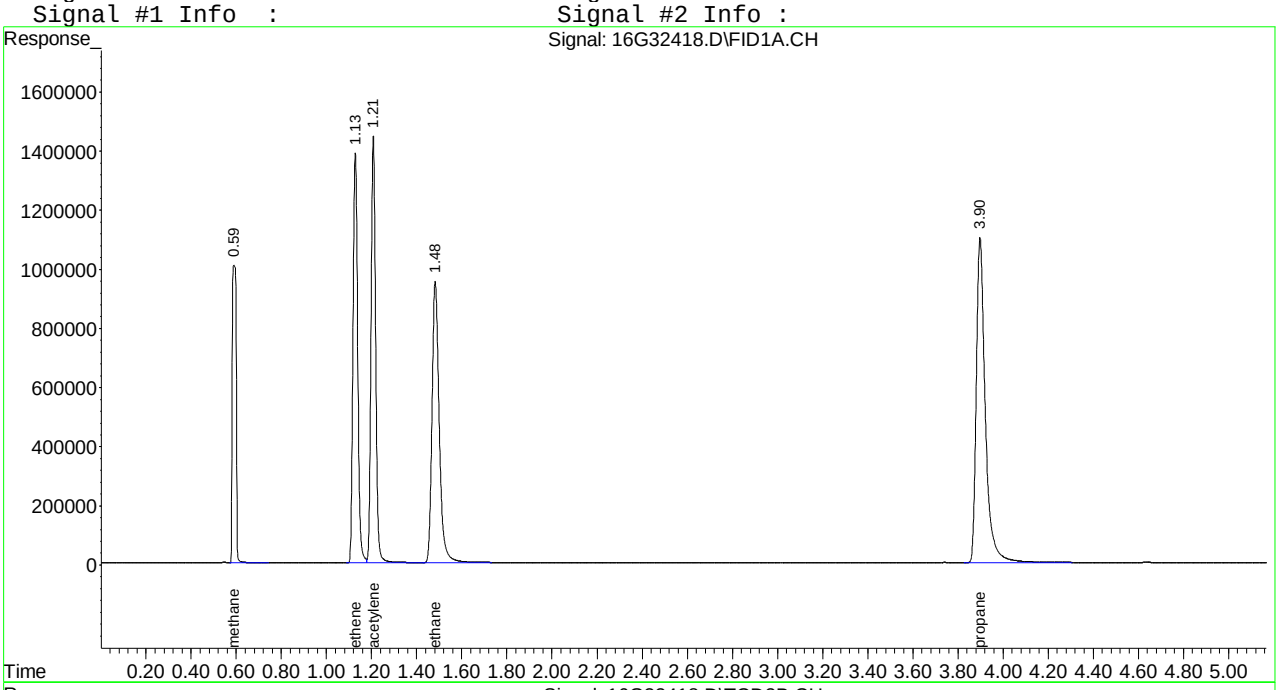
| | Compound | R.T. | Response | Conc Units |
|---|---|---|---|---|
| | Target Compounds | | | |
| 1) T | methane | 0.59 | 12107142 | 66.768 umol/ |
| 2) T | ethene | 1.13 | 19978900 | 67.403 umol/ |
| 3) T | acetylene | 1.21 | 20708973 | 71.513 umol/ |
| 4) T | ethane | 1.48 | 21095427 | 69.403 umol/ |
| 5) T | propane | 3.90 | 30683607 | 69.914 umol/ |
| 7) T | carbon dioxide | 0.20 | 37729369 | 6609.511 umol/ |

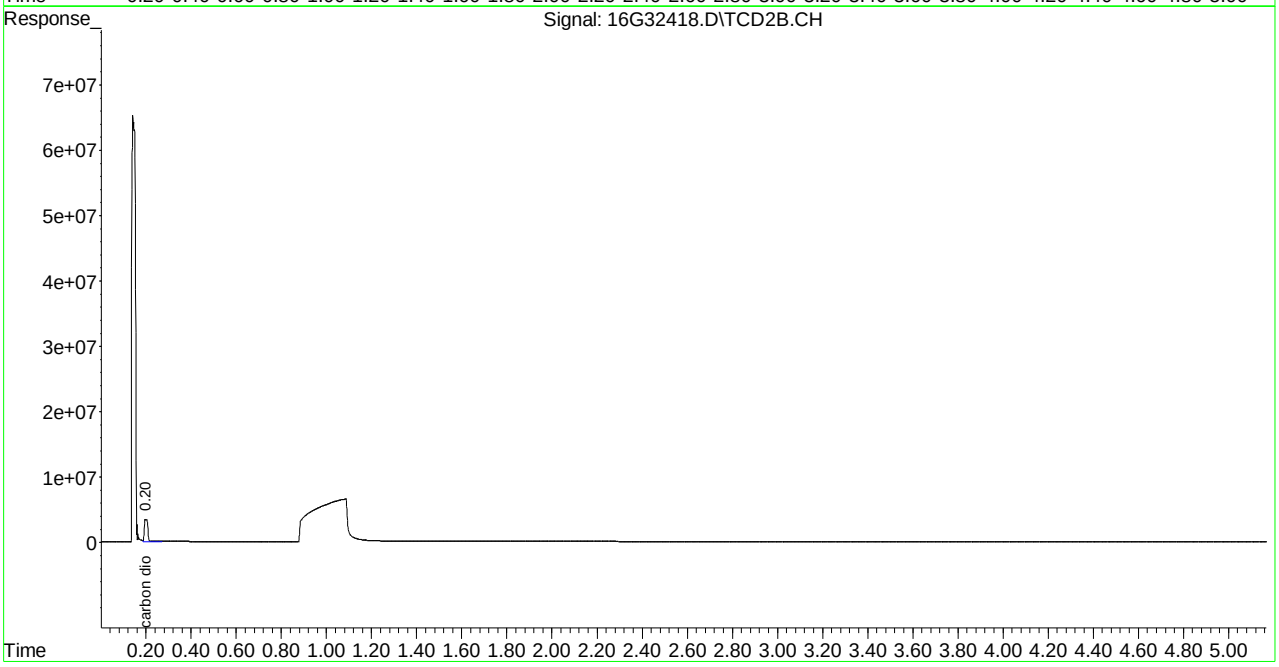
(f)=RT Delta > 1/2 Window (m)=manual int.
16G32418.D RSK2EXT.M Fri May 11 14:36:25 2012 Page 1

Signal #1 : C:\MSDchem\1\DATA\051112\16G32418.D\FID1A.CH Vial: 4
Signal #2 : C:\MSDchem\1\DATA\051112\16G32418.D\TCD2B.CH
Acq On : 11 May 2012 14:31 Operator: FJB
Sample : WG397786-03 67umol/mol LCSD RSK175 Inst : HP16
Misc : 1,1 STD45308 Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e
Quant Time: May 11 14:36 2012 Quant Results File: RSK2EXT.RES

Quant Method : C:\MSDCHEM\1\METHODS\RSK2EXT.M (Chemstation Integrator)
Title : RSK175 HP16 (SOP: OVL RSK01) 043012
Last Update : Mon Apr 30 15:17:04 2012
Response via : Multiple Level Calibration
DataAcq Meth : RSK2EXT.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :



# 2.2 Semivolatiles Data

# 2.2.1 Semivolatiles GC/MS Data (8270)

# 2.2.1.1 Summary Data

**Login Number:** L12050284
**Department**: Semivolatiles
**Analyst:** Cassie A. Augenstein

**METHOD**

**Preparation** 3520C

**Analysis** SW-846 8270C/40 CFR 264 App. IX

**HOLDING TIMES**

**Sample Preparation:** All holding times were met.

**Sample Analysis:** All holding times were met.

**PREPARATION**

Sample preparation proceeded normally.

**CALIBRATION**

**Initial Calibration:** For all compounds that yielded a %RSD greater than 15%, linear or higher order equations were applied. All acceptance criteria were met.

**Alternate Source Standards:** The percent difference was out of range for the following analytes: 2,4-Dinitrophenol. Please see the applicable QC report for a detailed presentation of the failures.

**Continuing Calibration and Tune:** Recoveries out of range were observed for the following analytes: Benzoic Acid. Please see the applicable QC report for a detailed presentation of the failures.

**BATCH QA/QC**

**Method Blank:** All acceptance criteria were met.

**Laboratory Control Sample:** Recoveries out of range were observed for the following analytes/surrogates: bis(2-Chloroethoxy)methane, Hexachlorocyclopentadiene, Phenol-d5. Please see the applicable QC report for a detailed presentation of the failures.

**Matrix Spikes:** The client did not specify an MS/MSD for this sample delivery group.

**SAMPLES**

**Samples:** Sample 01 was analyzed at a dilution due to the appearance of the extract.

The extracts were library searched using the NIST library and the top twenty TICs found were reported. Requested acid compounds listed as TICs in the Waterloo QAPP may not have been detected due to unknown extraction efficiency and chromatographic performance.

**Internal Standards:** Sample 01 yielded areas beyond the acceptance limits for internal standard 1,4-Dichlorobenzene-d4 due to sample matrix interference.

**Surrogates:** Recoveries out of range were observed for the following surrogates due to sample matrix interference: 2-Fluorophenol, Phenol-d5. Please see the applicable QC report for a detailed presentation of the failures.

**Manual Integration Reason Codes**

**Reason #1: Data System Fails to Select Correct Peak** In some cases the chromatography system selects and integrates the 'wrong peak'. In this case the analyst must correct the selection and force the system to integrate the proper peak. Other times the system may miss the peak
completely.

**Reason #2: Data System Splits the Peak Incorrectly or Integrates a False Peak as a Rider Peak** This phenomena is common at low concentrations where the signal:noise ratio is low. A single compound (peak) is incorrectly split into multiple peaks or integrated as a main peak with one or more rider peaks resulting in low area

counts for the target compound.

**Reason #3: Improperly Integrated Isomers and/or coeluting compounds.** This system often fails to distinguish coeluting compounds and or isomers. The integration areas and concentrations are wrong, and they must be corrected by manual integration. Prime examples are benzo(k)fluoranthene and
benzo(b)fluoranthene which are often unresolved and integrated improperly when both are present at low concentrations in standards or samples.

**Reason #4: System Establishes Incorrect Baseline** There are numerous situations in chromatography where the system establishes the baseline incorrectly. Some baseline errors will be obvious to the analyst and should be corrected via manual procedures.

**Reason #5: Miscellaneous** Other situations involving integration errors may require in-depth review and technical judgment. These cases should be brought to the attention of the laboratory management. If the form of manual integration is not clearly covered by these four cases, then review and approval by the Managing Director or the QAO will be required.

I certify that this data package is in compliance with the terms and conditions agreed to by the client and Microbac Laboratories Inc., both technically and for completeness, except for the conditions noted above. Release of the data contained in this hard copy data package has been authorized by the Laboratory Manager or designated person, as verified by the following signature.

**Narrative ID:** 46854
**Approved By:** Mike Cochran

# Certificate of Analysis

**Sample #:** L12050284-01
**Client ID:** BBLD-PIT-SSP-050812
**Matrix:** Water
**Workgroup #:** WG398144
**Collect Date:** 05/08/2012 10:01
**Sample Tag:** DL01

**PrePrep Method:** N/A
**Prep Method:** 3520C
**Analytical Method:** 8270C
**Analyst:** CAA
**Dilution:** 1
**Units:** ug/L

**Instrument:** HPMS5
**Prep Date:** 05/09/2012 14:00
**Cal Date:** 05/11/2012 13:10
**Run Date:** 05/14/2012 18:02
**File ID:** 5M66992

| Analyte | CAS # | Result | Qual | RL | MDL |
|---|---|---|---|---|---|
| unknown | | 246 | | 0.000 | 0.000 |
| unknown | | 1140 | | 0.000 | 0.000 |
| unknown | | 406 | | 0.000 | 0.000 |
| unknown | | 226 | | 0.000 | 0.000 |
| Acetic acid, mercapto-, methyl est | | 566 | | 0.000 | 0.000 |
| unknown | | 746 | | 0.000 | 0.000 |
| unknown | | 2220 | | 0.000 | 0.000 |
| Acetic acid, mercapto- | | 511 | | 0.000 | 0.000 |
| unknown | | 173 | | 0.000 | 0.000 |
| Acetic acid, mercapto- | | 533 | | 0.000 | 0.000 |
| 3-Mercaptopropionic acid | | 1450 | | 0.000 | 0.000 |
| unknown | | 354 | | 0.000 | 0.000 |
| unknown | | 235 | | 0.000 | 0.000 |
| unknown | | 193 | | 0.000 | 0.000 |
| unknown | | 289 | | 0.000 | 0.000 |
| unknown | | 121 | | 0.000 | 0.000 |
| unknown | | 146 | | 0.000 | 0.000 |
| unknown | | 410 | | 0.000 | 0.000 |
| unknown | | 319 | | 0.000 | 0.000 |
| unknown | | 128 | | 0.000 | 0.000 |

**Sample #:** L12050284-01
**Client ID:** BBLD-PIT-SSP-050812
**Matrix:** Water
**Workgroup #:** WG398144
**Collect Date:** 05/08/2012 10:01
**Sample Tag:** DL01

**PrePrep Method:** N/A
**Prep Method:** 3520C
**Analytical Method:** 8270C
**Analyst:** CAA
**Dilution:** 2
**Units:** ug/L

**Instrument:** HPMS5
**Prep Date:** 05/09/2012 14:00
**Cal Date:** 05/11/2012 13:10
**Run Date:** 05/14/2012 18:02
**File ID:** 5M66992

| Analyte | CAS # | Result | Qual | RL | MDL |
|---|---|---|---|---|---|
| 1,1'-Biphenyl | 92-52-4 | | U | 40.0 | 5.00 |
| 1,3,5-Trinitrobenzene | 99-35-4 | | U | 10.0 | 5.00 |
| 1,3-Dinitrobenzene | 99-65-0 | | U | 10.0 | 5.00 |
| 1,4-Dioxane | 123-91-1 | | U | 20.0 | 10.0 |

Certificate of Analysis

| Analyte | CAS # | Result | Qual | RL | MDL |
|---|---|---|---|---|---|
| 2,4,5-Trichlorophenol | 95-95-4 | | U | 10.0 | 5.00 |
| 2,4,6-Trichlorophenol | 88-06-2 | | U | 10.0 | 5.00 |
| 2,4-Dichlorophenol | 120-83-2 | | U | 10.0 | 5.00 |
| 2,4-Dimethylphenol | 105-67-9 | | U | 10.0 | 5.00 |
| 2,4-Dinitrophenol | 51-28-5 | | U | 50.0 | 25.0 |
| 2,4-Dinitrotoluene | 121-14-2 | | U | 10.0 | 5.00 |
| 2,6-Dinitrotoluene | 606-20-2 | | U | 10.0 | 5.00 |
| 2-Chloronaphthalene | 91-58-7 | | U | 10.0 | 5.00 |
| 2-Chlorophenol | 95-57-8 | | U | 10.0 | 5.00 |
| 2-Methylnaphthalene | 91-57-6 | | U | 10.0 | 5.00 |
| 2-Methylphenol | 95-48-7 | | U | 10.0 | 5.00 |
| 2-Nitroaniline | 88-74-4 | | U | 50.0 | 25.0 |
| 2-Nitrophenol | 88-75-5 | | U | 10.0 | 5.00 |
| 3-Nitroaniline | 99-09-2 | | U | 50.0 | 25.0 |
| 3,3'-Dichlorobenzidine | 91-94-1 | | U | 10.0 | 5.00 |
| 3-,4-Methylphenol | 106-44-5 | 174 | | 10.0 | 5.00 |
| 4-Bromophenyl-phenylether | 101-55-3 | | U | 10.0 | 5.00 |
| 4-Chloroaniline | 106-47-8 | | U | 10.0 | 5.00 |
| 4-Nitrophenol | 100-02-7 | | U | 50.0 | 25.0 |
| Acenaphthene | 83-32-9 | | U | 10.0 | 5.00 |
| Acenaphthylene | 208-96-8 | | U | 10.0 | 5.00 |
| Anthracene | 120-12-7 | | U | 10.0 | 5.00 |
| Benzo(a)anthracene | 56-55-3 | | U | 10.0 | 5.00 |
| Benzo(a)pyrene | 50-32-8 | | U | 10.0 | 5.00 |
| Benzo(b)fluoranthene | 205-99-2 | | U | 10.0 | 5.00 |
| Benzo(g,h,i)Perylene | 191-24-2 | | U | 10.0 | 5.00 |
| Benzo(k)fluoranthene | 207-08-9 | | U | 10.0 | 5.00 |
| Benzoic acid | 65-85-0 | 114 | | 40.0 | 20.0 |
| Benzyl alcohol | 100-51-6 | | U | 10.0 | 5.00 |
| Bis(2-Chloroethyl)ether | 111-44-4 | | U | 10.0 | 5.00 |
| Bis(2-Chloroethoxy)Methane | 111-91-1 | | U | 10.0 | 5.00 |
| bis(2-Ethylhexyl)phthalate | 117-81-7 | 18.8 | | 10.0 | 5.00 |
| Butylbenzylphthalate | 85-68-7 | | U | 10.0 | 5.00 |
| Carbazole | 86-74-8 | | U | 40.0 | 5.00 |
| Chrysene | 218-01-9 | | U | 10.0 | 5.00 |
| Di-N-Butylphthalate | 84-74-2 | | U | 10.0 | 5.00 |
| Di-n-octylphthalate | 117-84-0 | | U | 10.0 | 5.00 |
| Dibenzo(a,h)Anthracene | 53-70-3 | | U | 10.0 | 5.00 |
| Dibenzofuran | 132-64-9 | | U | 10.0 | 5.00 |

Certificate of Analysis

| Analyte | CAS # | Result | Qual | RL | MDL |
|---|---|---|---|---|---|
| Diethylphthalate | 84-66-2 | | U | 10.0 | 5.00 |
| Dimethylphthalate | 131-11-3 | | U | 10.0 | 5.00 |
| Fluoranthene | 206-44-0 | | U | 10.0 | 5.00 |
| Fluorene | 86-73-7 | | U | 10.0 | 5.00 |
| Hexachlorobenzene | 118-74-1 | | U | 10.0 | 5.00 |
| Hexachlorobutadiene | 87-68-3 | | U | 10.0 | 5.00 |
| Hexachlorocyclopentadiene | 77-47-4 | | U | 10.0 | 5.00 |
| Hexachloroethane | 67-72-1 | | U | 10.0 | 5.00 |
| Indeno(1,2,3-cd)pyrene | 193-39-5 | | U | 10.0 | 5.00 |
| Isophorone | 78-59-1 | | U | 10.0 | 5.00 |
| N-Nitrosodiphenylamine | 86-30-6 | | U | 10.0 | 5.00 |
| Naphthalene | 91-20-3 | | U | 10.0 | 5.00 |
| Nitrobenzene | 98-95-3 | | U | 10.0 | 5.00 |
| Pentachlorophenol | 87-86-5 | | U | 50.0 | 25.0 |
| Phenanthrene | 85-01-8 | | U | 10.0 | 5.00 |
| Phenol | 108-95-2 | | U | 10.0 | 5.00 |
| Pyrene | 129-00-0 | | U | 10.0 | 5.00 |

| Surrogate | Recovery | Lower Limit | Upper Limit | Q |
|---|---|---|---|---|
| 2,4,6-Tribromophenol | 81.8 | 10 | 123 | |
| 2-Fluorobiphenyl | 64.0 | 43 | 116 | |
| 2-Fluorophenol | 214 | 21 | 100 | * |
| Nitrobenzene-d5 | 63.1 | 35 | 114 | |
| p-Terphenyl-d14 | 95.7 | 33 | 141 | |
| Phenol-d5 | 203 | 10 | 94 | * |

| | |
|---|---|
| U | Not detected at or above adjusted sample detection limit. |

**Sample #:** L12050284-03
**Client ID:** PZ-07-050812
**Matrix:** Water
**Workgroup #:** WG398144
**Collect Date:** 05/08/2012 10:10
**Sample Tag:** 01

**PrePrep Method:** N/A
**Prep Method:** 3520C
**Analytical Method:** 8270C
**Analyst:** CAA
**Dilution:** 1
**Units:** ug/L

**Instrument:** HPMS5
**Prep Date:** 05/09/2012 14:00
**Cal Date:** 05/11/2012 13:10
**Run Date:** 05/14/2012 15:00
**File ID:** 5M66987

| Analyte | CAS # | Result | Qual | RL | MDL |
|---|---|---|---|---|---|
| unknown | | 8.12 | | 0.000 | 0.000 |
| unknown | | 11.5 | | 0.000 | 0.000 |
| unknown | | 5.46 | | 0.000 | 0.000 |
| n-Hexadecanoic acid | | 8.58 | | 0.000 | 0.000 |
| Octadecanoic acid | | 4.98 | | 0.000 | 0.000 |

## Certificate of Analysis

| | | | | | |
|---|---|---|---|---|---|
| **Sample #:** | L12050284-03 | **PrePrep Method:** | N/A | **Instrument:** | HPMS5 |
| **Client ID:** | PZ-07-050812 | **Prep Method:** | 3520C | **Prep Date:** | 05/09/2012 14:00 |
| **Matrix:** | Water | **Analytical Method:** | 8270C | **Cal Date:** | 05/11/2012 13:10 |
| **Workgroup #:** | WG398144 | **Analyst:** | CAA | **Run Date:** | 05/14/2012 15:00 |
| **Collect Date:** | 05/08/2012 10:10 | **Dilution:** | 1 | **File ID:** | 5M66987 |
| **Sample Tag:** | 01 | **Units:** | ug/L | | |

| Analyte | CAS # | Result | Qual | RL | MDL |
|---|---|---|---|---|---|
| 1,1'-Biphenyl | 92-52-4 | | U | 21.5 | 2.69 |
| 1,3,5-Trinitrobenzene | 99-35-4 | | U | 5.38 | 2.69 |
| 1,3-Dinitrobenzene | 99-65-0 | | U | 5.38 | 2.69 |
| 1,4-Dioxane | 123-91-1 | | U | 10.8 | 5.38 |
| 2,4,5-Trichlorophenol | 95-95-4 | | U | 5.38 | 2.69 |
| 2,4,6-Trichlorophenol | 88-06-2 | | U | 5.38 | 2.69 |
| 2,4-Dichlorophenol | 120-83-2 | | U | 5.38 | 2.69 |
| 2,4-Dimethylphenol | 105-67-9 | | U | 5.38 | 2.69 |
| 2,4-Dinitrophenol | 51-28-5 | | U | 26.9 | 13.4 |
| 2,4-Dinitrotoluene | 121-14-2 | | U | 5.38 | 2.69 |
| 2,6-Dinitrotoluene | 606-20-2 | | U | 5.38 | 2.69 |
| 2-Chloronaphthalene | 91-58-7 | | U | 5.38 | 2.69 |
| 2-Chlorophenol | 95-57-8 | | U | 5.38 | 2.69 |
| 2-Methylnaphthalene | 91-57-6 | | U | 5.38 | 2.69 |
| 2-Methylphenol | 95-48-7 | | U | 5.38 | 2.69 |
| 2-Nitroaniline | 88-74-4 | | U | 26.9 | 13.4 |
| 2-Nitrophenol | 88-75-5 | | U | 5.38 | 2.69 |
| 3-Nitroaniline | 99-09-2 | | U | 26.9 | 13.4 |
| 3,3'-Dichlorobenzidine | 91-94-1 | | U | 5.38 | 2.69 |
| 3-,4-Methylphenol | 106-44-5 | | U | 5.38 | 2.69 |
| 4-Bromophenyl-phenylether | 101-55-3 | | U | 5.38 | 2.69 |
| 4-Chloroaniline | 106-47-8 | | U | 5.38 | 2.69 |
| 4-Nitrophenol | 100-02-7 | | U | 26.9 | 13.4 |
| Acenaphthene | 83-32-9 | | U | 5.38 | 2.69 |
| Acenaphthylene | 208-96-8 | | U | 5.38 | 2.69 |
| Anthracene | 120-12-7 | | U | 5.38 | 2.69 |
| Benzo(a)anthracene | 56-55-3 | | U | 5.38 | 2.69 |
| Benzo(a)pyrene | 50-32-8 | | U | 5.38 | 2.69 |
| Benzo(b)fluoranthene | 205-99-2 | | U | 5.38 | 2.69 |
| Benzo(g,h,i)Perylene | 191-24-2 | | U | 5.38 | 2.69 |
| Benzo(k)fluoranthene | 207-08-9 | | U | 5.38 | 2.69 |
| Benzoic acid | 65-85-0 | | U | 21.5 | 10.8 |
| Benzyl alcohol | 100-51-6 | | U | 5.38 | 2.69 |

Certificate of Analysis

| Analyte | CAS # | Result | Qual | RL | MDL |
|---|---|---|---|---|---|
| Bis(2-Chloroethyl)ether | 111-44-4 | | U | 5.38 | 2.69 |
| Bis(2-Chloroethoxy)Methane | 111-91-1 | | U | 5.38 | 2.69 |
| bis(2-Ethylhexyl)phthalate | 117-81-7 | | U | 5.38 | 2.69 |
| Butylbenzylphthalate | 85-68-7 | | U | 5.38 | 2.69 |
| Carbazole | 86-74-8 | | U | 21.5 | 2.69 |
| Chrysene | 218-01-9 | | U | 5.38 | 2.69 |
| Di-N-Butylphthalate | 84-74-2 | | U | 5.38 | 2.69 |
| Di-n-octylphthalate | 117-84-0 | | U | 5.38 | 2.69 |
| Dibenzo(a,h)Anthracene | 53-70-3 | | U | 5.38 | 2.69 |
| Dibenzofuran | 132-64-9 | | U | 5.38 | 2.69 |
| Diethylphthalate | 84-66-2 | | U | 5.38 | 2.69 |
| Dimethylphthalate | 131-11-3 | | U | 5.38 | 2.69 |
| Fluoranthene | 206-44-0 | | U | 5.38 | 2.69 |
| Fluorene | 86-73-7 | | U | 5.38 | 2.69 |
| Hexachlorobenzene | 118-74-1 | | U | 5.38 | 2.69 |
| Hexachlorobutadiene | 87-68-3 | | U | 5.38 | 2.69 |
| Hexachlorocyclopentadiene | 77-47-4 | | U | 5.38 | 2.69 |
| Hexachloroethane | 67-72-1 | | U | 5.38 | 2.69 |
| Indeno(1,2,3-cd)pyrene | 193-39-5 | | U | 5.38 | 2.69 |
| Isophorone | 78-59-1 | | U | 5.38 | 2.69 |
| N-Nitrosodiphenylamine | 86-30-6 | | U | 5.38 | 2.69 |
| Naphthalene | 91-20-3 | | U | 5.38 | 2.69 |
| Nitrobenzene | 98-95-3 | | U | 5.38 | 2.69 |
| Pentachlorophenol | 87-86-5 | | U | 26.9 | 13.4 |
| Phenanthrene | 85-01-8 | | U | 5.38 | 2.69 |
| Phenol | 108-95-2 | | U | 5.38 | 2.69 |
| Pyrene | 129-00-0 | | U | 5.38 | 2.69 |

| Surrogate | Recovery | Lower Limit | Upper Limit | Q |
|---|---|---|---|---|
| 2,4,6-Tribromophenol | 64.8 | 10 | 123 | |
| 2-Fluorobiphenyl | 59.4 | 43 | 116 | |
| 2-Fluorophenol | 54.1 | 21 | 100 | |
| Nitrobenzene-d5 | 61.4 | 35 | 114 | |
| p-Terphenyl-d14 | 59.9 | 33 | 141 | |
| Phenol-d5 | 53.5 | 10 | 94 | |

| | |
|---|---|
| U | Not detected at or above adjusted sample detection limit. |

## Certificate of Analysis

| | | | | | |
|---|---|---|---|---|---|
| **Sample #:** | L12050284-05 | **PrePrep Method:** | N/A | **Instrument:** | HPMS5 |
| **Client ID:** | MW-18-050812 | **Prep Method:** | 3520C | **Prep Date:** | 05/09/2012 14:00 |
| **Matrix:** | Water | **Analytical Method:** | 8270C | **Cal Date:** | 05/11/2012 13:10 |
| **Workgroup #:** | WG398144 | **Analyst:** | CAA | **Run Date:** | 05/14/2012 15:36 |
| **Collect Date:** | 05/08/2012 11:00 | **Dilution:** | 1 | **File ID:** | 5M66988 |
| **Sample Tag:** | 01 | **Units:** | ug/L | | |

| Analyte | CAS # | Result | Qual | RL | MDL |
|---|---|---|---|---|---|
| 1,1'-Biphenyl | 92-52-4 | | U | 22.2 | 2.78 |
| 1,3,5-Trinitrobenzene | 99-35-4 | | U | 5.56 | 2.78 |
| 1,3-Dinitrobenzene | 99-65-0 | | U | 5.56 | 2.78 |
| 1,4-Dioxane | 123-91-1 | | U | 11.1 | 5.56 |
| 2,4,5-Trichlorophenol | 95-95-4 | | U | 5.56 | 2.78 |
| 2,4,6-Trichlorophenol | 88-06-2 | | U | 5.56 | 2.78 |
| 2,4-Dichlorophenol | 120-83-2 | | U | 5.56 | 2.78 |
| 2,4-Dimethylphenol | 105-67-9 | | U | 5.56 | 2.78 |
| 2,4-Dinitrophenol | 51-28-5 | | U | 27.8 | 13.9 |
| 2,4-Dinitrotoluene | 121-14-2 | | U | 5.56 | 2.78 |
| 2,6-Dinitrotoluene | 606-20-2 | | U | 5.56 | 2.78 |
| 2-Chloronaphthalene | 91-58-7 | | U | 5.56 | 2.78 |
| 2-Chlorophenol | 95-57-8 | | U | 5.56 | 2.78 |
| 2-Methylnaphthalene | 91-57-6 | | U | 5.56 | 2.78 |
| 2-Methylphenol | 95-48-7 | | U | 5.56 | 2.78 |
| 2-Nitroaniline | 88-74-4 | | U | 27.8 | 13.9 |
| 2-Nitrophenol | 88-75-5 | | U | 5.56 | 2.78 |
| 3-Nitroaniline | 99-09-2 | | U | 27.8 | 13.9 |
| 3,3'-Dichlorobenzidine | 91-94-1 | | U | 5.56 | 2.78 |
| 3-,4-Methylphenol | 106-44-5 | | U | 5.56 | 2.78 |
| 4-Bromophenyl-phenylether | 101-55-3 | | U | 5.56 | 2.78 |
| 4-Chloroaniline | 106-47-8 | | U | 5.56 | 2.78 |
| 4-Nitrophenol | 100-02-7 | | U | 27.8 | 13.9 |
| Acenaphthene | 83-32-9 | | U | 5.56 | 2.78 |
| Acenaphthylene | 208-96-8 | | U | 5.56 | 2.78 |
| Anthracene | 120-12-7 | | U | 5.56 | 2.78 |
| Benzo(a)anthracene | 56-55-3 | | U | 5.56 | 2.78 |
| Benzo(a)pyrene | 50-32-8 | | U | 5.56 | 2.78 |
| Benzo(b)fluoranthene | 205-99-2 | | U | 5.56 | 2.78 |
| Benzo(g,h,i)Perylene | 191-24-2 | | U | 5.56 | 2.78 |
| Benzo(k)fluoranthene | 207-08-9 | | U | 5.56 | 2.78 |
| Benzoic acid | 65-85-0 | | U | 22.2 | 11.1 |
| Benzyl alcohol | 100-51-6 | | U | 5.56 | 2.78 |

Certificate of Analysis

| Analyte | CAS # | Result | Qual | RL | MDL |
|---|---|---|---|---|---|
| Bis(2-Chloroethyl)ether | 111-44-4 | | U | 5.56 | 2.78 |
| Bis(2-Chloroethoxy)Methane | 111-91-1 | | U | 5.56 | 2.78 |
| bis(2-Ethylhexyl)phthalate | 117-81-7 | | U | 5.56 | 2.78 |
| Butylbenzylphthalate | 85-68-7 | | U | 5.56 | 2.78 |
| Carbazole | 86-74-8 | | U | 22.2 | 2.78 |
| Chrysene | 218-01-9 | | U | 5.56 | 2.78 |
| Di-N-Butylphthalate | 84-74-2 | | U | 5.56 | 2.78 |
| Di-n-octylphthalate | 117-84-0 | | U | 5.56 | 2.78 |
| Dibenzo(a,h)Anthracene | 53-70-3 | | U | 5.56 | 2.78 |
| Dibenzofuran | 132-64-9 | | U | 5.56 | 2.78 |
| Diethylphthalate | 84-66-2 | | U | 5.56 | 2.78 |
| Dimethylphthalate | 131-11-3 | | U | 5.56 | 2.78 |
| Fluoranthene | 206-44-0 | | U | 5.56 | 2.78 |
| Fluorene | 86-73-7 | | U | 5.56 | 2.78 |
| Hexachlorobenzene | 118-74-1 | | U | 5.56 | 2.78 |
| Hexachlorobutadiene | 87-68-3 | | U | 5.56 | 2.78 |
| Hexachlorocyclopentadiene | 77-47-4 | | U | 5.56 | 2.78 |
| Hexachloroethane | 67-72-1 | | U | 5.56 | 2.78 |
| Indeno(1,2,3-cd)pyrene | 193-39-5 | | U | 5.56 | 2.78 |
| Isophorone | 78-59-1 | | U | 5.56 | 2.78 |
| N-Nitrosodiphenylamine | 86-30-6 | | U | 5.56 | 2.78 |
| Naphthalene | 91-20-3 | | U | 5.56 | 2.78 |
| Nitrobenzene | 98-95-3 | | U | 5.56 | 2.78 |
| Pentachlorophenol | 87-86-5 | | U | 27.8 | 13.9 |
| Phenanthrene | 85-01-8 | | U | 5.56 | 2.78 |
| Phenol | 108-95-2 | | U | 5.56 | 2.78 |
| Pyrene | 129-00-0 | | U | 5.56 | 2.78 |

| Surrogate | Recovery | Lower Limit | Upper Limit | Q |
|---|---|---|---|---|
| 2,4,6-Tribromophenol | 93.0 | 10 | 123 | |
| 2-Fluorobiphenyl | 69.6 | 43 | 116 | |
| 2-Fluorophenol | 65.1 | 21 | 100 | |
| Nitrobenzene-d5 | 67.8 | 35 | 114 | |
| p-Terphenyl-d14 | 83.8 | 33 | 141 | |
| Phenol-d5 | 66.8 | 10 | 94 | |

| | |
|---|---|
| U | Not detected at or above adjusted sample detection limit. |

Certificate of Analysis

**Sample #:** L12050284-05 **PrePrep Method:** N/A **Instrument:** HPMS5
**Client ID:** MW-18-050812 **Prep Method:** 3520C **Prep Date:** 05/09/2012 14:00
**Matrix:** Water **Analytical Method:** 8270C **Cal Date:** 05/11/2012 13:10
**Workgroup #:** WG398144 **Analyst:** CAA **Run Date:** 05/14/2012 15:36
**Collect Date:** 05/08/2012 11:00 **Dilution:** 1 **File ID:** 5M66988
**Sample Tag:** 01 **Units:** ug/L

| Analyte | CAS # | Result | Qual | RL | MDL |
|---|---|---|---|---|---|
| unknown | | 13.3 | | 0.000 | 0.000 |
| unknown | | 12.2 | | 0.000 | 0.000 |
| n-Hexadecanoic acid | | 10.5 | | 0.000 | 0.000 |

**Sample #:** L12050284-07 **PrePrep Method:** N/A **Instrument:** HPMS5
**Client ID:** TW-01-050812 **Prep Method:** 3520C **Prep Date:** 05/09/2012 14:00
**Matrix:** Water **Analytical Method:** 8270C **Cal Date:** 05/11/2012 13:10
**Workgroup #:** WG398144 **Analyst:** CAA **Run Date:** 05/14/2012 16:14
**Collect Date:** 05/08/2012 14:50 **Dilution:** 1 **File ID:** 5M66989
**Sample Tag:** 01 **Units:** ug/L

| Analyte | CAS # | Result | Qual | RL | MDL |
|---|---|---|---|---|---|
| unknown | | 6.51 | | 0.000 | 0.000 |
| unknown | | 7.83 | | 0.000 | 0.000 |
| Dodecanoic acid | | 4.64 | | 0.000 | 0.000 |
| n-Hexadecanoic acid | | 5.11 | | 0.000 | 0.000 |

**Sample #:** L12050284-07 **PrePrep Method:** N/A **Instrument:** HPMS5
**Client ID:** TW-01-050812 **Prep Method:** 3520C **Prep Date:** 05/09/2012 14:00
**Matrix:** Water **Analytical Method:** 8270C **Cal Date:** 05/11/2012 13:10
**Workgroup #:** WG398144 **Analyst:** CAA **Run Date:** 05/14/2012 16:14
**Collect Date:** 05/08/2012 14:50 **Dilution:** 1 **File ID:** 5M66989
**Sample Tag:** 01 **Units:** ug/L

| Analyte | CAS # | Result | Qual | RL | MDL |
|---|---|---|---|---|---|
| 1,1'-Biphenyl | 92-52-4 | | U | 20.0 | 2.50 |
| 1,3,5-Trinitrobenzene | 99-35-4 | | U | 5.00 | 2.50 |
| 1,3-Dinitrobenzene | 99-65-0 | | U | 5.00 | 2.50 |
| 1,4-Dioxane | 123-91-1 | | U | 10.0 | 5.00 |
| 2,4,5-Trichlorophenol | 95-95-4 | | U | 5.00 | 2.50 |
| 2,4,6-Trichlorophenol | 88-06-2 | | U | 5.00 | 2.50 |
| 2,4-Dichlorophenol | 120-83-2 | | U | 5.00 | 2.50 |
| 2,4-Dimethylphenol | 105-67-9 | | U | 5.00 | 2.50 |

Certificate of Analysis

| Analyte | CAS # | Result | Qual | RL | MDL |
|---|---|---|---|---|---|
| 2,4-Dinitrophenol | 51-28-5 | | U | 25.0 | 12.5 |
| 2,4-Dinitrotoluene | 121-14-2 | | U | 5.00 | 2.50 |
| 2,6-Dinitrotoluene | 606-20-2 | | U | 5.00 | 2.50 |
| 2-Chloronaphthalene | 91-58-7 | | U | 5.00 | 2.50 |
| 2-Chlorophenol | 95-57-8 | | U | 5.00 | 2.50 |
| 2-Methylnaphthalene | 91-57-6 | | U | 5.00 | 2.50 |
| 2-Methylphenol | 95-48-7 | | U | 5.00 | 2.50 |
| 2-Nitroaniline | 88-74-4 | | U | 25.0 | 12.5 |
| 2-Nitrophenol | 88-75-5 | | U | 5.00 | 2.50 |
| 3-Nitroaniline | 99-09-2 | | U | 25.0 | 12.5 |
| 3,3'-Dichlorobenzidine | 91-94-1 | | U | 5.00 | 2.50 |
| 3-,4-Methylphenol | 106-44-5 | | U | 5.00 | 2.50 |
| 4-Bromophenyl-phenylether | 101-55-3 | | U | 5.00 | 2.50 |
| 4-Chloroaniline | 106-47-8 | | U | 5.00 | 2.50 |
| 4-Nitrophenol | 100-02-7 | | U | 25.0 | 12.5 |
| Acenaphthene | 83-32-9 | | U | 5.00 | 2.50 |
| Acenaphthylene | 208-96-8 | | U | 5.00 | 2.50 |
| Anthracene | 120-12-7 | | U | 5.00 | 2.50 |
| Benzo(a)anthracene | 56-55-3 | | U | 5.00 | 2.50 |
| Benzo(a)pyrene | 50-32-8 | | U | 5.00 | 2.50 |
| Benzo(b)fluoranthene | 205-99-2 | | U | 5.00 | 2.50 |
| Benzo(g,h,i)Perylene | 191-24-2 | | U | 5.00 | 2.50 |
| Benzo(k)fluoranthene | 207-08-9 | | U | 5.00 | 2.50 |
| Benzoic acid | 65-85-0 | | U | 20.0 | 10.0 |
| Benzyl alcohol | 100-51-6 | | U | 5.00 | 2.50 |
| Bis(2-Chloroethyl)ether | 111-44-4 | | U | 5.00 | 2.50 |
| Bis(2-Chloroethoxy)Methane | 111-91-1 | | U | 5.00 | 2.50 |
| bis(2-Ethylhexyl)phthalate | 117-81-7 | | U | 5.00 | 2.50 |
| Butylbenzylphthalate | 85-68-7 | | U | 5.00 | 2.50 |
| Carbazole | 86-74-8 | | U | 20.0 | 2.50 |
| Chrysene | 218-01-9 | | U | 5.00 | 2.50 |
| Di-N-Butylphthalate | 84-74-2 | | U | 5.00 | 2.50 |
| Di-n-octylphthalate | 117-84-0 | | U | 5.00 | 2.50 |
| Dibenzo(a,h)Anthracene | 53-70-3 | | U | 5.00 | 2.50 |
| Dibenzofuran | 132-64-9 | | U | 5.00 | 2.50 |
| Diethylphthalate | 84-66-2 | | U | 5.00 | 2.50 |
| Dimethylphthalate | 131-11-3 | | U | 5.00 | 2.50 |
| Fluoranthene | 206-44-0 | | U | 5.00 | 2.50 |
| Fluorene | 86-73-7 | | U | 5.00 | 2.50 |

Certificate of Analysis

| Analyte | CAS # | Result | Qual | RL | MDL |
|---|---|---|---|---|---|
| Hexachlorobenzene | 118-74-1 | | U | 5.00 | 2.50 |
| Hexachlorobutadiene | 87-68-3 | | U | 5.00 | 2.50 |
| Hexachlorocyclopentadiene | 77-47-4 | | U | 5.00 | 2.50 |
| Hexachloroethane | 67-72-1 | | U | 5.00 | 2.50 |
| Indeno(1,2,3-cd)pyrene | 193-39-5 | | U | 5.00 | 2.50 |
| Isophorone | 78-59-1 | | U | 5.00 | 2.50 |
| N-Nitrosodiphenylamine | 86-30-6 | | U | 5.00 | 2.50 |
| Naphthalene | 91-20-3 | | U | 5.00 | 2.50 |
| Nitrobenzene | 98-95-3 | | U | 5.00 | 2.50 |
| Pentachlorophenol | 87-86-5 | | U | 25.0 | 12.5 |
| Phenanthrene | 85-01-8 | | U | 5.00 | 2.50 |
| Phenol | 108-95-2 | | U | 5.00 | 2.50 |
| Pyrene | 129-00-0 | | U | 5.00 | 2.50 |

| Surrogate | Recovery | Lower Limit | Upper Limit | Q |
|---|---|---|---|---|
| 2,4,6-Tribromophenol | 92.0 | 10 | 123 | |
| 2-Fluorobiphenyl | 83.0 | 43 | 116 | |
| 2-Fluorophenol | 77.5 | 21 | 100 | |
| Nitrobenzene-d5 | 80.5 | 35 | 114 | |
| p-Terphenyl-d14 | 62.0 | 33 | 141 | |
| Phenol-d5 | 77.7 | 10 | 94 | |

| | |
|---|---|
| U | Not detected at or above adjusted sample detection limit. |

**Sample #:** L12050284-10
**Client ID:** DUP-GW-050812
**Matrix:** Water
**Workgroup #:** WG398144
**Collect Date:** 05/08/2012 15:00
**Sample Tag:** 01

**PrePrep Method:** N/A
**Prep Method:** 3520C
**Analytical Method:** 8270C
**Analyst:** CAA
**Dilution:** 1
**Units:** ug/L

**Instrument:** HPMS5
**Prep Date:** 05/09/2012 14:00
**Cal Date:** 05/11/2012 13:10
**Run Date:** 05/14/2012 16:50
**File ID:** 5M66990

| Analyte | CAS # | Result | Qual | RL | MDL |
|---|---|---|---|---|---|
| 1,1'-Biphenyl | 92-52-4 | | U | 20.4 | 2.55 |
| 1,3,5-Trinitrobenzene | 99-35-4 | | U | 5.10 | 2.55 |
| 1,3-Dinitrobenzene | 99-65-0 | | U | 5.10 | 2.55 |
| 1,4-Dioxane | 123-91-1 | | U | 10.2 | 5.10 |
| 2,4,5-Trichlorophenol | 95-95-4 | | U | 5.10 | 2.55 |
| 2,4,6-Trichlorophenol | 88-06-2 | | U | 5.10 | 2.55 |
| 2,4-Dichlorophenol | 120-83-2 | | U | 5.10 | 2.55 |
| 2,4-Dimethylphenol | 105-67-9 | | U | 5.10 | 2.55 |
| 2,4-Dinitrophenol | 51-28-5 | | U | 25.5 | 12.8 |
| 2,4-Dinitrotoluene | 121-14-2 | | U | 5.10 | 2.55 |

Certificate of Analysis

| Analyte | CAS # | Result | Qual | RL | MDL |
|---|---|---|---|---|---|
| 2,6-Dinitrotoluene | 606-20-2 | | U | 5.10 | 2.55 |
| 2-Chloronaphthalene | 91-58-7 | | U | 5.10 | 2.55 |
| 2-Chlorophenol | 95-57-8 | | U | 5.10 | 2.55 |
| 2-Methylnaphthalene | 91-57-6 | | U | 5.10 | 2.55 |
| 2-Methylphenol | 95-48-7 | | U | 5.10 | 2.55 |
| 2-Nitroaniline | 88-74-4 | | U | 25.5 | 12.8 |
| 2-Nitrophenol | 88-75-5 | | U | 5.10 | 2.55 |
| 3-Nitroaniline | 99-09-2 | | U | 25.5 | 12.8 |
| 3,3'-Dichlorobenzidine | 91-94-1 | | U | 5.10 | 2.55 |
| 3-,4-Methylphenol | 106-44-5 | | U | 5.10 | 2.55 |
| 4-Bromophenyl-phenylether | 101-55-3 | | U | 5.10 | 2.55 |
| 4-Chloroaniline | 106-47-8 | | U | 5.10 | 2.55 |
| 4-Nitrophenol | 100-02-7 | | U | 25.5 | 12.8 |
| Acenaphthene | 83-32-9 | | U | 5.10 | 2.55 |
| Acenaphthylene | 208-96-8 | | U | 5.10 | 2.55 |
| Anthracene | 120-12-7 | | U | 5.10 | 2.55 |
| Benzo(a)anthracene | 56-55-3 | | U | 5.10 | 2.55 |
| Benzo(a)pyrene | 50-32-8 | | U | 5.10 | 2.55 |
| Benzo(b)fluoranthene | 205-99-2 | | U | 5.10 | 2.55 |
| Benzo(g,h,i)Perylene | 191-24-2 | | U | 5.10 | 2.55 |
| Benzo(k)fluoranthene | 207-08-9 | | U | 5.10 | 2.55 |
| Benzoic acid | 65-85-0 | | U | 20.4 | 10.2 |
| Benzyl alcohol | 100-51-6 | | U | 5.10 | 2.55 |
| Bis(2-Chloroethyl)ether | 111-44-4 | | U | 5.10 | 2.55 |
| Bis(2-Chloroethoxy)Methane | 111-91-1 | | U | 5.10 | 2.55 |
| bis(2-Ethylhexyl)phthalate | 117-81-7 | | U | 5.10 | 2.55 |
| Butylbenzylphthalate | 85-68-7 | | U | 5.10 | 2.55 |
| Carbazole | 86-74-8 | | U | 20.4 | 2.55 |
| Chrysene | 218-01-9 | | U | 5.10 | 2.55 |
| Di-N-Butylphthalate | 84-74-2 | | U | 5.10 | 2.55 |
| Di-n-octylphthalate | 117-84-0 | | U | 5.10 | 2.55 |
| Dibenzo(a,h)Anthracene | 53-70-3 | | U | 5.10 | 2.55 |
| Dibenzofuran | 132-64-9 | | U | 5.10 | 2.55 |
| Diethylphthalate | 84-66-2 | | U | 5.10 | 2.55 |
| Dimethylphthalate | 131-11-3 | | U | 5.10 | 2.55 |
| Fluoranthene | 206-44-0 | | U | 5.10 | 2.55 |
| Fluorene | 86-73-7 | | U | 5.10 | 2.55 |
| Hexachlorobenzene | 118-74-1 | | U | 5.10 | 2.55 |
| Hexachlorobutadiene | 87-68-3 | | U | 5.10 | 2.55 |

Certificate of Analysis

| Analyte | CAS # | Result | Qual | RL | MDL |
|---|---|---|---|---|---|
| Hexachlorocyclopentadiene | 77-47-4 | | U | 5.10 | 2.55 |
| Hexachloroethane | 67-72-1 | | U | 5.10 | 2.55 |
| Indeno(1,2,3-cd)pyrene | 193-39-5 | | U | 5.10 | 2.55 |
| Isophorone | 78-59-1 | | U | 5.10 | 2.55 |
| N-Nitrosodiphenylamine | 86-30-6 | | U | 5.10 | 2.55 |
| Naphthalene | 91-20-3 | | U | 5.10 | 2.55 |
| Nitrobenzene | 98-95-3 | | U | 5.10 | 2.55 |
| Pentachlorophenol | 87-86-5 | | U | 25.5 | 12.8 |
| Phenanthrene | 85-01-8 | | U | 5.10 | 2.55 |
| Phenol | 108-95-2 | | U | 5.10 | 2.55 |
| Pyrene | 129-00-0 | | U | 5.10 | 2.55 |

| Surrogate | Recovery | Lower Limit | Upper Limit | Q |
|---|---|---|---|---|
| 2,4,6-Tribromophenol | 84.8 | 10 | 123 | |
| 2-Fluorobiphenyl | 81.5 | 43 | 116 | |
| 2-Fluorophenol | 68.9 | 21 | 100 | |
| Nitrobenzene-d5 | 79.5 | 35 | 114 | |
| p-Terphenyl-d14 | 81.9 | 33 | 141 | |
| Phenol-d5 | 73.3 | 10 | 94 | |

| | |
|---|---|
| U | Not detected at or above adjusted sample detection limit. |

**Sample #:** L12050284-10
**Client ID:** DUP-GW-050812
**Matrix:** Water
**Workgroup #:** WG398144
**Collect Date:** 05/08/2012 15:00
**Sample Tag:** 01

**PrePrep Method:** N/A
**Prep Method:** 3520C
**Analytical Method:** 8270C
**Analyst:** CAA
**Dilution:** 1
**Units:** ug/L

**Instrument:** HPMS5
**Prep Date:** 05/09/2012 14:00
**Cal Date:** 05/11/2012 13:10
**Run Date:** 05/14/2012 16:50
**File ID:** 5M66990

| Analyte | CAS # | Result | Qual | RL | MDL |
|---|---|---|---|---|---|
| Ethane, 1,1,2-trichloro- | | 6.79 | | 0.000 | 0.000 |
| unknown | | 10.4 | | 0.000 | 0.000 |
| unknown | | 6.21 | | 0.000 | 0.000 |
| unknown | | 15.6 | | 0.000 | 0.000 |
| unknown | | 5.53 | | 0.000 | 0.000 |
| Ethane, 1,1,2,2-tetrachloro- | | 214 | | 0.000 | 0.000 |
| unknown | | 7.46 | | 0.000 | 0.000 |
| unknown | | 4.95 | | 0.000 | 0.000 |
| unknown | | 9.01 | | 0.000 | 0.000 |
| unknown | | 5.32 | | 0.000 | 0.000 |
| unknown | | 9.27 | | 0.000 | 0.000 |
| unknown | | 7.74 | | 0.000 | 0.000 |

Certificate of Analysis

| Analyte | CAS # | Result | Qual | RL | MDL |
|---|---|---|---|---|---|
| unknown | | 4.26 | | 0.000 | 0.000 |
| unknown | | 9.74 | | 0.000 | 0.000 |
| unknown | | 14.6 | | 0.000 | 0.000 |
| unknown | | 9.60 | | 0.000 | 0.000 |
| unknown | | 5.34 | | 0.000 | 0.000 |
| Dodecanoic acid | | 4.83 | | 0.000 | 0.000 |
| n-Hexadecanoic acid | | 4.77 | | 0.000 | 0.000 |

**Sample #:** L12050284-12
**Client ID:** EB-050812-GW
**Matrix:** Water
**Workgroup #:** WG398144
**Collect Date:** 05/08/2012 13:10
**Sample Tag:** 01

**PrePrep Method:** N/A
**Prep Method:** 3520C
**Analytical Method:** 8270C
**Analyst:** CAA
**Dilution:** 1
**Units:** ug/L

**Instrument:** HPMS5
**Prep Date:** 05/09/2012 14:00
**Cal Date:** 05/11/2012 13:10
**Run Date:** 05/14/2012 17:26
**File ID:** 5M66991

| Analyte | CAS # | Result | Qual | RL | MDL |
|---|---|---|---|---|---|
| 1,1'-Biphenyl | 92-52-4 | | U | 22.0 | 2.75 |
| 1,3,5-Trinitrobenzene | 99-35-4 | | U | 5.49 | 2.75 |
| 1,3-Dinitrobenzene | 99-65-0 | | U | 5.49 | 2.75 |
| 1,4-Dioxane | 123-91-1 | | U | 11.0 | 5.49 |
| 2,4,5-Trichlorophenol | 95-95-4 | | U | 5.49 | 2.75 |
| 2,4,6-Trichlorophenol | 88-06-2 | | U | 5.49 | 2.75 |
| 2,4-Dichlorophenol | 120-83-2 | | U | 5.49 | 2.75 |
| 2,4-Dimethylphenol | 105-67-9 | | U | 5.49 | 2.75 |
| 2,4-Dinitrophenol | 51-28-5 | | U | 27.5 | 13.7 |
| 2,4-Dinitrotoluene | 121-14-2 | | U | 5.49 | 2.75 |
| 2,6-Dinitrotoluene | 606-20-2 | | U | 5.49 | 2.75 |
| 2-Chloronaphthalene | 91-58-7 | | U | 5.49 | 2.75 |
| 2-Chlorophenol | 95-57-8 | | U | 5.49 | 2.75 |
| 2-Methylnaphthalene | 91-57-6 | | U | 5.49 | 2.75 |
| 2-Methylphenol | 95-48-7 | | U | 5.49 | 2.75 |
| 2-Nitroaniline | 88-74-4 | | U | 27.5 | 13.7 |
| 2-Nitrophenol | 88-75-5 | | U | 5.49 | 2.75 |
| 3-Nitroaniline | 99-09-2 | | U | 27.5 | 13.7 |
| 3,3'-Dichlorobenzidine | 91-94-1 | | U | 5.49 | 2.75 |
| 3-,4-Methylphenol | 106-44-5 | | U | 5.49 | 2.75 |
| 4-Bromophenyl-phenylether | 101-55-3 | | U | 5.49 | 2.75 |
| 4-Chloroaniline | 106-47-8 | | U | 5.49 | 2.75 |
| 4-Nitrophenol | 100-02-7 | | U | 27.5 | 13.7 |
| Acenaphthene | 83-32-9 | | U | 5.49 | 2.75 |

Certificate of Analysis

| Analyte | CAS # | Result | Qual | RL | MDL |
|---|---|---|---|---|---|
| Acenaphthylene | 208-96-8 | | U | 5.49 | 2.75 |
| Anthracene | 120-12-7 | | U | 5.49 | 2.75 |
| Benzo(a)anthracene | 56-55-3 | | U | 5.49 | 2.75 |
| Benzo(a)pyrene | 50-32-8 | | U | 5.49 | 2.75 |
| Benzo(b)fluoranthene | 205-99-2 | | U | 5.49 | 2.75 |
| Benzo(g,h,i)Perylene | 191-24-2 | | U | 5.49 | 2.75 |
| Benzo(k)fluoranthene | 207-08-9 | | U | 5.49 | 2.75 |
| Benzoic acid | 65-85-0 | | U | 22.0 | 11.0 |
| Benzyl alcohol | 100-51-6 | | U | 5.49 | 2.75 |
| Bis(2-Chloroethyl)ether | 111-44-4 | | U | 5.49 | 2.75 |
| Bis(2-Chloroethoxy)Methane | 111-91-1 | | U | 5.49 | 2.75 |
| bis(2-Ethylhexyl)phthalate | 117-81-7 | | U | 5.49 | 2.75 |
| Butylbenzylphthalate | 85-68-7 | | U | 5.49 | 2.75 |
| Carbazole | 86-74-8 | | U | 22.0 | 2.75 |
| Chrysene | 218-01-9 | | U | 5.49 | 2.75 |
| Di-N-Butylphthalate | 84-74-2 | | U | 5.49 | 2.75 |
| Di-n-octylphthalate | 117-84-0 | | U | 5.49 | 2.75 |
| Dibenzo(a,h)Anthracene | 53-70-3 | | U | 5.49 | 2.75 |
| Dibenzofuran | 132-64-9 | | U | 5.49 | 2.75 |
| Diethylphthalate | 84-66-2 | | U | 5.49 | 2.75 |
| Dimethylphthalate | 131-11-3 | | U | 5.49 | 2.75 |
| Fluoranthene | 206-44-0 | | U | 5.49 | 2.75 |
| Fluorene | 86-73-7 | | U | 5.49 | 2.75 |
| Hexachlorobenzene | 118-74-1 | | U | 5.49 | 2.75 |
| Hexachlorobutadiene | 87-68-3 | | U | 5.49 | 2.75 |
| Hexachlorocyclopentadiene | 77-47-4 | | U | 5.49 | 2.75 |
| Hexachloroethane | 67-72-1 | | U | 5.49 | 2.75 |
| Indeno(1,2,3-cd)pyrene | 193-39-5 | | U | 5.49 | 2.75 |
| Isophorone | 78-59-1 | | U | 5.49 | 2.75 |
| N-Nitrosodiphenylamine | 86-30-6 | | U | 5.49 | 2.75 |
| Naphthalene | 91-20-3 | | U | 5.49 | 2.75 |
| Nitrobenzene | 98-95-3 | | U | 5.49 | 2.75 |
| Pentachlorophenol | 87-86-5 | | U | 27.5 | 13.7 |
| Phenanthrene | 85-01-8 | | U | 5.49 | 2.75 |
| Phenol | 108-95-2 | | U | 5.49 | 2.75 |
| Pyrene | 129-00-0 | | U | 5.49 | 2.75 |

| Surrogate | Recovery | Lower Limit | Upper Limit | Q |
|---|---|---|---|---|
| 2,4,6-Tribromophenol | 80.4 | 10 | 123 | |
| 2-Fluorobiphenyl | 70.0 | 43 | 116 | |

Certificate of Analysis

| | | | | |
|---|---|---|---|---|
| 2-Fluorophenol | 64.6 | 21 | 100 | |
| Nitrobenzene-d5 | 71.3 | 35 | 114 | |
| p-Terphenyl-d14 | 114 | 33 | 141 | |
| Phenol-d5 | 66.8 | 10 | 94 | |

| | |
|---|---|
| U | Not detected at or above adjusted sample detection limit. |

| | | | | | |
|---|---|---|---|---|---|
| **Sample #:** | L12050284-12 | **PrePrep Method:** | N/A | **Instrument:** | HPMS5 |
| **Client ID:** | EB-050812-GW | **Prep Method:** | 3520C | **Prep Date:** | 05/09/2012 14:00 |
| **Matrix:** | Water | **Analytical Method:** | 8270C | **Cal Date:** | 05/11/2012 13:10 |
| **Workgroup #:** | WG398144 | **Analyst:** | CAA | **Run Date:** | 05/14/2012 17:26 |
| **Collect Date:** | 05/08/2012 13:10 | **Dilution:** | 1 | **File ID:** | 5M66991 |
| **Sample Tag:** | 01 | **Units:** | ug/L | | |

| Analyte | CAS # | Result | Qual | RL | MDL |
|---|---|---|---|---|---|
| 2-Butanone, 4-hydroxy- | | 33.8 | | 0.000 | 0.000 |
| unknown | | 11.7 | | 0.000 | 0.000 |

# 2.2.1.2 QC Summary Data

## Example 8270 Calculations

**1.0 Calculating the Response Factor (RF) from the initial calibration (ICAL) data:**

RF = [ (Ax) (Cis) ] / [ (Ais) (Cx) ]

| where: | Example |
|---|---|
| Ax = Area of the characteristic ion for the compound being measured: | 1261197 |
| Cis = Concentration of the specific internal standard (ug/mL) | 40 |
| Ais = Area of the characteristic ion of the specific internal standard | 608044 |
| Cx = Concentration of the compound in the standard being measured (ug/mL) | 50 |
| RF = Calculated Response Factor | **1.65935** |

**2.0 Calculating the concentration ( C ) of a compound in water using the data from the prep log and quantitation report: ***

Cx = [ (Ax) (Cis) (Vf) (D)] / [ (Ais) (RF) (Vi) ]

| where: | Example |
|---|---|
| Ax = Area of the characteristic ion for the compound being measured | 367250 |
| Cis = Concentration of the specific internal standard (ug/mL) | 40 |
| Vf = Final volume of sample extract from prep log (mL) | 1 |
| D = Dilution factor for sample as a multiplier ( 10x = 10) | 1 |
| Ais = Area of the characteristic ion of the specific internal standard | 511641 |
| RF = Average RF from the ICAL | 1.65935 |
| Vi = Initial volume of sample extracted from prep log (mL) | 1021 |
| Cx = Concentration of the compound in the sample being measured (ug/mL) | 0.016947 |
| Cx = Concentration of the compound in the sample being measured (ug/L) | **16.947** |

**3.0 Calculating the concentration ( C ) of a compound in soil using the data from the prep log and quantitation report: ***

Cx = [ (Ax) (Cis) (Vf) (D)] / [ (Ais) (RF) (Wi) ]

| where: | Example |
|---|---|
| Ax = Area of the characteristic ion for the compound being measured | 367250 |
| Cis = Concentration of the specific internal standard (ug/mL) | 40 |
| Vf = Final volume of sample extract from prep log (mL) | 1 |
| D = Dilution factor for sample as a multiplier ( 10x = 10) | 1 |
| Ais = Area of the characteristic ion of the specific internal standard | 511641 |
| RF = Average RF from the ICAL | 1.65935 |
| Wi = Initial weight of sample extracted ( g ) from prep log | 30 |
| Cx = Concentration of the compound in the sample being measured (ug/g) | 0.576763 |
| Cx = Concentration of the compound in the sample being measured (ug/kg) | **576.7627** |

Dry weight correction:

| | |
|---|---|
| Percent solids (PCT_S) | 50 |
| Cd = (Cx) (100)/PCT_S | **1153.525** ug/kg |

* Concentrations appearing on the instrument quantitation reports are on-column results and do not take into account initial volume, final volume, and the dilution factor.

**4.0 Concentration from Linear Regression**

**Step 1: Retrieve Curve Data From Plot, y = mx + b**

y = response ratio = response of analyte / response of IS = Ax/Ais

x = amount ratio = concentration analyte/concentration internal standard = Cx / Cis

m = slope from curve plot

b = intercept from curve plot

**Step 2: Calculate y from Quantitation Report**

y = 16790/784838 = 0.02139

**Step 3: Solve for x**

x = (y - b)/m = [( 0.02139 -( - 0.0435)]/ 0.0783 = 0.829

**Step 4: Solve for analyte concentration Cx**

Cx = Cis ( x ) = (25.0)(0.829) = 20.72 ug/L

**Example Spreadsheet Calculation:**

| | | |
|---|---|---|
| Slope from curve, m: | 0.0783 | |
| Intercept from curve, b: | -0.0435 | |
| Area of analyte, Ax: | 16790 | |
| Area of Internal Standard , Ais: | 784484 | |
| Concentration of IS, Cis | 25.00 | ug/L |
| Response Ratio ( y) : | 0.021403 | |
| Amount Ratio: | 0.828897 | |
| Concentration (Cx): | 20.72241 | ug/L |

**5.0 Concentration from Quadratic Regression**

**Step 1 - Retrieve Curve Data from Plot, y = Ax^2 + Bx + C**
Where:
Ax^2 + Bx + (C - y) = 0
A, B, C = constants from the ICAL quadratic regression
y = Response ratio = Area of analyte/Area of internal standard (IS)
x = Amount ratio = Concentration of analyte/concentration of IS

**Step 2: Calculate y from Quantitation Report**

y = Ax/Ais

**Step 3: Solve for x using the quadratic formula**
Ax^2 + Bx + C - y = 0

$$x = \frac{b \pm \sqrt{\left(b^2 - 4a(c - y)\right)}}{2a}$$ (Two possible solutions)

**Step 4: Solve for analyte concentration Cx**

Cx = ( Cis )( Amount ratio)

**Example Spreadsheet Calculation:**

| | | |
|---|---|---|
| Value of A from plot: | **0.0259** | |
| Value of B from plot: | **0.0596** | |
| Value of C from plot: | **-0.0165** | |
| Area of analyte from quantitation report: | **203233** | |
| Area of IS from quantiation report: | **1425653** | |
| Response ratio, y: | **0.142554** | |
| C - y: | **-0.15905** | |
| Root 1 - Computed amount ratio , X1: | **-3.88278** | |
| Root 2 - Computed amount ratio , X2: | **1.581623** | use this solution |
| Concentration of IS, Cis: | **40.00** | |
| Concentration of analyte, Cx: | **63.26** | ug/L |

# Microbac Laboratories Inc.
## Continuous Sample Extract Log

Workgroup: WG397434
Analyst: CSH
Spike Analyst: CSH
Method: 3520C
Run Date: 05/09/2012 14:00
SOP: EXB01 Revison 16
Spike Witness: CPD
Surr Solution: STD50249

TIME ON: 16:45 OFF: 10:45 ON: 13:00 OFF: 07:30
Methylene Chloride Lot #: COA16058
1:1 H2SO4 Lot #: RGT17192
10N NaOH Lot #: RGT17312
Sodium Sulfate,Anhydrous,Granular ( Lot #COA15998

| | SAMPLE # | Type | Reference | Prod | pH | Init Amnt | Surr Amnt | Spike Amnt | Spike Sol | Final Vol | Color |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | L12050134-08 | SAMP | | 827-SPE-DIO | <2>12 | 970 mL | .5 mL | | | 1 mL | Transparent |
| 2 | L12050226-01 | SAMP | | 827-SPE-DIO | <2>12 | 900 mL | .5 mL | | | 1 mL | Colored |
| 3 | L12050226-03 | SAMP | | 827-SPE-DIO | <2>12 | 630 mL | .5 mL | | | 1 mL | Colored |
| 4 | L12050226-05 | SAMP | | 827-SPE-DIO | <2>12 | 910 mL | .5 mL | | | 1 mL | Transparent |
| 5 | L12050226-07 | SAMP | | 827-SPE-DIO | <2>12 | 920 mL | .5 mL | | | 1 mL | Colored |
| 6 | L12050226-10 | SAMP | | 827-SPE-DIO | <2>12 | 910 mL | .5 mL | | | 1 mL | Colored |
| 7 | L12050232-01 | RS01 | | 827-SPE | <2>12 | 1000 mL | .5 mL | | | 1 mL | Transparent |
| 8 | L12050232-02 | MS01 | L12050232-01 | 827-SPE | <2>12 | 980 mL | .5 mL | 1 mL | STD51286 | 1 mL | Colored |
| 9 | L12050232-03 | SD01 | L12050232-01 | 827-SPE | <2>12 | 980 mL | .5 mL | 1 mL | STD51286 | 1 mL | Colored |
| 10 | L12050284-01 | SAMP | | 827-SPE-DIO | <2>12 | 1000 mL | .5 mL | | | 1 mL | Colored |
| 11 | L12050284-03 | SAMP | | 827-SPE-DIO | <2>12 | 930 mL | .5 mL | | | 1 mL | Transparent |
| 12 | L12050284-05 | SAMP | | 827-SPE-DIO | <2>12 | 900 mL | .5 mL | | | 1 mL | Transparent |
| 13 | L12050284-07 | SAMP | | 827-SPE-DIO | <2>12 | 1000 mL | .5 mL | | | 1 mL | Colored |
| 14 | L12050284-10 | SAMP | | 827-SPE-DIO | <2>12 | 980 mL | .5 mL | | | 1 mL | Colored |
| 15 | L12050284-12 | SAMP | | 827-SPE-DIO | <2>12 | 910 mL | .5 mL | | | 1 mL | Transparent |
| 16 | WG397434-01 | REF | L12050232-01 | 827-SPE | <2>12 | 1000 mL | .5 mL | | | 1 mL | Transparent |
| 17 | WG397434-02 | BLANK | | 827-SPE | <2>12 | 1000 mL | .5 mL | | | 1 mL | Transparent |
| 18 | WG397434-03 | LCS | | 827-SPE | <2>12 | 1000 mL | .5 mL | 1 mL | STD51286 | 1 mL | Colored |
| 19 | WG397434-04 | MS | L12050232-01 | 827-SPE | <2>12 | 980 mL | .5 mL | 1 mL | STD51286 | 1 mL | Colored |
| 20 | WG397434-05 | MSD | L12050232-01 | 827-SPE | <2>12 | 980 mL | .5 mL | 1 mL | STD51286 | 1 mL | Colored |

| | |
|---|---|
| L12050134-08 | RE-EXTRACT IN HOLD |

Analyst: Chris Hill

Reviewer: Cheryl A. Flowers

EXTRACT - Modified 01/23/2009
PDF ID: 2412368
Report generated: 05/22/2012 13:43

# Microbac Laboratories Inc.

## Instrument Run Log

Instrument: HPMS5 Dataset: 051112
Analyst1: CAA Analyst2: NA
Method: 8270C SOP: MSS01 Rev: 19

Maintenance Log ID: 41711 Syringe Filter Lot#:

Column 1 ID: RXI-5MS Column 2 ID: NA
Workgroups: WG397722
Internal STD: COA16051 Surrogate STD: NA Calibration STD
CCV STD: LCS STD: MS/MSD STD:

Comments: Ran ICAL due to new column.

| Seq. | File ID | Sample Information | Mat | Dil | Reference | Date/Time |
|---|---|---|---|---|---|---|
| 1 | 5M66913 | WG397707-01 50PPM DFTPP STD | 1 | 1 | STD50659 | 05/11/12 08:05 |
| 2 | 5M66914 | WG397707-01 50PPM DFTPP STD | 1 | 1 | STD50659 | 05/11/12 08:23 |
| 3 | 5M66915 | WG397707-01 50PPM DFTPP STD | 1 | 1 | STD50659 | 05/11/12 08:42 |
| 4 | 5M66916 | WG397707-02 50PPM Megamix STD | 1 | 1 | STD50886 | 05/11/12 09:02 |
| 5 | 5M66917 | WG397707-03 3PPM Megamix STD | 1 | 1 | STD50886 | 05/11/12 09:37 |
| 6 | 5M66918 | WG397707-04 10PPM Megamix STD | 1 | 1 | STD50886 | 05/11/12 10:12 |
| 7 | 5M66919 | WG397707-05 15PPM Megamix STD | 1 | 1 | STD50886 | 05/11/12 10:47 |
| 8 | 5M66920 | WG397707-06 25PPM Megamix STD | 1 | 1 | STD50886 | 05/11/12 11:22 |
| 9 | 5M66921 | WG397707-07 80PPM Megamix STD | 1 | 1 | STD50886 | 05/11/12 11:58 |
| 10 | 5M66922 | WG397707-08 100PPM Megamix STD | 1 | 1 | STD50886 | 05/11/12 12:34 |
| 11 | 5M66923 | WG397707-09 120PPM Megamix STD | 1 | 1 | STD50886 | 05/11/12 13:10 |
| 12 | 5M66924 | WG397707-10 50PPM Megamix Alt Src STD | 1 | 1 | STD50596 | 05/11/12 13:46 |
| 13 | 5M66925 | WG397707-11 50PPM 1,4-Dioxane Alt Src ST | 1 | 1 | STD50848 | 05/11/12 14:21 |
| 14 | 5M66926 | WG397577-01 BLK 05/10 | 2 | 1 | | 05/11/12 14:57 |
| 15 | 5M66927 | WG397577-02 LCS 05/10 | 2 | 1 | | 05/11/12 15:32 |
| 16 | 5M66928 | WG397577-03 LCS DUP 05/10 | 2 | 1 | | 05/11/12 16:07 |
| 17 | 5M66929 | WG397560-01 FBLK | 17 | 1 | | 05/11/12 16:43 |
| 18 | 5M66930 | L12050238-01 | 17 | 1 | | 05/11/12 17:19 |
| 19 | 5M66931 | L12050239-01 | 17 | 1 | | 05/11/12 17:55 |
| 20 | 5M66932 | L12050240-01 | 17 | 1 | | 05/11/12 18:30 |
| 21 | 5M66933 | L12050241-01 | 17 | 1 | | 05/11/12 19:07 |
| 22 | 5M66934 | L12050247-01 | 17 | 1 | | 05/11/12 19:43 |
| 23 | 5M66935 | L12050249-01 | 17 | 1 | | 05/11/12 20:19 |
| 24 | 5M66936 | L12050248-01 | 2 | 1 | | 05/11/12 20:55 |

**Comments**

| Seq. | Rerun | Dil. | Reason | Analytes |
|---|---|---|---|---|
| 1 | X | | | |
| | WG397707-01 50PPM DFTPP STD - Tune failed. | | | |
| 2 | X | | | |
| | WG397707-01 50PPM DFTPP STD - Tune failed. | | | |
| 15 | | | | |
| | WG397577-02 LCS 05/10 - 2 analytes high. | | | |

Page: 1 Approved: 15-MAY-12

**Microbac Laboratories Inc.**

Instrument Run Log

Instrument: HPMS5 Dataset: 051112
Analyst1: CAA Analyst2: NA
Method: 8270C SOP: MSS01 Rev: 19

Maintenance Log ID: 41711 Syringe Filter Lot#:

Column 1 ID: RXI-5MS Column 2 ID: NA
Workgroups: WG397722
Internal STD: COA16051 Surrogate STD: NA
CCV STD: LCS STD:

**Comments**

| Seq. | Rerun | Dil. | Reason | Analytes |
|---|---|---|---|---|
| 16 | | | | |
| | WG397577-03 LCS DUP 05/10 - 2 analytes high, 1 low. | | | |
| 21 | | | | |
| | L12050241-01 - SS TPH high. | | | |


Approved: 15-MAY-12

# Microbac Laboratories Inc.

## Instrument Run Log

Instrument: HPMS5 Dataset: 051412
Analyst1: CAA Analyst2: NA
Method: 8270C SOP: MSS01 Rev: 19

Maintenance Log ID: 41739 Syringe Filter Lot#:

Column 1 ID: RXI-5MS Column 2 ID: NA
Workgroups: WG397828
Internal STD: COA16051 Surrogate STD: NA Calibration STD
CCV STD: LCS STD: MS/MSD STD:

Comments: Ran TCL ICAL due to new column.

| Seq. | File ID | Sample Information | Mat | Dil | Reference | Date/Time |
|---|---|---|---|---|---|---|
| 1 | 5M66976 | WG397870-01 50PPM DFTPP STD | 1 | 1 | STD50659 | 05/14/12 08:42 |
| 2 | 5M66977 | WG397870-02 50PPM Megamix STD | 1 | 1 | STD50886 | 05/14/12 09:02 |
| 3 | 5M66978 | WG397871-01 50PPM TCL STD | 1 | 1 | STD51428 | 05/14/12 09:37 |
| 4 | 5M66979 | WG397871-02 3PPM TCL STD | 1 | 1 | STD51428 | 05/14/12 10:13 |
| 5 | 5M66980 | WG397871-03 10PPM TCL STD | 1 | 1 | STD51428 | 05/14/12 10:50 |
| 6 | 5M66981 | WG397871-04 25PPM TCL STD | 1 | 1 | STD51428 | 05/14/12 11:25 |
| 7 | 5M66982 | WG397871-05 80PPM TCL STD | 1 | 1 | STD51428 | 05/14/12 12:01 |
| 8 | 5M66983 | WG397871-06 100PPM TCL STD | 1 | 1 | STD51428 | 05/14/12 12:36 |
| 9 | 5M66984 | WG397871-07 50PPM TCL Alt Src STD | 1 | 1 | STD51166 | 05/14/12 13:12 |
| 10 | 5M66985 | WG397434-02 BLK 05/09 | 1 | 1 | | 05/14/12 13:48 |
| 11 | 5M66986 | WG397434-03 LCS 05/09 | 1 | 1 | | 05/14/12 14:24 |
| 12 | 5M66987 | L12050284-03 | 1 | 1 | | 05/14/12 15:00 |
| 13 | 5M66988 | L12050284-05 | 1 | 1 | | 05/14/12 15:36 |
| 14 | 5M66989 | L12050284-07 | 1 | 1 | | 05/14/12 16:14 |
| 15 | 5M66990 | L12050284-10 | 1 | 1 | | 05/14/12 16:50 |
| 16 | 5M66991 | L12050284-12 | 1 | 1 | | 05/14/12 17:26 |
| 17 | 5M66992 | L12050284-01 2X | 1 | 2 | | 05/14/12 18:02 |

**Comments**

| Seq. | Rerun | Dil. | Reason | Analytes |
|---|---|---|---|---|
| 10 | X | 1 | | |
| | WG397434-02 BLK 05/09 - SS 2FP, PHL high, remix and run. | | | |
| 11 | | 1 | | |
| | WG397434-03 LCS 05/09 - SS TBP, 2FP, PHL high, 19 analytes high, remix and run. | | | |
| 17 | | | | |
| | L12050284-01 2X - Istd 1 low - SMI; SS 2FP, PHL high - SMI; Sample was analyzed at a dilution due to extract appearance. | | | |

Page: 1 Approved: 22-MAY-12

# Microbac Laboratories Inc.

## Instrument Run Log

Instrument: HPMS5 Dataset: 051612
Analyst1: CAA Analyst2: NA
Method: 8270C SOP: MSS01 Rev: 19

Maintenance Log ID: 41755 Syringe Filter Lot#:

Column 1 ID: RXI-5MS Column 2 ID: NA
Workgroups: WG3978144, WG397836, WG397980
Internal STD: COA16051 Surrogate STD: NA Calibration STD
CCV STD: LCS STD: MS/MSD STD:

Comments:

| Seq. | File ID | Sample Information | Mat | Dil | Reference | Date/Time |
|---|---|---|---|---|---|---|
| 1 | 5M67008 | WG398115-01 50PPM DFTPP STD | 1 | 1 | STD50659 | 05/16/12 08:00 |
| 2 | 5M67009 | WG398115-01 50PPM DFTPP STD | 1 | 1 | STD50659 | 05/16/12 08:20 |
| 3 | 5M67010 | WG398115-01 50PPM DFTPP STD | 1 | 1 | STD50659 | 05/16/12 08:38 |
| 4 | 5M67011 | WG398115-02 50PPM Megamix STD | 1 | 1 | STD50886 | 05/16/12 08:59 |
| 5 | 5M67012 | WG395530-01 50PPM TCL STD | 1 | 1 | STD51428 | 05/16/12 09:35 |
| 6 | 5M67013 | WG397744-02 BLK 05/11 REMIX | 1 | 1 | | 05/16/12 10:10 |
| 7 | 5M67014 | WG397434-02 BLK 05/09 REMIX | 1 | 1 | | 05/16/12 10:46 |
| 8 | 5M67015 | WG397434-03 LCS 05/09 REMIX | 1 | 1 | | 05/16/12 11:22 |
| 9 | 5M67016 | L12050340-02 5X | 1 | 5 | | 05/16/12 11:58 |
| 10 | 5M67017 | L12050340-05 5X | 1 | 5 | | 05/16/12 12:33 |
| 11 | 5M67018 | L12050340-08 10X | 1 | 10 | | 05/16/12 13:09 |
| 12 | 5M67019 | L12050257-05 5X | 1 | 5 | | 05/16/12 13:45 |
| 13 | 5M67020 | L12050297-09 20X | 1 | 20 | | 05/16/12 14:21 |
| 14 | 5M67021 | L12050297-10 20X | 1 | 20 | | 05/16/12 14:57 |
| 15 | 5M67022 | L12050257-01 REMIX | 1 | 1 | | 05/16/12 15:34 |
| 16 | 5M67023 | L12050257-03 REMIX | 1 | 1 | | 05/16/12 16:10 |
| 17 | 5M67024 | L12050257-05 REMIX | 1 | 1 | | 05/16/12 16:47 |
| 18 | 5M67025 | L12050257-07 REMIX | 1 | 1 | | 05/16/12 17:23 |
| 19 | 5M67026 | L12050297-03 REMIX | 1 | 1 | | 05/16/12 17:59 |
| 20 | 5M67027 | L12050297-05 REMIX | 1 | 1 | | 05/16/12 18:36 |
| 21 | 5M67028 | L12050297-09 REMIX | 1 | 1 | | 05/16/12 19:11 |
| 22 | 5M67029 | L12050297-10 REMIX | 1 | 1 | | 05/16/12 19:47 |
| 23 | 5M67030 | L12050297-11 REMIX | 1 | 1 | | 05/16/12 20:23 |

**Comments**

| Seq. | Rerun | Dil. | Reason | Analytes |
|---|---|---|---|---|
| 1 | X | | | |
| | WG398115-01 50PPM DFTPP STD - Tune failed. | | | |
| 2 | X | | | |
| | WG398115-01 50PPM DFTPP STD - Tune failed. | | | |
| 6 | | | | |
| | WG397744-02 BLK 05/11 REMIX - B(2eh)p >RL. | | | |
| 8 | | | | |
| | WG397434-03 LCS 05/09 REMIX - 1 analyte high, 1 low; SS PHL high. | | | |

Page: 1 Approved: 17-MAY-12

Microbac Laboratories Inc.

Data Checklist

Date: 11-MAY-2012
Analyst: CAA
Analyst: NA
Method: 8270
Instrument: HPMS5
Curve Workgroup: NA
Runlog ID: 46734
Analytical Workgroups: L12050238, 2050239, 050240, 050241, 050247, 050249, 050248

| | |
|---|---|
| ANALYTICAL | |
| System Performance Check | X |
| DFTPP (MS) | X |
| Endrin/DDT breakdown (8081/MS) | X |
| Pentachlorophenol/benzidine tailing (MS) | X |
| Eluent check (IC)/system pressure (HPLC) | NA |
| Window standard (FID) | NA |
| Initial Calibration | X |
| Average RF | X |
| Linear regression or higher order curve | X |
| Alternate source standard (ICV) % Difference | X |
| Continuing Calibration (CCV) | NA |
| % D/% Drift | NA |
| Minimum response factors (MS) | NA |
| Continuing calibration blank (CCB) (IC) | NA |
| Special standards | NA |
| Blanks | X |
| TCL hits | X |
| Surrogate recoveries | X |
| LCS/LCSD (Laboratory Control Sample) | X |
| Recoveries | X |
| Surrogate recoveries | X |
| MS/MSD/Sample duplicates | NA |
| Recoveries | NA |
| %RPD | NA |
| Samples | X |
| TCL hits | X |
| Mass spectra (MS/HPLC)/2nd column confirmations (ECD/FID/HPLC) | X |
| Surrogate recoveries | X |
| Internal standard areas (MS) | X |
| Library searches (MS) | NA |
| Calculations & correct factors | X |
| Compounds above calibration range | NA |
| Reruns | NA |
| Manual integrations | X |
| Project/client specific requirements | X |
| | |
| REPORTING | |
| Upload batch form | X |
| KOBRA workgroup data/forms/bench sheets | X |
| Case narratives | NA |
| Check for completeness | X |
| Primary Reviewer | CAA |
| | |
| SUPERVISORY/SECONDARY REVIEW | |
| Check for compliance with method and project specific requirements | X |
| Check the completeness/accuracy of reported information | X |
| Data qualifiers | X |
| Secondary Reviewer | MDC |

Primary Reviewer:
15-MAY-2012

Secondary Reviewer:
15-MAY-2012

CHECKLIST1 - Modified 03/05/2008
Generated: MAY-15-2012 09:13:45

Microbac Laboratories Inc.

Data Checklist

Date: 14-MAY-2012
Analyst: CAA
Analyst: NA
Method: 8270
Instrument: HPMS5
Curve Workgroup: NA
Runlog ID: 46765
Analytical Workgroups: L12050284

| | |
|---|---|
| ANALYTICAL | |
| System Performance Check | X |
| DFTPP (MS) | X |
| Endrin/DDT breakdown (8081/MS) | X |
| Pentachlorophenol/benzidine tailing (MS) | X |
| Eluent check (IC)/system pressure (HPLC) | NA |
| Window standard (FID) | NA |
| Initial Calibration | X |
| Average RF | X |
| Linear regression or higher order curve | NA |
| Alternate source standard (ICV) % Difference | X |
| Continuing Calibration (CCV) | X |
| % D/% Drift | X |
| Minimum response factors (MS) | X |
| Continuing calibration blank (CCB) (IC) | NA |
| Special standards | X |
| Blanks | X |
| TCL hits | X |
| Surrogate recoveries | X |
| LCS/LCSD (Laboratory Control Sample) | X |
| Recoveries | X |
| Surrogate recoveries | X |
| MS/MSD/Sample duplicates | NA |
| Recoveries | NA |
| %RPD | NA |
| Samples | X |
| TCL hits | X |
| Mass spectra (MS/HPLC)/2nd column confirmations (ECD/FID/HPLC) | X |
| Surrogate recoveries | X |
| Internal standard areas (MS) | X |
| Library searches (MS) | X |
| Calculations & correct factors | X |
| Compounds above calibration range | NA |
| Reruns | NA |
| Manual integrations | X |
| Project/client specific requirements | X |
| | |
| REPORTING | |
| Upload batch form | X |
| KOBRA workgroup data/forms/bench sheets | X |
| Case narratives | NA |
| Check for completeness | X |
| Primary Reviewer | CAA |
| | |
| SUPERVISORY/SECONDARY REVIEW | |
| Check for compliance with method and project specific requirements | X |
| Check the completeness/accuracy of reported information | X |
| Data qualifiers | X |
| Secondary Reviewer | MDC |

Primary Reviewer:
17-MAY-2012

Secondary Reviewer:
22-MAY-2012

CHECKLIST1 - Modified 03/05/2008
Generated: MAY-22-2012 11:41:48

Microbac Laboratories Inc.

Data Checklist

Date: 16-MAY-2012
Analyst: CAA
Analyst: NA
Method: 8270
Instrument: HPMS5
Curve Workgroup: NA
Runlog ID: 46796
Analytical Workgroups: L12050340, L12050257, L12050297

| | |
|---|---|
| ANALYTICAL | |
| System Performance Check | X |
| DFTPP (MS) | X |
| Endrin/DDT breakdown (8081/MS) | X |
| Pentachlorophenol/benzidine tailing (MS) | X |
| Eluent check (IC)/system pressure (HPLC) | NA |
| Window standard (FID) | NA |
| Initial Calibration | NA |
| Average RF | NA |
| Linear regression or higher order curve | NA |
| Alternate source standard (ICV) % Difference | NA |
| Continuing Calibration (CCV) | X |
| % D/% Drift | X |
| Minimum response factors (MS) | X |
| Continuing calibration blank (CCB) (IC) | NA |
| Special standards | X |
| Blanks | X |
| TCL hits | X |
| Surrogate recoveries | X |
| LCS/LCSD (Laboratory Control Sample) | X |
| Recoveries | X |
| Surrogate recoveries | X |
| MS/MSD/Sample duplicates | NA |
| Recoveries | NA |
| %RPD | NA |
| Samples | X |
| TCL hits | X |
| Mass spectra (MS/HPLC)/2nd column confirmations (ECD/FID/HPLC) | X |
| Surrogate recoveries | X |
| Internal standard areas (MS) | X |
| Library searches (MS) | X |
| Calculations & correct factors | X |
| Compounds above calibration range | X |
| Reruns | X |
| Manual integrations | X |
| Project/client specific requirements | X |
| | |
| REPORTING | |
| Upload batch form | X |
| KOBRA workgroup data/forms/bench sheets | X |
| Case narratives | NA |
| Check for completeness | X |
| Primary Reviewer | CAA |
| | |
| SUPERVISORY/SECONDARY REVIEW | |
| Check for compliance with method and project specific requirements | X |
| Check the completeness/accuracy of reported information | X |
| Data qualifiers | X |
| Secondary Reviewer | MDC |

Primary Reviewer:
17-MAY-2012

Secondary Reviewer:
17-MAY-2012

CHECKLIST1 - Modified 03/05/2008
Generated: MAY-17-2012 12:28:32

Microbac Laboratories Inc.

# HOLDING TIMES
# EQUIVALENT TO AFCEE FORM 9

Analytical Method: 8270C AAB#: WG398144

Login Number: L12050284

| Client ID | ID | Date Collected | TCLP Date | Time Held | Max Hold | Q | Extract Date | Time Held | Max Hold | Q | Run Date | Time Held | Max Hold | Q |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| BBLD-PIT-SSP-050812 | 01 | 05/08/12 | | | | | 05/09/12 | 1.2 | 7 | | 05/14/12 | 5.2 | 40 | |
| PZ-07-050812 | 03 | 05/08/12 | | | | | 05/09/12 | 1.2 | 7 | | 05/14/12 | 5 | 40 | |
| MW-18-050812 | 05 | 05/08/12 | | | | | 05/09/12 | 1.1 | 7 | | 05/14/12 | 5.1 | 40 | |
| TW-01-050812 | 07 | 05/08/12 | | | | | 05/09/12 | 1 | 7 | | 05/14/12 | 5.1 | 40 | |
| DUP-GW-050812 | 10 | 05/08/12 | | | | | 05/09/12 | 1 | 7 | | 05/14/12 | 5.1 | 40 | |
| EB-050812-GW | 12 | 05/08/12 | | | | | 05/09/12 | 1 | 7 | | 05/14/12 | 5.1 | 40 | |

* = SEE PROJECT QAPP REQUIREMENTS

HOLD_TIMES - Modified 03/06/2008
PDF File ID: 2418705
Report generated 05/22/2012 13:41

Login Number: L12050284
Instrument Id: HPMS5
Workgroup (AAB#): WG398144

Method: 8270
CAL ID: HPMS5-11-MAY-12
Matrix: Water

| Sample Number | Dilution | Tag | 1 | 2 | 3 | 4 | 5 | 6 |
|---|---|---|---|---|---|---|---|---|
| L12050284-01 | 2.00 | DL01 | 81.8 | 64.0 | 214 | 63.1 | 95.7 | 203 |
| L12050284-03 | 1.00 | 01 | 64.8 | 59.4 | 54.1 | 61.4 | 59.9 | 53.5 |
| L12050284-05 | 1.00 | 01 | 93.0 | 69.6 | 65.1 | 67.8 | 83.8 | 66.8 |
| L12050284-07 | 1.00 | 01 | 92.0 | 83.0 | 77.5 | 80.5 | 62.0 | 77.7 |
| L12050284-10 | 1.00 | 01 | 84.8 | 81.5 | 68.9 | 79.5 | 81.9 | 73.3 |
| L12050284-12 | 1.00 | 01 | 80.4 | 70.0 | 64.6 | 71.3 | 114 | 66.8 |
| WG397434-02 | 1.00 | 04 | 106 | 94.7 | 97.2 | 93.2 | 123 | 92.7 |
| WG397434-03 | 1.00 | 04 | 119 | 102 | 98.7 | 94.5 | 121 | 96.8 |

| Surrogates | Surrogate Limits | | |
|---|---|---|---|
| 1 - 2,4,6-Tribromophenol | 10 | - | 123 |
| 2 - 2-Fluorobiphenyl | 43 | - | 116 |
| 3 - 2-Fluorophenol | 21 | - | 100 |
| 4 - Nitrobenzene-d5 | 35 | - | 114 |
| 5 - p-Terphenyl-d14 | 33 | - | 141 |
| 6 - Phenol-d5 | 10 | - | 94 |

Underline = Result out of surrogate limits

DL = surrogate diluted out
ND = surrogate not detected

SURROGATES - Modified 03/06/2008
PDF File ID: 2416543
Report generated: 05/22/2012 13:42

Microbac Laboratories Inc.

## METHOD BLANK SUMMARY

Login Number: L12050284
Work Group: WG398144
Blank File ID: 5M67014
Blank Sample ID: WG397434-02
Prep Date: 05/09/12 14:00
Instrument ID: HPMS5
Analyzed Date: 05/16/12 10:46
Method: 8270C
Analyst: CAA

This Method Blank Applies To The Following Samples:

| Client ID | Lab Sample ID | Lab File ID | Time Analyzed | TAG |
|---|---|---|---|---|
| PZ-07-050812 | L12050284-03 | 5M66987 | 05/14/12 15:00 | 01 |
| MW-18-050812 | L12050284-05 | 5M66988 | 05/14/12 15:36 | 01 |
| TW-01-050812 | L12050284-07 | 5M66989 | 05/14/12 16:14 | 01 |
| DUP-GW-050812 | L12050284-10 | 5M66990 | 05/14/12 16:50 | 01 |
| EB-050812-GW | L12050284-12 | 5M66991 | 05/14/12 17:26 | 01 |
| BBLD-PIT-SSP-050812 | L12050284-01 | 5M66992 | 05/14/12 18:02 | DL01 |
| LCS | WG397434-03 | 5M67015 | 05/16/12 11:22 | 04 |

Report Name: BLANK_SUMMARY
PDF File ID: 2418706
Report generated 05/22/2012 13:41

Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number:L12050284 Prep Date:05/09/12 14:00 Sample ID:WG397434-02
Instrument ID:HPMS5 Run Date:05/16/12 10:46 Prep Method:3520C
File ID:5M67014 Analyst:CAA Method:8270C
Workgroup (AAB#):WG398144 Matrix:Water Units:ug/L
Contract #: Cal ID: HPMS5-11-MAY-12

| Analytes | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| 1,1'-Biphenyl | 2.50 | 20.0 | 2.50 | 1 | U |
| 1,3,5-Trinitrobenzene | 2.50 | 5.00 | 2.50 | 1 | U |
| 1,3-Dinitrobenzene | 2.50 | 5.00 | 2.50 | 1 | U |
| 1,4-Dioxane | 5.00 | 10.0 | 5.00 | 1 | U |
| 2,4,5-Trichlorophenol | 2.50 | 5.00 | 2.50 | 1 | U |
| 2,4,6-Trichlorophenol | 2.50 | 5.00 | 2.50 | 1 | U |
| 2,4-Dichlorophenol | 2.50 | 5.00 | 2.50 | 1 | U |
| 2,4-Dimethylphenol | 2.50 | 5.00 | 2.50 | 1 | U |
| 2,4-Dinitrophenol | 12.5 | 25.0 | 12.5 | 1 | U |
| 2,4-Dinitrotoluene | 2.50 | 5.00 | 2.50 | 1 | U |
| 2,6-Dinitrotoluene | 2.50 | 5.00 | 2.50 | 1 | U |
| 2-Chloronaphthalene | 2.50 | 5.00 | 2.50 | 1 | U |
| 2-Chlorophenol | 2.50 | 5.00 | 2.50 | 1 | U |
| 2-Methylnaphthalene | 2.50 | 5.00 | 2.50 | 1 | U |
| 2-Methylphenol | 2.50 | 5.00 | 2.50 | 1 | U |
| 2-Nitroaniline | 12.5 | 25.0 | 12.5 | 1 | U |
| 2-Nitrophenol | 2.50 | 5.00 | 2.50 | 1 | U |
| 3-Nitroaniline | 12.5 | 25.0 | 12.5 | 1 | U |
| 3,3'-Dichlorobenzidine | 2.50 | 5.00 | 2.50 | 1 | U |
| 3-,4-Methylphenol | 2.50 | 5.00 | 2.50 | 1 | U |
| 4-Bromophenyl-phenylether | 2.50 | 5.00 | 2.50 | 1 | U |
| 4-Chloroaniline | 2.50 | 5.00 | 2.50 | 1 | U |
| 4-Nitrophenol | 12.5 | 25.0 | 12.5 | 1 | U |
| Acenaphthene | 2.50 | 5.00 | 2.50 | 1 | U |
| Acenaphthylene | 2.50 | 5.00 | 2.50 | 1 | U |
| Anthracene | 2.50 | 5.00 | 2.50 | 1 | U |
| Benzo(a)anthracene | 2.50 | 5.00 | 2.50 | 1 | U |
| Benzo(a)pyrene | 2.50 | 5.00 | 2.50 | 1 | U |
| Benzo(b)fluoranthene | 2.50 | 5.00 | 2.50 | 1 | U |
| Benzo(g,h,i)Perylene | 2.50 | 5.00 | 2.50 | 1 | U |
| Benzo(k)fluoranthene | 2.50 | 5.00 | 2.50 | 1 | U |
| Benzoic acid | 10.0 | 20.0 | 10.0 | 1 | U |
| Benzyl alcohol | 2.50 | 5.00 | 2.50 | 1 | U |
| Bis(2-Chloroethyl)ether | 2.50 | 5.00 | 2.50 | 1 | U |
| Bis(2-Chloroethoxy)Methane | 2.50 | 5.00 | 2.50 | 1 | U |
| bis(2-Ethylhexyl)phthalate | 2.50 | 5.00 | 2.50 | 1 | U |
| Butylbenzylphthalate | 2.50 | 5.00 | 2.50 | 1 | U |
| Carbazole | 2.50 | 20.0 | 2.50 | 1 | U |
| Chrysene | 2.50 | 5.00 | 2.50 | 1 | U |
| Di-N-Butylphthalate | 2.50 | 5.00 | 2.50 | 1 | U |
| Di-n-octylphthalate | 2.50 | 5.00 | 2.50 | 1 | U |
| Dibenzo(a,h)Anthracene | 2.50 | 5.00 | 2.50 | 1 | U |

Report Name:BLANK
PDF ID: 2416540
22-MAY-2012 13:41

Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number: L12050284 Prep Date: 05/09/12 14:00 Sample ID: WG397434-02
Instrument ID: HPMS5 Run Date: 05/16/12 10:46 Prep Method: 3520C
File ID: 5M67014 Analyst: CAA Method: 8270C
Workgroup (AAB#): WG398144 Matrix: Water Units: ug/L
Contract #: Cal ID: HPMS5-11-MAY-12

| Analytes | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| Dibenzofuran | 2.50 | 5.00 | 2.50 | 1 | U |
| Diethylphthalate | 2.50 | 5.00 | 2.50 | 1 | U |
| Dimethylphthalate | 2.50 | 5.00 | 2.50 | 1 | U |
| Fluoranthene | 2.50 | 5.00 | 2.50 | 1 | U |
| Fluorene | 2.50 | 5.00 | 2.50 | 1 | U |
| Hexachlorobenzene | 2.50 | 5.00 | 2.50 | 1 | U |
| Hexachlorobutadiene | 2.50 | 5.00 | 2.50 | 1 | U |
| Hexachlorocyclopentadiene | 2.50 | 5.00 | 2.50 | 1 | U |
| Hexachloroethane | 2.50 | 5.00 | 2.50 | 1 | U |
| Indeno(1,2,3-cd)pyrene | 2.50 | 5.00 | 2.50 | 1 | U |
| Isophorone | 2.50 | 5.00 | 2.50 | 1 | U |
| N-Nitrosodiphenylamine | 2.50 | 5.00 | 2.50 | 1 | U |
| Naphthalene | 2.50 | 5.00 | 2.50 | 1 | U |
| Nitrobenzene | 2.50 | 5.00 | 2.50 | 1 | U |
| Pentachlorophenol | 12.5 | 25.0 | 12.5 | 1 | U |
| Phenanthrene | 2.50 | 5.00 | 2.50 | 1 | U |
| Phenol | 2.50 | 5.00 | 2.50 | 1 | U |
| Pyrene | 2.50 | 5.00 | 2.50 | 1 | U |

| Surrogates | % Recovery | Surrogate Limits | | | Qualifier |
|---|---|---|---|---|---|
| 2,4,6-Tribromophenol | 106 | 10 | - | 123 | PASS |
| 2-Fluorobiphenyl | 94.7 | 43 | - | 116 | PASS |
| 2-Fluorophenol | 97.2 | 21 | - | 100 | PASS |
| Nitrobenzene-d5 | 93.2 | 35 | - | 114 | PASS |
| p-Terphenyl-d14 | 123 | 33 | - | 141 | PASS |
| Phenol-d5 | 92.7 | 10 | - | 94 | PASS |

MDL Method Detection Limit
RL Reporting/Practical Quantitation Limit
ND Analyte Not detected at or above reporting limit
* |Analyte concentration| > RL

Report Name:BLANK
PDF ID: 2416540
22-MAY-2012 13:41

Login Number: L12050284 Run Date: 05/16/2012 Sample ID: WG397434-03
Instrument ID: HPMS5 Run Time: 11:22 Prep Method: 3520C
File ID: 5M67015 Analyst: CAA Method: 8270C
Workgroup (AAB#): WG398144 Matrix: Water Units: ug/L
QC Key: WATERLOO Lot#: STD51286 Cal ID: HPMS5-11-MAY-12

| Analytes | Expected | Found | % Rec | LCS Limits | Q |
|---|---|---|---|---|---|
| 1,1'-Biphenyl | 50.0 | 46.5 | 93.1 | 40 - 140 | |
| 1,3,5-Trinitrobenzene | 50.0 | 47.3 | 94.6 | 10 - 120 | |
| 1,3-Dinitrobenzene | 50.0 | 49.2 | 98.5 | 30 - 130 | |
| 1,4-Dioxane | 50.0 | 34.6 | 69.1 | 50 - 150 | |
| 2,4,5-Trichlorophenol | 50.0 | 54.1 | 108 | 35 - 120 | |
| 2,4,6-Trichlorophenol | 50.0 | 51.8 | 104 | 30 - 120 | |
| 2,4-Dichlorophenol | 50.0 | 49.5 | 99.0 | 20 - 110 | |
| 2,4-Dimethylphenol | 50.0 | 52.3 | 105 | 20 - 120 | |
| 2,4-Dinitrophenol | 50.0 | 59.5 | 119 | 20 - 140 | |
| 2,4-Dinitrotoluene | 50.0 | 58.7 | 117 | 50 - 139 | |
| 2,6-Dinitrotoluene | 50.0 | 53.5 | 107 | 50 - 120 | |
| 2-Chloronaphthalene | 50.0 | 57.9 | 116 | 25 - 120 | |
| 2-Chlorophenol | 50.0 | 46.7 | 93.3 | 25 - 110 | |
| 2-Methylnaphthalene | 50.0 | 48.6 | 97.3 | 25 - 120 | |
| 2-Methylphenol | 50.0 | 47.0 | 94.1 | 20 - 110 | |
| 2-Nitroaniline | 50.0 | 51.5 | 103 | 45 - 115 | |
| 2-Nitrophenol | 50.0 | 49.3 | 98.7 | 20 - 115 | |
| 3-Nitroaniline | 50.0 | 46.2 | 92.3 | 40 - 120 | |
| 3,3'-Dichlorobenzidine | 50.0 | 42.2 | 84.4 | 30 - 140 | |
| 3-,4-Methylphenol | 50.0 | 55.2 | 110 | 20 - 110 | |
| 4-Bromophenyl-phenylether | 50.0 | 54.5 | 109 | 40 - 115 | |
| 4-Chloroaniline | 50.0 | 39.2 | 78.4 | 25 - 120 | |
| 4-Nitrophenol | 50.0 | 47.8 | 95.5 | 10 - 132 | |
| Acenaphthene | 50.0 | 54.0 | 108 | 30 - 120 | |
| Acenaphthylene | 50.0 | 54.2 | 108 | 30 - 120 | |
| Anthracene | 50.0 | 50.2 | 100 | 55 - 130 | |
| Benzo(a)anthracene | 50.0 | 54.1 | 108 | 60 - 130 | |
| Benzo(a)pyrene | 50.0 | 55.5 | 111 | 55 - 135 | |
| Benzo(b)fluoranthene | 50.0 | 56.4 | 113 | 45 - 125 | |
| Benzo(g,h,i)Perylene | 50.0 | 54.3 | 109 | 45 - 140 | |
| Benzo(k)fluoranthene | 50.0 | 59.1 | 118 | 55 - 140 | |
| Benzoic acid | 50.0 | 24.2 | 48.4 | 10 - 100 | |
| Benzyl alcohol | 50.0 | 49.8 | 99.5 | 20 - 110 | |
| Bis(2-Chloroethyl)ether | 50.0 | 50.0 | 99.9 | 25 - 110 | |
| Bis(2-Chloroethoxy)Methane | 50.0 | 54.5 | 109 | 20 - 105 | * |
| bis(2-Ethylhexyl)phthalate | 50.0 | 56.2 | 112 | 50 - 150 | |
| Butylbenzylphthalate | 50.0 | 67.9 | 136 | 55 - 150 | |
| Carbazole | 50.0 | 53.7 | 107 | 50 - 130 | |
| Chrysene | 50.0 | 57.1 | 114 | 55 - 130 | |
| Di-N-Butylphthalate | 50.0 | 54.5 | 109 | 55 - 118 | |
| Di-n-octylphthalate | 50.0 | 57.8 | 116 | 40 - 146 | |

LCS - Modified 03/06/2008
PDF File ID: 2416542
Report generated: 05/22/2012 13:41

# Microbac Laboratories Inc.
## LABORATORY CONTROL SAMPLE (LCS)

Login Number: L12050284 Run Date: 05/16/2012 Sample ID: WG397434-03
Instrument ID: HPMS5 Run Time: 11:22 Prep Method: 3520C
File ID: 5M67015 Analyst: CAA Method: 8270C
Workgroup (AAB#): WG398144 Matrix: Water Units: ug/L
QC Key: WATERLOO Lot#: STD51286 Cal ID: HPMS5-11-MAY-12

| Analytes | Expected | Found | % Rec | LCS Limits | Q |
|---|---|---|---|---|---|
| Dibenzo(a,h)Anthracene | 50.0 | 55.5 | 111 | 45 - 125 | |
| Dibenzofuran | 50.0 | 55.9 | 112 | 35 - 115 | |
| Diethylphthalate | 50.0 | 56.2 | 112 | 45 - 120 | |
| Dimethylphthalate | 50.0 | 55.2 | 110 | 25 - 112 | |
| Fluoranthene | 50.0 | 55.2 | 110 | 50 - 137 | |
| Fluorene | 50.0 | 56.1 | 112 | 40 - 120 | |
| Hexachlorobenzene | 50.0 | 54.3 | 109 | 50 - 130 | |
| Hexachlorobutadiene | 50.0 | 37.8 | 75.6 | 24 - 105 | |
| Hexachlorocyclopentadiene | 50.0 | 9.65 | 19.3 | 20 - 143 | * |
| Hexachloroethane | 50.0 | 28.9 | 57.7 | 25 - 95 | |
| Indeno(1,2,3-cd)pyrene | 50.0 | 55.9 | 112 | 50 - 135 | |
| Isophorone | 50.0 | 50.6 | 101 | 30 - 110 | |
| N-Nitrosodiphenylamine | 100 | 93.3 | 93.3 | 40 - 110 | |
| Naphthalene | 50.0 | 47.5 | 95.0 | 25 - 110 | |
| Nitrobenzene | 50.0 | 49.1 | 98.2 | 30 - 110 | |
| Pentachlorophenol | 50.0 | 58.0 | 116 | 40 - 140 | |
| Phenanthrene | 50.0 | 55.4 | 111 | 55 - 120 | |
| Phenol | 50.0 | 47.3 | 94.7 | 10 - 120 | |
| Pyrene | 50.0 | 57.0 | 114 | 55 - 130 | |

| Surrogates | % Recovery | Surrogate Limits | Qualifier |
|---|---|---|---|
| 2,4,6-Tribromophenol | 119 | 10 - 123 | PASS |
| 2-Fluorobiphenyl | 102 | 43 - 116 | PASS |
| 2-Fluorophenol | 98.7 | 21 - 100 | PASS |
| Nitrobenzene-d5 | 94.5 | 35 - 114 | PASS |
| p-Terphenyl-d14 | 121 | 33 - 141 | PASS |
| Phenol-d5 | 96.8 | 10 - 94 | FAIL |

* EXCEEDS %REC LIMIT

LCS - Modified 03/06/2008
PDF File ID: 2416542
Report generated: 05/22/2012 13:41

## DFTPP

Login Number: L12050284
Instrument: HPMS5
Analyst: CAA
Workgroup: WG397707

Tune ID: WG397707-01
Run Date: 05/11/2012
Run Time: 08:42
File ID: 5M66915
Cal ID: HPMS5 - 11-MAY-12

| Target Mass | Rel. to Mass | Lower Limit% | Upper Limit% | Rel. Abn% | Raw Abn | Result Pass/Fail |
|---|---|---|---|---|---|---|
| 51.0 | 198 | 30.0 | 60.0 | 31.3 | 318182 | PASS |
| 68.0 | 69.0 | 0 | 2.00 | 0 | 0 | PASS |
| 69.0 | 198 | 0 | 100 | 32.6 | 331242 | PASS |
| 70.0 | 69.0 | 0 | 2.00 | 0.587 | 1946 | PASS |
| 127 | 198 | 40.0 | 60.0 | 44.4 | 450880 | PASS |
| 197 | 198 | 0 | 1.00 | 0 | 0 | PASS |
| 198 | 198 | 100 | 100 | 100 | 1015360 | PASS |
| 199 | 198 | 5.00 | 9.00 | 6.75 | 68533 | PASS |
| 275 | 198 | 10.0 | 30.0 | 27.6 | 280725 | PASS |
| 365 | 198 | 1.00 | 100 | 3.13 | 31778 | PASS |
| 441 | 443 | 0.0100 | 100 | 80.2 | 147186 | PASS |
| 442 | 198 | 40.0 | 100 | 93.6 | 950357 | PASS |
| 443 | 442 | 17.0 | 23.0 | 19.3 | 183528 | PASS |

This check relates to the following samples:

| Lab ID | Client ID | Tag | Date Analyzed | Q |
|---|---|---|---|---|
| WG397707-02 | STD-CCV | 01 | 05/11/2012 09:02 | |
| WG397707-03 | STD | 01 | 05/11/2012 09:37 | |
| WG397707-04 | STD | 01 | 05/11/2012 10:12 | |
| WG397707-05 | STD | 01 | 05/11/2012 10:47 | |
| WG397707-06 | STD | 01 | 05/11/2012 11:22 | |
| WG397707-07 | STD | 01 | 05/11/2012 11:58 | |
| WG397707-08 | STD | 01 | 05/11/2012 12:34 | |
| WG397707-09 | STD | 01 | 05/11/2012 13:10 | |
| WG397707-10 | SSCV | 01 | 05/11/2012 13:46 | |
| WG397707-11 | SSCV | 01 | 05/11/2012 14:21 | |

* Sample past 12 hour tune limit

TUNE - Modified 03/06/2008
PDF File ID: 2418709
Report generated 05/22/2012 13:41

## DFTPP

Login Number: L12050284
Instrument: HPMS5
Analyst: CAA
Workgroup: WG397870

Tune ID: WG397870-01
Run Date: 05/14/2012
Run Time: 08:42
File ID: 5M66976
Cal ID: HPMS5 - 11-MAY-12

| Target Mass | Rel. to Mass | Lower Limit% | Upper Limit% | Rel. Abn% | Raw Abn | Result Pass/Fail |
|---|---|---|---|---|---|---|
| 51.0 | 198 | 30.0 | 60.0 | 32.7 | 327705 | PASS |
| 68.0 | 69.0 | 0 | 2.00 | 0 | 0 | PASS |
| 69.0 | 198 | 0 | 100 | 33.3 | 333461 | PASS |
| 70.0 | 69.0 | 0 | 2.00 | 0.643 | 2145 | PASS |
| 127 | 198 | 40.0 | 60.0 | 44.9 | 449728 | PASS |
| 197 | 198 | 0 | 1.00 | 0 | 0 | PASS |
| 198 | 198 | 100 | 100 | 100 | 1001237 | PASS |
| 199 | 198 | 5.00 | 9.00 | 6.85 | 68613 | PASS |
| 275 | 198 | 10.0 | 30.0 | 27.1 | 270848 | PASS |
| 365 | 198 | 1.00 | 100 | 3.07 | 30698 | PASS |
| 441 | 443 | 0.0100 | 100 | 78.8 | 141536 | PASS |
| 442 | 198 | 40.0 | 100 | 91.3 | 914005 | PASS |
| 443 | 442 | 17.0 | 23.0 | 19.6 | 179597 | PASS |

This check relates to the following samples:

| Lab ID | Client ID | Tag | Date Analyzed | Q |
|---|---|---|---|---|
| WG397870-02 | CCV | 01 | 05/14/2012 09:02 | |
| WG397871-01 | STD-CCV | 01 | 05/14/2012 09:37 | |
| WG397871-02 | STD | 01 | 05/14/2012 10:13 | |
| WG397871-03 | STD | 01 | 05/14/2012 10:50 | |
| WG397871-04 | STD | 01 | 05/14/2012 11:25 | |
| WG397871-05 | STD | 01 | 05/14/2012 12:01 | |
| WG397871-06 | STD | 01 | 05/14/2012 12:36 | |
| WG397871-07 | SSCV | 01 | 05/14/2012 13:12 | |
| L12050284-03 | PZ-07-050812 | 01 | 05/14/2012 15:00 | |
| L12050284-05 | MW-18-050812 | 01 | 05/14/2012 15:36 | |
| L12050284-07 | TW-01-050812 | 01 | 05/14/2012 16:14 | |
| L12050284-10 | DUP-GW-050812 | 01 | 05/14/2012 16:50 | |
| L12050284-12 | EB-050812-GW | 01 | 05/14/2012 17:26 | |
| L12050284-01 | BBLD-PIT-SSP-050812 | DL01 | 05/14/2012 18:02 | |

* Sample past 12 hour tune limit

TUNE - Modified 03/06/2008
PDF File ID: 2418709
Report generated 05/22/2012 13:41

## DFTPP

Login Number: L12050284
Instrument: HPMS5
Analyst: CAA
Workgroup: WG398115

Tune ID: WG398115-01
Run Date: 05/16/2012
Run Time: 08:38
File ID: 5M67010
Cal ID: HPMS5-11-MAY-12

| Target Mass | Rel. to Mass | Lower Limit% | Upper Limit% | Rel. Abn% | Raw Abn | Result Pass/Fail |
|---|---|---|---|---|---|---|
| 51.0 | 198 | 30.0 | 60.0 | 30.5 | 376079 | PASS |
| 68.0 | 69.0 | 0 | 2.00 | 0 | 0 | PASS |
| 69.0 | 198 | 0 | 100 | 32.1 | 396309 | PASS |
| 70.0 | 69.0 | 0 | 2.00 | 0.561 | 2223 | PASS |
| 127 | 198 | 40.0 | 60.0 | 43.9 | 541973 | PASS |
| 197 | 198 | 0 | 1.00 | 0 | 0 | PASS |
| 198 | 198 | 100 | 100 | 100 | 1233685 | PASS |
| 199 | 198 | 5.00 | 9.00 | 6.96 | 85885 | PASS |
| 275 | 198 | 10.0 | 30.0 | 27.8 | 342485 | PASS |
| 365 | 198 | 1.00 | 100 | 3.27 | 40282 | PASS |
| 441 | 443 | 0.0100 | 100 | 80.3 | 182200 | PASS |
| 442 | 198 | 40.0 | 100 | 93.4 | 1151893 | PASS |
| 443 | 442 | 17.0 | 23.0 | 19.7 | 226936 | PASS |

This check relates to the following samples:

| Lab ID | Client ID | Tag | Date Analyzed | Q |
|---|---|---|---|---|
| WG398115-02 | CCV | 01 | 05/16/2012 08:59 | |
| WG395530-01 | CCV | 01 | 05/16/2012 09:35 | |
| WG397434-02 | BLANK | 04 | 05/16/2012 10:46 | |
| WG397434-02 | BLANK | 04 | 05/16/2012 10:46 | |
| WG397434-03 | LCS | 04 | 05/16/2012 11:22 | |

* Sample past 12 hour tune limit

TUNE - Modified 03/06/2008
PDF File ID: 2418709
Report generated 05/22/2012 13:41

**Microbac Laboratories Inc.**
**INITIAL CALIBRATION SUMMARY**

**Login Number:** L12050284 **Instrument ID:** HPMS5
**Analytical Method:** 8270C **Initial Calibration Date:** 11-MAY-12 13:10
**ICAL Workgroup:** WG397707 **Column ID:** F

| Analyte | | AVG RF | % RSD | LINEAR (R) | QUAD ($R^2$) |
|---|---|---|---|---|---|
| 2,4,6-Trichlorophenol | CCC | 0.4039 | 1.74 | | |
| 2,4-Dichlorophenol | CCC | 0.3043 | 1.82 | | |
| 2-Nitrophenol | CCC | 0.1901 | 3.85 | | |
| Acenaphthene | CCC | 1.115 | 7.68 | | |
| Benzo[a]pyrene | CCC | 1.082 | 3.08 | | |
| Di-n-Octyl Phthalate | CCC | 1.147 | 1.48 | | |
| Fluoranthene | CCC | 1.119 | 11.3 | | |
| Hexachlorobutadiene | CCC | 0.2079 | 4.31 | | |
| Pentachlorophenol | CCC | 0.1666 | 7.00 | | |
| Phenol | CCC | 1.362 | 4.68 | | |
| 2,4-Dinitrophenol | SPCC | 0.1642 | 19.4 | 0.99400 | |
| 4-Nitrophenol | SPCC | 0.2279 | 3.74 | | |
| Hexachlorocyclopentadiene | SPCC | 0.3420 | 9.76 | | |
| n-Nitrosodipropylamine | SPCC | 0.7257 | 14.5 | | |
| 1,3-Dinitrobenzene | | 0.2426 | 3.38 | | |
| 1,4-Dioxane | | 0.4913 | 11.3 | | |
| 2,4,5-Trichlorophenol | | 0.4184 | 3.29 | | |
| 2,4-Dimethylphenol | | 0.3029 | 5.58 | | |
| 2,4-Dinitrotoluene | | 0.4006 | 6.43 | | |
| 2,6-Dinitrotoluene | | 0.3171 | 1.42 | | |
| 2-Chloronaphthalene | | 1.155 | 4.76 | | |
| 2-Chlorophenol | | 1.268 | 2.65 | | |
| 2-Methylnaphthalene | | 0.6780 | 7.38 | | |
| 2-Methylphenol | | 0.9887 | 2.30 | | |
| 2-Nitroaniline | | 0.2863 | 6.10 | | |
| 3,3'-Dichlorobenzidine | | 0.3489 | 2.40 | | |
| 3-Nitroaniline | | 0.3277 | 3.82 | | |
| 4-Bromophenyl Phenyl Ether | | 0.2294 | 2.93 | | |
| 4-Chloroaniline | | 0.4240 | 3.05 | | |
| Acenaphthylene | | 1.748 | 7.19 | | |
| Anthracene | | 1.041 | 10.7 | | |
| Benzo[a]anthracene | | 1.006 | 6.24 | | |
| Benzo[b]fluoranthene | | 1.293 | 6.90 | | |
| Benzo[ghi]perylene | | 0.9630 | 4.51 | | |
| Benzo[k]fluoranthene | | 1.048 | 3.32 | | |
| Benzoic Acid | | 0.1878 | 26.0 | 0.99800 | |
| Benzyl Alcohol | | 0.7979 | 1.78 | | |
| Butyl Benzyl Phthalate | | 0.3997 | 19.7 | | 1.00000 |
| Carbazole | | 0.9501 | 7.70 | | |
| Chrysene | | 0.9353 | 8.22 | | |
| Di-n-Butyl Phthalate | | 1.094 | 11.9 | | |
| Dibenz[ah]anthracene | | 1.039 | 3.08 | | |
| Dibenzofuran | | 1.546 | 11.0 | | |
| Diethylphthalate | | 1.261 | 6.30 | | |
| Dimethylphthalate | | 1.295 | 5.22 | | |

**INT_CAL - Modified 03/06/2008**
**PDF File ID: 2418707**
**Report generated 05/22/2012 13:41**

**Microbac Laboratories Inc.**
**INITIAL CALIBRATION SUMMARY**

**Login Number:** L12050284 **Instrument ID:** HPMS5
**Analytical Method:** 8270C **Initial Calibration Date:** 11-MAY-12 13:10
**ICAL Workgroup:** WG397707 **Column ID:** F

| Analyte | | AVG RF | % RSD | LINEAR (R) | QUAD ($R^2$) |
|---|---|---|---|---|---|
| Fluorene | | 1.359 | 8.52 | | |
| Hexachlorobenzene | | 0.2576 | 3.34 | | |
| Hexachloroethane | | 0.5553 | 3.26 | | |
| Indeno[1,2,3-cd]pyrene | | 1.232 | 3.06 | | |
| Isophorone | | 0.5627 | 6.72 | | |
| Naphthalene | | 0.9769 | 8.18 | | |
| Nitrobenzene | | 0.3172 | 7.37 | | |
| Phenanthrene | | 1.028 | 9.92 | | |
| Pyrene | | 0.9519 | 14.8 | | |
| Sym-Trinitrobenzene | | 0.1492 | 7.08 | | |
| bis(2-Chloroethoxy)methane | | 0.4312 | 11.8 | | |
| bis(2-Chloroethyl)ether | | 0.7588 | 11.4 | | |
| bis(2-Ethylhexyl)phthalate | | 0.5966 | 10.5 | | |

**R = Correlation coefficient; 0.995 minimum**
**$R^2$ = Coefficient of determination; 0.99 minimum**

**If the %RSD is greater than the limit specified by the method or project QAP, then linear or quadratic equations will be used.**

**INT_CAL - Modified 03/06/2008**
**PDF File ID: 2418707**
**Report generated 05/22/2012 13:41**

**Microbac Laboratories Inc.**

**INITIAL CALIBRATION SUMMARY**

**Login Number:** L12050284 **Instrument ID:** HPMS5

**Analytical Method:** 8270C **Initial Calibration Date:** 14-MAY-12 12:36

**ICAL Workgroup:** WG397871 **Column ID:** F

| Analyte | | AVG RF | % RSD | LINEAR (R) | QUAD ($R^2$) |
|---|---|---|---|---|---|
| 1,1'-Biphenyl | | 1.554 | 5.45 | | |

**R = Correlation coefficient; 0.995 minimum**
**$R^2$ = Coefficient of determination; 0.99 minimum**

**If the %RSD is greater than the limit specified by the method or project QAP, then linear or quadratic equations will be used.**

**INT_CAL - Modified 03/06/2008**
**PDF File ID: 2418707**
**Report generated 05/22/2012 13:41**

# INITIAL CALIBRATION DATA

**Login Number:** L12050284
**Analytical Method:** 8270C
**Instrument ID:** HPMS5
**Initial Calibration Date:** 11-MAY-12 13:10
**Column ID:** F

| Analyte | WG397707-02 | | | WG397707-03 | | | WG397707-04 | | |
|---|---|---|---|---|---|---|---|---|---|
| | CONC | RESP | RF | CONC | RESP | RF | CONC | RESP | RF |
| 2,4,6-Trichlorophenol | 50.0 | 347012.000 | 0.4150 | 3.00 | 17411.0000 | 0.4077 | 10.0 | 55307.0000 | 0.3928 |
| 2,4-Dichlorophenol | 50.0 | 435458.000 | 0.3112 | 3.00 | 22824.0000 | 0.3125 | 10.0 | 70896.0000 | 0.2990 |
| 2-Nitrophenol | 50.0 | 274013.000 | 0.1958 | 3.00 | 14434.0000 | 0.1976 | 10.0 | 45007.0000 | 0.1898 |
| Acenaphthene | 50.0 | 943601.000 | 1.129 | 3.00 | 52285.0000 | 1.224 | 10.0 | 164661.000 | 1.169 |
| Benzo[a]pyrene | 50.0 | 1803938.00 | 1.106 | 3.00 | 90932.0000 | 1.066 | 10.0 | 287510.000 | 1.029 |
| Di-n-Octyl Phthalate | 50.0 | 1891151.00 | 1.159 | 3.00 | 99176.0000 | 1.163 | 10.0 | 315563.000 | 1.130 |
| Fluoranthene | 50.0 | 1800555.00 | 1.131 | 3.00 | 102007.000 | 1.298 | 10.0 | 311490.000 | 1.187 |
| Hexachlorobutadiene | 50.0 | 293142.000 | 0.2095 | 3.00 | 16380.0000 | 0.2243 | 10.0 | 50123.0000 | 0.2114 |
| Pentachlorophenol | 50.0 | 284231.000 | 0.1786 | NA | NA | NA | 10.0 | 38725.0000 | 0.1476 |
| Phenol | 50.0 | 506627.000 | 1.379 | 3.00 | 29268.0000 | 1.474 | 10.0 | 88634.0000 | 1.381 |
| 2,4-Dinitrophenol | 50.0 | 126143.000 | 0.1509 | NA | NA | NA | NA | NA | NA |
| 4-Nitrophenol | 50.0 | 197708.000 | 0.2365 | NA | NA | NA | 10.0 | 30082.0000 | 0.2136 |
| Hexachlorocyclopentadiene | 50.0 | 320810.000 | 0.3837 | 3.00 | 14184.0000 | 0.3321 | 10.0 | 49176.0000 | 0.3492 |
| n-Nitrosodipropylamine | 50.0 | 248795.000 | 0.6771 | 3.00 | 17239.0000 | 0.8683 | 10.0 | 50826.0000 | 0.7916 |
| 1,3-Dinitrobenzene | 50.0 | 208130.000 | 0.2489 | 3.00 | 9853.00000 | 0.2307 | 10.0 | 32881.0000 | 0.2335 |
| 1,4-Dioxane | 50.0 | 179438.000 | 0.4883 | NA | NA | NA | 10.0 | 37935.0000 | 0.5909 |
| 2,4,5-Trichlorophenol | 50.0 | 364476.000 | 0.4359 | 3.00 | 17510.0000 | 0.4100 | 10.0 | 55500.0000 | 0.3942 |
| 2,4-Dimethylphenol | 50.0 | 435312.000 | 0.3111 | 3.00 | 23941.0000 | 0.3278 | 10.0 | 73449.0000 | 0.3098 |
| 2,4-Dinitrotoluene | 50.0 | 345929.000 | 0.4137 | 3.00 | 17981.0000 | 0.4210 | 10.0 | 57337.0000 | 0.4072 |
| 2,6-Dinitrotoluene | 50.0 | 269501.000 | 0.3223 | 3.00 | 13822.0000 | 0.3236 | 10.0 | 43919.0000 | 0.3119 |
| 2-Chloronaphthalene | 50.0 | 986627.000 | 1.180 | 3.00 | 53654.0000 | 1.256 | 10.0 | 163371.000 | 1.160 |
| 2-Chlorophenol | 50.0 | 470449.000 | 1.280 | 3.00 | 26685.0000 | 1.344 | 10.0 | 80324.0000 | 1.251 |
| 2-Methylnaphthalene | 50.0 | 963004.000 | 0.6882 | 3.00 | 54821.0000 | 0.7506 | 10.0 | 166409.000 | 0.7018 |
| 2-Methylphenol | 50.0 | 371949.000 | 1.012 | 3.00 | 20464.0000 | 1.031 | 10.0 | 61685.0000 | 0.9608 |
| 2-Nitroaniline | 50.0 | 247730.000 | 0.2963 | NA | NA | NA | 10.0 | 42408.0000 | 0.3012 |
| 3,3'-Dichlorobenzidine | 50.0 | 667737.000 | 0.3561 | 3.00 | 33284.0000 | 0.3610 | 10.0 | 104143.000 | 0.3379 |
| 3-Nitroaniline | 50.0 | 282994.000 | 0.3385 | NA | NA | NA | 10.0 | 43174.0000 | 0.3066 |
| 4-Bromophenyl Phenyl Ether | 50.0 | 372648.000 | 0.2341 | 3.00 | 19047.0000 | 0.2424 | 10.0 | 58826.0000 | 0.2243 |
| 4-Chloroaniline | 50.0 | 607005.000 | 0.4338 | 3.00 | 32824.0000 | 0.4494 | 10.0 | 99939.0000 | 0.4215 |
| Acenaphthylene | 50.0 | 1498273.00 | 1.792 | 3.00 | 82605.0000 | 1.934 | 10.0 | 251954.000 | 1.789 |
| Anthracene | 50.0 | 1691943.00 | 1.063 | 3.00 | 93424.0000 | 1.189 | 10.0 | 290609.000 | 1.108 |
| Benzo[a]anthracene | 50.0 | 1921460.00 | 1.025 | 3.00 | 102238.000 | 1.109 | 10.0 | 315998.000 | 1.025 |
| Benzo[b]fluoranthene | 50.0 | 2236076.00 | 1.370 | 3.00 | 102221.000 | 1.199 | 10.0 | 332550.000 | 1.190 |
| Benzo[ghi]perylene | 50.0 | 1654792.00 | 1.014 | 3.00 | 85662.0000 | 1.005 | 10.0 | 268419.000 | 0.9608 |
| Benzo[k]fluoranthene | 50.0 | 1746954.00 | 1.071 | 3.00 | 89926.0000 | 1.055 | 10.0 | 303883.000 | 1.088 |
| Benzoic Acid | 50.0 | 255065.000 | 0.1823 | NA | NA | NA | NA | NA | NA |
| Benzyl Alcohol | 50.0 | 303661.000 | 0.8264 | 3.00 | 15846.0000 | 0.7982 | 10.0 | 49859.0000 | 0.7766 |
| Butyl Benzyl Phthalate | 50.0 | 722023.000 | 0.3850 | 3.00 | 46290.0000 | 0.5020 | 10.0 | 142638.000 | 0.4627 |
| Carbazole | 50.0 | 1550006.00 | 0.9737 | 3.00 | 82911.0000 | 1.055 | 10.0 | 256975.000 | 0.9796 |
| Chrysene | 50.0 | 1796487.00 | 0.9580 | 3.00 | 96578.0000 | 1.047 | 10.0 | 299127.000 | 0.9704 |
| Di-n-Butyl Phthalate | 50.0 | 1746662.00 | 1.097 | 3.00 | 100466.000 | 1.279 | 10.0 | 310683.000 | 1.184 |
| Dibenz[ah]anthracene | 50.0 | 1805081.00 | 1.106 | 3.00 | 87577.0000 | 1.027 | 10.0 | 281833.000 | 1.009 |

**INT_CAL - Modified 03/06/2008**
**PDF File ID: 2418707**
**Report generated 05/22/2012 13:41**

**Microbac Laboratories Inc.**

**INITIAL CALIBRATION DATA**

**Login Number:** L12050284
**Analytical Method:** 8270C

**Instrument ID:** HPMS5
**Initial Calibration Date:** 11-MAY-12 13:10
**Column ID:** F

| Analyte | WG397707-02 | | | WG397707-03 | | | WG397707-04 | | |
|---|---|---|---|---|---|---|---|---|---|
| | CONC | RESP | RF | CONC | RESP | RF | CONC | RESP | RF |
| Dibenzofuran | 50.0 | 1308818.00 | 1.565 | 3.00 | 75787.0000 | 1.775 | 10.0 | 232680.000 | 1.653 |
| Diethylphthalate | 50.0 | 1062761.00 | 1.271 | 3.00 | 59283.0000 | 1.388 | 10.0 | 183234.000 | 1.301 |
| Dimethylphthalate | 50.0 | 1081563.00 | 1.294 | 3.00 | 60999.0000 | 1.428 | 10.0 | 185982.000 | 1.321 |
| Fluorene | 50.0 | 1160207.00 | 1.388 | 3.00 | 64172.0000 | 1.503 | 10.0 | 199581.000 | 1.417 |
| Hexachlorobenzene | 50.0 | 420786.000 | 0.2643 | 3.00 | 21384.0000 | 0.2722 | 10.0 | 67158.0000 | 0.2560 |
| Hexachloroethane | 50.0 | 207513.000 | 0.5647 | 3.00 | 11721.0000 | 0.5904 | 10.0 | 35185.0000 | 0.5480 |
| Indeno[1,2,3-cd]pyrene | 50.0 | 2136034.00 | 1.309 | 3.00 | 103802.000 | 1.217 | 10.0 | 333522.000 | 1.194 |
| Isophorone | 50.0 | 791801.000 | 0.5658 | 3.00 | 46121.0000 | 0.6314 | 10.0 | 137382.000 | 0.5794 |
| Naphthalene | 50.0 | 1387206.00 | 0.9913 | 3.00 | 81020.0000 | 1.109 | 10.0 | 239327.000 | 1.009 |
| Nitrobenzene | 50.0 | 447368.000 | 0.3197 | 3.00 | 26082.0000 | 0.3571 | 10.0 | 78143.0000 | 0.3296 |
| Phenanthrene | 50.0 | 1645802.00 | 1.034 | 3.00 | 92609.0000 | 1.179 | 10.0 | 286078.000 | 1.091 |
| Pyrene | 50.0 | 1813784.00 | 0.9673 | 3.00 | 103697.000 | 1.125 | 10.0 | 321081.000 | 1.042 |
| Sym-Trinitrobenzene | 50.0 | 258443.000 | 0.1624 | 3.00 | 10433.0000 | 0.1328 | 10.0 | 39069.0000 | 0.1489 |
| bis(2-Chloroethoxy)methane | 50.0 | 603682.000 | 0.4314 | 3.00 | 36529.0000 | 0.5001 | 10.0 | 109839.000 | 0.4633 |
| bis(2-Chloroethyl)ether | 50.0 | 274898.000 | 0.7481 | 3.00 | 17829.0000 | 0.8980 | 10.0 | 52067.0000 | 0.8110 |
| bis(2-Ethylhexyl)phthalate | 50.0 | 1110185.00 | 0.5921 | 3.00 | 64251.0000 | 0.6968 | 10.0 | 195173.000 | 0.6332 |

**INT_CAL - Modified 03/06/2008**
**PDF File ID: 2418707**
**Report generated 05/22/2012 13:41**

**Microbac Laboratories Inc.**

**INITIAL CALIBRATION DATA**

**Login Number:** L12050284
**Analytical Method:** 8270C

**Instrument ID:** HPMS5
**Initial Calibration Date:** 11-MAY-12 13:10
**Column ID:** F

| Analyte | WG397707-05 | | | WG397707-06 | | | WG397707-07 | | |
|---|---|---|---|---|---|---|---|---|---|
| | CONC | RESP | RF | CONC | RESP | RF | CONC | RESP | RF |
| 2,4,6-Trichlorophenol | 15.0 | 80302.0000 | 0.3978 | 25.0 | 156259.000 | 0.4019 | 80.0 | 497121.000 | 0.4079 |
| 2,4-Dichlorophenol | 15.0 | 101619.000 | 0.3017 | 25.0 | 199582.000 | 0.3053 | 80.0 | 623841.000 | 0.3044 |
| 2-Nitrophenol | 15.0 | 64900.0000 | 0.1927 | 25.0 | 127816.000 | 0.1955 | 80.0 | 388975.000 | 0.1898 |
| Acenaphthene | 15.0 | 234587.000 | 1.162 | 25.0 | 456661.000 | 1.175 | 80.0 | 1292572.00 | 1.061 |
| Benzo[a]pyrene | 15.0 | 414748.000 | 1.048 | 25.0 | 810283.000 | 1.070 | 80.0 | 2521185.00 | 1.116 |
| Di-n-Octyl Phthalate | 15.0 | 456378.000 | 1.153 | 25.0 | 882821.000 | 1.165 | 80.0 | 2596290.00 | 1.149 |
| Fluoranthene | 15.0 | 453943.000 | 1.199 | 25.0 | 878492.000 | 1.186 | 80.0 | 2405776.00 | 1.048 |
| Hexachlorobutadiene | 15.0 | 70597.0000 | 0.2096 | 25.0 | 138039.000 | 0.2111 | 80.0 | 417110.000 | 0.2035 |
| Pentachlorophenol | 15.0 | 58284.0000 | 0.1539 | 25.0 | 122715.000 | 0.1656 | 80.0 | 400808.000 | 0.1746 |
| Phenol | 15.0 | 125351.000 | 1.391 | 25.0 | 239414.000 | 1.382 | 80.0 | 710454.000 | 1.320 |
| 2,4-Dinitrophenol | 15.0 | 23312.0000 | 0.1155 | 25.0 | 57304.0000 | 0.1474 | 80.0 | 219520.000 | 0.1801 |
| 4-Nitrophenol | 15.0 | 44962.0000 | 0.2227 | 25.0 | 89119.0000 | 0.2292 | 80.0 | 273577.000 | 0.2245 |
| Hexachlorocyclopentadiene | 15.0 | 72964.0000 | 0.3614 | 25.0 | 144761.000 | 0.3723 | 80.0 | 419125.000 | 0.3439 |
| n-Nitrosodipropylamine | 15.0 | 71191.0000 | 0.7901 | 25.0 | 131777.000 | 0.7607 | 80.0 | 329830.000 | 0.6128 |
| 1,3-Dinitrobenzene | 15.0 | 47554.0000 | 0.2356 | 25.0 | 94610.0000 | 0.2433 | 80.0 | 301282.000 | 0.2472 |
| 1,4-Dioxane | 15.0 | 46991.0000 | 0.5215 | 25.0 | 88646.0000 | 0.5117 | 80.0 | 242467.000 | 0.4505 |
| 2,4,5-Trichlorophenol | 15.0 | 82234.0000 | 0.4074 | 25.0 | 163129.000 | 0.4196 | 80.0 | 523121.000 | 0.4293 |
| 2,4-Dimethylphenol | 15.0 | 103829.000 | 0.3082 | 25.0 | 202860.000 | 0.3103 | 80.0 | 603929.000 | 0.2947 |
| 2,4-Dinitrotoluene | 15.0 | 84736.0000 | 0.4198 | 25.0 | 166136.000 | 0.4273 | 80.0 | 471607.000 | 0.3870 |
| 2,6-Dinitrotoluene | 15.0 | 62905.0000 | 0.3116 | 25.0 | 122913.000 | 0.3161 | 80.0 | 387395.000 | 0.3179 |
| 2-Chloronaphthalene | 15.0 | 233252.000 | 1.156 | 25.0 | 458408.000 | 1.179 | 80.0 | 1373425.00 | 1.127 |
| 2-Chlorophenol | 15.0 | 114446.000 | 1.270 | 25.0 | 219292.000 | 1.266 | 80.0 | 670362.000 | 1.246 |
| 2-Methylnaphthalene | 15.0 | 238042.000 | 0.7067 | 25.0 | 459319.000 | 0.7025 | 80.0 | 1340529.00 | 0.6540 |
| 2-Methylphenol | 15.0 | 88483.0000 | 0.9820 | 25.0 | 171838.000 | 0.9920 | 80.0 | 529427.000 | 0.9837 |
| 2-Nitroaniline | 15.0 | 60301.0000 | 0.2987 | 25.0 | 117779.000 | 0.3029 | 80.0 | 336144.000 | 0.2758 |
| 3,3'-Dichlorobenzidine | 15.0 | 154683.000 | 0.3488 | 25.0 | 303160.000 | 0.3530 | 80.0 | 950976.000 | 0.3509 |
| 3-Nitroaniline | 15.0 | 63528.0000 | 0.3147 | 25.0 | 127227.000 | 0.3272 | 80.0 | 404971.000 | 0.3323 |
| 4-Bromophenyl Phenyl Ether | 15.0 | 85534.0000 | 0.2259 | 25.0 | 169944.000 | 0.2294 | 80.0 | 530663.000 | 0.2311 |
| 4-Chloroaniline | 15.0 | 142596.000 | 0.4233 | 25.0 | 277120.000 | 0.4238 | 80.0 | 859423.000 | 0.4193 |
| Acenaphthylene | 15.0 | 363118.000 | 1.799 | 25.0 | 708215.000 | 1.822 | 80.0 | 2058154.00 | 1.689 |
| Anthracene | 15.0 | 417453.000 | 1.103 | 25.0 | 820276.000 | 1.107 | 80.0 | 2249059.00 | 0.9795 |
| Benzo[a]anthracene | 15.0 | 458642.000 | 1.034 | 25.0 | 886472.000 | 1.032 | 80.0 | 2642023.00 | 0.9749 |
| Benzo[b]fluoranthene | 15.0 | 469035.000 | 1.185 | 25.0 | 995294.000 | 1.314 | 80.0 | 2962607.00 | 1.311 |
| Benzo[ghi]perylene | 15.0 | 388829.000 | 0.9822 | 25.0 | 749700.000 | 0.9897 | 80.0 | 2140069.00 | 0.9471 |
| Benzo[k]fluoranthene | 15.0 | 413948.000 | 1.046 | 25.0 | 819433.000 | 1.082 | 80.0 | 2272150.00 | 1.006 |
| Benzoic Acid | 15.0 | 36658.0000 | 0.1088 | 25.0 | 101334.000 | 0.1550 | 80.0 | 454050.000 | 0.2215 |
| Benzyl Alcohol | 15.0 | 71447.0000 | 0.7930 | 25.0 | 139699.000 | 0.8064 | 80.0 | 428261.000 | 0.7957 |
| Butyl Benzyl Phthalate | 15.0 | 203615.000 | 0.4592 | 25.0 | 381352.000 | 0.4440 | 80.0 | 931154.000 | 0.3436 |
| Carbazole | 15.0 | 374383.000 | 0.9888 | 25.0 | 732181.000 | 0.9882 | 80.0 | 2099385.00 | 0.9144 |
| Chrysene | 15.0 | 431508.000 | 0.9731 | 25.0 | 835295.000 | 0.9726 | 80.0 | 2445724.00 | 0.9025 |
| Di-n-Butyl Phthalate | 15.0 | 448346.000 | 1.184 | 25.0 | 849203.000 | 1.146 | 80.0 | 2329702.00 | 1.015 |
| Dibenz[ah]anthracene | 15.0 | 405214.000 | 1.024 | 25.0 | 800693.000 | 1.057 | 80.0 | 2380441.00 | 1.053 |

**INT_CAL - Modified 03/06/2008**
**PDF File ID: 2418707**
**Report generated 05/22/2012 13:41**

**Microbac Laboratories Inc.**

**INITIAL CALIBRATION DATA**

**Login Number:** L12050284
**Analytical Method:** 8270C

**Instrument ID:** HPMS5
**Initial Calibration Date:** 11-MAY-12 13:10
**Column ID:** F

| Analyte | WG397707-05 | | | WG397707-06 | | | WG397707-07 | | |
|---|---|---|---|---|---|---|---|---|---|
| | CONC | RESP | RF | CONC | RESP | RF | CONC | RESP | RF |
| Dibenzofuran | 15.0 | 332852.000 | 1.649 | 25.0 | 642958.000 | 1.654 | 80.0 | 1751477.00 | 1.437 |
| Diethylphthalate | 15.0 | 261876.000 | 1.297 | 25.0 | 505411.000 | 1.300 | 80.0 | 1473844.00 | 1.209 |
| Dimethylphthalate | 15.0 | 264272.000 | 1.309 | 25.0 | 510906.000 | 1.314 | 80.0 | 1525944.00 | 1.252 |
| Fluorene | 15.0 | 288898.000 | 1.431 | 25.0 | 560644.000 | 1.442 | 80.0 | 1573521.00 | 1.291 |
| Hexachlorobenzene | 15.0 | 97267.0000 | 0.2569 | 25.0 | 190732.000 | 0.2574 | 80.0 | 593193.000 | 0.2584 |
| Hexachloroethane | 15.0 | 50505.0000 | 0.5605 | 25.0 | 96977.0000 | 0.5598 | 80.0 | 294116.000 | 0.5465 |
| Indeno[1,2,3-cd]pyrene | 15.0 | 483474.000 | 1.221 | 25.0 | 950465.000 | 1.255 | 80.0 | 2819550.00 | 1.248 |
| Isophorone | 15.0 | 195574.000 | 0.5806 | 25.0 | 373421.000 | 0.5711 | 80.0 | 1096914.00 | 0.5352 |
| Naphthalene | 15.0 | 341922.000 | 1.015 | 25.0 | 655796.000 | 1.003 | 80.0 | 1929726.00 | 0.9415 |
| Nitrobenzene | 15.0 | 110167.000 | 0.3271 | 25.0 | 212728.000 | 0.3254 | 80.0 | 615962.000 | 0.3005 |
| Phenanthrene | 15.0 | 411923.000 | 1.088 | 25.0 | 795897.000 | 1.074 | 80.0 | 2216532.00 | 0.9654 |
| Pyrene | 15.0 | 462558.000 | 1.043 | 25.0 | 897922.000 | 1.046 | 80.0 | 2383983.00 | 0.8797 |
| Sym-Trinitrobenzene | 15.0 | 58370.0000 | 0.1542 | 25.0 | 116653.000 | 0.1574 | 80.0 | 356084.000 | 0.1551 |
| bis(2-Chloroethoxy)methane | 15.0 | 158316.000 | 0.4700 | 25.0 | 299358.000 | 0.4579 | 80.0 | 813044.000 | 0.3967 |
| bis(2-Chloroethyl)ether | 15.0 | 73079.0000 | 0.8111 | 25.0 | 138051.000 | 0.7969 | 80.0 | 374761.000 | 0.6963 |
| bis(2-Ethylhexyl)phthalate | 15.0 | 280897.000 | 0.6335 | 25.0 | 533789.000 | 0.6215 | 80.0 | 1514153.00 | 0.5587 |

**INT_CAL - Modified 03/06/2008**
**PDF File ID: 2418707**
**Report generated 05/22/2012 13:41**

# INITIAL CALIBRATION DATA

**Login Number:** L12050284
**Analytical Method:** 8270C
**Instrument ID:** HPMS5
**Initial Calibration Date:** 11-MAY-12 13:10
**Column ID:** F

| Analyte | WG397707-08 | | | WG397707-09 | | |
|---|---|---|---|---|---|---|
| | CONC | RESP | RF | CONC | RESP | RF |
| 2,4,6-Trichlorophenol | 100 | 635200.000 | 0.4079 | 120 | 764863.000 | 0.4005 |
| 2,4-Dichlorophenol | 100 | 801159.000 | 0.3037 | 120 | 963224.000 | 0.2963 |
| 2-Nitrophenol | 100 | 484748.000 | 0.1838 | 120 | 570883.000 | 0.1756 |
| Acenaphthene | 100 | 1589479.00 | 1.021 | 120 | 1868852.00 | 0.9785 |
| Benzo[a]pyrene | 100 | 3162018.00 | 1.115 | 120 | 3792214.00 | 1.107 |
| Di-n-Octyl Phthalate | 100 | 3246154.00 | 1.145 | 120 | 3824524.00 | 1.116 |
| Fluoranthene | 100 | 2893090.00 | 0.9871 | 120 | 3282617.00 | 0.9140 |
| Hexachlorobutadiene | 100 | 524888.000 | 0.1990 | 120 | 633609.000 | 0.1949 |
| Pentachlorophenol | 100 | 511615.000 | 0.1746 | 120 | 616270.000 | 0.1716 |
| Phenol | 100 | 898957.000 | 1.293 | 120 | 1090195.00 | 1.276 |
| 2,4-Dinitrophenol | 100 | 297425.000 | 0.1910 | 120 | 382163.000 | 0.2001 |
| 4-Nitrophenol | 100 | 358531.000 | 0.2302 | 120 | 455584.000 | 0.2385 |
| Hexachlorocyclopentadiene | 100 | 486616.000 | 0.3125 | 120 | 536466.000 | 0.2809 |
| n-Nitrosodipropylamine | 100 | 402885.000 | 0.5794 | NA | NA | NA |
| 1,3-Dinitrobenzene | 100 | 390262.000 | 0.2506 | 120 | 479468.000 | 0.2510 |
| 1,4-Dioxane | 100 | 304075.000 | 0.4373 | 120 | 375069.000 | 0.4390 |
| 2,4,5-Trichlorophenol | 100 | 667799.000 | 0.4288 | 120 | 805926.000 | 0.4220 |
| 2,4-Dimethylphenol | 100 | 759510.000 | 0.2879 | 120 | 887752.000 | 0.2731 |
| 2,4-Dinitrotoluene | 100 | 580664.000 | 0.3728 | 120 | 680275.000 | 0.3562 |
| 2,6-Dinitrotoluene | 100 | 497130.000 | 0.3192 | 120 | 600123.000 | 0.3142 |
| 2-Chloronaphthalene | 100 | 1713582.00 | 1.100 | 120 | 2059979.00 | 1.079 |
| 2-Chlorophenol | 100 | 864890.000 | 1.244 | 120 | 1062777.00 | 1.244 |
| 2-Methylnaphthalene | 100 | 1648619.00 | 0.6250 | 120 | 1935816.00 | 0.5955 |
| 2-Methylphenol | 100 | 676884.000 | 0.9735 | 120 | 832685.000 | 0.9747 |
| 2-Nitroaniline | 100 | 418789.000 | 0.2689 | 120 | 497533.000 | 0.2605 |
| 3,3'-Dichlorobenzidine | 100 | 1208414.00 | 0.3462 | 120 | 1448281.00 | 0.3369 |
| 3-Nitroaniline | 100 | 525524.000 | 0.3374 | 120 | 644485.000 | 0.3374 |
| 4-Bromophenyl Phenyl Ether | 100 | 667586.000 | 0.2278 | 120 | 791828.000 | 0.2205 |
| 4-Chloroaniline | 100 | 1092595.00 | 0.4142 | 120 | 1321217.00 | 0.4064 |
| Acenaphthylene | 100 | 2517917.00 | 1.617 | 120 | 2940598.00 | 1.540 |
| Anthracene | 100 | 2695076.00 | 0.9195 | 120 | 3082844.00 | 0.8584 |
| Benzo[a]anthracene | 100 | 3299277.00 | 0.9453 | 120 | 3890591.00 | 0.9049 |
| Benzo[b]fluoranthene | 100 | 3929314.00 | 1.386 | 120 | 4759606.00 | 1.389 |
| Benzo[ghi]perylene | 100 | 2596425.00 | 0.9155 | 120 | 3050658.00 | 0.8904 |
| Benzo[k]fluoranthene | 100 | 2970069.00 | 1.047 | 120 | 3391551.00 | 0.9899 |
| Benzoic Acid | 100 | 601840.000 | 0.2282 | 120 | 749889.000 | 0.2307 |
| Benzyl Alcohol | 100 | 553153.000 | 0.7955 | 120 | 675828.000 | 0.7911 |
| Butyl Benzyl Phthalate | 100 | 1087749.00 | 0.3117 | 120 | 1243116.00 | 0.2891 |
| Carbazole | 100 | 2551842.00 | 0.8706 | 120 | 2981064.00 | 0.8300 |
| Chrysene | 100 | 2960251.00 | 0.8482 | 120 | 3484757.00 | 0.8105 |
| Di-n-Butyl Phthalate | 100 | 2805526.00 | 0.9572 | 120 | 3204188.00 | 0.8921 |
| Dibenz[ah]anthracene | 100 | 2904598.00 | 1.024 | 120 | 3474541.00 | 1.014 |

**INT_CAL - Modified 03/06/2008**
**PDF File ID: 2418707**
**Report generated 05/22/2012 13:41**

**Microbac Laboratories Inc.**

**INITIAL CALIBRATION DATA**

**Login Number:** L12050284
**Analytical Method:** 8270C
**Instrument ID:** HPMS5
**Initial Calibration Date:** 11-MAY-12 13:10
**Column ID:** F

| Analyte | WG397707-08 | | | WG397707-09 | | |
|---|---|---|---|---|---|---|
| | CONC | RESP | RF | CONC | RESP | RF |
| Dibenzofuran | 100 | 2118299.00 | 1.360 | 120 | 2442729.00 | 1.279 |
| Diethylphthalate | 100 | 1831618.00 | 1.176 | 120 | 2185623.00 | 1.144 |
| Dimethylphthalate | 100 | 1919141.00 | 1.232 | 120 | 2310682.00 | 1.210 |
| Fluorene | 100 | 1929512.00 | 1.239 | 120 | 2223990.00 | 1.164 |
| Hexachlorobenzene | 100 | 742168.000 | 0.2532 | 120 | 869789.000 | 0.2422 |
| Hexachloroethane | 100 | 376476.000 | 0.5414 | 120 | 453360.000 | 0.5307 |
| Indeno[1,2,3-cd]pyrene | 100 | 3453631.00 | 1.218 | 120 | 4098737.00 | 1.196 |
| Isophorone | 100 | 1382919.00 | 0.5243 | 120 | 1671321.00 | 0.5141 |
| Naphthalene | 100 | 2357670.00 | 0.8938 | 120 | 2768757.00 | 0.8517 |
| Nitrobenzene | 100 | 777068.000 | 0.2946 | 120 | 922406.000 | 0.2838 |
| Phenanthrene | 100 | 2712131.00 | 0.9253 | 120 | 3114178.00 | 0.8671 |
| Pyrene | 100 | 2770362.00 | 0.7938 | 120 | 3092249.00 | 0.7192 |
| Sym-Trinitrobenzene | 100 | 434552.000 | 0.1483 | 120 | 483820.000 | 0.1347 |
| bis(2-Chloroethoxy)methane | 100 | 990356.000 | 0.3755 | 120 | 1151695.00 | 0.3543 |
| bis(2-Chloroethyl)ether | 100 | 463082.000 | 0.6660 | 120 | 549498.000 | 0.6432 |
| bis(2-Ethylhexyl)phthalate | 100 | 1866397.00 | 0.5348 | 120 | 2160656.00 | 0.5025 |

**INT_CAL - Modified 03/06/2008**
**PDF File ID: 2418707**
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**Microbac Laboratories Inc.**

**INITIAL CALIBRATION DATA**

**Login Number:** L12050284
**Analytical Method:** 8270C

**Instrument ID:** HPMS5
**Initial Calibration Date:** 14-MAY-12 12:36
**Column ID:** F

| Analyte | WG397871-01 | | | WG397871-02 | | | WG397871-03 | | |
|---|---|---|---|---|---|---|---|---|---|
| | CONC | RESP | RF | CONC | RESP | RF | CONC | RESP | RF |
| 1,1'-Biphenyl | 50.0 | 1282775.00 | 1.581 | 3.00 | 68405.0000 | 1.615 | 10.0 | 235230.000 | 1.618 |

**INT_CAL - Modified 03/06/2008**
**PDF File ID: 2418707**
**Report generated 05/22/2012 13:41**

**Microbac Laboratories Inc.**

**INITIAL CALIBRATION DATA**

**Login Number:** L12050284
**Analytical Method:** 8270C

**Instrument ID:** HPMS5
**Initial Calibration Date:** 14-MAY-12 12:36
**Column ID:** F

| Analyte | WG397871-04 | | | WG397871-05 | | | WG397871-06 | | |
|---|---|---|---|---|---|---|---|---|---|
| | CONC | RESP | RF | CONC | RESP | RF | CONC | RESP | RF |
| 1,1'-Biphenyl | 25.0 | 542935.000 | 1.612 | 80.0 | 1719599.00 | 1.488 | 100 | 2004687.00 | 1.414 |

**INT_CAL - Modified 03/06/2008**
**PDF File ID: 2418707**
**Report generated 05/22/2012 13:41**

Microbac Laboratories Inc.
ALTERNATE SOURCE CALIBRATION REPORT

Login Number:L12050284 Run Date:05/11/2012 Sample ID:WG397707-10
Instrument ID:HPMS5 Run Time:13:46 Method:8270C
File ID:5M66924 Analyst:CAA QC Key:WATERLOO
ICal Workgroup:WG397707 Cal ID: HPMS5 - 11-MAY-12

| Analyte | | Expected | Found | Units | RF | %D | UCL | Q |
|---|---|---|---|---|---|---|---|---|
| 2,4,6-Trichlorophenol | CCC | 50000 | 54000 | ug/L | 0.436 | 8.00 | 25 | |
| 2,4-Dichlorophenol | CCC | 50000 | 52000 | ug/L | 0.316 | 3.90 | 25 | |
| 2-Nitrophenol | CCC | 50000 | 53500 | ug/L | 0.203 | 7.00 | 25 | |
| Acenaphthene | CCC | 50000 | 52900 | ug/L | 1.18 | 5.80 | 25 | |
| Benzo[a]pyrene | CCC | 50000 | 53400 | ug/L | 1.16 | 6.80 | 25 | |
| Di-n-Octyl Phthalate | CCC | 50000 | 52300 | ug/L | 1.20 | 4.70 | 25 | |
| Fluoranthene | CCC | 50000 | 51500 | ug/L | 1.15 | 3.00 | 25 | |
| Hexachlorobutadiene | CCC | 50000 | 55000 | ug/L | 0.229 | 10.1 | 25 | |
| n-Nitrosodiphenylamine | CCC | 50000 | 53200 | ug/L | 0.660 | 6.40 | 25 | |
| Pentachlorophenol | CCC | 50000 | 61300 | ug/L | 0.204 | 22.5 | 25 | |
| Phenol | CCC | 50000 | 51900 | ug/L | 1.41 | 3.90 | 25 | |
| 2,4-Dinitrophenol | SPCC | 50000 | 72000 | ug/L | 0.265 | 44.0 | 25 | * |
| 4-Nitrophenol | SPCC | 50000 | 52500 | ug/L | 0.239 | 4.90 | 25 | |
| Hexachlorocyclopentadiene | SPCC | 50000 | 50600 | ug/L | 0.346 | 1.30 | 25 | |
| n-Nitrosodipropylamine | SPCC | 50000 | 49300 | ug/L | 0.715 | 1.40 | 25 | |
| 1,3-Dinitrobenzene | | 50000 | 48800 | ug/L | 0.237 | 2.50 | 25 | |
| 2,4,5-Trichlorophenol | | 50000 | 56600 | ug/L | 0.474 | 13.3 | 25 | |
| 2,4-Dimethylphenol | | 50000 | 52600 | ug/L | 0.319 | 5.20 | 25 | |
| 2,4-Dinitrotoluene | | 50000 | 53800 | ug/L | 0.431 | 7.60 | 25 | |
| 2,6-Dinitrotoluene | | 50000 | 53600 | ug/L | 0.340 | 7.20 | 25 | |
| 2-Chloronaphthalene | | 50000 | 59900 | ug/L | 1.38 | 19.9 | 25 | |
| 2-Chlorophenol | | 50000 | 52700 | ug/L | 1.34 | 5.40 | 25 | |
| 2-Methylnaphthalene | | 50000 | 52700 | ug/L | 0.715 | 5.40 | 25 | |
| 2-Methylphenol | | 50000 | 52500 | ug/L | 1.04 | 5.00 | 25 | |
| 2-Nitroaniline | | 50000 | 53400 | ug/L | 0.306 | 6.70 | 25 | |
| 3-Nitroaniline | | 50000 | 53300 | ug/L | 0.350 | 6.70 | 25 | |
| 3,3'-Dichlorobenzidine | | 50000 | 53900 | ug/L | 0.376 | 7.80 | 25 | |
| 3-,4-Methylphenol | | 50000 | 51800 | ug/L | 1.30 | 3.50 | 25 | |
| 4-Bromophenyl Phenyl Ether | | 50000 | 51700 | ug/L | 0.237 | 3.40 | 25 | |
| 4-Chloroaniline | | 50000 | 52500 | ug/L | 0.445 | 5.00 | 25 | |
| Acenaphthylene | | 50000 | 53800 | ug/L | 1.88 | 7.50 | 25 | |
| Anthracene | | 50000 | 52500 | ug/L | 1.09 | 4.90 | 25 | |
| Benzo[a]anthracene | | 50000 | 53200 | ug/L | 1.07 | 6.30 | 25 | |
| Benzo[b]fluoranthene | | 50000 | 56100 | ug/L | 1.45 | 12.3 | 25 | |
| Benzo[ghi]perylene | | 50000 | 53400 | ug/L | 1.03 | 6.80 | 25 | |
| Benzo[k]fluoranthene | | 50000 | 52400 | ug/L | 1.10 | 4.90 | 25 | |
| Benzoic Acid | | 50000 | 60200 | ug/L | 0.252 | 20.5 | 25 | |
| Benzyl Alcohol | | 50000 | 56400 | ug/L | 0.901 | 12.9 | 25 | |
| bis(2-Chloroethyl)ether | | 50000 | 50200 | ug/L | 0.762 | 0.400 | 25 | |
| bis(2-Chloroethoxy)methane | | 50000 | 53400 | ug/L | 0.461 | 6.90 | 25 | |
| bis(2-Ethylhexyl)phthalate | | 50000 | 51900 | ug/L | 0.620 | 3.90 | 25 | |
| Butyl Benzyl Phthalate | | 50000 | 54700 | ug/L | 0.416 | 9.50 | 25 | |

ALT - Modified 09/06/2007
Version 1.5 PDF File ID: 2418708
Report generated 05/22/2012 13:40

Microbac Laboratories Inc.
ALTERNATE SOURCE CALIBRATION REPORT

Login Number: L12050284 Run Date: 05/11/2012 Sample ID: WG397707-10
Instrument ID: HPMS5 Run Time: 13:46 Method: 8270C
File ID: 5M66924 Analyst: CAA QC Key: WATERLOO
ICal Workgroup: WG397707 Cal ID: HPMS5 - 11-MAY-12

| Analyte | | Expected | Found | Units | RF | %D | UCL | Q |
|---|---|---|---|---|---|---|---|---|
| Carbazole | | 50000 | 51700 | ug/L | 0.982 | 3.30 | 25 | |
| Chrysene | | 50000 | 55000 | ug/L | 1.03 | 9.90 | 25 | |
| Di-n-Butyl Phthalate | | 50000 | 50100 | ug/L | 1.10 | 0.100 | 25 | |
| Dibenz[ah]anthracene | | 50000 | 54000 | ug/L | 1.12 | 7.90 | 25 | |
| Dibenzofuran | | 50000 | 53600 | ug/L | 1.66 | 7.20 | 25 | |
| Diethylphthalate | | 50000 | 51700 | ug/L | 1.30 | 3.50 | 25 | |
| Dimethylphthalate | | 50000 | 51700 | ug/L | 1.34 | 3.40 | 25 | |
| Fluorene | | 50000 | 53200 | ug/L | 1.45 | 6.40 | 25 | |
| Hexachlorobenzene | | 50000 | 51200 | ug/L | 0.264 | 2.40 | 25 | |
| Hexachloroethane | | 50000 | 51800 | ug/L | 0.575 | 3.50 | 25 | |
| Indeno[1,2,3-cd]pyrene | | 50000 | 54500 | ug/L | 1.34 | 9.00 | 25 | |
| Isophorone | | 50000 | 49500 | ug/L | 0.557 | 1.00 | 25 | |
| Naphthalene | | 50000 | 53000 | ug/L | 1.04 | 6.00 | 25 | |
| Nitrobenzene | | 50000 | 50700 | ug/L | 0.322 | 1.50 | 25 | |
| Phenanthrene | | 50000 | 52600 | ug/L | 1.08 | 5.20 | 25 | |
| Pyrene | | 50000 | 53600 | ug/L | 1.02 | 7.20 | 25 | |

* Exceeds %D Limit

CCC Calibration Check Compounds
SPCC System Performance Check Compounds

ALT - Modified 09/06/2007
Version 1.5 PDF File ID: 2418708
Report generated 05/22/2012 13:40

Microbac Laboratories Inc.
ALTERNATE SOURCE CALIBRATION REPORT

Login Number: L12050284 Run Date: 05/11/2012 Sample ID: WG397707-11
Instrument ID: HPMS5 Run Time: 14:21 Method: 8270C
File ID: 5M66925 Analyst: CAA QC Key: WATERLOO
ICal Workgroup: WG397707 Cal ID: HPMS5 - 11-MAY-12

| Analyte | | Expected | Found | Units | RF | %D | UCL | Q |
|---|---|---|---|---|---|---|---|---|
| 1,4-Dioxane | | 50000 | 53900 | ug/L | 0.529 | 7.70 | 25 | |

* Exceeds %D Limit

CCC Calibration Check Compounds
SPCC System Performance Check Compounds

ALT - Modified 09/06/2007
Version 1.5 PDF File ID: 2418708
Report generated 05/22/2012 13:40

Microbac Laboratories Inc.
ALTERNATE SOURCE CALIBRATION REPORT

Login Number: L12050284 Run Date: 05/14/2012 Sample ID: WG397871-07
Instrument ID: HPMS5 Run Time: 13:12 Method: 8270C
File ID: 5M66984 Analyst: CAA QC Key: WATERLOO
ICal Workgroup: WG397871 Cal ID: HPMS5 - 14-MAY-12

| Analyte | | Expected | Found | Units | RF | %D | UCL | Q |
|---|---|---|---|---|---|---|---|---|
| 1,1'-Biphenyl | | 50000 | 49200 | ug/L | 1.53 | 1.50 | 25 | |

* Exceeds %D Limit

CCC Calibration Check Compounds
SPCC System Performance Check Compounds

ALT - Modified 09/06/2007
Version 1.5 PDF File ID: 2418708
Report generated 05/22/2012 13:40

Microbac Laboratories Inc.
CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L12050284 Run Date: 05/14/2012 Sample ID: WG397870-02
Instrument ID: HPMS5 Run Time: 09:02 Method: 8270C
File ID: 5M66977 Analyst: CAA QC Key: WATERLOO
Workgroup (AAB#): WG398144 Cal ID: HPMS5 - 11-MAY-12
Matrix: WATER

| Analyte | | Expected | Found | UNITS | RF | %D | UCL | Q |
|---|---|---|---|---|---|---|---|---|
| 2,4,6-Trichlorophenol | CCC | 50000 | 51200 | ug/L | 0.413 | 2.35 | 20 | |
| 2,4-Dichlorophenol | CCC | 50000 | 50600 | ug/L | 0.308 | 1.18 | 20 | |
| 2-Nitrophenol | CCC | 50000 | 51700 | ug/L | 0.196 | 3.34 | 20 | |
| Acenaphthene | CCC | 50000 | 51300 | ug/L | 1.14 | 2.54 | 20 | |
| Benzo[a]pyrene | CCC | 50000 | 51000 | ug/L | 1.10 | 2.05 | 20 | |
| Di-n-Octyl Phthalate | CCC | 50000 | 49800 | ug/L | 1.14 | 0.491 | 20 | |
| Fluoranthene | CCC | 50000 | 50600 | ug/L | 1.13 | 1.20 | 20 | |
| Hexachlorobutadiene | CCC | 50000 | 51200 | ug/L | 0.213 | 2.50 | 20 | |
| n-Nitrosodiphenylamine | CCC | 50000 | 51700 | ug/L | 0.642 | 3.46 | 20 | |
| Pentachlorophenol | CCC | 50000 | 51600 | ug/L | 0.172 | 3.16 | 20 | |
| Phenol | CCC | 50000 | 49900 | ug/L | 1.36 | 0.280 | 20 | |
| 1,4-Dichlorobenzene | CCC | 50000 | 50300 | ug/L | 1.56 | 0.526 | 20 | |
| 4-Chloro-3-Methylphenol | CCC | 50000 | 50800 | ug/L | 0.282 | 1.67 | 20 | |
| 2,4-Dinitrophenol | SPCC | 50000 | 48000 | ug/L | 0.163 | 3.98 | 20 | |
| 4-Nitrophenol | SPCC | 50000 | 50400 | ug/L | 0.230 | 0.738 | 20 | |
| Hexachlorocyclopentadiene | SPCC | 50000 | 56000 | ug/L | 0.383 | 11.9 | 20 | |
| n-Nitrosodipropylamine | SPCC | 50000 | 47600 | ug/L | 0.691 | 4.86 | 20 | |
| Sym-Trinitrobenzene | | 50000 | 52700 | ug/L | 0.157 | 5.33 | 20 | |
| 1,3-Dinitrobenzene | | 50000 | 50900 | ug/L | 0.247 | 1.75 | 20 | |
| 1,4-Dioxane | | 50000 | 48200 | ug/L | 0.474 | 3.62 | 20 | |
| 2,4,5-Trichlorophenol | | 50000 | 51500 | ug/L | 0.431 | 3.02 | 20 | |
| 2,4-Dimethylphenol | | 50000 | 50700 | ug/L | 0.307 | 1.49 | 20 | |
| 2,4-Dinitrotoluene | | 50000 | 52200 | ug/L | 0.418 | 4.30 | 20 | |
| 2,6-Dinitrotoluene | | 50000 | 50600 | ug/L | 0.321 | 1.20 | 20 | |
| 2-Chloronaphthalene | | 50000 | 50500 | ug/L | 1.17 | 1.00 | 20 | |
| 2-Chlorophenol | | 50000 | 49800 | ug/L | 1.26 | 0.478 | 20 | |
| 2-Methylnaphthalene | | 50000 | 50800 | ug/L | 0.689 | 1.62 | 20 | |
| 2-Methylphenol | | 50000 | 50500 | ug/L | 0.998 | 0.953 | 20 | |
| 2-Nitroaniline | | 50000 | 51400 | ug/L | 0.294 | 2.77 | 20 | |
| 3-Nitroaniline | | 50000 | 51300 | ug/L | 0.336 | 2.64 | 20 | |
| 3,3'-Dichlorobenzidine | | 50000 | 51700 | ug/L | 0.361 | 3.39 | 20 | |
| 3-,4-Methylphenol | | 50000 | 50600 | ug/L | 1.27 | 1.12 | 20 | |
| 4-Bromophenyl Phenyl Ether | | 50000 | 51100 | ug/L | 0.235 | 2.29 | 20 | |
| 4-Chloroaniline | | 50000 | 51200 | ug/L | 0.434 | 2.37 | 20 | |
| Acenaphthylene | | 50000 | 51300 | ug/L | 1.79 | 2.63 | 20 | |
| Anthracene | | 50000 | 50900 | ug/L | 1.06 | 1.83 | 20 | |
| Benzo[a]anthracene | | 50000 | 50400 | ug/L | 1.02 | 0.877 | 20 | |
| Benzo[b]fluoranthene | | 50000 | 49700 | ug/L | 1.29 | 0.572 | 20 | |
| Benzo[ghi]perylene | | 50000 | 50100 | ug/L | 0.965 | 0.191 | 20 | |
| Benzo[k]fluoranthene | | 50000 | 50000 | ug/L | 1.05 | 0.0476 | 20 | |
| Benzoic Acid | | 50000 | 43400 | ug/L | 0.168 | 13.2 | 20 | |
| Benzyl Alcohol | | 50000 | 51000 | ug/L | 0.813 | 1.95 | 20 | |

CCV - Modified 03/05/2008
PDF File ID: 2418710
Report generated 05/22/2012 13:42

Microbac Laboratories Inc.
CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L12050284 Run Date: 05/14/2012 Sample ID: WG397870-02
Instrument ID: HPMS5 Run Time: 09:02 Method: 8270C
File ID: 5M66977 Analyst: CAA QC Key: WATERLOO
Workgroup (AAB#): WG398144 Cal ID: HPMS5 - 11-MAY-12
Matrix: WATER

| Analyte | | Expected | Found | UNITS | RF | %D | UCL | Q |
|---|---|---|---|---|---|---|---|---|
| bis(2-Chloroethyl)ether | | 50000 | 48500 | ug/L | 0.736 | 2.96 | 20 | |
| bis(2-Chloroethoxy)methane | | 50000 | 49900 | ug/L | 0.431 | 0.107 | 20 | |
| bis(2-Ethylhexyl)phthalate | | 50000 | 49100 | ug/L | 0.586 | 1.86 | 20 | |
| Butyl Benzyl Phthalate | | 50000 | 50600 | ug/L | 0.391 | 1.27 | 20 | |
| Carbazole | | 50000 | 51000 | ug/L | 0.969 | 1.99 | 20 | |
| Chrysene | | 50000 | 50700 | ug/L | 0.949 | 1.42 | 20 | |
| Di-n-Butyl Phthalate | | 50000 | 49500 | ug/L | 1.08 | 1.05 | 20 | |
| Dibenz[ah]anthracene | | 50000 | 51800 | ug/L | 1.08 | 3.52 | 20 | |
| Dibenzofuran | | 50000 | 51100 | ug/L | 1.58 | 2.15 | 20 | |
| Diethylphthalate | | 50000 | 50100 | ug/L | 1.26 | 0.208 | 20 | |
| Dimethylphthalate | | 50000 | 50100 | ug/L | 1.30 | 0.144 | 20 | |
| Fluorene | | 50000 | 51600 | ug/L | 1.40 | 3.23 | 20 | |
| Hexachlorobenzene | | 50000 | 51300 | ug/L | 0.264 | 2.65 | 20 | |
| Hexachloroethane | | 50000 | 50800 | ug/L | 0.564 | 1.58 | 20 | |
| Indeno[1,2,3-cd]pyrene | | 50000 | 51500 | ug/L | 1.27 | 2.93 | 20 | |
| Isophorone | | 50000 | 49300 | ug/L | 0.554 | 1.49 | 20 | |
| Naphthalene | | 50000 | 50500 | ug/L | 0.987 | 1.02 | 20 | |
| Nitrobenzene | | 50000 | 50300 | ug/L | 0.319 | 0.519 | 20 | |
| Phenanthrene | | 50000 | 50500 | ug/L | 1.04 | 0.927 | 20 | |
| Pyrene | | 50000 | 50500 | ug/L | 0.962 | 1.10 | 20 | |

* Exceeds %D Criteria

CCC Calibration Check Compounds
SPCC System Performance Check Compounds

CCV - Modified 03/05/2008
PDF File ID: 2418710
Report generated 05/22/2012 13:42

Microbac Laboratories Inc.
CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L12050284 Run Date: 05/16/2012 Sample ID: WG398115-02
Instrument ID: HPMS5 Run Time: 08:59 Method: 8270C
File ID: 5M67011 Analyst: CAA QC Key: WATERLOO
Workgroup (AAB#): WG398144 Cal ID: HPMS5 - 11-MAY-12
Matrix: WATER

| Analyte | | Expected | Found | UNITS | RF | %D | UCL | Q |
|---|---|---|---|---|---|---|---|---|
| 2,4,6-Trichlorophenol | CCC | 50000 | 51500 | ug/L | 0.416 | 2.92 | 20 | |
| 2,4-Dichlorophenol | CCC | 50000 | 51300 | ug/L | 0.312 | 2.68 | 20 | |
| 2-Nitrophenol | CCC | 50000 | 51800 | ug/L | 0.197 | 3.50 | 20 | |
| Acenaphthene | CCC | 50000 | 51400 | ug/L | 1.15 | 2.78 | 20 | |
| Benzo[a]pyrene | CCC | 50000 | 51200 | ug/L | 1.11 | 2.40 | 20 | |
| Di-n-Octyl Phthalate | CCC | 50000 | 50100 | ug/L | 1.15 | 0.291 | 20 | |
| Fluoranthene | CCC | 50000 | 50000 | ug/L | 1.12 | 0.0996 | 20 | |
| Hexachlorobutadiene | CCC | 50000 | 52200 | ug/L | 0.217 | 4.45 | 20 | |
| n-Nitrosodiphenylamine | CCC | 50000 | 51700 | ug/L | 0.641 | 3.30 | 20 | |
| Pentachlorophenol | CCC | 50000 | 53300 | ug/L | 0.178 | 6.52 | 20 | |
| Phenol | CCC | 50000 | 48900 | ug/L | 1.33 | 2.27 | 20 | |
| 1,4-Dichlorobenzene | CCC | 50000 | 50800 | ug/L | 1.57 | 1.56 | 20 | |
| 4-Chloro-3-Methylphenol | CCC | 50000 | 50200 | ug/L | 0.279 | 0.406 | 20 | |
| 2,4-Dinitrophenol | SPCC | 50000 | 49900 | ug/L | 0.171 | 0.176 | 20 | |
| 4-Nitrophenol | SPCC | 50000 | 48700 | ug/L | 0.222 | 2.62 | 20 | |
| Hexachlorocyclopentadiene | SPCC | 50000 | 56500 | ug/L | 0.386 | 12.9 | 20 | |
| n-Nitrosodipropylamine | SPCC | 50000 | 46600 | ug/L | 0.676 | 6.82 | 20 | |
| Sym-Trinitrobenzene | | 50000 | 51700 | ug/L | 0.154 | 3.42 | 20 | |
| 1,3-Dinitrobenzene | | 50000 | 50400 | ug/L | 0.244 | 0.741 | 20 | |
| 1,4-Dioxane | | 50000 | 46900 | ug/L | 0.461 | 6.17 | 20 | |
| 2,4,5-Trichlorophenol | | 50000 | 51800 | ug/L | 0.433 | 3.54 | 20 | |
| 2,4-Dimethylphenol | | 50000 | 50800 | ug/L | 0.308 | 1.59 | 20 | |
| 2,4-Dinitrotoluene | | 50000 | 51800 | ug/L | 0.415 | 3.56 | 20 | |
| 2,6-Dinitrotoluene | | 50000 | 50400 | ug/L | 0.320 | 0.809 | 20 | |
| 2-Chloronaphthalene | | 50000 | 50700 | ug/L | 1.17 | 1.33 | 20 | |
| 2-Chlorophenol | | 50000 | 49700 | ug/L | 1.26 | 0.623 | 20 | |
| 2-Methylnaphthalene | | 50000 | 51100 | ug/L | 0.693 | 2.19 | 20 | |
| 2-Methylphenol | | 50000 | 49600 | ug/L | 0.981 | 0.756 | 20 | |
| 2-Nitroaniline | | 50000 | 49400 | ug/L | 0.283 | 1.19 | 20 | |
| 3-Nitroaniline | | 50000 | 50400 | ug/L | 0.331 | 0.871 | 20 | |
| 3,3'-Dichlorobenzidine | | 50000 | 51400 | ug/L | 0.358 | 2.72 | 20 | |
| 3-,4-Methylphenol | | 50000 | 50000 | ug/L | 1.26 | 0.00200 | 20 | |
| 4-Bromophenyl Phenyl Ether | | 50000 | 51700 | ug/L | 0.237 | 3.46 | 20 | |
| 4-Chloroaniline | | 50000 | 50200 | ug/L | 0.426 | 0.475 | 20 | |
| Acenaphthylene | | 50000 | 51200 | ug/L | 1.79 | 2.44 | 20 | |
| Anthracene | | 50000 | 50600 | ug/L | 1.05 | 1.23 | 20 | |
| Benzo[a]anthracene | | 50000 | 50400 | ug/L | 1.02 | 0.888 | 20 | |
| Benzo[b]fluoranthene | | 50000 | 52100 | ug/L | 1.35 | 4.22 | 20 | |
| Benzo[ghi]perylene | | 50000 | 48300 | ug/L | 0.930 | 3.41 | 20 | |
| Benzo[k]fluoranthene | | 50000 | 54700 | ug/L | 1.15 | 9.34 | 20 | |
| Benzoic Acid | | 50000 | 34900 | ug/L | 0.125 | 30.2 | 20 | * |
| Benzyl Alcohol | | 50000 | 49800 | ug/L | 0.794 | 0.459 | 20 | |

CCV - Modified 03/05/2008
PDF File ID: 2418710
Report generated 05/22/2012 13:42

Microbac Laboratories Inc.
CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L12050284 Run Date: 05/16/2012 Sample ID: WG398115-02
Instrument ID: HPMS5 Run Time: 08:59 Method: 8270C
File ID: 5M67011 Analyst: CAA QC Key: WATERLOO
Workgroup (AAB#): WG398144 Cal ID: HPMS5 - 11-MAY-12
Matrix: WATER

| Analyte | | Expected | Found | UNITS | RF | %D | UCL | Q |
|---|---|---|---|---|---|---|---|---|
| bis(2-Chloroethyl)ether | | 50000 | 47800 | ug/L | 0.726 | 4.39 | 20 | |
| bis(2-Chloroethoxy)methane | | 50000 | 50000 | ug/L | 0.431 | 0.0530 | 20 | |
| bis(2-Ethylhexyl)phthalate | | 50000 | 48700 | ug/L | 0.581 | 2.63 | 20 | |
| Butyl Benzyl Phthalate | | 50000 | 49600 | ug/L | 0.385 | 0.726 | 20 | |
| Carbazole | | 50000 | 50600 | ug/L | 0.962 | 1.23 | 20 | |
| Chrysene | | 50000 | 50400 | ug/L | 0.943 | 0.810 | 20 | |
| Di-n-Butyl Phthalate | | 50000 | 48900 | ug/L | 1.07 | 2.27 | 20 | |
| Dibenz[ah]anthracene | | 50000 | 50200 | ug/L | 1.04 | 0.416 | 20 | |
| Dibenzofuran | | 50000 | 50800 | ug/L | 1.57 | 1.60 | 20 | |
| Diethylphthalate | | 50000 | 50000 | ug/L | 1.26 | 0.0876 | 20 | |
| Dimethylphthalate | | 50000 | 50000 | ug/L | 1.30 | 0.0108 | 20 | |
| Fluorene | | 50000 | 51700 | ug/L | 1.41 | 3.43 | 20 | |
| Hexachlorobenzene | | 50000 | 51900 | ug/L | 0.267 | 3.71 | 20 | |
| Hexachloroethane | | 50000 | 50400 | ug/L | 0.560 | 0.860 | 20 | |
| Indeno[1,2,3-cd]pyrene | | 50000 | 50400 | ug/L | 1.24 | 0.719 | 20 | |
| Isophorone | | 50000 | 49100 | ug/L | 0.553 | 1.79 | 20 | |
| Naphthalene | | 50000 | 50600 | ug/L | 0.988 | 1.11 | 20 | |
| Nitrobenzene | | 50000 | 49500 | ug/L | 0.314 | 1.03 | 20 | |
| Phenanthrene | | 50000 | 50100 | ug/L | 1.03 | 0.228 | 20 | |
| Pyrene | | 50000 | 49900 | ug/L | 0.950 | 0.251 | 20 | |

* Exceeds %D Criteria

CCC Calibration Check Compounds
SPCC System Performance Check Compounds

CCV - Modified 03/05/2008
PDF File ID: 2418710
Report generated 05/22/2012 13:42

Microbac Laboratories Inc.
CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L12050284 Run Date: 05/16/2012 Sample ID: WG395530-01
Instrument ID: HPMS5 Run Time: 09:35 Method: 8270C
File ID: 5M67012 Analyst: CAA QC Key: WATERLOO
Workgroup (AAB#): WG398144 Cal ID: HPMS5 - 14-MAY-12
Matrix: WATER

| Analyte | | Expected | Found | UNITS | RF | %D | UCL | Q |
|---|---|---|---|---|---|---|---|---|
| 1,1'-Biphenyl | | 50000 | 51100 | ug/L | 1.59 | 2.10 | 20 | |

* Exceeds %D Criteria

CCC Calibration Check Compounds
SPCC System Performance Check Compounds

CCV - Modified 03/05/2008
PDF File ID: 2418710
Report generated 05/22/2012 13:42

Microbac Laboratories Inc.

INTERNAL STANDARD AREA SUMMARY
(COMPARED TO CCV)

Login Number: L12050284
Instrument ID: HPMS5
Workgroup (AAB#): WG398144

CCV Number: WG397870-02
CAL ID: HPMS5-11-MAY-12
Matrix: WATER

| Sample Number | Dilution | Tag | IS-1 | IS-2 | IS-3 | IS-4 | IS-5 | IS-6 |
|---|---|---|---|---|---|---|---|---|
| WG397870-02 | NA | NA | 328467 | 750342 | 1704599 | 1250668 | 1479147 | 1435976 |
| Upper Limit | NA | NA | 656934 | 1500684 | 3409198 | 2501336 | 2958294 | 2871952 |
| Lower Limit | NA | NA | 164234 | 375171 | 852300 | 625334 | 739574 | 717988 |
| L12050284-01 | 2.00 | DL01 | 75273 | 684258 | 1348979 | 997039 | 985785 | 1148224 |
| L12050284-03 | 1.00 | 01 | 292638 | 633405 | 1380684 | 1074490 | 1256136 | 1166533 |
| L12050284-05 | 1.00 | 01 | 246713 | 531636 | 1173558 | 916131 | 1042224 | 985030 |
| L12050284-07 | 1.00 | 01 | 313417 | 671188 | 1485652 | 1146556 | 1358897 | 1229401 |
| L12050284-10 | 1.00 | 01 | 303516 | 640529 | 1403012 | 1111656 | 1270610 | 1164796 |
| L12050284-12 | 1.00 | 01 | 259238 | 563249 | 1219992 | 953074 | 1111791 | 1030226 |

IS-1 - 1,4-Dichlorobenzene-d4
IS-2 - Acenaphthene-d10
IS-3 - Chrysene-d12
IS-4 - Naphthalene-D8
IS-5 - Perylene-d12
IS-6 - Phenanthrene-d10

Underline = Response outside limits

INTERNAL_STD - Modified 03/06/2008
PDF File ID: 2418711
Report generated 05/22/2012 13:42

Microbac Laboratories Inc.

INTERNAL STANDARD AREA SUMMARY
(COMPARED TO CCV)

Login Number: L12050284
Instrument ID: HPMS5
Workgroup (AAB#): WG398144

CCV Number: WG398115-02
CAL ID: HPMS5-11-MAY-12
Matrix: WATER

| Sample Number | Dilution | Tag | IS-1 | IS-2 | IS-3 | IS-4 | IS-5 | IS-6 |
|---|---|---|---|---|---|---|---|---|
| WG398115-02 | NA | NA | 378021 | 855698 | 1920701 | 1420031 | 1642220 | 1626861 |
| Upper Limit | NA | NA | 756042 | 1711396 | 3841402 | 2840062 | 3284440 | 3253722 |
| Lower Limit | NA | NA | 189011 | 427849 | 960351 | 710016 | 821110 | 813431 |
| WG397434-02 | 1.00 | 04 | 233432 | 509551 | 1123012 | 867297 | 1017459 | 949615 |
| WG397434-03 | 1.00 | 04 | 244445 | 559655 | 1301127 | 936906 | 1102258 | 1107955 |

IS-1 - 1,4-Dichlorobenzene-d4
IS-2 - Acenaphthene-d10
IS-3 - Chrysene-d12
IS-4 - Naphthalene-d8
IS-5 - Perylene-d12
IS-6 - Phenanthrene-d10

Underline = Response outside limits

INTERNAL_STD - Modified 03/06/2008
PDF File ID: 2418711
Report generated 05/22/2012 13:42

Microbac Laboratories Inc.

INTERNAL STANDARD RETENTION TIME SUMMARY
(COMPARED TO CCV)

Login Number: L12050284 CCV Number: WG397870-02

Instrument ID: HPMS5 CAL ID: HPMS5-11-MAY-12

Workgroup (AAB#): WG398144 Matrix: WATER

| Sample Number | Dilution | Tag | IS-1 | IS-2 | IS-3 | IS-4 | IS-5 | IS-6 |
|---|---|---|---|---|---|---|---|---|
| WG397870-02 | NA | NA | 9.3 | 13.02 | 17.53 | 10.91 | 20.07 | 14.64 |
| Upper Limit | NA | NA | 9.8 | 13.52 | 18.03 | 11.41 | 20.57 | 15.14 |
| Lower Limit | NA | NA | 8.8 | 12.52 | 17.03 | 10.41 | 19.57 | 14.14 |
| L12050284-01 | 2.00 | DL01 | 9.29 | 13.03 | 17.52 | 10.92 | 20.06 | 14.64 |
| L12050284-03 | 1.00 | 01 | 9.29 | 13.02 | 17.52 | 10.9 | 20.05 | 14.63 |
| L12050284-05 | 1.00 | 01 | 9.29 | 13.02 | 17.52 | 10.9 | 20.05 | 14.63 |
| L12050284-07 | 1.00 | 01 | 9.29 | 13.02 | 17.52 | 10.9 | 20.05 | 14.64 |
| L12050284-10 | 1.00 | 01 | 9.29 | 13.02 | 17.52 | 10.9 | 20.05 | 14.63 |
| L12050284-12 | 1.00 | 01 | 9.29 | 13.02 | 17.52 | 10.9 | 20.05 | 14.64 |

IS-1 - 1,4-Dichlorobenzene-d4
IS-2 - Acenaphthene-d10
IS-3 - Chrysene-d12
IS-4 - Naphthalene-D8
IS-5 - Perylene-d12
IS-6 - Phenanthrene-d10

Underline = Response outside limits

INTERNAL_STD_RT - Modified 03/06/2008
PDF File ID: 2418712
Report generated 05/22/2012 13:42

Microbac Laboratories Inc.

INTERNAL STANDARD RETENTION TIME SUMMARY
(COMPARED TO CCV)

Login Number: L12050284 CCV Number: WG398115-02

Instrument ID: HPMS5 CAL ID: HPMS5-11-MAY-12

Workgroup (AAB#): WG398144 Matrix: WATER

| Sample Number | Dilution | Tag | IS-1 | IS-2 | IS-3 | IS-4 | IS-5 | IS-6 |
|---|---|---|---|---|---|---|---|---|
| WG398115-02 | NA | NA | 9.29 | 13.03 | 17.53 | 10.91 | 20.07 | 14.64 |
| Upper Limit | NA | NA | 9.79 | 13.53 | 18.03 | 11.41 | 20.57 | 15.14 |
| Lower Limit | NA | NA | 8.79 | 12.53 | 17.03 | 10.41 | 19.57 | 14.14 |
| WG397434-02 | 1.00 | 04 | 9.29 | 13.02 | 17.52 | 10.9 | 20.05 | 14.63 |
| WG397434-03 | 1.00 | 04 | 9.29 | 13.02 | 17.53 | 10.9 | 20.06 | 14.64 |

IS-1 - 1,4-Dichlorobenzene-d4
IS-2 - Acenaphthene-d10
IS-3 - Chrysene-d12
IS-4 - Naphthalene-d8
IS-5 - Perylene-d12
IS-6 - Phenanthrene-d10

Underline = Response outside limits

INTERNAL_STD_RT - Modified 03/06/2008
PDF File ID: 2418712
Report generated 05/22/2012 13:42

# 2.2.1.3 Sample Data

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\051412\5M66992.D Vial: 17
Acq On : 14 May 2012 6:02 pm Operator: CAA
Sample : L12050284-01 2X Inst : HPMS5
Misc : 1,2 Multiplr: 2.00
MS Integration Params: RTEINT.P
Quant Time: May 16 08:13:37 2012 Quant Results File: MEGAMIX.RES

Quant Method : C:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
Title : OVD MSS01 8270/625/Initial cal. 05/11/12
Last Update : Wed May 16 08:13:18 2012
Response via : Initial Calibration
DataAcq Meth : BNA

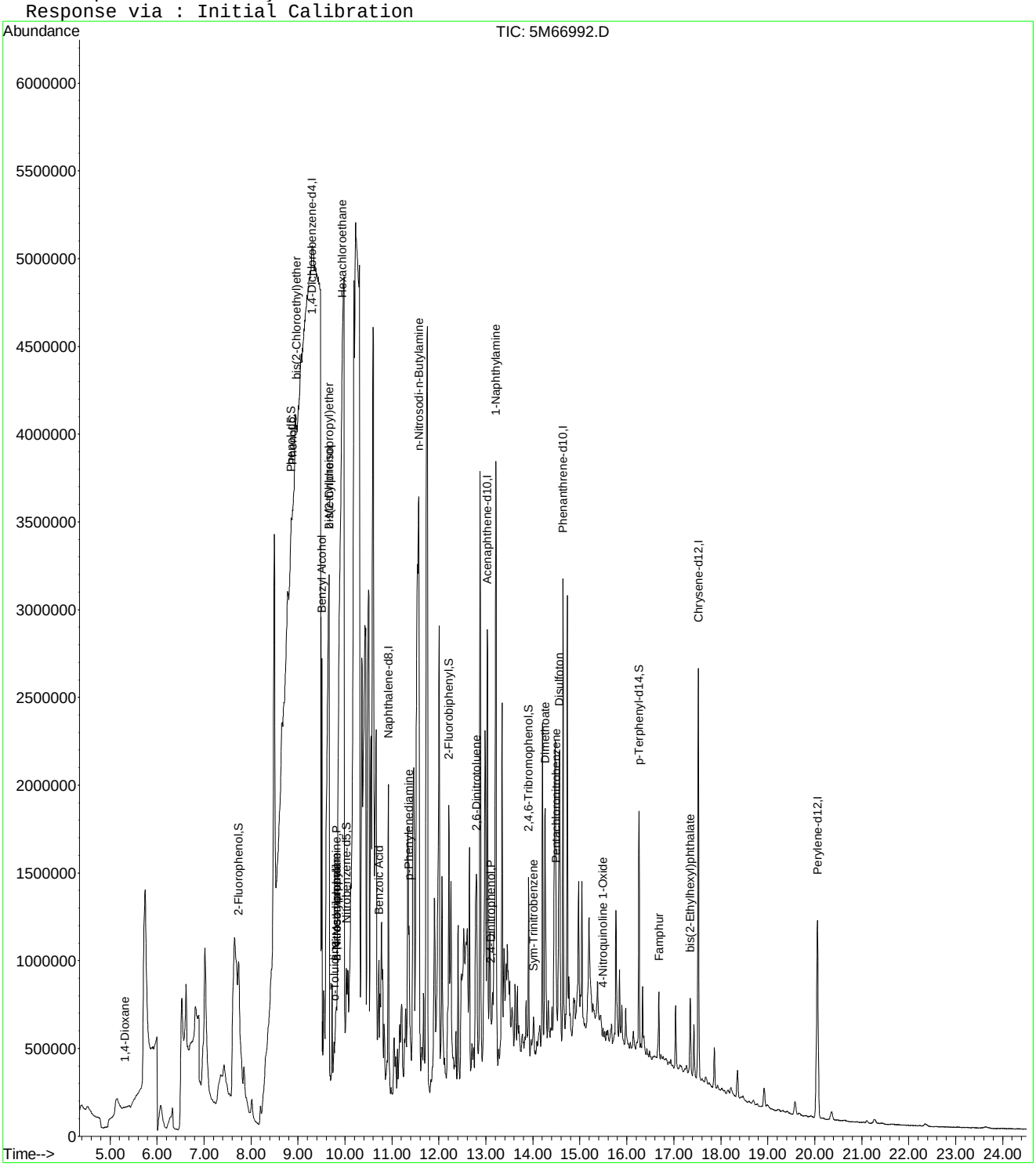
| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 1) 1,4-Dichlorobenzene-d4 | 9.29 | 152 | 75273 | 40.00 | ug/ml | 0.00 |
| 30) Naphthalene-d8 | 10.92 | 136 | 996345 | 40.00 | ug/ml | 0.01 |
| 54) Acenaphthene-d10 | 13.03 | 164 | 654269 | 40.00 | ug/ml | 0.00 |
| 87) Phenanthrene-d10 | 14.64 | 188 | 1147495 | 40.00 | ug/ml | 0.00 |
| 113) Chrysene-d12 | 17.52 | 240 | 1348979 | 40.00 | ug/ml | -0.02 |
| 128) Perylene-d12 | 20.06 | 264 | 985785 | 40.00 | ug/ml | -0.02 |
| **System Monitoring Compounds** | | | | | | |
| 8) 2-Fluorophenol | 7.74 | 112 | 222025 | 213.9675 | ug/ml | 0.02 |
| Spiked Amount 100.000 | Range 21 - 100 | | Recovery = 213.97%# | | | |
| 12) Phenol-d5 | 8.85 | 99 | 251617 | 203.3734 | ug/ml | 0.02 |
| Spiked Amount 100.000 | Range 10 - 94 | | Recovery = 203.37%# | | | |
| 31) Nitrobenzene-d5 | 10.03 | 82 | 128197 | 31.5582 | ug/ml | 0.01 |
| Spiked Amount 50.000 | Range 35 - 114 | | Recovery = 63.12% | | | |
| 59) 2-Fluorobiphenyl | 12.21 | 172 | 353140 | 32.0207 | ug/ml | 0.00 |
| Spiked Amount 50.000 | Range 43 - 116 | | Recovery = 64.04% | | | |
| 86) 2,4,6-Tribromophenol | 13.91 | 330 | 145046 | 81.7779 | ug/ml | 0.00 |
| Spiked Amount 100.000 | Range 10 - 123 | | Recovery = 81.78% | | | |
| 117) p-Terphenyl-d14 | 16.26 | 244 | 516840 | 47.8257 | ug/ml | 0.00 |
| Spiked Amount 50.000 | Range 33 - 141 | | Recovery = 95.66% | | | |
| **Target Compounds** | | | | | | Qvalue |
| 2) 1,4-Dioxane | 5.31 | 88 | 9455 | 10.2262 | ug/ml# | 100 |
| 13) Phenol | 8.88 | 94 | 88176 | 34.4037 | ug/ml# | 60 |
| 14) bis(2-Chloroethyl)ether | 8.97 | 63 | 3893 | 2.7262 | ug/ml# | 1 |
| 19) Benzyl Alcohol | 9.51 | 108 | 12949 | 8.6245 | ug/ml# | 4 |
| 21) 2-Methylphenol | 9.66 | 107 | 96996 | 52.1328 | ug/ml# | 70 |
| 22) bis(2-Chloroisopropyl)ethe | 9.66 | 45 | 1101746 | 384.7243 | ug/ml# | 53 |
| 23) 3-,4-Methylphenol | 9.81 | 107 | 205959 | 86.8876 | ug/ml | 90 |
| 25) n-Nitrosodipropylamine | 9.82 | 70 | 4161 | 3.0468 | ug/ml# | 13 |
| 27) n-Nitrosomorpholine | 9.82 | 56 | 13412 | 8.0728 | ug/ml# | 38 |
| 28) o-Toluidine | 9.78 | 106 | 14887 | 4.0533 | ug/ml# | 20 |
| 29) Hexachloroethane | 9.94 | 117 | 6358 | 6.0848 | ug/ml# | 6 |
| 39) Benzoic Acid | 10.72 | 105 | 294022 | 57.0378 | ug/ml | 77 |
| 48) n-Nitrosodi-n-Butylamine | 11.57 | 84 | 1536060 | 268.4418 | ug/ml# | 16 |
| 49) p-Phenylenediamine | 11.36 | 108 | 14665 | 4.1122 | ug/ml# | 59 |
| 64) 1,4-Naphthoquinone | 12.54 | 158 | 1550 | Below Cal # 22 | | |
| 67) 2,6-Dinitrotoluene | 12.79 | 165 | 18679 | 3.6011 | ug/ml# | 1 |
| 70) 2,4-Dinitrophenol | 13.11 | 184 | 577 | 9.5322 | ug/ml# | 1 |
| 77) 1-Naphthylamine | 13.22 | 143 | 1120153 | 61.6439 | ug/ml# | 40 |
| 91) Sym-Trinitrobenzene | 14.01 | 75 | 8348 | 1.9502 | ug/ml# | 47 |
| 97) Dimethoate | 14.26 | 87 | 18904 | 1.9821 | ug/ml# | 30 |
| 101) Pentachloronitrobenzene | 14.50 | 237 | 8608 | 3.1440 | ug/ml# | 19 |
| 102) Disulfoton | 14.56 | 88 | 27098 | 3.1628 | ug/ml# | 1 |
| 109) 4-Nitroquinoline 1-Oxide | 15.48 | 190 | 495 | 4.7529 | ug/ml# | 1 |
| 110) Methapyrilene | 15.53 | 58 | 748 | Below Cal # 26 | | |
| 120) Famphur | 16.69 | 218 | 189 | 1.9191 | ug/ml# | 1 |
| 121) Butyl Benzyl Phthalate | 16.72 | 149 | 3078 | Below Cal # 69 | | |
| 124) bis(2-Ethylhexyl)phthalate | 17.35 | 149 | 189071 | 9.3966 | ug/ml | 98 |

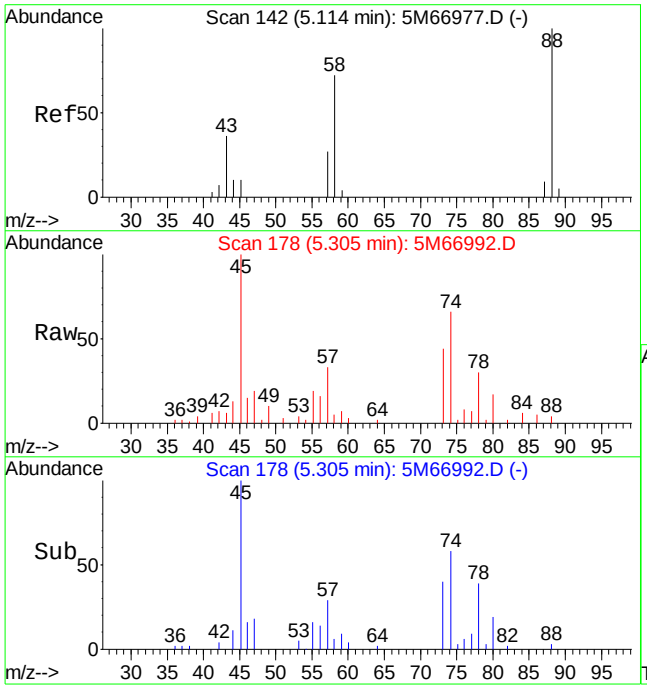
(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\051412\5M66992.D Vial: 17
Acq On : 14 May 2012 6:02 pm Operator: CAA
Sample : L12050284-01 2X Inst : HPMS5
Misc : 1,2 Multiplr: 2.00
MS Integration Params: RTEINT.P
Quant Time: May 16 8:13 2012 Quant Results File: MEGAMIX.RES

Method : C:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
Title : OVD MSS01 8270/625/Initial cal. 05/11/12
Last Update : Wed May 16 08:13:18 2012
Response via : Initial Calibration

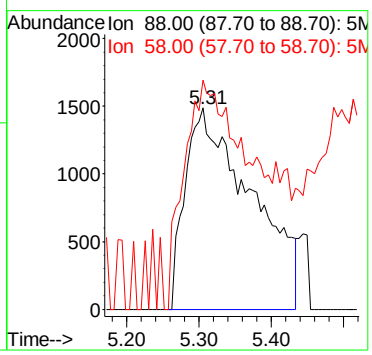


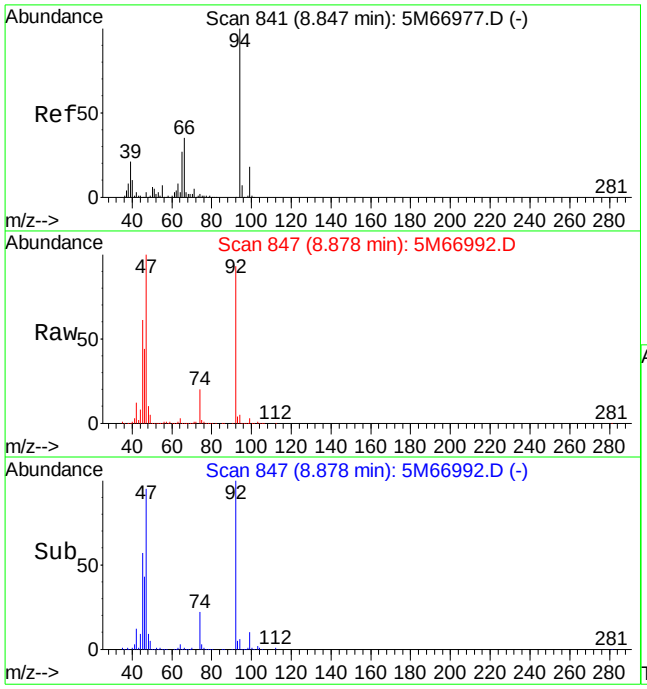



#2
1,4-Dioxane
Concen:  10.23 ug/ml
RT: 5.31 min  Scan# 178
Delta R.T.  0.17 min
Lab File:  5M66992.D
Acq: 14 May 2012  6:02 pm

Tgt Ion: 88 Resp:  9455

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 88 | 100 | | |
| 58 | 94.0 | 0.0 | 0.0# |

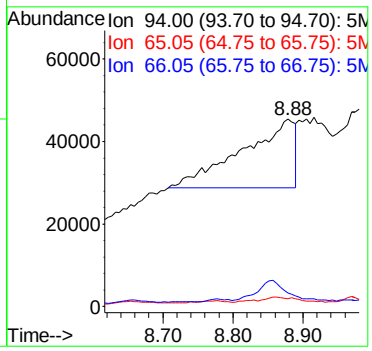


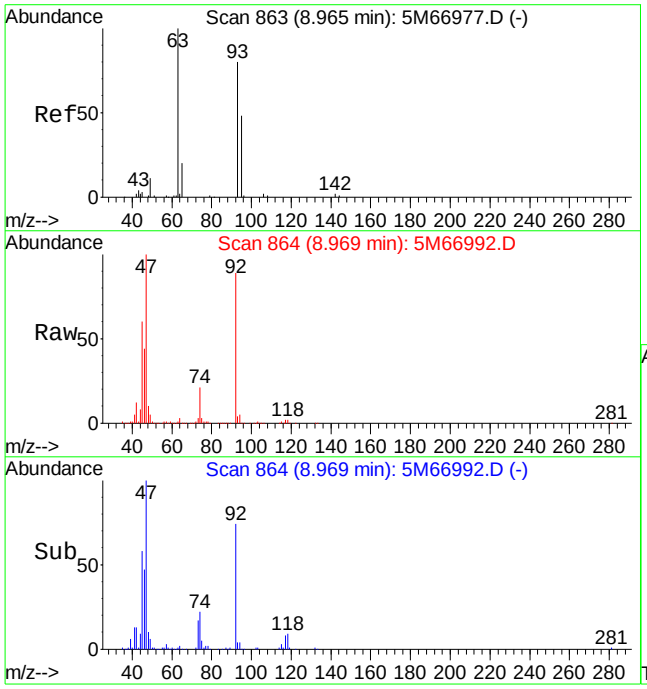




#13
Phenol
Concen:  34.40 ug/ml
RT: 8.88 min  Scan# 847
Delta R.T.  0.03 min
Lab File:  5M66992.D
Acq: 14 May 2012  6:02 pm

Tgt Ion: 94 Resp:  88176

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 94 | 100 | | |
| 65 | 5.1 | 16.7 | 38.9# |
| 66 | 17.1 | 23.9 | 55.9# |

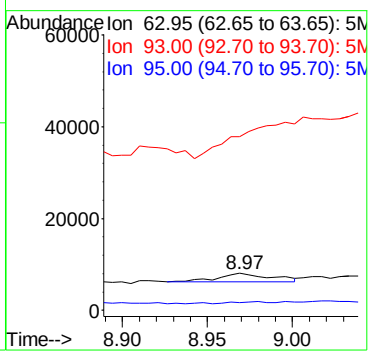


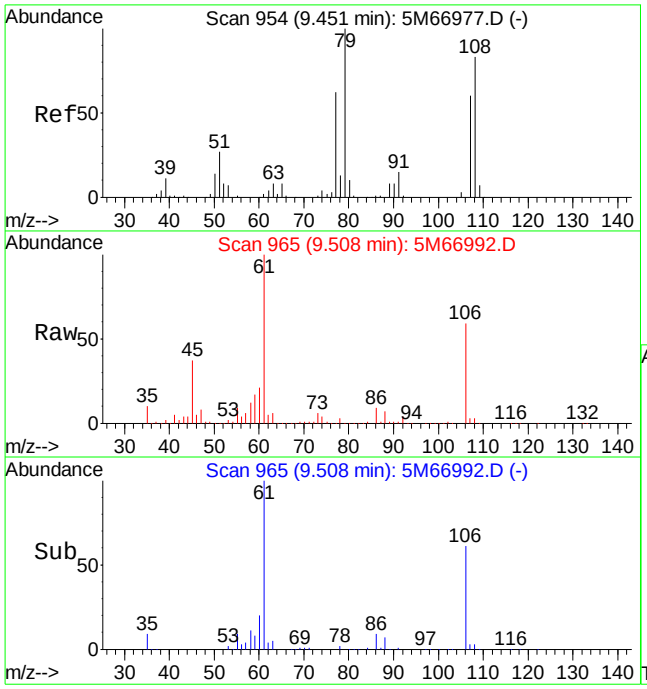



#14
bis(2-Chloroethyl)ether
Concen: 2.73 ug/ml
RT: 8.97 min Scan# 864
Delta R.T. 0.00 min
Lab File: 5M66992.D
Acq: 14 May 2012 6:02 pm

Tgt Ion: 63 Resp: 3893

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 63 | 100 | | |
| 93 | 0.0 | 86.8 | 202.6# |
| 95 | 16.0 | 35.3 | 82.5# |

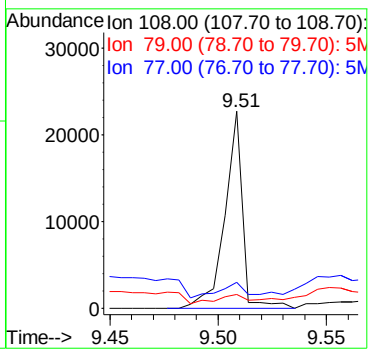


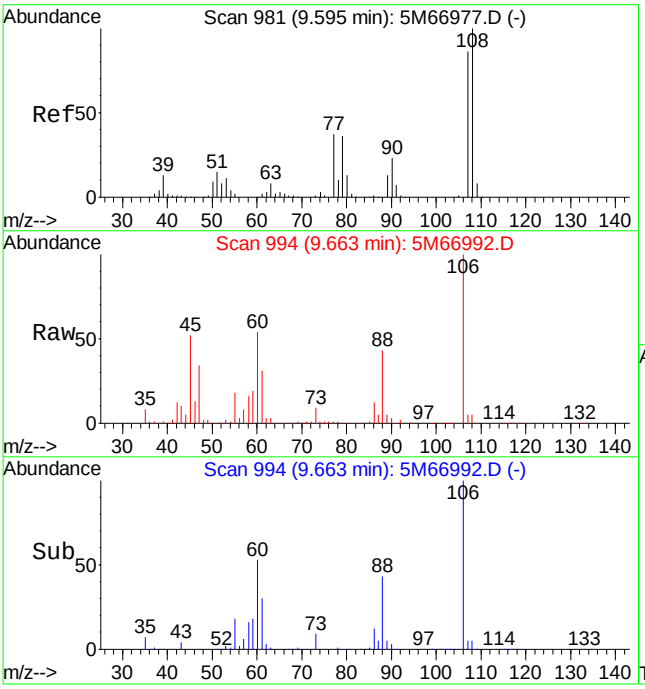




#19
Benzyl Alcohol
Concen: 8.62 ug/ml
RT: 9.51 min Scan# 965
Delta R.T. 0.05 min
Lab File: 5M66992.D
Acq: 14 May 2012 6:02 pm

Tgt Ion:108 Resp: 12949

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 108 | 100 | | |
| 79 | 4.1 | 72.4 | 169.0# |
| 77 | 5.2 | 45.2 | 105.4# |

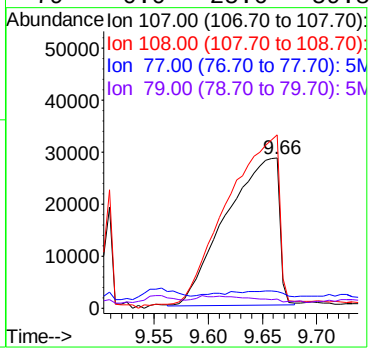


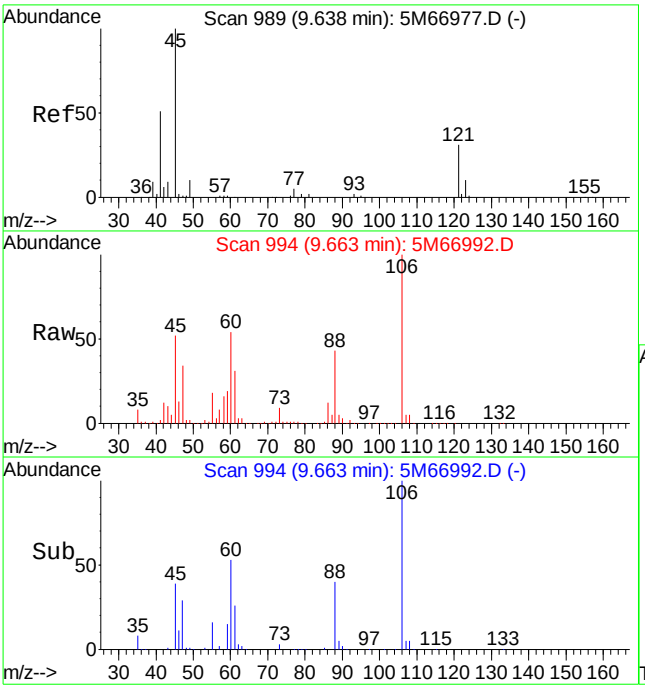



#21
2-Methylphenol
Concen:  52.13 ug/ml
RT: 9.66 min  Scan# 994
Delta R.T.  0.06 min
Lab File:  5M66992.D
Acq: 14 May 2012  6:02 pm

Tgt Ion:107 Resp:  96996

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 107 | 100 | | |
| 108 | 118.3 | 69.2 | 161.6 |
| 77 | 0.0 | 26.3 | 61.3# |
| 79 | 0.0 | 25.6 | 59.8# |

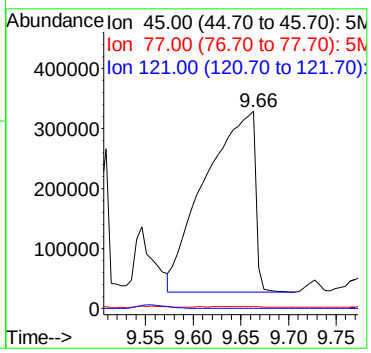


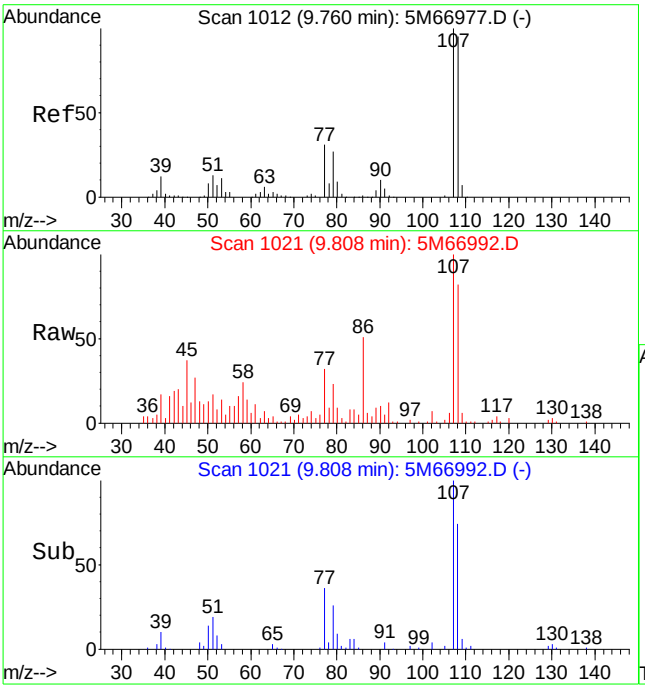




#22
bis(2-Chloroisopropyl)ether
Concen:  384.72 ug/ml
RT: 9.66 min  Scan# 994
Delta R.T.  0.02 min
Lab File:  5M66992.D
Acq: 14 May 2012  6:02 pm

Tgt Ion: 45 Resp: 1101746

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 45 | 100 | | |
| 77 | 0.0 | 8.5 | 19.7# |
| 121 | 0.0 | 17.1 | 39.9# |

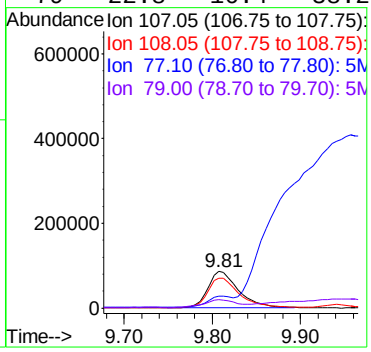


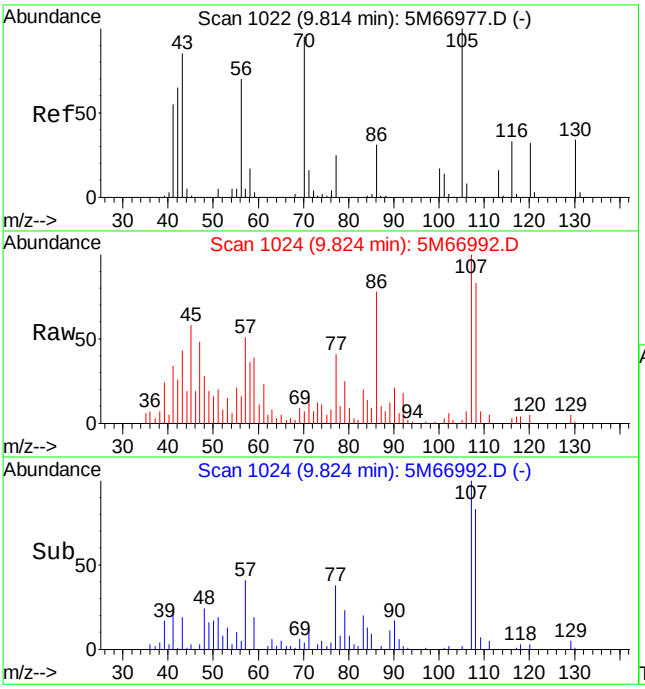



#23
3-,4-Methylphenol
Concen:  86.89 ug/ml
RT: 9.81 min  Scan# 1021
Delta R.T.  0.04 min
Lab File:  5M66992.D
Acq: 14 May 2012  6:02 pm

Tgt Ion:107 Resp:  205959

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 107 | 100 | | |
| 108 | 84.2 | 56.0 | 130.8 |
| 77 | 24.7 | 18.5 | 43.3 |
| 79 | 22.8 | 16.4 | 38.2 |

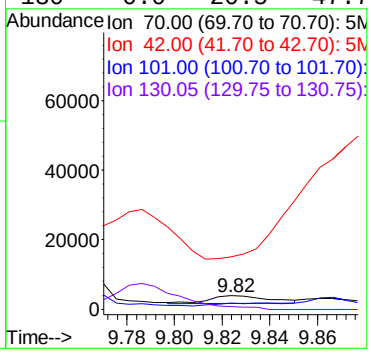


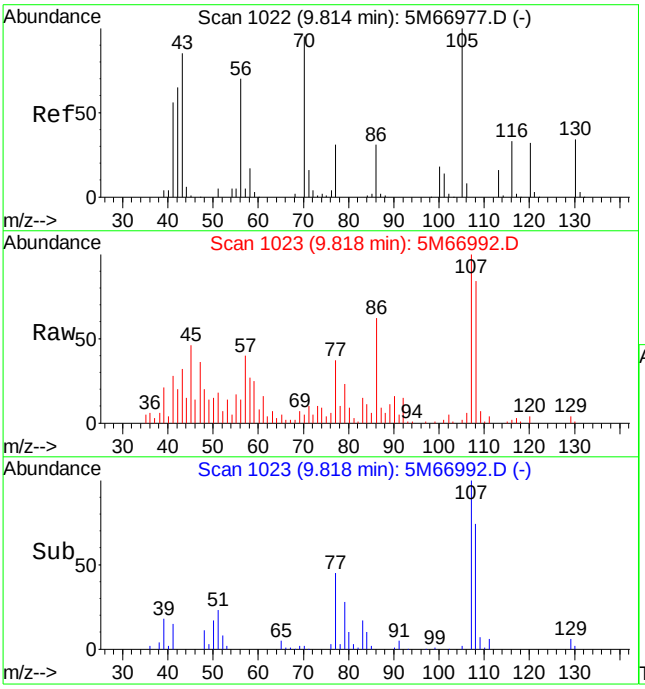




#25
n-Nitrosodipropylamine
Concen:  3.05 ug/ml
RT: 9.82 min  Scan# 1024
Delta R.T.  0.00 min
Lab File:  5M66992.D
Acq: 14 May 2012  6:02 pm

Tgt Ion: 70 Resp:  4161

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 70 | 100 | | |
| 42 | 0.0 | 64.9 | 151.5# |
| 101 | 35.0 | 10.7 | 25.1# |
| 130 | 0.0 | 20.5 | 47.7# |

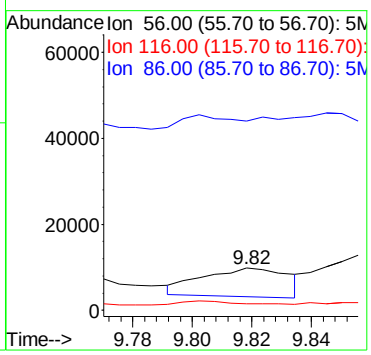


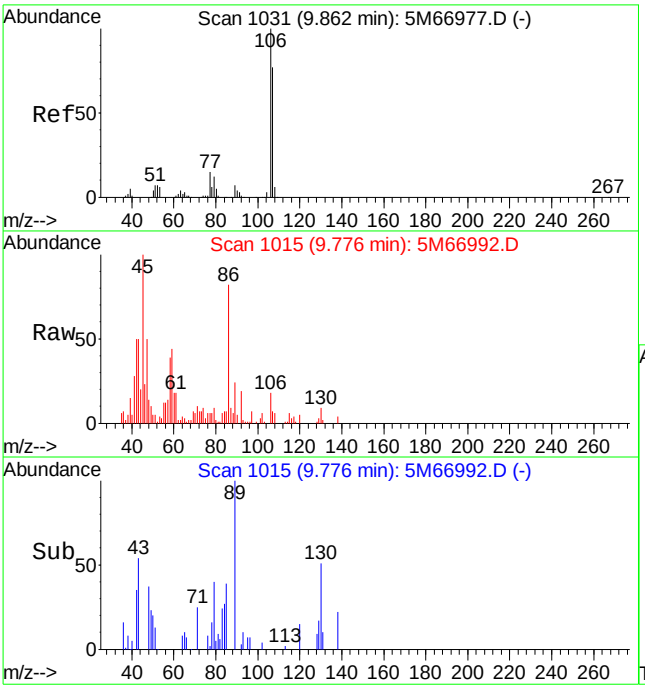



#27
n-Nitrosomorpholine
Concen: 8.07 ug/ml
RT: 9.82 min Scan# 1023
Delta R.T. 0.00 min
Lab File: 5M66992.D
Acq: 14 May 2012 6:02 pm

Tgt Ion: 56 Resp: 13412

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 56 | 100 | | |
| 116 | 8.1 | 35.0 | 52.6# |
| 86 | 0.0 | 35.7 | 53.5# |

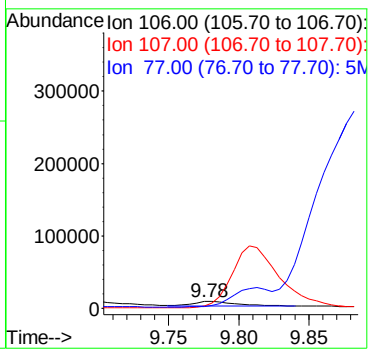


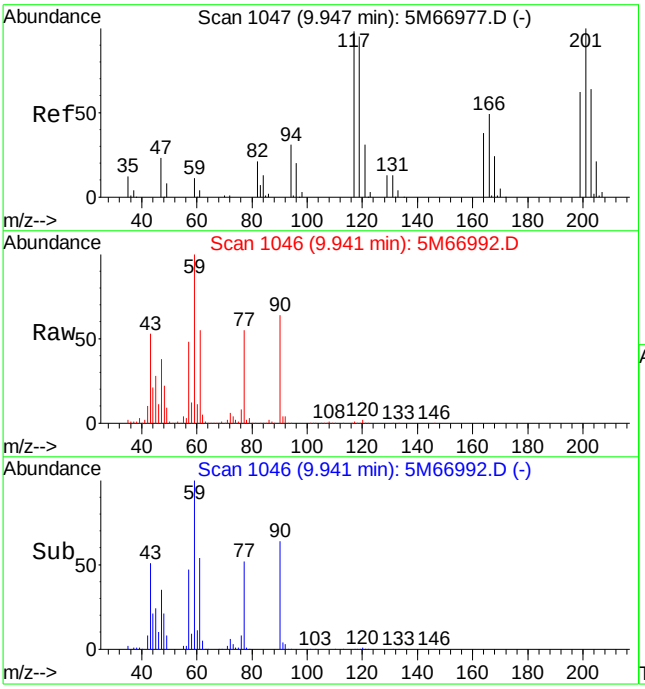




#28
o-Toluidine
Concen: 4.05 ug/ml
RT: 9.78 min Scan# 1015
Delta R.T. -0.09 min
Lab File: 5M66992.D
Acq: 14 May 2012 6:02 pm

Tgt Ion:106 Resp: 14887

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 106 | 100 | | |
| 107 | 0.0 | 61.2 | 91.8# |
| 77 | 0.0 | 13.4 | 20.0# |

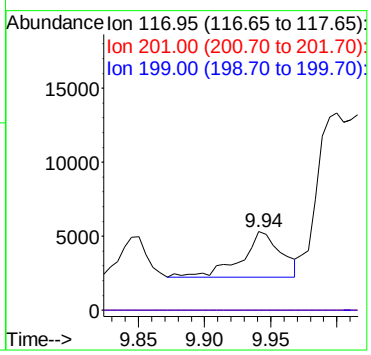


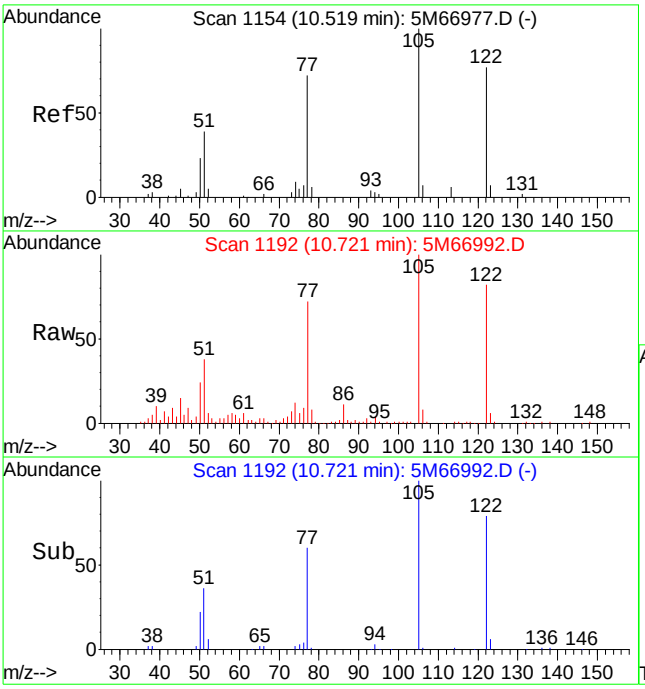



#29
Hexachloroethane
Concen: 6.08 ug/ml
RT: 9.94 min Scan# 1046
Delta R.T. -0.02 min
Lab File: 5M66992.D
Acq: 14 May 2012 6:02 pm

Tgt Ion:117 Resp: 6358

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 117 | 100 | | |
| 201 | 0.0 | 61.4 | 143.2# |
| 199 | 0.0 | 38.5 | 89.7# |

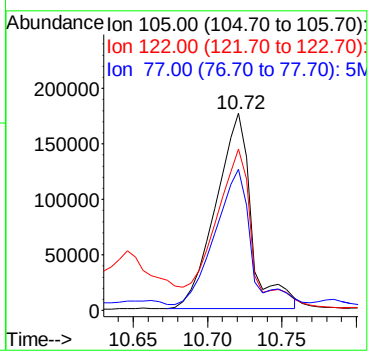


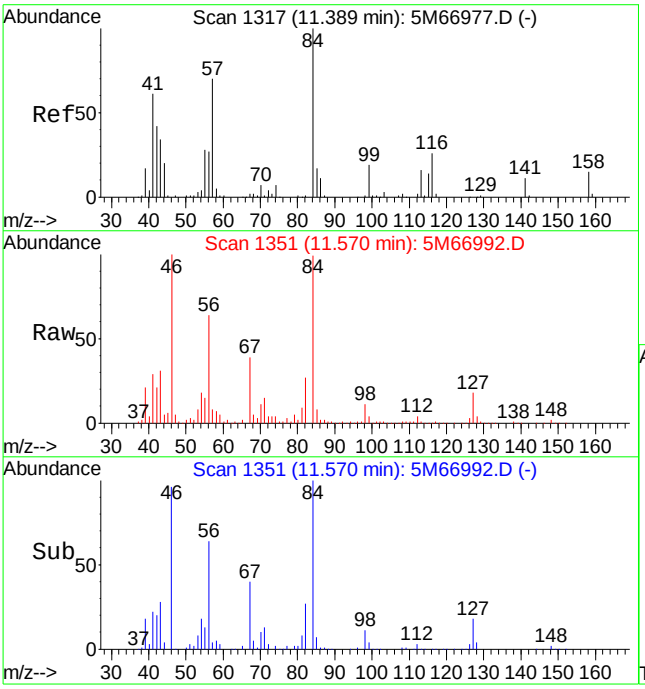




#39
Benzoic Acid
Concen: 57.04 ug/ml
RT: 10.72 min Scan# 1192
Delta R.T. 0.20 min
Lab File: 5M66992.D
Acq: 14 May 2012 6:02 pm

Tgt Ion:105 Resp: 294022

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 105 | 100 | | |
| 122 | 73.3 | 34.2 | 79.8 |
| 77 | 68.2 | 30.8 | 71.8 |

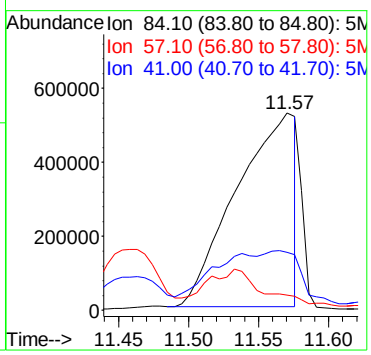


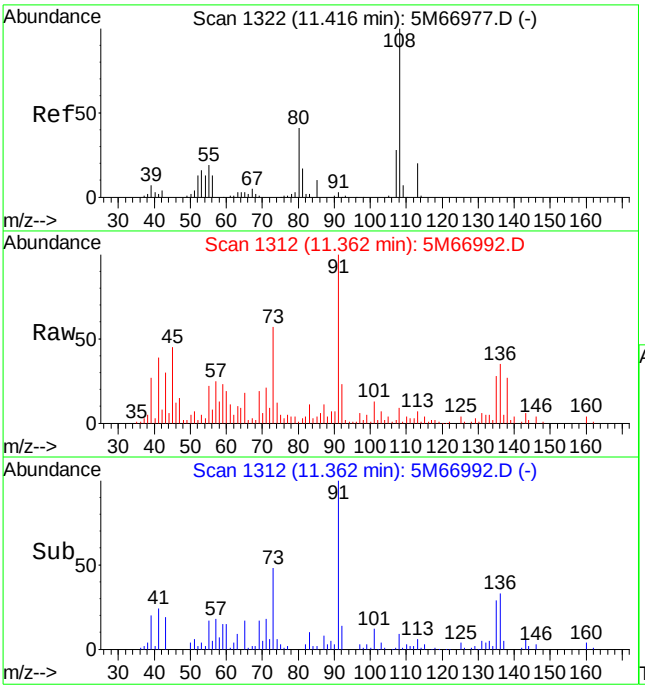



#48
n-Nitrosodi-n-Butylamine
Concen:  268.44 ug/ml
RT: 11.57 min  Scan# 1351
Delta R.T.  0.17 min
Lab File:  5M66992.D
Acq: 14 May 2012  6:02 pm

Tgt Ion: 84 Resp: 1536060

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 84 | 100 | | |
| 57 | 0.0 | 50.8 | 76.2# |
| 41 | 0.0 | 58.2 | 87.2# |

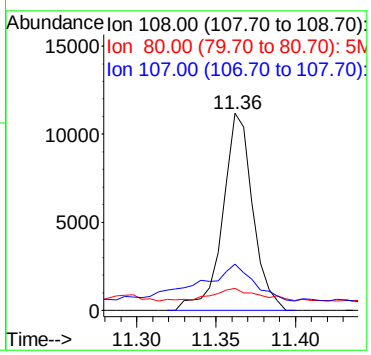


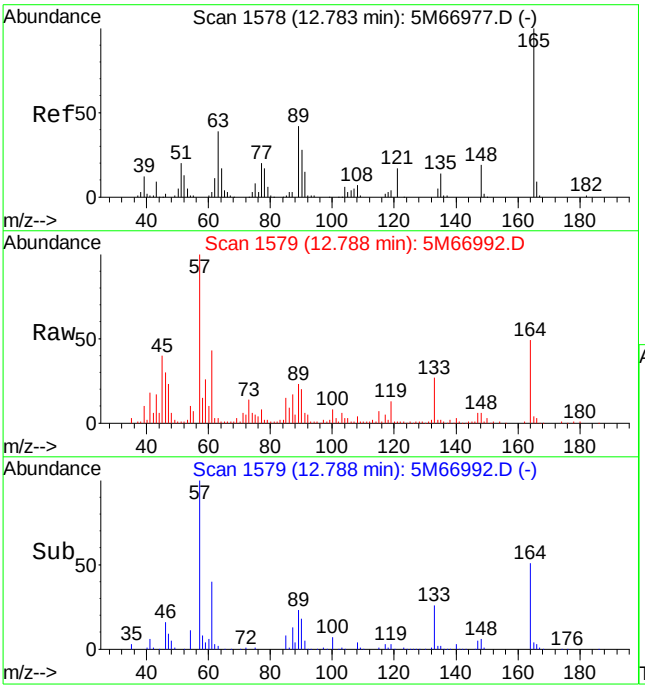




#49
p-Phenylenediamine
Concen:  4.11 ug/ml
RT: 11.36 min  Scan# 1312
Delta R.T.  -0.06 min
Lab File:  5M66992.D
Acq: 14 May 2012  6:02 pm

Tgt Ion:108 Resp:  14665

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 108 | 100 | | |
| 80 | 11.0 | 32.6 | 48.8# |
| 107 | 44.1 | 22.4 | 33.6# |

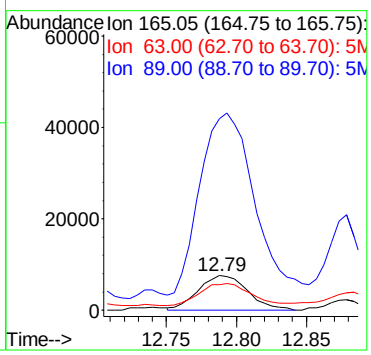


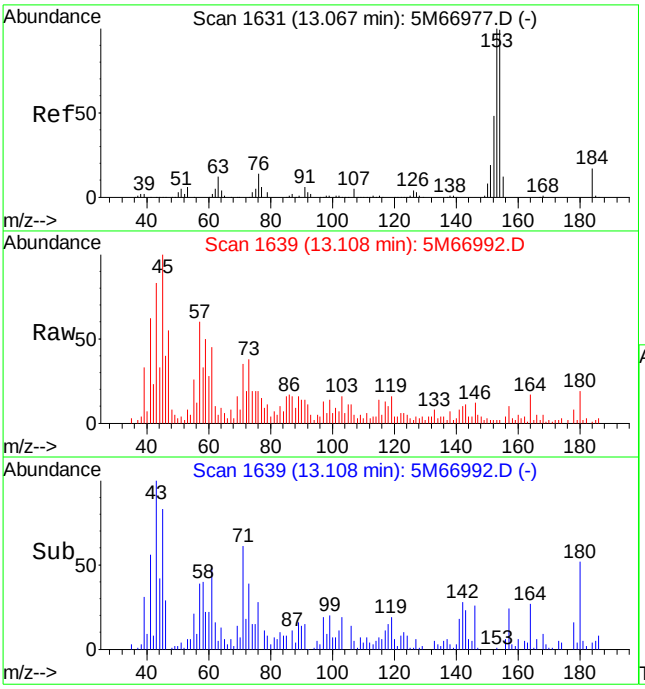



#67
2,6-Dinitrotoluene
Concen: 3.60 ug/ml
RT: 12.79 min Scan# 1579
Delta R.T. 0.00 min
Lab File: 5M66992.D
Acq: 14 May 2012 6:02 pm

Tgt Ion:165 Resp: 18679

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 165 | 100 | | |
| 63 | 65.4 | 27.0 | 63.0# |
| 89 | 582.2 | 27.1 | 63.3# |

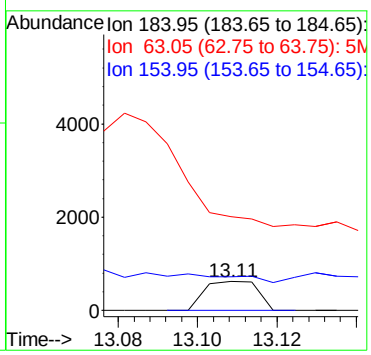


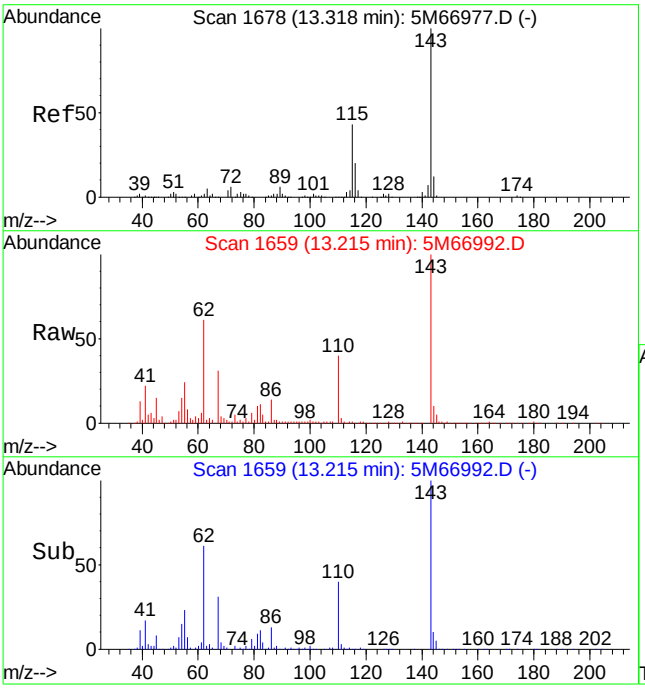




#70
2,4-Dinitrophenol
Concen: 9.53 ug/ml
RT: 13.11 min Scan# 1639
Delta R.T. 0.03 min
Lab File: 5M66992.D
Acq: 14 May 2012 6:02 pm

Tgt Ion:184 Resp: 577

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 184 | 100 | | |
| 63 | 0.0 | 83.7 | 195.3# |
| 154 | 43.5 | 448.8 | 1047.2# |

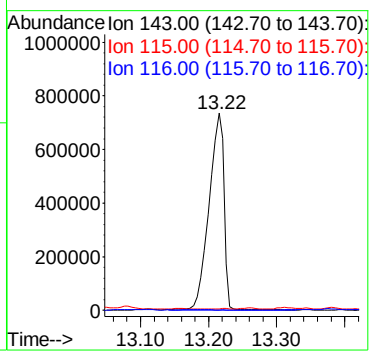


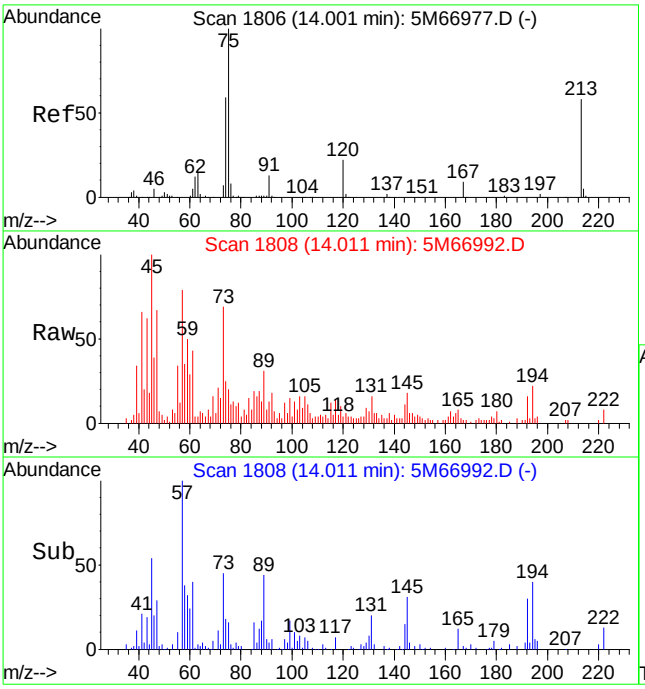



#77
1-Naphthylamine
Concen: 61.64 ug/ml
RT: 13.22 min Scan# 1659
Delta R.T. -0.11 min
Lab File: 5M66992.D
Acq: 14 May 2012 6:02 pm

Tgt Ion:143 Resp: 1120153

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 143 | 100 | | |
| 115 | 0.2 | 34.0 | 51.0# |
| 116 | 0.0 | 18.3 | 27.5# |

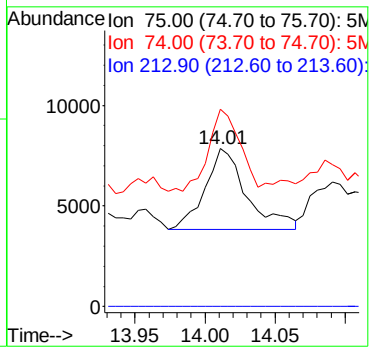


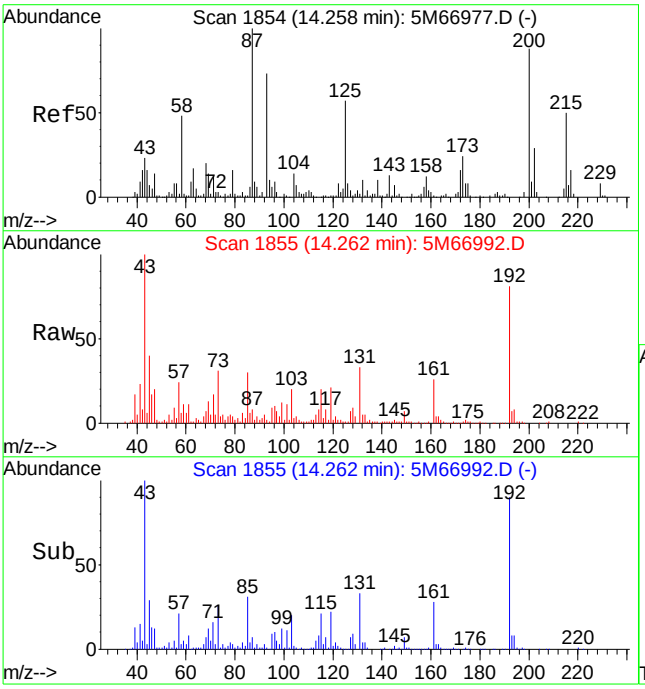




#91
Sym-Trinitrobenzene
Concen: 1.95 ug/ml
RT: 14.01 min Scan# 1808
Delta R.T. 0.01 min
Lab File: 5M66992.D
Acq: 14 May 2012 6:02 pm

Tgt Ion: 75 Resp: 8348

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 75 | 100 | | |
| 74 | 77.8 | 46.8 | 70.2# |
| 213 | 0.0 | 47.5 | 71.3# |

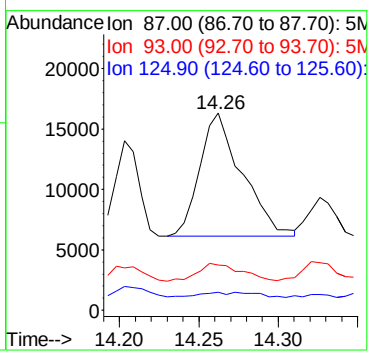


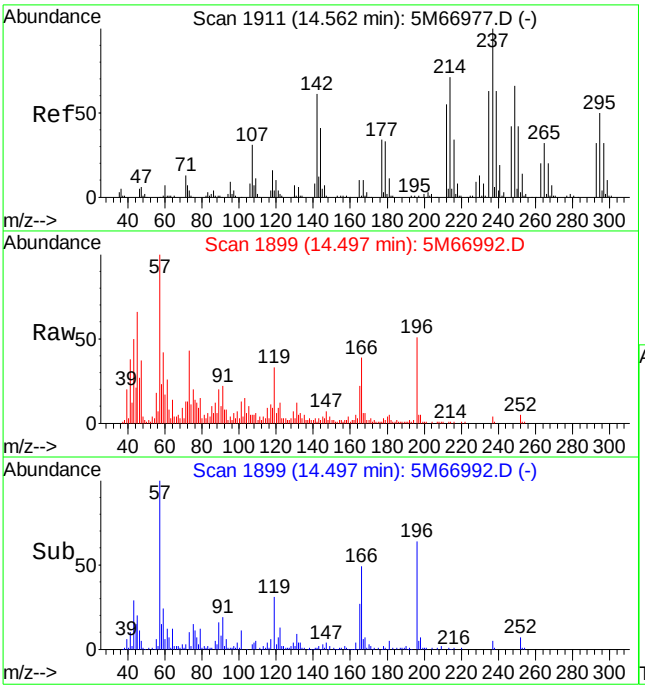



#97
Dimethoate
Concen: 1.98 ug/ml
RT: 14.26 min Scan# 1855
Delta R.T. 0.00 min
Lab File: 5M66992.D
Acq: 14 May 2012 6:02 pm

Tgt Ion: 87 Resp: 18904

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 87 | 100 | | |
| 93 | 16.4 | 57.4 | 86.2# |
| 125 | 1.7 | 45.8 | 68.6# |

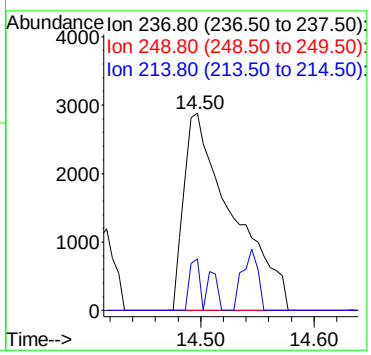


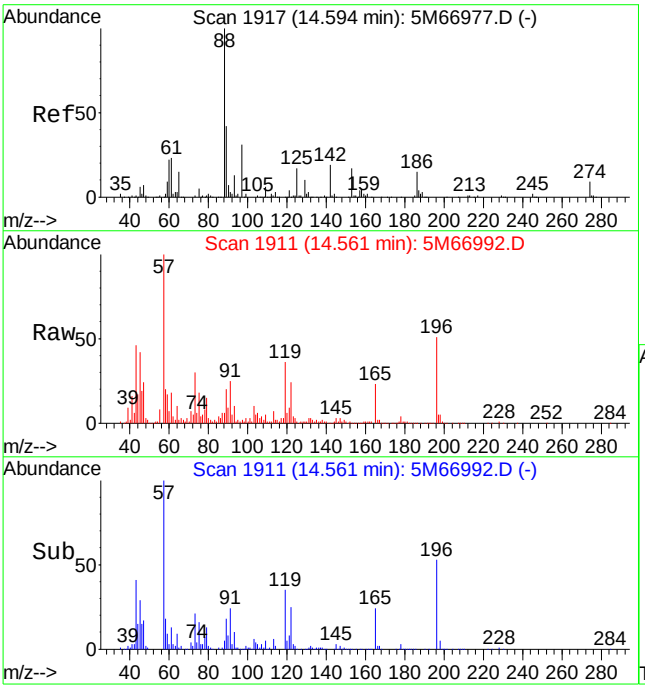




#101
Pentachloronitrobenzene
Concen: 3.14 ug/ml
RT: 14.50 min Scan# 1899
Delta R.T. -0.07 min
Lab File: 5M66992.D
Acq: 14 May 2012 6:02 pm

Tgt Ion:237 Resp: 8608

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 237 | 100 | | |
| 249 | 0.0 | 52.7 | 79.1# |
| 214 | 5.4 | 56.3 | 84.5# |

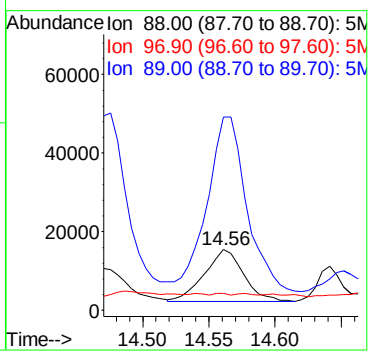


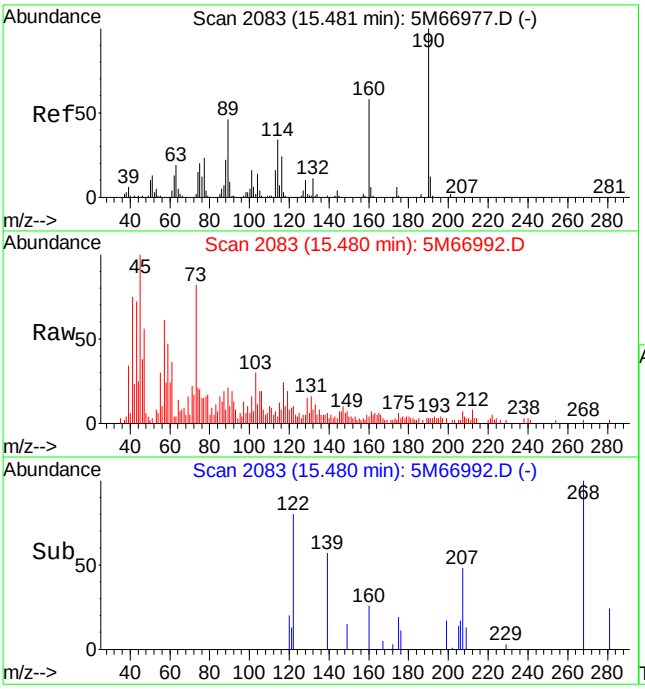



#102
Disulfoton
Concen: 3.16 ug/ml
RT: 14.56 min Scan# 1911
Delta R.T. -0.04 min
Lab File: 5M66992.D
Acq: 14 May 2012 6:02 pm

Tgt Ion: 88 Resp: 27098

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 88 | 100 | | |
| 97 | 0.0 | 26.2 | 39.2# |
| 89 | 344.0 | 33.4 | 50.0# |

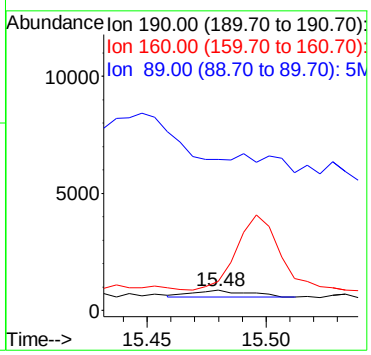


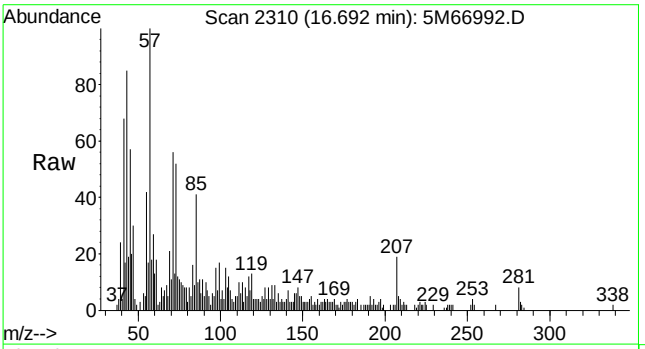




#109
4-Nitroquinoline 1-Oxide
Concen: 4.75 ug/ml
RT: 15.48 min Scan# 2083
Delta R.T. -0.00 min
Lab File: 5M66992.D
Acq: 14 May 2012 6:02 pm

Tgt Ion:190 Resp: 495

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 190 | 100 | | |
| 160 | 922.0 | 48.2 | 72.2# |
| 89 | 0.0 | 41.0 | 61.4# |

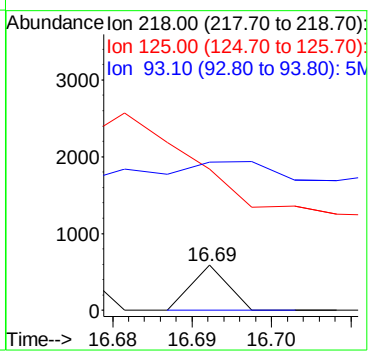


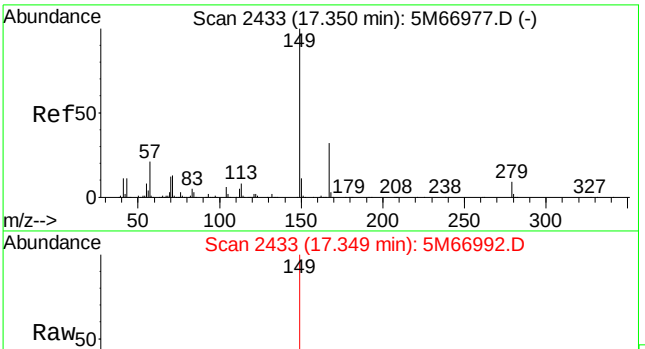



#120
Famphur
Concen: 1.92 ug/ml
RT: 16.69 min Scan# 2310
Delta R.T. -0.04 min
Lab File: 5M66992.D
Acq: 14 May 2012 6:02 pm

Tgt Ion:218 Resp: 189

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 218 | 100 | | |
| 125 | 0.0 | 51.3 | 76.9# |
| 93 | 129.1 | 344.2 | 516.4# |

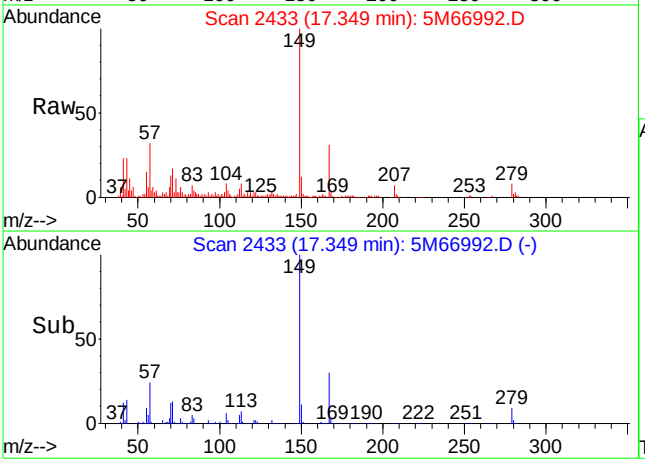


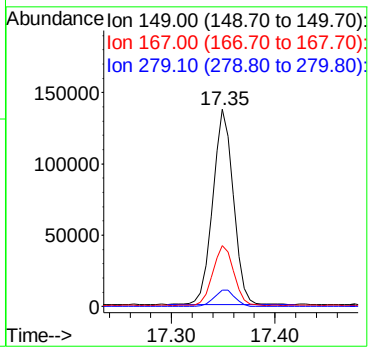




#124
bis(2-Ethylhexyl)phthalate
Concen: 9.40 ug/ml
RT: 17.35 min Scan# 2433
Delta R.T. -0.01 min
Lab File: 5M66992.D
Acq: 14 May 2012 6:02 pm

Tgt Ion:149 Resp: 189071

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 149 | 100 | | |
| 167 | 31.6 | 25.9 | 38.9 |
| 279 | 8.7 | 7.4 | 11.2 |



Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\051412\5M66992.D Vial: 17
Acq On : 14 May 2012 6:02 pm Operator: CAA
Sample : L12050284-01 2X Inst : HPMS5
Misc : 1,2 Multiplr: 2.00
MS Integration Params: RTEINT.P
Quant Time: May 16 09:13:26 2012 Quant Results File: TCL.RES

Quant Method : C:\MSDCHEM\1\METHODS\TCL.M (RTE Integrator)
Title : MSS01 OVD 827-TCL INITIAL CALIBRATION 05/14/12
Last Update : Wed May 16 09:13:02 2012
Response via : Initial Calibration
DataAcq Meth : BNA

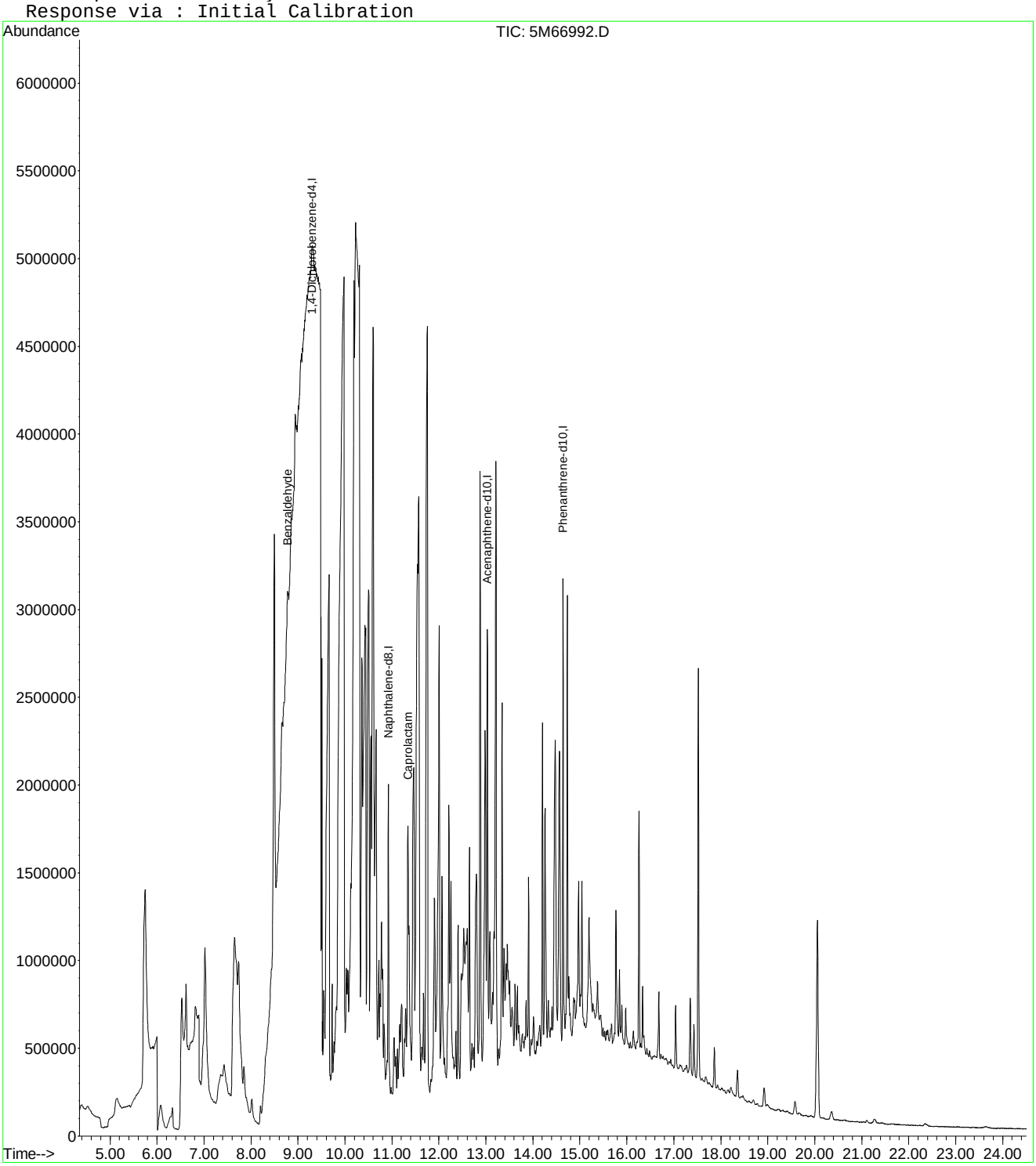
| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 1) 1,4-Dichlorobenzene-d4 | 9.29 | 152 | 75273 | 40.00 | ug/mL | 0.00 |
| 3) Naphthalene-d8 | 10.92 | 136 | 997039 | 40.00 | ug/mL | 0.02 |
| 5) Acenaphthene-d10 | 13.03 | 164 | 684258 | 40.00 | ug/mL | 0.00 |
| 7) Phenanthrene-d10 | 14.64 | 188 | 1148224 | 40.00 | ug/mL | 0.00 |
| **Target Compounds** | | | | | | Qvalue |
| 2) Benzaldehyde | 8.77 | 105 | 46672 | 24.3324 | ug/L | # 57 |
| 4) Caprolactam | 11.35 | 55 | 94062 | 26.7797 | ug/L | # 39 |

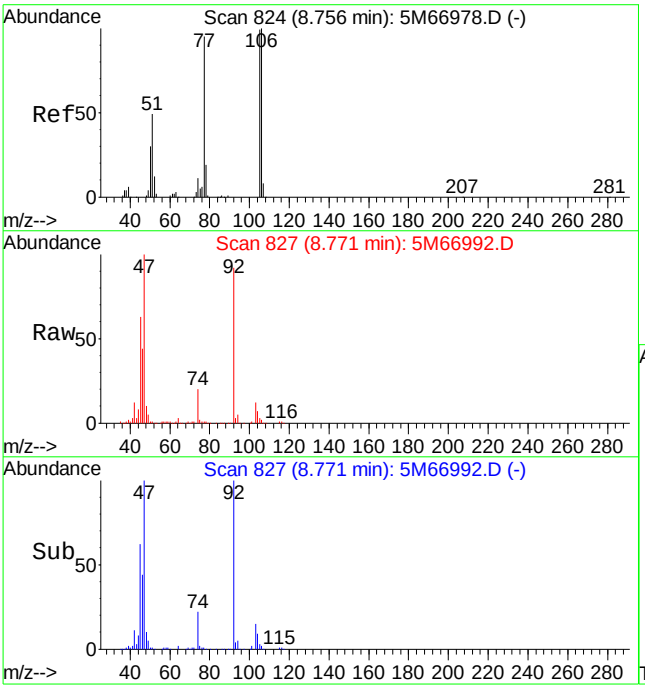
(#) = qualifier out of range (m) = manual integration
5M66992.D TCL.M Wed May 16 09:13:26 2012 Page 1

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\051412\5M66992.D Vial: 17
Acq On : 14 May 2012 6:02 pm Operator: CAA
Sample : L12050284-01 2X Inst : HPMS5
Misc : 1,2 Multiplr: 2.00
MS Integration Params: RTEINT.P
Quant Time: May 16 9:13 2012 Quant Results File: TCL.RES

Method : C:\MSDCHEM\1\METHODS\TCL.M (RTE Integrator)
Title : MSS01 OVD 827-TCL INITIAL CALIBRATION 05/14/12
Last Update : Wed May 16 09:13:02 2012
Response via : Initial Calibration

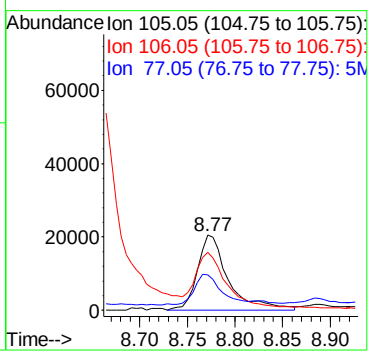


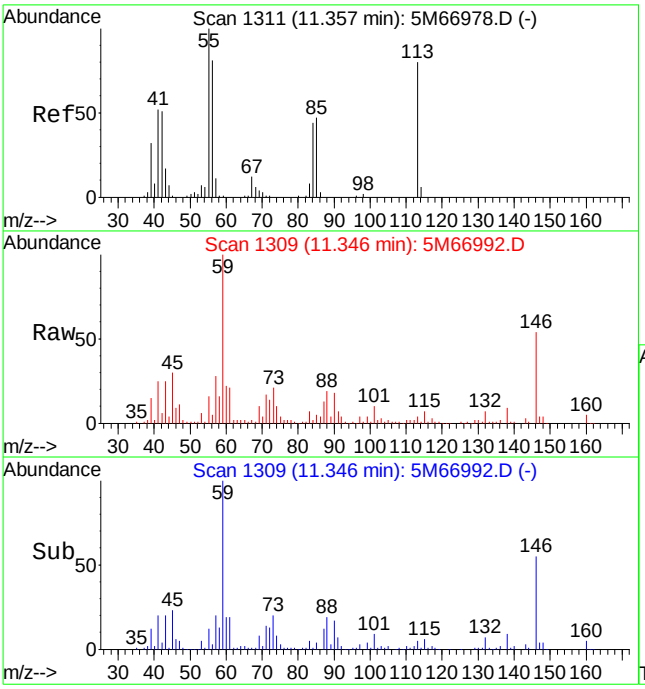



#2
Benzaldehyde
Concen:  24.33 ug/L
RT: 8.77 min  Scan# 827
Delta R.T.  0.02 min
Lab File:  5M66992.D
Acq: 14 May 2012  6:02 pm

Tgt Ion:105 Resp:  46672

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 105 | 100 | | |
| 106 | 78.2 | 81.0 | 121.4# |
| 77 | 34.9 | 77.6 | 116.4# |

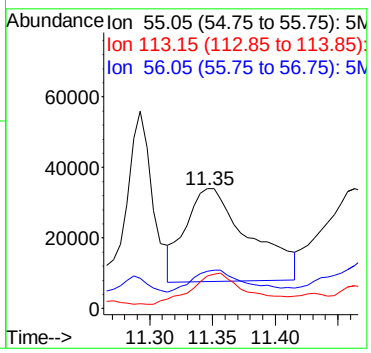



#4
Caprolactam
Concen:  26.78 ug/L
RT: 11.35 min  Scan# 1309
Delta R.T.  -0.01 min
Lab File:  5M66992.D
Acq: 14 May 2012  6:02 pm

Tgt Ion: 55 Resp:  94062

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 55 | 100 | | |
| 113 | 32.4 | 63.0 | 94.6# |
| 56 | 19.6 | 63.7 | 95.5# |



LSC Area Percent Report

Data File : C:\MSDCHEM\1\DATA\051412\5M66992.D Vial: 17
Acq On : 14 May 2012 6:02 pm Operator: CAA
Sample : L12050284-01 2X Inst : HPMS5
Misc : 1,2 Multiplr: 2.00
MS Integration Params: LSCINT.P

Method : C:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
Title : OVD MSS01 8270/625/Initial cal. 05/11/12
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 1 % of largest Peak
Start Thrs: 0.05 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

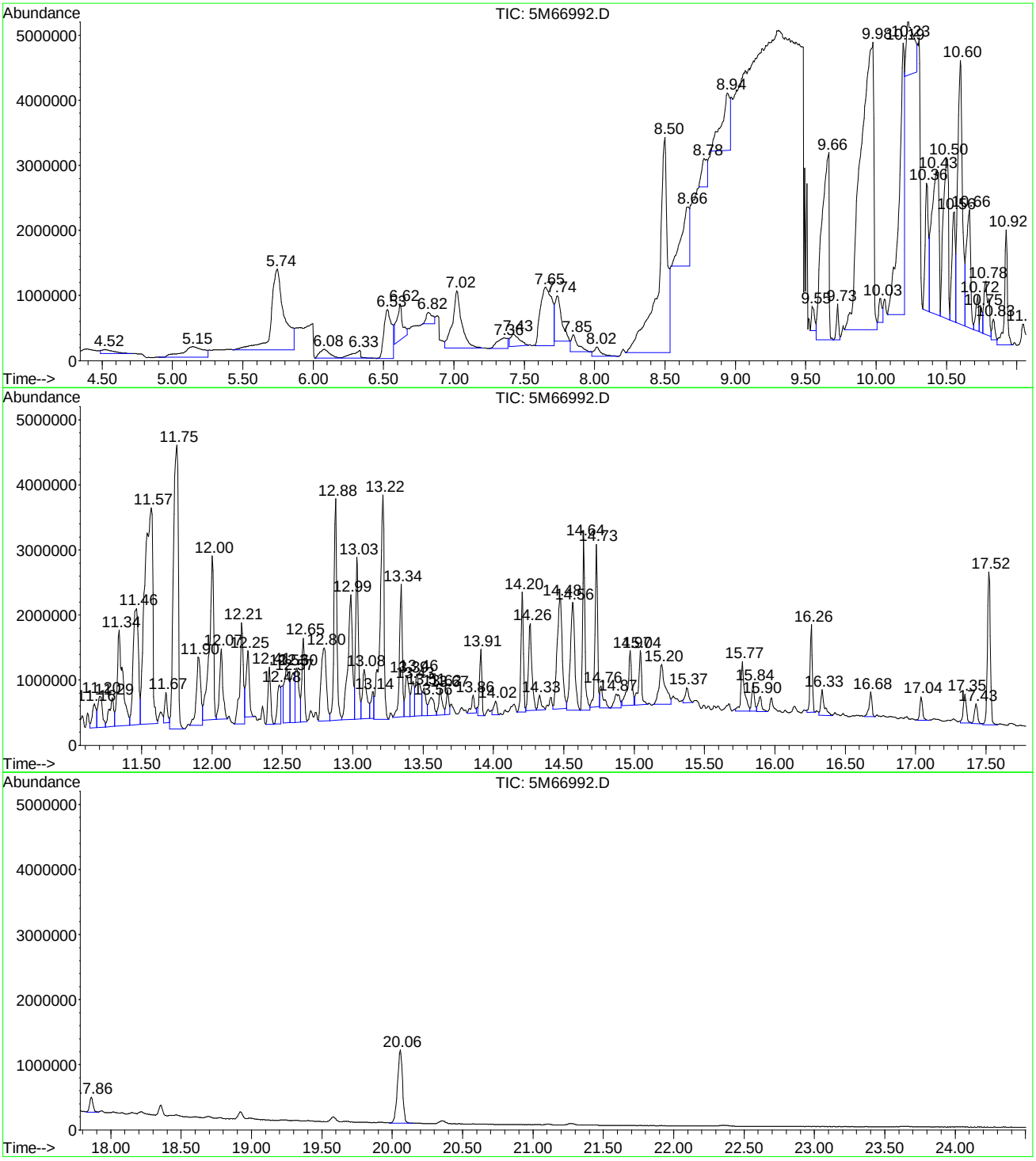
Signal : TIC

| peak # | R.T. min | first scan | max scan | last scan | PK TY | peak height | corr. area | corr. % max. | % of total |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 4.522 | 28 | 34 | 68 | rVB8 | 62097 | 386940 | 1.36% | 0.137% |
| 2 | 5.150 | 103 | 149 | 168 | rBV7 | 162599 | 1753630 | 6.17% | 0.620% |
| 3 | 5.743 | 202 | 260 | 283 | rBV | 1239424 | 8109253 | 28.55% | 2.868% |
| 4 | 6.080 | 311 | 323 | 346 | rBV2 | 137795 | 695631 | 2.45% | 0.246% |
| 5 | 6.331 | 346 | 370 | 386 | rVB2 | 122364 | 509594 | 1.79% | 0.180% |
| 6 | 6.528 | 392 | 407 | 415 | rBV | 750179 | 2887110 | 10.16% | 1.021% |
| 7 | 6.619 | 416 | 424 | 433 | rVV | 530349 | 1607245 | 5.66% | 0.569% |
| 8 | 6.817 | 454 | 461 | 470 | rBV3 | 176896 | 587976 | 2.07% | 0.208% |
| 9 | 7.020 | 483 | 499 | 534 | rVB4 | 882180 | 4027205 | 14.18% | 1.425% |
| 10 | 7.361 | 543 | 563 | 567 | rBV6 | 163488 | 809375 | 2.85% | 0.286% |
| 11 | 7.425 | 569 | 575 | 594 | rVB7 | 177731 | 785085 | 2.76% | 0.278% |
| 12 | 7.650 | 603 | 617 | 629 | rBV2 | 902191 | 5308316 | 18.69% | 1.878% |
| 13 | 7.735 | 629 | 633 | 650 | rVB2 | 697310 | 2200232 | 7.75% | 0.778% |
| 14 | 7.847 | 650 | 654 | 678 | rVB2 | 263119 | 859858 | 3.03% | 0.304% |
| 15 | 8.018 | 679 | 686 | 714 | rVB2 | 145447 | 512866 | 1.81% | 0.181% |
| 16 | 8.499 | 724 | 776 | 783 | rBV | 3304021 | 15775096 | 55.54% | 5.580% |
| 17 | 8.665 | 785 | 807 | 809 | rBV2 | 902954 | 3638987 | 12.81% | 1.287% |
| 18 | 8.777 | 821 | 828 | 833 | rBV4 | 431431 | 1231421 | 4.34% | 0.436% |
| 19 | 8.942 | 838 | 859 | 863 | rVV4 | 883080 | 3789847 | 13.34% | 1.341% |
| 20 | 9.546 | 969 | 972 | 977 | rBV2 | 369685 | 569375 | 2.00% | 0.201% |
| 21 | 9.663 | 977 | 994 | 1000 | rVB2 | 2883675 | 10307492 | 36.29% | 3.646% |
| 22 | 9.727 | 1000 | 1006 | 1009 | rBV2 | 550081 | 565479 | 1.99% | 0.200% |
| 23 | 9.978 | 1015 | 1053 | 1058 | rBV3 | 4421035 | 28402637 | 100.00% | 10.047% |
| 24 | 10.032 | 1058 | 1063 | 1066 | rBV | 367823 | 587032 | 2.07% | 0.208% |
| 25 | 10.192 | 1072 | 1093 | 1095 | rBV2 | 4171001 | 11393541 | 40.11% | 4.030% |
| 26 | 10.230 | 1095 | 1100 | 1111 | rVV9 | 776767 | 3125979 | 11.01% | 1.106% |
| 27 | 10.358 | 1119 | 1124 | 1128 | rBV2 | 1936761 | 3440424 | 12.11% | 1.217% |
| 28 | 10.427 | 1128 | 1137 | 1142 | rVV5 | 2170837 | 7560008 | 26.62% | 2.674% |
| 29 | 10.502 | 1142 | 1151 | 1155 | rVV3 | 2442714 | 6207175 | 21.85% | 2.196% |
| 30 | 10.555 | 1155 | 1161 | 1163 | rVV3 | 1670020 | 2930202 | 10.32% | 1.036% |
| 31 | 10.598 | 1163 | 1169 | 1175 | rVV3 | 4044513 | 9301081 | 32.75% | 3.290% |
| 32 | 10.662 | 1175 | 1181 | 1187 | rVV2 | 1814295 | 3795601 | 13.36% | 1.343% |
| 33 | 10.721 | 1187 | 1192 | 1194 | rVV | 545440 | 716265 | 2.52% | 0.253% |
| 34 | 10.748 | 1194 | 1197 | 1199 | rVV | 382142 | 493165 | 1.74% | 0.174% |
| 35 | 10.780 | 1199 | 1203 | 1210 | rVV4 | 834662 | 1799297 | 6.33% | 0.636% |
| 36 | 10.833 | 1210 | 1213 | 1218 | rVB3 | 317740 | 420012 | 1.48% | 0.149% |
| 37 | 10.924 | 1218 | 1230 | 1238 | rVB | 1763917 | 2572421 | 9.06% | 0.910% |
| 38 | 11.047 | 1247 | 1253 | 1257 | rBV4 | 318267 | 580515 | 2.04% | 0.205% |
| 39 | 11.164 | 1269 | 1275 | 1278 | rVV3 | 375086 | 724357 | 2.55% | 0.256% |
| 40 | 11.202 | 1278 | 1282 | 1290 | rVV4 | 481312 | 1104301 | 3.89% | 0.391% |
| 41 | 11.292 | 1290 | 1299 | 1302 | rVV3 | 446450 | 1000072 | 3.52% | 0.354% |
| 42 | 11.340 | 1302 | 1308 | 1322 | rVV2 | 1474264 | 3904631 | 13.75% | 1.381% |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 43 | 11.463 | 1322 | 1331 | 1336 | rVV2 | 1791690 | 4695495 | 16.53% | 1.661% |
| 44 | 11.570 | 1336 | 1351 | 1359 | rVV4 | 3319994 | 13192892 | 46.45% | 4.667% |
| 45 | 11.672 | 1367 | 1370 | 1375 | rVV2 | 469678 | 590417 | 2.08% | 0.209% |
| 46 | 11.752 | 1375 | 1385 | 1395 | rVB | 4367646 | 10265566 | 36.14% | 3.631% |
| 47 | 11.901 | 1402 | 1413 | 1419 | rBV2 | 1047449 | 2321267 | 8.17% | 0.821% |
| 48 | 12.003 | 1419 | 1432 | 1437 | rVV3 | 2510567 | 5409076 | 19.04% | 1.913% |
| 49 | 12.067 | 1437 | 1444 | 1452 | rVB4 | 1073919 | 1804533 | 6.35% | 0.638% |
| 50 | 12.211 | 1461 | 1471 | 1475 | rBV2 | 1555022 | 2713633 | 9.55% | 0.960% |
| 51 | 12.254 | 1475 | 1479 | 1487 | rVB2 | 1011920 | 1575577 | 5.55% | 0.557% |
| 52 | 12.409 | 1503 | 1508 | 1514 | rBV | 878515 | 1138221 | 4.01% | 0.403% |
| 53 | 12.478 | 1514 | 1521 | 1523 | rBV3 | 601377 | 1038135 | 3.66% | 0.367% |
| 54 | 12.531 | 1526 | 1531 | 1535 | rVV2 | 842771 | 2026989 | 7.14% | 0.717% |
| 55 | 12.574 | 1535 | 1539 | 1542 | rVV | 759090 | 1620079 | 5.70% | 0.573% |
| 56 | 12.601 | 1542 | 1544 | 1549 | rVV5 | 832912 | 1411647 | 4.97% | 0.499% |
| 57 | 12.649 | 1549 | 1553 | 1558 | rVV | 1290836 | 1643064 | 5.78% | 0.581% |
| 58 | 12.799 | 1573 | 1581 | 1588 | rVV5 | 1122188 | 2950303 | 10.39% | 1.044% |
| 59 | 12.879 | 1588 | 1596 | 1604 | rVV | 3408371 | 4766322 | 16.78% | 1.686% |
| 60 | 12.985 | 1604 | 1616 | 1621 | rVV3 | 1923180 | 4487963 | 15.80% | 1.588% |
| 61 | 13.028 | 1621 | 1624 | 1630 | rVV | 2488620 | 3369700 | 11.86% | 1.192% |
| 62 | 13.082 | 1630 | 1634 | 1641 | rVV3 | 761907 | 1561053 | 5.50% | 0.552% |
| 63 | 13.140 | 1641 | 1645 | 1647 | rVV3 | 409100 | 635618 | 2.24% | 0.225% |
| 64 | 13.215 | 1647 | 1659 | 1666 | rVB2 | 3444621 | 7061600 | 24.86% | 2.498% |
| 65 | 13.343 | 1672 | 1683 | 1687 | rVV2 | 2039182 | 2925700 | 10.30% | 1.035% |
| 66 | 13.386 | 1687 | 1691 | 1695 | rVV3 | 632142 | 1201943 | 4.23% | 0.425% |
| 67 | 13.429 | 1695 | 1699 | 1701 | rVV2 | 539009 | 886845 | 3.12% | 0.314% |
| 68 | 13.456 | 1701 | 1704 | 1711 | rVV5 | 645716 | 1575697 | 5.55% | 0.557% |
| 69 | 13.509 | 1711 | 1714 | 1718 | rVV3 | 430168 | 687932 | 2.42% | 0.243% |
| 70 | 13.557 | 1718 | 1723 | 1730 | rVV4 | 277185 | 730633 | 2.57% | 0.258% |
| 71 | 13.621 | 1730 | 1735 | 1741 | rVV2 | 401463 | 695465 | 2.45% | 0.246% |
| 72 | 13.674 | 1741 | 1745 | 1748 | rVV | 384859 | 480223 | 1.69% | 0.170% |
| 73 | 13.856 | 1771 | 1779 | 1783 | rVV | 283210 | 447201 | 1.57% | 0.158% |
| 74 | 13.910 | 1785 | 1789 | 1794 | rVB | 1018352 | 1162364 | 4.09% | 0.411% |
| 75 | 14.016 | 1804 | 1809 | 1814 | rVB4 | 212423 | 330322 | 1.16% | 0.117% |
| 76 | 14.203 | 1837 | 1844 | 1849 | rBV | 1844034 | 2186807 | 7.70% | 0.774% |
| 77 | 14.262 | 1849 | 1855 | 1863 | rVV | 1328046 | 2315651 | 8.15% | 0.819% |
| 78 | 14.326 | 1863 | 1867 | 1875 | rVV6 | 225783 | 350936 | 1.24% | 0.124% |
| 79 | 14.476 | 1885 | 1895 | 1903 | rVV2 | 1695116 | 4368188 | 15.38% | 1.545% |
| 80 | 14.561 | 1903 | 1911 | 1921 | rVB | 1652299 | 3605213 | 12.69% | 1.275% |
| 81 | 14.641 | 1921 | 1926 | 1934 | rBV | 2638144 | 3063459 | 10.79% | 1.084% |
| 82 | 14.732 | 1934 | 1943 | 1947 | rVV | 2491682 | 3071440 | 10.81% | 1.086% |
| 83 | 14.764 | 1947 | 1949 | 1961 | rVB5 | 340445 | 583516 | 2.05% | 0.206% |
| 84 | 14.871 | 1962 | 1969 | 1976 | rBV5 | 213155 | 586542 | 2.07% | 0.207% |
| 85 | 14.972 | 1977 | 1988 | 1993 | rVV3 | 834211 | 1571831 | 5.53% | 0.556% |
| 86 | 15.042 | 1994 | 2001 | 2011 | rVB3 | 824500 | 1269837 | 4.47% | 0.449% |
| 87 | 15.197 | 2019 | 2030 | 2042 | rBV3 | 616300 | 1838715 | 6.47% | 0.650% |
| 88 | 15.373 | 2058 | 2063 | 2071 | rVB2 | 221995 | 380718 | 1.34% | 0.135% |
| 89 | 15.768 | 2128 | 2137 | 2147 | rVV | 761431 | 1349137 | 4.75% | 0.477% |
| 90 | 15.843 | 2147 | 2151 | 2156 | rVV | 425292 | 553935 | 1.95% | 0.196% |
| 91 | 15.896 | 2156 | 2161 | 2170 | rVB3 | 227375 | 386246 | 1.36% | 0.137% |
| 92 | 16.260 | 2223 | 2229 | 2234 | rVB | 1346883 | 1432286 | 5.04% | 0.507% |
| 93 | 16.334 | 2239 | 2243 | 2257 | rVV2 | 395126 | 672693 | 2.37% | 0.238% |
| 94 | 16.682 | 2300 | 2308 | 2313 | rVB | 383987 | 544025 | 1.92% | 0.192% |
| 95 | 17.039 | 2369 | 2375 | 2385 | rVB | 363857 | 499674 | 1.76% | 0.177% |
| 96 | 17.349 | 2427 | 2433 | 2442 | rVB | 445245 | 673401 | 2.37% | 0.238% |
| 97 | 17.429 | 2442 | 2448 | 2456 | rVV | 308482 | 464321 | 1.63% | 0.164% |
| 98 | 17.520 | 2457 | 2465 | 2476 | rVB | 2349248 | 3361841 | 11.84% | 1.189% |
| 99 | 17.862 | 2523 | 2529 | 2538 | rVB | 229338 | 368893 | 1.30% | 0.130% |
| 100 | 20.057 | 2926 | 2940 | 2956 | rVB2 | 1128499 | 2826560 | 9.95% | 1.000% |

Sum of corrected areas: 282706069

```
File       : C:\MSDCHEM\1\DATA\051412\5M66992.D
Operator   : CAA
Acquired   : 14 May 2012   6:02 pm using AcqMethod BNA
Instrument :   HPMS5
Sample Name: L12050284-01 2X
Misc Info  : 1,2
Vial Number: 17
Quant File :MEGAMIX.RES (RTE Integrator)
```



Data File : C:\MSDCHEM\1\DATA\051412\5M66992.D Vial: 17
Acq On : 14 May 2012 6:02 pm Operator: CAA
Sample : L12050284-01 2X Inst : HPMS5
Misc : 1,2 Multiplr: 2.00
MS Integration Params: LSCINT.P

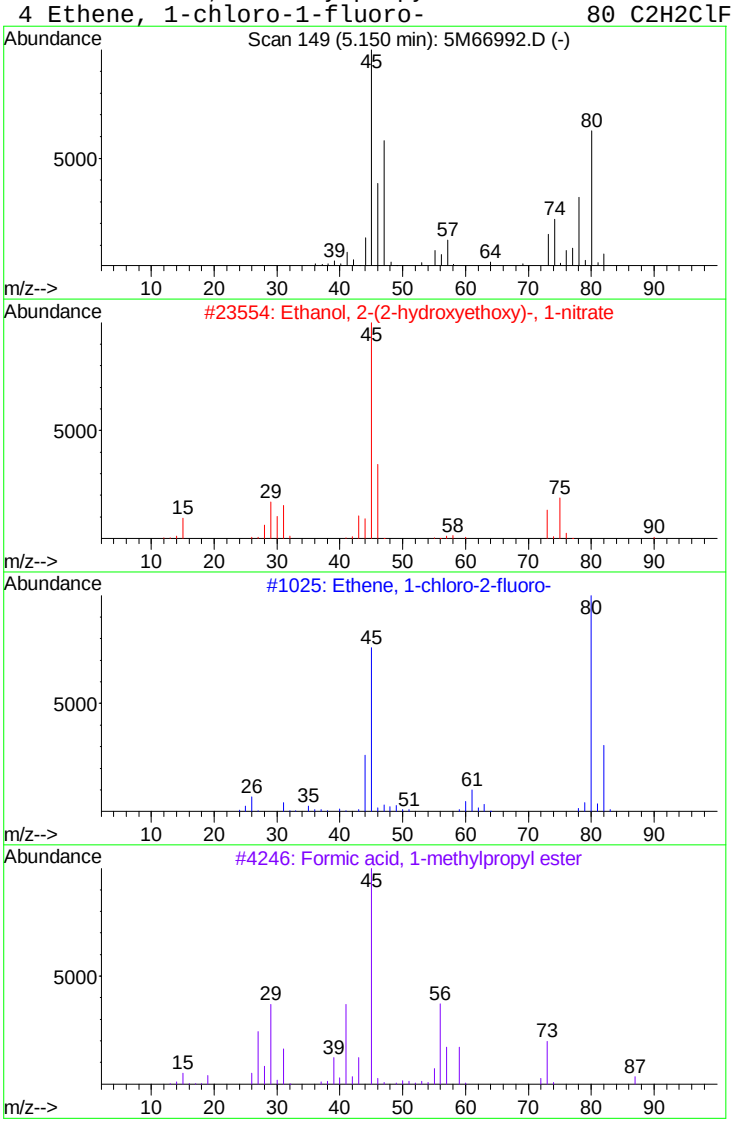
Quant Method : C:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
Title : OVD MSS01 8270/625/Initial cal. 05/11/12
Library : K:\ORGANICS\SEMIVOA\8270\NIST02.L

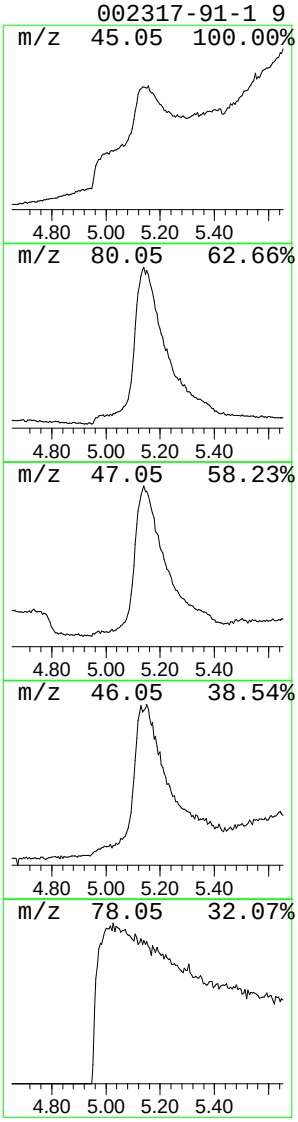
**********

Peak Number 1 Ethanol, 2-(2-hydroxyethoxy... Concentration Rank 13

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 5.15 | 123.20 ug/ml | 1753630 | 1,4-Dichlorobenzene-d4 | 9.29 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Ethanol, 2-(2-hydroxyethoxy)-, 1... | 151 | C4H9NO5 | 020633-16-3 | 23 |
| 2 | Ethene, 1-chloro-2-fluoro- | 80 | C2H2ClF | 000460-16-2 | 14 |
| 3 | Formic acid, 1-methylpropyl ester | 102 | C5H10O2 | 000589-40-2 | 10 |
| 4 | Ethene, 1-chloro-1-fluoro- | 80 | C2H2ClF | 002317-91-1 | 9 |



Data File : C:\MSDCHEM\1\DATA\051412\5M66992.D Vial: 17
Acq On : 14 May 2012 6:02 pm Operator: CAA
Sample : L12050284-01 2X Inst : HPMS5
Misc : 1,2 Multiplr: 2.00
MS Integration Params: LSCINT.P

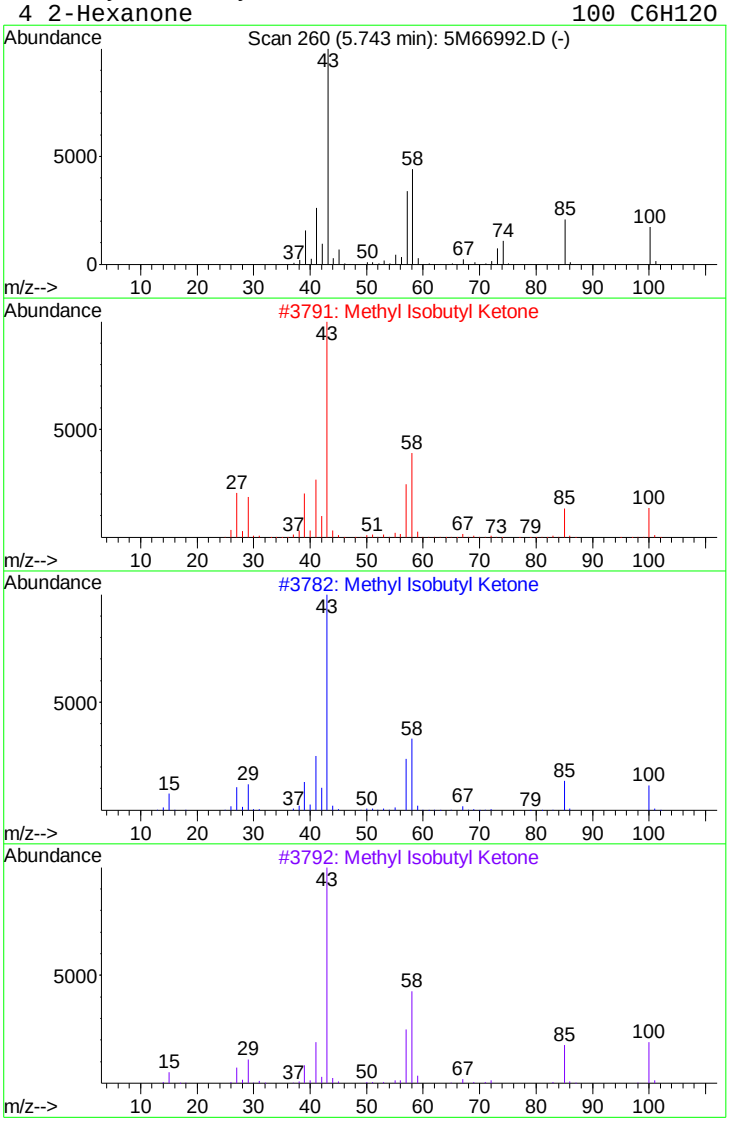
Quant Method : C:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
Title : OVD MSS01 8270/625/Initial cal. 05/11/12
Library : K:\ORGANICS\SEMIVOA\8270\NIST02.L

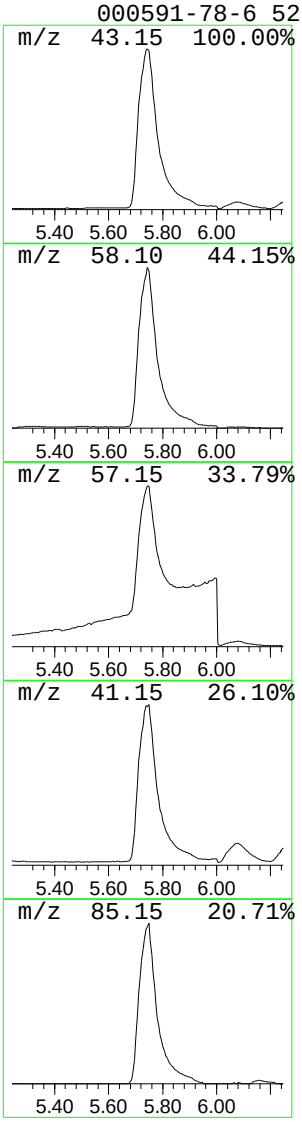
**********

Peak Number 2 Methyl Isobutyl Ketone Concentration Rank 3

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 5.74 | 569.70 ug/ml | 8109250 | 1,4-Dichlorobenzene-d4 | 9.29 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Methyl Isobutyl Ketone | 100 | C6H12O | 000108-10-1 | 74 |
| 2 | Methyl Isobutyl Ketone | 100 | C6H12O | 000108-10-1 | 72 |
| 3 | Methyl Isobutyl Ketone | 100 | C6H12O | 000108-10-1 | 72 |
| 4 | 2-Hexanone | 100 | C6H12O | 000591-78-6 | 52 |



Data File : C:\MSDCHEM\1\DATA\051412\5M66992.D Vial: 17
Acq On : 14 May 2012 6:02 pm Operator: CAA
Sample : L12050284-01 2X Inst : HPMS5
Misc : 1,2 Multiplr: 2.00
MS Integration Params: LSCINT.P

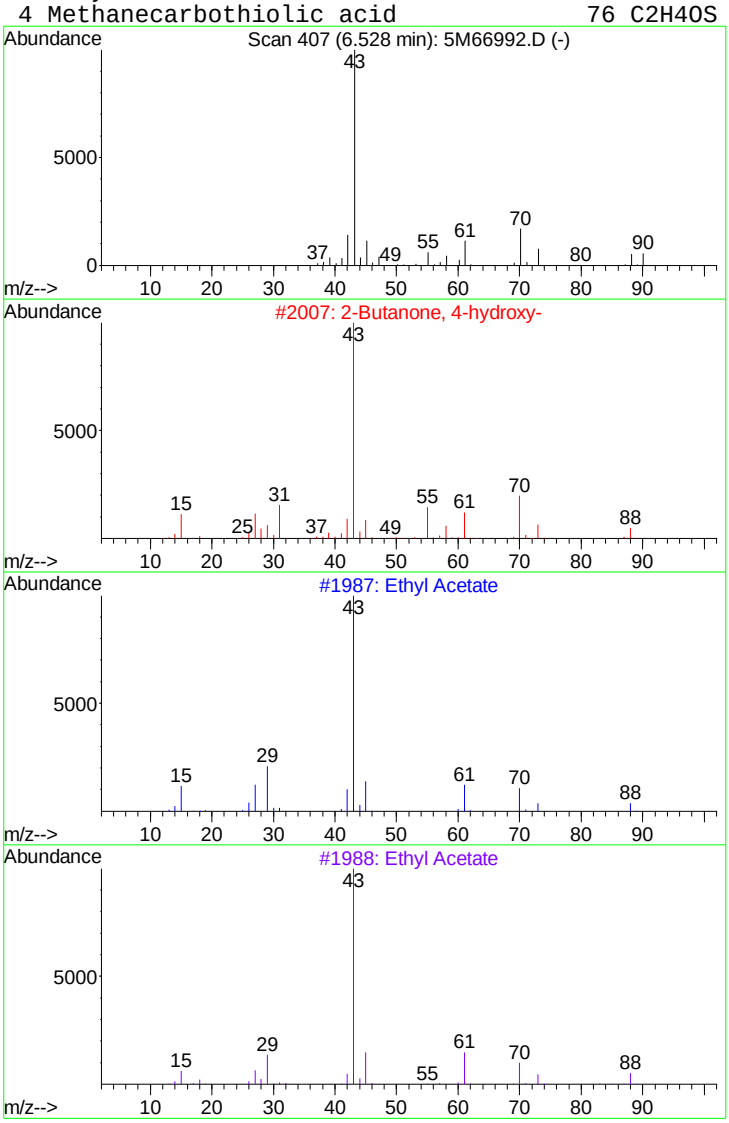
Quant Method : C:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
Title : OVD MSS01 8270/625/Initial cal. 05/11/12
Library : K:\ORGANICS\SEMIVOA\8270\NIST02.L

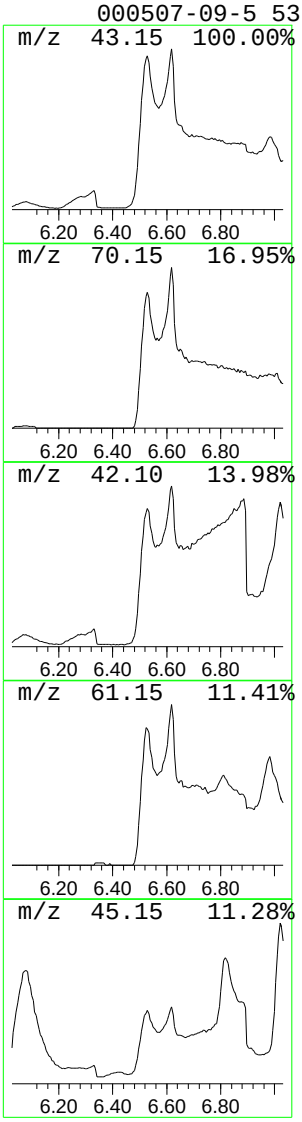
**********

Peak Number 3 2-Butanone, 4-hydroxy- Concentration Rank 9

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 6.53 | 202.83 ug/ml | 2887110 | 1,4-Dichlorobenzene-d4 | 9.29 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | 2-Butanone, 4-hydroxy- | 88 | C4H8O2 | 000590-90-9 | 80 |
| 2 | Ethyl Acetate | 88 | C4H8O2 | 000141-78-6 | 64 |
| 3 | Ethyl Acetate | 88 | C4H8O2 | 000141-78-6 | 53 |
| 4 | Methanecarbothiolic acid | 76 | C2H4OS | 000507-09-5 | 53 |



Data File : C:\MSDCHEM\1\DATA\051412\5M66992.D Vial: 17
Acq On : 14 May 2012 6:02 pm Operator: CAA
Sample : L12050284-01 2X Inst : HPMS5
Misc : 1,2 Multiplr: 2.00
MS Integration Params: LSCINT.P

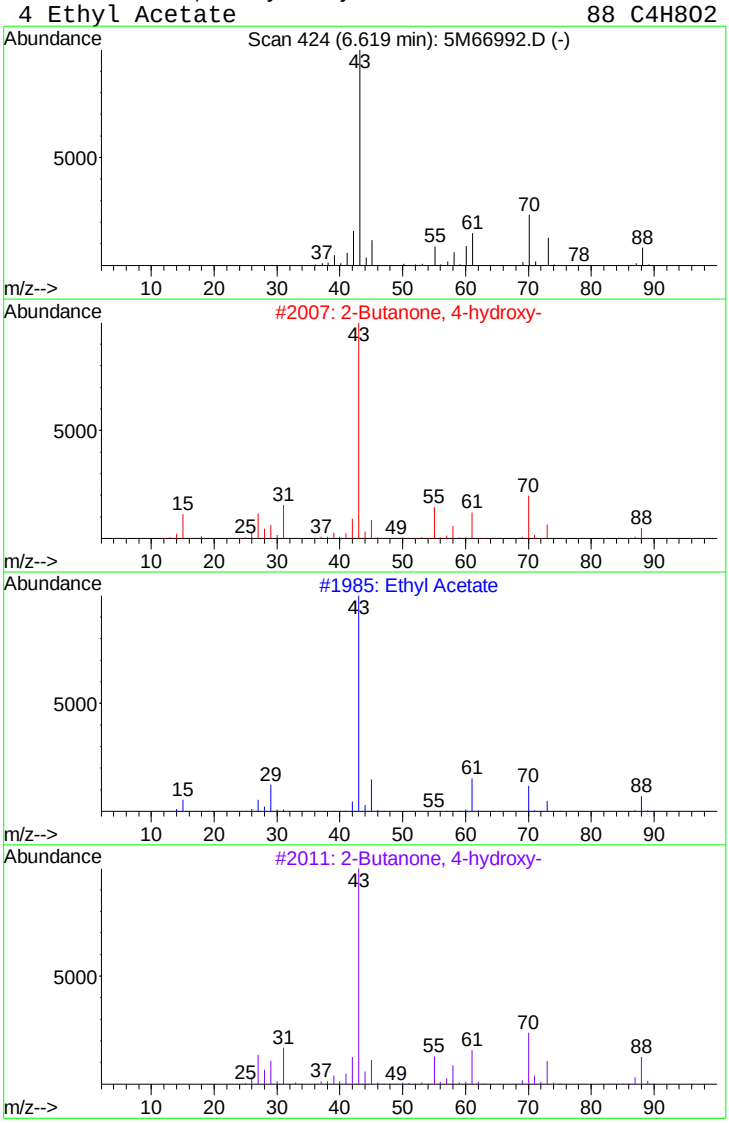
Quant Method : C:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
Title : OVD MSS01 8270/625/Initial cal. 05/11/12
Library : K:\ORGANICS\SEMIVOA\8270\NIST02.L

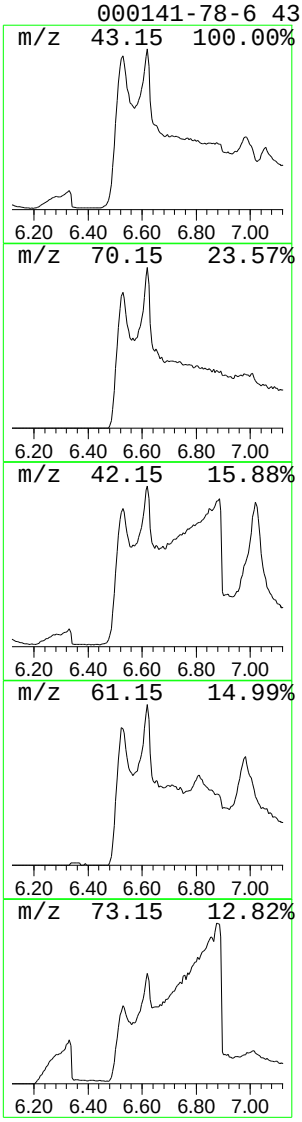
**********

Peak Number 4 2-Butanone, 4-hydroxy- Concentration Rank 15

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 6.62 | 112.91 ug/ml | 1607250 | 1,4-Dichlorobenzene-d4 | 9.29 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | 2-Butanone, 4-hydroxy- | 88 | C4H8O2 | 000590-90-9 | 80 |
| 2 | Ethyl Acetate | 88 | C4H8O2 | 000141-78-6 | 47 |
| 3 | 2-Butanone, 4-hydroxy- | 88 | C4H8O2 | 000590-90-9 | 45 |
| 4 | Ethyl Acetate | 88 | C4H8O2 | 000141-78-6 | 43 |



Data File : C:\MSDCHEM\1\DATA\051412\5M66992.D Vial: 17
Acq On : 14 May 2012 6:02 pm Operator: CAA
Sample : L12050284-01 2X Inst : HPMS5
Misc : 1,2 Multiplr: 2.00
MS Integration Params: LSCINT.P

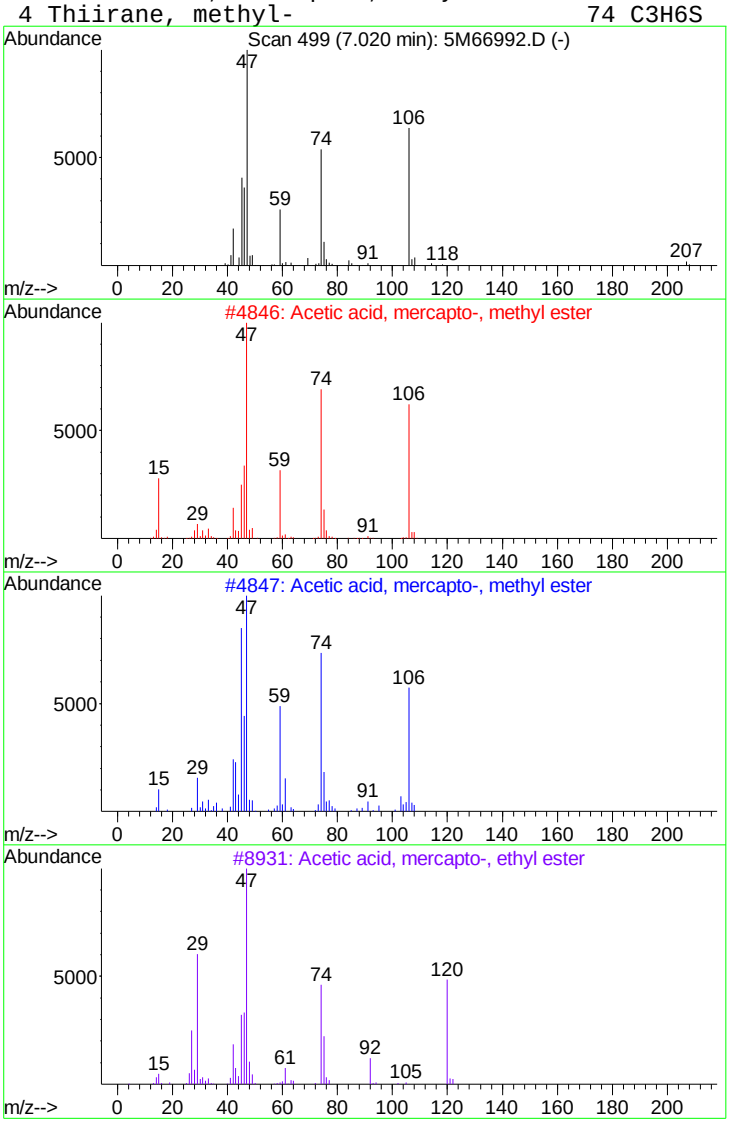
Quant Method : C:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
Title : OVD MSS01 8270/625/Initial cal. 05/11/12
Library : K:\ORGANICS\SEMIVOA\8270\NIST02.L

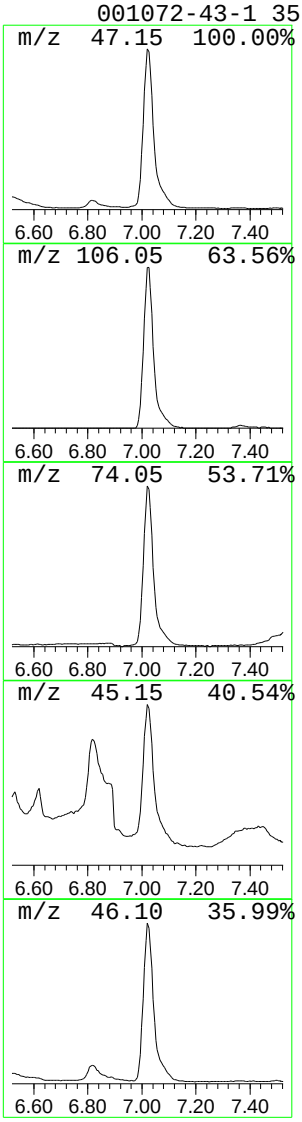
**********

Peak Number 5 Acetic acid, mercapto-, met... Concentration Rank 5

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 7.02 | 282.92 ug/ml | 4027210 | 1,4-Dichlorobenzene-d4 | 9.29 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Acetic acid, mercapto-, methyl e... | 106 | C3H6O2S | 002365-48-2 | 90 |
| 2 | Acetic acid, mercapto-, methyl e... | 106 | C3H6O2S | 002365-48-2 | 50 |
| 3 | Acetic acid, mercapto-, ethyl ester | 120 | C4H8O2S | 000623-51-8 | 36 |
| 4 | Thiirane, methyl- | 74 | C3H6S | 001072-43-1 | 35 |



Data File : C:\MSDCHEM\1\DATA\051412\5M66992.D Vial: 17
Acq On : 14 May 2012 6:02 pm Operator: CAA
Sample : L12050284-01 2X Inst : HPMS5
Misc : 1,2 Multiplr: 2.00
MS Integration Params: LSCINT.P

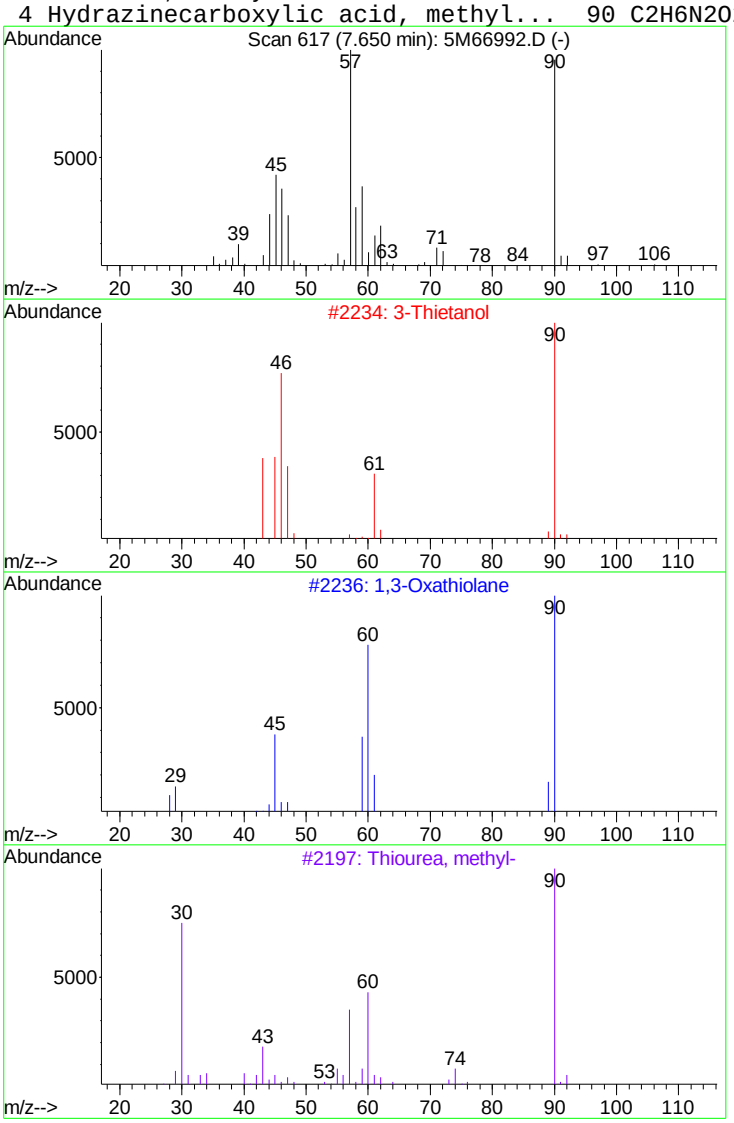
Quant Method : C:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
Title : OVD MSS01 8270/625/Initial cal. 05/11/12
Library : K:\ORGANICS\SEMIVOA\8270\NIST02.L

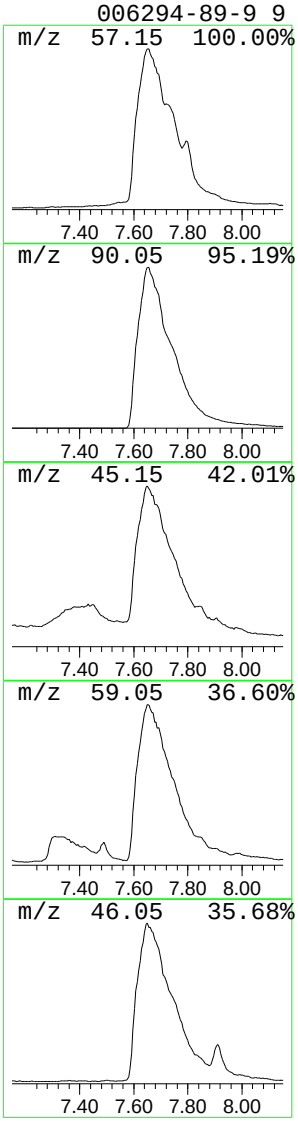
**********

Peak Number 6 3-Thietanol Concentration Rank 4

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 7.65 | 372.92 ug/ml | 5308320 | 1,4-Dichlorobenzene-d4 | 9.29 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | 3-Thietanol | 90 | C3H6OS | 010304-16-2 | 53 |
| 2 | 1,3-Oxathiolane | 90 | C3H6OS | 002094-97-5 | 42 |
| 3 | Thiourea, methyl- | 90 | C2H6N2S | 000598-52-7 | 9 |
| 4 | Hydrazinecarboxylic acid, methyl... | 90 | C2H6N2O2 | 006294-89-9 | 9 |



Data File : C:\MSDCHEM\1\DATA\051412\5M66992.D Vial: 17
Acq On : 14 May 2012 6:02 pm Operator: CAA
Sample : L12050284-01 2X Inst : HPMS5
Misc : 1,2 Multiplr: 2.00
MS Integration Params: LSCINT.P

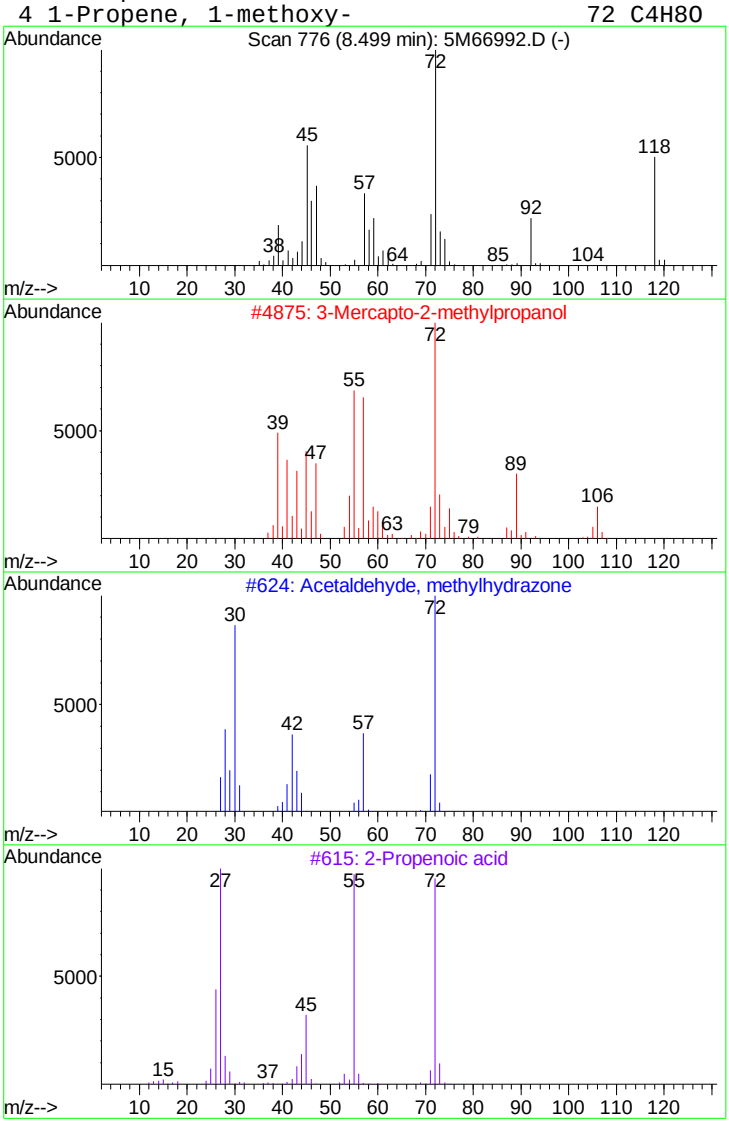
Quant Method : C:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
Title : OVD MSS01 8270/625/Initial cal. 05/11/12
Library : K:\ORGANICS\SEMIVOA\8270\NIST02.L

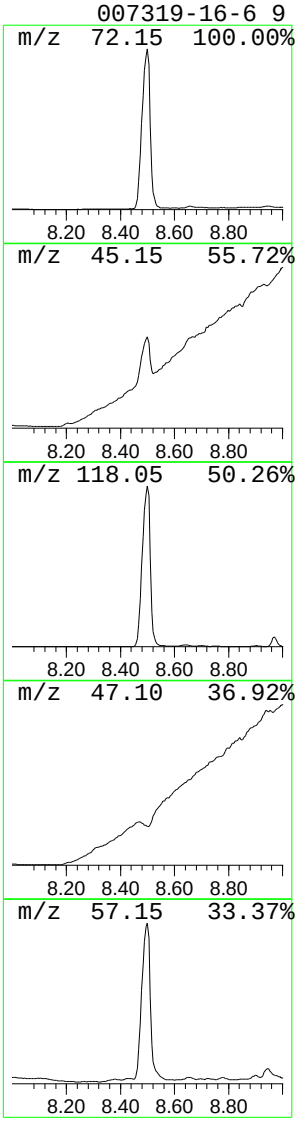
**********

Peak Number 7 3-Mercapto-2-methylpropanol Concentration Rank 1

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 8.50 | 1108.24 ug/ml | 15775100 | 1,4-Dichlorobenzene-d4 | 9.29 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | 3-Mercapto-2-methylpropanol | 106 | C4H10OS | 056160-79-3 | 28 |
| 2 | Acetaldehyde, methylhydrazone | 72 | C3H8N2 | 017167-73-6 | 16 |
| 3 | 2-Propenoic acid | 72 | C3H4O2 | 000079-10-7 | 16 |
| 4 | 1-Propene, 1-methoxy- | 72 | C4H8O | 007319-16-6 | 9 |



Data File : C:\MSDCHEM\1\DATA\051412\5M66992.D Vial: 17
Acq On : 14 May 2012 6:02 pm Operator: CAA
Sample : L12050284-01 2X Inst : HPMS5
Misc : 1,2 Multiplr: 2.00
MS Integration Params: LSCINT.P

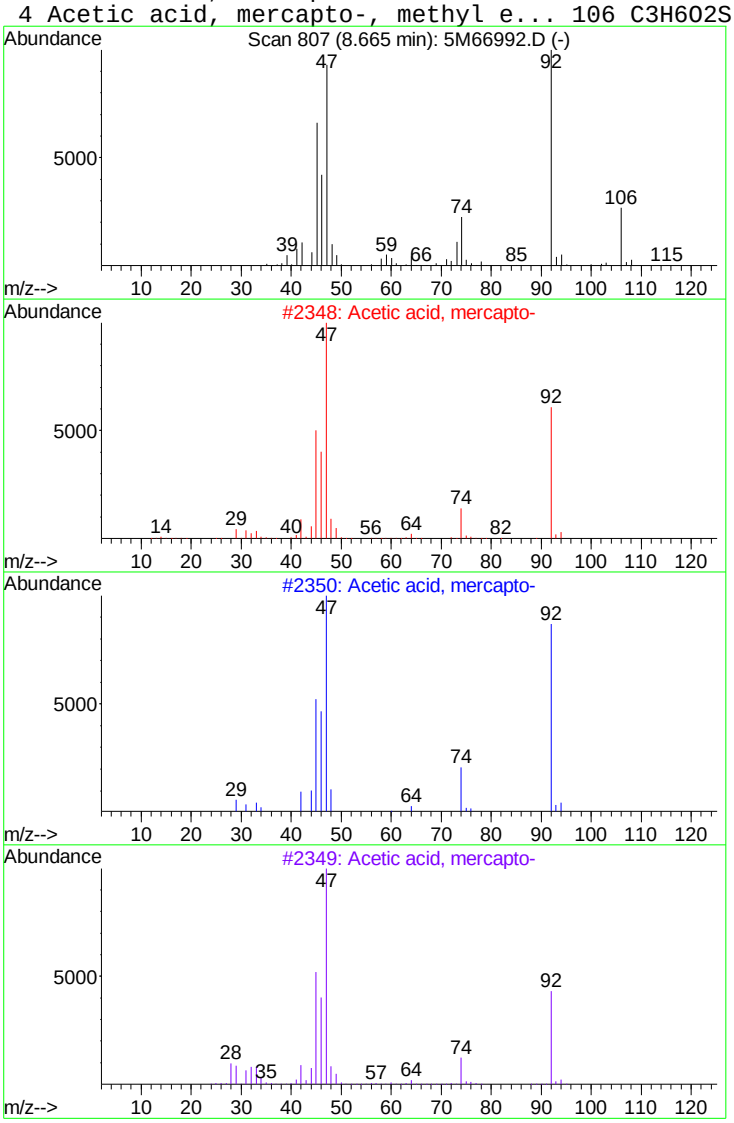
Quant Method : C:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
Title : OVD MSS01 8270/625/Initial cal. 05/11/12
Library : K:\ORGANICS\SEMIVOA\8270\NIST02.L

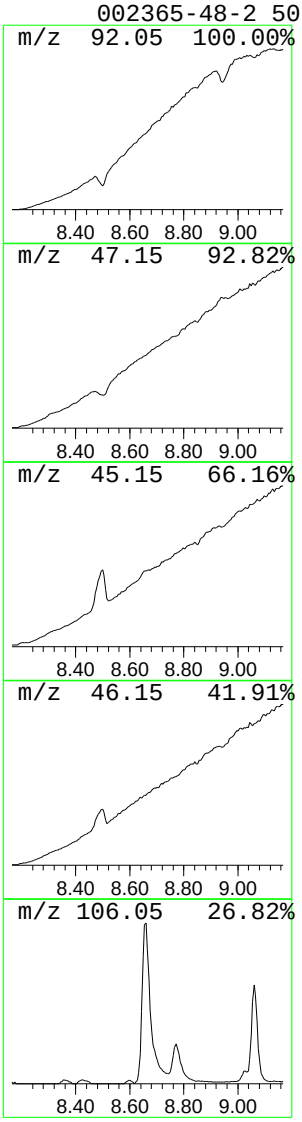
**********

Peak Number 8 Acetic acid, mercapto- Concentration Rank 7

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 8.66 | 255.65 ug/ml | 3638990 | 1,4-Dichlorobenzene-d4 | 9.29 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Acetic acid, mercapto- | 92 | C2H4O2S | 000068-11-1 | 93 |
| 2 | Acetic acid, mercapto- | 92 | C2H4O2S | 000068-11-1 | 91 |
| 3 | Acetic acid, mercapto- | 92 | C2H4O2S | 000068-11-1 | 90 |
| 4 | Acetic acid, mercapto-, methyl e... | 106 | C3H6O2S | 002365-48-2 | 50 |



Data File : C:\MSDCHEM\1\DATA\051412\5M66992.D Vial: 17
Acq On : 14 May 2012 6:02 pm Operator: CAA
Sample : L12050284-01 2X Inst : HPMS5
Misc : 1,2 Multiplr: 2.00
MS Integration Params: LSCINT.P

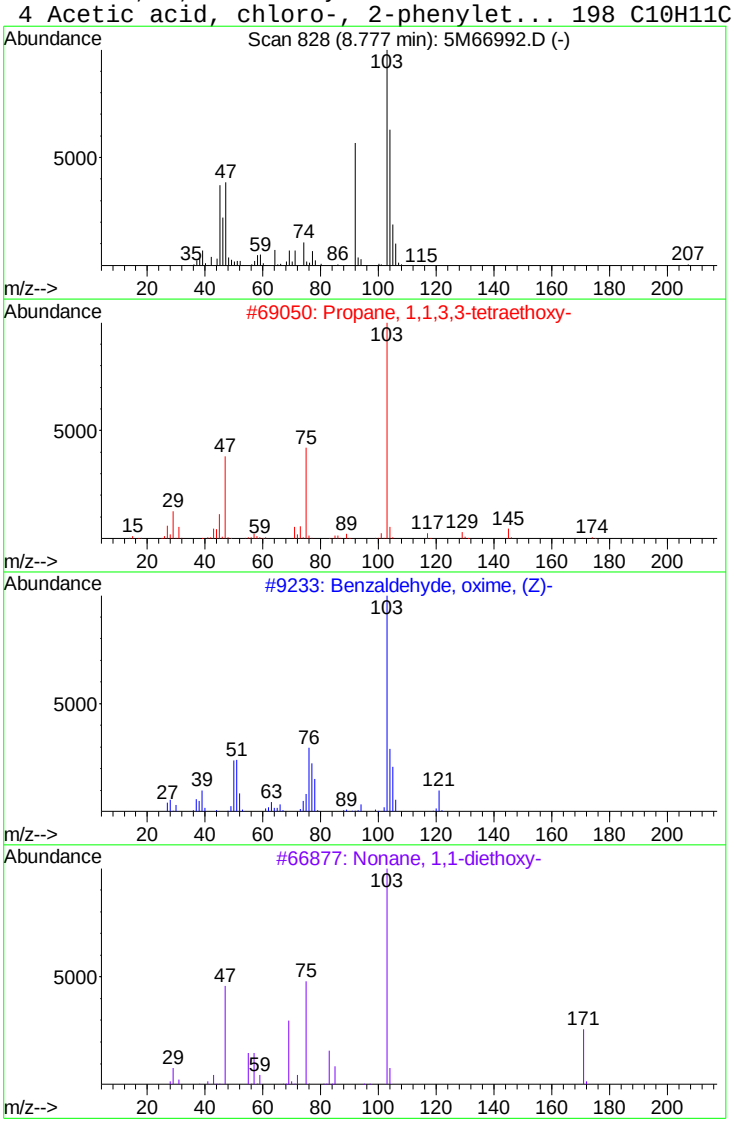
Quant Method : C:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
Title : OVD MSS01 8270/625/Initial cal. 05/11/12
Library : K:\ORGANICS\SEMIVOA\8270\NIST02.L

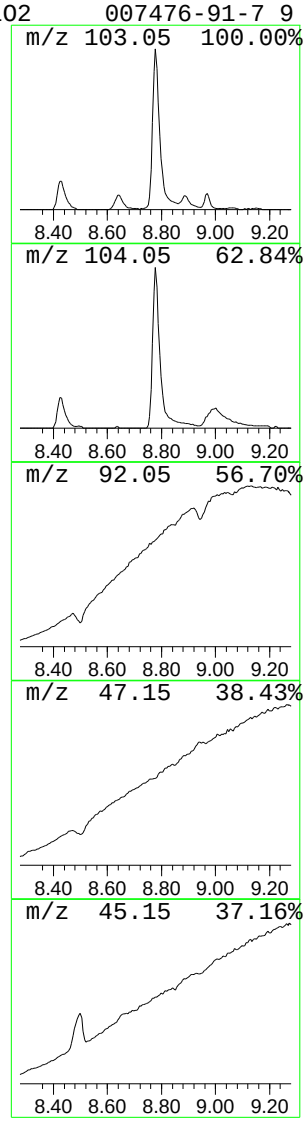
**********

Peak Number 9 Propane, 1,1,3,3-tetraethoxy- Concentration Rank 17

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 8.78 | 86.51 ug/ml | 1231420 | 1,4-Dichlorobenzene-d4 | 9.29 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Propane, 1,1,3,3-tetraethoxy- | 220 | C11H24O4 | 000122-31-6 | 17 |
| 2 | Benzaldehyde, oxime, (Z)- | 121 | C7H7NO | 000622-32-2 | 9 |
| 3 | Nonane, 1,1-diethoxy- | 216 | C13H28O2 | 054815-13-3 | 9 |
| 4 | Acetic acid, chloro-, 2-phenylet... | 198 | C10H11ClO2 | 007476-91-7 | 9 |



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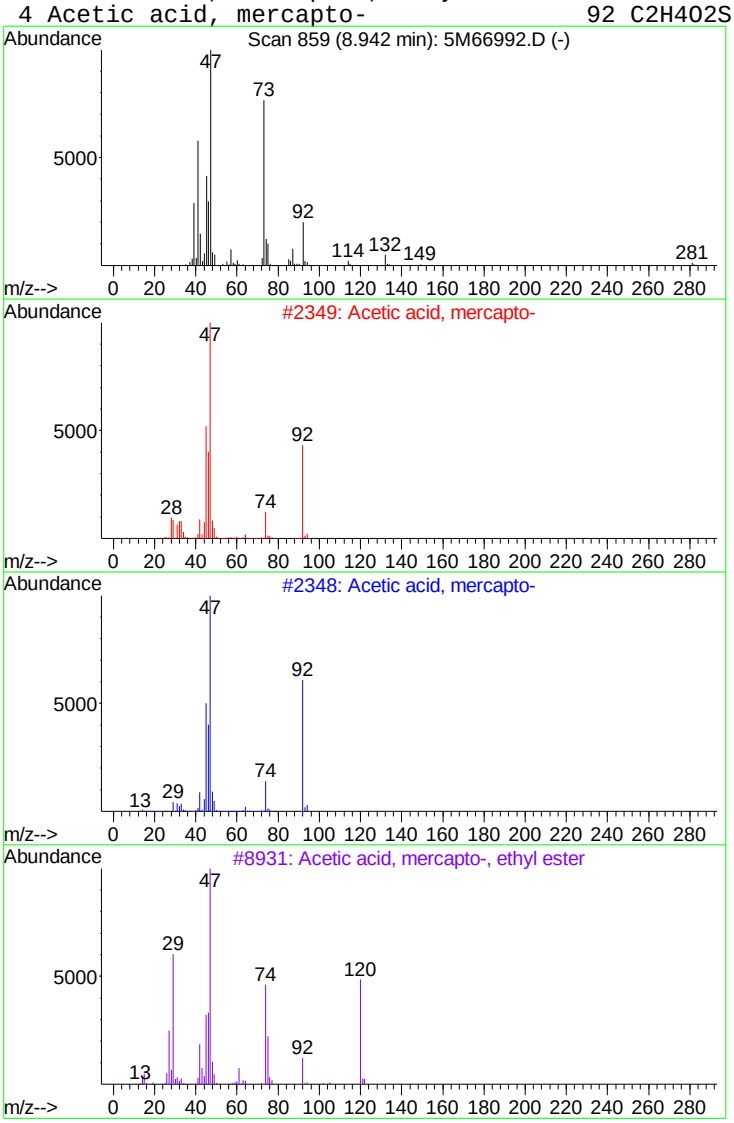
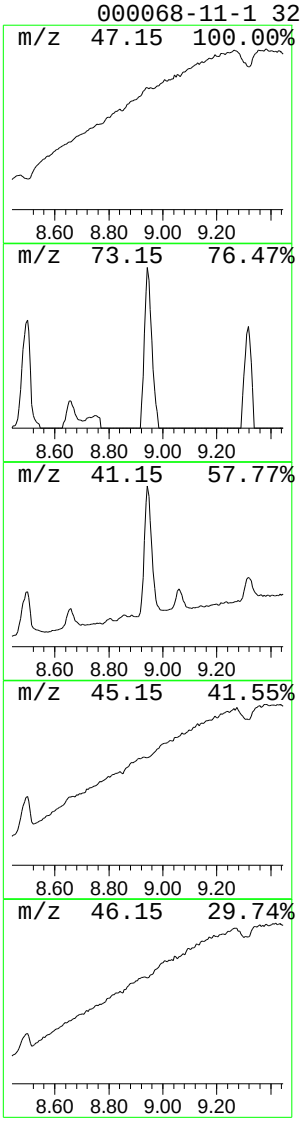
Data File : C:\MSDCHEM\1\DATA\051412\5M66992.D          Vial: 17
Acq On    : 14 May 2012   6:02 pm                   Operator: CAA
Sample    : L12050284-01 2X                         Inst    : HPMS5
Misc      : 1,2                                     Multiplr: 2.00
MS Integration Params: LSCINT.P

Quant Method : C:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
Title        : OVD MSS01 8270/625/Initial cal. 05/11/12
Library      : K:\ORGANICS\SEMIVOA\8270\NIST02.L
 *********************************************************************
 Peak Number 10  Acetic acid, mercapto-          Concentration Rank  6

   R.T.   EstConc           Area       Relative to ISTD         R.T.
 ------------------------------------------------------------------------
   8.94  266.25 ug/ml     3789850    1,4-Dichlorobenzene-d4      9.29

 Hit# of  5    Tentative ID              MW  MolForm       CAS#       Qual
 ------------------------------------------------------------------------
 1 Acetic acid, mercapto-                 92 C2H4O2S       000068-11-1 83
 2 Acetic acid, mercapto-                 92 C2H4O2S       000068-11-1 50
 3 Acetic acid, mercapto-, ethyl ester   120 C4H8O2S       000623-51-8 33
 4 Acetic acid, mercapto-                 92 C2H4O2S       000068-11-1 32
```



Data File : C:\MSDCHEM\1\DATA\051412\5M66992.D Vial: 17
Acq On : 14 May 2012 6:02 pm Operator: CAA
Sample : L12050284-01 2X Inst : HPMS5
Misc : 1,2 Multiplr: 2.00
MS Integration Params: LSCINT.P

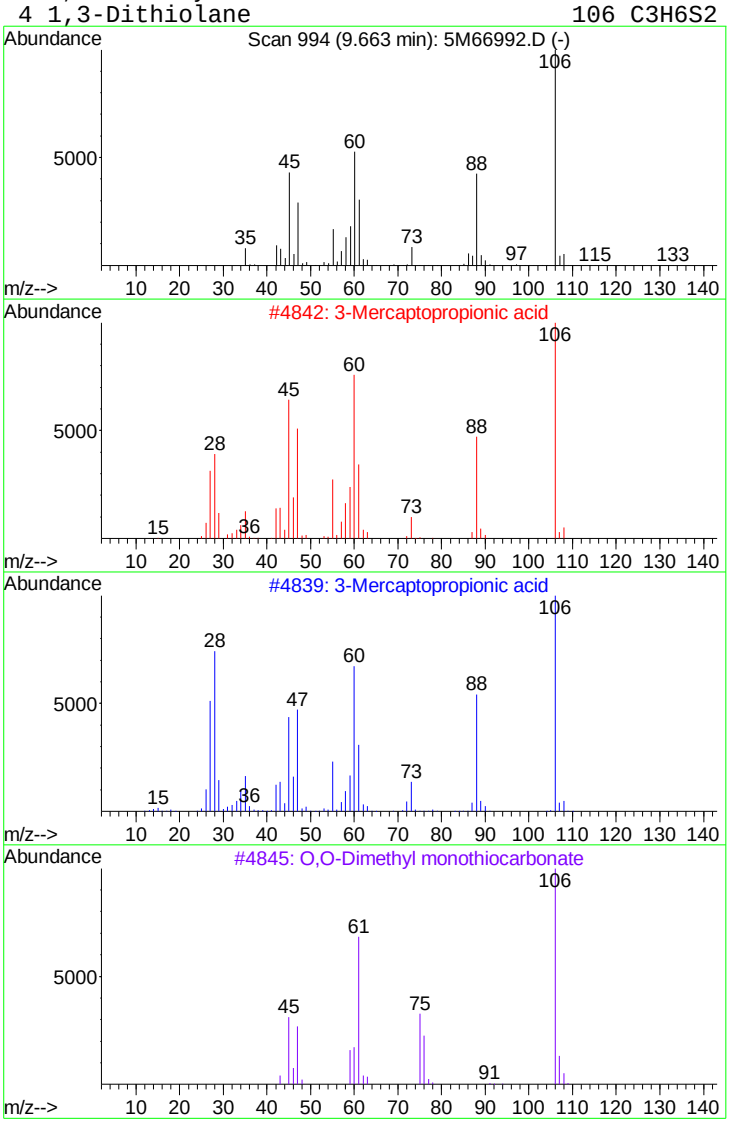
Quant Method : C:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
Title : OVD MSS01 8270/625/Initial cal. 05/11/12
Library : K:\ORGANICS\SEMIVOA\8270\NIST02.L

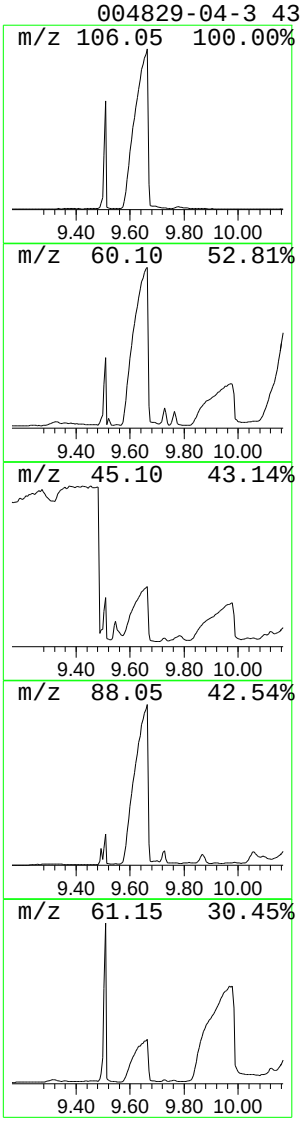
**********

Peak Number 11 3-Mercaptopropionic acid Concentration Rank 2

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 9.66 | 724.13 ug/ml | 10307500 | 1,4-Dichlorobenzene-d4 | 9.29 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | 3-Mercaptopropionic acid | 106 | C3H6O2S | 000107-96-0 | 94 |
| 2 | 3-Mercaptopropionic acid | 106 | C3H6O2S | 000107-96-0 | 56 |
| 3 | O,O-Dimethyl monothiocarbonate | 106 | C3H6O2S | 001115-13-5 | 50 |
| 4 | 1,3-Dithiolane | 106 | C3H6S2 | 004829-04-3 | 43 |



Data File : C:\MSDCHEM\1\DATA\051412\5M66992.D Vial: 17
Acq On : 14 May 2012 6:02 pm Operator: CAA
Sample : L12050284-01 2X Inst : HPMS5
Misc : 1,2 Multiplr: 2.00
MS Integration Params: LSCINT.P

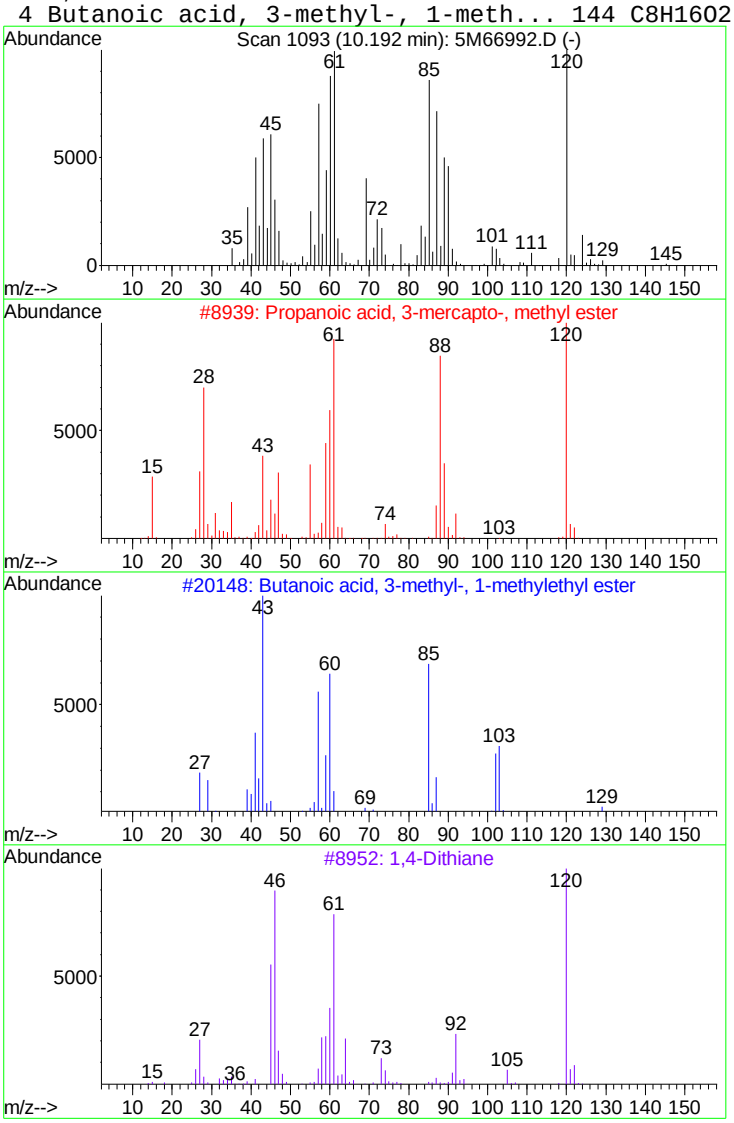
Quant Method : C:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
Title : OVD MSS01 8270/625/Initial cal. 05/11/12
Library : K:\ORGANICS\SEMIVOA\8270\NIST02.L

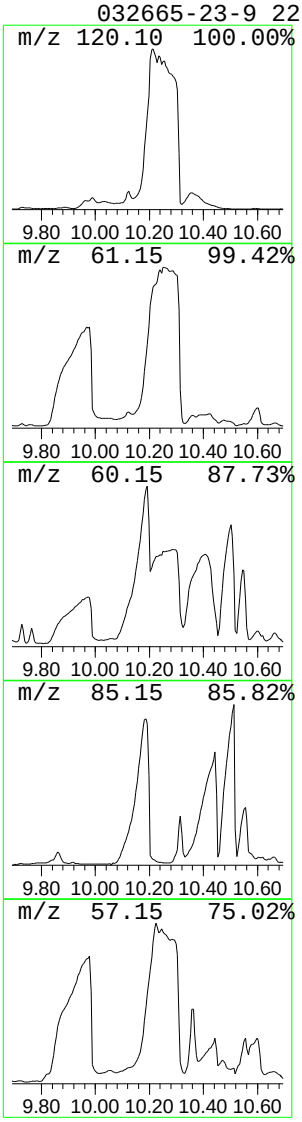
**********

Peak Number 12 Propanoic acid, 3-mercapto-... Concentration Rank 10

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 10.19 | 177.16 ug/ml | 11393500 | Naphthalene-d8 | 10.92 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Propanoic acid, 3-mercapto-, met... | 120 | C4H8O2S | 002935-90-2 | 38 |
| 2 | Butanoic acid, 3-methyl-, 1-meth... | 144 | C8H16O2 | 032665-23-9 | 22 |
| 3 | 1,4-Dithiane | 120 | C4H8S2 | 000505-29-3 | 22 |
| 4 | Butanoic acid, 3-methyl-, 1-meth... | 144 | C8H16O2 | 032665-23-9 | 22 |



Data File : C:\MSDCHEM\1\DATA\051412\5M66992.D Vial: 17
Acq On : 14 May 2012 6:02 pm Operator: CAA
Sample : L12050284-01 2X Inst : HPMS5
Misc : 1,2 Multiplr: 2.00
MS Integration Params: LSCINT.P

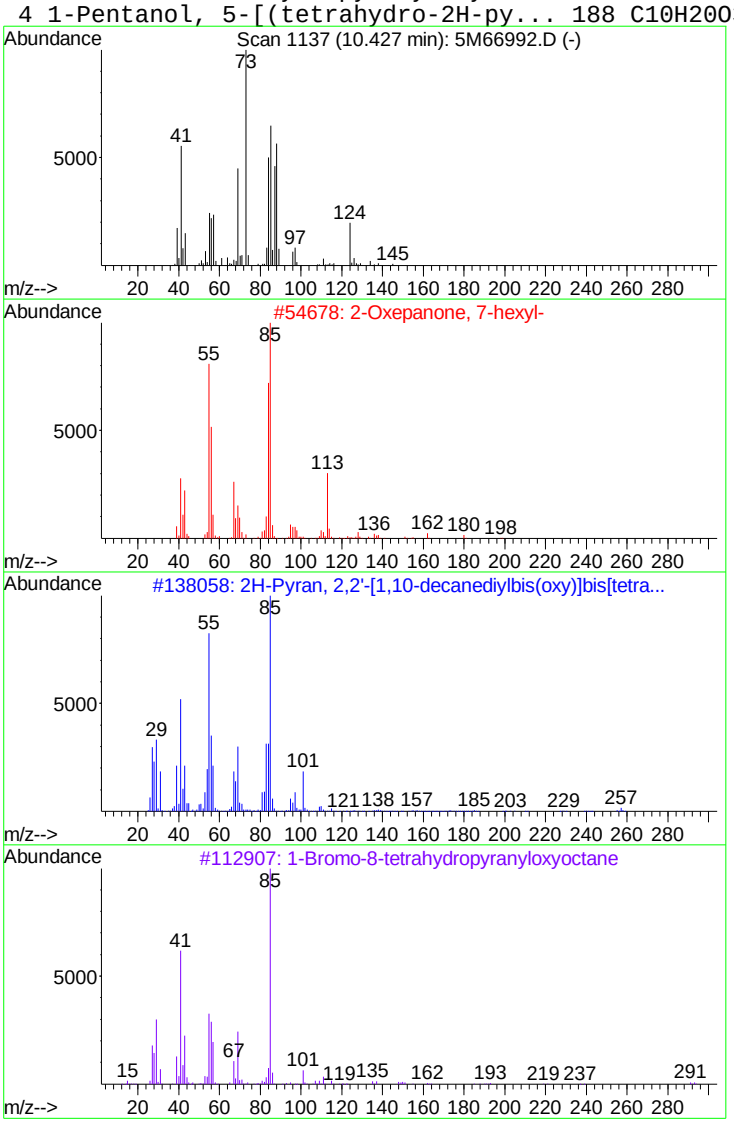
Quant Method : C:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
Title : OVD MSS01 8270/625/Initial cal. 05/11/12
Library : K:\ORGANICS\SEMIVOA\8270\NIST02.L

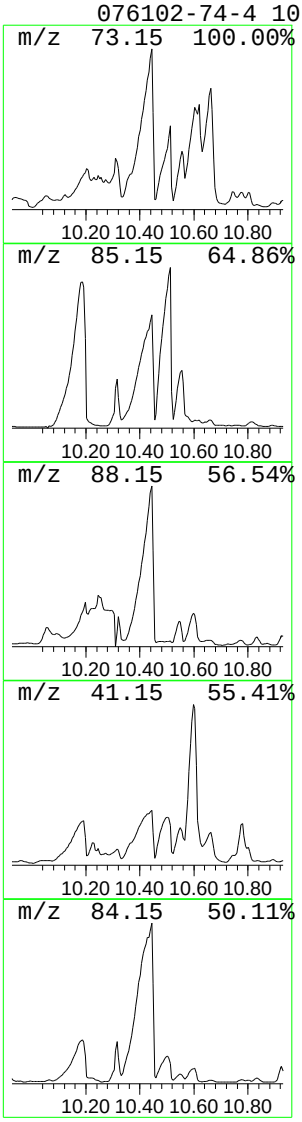
**********

Peak Number 13 2-Oxepanone, 7-hexyl- Concentration Rank 14

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 10.43 | 117.56 ug/ml | 7560010 | Naphthalene-d8 | 10.92 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | 2-Oxepanone, 7-hexyl- | 198 | C12H22O2 | 016429-21-3 | 27 |
| 2 | 2H-Pyran, 2,2'-[1,10-decanediylb... | 342 | C20H38O4 | 056599-49-6 | 10 |
| 3 | 1-Bromo-8-tetrahydropyranyloxyoc... | 292 | C13H25BrO2 | 050816-20-1 | 10 |
| 4 | 1-Pentanol, 5-[(tetrahydro-2H-py... | 188 | C10H20O3 | 076102-74-4 | 10 |



Data File : C:\MSDCHEM\1\DATA\051412\5M66992.D Vial: 17
Acq On : 14 May 2012 6:02 pm Operator: CAA
Sample : L12050284-01 2X Inst : HPMS5
Misc : 1,2 Multiplr: 2.00
MS Integration Params: LSCINT.P

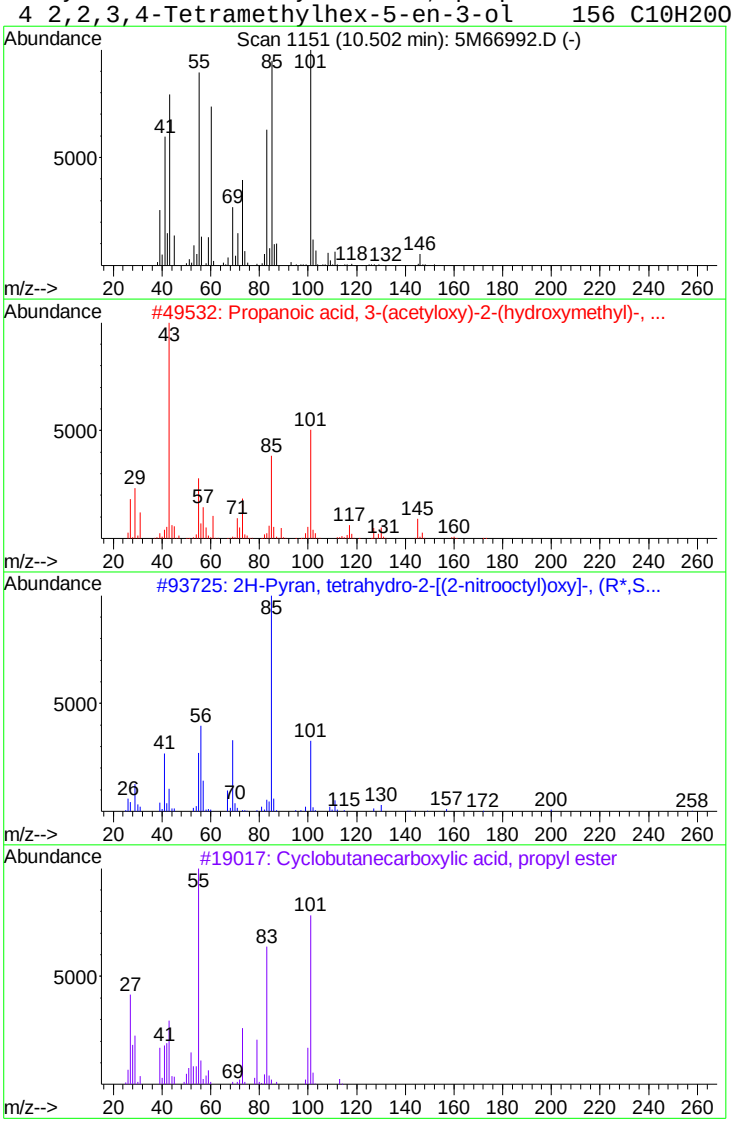
Quant Method : C:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
Title : OVD MSS01 8270/625/Initial cal. 05/11/12
Library : K:\ORGANICS\SEMIVOA\8270\NIST02.L

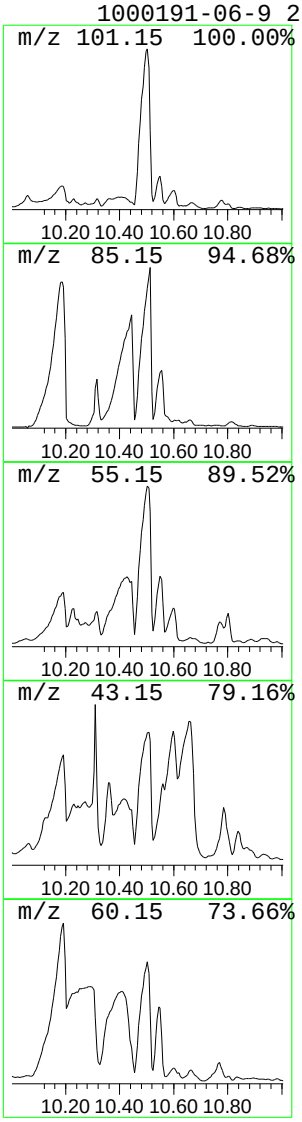
**********

Peak Number 14 Propanoic acid, 3-(acetylox... Concentration Rank 16

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 10.50 | 96.52 ug/ml | 6207180 | Naphthalene-d8 | 10.92 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Propanoic acid, 3-(acetyloxy)-2-... | 190 | C8H14O5 | 125476-48-4 | 38 |
| 2 | 2H-Pyran, tetrahydro-2-[(2-nitro... | 259 | C13H25NO4 | 096039-96-2 | 38 |
| 3 | Cyclobutanecarboxylic acid, prop... | 142 | C8H14O2 | 1000280-40-0 | 35 |
| 4 | 2,2,3,4-Tetramethylhex-5-en-3-ol | 156 | C10H20O | 1000191-06-9 | 27 |



Data File : C:\MSDCHEM\1\DATA\051412\5M66992.D Vial: 17
Acq On : 14 May 2012 6:02 pm Operator: CAA
Sample : L12050284-01 2X Inst : HPMS5
Misc : 1,2 Multiplr: 2.00
MS Integration Params: LSCINT.P

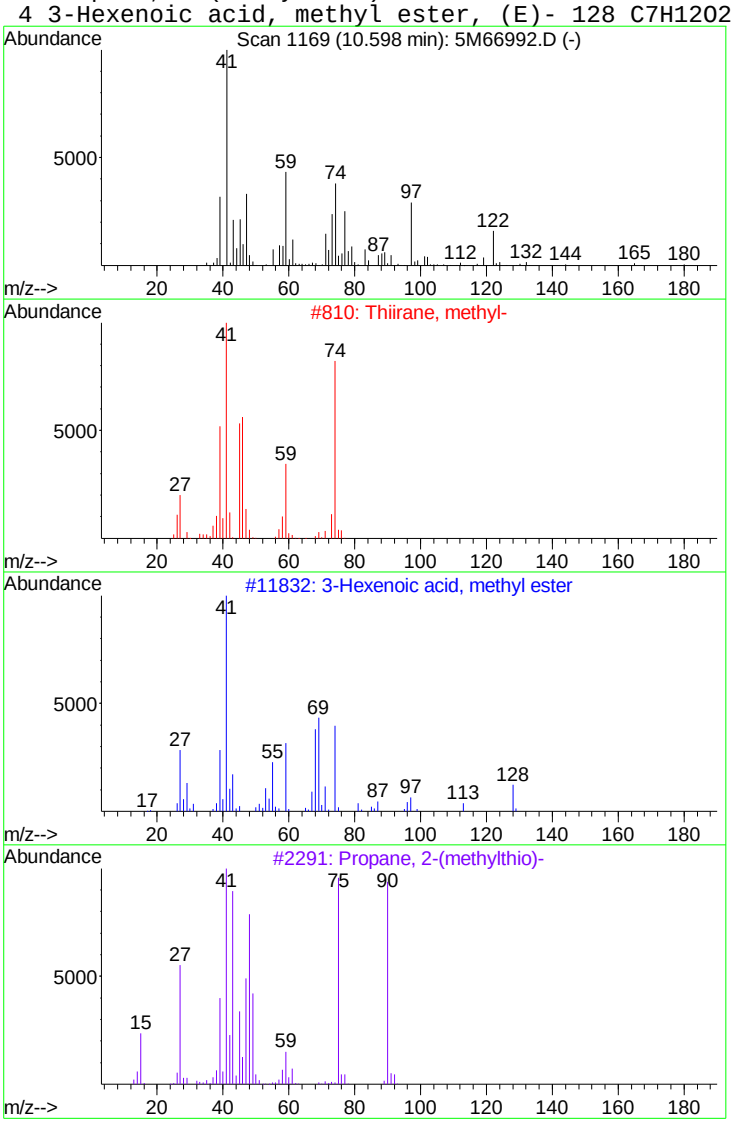
Quant Method : C:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
Title : OVD MSS01 8270/625/Initial cal. 05/11/12
Library : K:\ORGANICS\SEMIVOA\8270\NIST02.L

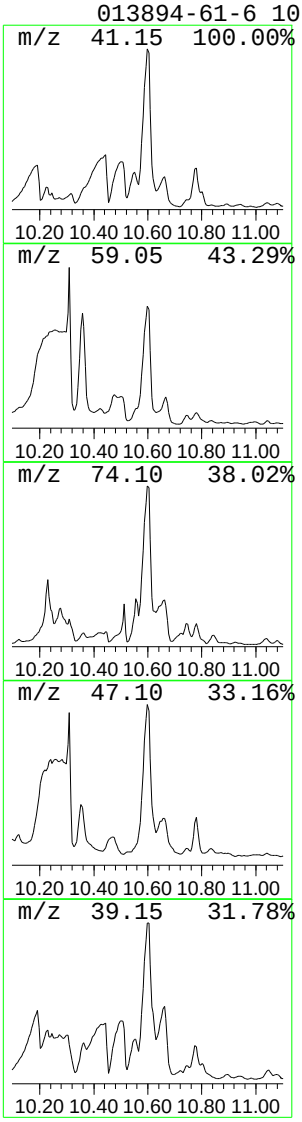
**********

Peak Number 15 Thiirane, methyl- Concentration Rank 12

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 10.60 | 144.63 ug/ml | 9301080 | Naphthalene-d8 | 10.92 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Thiirane, methyl- | 74 | C3H6S | 001072-43-1 | 22 |
| 2 | 3-Hexenoic acid, methyl ester | 128 | C7H12O2 | 002396-78-3 | 10 |
| 3 | Propane, 2-(methylthio)- | 90 | C4H10S | 001551-21-9 | 10 |
| 4 | 3-Hexenoic acid, methyl ester, (E)- | 128 | C7H12O2 | 013894-61-6 | 10 |



Data File : C:\MSDCHEM\1\DATA\051412\5M66992.D Vial: 17
Acq On : 14 May 2012 6:02 pm Operator: CAA
Sample : L12050284-01 2X Inst : HPMS5
Misc : 1,2 Multiplr: 2.00
MS Integration Params: LSCINT.P

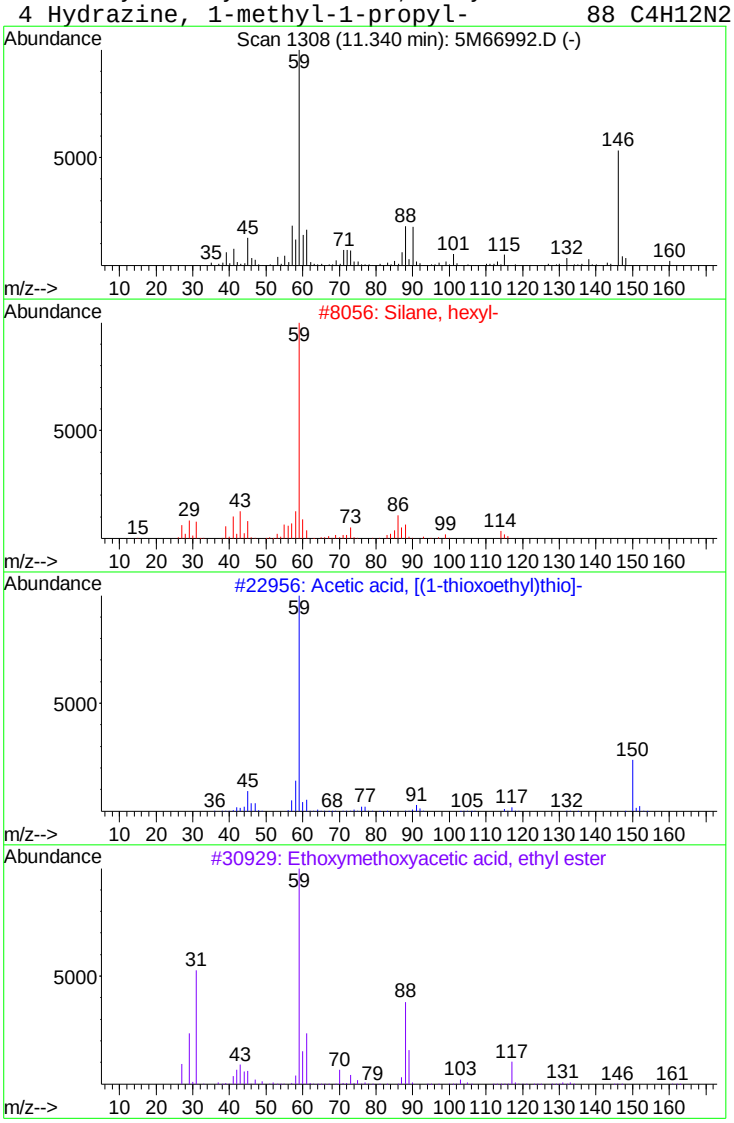
Quant Method : C:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
Title : OVD MSS01 8270/625/Initial cal. 05/11/12
Library : K:\ORGANICS\SEMIVOA\8270\NIST02.L

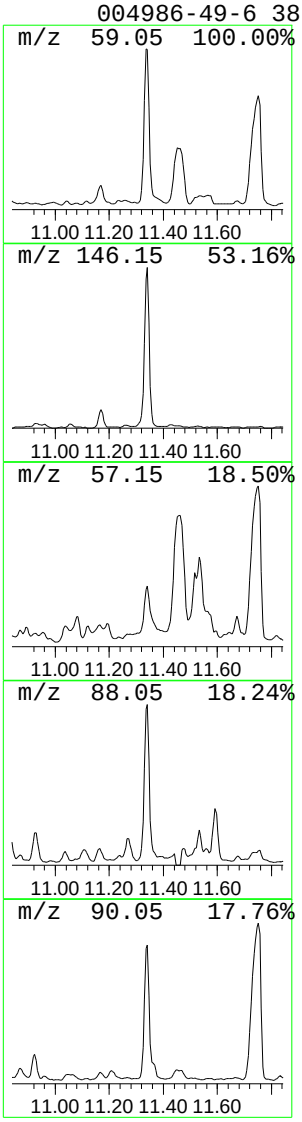
**********

Peak Number 16 Silane, hexyl- Concentration Rank 20

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 11.34 | 60.72 ug/ml | 3904630 | Naphthalene-d8 | 10.92 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Silane, hexyl- | 116 | C6H16Si | 001072-14-6 | 43 |
| 2 | Acetic acid, [(1-thioxoethyl)thio]- | 150 | C4H6O2S2 | 017930-82-4 | 38 |
| 3 | Ethoxymethoxyacetic acid, ethyl ... | 162 | C7H14O4 | 1000191-73-7 | 38 |
| 4 | Hydrazine, 1-methyl-1-propyl- | 88 | C4H12N2 | 004986-49-6 | 38 |



Data File : C:\MSDCHEM\1\DATA\051412\5M66992.D Vial: 17
Acq On : 14 May 2012 6:02 pm Operator: CAA
Sample : L12050284-01 2X Inst : HPMS5
Misc : 1,2 Multiplr: 2.00
MS Integration Params: LSCINT.P

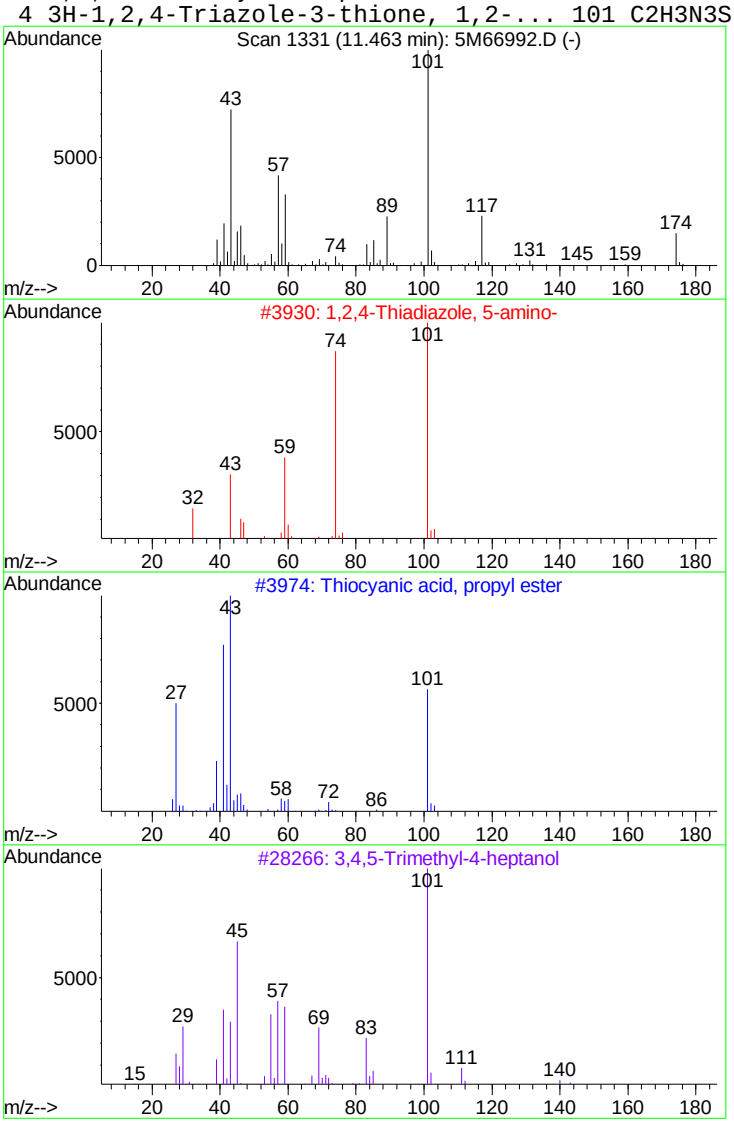
Quant Method : C:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
Title : OVD MSS01 8270/625/Initial cal. 05/11/12
Library : K:\ORGANICS\SEMIVOA\8270\NIST02.L

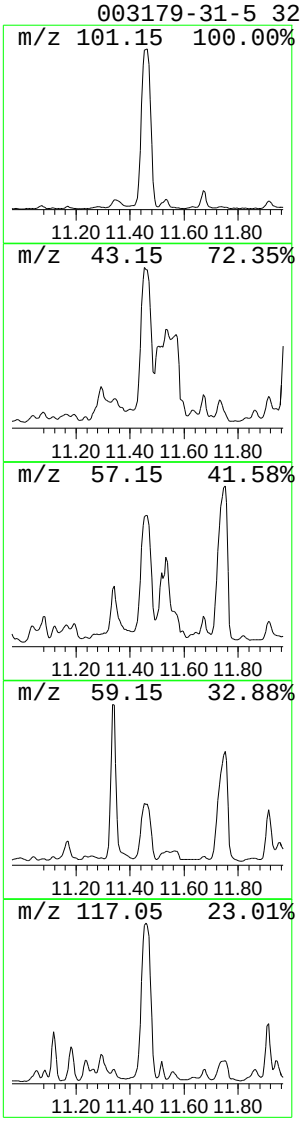
**********

Peak Number 17 1,2,4-Thiadiazole, 5-amino- Concentration Rank 18

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 11.46 | 73.01 ug/ml | 4695500 | Naphthalene-d8 | 10.92 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | 1,2,4-Thiadiazole, 5-amino- | 101 | C2H3N3S | 007552-07-0 | 49 |
| 2 | Thiocyanic acid, propyl ester | 101 | C4H7NS | 004251-16-5 | 43 |
| 3 | 3,4,5-Trimethyl-4-heptanol | 158 | C10H22O | 060836-08-0 | 38 |
| 4 | 3H-1,2,4-Triazole-3-thione, 1,2-... | 101 | C2H3N3S | 003179-31-5 | 32 |



Data File : C:\MSDCHEM\1\DATA\051412\5M66992.D Vial: 17
Acq On : 14 May 2012 6:02 pm Operator: CAA
Sample : L12050284-01 2X Inst : HPMS5
Misc : 1,2 Multiplr: 2.00
MS Integration Params: LSCINT.P

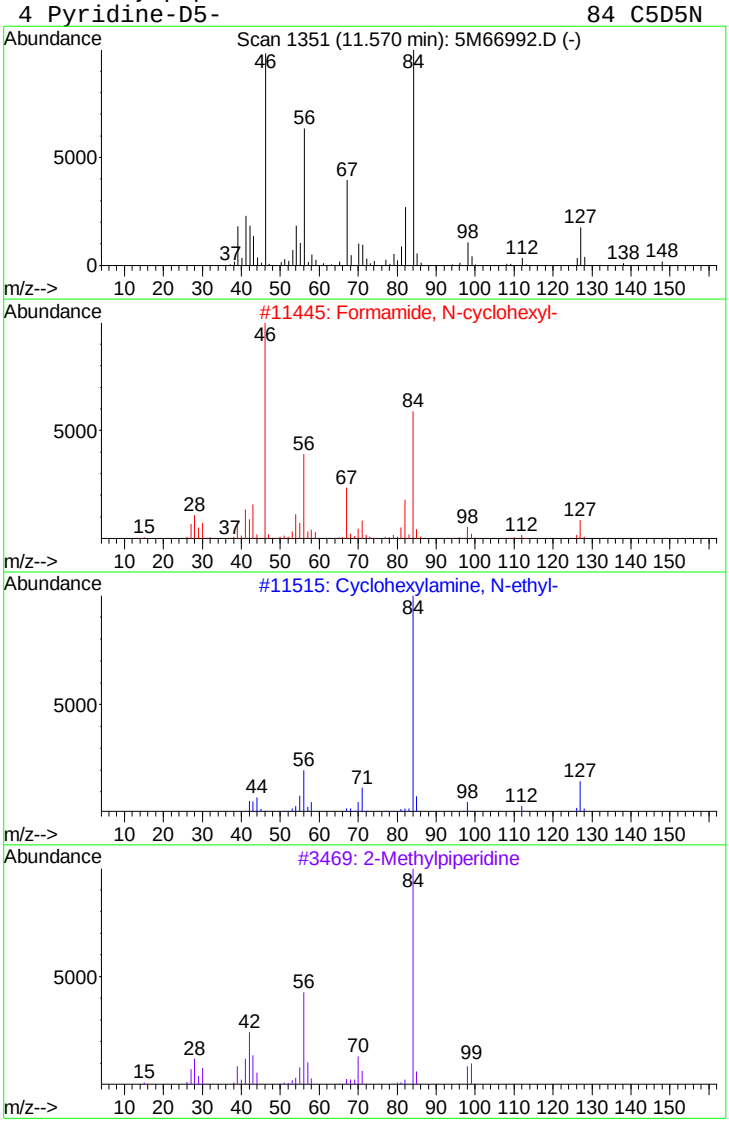
Quant Method : C:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
Title : OVD MSS01 8270/625/Initial cal. 05/11/12
Library : K:\ORGANICS\SEMIVOA\8270\NIST02.L

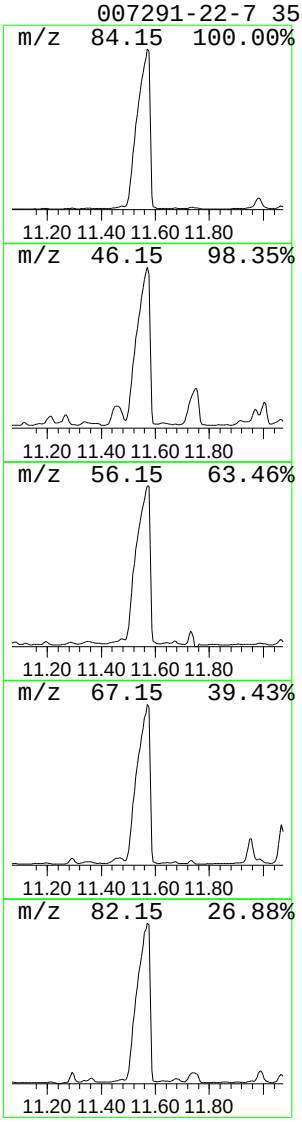
**********

Peak Number 18 Formamide, N-cyclohexyl- Concentration Rank 8

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 11.57 | 205.14 ug/ml | 13192900 | Naphthalene-d8 | 10.92 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Formamide, N-cyclohexyl- | 127 | C7H13NO | 000766-93-8 | 70 |
| 2 | Cyclohexylamine, N-ethyl- | 127 | C8H17N | 005459-93-8 | 43 |
| 3 | 2-Methylpiperidine | 99 | C6H13N | 000109-05-7 | 35 |
| 4 | Pyridine-D5- | 84 | C5D5N | 007291-22-7 | 35 |



Data File : C:\MSDCHEM\1\DATA\051412\5M66992.D Vial: 17
Acq On : 14 May 2012 6:02 pm Operator: CAA
Sample : L12050284-01 2X Inst : HPMS5
Misc : 1,2 Multiplr: 2.00
MS Integration Params: LSCINT.P

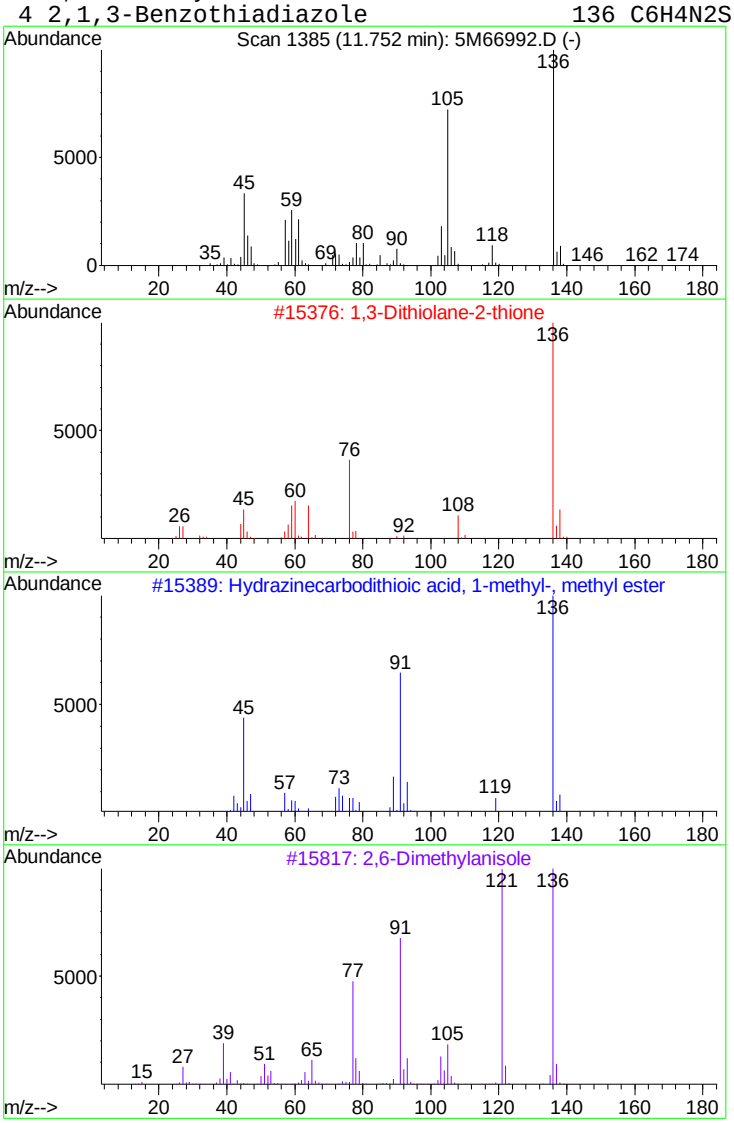
Quant Method : C:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
Title : OVD MSS01 8270/625/Initial cal. 05/11/12
Library : K:\ORGANICS\SEMIVOA\8270\NIST02.L

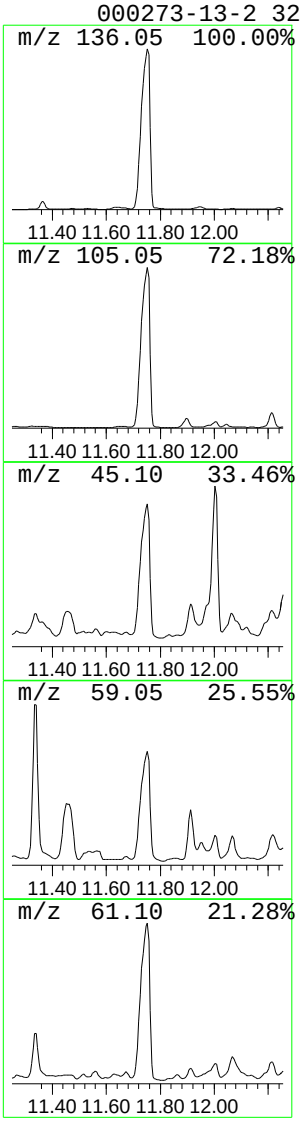
**********

Peak Number 19 1,3-Dithiolane-2-thione Concentration Rank 11

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 11.75 | 159.63 ug/ml | 10265600 | Naphthalene-d8 | 10.92 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | 1,3-Dithiolane-2-thione | 136 | C3H4S3 | 000822-38-8 | 37 |
| 2 | Hydrazinecarbodithioic acid, 1-m... | 136 | C3H8N2S2 | 020184-94-5 | 37 |
| 3 | 2,6-Dimethylanisole | 136 | C9H12O | 001004-66-6 | 35 |
| 4 | 2,1,3-Benzothiadiazole | 136 | C6H4N2S | 000273-13-2 | 32 |



Data File : C:\MSDCHEM\1\DATA\051412\5M66992.D Vial: 17
Acq On : 14 May 2012 6:02 pm Operator: CAA
Sample : L12050284-01 2X Inst : HPMS5
Misc : 1,2 Multiplr: 2.00
MS Integration Params: LSCINT.P

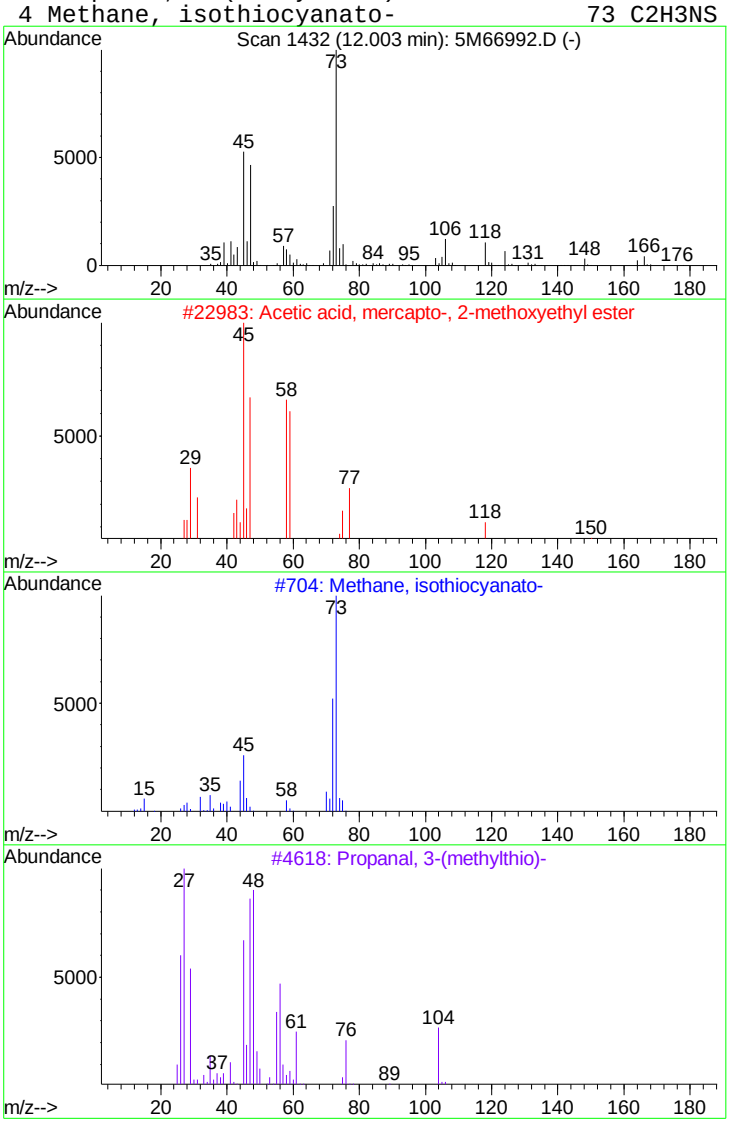
Quant Method : C:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
Title : OVD MSS01 8270/625/Initial cal. 05/11/12
Library : K:\ORGANICS\SEMIVOA\8270\NIST02.L

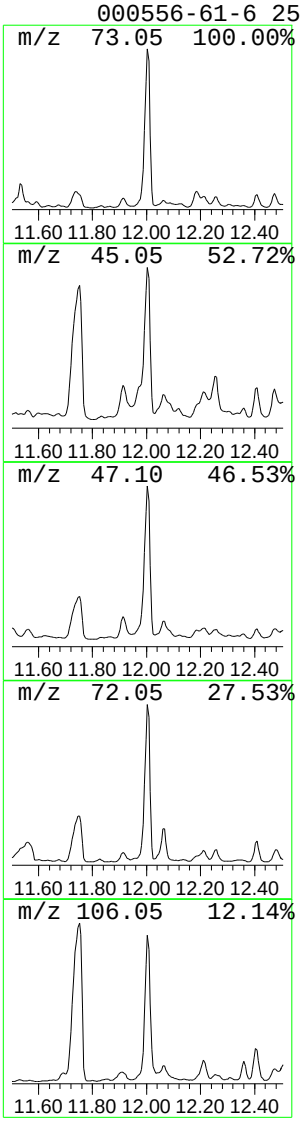
**********

Peak Number 20 Acetic acid, mercapto-, 2-m... Concentration Rank 19

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 12.00 | 64.21 ug/ml | 5409080 | Acenaphthene-d10 | 13.03 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Acetic acid, mercapto-, 2-methox... | 150 | C5H10O3S | 019788-48-8 | 38 |
| 2 | Methane, isothiocyanato- | 73 | C2H3NS | 000556-61-6 | 35 |
| 3 | Propanal, 3-(methylthio)- | 104 | C4H8OS | 003268-49-3 | 25 |
| 4 | Methane, isothiocyanato- | 73 | C2H3NS | 000556-61-6 | 25 |



Tentatively Identified Compound (LSC) summary

Operator ID: CAA  Date Acquired: 14 May 2012  6:02 pm
Data File: C:\MSDCHEM\1\DATA\051412\5M66992.D
Name: L12050284-01 2X
Misc: 1,2
Method: C:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
Title: OVD MSS01 8270/625/Initial cal. 05/11/12
Library Searched: K:\ORGANICS\SEMIVOA\8270\NIST02.L

| | | | | | Internal Standard | | | |
|---|---|---|---|---|---|---|---|---|
| TIC Top Hit name | RT | EstConc | Units | Response | # | RT | Resp | Conc |
| Ethanol, 2-(2-hyd... | 5.15 | 123.2 | ug/ml | 1753630 | 1 | 9.29 | 569375 | 40.0 |
| Methyl Isobutyl K... | 5.74 | 569.7 | ug/ml | 8109250 | 1 | 9.29 | 569375 | 40.0 |
| 2-Butanone, 4-hyd... | 6.53 | 202.8 | ug/ml | 2887110 | 1 | 9.29 | 569375 | 40.0 |
| 2-Butanone, 4-hyd... | 6.62 | 112.9 | ug/ml | 1607250 | 1 | 9.29 | 569375 | 40.0 |
| Acetic acid, merc... | 7.02 | 282.9 | ug/ml | 4027210 | 1 | 9.29 | 569375 | 40.0 |
| 3-Thietanol | 7.65 | 372.9 | ug/ml | 5308320 | 1 | 9.29 | 569375 | 40.0 |
| 3-Mercapto-2-meth... | 8.50 | 1108.2 | ug/ml | 15775100 | 1 | 9.29 | 569375 | 40.0 |
| Acetic acid, merc... | 8.66 | 255.6 | ug/ml | 3638990 | 1 | 9.29 | 569375 | 40.0 |
| Propane, 1,1,3,3-... | 8.78 | 86.5 | ug/ml | 1231420 | 1 | 9.29 | 569375 | 40.0 |
| Acetic acid, merc... | 8.94 | 266.2 | ug/ml | 3789850 | 1 | 9.29 | 569375 | 40.0 |
| 3-Mercaptopropion... | 9.66 | 724.1 | ug/ml | 10307500 | 1 | 9.29 | 569375 | 40.0 |
| Propanoic acid, 3... | 10.19 | 177.2 | ug/ml | 11393500 | 2 | 10.92 | 2572420 | 40.0 |
| 2-Oxepanone, 7-he... | 10.43 | 117.6 | ug/ml | 7560010 | 2 | 10.92 | 2572420 | 40.0 |
| Propanoic acid, 3... | 10.50 | 96.5 | ug/ml | 6207180 | 2 | 10.92 | 2572420 | 40.0 |
| Thiirane, methyl- | 10.60 | 144.6 | ug/ml | 9301080 | 2 | 10.92 | 2572420 | 40.0 |
| Silane, hexyl- | 11.34 | 60.7 | ug/ml | 3904630 | 2 | 10.92 | 2572420 | 40.0 |
| 1,2,4-Thiadiazole... | 11.46 | 73.0 | ug/ml | 4695500 | 2 | 10.92 | 2572420 | 40.0 |
| Formamide, N-cycl... | 11.57 | 205.1 | ug/ml | 13192900 | 2 | 10.92 | 2572420 | 40.0 |
| 1,3-Dithiolane-2-... | 11.75 | 159.6 | ug/ml | 10265600 | 2 | 10.92 | 2572420 | 40.0 |
| Acetic acid, merc... | 12.00 | 64.2 | ug/ml | 5409080 | 3 | 13.03 | 3369700 | 40.0 |

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\051412\5M66987.D Vial: 12
Acq On : 14 May 2012 3:00 pm Operator: CAA
Sample : L12050284-03 Inst : HPMS5
Misc : 1,1 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 16 08:13:33 2012 Quant Results File: MEGAMIX.RES

Quant Method : C:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
Title : OVD MSS01 8270/625/Initial cal. 05/11/12
Last Update : Wed May 16 08:13:18 2012
Response via : Initial Calibration
DataAcq Meth : BNA

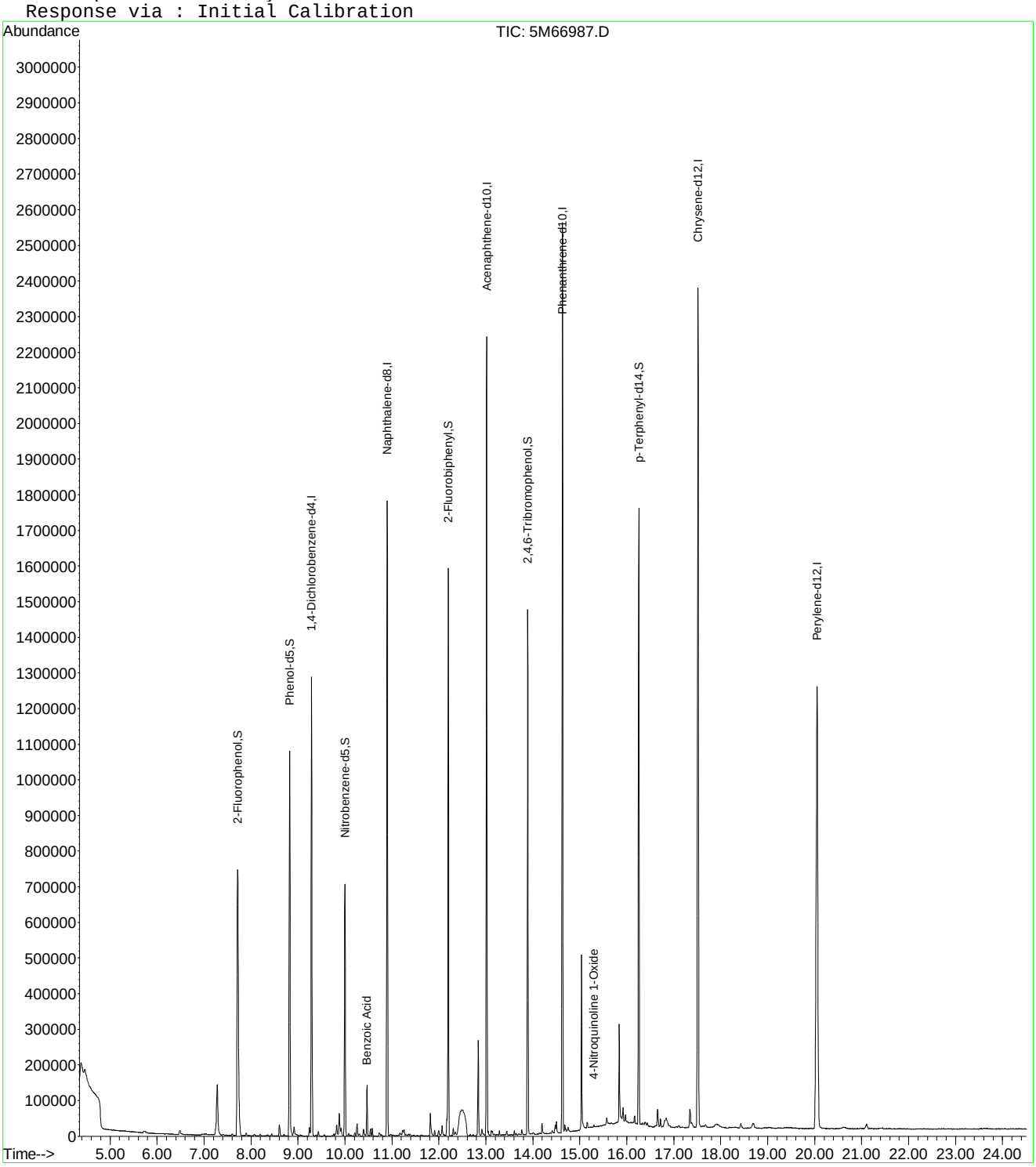
| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 1) 1,4-Dichlorobenzene-d4 | 9.29 | 152 | 292638 | 40.00 | ug/ml | 0.00 |
| 30) Naphthalene-d8 | 10.90 | 136 | 1074490 | 40.00 | ug/ml | -0.01 |
| 54) Acenaphthene-d10 | 13.02 | 164 | 633405 | 40.00 | ug/ml | 0.00 |
| 87) Phenanthrene-d10 | 14.63 | 188 | 1166533 | 40.00 | ug/ml | -0.01 |
| 113) Chrysene-d12 | 17.52 | 240 | 1380684 | 40.00 | ug/ml | -0.02 |
| 128) Perylene-d12 | 20.05 | 264 | 1256136 | 40.00 | ug/ml | -0.02 |
| **System Monitoring Compounds** | | | | | | |
| 8) 2-Fluorophenol | 7.72 | 112 | 436665 | 54.1219 | ug/ml | 0.00 |
| Spiked Amount 100.000 | Range 21 - 100 | | Recovery = 54.12% | | | |
| 12) Phenol-d5 | 8.82 | 99 | 514852 | 53.5199 | ug/ml | 0.00 |
| Spiked Amount 100.000 | Range 10 - 94 | | Recovery = 53.52% | | | |
| 31) Nitrobenzene-d5 | 10.00 | 82 | 269076 | 30.7105 | ug/ml | -0.01 |
| Spiked Amount 50.000 | Range 35 - 114 | | Recovery = 61.42% | | | |
| 59) 2-Fluorobiphenyl | 12.20 | 172 | 634001 | 29.6905 | ug/ml | 0.00 |
| Spiked Amount 50.000 | Range 43 - 116 | | Recovery = 59.38% | | | |
| 86) 2,4,6-Tribromophenol | 13.89 | 330 | 222589 | 64.8155 | ug/ml | -0.02 |
| Spiked Amount 100.000 | Range 10 - 123 | | Recovery = 64.82% | | | |
| 117) p-Terphenyl-d14 | 16.26 | 244 | 662206 | 29.9350 | ug/ml | 0.00 |
| Spiked Amount 50.000 | Range 33 - 141 | | Recovery = 59.88% | | | |
| **Target Compounds** | | | | | | Qvalue |
| 27) n-Nitrosomorpholine | 9.82 | 56 | 1104 | Below Cal | # | 32 |
| 39) Benzoic Acid | 10.46 | 105 | 1258 | 10.2982 | ug/ml | 96 |
| 109) 4-Nitroquinoline 1-Oxide | 15.30 | 190 | 1721 | 5.0952 | ug/ml# | 23 |
| 110) Methapyrilene | 15.51 | 58 | 807 | Below Cal | # | 64 |
| 121) Butyl Benzyl Phthalate | 16.72 | 149 | 1925 | Below Cal | # | 53 |

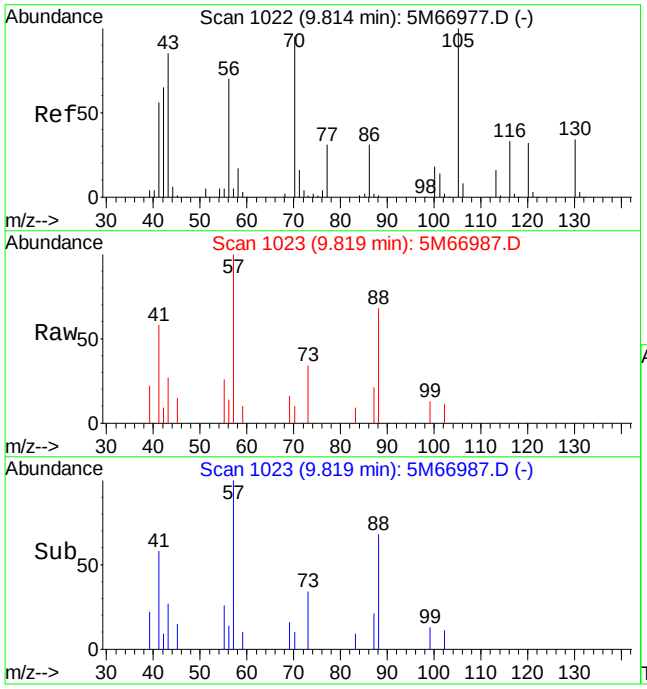
(#) = qualifier out of range (m) = manual integration
5M66987.D MEGAMIX.M Wed May 16 08:50:50 2012 Page 1

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\051412\5M66987.D Vial: 12
Acq On : 14 May 2012 3:00 pm Operator: CAA
Sample : L12050284-03 Inst : HPMS5
Misc : 1,1 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 16 8:13 2012 Quant Results File: MEGAMIX.RES

Method : C:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
Title : OVD MSS01 8270/625/Initial cal. 05/11/12
Last Update : Wed May 16 08:13:18 2012
Response via : Initial Calibration

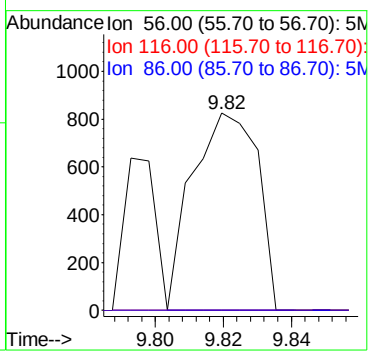


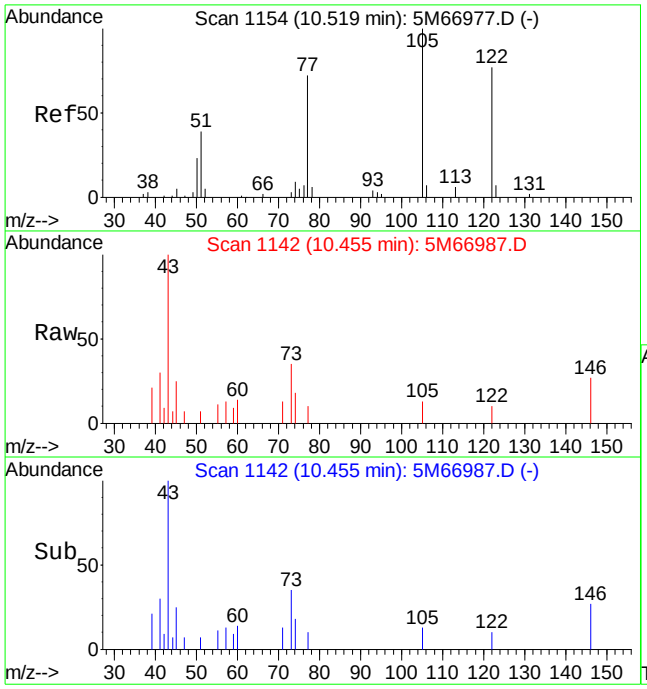



#27
n-Nitrosomorpholine
Concen: Below Cal
RT: 9.82 min Scan# 1023
Delta R.T. 0.00 min
Lab File: 5M66987.D
Acq: 14 May 2012 3:00 pm

Tgt Ion: 56 Resp: 1104

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 56 | 100 | | |
| 116 | 0.0 | 35.0 | 52.6# |
| 86 | 0.0 | 35.7 | 53.5# |

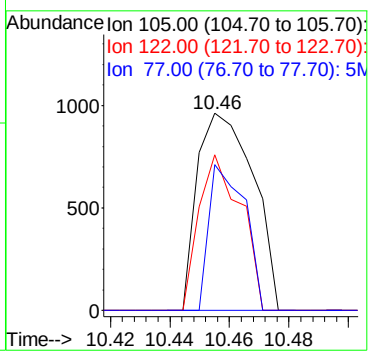


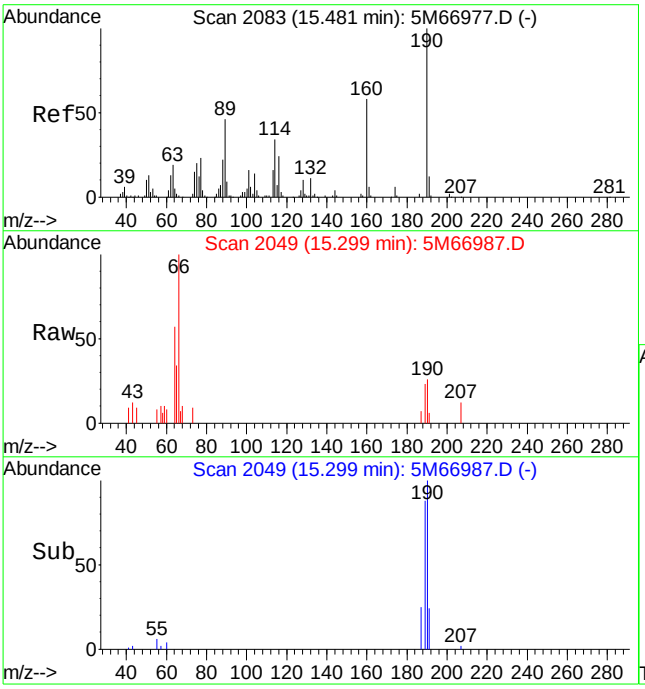




#39
Benzoic Acid
Concen: 10.30 ug/ml
RT: 10.46 min Scan# 1142
Delta R.T. -0.06 min
Lab File: 5M66987.D
Acq: 14 May 2012 3:00 pm

Tgt Ion:105 Resp: 1258

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 105 | 100 | | |
| 122 | 58.9 | 34.2 | 79.8 |
| 77 | 47.2 | 30.8 | 71.8 |

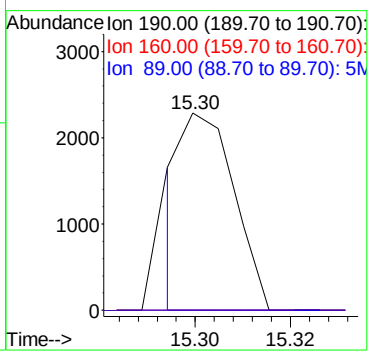





#109
4-Nitroquinoline 1-Oxide
Concen: 5.10 ug/ml
RT: 15.30 min Scan# 2049
Delta R.T. -0.18 min
Lab File: 5M66987.D
Acq: 14 May 2012 3:00 pm

Tgt Ion:190 Resp: 1721

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 190 | 100 | | |
| 160 | 0.0 | 48.2 | 72.2# |
| 89 | 0.0 | 41.0 | 61.4# |



Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\051412\5M66987.D Vial: 12
Acq On : 14 May 2012 3:00 pm Operator: CAA
Sample : L12050284-03 Inst : HPMS5
Misc : 1,1 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 16 09:13:23 2012 Quant Results File: TCL.RES

Quant Method : C:\MSDCHEM\1\METHODS\TCL.M (RTE Integrator)
Title : MSS01 OVD 827-TCL INITIAL CALIBRATION 05/14/12
Last Update : Wed May 16 09:13:02 2012
Response via : Initial Calibration
DataAcq Meth : BNA

| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 1) 1,4-Dichlorobenzene-d4 | 9.29 | 152 | 292638 | 40.00 | ug/mL | 0.00 |
| 3) Naphthalene-d8 | 10.90 | 136 | 1074490 | 40.00 | ug/mL | 0.00 |
| 5) Acenaphthene-d10 | 13.02 | 164 | 633405 | 40.00 | ug/mL | 0.00 |
| 7) Phenanthrene-d10 | 14.63 | 188 | 1166533 | 40.00 | ug/mL | 0.00 |

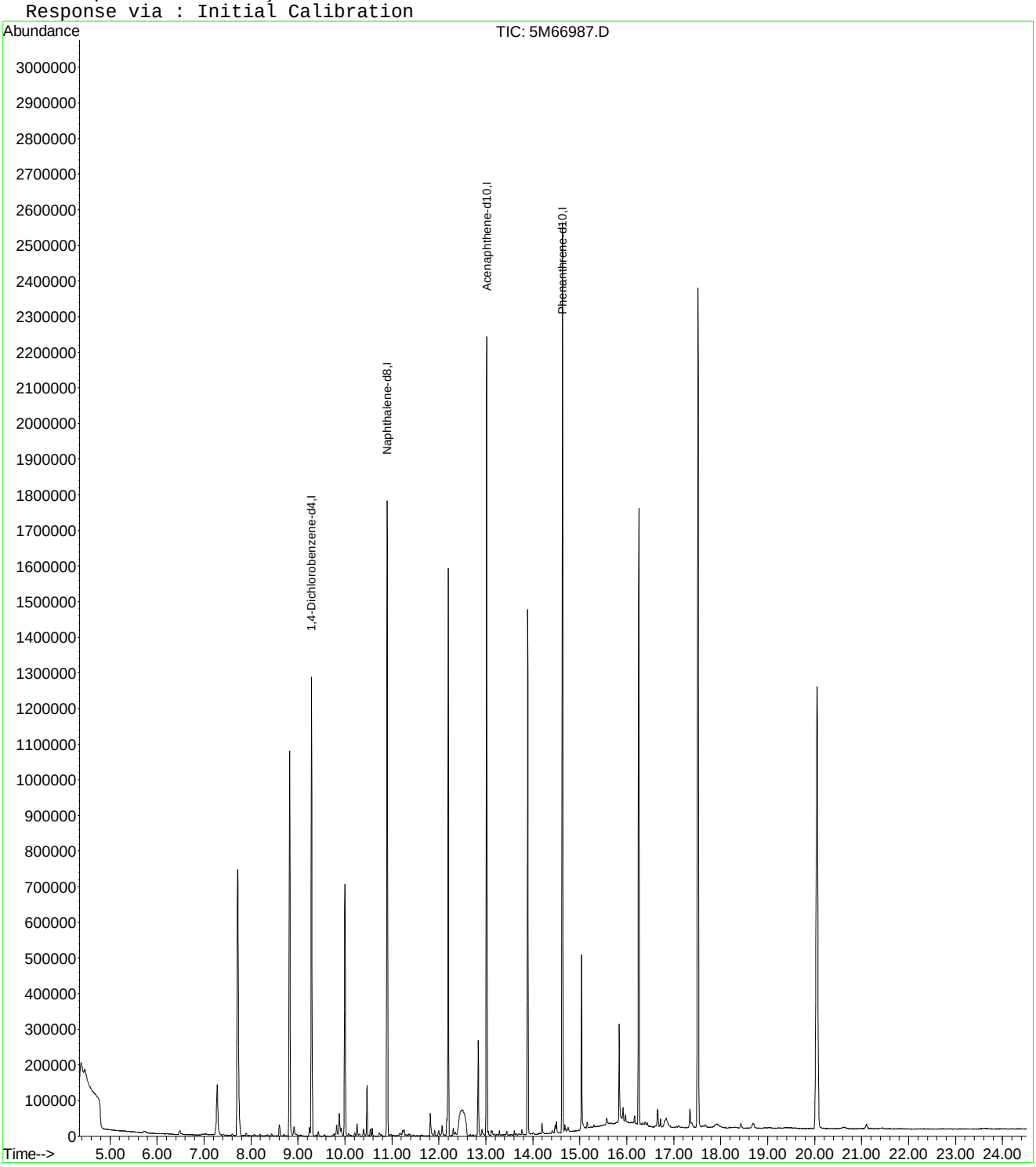
Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration
5M66987.D TCL.M Wed May 16 09:13:23 2012 Page 1

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\051412\5M66987.D Vial: 12
Acq On : 14 May 2012 3:00 pm Operator: CAA
Sample : L12050284-03 Inst : HPMS5
Misc : 1,1 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 16 9:13 2012 Quant Results File: TCL.RES

Method : C:\MSDCHEM\1\METHODS\TCL.M (RTE Integrator)
Title : MSS01 OVD 827-TCL INITIAL CALIBRATION 05/14/12
Last Update : Wed May 16 09:13:02 2012
Response via : Initial Calibration



LSC Area Percent Report

Data File : C:\MSDCHEM\1\DATA\051412\5M66987.D Vial: 12
Acq On : 14 May 2012 3:00 pm Operator: CAA
Sample : L12050284-03 Inst : HPMS5
Misc : 1,1 Multiplr: 1.00
MS Integration Params: LSCINT.P

Method : C:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
Title : OVD MSS01 8270/625/Initial cal. 05/11/12
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 1 % of largest Peak
Start Thrs: 0.05 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

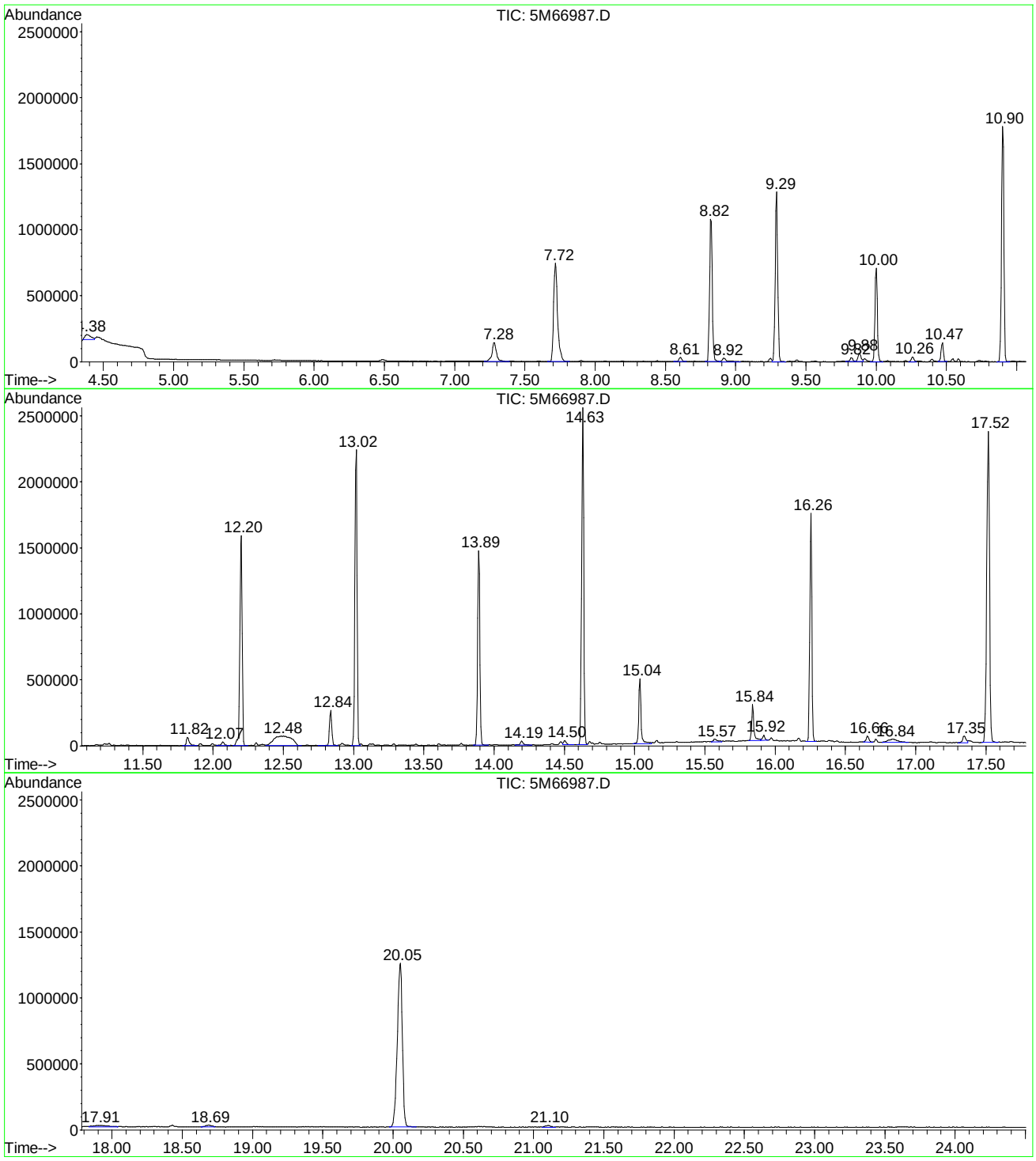
If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Signal : TIC

| peak # | R.T. min | first scan | max scan | last scan | PK TY | peak height | corr. area | corr. % max. | % of total |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 4.382 | 3 | 8 | 18 | rBV2 | 36501 | 106688 | 3.19% | 0.383% |
| 2 | 7.282 | 535 | 548 | 567 | rVB2 | 142072 | 309804 | 9.28% | 1.113% |
| 3 | 7.715 | 619 | 629 | 647 | rVB | 746705 | 1468496 | 43.97% | 5.275% |
| 4 | 8.607 | 787 | 796 | 803 | rBV | 31338 | 43794 | 1.31% | 0.157% |
| 5 | 8.821 | 829 | 836 | 848 | rBV | 1080858 | 1431786 | 42.87% | 5.143% |
| 6 | 8.917 | 848 | 854 | 875 | rVB3 | 26380 | 62138 | 1.86% | 0.223% |
| 7 | 9.291 | 918 | 924 | 935 | rVB | 1289169 | 1640650 | 49.12% | 5.893% |
| 8 | 9.825 | 1016 | 1024 | 1029 | rBV2 | 29632 | 47222 | 1.41% | 0.170% |
| 9 | 9.878 | 1029 | 1034 | 1039 | rVV4 | 64078 | 97786 | 2.93% | 0.351% |
| 10 | 10.001 | 1049 | 1057 | 1065 | rVB | 707793 | 844089 | 25.27% | 3.032% |
| 11 | 10.257 | 1100 | 1105 | 1110 | rBV2 | 35308 | 46467 | 1.39% | 0.167% |
| 12 | 10.471 | 1139 | 1145 | 1150 | rVV | 143184 | 169167 | 5.06% | 0.608% |
| 13 | 10.898 | 1218 | 1225 | 1234 | rBV | 1783092 | 2095756 | 62.75% | 7.527% |
| 14 | 11.817 | 1391 | 1397 | 1409 | rBV2 | 63132 | 91339 | 2.73% | 0.328% |
| 15 | 12.068 | 1436 | 1444 | 1453 | rVB2 | 28503 | 43972 | 1.32% | 0.158% |
| 16 | 12.202 | 1458 | 1469 | 1477 | rBV | 1592962 | 1804192 | 54.02% | 6.480% |
| 17 | 12.485 | 1502 | 1522 | 1548 | rVB9 | 73380 | 653040 | 19.55% | 2.346% |
| 18 | 12.837 | 1571 | 1588 | 1597 | rBV | 268006 | 311320 | 9.32% | 1.118% |
| 19 | 13.019 | 1615 | 1622 | 1627 | rBV | 2242173 | 2452468 | 73.43% | 8.809% |
| 20 | 13.889 | 1778 | 1785 | 1797 | rBV | 1474626 | 1603776 | 48.02% | 5.760% |
| 21 | 14.194 | 1834 | 1842 | 1855 | rVB | 29945 | 40384 | 1.21% | 0.145% |
| 22 | 14.504 | 1897 | 1900 | 1911 | rVB | 32772 | 42323 | 1.27% | 0.152% |
| 23 | 14.632 | 1916 | 1924 | 1930 | rBV | 2555422 | 2766193 | 82.82% | 9.936% |
| 24 | 15.038 | 1991 | 2000 | 2015 | rBV | 492700 | 552120 | 16.53% | 1.983% |
| 25 | 15.572 | 2095 | 2100 | 2109 | rBV5 | 19942 | 39223 | 1.17% | 0.141% |
| 26 | 15.839 | 2145 | 2150 | 2161 | rBV | 276813 | 320358 | 9.59% | 1.151% |
| 27 | 15.919 | 2161 | 2165 | 2170 | rVB | 38934 | 44062 | 1.32% | 0.158% |
| 28 | 16.255 | 2221 | 2228 | 2234 | rVB | 1729628 | 1836032 | 54.97% | 6.595% |
| 29 | 16.656 | 2298 | 2303 | 2310 | rVV | 48191 | 63005 | 1.89% | 0.226% |
| 30 | 16.843 | 2323 | 2338 | 2357 | rVB2 | 26366 | 114867 | 3.44% | 0.413% |
| 31 | 17.345 | 2424 | 2432 | 2437 | rBV | 51821 | 83710 | 2.51% | 0.301% |
| 32 | 17.516 | 2456 | 2464 | 2477 | rBV | 2356103 | 3339932 | 100.00% | 11.996% |
| 33 | 17.906 | 2524 | 2537 | 2562 | rVB6 | 10229 | 67076 | 2.01% | 0.241% |
| 34 | 18.686 | 2673 | 2683 | 2691 | rBV6 | 13035 | 36573 | 1.10% | 0.131% |
| 35 | 20.053 | 2924 | 2939 | 2959 | rBV | 1240915 | 3137969 | 93.95% | 11.271% |
| 36 | 21.100 | 3128 | 3135 | 3145 | rVB3 | 13590 | 33566 | 1.00% | 0.121% |

Sum of corrected areas: 27841343

```
File       : C:\MSDCHEM\1\DATA\051412\5M66987.D
Operator   : CAA
Acquired   : 14 May 2012   3:00 pm using AcqMethod BNA
Instrument :   HPMS5
Sample Name: L12050284-03
Misc Info  : 1,1
Vial Number: 12
Quant File :MEGAMIX.RES (RTE Integrator)
```



Data File : C:\MSDCHEM\1\DATA\051412\5M66987.D Vial: 12
Acq On : 14 May 2012 3:00 pm Operator: CAA
Sample : L12050284-03 Inst : HPMS5
Misc : 1,1 Multiplr: 1.00
MS Integration Params: LSCINT.P

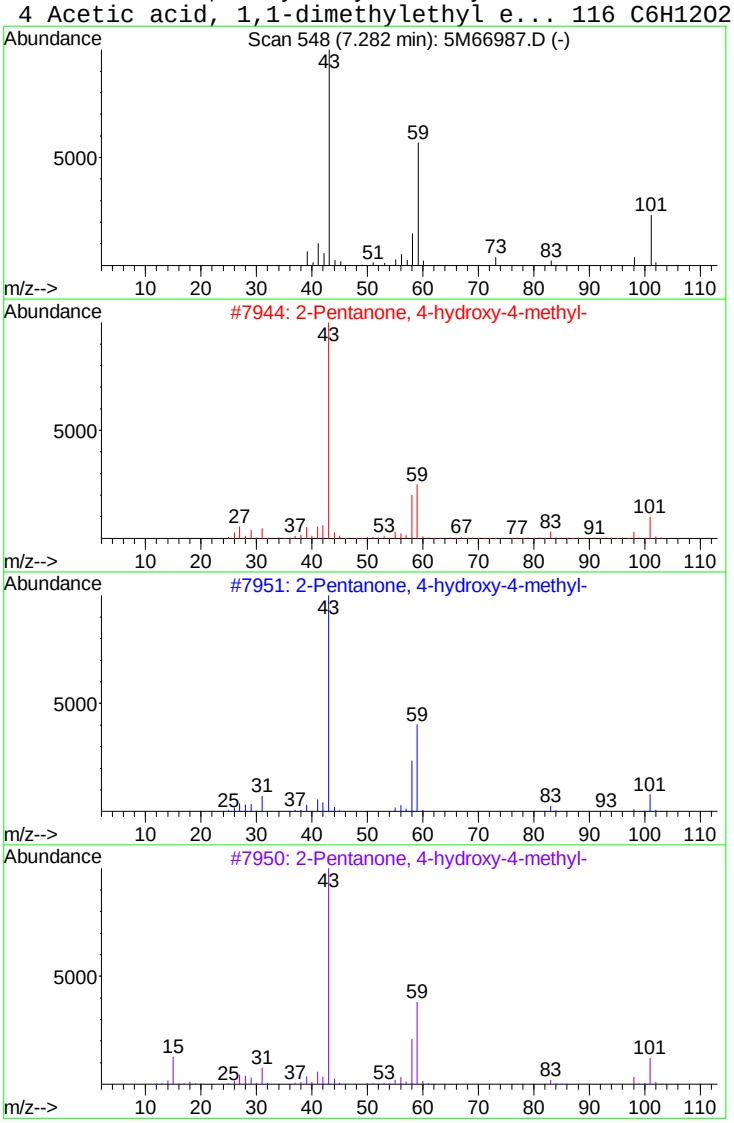
Quant Method : C:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
Title : OVD MSS01 8270/625/Initial cal. 05/11/12
Library : K:\ORGANICS\SEMIVOA\8270\NIST02.L

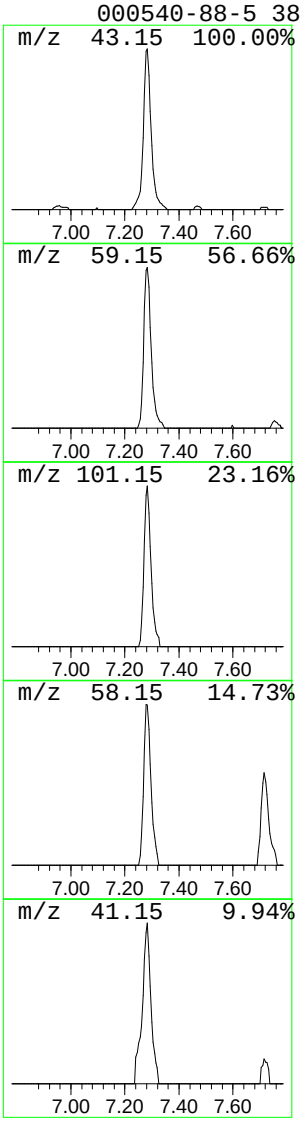
**********

Peak Number 1 2-Pentanone, 4-hydroxy-4-me... Concentration Rank 3

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 7.28 | 7.55 ug/ml | 309804 | 1,4-Dichlorobenzene-d4 | 9.29 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | 2-Pentanone, 4-hydroxy-4-methyl- | 116 | C6H12O2 | 000123-42-2 | 64 |
| 2 | 2-Pentanone, 4-hydroxy-4-methyl- | 116 | C6H12O2 | 000123-42-2 | 50 |
| 3 | 2-Pentanone, 4-hydroxy-4-methyl- | 116 | C6H12O2 | 000123-42-2 | 45 |
| 4 | Acetic acid, 1,1-dimethylethyl e... | 116 | C6H12O2 | 000540-88-5 | 38 |



Data File : C:\MSDCHEM\1\DATA\051412\5M66987.D Vial: 12
Acq On : 14 May 2012 3:00 pm Operator: CAA
Sample : L12050284-03 Inst : HPMS5
Misc : 1,1 Multiplr: 1.00
MS Integration Params: LSCINT.P

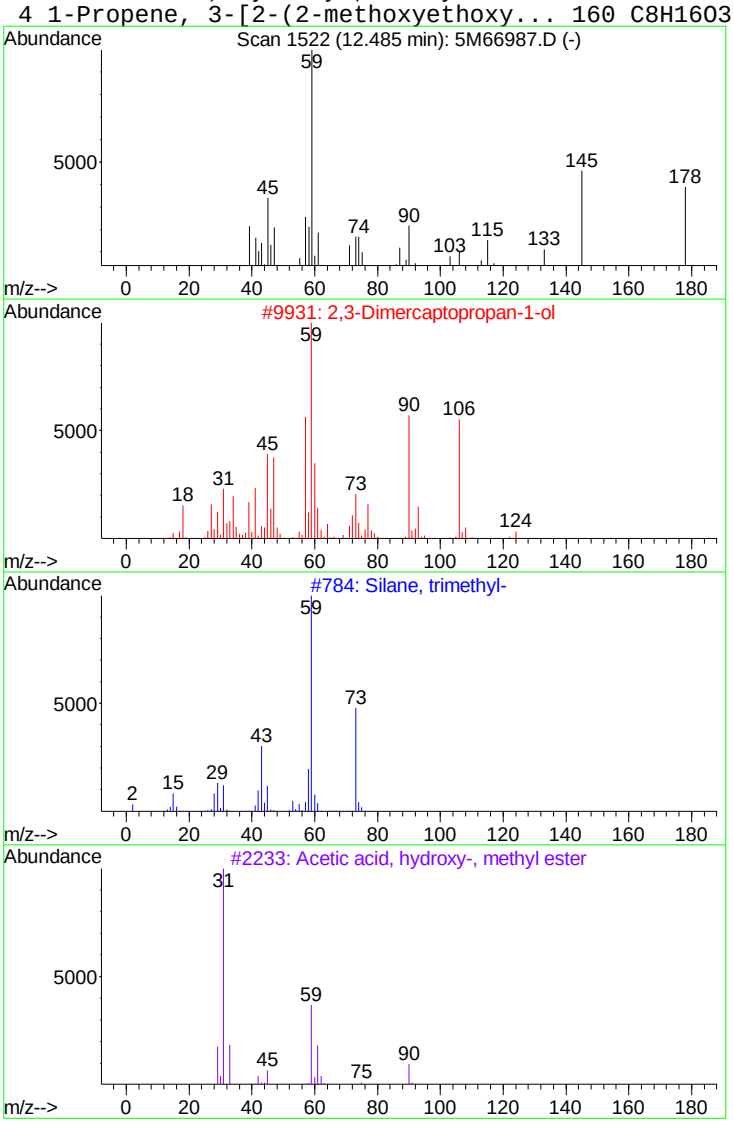
Quant Method : C:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
Title : OVD MSS01 8270/625/Initial cal. 05/11/12
Library : K:\ORGANICS\SEMIVOA\8270\NIST02.L

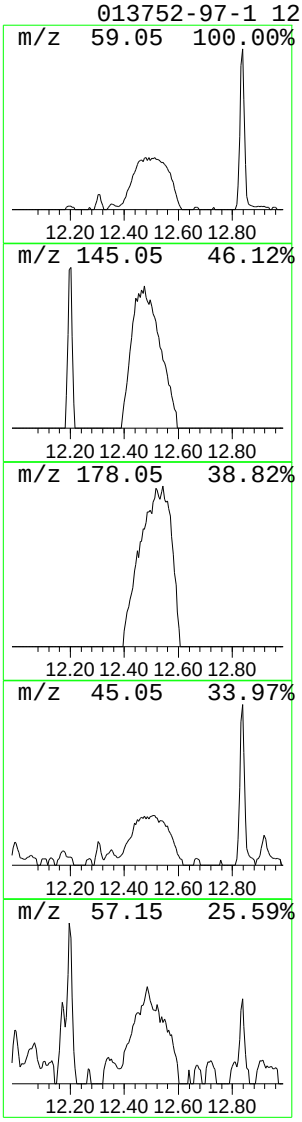
**********

Peak Number 2 2,3-Dimercaptopropan-1-ol Concentration Rank 1

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 12.48 | 10.65 ug/ml | 653040 | Acenaphthene-d10 | 13.02 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | 2,3-Dimercaptopropan-1-ol | 124 | C3H8OS2 | 000059-52-9 | 12 |
| 2 | Silane, trimethyl- | 74 | C3H10Si | 000993-07-7 | 12 |
| 3 | Acetic acid, hydroxy-, methyl ester | 90 | C3H6O3 | 000096-35-5 | 12 |
| 4 | 1-Propene, 3-[2-(2-methoxyethoxy... | 160 | C8H16O3 | 013752-97-1 | 12 |



Data File : C:\MSDCHEM\1\DATA\051412\5M66987.D Vial: 12
Acq On : 14 May 2012 3:00 pm Operator: CAA
Sample : L12050284-03 Inst : HPMS5
Misc : 1,1 Multiplr: 1.00
MS Integration Params: LSCINT.P

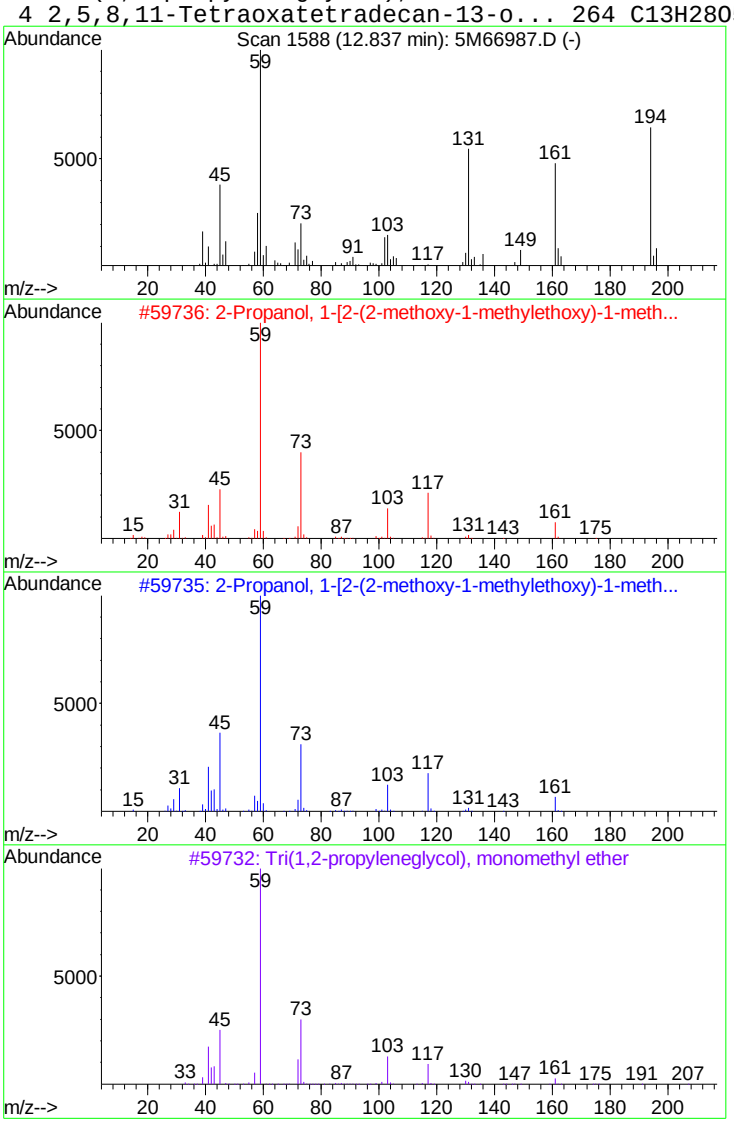
Quant Method : C:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
Title : OVD MSS01 8270/625/Initial cal. 05/11/12
Library : K:\ORGANICS\SEMIVOA\8270\NIST02.L

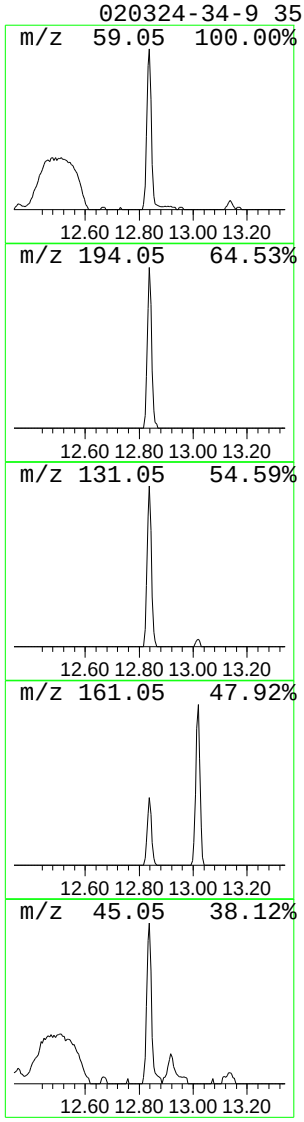
**********

Peak Number 3 2-Propanol, 1-[2-(2-methoxy... Concentration Rank 4

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 12.84 | 5.08 ug/ml | 311320 | Acenaphthene-d10 | 13.02 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | 2-Propanol, 1-[2-(2-methoxy-1-me... | 206 | C10H22O4 | 020324-33-8 | 47 |
| 2 | 2-Propanol, 1-[2-(2-methoxy-1-me... | 206 | C10H22O4 | 020324-33-8 | 38 |
| 3 | Tri(1,2-propyleneglycol), monome... | 206 | C10H22O4 | 1000262-26-6 | 37 |
| 4 | 2,5,8,11-Tetraoxatetradecan-13-o... | 264 | C13H28O5 | 020324-34-9 | 35 |



Data File : C:\MSDCHEM\1\DATA\051412\5M66987.D Vial: 12
Acq On : 14 May 2012 3:00 pm Operator: CAA
Sample : L12050284-03 Inst : HPMS5
Misc : 1,1 Multiplr: 1.00
MS Integration Params: LSCINT.P

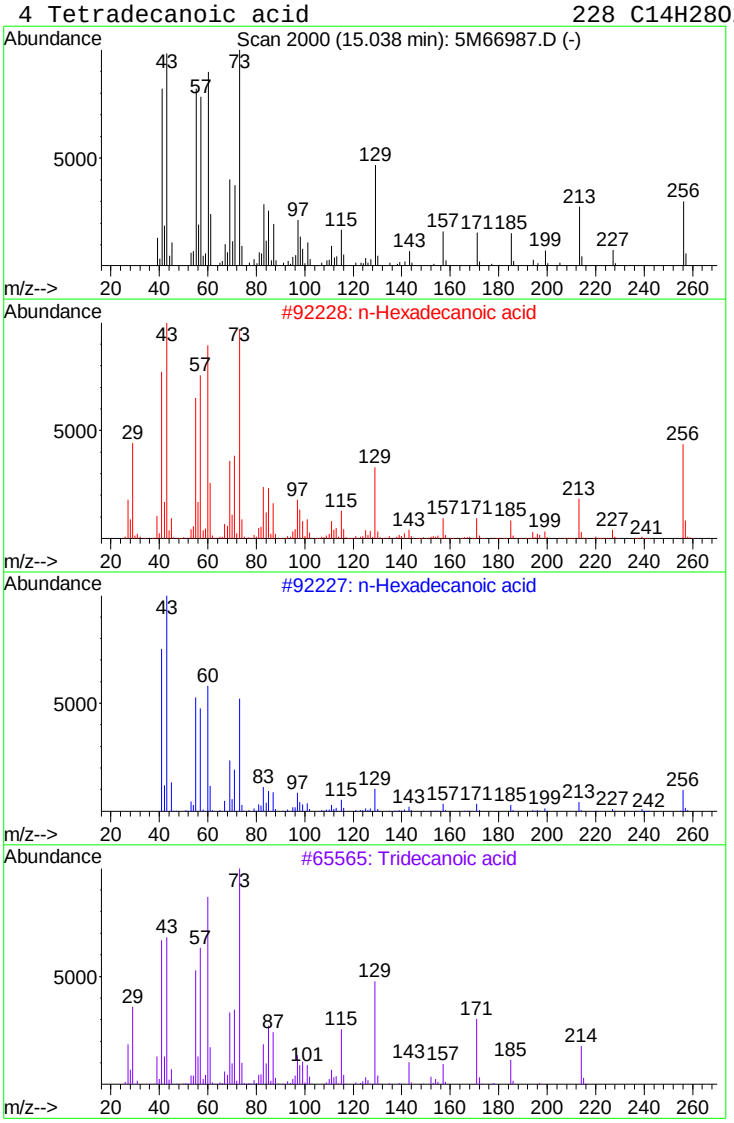
Quant Method : C:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
Title : OVD MSS01 8270/625/Initial cal. 05/11/12
Library : K:\ORGANICS\SEMIVOA\8270\NIST02.L

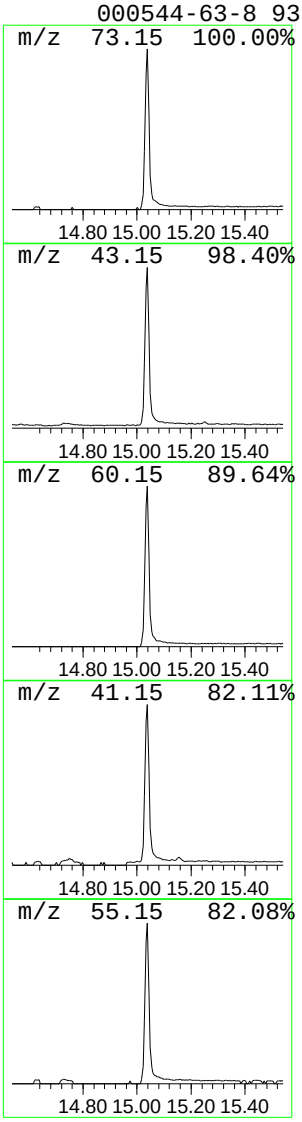
**********

Peak Number 4 n-Hexadecanoic acid Concentration Rank 2

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 15.04 | 7.98 ug/ml | 552120 | Phenanthrene-d10 | 14.63 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | n-Hexadecanoic acid | 256 | C16H32O2 | 000057-10-3 | 98 |
| 2 | n-Hexadecanoic acid | 256 | C16H32O2 | 000057-10-3 | 96 |
| 3 | Tridecanoic acid | 214 | C13H26O2 | 000638-53-9 | 95 |
| 4 | Tetradecanoic acid | 228 | C14H28O2 | 000544-63-8 | 93 |



Data File : C:\MSDCHEM\1\DATA\051412\5M66987.D Vial: 12
Acq On : 14 May 2012 3:00 pm Operator: CAA
Sample : L12050284-03 Inst : HPMS5
Misc : 1,1 Multiplr: 1.00
MS Integration Params: LSCINT.P

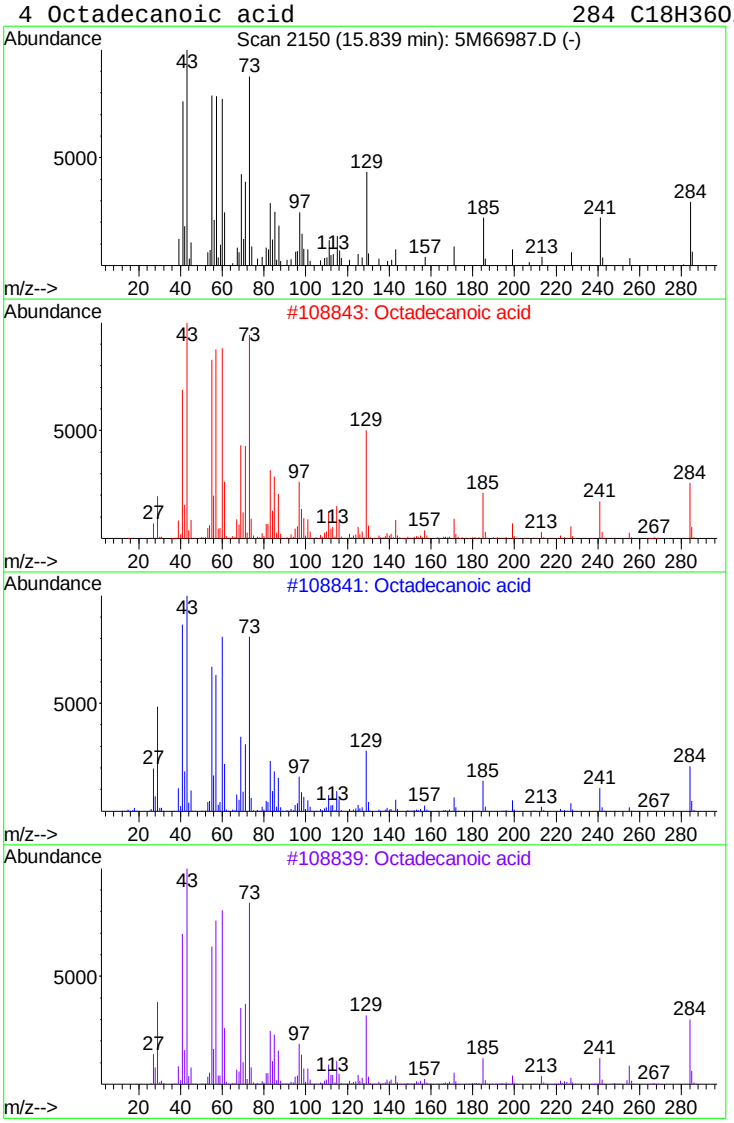
Quant Method : C:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
Title : OVD MSS01 8270/625/Initial cal. 05/11/12
Library : K:\ORGANICS\SEMIVOA\8270\NIST02.L

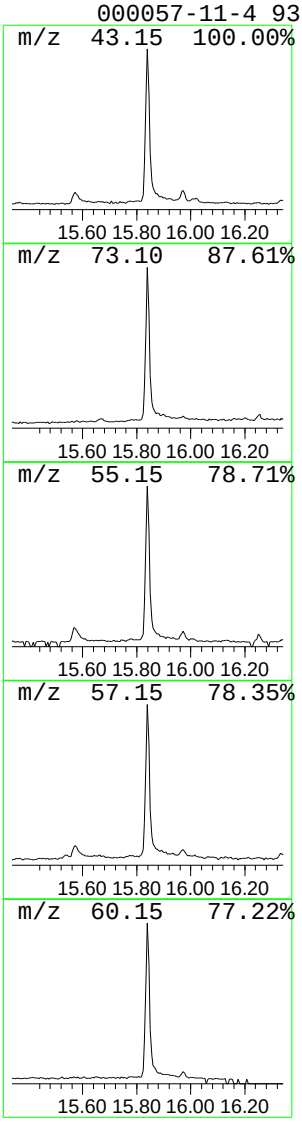
**********

Peak Number 5 Octadecanoic acid Concentration Rank 5

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 15.84 | 4.63 ug/ml | 320358 | Phenanthrene-d10 | 14.63 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Octadecanoic acid | 284 | C18H36O2 | 000057-11-4 | 99 |
| 2 | Octadecanoic acid | 284 | C18H36O2 | 000057-11-4 | 99 |
| 3 | Octadecanoic acid | 284 | C18H36O2 | 000057-11-4 | 95 |
| 4 | Octadecanoic acid | 284 | C18H36O2 | 000057-11-4 | 93 |



Tentatively Identified Compound (LSC) summary

Operator ID: CAA  Date Acquired: 14 May 2012  3:00 pm
Data File: C:\MSDCHEM\1\DATA\051412\5M66987.D
Name: L12050284-03
Misc: 1,1
Method: C:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
Title: OVD MSS01 8270/625/Initial cal. 05/11/12
Library Searched: K:\ORGANICS\SEMIVOA\8270\NIST02.L

| | | | | | Internal Standard | | | |
|---|---|---|---|---|---|---|---|---|
| TIC Top Hit name | RT | EstConc | Units | Response | # | RT | Resp | Conc |
| 2-Pentanone, 4-hy... | 7.28 | 7.6 | ug/ml | 309804 | 1 | 9.29 | 1640650 | 40.0 |
| 2,3-Dimercaptopro... | 12.48 | 10.7 | ug/ml | 653040 | 3 | 13.02 | 2452470 | 40.0 |
| 2-Propanol, 1-[2-... | 12.84 | 5.1 | ug/ml | 311320 | 3 | 13.02 | 2452470 | 40.0 |
| n-Hexadecanoic acid | 15.04 | 8.0 | ug/ml | 552120 | 4 | 14.63 | 2766190 | 40.0 |
| Octadecanoic acid | 15.84 | 4.6 | ug/ml | 320358 | 4 | 14.63 | 2766190 | 40.0 |

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\051412\5M66988.D Vial: 13
Acq On : 14 May 2012 3:36 pm Operator: CAA
Sample : L12050284-05 Inst : HPMS5
Misc : 1,1 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 16 08:13:34 2012 Quant Results File: MEGAMIX.RES

Quant Method : C:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
Title : OVD MSS01 8270/625/Initial cal. 05/11/12
Last Update : Wed May 16 08:13:18 2012
Response via : Initial Calibration
DataAcq Meth : BNA

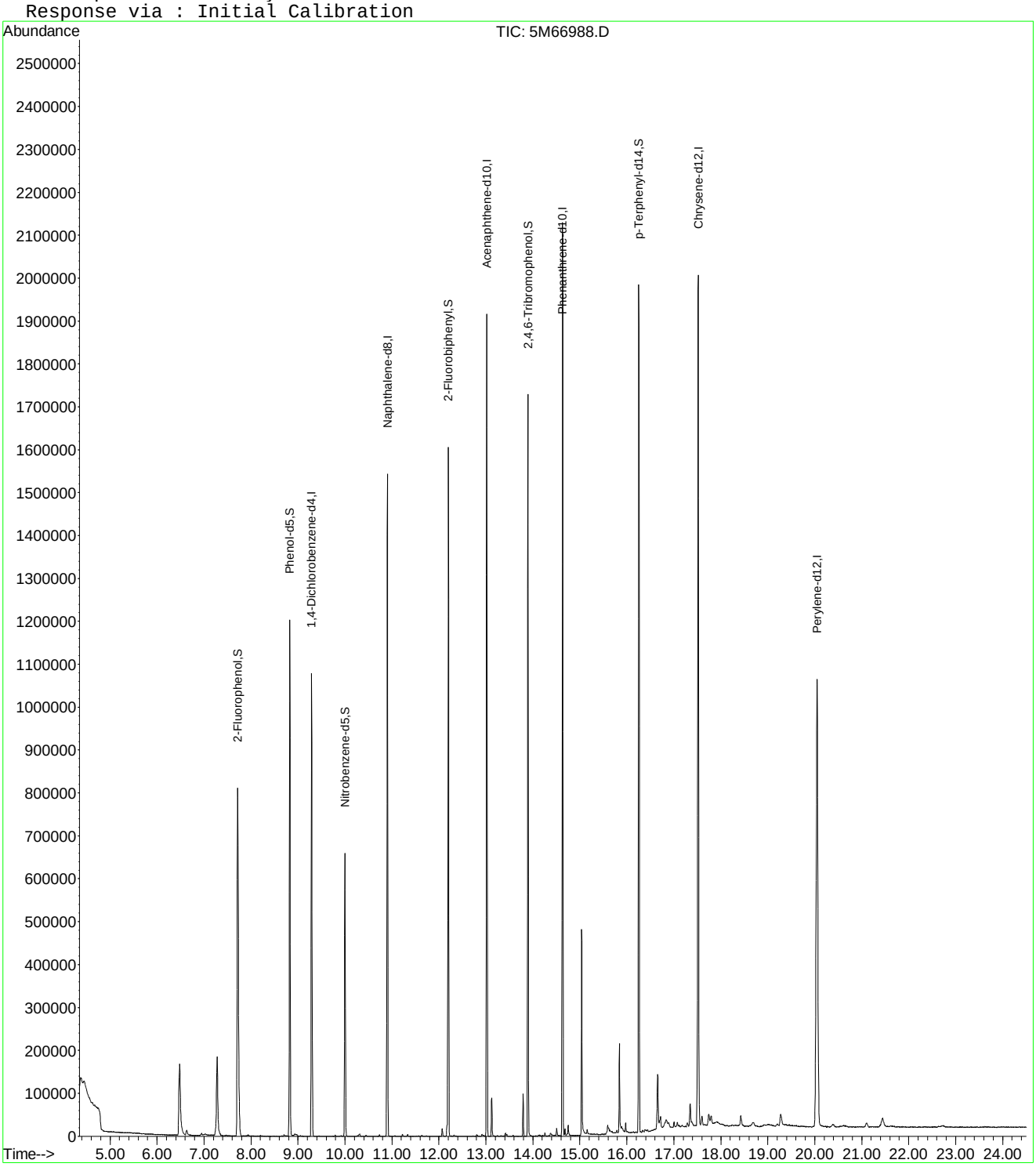
| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 1) 1,4-Dichlorobenzene-d4 | 9.29 | 152 | 246713 | 40.00 | ug/ml | -0.01 |
| 30) Naphthalene-d8 | 10.90 | 136 | 916131 | 40.00 | ug/ml | -0.01 |
| 54) Acenaphthene-d10 | 13.02 | 164 | 531636 | 40.00 | ug/ml | -0.01 |
| 87) Phenanthrene-d10 | 14.63 | 188 | 985030 | 40.00 | ug/ml | -0.02 |
| 113) Chrysene-d12 | 17.52 | 240 | 1173558 | 40.00 | ug/ml | -0.02 |
| 128) Perylene-d12 | 20.05 | 264 | 1042224 | 40.00 | ug/ml | -0.02 |
| **System Monitoring Compounds** | | | | | | |
| 8) 2-Fluorophenol | 7.72 | 112 | 442990 | 65.1264 | ug/ml | 0.00 |
| Spiked Amount 100.000 | Range 21 - 100 | | Recovery = 65.13% | | | |
| 12) Phenol-d5 | 8.82 | 99 | 541507 | 66.7691 | ug/ml | 0.00 |
| Spiked Amount 100.000 | Range 10 - 94 | | Recovery = 66.77% | | | |
| 31) Nitrobenzene-d5 | 10.00 | 82 | 253267 | 33.9027 | ug/ml | -0.02 |
| Spiked Amount 50.000 | Range 35 - 114 | | Recovery = 67.80% | | | |
| 59) 2-Fluorobiphenyl | 12.20 | 172 | 623568 | 34.7920 | ug/ml | -0.01 |
| Spiked Amount 50.000 | Range 43 - 116 | | Recovery = 69.58% | | | |
| 86) 2,4,6-Tribromophenol | 13.89 | 330 | 268056 | 92.9967 | ug/ml | -0.02 |
| Spiked Amount 100.000 | Range 10 - 123 | | Recovery = 93.00% | | | |
| 117) p-Terphenyl-d14 | 16.25 | 244 | 787663 | 41.8906 | ug/ml | -0.01 |
| Spiked Amount 50.000 | Range 33 - 141 | | Recovery = 83.78% | | | |
| **Target Compounds** | | | | | | Qvalue |
| 110) Methapyrilene | 15.59 | 58 | 993 | Below Cal | # | 59 |
| 121) Butyl Benzyl Phthalate | 16.72 | 149 | 1037 | Below Cal | # | 46 |

(#) = qualifier out of range (m) = manual integration
5M66988.D MEGAMIX.M Wed May 16 08:50:51 2012 Page 1

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\051412\5M66988.D Vial: 13
Acq On : 14 May 2012 3:36 pm Operator: CAA
Sample : L12050284-05 Inst : HPMS5
Misc : 1,1 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 16 8:13 2012 Quant Results File: MEGAMIX.RES

Method : C:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
Title : OVD MSS01 8270/625/Initial cal. 05/11/12
Last Update : Wed May 16 08:13:18 2012
Response via : Initial Calibration




5M66988.D MEGAMIX.M Wed May 16 08:50:51 2012 Page 2

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\051412\5M66988.D Vial: 13
Acq On : 14 May 2012 3:36 pm Operator: CAA
Sample : L12050284-05 Inst : HPMS5
Misc : 1,1 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 16 09:13:24 2012 Quant Results File: TCL.RES

Quant Method : C:\MSDCHEM\1\METHODS\TCL.M (RTE Integrator)
Title : MSS01 OVD 827-TCL INITIAL CALIBRATION 05/14/12
Last Update : Wed May 16 09:13:02 2012
Response via : Initial Calibration
DataAcq Meth : BNA

| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 1) 1,4-Dichlorobenzene-d4 | 9.29 | 152 | 246713 | 40.00 | ug/mL | 0.00 |
| 3) Naphthalene-d8 | 10.90 | 136 | 916131 | 40.00 | ug/mL | 0.00 |
| 5) Acenaphthene-d10 | 13.02 | 164 | 531636 | 40.00 | ug/mL | 0.00 |
| 7) Phenanthrene-d10 | 14.63 | 188 | 985030 | 40.00 | ug/mL | 0.00 |

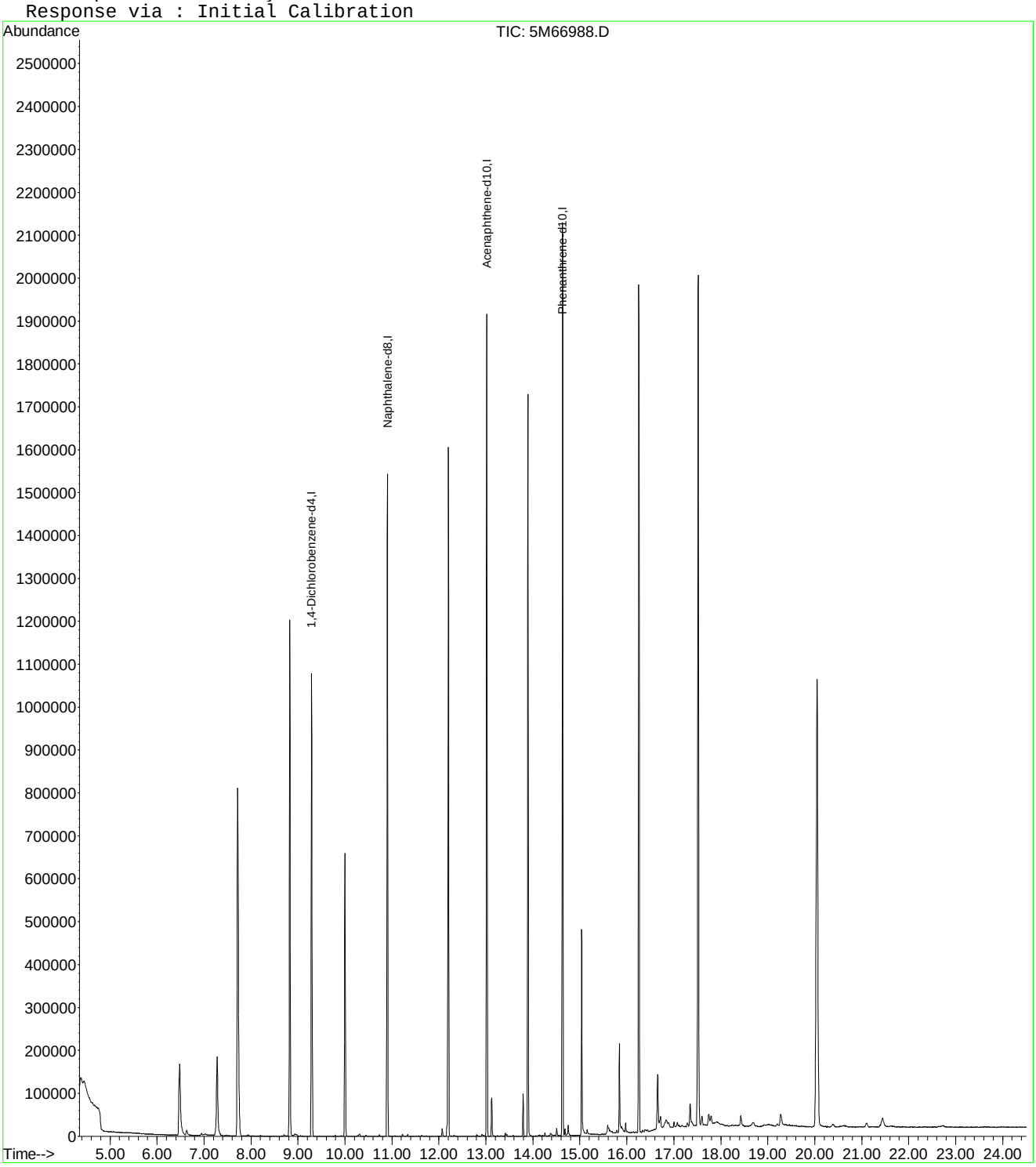
Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration
5M66988.D TCL.M Wed May 16 09:13:24 2012 Page 1

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\051412\5M66988.D Vial: 13
Acq On : 14 May 2012 3:36 pm Operator: CAA
Sample : L12050284-05 Inst : HPMS5
Misc : 1,1 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 16 9:13 2012 Quant Results File: TCL.RES

Method : C:\MSDCHEM\1\METHODS\TCL.M (RTE Integrator)
Title : MSS01 OVD 827-TCL INITIAL CALIBRATION 05/14/12
Last Update : Wed May 16 09:13:02 2012
Response via : Initial Calibration




5M66988.D TCL.M Wed May 16 09:13:24 2012 Page 2

LSC Area Percent Report

Data File : C:\MSDCHEM\1\DATA\051412\5M66988.D Vial: 13
Acq On : 14 May 2012 3:36 pm Operator: CAA
Sample : L12050284-05 Inst : HPMS5
Misc : 1,1 Multiplr: 1.00
MS Integration Params: LSCINT.P

Method : C:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
Title : OVD MSS01 8270/625/Initial cal. 05/11/12
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 1 % of largest Peak
Start Thrs: 0.05 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

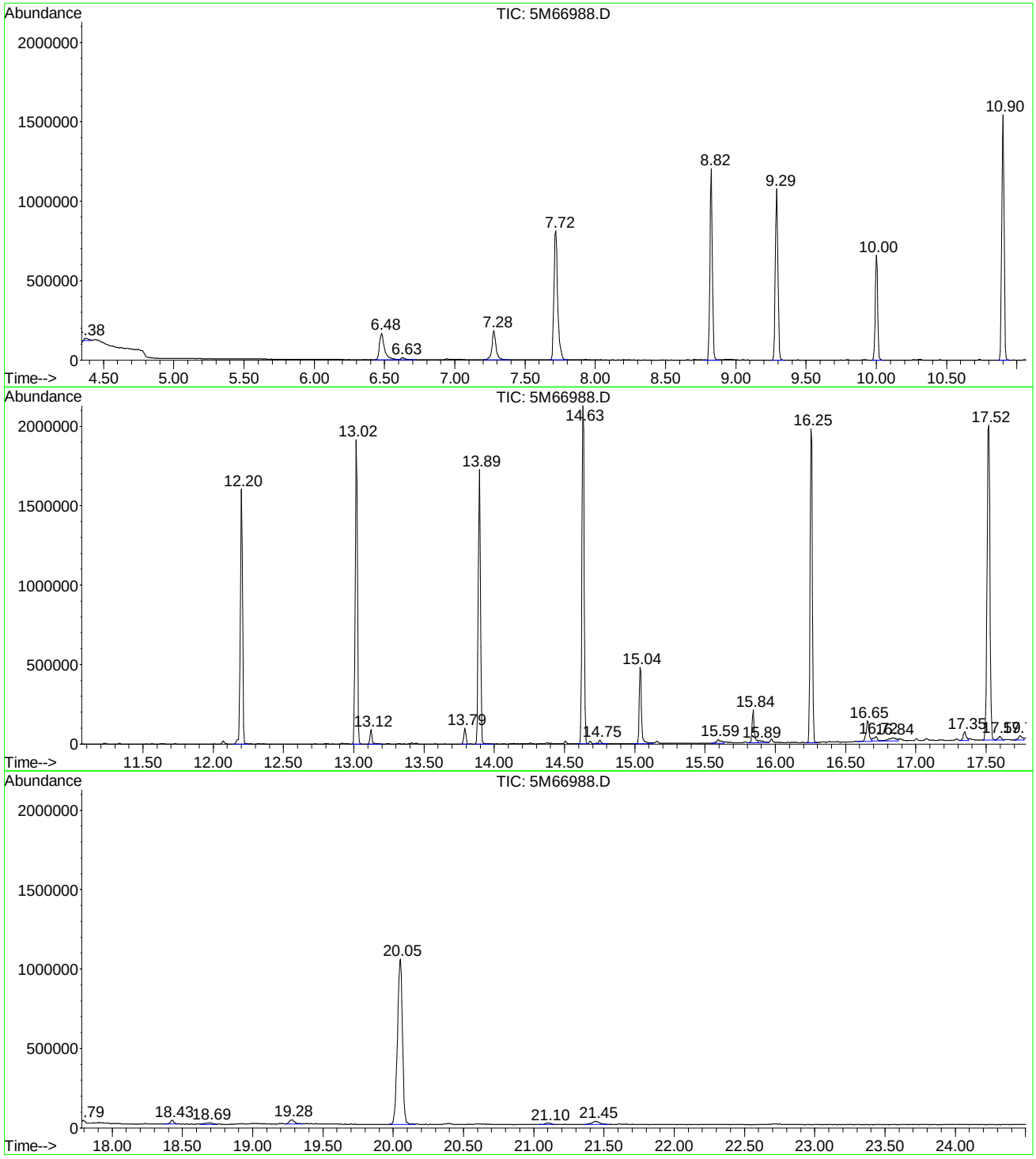
If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Signal : TIC

| peak # | R.T. min | first scan | max scan | last scan | PK TY | peak height | corr. area | corr. % max. | % of total |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 4.376 | 3 | 7 | 14 | rBV3 | 15414 | 33870 | 1.20% | 0.134% |
| 2 | 6.480 | 388 | 398 | 420 | rBV | 166025 | 411242 | 14.54% | 1.632% |
| 3 | 6.629 | 420 | 426 | 443 | rVB | 12955 | 28530 | 1.01% | 0.113% |
| 4 | 7.276 | 534 | 547 | 568 | rVB | 185025 | 376800 | 13.32% | 1.495% |
| 5 | 7.719 | 622 | 630 | 645 | rVB | 811709 | 1480633 | 52.35% | 5.875% |
| 6 | 8.825 | 827 | 837 | 849 | rBV | 1203992 | 1483515 | 52.45% | 5.887% |
| 7 | 9.289 | 917 | 924 | 934 | rBB | 1078928 | 1376651 | 48.67% | 5.463% |
| 8 | 10.000 | 1051 | 1057 | 1066 | rBB | 660207 | 773722 | 27.35% | 3.070% |
| 9 | 10.902 | 1219 | 1226 | 1235 | rBB | 1543714 | 1781818 | 63.00% | 7.070% |
| 10 | 12.200 | 1459 | 1469 | 1478 | rBB | 1605802 | 1735729 | 61.37% | 6.887% |
| 11 | 13.017 | 1616 | 1622 | 1629 | rBB | 1917020 | 2054183 | 72.63% | 8.151% |
| 12 | 13.124 | 1637 | 1642 | 1656 | rBB | 89818 | 90612 | 3.20% | 0.360% |
| 13 | 13.792 | 1762 | 1767 | 1772 | rBB | 99098 | 101783 | 3.60% | 0.404% |
| 14 | 13.893 | 1780 | 1786 | 1805 | rBB | 1729671 | 1899741 | 67.17% | 7.538% |
| 15 | 14.630 | 1918 | 1924 | 1931 | rBV | 2129469 | 2324798 | 82.19% | 9.225% |
| 16 | 14.753 | 1938 | 1947 | 1957 | rVB2 | 24498 | 34169 | 1.21% | 0.136% |
| 17 | 15.036 | 1992 | 2000 | 2018 | rBV | 481100 | 550437 | 19.46% | 2.184% |
| 18 | 15.592 | 2096 | 2104 | 2112 | rBV2 | 22738 | 57411 | 2.03% | 0.228% |
| 19 | 15.843 | 2144 | 2151 | 2157 | rBV | 207528 | 219473 | 7.76% | 0.871% |
| 20 | 15.891 | 2157 | 2160 | 2171 | rVV4 | 13632 | 28929 | 1.02% | 0.115% |
| 21 | 16.254 | 2221 | 2228 | 2236 | rBV | 1977044 | 2173083 | 76.83% | 8.623% |
| 22 | 16.655 | 2290 | 2303 | 2309 | rBV3 | 129398 | 197571 | 6.99% | 0.784% |
| 23 | 16.719 | 2309 | 2315 | 2322 | rVB4 | 26410 | 48623 | 1.72% | 0.193% |
| 24 | 16.836 | 2322 | 2337 | 2344 | rBV3 | 19344 | 74209 | 2.62% | 0.294% |
| 25 | 17.349 | 2426 | 2433 | 2438 | rBV | 52534 | 77365 | 2.74% | 0.307% |
| 26 | 17.520 | 2457 | 2465 | 2474 | rBV | 1982750 | 2828459 | 100.00% | 11.223% |
| 27 | 17.595 | 2474 | 2479 | 2485 | rVB2 | 21020 | 33127 | 1.17% | 0.131% |
| 28 | 17.744 | 2499 | 2507 | 2512 | rBV2 | 26387 | 53436 | 1.89% | 0.212% |
| 29 | 17.792 | 2512 | 2516 | 2523 | rVB6 | 18486 | 33402 | 1.18% | 0.133% |
| 30 | 18.428 | 2624 | 2635 | 2642 | rBV4 | 23622 | 43432 | 1.54% | 0.172% |
| 31 | 18.695 | 2672 | 2685 | 2694 | rVB10 | 9161 | 32717 | 1.16% | 0.130% |
| 32 | 19.277 | 2786 | 2794 | 2808 | rBV5 | 26899 | 71530 | 2.53% | 0.284% |
| 33 | 20.052 | 2924 | 2939 | 2958 | rBV | 1042742 | 2587340 | 91.48% | 10.266% |
| 34 | 21.104 | 3124 | 3136 | 3145 | rBV5 | 9744 | 30990 | 1.10% | 0.123% |
| 35 | 21.446 | 3185 | 3200 | 3216 | rBV9 | 21003 | 72464 | 2.56% | 0.288% |

Sum of corrected areas: 25201794

```
File       : C:\MSDCHEM\1\DATA\051412\5M66988.D
Operator   : CAA
Acquired   : 14 May 2012   3:36 pm using AcqMethod BNA
Instrument :   HPMS5
Sample Name: L12050284-05
Misc Info  : 1,1
Vial Number: 13
Quant File :MEGAMIX.RES (RTE Integrator)
```



Data File : C:\MSDCHEM\1\DATA\051412\5M66988.D Vial: 13
Acq On : 14 May 2012 3:36 pm Operator: CAA
Sample : L12050284-05 Inst : HPMS5
Misc : 1,1 Multiplr: 1.00
MS Integration Params: LSCINT.P

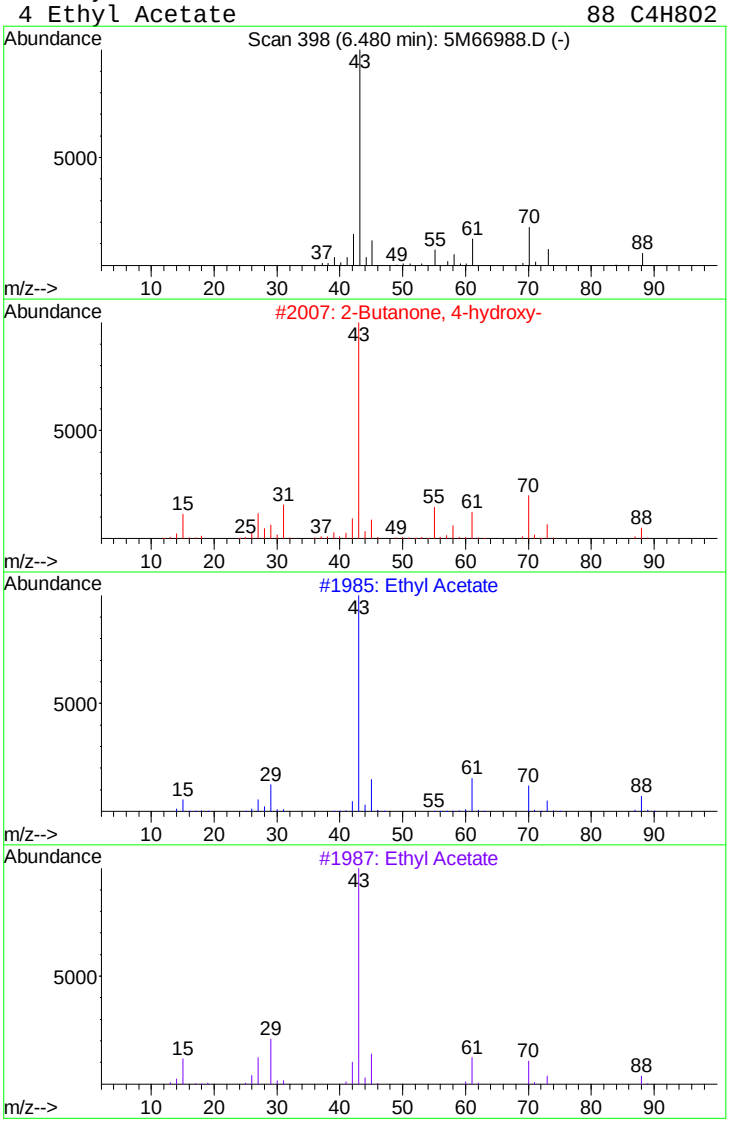
Quant Method : C:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
Title : OVD MSS01 8270/625/Initial cal. 05/11/12
Library : K:\ORGANICS\SEMIVOA\8270\NIST02.L

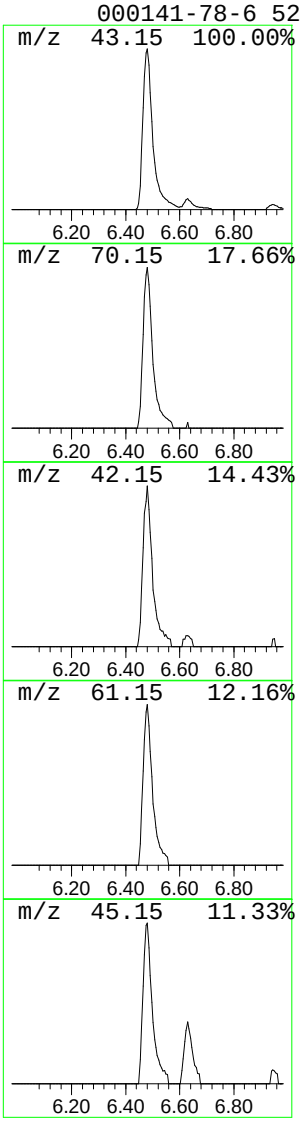
**********

Peak Number 1 2-Butanone, 4-hydroxy- Concentration Rank 1

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 6.48 | 11.95 ug/ml | 411242 | 1,4-Dichlorobenzene-d4 | 9.29 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | 2-Butanone, 4-hydroxy- | 88 | C4H8O2 | 000590-90-9 | 80 |
| 2 | Ethyl Acetate | 88 | C4H8O2 | 000141-78-6 | 72 |
| 3 | Ethyl Acetate | 88 | C4H8O2 | 000141-78-6 | 59 |
| 4 | Ethyl Acetate | 88 | C4H8O2 | 000141-78-6 | 52 |



Data File : C:\MSDCHEM\1\DATA\051412\5M66988.D Vial: 13
Acq On : 14 May 2012 3:36 pm Operator: CAA
Sample : L12050284-05 Inst : HPMS5
Misc : 1,1 Multiplr: 1.00
MS Integration Params: LSCINT.P

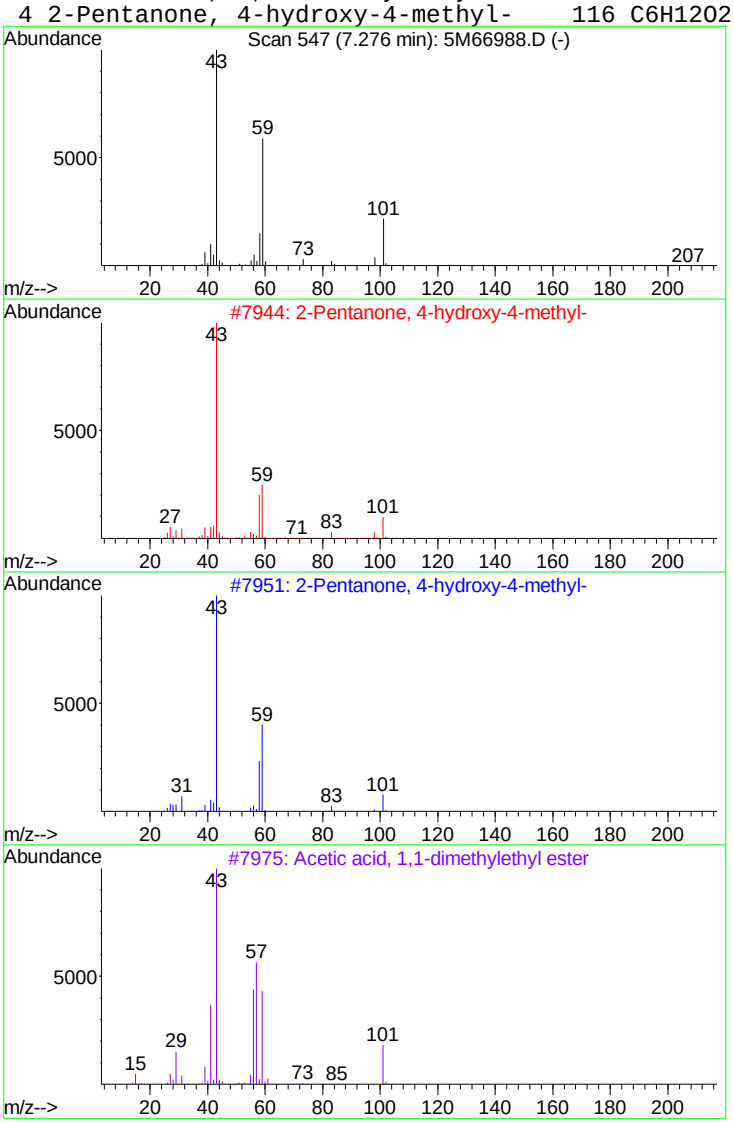
Quant Method : C:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
Title : OVD MSS01 8270/625/Initial cal. 05/11/12
Library : K:\ORGANICS\SEMIVOA\8270\NIST02.L

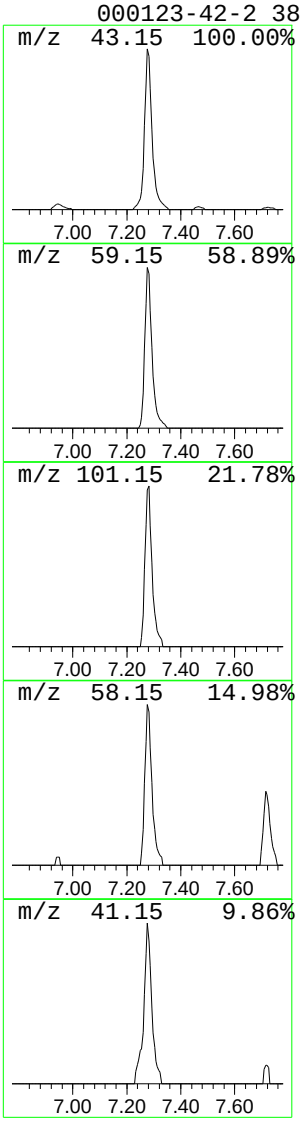
**********

Peak Number 2 2-Pentanone, 4-hydroxy-4-me... Concentration Rank 2

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 7.28 | 10.95 ug/ml | 376800 | 1,4-Dichlorobenzene-d4 | 9.29 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | 2-Pentanone, 4-hydroxy-4-methyl- | 116 | C6H12O2 | 000123-42-2 | 64 |
| 2 | 2-Pentanone, 4-hydroxy-4-methyl- | 116 | C6H12O2 | 000123-42-2 | 50 |
| 3 | Acetic acid, 1,1-dimethylethyl e... | 116 | C6H12O2 | 000540-88-5 | 38 |
| 4 | 2-Pentanone, 4-hydroxy-4-methyl- | 116 | C6H12O2 | 000123-42-2 | 38 |



Data File : C:\MSDCHEM\1\DATA\051412\5M66988.D Vial: 13
Acq On : 14 May 2012 3:36 pm Operator: CAA
Sample : L12050284-05 Inst : HPMS5
Misc : 1,1 Multiplr: 1.00
MS Integration Params: LSCINT.P

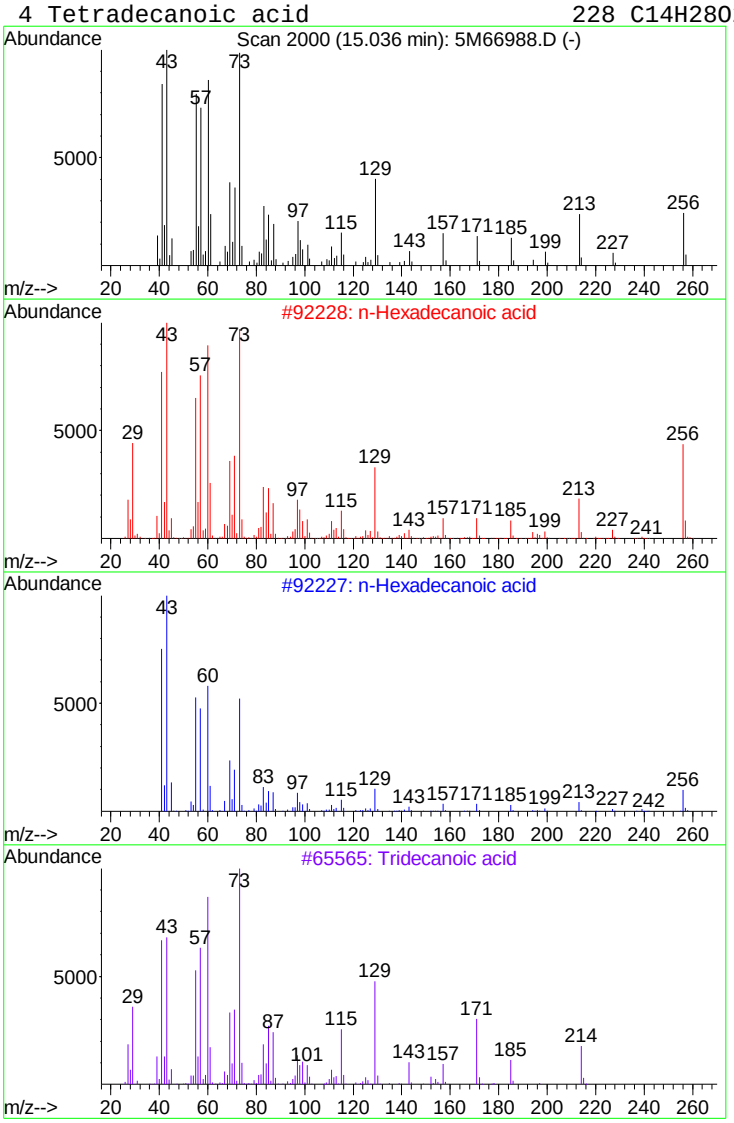
Quant Method : C:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
Title : OVD MSS01 8270/625/Initial cal. 05/11/12
Library : K:\ORGANICS\SEMIVOA\8270\NIST02.L

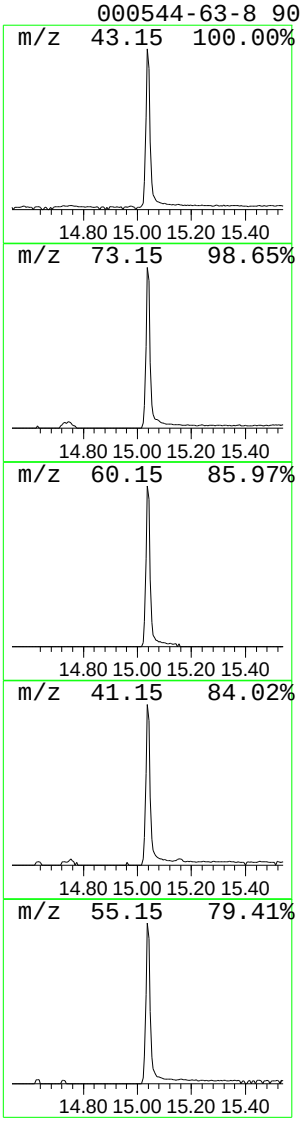
**********

Peak Number 3 n-Hexadecanoic acid Concentration Rank 3

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 15.04 | 9.47 ug/ml | 550437 | Phenanthrene-d10 | 14.63 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | n-Hexadecanoic acid | 256 | C16H32O2 | 000057-10-3 | 99 |
| 2 | n-Hexadecanoic acid | 256 | C16H32O2 | 000057-10-3 | 98 |
| 3 | Tridecanoic acid | 214 | C13H26O2 | 000638-53-9 | 93 |
| 4 | Tetradecanoic acid | 228 | C14H28O2 | 000544-63-8 | 90 |



Tentatively Identified Compound (LSC) summary

Operator ID: CAA  Date Acquired: 14 May 2012  3:36 pm
Data File: C:\MSDCHEM\1\DATA\051412\5M66988.D
Name: L12050284-05
Misc: 1,1
Method: C:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
Title: OVD MSS01 8270/625/Initial cal. 05/11/12
Library Searched: K:\ORGANICS\SEMIVOA\8270\NIST02.L

| | | | | | Internal Standard | | | |
|---|---|---|---|---|---|---|---|---|
| TIC Top Hit name | RT | EstConc | Units | Response | # | RT | Resp | Conc |
| 2-Butanone, 4-hyd... | 6.48 | 11.9 | ug/ml | 411242 | 1 | 9.29 | 1376650 | 40.0 |
| 2-Pentanone, 4-hy... | 7.28 | 10.9 | ug/ml | 376800 | 1 | 9.29 | 1376650 | 40.0 |
| n-Hexadecanoic acid | 15.04 | 9.5 | ug/ml | 550437 | 4 | 14.63 | 2324800 | 40.0 |

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\051412\5M66989.D Vial: 14
Acq On : 14 May 2012 4:14 pm Operator: CAA
Sample : L12050284-07 Inst : HPMS5
Misc : 1,1 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 16 08:13:35 2012 Quant Results File: MEGAMIX.RES

Quant Method : C:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
Title : OVD MSS01 8270/625/Initial cal. 05/11/12
Last Update : Wed May 16 08:13:18 2012
Response via : Initial Calibration
DataAcq Meth : BNA

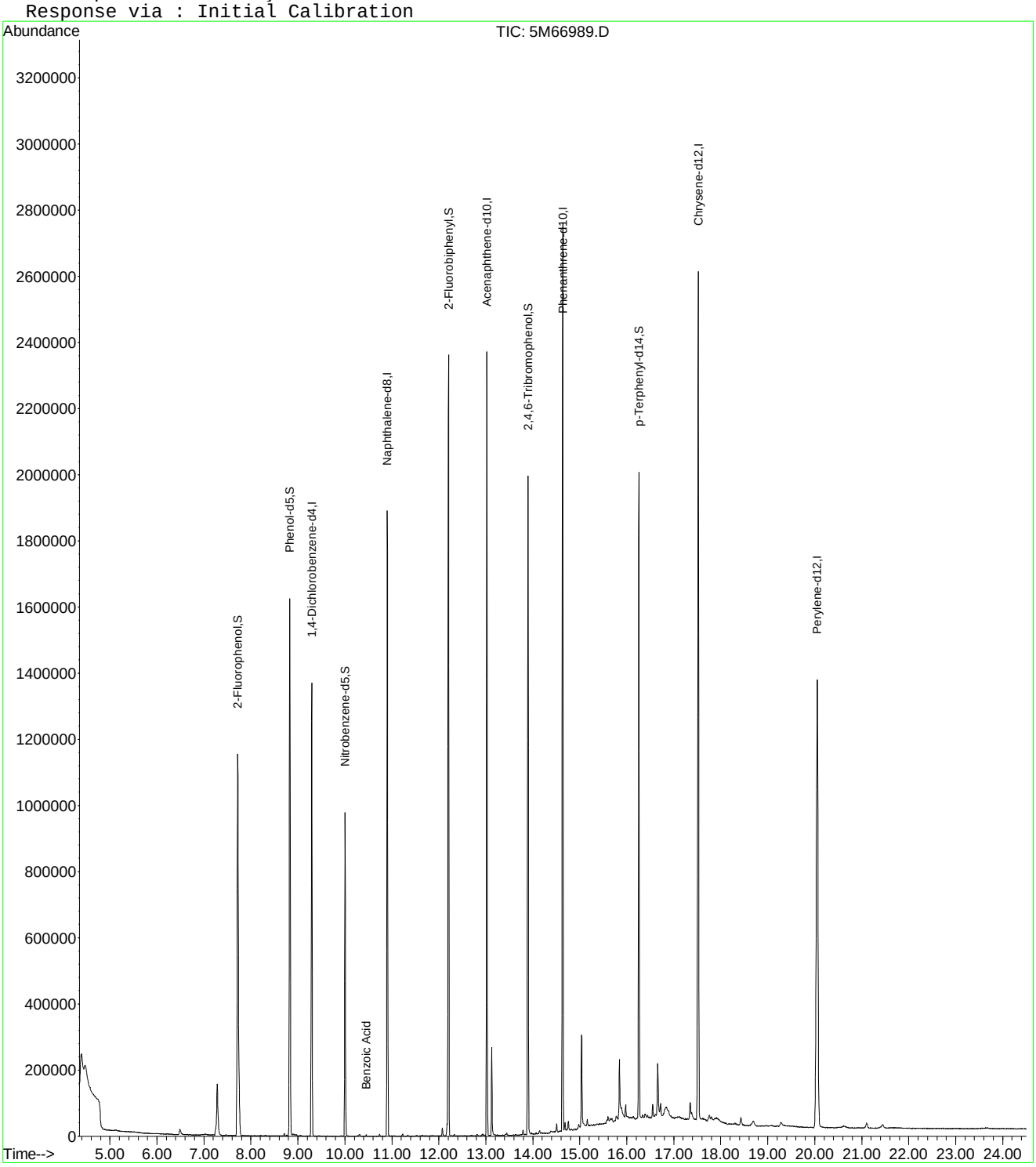
| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 1) 1,4-Dichlorobenzene-d4 | 9.29 | 152 | 313417 | 40.00 | ug/ml | 0.00 |
| 30) Naphthalene-d8 | 10.90 | 136 | 1146556 | 40.00 | ug/ml | -0.01 |
| 54) Acenaphthene-d10 | 13.02 | 164 | 671188 | 40.00 | ug/ml | 0.00 |
| 87) Phenanthrene-d10 | 14.64 | 188 | 1229401 | 40.00 | ug/ml | -0.01 |
| 113) Chrysene-d12 | 17.52 | 240 | 1485652 | 40.00 | ug/ml | -0.02 |
| 128) Perylene-d12 | 20.05 | 264 | 1358897 | 40.00 | ug/ml | -0.02 |
| **System Monitoring Compounds** | | | | | | |
| 8) 2-Fluorophenol | 7.72 | 112 | 669657 | 77.4970 | ug/ml | 0.00 |
| Spiked Amount 100.000 | Range 21 - 100 | | Recovery = 77.50% | | | |
| 12) Phenol-d5 | 8.83 | 99 | 800262 | 77.6735 | ug/ml | 0.00 |
| Spiked Amount 100.000 | Range 10 - 94 | | Recovery = 77.67% | | | |
| 31) Nitrobenzene-d5 | 10.00 | 82 | 376200 | 40.2381 | ug/ml | -0.01 |
| Spiked Amount 50.000 | Range 35 - 114 | | Recovery = 80.48% | | | |
| 59) 2-Fluorobiphenyl | 12.21 | 172 | 939338 | 41.5133 | ug/ml | 0.00 |
| Spiked Amount 50.000 | Range 43 - 116 | | Recovery = 83.02% | | | |
| 86) 2,4,6-Tribromophenol | 13.90 | 330 | 334653 | 91.9617 | ug/ml | -0.01 |
| Spiked Amount 100.000 | Range 10 - 123 | | Recovery = 91.96% | | | |
| 117) p-Terphenyl-d14 | 16.26 | 244 | 738464 | 31.0236 | ug/ml | 0.00 |
| Spiked Amount 50.000 | Range 33 - 141 | | Recovery = 62.04% | | | |
| **Target Compounds** | | | | | | Qvalue |
| 39) Benzoic Acid | 10.46 | 105 | 324 | 10.1569 | ug/ml | # 58 |
| 110) Methapyrilene | 15.60 | 58 | 1037 | Below Cal | # | 13 |
| 121) Butyl Benzyl Phthalate | 16.72 | 149 | 1987 | Below Cal | # | 64 |

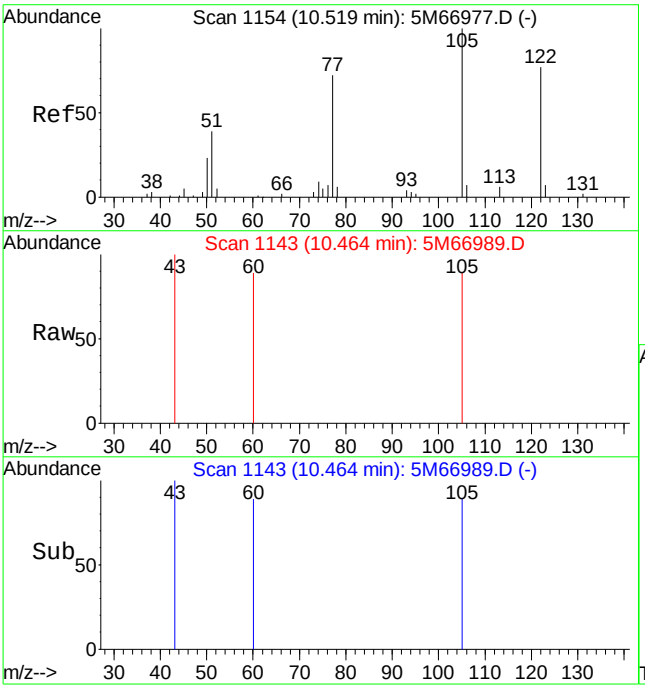
(#) = qualifier out of range (m) = manual integration
5M66989.D MEGAMIX.M Wed May 16 08:50:52 2012 Page 1

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\051412\5M66989.D Vial: 14
Acq On : 14 May 2012 4:14 pm Operator: CAA
Sample : L12050284-07 Inst : HPMS5
Misc : 1,1 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 16 8:13 2012 Quant Results File: MEGAMIX.RES

Method : C:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
Title : OVD MSS01 8270/625/Initial cal. 05/11/12
Last Update : Wed May 16 08:13:18 2012
Response via : Initial Calibration

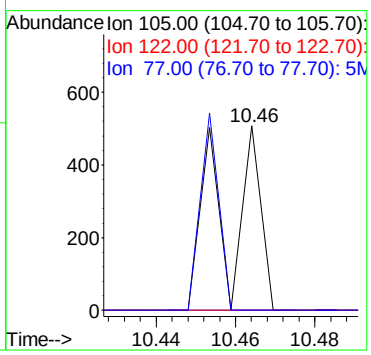





#39
Benzoic Acid
Concen: 10.16 ug/ml
RT: 10.46 min Scan# 1143
Delta R.T. -0.05 min
Lab File: 5M66989.D
Acq: 14 May 2012 4:14 pm

Tgt Ion:105 Resp: 324

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 105 | 100 | | |
| 122 | 0.0 | 34.2 | 79.8# |
| 77 | 53.7 | 30.8 | 71.8 |



Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\051412\5M66989.D Vial: 14
Acq On : 14 May 2012 4:14 pm Operator: CAA
Sample : L12050284-07 Inst : HPMS5
Misc : 1,1 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 16 09:13:24 2012 Quant Results File: TCL.RES

Quant Method : C:\MSDCHEM\1\METHODS\TCL.M (RTE Integrator)
Title : MSS01 OVD 827-TCL INITIAL CALIBRATION 05/14/12
Last Update : Wed May 16 09:13:02 2012
Response via : Initial Calibration
DataAcq Meth : BNA

| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 1) 1,4-Dichlorobenzene-d4 | 9.29 | 152 | 313417 | 40.00 | ug/mL | 0.00 |
| 3) Naphthalene-d8 | 10.90 | 136 | 1146556 | 40.00 | ug/mL | 0.00 |
| 5) Acenaphthene-d10 | 13.02 | 164 | 671188 | 40.00 | ug/mL | 0.00 |
| 7) Phenanthrene-d10 | 14.64 | 188 | 1229401 | 40.00 | ug/mL | 0.00 |

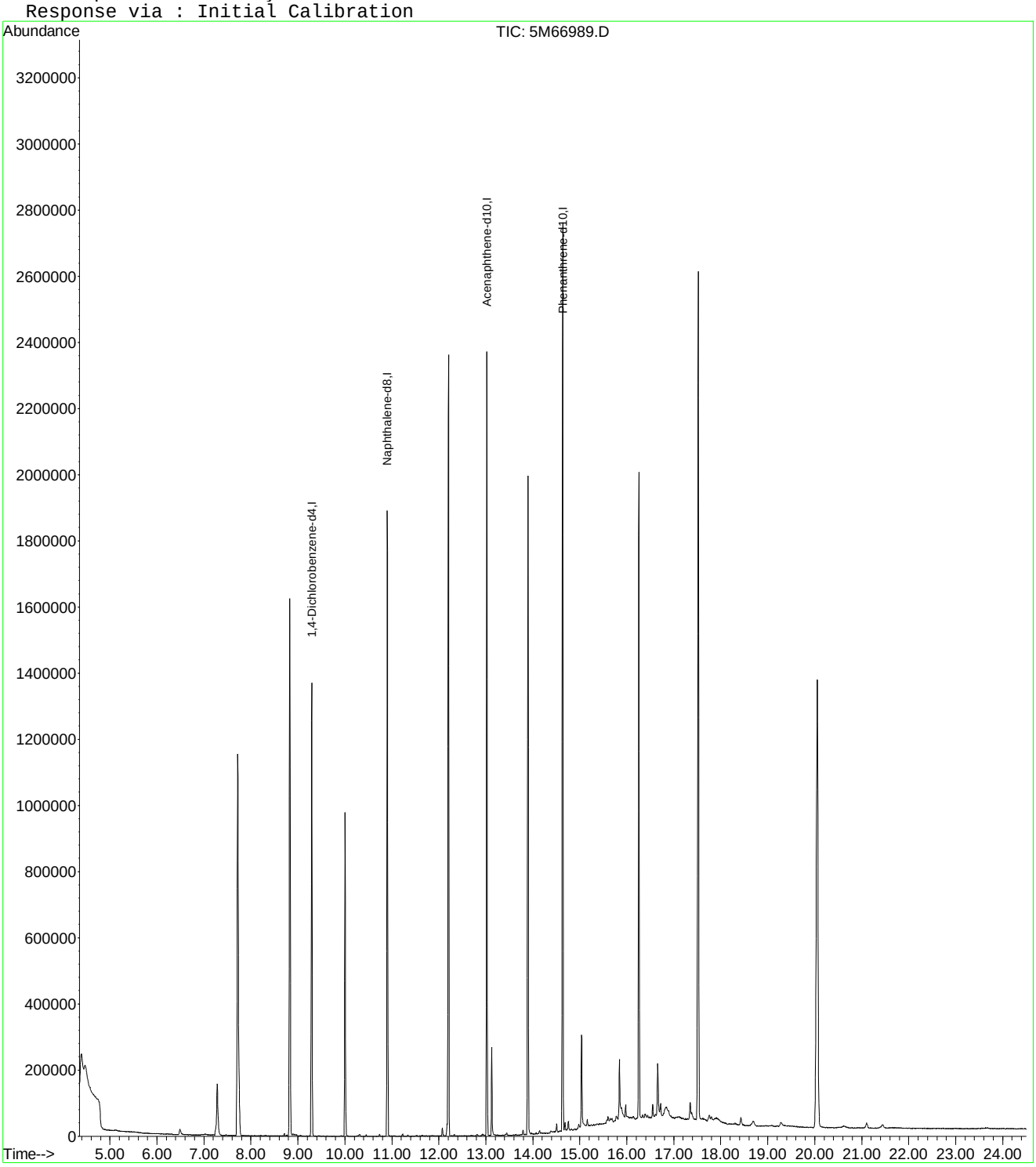
Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration
5M66989.D TCL.M Wed May 16 09:13:24 2012 Page 1

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\051412\5M66989.D Vial: 14
Acq On : 14 May 2012 4:14 pm Operator: CAA
Sample : L12050284-07 Inst : HPMS5
Misc : 1,1 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 16 9:13 2012 Quant Results File: TCL.RES

Method : C:\MSDCHEM\1\METHODS\TCL.M (RTE Integrator)
Title : MSS01 OVD 827-TCL INITIAL CALIBRATION 05/14/12
Last Update : Wed May 16 09:13:02 2012
Response via : Initial Calibration




5M66989.D TCL.M Wed May 16 09:13:24 2012 Page 2

LSC Area Percent Report

Data File : C:\MSDCHEM\1\DATA\051412\5M66989.D Vial: 14
Acq On : 14 May 2012 4:14 pm Operator: CAA
Sample : L12050284-07 Inst : HPMS5
Misc : 1,1 Multiplr: 1.00
MS Integration Params: LSCINT.P

Method : C:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
Title : OVD MSS01 8270/625/Initial cal. 05/11/12
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 1 % of largest Peak
Start Thrs: 0.05 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

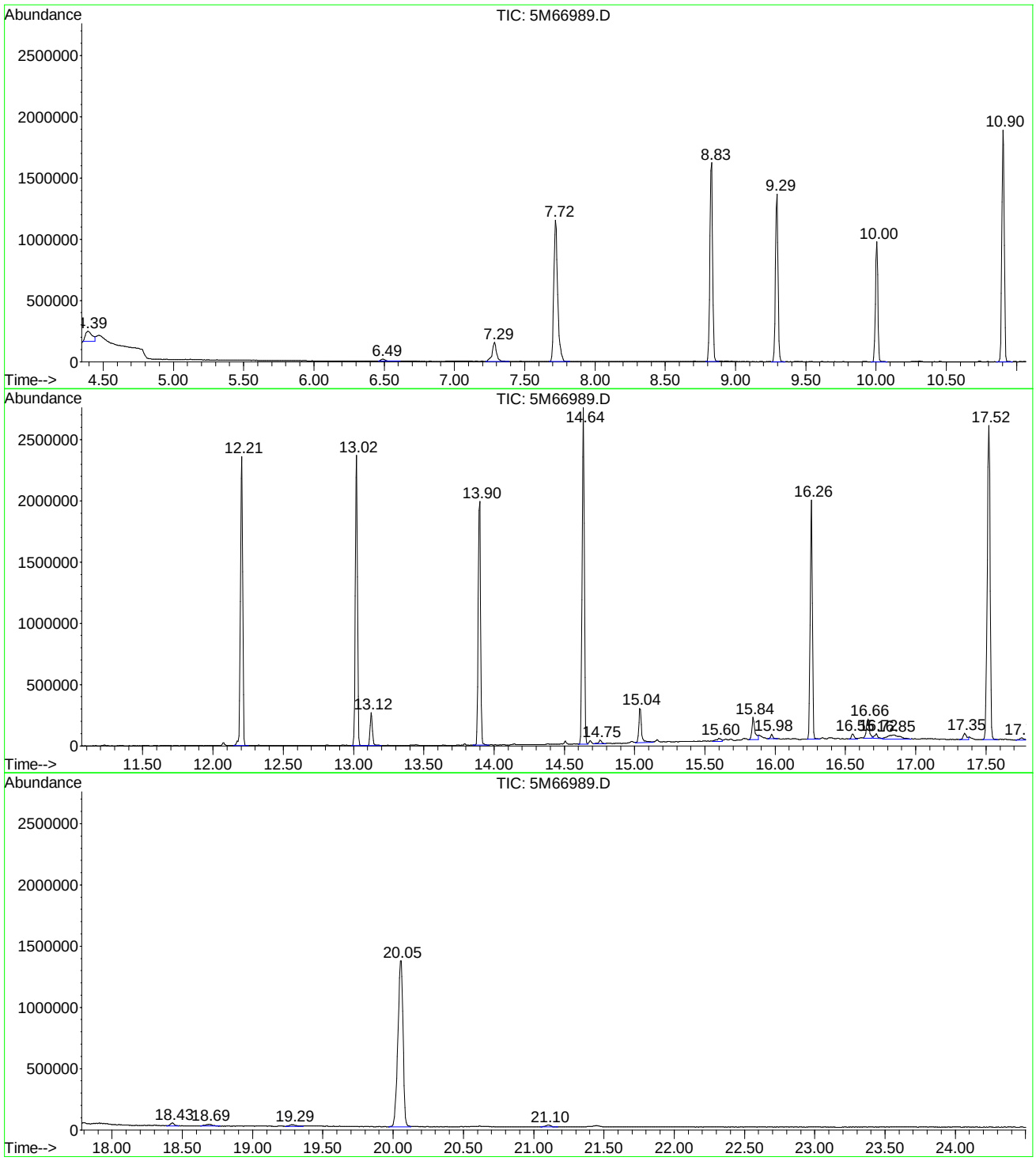
If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Signal : TIC

| peak # | R.T. min | first scan | max scan | last scan | PK TY | peak height | corr. area | corr. % max. | % of total |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 4.395 | 3 | 10 | 19 | rBV | 83290 | 285369 | 7.86% | 0.899% |
| 2 | 6.490 | 393 | 399 | 421 | rVB3 | 16484 | 39831 | 1.10% | 0.125% |
| 3 | 7.286 | 536 | 548 | 566 | rVB2 | 155926 | 343353 | 9.45% | 1.081% |
| 4 | 7.719 | 621 | 629 | 647 | rBV | 1154132 | 2222981 | 61.20% | 7.000% |
| 5 | 8.830 | 829 | 837 | 846 | rBV | 1624843 | 2137719 | 58.86% | 6.731% |
| 6 | 9.294 | 917 | 924 | 934 | rBB | 1370151 | 1753151 | 48.27% | 5.520% |
| 7 | 10.005 | 1050 | 1057 | 1070 | rBB | 979478 | 1151676 | 31.71% | 3.626% |
| 8 | 10.902 | 1217 | 1225 | 1237 | rBB | 1890744 | 2240631 | 61.69% | 7.055% |
| 9 | 12.205 | 1458 | 1469 | 1477 | rBV | 2361487 | 2623538 | 72.23% | 8.261% |
| 10 | 13.022 | 1615 | 1622 | 1635 | rBV | 2370229 | 2599863 | 71.58% | 8.187% |
| 11 | 13.124 | 1635 | 1641 | 1654 | rBV | 267556 | 301262 | 8.29% | 0.949% |
| 12 | 13.898 | 1777 | 1786 | 1797 | rBV | 1992439 | 2345313 | 64.57% | 7.385% |
| 13 | 14.635 | 1918 | 1924 | 1930 | rBV | 2748396 | 2934422 | 80.79% | 9.240% |
| 14 | 14.753 | 1938 | 1946 | 1953 | rVB2 | 27487 | 39261 | 1.08% | 0.124% |
| 15 | 15.036 | 1993 | 1999 | 2017 | rVV | 280621 | 374507 | 10.31% | 1.179% |
| 16 | 15.597 | 2096 | 2104 | 2109 | rBV2 | 22774 | 52904 | 1.46% | 0.167% |
| 17 | 15.843 | 2145 | 2150 | 2157 | rBV2 | 181638 | 261198 | 7.19% | 0.822% |
| 18 | 15.976 | 2170 | 2175 | 2182 | rBV | 38187 | 38761 | 1.07% | 0.122% |
| 19 | 16.259 | 2222 | 2228 | 2238 | rBV | 1954100 | 2091102 | 57.57% | 6.585% |
| 20 | 16.553 | 2278 | 2283 | 2289 | rBV4 | 41535 | 58631 | 1.61% | 0.185% |
| 21 | 16.660 | 2297 | 2303 | 2309 | rBV2 | 156364 | 228762 | 6.30% | 0.720% |
| 22 | 16.718 | 2310 | 2314 | 2322 | rVV2 | 38514 | 55604 | 1.53% | 0.175% |
| 23 | 16.847 | 2323 | 2338 | 2360 | rVB4 | 34056 | 206593 | 5.69% | 0.651% |
| 24 | 17.349 | 2425 | 2432 | 2437 | rBV | 52243 | 86765 | 2.39% | 0.273% |
| 25 | 17.520 | 2456 | 2464 | 2475 | rBV | 2565131 | 3632068 | 100.00% | 11.437% |
| 26 | 17.755 | 2500 | 2508 | 2513 | rBV3 | 19118 | 45166 | 1.24% | 0.142% |
| 27 | 18.428 | 2627 | 2634 | 2642 | rVB2 | 23868 | 46793 | 1.29% | 0.147% |
| 28 | 18.689 | 2672 | 2683 | 2697 | rVB8 | 15253 | 49634 | 1.37% | 0.156% |
| 29 | 19.288 | 2785 | 2795 | 2808 | rBV7 | 12968 | 45938 | 1.26% | 0.145% |
| 30 | 20.051 | 2923 | 2938 | 2952 | rBV | 1354836 | 3427410 | 94.37% | 10.792% |
| 31 | 21.104 | 3125 | 3135 | 3147 | rVB4 | 15396 | 37563 | 1.03% | 0.118% |

Sum of corrected areas: 31757769

```
File       : C:\MSDCHEM\1\DATA\051412\5M66989.D
Operator   : CAA
Acquired   : 14 May 2012   4:14 pm using AcqMethod BNA
Instrument :   HPMS5
Sample Name: L12050284-07
Misc Info  : 1,1
Vial Number: 14
Quant File :MEGAMIX.RES (RTE Integrator)
```



Data File : C:\MSDCHEM\1\DATA\051412\5M66989.D Vial: 14
Acq On : 14 May 2012 4:14 pm Operator: CAA
Sample : L12050284-07 Inst : HPMS5
Misc : 1,1 Multiplr: 1.00
MS Integration Params: LSCINT.P

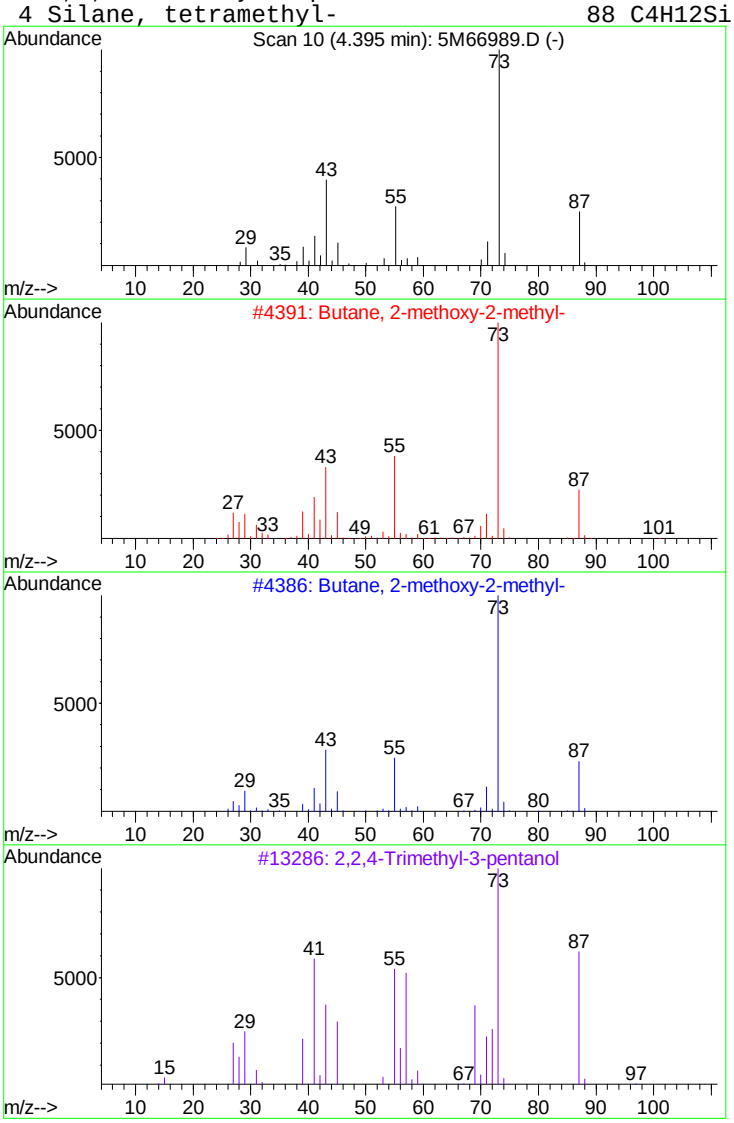
Quant Method : C:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
Title : OVD MSS01 8270/625/Initial cal. 05/11/12
Library : K:\ORGANICS\SEMIVOA\8270\NIST02.L

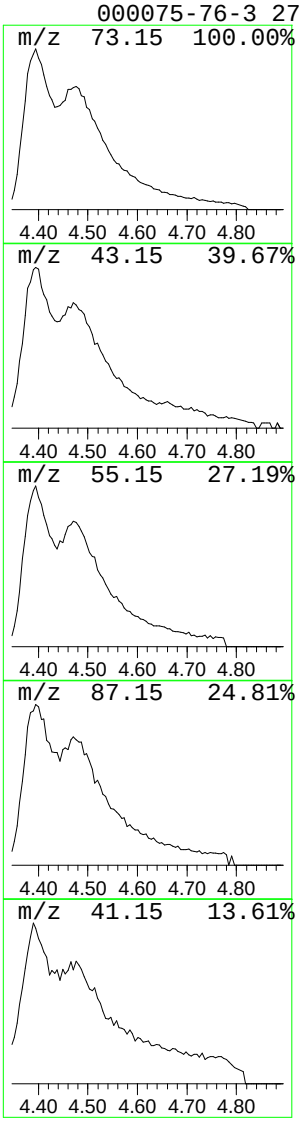
**********

Peak Number 1 Butane, 2-methoxy-2-methyl- Concentration Rank 2

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 4.39 | 6.51 ug/ml | 285369 | 1,4-Dichlorobenzene-d4 | 9.29 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Butane, 2-methoxy-2-methyl- | 102 | C6H14O | 000994-05-8 | 78 |
| 2 | Butane, 2-methoxy-2-methyl- | 102 | C6H14O | 000994-05-8 | 78 |
| 3 | 2,2,4-Trimethyl-3-pentanol | 130 | C8H18O | 005162-48-1 | 40 |
| 4 | Silane, tetramethyl- | 88 | C4H12Si | 000075-76-3 | 27 |



Data File : C:\MSDCHEM\1\DATA\051412\5M66989.D Vial: 14
Acq On : 14 May 2012 4:14 pm Operator: CAA
Sample : L12050284-07 Inst : HPMS5
Misc : 1,1 Multiplr: 1.00
MS Integration Params: LSCINT.P

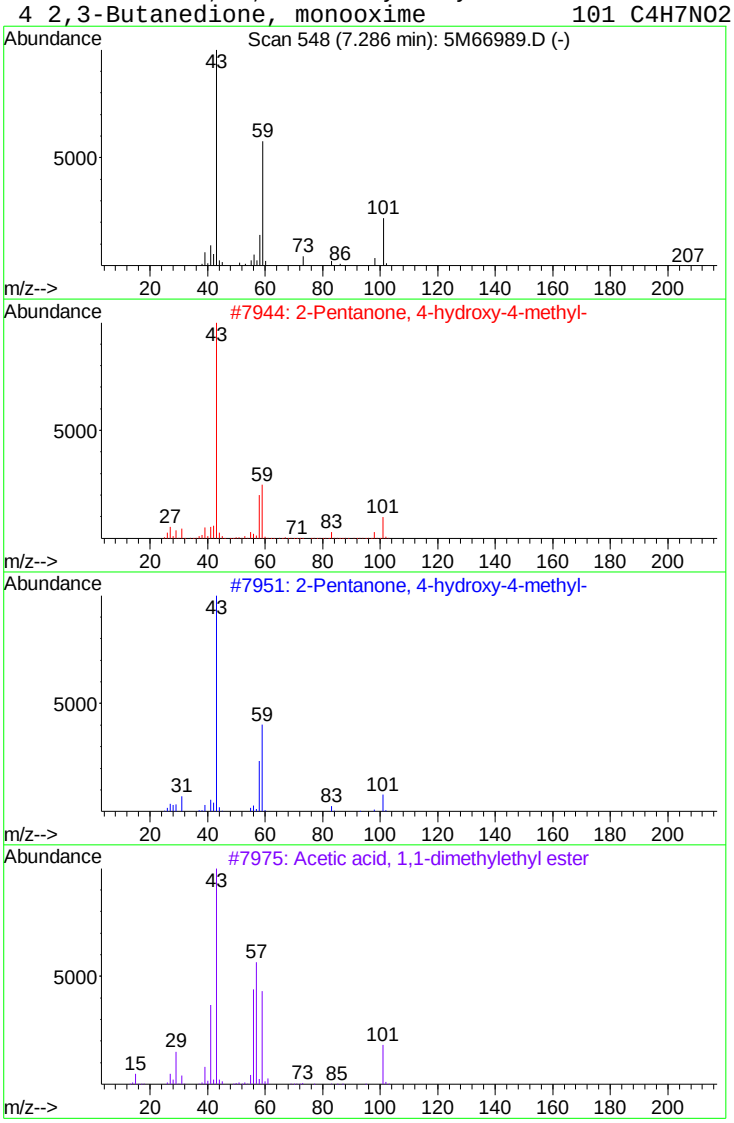
Quant Method : C:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
Title : OVD MSS01 8270/625/Initial cal. 05/11/12
Library : K:\ORGANICS\SEMIVOA\8270\NIST02.L

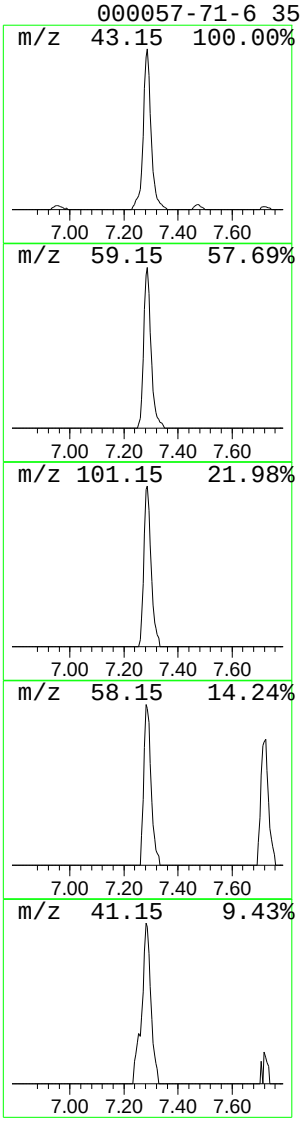
**********

Peak Number 2 2-Pentanone, 4-hydroxy-4-me... Concentration Rank 1

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 7.29 | 7.83 ug/ml | 343353 | 1,4-Dichlorobenzene-d4 | 9.29 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | 2-Pentanone, 4-hydroxy-4-methyl- | 116 | C6H12O2 | 000123-42-2 | 50 |
| 2 | 2-Pentanone, 4-hydroxy-4-methyl- | 116 | C6H12O2 | 000123-42-2 | 50 |
| 3 | Acetic acid, 1,1-dimethylethyl e... | 116 | C6H12O2 | 000540-88-5 | 38 |
| 4 | 2,3-Butanedione, monooxime | 101 | C4H7NO2 | 000057-71-6 | 35 |



Data File : C:\MSDCHEM\1\DATA\051412\5M66989.D Vial: 14
Acq On : 14 May 2012 4:14 pm Operator: CAA
Sample : L12050284-07 Inst : HPMS5
Misc : 1,1 Multiplr: 1.00
MS Integration Params: LSCINT.P

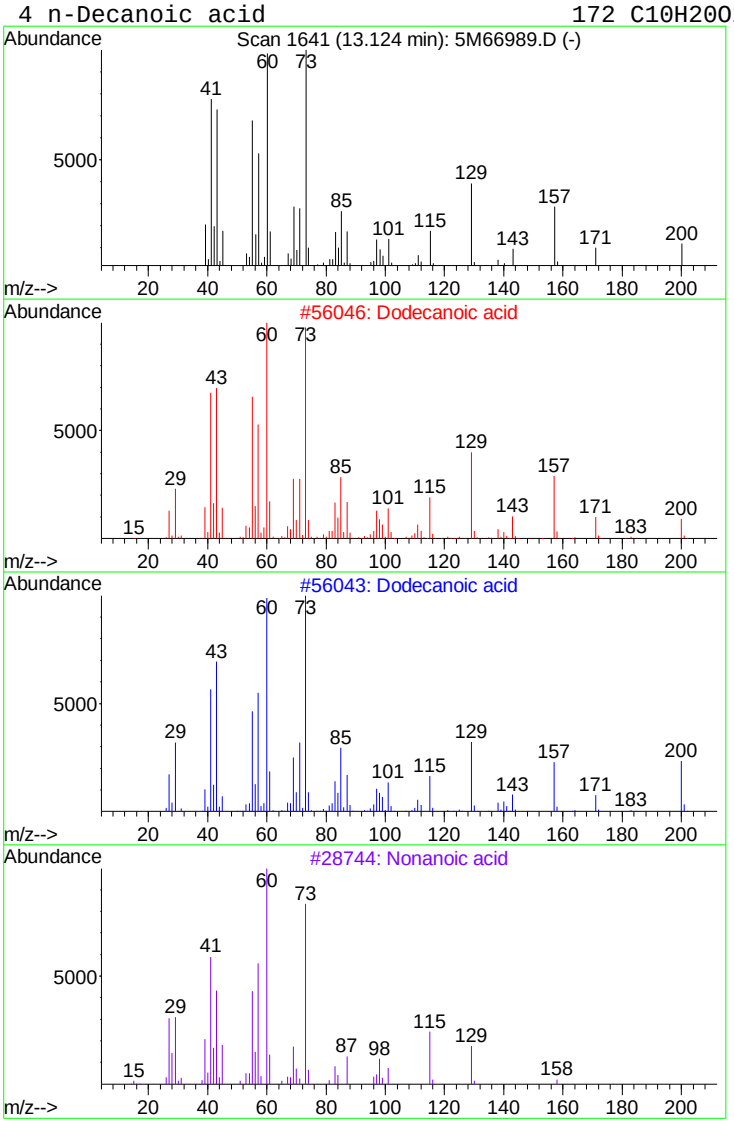
Quant Method : C:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
Title : OVD MSS01 8270/625/Initial cal. 05/11/12
Library : K:\ORGANICS\SEMIVOA\8270\NIST02.L

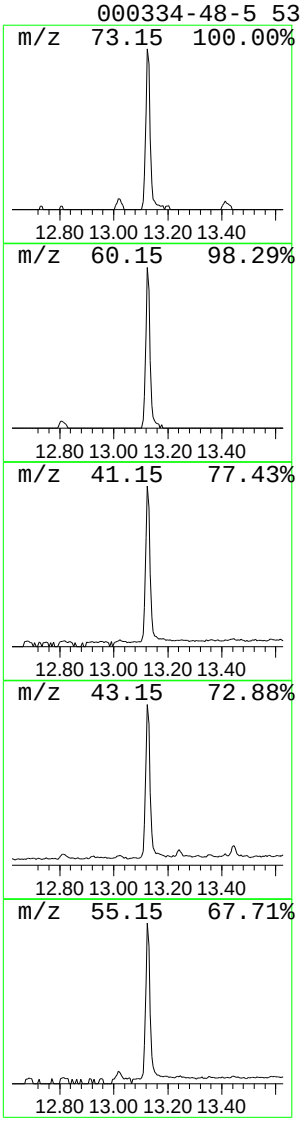
**********

Peak Number 3 Dodecanoic acid Concentration Rank 4

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 13.12 | 4.64 ug/ml | 301262 | Acenaphthene-d10 | 13.02 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Dodecanoic acid | 200 | C12H24O2 | 000143-07-7 | 99 |
| 2 | Dodecanoic acid | 200 | C12H24O2 | 000143-07-7 | 87 |
| 3 | Nonanoic acid | 158 | C9H18O2 | 000112-05-0 | 55 |
| 4 | n-Decanoic acid | 172 | C10H20O2 | 000334-48-5 | 53 |



Data File : C:\MSDCHEM\1\DATA\051412\5M66989.D Vial: 14
Acq On : 14 May 2012 4:14 pm Operator: CAA
Sample : L12050284-07 Inst : HPMS5
Misc : 1,1 Multiplr: 1.00
MS Integration Params: LSCINT.P

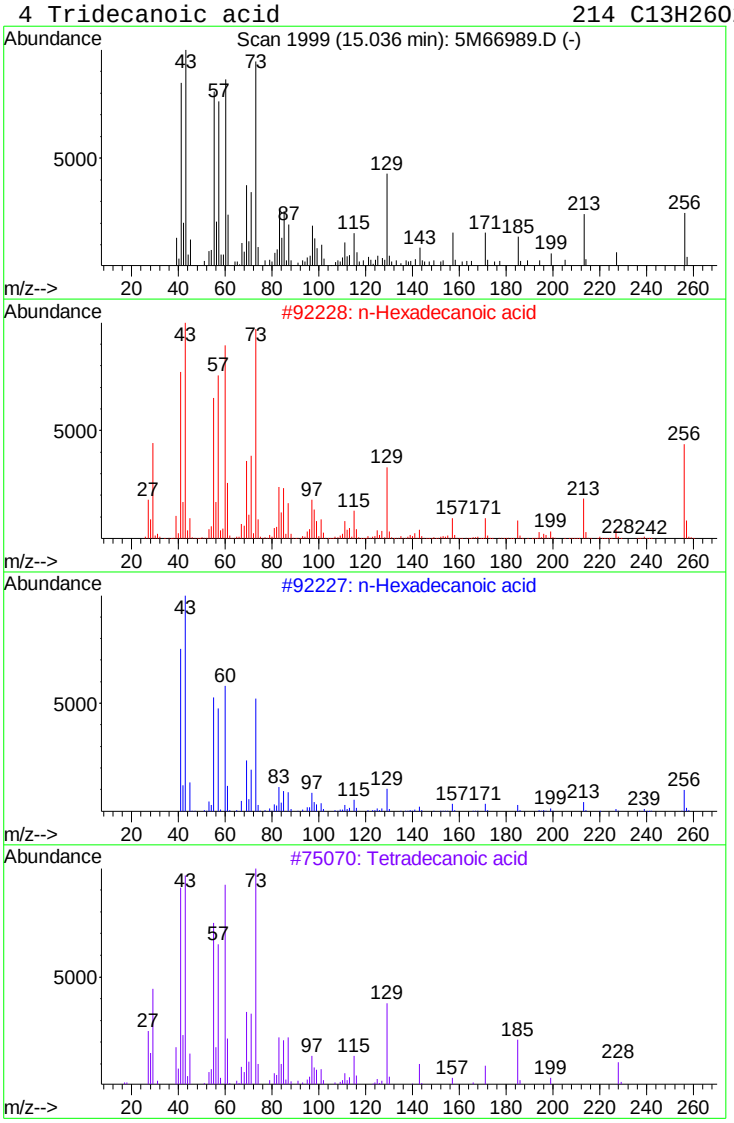
Quant Method : C:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
Title : OVD MSS01 8270/625/Initial cal. 05/11/12
Library : K:\ORGANICS\SEMIVOA\8270\NIST02.L

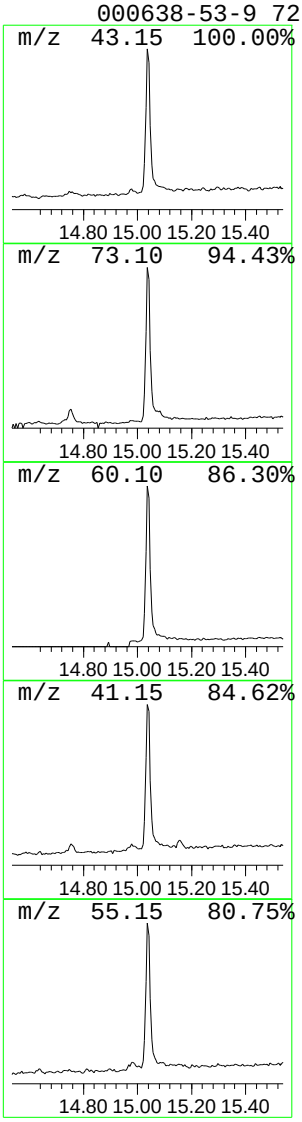
**********

Peak Number 4 n-Hexadecanoic acid Concentration Rank 3

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 15.04 | 5.11 ug/ml | 374507 | Phenanthrene-d10 | 14.64 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | n-Hexadecanoic acid | 256 | C16H32O2 | 000057-10-3 | 99 |
| 2 | n-Hexadecanoic acid | 256 | C16H32O2 | 000057-10-3 | 96 |
| 3 | Tetradecanoic acid | 228 | C14H28O2 | 000544-63-8 | 81 |
| 4 | Tridecanoic acid | 214 | C13H26O2 | 000638-53-9 | 72 |



Tentatively Identified Compound (LSC) summary

Operator ID: CAA  Date Acquired: 14 May 2012  4:14 pm
Data File: C:\MSDCHEM\1\DATA\051412\5M66989.D
Name: L12050284-07
Misc: 1,1
Method: C:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
Title: OVD MSS01 8270/625/Initial cal. 05/11/12
Library Searched: K:\ORGANICS\SEMIVOA\8270\NIST02.L

| | | | | | Internal Standard | | | |
|---|---|---|---|---|---|---|---|---|
| TIC Top Hit name | RT | EstConc | Units | Response | # | RT | Resp | Conc |
| Butane, 2-methoxy... | 4.39 | 6.5 | ug/ml | 285369 | 1 | 9.29 | 1753150 | 40.0 |
| 2-Pentanone, 4-hy... | 7.29 | 7.8 | ug/ml | 343353 | 1 | 9.29 | 1753150 | 40.0 |
| Dodecanoic acid | 13.12 | 4.6 | ug/ml | 301262 | 3 | 13.02 | 2599860 | 40.0 |
| n-Hexadecanoic acid | 15.04 | 5.1 | ug/ml | 374507 | 4 | 14.64 | 2934420 | 40.0 |

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\051412\5M66990.D Vial: 15
Acq On : 14 May 2012 4:50 pm Operator: CAA
Sample : L12050284-10 Inst : HPMS5
Misc : 1,1 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 16 08:13:36 2012 Quant Results File: MEGAMIX.RES

Quant Method : C:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
Title : OVD MSS01 8270/625/Initial cal. 05/11/12
Last Update : Wed May 16 08:13:18 2012
Response via : Initial Calibration
DataAcq Meth : BNA

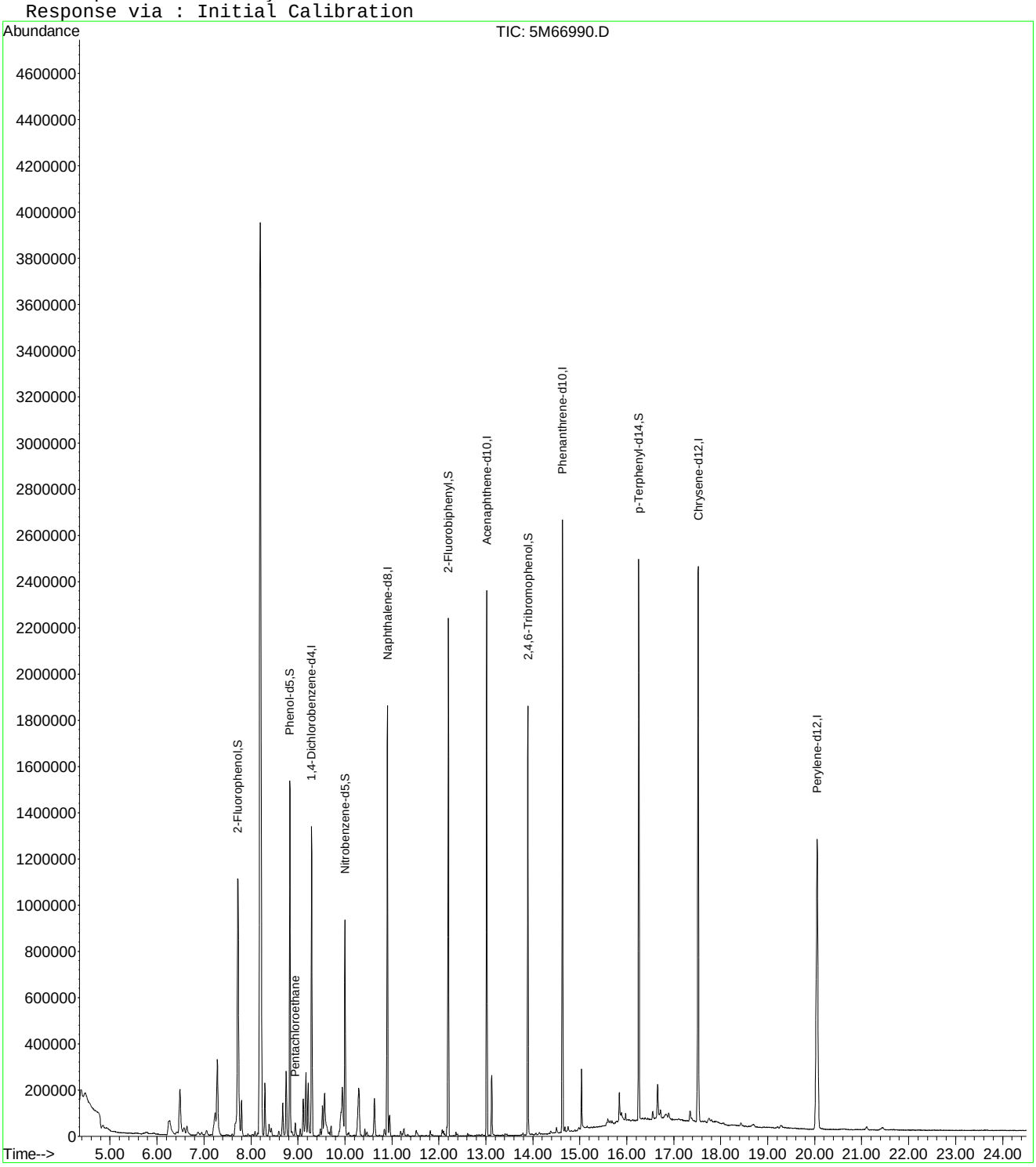
| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 1) 1,4-Dichlorobenzene-d4 | 9.29 | 152 | 303516 | 40.00 | ug/ml | 0.00 |
| 30) Naphthalene-d8 | 10.90 | 136 | 1111656 | 40.00 | ug/ml | 0.00 |
| 54) Acenaphthene-d10 | 13.02 | 164 | 640529 | 40.00 | ug/ml | 0.00 |
| 87) Phenanthrene-d10 | 14.63 | 188 | 1164796 | 40.00 | ug/ml | -0.02 |
| 113) Chrysene-d12 | 17.52 | 240 | 1403012 | 40.00 | ug/ml | -0.02 |
| 128) Perylene-d12 | 20.05 | 264 | 1270610 | 40.00 | ug/ml | -0.02 |
| **System Monitoring Compounds** | | | | | | |
| 8) 2-Fluorophenol | 7.73 | 112 | 576278 | 68.8661 | ug/ml | 0.00 |
| Spiked Amount 100.000 | Range 21 - 100 | | Recovery = 68.87% | | | |
| 12) Phenol-d5 | 8.83 | 99 | 731027 | 73.2681 | ug/ml | 0.00 |
| Spiked Amount 100.000 | Range 10 - 94 | | Recovery = 73.27% | | | |
| 31) Nitrobenzene-d5 | 10.00 | 82 | 360142 | 39.7299 | ug/ml | -0.02 |
| Spiked Amount 50.000 | Range 35 - 114 | | Recovery = 79.46% | | | |
| 59) 2-Fluorobiphenyl | 12.20 | 172 | 879525 | 40.7304 | ug/ml | 0.00 |
| Spiked Amount 50.000 | Range 43 - 116 | | Recovery = 81.46% | | | |
| 86) 2,4,6-Tribromophenol | 13.89 | 330 | 294491 | 84.7988 | ug/ml | -0.02 |
| Spiked Amount 100.000 | Range 10 - 123 | | Recovery = 84.80% | | | |
| 117) p-Terphenyl-d14 | 16.25 | 244 | 920433 | 40.9460 | ug/ml | 0.00 |
| Spiked Amount 50.000 | Range 33 - 141 | | Recovery = 81.90% | | | |
| **Target Compounds** | | | | | | Qvalue |
| 15) Pentachloroethane | 8.94 | 167 | 10105 | 2.5276 | ug/ml | 98 |
| 97) Dimethoate | 14.39 | 87 | 194 | Below Cal | # | 57 |
| 110) Methapyrilene | 15.53 | 58 | 174 | Below Cal | # | 14 |
| 121) Butyl Benzyl Phthalate | 16.72 | 149 | 1422 | Below Cal | # | 87 |

(#) = qualifier out of range (m) = manual integration
5M66990.D MEGAMIX.M Wed May 16 08:50:53 2012 Page 1

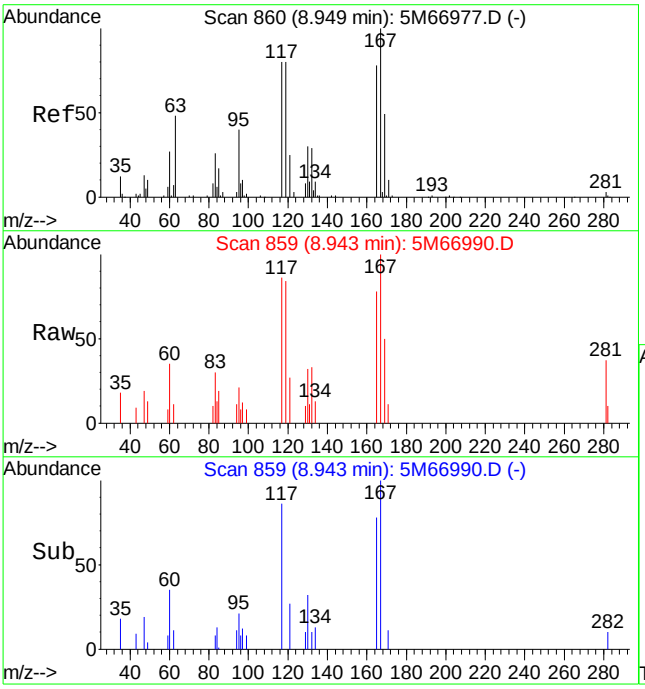
Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\051412\5M66990.D Vial: 15
Acq On : 14 May 2012 4:50 pm Operator: CAA
Sample : L12050284-10 Inst : HPMS5
Misc : 1,1 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 16 8:13 2012 Quant Results File: MEGAMIX.RES

Method : C:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
Title : OVD MSS01 8270/625/Initial cal. 05/11/12
Last Update : Wed May 16 08:13:18 2012
Response via : Initial Calibration



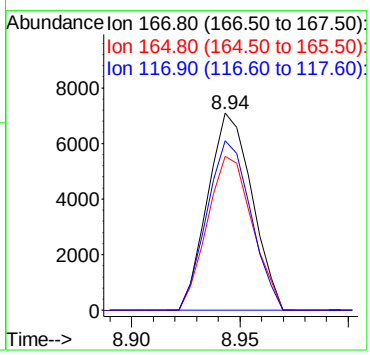

5M66990.D MEGAMIX.M Wed May 16 08:50:53 2012 Page 2




#15
Pentachloroethane
Concen: 2.53 ug/ml
RT: 8.94 min Scan# 859
Delta R.T. -0.01 min
Lab File: 5M66990.D
Acq: 14 May 2012 4:50 pm

Tgt Ion:167 Resp: 10105

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 167 | 100 | | |
| 165 | 79.2 | 62.5 | 93.7 |
| 117 | 85.2 | 66.2 | 99.2 |



Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\051412\5M66990.D Vial: 15
Acq On : 14 May 2012 4:50 pm Operator: CAA
Sample : L12050284-10 Inst : HPMS5
Misc : 1,1 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 16 09:13:25 2012 Quant Results File: TCL.RES

Quant Method : C:\MSDCHEM\1\METHODS\TCL.M (RTE Integrator)
Title : MSS01 OVD 827-TCL INITIAL CALIBRATION 05/14/12
Last Update : Wed May 16 09:13:02 2012
Response via : Initial Calibration
DataAcq Meth : BNA

| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 1) 1,4-Dichlorobenzene-d4 | 9.29 | 152 | 303516 | 40.00 | ug/mL | 0.00 |
| 3) Naphthalene-d8 | 10.90 | 136 | 1111656 | 40.00 | ug/mL | 0.00 |
| 5) Acenaphthene-d10 | 13.02 | 164 | 640529 | 40.00 | ug/mL | 0.00 |
| 7) Phenanthrene-d10 | 14.63 | 188 | 1164796 | 40.00 | ug/mL | 0.00 |

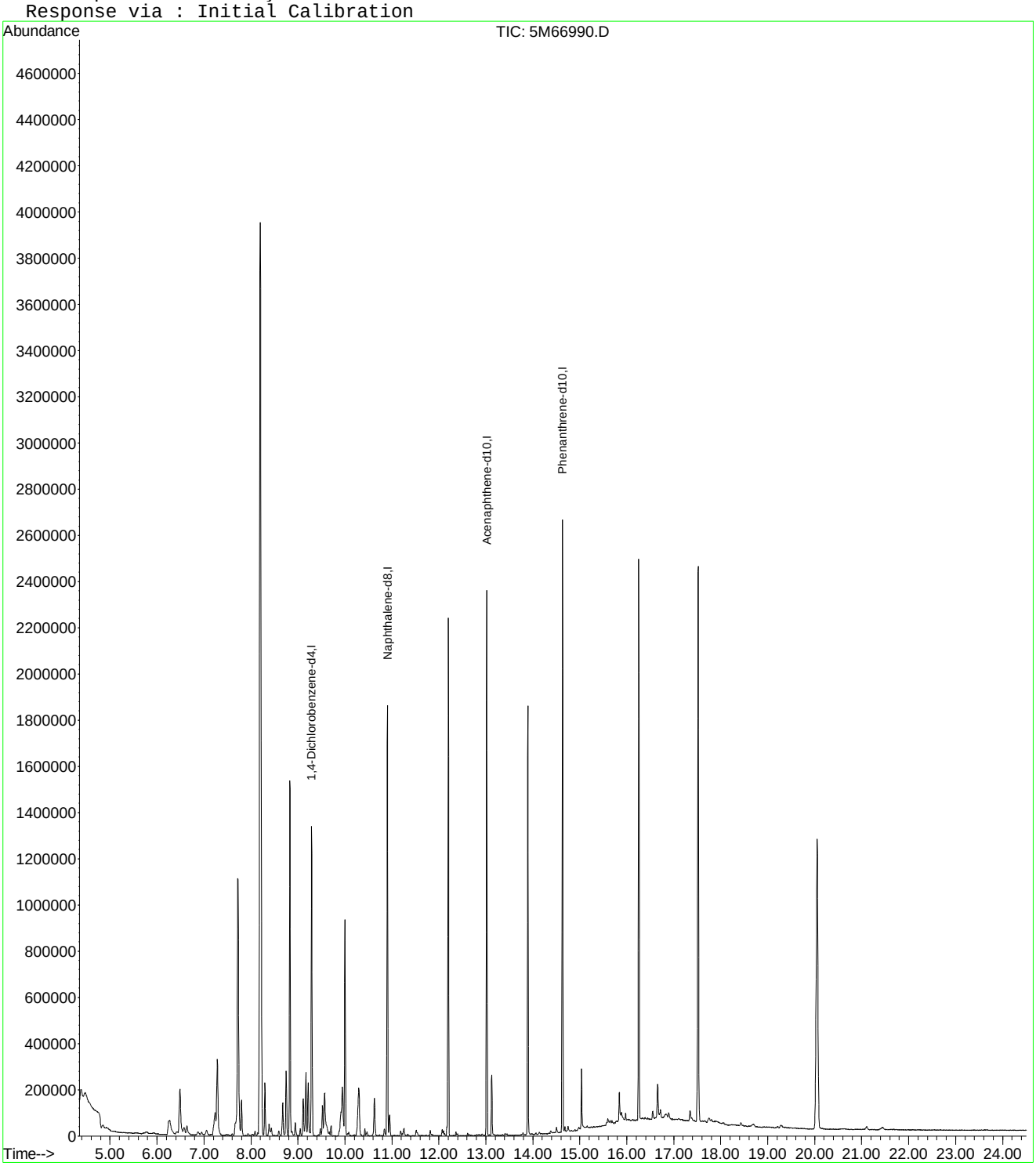
Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration
5M66990.D TCL.M Wed May 16 09:13:25 2012 Page 1

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\051412\5M66990.D Vial: 15
Acq On : 14 May 2012 4:50 pm Operator: CAA
Sample : L12050284-10 Inst : HPMS5
Misc : 1,1 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 16 9:13 2012 Quant Results File: TCL.RES

Method : C:\MSDCHEM\1\METHODS\TCL.M (RTE Integrator)
Title : MSS01 OVD 827-TCL INITIAL CALIBRATION 05/14/12
Last Update : Wed May 16 09:13:02 2012
Response via : Initial Calibration




5M66990.D TCL.M Wed May 16 09:13:25 2012 Page 2

LSC Area Percent Report

Data File : C:\MSDCHEM\1\DATA\051412\5M66990.D Vial: 15
Acq On : 14 May 2012 4:50 pm Operator: CAA
Sample : L12050284-10 Inst : HPMS5
Misc : 1,1 Multiplr: 1.00
MS Integration Params: LSCINT.P

Method : C:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
Title : OVD MSS01 8270/625/Initial cal. 05/11/12
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 1 % of largest Peak
Start Thrs: 0.05 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

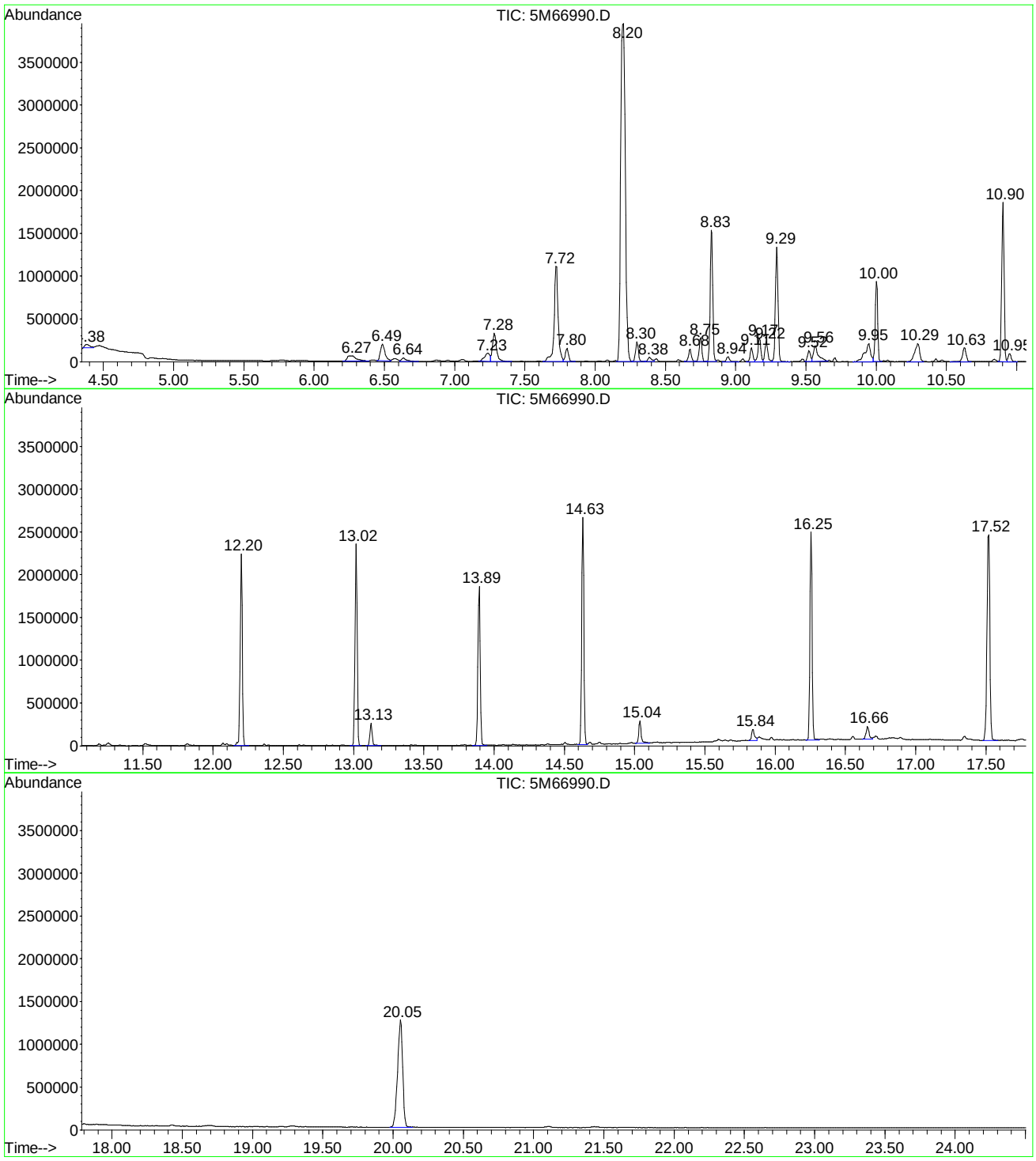
If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Signal : TIC

| peak # | R.T. min | first scan | max scan | last scan | PK TY | peak height | corr. area | corr. % max. | % of total |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 4.377 | 3 | 7 | 17 | rBV2 | 39110 | 103518 | 1.14% | 0.232% |
| 2 | 6.273 | 346 | 359 | 380 | rBV5 | 61588 | 286709 | 3.17% | 0.643% |
| 3 | 6.486 | 392 | 399 | 410 | rBV | 191399 | 439117 | 4.85% | 0.985% |
| 4 | 6.636 | 422 | 427 | 446 | rVB4 | 39236 | 98178 | 1.09% | 0.220% |
| 5 | 7.234 | 527 | 539 | 543 | rBV2 | 95928 | 262743 | 2.90% | 0.589% |
| 6 | 7.282 | 543 | 548 | 570 | rVB | 330965 | 657750 | 7.27% | 1.475% |
| 7 | 7.720 | 613 | 630 | 640 | rBV | 1113767 | 2167916 | 23.96% | 4.862% |
| 8 | 7.800 | 640 | 645 | 655 | rVB | 155210 | 233639 | 2.58% | 0.524% |
| 9 | 8.201 | 711 | 720 | 732 | rVB | 3951050 | 9046706 | 100.00% | 20.287% |
| 10 | 8.297 | 732 | 738 | 749 | rVB | 228851 | 315278 | 3.49% | 0.707% |
| 11 | 8.382 | 749 | 754 | 761 | rBV2 | 50725 | 95933 | 1.06% | 0.215% |
| 12 | 8.676 | 801 | 809 | 815 | rBV2 | 143871 | 209172 | 2.31% | 0.469% |
| 13 | 8.751 | 815 | 823 | 831 | rVB | 280433 | 380955 | 4.21% | 0.854% |
| 14 | 8.826 | 831 | 837 | 844 | rBV | 1538180 | 1989033 | 21.99% | 4.460% |
| 15 | 8.943 | 852 | 859 | 873 | rVB3 | 58609 | 96653 | 1.07% | 0.217% |
| 16 | 9.114 | 884 | 891 | 895 | rVV | 161421 | 224953 | 2.49% | 0.504% |
| 17 | 9.167 | 895 | 901 | 906 | rVV | 276439 | 391779 | 4.33% | 0.879% |
| 18 | 9.215 | 906 | 910 | 918 | rVV | 231483 | 327567 | 3.62% | 0.735% |
| 19 | 9.290 | 918 | 924 | 941 | rVB | 1340535 | 1725687 | 19.08% | 3.870% |
| 20 | 9.520 | 962 | 967 | 971 | rVV2 | 128850 | 179856 | 1.99% | 0.403% |
| 21 | 9.563 | 971 | 975 | 992 | rVB | 177709 | 411852 | 4.55% | 0.924% |
| 22 | 9.947 | 1026 | 1047 | 1053 | rBV2 | 213855 | 618346 | 6.84% | 1.387% |
| 23 | 10.001 | 1053 | 1057 | 1064 | rVB | 933499 | 1103749 | 12.20% | 2.475% |
| 24 | 10.294 | 1098 | 1112 | 1120 | rBV3 | 208904 | 513387 | 5.67% | 1.151% |
| 25 | 10.625 | 1156 | 1174 | 1183 | rBV2 | 163129 | 284975 | 3.15% | 0.639% |
| 26 | 10.903 | 1219 | 1226 | 1231 | rVV | 1863614 | 2181525 | 24.11% | 4.892% |
| 27 | 10.951 | 1231 | 1235 | 1244 | rVB2 | 91575 | 135318 | 1.50% | 0.303% |
| 28 | 12.201 | 1459 | 1469 | 1478 | rBV | 2241413 | 2461291 | 27.21% | 5.519% |
| 29 | 13.018 | 1614 | 1622 | 1628 | rBV | 2360438 | 2487701 | 27.50% | 5.579% |
| 30 | 13.125 | 1635 | 1642 | 1654 | rBV | 262224 | 294284 | 3.25% | 0.660% |
| 31 | 13.894 | 1777 | 1786 | 1796 | rBV | 1859537 | 2095706 | 23.17% | 4.700% |
| 32 | 14.631 | 1917 | 1924 | 1930 | rBV | 2654850 | 2790462 | 30.85% | 6.258% |
| 33 | 15.037 | 1994 | 2000 | 2013 | rVV | 262138 | 325698 | 3.60% | 0.730% |
| 34 | 15.844 | 2145 | 2151 | 2156 | rBV | 127480 | 190771 | 2.11% | 0.428% |
| 35 | 16.255 | 2221 | 2228 | 2239 | rBV | 2429711 | 2588612 | 28.61% | 5.805% |
| 36 | 16.656 | 2296 | 2303 | 2310 | rBV2 | 147576 | 222388 | 2.46% | 0.499% |
| 37 | 17.521 | 2457 | 2465 | 2476 | rVB | 2406791 | 3470015 | 38.36% | 7.781% |
| 38 | 20.052 | 2925 | 2939 | 2954 | rBV | 1255265 | 3183946 | 35.19% | 7.140% |

Sum of corrected areas: 44593168

```
File       : C:\MSDCHEM\1\DATA\051412\5M66990.D
Operator   : CAA
Acquired   : 14 May 2012   4:50 pm using AcqMethod BNA
Instrument :   HPMS5
Sample Name: L12050284-10
Misc Info  : 1,1
Vial Number: 15
Quant File :MEGAMIX.RES (RTE Integrator)
```



Data File : C:\MSDCHEM\1\DATA\051412\5M66990.D Vial: 15
Acq On : 14 May 2012 4:50 pm Operator: CAA
Sample : L12050284-10 Inst : HPMS5
Misc : 1,1 Multiplr: 1.00
MS Integration Params: LSCINT.P

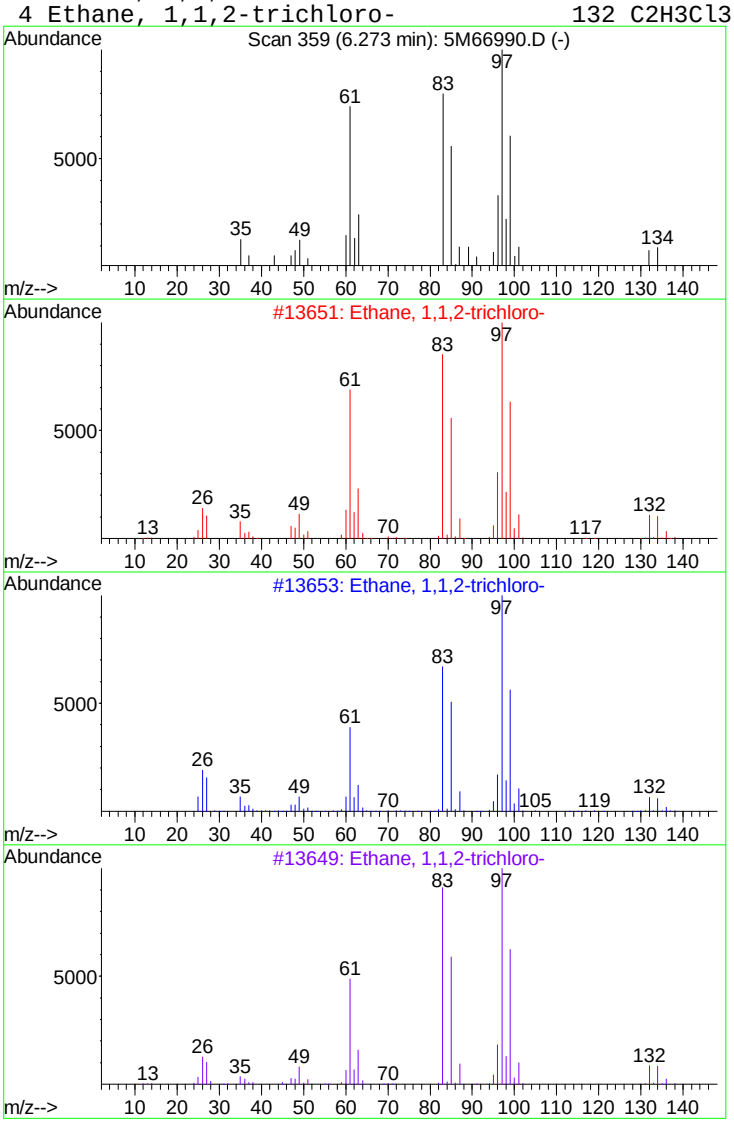
Quant Method : C:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
Title : OVD MSS01 8270/625/Initial cal. 05/11/12
Library : K:\ORGANICS\SEMIVOA\8270\NIST02.L

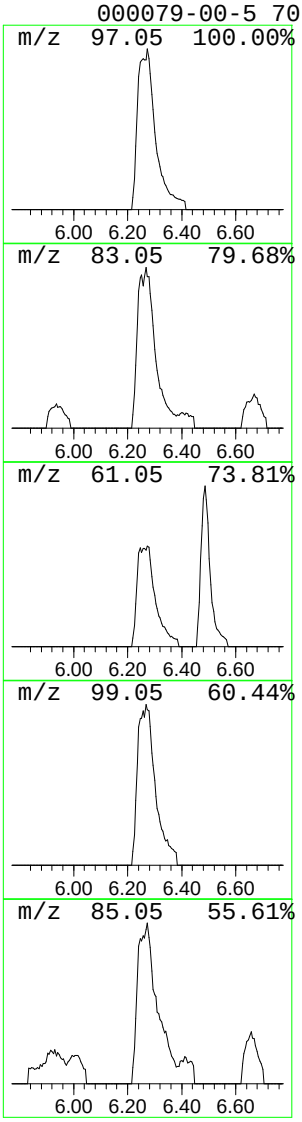
**********

Peak Number 1 Ethane, 1,1,2-trichloro- Concentration Rank 11

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 6.27 | 6.65 ug/ml | 286709 | 1,4-Dichlorobenzene-d4 | 9.29 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Ethane, 1,1,2-trichloro- | 132 | C2H3Cl3 | 000079-00-5 | 98 |
| 2 | Ethane, 1,1,2-trichloro- | 132 | C2H3Cl3 | 000079-00-5 | 93 |
| 3 | Ethane, 1,1,2-trichloro- | 132 | C2H3Cl3 | 000079-00-5 | 76 |
| 4 | Ethane, 1,1,2-trichloro- | 132 | C2H3Cl3 | 000079-00-5 | 70 |



Data File : C:\MSDCHEM\1\DATA\051412\5M66990.D Vial: 15
Acq On : 14 May 2012 4:50 pm Operator: CAA
Sample : L12050284-10 Inst : HPMS5
Misc : 1,1 Multiplr: 1.00
MS Integration Params: LSCINT.P

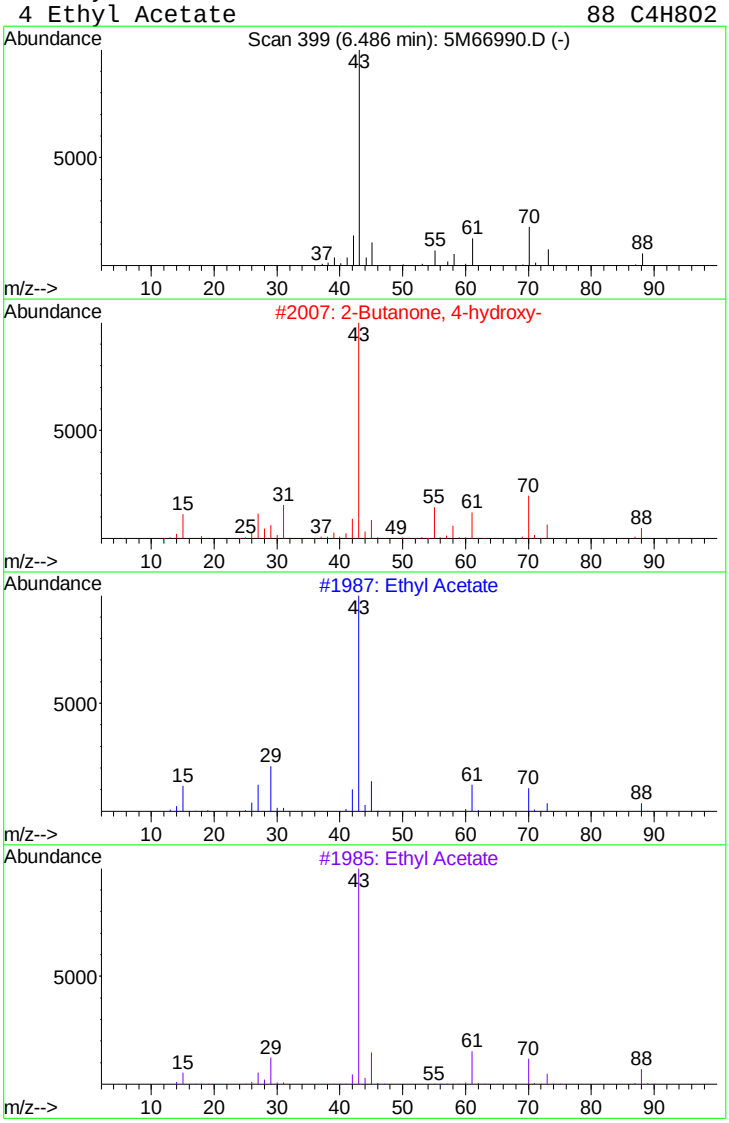
Quant Method : C:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
Title : OVD MSS01 8270/625/Initial cal. 05/11/12
Library : K:\ORGANICS\SEMIVOA\8270\NIST02.L

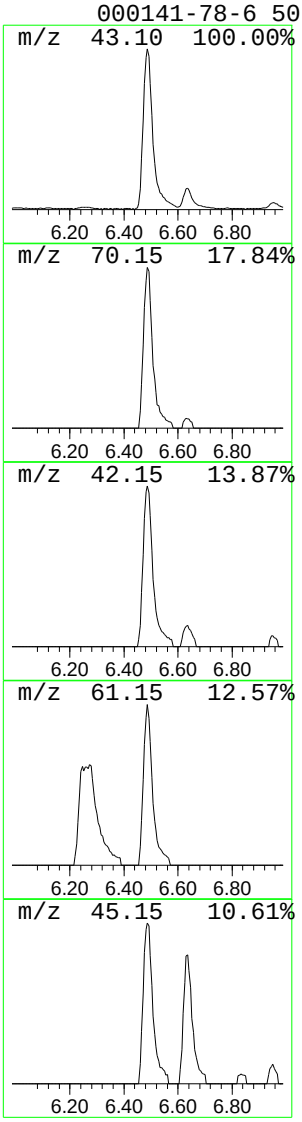
**********

Peak Number 2 2-Butanone, 4-hydroxy- Concentration Rank 4

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 6.49 | 10.18 ug/ml | 439117 | 1,4-Dichlorobenzene-d4 | 9.29 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | 2-Butanone, 4-hydroxy- | 88 | C4H8O2 | 000590-90-9 | 80 |
| 2 | Ethyl Acetate | 88 | C4H8O2 | 000141-78-6 | 72 |
| 3 | Ethyl Acetate | 88 | C4H8O2 | 000141-78-6 | 72 |
| 4 | Ethyl Acetate | 88 | C4H8O2 | 000141-78-6 | 50 |



Data File : C:\MSDCHEM\1\DATA\051412\5M66990.D Vial: 15
Acq On : 14 May 2012 4:50 pm Operator: CAA
Sample : L12050284-10 Inst : HPMS5
Misc : 1,1 Multiplr: 1.00
MS Integration Params: LSCINT.P

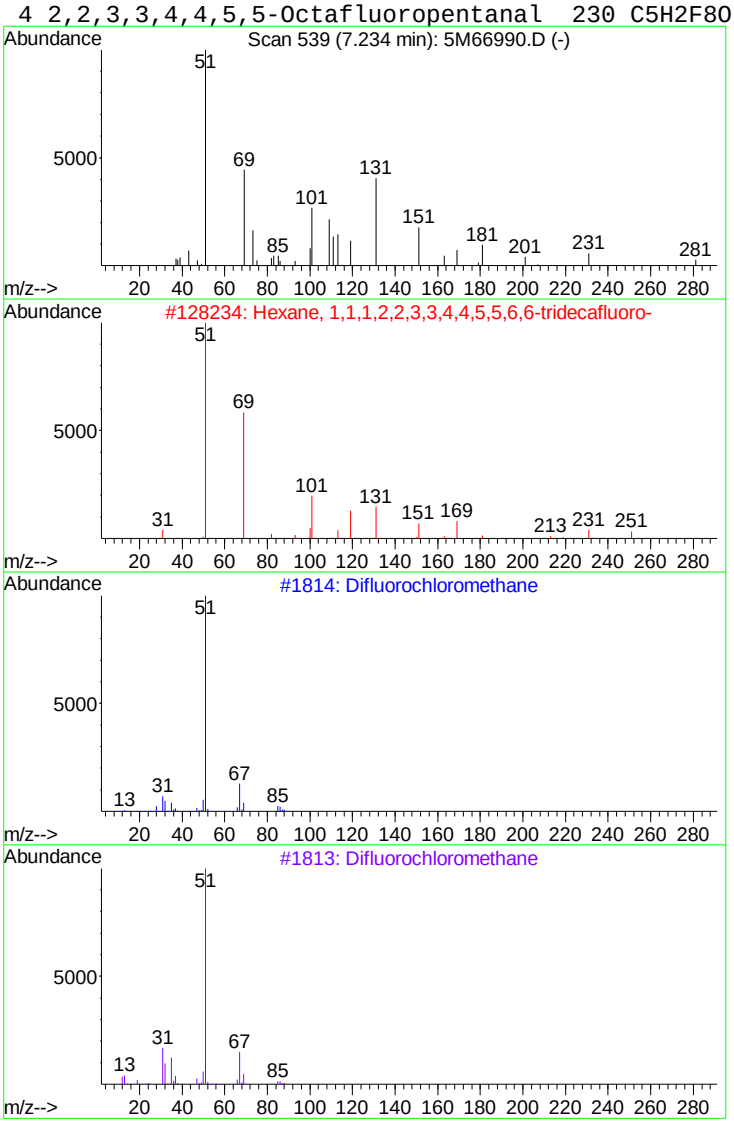
Quant Method : C:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
Title : OVD MSS01 8270/625/Initial cal. 05/11/12
Library : K:\ORGANICS\SEMIVOA\8270\NIST02.L

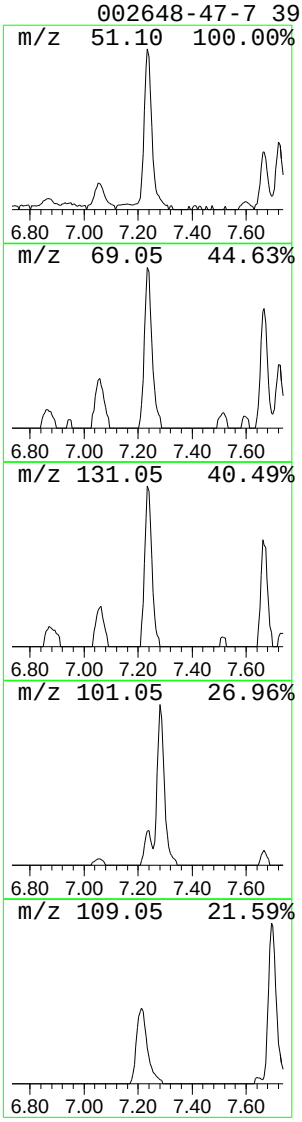
**********

Peak Number 3 Hexane, 1,1,1,2,2,3,3,4,4,5... Concentration Rank 12

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 7.23 | 6.09 ug/ml | 262743 | 1,4-Dichlorobenzene-d4 | 9.29 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Hexane, 1,1,1,2,2,3,3,4,4,5,5,6,... | 320 | C6HF13 | 000355-37-3 | 45 |
| 2 | Difluorochloromethane | 86 | CHClF2 | 000075-45-6 | 42 |
| 3 | Difluorochloromethane | 86 | CHClF2 | 000075-45-6 | 42 |
| 4 | 2,2,3,3,4,4,5,5-Octafluoropentanal | 230 | C5H2F8O | 002648-47-7 | 39 |



Data File : C:\MSDCHEM\1\DATA\051412\5M66990.D Vial: 15
Acq On : 14 May 2012 4:50 pm Operator: CAA
Sample : L12050284-10 Inst : HPMS5
Misc : 1,1 Multiplr: 1.00
MS Integration Params: LSCINT.P

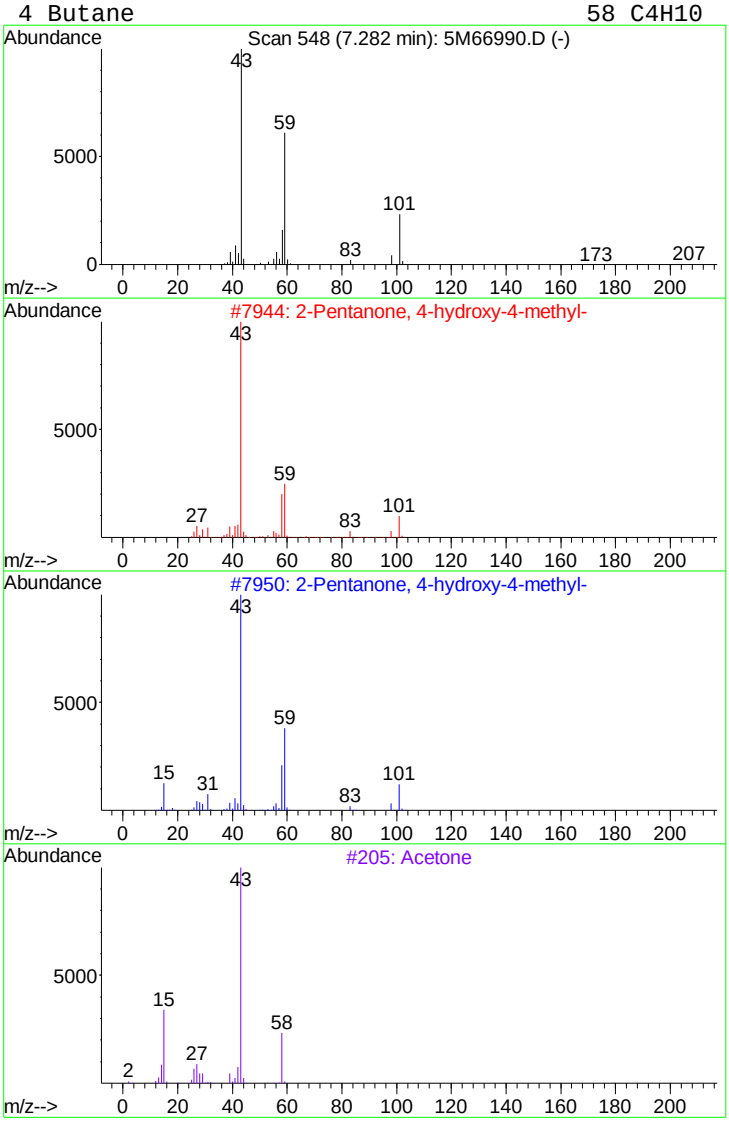
Quant Method : C:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
Title : OVD MSS01 8270/625/Initial cal. 05/11/12
Library : K:\ORGANICS\SEMIVOA\8270\NIST02.L

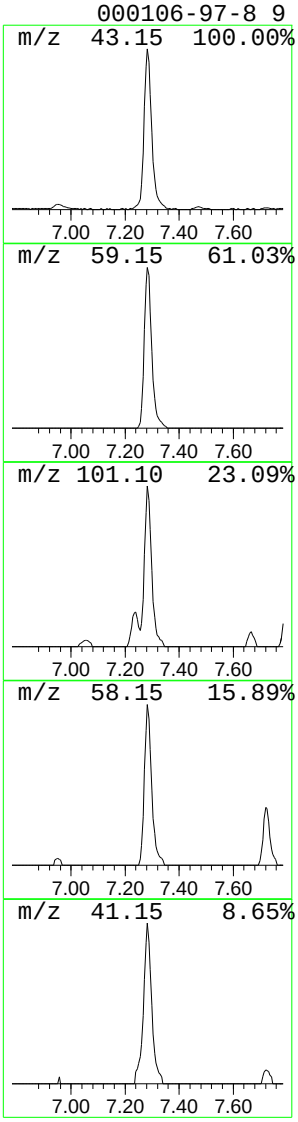
**********

Peak Number 4 2-Pentanone, 4-hydroxy-4-me... Concentration Rank 2

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 7.28 | 15.25 ug/ml | 657750 | 1,4-Dichlorobenzene-d4 | 9.29 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | 2-Pentanone, 4-hydroxy-4-methyl- | 116 | C6H12O2 | 000123-42-2 | 50 |
| 2 | 2-Pentanone, 4-hydroxy-4-methyl- | 116 | C6H12O2 | 000123-42-2 | 33 |
| 3 | Acetone | 58 | C3H6O | 000067-64-1 | 10 |
| 4 | Butane | 58 | C4H10 | 000106-97-8 | 9 |



Data File : C:\MSDCHEM\1\DATA\051412\5M66990.D Vial: 15
Acq On : 14 May 2012 4:50 pm Operator: CAA
Sample : L12050284-10 Inst : HPMS5
Misc : 1,1 Multiplr: 1.00
MS Integration Params: LSCINT.P

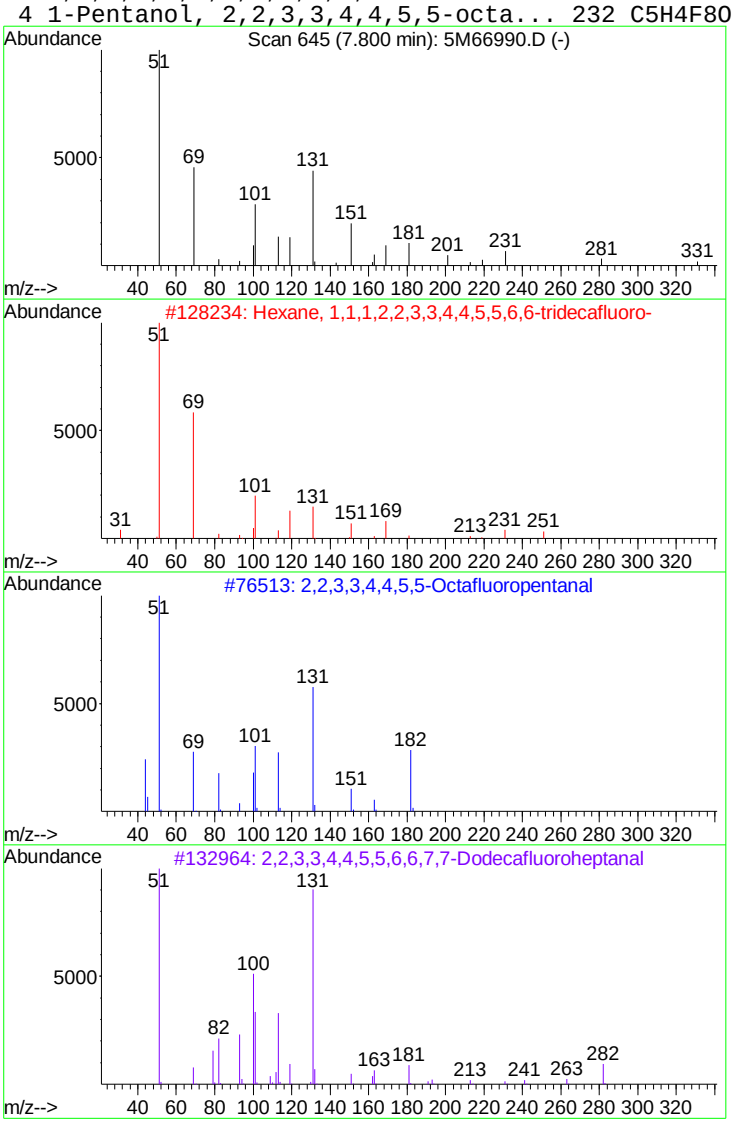
Quant Method : C:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
Title : OVD MSS01 8270/625/Initial cal. 05/11/12
Library : K:\ORGANICS\SEMIVOA\8270\NIST02.L

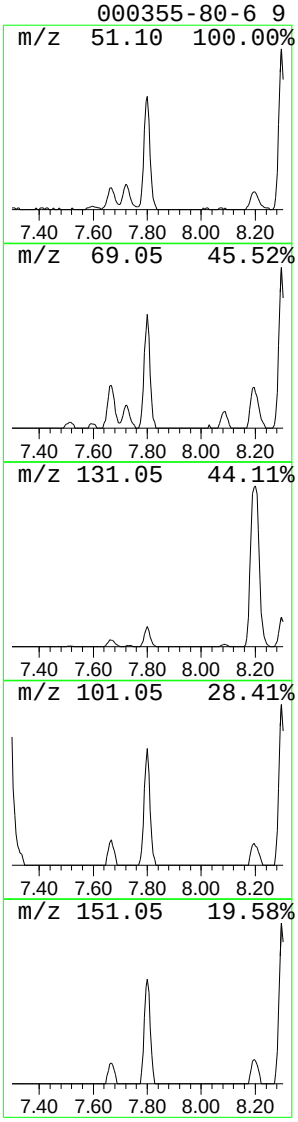
**********

Peak Number 5 Hexane, 1,1,1,2,2,3,3,4,4,5... Concentration Rank 13

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 7.80 | 5.42 ug/ml | 233639 | 1,4-Dichlorobenzene-d4 | 9.29 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Hexane, 1,1,1,2,2,3,3,4,4,5,5,6,... | 320 | C6HF13 | 000355-37-3 | 64 |
| 2 | 2,2,3,3,4,4,5,5-Octafluoropentanal | 230 | C5H2F8O | 002648-47-7 | 40 |
| 3 | 2,2,3,3,4,4,5,5,6,6,7,7-Dodecafl... | 330 | C7H2F12O | 000647-44-9 | 39 |
| 4 | 1-Pentanol, 2,2,3,3,4,4,5,5-octa... | 232 | C5H4F8O | 000355-80-6 | 9 |



Data File : C:\MSDCHEM\1\DATA\051412\5M66990.D Vial: 15
Acq On : 14 May 2012 4:50 pm Operator: CAA
Sample : L12050284-10 Inst : HPMS5
Misc : 1,1 Multiplr: 1.00
MS Integration Params: LSCINT.P

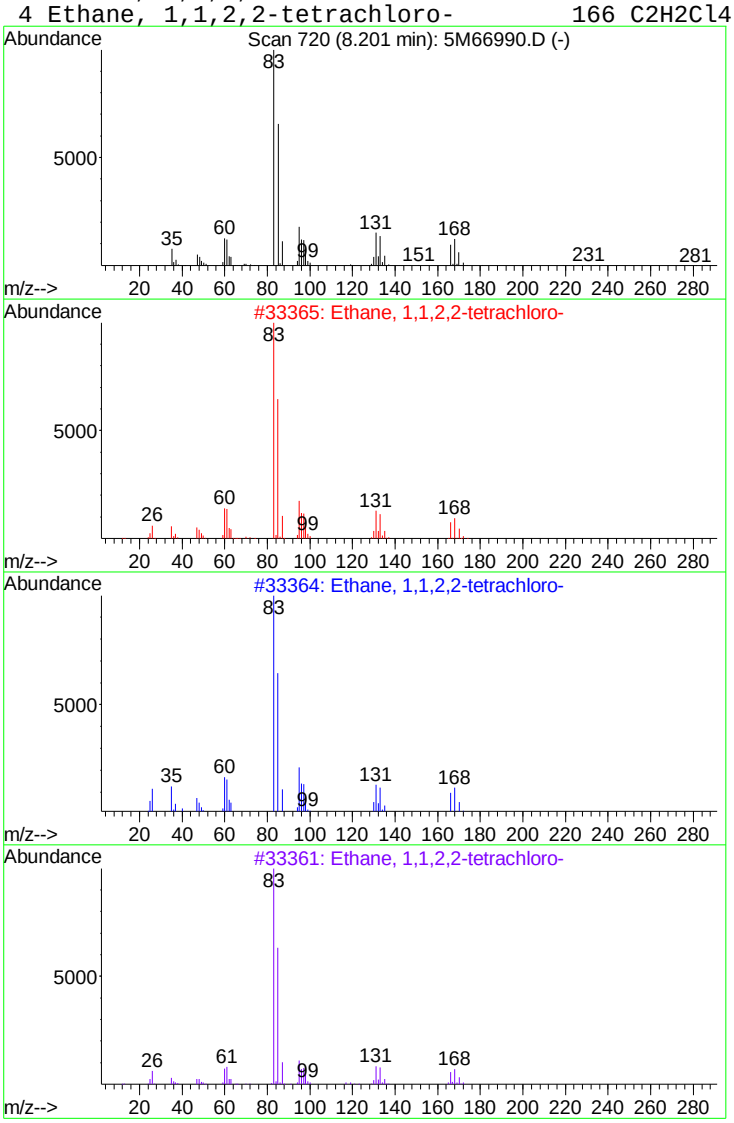
Quant Method : C:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
Title : OVD MSS01 8270/625/Initial cal. 05/11/12
Library : K:\ORGANICS\SEMIVOA\8270\NIST02.L

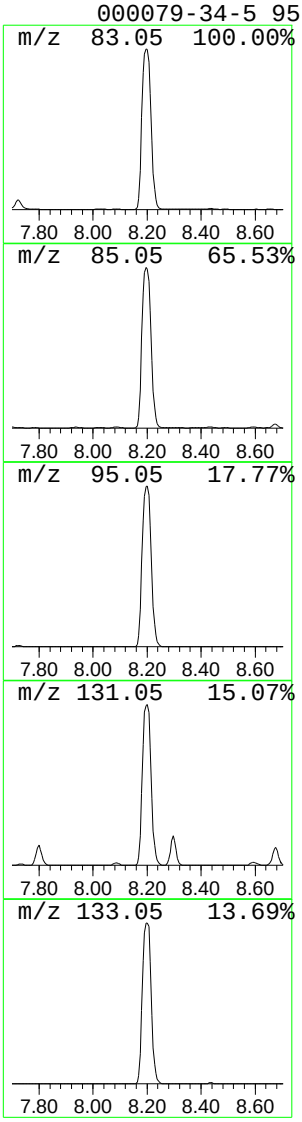
**********

Peak Number 6 Ethane, 1,1,2,2-tetrachloro- Concentration Rank 1

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 8.20 | 209.69 ug/ml | 9046710 | 1,4-Dichlorobenzene-d4 | 9.29 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Ethane, 1,1,2,2-tetrachloro- | 166 | C2H2Cl4 | 000079-34-5 | 98 |
| 2 | Ethane, 1,1,2,2-tetrachloro- | 166 | C2H2Cl4 | 000079-34-5 | 96 |
| 3 | Ethane, 1,1,2,2-tetrachloro- | 166 | C2H2Cl4 | 000079-34-5 | 95 |
| 4 | Ethane, 1,1,2,2-tetrachloro- | 166 | C2H2Cl4 | 000079-34-5 | 95 |



Data File : C:\MSDCHEM\1\DATA\051412\5M66990.D Vial: 15
Acq On : 14 May 2012 4:50 pm Operator: CAA
Sample : L12050284-10 Inst : HPMS5
Misc : 1,1 Multiplr: 1.00
MS Integration Params: LSCINT.P

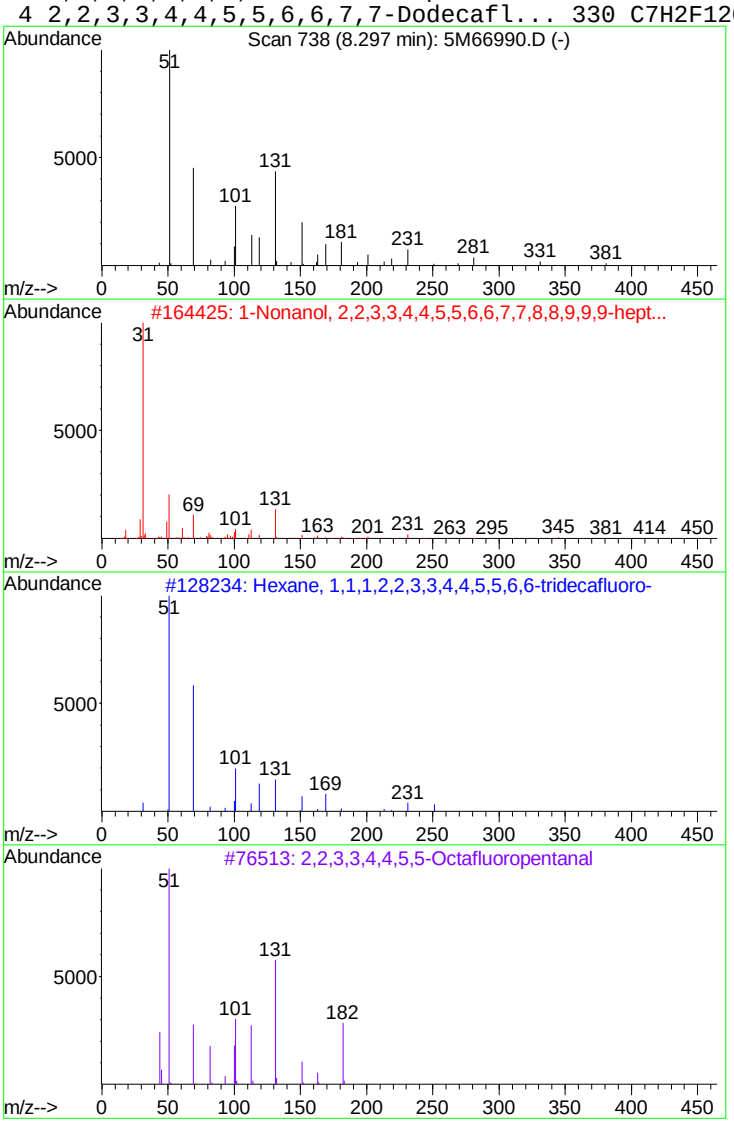
Quant Method : C:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
Title : OVD MSS01 8270/625/Initial cal. 05/11/12
Library : K:\ORGANICS\SEMIVOA\8270\NIST02.L

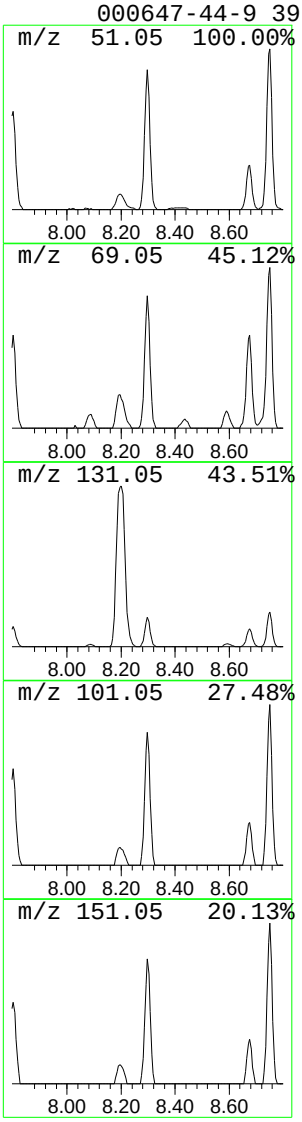
**********

Peak Number 7 1-Nonanol, 2,2,3,3,4,4,5,5,... Concentration Rank 10

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 8.30 | 7.31 ug/ml | 315278 | 1,4-Dichlorobenzene-d4 | 9.29 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | 1-Nonanol, 2,2,3,3,4,4,5,5,6,6,7... | 450 | C9H3F17O | 000423-56-3 | 56 |
| 2 | Hexane, 1,1,1,2,2,3,3,4,4,5,5,6,... | 320 | C6HF13 | 000355-37-3 | 50 |
| 3 | 2,2,3,3,4,4,5,5-Octafluoropentanal | 230 | C5H2F8O | 002648-47-7 | 40 |
| 4 | 2,2,3,3,4,4,5,5,6,6,7,7-Dodecafl... | 330 | C7H2F12O | 000647-44-9 | 39 |



Data File : C:\MSDCHEM\1\DATA\051412\5M66990.D Vial: 15
Acq On : 14 May 2012 4:50 pm Operator: CAA
Sample : L12050284-10 Inst : HPMS5
Misc : 1,1 Multiplr: 1.00
MS Integration Params: LSCINT.P

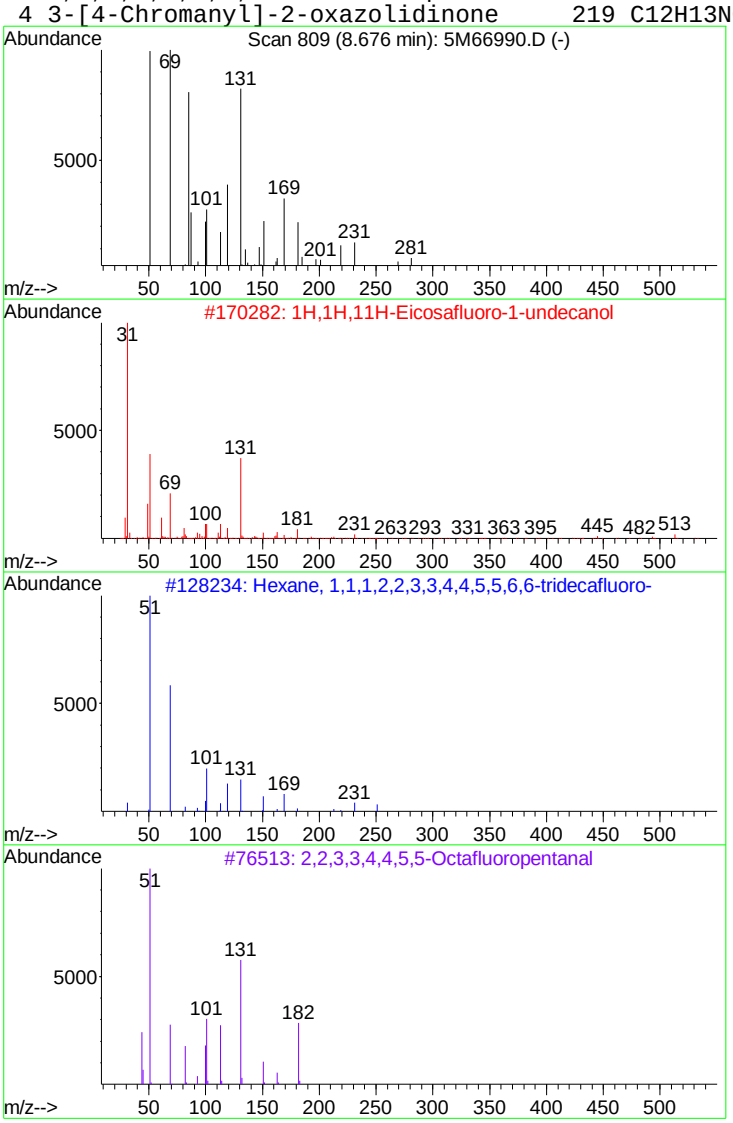
Quant Method : C:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
Title : OVD MSS01 8270/625/Initial cal. 05/11/12
Library : K:\ORGANICS\SEMIVOA\8270\NIST02.L

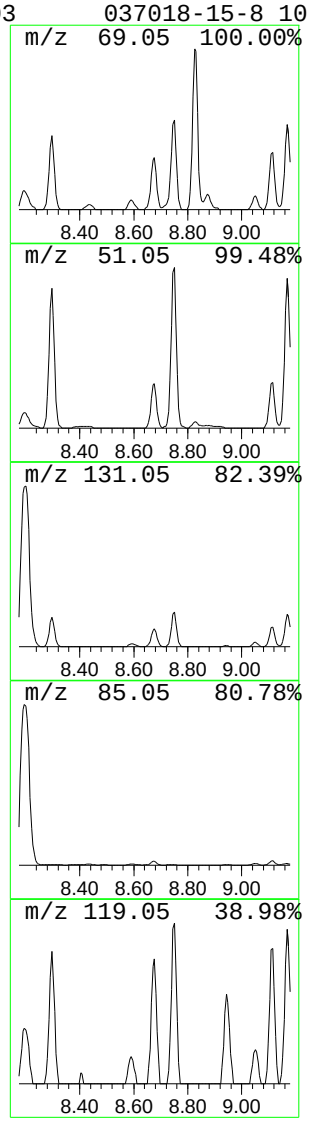
**********

Peak Number 8 1H,1H,11H-Eicosafluoro-1-un... Concentration Rank 16

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 8.68 | 4.85 ug/ml | 209172 | 1,4-Dichlorobenzene-d4 | 9.29 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | 1H,1H,11H-Eicosafluoro-1-undecanol | 532 | C11H4F20O | 000307-70-0 | 50 |
| 2 | Hexane, 1,1,1,2,2,3,3,4,4,5,5,6,... | 320 | C6HF13 | 000355-37-3 | 38 |
| 3 | 2,2,3,3,4,4,5,5-Octafluoropentanal | 230 | C5H2F8O | 002648-47-7 | 38 |
| 4 | 3-[4-Chromanyl]-2-oxazolidinone | 219 | C12H13NO3 | 037018-15-8 | 10 |



Data File : C:\MSDCHEM\1\DATA\051412\5M66990.D Vial: 15
Acq On : 14 May 2012 4:50 pm Operator: CAA
Sample : L12050284-10 Inst : HPMS5
Misc : 1,1 Multiplr: 1.00
MS Integration Params: LSCINT.P

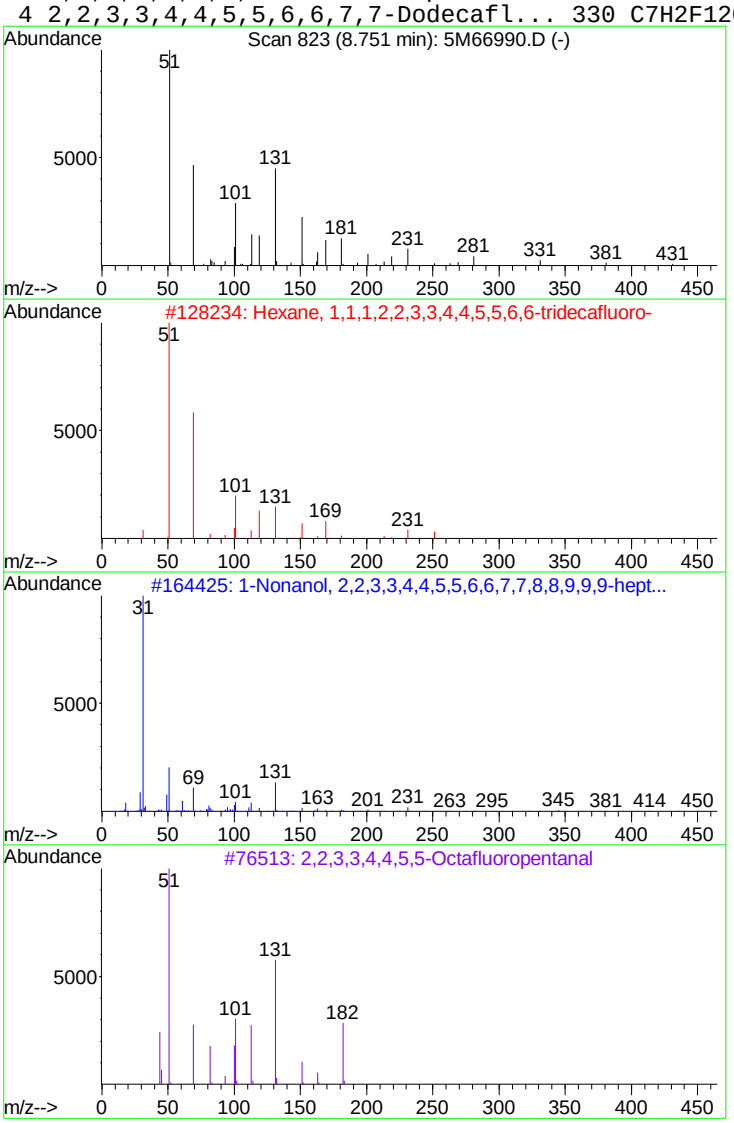
Quant Method : C:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
Title : OVD MSS01 8270/625/Initial cal. 05/11/12
Library : K:\ORGANICS\SEMIVOA\8270\NIST02.L

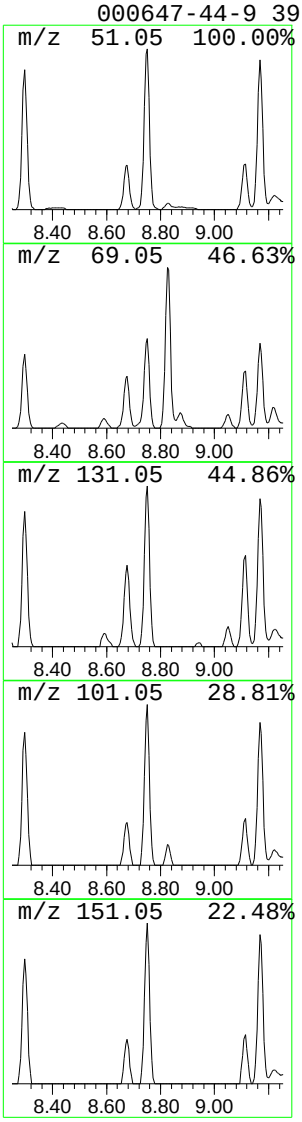
**********

Peak Number 9 Hexane, 1,1,1,2,2,3,3,4,4,5... Concentration Rank 8

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 8.75 | 8.83 ug/ml | 380955 | 1,4-Dichlorobenzene-d4 | 9.29 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Hexane, 1,1,1,2,2,3,3,4,4,5,5,6,... | 320 | C6HF13 | 000355-37-3 | 56 |
| 2 | 1-Nonanol, 2,2,3,3,4,4,5,5,6,6,7... | 450 | C9H3F17O | 000423-56-3 | 56 |
| 3 | 2,2,3,3,4,4,5,5-Octafluoropentanal | 230 | C5H2F8O | 002648-47-7 | 40 |
| 4 | 2,2,3,3,4,4,5,5,6,6,7,7-Dodecafl... | 330 | C7H2F12O | 000647-44-9 | 39 |



Data File : C:\MSDCHEM\1\DATA\051412\5M66990.D Vial: 15
Acq On : 14 May 2012 4:50 pm Operator: CAA
Sample : L12050284-10 Inst : HPMS5
Misc : 1,1 Multiplr: 1.00
MS Integration Params: LSCINT.P

Quant Method : C:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
Title : OVD MSS01 8270/625/Initial cal. 05/11/12
Library : K:\ORGANICS\SEMIVOA\8270\NIST02.L

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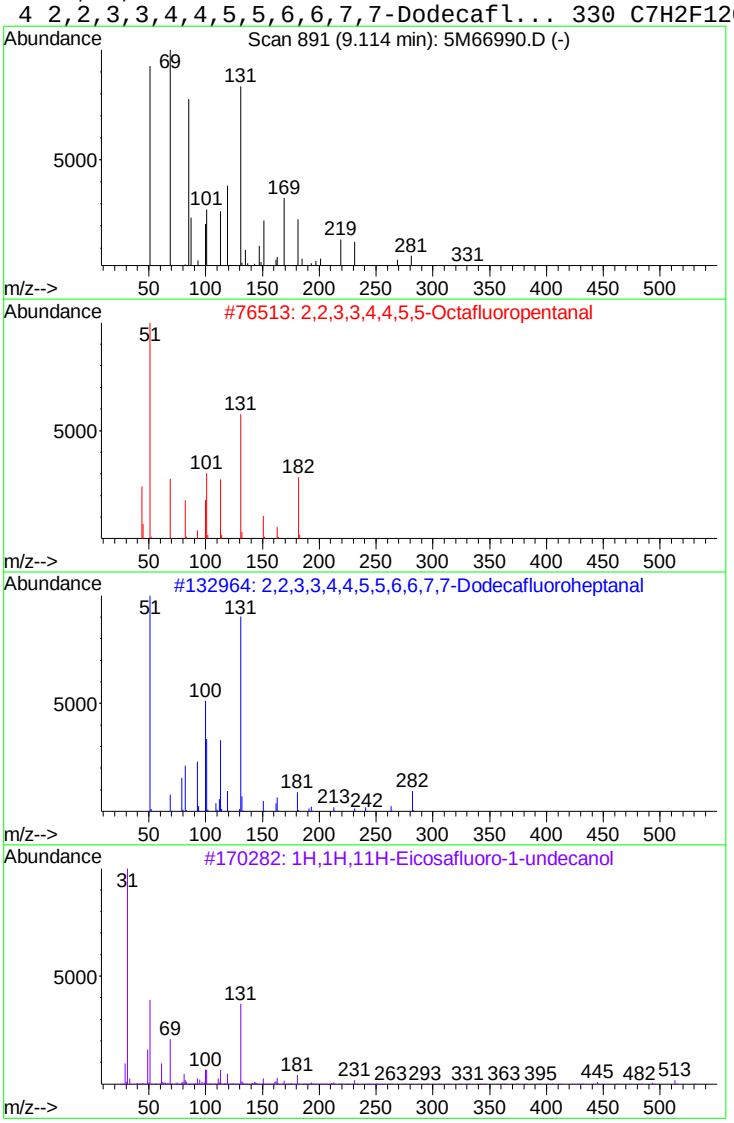
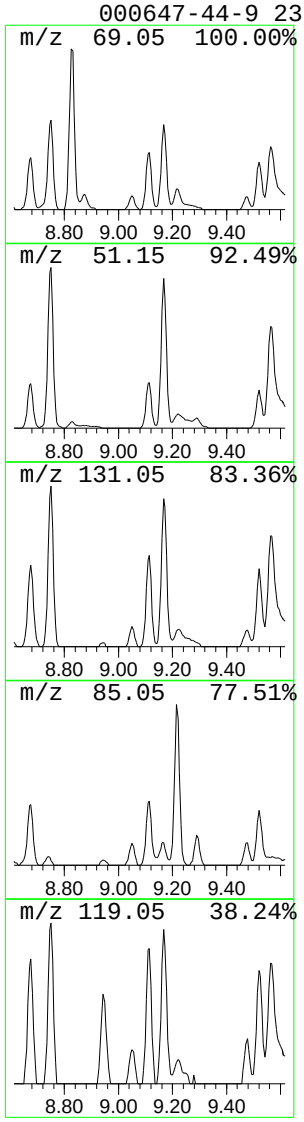
Peak Number 10 2,2,3,3,4,4,5,5-Octafluorop... Concentration Rank 15

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 9.11 | 5.21 ug/ml | 224953 | 1,4-Dichlorobenzene-d4 | 9.29 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | 2,2,3,3,4,4,5,5-Octafluoropentanal | 230 | C5H2F8O | 002648-47-7 | 38 |
| 2 | 2,2,3,3,4,4,5,5,6,6,7,7-Dodecafl... | 330 | C7H2F12O | 000647-44-9 | 33 |
| 3 | 1H,1H,11H-Eicosafluoro-1-undecanol | 532 | C11H4F20O | 000307-70-0 | 28 |
| 4 | 2,2,3,3,4,4,5,5,6,6,7,7-Dodecafl... | 330 | C7H2F12O | 000647-44-9 | 23 |



Data File : C:\MSDCHEM\1\DATA\051412\5M66990.D Vial: 15
Acq On : 14 May 2012 4:50 pm Operator: CAA
Sample : L12050284-10 Inst : HPMS5
Misc : 1,1 Multiplr: 1.00
MS Integration Params: LSCINT.P

Quant Method : C:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
Title : OVD MSS01 8270/625/Initial cal. 05/11/12
Library : K:\ORGANICS\SEMIVOA\8270\NIST02.L

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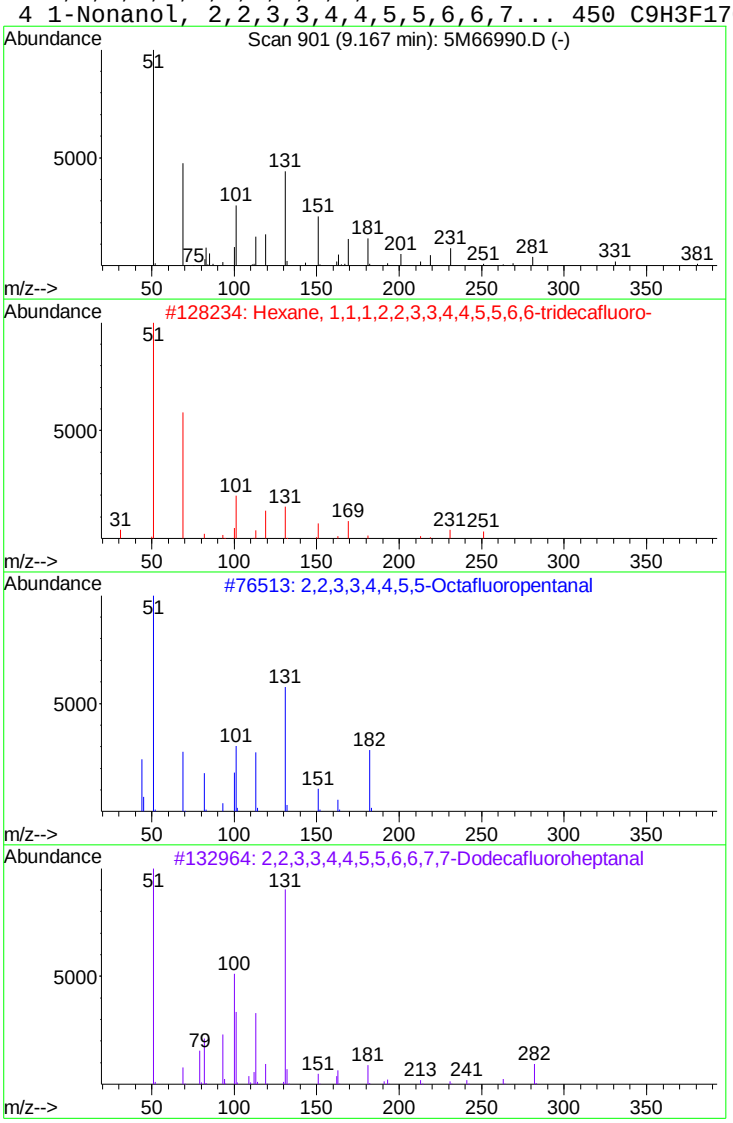
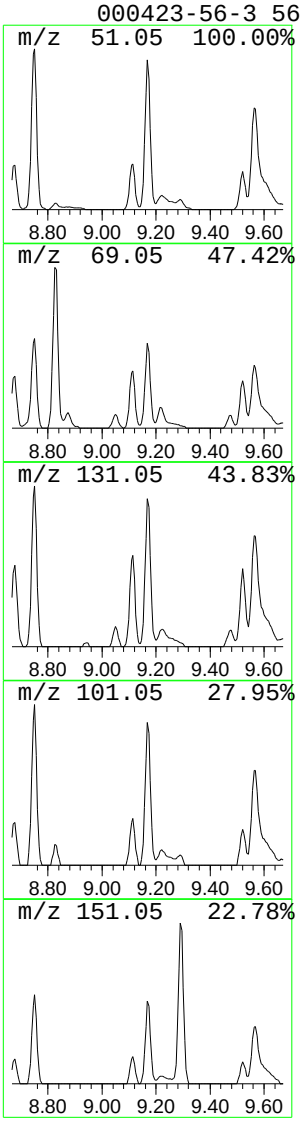
Peak Number 11 Hexane, 1,1,1,2,2,3,3,4,4,5... Concentration Rank 7

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 9.17 | 9.08 ug/ml | 391779 | 1,4-Dichlorobenzene-d4 | 9.29 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Hexane, 1,1,1,2,2,3,3,4,4,5,5,6,... | 320 | C6HF13 | 000355-37-3 | 56 |
| 2 | 2,2,3,3,4,4,5,5-Octafluoropentanal | 230 | C5H2F8O | 002648-47-7 | 56 |
| 3 | 2,2,3,3,4,4,5,5,6,6,7,7-Dodecafl... | 330 | C7H2F12O | 000647-44-9 | 56 |
| 4 | 1-Nonanol, 2,2,3,3,4,4,5,5,6,6,7... | 450 | C9H3F17O | 000423-56-3 | 56 |



Data File : C:\MSDCHEM\1\DATA\051412\5M66990.D Vial: 15
Acq On : 14 May 2012 4:50 pm Operator: CAA
Sample : L12050284-10 Inst : HPMS5
Misc : 1,1 Multiplr: 1.00
MS Integration Params: LSCINT.P

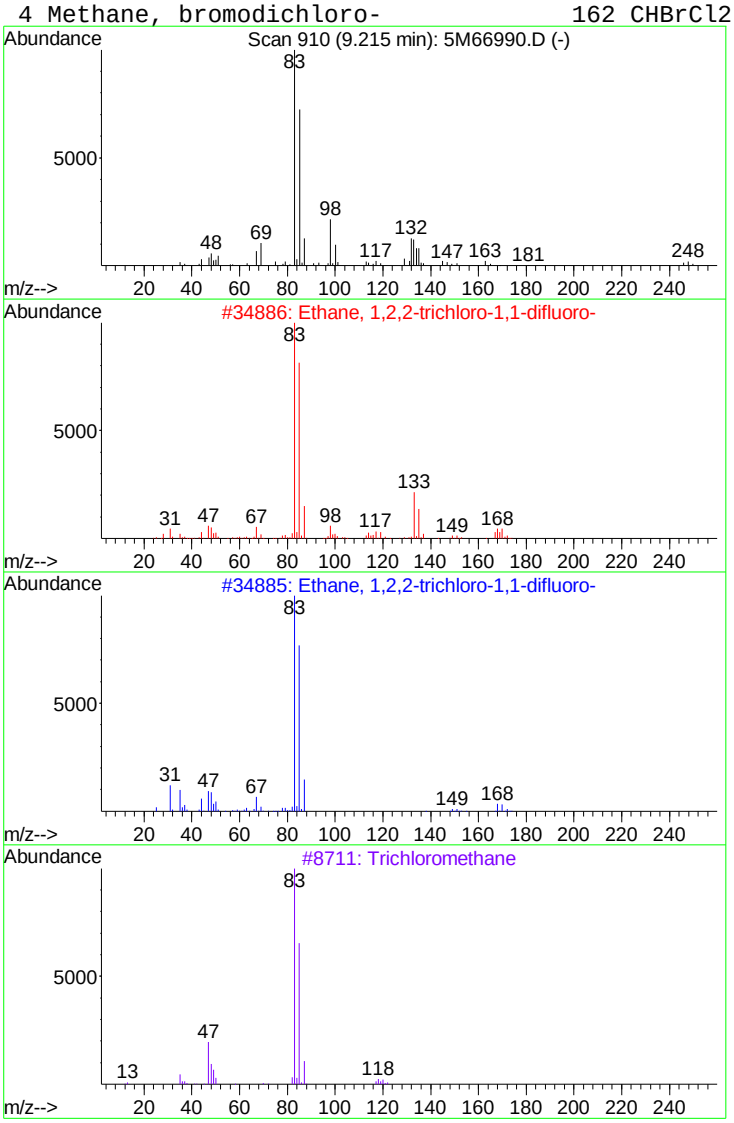
Quant Method : C:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
Title : OVD MSS01 8270/625/Initial cal. 05/11/12
Library : K:\ORGANICS\SEMIVOA\8270\NIST02.L

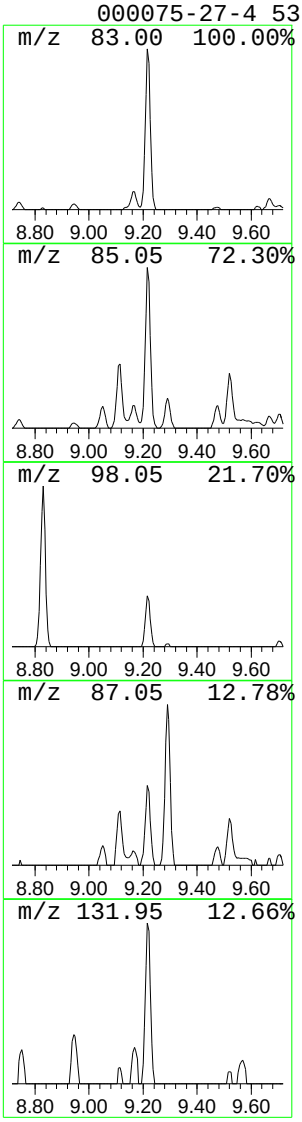
**********

Peak Number 12 Ethane, 1,2,2-trichloro-1,1... Concentration Rank 9

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 9.22 | 7.59 ug/ml | 327567 | 1,4-Dichlorobenzene-d4 | 9.29 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Ethane, 1,2,2-trichloro-1,1-difl... | 168 | C2HCl3F2 | 000354-21-2 | 64 |
| 2 | Ethane, 1,2,2-trichloro-1,1-difl... | 168 | C2HCl3F2 | 000354-21-2 | 59 |
| 3 | Trichloromethane | 118 | CHCl3 | 000067-66-3 | 53 |
| 4 | Methane, bromodichloro- | 162 | CHBrCl2 | 000075-27-4 | 53 |



Data File : C:\MSDCHEM\1\DATA\051412\5M66990.D Vial: 15
Acq On : 14 May 2012 4:50 pm Operator: CAA
Sample : L12050284-10 Inst : HPMS5
Misc : 1,1 Multiplr: 1.00
MS Integration Params: LSCINT.P

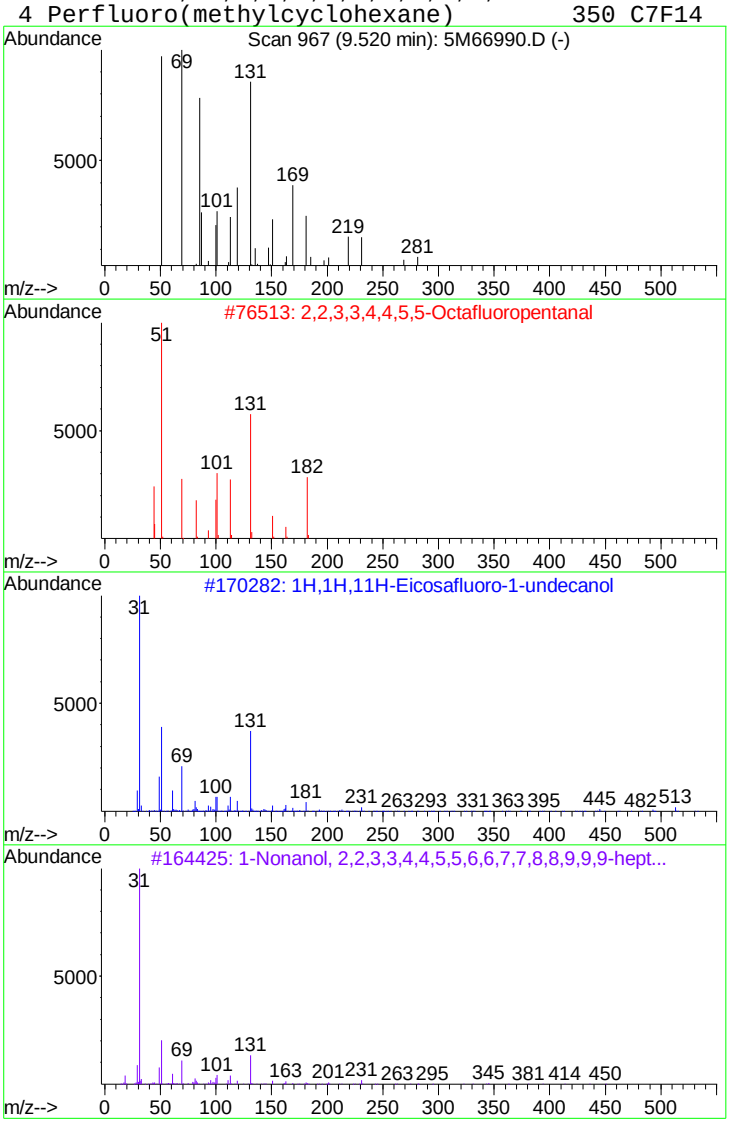
Quant Method : C:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
Title : OVD MSS01 8270/625/Initial cal. 05/11/12
Library : K:\ORGANICS\SEMIVOA\8270\NIST02.L

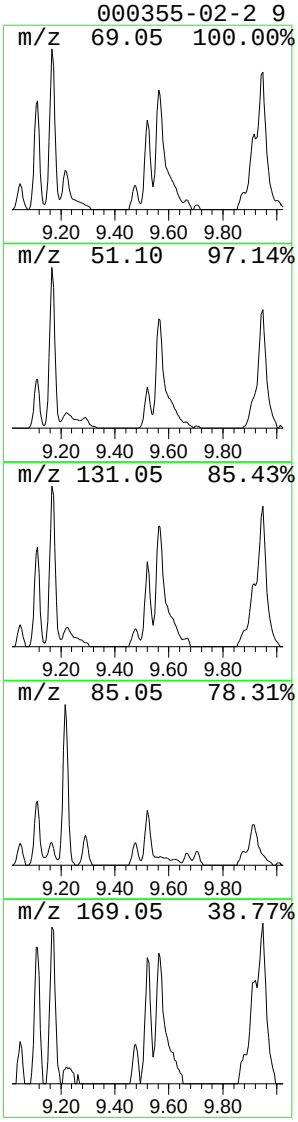
**********

Peak Number 13 2,2,3,3,4,4,5,5-Octafluorop... Concentration Rank 19

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 9.52 | 4.17 ug/ml | 179856 | 1,4-Dichlorobenzene-d4 | 9.29 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | 2,2,3,3,4,4,5,5-Octafluoropentanal | 230 | C5H2F8O | 002648-47-7 | 38 |
| 2 | 1H,1H,11H-Eicosafluoro-1-undecanol | 532 | C11H4F20O | 000307-70-0 | 33 |
| 3 | 1-Nonanol, 2,2,3,3,4,4,5,5,6,6,7... | 450 | C9H3F17O | 000423-56-3 | 9 |
| 4 | Perfluoro(methylcyclohexane) | 350 | C7F14 | 000355-02-2 | 9 |



Data File : C:\MSDCHEM\1\DATA\051412\5M66990.D Vial: 15
Acq On : 14 May 2012 4:50 pm Operator: CAA
Sample : L12050284-10 Inst : HPMS5
Misc : 1,1 Multiplr: 1.00
MS Integration Params: LSCINT.P

Quant Method : C:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
Title : OVD MSS01 8270/625/Initial cal. 05/11/12
Library : K:\ORGANICS\SEMIVOA\8270\NIST02.L

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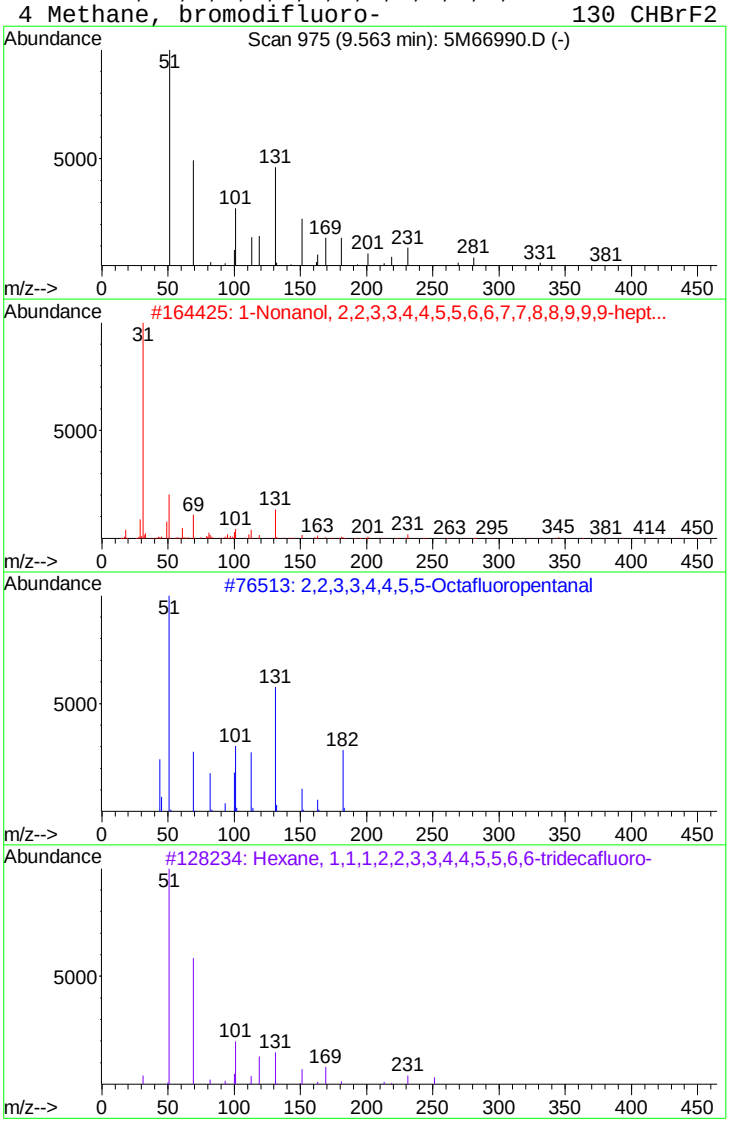
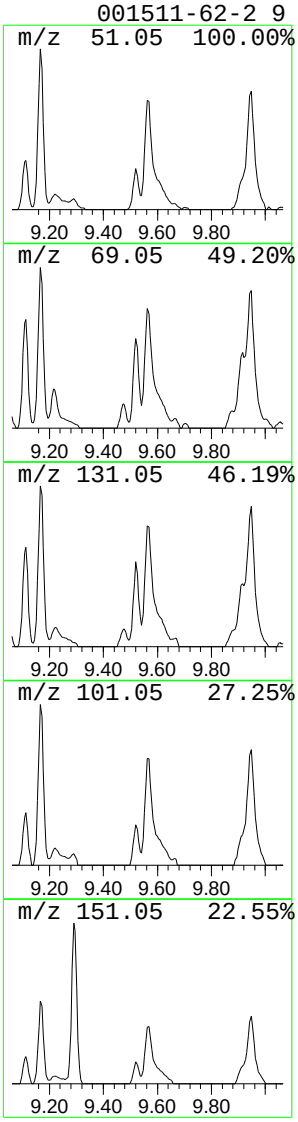
Peak Number 14 1-Nonanol, 2,2,3,3,4,4,5,5,... Concentration Rank 5

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 9.56 | 9.55 ug/ml | 411852 | 1,4-Dichlorobenzene-d4 | 9.29 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | 1-Nonanol, 2,2,3,3,4,4,5,5,6,6,7... | 450 | C9H3F17O | 000423-56-3 | 56 |
| 2 | 2,2,3,3,4,4,5,5-Octafluoropentanal | 230 | C5H2F8O | 002648-47-7 | 40 |
| 3 | Hexane, 1,1,1,2,2,3,3,4,4,5,5,6,... | 320 | C6HF13 | 000355-37-3 | 10 |
| 4 | Methane, bromodifluoro- | 130 | CHBrF2 | 001511-62-2 | 9 |



Data File : C:\MSDCHEM\1\DATA\051412\5M66990.D Vial: 15
Acq On : 14 May 2012 4:50 pm Operator: CAA
Sample : L12050284-10 Inst : HPMS5
Misc : 1,1 Multiplr: 1.00
MS Integration Params: LSCINT.P

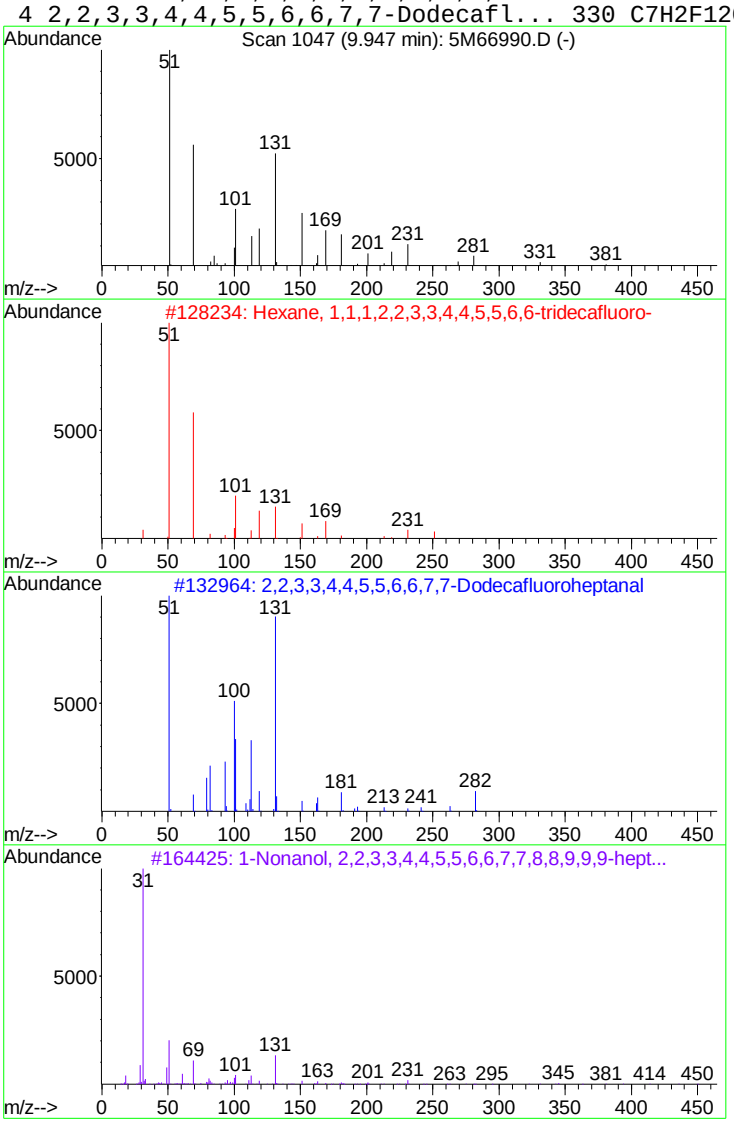
Quant Method : C:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
Title : OVD MSS01 8270/625/Initial cal. 05/11/12
Library : K:\ORGANICS\SEMIVOA\8270\NIST02.L

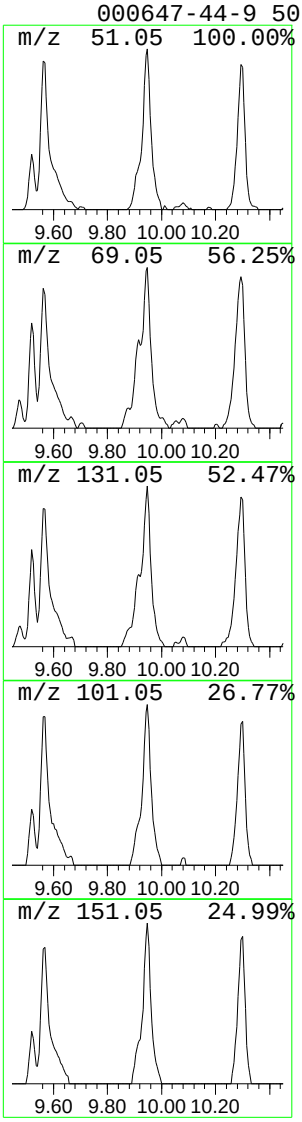
**********

Peak Number 15 Hexane, 1,1,1,2,2,3,3,4,4,5... Concentration Rank 3

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 9.95 | 14.33 ug/ml | 618346 | 1,4-Dichlorobenzene-d4 | 9.29 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Hexane, 1,1,1,2,2,3,3,4,4,5,5,6,... | 320 | C6HF13 | 000355-37-3 | 56 |
| 2 | 2,2,3,3,4,4,5,5,6,6,7,7-Dodecafl... | 330 | C7H2F12O | 000647-44-9 | 56 |
| 3 | 1-Nonanol, 2,2,3,3,4,4,5,5,6,6,7... | 450 | C9H3F17O | 000423-56-3 | 56 |
| 4 | 2,2,3,3,4,4,5,5,6,6,7,7-Dodecafl... | 330 | C7H2F12O | 000647-44-9 | 50 |



Data File : C:\MSDCHEM\1\DATA\051412\5M66990.D Vial: 15
Acq On : 14 May 2012 4:50 pm Operator: CAA
Sample : L12050284-10 Inst : HPMS5
Misc : 1,1 Multiplr: 1.00
MS Integration Params: LSCINT.P

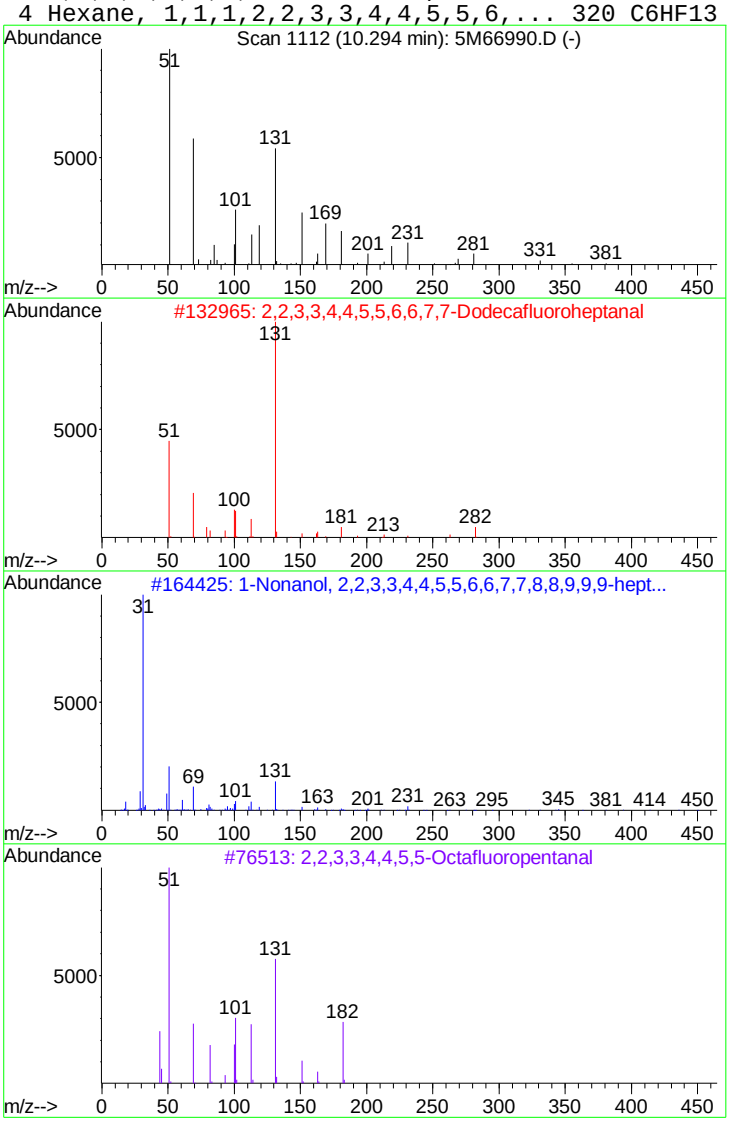
Quant Method : C:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
Title : OVD MSS01 8270/625/Initial cal. 05/11/12
Library : K:\ORGANICS\SEMIVOA\8270\NIST02.L

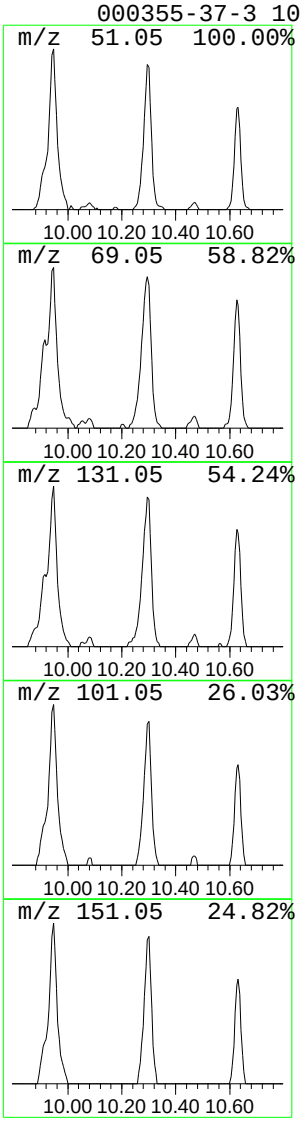
**********

Peak Number 16 2,2,3,3,4,4,5,5,6,6,7,7-Dod... Concentration Rank 6

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 10.29 | 9.41 ug/ml | 513387 | Naphthalene-d8 | 10.90 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | 2,2,3,3,4,4,5,5,6,6,7,7-Dodecafl... | 330 | C7H2F12O | 000647-44-9 | 45 |
| 2 | 1-Nonanol, 2,2,3,3,4,4,5,5,6,6,7... | 450 | C9H3F17O | 000423-56-3 | 39 |
| 3 | 2,2,3,3,4,4,5,5-Octafluoropentanal | 230 | C5H2F8O | 002648-47-7 | 39 |
| 4 | Hexane, 1,1,1,2,2,3,3,4,4,5,5,6,... | 320 | C6HF13 | 000355-37-3 | 10 |



Data File : C:\MSDCHEM\1\DATA\051412\5M66990.D Vial: 15
Acq On : 14 May 2012 4:50 pm Operator: CAA
Sample : L12050284-10 Inst : HPMS5
Misc : 1,1 Multiplr: 1.00
MS Integration Params: LSCINT.P

Quant Method : C:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
Title : OVD MSS01 8270/625/Initial cal. 05/11/12
Library : K:\ORGANICS\SEMIVOA\8270\NIST02.L

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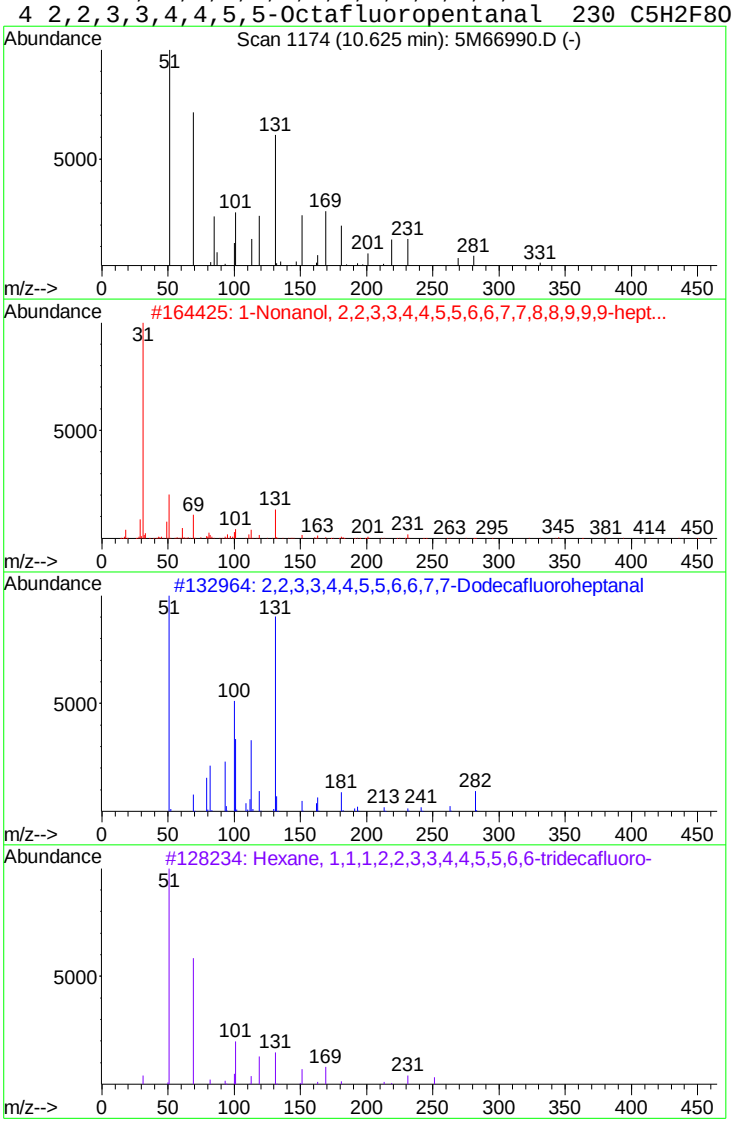
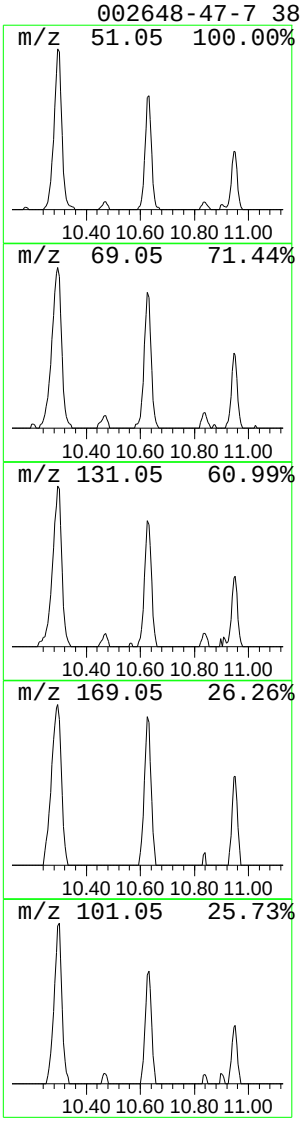
Peak Number 17 1-Nonanol, 2,2,3,3,4,4,5,5,... Concentration Rank 14

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 10.63 | 5.23 ug/ml | 284975 | Naphthalene-d8 | 10.90 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | 1-Nonanol, 2,2,3,3,4,4,5,5,6,6,7... | 450 | C9H3F17O | 000423-56-3 | 50 |
| 2 | 2,2,3,3,4,4,5,5,6,6,7,7-Dodecafl... | 330 | C7H2F12O | 000647-44-9 | 50 |
| 3 | Hexane, 1,1,1,2,2,3,3,4,4,5,5,6,... | 320 | C6HF13 | 000355-37-3 | 45 |
| 4 | 2,2,3,3,4,4,5,5-Octafluoropentanal | 230 | C5H2F8O | 002648-47-7 | 38 |



Data File : C:\MSDCHEM\1\DATA\051412\5M66990.D Vial: 15
Acq On : 14 May 2012 4:50 pm Operator: CAA
Sample : L12050284-10 Inst : HPMS5
Misc : 1,1 Multiplr: 1.00
MS Integration Params: LSCINT.P

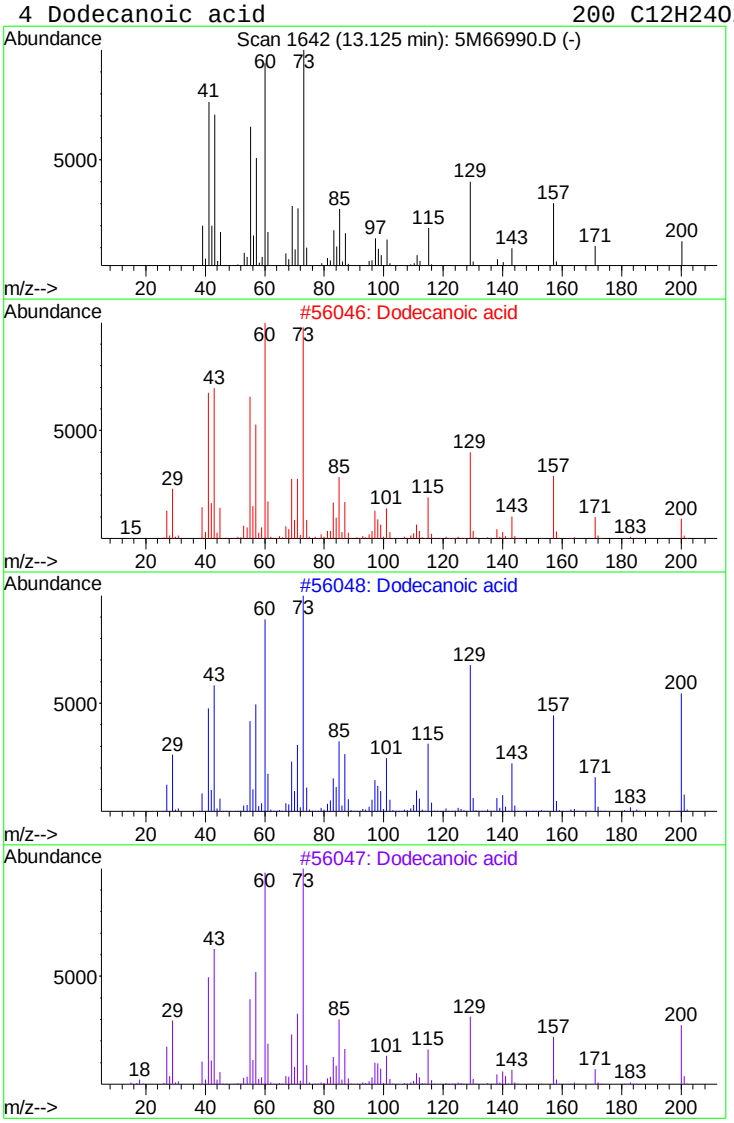
Quant Method : C:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
Title : OVD MSS01 8270/625/Initial cal. 05/11/12
Library : K:\ORGANICS\SEMIVOA\8270\NIST02.L

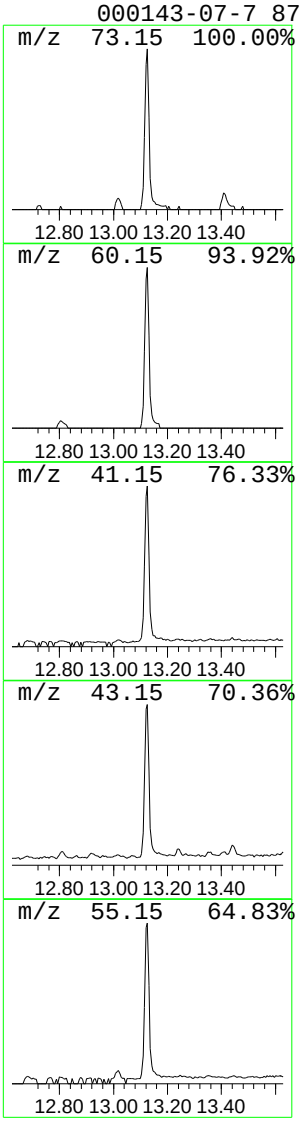
**********

Peak Number 18 Dodecanoic acid Concentration Rank 17

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 13.13 | 4.73 ug/ml | 294284 | Acenaphthene-d10 | 13.02 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Dodecanoic acid | 200 | C12H24O2 | 000143-07-7 | 99 |
| 2 | Dodecanoic acid | 200 | C12H24O2 | 000143-07-7 | 97 |
| 3 | Dodecanoic acid | 200 | C12H24O2 | 000143-07-7 | 94 |
| 4 | Dodecanoic acid | 200 | C12H24O2 | 000143-07-7 | 87 |



Data File : C:\MSDCHEM\1\DATA\051412\5M66990.D Vial: 15
Acq On : 14 May 2012 4:50 pm Operator: CAA
Sample : L12050284-10 Inst : HPMS5
Misc : 1,1 Multiplr: 1.00
MS Integration Params: LSCINT.P

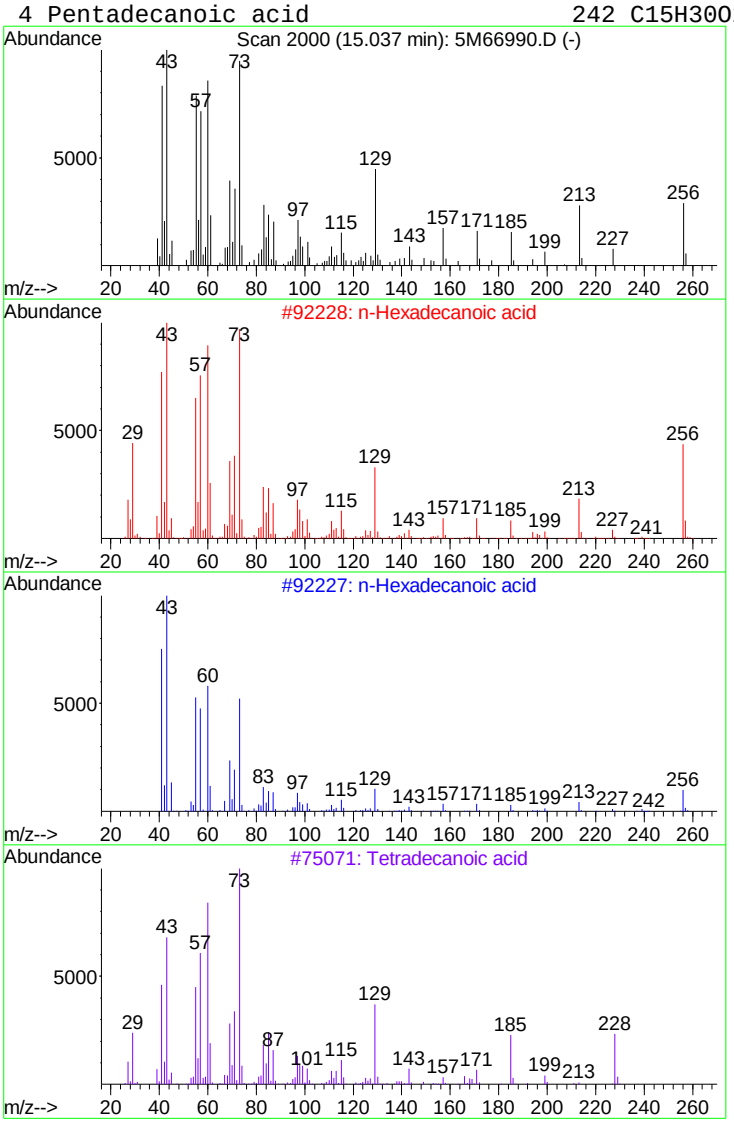
Quant Method : C:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
Title : OVD MSS01 8270/625/Initial cal. 05/11/12
Library : K:\ORGANICS\SEMIVOA\8270\NIST02.L

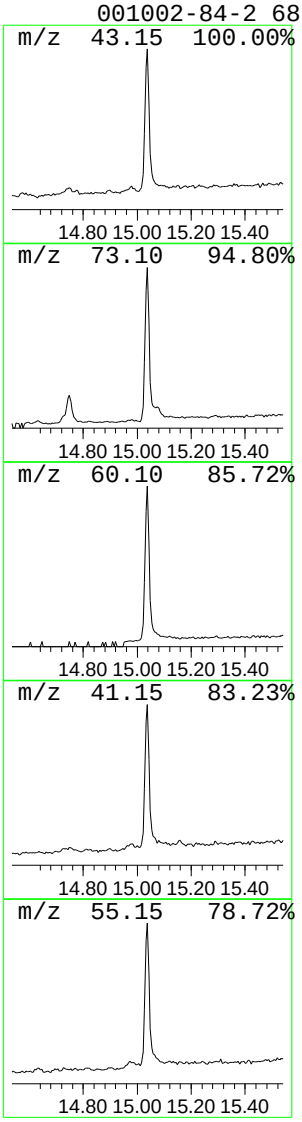
**********

Peak Number 19 n-Hexadecanoic acid Concentration Rank 18

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 15.04 | 4.67 ug/ml | 325698 | Phenanthrene-d10 | 14.63 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | n-Hexadecanoic acid | 256 | C16H32O2 | 000057-10-3 | 98 |
| 2 | n-Hexadecanoic acid | 256 | C16H32O2 | 000057-10-3 | 96 |
| 3 | Tetradecanoic acid | 228 | C14H28O2 | 000544-63-8 | 74 |
| 4 | Pentadecanoic acid | 242 | C15H30O2 | 001002-84-2 | 68 |



Tentatively Identified Compound (LSC) summary

Operator ID: CAA  Date Acquired: 14 May 2012  4:50 pm
Data File: C:\MSDCHEM\1\DATA\051412\5M66990.D
Name: L12050284-10
Misc: 1,1
Method: C:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
Title: OVD MSS01 8270/625/Initial cal. 05/11/12
Library Searched: K:\ORGANICS\SEMIVOA\8270\NIST02.L

| | | | | | Internal Standard | | | |
|---|---|---|---|---|---|---|---|---|
| TIC Top Hit name | RT | EstConc | Units | Response | # | RT | Resp | Conc |
| Ethane, 1,1,2-tri... | 6.27 | 6.6 | ug/ml | 286709 | 1 | 9.29 | 1725690 | 40.0 |
| 2-Butanone, 4-hyd... | 6.49 | 10.2 | ug/ml | 439117 | 1 | 9.29 | 1725690 | 40.0 |
| Hexane, 1,1,1,2,2... | 7.23 | 6.1 | ug/ml | 262743 | 1 | 9.29 | 1725690 | 40.0 |
| 2-Pentanone, 4-hy... | 7.28 | 15.2 | ug/ml | 657750 | 1 | 9.29 | 1725690 | 40.0 |
| Hexane, 1,1,1,2,2... | 7.80 | 5.4 | ug/ml | 233639 | 1 | 9.29 | 1725690 | 40.0 |
| Ethane, 1,1,2,2-t... | 8.20 | 209.7 | ug/ml | 9046710 | 1 | 9.29 | 1725690 | 40.0 |
| 1-Nonanol, 2,2,3,... | 8.30 | 7.3 | ug/ml | 315278 | 1 | 9.29 | 1725690 | 40.0 |
| 1H,1H,11H-Eicosaf... | 8.68 | 4.8 | ug/ml | 209172 | 1 | 9.29 | 1725690 | 40.0 |
| Hexane, 1,1,1,2,2... | 8.75 | 8.8 | ug/ml | 380955 | 1 | 9.29 | 1725690 | 40.0 |
| 2,2,3,3,4,4,5,5-O... | 9.11 | 5.2 | ug/ml | 224953 | 1 | 9.29 | 1725690 | 40.0 |
| Hexane, 1,1,1,2,2... | 9.17 | 9.1 | ug/ml | 391779 | 1 | 9.29 | 1725690 | 40.0 |
| Ethane, 1,2,2-tri... | 9.22 | 7.6 | ug/ml | 327567 | 1 | 9.29 | 1725690 | 40.0 |
| 2,2,3,3,4,4,5,5-O... | 9.52 | 4.2 | ug/ml | 179856 | 1 | 9.29 | 1725690 | 40.0 |
| 1-Nonanol, 2,2,3,... | 9.56 | 9.5 | ug/ml | 411852 | 1 | 9.29 | 1725690 | 40.0 |
| Hexane, 1,1,1,2,2... | 9.95 | 14.3 | ug/ml | 618346 | 1 | 9.29 | 1725690 | 40.0 |
| 2,2,3,3,4,4,5,5,6... | 10.29 | 9.4 | ug/ml | 513387 | 2 | 10.90 | 2181530 | 40.0 |
| 1-Nonanol, 2,2,3,... | 10.63 | 5.2 | ug/ml | 284975 | 2 | 10.90 | 2181530 | 40.0 |
| Dodecanoic acid | 13.13 | 4.7 | ug/ml | 294284 | 3 | 13.02 | 2487700 | 40.0 |
| n-Hexadecanoic acid | 15.04 | 4.7 | ug/ml | 325698 | 4 | 14.63 | 2790460 | 40.0 |

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\051412\5M66991.D Vial: 16
Acq On : 14 May 2012 5:26 pm Operator: CAA
Sample : L12050284-12 Inst : HPMS5
Misc : 1,1 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 16 08:13:37 2012 Quant Results File: MEGAMIX.RES

Quant Method : C:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
Title : OVD MSS01 8270/625/Initial cal. 05/11/12
Last Update : Wed May 16 08:13:18 2012
Response via : Initial Calibration
DataAcq Meth : BNA

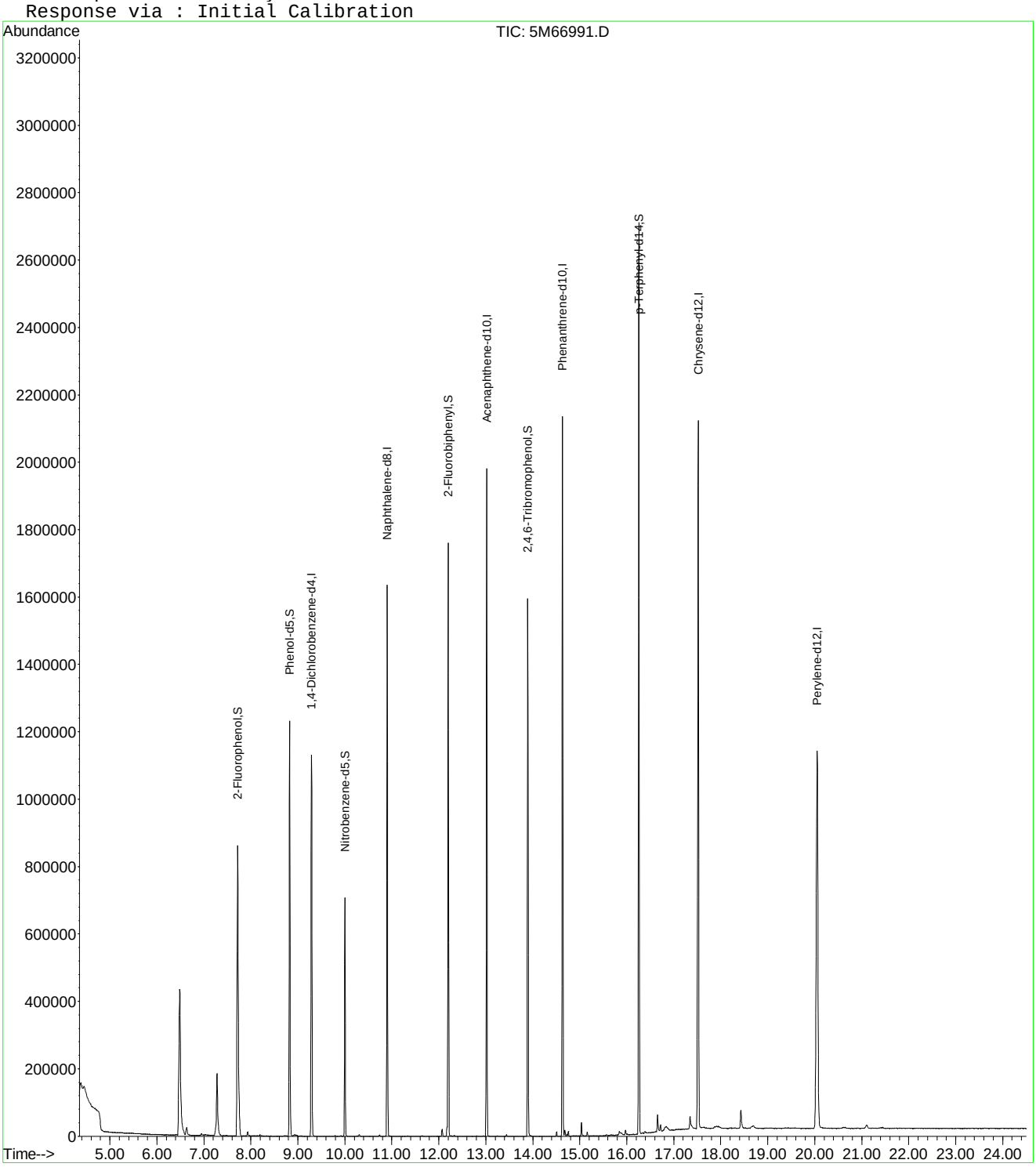
| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 1) 1,4-Dichlorobenzene-d4 | 9.29 | 152 | 259238 | 40.00 | ug/ml | -0.01 |
| 30) Naphthalene-d8 | 10.90 | 136 | 953074 | 40.00 | ug/ml | -0.01 |
| 54) Acenaphthene-d10 | 13.02 | 164 | 563249 | 40.00 | ug/ml | -0.01 |
| 87) Phenanthrene-d10 | 14.64 | 188 | 1030226 | 40.00 | ug/ml | -0.01 |
| 113) Chrysene-d12 | 17.52 | 240 | 1219992 | 40.00 | ug/ml | -0.02 |
| 128) Perylene-d12 | 20.05 | 264 | 1111791 | 40.00 | ug/ml | -0.02 |
| **System Monitoring Compounds** | | | | | | |
| 8) 2-Fluorophenol | 7.72 | 112 | 461680 | 64.5948 | ug/ml | 0.00 |
| Spiked Amount 100.000 | Range 21 - 100 | | Recovery = 64.59% | | | |
| 12) Phenol-d5 | 8.82 | 99 | 569234 | 66.7968 | ug/ml | 0.00 |
| Spiked Amount 100.000 | Range 10 - 94 | | Recovery = 66.80% | | | |
| 31) Nitrobenzene-d5 | 10.00 | 82 | 277026 | 35.6458 | ug/ml | -0.02 |
| Spiked Amount 50.000 | Range 35 - 114 | | Recovery = 71.30% | | | |
| 59) 2-Fluorobiphenyl | 12.20 | 172 | 664798 | 35.0106 | ug/ml | -0.01 |
| Spiked Amount 50.000 | Range 43 - 116 | | Recovery = 70.02% | | | |
| 86) 2,4,6-Tribromophenol | 13.89 | 330 | 245463 | 80.3789 | ug/ml | -0.02 |
| Spiked Amount 100.000 | Range 10 - 123 | | Recovery = 80.38% | | | |
| 117) p-Terphenyl-d14 | 16.26 | 244 | 1109415 | 56.7568 | ug/ml | 0.00 |
| Spiked Amount 50.000 | Range 33 - 141 | | Recovery = 113.52% | | | |
| **Target Compounds** | | | | | | Qvalue |
| 121) Butyl Benzyl Phthalate | 16.72 | 149 | 1839 | Below Cal | # | 75 |

(#) = qualifier out of range (m) = manual integration
5M66991.D MEGAMIX.M Wed May 16 08:50:54 2012 Page 1

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\051412\5M66991.D Vial: 16
Acq On : 14 May 2012 5:26 pm Operator: CAA
Sample : L12050284-12 Inst : HPMS5
Misc : 1,1 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 16 8:13 2012 Quant Results File: MEGAMIX.RES

Method : C:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
Title : OVD MSS01 8270/625/Initial cal. 05/11/12
Last Update : Wed May 16 08:13:18 2012
Response via : Initial Calibration




5M66991.D MEGAMIX.M Wed May 16 08:50:54 2012 Page 2

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\051412\5M66991.D Vial: 16
Acq On : 14 May 2012 5:26 pm Operator: CAA
Sample : L12050284-12 Inst : HPMS5
Misc : 1,1 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 16 09:13:25 2012 Quant Results File: TCL.RES

Quant Method : C:\MSDCHEM\1\METHODS\TCL.M (RTE Integrator)
Title : MSS01 OVD 827-TCL INITIAL CALIBRATION 05/14/12
Last Update : Wed May 16 09:13:02 2012
Response via : Initial Calibration
DataAcq Meth : BNA

| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 1) 1,4-Dichlorobenzene-d4 | 9.29 | 152 | 259238 | 40.00 | ug/mL | 0.00 |
| 3) Naphthalene-d8 | 10.90 | 136 | 953074 | 40.00 | ug/mL | 0.00 |
| 5) Acenaphthene-d10 | 13.02 | 164 | 563249 | 40.00 | ug/mL | 0.00 |
| 7) Phenanthrene-d10 | 14.64 | 188 | 1030226 | 40.00 | ug/mL | 0.00 |

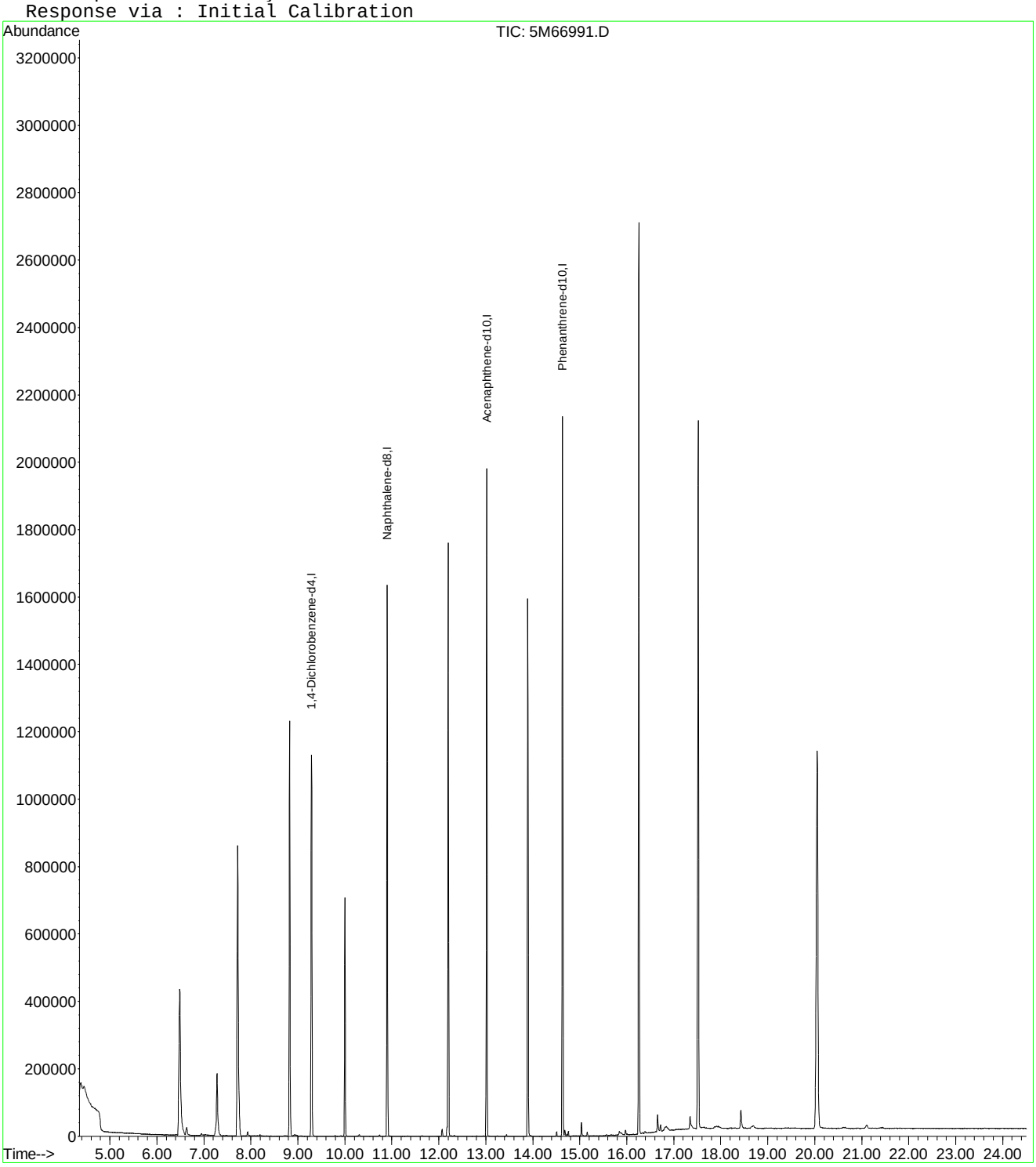
Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration
5M66991.D TCL.M Wed May 16 09:13:25 2012 Page 1

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\051412\5M66991.D Vial: 16
Acq On : 14 May 2012 5:26 pm Operator: CAA
Sample : L12050284-12 Inst : HPMS5
Misc : 1,1 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 16 9:13 2012 Quant Results File: TCL.RES

Method : C:\MSDCHEM\1\METHODS\TCL.M (RTE Integrator)
Title : MSS01 OVD 827-TCL INITIAL CALIBRATION 05/14/12
Last Update : Wed May 16 09:13:02 2012
Response via : Initial Calibration



LSC Area Percent Report

Data File : C:\MSDCHEM\1\DATA\051412\5M66991.D Vial: 16
Acq On : 14 May 2012 5:26 pm Operator: CAA
Sample : L12050284-12 Inst : HPMS5
Misc : 1,1 Multiplr: 1.00
MS Integration Params: LSCINT.P

Method : C:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
Title : OVD MSS01 8270/625/Initial cal. 05/11/12
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 1 % of largest Peak
Start Thrs: 0.05 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

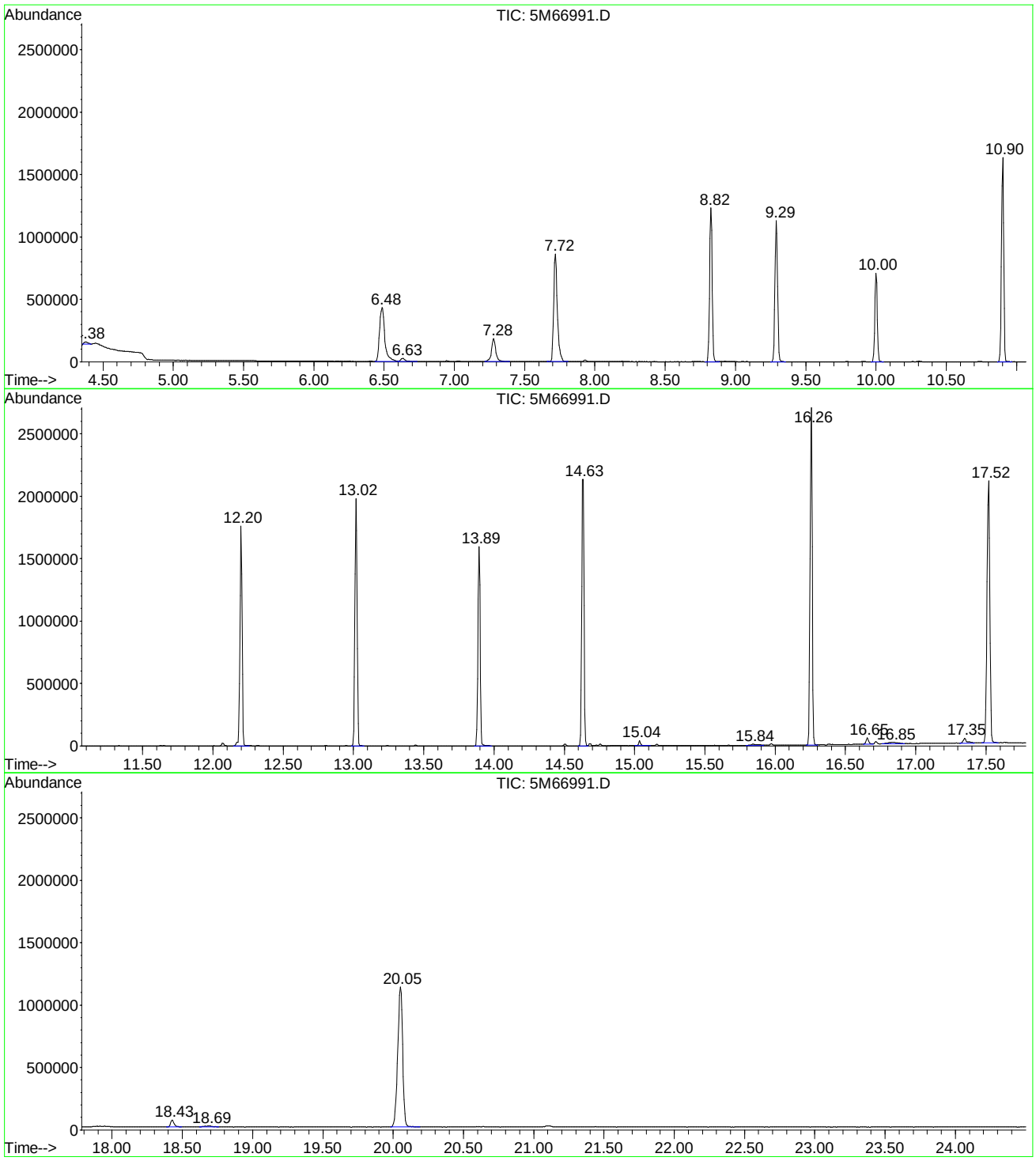
If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Signal : TIC

| peak # | R.T. min | first scan | max scan | last scan | PK TY | peak height | corr. area | corr. % max. | % of total |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 4.379 | 3 | 7 | 13 | rVB3 | 16683 | 31291 | 1.03% | 0.120% |
| 2 | 6.485 | 389 | 398 | 420 | rBV | 433234 | 1119964 | 36.90% | 4.283% |
| 3 | 6.634 | 420 | 426 | 444 | rVB | 24240 | 55572 | 1.83% | 0.213% |
| 4 | 7.280 | 535 | 547 | 567 | rVB2 | 186071 | 389030 | 12.82% | 1.488% |
| 5 | 7.718 | 618 | 629 | 645 | rBV | 862538 | 1539562 | 50.73% | 5.887% |
| 6 | 8.824 | 829 | 836 | 847 | rBV | 1232393 | 1550368 | 51.08% | 5.929% |
| 7 | 9.289 | 916 | 923 | 935 | rBB | 1132037 | 1455592 | 47.96% | 5.566% |
| 8 | 9.999 | 1050 | 1056 | 1065 | rBB | 708699 | 838686 | 27.63% | 3.207% |
| 9 | 10.902 | 1218 | 1225 | 1236 | rBB | 1635327 | 1852647 | 61.04% | 7.084% |
| 10 | 12.200 | 1458 | 1468 | 1479 | rBV | 1760990 | 1844321 | 60.77% | 7.053% |
| 11 | 13.017 | 1615 | 1621 | 1631 | rBB | 1981260 | 2162303 | 71.25% | 8.269% |
| 12 | 13.893 | 1779 | 1785 | 1801 | rBB | 1595814 | 1743068 | 57.43% | 6.665% |
| 13 | 14.630 | 1917 | 1923 | 1930 | rBV | 2136002 | 2419198 | 79.71% | 9.251% |
| 14 | 15.036 | 1993 | 1999 | 2012 | rBV | 40219 | 37927 | 1.25% | 0.145% |
| 15 | 15.842 | 2141 | 2150 | 2164 | rBV4 | 11252 | 35424 | 1.17% | 0.135% |
| 16 | 16.259 | 2221 | 2228 | 2235 | rBV | 2706559 | 3034965 | 100.00% | 11.606% |
| 17 | 16.654 | 2297 | 2302 | 2310 | rBV | 51499 | 67023 | 2.21% | 0.256% |
| 18 | 16.846 | 2322 | 2338 | 2351 | rBV4 | 13739 | 68899 | 2.27% | 0.263% |
| 19 | 17.348 | 2426 | 2432 | 2445 | rBV2 | 37545 | 75329 | 2.48% | 0.288% |
| 20 | 17.519 | 2455 | 2464 | 2476 | rBV | 2102293 | 2937397 | 96.79% | 11.232% |
| 21 | 18.427 | 2627 | 2634 | 2646 | rVB | 54594 | 99687 | 3.28% | 0.381% |
| 22 | 18.694 | 2671 | 2684 | 2695 | rBV9 | 8394 | 33131 | 1.09% | 0.127% |
| 23 | 20.051 | 2925 | 2938 | 2963 | rBV | 1121439 | 2759602 | 90.93% | 10.553% |

Sum of corrected areas: 26150986

```
File       : C:\MSDCHEM\1\DATA\051412\5M66991.D
Operator   : CAA
Acquired   : 14 May 2012   5:26 pm using AcqMethod BNA
Instrument :   HPMS5
Sample Name: L12050284-12
Misc Info  : 1,1
Vial Number: 16
Quant File :MEGAMIX.RES (RTE Integrator)
```



Data File : C:\MSDCHEM\1\DATA\051412\5M66991.D Vial: 16
Acq On : 14 May 2012 5:26 pm Operator: CAA
Sample : L12050284-12 Inst : HPMS5
Misc : 1,1 Multiplr: 1.00
MS Integration Params: LSCINT.P

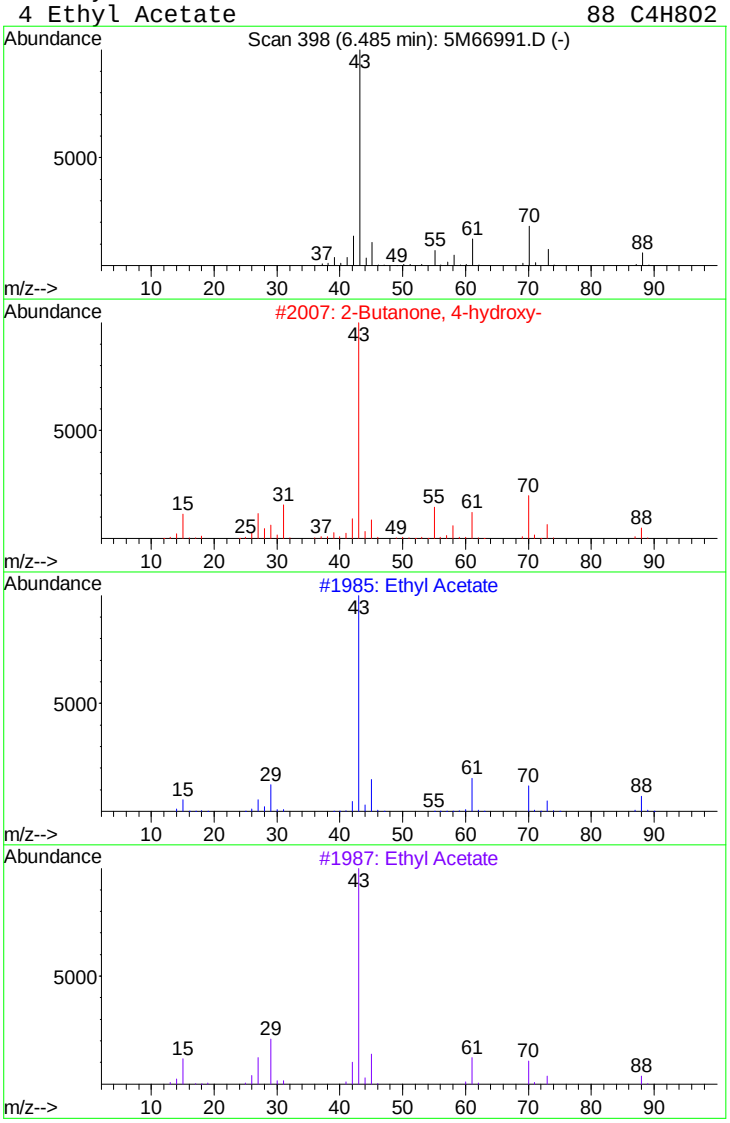
Quant Method : C:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
Title : OVD MSS01 8270/625/Initial cal. 05/11/12
Library : K:\ORGANICS\SEMIVOA\8270\NIST02.L

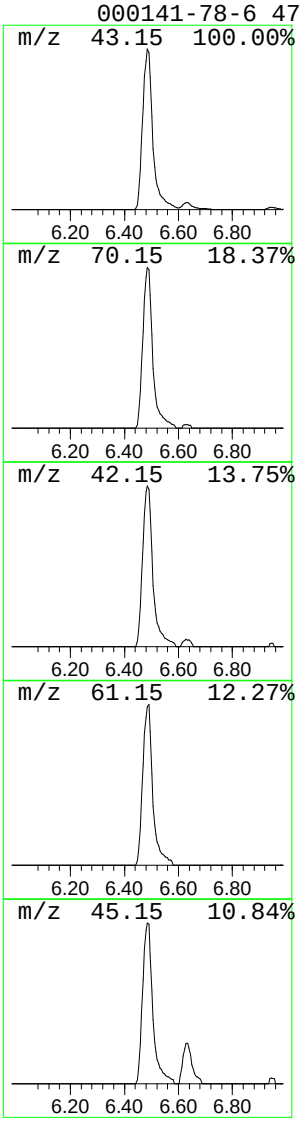
**********

Peak Number 1 2-Butanone, 4-hydroxy- Concentration Rank 1

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 6.48 | 30.78 ug/ml | 1119960 | 1,4-Dichlorobenzene-d4 | 9.29 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | 2-Butanone, 4-hydroxy- | 88 | C4H8O2 | 000590-90-9 | 87 |
| 2 | Ethyl Acetate | 88 | C4H8O2 | 000141-78-6 | 59 |
| 3 | Ethyl Acetate | 88 | C4H8O2 | 000141-78-6 | 53 |
| 4 | Ethyl Acetate | 88 | C4H8O2 | 000141-78-6 | 47 |



Data File : C:\MSDCHEM\1\DATA\051412\5M66991.D Vial: 16
Acq On : 14 May 2012 5:26 pm Operator: CAA
Sample : L12050284-12 Inst : HPMS5
Misc : 1,1 Multiplr: 1.00
MS Integration Params: LSCINT.P

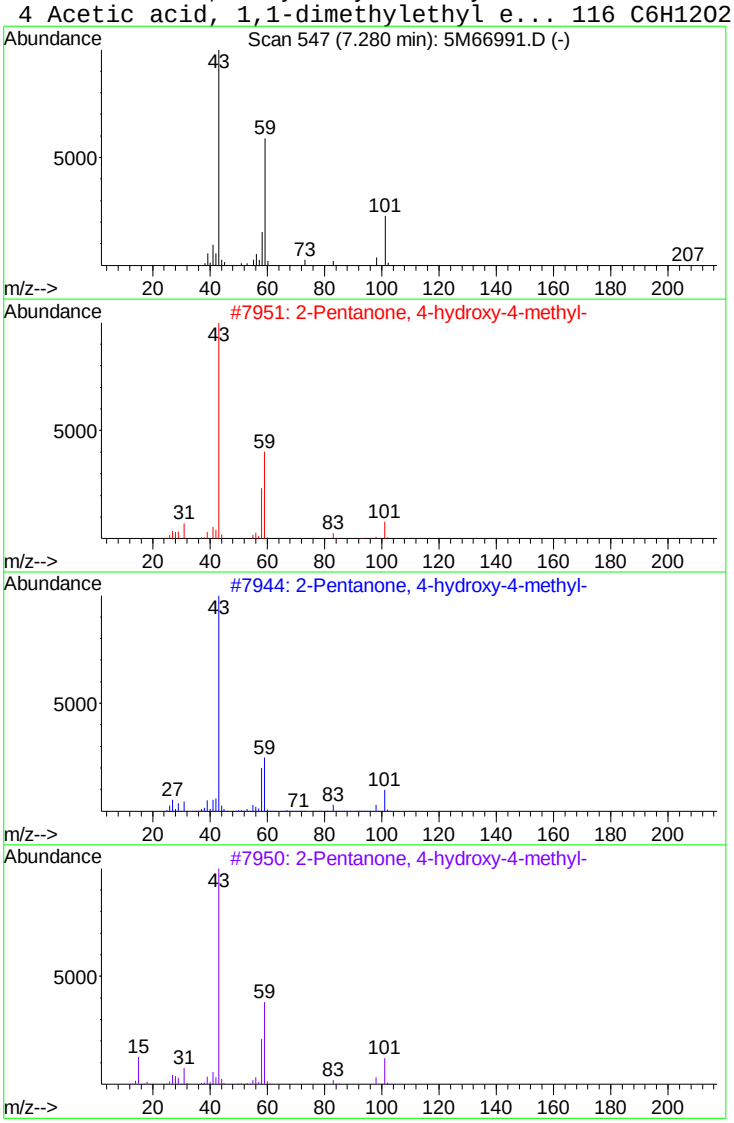
Quant Method : C:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
Title : OVD MSS01 8270/625/Initial cal. 05/11/12
Library : K:\ORGANICS\SEMIVOA\8270\NIST02.L

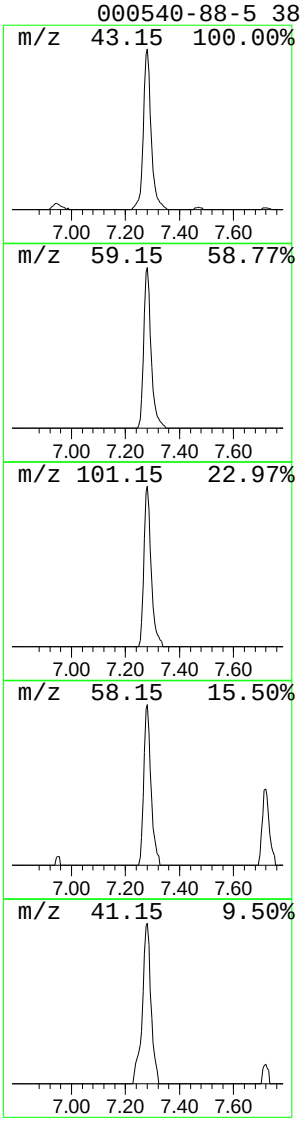
**********

Peak Number 2 2-Pentanone, 4-hydroxy-4-me... Concentration Rank 2

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 7.28 | 10.69 ug/ml | 389030 | 1,4-Dichlorobenzene-d4 | 9.29 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | 2-Pentanone, 4-hydroxy-4-methyl- | 116 | C6H12O2 | 000123-42-2 | 56 |
| 2 | 2-Pentanone, 4-hydroxy-4-methyl- | 116 | C6H12O2 | 000123-42-2 | 50 |
| 3 | 2-Pentanone, 4-hydroxy-4-methyl- | 116 | C6H12O2 | 000123-42-2 | 38 |
| 4 | Acetic acid, 1,1-dimethylethyl e... | 116 | C6H12O2 | 000540-88-5 | 38 |



Tentatively Identified Compound (LSC) summary

Operator ID: CAA  Date Acquired: 14 May 2012  5:26 pm
Data File: C:\MSDCHEM\1\DATA\051412\5M66991.D
Name: L12050284-12
Misc: 1,1
Method: C:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
Title: OVD MSS01 8270/625/Initial cal. 05/11/12
Library Searched: K:\ORGANICS\SEMIVOA\8270\NIST02.L

| | | | | | Internal Standard | | | |
|---|---|---|---|---|---|---|---|---|
| TIC Top Hit name | RT | EstConc | Units | Response | # | RT | Resp | Conc |
| 2-Butanone, 4-hyd... | 6.48 | 30.8 | ug/ml | 1119960 | 1 | 9.29 | 1455590 | 40.0 |
| 2-Pentanone, 4-hy... | 7.28 | 10.7 | ug/ml | 389030 | 1 | 9.29 | 1455590 | 40.0 |

# 2.2.1.4 Standards Data

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\051112\5M66916.D Vial: 2
Acq On : 11 May 2012 9:02 am Operator: CAA
Sample : WG397707-02 50PPM Megamix STD Inst : HPMS5
Misc : 1,1 STD50886 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 11 13:21:39 2012 Quant Results File: MEGAMIX.RES

Quant Method : C:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
Title : OVD MSS01 8270/625/Initial cal. 05/11/12
Last Update : Fri May 11 13:21:35 2012
Response via : Initial Calibration
DataAcq Meth : BNA

| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 1) 1,4-Dichlorobenzene-d4 | 9.30 | 152 | 293975 | 40.00 | ug/ml | 0.00 |
| 30) Naphthalene-d8 | 10.91 | 136 | 1119494 | 40.00 | ug/ml | 0.00 |
| 54) Acenaphthene-d10 | 13.03 | 164 | 668866 | 40.00 | ug/ml | 0.00 |
| 87) Phenanthrene-d10 | 14.65 | 188 | 1273447 | 40.00 | ug/ml | 0.00 |
| 113) Chrysene-d12 | 17.54 | 240 | 1500121 | 40.00 | ug/ml | 0.00 |
| 128) Perylene-d12 | 20.07 | 264 | 1305466 | 40.00 | ug/ml | 0.00 |
| **System Monitoring Compounds** | | | | | | |
| 8) 2-Fluorophenol | 7.72 | 112 | 406890 | 46.6034 | ug/ml | 0.01 |
| Spiked Amount 100.000 | Range 21 - 100 | | Recovery = 46.60% | | | |
| 12) Phenol-d5 | 8.83 | 99 | 485360 | 46.1751 | ug/ml | 0.00 |
| Spiked Amount 100.000 | Range 10 - 94 | | Recovery = 46.18% | | | |
| 31) Nitrobenzene-d5 | 10.02 | 82 | 460106 | 47.3002 | ug/ml | 0.00 |
| Spiked Amount 50.000 | Range 35 - 114 | | Recovery = 94.60% | | | |
| 59) 2-Fluorobiphenyl | 12.21 | 172 | 1155390 | 50.5784 | ug/ml | 0.00 |
| Spiked Amount 50.000 | Range 43 - 116 | | Recovery = 101.16% | | | |
| 86) 2,4,6-Tribromophenol | 13.91 | 330 | 193729 | 58.0169 | ug/ml | 0.00 |
| Spiked Amount 100.000 | Range 10 - 123 | | Recovery = 58.02% | | | |
| 117) p-Terphenyl-d14 | 16.26 | 244 | 1220265 | 48.9370 | ug/ml | -0.02 |
| Spiked Amount 50.000 | Range 33 - 141 | | Recovery = 97.88% | | | |
| **Target Compounds** | | | | | | Qvalue |
| 2) 1,4-Dioxane | 5.14 | 88 | 179438m | 44.9487 | ug/ml | |
| 3) n-Nitrosodimethylamine | 5.80 | 74 | 242868 | 44.1890 | ug/ml | 99 |
| 4) Pyridine | 5.80 | 79 | 427631 | 43.5123 | ug/ml | 94 |
| 5) 2-Picoline | 6.94 | 93 | 465915 | 44.9647 | ug/ml | 99 |
| 6) n-Nitrosomethylethylamine | 7.13 | 88 | 195021 | 45.1128 | ug/ml | 94 |
| 7) Methyl Methanesulfonate | 7.53 | 80 | 234924 | 45.3995 | ug/ml | 96 |
| 9) n-Nitrosodiethylamine | 8.02 | 102 | 203709 | 46.3085 | ug/ml | 89 |
| 10) Ethyl Methanesulfonate | 8.38 | 79 | 301749 | 44.4269 | ug/ml | 98 |
| 11) Aniline | 8.93 | 93 | 678312 | 46.0394 | ug/ml | 97 |
| 13) Phenol | 8.85 | 94 | 506627 | 45.6575 | ug/ml | 99 |
| 14) bis(2-Chloroethyl)ether | 8.97 | 63 | 274898 | 41.4197 | ug/ml | 92 |
| 15) Pentachloroethane | 8.95 | 167 | 195250 | 50.6469 | ug/ml | 97 |
| 16) 2-Chlorophenol | 9.08 | 128 | 470449 | 48.3247 | ug/ml | 96 |
| 17) 1,3-Dichlorobenzene | 9.26 | 146 | 546526 | 49.2040 | ug/ml | 99 |
| 18) 1,4-Dichlorobenzene | 9.32 | 146 | 572276 | 49.6964 | ug/ml | 99 |
| 19) Benzyl Alcohol | 9.45 | 108 | 303661 | 47.7737 | ug/ml | 98 |
| 20) 1,2-Dichlorobenzene | 9.56 | 146 | 527380 | 49.8249 | ug/ml | 99 |
| 21) 2-Methylphenol | 9.60 | 107 | 371949 | 47.4911 | ug/ml | 100 |
| 22) bis(2-Chloroisopropyl)ethe | 9.64 | 45 | 554937 | 38.5988 | ug/ml | 91 |
| 23) 3-,4-Methylphenol | 9.76 | 107 | 472655 | 47.6591 | ug/ml | 100 |
| 24) n-Nitrosopyrrolidine | 9.81 | 100 | 187993 | 47.6627 | ug/ml | 86 |
| 25) n-Nitrosodipropylamine | 9.82 | 70 | 248795 | 42.3182 | ug/ml | 96 |
| 26) Acetophenone | 9.81 | 105 | 558110 | 45.5922 | ug/ml | 97 |
| 27) n-Nitrosomorpholine | 9.82 | 56 | 204776 | 39.2344 | ug/ml | 92 |
| 28) o-Toluidine | 9.87 | 106 | 732817 | 47.3588 | ug/ml | 100 |
| 29) Hexachloroethane | 9.96 | 117 | 207513 | 48.7402 | ug/ml | 93 |
| 32) Nitrobenzene | 10.04 | 77 | 447368 | 46.4217 | ug/ml | 97 |
| 33) n-Nitrosopiperidine | 10.22 | 114 | 226610 | 48.2692 | ug/ml | 87 |
| 34) Isophorone | 10.31 | 82 | 791801 | 46.0442 | ug/ml | 97 |
| 35) 2-Nitrophenol | 10.44 | 139 | 274013 | 51.3945 | ug/ml | 96 |
| 36) 2,4-Dimethylphenol | 10.43 | 122 | 435312 | 50.1621 | ug/ml | 100 |
| 37) 0,0,0-Triethyl Phosphoroth | 10.56 | 198 | 264487 | 53.9050 | ug/ml | 91 |
| 38) bis(2-Chloroethoxy)methane | 10.55 | 93 | 603682 | 46.1421 | ug/ml | 99 |

(#) = qualifier out of range (m) = manual integration
5M66916.D MEGAMIX.M Mon May 14 14:45:12 2012 Page 1

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\051112\5M66916.D Vial: 2
Acq On : 11 May 2012 9:02 am Operator: CAA
Sample : WG397707-02 50PPM Megamix STD Inst : HPMS5
Misc : 1,1 STD50886 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 11 13:21:39 2012 Quant Results File: MEGAMIX.RES

Quant Method : C:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
Title : OVD MSS01 8270/625/Initial cal. 05/11/12
Last Update : Fri May 11 13:21:35 2012
Response via : Initial Calibration
DataAcq Meth : BNA

| | Compound | R.T. | QIon | Response | Conc Unit | Qvalue |
|---|---|---|---|---|---|---|
| 39) | Benzoic Acid | 10.52 | 105 | 255065m | 35.9931 ug/ml | |
| 40) | 2,4-Dichlorophenol | 10.72 | 162 | 435458 | 52.1133 ug/ml | 99 |
| 41) | a,a-Dimethylphenethylamine | 10.78 | 58 | 1209615m | 44.2332 ug/ml | |
| 42) | 1,2,4-Trichlorobenzene | 10.85 | 180 | 492107 | 51.9006 ug/ml | 100 |
| 43) | Naphthalene | 10.94 | 128 | 1387206 | 49.4587 ug/ml | 100 |
| 44) | 4-Chloroaniline | 10.99 | 127 | 607005 | 49.9224 ug/ml | 98 |
| 45) | 2,6-Dichlorophenol | 11.01 | 162 | 444714 | 51.7786 ug/ml | 99 |
| 46) | Hexachloropropene | 11.08 | 213 | 332000 | 58.3155 ug/ml | 100 |
| 47) | Hexachlorobutadiene | 11.14 | 225 | 293142 | 53.7406 ug/ml | 99 |
| 48) | n-Nitrosodi-n-Butylamine | 11.40 | 84 | 355371 | 51.4370 ug/ml | 94 |
| 49) | p-Phenylenediamine | 11.42 | 108 | 311805 | 59.8157 ug/ml | 99 |
| 50) | 4-Chloro-3-Methylphenol | 11.55 | 107 | 399299 | 49.9594 ug/ml | 99 |
| 51) | Safrole | 11.64 | 162 | 414343 | 52.3759 ug/ml | 99 |
| 52) | 2-Methylnaphthalene | 11.78 | 142 | 963004 | 50.5010 ug/ml | 100 |
| 53) | 1-Methylnaphthalene | 11.92 | 142 | 916829 | 50.9194 ug/ml | 100 |
| 55) | 1,2,4,5-Tetrachlorobenzene | 12.03 | 216 | 504347 | 51.9157 ug/ml | 100 |
| 56) | Hexachlorocyclopentadiene | 12.05 | 237 | 320810 | 62.1821 ug/ml | 99 |
| 57) | 2,4,6-Trichlorophenol | 12.13 | 196 | 347012 | 52.0473 ug/ml | 99 |
| 58) | 2,4,5-Trichlorophenol | 12.18 | 196 | 364476 | 52.1857 ug/ml | 100 |
| 60) | Isosafrole | 12.26 | 162 | 436393 | 50.0460 ug/ml | 99 |
| 61) | 2-Chloronaphthalene | 12.37 | 162 | 986627 | 49.8530 ug/ml | 100 |
| 62) | 1-Chloronaphthalene | 12.41 | 162 | 934643 | 49.3730 ug/ml | 100 |
| 63) | 2-Nitroaniline | 12.49 | 65 | 247730 | 45.7010 ug/ml | 92 |
| 64) | 1,4-Naphthoquinone | 12.56 | 158 | 222579 | 38.5435 ug/ml | 99 |
| 65) | Dimethylphthalate | 12.69 | 163 | 1081563 | 49.3486 ug/ml | 100 |
| 66) | 1,3-Dinitrobenzene | 12.74 | 168 | 208130 | 50.9809 ug/ml | 93 |
| 67) | 2,6-Dinitrotoluene | 12.79 | 165 | 269501 | 50.5459 ug/ml | 95 |
| 68) | Acenaphthylene | 12.86 | 152 | 1498273 | 49.5041 ug/ml | 100 |
| 69) | 3-Nitroaniline | 12.96 | 138 | 282994 | 49.9732 ug/ml | 96 |
| 70) | 2,4-Dinitrophenol | 13.08 | 184 | 126143 | 46.4633 ug/ml | 91 |
| 71) | Acenaphthene | 13.07 | 154 | 943601 | 49.3167 ug/ml | 100 |
| 72) | 4-Nitrophenol | 13.09 | 65 | 197708 | 47.5644 ug/ml | 92 |
| 73) | 2,4-Dinitrotoluene | 13.24 | 165 | 345929 | 51.6229 ug/ml | 93 |
| 74) | Pentachlorobenzene | 13.26 | 250 | 477933 | 53.1635 ug/ml | 99 |
| 75) | Dibenzofuran | 13.24 | 168 | 1308818 | 49.6602 ug/ml | 100 |
| 76) | 2,3,4,6-Tetrachlorophenol | 13.41 | 232 | 320775 | 55.0526 ug/ml | 98 |
| 77) | 1-Naphthylamine | 13.33 | 143 | 985392 | 52.3647 ug/ml | 99 |
| 78) | 2-Naphthylamine | 13.40 | 143 | 901006 | 59.0642 ug/ml | 99 |
| 79) | Diethylphthalate | 13.47 | 149 | 1062761 | 49.5272 ug/ml | 99 |
| 80) | Thionazin | 13.57 | 107 | 155334 | 48.3677 ug/ml | 98 |
| 81) | Fluorene | 13.62 | 166 | 1160207 | 49.9884 ug/ml | 100 |
| 82) | 4-Chlorophenyl Phenyl Ethe | 13.58 | 204 | 569710 | 52.3463 ug/ml | 98 |
| 83) | 4-Nitroaniline | 13.65 | 138 | 295695 | 51.8850 ug/ml | 94 |
| 84) | 5-Nitro-o-Toluidine | 13.64 | 152 | 358265 | 51.8417 ug/ml | 94 |
| 85) | 1,2-Diphenylhydrazine | 13.75 | 77 | 914410 | 44.7621 ug/ml | 94 |
| 88) | 4,6-Dinitro-2-Methylphenol | 13.69 | 198 | 191541 | 46.7344 ug/ml | 89 |
| 89) | n-Nitrosodiphenylamine | 13.71 | 169 | 1020788 | 49.4510 ug/ml | 100 |
| 90) | Sulfotepp | 13.93 | 322 | 240958 | 55.5140 ug/ml | 88 |
| 91) | Sym-Trinitrobenzene | 14.01 | 75 | 258443 | 50.8023 ug/ml | 97 |
| 92) | Diallate | 14.04 | 86 | 328072 | 42.1027 ug/ml | 89 |
| 93) | Phenacetin | 14.04 | 108 | 479174 | 47.2588 ug/ml | 97 |
| 94) | Phorate | 14.06 | 75 | 517682 | 43.3105 ug/ml# | 94 |
| 95) | 4-Bromophenyl Phenyl Ether | 14.11 | 248 | 372648 | 51.9349 ug/ml | 98 |
| 96) | Hexachlorobenzene | 14.32 | 284 | 420786 | 52.6995 ug/ml | 97 |

(#) = qualifier out of range (m) = manual integration
5M66916.D MEGAMIX.M Mon May 14 14:45:12 2012 Page 2

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\051112\5M66916.D Vial: 2
Acq On : 11 May 2012 9:02 am Operator: CAA
Sample : WG397707-02 50PPM Megamix STD Inst : HPMS5
Misc : 1,1 STD50886 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 11 13:21:39 2012 Quant Results File: MEGAMIX.RES

Quant Method : C:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
Title : OVD MSS01 8270/625/Initial cal. 05/11/12
Last Update : Fri May 11 13:21:35 2012
Response via : Initial Calibration
DataAcq Meth : BNA

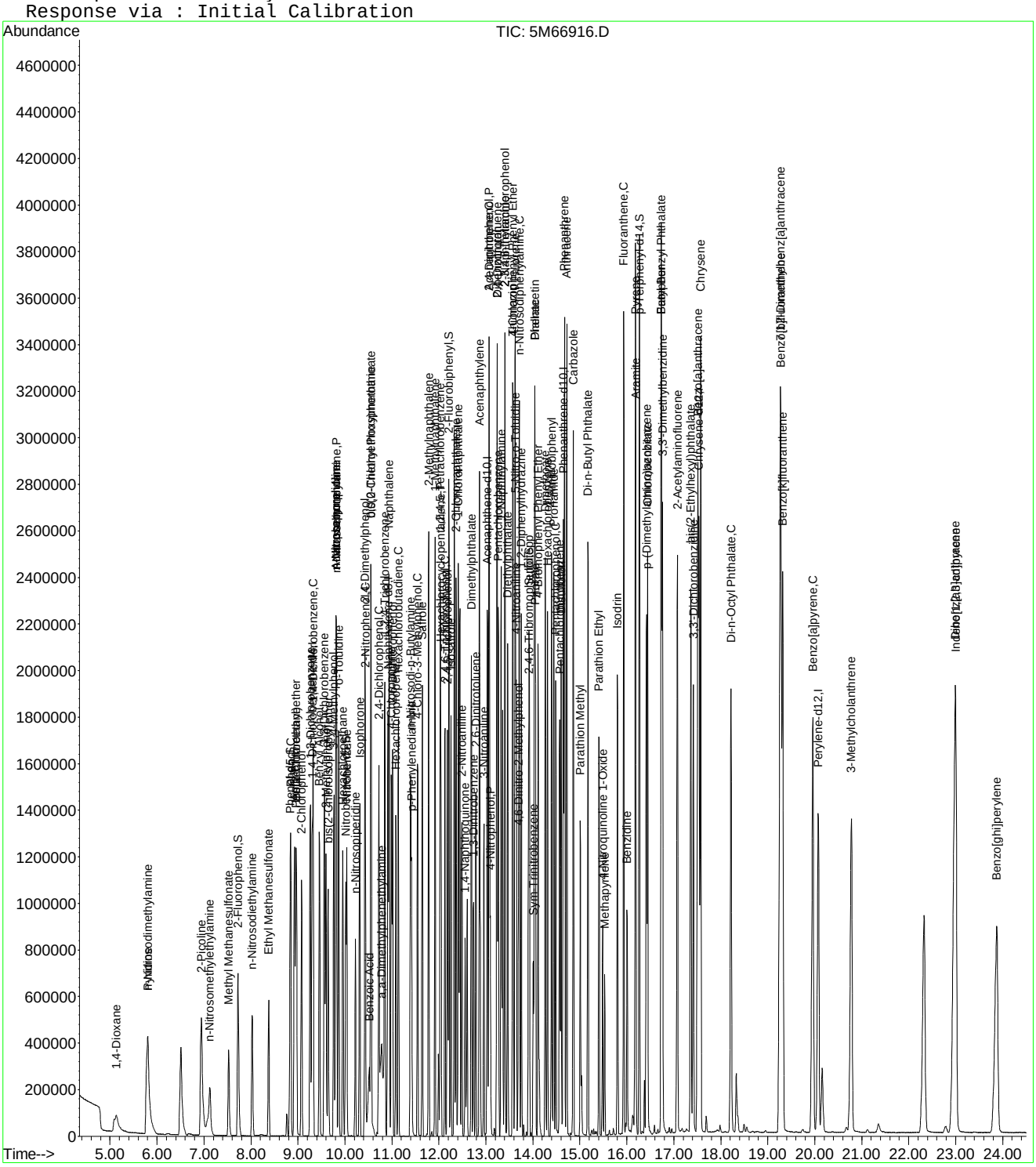
| | Compound | R.T. | QIon | Response | Conc | Unit | Qvalue |
|---|---|---|---|---|---|---|---|
| 97) | Dimethoate | 14.26 | 87 | 264482 | 41.6265 | ug/ml | 96 |
| 98) | 4-Aminobiphenyl | 14.40 | 169 | 1148060 | 52.9095 | ug/ml | 100 |
| 99) | Pentachlorophenol | 14.49 | 266 | 284231 | 54.3449 | ug/ml | 100 |
| 100) | Pronamide | 14.44 | 173 | 525961 | 50.0022 | ug/ml | 100 |
| 101) | Pentachloronitrobenzene | 14.57 | 237 | 152188 | 52.1310 | ug/ml | 99 |
| 102) | Disulfoton | 14.60 | 88 | 488783 | 44.5318 | ug/ml | 98 |
| 103) | Phenanthrene | 14.67 | 178 | 1645802 | 48.6486 | ug/ml | 100 |
| 104) | Anthracene | 14.72 | 178 | 1691943 | 49.0864 | ug/ml | 99 |
| 105) | Carbazole | 14.86 | 167 | 1550006 | 49.2578 | ug/ml | 97 |
| 106) | Parathion Methyl | 15.01 | 109 | 279512 | 47.0375 | ug/ml | 94 |
| 107) | Di-n-Butyl Phthalate | 15.17 | 149 | 1746662 | 47.7302 | ug/ml | 100 |
| 108) | Parathion Ethyl | 15.40 | 97 | 193052 | 47.7211 | ug/ml | 93 |
| 109) | 4-Nitroquinoline 1-Oxide | 15.48 | 190 | 135783 | 69.4440 | ug/ml | 97 |
| 110) | Methapyrilene | 15.53 | 58 | 214054 | 24.2219 | ug/ml | 94 |
| 111) | Isodrin | 15.80 | 193 | 190871 | 49.9590 | ug/ml | 95 |
| 112) | Fluoranthene | 15.93 | 202 | 1800555 | 49.6857 | ug/ml | 98 |
| 114) | Benzidine | 16.01 | 184 | 500873 | 76.1091 | ug/ml | 100 |
| 115) | Pyrene | 16.18 | 202 | 1813784 | 47.4743 | ug/ml | 99 |
| 116) | Aramite | 16.20 | 185 | 105842 | 51.8277 | ug/ml | 96 |
| 118) | p-(Dimethylamino)azobenzen | 16.42 | 225 | 447931 | 50.3736 | ug/ml | 91 |
| 119) | Chlorobenzilate | 16.45 | 251 | 623343 | 52.1994 | ug/ml | 96 |
| 120) | Famphur | 16.73 | 218 | 5476 | 33.6140 | ug/ml# | 63 |
| 121) | Butyl Benzyl Phthalate | 16.74 | 149 | 722023 | 44.9968 | ug/ml | 95 |
| 122) | 3,3'-Dimethylbenzidine | 16.76 | 212 | 1292917 | 53.2169 | ug/ml | 98 |
| 123) | 2-Acetylaminofluorene | 17.08 | 181 | 817155 | 51.0632 | ug/ml | 99 |
| 124) | bis(2-Ethylhexyl)phthalate | 17.36 | 149 | 1110185 | 45.2877 | ug/ml | 98 |
| 125) | 3,3'-Dichlorobenzidine | 17.41 | 252 | 667737 | 51.4892 | ug/ml | 99 |
| 126) | Benzo[a]anthracene | 17.51 | 228 | 1921460 | 49.5223 | ug/ml | 99 |
| 127) | Chrysene | 17.57 | 228 | 1796487 | 49.2527 | ug/ml | 100 |
| 129) | Di-n-Octyl Phthalate | 18.21 | 149 | 1891151 | 46.3175 | ug/ml | 96 |
| 130) | 7,12-Dimethylbenz[a]anthra | 19.27 | 256 | 929840 | 50.6459 | ug/ml | 100 |
| 131) | Benzo[b]fluoranthene | 19.28 | 252 | 2236076 | 51.2863 | ug/ml | 96 |
| 132) | Benzo[k]fluoranthene | 19.32 | 252 | 1746954 | 50.8207 | ug/ml | 97 |
| 133) | Benzo[a]pyrene | 19.96 | 252 | 1803938 | 50.4918 | ug/ml | 98 |
| 134) | 3-Methylcholanthrene | 20.78 | 268 | 968518 | 52.6589 | ug/ml | 100 |
| 135) | Indeno[1,2,3-cd]pyrene | 23.01 | 276 | 2136034 | 52.2430 | ug/ml | 96 |
| 136) | Dibenz[ah]anthracene | 22.99 | 278 | 1805081 | 52.7560 | ug/ml | 98 |
| 137) | Benzo[ghi]perylene | 23.88 | 276 | 1654792 | 50.8040 | ug/ml | 99 |

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

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\051112\5M66916.D Vial: 2
Acq On : 11 May 2012 9:02 am Operator: CAA
Sample : WG397707-02 50PPM Megamix STD Inst : HPMS5
Misc : 1,1 STD50886 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 11 13:22 2012 Quant Results File: MEGAMIX.RES

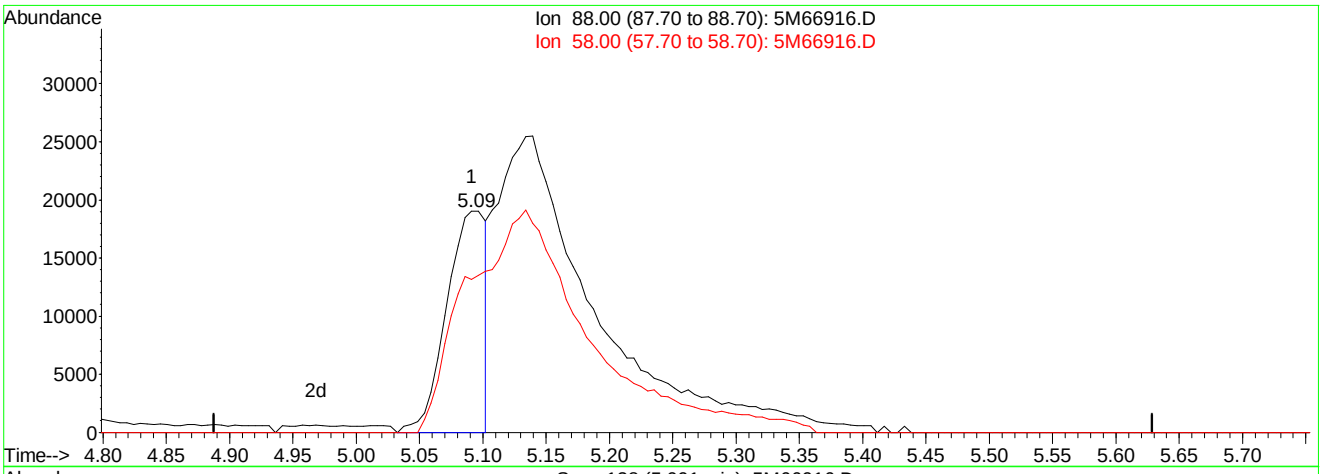
Method : C:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
Title : OVD MSS01 8270/625/Initial cal. 05/11/12
Last Update : Fri May 11 14:12:23 2012
Response via : Initial Calibration

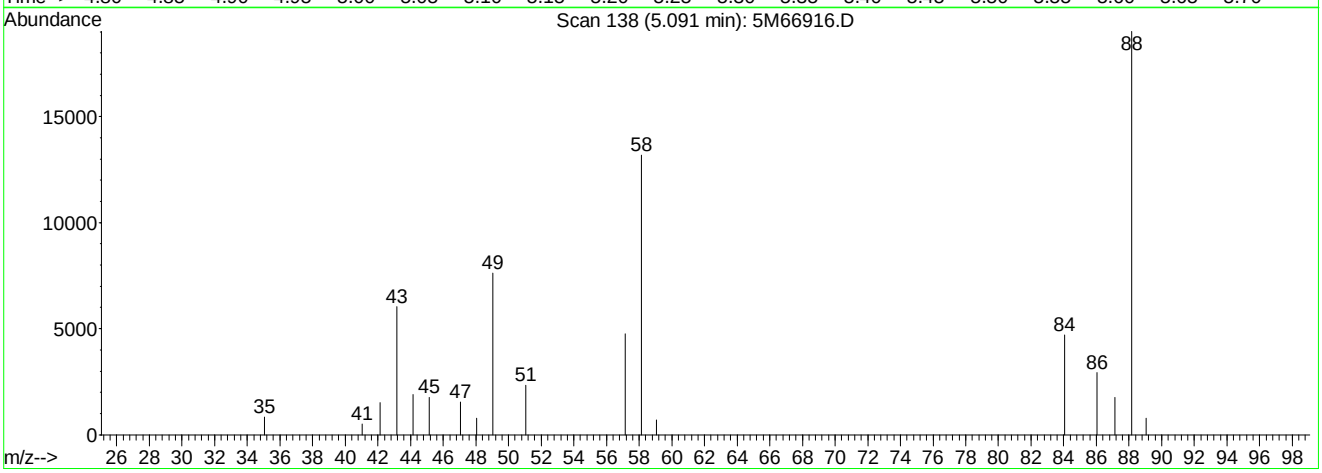


Quantitation Report (Qedit)

Data File : C:\MSDCHEM\1\DATA\051112\5M66916.D Vial: 2
Acq On : 11 May 2012 9:02 am Operator: CAA
Sample : WG397707-02 50PPM Megamix STD Inst : HPMS5
Misc : 1,1 STD50886 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 11 13:21 2012 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
Title : OVD MSS01 8270/625/Initial cal. 05/11/12
Last Update : Fri May 11 13:21:35 2012
Response via : Multiple Level Calibration




TIC: 5M66916.D

(2) 1,4-Dioxane

5.09min 10.26ug/ml

response 40964

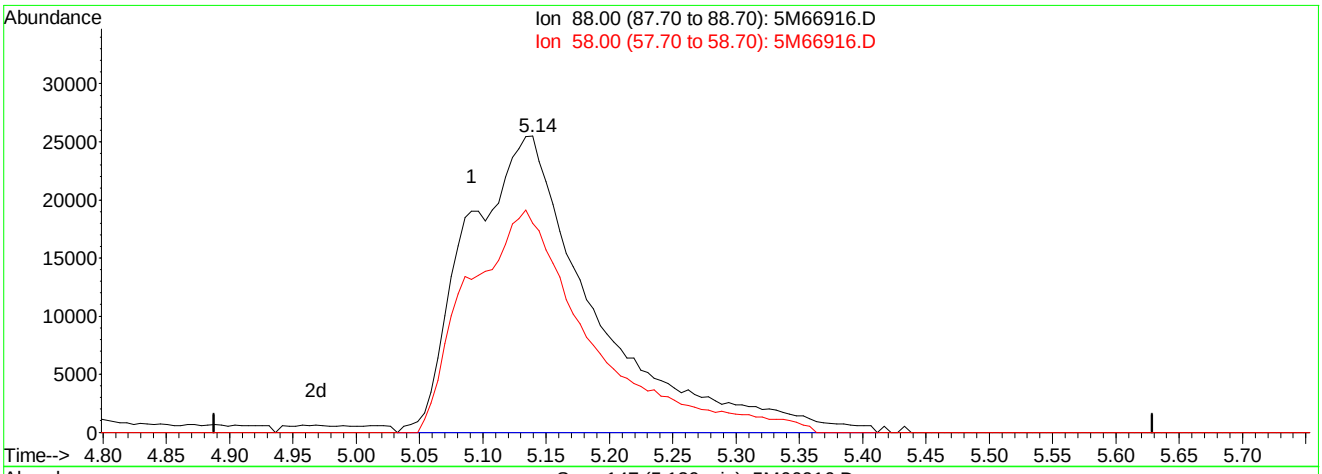
| Ion | Exp% | Act% |
|---|---|---|
| 88.00 | 100 | 100 |
| 58.00 | 21.70 | 0.00# |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

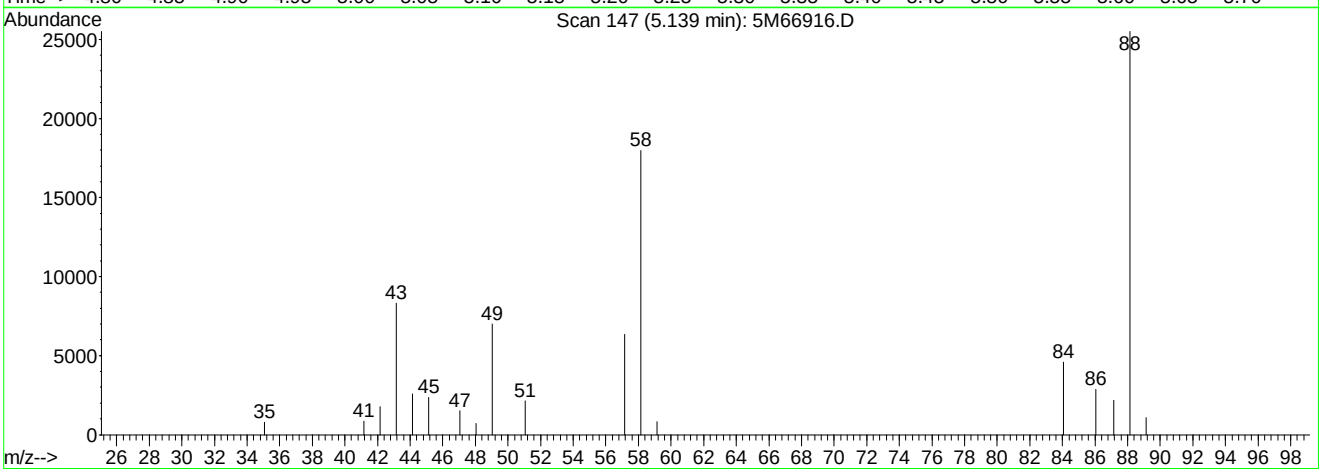
5M66916.D MEGAMIX.M Fri May 11 13:21:46 2012

Quantitation Report (Qedit)

Data File : C:\MSDCHEM\1\DATA\051112\5M66916.D Vial: 2
Acq On : 11 May 2012 9:02 am Operator: CAA
Sample : WG397707-02 50PPM Megamix STD Inst : HPMS5
Misc : 1,1 STD50886 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 11 13:21 2012 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
Title : OVD MSS01 8270/625/Initial cal. 05/11/12
Last Update : Fri May 11 13:21:35 2012
Response via : Multiple Level Calibration




TIC: 5M66916.D

(2) 1,4-Dioxane

5.14min 44.95ug/ml mint

response 179438

| Ion | Exp% | Act% |
|---|---|---|
| 88.00 | 100 | 100 |
| 58.00 | 21.70 | 0.00# |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

5M66916.D MEGAMIX.M Fri May 11 2012

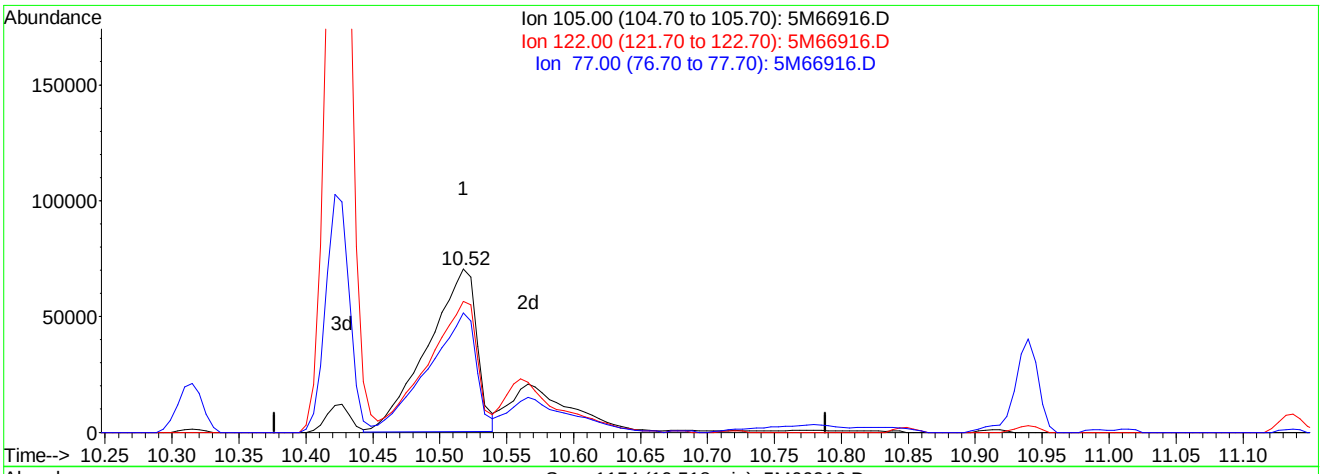
Analyst: 05/15/2012 07:34 Supervisor: 05/15/2012 09:20

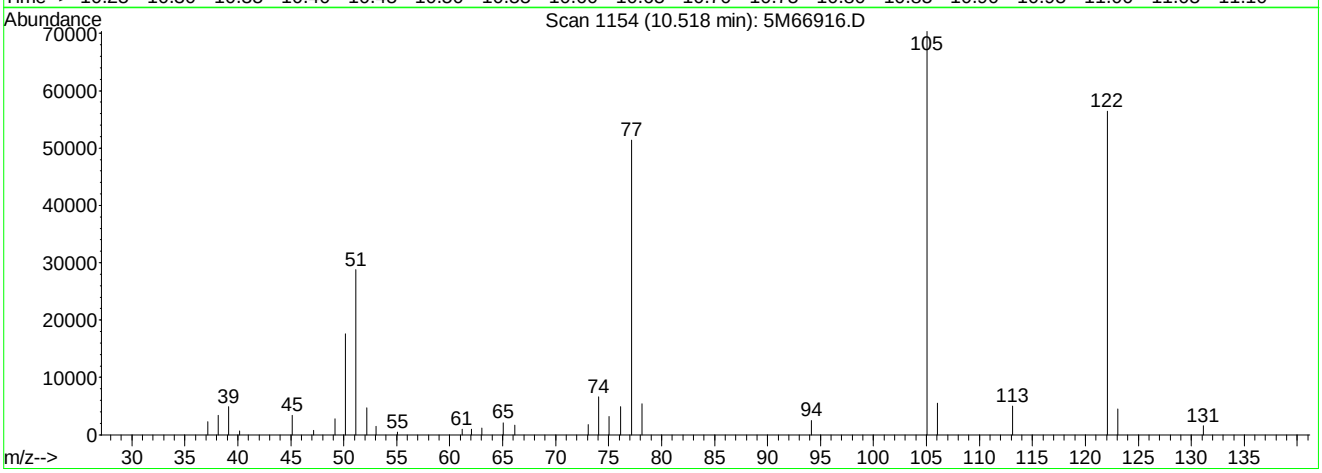
#2 - Data system splits the peak incorrectly or integrates a false peak as a rider peak

Quantitation Report (Qedit)

Data File : C:\MSDCHEM\1\DATA\051112\5M66916.D Vial: 2
Acq On : 11 May 2012 9:02 am Operator: CAA
Sample : WG397707-02 50PPM Megamix STD Inst : HPMS5
Misc : 1,1 STD50886 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 11 13:21 2012 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
Title : OVD MSS01 8270/625/Initial cal. 05/11/12
Last Update : Fri May 11 13:21:35 2012
Response via : Single Level Calibration




TIC: 5M66916.D

(39) Benzoic Acid

10.52min 25.38ug/ml

response 179865

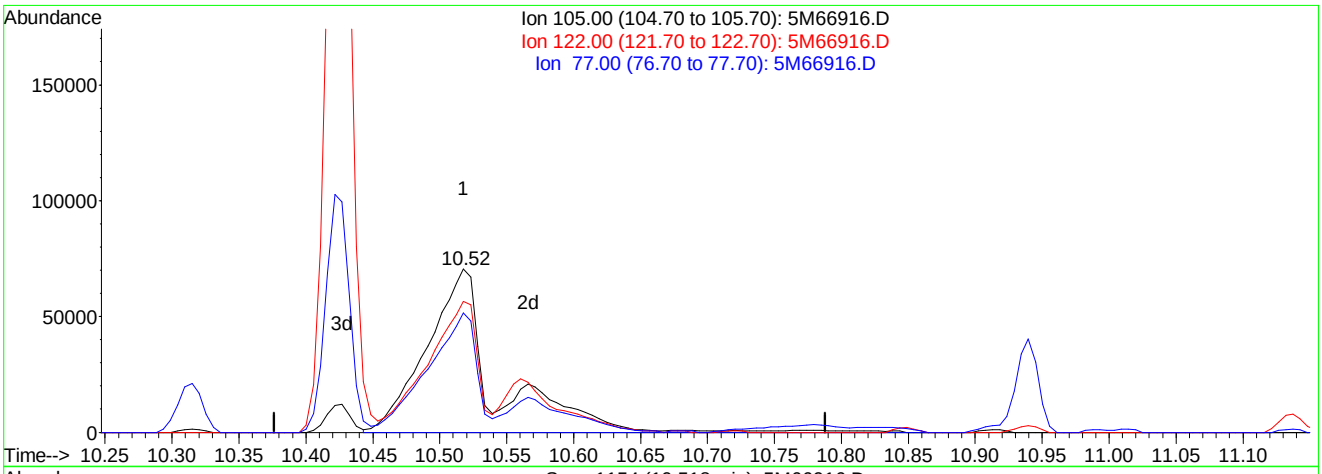
| Ion | Exp% | Act% |
|---|---|---|
| 105.00 | 100 | 100 |
| 122.00 | 56.30 | 80.88# |
| 77.00 | 46.90 | 72.69# |
| 0.00 | 0.00 | 0.00 |

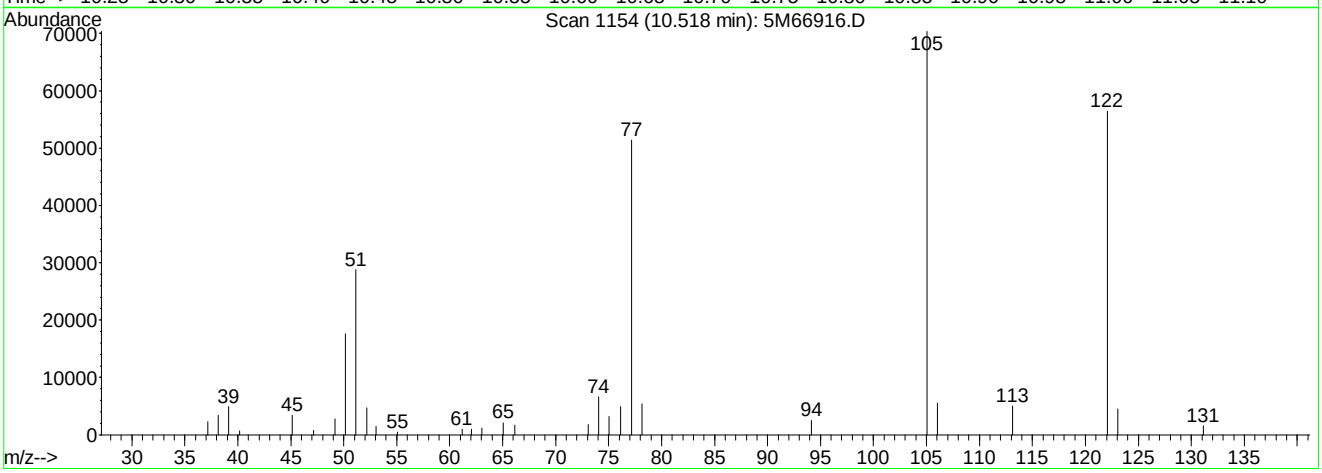
5M66916.D MEGAMIX.M Fri May 11 13:21:59 2012

Quantitation Report (Qedit)

Data File : C:\MSDCHEM\1\DATA\051112\5M66916.D Vial: 2
Acq On : 11 May 2012 9:02 am Operator: CAA
Sample : WG397707-02 50PPM Megamix STD Inst : HPMS5
Misc : 1,1 STD50886 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 11 13:22 2012 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
Title : OVD MSS01 8270/625/Initial cal. 05/11/12
Last Update : Fri May 11 13:21:35 2012
Response via : Single Level Calibration




TIC: 5M66916.D

(39) Benzoic Acid

10.52min 35.99ug/ml mint

response 255065

| Ion | Exp% | Act% |
|---|---|---|
| 105.00 | 100 | 100 |
| 122.00 | 56.30 | 57.03 |
| 77.00 | 46.90 | 51.26 |
| 0.00 | 0.00 | 0.00 |

5M66916.D MEGAMIX.M Fri May 11 3 2012

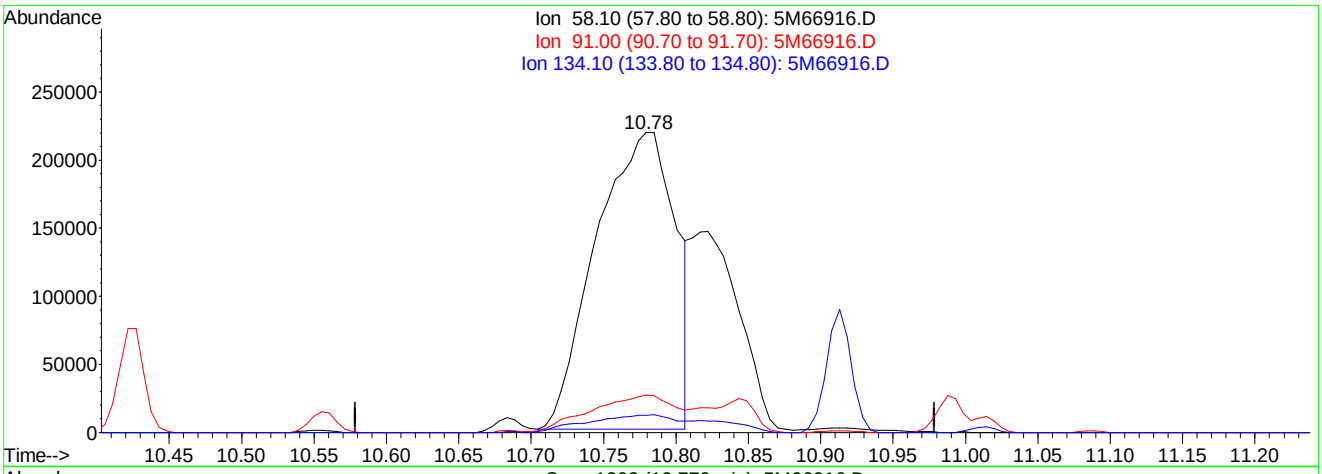
Analyst: 05/15/2012 07:34 Supervisor: 05/15/2012 09:20

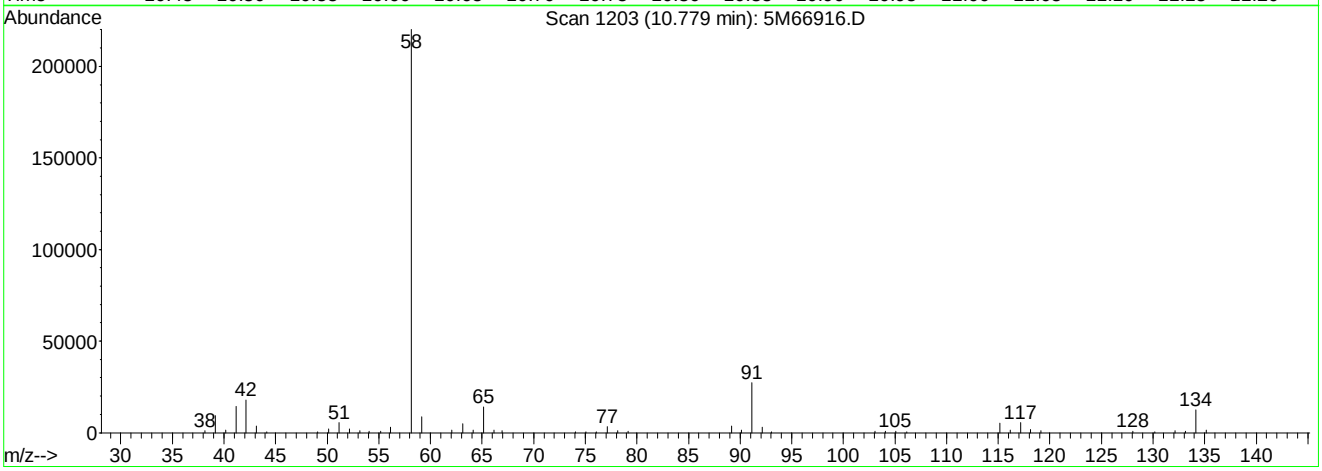
#2 - Data system splits the peak incorrectly or integrates a false peak as a rider peak

Quantitation Report (Qedit)

Data File : C:\MSDCHEM\1\DATA\051112\5M66916.D Vial: 2
Acq On : 11 May 2012 9:02 am Operator: CAA
Sample : WG397707-02 50PPM Megamix STD Inst : HPMS5
Misc : 1,1 STD50886 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 11 13:22 2012 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
Title : OVD MSS01 8270/625/Initial cal. 05/11/12
Last Update : Fri May 11 13:21:35 2012
Response via : Multiple Level Calibration




TIC: 5M66916.D

(41) a,a-Dimethylphenethylamine

10.78min 30.30ug/ml

response 828625

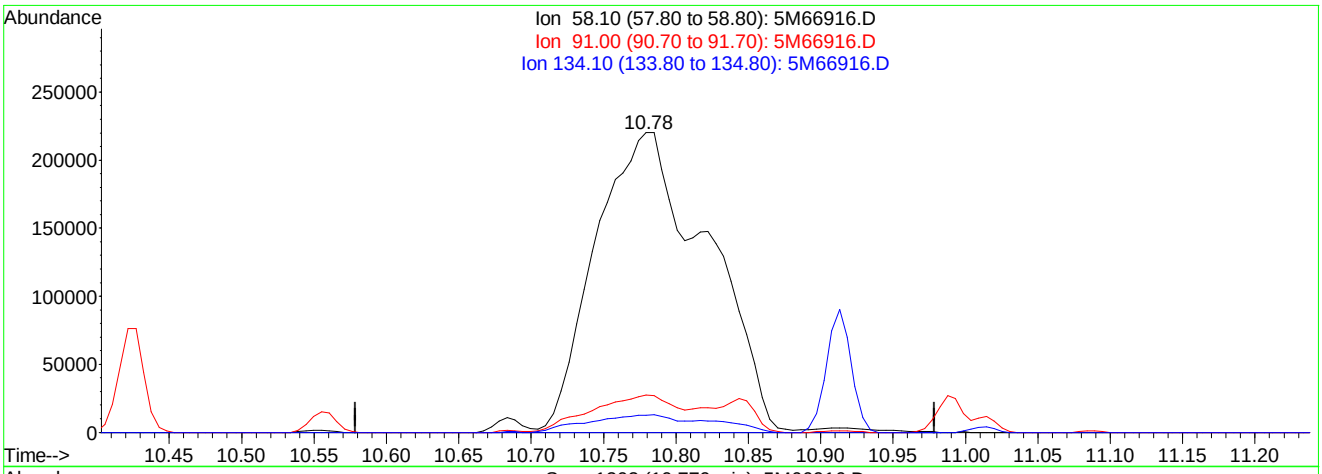
| Ion | Exp% | Act% |
|---|---|---|
| 58.10 | 100 | 100 |
| 91.00 | 7.70 | 13.18# |
| 134.10 | 3.50 | 6.44# |
| 0.00 | 0.00 | 0.00 |

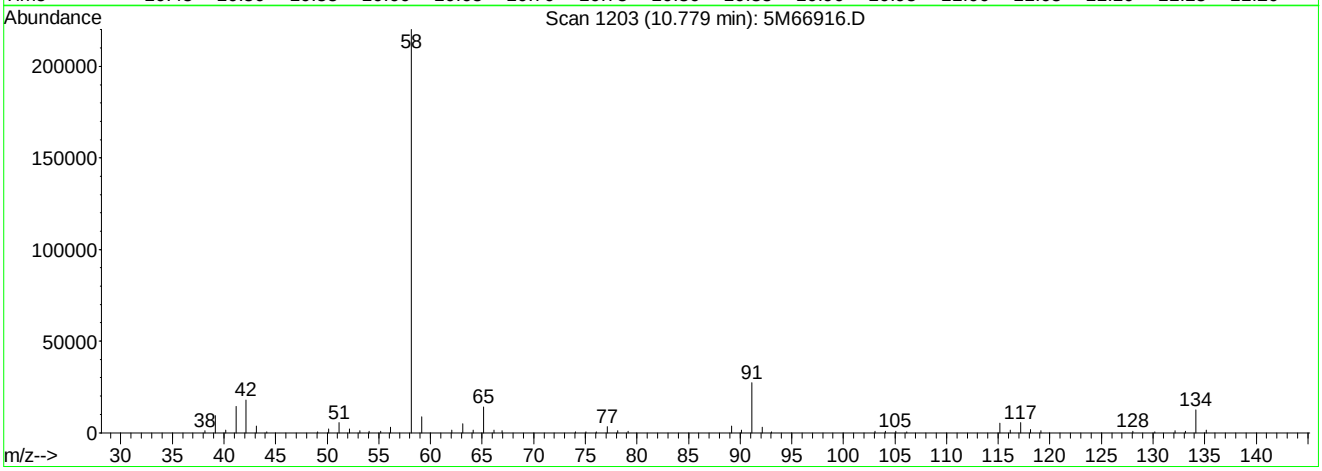
5M66916.D MEGAMIX.M Fri May 11 13:22:07 2012

Quantitation Report (Qedit)

Data File : C:\MSDCHEM\1\DATA\051112\5M66916.D Vial: 2
Acq On : 11 May 2012 9:02 am Operator: CAA
Sample : WG397707-02 50PPM Megamix STD Inst : HPMS5
Misc : 1,1 STD50886 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 11 13:22 2012 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
Title : OVD MSS01 8270/625/Initial cal. 05/11/12
Last Update : Fri May 11 13:21:35 2012
Response via : Multiple Level Calibration




TIC: 5M66916.D

(41) a,a-Dimethylphenethylamine

10.78min 44.23ug/ml mint

response 1209615

| Ion | Exp% | Act% |
|---|---|---|
| 58.10 | 100 | 100 |
| 91.00 | 7.70 | 9.03 |
| 134.10 | 3.50 | 4.41# |
| 0.00 | 0.00 | 0.00 |

5M66916.D MEGAMIX.M Fri May 11 2012

Analyst: 05/15/2012 07:34 Supervisor: 05/15/2012 09:20

#2 - Data system splits the peak incorrectly or integrates a false peak as a rider peak

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\051112\5M66917.D Vial: 3
Acq On : 11 May 2012 9:37 am Operator: CAA
Sample : WG397707-03 3PPM Megamix STD Inst : HPMS5
Misc : 1,1 STD50886 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 11 13:22:34 2012 Quant Results File: MEGAMIX.RES

Quant Method : C:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
Title : OVD MSS01 8270/625/Initial cal. 05/11/12
Last Update : Fri May 11 13:22:30 2012
Response via : Initial Calibration
DataAcq Meth : BNA

| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 1) 1,4-Dichlorobenzene-d4 | 9.29 | 152 | 264707 | 40.00 | ug/ml | 0.00 |
| 30) Naphthalene-d8 | 10.91 | 136 | 973876 | 40.00 | ug/ml | 0.00 |
| 54) Acenaphthene-d10 | 13.02 | 164 | 569465 | 40.00 | ug/ml | 0.00 |
| 87) Phenanthrene-d10 | 14.64 | 188 | 1047610 | 40.00 | ug/ml | 0.00 |
| 113) Chrysene-d12 | 17.53 | 240 | 1229406 | 40.00 | ug/ml | -0.01 |
| 128) Perylene-d12 | 20.06 | 264 | 1137073 | 40.00 | ug/ml | -0.01 |
| **System Monitoring Compounds** | | | | | | |
| 8) 2-Fluorophenol | 7.72 | 112 | 23494 | 3.0122 | ug/ml | 0.00 |
| Spiked Amount 100.000 | Range 21 - 100 | | Recovery = | 3.01%# | | |
| 12) Phenol-d5 | 8.82 | 99 | 28438 | 3.0328 | ug/ml | -0.01 |
| Spiked Amount 100.000 | Range 10 - 94 | | Recovery = | 3.03%# | | |
| 31) Nitrobenzene-d5 | 10.01 | 82 | 26438 | 3.1412 | ug/ml | -0.01 |
| Spiked Amount 50.000 | Range 35 - 114 | | Recovery = | 6.28%# | | |
| 59) 2-Fluorobiphenyl | 12.21 | 172 | 63208 | 3.2454 | ug/ml | 0.00 |
| Spiked Amount 50.000 | Range 43 - 116 | | Recovery = | 6.50%# | | |
| 86) 2,4,6-Tribromophenol | 13.90 | 330 | 8756 | 3.0244 | ug/ml | -0.01 |
| Spiked Amount 100.000 | Range 10 - 123 | | Recovery = | 3.02%# | | |
| 117) p-Terphenyl-d14 | 16.26 | 244 | 68630 | 3.3754 | ug/ml | 0.00 |
| Spiked Amount 50.000 | Range 33 - 141 | | Recovery = | 6.76%# | | |
| **Target Compounds** | | | | | | Qvalue |
| 2) 1,4-Dioxane | 5.13 | 88 | 17435m | 4.9073 | ug/ml | |
| 3) n-Nitrosodimethylamine | 5.79 | 74 | 13580 | 2.7886 | ug/ml# | 91 |
| 4) Pyridine | 5.80 | 79 | 24583 | 2.8235 | ug/ml | 97 |
| 5) 2-Picoline | 6.94 | 93 | 27503 | 2.9832 | ug/ml | 98 |
| 6) n-Nitrosomethylethylamine | 7.12 | 88 | 11613 | 3.0217 | ug/ml | 99 |
| 7) Methyl Methanesulfonate | 7.52 | 80 | 14963 | 3.2447 | ug/ml | 95 |
| 9) n-Nitrosodiethylamine | 8.02 | 102 | 11757 | 2.9967 | ug/ml | 90 |
| 10) Ethyl Methanesulfonate | 8.37 | 79 | 18035 | 2.9858 | ug/ml | 99 |
| 11) Aniline | 8.92 | 93 | 39019 | 2.9723 | ug/ml | 97 |
| 13) Phenol | 8.84 | 94 | 29268 | 2.9625 | ug/ml | 94 |
| 14) bis(2-Chloroethyl)ether | 8.96 | 63 | 17829 | 3.0448 | ug/ml | 93 |
| 15) Pentachloroethane | 8.95 | 167 | 11044 | 3.1763 | ug/ml | 100 |
| 16) 2-Chlorophenol | 9.07 | 128 | 26685 | 3.0562 | ug/ml | 98 |
| 17) 1,3-Dichlorobenzene | 9.26 | 146 | 31387 | 3.1416 | ug/ml | 99 |
| 18) 1,4-Dichlorobenzene | 9.32 | 146 | 33574 | 3.2379 | ug/ml | 94 |
| 19) Benzyl Alcohol | 9.45 | 108 | 15846 | 2.7861 | ug/ml | 92 |
| 20) 1,2-Dichlorobenzene | 9.56 | 146 | 30184 | 3.1672 | ug/ml | 99 |
| 21) 2-Methylphenol | 9.58 | 107 | 20464 | 2.9207 | ug/ml | 98 |
| 22) bis(2-Chloroisopropyl)ethe | 9.64 | 45 | 37171 | 2.9553 | ug/ml | 93 |
| 23) 3-,4-Methylphenol | 9.74 | 107 | 26525 | 2.9884 | ug/ml | 98 |
| 24) n-Nitrosopyrrolidine | 9.78 | 100 | 10414 | 2.9607 | ug/ml# | 52 |
| 25) n-Nitrosodipropylamine | 9.80 | 70 | 17239 | 3.3160 | ug/ml | 87 |
| 26) Acetophenone | 9.80 | 105 | 34880 | 3.1898 | ug/ml | 95 |
| 27) n-Nitrosomorpholine | 9.80 | 56 | 16068 | 3.4900 | ug/ml# | 88 |
| 28) o-Toluidine | 9.86 | 106 | 41068 | 2.9708 | ug/ml | 100 |
| 29) Hexachloroethane | 9.95 | 117 | 11721 | 3.0687 | ug/ml | 95 |
| 32) Nitrobenzene | 10.03 | 77 | 26082 | 3.1359 | ug/ml | 96 |
| 33) n-Nitrosopiperidine | 10.21 | 114 | 12590 | 3.0921 | ug/ml | 87 |
| 34) Isophorone | 10.30 | 82 | 46121 | 3.1088 | ug/ml | 98 |
| 35) 2-Nitrophenol | 10.43 | 139 | 14434 | 3.1090 | ug/ml | 91 |
| 36) 2,4-Dimethylphenol | 10.42 | 122 | 23941 | 3.1748 | ug/ml | 97 |
| 37) 0,0,0-Triethyl Phosphoroth | 10.55 | 198 | 15026 | 3.4880 | ug/ml | 94 |
| 38) bis(2-Chloroethoxy)methane | 10.54 | 93 | 36529 | 3.2418 | ug/ml | 97 |

(#) = qualifier out of range (m) = manual integration
5M66917.D MEGAMIX.M Mon May 14 14:45:13 2012 Page 1

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\051112\5M66917.D Vial: 3
Acq On : 11 May 2012 9:37 am Operator: CAA
Sample : WG397707-03 3PPM Megamix STD Inst : HPMS5
Misc : 1,1 STD50886 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 11 13:22:34 2012 Quant Results File: MEGAMIX.RES

Quant Method : C:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
Title : OVD MSS01 8270/625/Initial cal. 05/11/12
Last Update : Fri May 11 13:22:30 2012
Response via : Initial Calibration
DataAcq Meth : BNA

| | Compound | R.T. | QIon | Response | Conc Unit | Qvalue |
|---|---|---|---|---|---|---|
| 39) | Benzoic Acid | 10.47 | 105 | 3659 | 0.6279 ug/ml# | 68 |
| 40) | 2,4-Dichlorophenol | 10.71 | 162 | 22824 | 3.1235 ug/ml | 99 |
| 41) | a,a-Dimethylphenethylamine | 10.66 | 58 | 62665 | 2.6848 ug/ml# | 93 |
| 42) | 1,2,4-Trichlorobenzene | 10.84 | 180 | 27700 | 3.3416 ug/ml | 100 |
| 43) | Naphthalene | 10.93 | 128 | 81020 | 3.3233 ug/ml | 98 |
| 44) | 4-Chloroaniline | 10.98 | 127 | 32824 | 3.1039 ug/ml | 98 |
| 45) | 2,6-Dichlorophenol | 11.00 | 162 | 23562 | 3.1396 ug/ml | 99 |
| 46) | Hexachloropropene | 11.08 | 213 | 16888 | 3.3574 ug/ml | 99 |
| 47) | Hexachlorobutadiene | 11.13 | 225 | 16380 | 3.4174 ug/ml | 98 |
| 48) | n-Nitrosodi-n-Butylamine | 11.38 | 84 | 16740 | 2.8007 ug/ml# | 88 |
| 49) | p-Phenylenediamine | 11.40 | 108 | 8490 | 1.8792 ug/ml# | 90 |
| 50) | 4-Chloro-3-Methylphenol | 11.53 | 107 | 21370 | 3.0751 ug/ml | 98 |
| 51) | Safrole | 11.64 | 162 | 22209 | 3.2108 ug/ml | 93 |
| 52) | 2-Methylnaphthalene | 11.77 | 142 | 54821 | 3.3010 ug/ml | 99 |
| 53) | 1-Methylnaphthalene | 11.91 | 142 | 51656 | 3.2920 ug/ml | 98 |
| 55) | 1,2,4,5-Tetrachlorobenzene | 12.02 | 216 | 27681 | 3.3303 ug/ml | 99 |
| 56) | Hexachlorocyclopentadiene | 12.04 | 237 | 14184 | 3.1797 ug/ml | 96 |
| 57) | 2,4,6-Trichlorophenol | 12.12 | 196 | 17411 | 3.0545 ug/ml | 98 |
| 58) | 2,4,5-Trichlorophenol | 12.17 | 196 | 17510 | 2.9327 ug/ml | 99 |
| 60) | Isosafrole | 12.25 | 162 | 23115 | 3.1136 ug/ml | 96 |
| 61) | 2-Chloronaphthalene | 12.36 | 162 | 53654 | 3.1847 ug/ml | 99 |
| 62) | 1-Chloronaphthalene | 12.40 | 162 | 51171 | 3.1795 ug/ml | 99 |
| 63) | 2-Nitroaniline | 12.48 | 65 | 13386 | 2.9427 ug/ml | 90 |
| 64) | 1,4-Naphthoquinone | 12.55 | 158 | 19112 | 3.9514 ug/ml | 99 |
| 65) | Dimethylphthalate | 12.68 | 163 | 60999 | 3.2697 ug/ml | 99 |
| 66) | 1,3-Dinitrobenzene | 12.72 | 168 | 9853 | 2.8336 ug/ml | 91 |
| 67) | 2,6-Dinitrotoluene | 12.78 | 165 | 13822 | 3.0402 ug/ml | 93 |
| 68) | Acenaphthylene | 12.86 | 152 | 82605 | 3.2114 ug/ml | 97 |
| 69) | 3-Nitroaniline | 12.94 | 138 | 13487 | 2.8043 ug/ml | 94 |
| 70) | 2,4-Dinitrophenol | 13.05 | 184 | 2058 | 0.8990 ug/ml# | 1 |
| 71) | Acenaphthene | 13.06 | 154 | 52285 | 3.2146 ug/ml | 97 |
| 72) | 4-Nitrophenol | 13.07 | 65 | 8452 | 2.4092 ug/ml | 90 |
| 73) | 2,4-Dinitrotoluene | 13.22 | 165 | 17981 | 3.1499 ug/ml | 85 |
| 74) | Pentachlorobenzene | 13.26 | 250 | 24842 | 3.2194 ug/ml | 98 |
| 75) | Dibenzofuran | 13.23 | 168 | 75787 | 3.3822 ug/ml | 96 |
| 76) | 2,3,4,6-Tetrachlorophenol | 13.40 | 232 | 15513 | 3.1046 ug/ml | 96 |
| 77) | 1-Naphthylamine | 13.32 | 143 | 48315m | 3.0082 ug/ml | |
| 78) | 2-Naphthylamine | 13.39 | 143 | 46525 | 3.5439 ug/ml | 97 |
| 79) | Diethylphthalate | 13.45 | 149 | 59283 | 3.2459 ug/ml | 98 |
| 80) | Thionazin | 13.55 | 107 | 8657 | 3.1878 ug/ml | 94 |
| 81) | Fluorene | 13.62 | 166 | 64172 | 3.2488 ug/ml | 100 |
| 82) | 4-Chlorophenyl Phenyl Ethe | 13.57 | 204 | 32165 | 3.4657 ug/ml | 96 |
| 83) | 4-Nitroaniline | 13.63 | 138 | 13601 | 2.8030 ug/ml | 85 |
| 84) | 5-Nitro-o-Toluidine | 13.62 | 152 | 17033 | 2.8917 ug/ml# | 88 |
| 85) | 1,2-Diphenylhydrazine | 13.74 | 77 | 54486 | 3.1760 ug/ml | 93 |
| 88) | 4,6-Dinitro-2-Methylphenol | 13.67 | 198 | 5430 | 1.6311 ug/ml# | 27 |
| 89) | n-Nitrosodiphenylamine | 13.70 | 169 | 54188 | 3.2039 ug/ml | 99 |
| 90) | Sulfotepp | 13.91 | 322 | 11756 | 3.2498 ug/ml# | 88 |
| 91) | Sym-Trinitrobenzene | 13.98 | 75 | 10433 | 2.5053 ug/ml | 93 |
| 92) | Diallate | 14.03 | 86 | 20616m | 3.2711 ug/ml | |
| 93) | Phenacetin | 14.01 | 108 | 26691 | 3.2308 ug/ml | 94 |
| 94) | Phorate | 14.05 | 75 | 32205 | 3.3480 ug/ml# | 91 |
| 95) | 4-Bromophenyl Phenyl Ether | 14.11 | 248 | 19047 | 3.2085 ug/ml | 95 |
| 96) | Hexachlorobenzene | 14.30 | 284 | 21384 | 3.2326 ug/ml | 96 |

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

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\051112\5M66917.D Vial: 3
Acq On : 11 May 2012 9:37 am Operator: CAA
Sample : WG397707-03 3PPM Megamix STD Inst : HPMS5
Misc : 1,1 STD50886 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 11 13:22:34 2012 Quant Results File: MEGAMIX.RES

Quant Method : C:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
Title : OVD MSS01 8270/625/Initial cal. 05/11/12
Last Update : Fri May 11 13:22:30 2012
Response via : Initial Calibration
DataAcq Meth : BNA

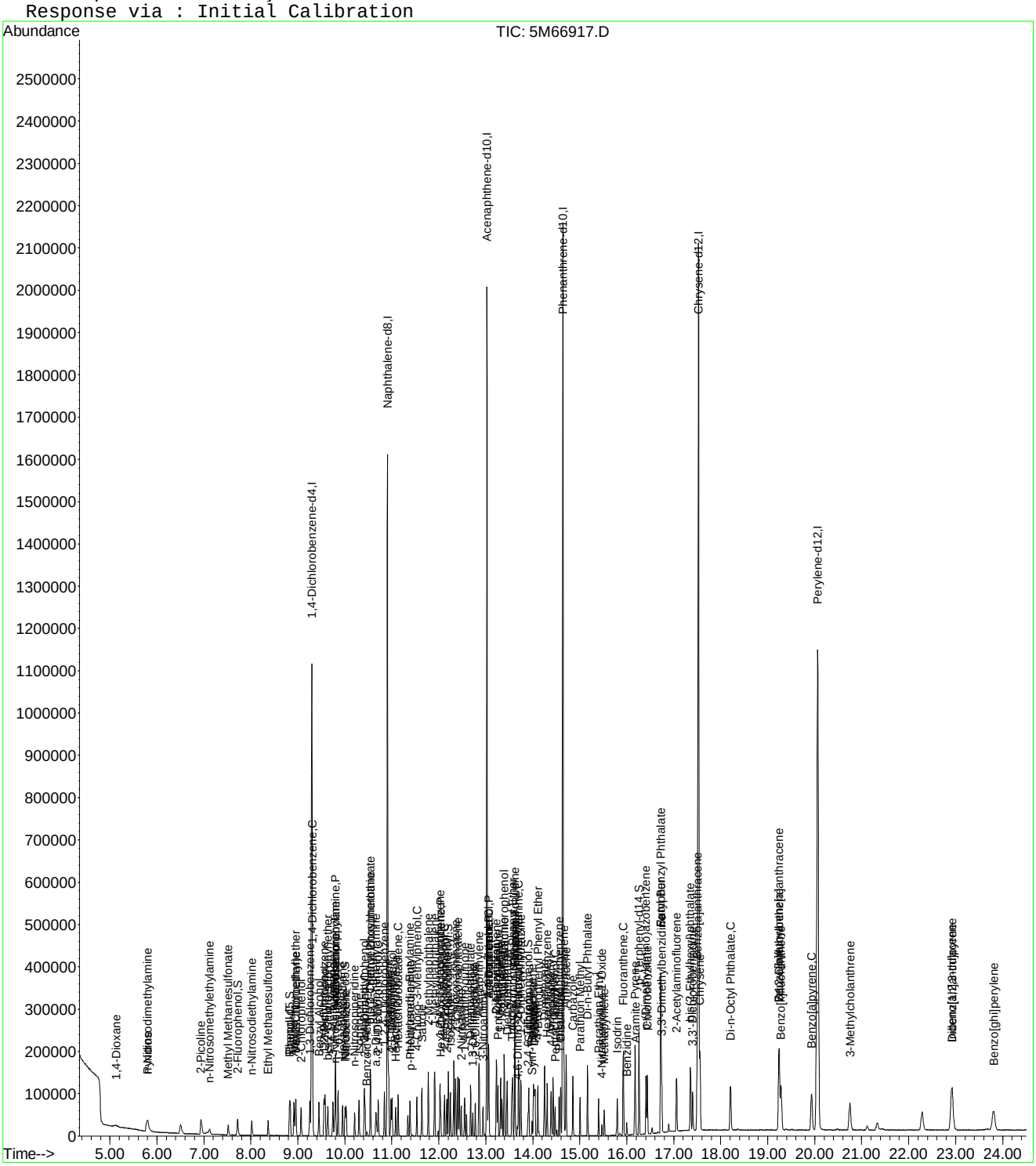
| | Compound | R.T. | QIon | Response | Conc | Unit | Qvalue |
|---|---|---|---|---|---|---|---|
| 97) | Dimethoate | 14.25 | 87 | 20019 | 3.9017 | ug/ml | 98 |
| 98) | 4-Aminobiphenyl | 14.39 | 169 | 53970 | 3.0244 | ug/ml | 97 |
| 99) | Pentachlorophenol | 14.48 | 266 | 10385 | 2.3958 | ug/ml | 99 |
| 100) | Pronamide | 14.43 | 173 | 27325 | 3.1615 | ug/ml | 98 |
| 101) | Pentachloronitrobenzene | 14.56 | 237 | 8249 | 3.4127 | ug/ml | 97 |
| 102) | Disulfoton | 14.59 | 88 | 26084 | 2.9343 | ug/ml | 99 |
| 103) | Phenanthrene | 14.66 | 178 | 92609 | 3.3369 | ug/ml | 98 |
| 104) | Anthracene | 14.71 | 178 | 93424 | 3.3052 | ug/ml | 98 |
| 105) | Carbazole | 14.85 | 167 | 82911 | 3.2131 | ug/ml | 97 |
| 106) | Parathion Methyl | 15.00 | 109 | 17649 | 3.6555 | ug/ml | 96 |
| 107) | Di-n-Butyl Phthalate | 15.16 | 149 | 100466 | 3.3509 | ug/ml | 99 |
| 108) | Parathion Ethyl | 15.40 | 97 | 10278 | 3.1185 | ug/ml | 92 |
| 109) | 4-Nitroquinoline 1-Oxide | 15.47 | 190 | 3002 | 1.8527 | ug/ml# | 91 |
| 110) | Methapyrilene | 15.52 | 58 | 21399 | 3.1048 | ug/ml | 98 |
| 111) | Isodrin | 15.80 | 193 | 10584 | 3.3663 | ug/ml# | 77 |
| 112) | Fluoranthene | 15.93 | 202 | 102007 | 3.4245 | ug/ml | 97 |
| 114) | Benzidine | 16.00 | 184 | 18402 | 3.3281 | ug/ml | 100 |
| 115) | Pyrene | 16.17 | 202 | 103697 | 3.3367 | ug/ml | 97 |
| 116) | Aramite | 16.19 | 185 | 5189 | 3.1001 | ug/ml# | 90 |
| 118) | p-(Dimethylamino)azobenzen | 16.41 | 225 | 21910 | 3.0098 | ug/ml# | 85 |
| 119) | Chlorobenzilate | 16.44 | 251 | 30682 | 3.1303 | ug/ml | 89 |
| 120) | Famphur | 16.72 | 218 | 34054 | 379.4073 | ug/ml# | 1 |
| 121) | Butyl Benzyl Phthalate | 16.73 | 149 | 46290 | 3.5617 | ug/ml | 94 |
| 122) | 3,3'-Dimethylbenzidine | 16.75 | 212 | 51271 | 2.5944 | ug/ml | 99 |
| 123) | 2-Acetylaminofluorene | 17.06 | 181 | 37707 | 2.8794 | ug/ml | 98 |
| 124) | bis(2-Ethylhexyl)phthalate | 17.35 | 149 | 64251 | 3.2299 | ug/ml | 97 |
| 125) | 3,3'-Dichlorobenzidine | 17.40 | 252 | 33284 | 3.1275 | ug/ml | 97 |
| 126) | Benzo[a]anthracene | 17.50 | 228 | 102238 | 3.2167 | ug/ml | 97 |
| 127) | Chrysene | 17.56 | 228 | 96578 | 3.2367 | ug/ml | 98 |
| 129) | Di-n-Octyl Phthalate | 18.21 | 149 | 99176 | 2.8181 | ug/ml | 95 |
| 130) | 7,12-Dimethylbenz[a]anthra | 19.24 | 256 | 43526 | 2.7231 | ug/ml | 99 |
| 131) | Benzo[b]fluoranthene | 19.24 | 252 | 102221m | 2.6858 | ug/ml | |
| 132) | Benzo[k]fluoranthene | 19.28 | 252 | 89926 | 3.0134 | ug/ml | 98 |
| 133) | Benzo[a]pyrene | 19.93 | 252 | 90932 | 2.9230 | ug/ml | 99 |
| 134) | 3-Methylcholanthrene | 20.75 | 268 | 49523 | 3.0819 | ug/ml | 99 |
| 135) | Indeno[1,2,3-cd]pyrene | 22.93 | 276 | 103802 | 2.9058 | ug/ml | 96 |
| 136) | Dibenz[ah]anthracene | 22.92 | 278 | 87577 | 2.9269 | ug/ml | 97 |
| 137) | Benzo[ghi]perylene | 23.81 | 276 | 85662 | 3.0175 | ug/ml | 98 |

(#) = qualifier out of range (m) = manual integration
5M66917.D MEGAMIX.M Mon May 14 14:45:14 2012 Page 3

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\051112\5M66917.D Vial: 3
Acq On : 11 May 2012 9:37 am Operator: CAA
Sample : WG397707-03 3PPM Megamix STD Inst : HPMS5
Misc : 1,1 STD50886 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 11 13:23 2012 Quant Results File: MEGAMIX.RES

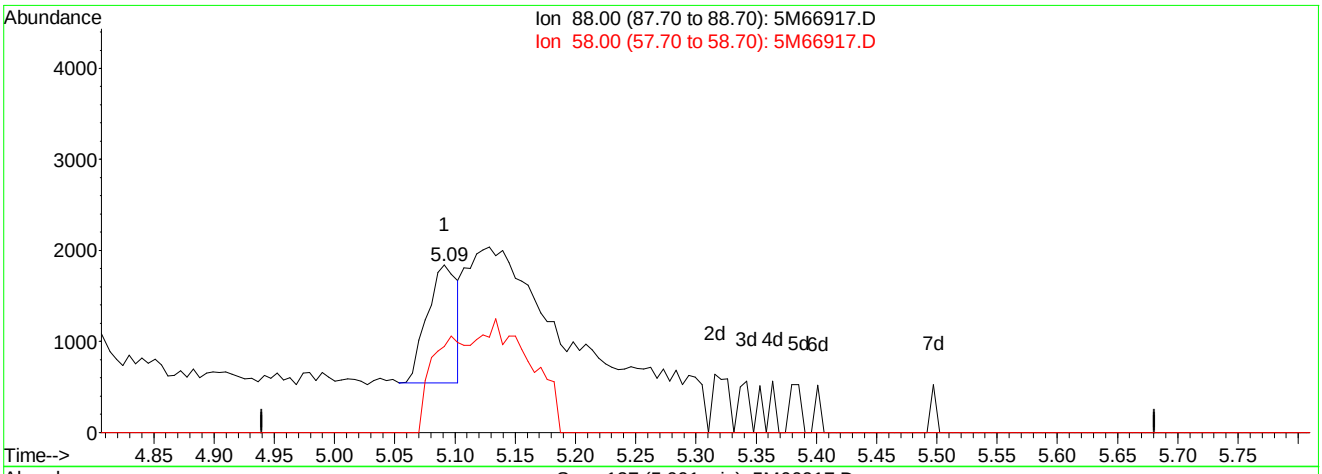
Method : C:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
Title : OVD MSS01 8270/625/Initial cal. 05/11/12
Last Update : Fri May 11 14:12:23 2012
Response via : Initial Calibration

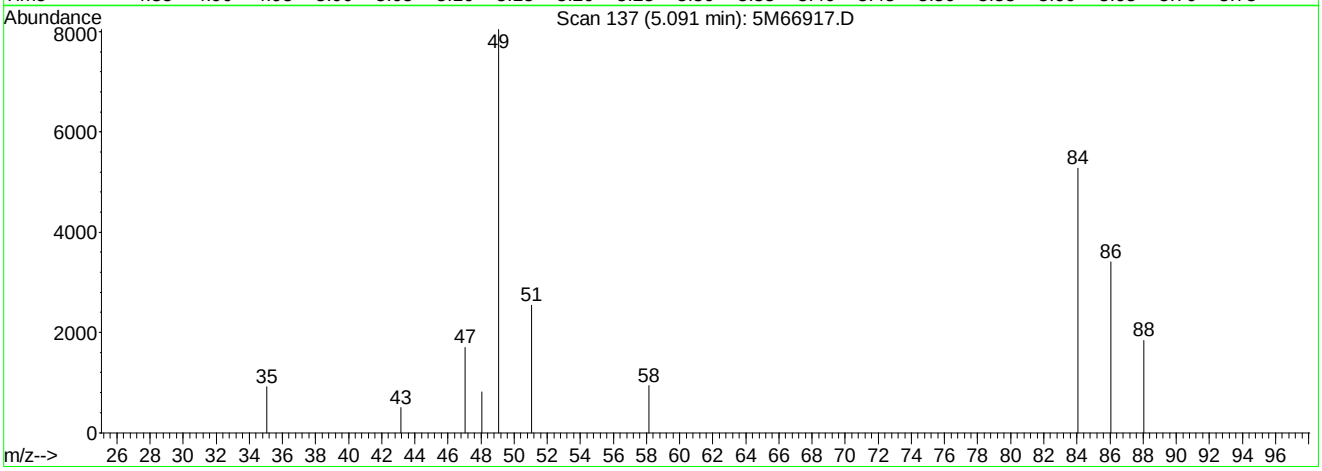


Quantitation Report (Qedit)

Data File : C:\MSDCHEM\1\DATA\051112\5M66917.D Vial: 3
Acq On : 11 May 2012 9:37 am Operator: CAA
Sample : WG397707-03 3PPM Megamix STD Inst : HPMS5
Misc : 1,1 STD50886 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 11 13:22 2012 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
Title : OVD MSS01 8270/625/Initial cal. 05/11/12
Last Update : Fri May 11 13:22:30 2012
Response via : Multiple Level Calibration




TIC: 5M66917.D

(2) 1,4-Dioxane

5.09min 0.63ug/ml

response 2231

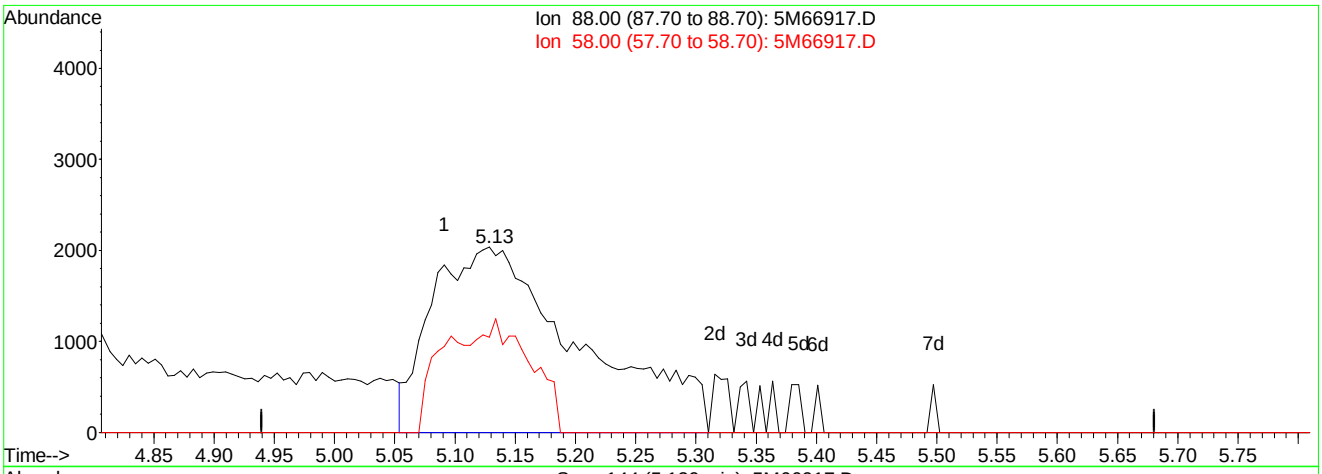
| Ion | Exp% | Act% |
|---|---|---|
| 88.00 | 100 | 100 |
| 58.00 | 0.00 | 89.42# |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

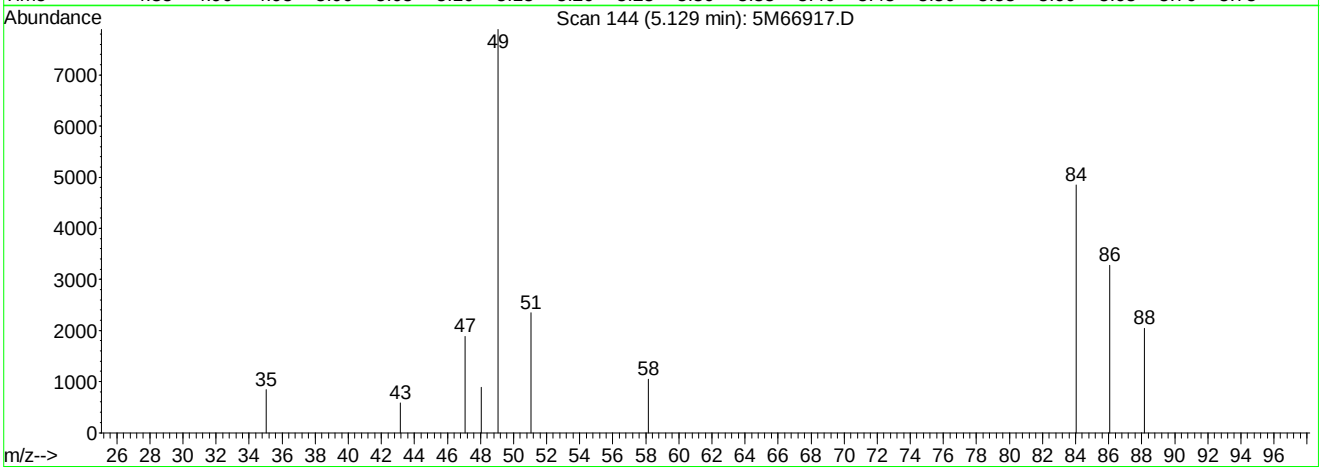
5M66917.D MEGAMIX.M Fri May 11 13:22:41 2012

Quantitation Report (Qedit)

Data File : C:\MSDCHEM\1\DATA\051112\5M66917.D Vial: 3
Acq On : 11 May 2012 9:37 am Operator: CAA
Sample : WG397707-03 3PPM Megamix STD Inst : HPMS5
Misc : 1,1 STD50886 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 11 13:22 2012 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
Title : OVD MSS01 8270/625/Initial cal. 05/11/12
Last Update : Fri May 11 13:22:30 2012
Response via : Multiple Level Calibration




TIC: 5M66917.D

(2) 1,4-Dioxane

5.13min 4.91ug/ml mint

response 17435

| Ion | Exp% | Act% |
|---|---|---|
| 88.00 | 100 | 100 |
| 58.00 | 0.00 | 11.44# |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

5M66917.D MEGAMIX.M Fri May 11 ; 2012

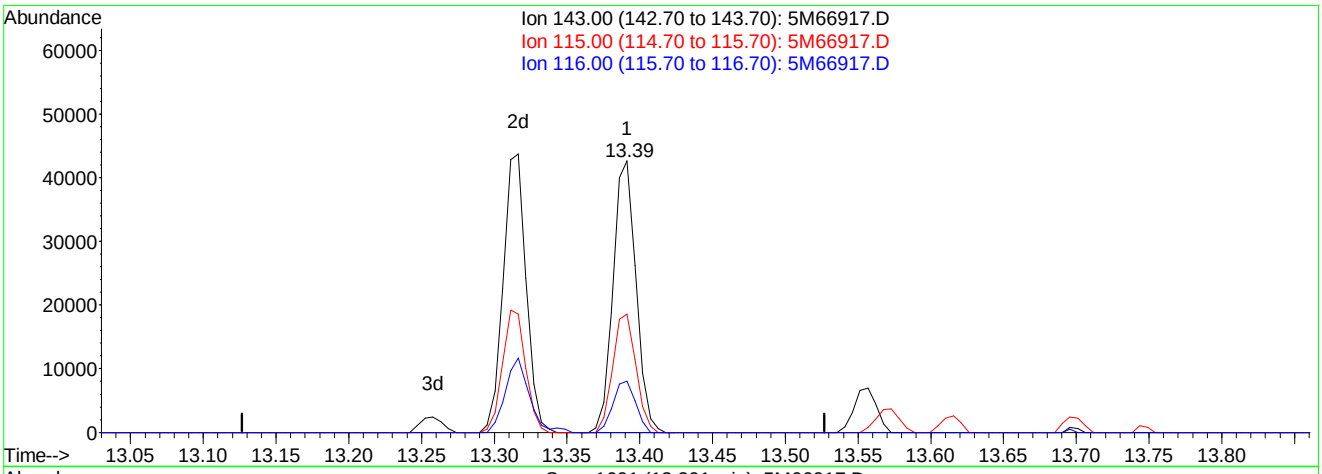
Analyst: 05/15/2012 07:34 Supervisor: 05/15/2012 09:20

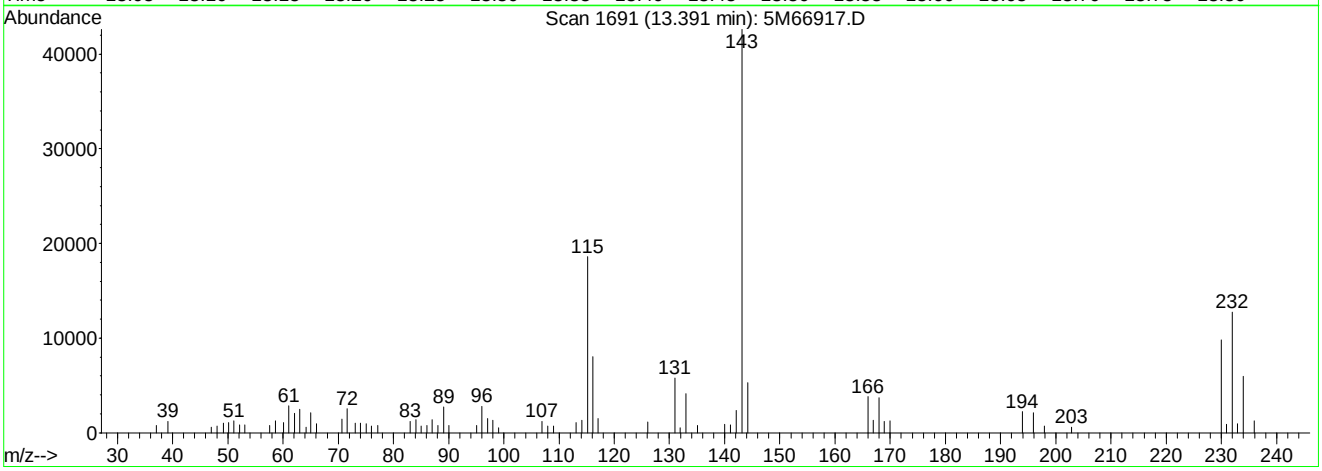
#4 - System establishes incorrect baseline

Quantitation Report (Qedit)

Data File : C:\MSDCHEM\1\DATA\051112\5M66917.D Vial: 3
Acq On : 11 May 2012 9:37 am Operator: CAA
Sample : WG397707-03 3PPM Megamix STD Inst : HPMS5
Misc : 1,1 STD50886 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 11 13:22 2012 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
Title : OVD MSS01 8270/625/Initial cal. 05/11/12
Last Update : Fri May 11 13:22:30 2012
Response via : Multiple Level Calibration




TIC: 5M66917.D

(77) 1-Naphthylamine

13.39min 2.90ug/ml

response 46525

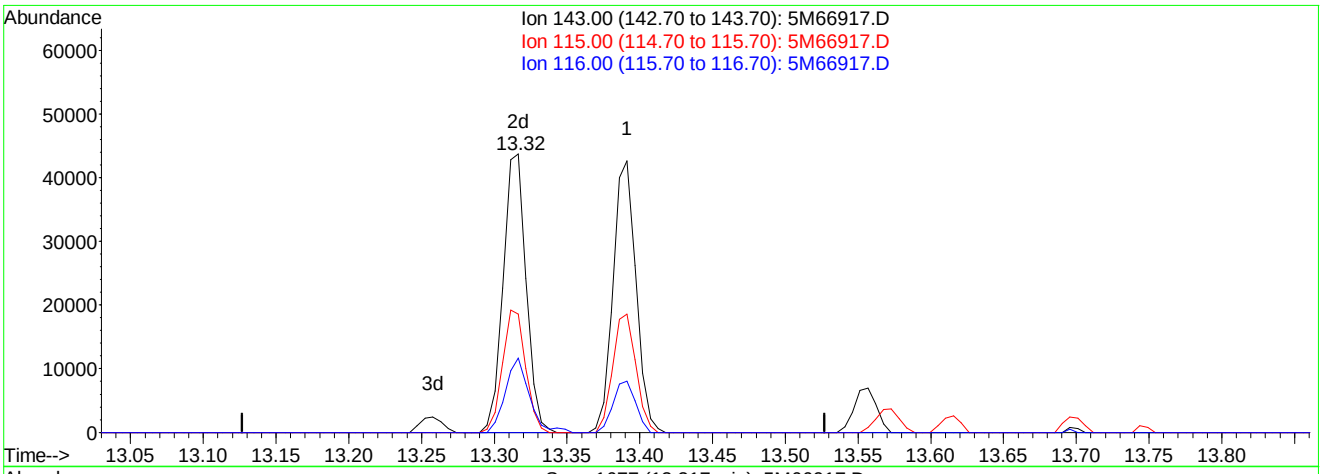
| Ion | Exp% | Act% |
|---|---|---|
| 143.00 | 100 | 100 |
| 115.00 | 42.50 | 44.15 |
| 116.00 | 22.90 | 18.50 |
| 0.00 | 0.00 | 0.00 |

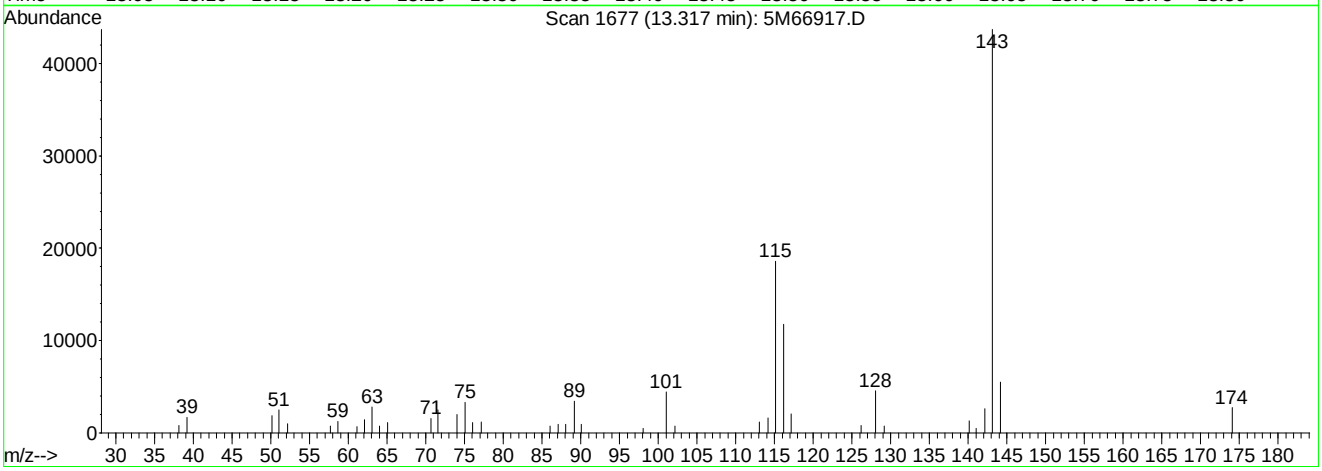
5M66917.D MEGAMIX.M Fri May 11 13:23:02 2012

Quantitation Report (Qedit)

Data File : C:\MSDCHEM\1\DATA\051112\5M66917.D Vial: 3
Acq On : 11 May 2012 9:37 am Operator: CAA
Sample : WG397707-03 3PPM Megamix STD Inst : HPMS5
Misc : 1,1 STD50886 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 11 13:23 2012 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
Title : OVD MSS01 8270/625/Initial cal. 05/11/12
Last Update : Fri May 11 13:22:30 2012
Response via : Multiple Level Calibration




TIC: 5M66917.D

(77) 1-Naphthylamine

13.32min 3.01ug/ml mint

response 48315

| Ion | Exp% | Act% |
|---|---|---|
| 143.00 | 100 | 100 |
| 115.00 | 42.50 | 42.52 |
| 116.00 | 22.90 | 17.81# |
| 0.00 | 0.00 | 0.00 |

5M66917.D MEGAMIX.M Fri May 11 ; 2012

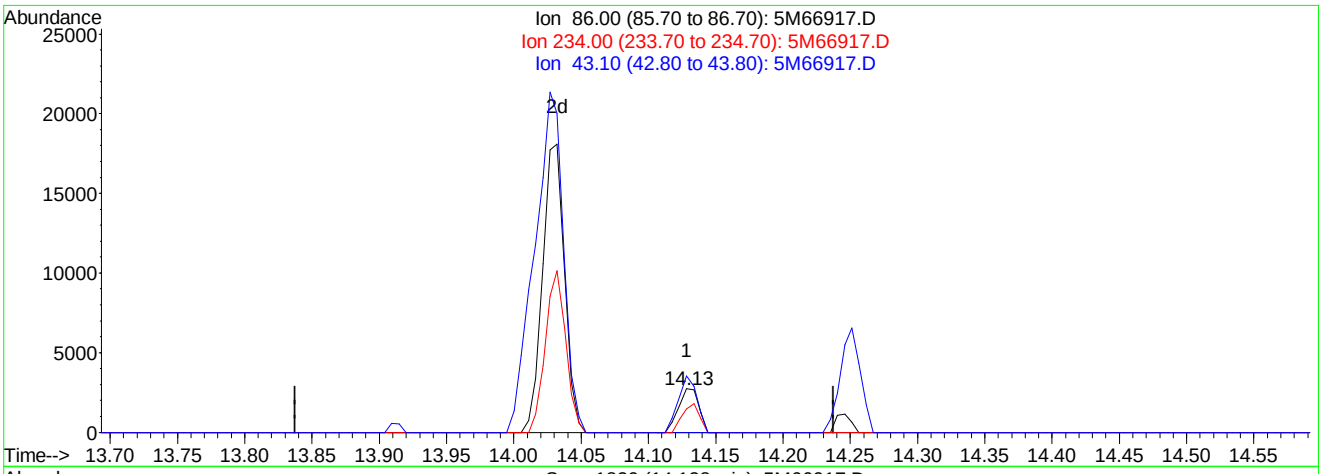
Analyst: 05/15/2012 07:34 Supervisor: 05/15/2012 09:20

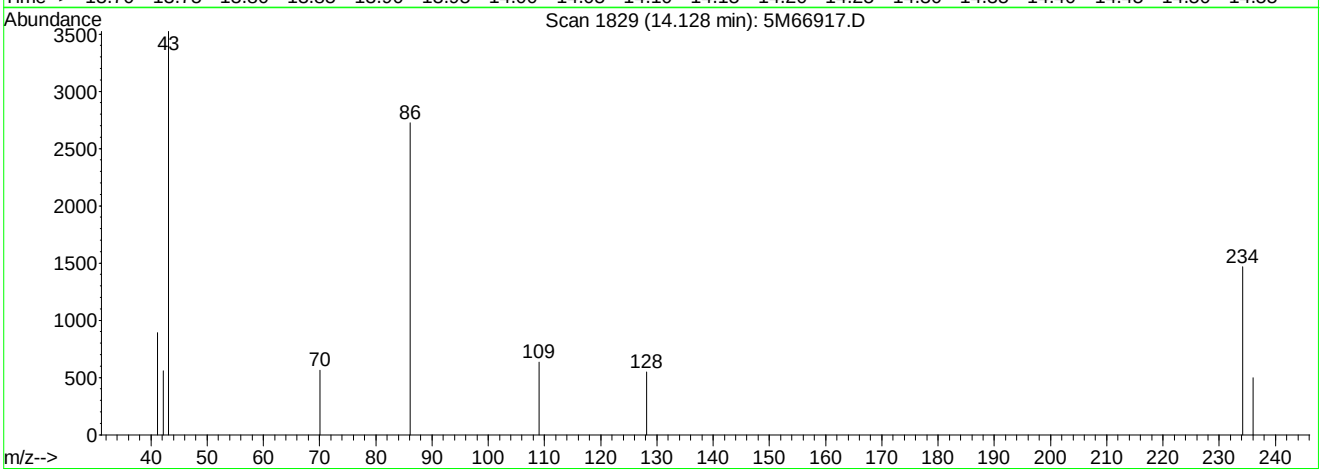
#1 - Data system fails to select correct peak

Quantitation Report (Qedit)

Data File : C:\MSDCHEM\1\DATA\051112\5M66917.D Vial: 3
Acq On : 11 May 2012 9:37 am Operator: CAA
Sample : WG397707-03 3PPM Megamix STD Inst : HPMS5
Misc : 1,1 STD50886 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 11 13:23 2012 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
Title : OVD MSS01 8270/625/Initial cal. 05/11/12
Last Update : Fri May 11 13:22:30 2012
Response via : Multiple Level Calibration




TIC: 5M66917.D

(92) Diallate

14.13min 0.45ug/ml

response 2866

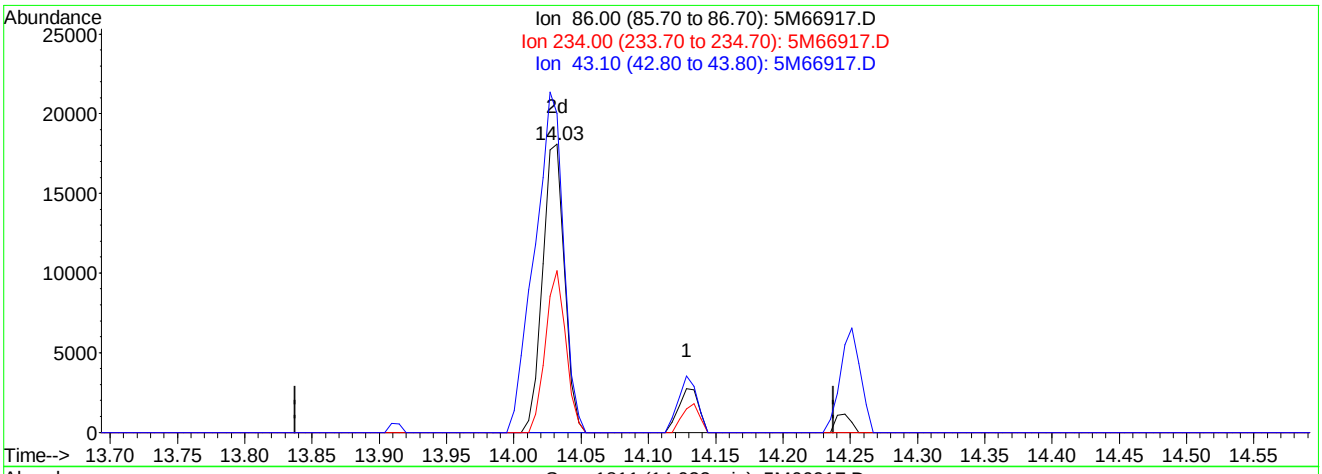
| Ion | Exp% | Act% |
|---|---|---|
| 86.00 | 100 | 100 |
| 234.00 | 61.80 | 55.30 |
| 43.10 | 113.30 | 119.78 |
| 0.00 | 0.00 | 0.00 |

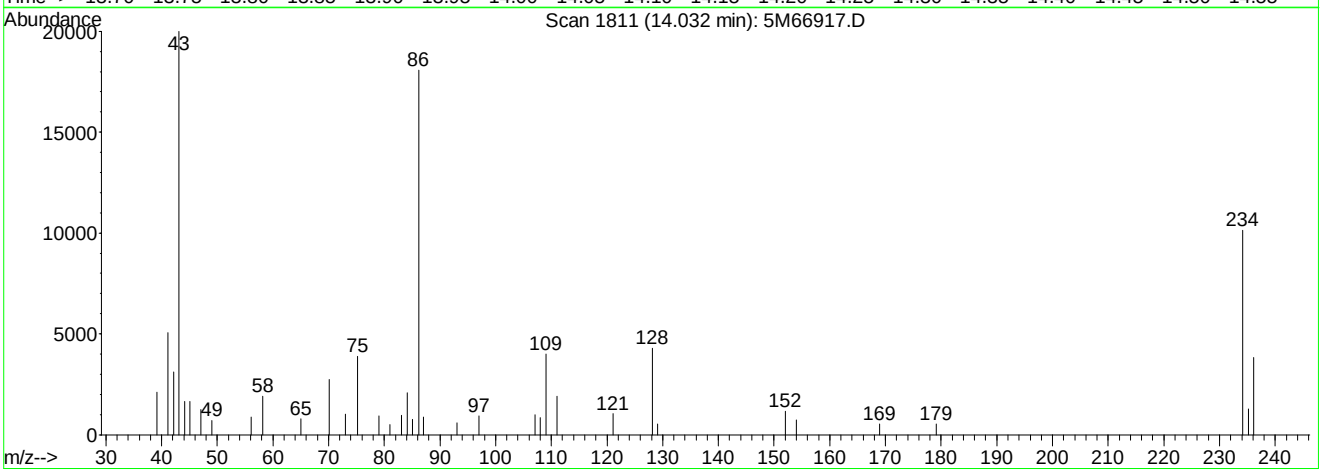
5M66917.D MEGAMIX.M Fri May 11 13:23:12 2012

Quantitation Report (Qedit)

Data File : C:\MSDCHEM\1\DATA\051112\5M66917.D Vial: 3
Acq On : 11 May 2012 9:37 am Operator: CAA
Sample : WG397707-03 3PPM Megamix STD Inst : HPMS5
Misc : 1,1 STD50886 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 11 13:23 2012 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
Title : OVD MSS01 8270/625/Initial cal. 05/11/12
Last Update : Fri May 11 13:22:30 2012
Response via : Multiple Level Calibration




TIC: 5M66917.D

(92) Diallate

14.03min 3.27ug/ml mint

response 20616

| Ion | Exp% | Act% |
|---|---|---|
| 86.00 | 100 | 100 |
| 234.00 | 61.80 | 7.69# |
| 43.10 | 113.30 | 16.65# |
| 0.00 | 0.00 | 0.00 |

5M66917.D MEGAMIX.M Fri May 11 ; 2012

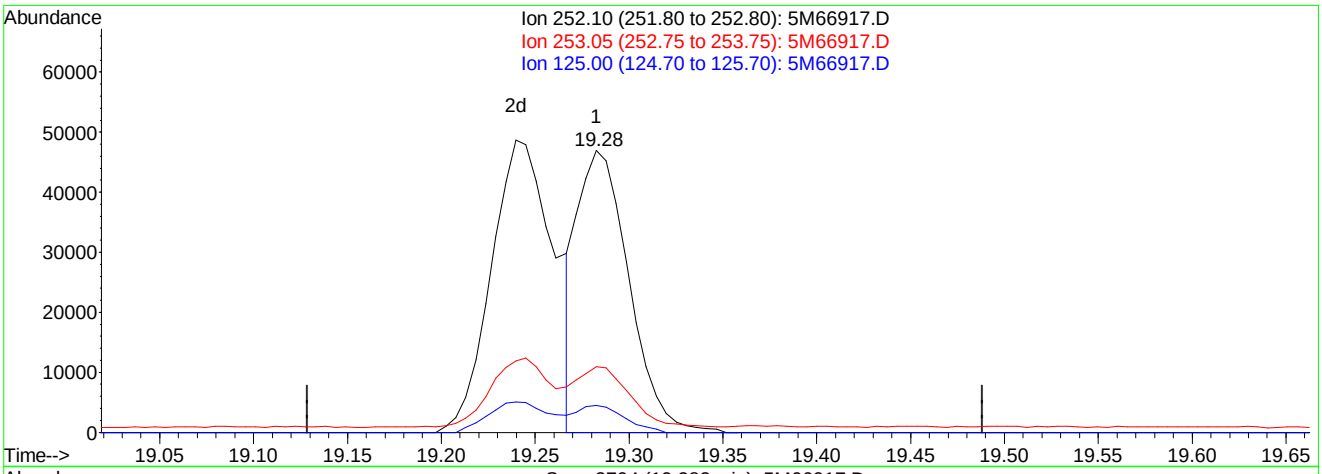
Analyst: 05/15/2012 07:34 Supervisor: 05/15/2012 09:20

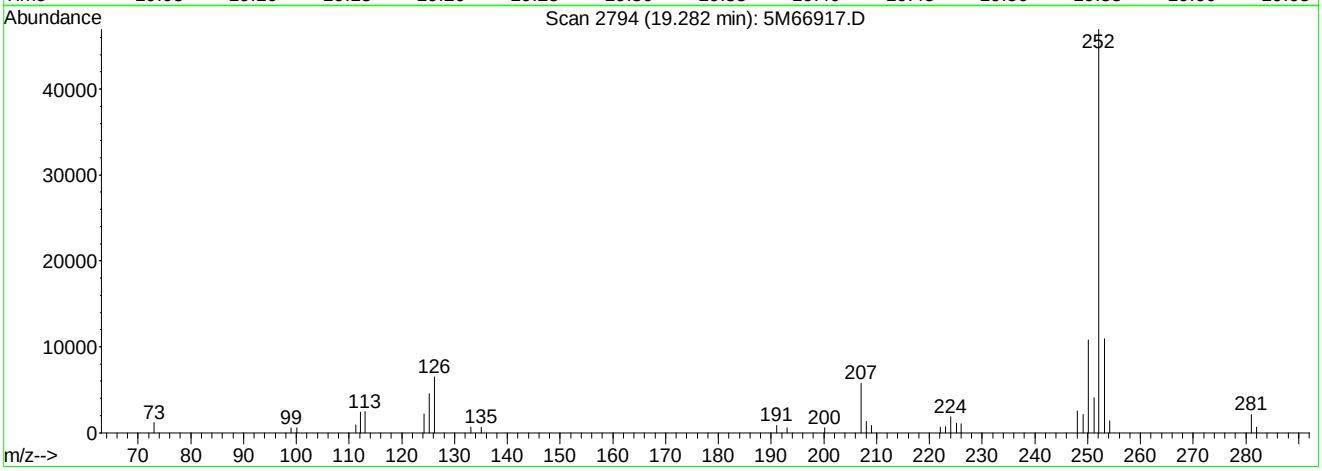
#1 - Data system fails to select correct peak

Quantitation Report (Qedit)

Data File : C:\MSDCHEM\1\DATA\051112\5M66917.D Vial: 3
Acq On : 11 May 2012 9:37 am Operator: CAA
Sample : WG397707-03 3PPM Megamix STD Inst : HPMS5
Misc : 1,1 STD50886 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 11 13:23 2012 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
Title : OVD MSS01 8270/625/Initial cal. 05/11/12
Last Update : Fri May 11 13:22:30 2012
Response via : Multiple Level Calibration




TIC: 5M66917.D

(131) Benzo[b]fluoranthene

19.28min 2.36ug/ml

response 89926

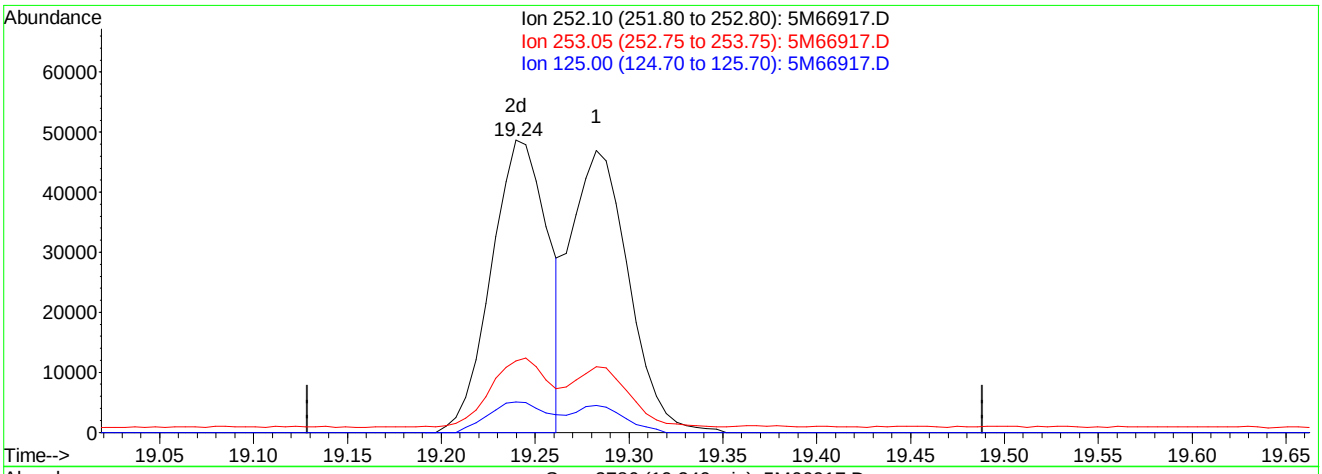
| Ion | Exp% | Act% |
|---|---|---|
| 252.10 | 100 | 100 |
| 253.05 | 22.00 | 21.20 |
| 125.00 | 10.90 | 8.83 |
| 0.00 | 0.00 | 0.00 |

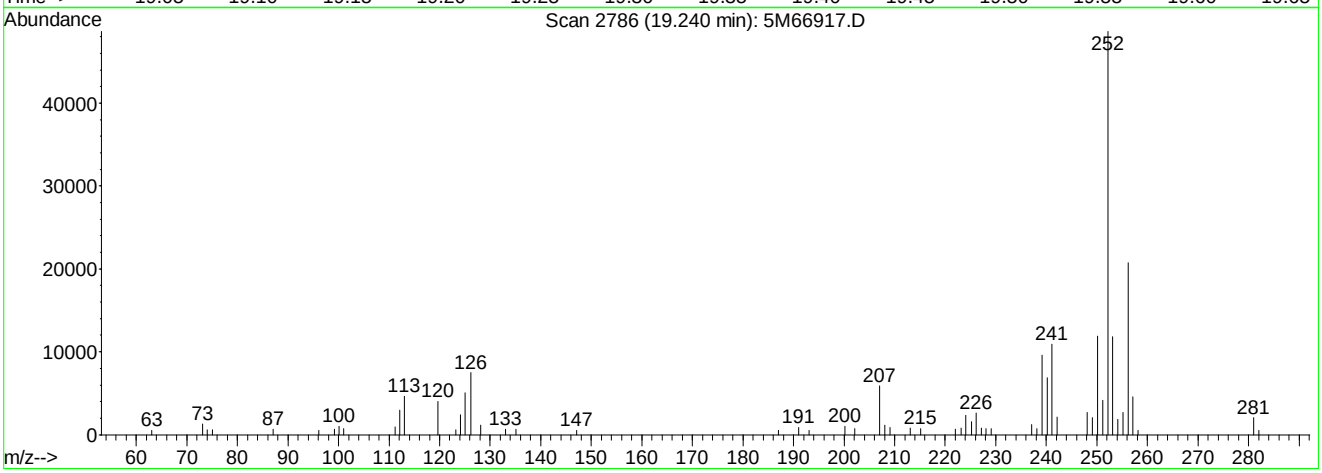
5M66917.D MEGAMIX.M Fri May 11 13:23:23 2012

Quantitation Report (Qedit)

Data File : C:\MSDCHEM\1\DATA\051112\5M66917.D Vial: 3
Acq On : 11 May 2012 9:37 am Operator: CAA
Sample : WG397707-03 3PPM Megamix STD Inst : HPMS5
Misc : 1,1 STD50886 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 11 13:23 2012 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
Title : OVD MSS01 8270/625/Initial cal. 05/11/12
Last Update : Fri May 11 13:22:30 2012
Response via : Multiple Level Calibration




TIC: 5M66917.D

(131) Benzo[b]fluoranthene

19.24min 2.69ug/ml mint

response 102221

| Ion | Exp% | Act% |
|---|---|---|
| 252.10 | 100 | 100 |
| 253.05 | 22.00 | 18.65 |
| 125.00 | 10.90 | 7.77 |
| 0.00 | 0.00 | 0.00 |

5M66917.D MEGAMIX.M Fri May 11 2012

Analyst: 05/15/2012 07:34 Supervisor: 05/15/2012 09:20

#3 - Improperly integrated isomers and/or coeluting compounds

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\051112\5M66918.D Vial: 4
Acq On : 11 May 2012 10:12 am Operator: CAA
Sample : WG397707-04 10PPM Megamix STD Inst : HPMS5
Misc : 1,1 STD50886 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 11 13:23:40 2012 Quant Results File: MEGAMIX.RES

Quant Method : C:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
Title : OVD MSS01 8270/625/Initial cal. 05/11/12
Last Update : Fri May 11 13:23:35 2012
Response via : Initial Calibration
DataAcq Meth : BNA

| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 1) 1,4-Dichlorobenzene-d4 | 9.30 | 152 | 256811 | 40.00 | ug/ml | 0.00 |
| 30) Naphthalene-d8 | 10.91 | 136 | 948404 | 40.00 | ug/ml | 0.00 |
| 54) Acenaphthene-d10 | 13.02 | 164 | 563222 | 40.00 | ug/ml | 0.00 |
| 87) Phenanthrene-d10 | 14.64 | 188 | 1049285 | 40.00 | ug/ml | 0.00 |
| 113) Chrysene-d12 | 17.53 | 240 | 1232975 | 40.00 | ug/ml | -0.01 |
| 128) Perylene-d12 | 20.07 | 264 | 1117446 | 40.00 | ug/ml | 0.00 |
| **System Monitoring Compounds** | | | | | | |
| 8) 2-Fluorophenol | 7.72 | 112 | 70485 | 9.4218 | ug/ml | 0.00 |
| Spiked Amount 100.000 | Range 21 - 100 | | Recovery = 9.42%# | | | |
| 12) Phenol-d5 | 8.82 | 99 | 84932 | 9.4609 | ug/ml | -0.01 |
| Spiked Amount 100.000 | Range 10 - 94 | | Recovery = 9.46%# | | | |
| 31) Nitrobenzene-d5 | 10.01 | 82 | 78638 | 9.6625 | ug/ml | -0.01 |
| Spiked Amount 50.000 | Range 35 - 114 | | Recovery = 19.32%# | | | |
| 59) 2-Fluorobiphenyl | 12.21 | 172 | 192578 | 10.0434 | ug/ml | 0.00 |
| Spiked Amount 50.000 | Range 43 - 116 | | Recovery = 20.08%# | | | |
| 86) 2,4,6-Tribromophenol | 13.90 | 330 | 28049 | 9.7309 | ug/ml | -0.01 |
| Spiked Amount 100.000 | Range 10 - 123 | | Recovery = 9.73%# | | | |
| 117) p-Terphenyl-d14 | 16.26 | 244 | 216140 | 10.7142 | ug/ml | 0.00 |
| Spiked Amount 50.000 | Range 33 - 141 | | Recovery = 21.42%# | | | |
| **Target Compounds** | | | | | | Qvalue |
| 2) 1,4-Dioxane | 5.13 | 88 | 37935m | 11.0055 | ug/ml | |
| 3) n-Nitrosodimethylamine | 5.79 | 74 | 42051 | 9.0077 | ug/ml | 95 |
| 4) Pyridine | 5.80 | 79 | 75075 | 9.0581 | ug/ml | 98 |
| 5) 2-Picoline | 6.94 | 93 | 82073 | 9.3030 | ug/ml | 99 |
| 6) n-Nitrosomethylethylamine | 7.12 | 88 | 33740 | 9.1138 | ug/ml | 95 |
| 7) Methyl Methanesulfonate | 7.52 | 80 | 43260 | 9.7109 | ug/ml | 99 |
| 9) n-Nitrosodiethylamine | 8.02 | 102 | 35349 | 9.3646 | ug/ml | 93 |
| 10) Ethyl Methanesulfonate | 8.37 | 79 | 54344 | 9.4118 | ug/ml | 98 |
| 11) Aniline | 8.92 | 93 | 117709 | 9.3597 | ug/ml | 99 |
| 13) Phenol | 8.84 | 94 | 88634 | 9.3993 | ug/ml | 95 |
| 14) bis(2-Chloroethyl)ether | 8.96 | 63 | 52067 | 9.3933 | ug/ml | 93 |
| 15) Pentachloroethane | 8.95 | 167 | 34402 | 10.2095 | ug/ml | 99 |
| 16) 2-Chlorophenol | 9.07 | 128 | 80324 | 9.5453 | ug/ml | 99 |
| 17) 1,3-Dichlorobenzene | 9.26 | 146 | 94562 | 9.8196 | ug/ml | 99 |
| 18) 1,4-Dichlorobenzene | 9.32 | 146 | 99279 | 9.8957 | ug/ml | 98 |
| 19) Benzyl Alcohol | 9.45 | 108 | 49859 | 9.1867 | ug/ml | 94 |
| 20) 1,2-Dichlorobenzene | 9.56 | 146 | 90179 | 9.7814 | ug/ml | 99 |
| 21) 2-Methylphenol | 9.58 | 107 | 61685 | 9.1821 | ug/ml | 98 |
| 22) bis(2-Chloroisopropyl)ethe | 9.64 | 45 | 107264 | 9.1105 | ug/ml | 95 |
| 23) 3-,4-Methylphenol | 9.75 | 107 | 79033 | 9.2564 | ug/ml | 99 |
| 24) n-Nitrosopyrrolidine | 9.78 | 100 | 31909 | 9.4072 | ug/ml# | 63 |
| 25) n-Nitrosodipropylamine | 9.80 | 70 | 50826 | 10.2207 | ug/ml | 89 |
| 26) Acetophenone | 9.80 | 105 | 103435 | 9.8406 | ug/ml | 96 |
| 27) n-Nitrosomorpholine | 9.80 | 56 | 46074 | 10.4923 | ug/ml# | 89 |
| 28) o-Toluidine | 9.86 | 106 | 124966 | 9.4194 | ug/ml | 100 |
| 29) Hexachloroethane | 9.95 | 117 | 35185 | 9.5479 | ug/ml | 99 |
| 32) Nitrobenzene | 10.03 | 77 | 78143 | 9.7480 | ug/ml | 97 |
| 33) n-Nitrosopiperidine | 10.21 | 114 | 37588 | 9.5514 | ug/ml | 87 |
| 34) Isophorone | 10.30 | 82 | 137382 | 9.6458 | ug/ml | 98 |
| 35) 2-Nitrophenol | 10.43 | 139 | 45007 | 9.9642 | ug/ml | 93 |
| 36) 2,4-Dimethylphenol | 10.42 | 122 | 73449 | 10.0689 | ug/ml | 98 |
| 37) 0,0,0-Triethyl Phosphoroth | 10.55 | 198 | 45054 | 10.6788 | ug/ml | 94 |
| 38) bis(2-Chloroethoxy)methane | 10.54 | 93 | 109839 | 10.1740 | ug/ml | 97 |

(#) = qualifier out of range (m) = manual integration
5M66918.D MEGAMIX.M Mon May 14 14:45:14 2012 Page 1

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\051112\5M66918.D Vial: 4
Acq On : 11 May 2012 10:12 am Operator: CAA
Sample : WG397707-04 10PPM Megamix STD Inst : HPMS5
Misc : 1,1 STD50886 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 11 13:23:40 2012 Quant Results File: MEGAMIX.RES

Quant Method : C:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
Title : OVD MSS01 8270/625/Initial cal. 05/11/12
Last Update : Fri May 11 13:23:35 2012
Response via : Initial Calibration
DataAcq Meth : BNA

| Compound | R.T. | QIon | Response | Conc Unit | Qvalue |
|---|---|---|---|---|---|
| 39) Benzoic Acid | 10.50 | 105 | 19968m | 3.5186 ug/ml | |
| 40) 2,4-Dichlorophenol | 10.71 | 162 | 70896 | 9.9731 ug/ml | 99 |
| 41) a,a-Dimethylphenethylamine | 10.69 | 58 | 203559 | 9.1030 ug/ml# | 91 |
| 42) 1,2,4-Trichlorobenzene | 10.84 | 180 | 82296 | 10.1958 ug/ml | 99 |
| 43) Naphthalene | 10.93 | 128 | 239327 | 10.1410 ug/ml | 99 |
| 44) 4-Chloroaniline | 10.98 | 127 | 99939 | 9.7534 ug/ml | 98 |
| 45) 2,6-Dichlorophenol | 11.00 | 162 | 72361 | 9.9243 ug/ml | 100 |
| 46) Hexachloropropene | 11.08 | 213 | 53994 | 10.7581 ug/ml | 99 |
| 47) Hexachlorobutadiene | 11.13 | 225 | 50123 | 10.6733 ug/ml | 99 |
| 48) n-Nitrosodi-n-Butylamine | 11.38 | 84 | 48069 | 8.3002 ug/ml# | 83 |
| 49) p-Phenylenediamine | 11.40 | 108 | 45590 | 10.1443 ug/ml | 97 |
| 50) 4-Chloro-3-Methylphenol | 11.53 | 107 | 67088 | 9.9828 ug/ml | 97 |
| 51) Safrole | 11.64 | 162 | 69040 | 10.2356 ug/ml | 96 |
| 52) 2-Methylnaphthalene | 11.77 | 142 | 166409 | 10.3336 ug/ml | 99 |
| 53) 1-Methylnaphthalene | 11.91 | 142 | 156317 | 10.2660 ug/ml | 99 |
| 55) 1,2,4,5-Tetrachlorobenzene | 12.02 | 216 | 84470 | 10.3050 ug/ml | 99 |
| 56) Hexachlorocyclopentadiene | 12.04 | 237 | 49176 | 10.8311 ug/ml | 99 |
| 57) 2,4,6-Trichlorophenol | 12.12 | 196 | 55307 | 9.8138 ug/ml | 100 |
| 58) 2,4,5-Trichlorophenol | 12.17 | 196 | 55500 | 9.4633 ug/ml | 98 |
| 60) Isosafrole | 12.25 | 162 | 70308 | 9.6364 ug/ml | 96 |
| 61) 2-Chloronaphthalene | 12.36 | 162 | 163371 | 9.8817 ug/ml | 99 |
| 62) 1-Chloronaphthalene | 12.40 | 162 | 157931 | 10.0094 ug/ml | 99 |
| 63) 2-Nitroaniline | 12.48 | 65 | 42408 | 9.4261 ug/ml | 91 |
| 64) 1,4-Naphthoquinone | 12.55 | 158 | 59434 | 12.6817 ug/ml | 98 |
| 65) Dimethylphthalate | 12.68 | 163 | 185982 | 10.1428 ug/ml | 99 |
| 66) 1,3-Dinitrobenzene | 12.72 | 168 | 32881 | 9.6087 ug/ml | 94 |
| 67) 2,6-Dinitrotoluene | 12.78 | 165 | 43919 | 9.7932 ug/ml | 95 |
| 68) Acenaphthylene | 12.86 | 152 | 251954 | 9.9829 ug/ml | 99 |
| 69) 3-Nitroaniline | 12.94 | 138 | 43174 | 9.0765 ug/ml | 96 |
| 70) 2,4-Dinitrophenol | 13.06 | 184 | 14051 | 6.2063 ug/ml# | 1 |
| 71) Acenaphthene | 13.06 | 154 | 164661 | 10.3099 ug/ml | 99 |
| 72) 4-Nitrophenol | 13.07 | 65 | 30082 | 8.6698 ug/ml | 94 |
| 73) 2,4-Dinitrotoluene | 13.22 | 165 | 57337 | 10.1407 ug/ml | 87 |
| 74) Pentachlorobenzene | 13.26 | 250 | 76736 | 10.0855 ug/ml | 98 |
| 75) Dibenzofuran | 13.23 | 168 | 232680 | 10.5786 ug/ml | 97 |
| 76) 2,3,4,6-Tetrachlorophenol | 13.40 | 232 | 50143 | 10.1716 ug/ml | 97 |
| 77) 1-Naphthylamine | 13.32 | 143 | 147748 | 9.3941 ug/ml | 96 |
| 78) 2-Naphthylamine | 13.39 | 143 | 107732 | 8.3148 ug/ml | 97 |
| 79) Diethylphthalate | 13.45 | 149 | 183234 | 10.2070 ug/ml | 98 |
| 80) Thionazin | 13.56 | 107 | 27247 | 10.2476 ug/ml | 96 |
| 81) Fluorene | 13.62 | 166 | 199581 | 10.2807 ug/ml | 99 |
| 82) 4-Chlorophenyl Phenyl Ethe | 13.57 | 204 | 99389 | 10.8431 ug/ml | 96 |
| 83) 4-Nitroaniline | 13.63 | 138 | 46807 | 9.7532 ug/ml | 91 |
| 84) 5-Nitro-o-Toluidine | 13.62 | 152 | 55875 | 9.5979 ug/ml | 92 |
| 85) 1,2-Diphenylhydrazine | 13.74 | 77 | 165157 | 9.8862 ug/ml | 95 |
| 88) 4,6-Dinitro-2-Methylphenol | 13.67 | 198 | 25846 | 7.7515 ug/ml# | 66 |
| 89) n-Nitrosodiphenylamine | 13.70 | 169 | 168297 | 10.0075 ug/ml | 99 |
| 90) Sulfotepp | 13.92 | 322 | 37021 | 10.1321 ug/ml# | 88 |
| 91) Sym-Trinitrobenzene | 13.98 | 75 | 39069 | 9.3552 ug/ml | 97 |
| 92) Diallate | 14.03 | 86 | 61516m | 9.9111 ug/ml | |
| 93) Phenacetin | 14.02 | 108 | 86065 | 10.4930 ug/ml | 95 |
| 94) Phorate | 14.05 | 75 | 98985 | 10.4815 ug/ml# | 94 |
| 95) 4-Bromophenyl Phenyl Ether | 14.11 | 248 | 58826 | 9.8907 ug/ml | 95 |
| 96) Hexachlorobenzene | 14.31 | 284 | 67158 | 10.1536 ug/ml | 97 |

(#) = qualifier out of range (m) = manual integration
5M66918.D MEGAMIX.M Mon May 14 14:45:15 2012 Page 2

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\051112\5M66918.D Vial: 4
Acq On : 11 May 2012 10:12 am Operator: CAA
Sample : WG397707-04 10PPM Megamix STD Inst : HPMS5
Misc : 1,1 STD50886 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 11 13:23:40 2012 Quant Results File: MEGAMIX.RES

Quant Method : C:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
Title : OVD MSS01 8270/625/Initial cal. 05/11/12
Last Update : Fri May 11 13:23:35 2012
Response via : Initial Calibration
DataAcq Meth : BNA

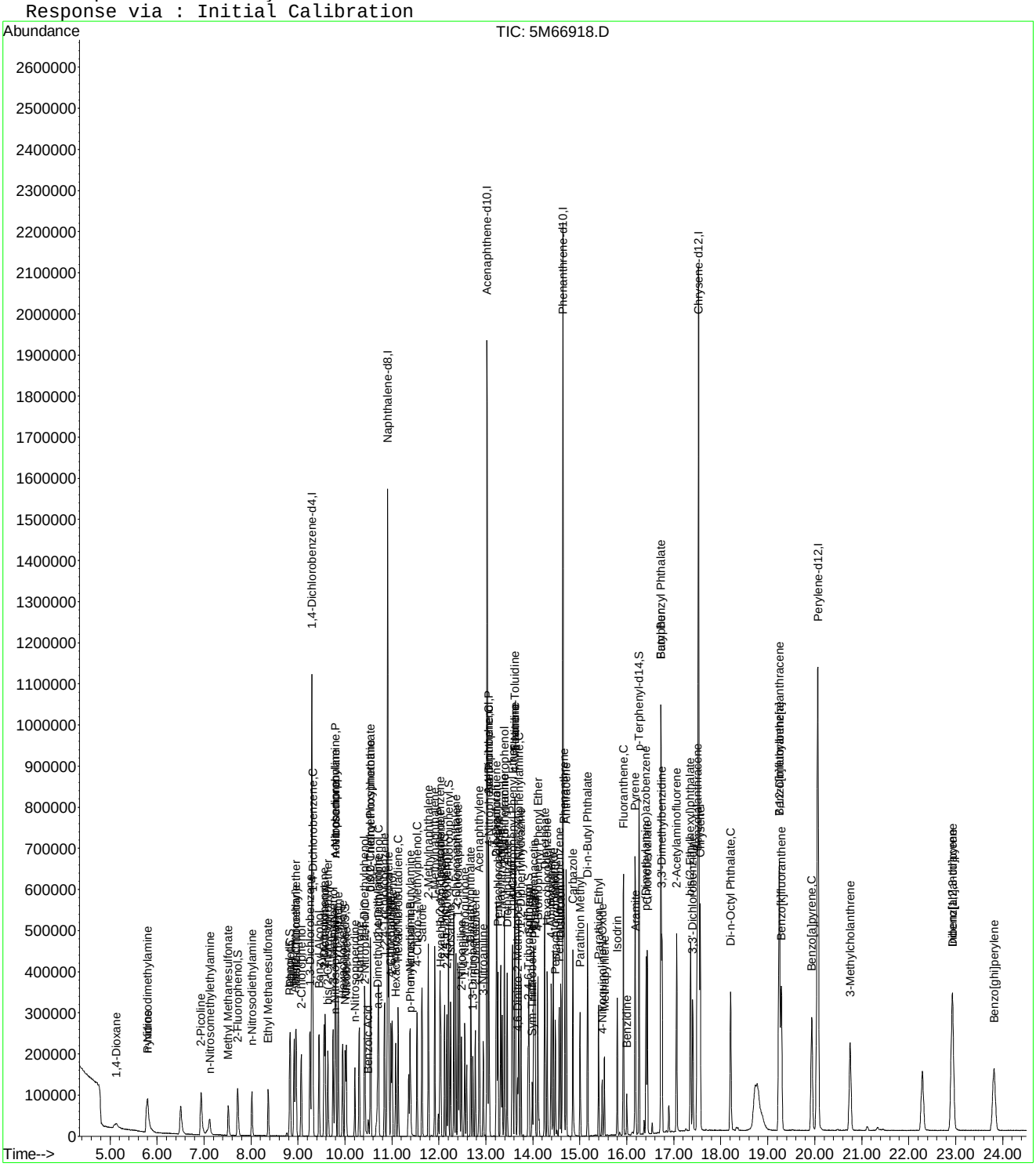
| | Compound | R.T. | QIon | Response | Conc | Unit | Qvalue |
|---|---|---|---|---|---|---|---|
| 97) | Dimethoate | 14.25 | 87 | 60399 | 11.9112 | ug/ml | 99 |
| 98) | 4-Aminobiphenyl | 14.39 | 169 | 170867 | 9.5441 | ug/ml | 99 |
| 99) | Pentachlorophenol | 14.48 | 266 | 38725 | 8.9197 | ug/ml | 99 |
| 100) | Pronamide | 14.43 | 173 | 86814 | 10.0533 | ug/ml | 98 |
| 101) | Pentachloronitrobenzene | 14.56 | 237 | 26181 | 10.7267 | ug/ml | 97 |
| 102) | Disulfoton | 14.59 | 88 | 81213 | 9.3248 | ug/ml | 99 |
| 103) | Phenanthrene | 14.66 | 178 | 286078 | 10.3636 | ug/ml | 98 |
| 104) | Anthracene | 14.71 | 178 | 290609 | 10.3421 | ug/ml | 98 |
| 105) | Carbazole | 14.86 | 167 | 256975 | 9.9923 | ug/ml | 98 |
| 106) | Parathion Methyl | 15.00 | 109 | 56480 | 11.6523 | ug/ml | 97 |
| 107) | Di-n-Butyl Phthalate | 15.17 | 149 | 310683 | 10.4398 | ug/ml | 99 |
| 108) | Parathion Ethyl | 15.40 | 97 | 33212 | 10.0422 | ug/ml | 95 |
| 109) | 4-Nitroquinoline 1-Oxide | 15.47 | 190 | 16713 | 9.9009 | ug/ml | 94 |
| 110) | Methapyrilene | 15.52 | 58 | 66357 | 10.2528 | ug/ml | 99 |
| 111) | Isodrin | 15.80 | 193 | 31858 | 10.1139 | ug/ml | 95 |
| 112) | Fluoranthene | 15.93 | 202 | 311490 | 10.4791 | ug/ml | 98 |
| 114) | Benzidine | 16.00 | 184 | 53304 | 9.1032 | ug/ml | 100 |
| 115) | Pyrene | 16.17 | 202 | 321081 | 10.4307 | ug/ml | 98 |
| 116) | Aramite | 16.19 | 185 | 17409 | 10.4210 | ug/ml | 95 |
| 118) | p-(Dimethylamino)azobenzen | 16.41 | 225 | 70738 | 9.8200 | ug/ml# | 90 |
| 119) | Chlorobenzilate | 16.44 | 251 | 97719 | 9.9302 | ug/ml | 91 |
| 120) | Famphur | 16.72 | 218 | 50043 | 555.9323 | ug/ml# | 1 |
| 121) | Butyl Benzyl Phthalate | 16.73 | 149 | 142638 | 11.1701 | ug/ml | 95 |
| 122) | 3,3'-Dimethylbenzidine | 16.75 | 212 | 203690 | 10.2869 | ug/ml | 100 |
| 123) | 2-Acetylaminofluorene | 17.06 | 181 | 126004 | 9.6575 | ug/ml | 98 |
| 124) | bis(2-Ethylhexyl)phthalate | 17.35 | 149 | 195173 | 9.9824 | ug/ml | 98 |
| 125) | 3,3'-Dichlorobenzidine | 17.40 | 252 | 104143 | 9.7737 | ug/ml | 98 |
| 126) | Benzo[a]anthracene | 17.50 | 228 | 315998 | 10.0004 | ug/ml | 98 |
| 127) | Chrysene | 17.56 | 228 | 299127 | 10.0843 | ug/ml | 98 |
| 129) | Di-n-Octyl Phthalate | 18.21 | 149 | 315563 | 9.2666 | ug/ml | 96 |
| 130) | 7,12-Dimethylbenz[a]anthra | 19.24 | 256 | 148100 | 9.5994 | ug/ml | 100 |
| 131) | Benzo[b]fluoranthene | 19.25 | 252 | 332550m | 9.0330 | ug/ml | |
| 132) | Benzo[k]fluoranthene | 19.29 | 252 | 303883 | 10.4897 | ug/ml | 98 |
| 133) | Benzo[a]pyrene | 19.93 | 252 | 287510 | 9.4645 | ug/ml | 99 |
| 134) | 3-Methylcholanthrene | 20.75 | 268 | 155135 | 9.7916 | ug/ml | 99 |
| 135) | Indeno[1,2,3-cd]pyrene | 22.93 | 276 | 333522 | 9.5178 | ug/ml | 98 |
| 136) | Dibenz[ah]anthracene | 22.93 | 278 | 281833 | 9.5879 | ug/ml | 99 |
| 137) | Benzo[ghi]perylene | 23.82 | 276 | 268419 | 9.6434 | ug/ml | 99 |

(#) = qualifier out of range (m) = manual integration
5M66918.D MEGAMIX.M Mon May 14 14:45:15 2012 Page 3

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\051112\5M66918.D Vial: 4
Acq On : 11 May 2012 10:12 am Operator: CAA
Sample : WG397707-04 10PPM Megamix STD Inst : HPMS5
Misc : 1,1 STD50886 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 11 13:24 2012 Quant Results File: MEGAMIX.RES

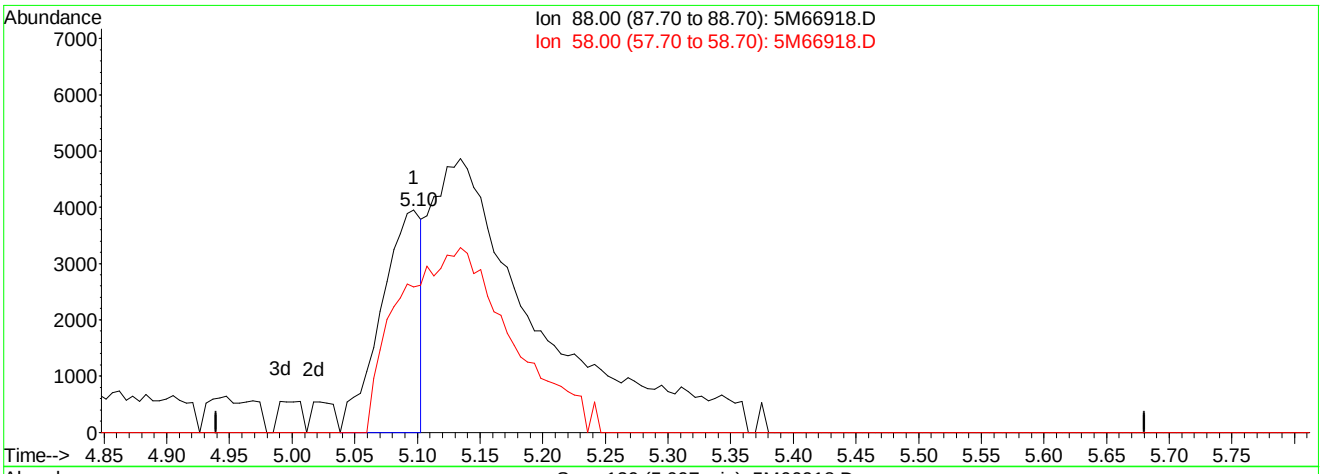
Method : C:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
Title : OVD MSS01 8270/625/Initial cal. 05/11/12
Last Update : Fri May 11 14:12:23 2012
Response via : Initial Calibration

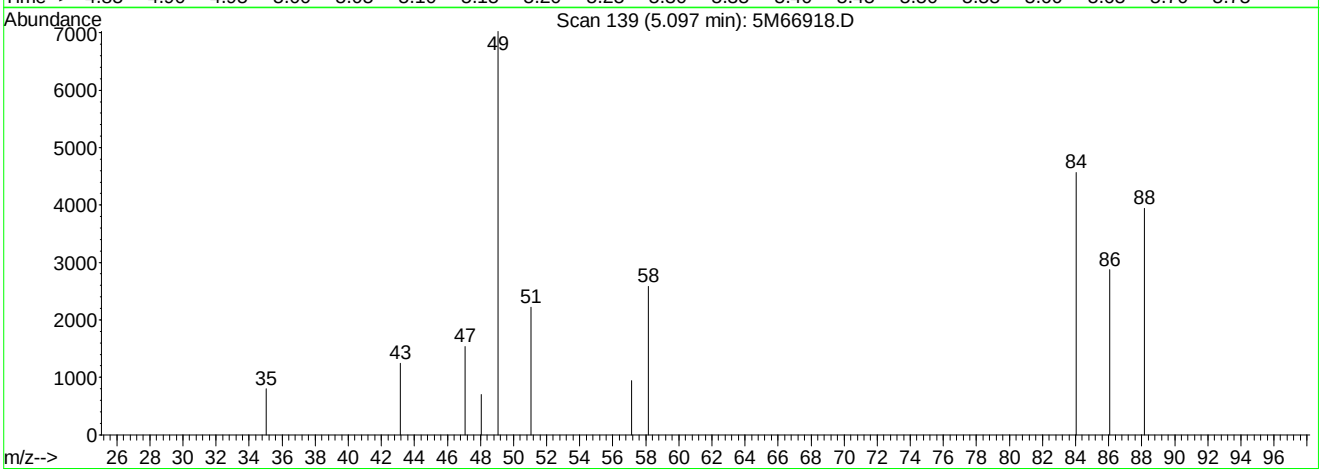


Quantitation Report (Qedit)

Data File : C:\MSDCHEM\1\DATA\051112\5M66918.D Vial: 4
Acq On : 11 May 2012 10:12 am Operator: CAA
Sample : WG397707-04 10PPM Megamix STD Inst : HPMS5
Misc : 1,1 STD50886 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 11 13:23 2012 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
Title : OVD MSS01 8270/625/Initial cal. 05/11/12
Last Update : Fri May 11 13:23:35 2012
Response via : Multiple Level Calibration




TIC: 5M66918.D

(2) 1,4-Dioxane

5.10min 2.57ug/ml

response 8869

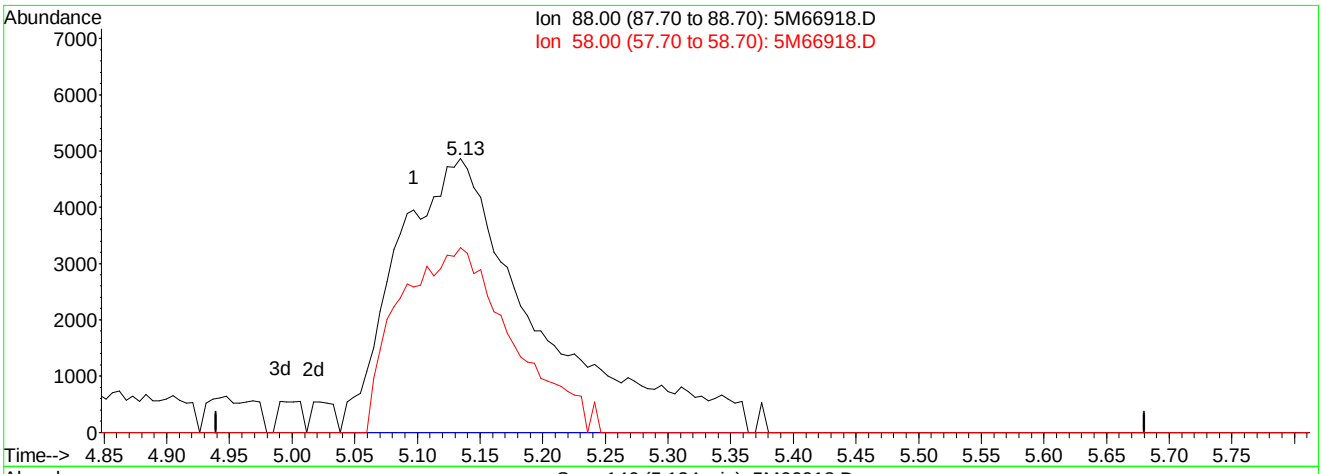
| Ion | Exp% | Act% |
|---|---|---|
| 88.00 | 100 | 100 |
| 58.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

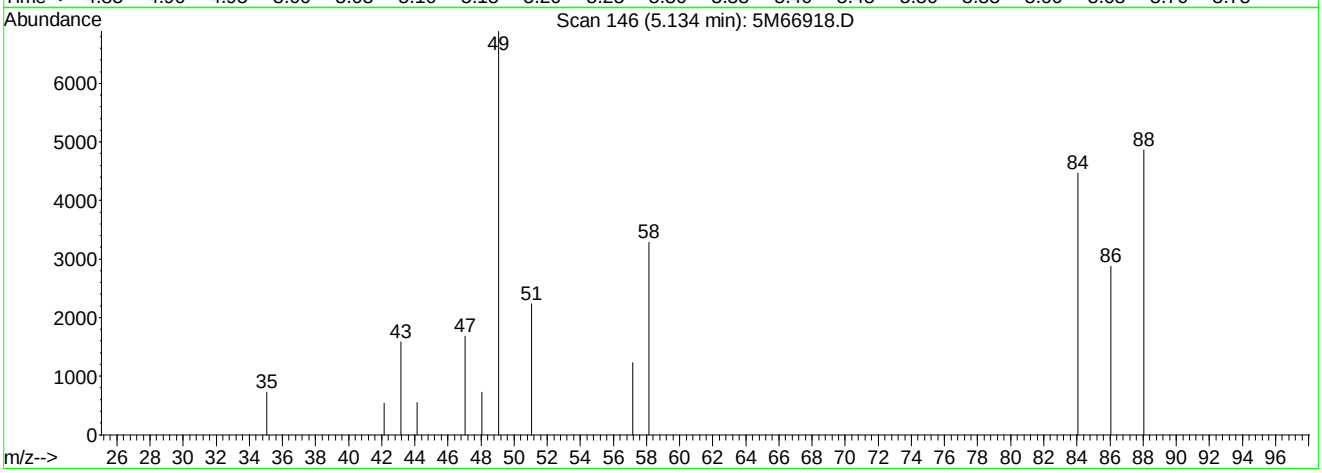
5M66918.D MEGAMIX.M Fri May 11 13:23:46 2012

Quantitation Report (Qedit)

Data File : C:\MSDCHEM\1\DATA\051112\5M66918.D Vial: 4
Acq On : 11 May 2012 10:12 am Operator: CAA
Sample : WG397707-04 10PPM Megamix STD Inst : HPMS5
Misc : 1,1 STD50886 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 11 13:23 2012 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
Title : OVD MSS01 8270/625/Initial cal. 05/11/12
Last Update : Fri May 11 13:23:35 2012
Response via : Multiple Level Calibration




TIC: 5M66918.D

(2) 1,4-Dioxane

5.13min 11.01ug/ml mint

response 37935

| Ion | Exp% | Act% |
|---|---|---|
| 88.00 | 100 | 100 |
| 58.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

5M66918.D MEGAMIX.M Fri May 11 ) 2012

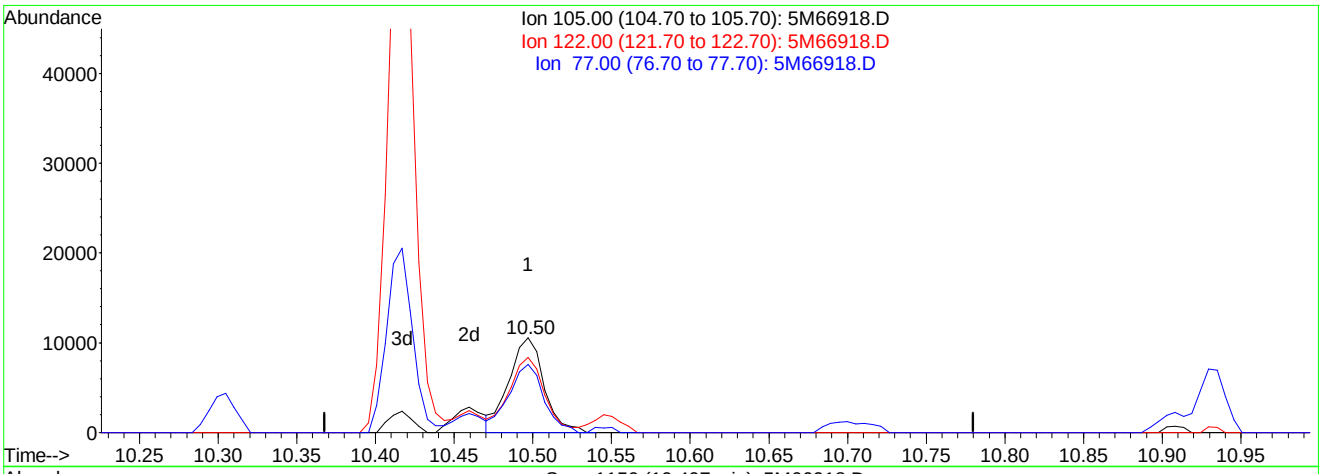
Analyst: 05/15/2012 07:34 Supervisor: 05/15/2012 09:20

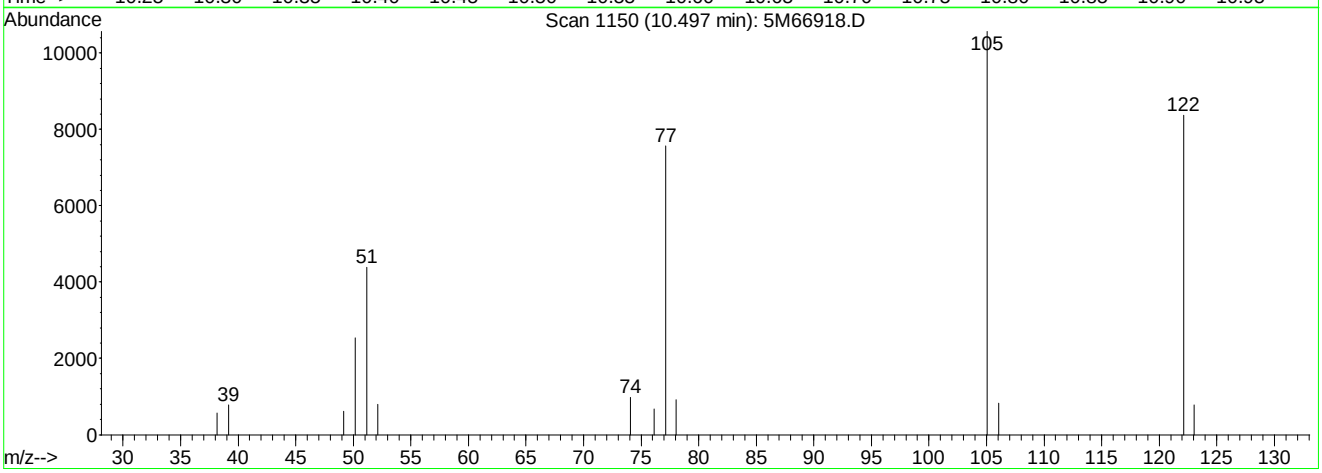
#2 - Data system splits the peak incorrectly or integrates a false peak as a rider peak

Quantitation Report (Qedit)

Data File : C:\MSDCHEM\1\DATA\051112\5M66918.D Vial: 4
Acq On : 11 May 2012 10:12 am Operator: CAA
Sample : WG397707-04 10PPM Megamix STD Inst : HPMS5
Misc : 1,1 STD50886 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 11 13:23 2012 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
Title : OVD MSS01 8270/625/Initial cal. 05/11/12
Last Update : Fri May 11 13:23:35 2012
Response via : Single Level Calibration




TIC: 5M66918.D

(39) Benzoic Acid

10.50min 2.86ug/ml

response 16210

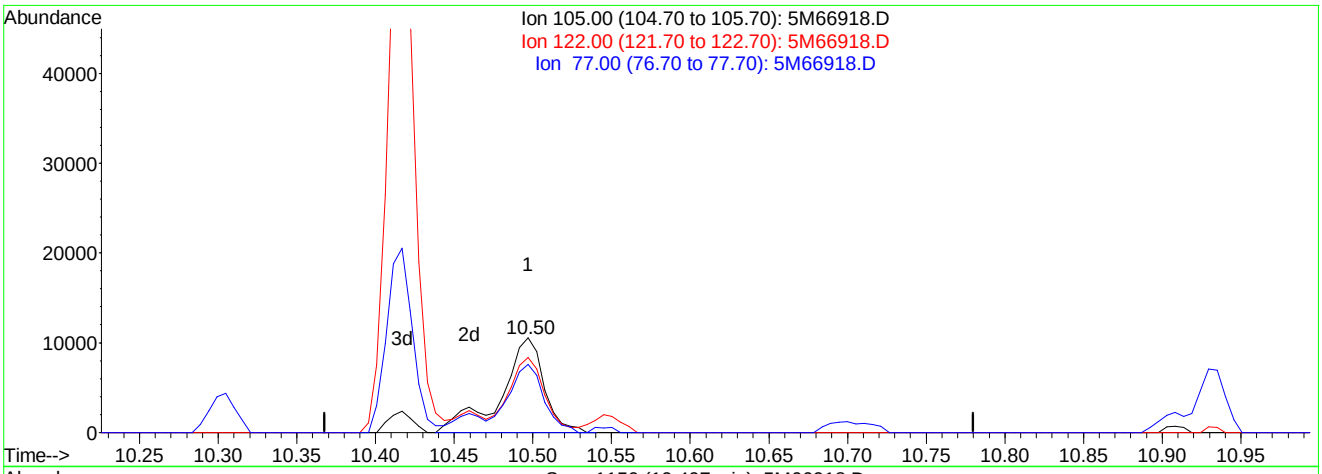
| Ion | Exp% | Act% |
|---|---|---|
| 105.00 | 100 | 100 |
| 122.00 | 57.00 | 81.35# |
| 77.00 | 51.30 | 72.02# |
| 0.00 | 0.00 | 0.00 |

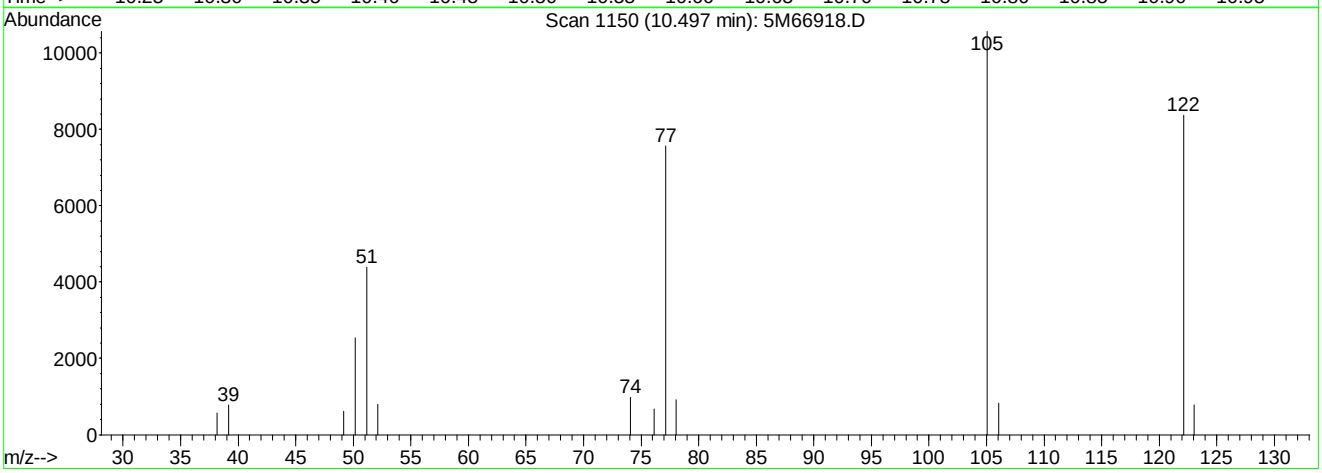
5M66918.D MEGAMIX.M Fri May 11 13:23:57 2012

Quantitation Report (Qedit)

Data File : C:\MSDCHEM\1\DATA\051112\5M66918.D Vial: 4
Acq On : 11 May 2012 10:12 am Operator: CAA
Sample : WG397707-04 10PPM Megamix STD Inst : HPMS5
Misc : 1,1 STD50886 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 11 13:23 2012 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
Title : OVD MSS01 8270/625/Initial cal. 05/11/12
Last Update : Fri May 11 13:23:35 2012
Response via : Single Level Calibration




TIC: 5M66918.D

(39) Benzoic Acid

10.50min 3.52ug/ml mint

response 19968

| Ion | Exp% | Act% |
|---|---|---|
| 105.00 | 100 | 100 |
| 122.00 | 57.00 | 66.04 |
| 77.00 | 51.30 | 58.46 |
| 0.00 | 0.00 | 0.00 |

5M66918.D MEGAMIX.M Fri May 11 2012

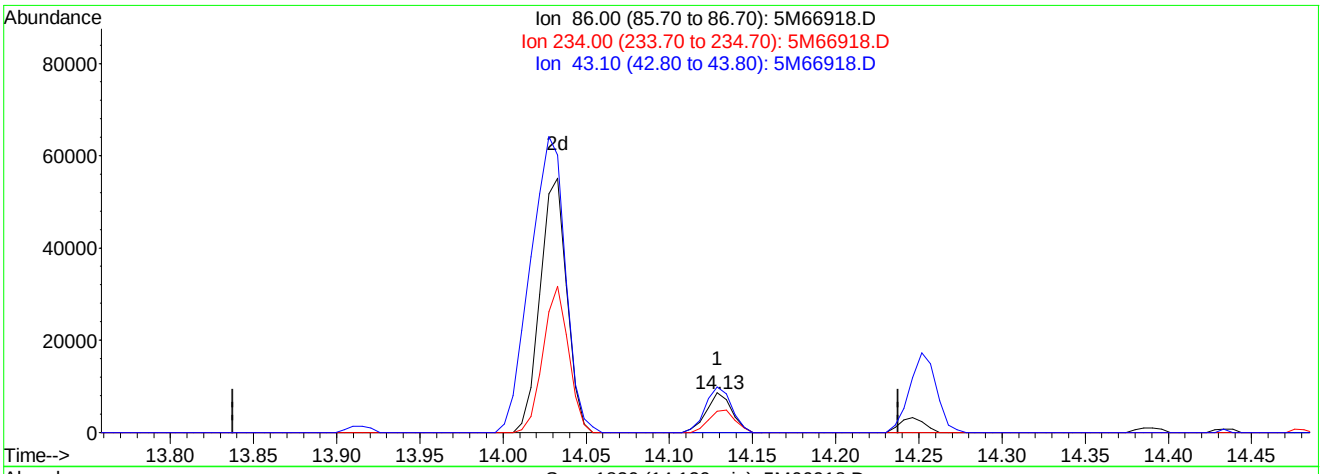
Analyst: 05/15/2012 07:34 Supervisor: 05/15/2012 09:20

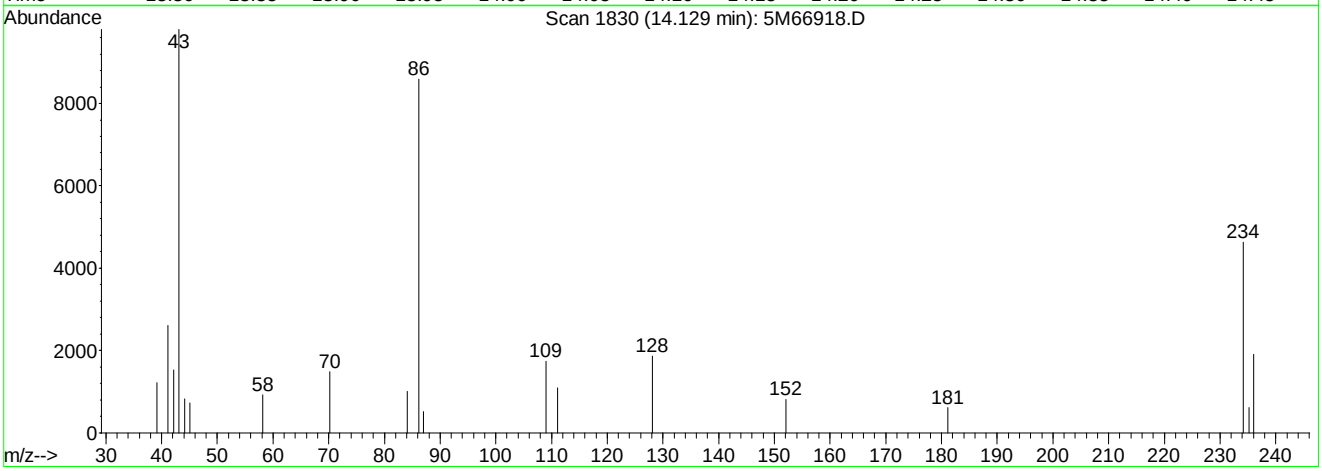
#2 - Data system splits the peak incorrectly or integrates a false peak as a rider peak

Quantitation Report (Qedit)

Data File : C:\MSDCHEM\1\DATA\051112\5M66918.D Vial: 4
Acq On : 11 May 2012 10:12 am Operator: CAA
Sample : WG397707-04 10PPM Megamix STD Inst : HPMS5
Misc : 1,1 STD50886 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 11 13:23 2012 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
Title : OVD MSS01 8270/625/Initial cal. 05/11/12
Last Update : Fri May 11 13:23:35 2012
Response via : Multiple Level Calibration




TIC: 5M66918.D

(92) Diallate

14.13min 1.46ug/ml

response 9053

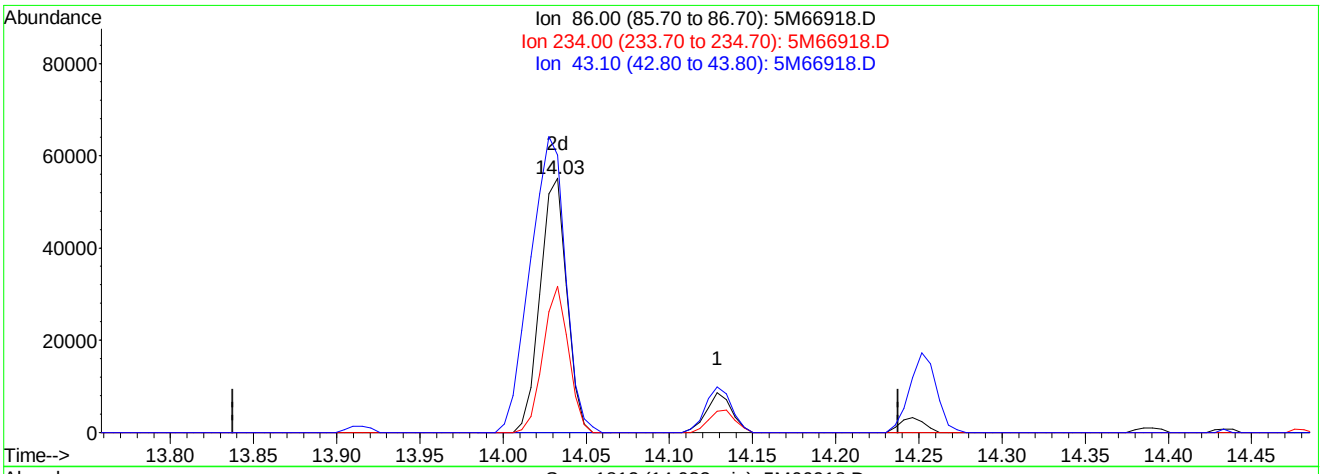
| Ion | Exp% | Act% |
|---|---|---|
| 86.00 | 100 | 100 |
| 234.00 | 61.80 | 58.16 |
| 43.10 | 113.30 | 119.14 |
| 0.00 | 0.00 | 0.00 |

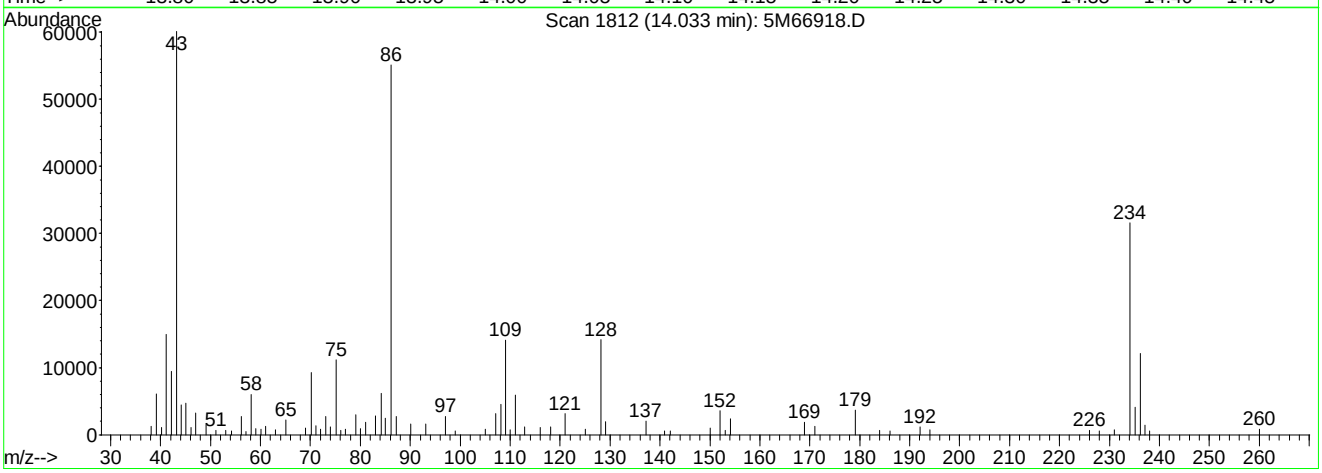
5M66918.D MEGAMIX.M Fri May 11 13:24:10 2012

Quantitation Report (Qedit)

Data File : C:\MSDCHEM\1\DATA\051112\5M66918.D Vial: 4
Acq On : 11 May 2012 10:12 am Operator: CAA
Sample : WG397707-04 10PPM Megamix STD Inst : HPMS5
Misc : 1,1 STD50886 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 11 13:24 2012 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
Title : OVD MSS01 8270/625/Initial cal. 05/11/12
Last Update : Fri May 11 13:23:35 2012
Response via : Multiple Level Calibration




TIC: 5M66918.D

(92) Diallate

14.03min 9.91ug/ml mint

response 61516

| Ion | Exp% | Act% |
|---|---|---|
| 86.00 | 100 | 100 |
| 234.00 | 61.80 | 8.56# |
| 43.10 | 113.30 | 17.53# |
| 0.00 | 0.00 | 0.00 |

5M66918.D MEGAMIX.M Fri May 11 13:23:35 2012

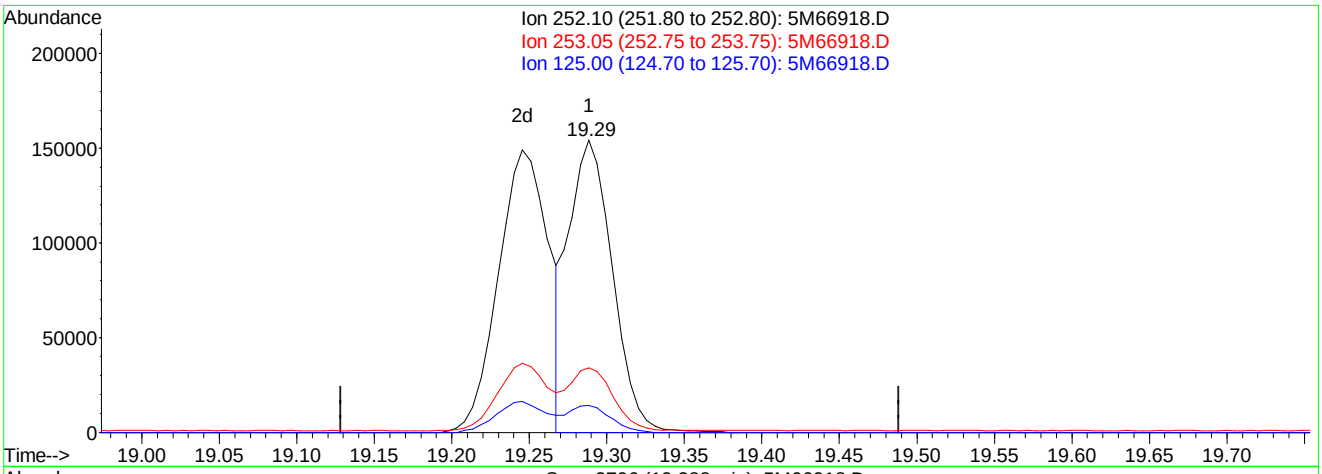
Analyst: 05/15/2012 07:35 Supervisor: 05/15/2012 09:20

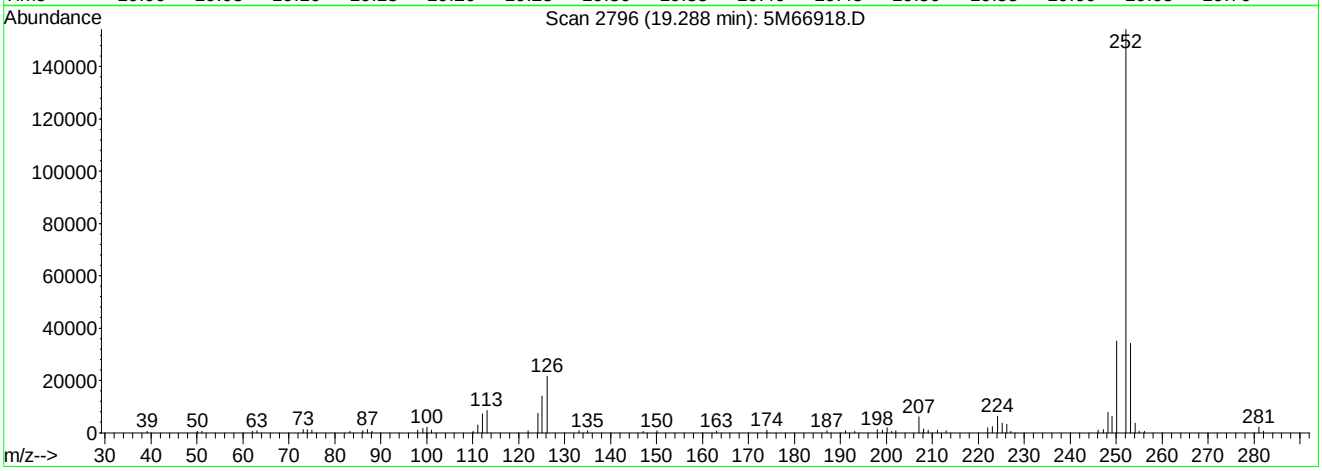
#1 - Data system fails to select correct peak

Quantitation Report (Qedit)

Data File : C:\MSDCHEM\1\DATA\051112\5M66918.D Vial: 4
Acq On : 11 May 2012 10:12 am Operator: CAA
Sample : WG397707-04 10PPM Megamix STD Inst : HPMS5
Misc : 1,1 STD50886 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 11 13:24 2012 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
Title : OVD MSS01 8270/625/Initial cal. 05/11/12
Last Update : Fri May 11 13:23:35 2012
Response via : Multiple Level Calibration




TIC: 5M66918.D

(131) Benzo[b]fluoranthene

19.29min 8.25ug/ml

response 303883

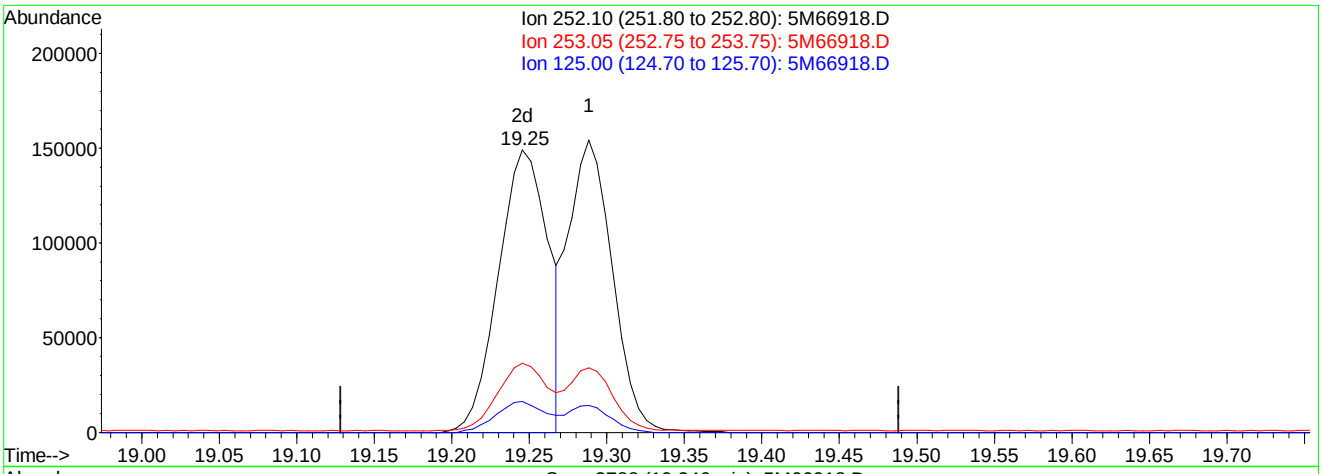
| Ion | Exp% | Act% |
|---|---|---|
| 252.10 | 100 | 100 |
| 253.05 | 22.00 | 21.83 |
| 125.00 | 10.90 | 8.07 |
| 0.00 | 0.00 | 0.00 |

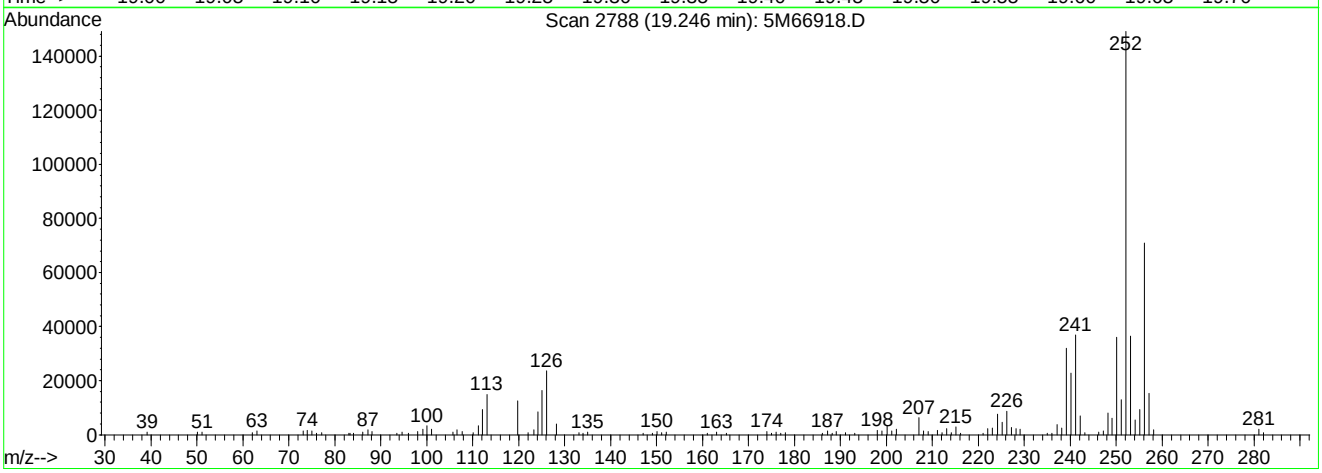
5M66918.D MEGAMIX.M Fri May 11 13:24:21 2012

Quantitation Report (Qedit)

Data File : C:\MSDCHEM\1\DATA\051112\5M66918.D Vial: 4
Acq On : 11 May 2012 10:12 am Operator: CAA
Sample : WG397707-04 10PPM Megamix STD Inst : HPMS5
Misc : 1,1 STD50886 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 11 13:24 2012 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
Title : OVD MSS01 8270/625/Initial cal. 05/11/12
Last Update : Fri May 11 13:23:35 2012
Response via : Multiple Level Calibration




TIC: 5M66918.D

(131) Benzo[b]fluoranthene

19.25min 9.03ug/ml mint

response 332550

| Ion | Exp% | Act% |
|---|---|---|
| 252.10 | 100 | 100 |
| 253.05 | 22.00 | 19.95 |
| 125.00 | 10.90 | 7.38 |
| 0.00 | 0.00 | 0.00 |

5M66918.D MEGAMIX.M Fri May 11 ; 2012

Analyst: 05/15/2012 07:35 Supervisor: 05/15/2012 09:20

#3 - Improperly integrated isomers and/or coeluting compounds

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\051112\5M66919.D Vial: 5
Acq On : 11 May 2012 10:47 am Operator: CAA
Sample : WG397707-05 15PPM Megamix STD Inst : HPMS5
Misc : 1,1 STD50886 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 11 13:24:34 2012 Quant Results File: MEGAMIX.RES

Quant Method : C:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
Title : OVD MSS01 8270/625/Initial cal. 05/11/12
Last Update : Fri May 11 13:24:30 2012
Response via : Initial Calibration
DataAcq Meth : BNA

| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 1) 1,4-Dichlorobenzene-d4 | 9.30 | 152 | 240274 | 40.00 | ug/ml | 0.00 |
| 30) Naphthalene-d8 | 10.91 | 136 | 898256 | 40.00 | ug/ml | 0.00 |
| 54) Acenaphthene-d10 | 13.02 | 164 | 538319 | 40.00 | ug/ml | 0.00 |
| 87) Phenanthrene-d10 | 14.64 | 188 | 1009698 | 40.00 | ug/ml | 0.00 |
| 113) Chrysene-d12 | 17.53 | 240 | 1182461 | 40.00 | ug/ml | -0.01 |
| 128) Perylene-d12 | 20.06 | 264 | 1055680 | 40.00 | ug/ml | -0.01 |
| **System Monitoring Compounds** | | | | | | |
| 8) 2-Fluorophenol | 7.72 | 112 | 100107 | 14.4716 | ug/ml | 0.00 |
| Spiked Amount 100.000 | Range 21 - 100 | | Recovery = 14.47%# | | | |
| 12) Phenol-d5 | 8.83 | 99 | 121274 | 14.6109 | ug/ml | 0.00 |
| Spiked Amount 100.000 | Range 10 - 94 | | Recovery = 14.61% | | | |
| 31) Nitrobenzene-d5 | 10.01 | 82 | 113095 | 14.8112 | ug/ml | -0.01 |
| Spiked Amount 50.000 | Range 35 - 114 | | Recovery = 29.62%# | | | |
| 59) 2-Fluorobiphenyl | 12.21 | 172 | 279593 | 15.3325 | ug/ml | 0.00 |
| Spiked Amount 50.000 | Range 43 - 116 | | Recovery = 30.66%# | | | |
| 86) 2,4,6-Tribromophenol | 13.90 | 330 | 42107 | 15.1966 | ug/ml | -0.01 |
| Spiked Amount 100.000 | Range 10 - 123 | | Recovery = 15.20% | | | |
| 117) p-Terphenyl-d14 | 16.26 | 244 | 315178 | 16.3738 | ug/ml | 0.00 |
| Spiked Amount 50.000 | Range 33 - 141 | | Recovery = 32.74%# | | | |
| **Target Compounds** | | | | | | Qvalue |
| 2) 1,4-Dioxane | 5.12 | 88 | 46991 | 14.6560 | ug/ml# | 100 |
| 3) n-Nitrosodimethylamine | 5.79 | 74 | 59405 | 13.8356 | ug/ml | 96 |
| 4) Pyridine | 5.79 | 79 | 106202 | 13.9587 | ug/ml | 98 |
| 5) 2-Picoline | 6.93 | 93 | 115187 | 14.1535 | ug/ml | 100 |
| 6) n-Nitrosomethylethylamine | 7.12 | 88 | 48506 | 14.2388 | ug/ml | 100 |
| 7) Methyl Methanesulfonate | 7.52 | 80 | 61430 | 14.8962 | ug/ml | 98 |
| 9) n-Nitrosodiethylamine | 8.02 | 102 | 50484 | 14.4574 | ug/ml | 94 |
| 10) Ethyl Methanesulfonate | 8.37 | 79 | 76297 | 14.3261 | ug/ml | 99 |
| 11) Aniline | 8.92 | 93 | 165017 | 14.1820 | ug/ml | 98 |
| 13) Phenol | 8.84 | 94 | 125351 | 14.4025 | ug/ml | 95 |
| 14) bis(2-Chloroethyl)ether | 8.96 | 63 | 73079 | 14.3834 | ug/ml | 93 |
| 15) Pentachloroethane | 8.95 | 167 | 47881 | 15.1646 | ug/ml | 99 |
| 16) 2-Chlorophenol | 9.07 | 128 | 114446 | 14.6392 | ug/ml | 99 |
| 17) 1,3-Dichlorobenzene | 9.26 | 146 | 134221 | 14.9679 | ug/ml | 99 |
| 18) 1,4-Dichlorobenzene | 9.32 | 146 | 140357 | 15.0076 | ug/ml | 98 |
| 19) Benzyl Alcohol | 9.45 | 108 | 71447 | 14.2364 | ug/ml | 96 |
| 20) 1,2-Dichlorobenzene | 9.56 | 146 | 127423 | 14.8319 | ug/ml | 99 |
| 21) 2-Methylphenol | 9.58 | 107 | 88483 | 14.2395 | ug/ml | 99 |
| 22) bis(2-Chloroisopropyl)ethe | 9.64 | 45 | 150550 | 14.1256 | ug/ml | 95 |
| 23) 3-,4-Methylphenol | 9.75 | 107 | 112339 | 14.2135 | ug/ml | 99 |
| 24) n-Nitrosopyrrolidine | 9.79 | 100 | 45463 | 14.4832 | ug/ml# | 62 |
| 25) n-Nitrosodipropylamine | 9.81 | 70 | 71191 | 15.5692 | ug/ml | 90 |
| 26) Acetophenone | 9.80 | 105 | 146822 | 15.0752 | ug/ml | 97 |
| 27) n-Nitrosomorpholine | 9.80 | 56 | 64258 | 15.9858 | ug/ml | 90 |
| 28) o-Toluidine | 9.86 | 106 | 177646 | 14.4546 | ug/ml | 100 |
| 29) Hexachloroethane | 9.95 | 117 | 50505 | 14.7282 | ug/ml | 97 |
| 32) Nitrobenzene | 10.03 | 77 | 110167 | 14.6602 | ug/ml | 98 |
| 33) n-Nitrosopiperidine | 10.21 | 114 | 54617 | 14.7827 | ug/ml | 91 |
| 34) Isophorone | 10.30 | 82 | 195574 | 14.6687 | ug/ml | 99 |
| 35) 2-Nitrophenol | 10.43 | 139 | 64900 | 15.1679 | ug/ml | 94 |
| 36) 2,4-Dimethylphenol | 10.42 | 122 | 103829 | 15.0916 | ug/ml | 98 |
| 37) 0,0,0-Triethyl Phosphoroth | 10.55 | 198 | 65123 | 16.2077 | ug/ml | 95 |
| 38) bis(2-Chloroethoxy)methane | 10.55 | 93 | 158316 | 15.6543 | ug/ml | 98 |

(#) = qualifier out of range (m) = manual integration
5M66919.D MEGAMIX.M Mon May 14 14:45:16 2012 Page 1

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\051112\5M66919.D Vial: 5
Acq On : 11 May 2012 10:47 am Operator: CAA
Sample : WG397707-05 15PPM Megamix STD Inst : HPMS5
Misc : 1,1 STD50886 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 11 13:24:34 2012 Quant Results File: MEGAMIX.RES

Quant Method : C:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
Title : OVD MSS01 8270/625/Initial cal. 05/11/12
Last Update : Fri May 11 13:24:30 2012
Response via : Initial Calibration
DataAcq Meth : BNA

| Compound | R.T. | QIon | Response | Conc Unit | Qvalue |
|---|---|---|---|---|---|
| 39) Benzoic Acid | 10.51 | 105 | 36658m | 6.8203 ug/ml | |
| 40) 2,4-Dichlorophenol | 10.71 | 162 | 101619 | 15.0821 ug/ml | 99 |
| 41) a,a-Dimethylphenethylamine | 10.71 | 58 | 290292 | 13.9588 ug/ml# | 92 |
| 42) 1,2,4-Trichlorobenzene | 10.84 | 180 | 119322 | 15.6052 ug/ml | 100 |
| 43) Naphthalene | 10.93 | 128 | 341922 | 15.3707 ug/ml | 99 |
| 44) 4-Chloroaniline | 10.98 | 127 | 142596 | 14.7578 ug/ml | 98 |
| 45) 2,6-Dichlorophenol | 11.00 | 162 | 103758 | 15.0243 ug/ml | 99 |
| 46) Hexachloropropene | 11.08 | 213 | 77585 | 16.0474 ug/ml | 99 |
| 47) Hexachlorobutadiene | 11.13 | 225 | 70597 | 15.7562 ug/ml | 99 |
| 48) n-Nitrosodi-n-Butylamine | 11.39 | 84 | 88902 | 16.3253 ug/ml | 89 |
| 49) p-Phenylenediamine | 11.40 | 108 | 81139 | 18.5297 ug/ml | 98 |
| 50) 4-Chloro-3-Methylphenol | 11.53 | 107 | 95613 | 15.0778 ug/ml | 98 |
| 51) Safrole | 11.64 | 162 | 98432 | 15.3665 ug/ml | 97 |
| 52) 2-Methylnaphthalene | 11.77 | 142 | 238042 | 15.6260 ug/ml | 99 |
| 53) 1-Methylnaphthalene | 11.91 | 142 | 221490 | 15.3817 ug/ml | 98 |
| 55) 1,2,4,5-Tetrachlorobenzene | 12.02 | 216 | 121553 | 15.5217 ug/ml | 99 |
| 56) Hexachlorocyclopentadiene | 12.04 | 237 | 72964 | 16.4712 ug/ml | 99 |
| 57) 2,4,6-Trichlorophenol | 12.12 | 196 | 80302 | 14.9412 ug/ml | 99 |
| 58) 2,4,5-Trichlorophenol | 12.17 | 196 | 82234 | 14.7473 ug/ml | 100 |
| 60) Isosafrole | 12.25 | 162 | 102075 | 14.7360 ug/ml | 97 |
| 61) 2-Chloronaphthalene | 12.36 | 162 | 233252 | 14.8508 ug/ml | 99 |
| 62) 1-Chloronaphthalene | 12.40 | 162 | 224467 | 14.9607 ug/ml | 99 |
| 63) 2-Nitroaniline | 12.48 | 65 | 60301 | 14.2786 ug/ml | 94 |
| 64) 1,4-Naphthoquinone | 12.55 | 158 | 82313 | 18.6753 ug/ml | 98 |
| 65) Dimethylphthalate | 12.68 | 163 | 264272 | 15.1334 ug/ml | 99 |
| 66) 1,3-Dinitrobenzene | 12.72 | 168 | 47554 | 14.5617 ug/ml | 95 |
| 67) 2,6-Dinitrotoluene | 12.78 | 165 | 62905 | 14.7271 ug/ml | 94 |
| 68) Acenaphthylene | 12.86 | 152 | 363118 | 15.1599 ug/ml | 99 |
| 69) 3-Nitroaniline | 12.94 | 138 | 63528 | 14.0755 ug/ml | 98 |
| 70) 2,4-Dinitrophenol | 13.06 | 184 | 23312 | 10.7732 ug/ml | 35 |
| 71) Acenaphthene | 13.06 | 154 | 234587 | 15.4447 ug/ml | 100 |
| 72) 4-Nitrophenol | 13.07 | 65 | 44962 | 13.7201 ug/ml | 94 |
| 73) 2,4-Dinitrotoluene | 13.22 | 165 | 84736 | 15.7147 ug/ml | 90 |
| 74) Pentachlorobenzene | 13.26 | 250 | 111673 | 15.3416 ug/ml | 99 |
| 75) Dibenzofuran | 13.23 | 168 | 332852 | 15.8896 ug/ml | 98 |
| 76) 2,3,4,6-Tetrachlorophenol | 13.40 | 232 | 73855 | 15.6731 ug/ml | 97 |
| 77) 1-Naphthylamine | 13.32 | 143 | 220618 | 14.6808 ug/ml | 97 |
| 78) 2-Naphthylamine | 13.39 | 143 | 175426 | 13.9475 ug/ml | 98 |
| 79) Diethylphthalate | 13.46 | 149 | 261876 | 15.3247 ug/ml | 98 |
| 80) Thionazin | 13.56 | 107 | 39340 | 15.6785 ug/ml | 94 |
| 81) Fluorene | 13.62 | 166 | 288898 | 15.6334 ug/ml | 99 |
| 82) 4-Chlorophenyl Phenyl Ethe | 13.57 | 204 | 142396 | 16.2390 ug/ml | 96 |
| 83) 4-Nitroaniline | 13.63 | 138 | 67739 | 14.7790 ug/ml | 92 |
| 84) 5-Nitro-o-Toluidine | 13.63 | 152 | 82692 | 14.8733 ug/ml | 93 |
| 85) 1,2-Diphenylhydrazine | 13.75 | 77 | 235404 | 14.9668 ug/ml | 95 |
| 88) 4,6-Dinitro-2-Methylphenol | 13.67 | 198 | 41242 | 12.8539 ug/ml# | 63 |
| 89) n-Nitrosodiphenylamine | 13.70 | 169 | 245054 | 15.2442 ug/ml | 99 |
| 90) Sulfotepp | 13.92 | 322 | 53761 | 15.1813 ug/ml | 89 |
| 91) Sym-Trinitrobenzene | 13.99 | 75 | 58370 | 14.6075 ug/ml | 98 |
| 92) Diallate | 14.03 | 86 | 88561m | 15.1225 ug/ml | |
| 93) Phenacetin | 14.02 | 108 | 124562 | 15.9177 ug/ml | 96 |
| 94) Phorate | 14.05 | 75 | 142799 | 16.0531 ug/ml# | 93 |
| 95) 4-Bromophenyl Phenyl Ether | 14.11 | 248 | 85534 | 14.9628 ug/ml | 95 |
| 96) Hexachlorobenzene | 14.31 | 284 | 97267 | 15.2523 ug/ml | 97 |

(#) = qualifier out of range (m) = manual integration
5M66919.D MEGAMIX.M Mon May 14 14:45:16 2012 Page 2

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\051112\5M66919.D Vial: 5
Acq On : 11 May 2012 10:47 am Operator: CAA
Sample : WG397707-05 15PPM Megamix STD Inst : HPMS5
Misc : 1,1 STD50886 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 11 13:24:34 2012 Quant Results File: MEGAMIX.RES

Quant Method : C:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
Title : OVD MSS01 8270/625/Initial cal. 05/11/12
Last Update : Fri May 11 13:24:30 2012
Response via : Initial Calibration
DataAcq Meth : BNA

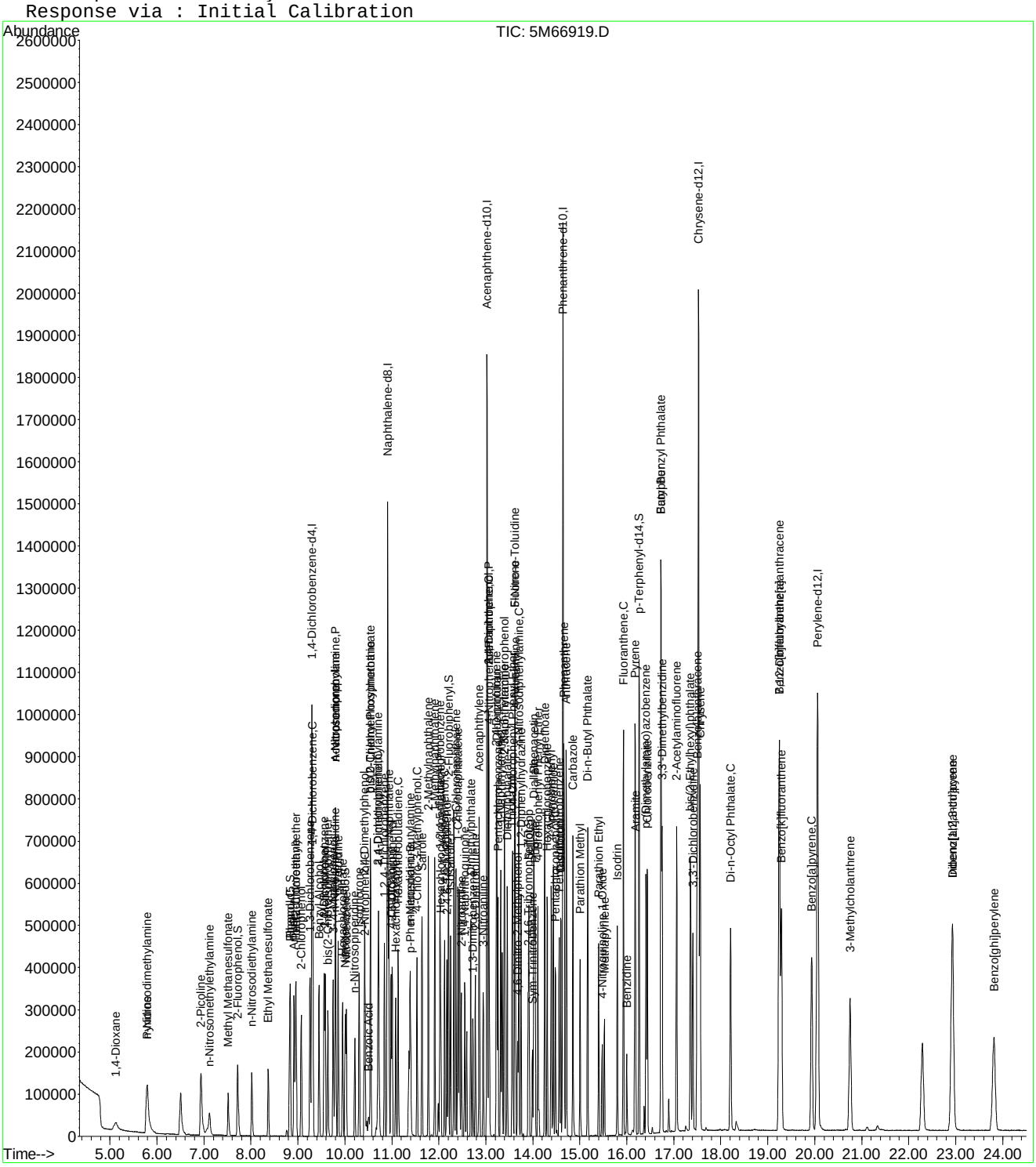
| | Compound | R.T. | QIon | Response | Conc | Unit | Qvalue |
|---|---|---|---|---|---|---|---|
| 97) | Dimethoate | 14.25 | 87 | 84499 | 17.6143 | ug/ml | 99 |
| 98) | 4-Aminobiphenyl | 14.39 | 169 | 262227 | 15.1799 | ug/ml | 99 |
| 99) | Pentachlorophenol | 14.48 | 266 | 58284 | 13.9881 | ug/ml | 100 |
| 100) | Pronamide | 14.43 | 173 | 127761 | 15.4388 | ug/ml | 99 |
| 101) | Pentachloronitrobenzene | 14.56 | 237 | 37555 | 15.8973 | ug/ml | 96 |
| 102) | Disulfoton | 14.59 | 88 | 119172 | 14.5053 | ug/ml | 100 |
| 103) | Phenanthrene | 14.66 | 178 | 411923 | 15.5762 | ug/ml | 98 |
| 104) | Anthracene | 14.71 | 178 | 417453 | 15.5148 | ug/ml | 99 |
| 105) | Carbazole | 14.86 | 167 | 374383 | 15.2171 | ug/ml | 98 |
| 106) | Parathion Methyl | 15.00 | 109 | 80139 | 17.2750 | ug/ml | 97 |
| 107) | Di-n-Butyl Phthalate | 15.17 | 149 | 448346 | 15.7650 | ug/ml | 99 |
| 108) | Parathion Ethyl | 15.40 | 97 | 49305 | 15.6008 | ug/ml | 94 |
| 109) | 4-Nitroquinoline 1-Oxide | 15.47 | 190 | 27232 | 16.2417 | ug/ml | 92 |
| 110) | Methapyrilene | 15.52 | 58 | 92163 | 15.6054 | ug/ml | 98 |
| 111) | Isodrin | 15.80 | 193 | 45825 | 15.1627 | ug/ml | 95 |
| 112) | Fluoranthene | 15.93 | 202 | 453943 | 15.9338 | ug/ml | 98 |
| 114) | Benzidine | 16.00 | 184 | 91803 | 15.6780 | ug/ml | 100 |
| 115) | Pyrene | 16.17 | 202 | 462558 | 15.8353 | ug/ml | 98 |
| 116) | Aramite | 16.19 | 185 | 25837 | 16.1877 | ug/ml | 95 |
| 118) | p-(Dimethylamino)azobenzen | 16.41 | 225 | 103884 | 15.1350 | ug/ml | 92 |
| 119) | Chlorobenzilate | 16.44 | 251 | 142464 | 15.0926 | ug/ml | 92 |
| 120) | Famphur | 16.72 | 218 | 45573 | 527.9024 | ug/ml# | 1 |
| 121) | Butyl Benzyl Phthalate | 16.73 | 149 | 203615 | 16.8162 | ug/ml | 95 |
| 122) | 3,3'-Dimethylbenzidine | 16.75 | 212 | 311129 | 16.2167 | ug/ml | 100 |
| 123) | 2-Acetylaminofluorene | 17.06 | 181 | 187542 | 15.0584 | ug/ml | 98 |
| 124) | bis(2-Ethylhexyl)phthalate | 17.35 | 149 | 280897 | 15.2110 | ug/ml | 98 |
| 125) | 3,3'-Dichlorobenzidine | 17.40 | 252 | 154683 | 15.1199 | ug/ml | 100 |
| 126) | Benzo[a]anthracene | 17.50 | 228 | 458642 | 15.2319 | ug/ml | 98 |
| 127) | Chrysene | 17.56 | 228 | 431508 | 15.2940 | ug/ml | 98 |
| 129) | Di-n-Octyl Phthalate | 18.21 | 149 | 456378 | 14.4676 | ug/ml | 97 |
| 130) | 7,12-Dimethylbenz[a]anthra | 19.25 | 256 | 212942 | 14.7021 | ug/ml | 100 |
| 131) | Benzo[b]fluoranthene | 19.25 | 252 | 469035m | 13.6373 | ug/ml | |
| 132) | Benzo[k]fluoranthene | 19.29 | 252 | 413948 | 15.0582 | ug/ml | 99 |
| 133) | Benzo[a]pyrene | 19.93 | 252 | 414748 | 14.5261 | ug/ml | 99 |
| 134) | 3-Methylcholanthrene | 20.75 | 268 | 224401 | 14.9665 | ug/ml | 100 |
| 135) | Indeno[1,2,3-cd]pyrene | 22.93 | 276 | 483474 | 14.5965 | ug/ml | 99 |
| 136) | Dibenz[ah]anthracene | 22.93 | 278 | 405214 | 14.5842 | ug/ml | 99 |
| 137) | Benzo[ghi]perylene | 23.82 | 276 | 388829 | 14.8027 | ug/ml | 98 |

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

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\051112\5M66919.D Vial: 5
Acq On : 11 May 2012 10:47 am Operator: CAA
Sample : WG397707-05 15PPM Megamix STD Inst : HPMS5
Misc : 1,1 STD50886 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 11 13:25 2012 Quant Results File: MEGAMIX.RES

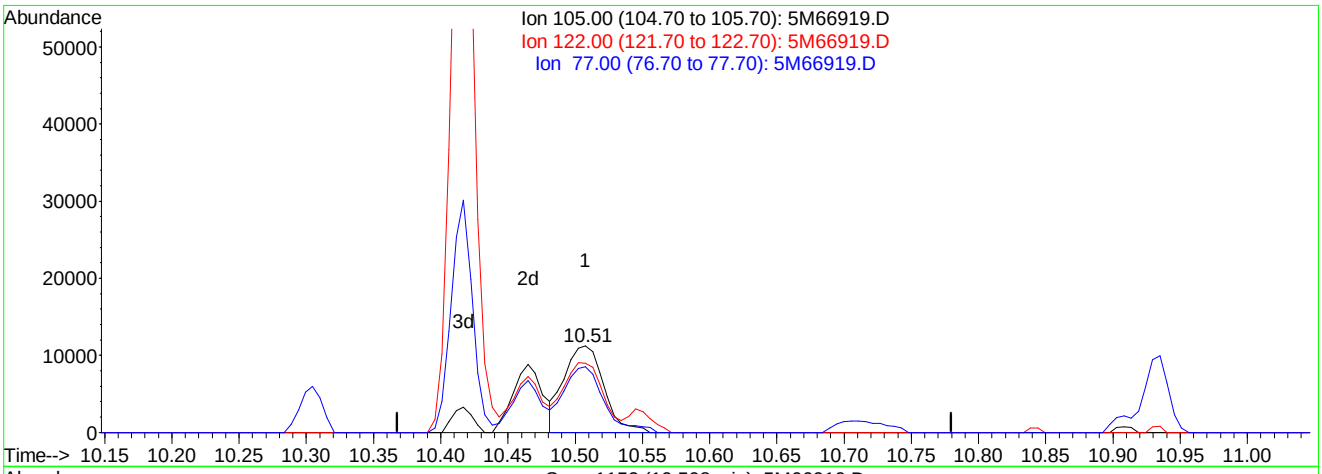
Method : C:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
Title : OVD MSS01 8270/625/Initial cal. 05/11/12
Last Update : Fri May 11 14:12:23 2012
Response via : Initial Calibration

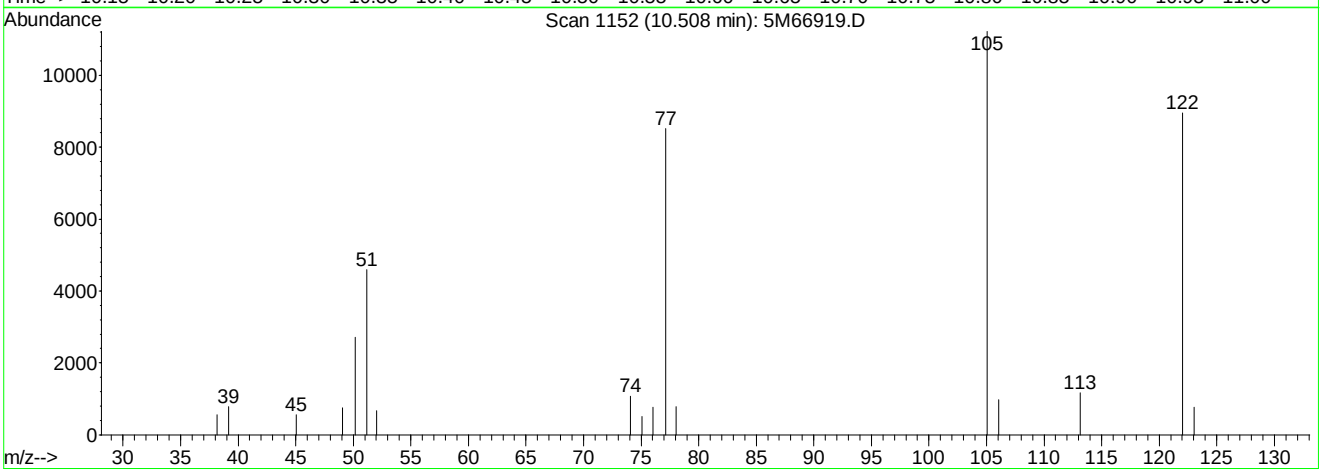


Quantitation Report (Qedit)

Data File : C:\MSDCHEM\1\DATA\051112\5M66919.D Vial: 5
Acq On : 11 May 2012 10:47 am Operator: CAA
Sample : WG397707-05 15PPM Megamix STD Inst : HPMS5
Misc : 1,1 STD50886 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 11 13:24 2012 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
Title : OVD MSS01 8270/625/Initial cal. 05/11/12
Last Update : Fri May 11 13:24:30 2012
Response via : Single Level Calibration




TIC: 5M66919.D

(39) Benzoic Acid

10.51min 4.29ug/ml

response 23044

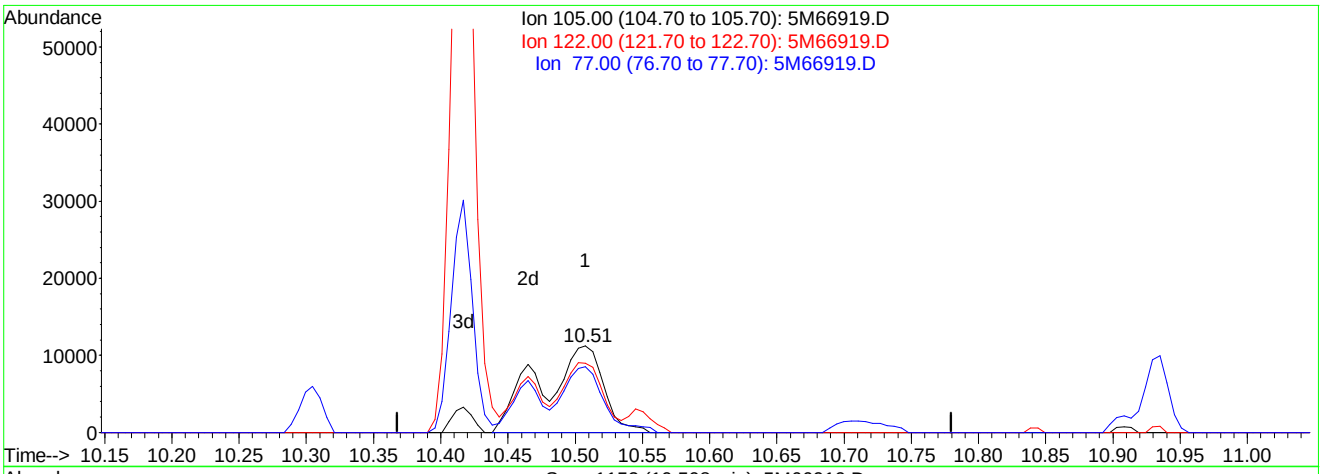
| Ion | Exp% | Act% |
|---|---|---|
| 105.00 | 100 | 100 |
| 122.00 | 57.00 | 80.28# |
| 77.00 | 51.30 | 76.16# |
| 0.00 | 0.00 | 0.00 |

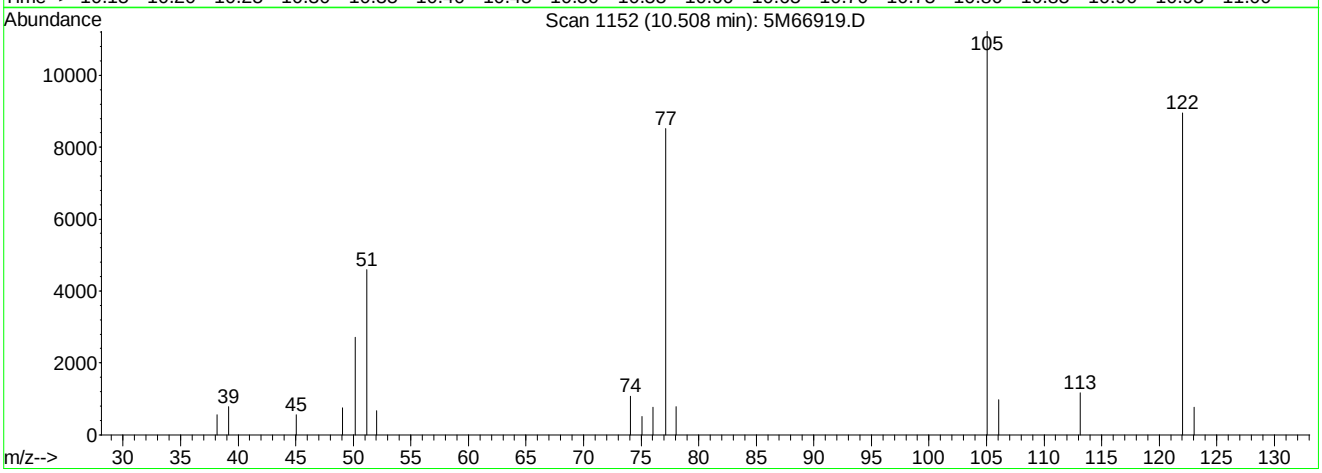
5M66919.D MEGAMIX.M Fri May 11 13:24:43 2012

Quantitation Report (Qedit)

Data File : C:\MSDCHEM\1\DATA\051112\5M66919.D Vial: 5
Acq On : 11 May 2012 10:47 am Operator: CAA
Sample : WG397707-05 15PPM Megamix STD Inst : HPMS5
Misc : 1,1 STD50886 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 11 13:24 2012 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
Title : OVD MSS01 8270/625/Initial cal. 05/11/12
Last Update : Fri May 11 13:24:30 2012
Response via : Single Level Calibration




TIC: 5M66919.D

(39) Benzoic Acid

10.51min 6.82ug/ml mint

response 36658

| Ion | Exp% | Act% |
|---|---|---|
| 105.00 | 100 | 100 |
| 122.00 | 57.00 | 50.47 |
| 77.00 | 51.30 | 47.88 |
| 0.00 | 0.00 | 0.00 |

5M66919.D MEGAMIX.M Fri May 11 ; 2012

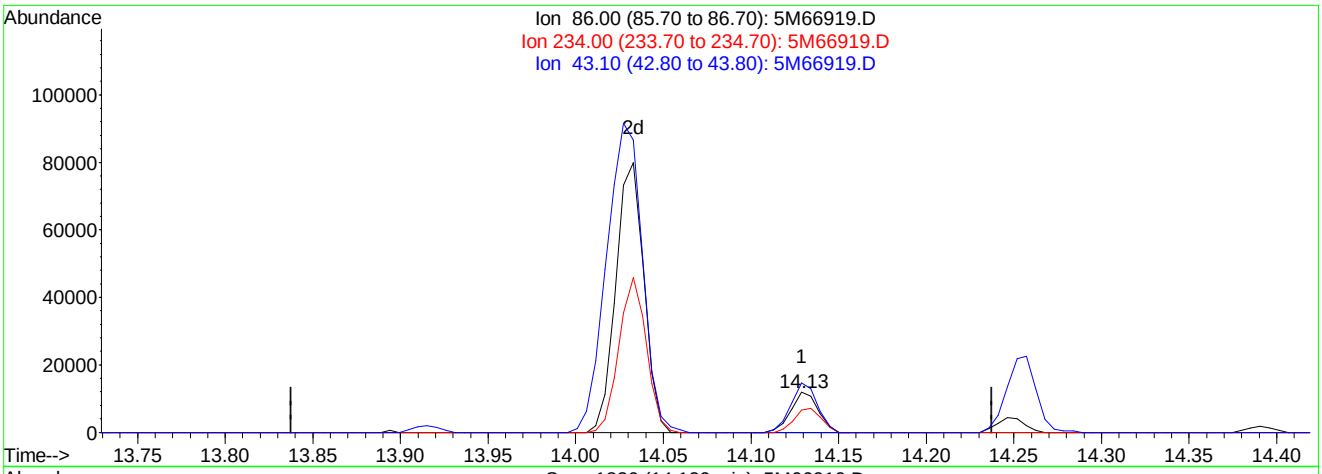
Analyst: 05/15/2012 07:35 Supervisor: 05/15/2012 09:20

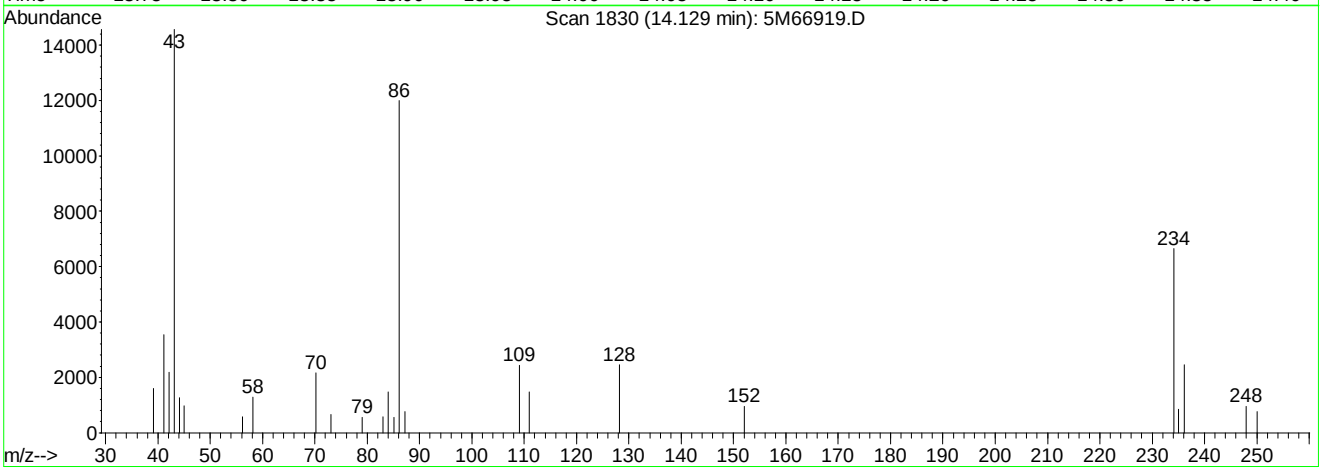
#2 - Data system splits the peak incorrectly or integrates a false peak as a rider peak

Quantitation Report (Qedit)

Data File : C:\MSDCHEM\1\DATA\051112\5M66919.D Vial: 5
Acq On : 11 May 2012 10:47 am Operator: CAA
Sample : WG397707-05 15PPM Megamix STD Inst : HPMS5
Misc : 1,1 STD50886 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 11 13:24 2012 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
Title : OVD MSS01 8270/625/Initial cal. 05/11/12
Last Update : Fri May 11 13:24:30 2012
Response via : Multiple Level Calibration




TIC: 5M66919.D

(92) Diallate

14.13min 2.22ug/ml

response 12991

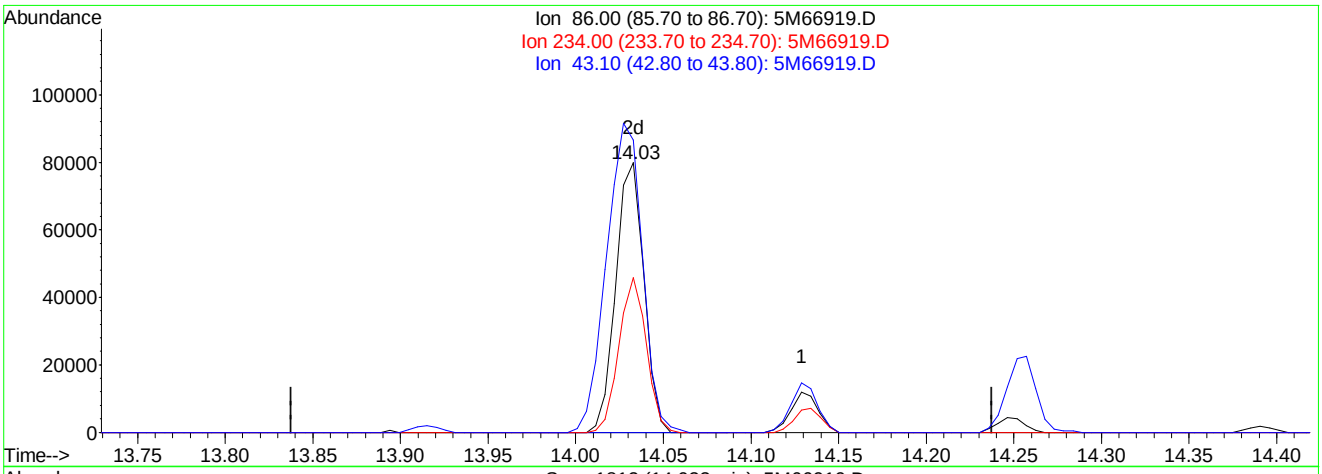
| Ion | Exp% | Act% |
|---|---|---|
| 86.00 | 100 | 100 |
| 234.00 | 61.80 | 59.14 |
| 43.10 | 113.30 | 120.30 |
| 0.00 | 0.00 | 0.00 |

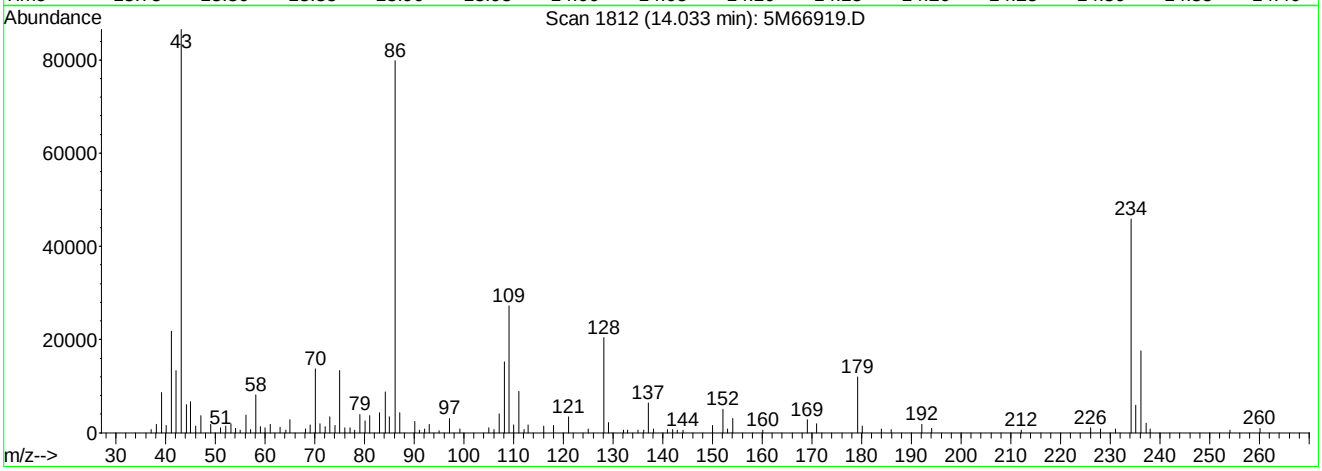
5M66919.D MEGAMIX.M Fri May 11 13:24:57 2012

Quantitation Report (Qedit)

Data File : C:\MSDCHEM\1\DATA\051112\5M66919.D Vial: 5
Acq On : 11 May 2012 10:47 am Operator: CAA
Sample : WG397707-05 15PPM Megamix STD Inst : HPMS5
Misc : 1,1 STD50886 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 11 13:24 2012 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
Title : OVD MSS01 8270/625/Initial cal. 05/11/12
Last Update : Fri May 11 13:24:30 2012
Response via : Multiple Level Calibration




TIC: 5M66919.D

(92) Diallate

14.03min 15.12ug/ml mint

response 88561

| Ion | Exp% | Act% |
|---|---|---|
| 86.00 | 100 | 100 |
| 234.00 | 61.80 | 8.68# |
| 43.10 | 113.30 | 17.65# |
| 0.00 | 0.00 | 0.00 |

5M66919.D MEGAMIX.M Fri May 11 ) 2012

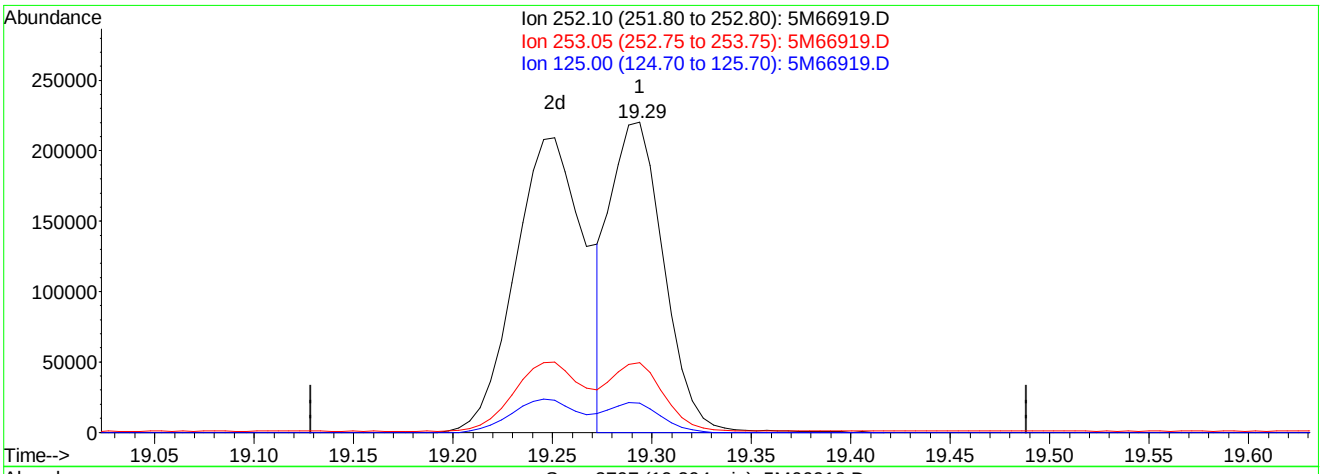
Analyst: 05/15/2012 07:35 Supervisor: 05/15/2012 09:20

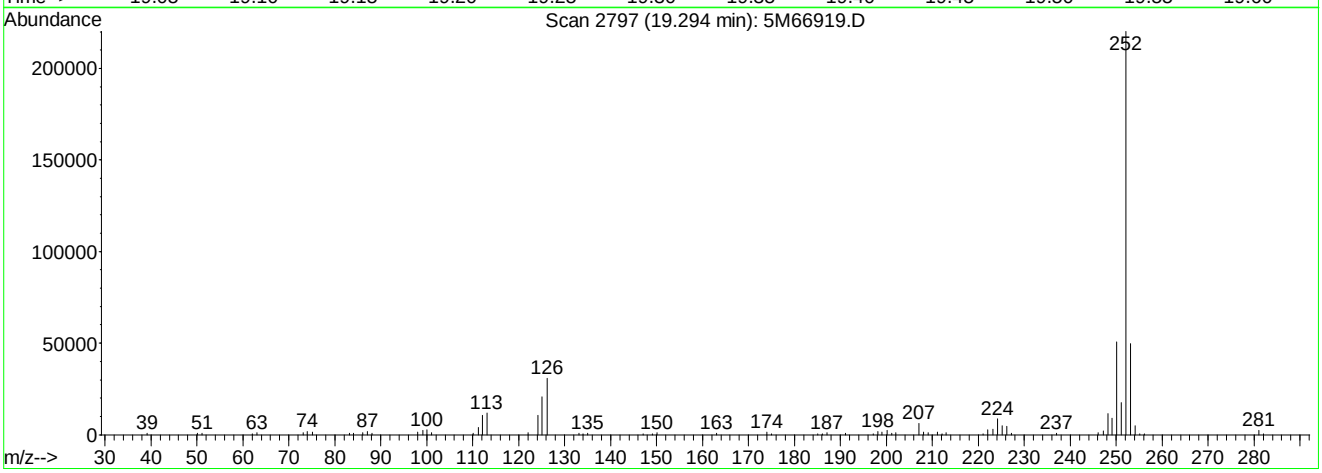
#1 - Data system fails to select correct peak

Quantitation Report (Qedit)

Data File : C:\MSDCHEM\1\DATA\051112\5M66919.D Vial: 5
Acq On : 11 May 2012 10:47 am Operator: CAA
Sample : WG397707-05 15PPM Megamix STD Inst : HPMS5
Misc : 1,1 STD50886 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 11 13:24 2012 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
Title : OVD MSS01 8270/625/Initial cal. 05/11/12
Last Update : Fri May 11 13:24:30 2012
Response via : Multiple Level Calibration




TIC: 5M66919.D

(131) Benzo[b]fluoranthene

19.29min 12.04ug/ml

response 413948

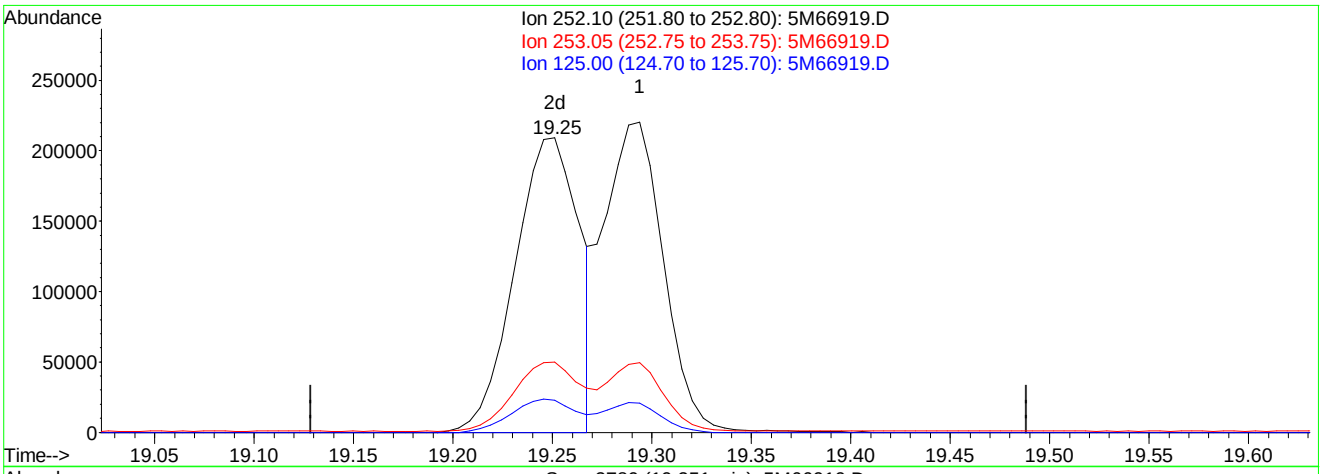
| Ion | Exp% | Act% |
|---|---|---|
| 252.10 | 100 | 100 |
| 253.05 | 22.00 | 21.75 |
| 125.00 | 10.90 | 9.08 |
| 0.00 | 0.00 | 0.00 |

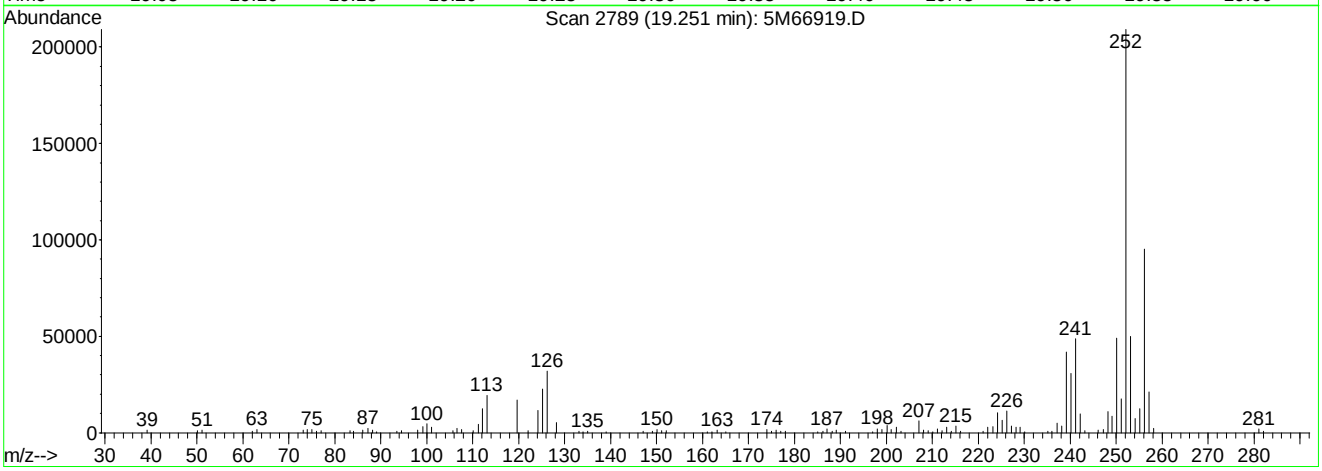
5M66919.D MEGAMIX.M Fri May 11 13:25:08 2012

Quantitation Report (Qedit)

Data File : C:\MSDCHEM\1\DATA\051112\5M66919.D Vial: 5
Acq On : 11 May 2012 10:47 am Operator: CAA
Sample : WG397707-05 15PPM Megamix STD Inst : HPMS5
Misc : 1,1 STD50886 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 11 13:25 2012 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
Title : OVD MSS01 8270/625/Initial cal. 05/11/12
Last Update : Fri May 11 13:24:30 2012
Response via : Multiple Level Calibration




TIC: 5M66919.D

(131) Benzo[b]fluoranthene

19.25min 13.64ug/ml mint

response 469035

| Ion | Exp% | Act% |
|---|---|---|
| 252.10 | 100 | 100 |
| 253.05 | 22.00 | 19.20 |
| 125.00 | 10.90 | 8.01 |
| 0.00 | 0.00 | 0.00 |

5M66919.D MEGAMIX.M Fri May 11 ? 2012

Analyst: 05/15/2012 07:35 Supervisor: 05/15/2012 09:20

#3 - Improperly integrated isomers and/or coeluting compounds

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\051112\5M66920.D Vial: 6
Acq On : 11 May 2012 11:22 am Operator: CAA
Sample : WG397707-06 25PPM Megamix STD Inst : HPMS5
Misc : 1,1 STD50886 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 11 13:25:23 2012 Quant Results File: MEGAMIX.RES

Quant Method : C:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
Title : OVD MSS01 8270/625/Initial cal. 05/11/12
Last Update : Fri May 11 13:25:18 2012
Response via : Initial Calibration
DataAcq Meth : BNA

| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 1) 1,4-Dichlorobenzene-d4 | 9.30 | 152 | 277164 | 40.00 | ug/ml | 0.00 |
| 30) Naphthalene-d8 | 10.91 | 136 | 1046127 | 40.00 | ug/ml | 0.00 |
| 54) Acenaphthene-d10 | 13.03 | 164 | 622077 | 40.00 | ug/ml | 0.00 |
| 87) Phenanthrene-d10 | 14.64 | 188 | 1185461 | 40.00 | ug/ml | 0.00 |
| 113) Chrysene-d12 | 17.53 | 240 | 1374183 | 40.00 | ug/ml | 0.00 |
| 128) Perylene-d12 | 20.07 | 264 | 1212008 | 40.00 | ug/ml | 0.00 |
| **System Monitoring Compounds** | | | | | | |
| 8) 2-Fluorophenol | 7.72 | 112 | 191216 | 24.1929 | ug/ml | 0.00 |
| Spiked Amount 100.000 | Range 21 - 100 | | Recovery = 24.19% | | | |
| 12) Phenol-d5 | 8.83 | 99 | 230414 | 24.3232 | ug/ml | 0.00 |
| Spiked Amount 100.000 | Range 10 - 94 | | Recovery = 24.32% | | | |
| 31) Nitrobenzene-d5 | 10.01 | 82 | 215481 | 24.4461 | ug/ml | 0.00 |
| Spiked Amount 50.000 | Range 35 - 114 | | Recovery = 48.90% | | | |
| 59) 2-Fluorobiphenyl | 12.21 | 172 | 541033 | 25.7373 | ug/ml | 0.00 |
| Spiked Amount 50.000 | Range 43 - 116 | | Recovery = 51.48% | | | |
| 86) 2,4,6-Tribromophenol | 13.90 | 330 | 84329 | 26.1308 | ug/ml | 0.00 |
| Spiked Amount 100.000 | Range 10 - 123 | | Recovery = 26.13% | | | |
| 117) p-Terphenyl-d14 | 16.26 | 244 | 608913 | 27.3195 | ug/ml | 0.00 |
| Spiked Amount 50.000 | Range 33 - 141 | | Recovery = 54.64% | | | |
| **Target Compounds** | | | | | | Qvalue |
| 2) 1,4-Dioxane | 5.13 | 88 | 88646 | 24.4419 | ug/ml# | 100 |
| 3) n-Nitrosodimethylamine | 5.80 | 74 | 113293 | 23.3306 | ug/ml | 97 |
| 4) Pyridine | 5.80 | 79 | 201878 | 23.4553 | ug/ml | 99 |
| 5) 2-Picoline | 6.94 | 93 | 219207 | 23.6889 | ug/ml | 100 |
| 6) n-Nitrosomethylethylamine | 7.12 | 88 | 91422 | 23.5648 | ug/ml | 98 |
| 7) Methyl Methanesulfonate | 7.52 | 80 | 114286 | 24.2171 | ug/ml | 99 |
| 9) n-Nitrosodiethylamine | 8.02 | 102 | 96379 | 24.1841 | ug/ml | 97 |
| 10) Ethyl Methanesulfonate | 8.37 | 79 | 144860 | 23.9472 | ug/ml | 99 |
| 11) Aniline | 8.92 | 93 | 316215 | 23.8427 | ug/ml | 98 |
| 13) Phenol | 8.84 | 94 | 239414 | 24.1637 | ug/ml | 97 |
| 14) bis(2-Chloroethyl)ether | 8.96 | 63 | 138051 | 24.1012 | ug/ml | 95 |
| 15) Pentachloroethane | 8.95 | 167 | 92231 | 25.3496 | ug/ml | 100 |
| 16) 2-Chlorophenol | 9.07 | 128 | 219292 | 24.4780 | ug/ml | 99 |
| 17) 1,3-Dichlorobenzene | 9.26 | 146 | 257657 | 25.0127 | ug/ml | 100 |
| 18) 1,4-Dichlorobenzene | 9.32 | 146 | 271035 | 25.2028 | ug/ml | 100 |
| 19) Benzyl Alcohol | 9.45 | 108 | 139699 | 24.3856 | ug/ml | 98 |
| 20) 1,2-Dichlorobenzene | 9.56 | 146 | 246476 | 24.9686 | ug/ml | 100 |
| 21) 2-Methylphenol | 9.58 | 107 | 171838 | 24.1872 | ug/ml | 99 |
| 22) bis(2-Chloroisopropyl)ethe | 9.64 | 45 | 277686 | 23.3483 | ug/ml | 97 |
| 23) 3-,4-Methylphenol | 9.75 | 107 | 216711 | 24.0141 | ug/ml | 99 |
| 24) n-Nitrosopyrrolidine | 9.79 | 100 | 89027 | 24.8587 | ug/ml | 79 |
| 25) n-Nitrosodipropylamine | 9.81 | 70 | 131777 | 25.3554 | ug/ml | 95 |
| 26) Acetophenone | 9.80 | 105 | 276893 | 24.8297 | ug/ml | 98 |
| 27) n-Nitrosomorpholine | 9.81 | 56 | 114906 | 25.2576 | ug/ml | 93 |
| 28) o-Toluidine | 9.86 | 106 | 343854 | 24.4921 | ug/ml | 100 |
| 29) Hexachloroethane | 9.95 | 117 | 96977 | 24.6392 | ug/ml | 99 |
| 32) Nitrobenzene | 10.03 | 77 | 212728 | 24.6144 | ug/ml | 98 |
| 33) n-Nitrosopiperidine | 10.21 | 114 | 104821 | 24.5078 | ug/ml | 93 |
| 34) Isophorone | 10.30 | 82 | 373421 | 24.3409 | ug/ml | 99 |
| 35) 2-Nitrophenol | 10.43 | 139 | 127816 | 25.7077 | ug/ml | 96 |
| 36) 2,4-Dimethylphenol | 10.42 | 122 | 202860 | 25.4152 | ug/ml | 99 |
| 37) 0,0,0-Triethyl Phosphoroth | 10.55 | 198 | 125596 | 26.6552 | ug/ml | 96 |
| 38) bis(2-Chloroethoxy)methane | 10.55 | 93 | 299358 | 25.6655 | ug/ml | 98 |

(#) = qualifier out of range (m) = manual integration
5M66920.D MEGAMIX.M Mon May 14 14:45:17 2012 Page 1

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\051112\5M66920.D Vial: 6
Acq On : 11 May 2012 11:22 am Operator: CAA
Sample : WG397707-06 25PPM Megamix STD Inst : HPMS5
Misc : 1,1 STD50886 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 11 13:25:23 2012 Quant Results File: MEGAMIX.RES

Quant Method : C:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
Title : OVD MSS01 8270/625/Initial cal. 05/11/12
Last Update : Fri May 11 13:25:18 2012
Response via : Initial Calibration
DataAcq Meth : BNA

| | Compound | R.T. | QIon | Response | Conc Unit | Qvalue |
|---|---|---|---|---|---|---|
| 39) | Benzoic Acid | 10.49 | 105 | 101334m | 17.5048 ug/ml | |
| 40) | 2,4-Dichlorophenol | 10.72 | 162 | 199582 | 25.4294 ug/ml | 100 |
| 41) | a,a-Dimethylphenethylamine | 10.73 | 58 | 559256m | 23.6113 ug/ml | |
| 42) | 1,2,4-Trichlorobenzene | 10.84 | 180 | 228802 | 25.6024 ug/ml | 100 |
| 43) | Naphthalene | 10.94 | 128 | 655796 | 25.4241 ug/ml | 100 |
| 44) | 4-Chloroaniline | 10.98 | 127 | 277120 | 24.7542 ug/ml | 99 |
| 45) | 2,6-Dichlorophenol | 11.01 | 162 | 201431 | 25.0248 ug/ml | 99 |
| 46) | Hexachloropropene | 11.08 | 213 | 151802 | 26.5459 ug/ml | 100 |
| 47) | Hexachlorobutadiene | 11.13 | 225 | 138039 | 26.2818 ug/ml | 99 |
| 48) | n-Nitrosodi-n-Butylamine | 11.39 | 84 | 167798 | 26.7789 ug/ml | 94 |
| 49) | p-Phenylenediamine | 11.41 | 108 | 163270 | 31.4612 ug/ml | 99 |
| 50) | 4-Chloro-3-Methylphenol | 11.54 | 107 | 184705 | 25.1254 ug/ml | 99 |
| 51) | Safrole | 11.64 | 162 | 190148 | 25.4726 ug/ml | 97 |
| 52) | 2-Methylnaphthalene | 11.78 | 142 | 459319 | 25.9221 ug/ml | 99 |
| 53) | 1-Methylnaphthalene | 11.91 | 142 | 434247 | 25.9780 ug/ml | 100 |
| 55) | 1,2,4,5-Tetrachlorobenzene | 12.02 | 216 | 237113 | 26.1700 ug/ml | 99 |
| 56) | Hexachlorocyclopentadiene | 12.04 | 237 | 144761 | 27.7511 ug/ml | 100 |
| 57) | 2,4,6-Trichlorophenol | 12.13 | 196 | 156259 | 25.1695 ug/ml | 99 |
| 58) | 2,4,5-Trichlorophenol | 12.17 | 196 | 163129 | 25.3972 ug/ml | 99 |
| 60) | Isosafrole | 12.25 | 162 | 199827 | 25.0711 ug/ml | 98 |
| 61) | 2-Chloronaphthalene | 12.36 | 162 | 458408 | 25.3977 ug/ml | 100 |
| 62) | 1-Chloronaphthalene | 12.41 | 162 | 441309 | 25.6143 ug/ml | 99 |
| 63) | 2-Nitroaniline | 12.48 | 65 | 117779 | 24.5964 ug/ml | 95 |
| 64) | 1,4-Naphthoquinone | 12.55 | 158 | 136227 | 27.1175 ug/ml | 99 |
| 65) | Dimethylphthalate | 12.68 | 163 | 510906 | 25.4235 ug/ml | 100 |
| 66) | 1,3-Dinitrobenzene | 12.73 | 168 | 94610 | 25.1401 ug/ml | 96 |
| 67) | 2,6-Dinitrotoluene | 12.78 | 165 | 122913 | 24.9634 ug/ml | 96 |
| 68) | Acenaphthylene | 12.86 | 152 | 708215 | 25.7674 ug/ml | 99 |
| 69) | 3-Nitroaniline | 12.95 | 138 | 127227 | 24.5965 ug/ml | 99 |
| 70) | 2,4-Dinitrophenol | 13.06 | 184 | 57304 | 23.0975 ug/ml | 87 |
| 71) | Acenaphthene | 13.06 | 154 | 456661 | 26.1611 ug/ml | 99 |
| 72) | 4-Nitrophenol | 13.08 | 65 | 89119 | 23.8462 ug/ml | 97 |
| 73) | 2,4-Dinitrotoluene | 13.23 | 165 | 166136 | 26.6595 ug/ml | 94 |
| 74) | Pentachlorobenzene | 13.26 | 250 | 219064 | 25.9692 ug/ml | 100 |
| 75) | Dibenzofuran | 13.23 | 168 | 642958 | 26.6508 ug/ml | 99 |
| 76) | 2,3,4,6-Tetrachlorophenol | 13.40 | 232 | 149660 | 27.4420 ug/ml | 98 |
| 77) | 1-Naphthylamine | 13.32 | 143 | 445099 | 25.6465 ug/ml | 98 |
| 78) | 2-Naphthylamine | 13.40 | 143 | 391534 | 26.5384 ug/ml | 99 |
| 79) | Diethylphthalate | 13.46 | 149 | 505411 | 25.6779 ug/ml | 99 |
| 80) | Thionazin | 13.56 | 107 | 77010 | 26.8641 ug/ml | 97 |
| 81) | Fluorene | 13.62 | 166 | 560644 | 26.3285 ug/ml | 99 |
| 82) | 4-Chlorophenyl Phenyl Ethe | 13.57 | 204 | 279180 | 27.5427 ug/ml | 98 |
| 83) | 4-Nitroaniline | 13.64 | 138 | 134604 | 25.5439 ug/ml | 95 |
| 84) | 5-Nitro-o-Toluidine | 13.63 | 152 | 163854 | 25.5391 ug/ml | 96 |
| 85) | 1,2-Diphenylhydrazine | 13.75 | 77 | 451055 | 25.2450 ug/ml | 96 |
| 88) | 4,6-Dinitro-2-Methylphenol | 13.68 | 198 | 89539 | 23.9293 ug/ml# | 59 |
| 89) | n-Nitrosodiphenylamine | 13.70 | 169 | 475574 | 25.3394 ug/ml | 99 |
| 90) | Sulfotepp | 13.92 | 322 | 106766 | 25.5020 ug/ml | 92 |
| 91) | Sym-Trinitrobenzene | 14.00 | 75 | 116653 | 25.0682 ug/ml | 99 |
| 92) | Diallate | 14.03 | 86 | 169134 | 25.0693 ug/ml | 87 |
| 93) | Phenacetin | 14.03 | 108 | 240202 | 26.3990 ug/ml | 98 |
| 94) | Phorate | 14.05 | 75 | 269798 | 26.3904 ug/ml# | 95 |
| 95) | 4-Bromophenyl Phenyl Ether | 14.11 | 248 | 169944 | 25.3470 ug/ml | 98 |
| 96) | Hexachlorobenzene | 14.31 | 284 | 190732 | 25.4185 ug/ml | 98 |

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

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\051112\5M66920.D Vial: 6
Acq On : 11 May 2012 11:22 am Operator: CAA
Sample : WG397707-06 25PPM Megamix STD Inst : HPMS5
Misc : 1,1 STD50886 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 11 13:25:23 2012 Quant Results File: MEGAMIX.RES

Quant Method : C:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
Title : OVD MSS01 8270/625/Initial cal. 05/11/12
Last Update : Fri May 11 13:25:18 2012
Response via : Initial Calibration
DataAcq Meth : BNA

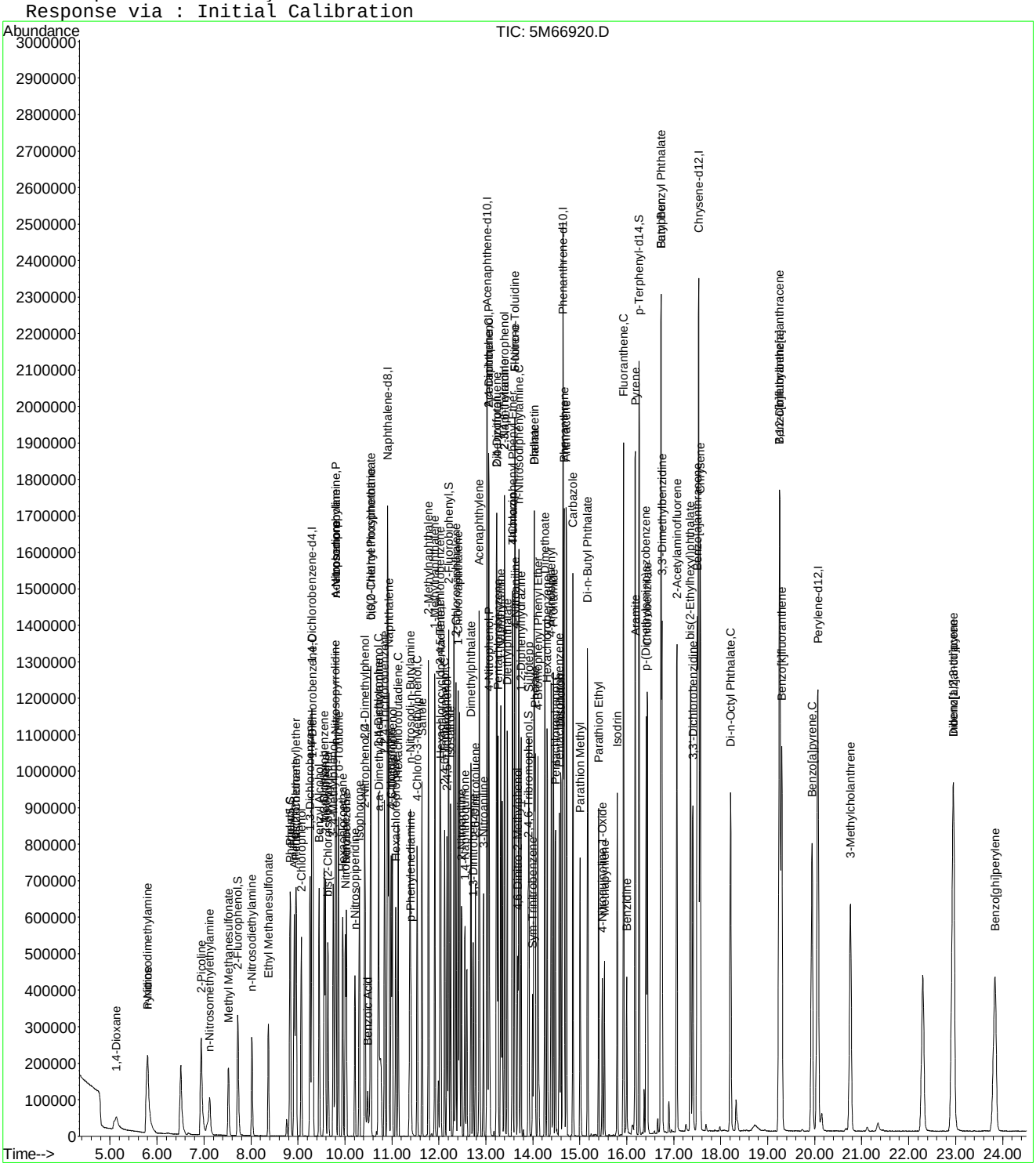
| | Compound | R.T. | QIon | Response | Conc | Unit | Qvalue |
|---|---|---|---|---|---|---|---|
| 97) | Dimethoate | 14.25 | 87 | 148288 | 26.7322 | ug/ml | 99 |
| 98) | 4-Aminobiphenyl | 14.39 | 169 | 535247 | 26.3953 | ug/ml | 99 |
| 99) | Pentachlorophenol | 14.48 | 266 | 122715 | 25.1920 | ug/ml | 99 |
| 100) | Pronamide | 14.44 | 173 | 246875 | 25.4558 | ug/ml | 100 |
| 101) | Pentachloronitrobenzene | 14.56 | 237 | 72377 | 25.9881 | ug/ml | 98 |
| 102) | Disulfoton | 14.59 | 88 | 231902 | 24.4760 | ug/ml | 100 |
| 103) | Phenanthrene | 14.67 | 178 | 795897 | 25.7492 | ug/ml | 99 |
| 104) | Anthracene | 14.71 | 178 | 820276 | 26.1081 | ug/ml | 99 |
| 105) | Carbazole | 14.86 | 167 | 732181 | 25.4953 | ug/ml | 99 |
| 106) | Parathion Methyl | 15.00 | 109 | 147512 | 27.3427 | ug/ml | 99 |
| 107) | Di-n-Butyl Phthalate | 15.17 | 149 | 849203 | 25.6058 | ug/ml | 100 |
| 108) | Parathion Ethyl | 15.40 | 97 | 93467 | 25.3443 | ug/ml | 97 |
| 109) | 4-Nitroquinoline 1-Oxide | 15.47 | 190 | 60657 | 30.2530 | ug/ml | 98 |
| 110) | Methapyrilene | 15.52 | 58 | 148882 | 22.5928 | ug/ml | 99 |
| 111) | Isodrin | 15.80 | 193 | 88422 | 24.9970 | ug/ml | 95 |
| 112) | Fluoranthene | 15.93 | 202 | 878492 | 26.3132 | ug/ml | 99 |
| 114) | Benzidine | 16.00 | 184 | 208903 | 29.5946 | ug/ml | 100 |
| 115) | Pyrene | 16.17 | 202 | 897922 | 26.6660 | ug/ml | 99 |
| 116) | Aramite | 16.19 | 185 | 49858 | 26.8938 | ug/ml | 97 |
| 118) | p-(Dimethylamino)azobenzen | 16.42 | 225 | 204464 | 25.7733 | ug/ml | 96 |
| 119) | Chlorobenzilate | 16.44 | 251 | 282122 | 25.7257 | ug/ml | 96 |
| 120) | Famphur | 16.72 | 218 | 24104 | 240.2577 | ug/ml# | 1 |
| 121) | Butyl Benzyl Phthalate | 16.73 | 149 | 381352 | 27.3846 | ug/ml | 97 |
| 122) | 3,3'-Dimethylbenzidine | 16.75 | 212 | 613341 | 27.2159 | ug/ml | 100 |
| 123) | 2-Acetylaminofluorene | 17.07 | 181 | 370311 | 25.6754 | ug/ml | 99 |
| 124) | bis(2-Ethylhexyl)phthalate | 17.36 | 149 | 533789 | 25.1708 | ug/ml | 99 |
| 125) | 3,3'-Dichlorobenzidine | 17.41 | 252 | 303160 | 25.4173 | ug/ml | 100 |
| 126) | Benzo[a]anthracene | 17.50 | 228 | 886472 | 25.4329 | ug/ml | 99 |
| 127) | Chrysene | 17.56 | 228 | 835295 | 25.6233 | ug/ml | 99 |
| 129) | Di-n-Octyl Phthalate | 18.21 | 149 | 882821 | 24.7042 | ug/ml | 98 |
| 130) | 7,12-Dimethylbenz[a]anthra | 19.25 | 256 | 425428 | 25.7399 | ug/ml | 100 |
| 131) | Benzo[b]fluoranthene | 19.26 | 252 | 995294m | 25.3163 | ug/ml | |
| 132) | Benzo[k]fluoranthene | 19.30 | 252 | 819433 | 26.3032 | ug/ml | 99 |
| 133) | Benzo[a]pyrene | 19.95 | 252 | 810283 | 24.7912 | ug/ml | 99 |
| 134) | 3-Methylcholanthrene | 20.76 | 268 | 437691 | 25.3962 | ug/ml | 100 |
| 135) | Indeno[1,2,3-cd]pyrene | 22.96 | 276 | 950465 | 24.9710 | ug/ml | 99 |
| 136) | Dibenz[ah]anthracene | 22.95 | 278 | 800693 | 25.0862 | ug/ml | 100 |
| 137) | Benzo[ghi]perylene | 23.84 | 276 | 749700 | 24.8595 | ug/ml | 99 |

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

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\051112\5M66920.D Vial: 6
Acq On : 11 May 2012 11:22 am Operator: CAA
Sample : WG397707-06 25PPM Megamix STD Inst : HPMS5
Misc : 1,1 STD50886 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 11 13:25 2012 Quant Results File: MEGAMIX.RES

Method : C:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
Title : OVD MSS01 8270/625/Initial cal. 05/11/12
Last Update : Fri May 11 14:12:23 2012
Response via : Initial Calibration

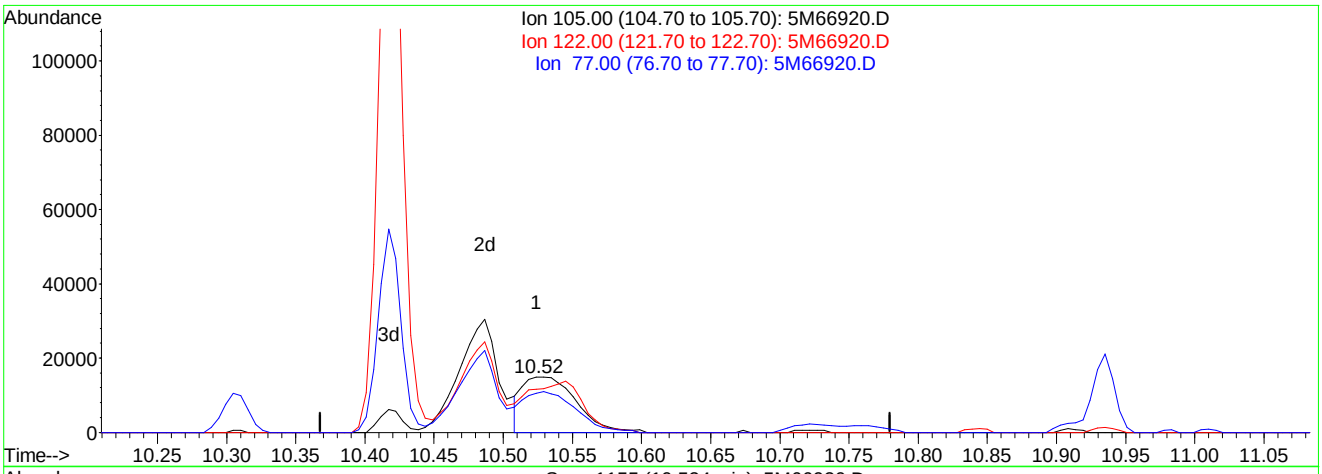


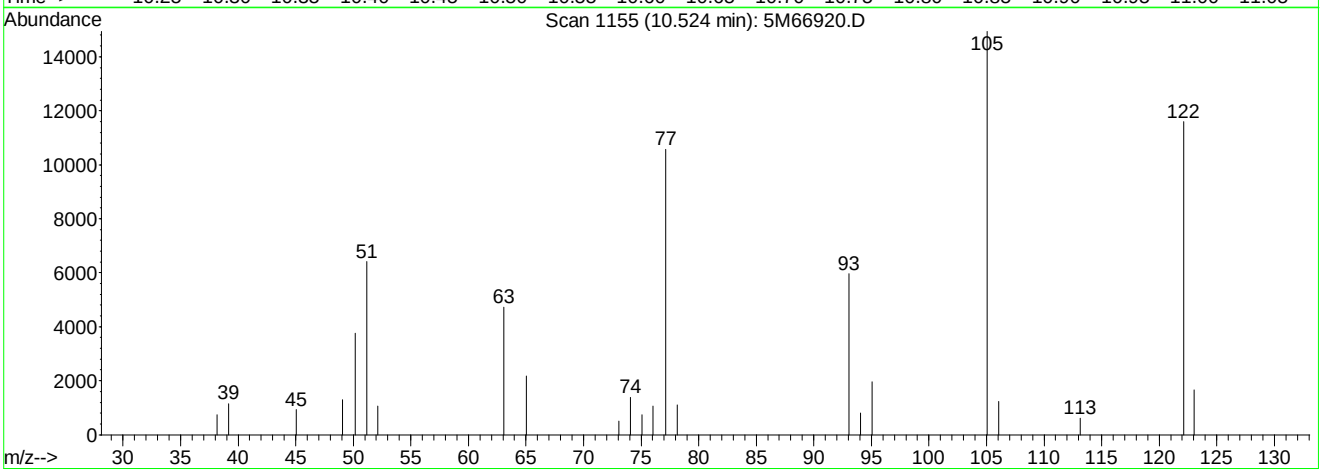

5M66920.D MEGAMIX.M Mon May 14 14:45:17 2012 Page 4

Quantitation Report (Qedit)

Data File : C:\MSDCHEM\1\DATA\051112\5M66920.D Vial: 6
Acq On : 11 May 2012 11:22 am Operator: CAA
Sample : WG397707-06 25PPM Megamix STD Inst : HPMS5
Misc : 1,1 STD50886 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 11 13:25 2012 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
Title : OVD MSS01 8270/625/Initial cal. 05/11/12
Last Update : Fri May 11 13:25:18 2012
Response via : Single Level Calibration




TIC: 5M66920.D

(39) Benzoic Acid

10.52min 6.97ug/ml

response 40372

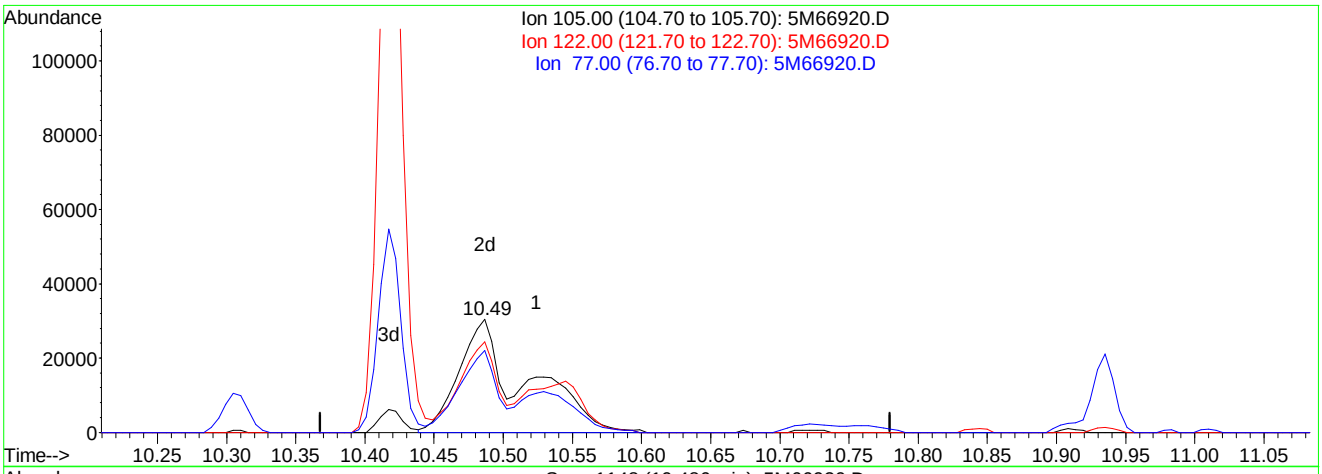
| Ion | Exp% | Act% |
|---|---|---|
| 105.00 | 100 | 100 |
| 122.00 | 57.00 | 93.48# |
| 77.00 | 51.30 | 72.12# |
| 0.00 | 0.00 | 0.00 |

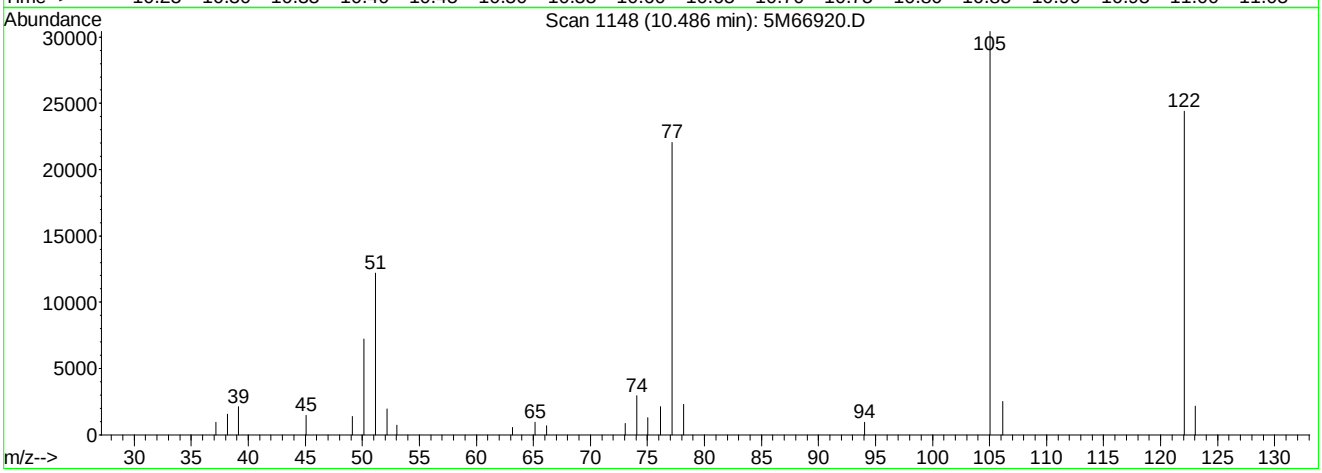
5M66920.D MEGAMIX.M Fri May 11 13:25:31 2012

Quantitation Report (Qedit)

Data File : C:\MSDCHEM\1\DATA\051112\5M66920.D Vial: 6
Acq On : 11 May 2012 11:22 am Operator: CAA
Sample : WG397707-06 25PPM Megamix STD Inst : HPMS5
Misc : 1,1 STD50886 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 11 13:25 2012 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
Title : OVD MSS01 8270/625/Initial cal. 05/11/12
Last Update : Fri May 11 13:25:18 2012
Response via : Single Level Calibration




TIC: 5M66920.D

(39) Benzoic Acid

10.49min 17.50ug/ml mint

response 101334

| Ion | Exp% | Act% |
|---|---|---|
| 105.00 | 100 | 100 |
| 122.00 | 57.00 | 37.24 |
| 77.00 | 51.30 | 28.73# |
| 0.00 | 0.00 | 0.00 |

5M66920.D MEGAMIX.M Fri May 11 [illegible] 2012

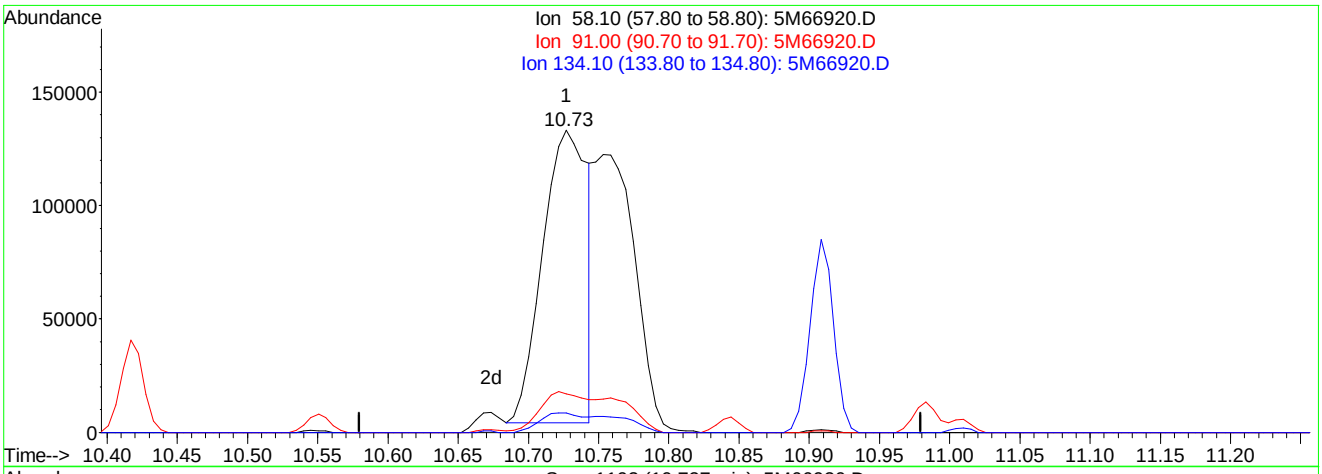
Analyst: 05/15/2012 07:35 Supervisor: 05/15/2012 09:20

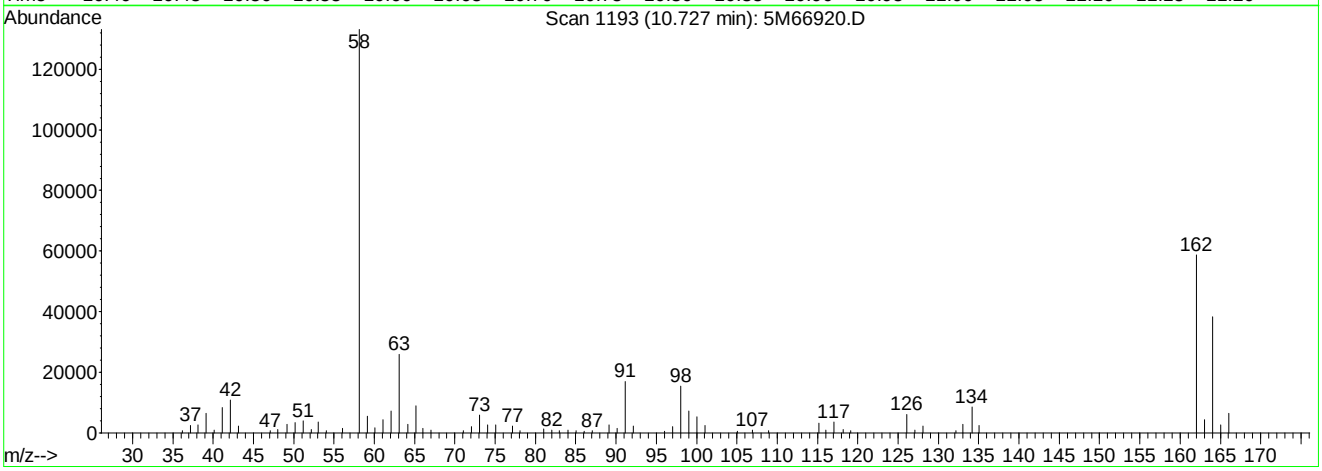
#2 - Data system splits the peak incorrectly or integrates a false peak as a rider peak

Quantitation Report (Qedit)

Data File : C:\MSDCHEM\1\DATA\051112\5M66920.D Vial: 6
Acq On : 11 May 2012 11:22 am Operator: CAA
Sample : WG397707-06 25PPM Megamix STD Inst : HPMS5
Misc : 1,1 STD50886 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 11 13:25 2012 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
Title : OVD MSS01 8270/625/Initial cal. 05/11/12
Last Update : Fri May 11 13:25:18 2012
Response via : Multiple Level Calibration




TIC: 5M66920.D

(41) a,a-Dimethylphenethylamine

10.73min 12.00ug/ml

response 284159

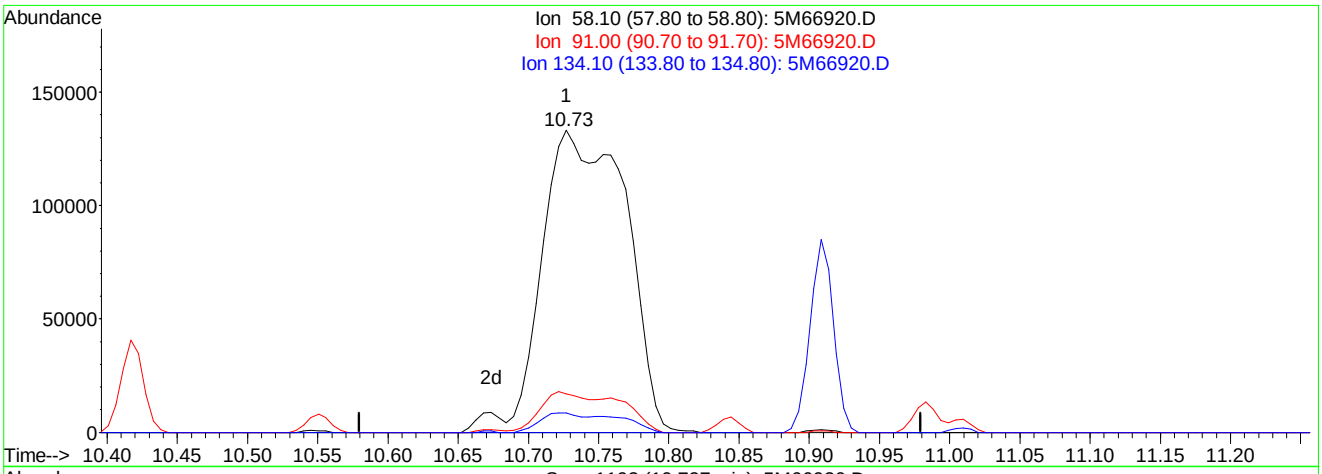
| Ion | Exp% | Act% |
|---|---|---|
| 58.10 | 100 | 100 |
| 91.00 | 9.00 | 13.16# |
| 134.10 | 4.40 | 6.72# |
| 0.00 | 0.00 | 0.00 |

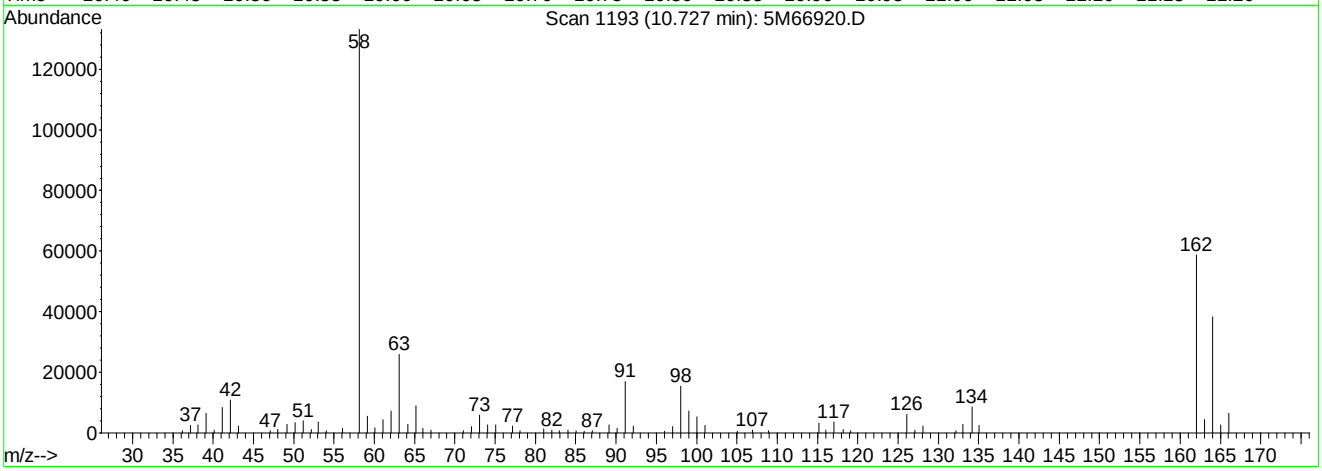
5M66920.D MEGAMIX.M Fri May 11 13:25:41 2012

Quantitation Report (Qedit)

Data File : C:\MSDCHEM\1\DATA\051112\5M66920.D Vial: 6
Acq On : 11 May 2012 11:22 am Operator: CAA
Sample : WG397707-06 25PPM Megamix STD Inst : HPMS5
Misc : 1,1 STD50886 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 11 13:25 2012 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
Title : OVD MSS01 8270/625/Initial cal. 05/11/12
Last Update : Fri May 11 13:25:18 2012
Response via : Multiple Level Calibration




TIC: 5M66920.D

(41) a,a-Dimethylphenethylamine

10.73min 23.61ug/ml mint

response 559256

| Ion | Exp% | Act% |
|---|---|---|
| 58.10 | 100 | 100 |
| 91.00 | 9.00 | 6.69# |
| 134.10 | 4.40 | 3.41# |
| 0.00 | 0.00 | 0.00 |

5M66920.D MEGAMIX.M Fri May 11 [illegible] 2012

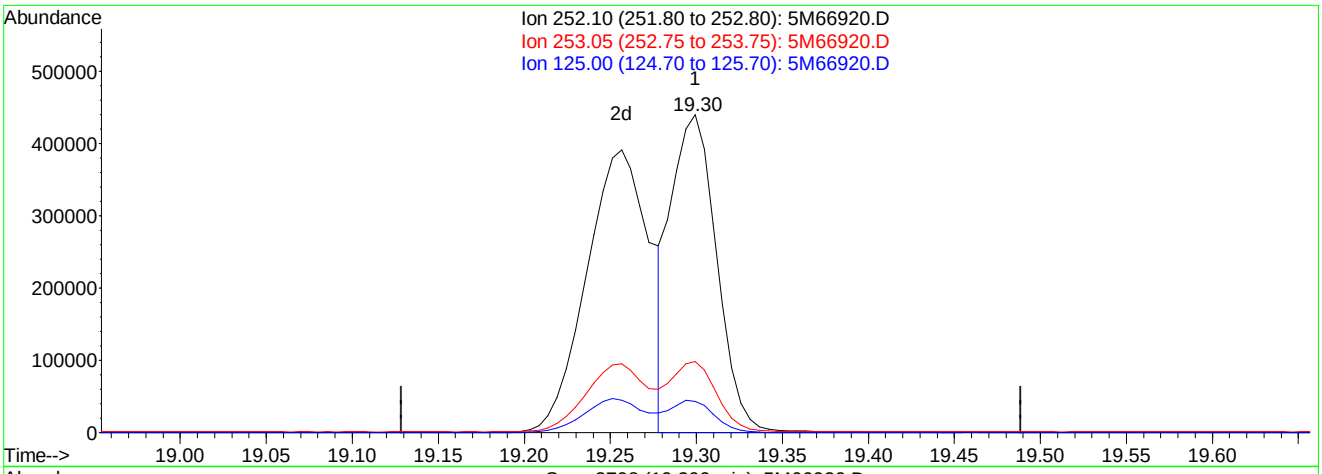
Analyst: 05/15/2012 07:35 Supervisor: 05/15/2012 09:20

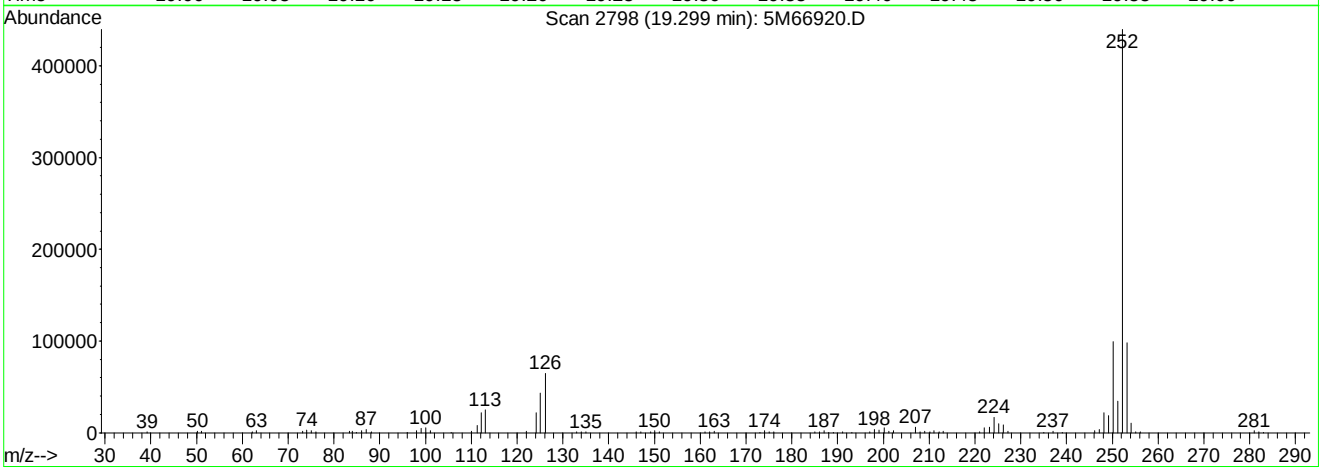
#2 - Data system splits the peak incorrectly or integrates a false peak as a rider peak

Quantitation Report (Qedit)

Data File : C:\MSDCHEM\1\DATA\051112\5M66920.D Vial: 6
Acq On : 11 May 2012 11:22 am Operator: CAA
Sample : WG397707-06 25PPM Megamix STD Inst : HPMS5
Misc : 1,1 STD50886 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 11 13:25 2012 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
Title : OVD MSS01 8270/625/Initial cal. 05/11/12
Last Update : Fri May 11 13:25:18 2012
Response via : Multiple Level Calibration




TIC: 5M66920.D

(131) Benzo[b]fluoranthene

19.30min 20.84ug/ml

response 819477

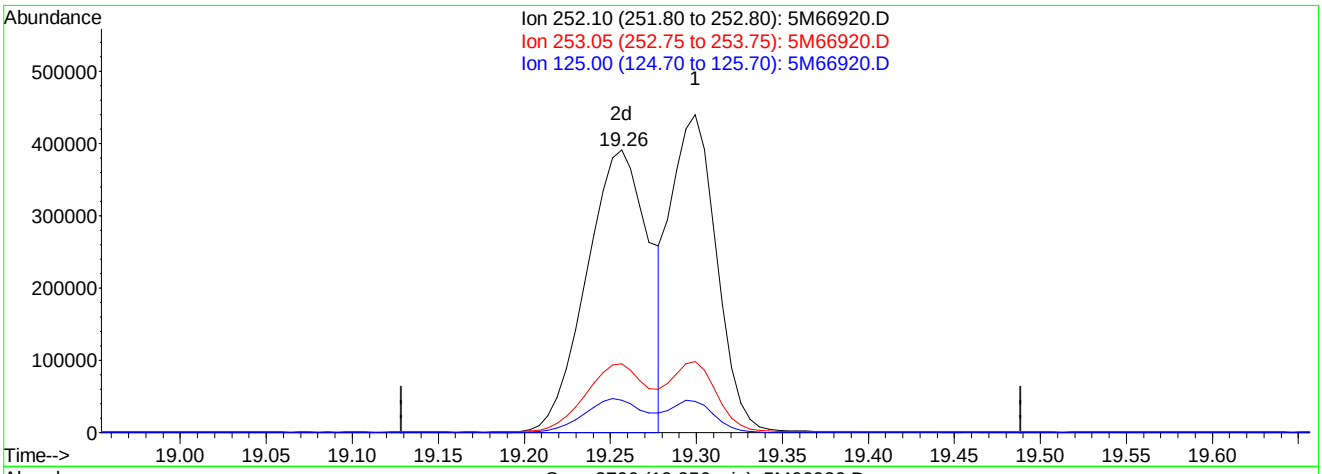
| Ion | Exp% | Act% |
|---|---|---|
| 252.10 | 100 | 100 |
| 253.05 | 22.00 | 22.01 |
| 125.00 | 10.90 | 9.53 |
| 0.00 | 0.00 | 0.00 |

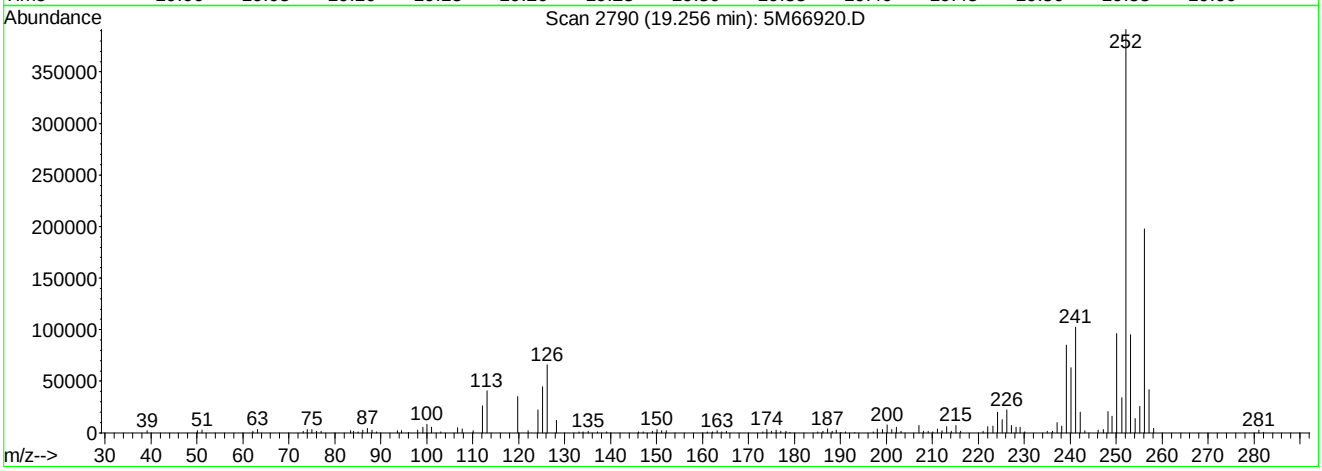
5M66920.D MEGAMIX.M Fri May 11 13:25:57 2012

Quantitation Report (Qedit)

Data File : C:\MSDCHEM\1\DATA\051112\5M66920.D Vial: 6
Acq On : 11 May 2012 11:22 am Operator: CAA
Sample : WG397707-06 25PPM Megamix STD Inst : HPMS5
Misc : 1,1 STD50886 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 11 13:25 2012 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
Title : OVD MSS01 8270/625/Initial cal. 05/11/12
Last Update : Fri May 11 13:25:18 2012
Response via : Multiple Level Calibration




TIC: 5M66920.D

(131) Benzo[b]fluoranthene

19.26min 25.32ug/ml mint

response 995294

| Ion | Exp% | Act% |
|---|---|---|
| 252.10 | 100 | 100 |
| 253.05 | 22.00 | 18.12 |
| 125.00 | 10.90 | 7.85 |
| 0.00 | 0.00 | 0.00 |

5M66920.D MEGAMIX.M Fri May 11 2012

Analyst: 05/15/2012 07:35 Supervisor: 05/15/2012 09:20

#3 - Improperly integrated isomers and/or coeluting compounds

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\051112\5M66921.D Vial: 7
Acq On : 11 May 2012 11:58 am Operator: CAA
Sample : WG397707-07 80PPM Megamix STD Inst : HPMS5
Misc : 1,1 STD50886 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 11 13:26:17 2012 Quant Results File: MEGAMIX.RES

Quant Method : C:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
Title : OVD MSS01 8270/625/Initial cal. 05/11/12
Last Update : Fri May 11 13:26:06 2012
Response via : Initial Calibration
DataAcq Meth : BNA

| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 1) 1,4-Dichlorobenzene-d4 | 9.30 | 152 | 269112 | 40.00 | ug/ml | 0.00 |
| 30) Naphthalene-d8 | 10.91 | 136 | 1024810 | 40.00 | ug/ml | 0.00 |
| 54) Acenaphthene-d10 | 13.03 | 164 | 609328 | 40.00 | ug/ml | 0.00 |
| 87) Phenanthrene-d10 | 14.65 | 188 | 1148009 | 40.00 | ug/ml | 0.00 |
| 113) Chrysene-d12 | 17.54 | 240 | 1354957 | 40.00 | ug/ml | 0.00 |
| 128) Perylene-d12 | 20.08 | 264 | 1129849 | 40.00 | ug/ml | 0.00 |
| **System Monitoring Compounds** | | | | | | |
| 8) 2-Fluorophenol | 7.72 | 112 | 575775 | 75.8088 | ug/ml | 0.00 |
| Spiked Amount 100.000 | Range 21 - 100 | | Recovery = 75.81% | | | |
| 12) Phenol-d5 | 8.84 | 99 | 681769 | 74.9763 | ug/ml | 0.00 |
| Spiked Amount 100.000 | Range 10 - 94 | | Recovery = 74.98% | | | |
| 31) Nitrobenzene-d5 | 10.02 | 82 | 637011 | 74.4600 | ug/ml | 0.00 |
| Spiked Amount 50.000 | Range 35 - 114 | | Recovery = 148.92%# | | | |
| 59) 2-Fluorobiphenyl | 12.21 | 172 | 1596296 | 77.5275 | ug/ml | 0.00 |
| Spiked Amount 50.000 | Range 43 - 116 | | Recovery = 155.06%# | | | |
| 86) 2,4,6-Tribromophenol | 13.90 | 330 | 275139 | 86.0577 | ug/ml | 0.00 |
| Spiked Amount 100.000 | Range 10 - 123 | | Recovery = 86.06% | | | |
| 117) p-Terphenyl-d14 | 16.26 | 244 | 1588388 | 72.3638 | ug/ml | 0.00 |
| Spiked Amount 50.000 | Range 33 - 141 | | Recovery = 144.72%# | | | |
| **Target Compounds** | | | | | | Qvalue |
| 2) 1,4-Dioxane | 5.12 | 88 | 242467 | 69.8298 | ug/ml# | 100 |
| 3) n-Nitrosodimethylamine | 5.80 | 74 | 340191 | 73.6394 | ug/ml | 97 |
| 4) Pyridine | 5.80 | 79 | 594036 | 72.3949 | ug/ml | 99 |
| 5) 2-Picoline | 6.94 | 93 | 655008 | 73.9742 | ug/ml | 99 |
| 6) n-Nitrosomethylethylamine | 7.12 | 88 | 272444 | 73.4131 | ug/ml | 99 |
| 7) Methyl Methanesulfonate | 7.53 | 80 | 320627 | 70.7656 | ug/ml | 100 |
| 9) n-Nitrosodiethylamine | 8.02 | 102 | 288291 | 75.3119 | ug/ml | 97 |
| 10) Ethyl Methanesulfonate | 8.38 | 79 | 423590 | 73.2142 | ug/ml | 99 |
| 11) Aniline | 8.93 | 93 | 963324 | 75.8654 | ug/ml | 99 |
| 13) Phenol | 8.85 | 94 | 710454 | 74.8629 | ug/ml | 98 |
| 14) bis(2-Chloroethyl)ether | 8.97 | 63 | 374761 | 68.8268 | ug/ml | 97 |
| 15) Pentachloroethane | 8.95 | 167 | 277780 | 78.5676 | ug/ml | 99 |
| 16) 2-Chlorophenol | 9.08 | 128 | 670362 | 77.5408 | ug/ml | 99 |
| 17) 1,3-Dichlorobenzene | 9.26 | 146 | 779194 | 78.1037 | ug/ml | 100 |
| 18) 1,4-Dichlorobenzene | 9.32 | 146 | 812396 | 77.8974 | ug/ml | 99 |
| 19) Benzyl Alcohol | 9.46 | 108 | 428261 | 77.7302 | ug/ml | 98 |
| 20) 1,2-Dichlorobenzene | 9.56 | 146 | 750705 | 78.4761 | ug/ml | 100 |
| 21) 2-Methylphenol | 9.60 | 107 | 529427 | 77.4299 | ug/ml | 99 |
| 22) bis(2-Chloroisopropyl)ethe | 9.64 | 45 | 734563 | 65.8159 | ug/ml | 97 |
| 23) 3-,4-Methylphenol | 9.76 | 107 | 676521 | 78.0355 | ug/ml | 99 |
| 24) n-Nitrosopyrrolidine | 9.81 | 100 | 262069 | 76.1662 | ug/ml | 90 |
| 25) n-Nitrosodipropylamine | 9.82 | 70 | 329830 | 66.5233 | ug/ml | 97 |
| 26) Acetophenone | 9.81 | 105 | 785708 | 73.1390 | ug/ml | 98 |
| 27) n-Nitrosomorpholine | 9.82 | 56 | 272692 | 63.0232 | ug/ml | 97 |
| 28) o-Toluidine | 9.87 | 106 | 1031305 | 76.3543 | ug/ml | 99 |
| 29) Hexachloroethane | 9.95 | 117 | 294116 | 77.3574 | ug/ml | 99 |
| 32) Nitrobenzene | 10.04 | 77 | 615962 | 73.5545 | ug/ml | 98 |
| 33) n-Nitrosopiperidine | 10.22 | 114 | 322026 | 77.4138 | ug/ml | 95 |
| 34) Isophorone | 10.31 | 82 | 1096914 | 73.8651 | ug/ml | 99 |
| 35) 2-Nitrophenol | 10.44 | 139 | 388975 | 79.8919 | ug/ml | 95 |
| 36) 2,4-Dimethylphenol | 10.43 | 122 | 603929 | 77.4952 | ug/ml | 99 |
| 37) 0,0,0-Triethyl Phosphoroth | 10.56 | 198 | 366814 | 78.9041 | ug/ml | 98 |
| 38) bis(2-Chloroethoxy)methane | 10.55 | 93 | 813044 | 71.8550 | ug/ml | 99 |

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

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\051112\5M66921.D Vial: 7
Acq On : 11 May 2012 11:58 am Operator: CAA
Sample : WG397707-07 80PPM Megamix STD Inst : HPMS5
Misc : 1,1 STD50886 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 11 13:26:17 2012 Quant Results File: MEGAMIX.RES

Quant Method : C:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
Title : OVD MSS01 8270/625/Initial cal. 05/11/12
Last Update : Fri May 11 13:26:06 2012
Response via : Initial Calibration
DataAcq Meth : BNA

| Compound | R.T. | QIon | Response | Conc Unit | Qvalue |
|---|---|---|---|---|---|
| 39) Benzoic Acid | 10.54 | 105 | 454050m | 85.6151 ug/ml | |
| 40) 2,4-Dichlorophenol | 10.72 | 162 | 623841 | 80.9796 ug/ml | 99 |
| 41) a,a-Dimethylphenethylamine | 10.81 | 58 | 1678868m | 74.0920 ug/ml | |
| 42) 1,2,4-Trichlorobenzene | 10.84 | 180 | 704303 | 80.2356 ug/ml | 99 |
| 43) Naphthalene | 10.94 | 128 | 1929726 | 76.6652 ug/ml | 99 |
| 44) 4-Chloroaniline | 10.99 | 127 | 859423 | 78.7594 ug/ml | 99 |
| 45) 2,6-Dichlorophenol | 11.01 | 162 | 637674 | 80.8668 ug/ml | 99 |
| 46) Hexachloropropene | 11.08 | 213 | 468228 | 82.5341 ug/ml | 99 |
| 47) Hexachlorobutadiene | 11.13 | 225 | 417110 | 80.3847 ug/ml | 99 |
| 48) n-Nitrosodi-n-Butylamine | 11.40 | 84 | 498985 | 82.2143 ug/ml | 98 |
| 49) p-Phenylenediamine | 11.43 | 108 | 405536 | 79.4374 ug/ml | 99 |
| 50) 4-Chloro-3-Methylphenol | 11.55 | 107 | 554278 | 77.2250 ug/ml | 97 |
| 51) Safrole | 11.64 | 162 | 584265 | 79.7977 ug/ml | 99 |
| 52) 2-Methylnaphthalene | 11.78 | 142 | 1340529 | 77.2685 ug/ml | 100 |
| 53) 1-Methylnaphthalene | 11.92 | 142 | 1266877 | 77.3639 ug/ml | 99 |
| 55) 1,2,4,5-Tetrachlorobenzene | 12.03 | 216 | 701851 | 78.7417 ug/ml | 99 |
| 56) Hexachlorocyclopentadiene | 12.04 | 237 | 419125 | 80.6777 ug/ml | 100 |
| 57) 2,4,6-Trichlorophenol | 12.13 | 196 | 497121 | 81.7199 ug/ml | 100 |
| 58) 2,4,5-Trichlorophenol | 12.18 | 196 | 523121 | 83.0469 ug/ml | 100 |
| 60) Isosafrole | 12.26 | 162 | 620056 | 79.5374 ug/ml | 99 |
| 61) 2-Chloronaphthalene | 12.37 | 162 | 1373425 | 77.7869 ug/ml | 99 |
| 62) 1-Chloronaphthalene | 12.41 | 162 | 1314849 | 78.0429 ug/ml | 100 |
| 63) 2-Nitroaniline | 12.49 | 65 | 336144 | 72.8953 ug/ml | 96 |
| 64) 1,4-Naphthoquinone | 12.56 | 158 | 259067 | 53.5627 ug/ml | 100 |
| 65) Dimethylphthalate | 12.69 | 163 | 1525944 | 77.5564 ug/ml | 100 |
| 66) 1,3-Dinitrobenzene | 12.74 | 168 | 301282 | 81.7430 ug/ml | 97 |
| 67) 2,6-Dinitrotoluene | 12.79 | 165 | 387395 | 80.4991 ug/ml | 96 |
| 68) Acenaphthylene | 12.86 | 152 | 2058154 | 76.6776 ug/ml | 99 |
| 69) 3-Nitroaniline | 12.96 | 138 | 404971 | 80.3783 ug/ml | 98 |
| 70) 2,4-Dinitrophenol | 13.08 | 184 | 219520 | 89.9392 ug/ml | 60 |
| 71) Acenaphthene | 13.07 | 154 | 1292572 | 75.6699 ug/ml | 99 |
| 72) 4-Nitrophenol | 13.10 | 65 | 273577 | 75.6205 ug/ml | 97 |
| 73) 2,4-Dinitrotoluene | 13.24 | 165 | 471607 | 77.0759 ug/ml | 96 |
| 74) Pentachlorobenzene | 13.26 | 250 | 680070 | 81.7986 ug/ml | 99 |
| 75) Dibenzofuran | 13.24 | 168 | 1751477 | 74.1610 ug/ml | 100 |
| 76) 2,3,4,6-Tetrachlorophenol | 13.41 | 232 | 428007 | 79.6798 ug/ml | 99 |
| 77) 1-Naphthylamine | 13.33 | 143 | 1374683 | 80.6984 ug/ml | 99 |
| 78) 2-Naphthylamine | 13.40 | 143 | 1248642 | 84.9972 ug/ml | 100 |
| 79) Diethylphthalate | 13.47 | 149 | 1473844 | 76.4910 ug/ml | 99 |
| 80) Thionazin | 13.57 | 107 | 199879 | 71.6176 ug/ml | 100 |
| 81) Fluorene | 13.62 | 166 | 1573521 | 75.4227 ug/ml | 100 |
| 82) 4-Chlorophenyl Phenyl Ethe | 13.58 | 204 | 754451 | 75.7053 ug/ml | 99 |
| 83) 4-Nitroaniline | 13.65 | 138 | 414450 | 80.3912 ug/ml | 97 |
| 84) 5-Nitro-o-Toluidine | 13.64 | 152 | 505721 | 80.4737 ug/ml | 97 |
| 85) 1,2-Diphenylhydrazine | 13.75 | 77 | 1218923 | 70.6258 ug/ml | 97 |
| 88) 4,6-Dinitro-2-Methylphenol | 13.70 | 198 | 319537 | 88.2289 ug/ml | 84 |
| 89) n-Nitrosodiphenylamine | 13.71 | 169 | 1388587 | 76.7812 ug/ml | 99 |
| 90) Sulfotepp | 13.93 | 322 | 339399 | 83.0724 ug/ml | 96 |
| 91) Sym-Trinitrobenzene | 14.02 | 75 | 356084 | 79.5592 ug/ml | 96 |
| 92) Diallate | 14.04 | 86 | 436004 | 67.9097 ug/ml | 95 |
| 93) Phenacetin | 14.05 | 108 | 618258 | 70.8639 ug/ml | 99 |
| 94) Phorate | 14.06 | 75 | 631197 | 65.0678 ug/ml# | 95 |
| 95) 4-Bromophenyl Phenyl Ether | 14.11 | 248 | 530663 | 81.4397 ug/ml | 98 |
| 96) Hexachlorobenzene | 14.31 | 284 | 593193 | 81.3592 ug/ml | 98 |

(#) = qualifier out of range (m) = manual integration
5M66921.D MEGAMIX.M Mon May 14 14:45:18 2012 Page 2

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\051112\5M66921.D Vial: 7
Acq On : 11 May 2012 11:58 am Operator: CAA
Sample : WG397707-07 80PPM Megamix STD Inst : HPMS5
Misc : 1,1 STD50886 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 11 13:26:17 2012 Quant Results File: MEGAMIX.RES

Quant Method : C:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
Title : OVD MSS01 8270/625/Initial cal. 05/11/12
Last Update : Fri May 11 13:26:06 2012
Response via : Initial Calibration
DataAcq Meth : BNA

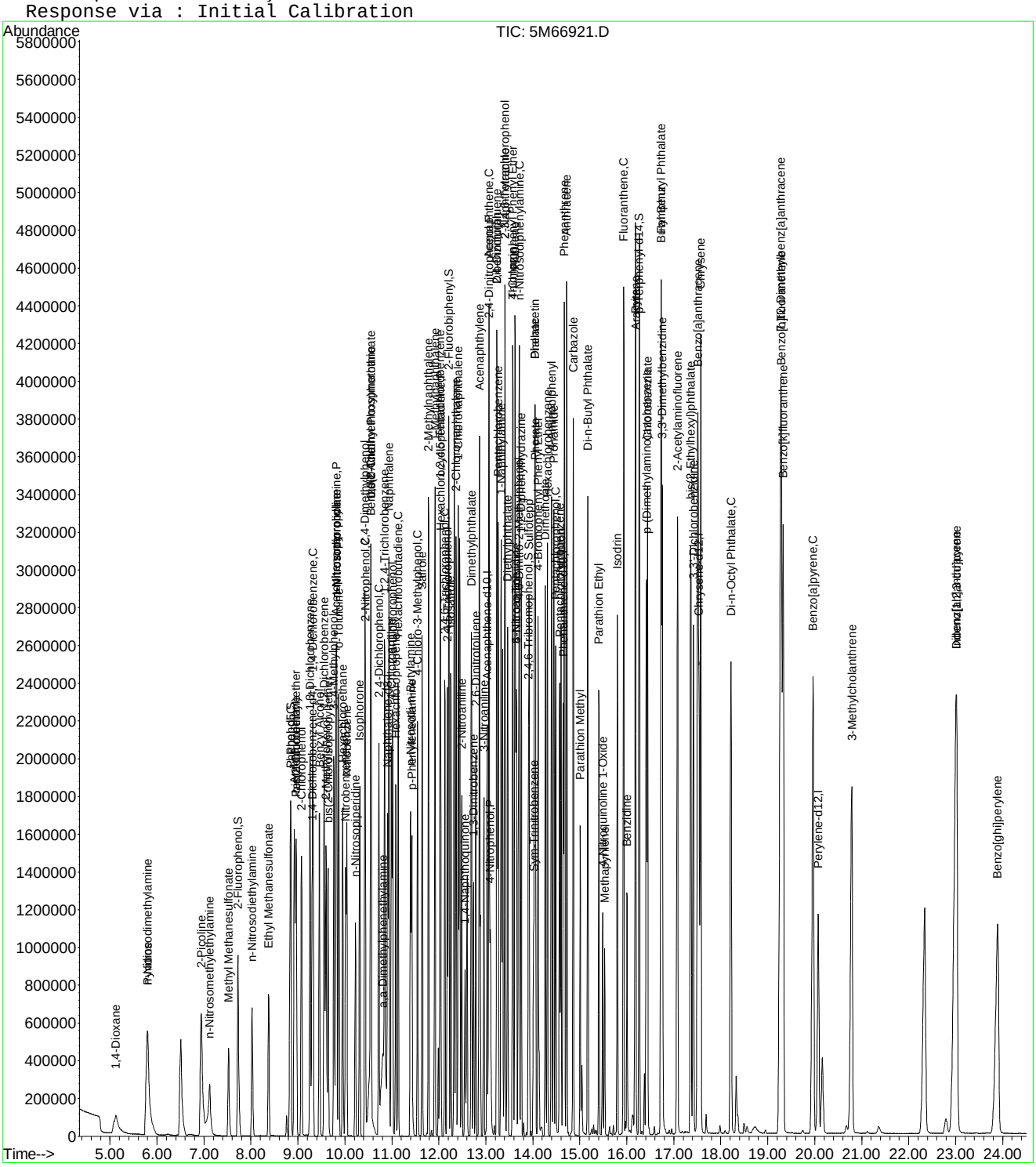
| | Compound | R.T. | QIon | Response | Conc | Unit | Qvalue |
|---|---|---|---|---|---|---|---|
| 97) | Dimethoate | 14.27 | 87 | 303574 | 57.6912 | ug/ml | 100 |
| 98) | 4-Aminobiphenyl | 14.40 | 169 | 1589334 | 80.8453 | ug/ml | 100 |
| 99) | Pentachlorophenol | 14.49 | 266 | 400808 | 84.8049 | ug/ml | 100 |
| 100) | Pronamide | 14.45 | 173 | 722042 | 77.1036 | ug/ml | 99 |
| 101) | Pentachloronitrobenzene | 14.57 | 237 | 208815 | 76.9805 | ug/ml | 99 |
| 102) | Disulfoton | 14.60 | 88 | 655399 | 72.6786 | ug/ml | 100 |
| 103) | Phenanthrene | 14.67 | 178 | 2216532 | 74.2717 | ug/ml | 99 |
| 104) | Anthracene | 14.72 | 178 | 2249059 | 74.0866 | ug/ml | 99 |
| 105) | Carbazole | 14.87 | 167 | 2099385 | 75.8916 | ug/ml | 100 |
| 106) | Parathion Methyl | 15.01 | 109 | 321943 | 62.3575 | ug/ml | 96 |
| 107) | Di-n-Butyl Phthalate | 15.17 | 149 | 2329702 | 72.9428 | ug/ml | 100 |
| 108) | Parathion Ethyl | 15.40 | 97 | 257130 | 72.6461 | ug/ml | 97 |
| 109) | 4-Nitroquinoline 1-Oxide | 15.48 | 190 | 191110 | 96.5223 | ug/ml | 97 |
| 110) | Methapyrilene | 15.53 | 58 | 309774 | 51.4253 | ug/ml | 98 |
| 111) | Isodrin | 15.80 | 193 | 267092 | 78.1255 | ug/ml | 98 |
| 112) | Fluoranthene | 15.93 | 202 | 2405776 | 74.3892 | ug/ml | 99 |
| 114) | Benzidine | 16.01 | 184 | 682003 | 94.7450 | ug/ml | 100 |
| 115) | Pyrene | 16.18 | 202 | 2383983 | 72.1872 | ug/ml | 99 |
| 116) | Aramite | 16.20 | 185 | 137420 | 75.1205 | ug/ml | 98 |
| 118) | p-(Dimethylamino)azobenzen | 16.42 | 225 | 622819 | 79.8463 | ug/ml | 96 |
| 119) | Chlorobenzilate | 16.44 | 251 | 860773 | 79.5456 | ug/ml | 98 |
| 120) | Famphur | 16.73 | 218 | 1600 | 16.1744 | ug/ml# | 1 |
| 121) | Butyl Benzyl Phthalate | 16.74 | 149 | 931154 | 68.3613 | ug/ml | 99 |
| 122) | 3,3'-Dimethylbenzidine | 16.76 | 212 | 1800549 | 80.7696 | ug/ml | 99 |
| 123) | 2-Acetylaminofluorene | 17.08 | 181 | 1122343 | 79.1448 | ug/ml | 99 |
| 124) | bis(2-Ethylhexyl)phthalate | 17.36 | 149 | 1514153 | 73.1875 | ug/ml | 99 |
| 125) | 3,3'-Dichlorobenzidine | 17.42 | 252 | 950976 | 80.7003 | ug/ml | 100 |
| 126) | Benzo[a]anthracene | 17.51 | 228 | 2642023 | 77.0712 | ug/ml | 99 |
| 127) | Chrysene | 17.57 | 228 | 2445724 | 76.4111 | ug/ml | 99 |
| 129) | Di-n-Octyl Phthalate | 18.21 | 149 | 2596290 | 78.9217 | ug/ml | 99 |
| 130) | 7,12-Dimethylbenz[a]anthra | 19.28 | 256 | 1283729 | 83.4125 | ug/ml | 100 |
| 131) | Benzo[b]fluoranthene | 19.29 | 252 | 2962607 | 80.7272 | ug/ml | 96 |
| 132) | Benzo[k]fluoranthene | 19.33 | 252 | 2272150 | 78.4760 | ug/ml | 100 |
| 133) | Benzo[a]pyrene | 19.97 | 252 | 2521185 | 82.8986 | ug/ml | 99 |
| 134) | 3-Methylcholanthrene | 20.79 | 268 | 1334037 | 82.7749 | ug/ml | 99 |
| 135) | Indeno[1,2,3-cd]pyrene | 23.02 | 276 | 2819550 | 79.2562 | ug/ml | 99 |
| 136) | Dibenz[ah]anthracene | 23.01 | 278 | 2380441 | 79.7897 | ug/ml | 99 |
| 137) | Benzo[ghi]perylene | 23.90 | 276 | 2140069 | 76.1348 | ug/ml | 99 |

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

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\051112\5M66921.D Vial: 7
Acq On : 11 May 2012 11:58 am Operator: CAA
Sample : WG397707-07 80PPM Megamix STD Inst : HPMS5
Misc : 1,1 STD50886 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 11 13:26 2012 Quant Results File: MEGAMIX.RES

Method : C:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
Title : OVD MSS01 8270/625/Initial cal. 05/11/12
Last Update : Fri May 11 14:12:23 2012
Response via : Initial Calibration

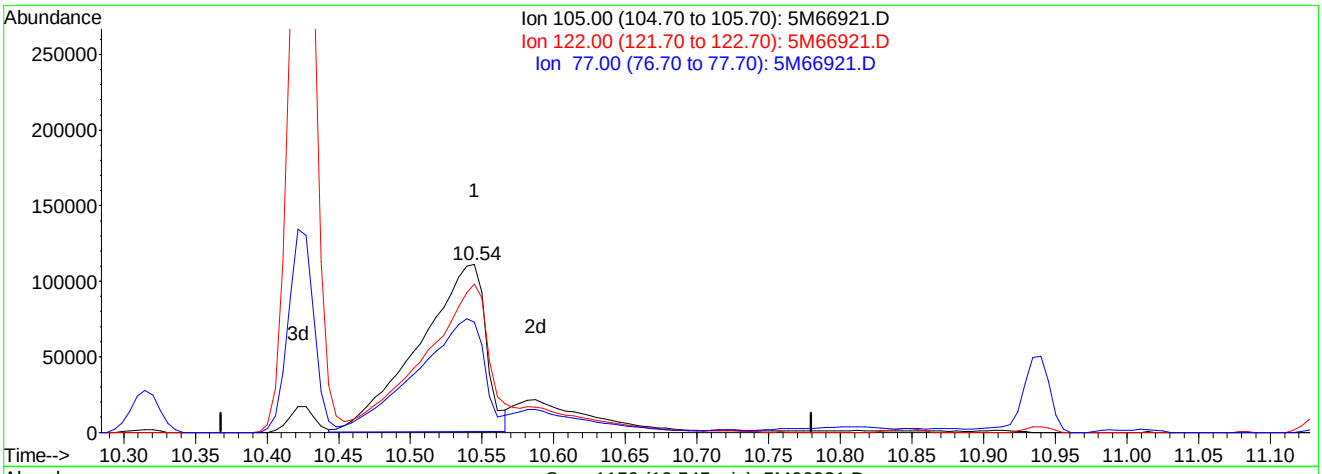


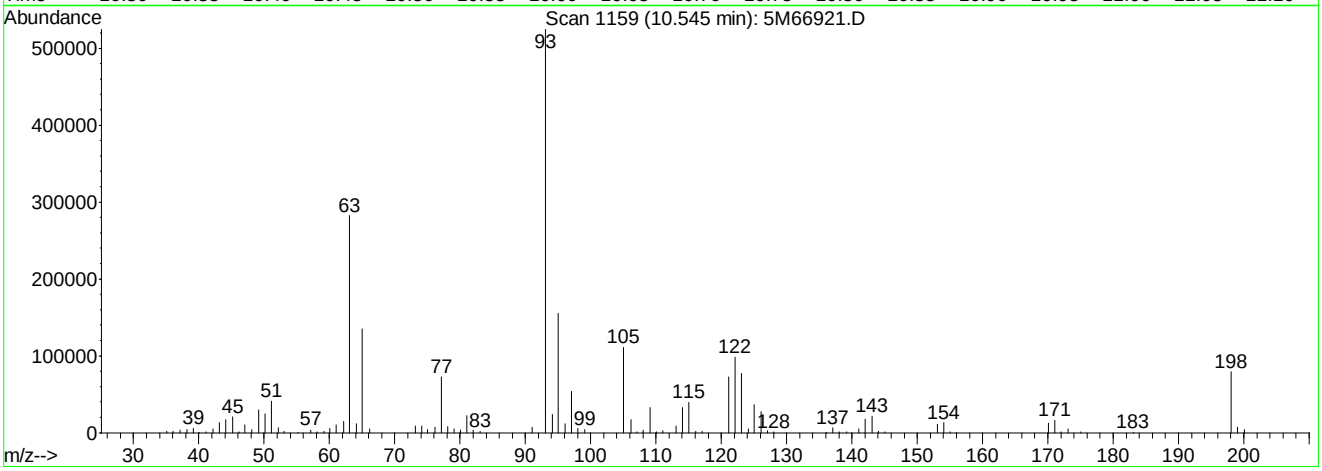

5M66921.D MEGAMIX.M Mon May 14 14:45:18 2012 Page 4

Quantitation Report (Qedit)

Data File : C:\MSDCHEM\1\DATA\051112\5M66921.D Vial: 7
Acq On : 11 May 2012 11:58 am Operator: CAA
Sample : WG397707-07 80PPM Megamix STD Inst : HPMS5
Misc : 1,1 STD50886 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 11 13:26 2012 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
Title : OVD MSS01 8270/625/Initial cal. 05/11/12
Last Update : Fri May 11 13:26:06 2012
Response via : Single Level Calibration




TIC: 5M66921.D

(39) Benzoic Acid

10.54min 67.50ug/ml

response 357967

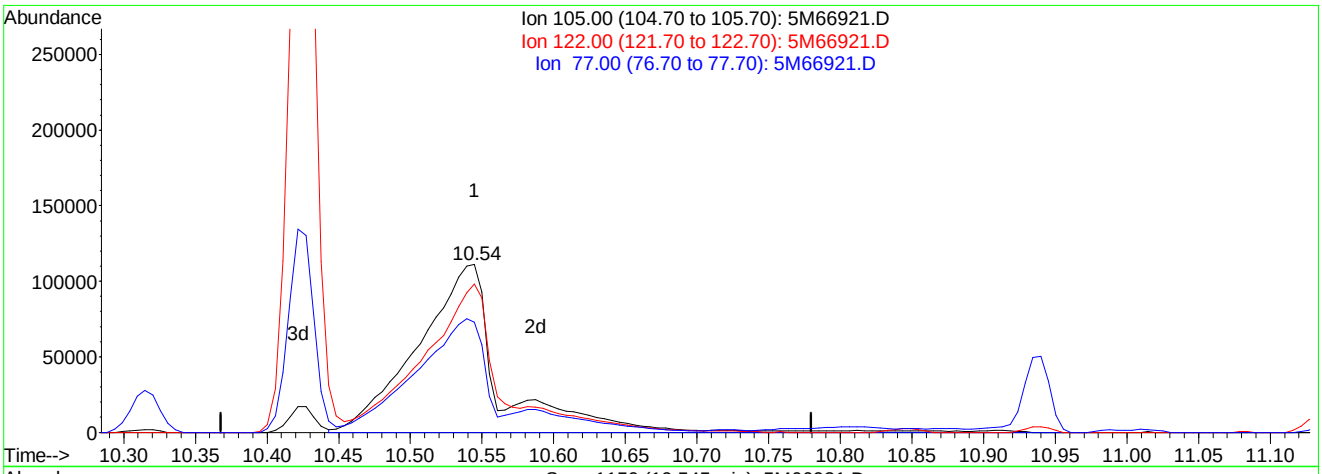
| Ion | Exp% | Act% |
|---|---|---|
| 105.00 | 100 | 100 |
| 122.00 | 57.00 | 75.46 |
| 77.00 | 51.30 | 69.34 |
| 0.00 | 0.00 | 0.00 |

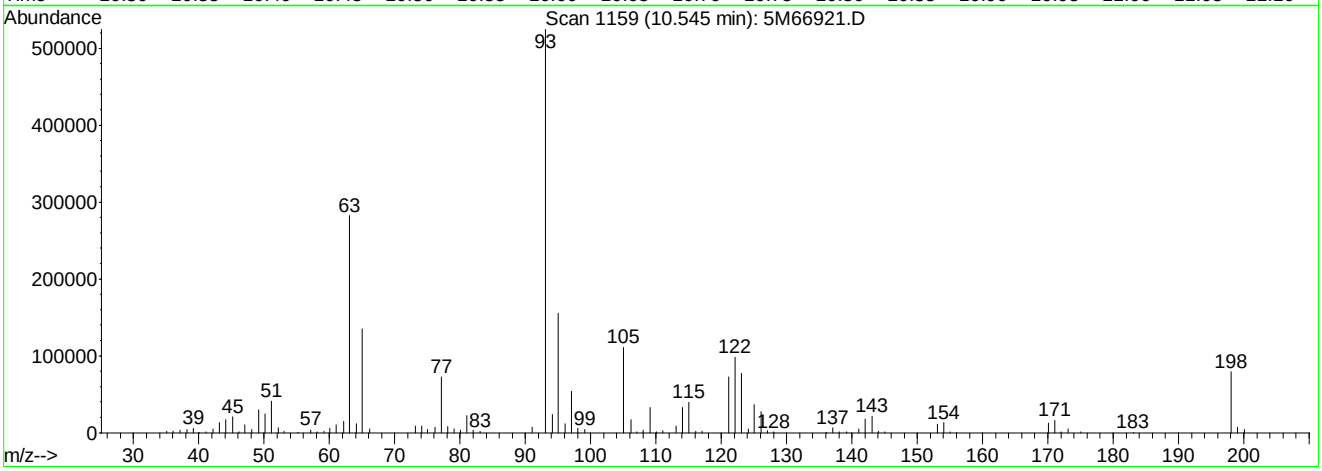
5M66921.D MEGAMIX.M Fri May 11 13:26:26 2012

Quantitation Report (Qedit)

Data File : C:\MSDCHEM\1\DATA\051112\5M66921.D Vial: 7
Acq On : 11 May 2012 11:58 am Operator: CAA
Sample : WG397707-07 80PPM Megamix STD Inst : HPMS5
Misc : 1,1 STD50886 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 11 13:26 2012 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
Title : OVD MSS01 8270/625/Initial cal. 05/11/12
Last Update : Fri May 11 13:26:06 2012
Response via : Single Level Calibration




TIC: 5M66921.D

(39) Benzoic Acid

10.54min 85.62ug/ml mint

response 454050

| Ion | Exp% | Act% |
|---|---|---|
| 105.00 | 100 | 100 |
| 122.00 | 57.00 | 59.49 |
| 77.00 | 51.30 | 54.67 |
| 0.00 | 0.00 | 0.00 |

5M66921.D MEGAMIX.M Fri May 11 ) 2012

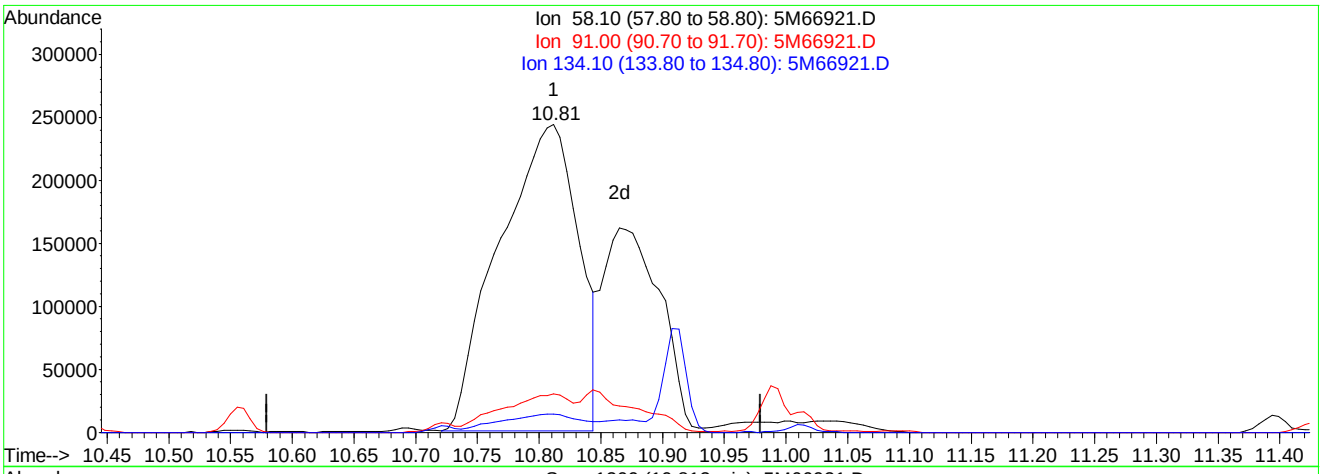
Analyst: 05/15/2012 07:35 Supervisor: 05/15/2012 09:20

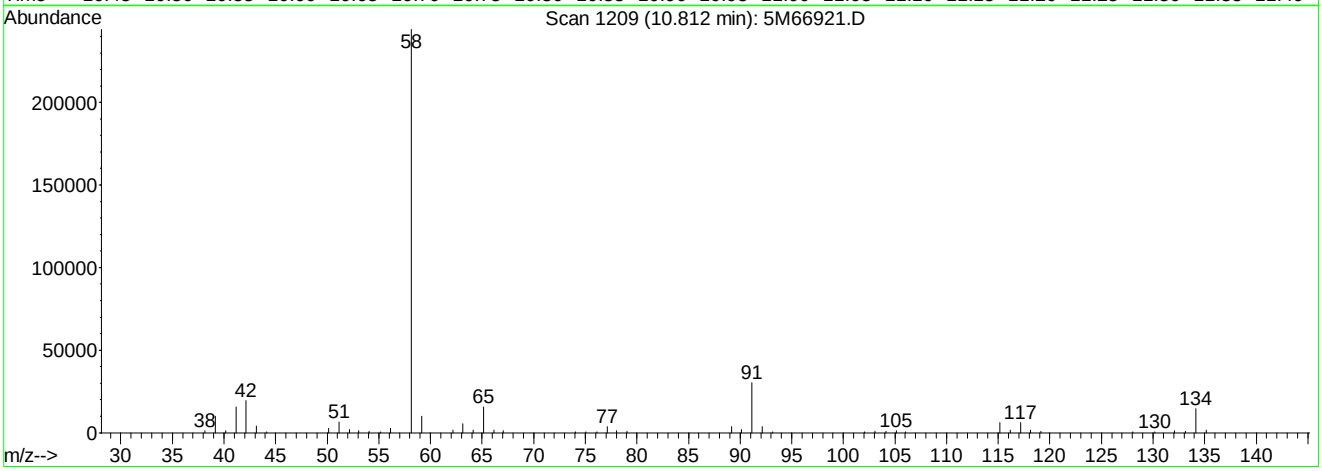
#2 - Data system splits the peak incorrectly or integrates a false peak as a rider peak

Quantitation Report (Qedit)

Data File : C:\MSDCHEM\1\DATA\051112\5M66921.D Vial: 7
Acq On : 11 May 2012 11:58 am Operator: CAA
Sample : WG397707-07 80PPM Megamix STD Inst : HPMS5
Misc : 1,1 STD50886 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 11 13:26 2012 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
Title : OVD MSS01 8270/625/Initial cal. 05/11/12
Last Update : Fri May 11 13:26:06 2012
Response via : Multiple Level Calibration




TIC: 5M66921.D

(41) a,a-Dimethylphenethylamine

10.81min 47.60ug/ml

response 1078621

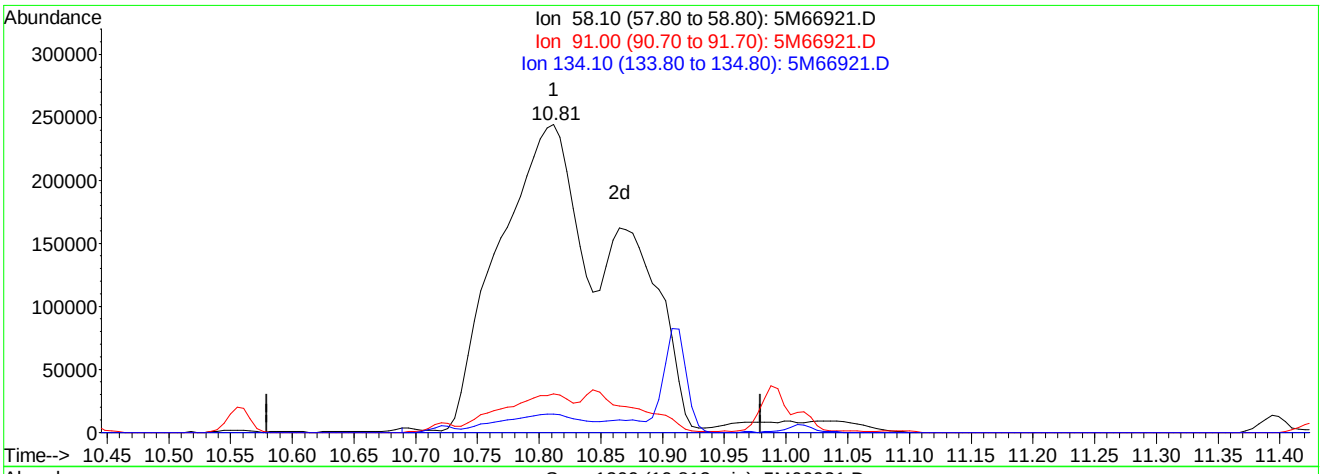
| Ion | Exp% | Act% |
|---|---|---|
| 58.10 | 100 | 100 |
| 91.00 | 9.00 | 10.76 |
| 134.10 | 4.40 | 4.58 |
| 0.00 | 0.00 | 0.00 |

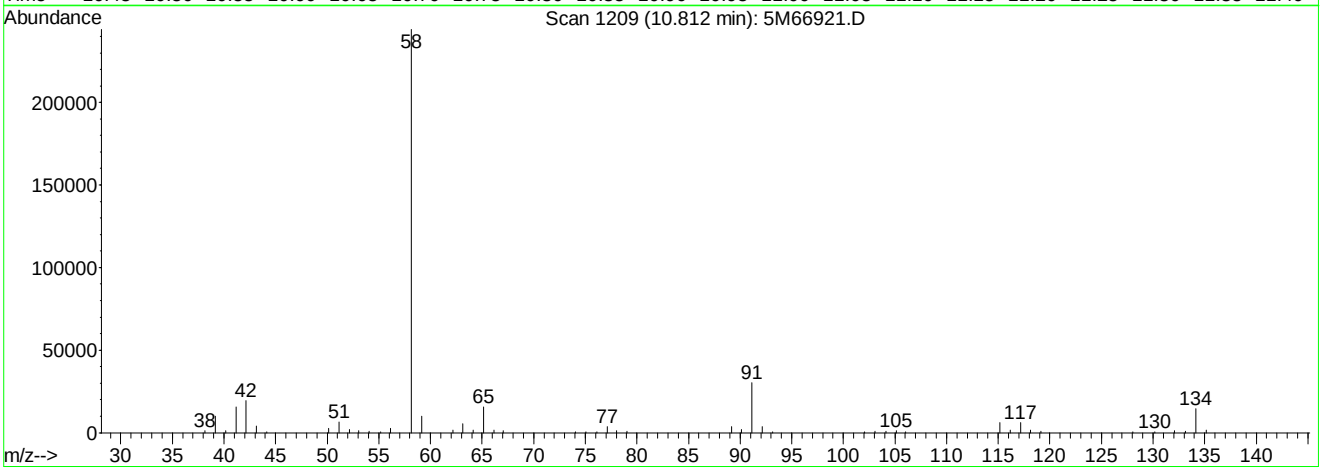
5M66921.D MEGAMIX.M Fri May 11 13:26:34 2012

Quantitation Report (Qedit)

Data File : C:\MSDCHEM\1\DATA\051112\5M66921.D Vial: 7
Acq On : 11 May 2012 11:58 am Operator: CAA
Sample : WG397707-07 80PPM Megamix STD Inst : HPMS5
Misc : 1,1 STD50886 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 11 13:26 2012 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
Title : OVD MSS01 8270/625/Initial cal. 05/11/12
Last Update : Fri May 11 13:26:06 2012
Response via : Multiple Level Calibration




TIC: 5M66921.D

(41) a,a-Dimethylphenethylamine

10.81min 74.09ug/ml mint

response 1678868

| Ion | Exp% | Act% |
|---|---|---|
| 58.10 | 100 | 100 |
| 91.00 | 9.00 | 6.91# |
| 134.10 | 4.40 | 2.94# |
| 0.00 | 0.00 | 0.00 |

5M66921.D MEGAMIX.M Fri May 11 2012

Analyst: 05/15/2012 07:35 Supervisor: 05/15/2012 09:20

#2 - Data system splits the peak incorrectly or integrates a false peak as a rider peak

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\051112\5M66922.D Vial: 8
Acq On : 11 May 2012 12:34 pm Operator: CAA
Sample : WG397707-08 100PPM Megamix STD Inst : HPMS5
Misc : 1,1 STD50886 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 11 13:26:58 2012 Quant Results File: MEGAMIX.RES

Quant Method : C:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
Title : OVD MSS01 8270/625/Initial cal. 05/11/12
Last Update : Fri May 11 13:26:53 2012
Response via : Initial Calibration
DataAcq Meth : BNA

| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 1) 1,4-Dichlorobenzene-d4 | 9.30 | 152 | 278136 | 40.00 | ug/ml | 0.00 |
| 30) Naphthalene-d8 | 10.91 | 136 | 1055107 | 40.00 | ug/ml | 0.00 |
| 54) Acenaphthene-d10 | 13.03 | 164 | 622963 | 40.00 | ug/ml | 0.00 |
| 87) Phenanthrene-d10 | 14.65 | 188 | 1172403 | 40.00 | ug/ml | 0.00 |
| 113) Chrysene-d12 | 17.54 | 240 | 1396015 | 40.00 | ug/ml | 0.00 |
| 128) Perylene-d12 | 20.08 | 264 | 1134395 | 40.00 | ug/ml | 0.00 |
| **System Monitoring Compounds** | | | | | | |
| 8) 2-Fluorophenol | 7.73 | 112 | 745876 | 95.8574 | ug/ml | 0.00 |
| Spiked Amount 100.000 | Range 21 - 100 | | Recovery = 95.86% | | | |
| 12) Phenol-d5 | 8.84 | 99 | 872876 | 93.7591 | ug/ml | 0.01 |
| Spiked Amount 100.000 | Range 10 - 94 | | Recovery = 93.76% | | | |
| 31) Nitrobenzene-d5 | 10.02 | 82 | 814577 | 93.2468 | ug/ml | 0.00 |
| Spiked Amount 50.000 | Range 35 - 114 | | Recovery = 186.50%# | | | |
| 59) 2-Fluorobiphenyl | 12.22 | 172 | 1976107 | 93.7730 | ug/ml | 0.00 |
| Spiked Amount 50.000 | Range 43 - 116 | | Recovery = 187.54%# | | | |
| 86) 2,4,6-Tribromophenol | 13.91 | 330 | 351408 | 106.2333 | ug/ml | 0.00 |
| Spiked Amount 100.000 | Range 10 - 123 | | Recovery = 106.23% | | | |
| 117) p-Terphenyl-d14 | 16.27 | 244 | 1870720 | 82.7408 | ug/ml | 0.00 |
| Spiked Amount 50.000 | Range 33 - 141 | | Recovery = 165.48%# | | | |
| **Target Compounds** | | | | | | Qvalue |
| 2) 1,4-Dioxane | 5.13 | 88 | 304075 | 86.1243 | ug/ml# | 100 |
| 3) n-Nitrosodimethylamine | 5.80 | 74 | 434723 | 92.7857 | ug/ml | 97 |
| 4) Pyridine | 5.80 | 79 | 762289 | 91.6591 | ug/ml | 98 |
| 5) 2-Picoline | 6.94 | 93 | 845906 | 93.7080 | ug/ml | 99 |
| 6) n-Nitrosomethylethylamine | 7.12 | 88 | 350840 | 92.8470 | ug/ml | 97 |
| 7) Methyl Methanesulfonate | 7.53 | 80 | 400305 | 86.7057 | ug/ml | 99 |
| 9) n-Nitrosodiethylamine | 8.03 | 102 | 373636 | 95.4856 | ug/ml | 94 |
| 10) Ethyl Methanesulfonate | 8.38 | 79 | 542765 | 91.9791 | ug/ml | 99 |
| 11) Aniline | 8.93 | 93 | 1219488 | 93.8812 | ug/ml | 98 |
| 13) Phenol | 8.86 | 94 | 898957 | 92.7503 | ug/ml | 96 |
| 14) bis(2-Chloroethyl)ether | 8.97 | 63 | 463082 | 84.1007 | ug/ml | 94 |
| 15) Pentachloroethane | 8.95 | 167 | 353961 | 96.7610 | ug/ml | 100 |
| 16) 2-Chlorophenol | 9.08 | 128 | 864890 | 97.2933 | ug/ml | 98 |
| 17) 1,3-Dichlorobenzene | 9.26 | 146 | 997637 | 96.9212 | ug/ml | 99 |
| 18) 1,4-Dichlorobenzene | 9.32 | 146 | 1038224 | 96.3539 | ug/ml | 99 |
| 19) Benzyl Alcohol | 9.46 | 108 | 553153 | 98.0635 | ug/ml | 97 |
| 20) 1,2-Dichlorobenzene | 9.56 | 146 | 962918 | 97.5218 | ug/ml | 99 |
| 21) 2-Methylphenol | 9.61 | 107 | 676884 | 96.6369 | ug/ml | 99 |
| 22) bis(2-Chloroisopropyl)ethe | 9.64 | 45 | 890071 | 79.4057 | ug/ml | 94 |
| 23) 3-,4-Methylphenol | 9.78 | 107 | 864925 | 97.2620 | ug/ml | 98 |
| 24) n-Nitrosopyrrolidine | 9.82 | 100 | 329118 | 93.4104 | ug/ml | 84 |
| 25) n-Nitrosodipropylamine | 9.84 | 70 | 402885 | 79.8124 | ug/ml | 95 |
| 26) Acetophenone | 9.81 | 105 | 1011977 | 91.8826 | ug/ml | 98 |
| 27) n-Nitrosomorpholine | 9.84 | 56 | 337552 | 76.5722 | ug/ml | 97 |
| 28) o-Toluidine | 9.87 | 106 | 1308486 | 94.5857 | ug/ml | 100 |
| 29) Hexachloroethane | 9.95 | 117 | 376476 | 96.3686 | ug/ml | 98 |
| 32) Nitrobenzene | 10.04 | 77 | 777068 | 91.0259 | ug/ml | 96 |
| 33) n-Nitrosopiperidine | 10.23 | 114 | 412194 | 96.5886 | ug/ml | 92 |
| 34) Isophorone | 10.32 | 82 | 1382919 | 91.2840 | ug/ml | 98 |
| 35) 2-Nitrophenol | 10.44 | 139 | 484748 | 96.5563 | ug/ml | 93 |
| 36) 2,4-Dimethylphenol | 10.43 | 122 | 759510 | 94.7507 | ug/ml | 97 |
| 37) 0,0,0-Triethyl Phosphoroth | 10.56 | 198 | 447937 | 92.7681 | ug/ml | 97 |
| 38) bis(2-Chloroethoxy)methane | 10.55 | 93 | 990356 | 85.5043 | ug/ml | 99 |

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

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\051112\5M66922.D Vial: 8
Acq On : 11 May 2012 12:34 pm Operator: CAA
Sample : WG397707-08 100PPM Megamix STD Inst : HPMS5
Misc : 1,1 STD50886 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 11 13:26:58 2012 Quant Results File: MEGAMIX.RES

Quant Method : C:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
Title : OVD MSS01 8270/625/Initial cal. 05/11/12
Last Update : Fri May 11 13:26:53 2012
Response via : Initial Calibration
DataAcq Meth : BNA

| | Compound | R.T. | QIon | Response | Conc | Unit | Qvalue |
|---|---|---|---|---|---|---|---|
| 39) | Benzoic Acid | 10.57 | 105 | 601840m | 114.4009 | ug/ml | |
| 40) | 2,4-Dichlorophenol | 10.73 | 162 | 801159 | 100.4819 | ug/ml | 99 |
| 41) | a,a-Dimethylphenethylamine | 10.83 | 58 | 2053742m | 89.7857 | ug/ml | |
| 42) | 1,2,4-Trichlorobenzene | 10.85 | 180 | 881062 | 96.8412 | ug/ml | 99 |
| 43) | Naphthalene | 10.94 | 128 | 2357670 | 90.9556 | ug/ml | 99 |
| 44) | 4-Chloroaniline | 10.99 | 127 | 1092595 | 97.3348 | ug/ml | 98 |
| 45) | 2,6-Dichlorophenol | 11.02 | 162 | 813484 | 99.8374 | ug/ml | 99 |
| 46) | Hexachloropropene | 11.09 | 213 | 592681 | 100.2418 | ug/ml | 99 |
| 47) | Hexachlorobutadiene | 11.14 | 225 | 524888 | 97.2538 | ug/ml | 100 |
| 48) | n-Nitrosodi-n-Butylamine | 11.40 | 84 | 527499 | 85.0819 | ug/ml | 88 |
| 49) | p-Phenylenediamine | 11.43 | 108 | 463668 | 88.6439 | ug/ml | 99 |
| 50) | 4-Chloro-3-Methylphenol | 11.56 | 107 | 700589 | 95.0784 | ug/ml | 97 |
| 51) | Safrole | 11.65 | 162 | 741297 | 97.8560 | ug/ml | 98 |
| 52) | 2-Methylnaphthalene | 11.78 | 142 | 1648619 | 92.0722 | ug/ml | 100 |
| 53) | 1-Methylnaphthalene | 11.92 | 142 | 1562075 | 92.4174 | ug/ml | 99 |
| 55) | 1,2,4,5-Tetrachlorobenzene | 12.03 | 216 | 870163 | 95.0553 | ug/ml | 100 |
| 56) | Hexachlorocyclopentadiene | 12.04 | 237 | 486616 | 91.1077 | ug/ml | 99 |
| 57) | 2,4,6-Trichlorophenol | 12.13 | 196 | 635200 | 101.7313 | ug/ml | 100 |
| 58) | 2,4,5-Trichlorophenol | 12.19 | 196 | 667799 | 103.3255 | ug/ml | 100 |
| 60) | Isosafrole | 12.26 | 162 | 786532 | 98.6517 | ug/ml | 97 |
| 61) | 2-Chloronaphthalene | 12.37 | 162 | 1713582 | 94.9485 | ug/ml | 99 |
| 62) | 1-Chloronaphthalene | 12.42 | 162 | 1622210 | 94.2028 | ug/ml | 100 |
| 63) | 2-Nitroaniline | 12.49 | 65 | 418789 | 90.3970 | ug/ml | 92 |
| 64) | 1,4-Naphthoquinone | 12.56 | 158 | 284998 | 58.1873 | ug/ml | 99 |
| 65) | Dimethylphthalate | 12.70 | 163 | 1919141 | 95.2485 | ug/ml | 99 |
| 66) | 1,3-Dinitrobenzene | 12.75 | 168 | 390262 | 103.5457 | ug/ml | 93 |
| 67) | 2,6-Dinitrotoluene | 12.79 | 165 | 497130 | 100.9760 | ug/ml | 94 |
| 68) | Acenaphthylene | 12.87 | 152 | 2517917 | 91.8274 | ug/ml | 98 |
| 69) | 3-Nitroaniline | 12.97 | 138 | 525524 | 102.4460 | ug/ml | 96 |
| 70) | 2,4-Dinitrophenol | 13.08 | 184 | 297425 | 118.5656 | ug/ml | 47 |
| 71) | Acenaphthene | 13.07 | 154 | 1589479 | 91.0304 | ug/ml | 98 |
| 72) | 4-Nitrophenol | 13.10 | 65 | 358531 | 98.1554 | ug/ml | 97 |
| 73) | 2,4-Dinitrotoluene | 13.25 | 165 | 580664 | 92.6525 | ug/ml | 94 |
| 74) | Pentachlorobenzene | 13.27 | 250 | 850196 | 99.3378 | ug/ml | 99 |
| 75) | Dibenzofuran | 13.24 | 168 | 2118299 | 87.6409 | ug/ml | 100 |
| 76) | 2,3,4,6-Tetrachlorophenol | 13.41 | 232 | 507908 | 92.0805 | ug/ml | 99 |
| 77) | 1-Naphthylamine | 13.33 | 143 | 1717202 | 98.6707 | ug/ml | 99 |
| 78) | 2-Naphthylamine | 13.41 | 143 | 1518774 | 100.7718 | ug/ml | 99 |
| 79) | Diethylphthalate | 13.47 | 149 | 1831618 | 92.9648 | ug/ml | 99 |
| 80) | Thionazin | 13.57 | 107 | 238646 | 84.1639 | ug/ml | 99 |
| 81) | Fluorene | 13.63 | 166 | 1929512 | 90.5402 | ug/ml | 100 |
| 82) | 4-Chlorophenyl Phenyl Ethe | 13.58 | 204 | 874546 | 85.3872 | ug/ml | 100 |
| 83) | 4-Nitroaniline | 13.67 | 138 | 497747 | 94.6937 | ug/ml | 98 |
| 84) | 5-Nitro-o-Toluidine | 13.65 | 152 | 640202 | 99.6947 | ug/ml | 97 |
| 85) | 1,2-Diphenylhydrazine | 13.76 | 77 | 1469780 | 84.2877 | ug/ml | 94 |
| 88) | 4,6-Dinitro-2-Methylphenol | 13.70 | 198 | 410824 | 110.4999 | ug/ml | 79 |
| 89) | n-Nitrosodiphenylamine | 13.72 | 169 | 1670486 | 90.6919 | ug/ml | 99 |
| 90) | Sulfotepp | 13.93 | 322 | 425219 | 101.0545 | ug/ml | 93 |
| 91) | Sym-Trinitrobenzene | 14.02 | 75 | 434552 | 95.9728 | ug/ml | 93 |
| 92) | Diallate | 14.04 | 86 | 530181 | 82.0175 | ug/ml | 92 |
| 93) | Phenacetin | 14.05 | 108 | 714619 | 80.7826 | ug/ml | 98 |
| 94) | Phorate | 14.06 | 75 | 697632 | 71.4197 | ug/ml# | 92 |
| 95) | 4-Bromophenyl Phenyl Ether | 14.12 | 248 | 667586 | 99.7794 | ug/ml | 98 |
| 96) | Hexachlorobenzene | 14.32 | 284 | 742168 | 99.0545 | ug/ml | 97 |

(#) = qualifier out of range (m) = manual integration
5M66922.D MEGAMIX.M Mon May 14 14:45:19 2012 Page 2

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\051112\5M66922.D Vial: 8
Acq On : 11 May 2012 12:34 pm Operator: CAA
Sample : WG397707-08 100PPM Megamix STD Inst : HPMS5
Misc : 1,1 STD50886 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 11 13:26:58 2012 Quant Results File: MEGAMIX.RES

Quant Method : C:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
Title : OVD MSS01 8270/625/Initial cal. 05/11/12
Last Update : Fri May 11 13:26:53 2012
Response via : Initial Calibration
DataAcq Meth : BNA

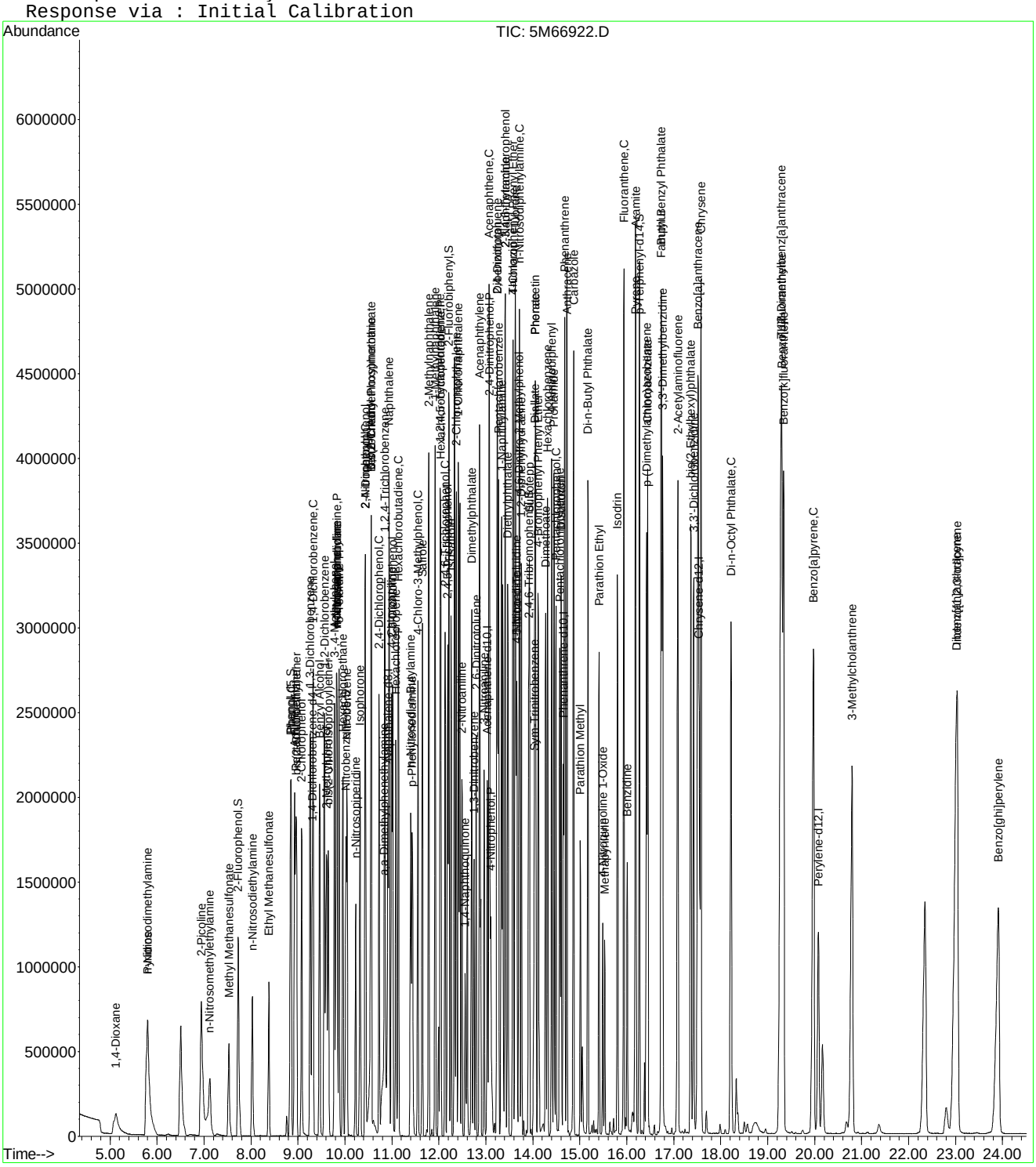
| | Compound | R.T. | QIon | Response | Conc | Unit | Qvalue |
|---|---|---|---|---|---|---|---|
| 97) | Dimethoate | 14.27 | 87 | 321975 | 60.8538 | ug/ml | 99 |
| 98) | 4-Aminobiphenyl | 14.40 | 169 | 1926665 | 95.9077 | ug/ml | 99 |
| 99) | Pentachlorophenol | 14.49 | 266 | 511615 | 105.4603 | ug/ml | 99 |
| 100) | Pronamide | 14.45 | 173 | 896190 | 93.8093 | ug/ml | 99 |
| 101) | Pentachloronitrobenzene | 14.57 | 237 | 260529 | 93.6419 | ug/ml | 99 |
| 102) | Disulfoton | 14.61 | 88 | 797944 | 88.0292 | ug/ml | 100 |
| 103) | Phenanthrene | 14.68 | 178 | 2712131 | 89.2134 | ug/ml | 99 |
| 104) | Anthracene | 14.73 | 178 | 2695076 | 87.2522 | ug/ml | 99 |
| 105) | Carbazole | 14.87 | 167 | 2551842 | 90.6030 | ug/ml | 100 |
| 106) | Parathion Methyl | 15.01 | 109 | 345887 | 66.5500 | ug/ml | 95 |
| 107) | Di-n-Butyl Phthalate | 15.17 | 149 | 2805526 | 86.3185 | ug/ml | 99 |
| 108) | Parathion Ethyl | 15.41 | 97 | 310964 | 86.9301 | ug/ml | 96 |
| 109) | 4-Nitroquinoline 1-Oxide | 15.49 | 190 | 213284 | 104.7252 | ug/ml | 96 |
| 110) | Methapyrilene | 15.53 | 58 | 372114 | 63.2502 | ug/ml | 99 |
| 111) | Isodrin | 15.80 | 193 | 330781 | 94.6545 | ug/ml | 97 |
| 112) | Fluoranthene | 15.94 | 202 | 2893090 | 87.5238 | ug/ml | 99 |
| 114) | Benzidine | 16.01 | 184 | 797994 | 105.6742 | ug/ml | 100 |
| 115) | Pyrene | 16.19 | 202 | 2770362 | 81.7473 | ug/ml | 98 |
| 116) | Aramite | 16.20 | 185 | 159677 | 84.9770 | ug/ml | 97 |
| 118) | p-(Dimethylamino)azobenzen | 16.42 | 225 | 780431 | 97.0079 | ug/ml | 94 |
| 119) | Chlorobenzilate | 16.45 | 251 | 1082921 | 97.0423 | ug/ml | 96 |
| 120) | Famphur | 16.73 | 218 | 326 | 3.1986 | ug/ml# | 1 |
| 121) | Butyl Benzyl Phthalate | 16.74 | 149 | 1087749 | 77.5486 | ug/ml | 99 |
| 122) | 3,3'-Dimethylbenzidine | 16.76 | 212 | 2188656 | 95.5983 | ug/ml | 99 |
| 123) | 2-Acetylaminofluorene | 17.09 | 181 | 1402163 | 96.2220 | ug/ml | 99 |
| 124) | bis(2-Ethylhexyl)phthalate | 17.36 | 149 | 1866397 | 88.1290 | ug/ml | 99 |
| 125) | 3,3'-Dichlorobenzidine | 17.43 | 252 | 1208414 | 99.3158 | ug/ml | 100 |
| 126) | Benzo[a]anthracene | 17.52 | 228 | 3299277 | 93.4481 | ug/ml | 98 |
| 127) | Chrysene | 17.58 | 228 | 2960251 | 89.8418 | ug/ml | 98 |
| 129) | Di-n-Octyl Phthalate | 18.22 | 149 | 3246154 | 98.8102 | ug/ml | 98 |
| 130) | 7,12-Dimethylbenz[a]anthra | 19.28 | 256 | 1613690 | 104.1154 | ug/ml | 99 |
| 131) | Benzo[b]fluoranthene | 19.31 | 252 | 3929314 | 106.9315 | ug/ml | 96 |
| 132) | Benzo[k]fluoranthene | 19.34 | 252 | 2970069m | 101.1647 | ug/ml | |
| 133) | Benzo[a]pyrene | 19.97 | 252 | 3162018 | 103.3332 | ug/ml | 99 |
| 134) | 3-Methylcholanthrene | 20.80 | 268 | 1633527 | 100.5260 | ug/ml | 99 |
| 135) | Indeno[1,2,3-cd]pyrene | 23.04 | 276 | 3453631 | 97.0296 | ug/ml | 99 |
| 136) | Dibenz[ah]anthracene | 23.02 | 278 | 2904598 | 97.1872 | ug/ml | 99 |
| 137) | Benzo[ghi]perylene | 23.91 | 276 | 2596425 | 92.6318 | ug/ml | 99 |

(#) = qualifier out of range (m) = manual integration
5M66922.D MEGAMIX.M Mon May 14 14:45:19 2012 Page 3

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\051112\5M66922.D Vial: 8
Acq On : 11 May 2012 12:34 pm Operator: CAA
Sample : WG397707-08 100PPM Megamix STD Inst : HPMS5
Misc : 1,1 STD50886 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 11 13:27 2012 Quant Results File: MEGAMIX.RES

Method : C:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
Title : OVD MSS01 8270/625/Initial cal. 05/11/12
Last Update : Fri May 11 14:12:23 2012
Response via : Initial Calibration

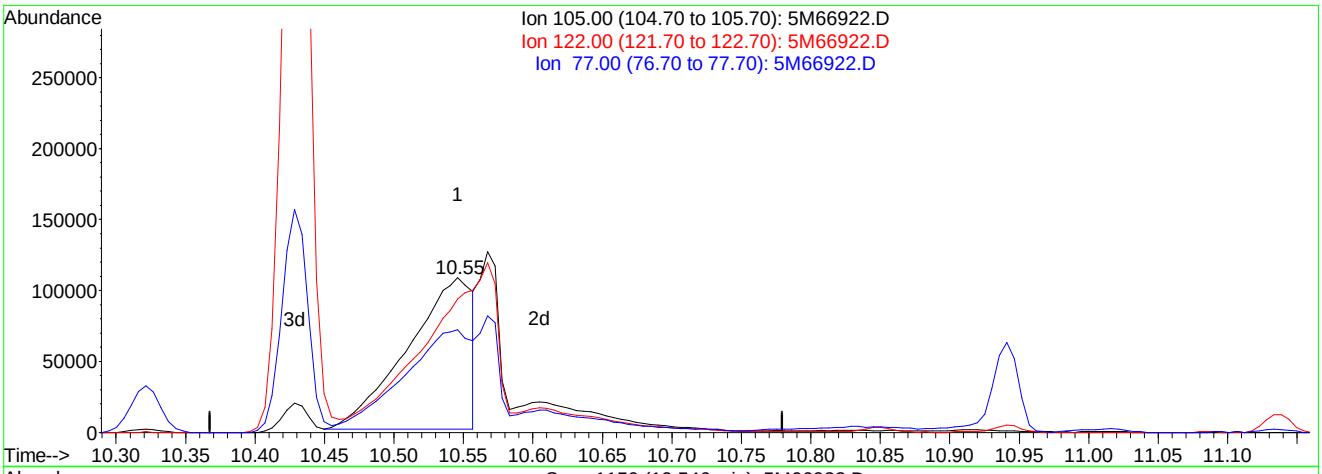


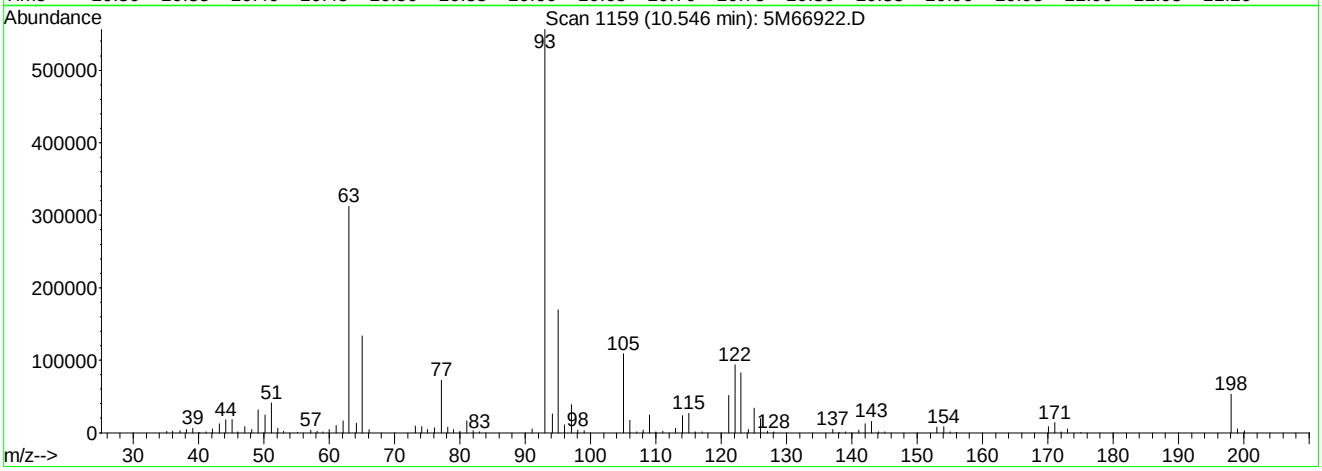

5M66922.D MEGAMIX.M Mon May 14 14:45:19 2012 Page 4

Quantitation Report (Qedit)

Data File : C:\MSDCHEM\1\DATA\051112\5M66922.D Vial: 8
Acq On : 11 May 2012 12:34 pm Operator: CAA
Sample : WG397707-08 100PPM Megamix STD Inst : HPMS5
Misc : 1,1 STD50886 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 11 13:26 2012 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
Title : OVD MSS01 8270/625/Initial cal. 05/11/12
Last Update : Fri May 11 13:26:53 2012
Response via : Single Level Calibration




TIC: 5M66922.D

(39) Benzoic Acid

10.55min 65.31ug/ml

response 343579

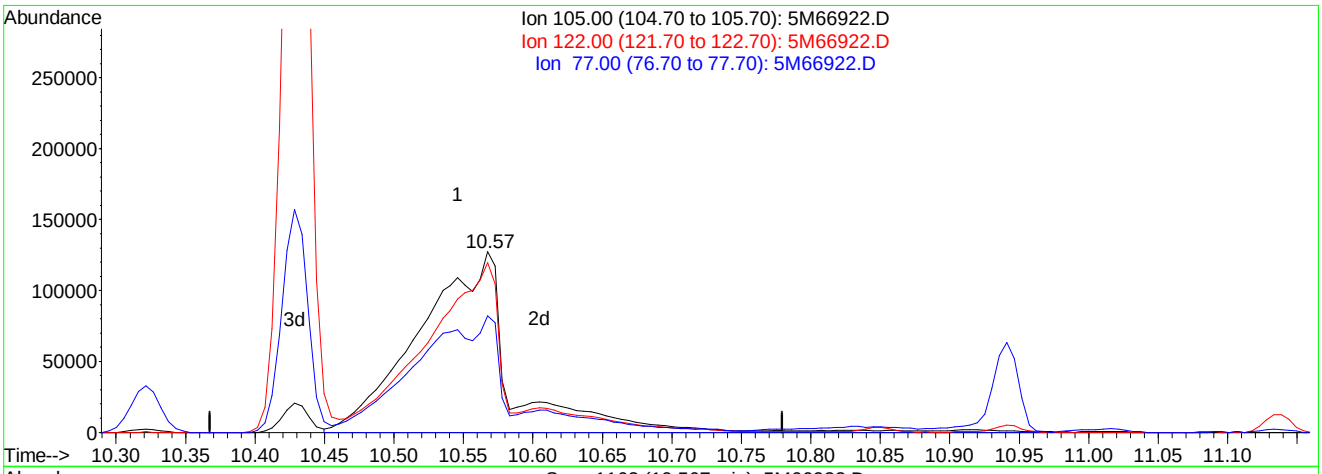
| Ion | Exp% | Act% |
|---|---|---|
| 105.00 | 100 | 100 |
| 122.00 | 57.00 | 108.11# |
| 77.00 | 51.30 | 64.09 |
| 0.00 | 0.00 | 0.00 |

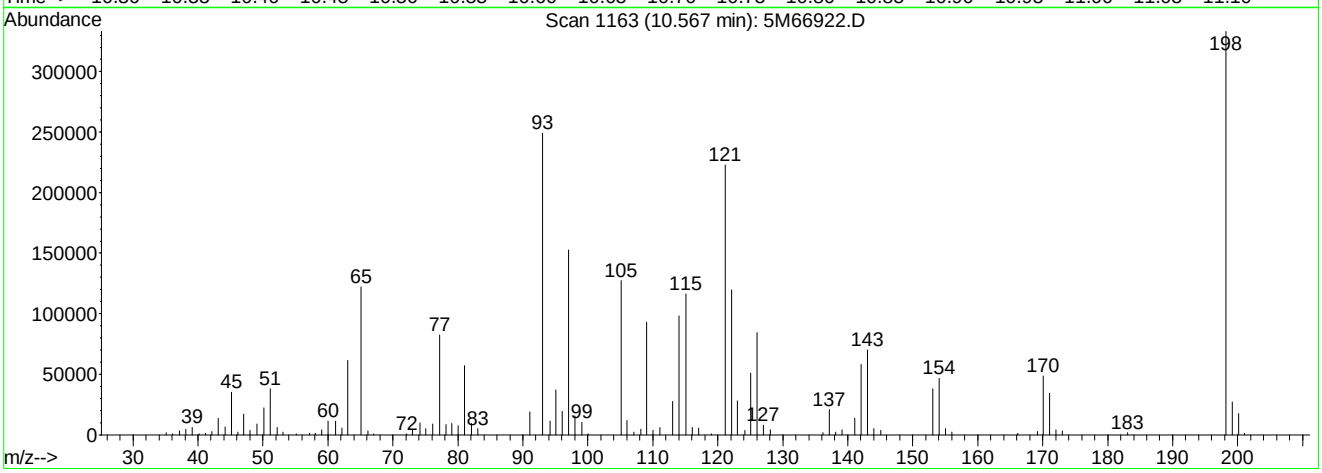
5M66922.D MEGAMIX.M Fri May 11 13:27:06 2012

Quantitation Report (Qedit)

Data File : C:\MSDCHEM\1\DATA\051112\5M66922.D Vial: 8
Acq On : 11 May 2012 12:34 pm Operator: CAA
Sample : WG397707-08 100PPM Megamix STD Inst : HPMS5
Misc : 1,1 STD50886 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 11 13:27 2012 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
Title : OVD MSS01 8270/625/Initial cal. 05/11/12
Last Update : Fri May 11 13:26:53 2012
Response via : Single Level Calibration




TIC: 5M66922.D

(39) Benzoic Acid

10.57min 114.40ug/ml mint

response 601840

| Ion | Exp% | Act% |
|---|---|---|
| 105.00 | 100 | 100 |
| 122.00 | 57.00 | 61.72 |
| 77.00 | 51.30 | 36.59 |
| 0.00 | 0.00 | 0.00 |

5M66922.D MEGAMIX.M Fri May 11 ) 2012

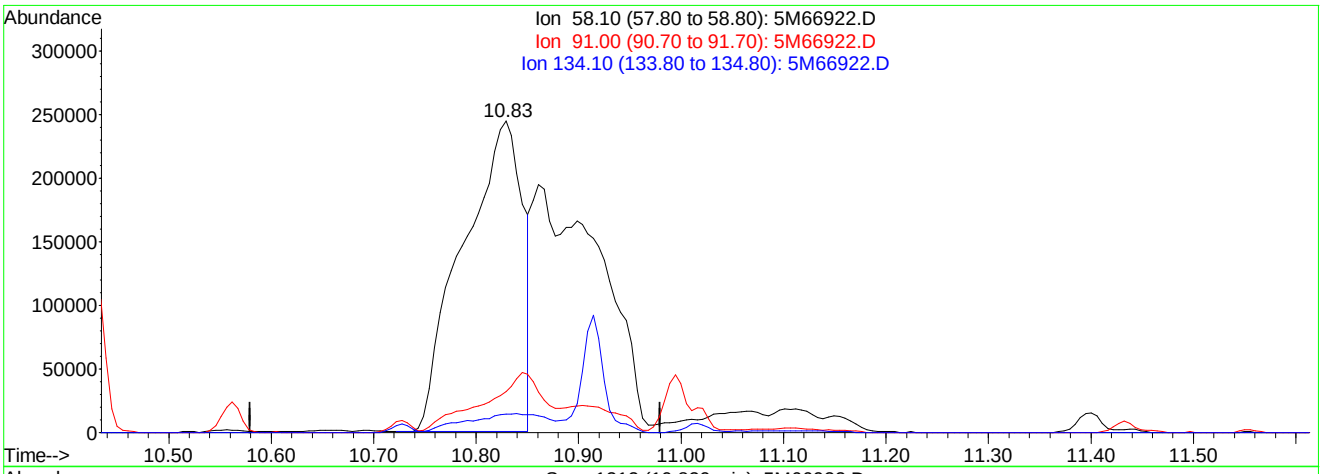
Analyst: 05/15/2012 07:35 Supervisor: 05/15/2012 09:21

#2 - Data system splits the peak incorrectly or integrates a false peak as a rider peak

Quantitation Report (Qedit)

Data File : C:\MSDCHEM\1\DATA\051112\5M66922.D Vial: 8
Acq On : 11 May 2012 12:34 pm Operator: CAA
Sample : WG397707-08 100PPM Megamix STD Inst : HPMS5
Misc : 1,1 STD50886 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 11 13:27 2012 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
Title : OVD MSS01 8270/625/Initial cal. 05/11/12
Last Update : Fri May 11 13:26:53 2012
Response via : Multiple Level Calibration




TIC: 5M66922.D

(41) a,a-Dimethylphenethylamine

10.83min 43.22ug/ml

response 988624

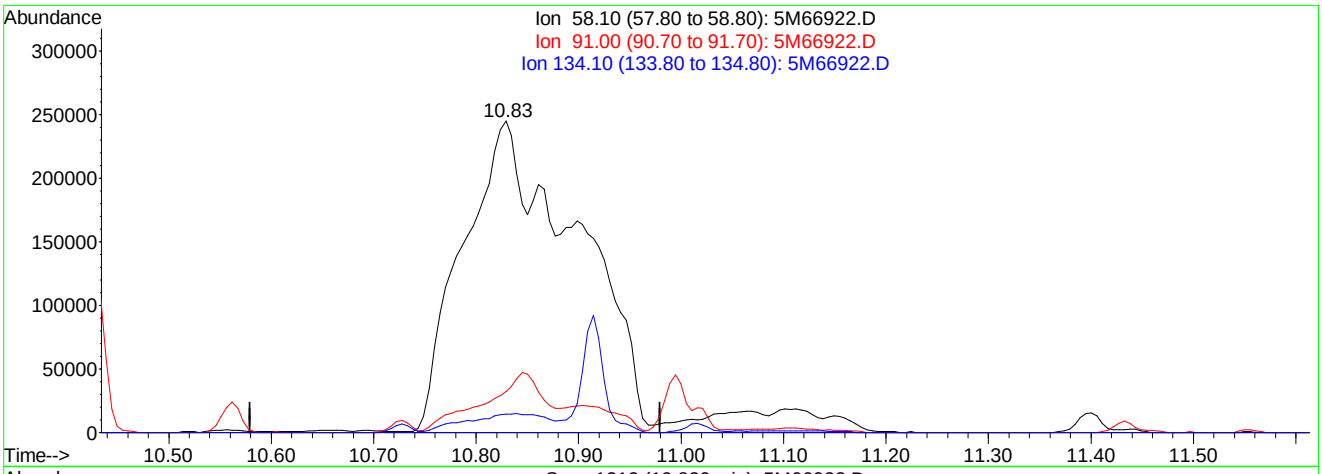
| Ion | Exp% | Act% |
|---|---|---|
| 58.10 | 100 | 100 |
| 91.00 | 9.00 | 18.51# |
| 134.10 | 4.40 | 7.55# |
| 0.00 | 0.00 | 0.00 |

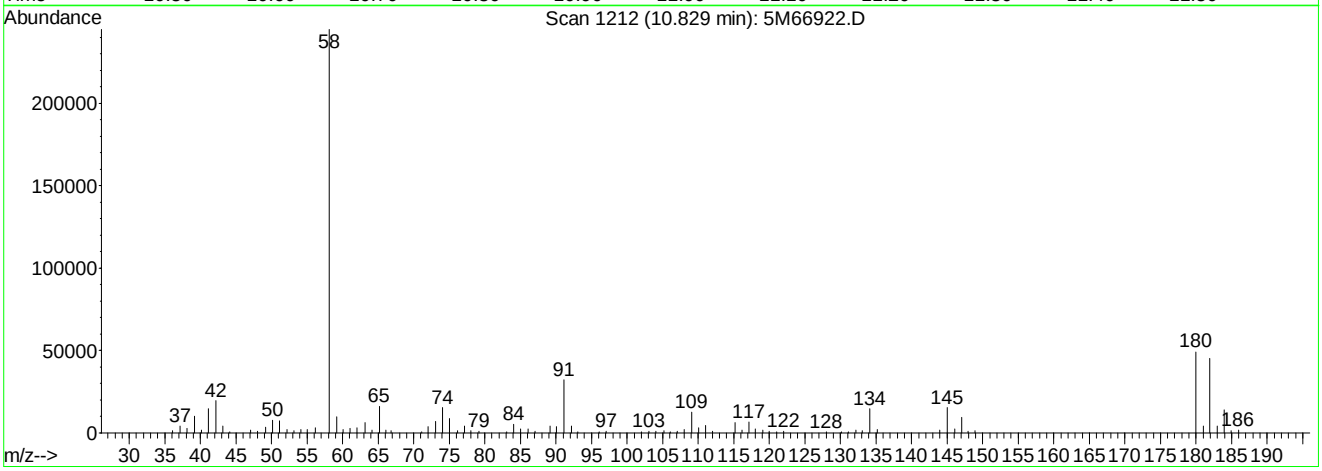
5M66922.D MEGAMIX.M Fri May 11 13:27:14 2012

Quantitation Report (Qedit)

Data File : C:\MSDCHEM\1\DATA\051112\5M66922.D Vial: 8
Acq On : 11 May 2012 12:34 pm Operator: CAA
Sample : WG397707-08 100PPM Megamix STD Inst : HPMS5
Misc : 1,1 STD50886 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 11 13:27 2012 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
Title : OVD MSS01 8270/625/Initial cal. 05/11/12
Last Update : Fri May 11 13:26:53 2012
Response via : Multiple Level Calibration




TIC: 5M66922.D

(41) a,a-Dimethylphenethylamine

10.83min 89.79ug/ml mint

response 2053742

| Ion | Exp% | Act% |
|---|---|---|
| 58.10 | 100 | 100 |
| 91.00 | 9.00 | 8.91 |
| 134.10 | 4.40 | 3.64 |
| 0.00 | 0.00 | 0.00 |

5M66922.D MEGAMIX.M Fri May 11 2012

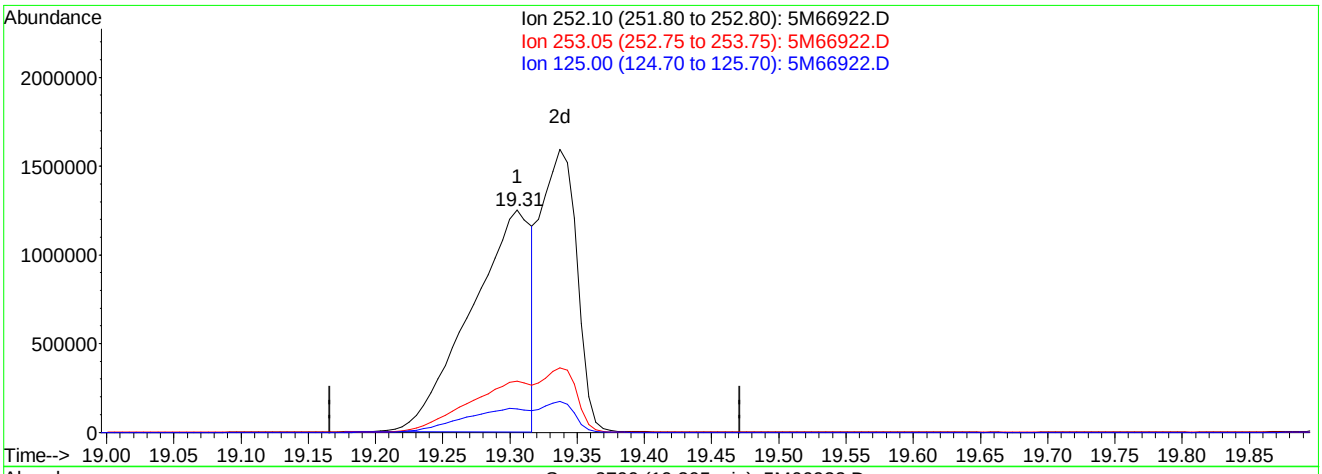
Analyst: 05/15/2012 07:35 Supervisor: 05/15/2012 09:21

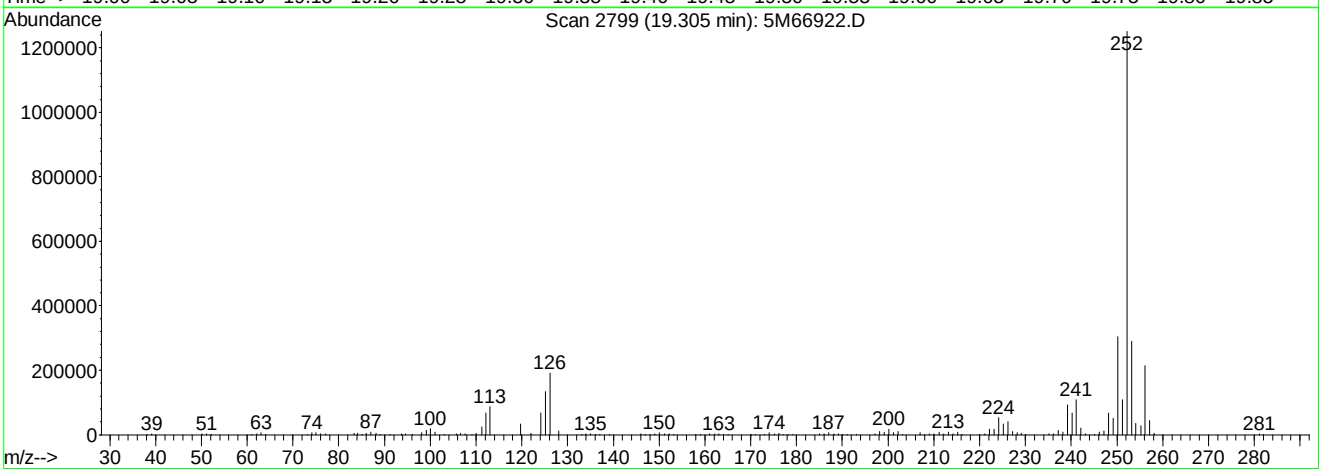
#2 - Data system splits the peak incorrectly or integrates a false peak as a rider peak

Quantitation Report (Qedit)

Data File : C:\MSDCHEM\1\DATA\051112\5M66922.D Vial: 8
Acq On : 11 May 2012 12:34 pm Operator: CAA
Sample : WG397707-08 100PPM Megamix STD Inst : HPMS5
Misc : 1,1 STD50886 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 11 13:27 2012 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
Title : OVD MSS01 8270/625/Initial cal. 05/11/12
Last Update : Fri May 11 13:26:53 2012
Response via : Multiple Level Calibration




TIC: 5M66922.D

(132) Benzo[k]fluoranthene

19.31min 133.19ug/ml

response 3910381

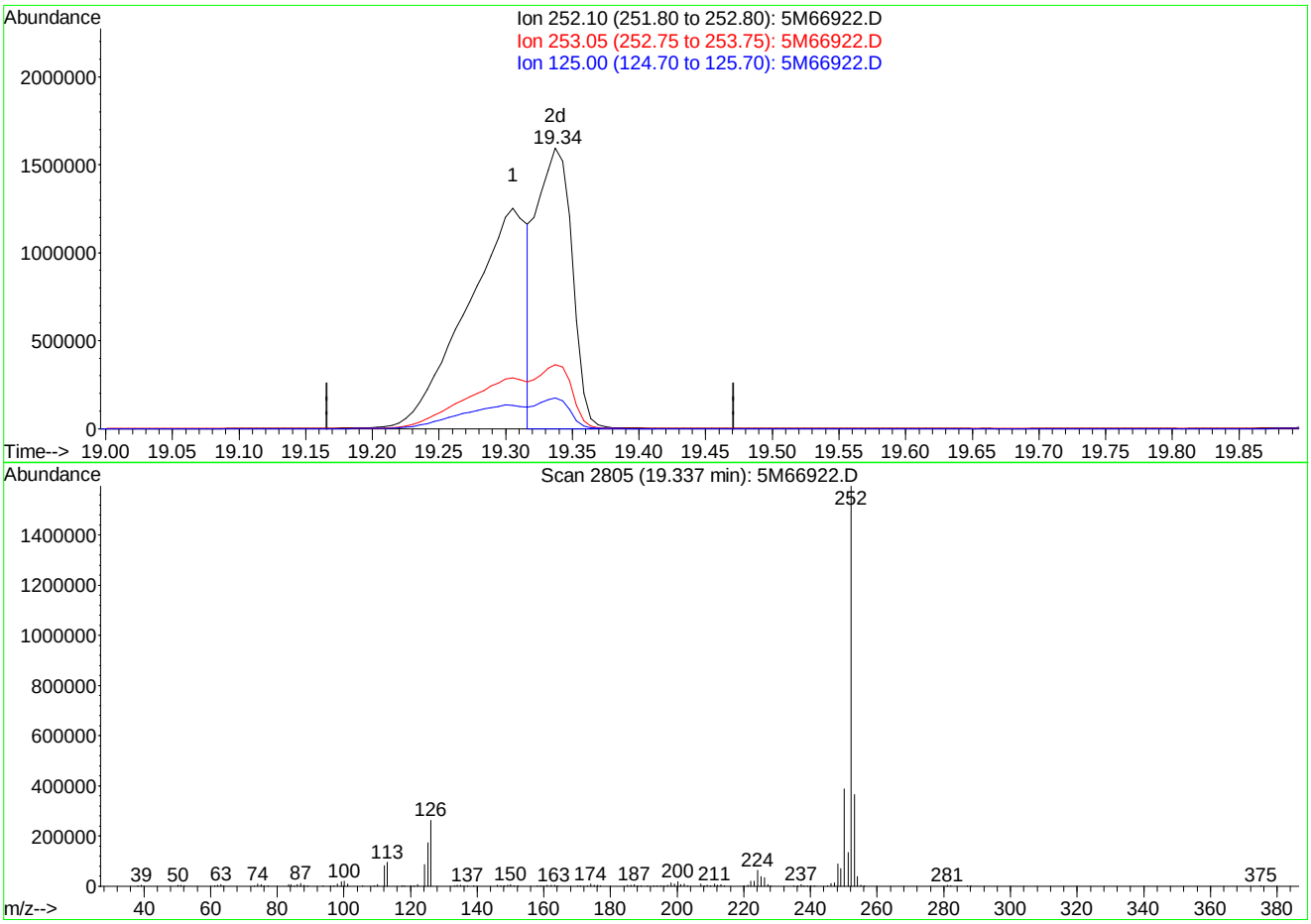
| Ion | Exp% | Act% |
|---|---|---|
| 252.10 | 100 | 100 |
| 253.05 | 22.20 | 24.06 |
| 125.00 | 10.00 | 11.98 |
| 0.00 | 0.00 | 0.00 |

5M66922.D MEGAMIX.M Fri May 11 13:27:30 2012

Quantitation Report (Qedit)

Data File : C:\MSDCHEM\1\DATA\051112\5M66922.D Vial: 8
Acq On : 11 May 2012 12:34 pm Operator: CAA
Sample : WG397707-08 100PPM Megamix STD Inst : HPMS5
Misc : 1,1 STD50886 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 11 13:27 2012 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
Title : OVD MSS01 8270/625/Initial cal. 05/11/12
Last Update : Fri May 11 13:26:53 2012
Response via : Multiple Level Calibration




TIC: 5M66922.D

(132) Benzo[k]fluoranthene

19.34min 101.16ug/ml mint

response 2970069

| Ion | Exp% | Act% |
|---|---|---|
| 252.10 | 100 | 100 |
| 253.05 | 22.20 | 31.68# |
| 125.00 | 10.00 | 15.78# |
| 0.00 | 0.00 | 0.00 |

5M66922.D MEGAMIX.M Fri May 11 [illegible] 2012

Analyst: 05/15/2012 07:35 Supervisor: 05/15/2012 09:21

#3 - Improperly integrated isomers and/or coeluting compounds

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\051112\5M66923.D Vial: 9
Acq On : 11 May 2012 1:10 pm Operator: CAA
Sample : WG397707-09 120PPM Megamix STD Inst : HPMS5
Misc : 1,1 STD50886 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 11 13:34:56 2012 Quant Results File: MEGAMIX.RES

Quant Method : C:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
Title : OVD MSS01 8270/625/Initial cal. 05/11/12
Last Update : Fri May 11 13:28:14 2012
Response via : Initial Calibration
DataAcq Meth : BNA

| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 1) 1,4-Dichlorobenzene-d4 | 9.30 | 152 | 284764 | 40.00 | ug/ml | 0.00 |
| 30) Naphthalene-d8 | 10.91 | 136 | 1083574 | 40.00 | ug/ml | 0.00 |
| 54) Acenaphthene-d10 | 13.03 | 164 | 636658 | 40.00 | ug/ml | 0.00 |
| 87) Phenanthrene-d10 | 14.65 | 188 | 1197183 | 40.00 | ug/ml | 0.00 |
| 113) Chrysene-d12 | 17.55 | 240 | 1433140 | 40.00 | ug/ml | 0.01 |
| 128) Perylene-d12 | 20.08 | 264 | 1142032 | 40.00 | ug/ml | 0.01 |
| **System Monitoring Compounds** | | | | | | |
| 8) 2-Fluorophenol | 7.73 | 112 | 919832 | 116.3651 | ug/ml | 0.00 |
| Spiked Amount 100.000 | Range 21 - 100 | | Recovery = 116.37%# | | | |
| 12) Phenol-d5 | 8.84 | 99 | 1063659 | 112.6267 | ug/ml | 0.01 |
| Spiked Amount 100.000 | Range 10 - 94 | | Recovery = 112.63%# | | | |
| 31) Nitrobenzene-d5 | 10.03 | 82 | 981808 | 110.2816 | ug/ml | 0.01 |
| Spiked Amount 50.000 | Range 35 - 114 | | Recovery = 220.56%# | | | |
| 59) 2-Fluorobiphenyl | 12.22 | 172 | 2297989 | 106.6970 | ug/ml | 0.00 |
| Spiked Amount 50.000 | Range 43 - 116 | | Recovery = 213.40%# | | | |
| 86) 2,4,6-Tribromophenol | 13.92 | 330 | 424319 | 124.2207 | ug/ml | 0.00 |
| Spiked Amount 100.000 | Range 10 - 123 | | Recovery = 124.22%# | | | |
| 117) p-Terphenyl-d14 | 16.27 | 244 | 2101924 | 90.8766 | ug/ml | 0.00 |
| Spiked Amount 50.000 | Range 33 - 141 | | Recovery = 181.76%# | | | |
| **Target Compounds** | | | | | | Qvalue |
| 2) 1,4-Dioxane | 5.12 | 88 | 375069 | 96.4086 | ug/ml# | 100 |
| 3) n-Nitrosodimethylamine | 5.81 | 74 | 540246 | 114.7585 | ug/ml | 95 |
| 4) Pyridine | 5.80 | 79 | 936840 | 112.1704 | ug/ml | 97 |
| 5) 2-Picoline | 6.95 | 93 | 1041451 | 114.1602 | ug/ml | 99 |
| 6) n-Nitrosomethylethylamine | 7.13 | 88 | 435585 | 114.2808 | ug/ml | 95 |
| 7) Methyl Methanesulfonate | 7.53 | 80 | 474007 | 101.8736 | ug/ml | 99 |
| 9) n-Nitrosodiethylamine | 8.03 | 102 | 458063 | 115.3998 | ug/ml | 92 |
| 10) Ethyl Methanesulfonate | 8.39 | 79 | 664805 | 111.5756 | ug/ml | 98 |
| 11) Aniline | 8.93 | 93 | 1495885 | 113.8948 | ug/ml | 97 |
| 13) Phenol | 8.86 | 94 | 1090195 | 111.1481 | ug/ml | 95 |
| 14) bis(2-Chloroethyl)ether | 8.98 | 63 | 549498 | 99.5283 | ug/ml | 94 |
| 15) Pentachloroethane | 8.95 | 167 | 429275 | 114.5001 | ug/ml | 99 |
| 16) 2-Chlorophenol | 9.08 | 128 | 1062777 | 117.2799 | ug/ml | 97 |
| 17) 1,3-Dichlorobenzene | 9.26 | 146 | 1214112 | 115.2662 | ug/ml | 99 |
| 18) 1,4-Dichlorobenzene | 9.32 | 146 | 1250607 | 113.3344 | ug/ml | 99 |
| 19) Benzyl Alcohol | 9.47 | 108 | 675828 | 117.9927 | ug/ml | 95 |
| 20) 1,2-Dichlorobenzene | 9.56 | 146 | 1166405 | 115.4054 | ug/ml | 99 |
| 21) 2-Methylphenol | 9.61 | 107 | 832685 | 117.2121 | ug/ml | 99 |
| 22) bis(2-Chloroisopropyl)ethe | 9.64 | 45 | 1027165 | 92.0164 | ug/ml | 92 |
| 23) 3-,4-Methylphenol | 9.78 | 107 | 1046600 | 115.8823 | ug/ml | 98 |
| 24) n-Nitrosopyrrolidine | 9.84 | 100 | 398359 | 111.5179 | ug/ml | 82 |
| 25) n-Nitrosodipropylamine | 9.84 | 70 | 476543 | 93.5526 | ug/ml | 94 |
| 26) Acetophenone | 9.82 | 105 | 1238159 | 110.6311 | ug/ml | 98 |
| 27) n-Nitrosomorpholine | 9.85 | 56 | 400710 | 90.0260 | ug/ml | 97 |
| 28) o-Toluidine | 9.88 | 106 | 1580456 | 112.6390 | ug/ml | 99 |
| 29) Hexachloroethane | 9.96 | 117 | 453360 | 113.9869 | ug/ml | 96 |
| 32) Nitrobenzene | 10.05 | 77 | 922406 | 106.1758 | ug/ml | 94 |
| 33) n-Nitrosopiperidine | 10.24 | 114 | 508763 | 116.6037 | ug/ml | 88 |
| 34) Isophorone | 10.33 | 82 | 1671321 | 108.5062 | ug/ml | 98 |
| 35) 2-Nitrophenol | 10.44 | 139 | 570883 | 110.7165 | ug/ml | 91 |
| 36) 2,4-Dimethylphenol | 10.43 | 122 | 887752 | 107.8825 | ug/ml | 97 |
| 37) 0,0,0-Triethyl Phosphoroth | 10.57 | 198 | 516925 | 103.5193 | ug/ml | 96 |
| 38) bis(2-Chloroethoxy)methane | 10.56 | 93 | 1151695 | 97.6198 | ug/ml | 99 |

(#) = qualifier out of range (m) = manual integration
5M66923.D MEGAMIX.M Mon May 14 14:45:20 2012 Page 1

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\051112\5M66923.D Vial: 9
Acq On : 11 May 2012 1:10 pm Operator: CAA
Sample : WG397707-09 120PPM Megamix STD Inst : HPMS5
Misc : 1,1 STD50886 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 11 13:34:56 2012 Quant Results File: MEGAMIX.RES

Quant Method : C:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
Title : OVD MSS01 8270/625/Initial cal. 05/11/12
Last Update : Fri May 11 13:28:14 2012
Response via : Initial Calibration
DataAcq Meth : BNA

| | Compound | R.T. | QIon | Response | Conc | Unit | Qvalue |
|---|---|---|---|---|---|---|---|
| 39) | Benzoic Acid | 10.58 | 105 | 749889m | 143.3533 | ug/ml | |
| 40) | 2,4-Dichlorophenol | 10.73 | 162 | 963224 | 117.1608 | ug/ml | 99 |
| 41) | a,a-Dimethylphenethylamine | 10.87 | 58 | 2475921m | 107.5156 | ug/ml | |
| 42) | 1,2,4-Trichlorobenzene | 10.85 | 180 | 1054344 | 112.2210 | ug/ml | 99 |
| 43) | Naphthalene | 10.95 | 128 | 2768757 | 104.2241 | ug/ml | 98 |
| 44) | 4-Chloroaniline | 11.00 | 127 | 1321217 | 114.8589 | ug/ml | 99 |
| 45) | 2,6-Dichlorophenol | 11.02 | 162 | 986175 | 117.5348 | ug/ml | 99 |
| 46) | Hexachloropropene | 11.09 | 213 | 711120 | 115.9066 | ug/ml | 99 |
| 47) | Hexachlorobutadiene | 11.14 | 225 | 633609 | 113.3890 | ug/ml | 99 |
| 48) | n-Nitrosodi-n-Butylamine | 11.41 | 84 | 610907 | 97.0315 | ug/ml | 86 |
| 49) | p-Phenylenediamine | 11.44 | 108 | 508692 | 95.6557 | ug/ml | 98 |
| 50) | 4-Chloro-3-Methylphenol | 11.56 | 107 | 840957 | 111.4173 | ug/ml | 96 |
| 51) | Safrole | 11.65 | 162 | 883218 | 113.0805 | ug/ml | 97 |
| 52) | 2-Methylnaphthalene | 11.79 | 142 | 1935816 | 105.2734 | ug/ml | 99 |
| 53) | 1-Methylnaphthalene | 11.92 | 142 | 1825342 | 105.1278 | ug/ml | 99 |
| 55) | 1,2,4,5-Tetrachlorobenzene | 12.03 | 216 | 1011784 | 107.7187 | ug/ml | 99 |
| 56) | Hexachlorocyclopentadiene | 12.05 | 237 | 536466 | 98.1859 | ug/ml | 99 |
| 57) | 2,4,6-Trichlorophenol | 12.14 | 196 | 764863 | 119.3927 | ug/ml | 100 |
| 58) | 2,4,5-Trichlorophenol | 12.19 | 196 | 805926 | 121.5650 | ug/ml | 100 |
| 60) | Isosafrole | 12.27 | 162 | 945521 | 116.0486 | ug/ml | 97 |
| 61) | 2-Chloronaphthalene | 12.38 | 162 | 2059979 | 111.8706 | ug/ml | 99 |
| 62) | 1-Chloronaphthalene | 12.42 | 162 | 1911629 | 108.7660 | ug/ml | 99 |
| 63) | 2-Nitroaniline | 12.49 | 65 | 497533 | 107.1243 | ug/ml | 89 |
| 64) | 1,4-Naphthoquinone | 12.56 | 158 | 310163 | 62.7083 | ug/ml | 99 |
| 65) | Dimethylphthalate | 12.70 | 163 | 2310682 | 112.1458 | ug/ml | 99 |
| 66) | 1,3-Dinitrobenzene | 12.75 | 168 | 479468 | 124.4288 | ug/ml | 91 |
| 67) | 2,6-Dinitrotoluene | 12.80 | 165 | 600123 | 119.1067 | ug/ml | 93 |
| 68) | Acenaphthylene | 12.87 | 152 | 2940598 | 105.2427 | ug/ml | 98 |
| 69) | 3-Nitroaniline | 12.97 | 138 | 644485 | 123.3710 | ug/ml | 95 |
| 70) | 2,4-Dinitrophenol | 13.09 | 184 | 382163 | 148.1170 | ug/ml | 36 |
| 71) | Acenaphthene | 13.07 | 154 | 1868852 | 104.8964 | ug/ml | 98 |
| 72) | 4-Nitrophenol | 13.11 | 65 | 455584 | 124.0707 | ug/ml | 97 |
| 73) | 2,4-Dinitrotoluene | 13.25 | 165 | 680275 | 106.3628 | ug/ml | 93 |
| 74) | Pentachlorobenzene | 13.27 | 250 | 993471 | 112.8960 | ug/ml | 98 |
| 75) | Dibenzofuran | 13.24 | 168 | 2442729 | 98.9171 | ug/ml | 100 |
| 76) | 2,3,4,6-Tetrachlorophenol | 13.42 | 232 | 583532 | 103.3493 | ug/ml | 99 |
| 77) | 1-Naphthylamine | 13.34 | 143 | 2024731 | 114.0563 | ug/ml | 99 |
| 78) | 2-Naphthylamine | 13.41 | 143 | 1737179 | 112.7815 | ug/ml | 100 |
| 79) | Diethylphthalate | 13.47 | 149 | 2185623 | 108.6692 | ug/ml | 98 |
| 80) | Thionazin | 13.57 | 107 | 269709 | 93.6697 | ug/ml | 100 |
| 81) | Fluorene | 13.63 | 166 | 2223990 | 102.3451 | ug/ml | 100 |
| 82) | 4-Chlorophenyl Phenyl Ethe | 13.59 | 204 | 971428 | 92.6868 | ug/ml | 100 |
| 83) | 4-Nitroaniline | 13.67 | 138 | 614711m | 114.9544 | ug/ml | |
| 84) | 5-Nitro-o-Toluidine | 13.65 | 152 | 772778 | 118.0250 | ug/ml | 96 |
| 85) | 1,2-Diphenylhydrazine | 13.76 | 77 | 1701069 | 96.7204 | ug/ml | 92 |
| 88) | 4,6-Dinitro-2-Methylphenol | 13.71 | 198 | 482669 | 126.5921 | ug/ml | 77 |
| 89) | n-Nitrosodiphenylamine | 13.72 | 169 | 1886837 | 100.7769 | ug/ml | 99 |
| 90) | Sulfotepp | 13.93 | 322 | 501715 | 115.9513 | ug/ml | 90 |
| 91) | Sym-Trinitrobenzene | 14.03 | 75 | 483820 | 106.1594 | ug/ml# | 88 |
| 92) | Diallate | 14.04 | 86 | 607083 | 93.3617 | ug/ml | 91 |
| 93) | Phenacetin | 14.07 | 108 | 801296 | 89.6313 | ug/ml | 98 |
| 94) | Phorate | 14.07 | 75 | 755546 | 76.8684 | ug/ml# | 92 |
| 95) | 4-Bromophenyl Phenyl Ether | 14.12 | 248 | 791828 | 115.4177 | ug/ml | 97 |
| 96) | Hexachlorobenzene | 14.32 | 284 | 869789 | 113.0977 | ug/ml | 98 |

(#) = qualifier out of range (m) = manual integration
5M66923.D MEGAMIX.M Mon May 14 14:45:20 2012 Page 2

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\051112\5M66923.D Vial: 9
Acq On : 11 May 2012 1:10 pm Operator: CAA
Sample : WG397707-09 120PPM Megamix STD Inst : HPMS5
Misc : 1,1 STD50886 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 11 13:34:56 2012 Quant Results File: MEGAMIX.RES

Quant Method : C:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
Title : OVD MSS01 8270/625/Initial cal. 05/11/12
Last Update : Fri May 11 13:28:14 2012
Response via : Initial Calibration
DataAcq Meth : BNA

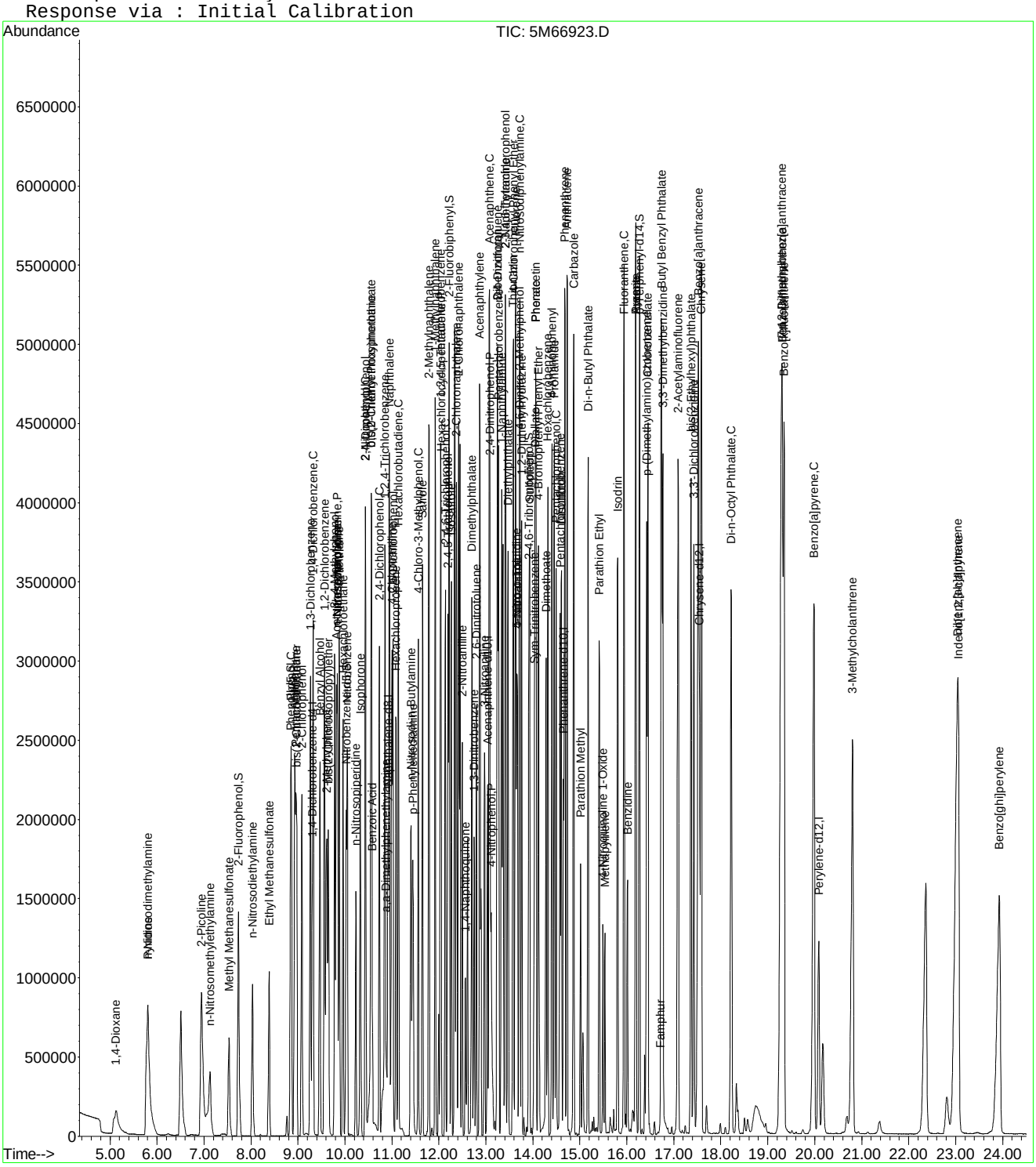
| | Compound | R.T. | QIon | Response | Conc | Unit | Qvalue |
|---|---|---|---|---|---|---|---|
| 97) | Dimethoate | 14.28 | 87 | 317071 | 59.4055 | ug/ml | 99 |
| 98) | 4-Aminobiphenyl | 14.41 | 169 | 2227119 | 108.7922 | ug/ml | 99 |
| 99) | Pentachlorophenol | 14.50 | 266 | 616270 | 123.8495 | ug/ml | 99 |
| 100) | Pronamide | 14.46 | 173 | 1041183 | 106.9421 | ug/ml | 99 |
| 101) | Pentachloronitrobenzene | 14.58 | 237 | 310382 | 108.8326 | ug/ml | 99 |
| 102) | Disulfoton | 14.60 | 88 | 916609 | 100.6420 | ug/ml | 100 |
| 103) | Phenanthrene | 14.68 | 178 | 3114178 | 100.6021 | ug/ml | 98 |
| 104) | Anthracene | 14.73 | 178 | 3082844 | 98.1913 | ug/ml | 97 |
| 105) | Carbazole | 14.87 | 167 | 2981064 | 104.1896 | ug/ml | 100 |
| 106) | Parathion Methyl | 15.02 | 109 | 347220 | 66.1741 | ug/ml | 95 |
| 107) | Di-n-Butyl Phthalate | 15.18 | 149 | 3204188 | 97.0328 | ug/ml | 99 |
| 108) | Parathion Ethyl | 15.41 | 97 | 357683 | 99.0225 | ug/ml | 95 |
| 109) | 4-Nitroquinoline 1-Oxide | 15.49 | 190 | 212259 | 101.5169 | ug/ml | 97 |
| 110) | Methapyrilene | 15.53 | 58 | 407779 | 70.6759 | ug/ml | 98 |
| 111) | Isodrin | 15.81 | 193 | 385323 | 107.8679 | ug/ml | 98 |
| 112) | Fluoranthene | 15.94 | 202 | 3282617 | 97.4080 | ug/ml | 98 |
| 114) | Benzidine | 16.01 | 184 | 865649 | 109.9534 | ug/ml | 100 |
| 115) | Pyrene | 16.19 | 202 | 3092249 | 89.5039 | ug/ml | 98 |
| 116) | Aramite | 16.20 | 185 | 175134 | 91.4284 | ug/ml | 95 |
| 118) | p-(Dimethylamino)azobenzen | 16.43 | 225 | 919833 | 111.2279 | ug/ml | 92 |
| 119) | Chlorobenzilate | 16.45 | 251 | 1264282 | 110.2662 | ug/ml | 95 |
| 120) | Famphur | 16.70 | 218 | 840 | 8.0283 | ug/ml# | 1 |
| 121) | Butyl Benzyl Phthalate | 16.75 | 149 | 1243116 | 86.4876 | ug/ml | 99 |
| 122) | 3,3'-Dimethylbenzidine | 16.77 | 212 | 2505455 | 106.9625 | ug/ml | 99 |
| 123) | 2-Acetylaminofluorene | 17.09 | 181 | 1660842 | 111.4313 | ug/ml | 99 |
| 124) | bis(2-Ethylhexyl)phthalate | 17.37 | 149 | 2160656 | 100.0391 | ug/ml | 98 |
| 125) | 3,3'-Dichlorobenzidine | 17.43 | 252 | 1448281 | 115.8157 | ug/ml | 100 |
| 126) | Benzo[a]anthracene | 17.52 | 228 | 3890591 | 107.4579 | ug/ml | 98 |
| 127) | Chrysene | 17.58 | 228 | 3484757 | 103.4041 | ug/ml | 98 |
| 129) | Di-n-Octyl Phthalate | 18.23 | 149 | 3824524 | 116.0936 | ug/ml | 97 |
| 130) | 7,12-Dimethylbenz[a]anthra | 19.29 | 256 | 1927320 | 123.0441 | ug/ml | 99 |
| 131) | Benzo[b]fluoranthene | 19.32 | 252 | 4759606 | 129.2738 | ug/ml | 96 |
| 132) | Benzo[k]fluoranthene | 19.35 | 252 | 3391551m | 113.5125 | ug/ml | |
| 133) | Benzo[a]pyrene | 19.99 | 252 | 3792214 | 122.9311 | ug/ml | 99 |
| 134) | 3-Methylcholanthrene | 20.81 | 268 | 1929337 | 117.6790 | ug/ml | 99 |
| 135) | Indeno[1,2,3-cd]pyrene | 23.06 | 276 | 4098737 | 115.3111 | ug/ml | 99 |
| 136) | Dibenz[ah]anthracene | 23.04 | 278 | 3474541 | 116.2502 | ug/ml | 99 |
| 137) | Benzo[ghi]perylene | 23.92 | 276 | 3050658 | 109.4077 | ug/ml | 98 |

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

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\051112\5M66923.D Vial: 9
Acq On : 11 May 2012 1:10 pm Operator: CAA
Sample : WG397707-09 120PPM Megamix STD Inst : HPMS5
Misc : 1,1 STD50886 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 11 13:37 2012 Quant Results File: MEGAMIX.RES

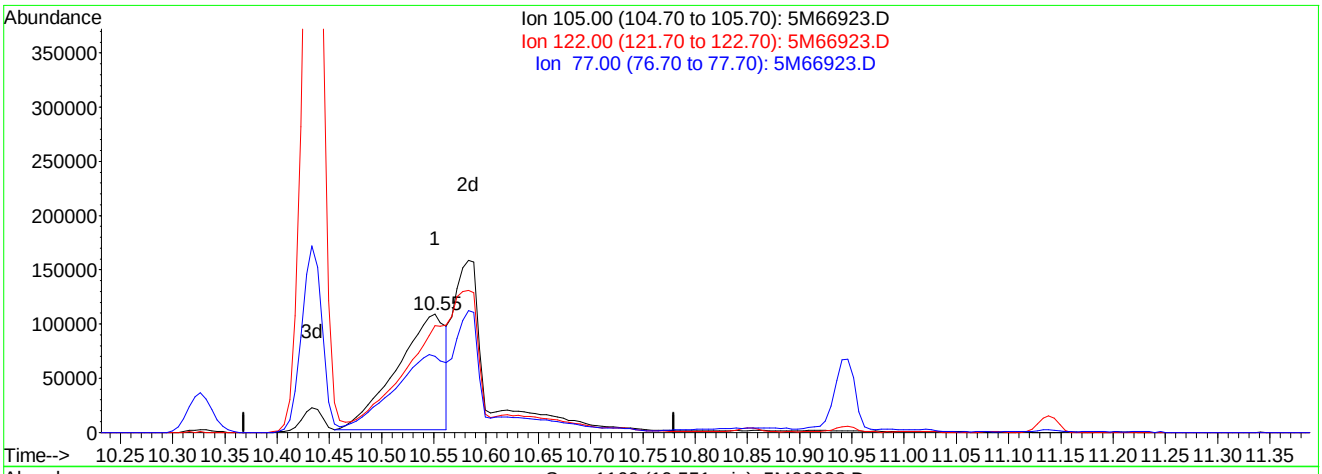
Method : C:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
Title : OVD MSS01 8270/625/Initial cal. 05/11/12
Last Update : Fri May 11 14:12:23 2012
Response via : Initial Calibration

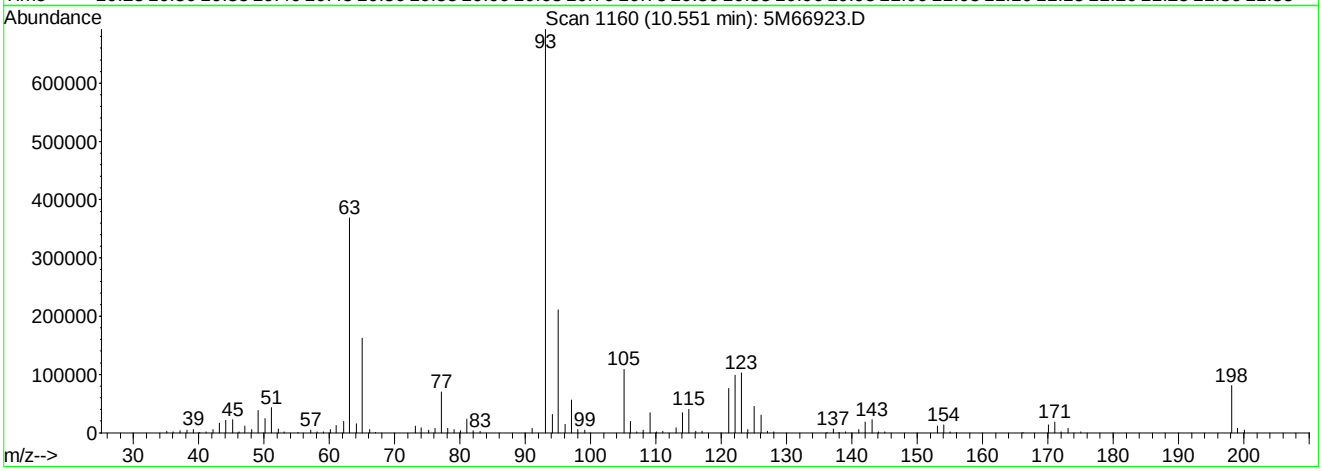


Quantitation Report (Qedit)

Data File : C:\MSDCHEM\1\DATA\051112\5M66923.D Vial: 9
Acq On : 11 May 2012 1:10 pm Operator: CAA
Sample : WG397707-09 120PPM Megamix STD Inst : HPMS5
Misc : 1,1 STD50886 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 11 13:34 2012 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
Title : OVD MSS01 8270/625/Initial cal. 05/11/12
Last Update : Fri May 11 13:28:14 2012
Response via : Single Level Calibration




TIC: 5M66923.D

(39) Benzoic Acid

10.55min 65.79ug/ml

response 344151

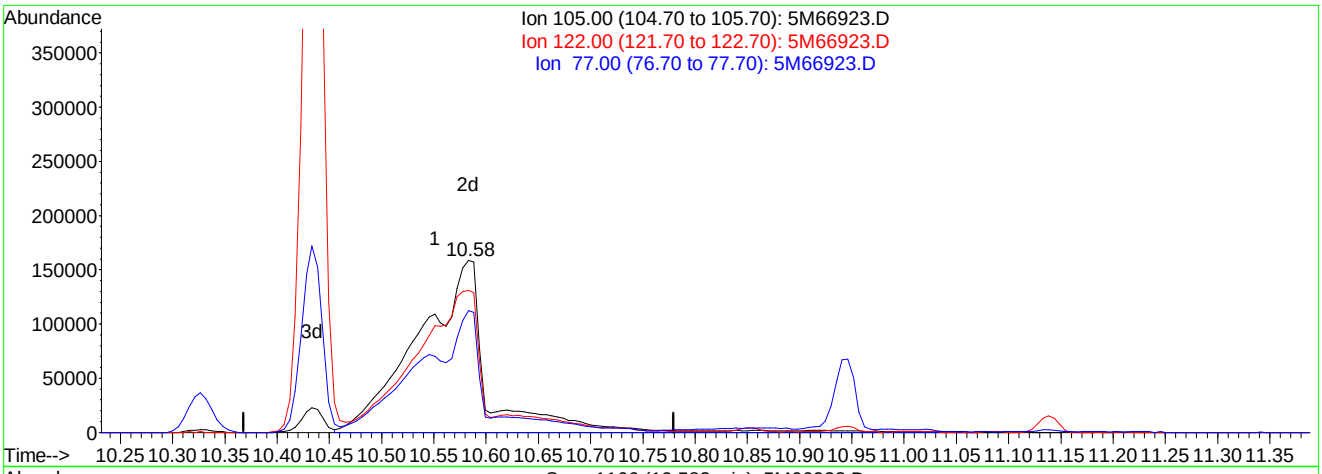
| Ion | Exp% | Act% |
|---|---|---|
| 105.00 | 100 | 100 |
| 122.00 | 57.00 | 0.00# |
| 77.00 | 51.30 | 64.07 |
| 0.00 | 0.00 | 0.00 |

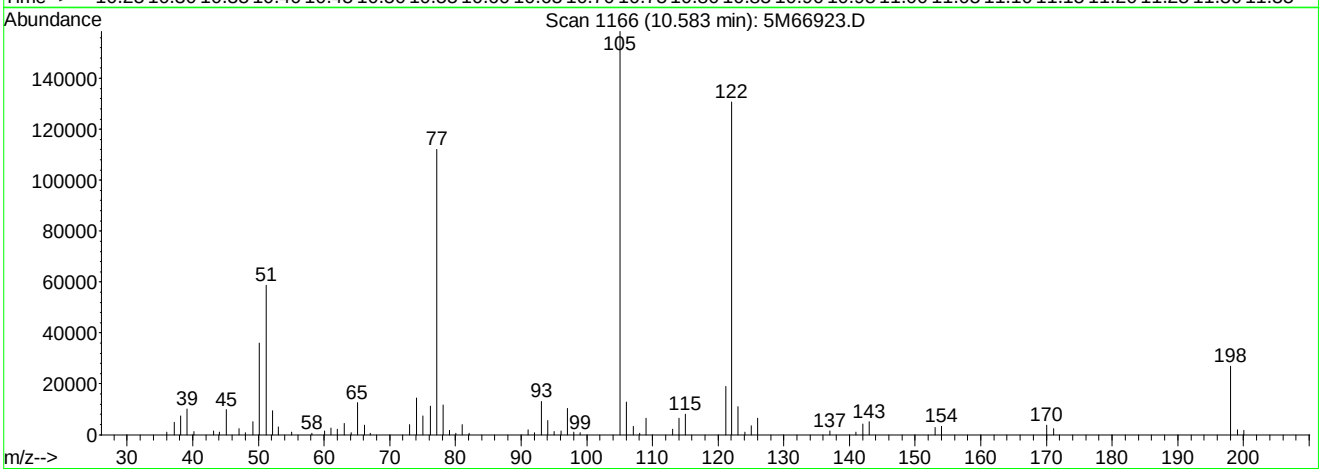
5M66923.D MEGAMIX.M Fri May 11 13:35:07 2012

Quantitation Report (Qedit)

Data File : C:\MSDCHEM\1\DATA\051112\5M66923.D Vial: 9
Acq On : 11 May 2012 1:10 pm Operator: CAA
Sample : WG397707-09 120PPM Megamix STD Inst : HPMS5
Misc : 1,1 STD50886 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 11 13:35 2012 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
Title : OVD MSS01 8270/625/Initial cal. 05/11/12
Last Update : Fri May 11 13:28:14 2012
Response via : Single Level Calibration




TIC: 5M66923.D

(39) Benzoic Acid

10.58min 143.35ug/ml mint

response 749889

| Ion | Exp% | Act% |
|---|---|---|
| 105.00 | 100 | 100 |
| 122.00 | 57.00 | 0.00# |
| 77.00 | 51.30 | 29.41# |
| 0.00 | 0.00 | 0.00 |

5M66923.D MEGAMIX.M Fri May 11 ) 2012

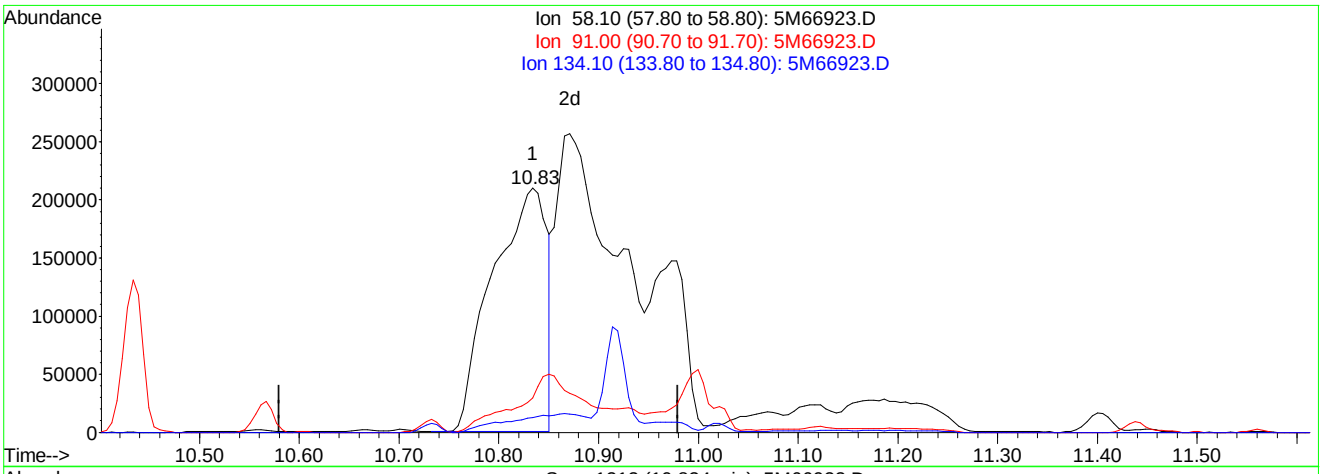
Analyst: 05/15/2012 07:35 Supervisor: 05/15/2012 09:21

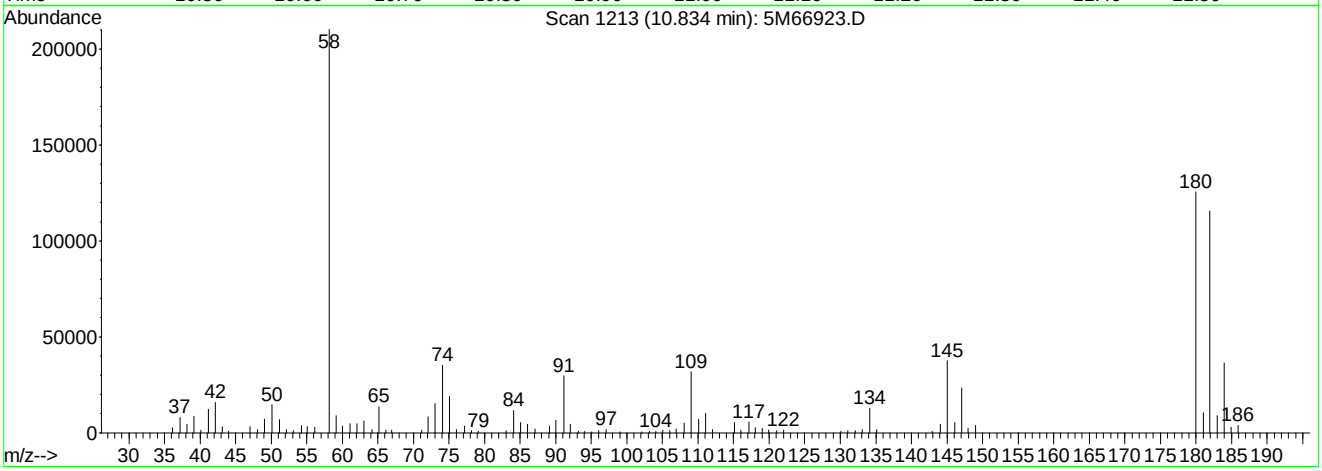
#2 - Data system splits the peak incorrectly or integrates a false peak as a rider peak

Quantitation Report (Qedit)

Data File : C:\MSDCHEM\1\DATA\051112\5M66923.D Vial: 9
Acq On : 11 May 2012 1:10 pm Operator: CAA
Sample : WG397707-09 120PPM Megamix STD Inst : HPMS5
Misc : 1,1 STD50886 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 11 13:35 2012 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
Title : OVD MSS01 8270/625/Initial cal. 05/11/12
Last Update : Fri May 11 13:28:14 2012
Response via : Multiple Level Calibration




TIC: 5M66923.D

(41) a,a-Dimethylphenethylamine

10.83min 34.17ug/ml

response 786982

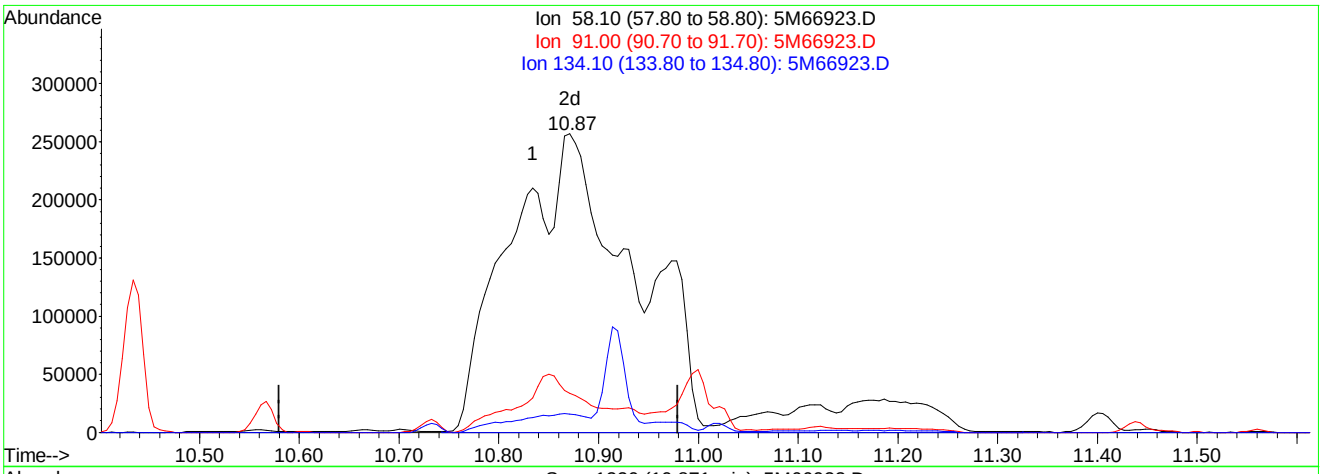
| Ion | Exp% | Act% |
|---|---|---|
| 58.10 | 100 | 100 |
| 91.00 | 9.00 | 0.00# |
| 134.10 | 4.40 | 0.00# |
| 0.00 | 0.00 | 0.00 |

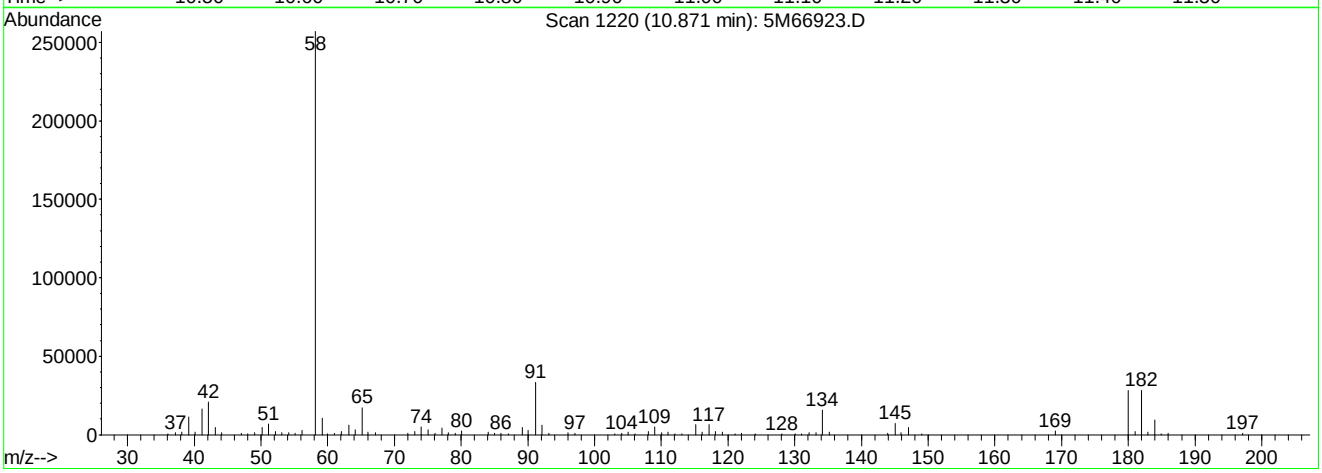
5M66923.D MEGAMIX.M Fri May 11 13:35:15 2012

Quantitation Report (Qedit)

Data File : C:\MSDCHEM\1\DATA\051112\5M66923.D Vial: 9
Acq On : 11 May 2012 1:10 pm Operator: CAA
Sample : WG397707-09 120PPM Megamix STD Inst : HPMS5
Misc : 1,1 STD50886 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 11 13:35 2012 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
Title : OVD MSS01 8270/625/Initial cal. 05/11/12
Last Update : Fri May 11 13:28:14 2012
Response via : Multiple Level Calibration




TIC: 5M66923.D

(41) a,a-Dimethylphenethylamine

10.87min 107.52ug/ml mint

response 2475921

| Ion | Exp% | Act% |
|---|---|---|
| 58.10 | 100 | 100 |
| 91.00 | 9.00 | 0.00# |
| 134.10 | 4.40 | 0.00# |
| 0.00 | 0.00 | 0.00 |

5M66923.D MEGAMIX.M Fri May 11 13:33 2012

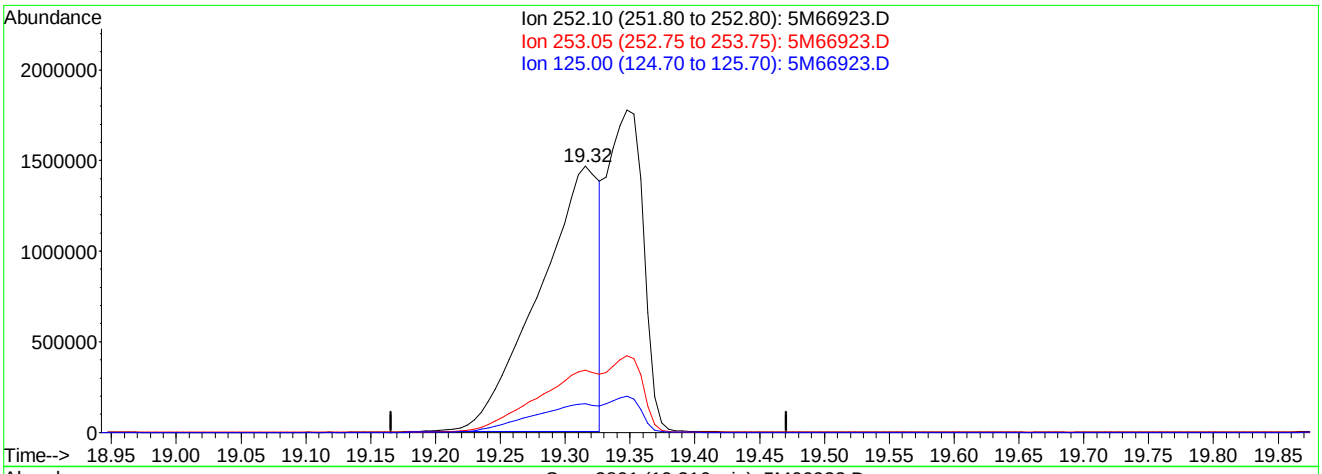
Analyst: 05/15/2012 07:35 Supervisor: 05/15/2012 09:21

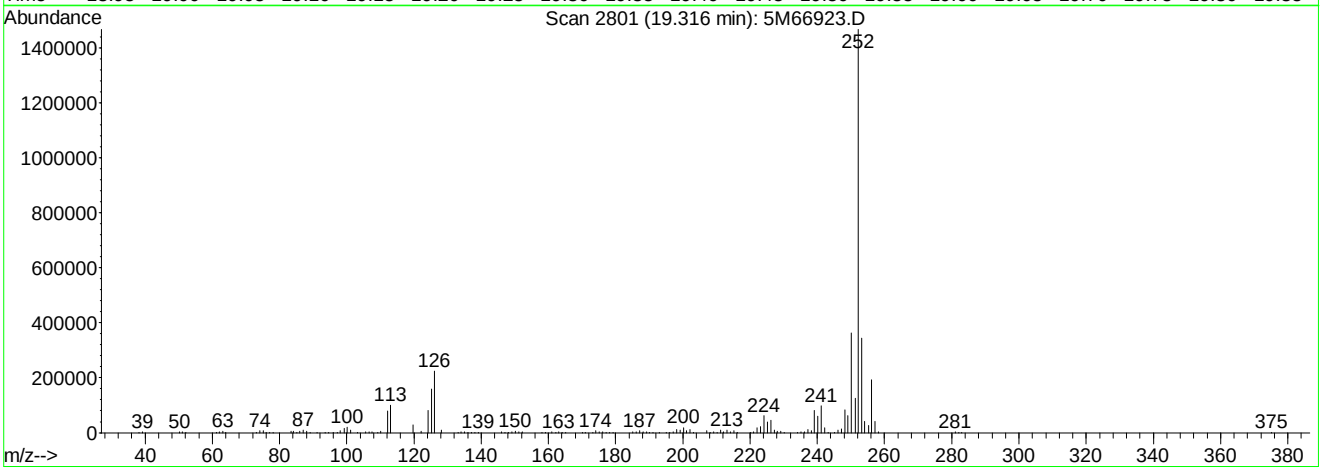
#2 - Data system splits the peak incorrectly or integrates a false peak as a rider peak

Quantitation Report (Qedit)

Data File : C:\MSDCHEM\1\DATA\051112\5M66923.D Vial: 9
Acq On : 11 May 2012 1:10 pm Operator: CAA
Sample : WG397707-09 120PPM Megamix STD Inst : HPMS5
Misc : 1,1 STD50886 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 11 13:35 2012 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
Title : OVD MSS01 8270/625/Initial cal. 05/11/12
Last Update : Fri May 11 13:28:14 2012
Response via : Multiple Level Calibration




TIC: 5M66923.D

(132) Benzo[k]fluoranthene

19.32min 158.38ug/ml

response 4732176

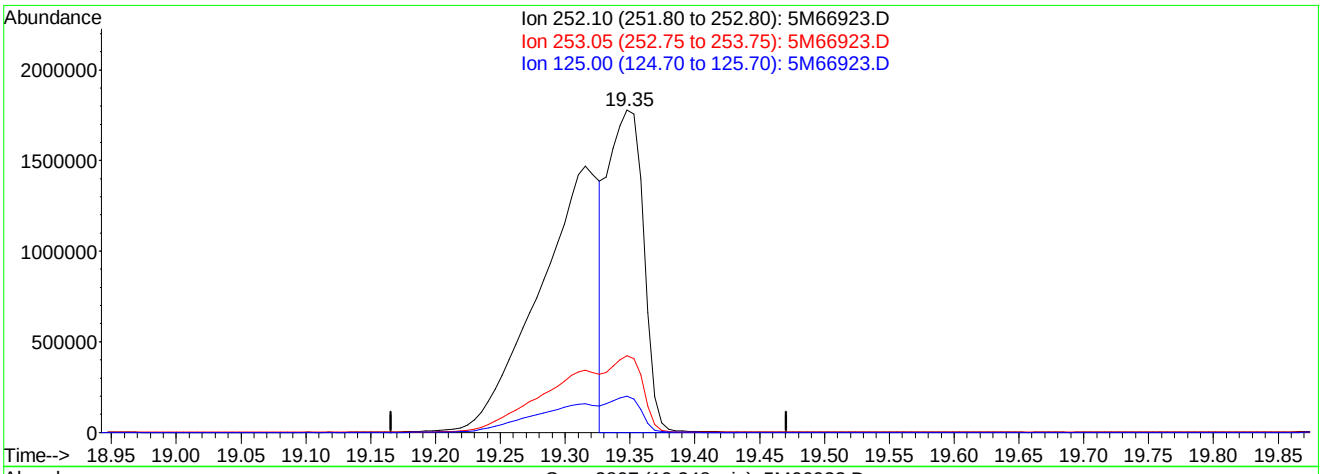
| Ion | Exp% | Act% |
|---|---|---|
| 252.10 | 100 | 100 |
| 253.05 | 22.20 | 24.25 |
| 125.00 | 10.00 | 12.03 |
| 0.00 | 0.00 | 0.00 |

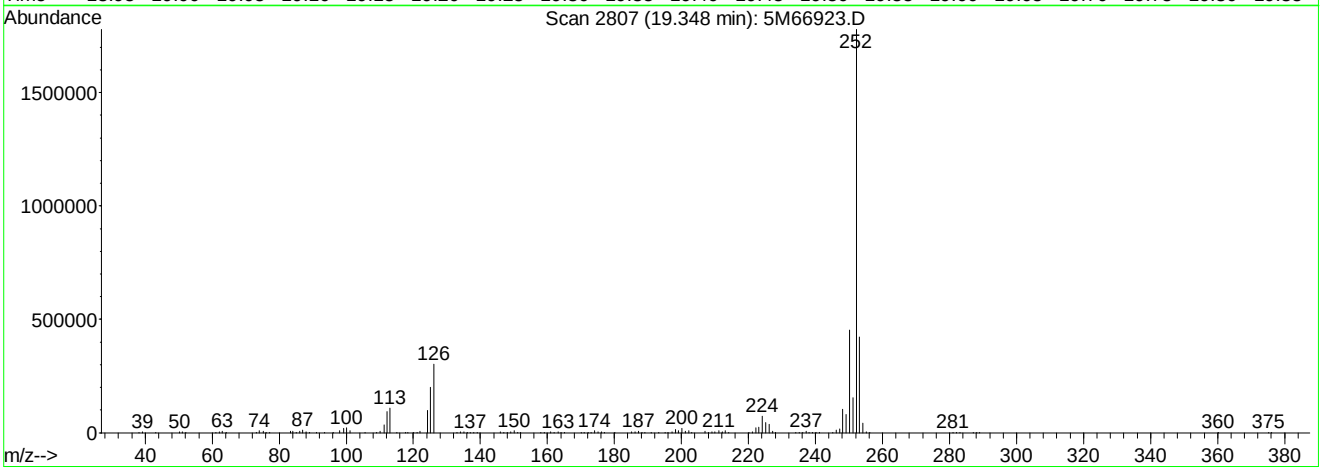
5M66923.D MEGAMIX.M Fri May 11 13:35:31 2012

Quantitation Report (Qedit)

Data File : C:\MSDCHEM\1\DATA\051112\5M66923.D Vial: 9
Acq On : 11 May 2012 1:10 pm Operator: CAA
Sample : WG397707-09 120PPM Megamix STD Inst : HPMS5
Misc : 1,1 STD50886 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 11 13:35 2012 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
Title : OVD MSS01 8270/625/Initial cal. 05/11/12
Last Update : Fri May 11 13:28:14 2012
Response via : Multiple Level Calibration




TIC: 5M66923.D

(132) Benzo[k]fluoranthene

19.35min 113.51ug/ml mint

response 3391551

| Ion | Exp% | Act% |
|---|---|---|
| 252.10 | 100 | 100 |
| 253.05 | 22.20 | 33.84# |
| 125.00 | 10.00 | 16.78# |
| 0.00 | 0.00 | 0.00 |

5M66923.D MEGAMIX.M Fri May 11 ; 2012

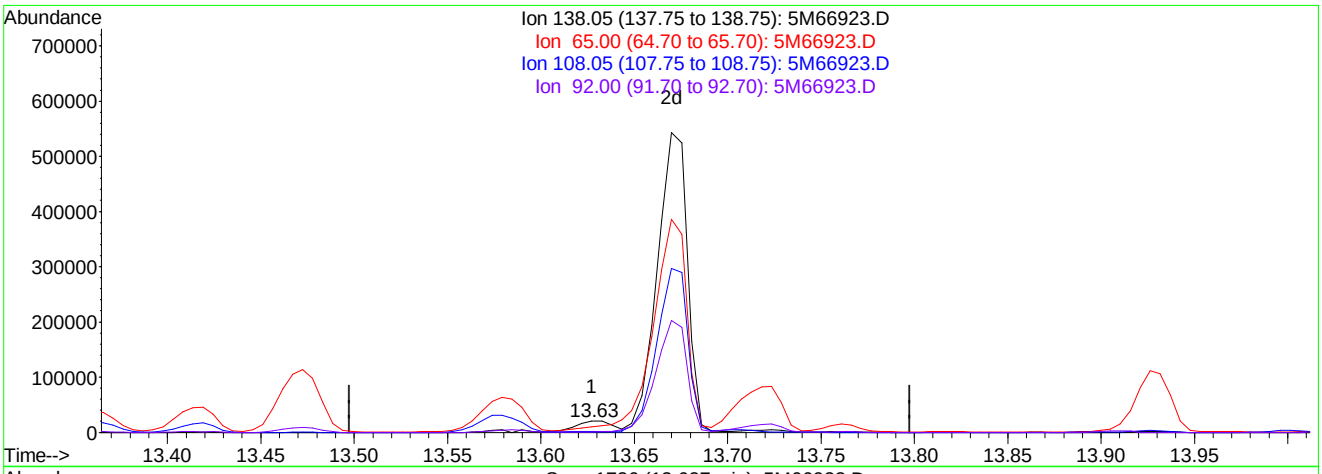
Analyst: 05/15/2012 07:35 Supervisor: 05/15/2012 09:21

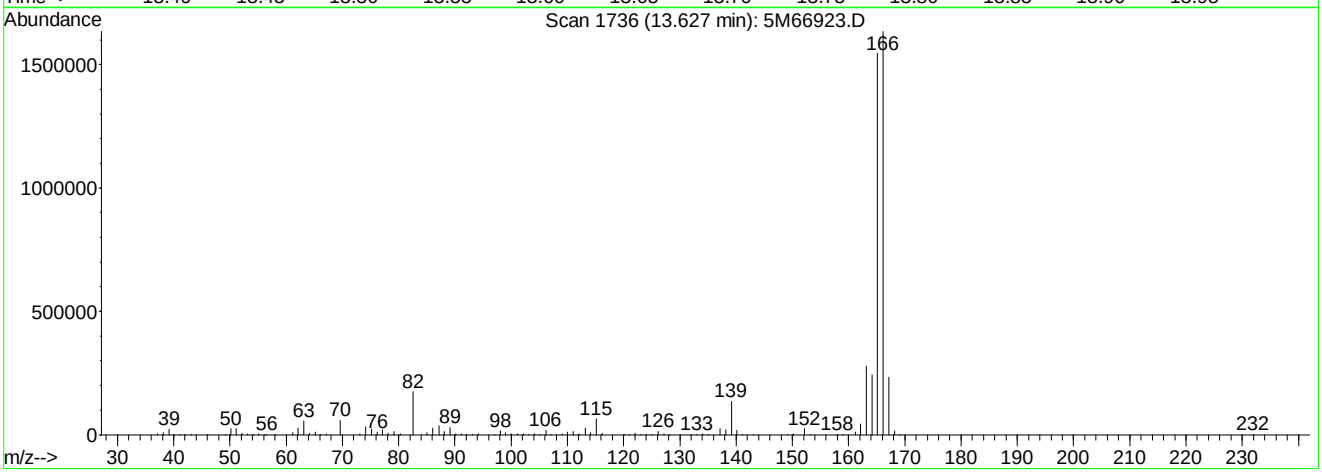
#3 - Improperly integrated isomers and/or coeluting compounds

Quantitation Report (Qedit)

Data File : C:\MSDCHEM\1\DATA\051112\5M66923.D Vial: 9
Acq On : 11 May 2012 1:10 pm Operator: CAA
Sample : WG397707-09 120PPM Megamix STD Inst : HPMS5
Misc : 1,1 STD50886 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 11 13:35 2012 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
Title : OVD MSS01 8270/625/Initial cal. 05/11/12
Last Update : Fri May 11 13:35:40 2012
Response via : Multiple Level Calibration




TIC: 5M66923.D

(83) 4-Nitroaniline

13.63min 5.07ug/ml

response 27094

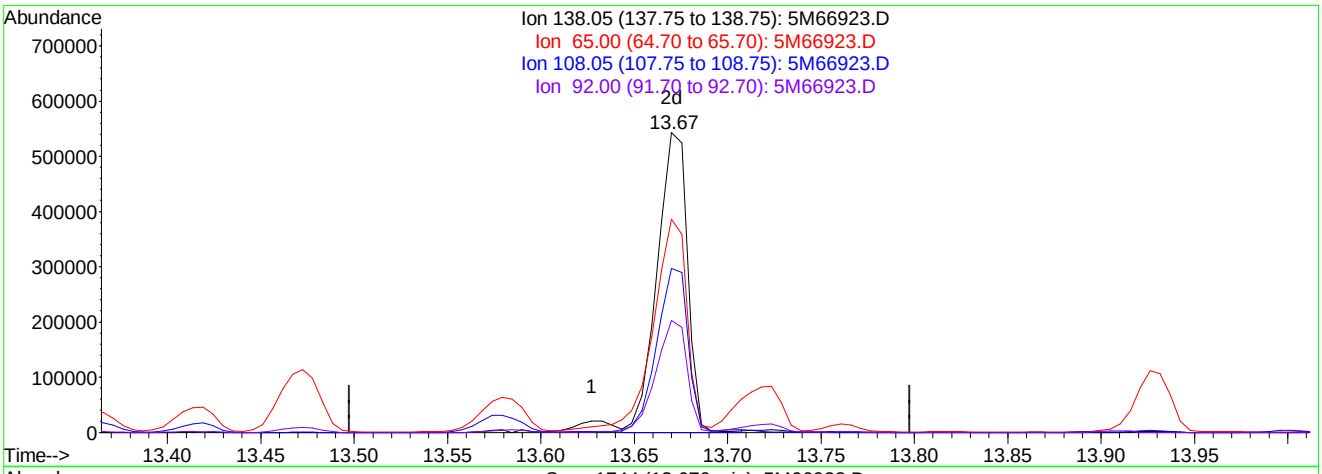
| Ion | Exp% | Act% |
|---|---|---|
| 138.05 | 100 | 100 |
| 65.00 | 85.90 | 0.00# |
| 108.05 | 57.80 | 0.00# |
| 92.00 | 39.00 | 0.00# |

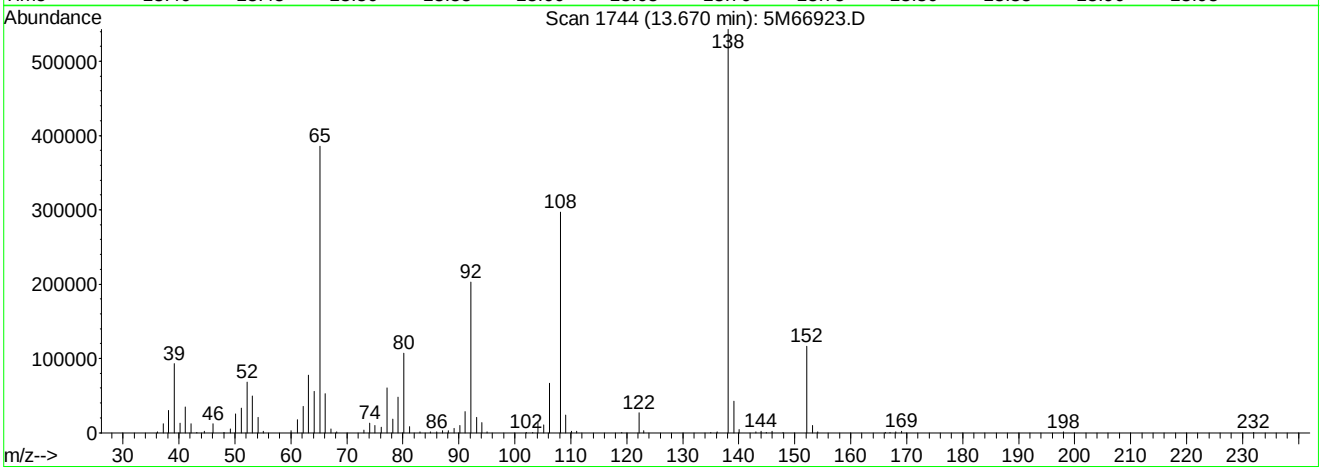
5M66923.D MEGAMIX.M Fri May 11 13:37:23 2012

Quantitation Report (Qedit)

Data File : C:\MSDCHEM\1\DATA\051112\5M66923.D Vial: 9
Acq On : 11 May 2012 1:10 pm Operator: CAA
Sample : WG397707-09 120PPM Megamix STD Inst : HPMS5
Misc : 1,1 STD50886 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 11 13:37 2012 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
Title : OVD MSS01 8270/625/Initial cal. 05/11/12
Last Update : Fri May 11 13:35:40 2012
Response via : Multiple Level Calibration




TIC: 5M66923.D

(83) 4-Nitroaniline

13.67min 114.95ug/ml mint

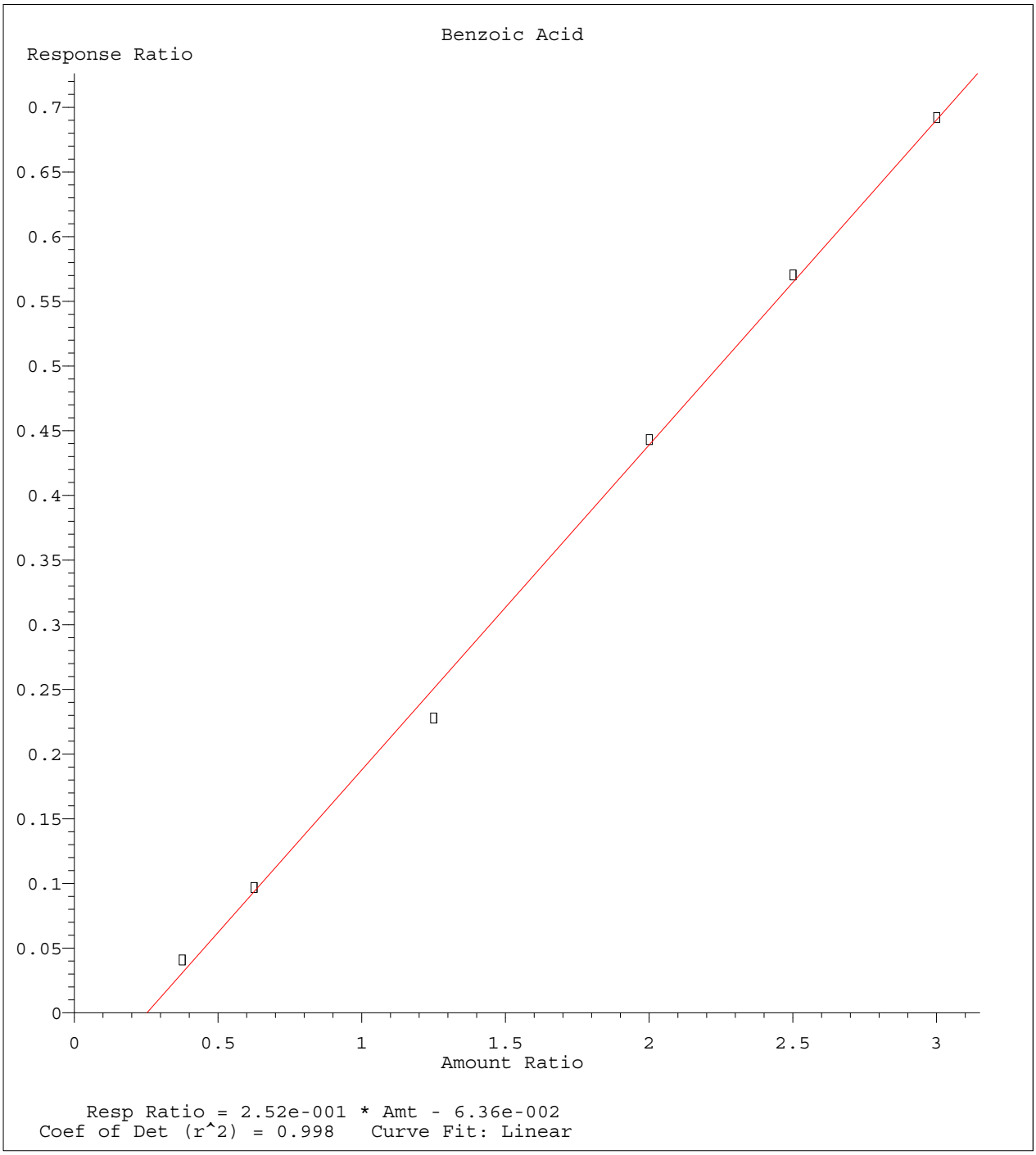
response 614711

| Ion | Exp% | Act% |
|---|---|---|
| 138.05 | 100 | 100 |
| 65.00 | 85.90 | 0.00# |
| 108.05 | 57.80 | 0.00# |
| 92.00 | 39.00 | 0.00# |

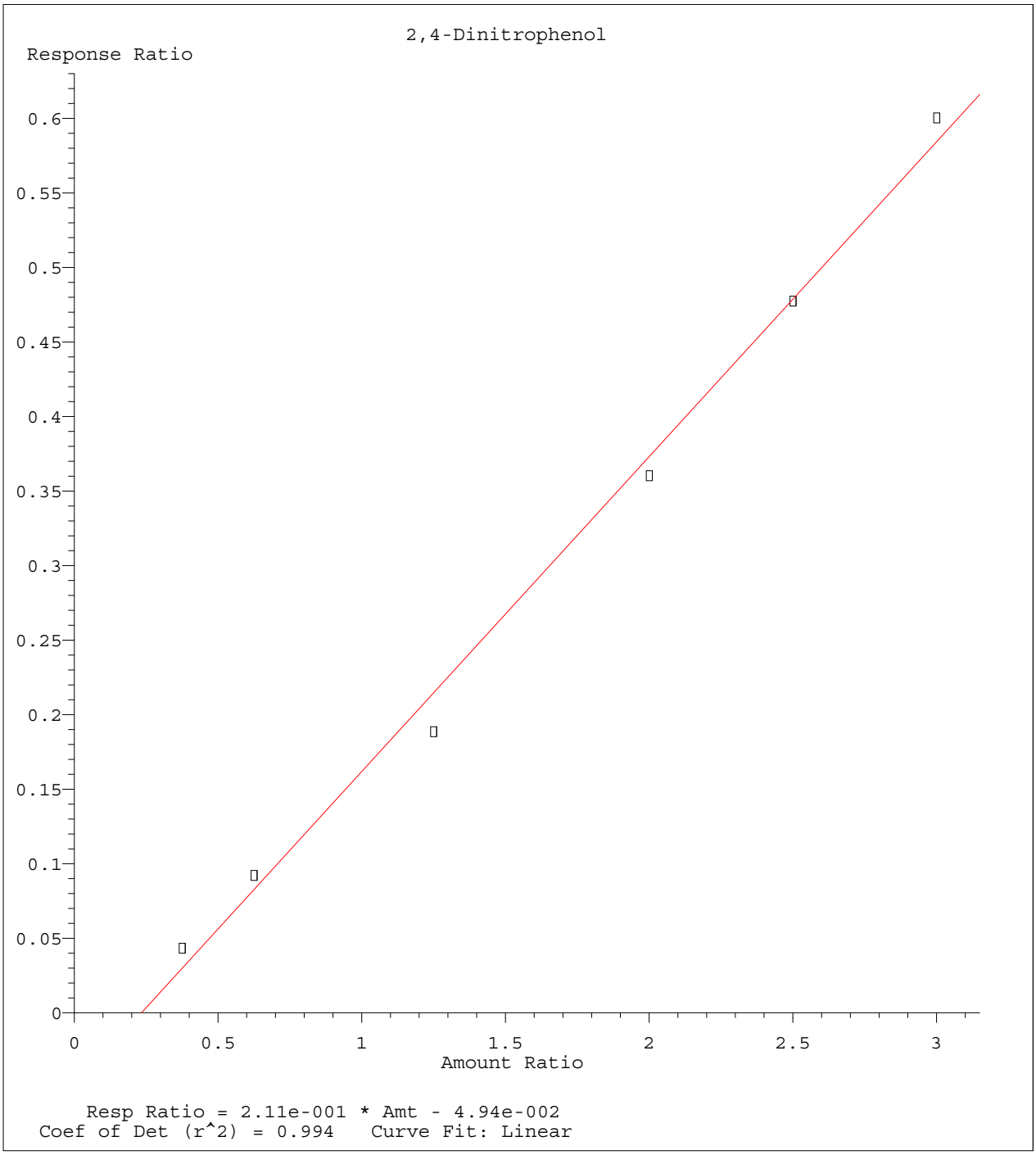
5M66923.D MEGAMIX.M Fri May 11 ; 2012

Analyst: 05/15/2012 07:35 Supervisor: 05/15/2012 09:21

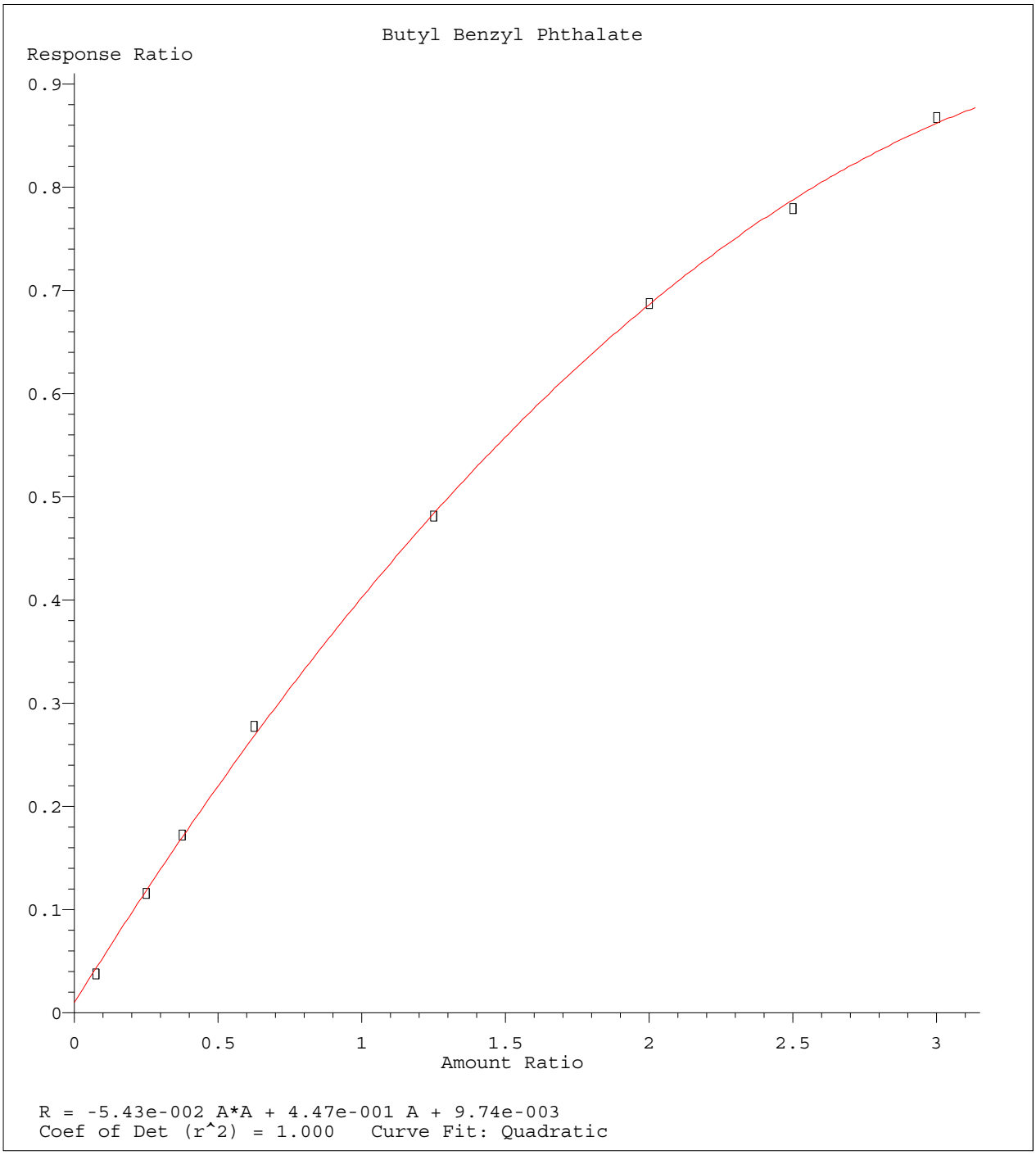
#1 - Data system fails to select correct peak




Method Name: C:\MSDCHEM\1\METHODS\MEGAMIX.M
Calibration Table Last Updated: Fri May 11 14:12:23 2012




Method Name: C:\MSDCHEM\1\METHODS\MEGAMIX.M
Calibration Table Last Updated: Fri May 11 14:12:23 2012




Method Name:  C:\MSDCHEM\1\METHODS\MEGAMIX.M
Calibration Table Last Updated: Mon May 14 15:01:56 2012

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\051112\5M66924.D Vial: 10
Acq On : 11 May 2012 1:46 pm Operator: CAA
Sample : WG397707-10 50PPM Megamix Alt Src STD Inst : HPMS5
Misc : 1,1 STD50596 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 14 15:10:00 2012 Quant Results File: MEGAMIX.RES

Quant Method : C:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
Title : OVD MSS01 8270/625/Initial cal. 05/11/12
Last Update : Mon May 14 15:01:56 2012
Response via : Initial Calibration
DataAcq Meth : BNA

| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 1) 1,4-Dichlorobenzene-d4 | 9.30 | 152 | 289430 | 40.00 | ug/ml | 0.00 |
| 30) Naphthalene-d8 | 10.91 | 136 | 1109308 | 40.00 | ug/ml | 0.00 |
| 54) Acenaphthene-d10 | 13.03 | 164 | 649859 | 40.00 | ug/ml | 0.00 |
| 87) Phenanthrene-d10 | 14.64 | 188 | 1261800 | 40.00 | ug/ml | 0.00 |
| 113) Chrysene-d12 | 17.54 | 240 | 1455504 | 40.00 | ug/ml | 0.00 |
| 128) Perylene-d12 | 20.07 | 264 | 1263487 | 40.00 | ug/ml | 0.00 |
| **System Monitoring Compounds** | | | | | | |
| 8) 2-Fluorophenol | 0.00 | 112 | 0 | 0.0000 | ug/ml | |
| Spiked Amount 100.000 | Range 21 - 100 | | Recovery = | 0.00%# | | |
| 12) Phenol-d5 | 8.83 | 99 | 850 | 0.0893 | ug/ml | 0.00 |
| Spiked Amount 100.000 | Range 10 - 94 | | Recovery = | 0.09%# | | |
| 31) Nitrobenzene-d5 | 9.95 | 82 | 42358 | 4.6827 | ug/ml | -0.06 |
| Spiked Amount 50.000 | Range 35 - 114 | | Recovery = | 9.36%# | | |
| 59) 2-Fluorobiphenyl | 12.21 | 172 | 1884 | 0.0860 | ug/ml | 0.00 |
| Spiked Amount 50.000 | Range 43 - 116 | | Recovery = | 0.18%# | | |
| 86) 2,4,6-Tribromophenol | 0.00 | 330 | 0 | 0.0000 | ug/ml | |
| Spiked Amount 100.000 | Range 10 - 123 | | Recovery = | 0.00%# | | |
| 117) p-Terphenyl-d14 | 16.26 | 244 | 2168 | 0.0930 | ug/ml | 0.00 |
| Spiked Amount 50.000 | Range 33 - 141 | | Recovery = | 0.18%# | | |
| **Target Compounds** | | | | | | Qvalue |
| 2) 1,4-Dioxane | 5.15 | 88 | 162 | 0.0456 | ug/ml# | 100 |
| 3) n-Nitrosodimethylamine | 5.80 | 74 | 255865 | 54.3717 | ug/ml | 99 |
| 4) Pyridine | 5.80 | 79 | 449306 | 53.9256 | ug/ml | 100 |
| 5) 2-Picoline | 6.94 | 93 | 441485 | 48.1947 | ug/ml | 100 |
| 6) n-Nitrosomethylethylamine | 7.13 | 88 | 191561 | 50.0942 | ug/ml | 99 |
| 7) Methyl Methanesulfonate | 7.52 | 80 | 241120 | 51.9200 | ug/ml | 100 |
| 9) n-Nitrosodiethylamine | 8.02 | 102 | 194316 | 48.5736 | ug/ml | 100 |
| 10) Ethyl Methanesulfonate | 8.38 | 79 | 303317 | 50.7740 | ug/ml | 100 |
| 11) Aniline | 8.92 | 93 | 646216 | 48.9491 | ug/ml | 99 |
| 13) Phenol | 8.85 | 94 | 511760 | 51.9299 | ug/ml | 96 |
| 14) bis(2-Chloroethyl)ether | 8.96 | 63 | 275523 | 50.1802 | ug/ml | 99 |
| 15) Pentachloroethane | 8.95 | 167 | 202686 | 53.1666 | ug/ml | 100 |
| 16) 2-Chlorophenol | 9.07 | 128 | 483573 | 52.7010 | ug/ml | 99 |
| 17) 1,3-Dichlorobenzene | 9.26 | 146 | 554710 | 51.8787 | ug/ml | 100 |
| 18) 1,4-Dichlorobenzene | 9.32 | 146 | 585036 | 52.2327 | ug/ml | 99 |
| 19) Benzyl Alcohol | 9.46 | 108 | 325795 | 56.4337 | ug/ml | 99 |
| 20) 1,2-Dichlorobenzene | 9.56 | 146 | 538476 | 52.4902 | ug/ml | 100 |
| 21) 2-Methylphenol | 9.59 | 107 | 375653 | 52.5098 | ug/ml | 99 |
| 22) bis(2-Chloroisopropyl)ethe | 9.64 | 45 | 536234 | 48.6988 | ug/ml | 100 |
| 23) 3-,4-Methylphenol | 9.76 | 107 | 471808 | 51.7652 | ug/ml | 99 |
| 24) n-Nitrosopyrrolidine | 9.80 | 100 | 182263 | 50.6547 | ug/ml | 98 |
| 25) n-Nitrosodipropylamine | 9.82 | 70 | 258805 | 49.2853 | ug/ml | 97 |
| 26) Acetophenone | 9.81 | 105 | 577780 | 51.1895 | ug/ml | 99 |
| 27) n-Nitrosomorpholine | 9.81 | 56 | 208261 | 55.9417 | ug/ml | 99 |
| 28) o-Toluidine | 9.87 | 106 | 695169 | 49.2254 | ug/ml | 100 |
| 29) Hexachloroethane | 9.95 | 117 | 207937 | 51.7553 | ug/ml | 100 |
| 32) Nitrobenzene | 10.03 | 77 | 446294 | 50.7328 | ug/ml | 100 |
| 33) n-Nitrosopiperidine | 10.22 | 114 | 209387 | 46.9981 | ug/ml | 99 |
| 34) Isophorone | 10.32 | 82 | 772483 | 49.4970 | ug/ml | 100 |
| 35) 2-Nitrophenol | 10.43 | 139 | 282000 | 53.4981 | ug/ml | 98 |
| 36) 2,4-Dimethylphenol | 10.42 | 122 | 441582 | 52.5760 | ug/ml | 100 |
| 37) 0,0,0-Triethyl Phosphoroth | 10.56 | 198 | 250729 | 48.9369 | ug/ml# | 46 |
| 38) bis(2-Chloroethoxy)methane | 10.55 | 93 | 638968 | 53.4415 | ug/ml | 98 |

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

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\051112\5M66924.D Vial: 10
Acq On : 11 May 2012 1:46 pm Operator: CAA
Sample : WG397707-10 50PPM Megamix Alt Src STD Inst : HPMS5
Misc : 1,1 STD50596 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 14 15:10:00 2012 Quant Results File: MEGAMIX.RES

Quant Method : C:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
Title : OVD MSS01 8270/625/Initial cal. 05/11/12
Last Update : Mon May 14 15:01:56 2012
Response via : Initial Calibration
DataAcq Meth : BNA

| | Compound | R.T. | QIon | Response | Conc Unit | Qvalue |
|---|---|---|---|---|---|---|
| 39) | Benzoic Acid | 10.55 | 105 | 349591 | 60.2250 ug/ml# | 45 |
| 40) | 2,4-Dichlorophenol | 10.72 | 162 | 438547 | 51.9746 ug/ml | 100 |
| 41) | a,a-Dimethylphenethylamine | 10.82 | 58 | 1148548 | 49.7672 ug/ml# | 93 |
| 42) | 1,2,4-Trichlorobenzene | 10.84 | 180 | 494705 | 51.2567 ug/ml | 100 |
| 43) | Naphthalene | 10.94 | 128 | 1435439 | 52.9846 ug/ml | 100 |
| 44) | 4-Chloroaniline | 10.99 | 127 | 617311 | 52.5016 ug/ml | 99 |
| 45) | 2,6-Dichlorophenol | 11.01 | 162 | 466249 | 54.1333 ug/ml | 100 |
| 46) | Hexachloropropene | 11.08 | 213 | 342646 | 53.9950 ug/ml | 100 |
| 47) | Hexachlorobutadiene | 11.13 | 225 | 317347 | 55.0394 ug/ml | 100 |
| 48) | n-Nitrosodi-n-Butylamine | 11.40 | 84 | 275672 | 43.2705 ug/ml# | 86 |
| 49) | p-Phenylenediamine | 11.42 | 108 | 254424 | 39.2858 ug/ml | 99 |
| 50) | 4-Chloro-3-Methylphenol | 11.54 | 107 | 399534 | 51.8703 ug/ml | 98 |
| 51) | Safrole | 11.65 | 162 | 425912 | 53.1371 ug/ml | 100 |
| 52) | 2-Methylnaphthalene | 11.78 | 142 | 991375 | 52.7220 ug/ml | 100 |
| 53) | 1-Methylnaphthalene | 11.91 | 142 | 918104 | 51.7758 ug/ml | 99 |
| 55) | 1,2,4,5-Tetrachlorobenzene | 12.03 | 216 | 521713 | 54.3399 ug/ml | 100 |
| 56) | Hexachlorocyclopentadiene | 12.04 | 237 | 281327 | 50.6307 ug/ml | 99 |
| 57) | 2,4,6-Trichlorophenol | 12.13 | 196 | 354464 | 54.0143 ug/ml | 99 |
| 58) | 2,4,5-Trichlorophenol | 12.17 | 196 | 385023 | 56.6449 ug/ml | 100 |
| 60) | Isosafrole | 12.25 | 162 | 451162 | 54.3047 ug/ml | 99 |
| 61) | 2-Chloronaphthalene | 12.36 | 162 | 1124420 | 59.9424 ug/ml | 99 |
| 62) | 1-Chloronaphthalene | 12.41 | 162 | 938929 | 52.5029 ug/ml | 99 |
| 63) | 2-Nitroaniline | 12.48 | 65 | 248244 | 53.3635 ug/ml | 100 |
| 64) | 1,4-Naphthoquinone | 12.55 | 158 | 254729 | 65.2209 ug/ml | 99 |
| 65) | Dimethylphthalate | 12.69 | 163 | 1088100 | 51.7174 ug/ml | 100 |
| 66) | 1,3-Dinitrobenzene | 12.74 | 168 | 192153 | 48.7500 ug/ml | 100 |
| 67) | 2,6-Dinitrotoluene | 12.78 | 165 | 276174 | 53.6052 ug/ml | 98 |
| 68) | Acenaphthylene | 12.86 | 152 | 1526641 | 53.7686 ug/ml | 100 |
| 69) | 3-Nitroaniline | 12.95 | 138 | 284070 | 53.3497 ug/ml | 99 |
| 70) | 2,4-Dinitrophenol | 13.07 | 184 | 214866 | 72.0043 ug/ml# | 24 |
| 71) | Acenaphthene | 13.07 | 154 | 957813 | 52.8832 ug/ml | 96 |
| 72) | 4-Nitrophenol | 13.09 | 65 | 194218 | 52.4554 ug/ml | 99 |
| 73) | 2,4-Dinitrotoluene | 13.23 | 165 | 350331 | 53.8243 ug/ml | 99 |
| 74) | Pentachlorobenzene | 13.26 | 250 | 487342 | 54.0605 ug/ml | 99 |
| 75) | Dibenzofuran | 13.24 | 168 | 1347239 | 53.6245 ug/ml | 99 |
| 76) | 2,3,4,6-Tetrachlorophenol | 13.40 | 232 | 300708 | 52.2002 ug/ml | 100 |
| 77) | 1-Naphthylamine | 13.32 | 143 | 932360 | 51.6575 ug/ml | 100 |
| 78) | 2-Naphthylamine | 13.40 | 143 | 929694 | 59.3193 ug/ml | 99 |
| 79) | Diethylphthalate | 13.46 | 149 | 1059727 | 51.7301 ug/ml | 100 |
| 80) | Thionazin | 13.56 | 107 | 138889 | 47.7124 ug/ml | 99 |
| 81) | Fluorene | 13.62 | 166 | 1174433 | 53.1766 ug/ml | 100 |
| 82) | 4-Chlorophenyl Phenyl Ethe | 13.57 | 204 | 573372 | 53.7472 ug/ml | 99 |
| 83) | 4-Nitroaniline | 13.65 | 138 | 303008 | 55.5698 ug/ml | 99 |
| 84) | 5-Nitro-o-Toluidine | 13.63 | 152 | 353306 | 52.9460 ug/ml | 99 |
| 85) | 1,2-Diphenylhydrazine | 13.75 | 77 | 926656 | 52.4290 ug/ml | 99 |
| 88) | 4,6-Dinitro-2-Methylphenol | 13.69 | 198 | 260003 | 64.7448 ug/ml | 86 |
| 89) | n-Nitrosodiphenylamine | 13.71 | 169 | 1040647 | 53.1907 ug/ml | 99 |
| 90) | Sulfotepp | 13.92 | 322 | 224271 | 48.9976 ug/ml | 97 |
| 91) | Sym-Trinitrobenzene | 14.01 | 75 | 282032 | 59.9167 ug/ml | 99 |
| 92) | Diallate | 14.03 | 86 | 328918 | 48.9247 ug/ml | 100 |
| 93) | Phenacetin | 14.04 | 108 | 490074 | 52.7039 ug/ml | 100 |
| 94) | Phorate | 14.05 | 75 | 509936 | 50.1628 ug/ml# | 100 |
| 95) | 4-Bromophenyl Phenyl Ether | 14.11 | 248 | 374270 | 51.7145 ug/ml | 100 |
| 96) | Hexachlorobenzene | 14.31 | 284 | 416067 | 51.2074 ug/ml | 99 |

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

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\051112\5M66924.D Vial: 10
Acq On : 11 May 2012 1:46 pm Operator: CAA
Sample : WG397707-10 50PPM Megamix Alt Src STD Inst : HPMS5
Misc : 1,1 STD50596 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 14 15:10:00 2012 Quant Results File: MEGAMIX.RES

Quant Method : C:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
Title : OVD MSS01 8270/625/Initial cal. 05/11/12
Last Update : Mon May 14 15:01:56 2012
Response via : Initial Calibration
DataAcq Meth : BNA

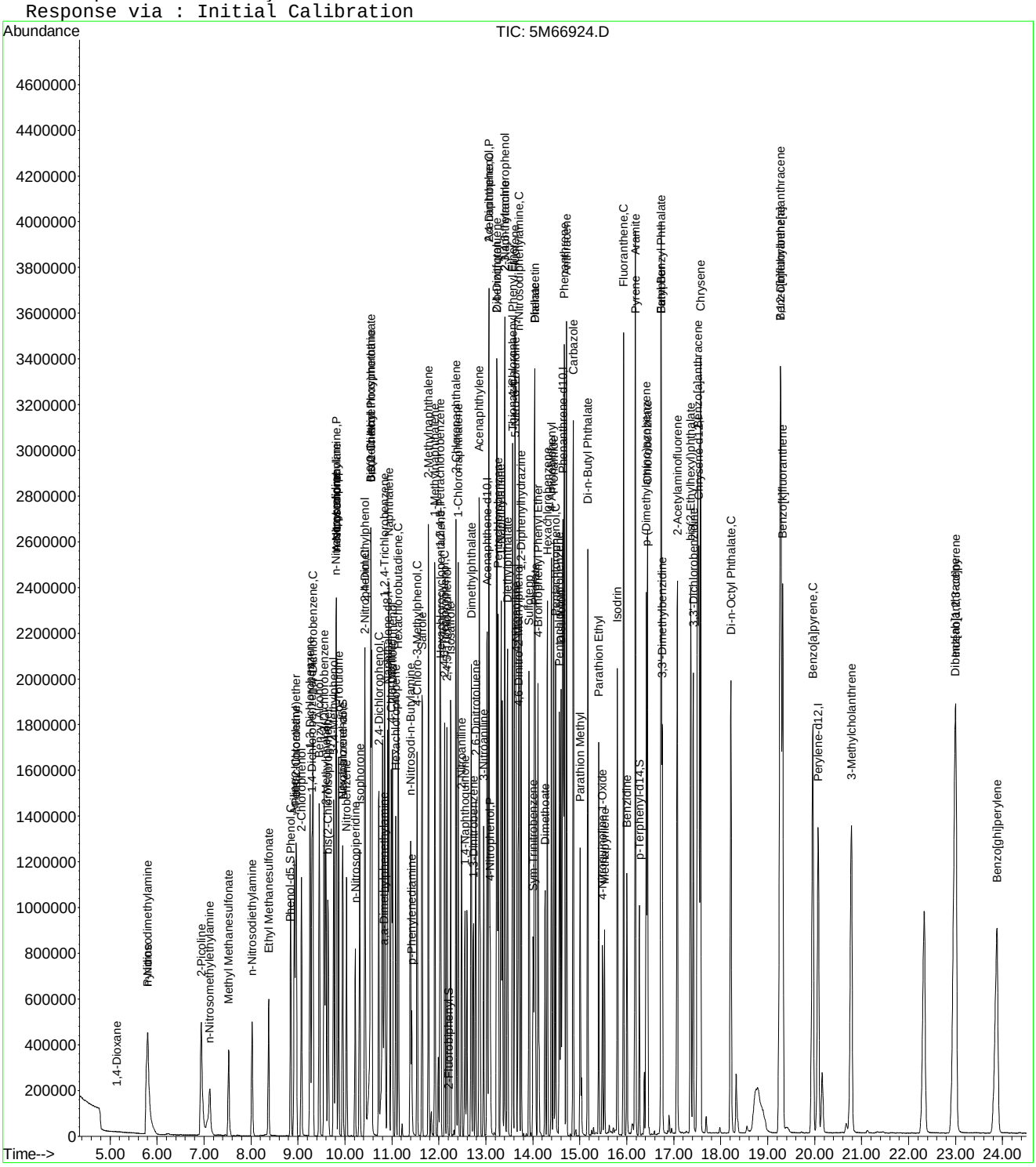
| | Compound | R.T. | QIon | Response | Conc | Unit | Qvalue |
|---|---|---|---|---|---|---|---|
| 97) | Dimethoate | 14.26 | 87 | 239892 | 43.5865 | ug/ml | 96 |
| 98) | 4-Aminobiphenyl | 14.40 | 169 | 1145530 | 53.3628 | ug/ml | 100 |
| 99) | Pentachlorophenol | 14.48 | 266 | 322033 | 61.2636 | ug/ml | 100 |
| 100) | Pronamide | 14.44 | 173 | 533080 | 52.1998 | ug/ml | 100 |
| 101) | Pentachloronitrobenzene | 14.57 | 237 | 152054 | 50.5050 | ug/ml | 99 |
| 102) | Disulfoton | 14.60 | 88 | 464558 | 49.3098 | ug/ml | 99 |
| 103) | Phenanthrene | 14.67 | 178 | 1706230 | 52.6215 | ug/ml | 100 |
| 104) | Anthracene | 14.72 | 178 | 1722346 | 52.4566 | ug/ml | 100 |
| 105) | Carbazole | 14.86 | 167 | 1548579 | 51.6708 | ug/ml | 100 |
| 106) | Parathion Methyl | 15.01 | 109 | 271734 | 49.3976 | ug/ml | 99 |
| 107) | Di-n-Butyl Phthalate | 15.17 | 149 | 1728466 | 50.0709 | ug/ml | 100 |
| 108) | Parathion Ethyl | 15.41 | 97 | 183791 | 48.9225 | ug/ml | 99 |
| 109) | 4-Nitroquinoline 1-Oxide | 15.48 | 190 | 128601 | 44.5777 | ug/ml | 98 |
| 110) | Methapyrilene | 15.52 | 58 | 282960 | 64.1247 | ug/ml | 99 |
| 111) | Isodrin | 15.80 | 193 | 197378 | 52.5304 | ug/ml | 94 |
| 112) | Fluoranthene | 15.94 | 202 | 1817552 | 51.5003 | ug/ml | 100 |
| 114) | Benzidine | 16.00 | 184 | 533634 | 66.2261 | ug/ml | 100 |
| 115) | Pyrene | 16.18 | 202 | 1856874 | 53.6110 | ug/ml | 100 |
| 116) | Aramite | 16.19 | 185 | 94293 | 49.0421 | ug/ml | 98 |
| 118) | p-(Dimethylamino)azobenzen | 16.42 | 225 | 446592 | 53.1964 | ug/ml | 100 |
| 119) | Chlorobenzilate | 16.44 | 251 | 640197 | 55.1109 | ug/ml | 99 |
| 120) | Famphur | 16.73 | 218 | 5731 | 53.9324 | ug/ml | 90 |
| 121) | Butyl Benzyl Phthalate | 16.74 | 149 | 756398 | 54.7412 | ug/ml | 99 |
| 122) | 3,3'-Dimethylbenzidine | 16.76 | 212 | 852584 | 36.0719 | ug/ml | 99 |
| 123) | 2-Acetylaminofluorene | 17.08 | 181 | 798307 | 53.0275 | ug/ml | 100 |
| 124) | bis(2-Ethylhexyl)phthalate | 17.36 | 149 | 1127748 | 51.9455 | ug/ml | 99 |
| 125) | 3,3'-Dichlorobenzidine | 17.41 | 252 | 683929 | 53.8794 | ug/ml | 99 |
| 126) | Benzo[a]anthracene | 17.51 | 228 | 1946962 | 53.1717 | ug/ml | 100 |
| 127) | Chrysene | 17.57 | 228 | 1870650 | 54.9622 | ug/ml | 100 |
| 129) | Di-n-Octyl Phthalate | 18.22 | 149 | 1896983 | 52.3384 | ug/ml | 100 |
| 130) | 7,12-Dimethylbenz[a]anthra | 19.27 | 256 | 998246 | 57.3361 | ug/ml | 100 |
| 131) | Benzo[b]fluoranthene | 19.28 | 252 | 2292579 | 56.1335 | ug/ml | 100 |
| 132) | Benzo[k]fluoranthene | 19.32 | 252 | 1735768 | 52.4417 | ug/ml | 100 |
| 133) | Benzo[a]pyrene | 19.96 | 252 | 1825193 | 53.4050 | ug/ml | 99 |
| 134) | 3-Methylcholanthrene | 20.78 | 268 | 982763 | 54.0658 | ug/ml | 100 |
| 135) | Indeno[1,2,3-cd]pyrene | 23.01 | 276 | 2121754 | 54.5117 | ug/ml | 99 |
| 136) | Dibenz[ah]anthracene | 22.99 | 278 | 1771090 | 53.9503 | ug/ml | 99 |
| 137) | Benzo[ghi]perylene | 23.88 | 276 | 1624652 | 53.4082 | ug/ml | 99 |

(#) = qualifier out of range (m) = manual integration
5M66924.D MEGAMIX.M Mon May 14 15:10:21 2012 Page 3

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\051112\5M66924.D Vial: 10
Acq On : 11 May 2012 1:46 pm Operator: CAA
Sample : WG397707-10 50PPM Megamix Alt Src STD Inst : HPMS5
Misc : 1,1 STD50596 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 14 15:10 2012 Quant Results File: MEGAMIX.RES

Method : C:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
Title : OVD MSS01 8270/625/Initial cal. 05/11/12
Last Update : Mon May 14 15:01:56 2012
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\051112\5M66925.D Vial: 11
Acq On : 11 May 2012 2:21 pm Operator: CAA
Sample : WG397707-11 50PPM 1,4-Dioxane Alt Src ST Inst : HPMS5
Misc : 1,1 STD50848 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 14 15:10:30 2012 Quant Results File: MEGAMIX.RES

Quant Method : C:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
Title : OVD MSS01 8270/625/Initial cal. 05/11/12
Last Update : Mon May 14 15:01:56 2012
Response via : Initial Calibration
DataAcq Meth : BNA

| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 1) 1,4-Dichlorobenzene-d4 | 9.30 | 152 | 245024 | 40.00 | ug/ml | 0.00 |
| 30) Naphthalene-d8 | 10.91 | 136 | 899791 | 40.00 | ug/ml | 0.00 |
| 54) Acenaphthene-d10 | 13.02 | 164 | 512125 | 40.00 | ug/ml | 0.00 |
| 87) Phenanthrene-d10 | 14.64 | 188 | 920097 | 40.00 | ug/ml | 0.00 |
| 113) Chrysene-d12 | 17.53 | 240 | 1073145 | 40.00 | ug/ml | 0.00 |
| 128) Perylene-d12 | 20.06 | 264 | 992258 | 40.00 | ug/ml | -0.02 |

| System Monitoring Compounds | | | | | | |
|---|---|---|---|---|---|---|
| 8) 2-Fluorophenol | 0.00 | 112 | 0 | 0.0000 | ug/ml | |
| Spiked Amount 100.000 | Range 21 - 100 | | Recovery = | 0.00%# | | |
| 12) Phenol-d5 | 0.00 | 99 | 0 | 0.0000 | ug/ml | |
| Spiked Amount 100.000 | Range 10 - 94 | | Recovery = | 0.00%# | | |
| 31) Nitrobenzene-d5 | 0.00 | 82 | 0 | 0.0000 | ug/ml | |
| Spiked Amount 50.000 | Range 35 - 114 | | Recovery = | 0.00%# | | |
| 59) 2-Fluorobiphenyl | 0.00 | 172 | 0 | 0.0000 | ug/ml | |
| Spiked Amount 50.000 | Range 43 - 116 | | Recovery = | 0.00%# | | |
| 86) 2,4,6-Tribromophenol | 0.00 | 330 | 0 | 0.0000 | ug/ml | |
| Spiked Amount 100.000 | Range 10 - 123 | | Recovery = | 0.00%# | | |
| 117) p-Terphenyl-d14 | 0.00 | 244 | 0 | 0.0000 | ug/ml | |
| Spiked Amount 50.000 | Range 33 - 141 | | Recovery = | 0.00%# | | |

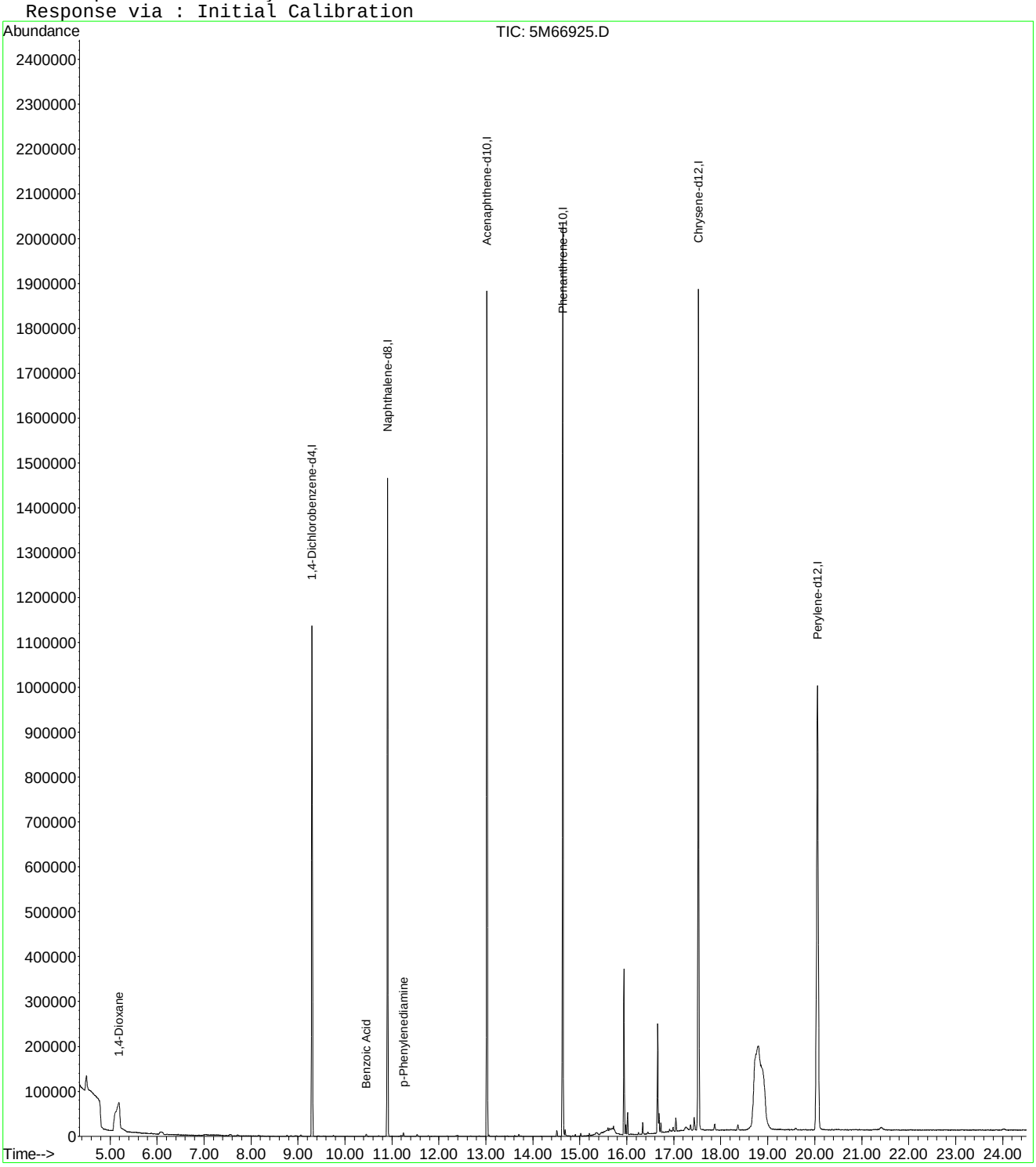
| Target Compounds | | | | | | Qvalue |
|---|---|---|---|---|---|---|
| 2) 1,4-Dioxane | 5.19 | 88 | 162132 | 53.8706 | ug/ml# | 100 |
| 39) Benzoic Acid | 10.45 | 105 | 2047 | 10.4738 | ug/ml# | 71 |
| 49) p-Phenylenediamine | 11.24 | 108 | 1556 | 2.2841 | ug/ml# | 40 |
| 121) Butyl Benzyl Phthalate | 16.73 | 149 | 682 | Below Cal | # | 52 |

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

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\051112\5M66925.D Vial: 11
Acq On : 11 May 2012 2:21 pm Operator: CAA
Sample : WG397707-11 50PPM 1,4-Dioxane Alt Src ST Inst : HPMS5
Misc : 1,1 STD50848 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 14 15:10 2012 Quant Results File: MEGAMIX.RES

Method : C:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
Title : OVD MSS01 8270/625/Initial cal. 05/11/12
Last Update : Mon May 14 15:01:56 2012
Response via : Initial Calibration




5M66925.D MEGAMIX.M Mon May 14 15:10:39 2012 Page 2

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\051412\5M66978.D Vial: 3
Acq On : 14 May 2012 9:37 am Operator: CAA
Sample : WG397871-01 50PPM TCL STD Inst : HPMS5
Misc : 1,1 STD51428 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 15 09:34:13 2012 Quant Results File: TCL.RES

Quant Method : C:\MSDCHEM\1\METHODS\TCL.M (RTE Integrator)
Title : MSS01 OVD 827-TCL INITIAL CALIBRATION 05/14/12
Last Update : Tue May 15 09:34:11 2012
Response via : Initial Calibration
DataAcq Meth : BNA

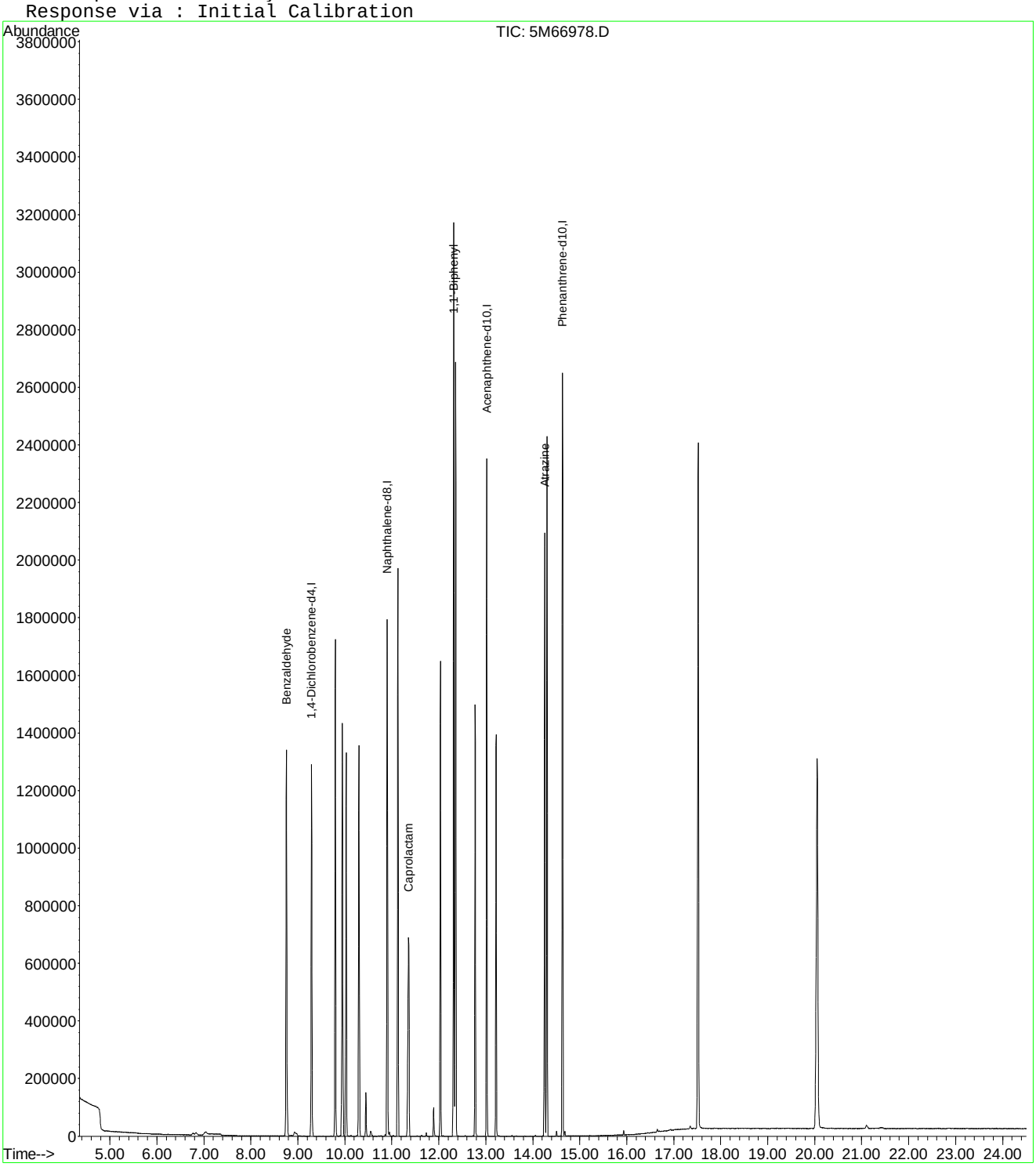
| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 1) 1,4-Dichlorobenzene-d4 | 9.29 | 152 | 293441 | 40.00 | ug/mL | 0.00 |
| 3) Naphthalene-d8 | 10.90 | 136 | 1089026 | 40.00 | ug/mL | 0.00 |
| 5) Acenaphthene-d10 | 13.02 | 164 | 649188 | 40.00 | ug/mL | 0.00 |
| 7) Phenanthrene-d10 | 14.63 | 188 | 1206846 | 40.00 | ug/mL | 0.00 |
| **Target Compounds** | | | | | | Qvalue |
| 2) Benzaldehyde | 8.76 | 105 | 377619 | 40.6091 | ug/L | 96 |
| 4) Caprolactam | 11.36 | 55 | 200034 | 32.1455 | ug/L # | 88 |
| 6) 1,1'-Biphenyl | 12.32 | 154 | 1282775 | 43.3314 | ug/L | 99 |
| 8) Atrazine | 14.26 | 200 | 359072 | 47.1372 | ug/L | 98 |

(#) = qualifier out of range (m) = manual integration
5M66978.D TCL.M Wed May 16 09:12:30 2012 Page 1

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\051412\5M66978.D Vial: 3
Acq On : 14 May 2012 9:37 am Operator: CAA
Sample : WG397871-01 50PPM TCL STD Inst : HPMS5
Misc : 1,1 STD51428 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 15 9:34 2012 Quant Results File: TCL.RES

Method : C:\MSDCHEM\1\METHODS\TCL.M (RTE Integrator)
Title : MSS01 OVD 827-TCL INITIAL CALIBRATION 05/14/12
Last Update : Tue May 15 09:35:12 2012
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\051412\5M66979.D Vial: 4
Acq On : 14 May 2012 10:13 am Operator: CAA
Sample : WG397871-02 3PPM TCL STD Inst : HPMS5
Misc : 1,1 STD51428 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 15 09:34:23 2012 Quant Results File: TCL.RES

Quant Method : C:\MSDCHEM\1\METHODS\TCL.M (RTE Integrator)
Title : MSS01 OVD 827-TCL INITIAL CALIBRATION 05/14/12
Last Update : Tue May 15 09:34:19 2012
Response via : Initial Calibration
DataAcq Meth : BNA

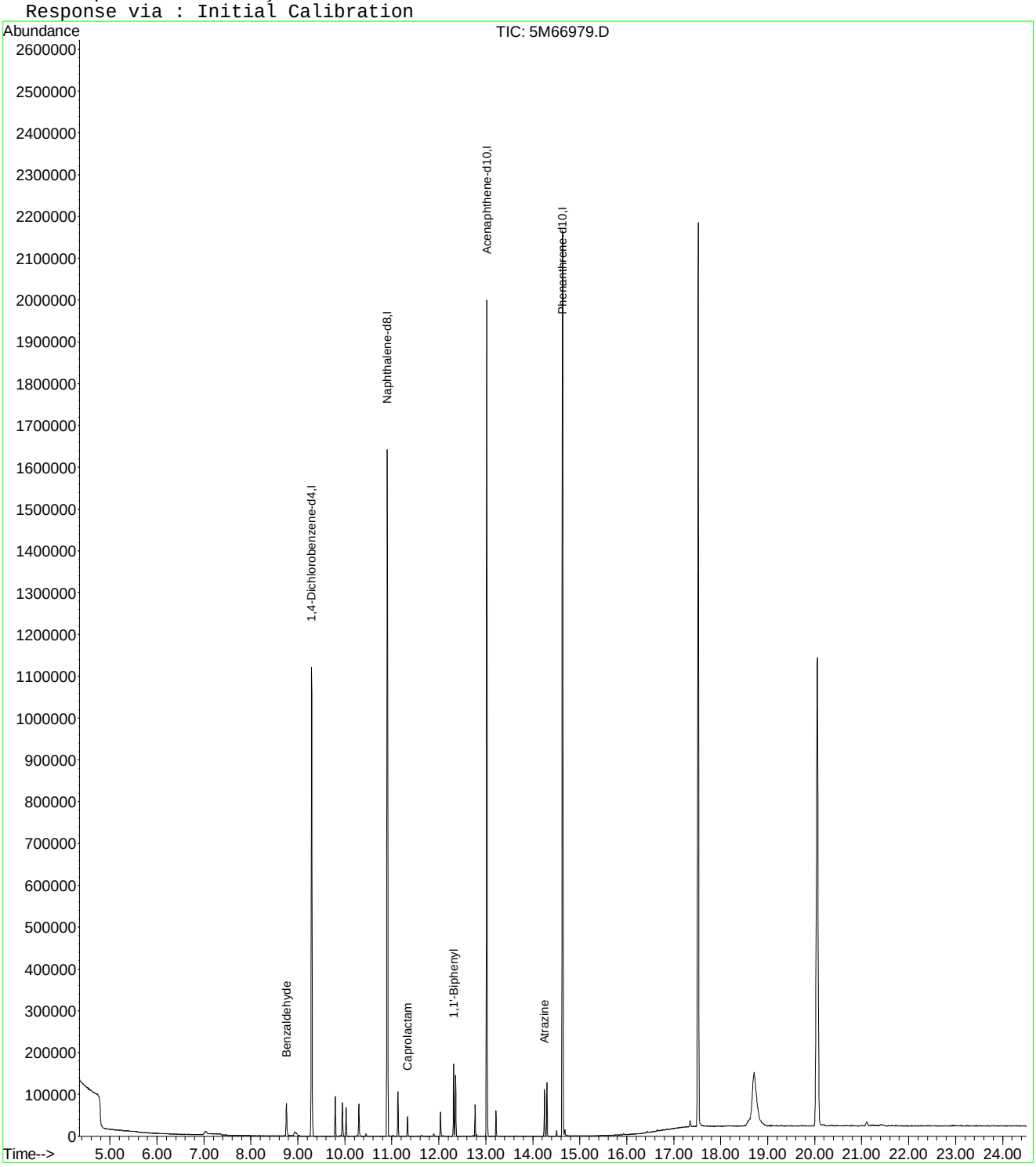
| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 1) 1,4-Dichlorobenzene-d4 | 9.29 | 152 | 265730 | 40.00 | ug/mL | 0.00 |
| 3) Naphthalene-d8 | 10.90 | 136 | 971928 | 40.00 | ug/mL | 0.00 |
| 5) Acenaphthene-d10 | 13.02 | 164 | 564705 | 40.00 | ug/mL | 0.00 |
| 7) Phenanthrene-d10 | 14.63 | 188 | 1037583 | 40.00 | ug/mL | 0.00 |
| **Target Compounds** | | | | | | Qvalue |
| 2) Benzaldehyde | 8.76 | 105 | 20578 | 2.5093 | ug/L | 99 |
| 4) Caprolactam | 11.34 | 55 | 9433 | 1.8062 | ug/L | 97 |
| 6) 1,1'-Biphenyl | 12.31 | 154 | 68405 | 2.7039 | ug/L | 98 |
| 8) Atrazine | 14.25 | 200 | 17233 | 2.6396 | ug/L | 99 |

(#) = qualifier out of range (m) = manual integration
5M66979.D TCL.M Wed May 16 09:12:31 2012 Page 1

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\051412\5M66979.D Vial: 4
Acq On : 14 May 2012 10:13 am Operator: CAA
Sample : WG397871-02 3PPM TCL STD Inst : HPMS5
Misc : 1,1 STD51428 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 15 9:34 2012 Quant Results File: TCL.RES

Method : C:\MSDCHEM\1\METHODS\TCL.M (RTE Integrator)
Title : MSS01 OVD 827-TCL INITIAL CALIBRATION 05/14/12
Last Update : Tue May 15 09:35:12 2012
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\051412\5M66980.D Vial: 5
Acq On : 14 May 2012 10:50 am Operator: CAA
Sample : WG397871-03 10PPM TCL STD Inst : HPMS5
Misc : 1,1 STD51428 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 15 09:34:33 2012 Quant Results File: TCL.RES

Quant Method : C:\MSDCHEM\1\METHODS\TCL.M (RTE Integrator)
Title : MSS01 OVD 827-TCL INITIAL CALIBRATION 05/14/12
Last Update : Tue May 15 09:34:28 2012
Response via : Initial Calibration
DataAcq Meth : BNA

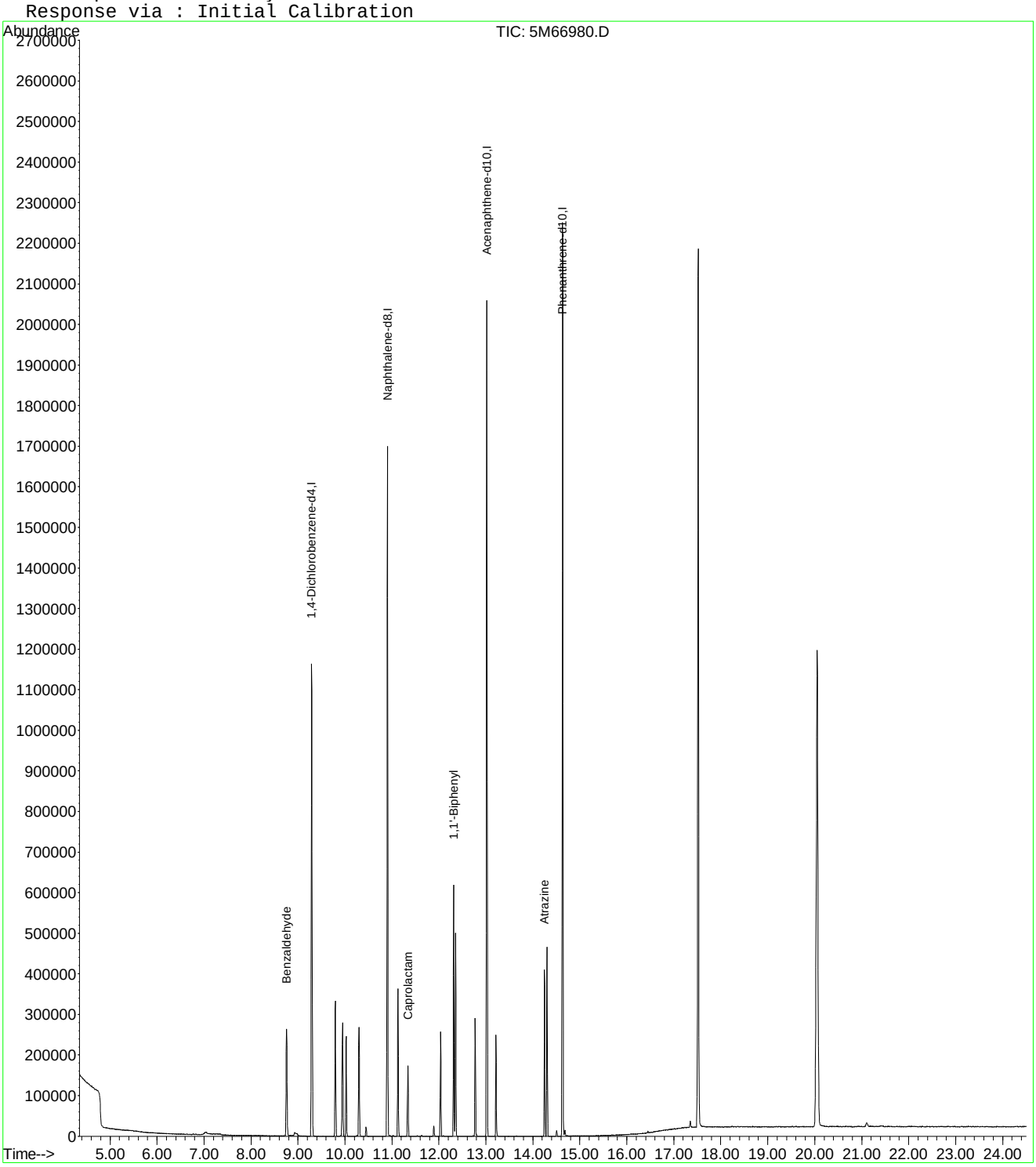
| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 1) 1,4-Dichlorobenzene-d4 | 9.29 | 152 | 273922 | 40.00 | ug/mL | 0.00 |
| 3) Naphthalene-d8 | 10.90 | 136 | 990531 | 40.00 | ug/mL | 0.00 |
| 5) Acenaphthene-d10 | 13.02 | 164 | 581696 | 40.00 | ug/mL | 0.00 |
| 7) Phenanthrene-d10 | 14.63 | 188 | 1065680 | 40.00 | ug/mL | 0.00 |
| **Target Compounds** | | | | | | Qvalue |
| 2) Benzaldehyde | 8.76 | 105 | 68664 | 8.4805 | ug/L | 98 |
| 4) Caprolactam | 11.34 | 55 | 34752 | 6.9847 | ug/L | 97 |
| 6) 1,1'-Biphenyl | 12.31 | 154 | 235230 | 9.3965 | ug/L | 98 |
| 8) Atrazine | 14.25 | 200 | 61283 | 9.4571 | ug/L | 99 |

(#) = qualifier out of range (m) = manual integration
5M66980.D TCL.M Wed May 16 09:12:31 2012 Page 1

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\051412\5M66980.D Vial: 5
Acq On : 14 May 2012 10:50 am Operator: CAA
Sample : WG397871-03 10PPM TCL STD Inst : HPMS5
Misc : 1,1 STD51428 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 15 9:34 2012 Quant Results File: TCL.RES

Method : C:\MSDCHEM\1\METHODS\TCL.M (RTE Integrator)
Title : MSS01 OVD 827-TCL INITIAL CALIBRATION 05/14/12
Last Update : Tue May 15 09:35:12 2012
Response via : Initial Calibration




5M66980.D TCL.M Wed May 16 09:12:31 2012 Page 2

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\051412\5M66981.D Vial: 6
Acq On : 14 May 2012 11:25 am Operator: CAA
Sample : WG397871-04 25PPM TCL STD Inst : HPMS5
Misc : 1,1 STD51428 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 15 09:34:40 2012 Quant Results File: TCL.RES

Quant Method : C:\MSDCHEM\1\METHODS\TCL.M (RTE Integrator)
Title : MSS01 OVD 827-TCL INITIAL CALIBRATION 05/14/12
Last Update : Tue May 15 09:34:36 2012
Response via : Initial Calibration
DataAcq Meth : BNA

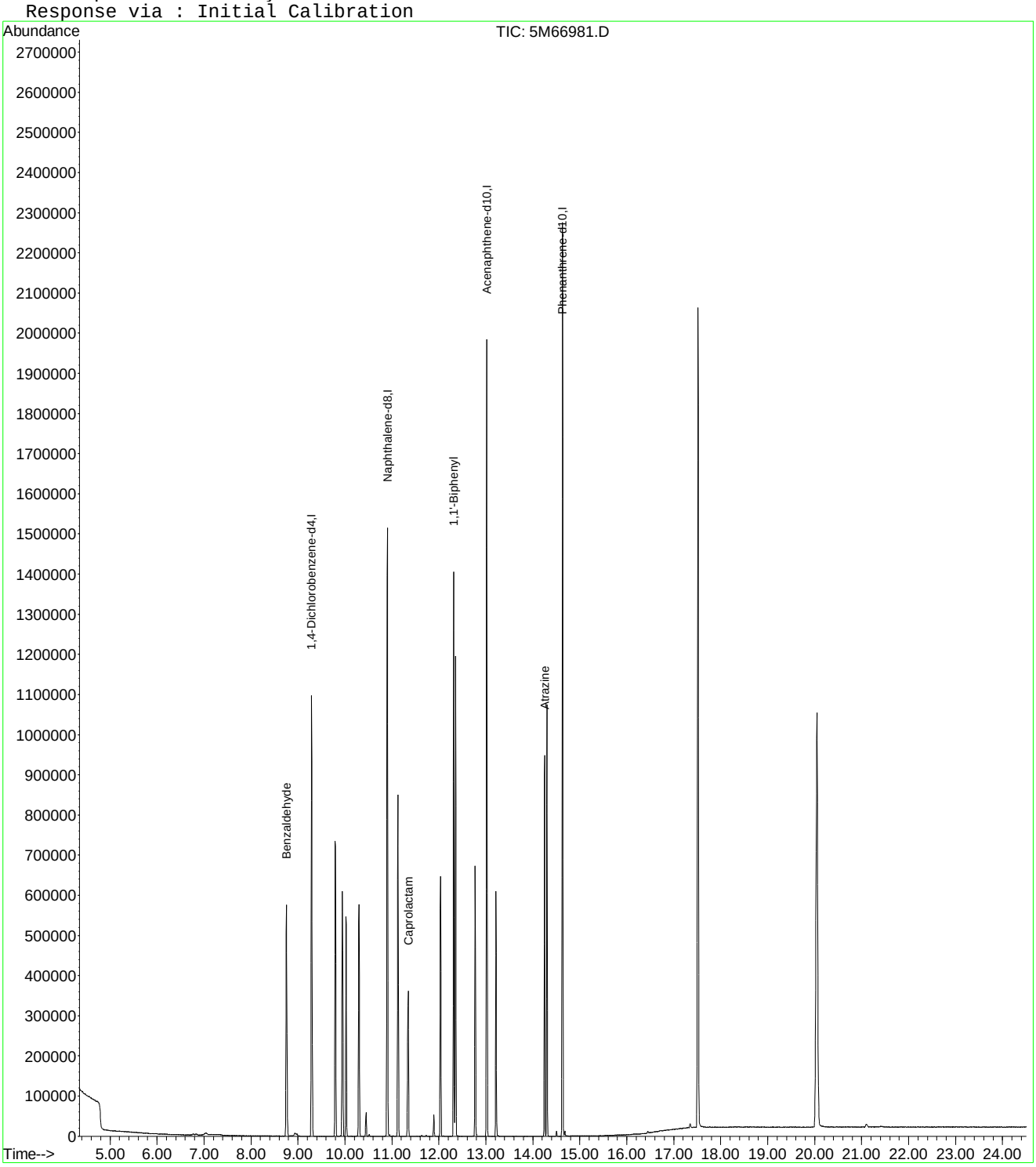
| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 1) 1,4-Dichlorobenzene-d4 | 9.29 | 152 | 249083 | 40.00 | ug/mL | 0.00 |
| 3) Naphthalene-d8 | 10.90 | 136 | 916427 | 40.00 | ug/mL | 0.00 |
| 5) Acenaphthene-d10 | 13.02 | 164 | 539066 | 40.00 | ug/mL | 0.00 |
| 7) Phenanthrene-d10 | 14.63 | 188 | 994034 | 40.00 | ug/mL | 0.00 |
| **Target Compounds** | | | | | | Qvalue |
| 2) Benzaldehyde | 8.76 | 105 | 156425 | 22.3225 | ug/L | 99 |
| 4) Caprolactam | 11.35 | 55 | 81440 | 19.1920 | ug/L | 97 |
| 6) 1,1'-Biphenyl | 12.31 | 154 | 542935 | 24.3240 | ug/L | 98 |
| 8) Atrazine | 14.25 | 200 | 146922 | 25.1039 | ug/L | 99 |

(#) = qualifier out of range (m) = manual integration
5M66981.D TCL.M Wed May 16 09:12:32 2012 Page 1

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\051412\5M66981.D Vial: 6
Acq On : 14 May 2012 11:25 am Operator: CAA
Sample : WG397871-04 25PPM TCL STD Inst : HPMS5
Misc : 1,1 STD51428 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 15 9:34 2012 Quant Results File: TCL.RES

Method : C:\MSDCHEM\1\METHODS\TCL.M (RTE Integrator)
Title : MSS01 OVD 827-TCL INITIAL CALIBRATION 05/14/12
Last Update : Tue May 15 09:35:12 2012
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\051412\5M66982.D Vial: 7
Acq On : 14 May 2012 12:01 pm Operator: CAA
Sample : WG397871-05 80PPM TCL STD Inst : HPMS5
Misc : 1,1 STD51428 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 15 09:34:48 2012 Quant Results File: TCL.RES

Quant Method : C:\MSDCHEM\1\METHODS\TCL.M (RTE Integrator)
Title : MSS01 OVD 827-TCL INITIAL CALIBRATION 05/14/12
Last Update : Tue May 15 09:34:44 2012
Response via : Initial Calibration
DataAcq Meth : BNA

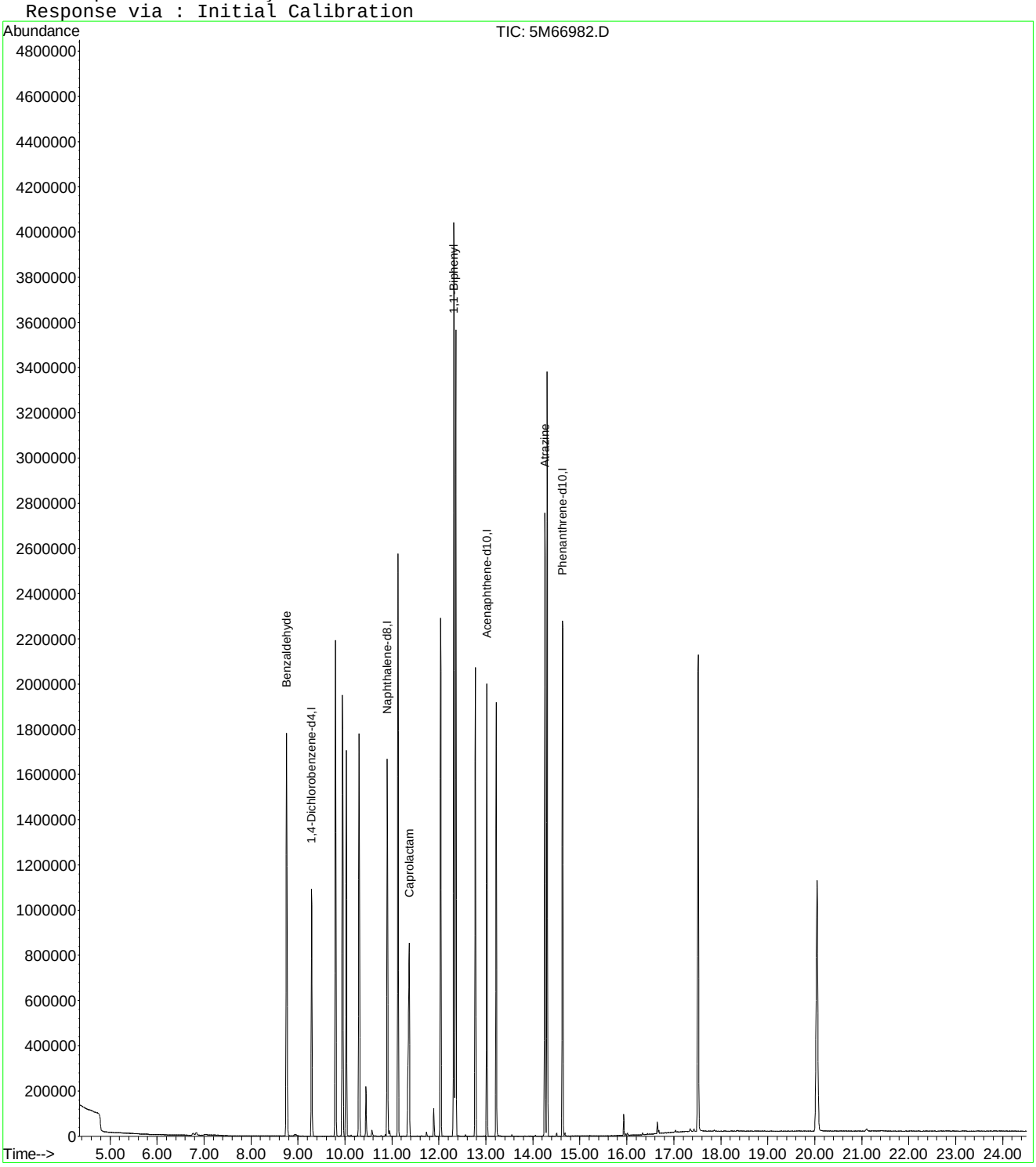
| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 1) 1,4-Dichlorobenzene-d4 | 9.29 | 152 | 259739 | 40.00 | ug/mL | 0.00 |
| 3) Naphthalene-d8 | 10.90 | 136 | 964937 | 40.00 | ug/mL | 0.00 |
| 5) Acenaphthene-d10 | 13.02 | 164 | 577688 | 40.00 | ug/mL | 0.00 |
| 7) Phenanthrene-d10 | 14.63 | 188 | 1079048 | 40.00 | ug/mL | 0.00 |
| **Target Compounds** | | | | | | Qvalue |
| 2) Benzaldehyde | 8.76 | 105 | 527990 | 75.3420 | ug/L | 99 |
| 4) Caprolactam | 11.37 | 55 | 276376 | 67.4721 | ug/L | 99 |
| 6) 1,1'-Biphenyl | 12.32 | 154 | 1719599 | 73.8291 | ug/L | 100 |
| 8) Atrazine | 14.26 | 200 | 503313 | 80.2742 | ug/L | 100 |

(#) = qualifier out of range (m) = manual integration
5M66982.D TCL.M Wed May 16 09:12:32 2012 Page 1

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\051412\5M66982.D Vial: 7
Acq On : 14 May 2012 12:01 pm Operator: CAA
Sample : WG397871-05 80PPM TCL STD Inst : HPMS5
Misc : 1,1 STD51428 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 15 9:34 2012 Quant Results File: TCL.RES

Method : C:\MSDCHEM\1\METHODS\TCL.M (RTE Integrator)
Title : MSS01 OVD 827-TCL INITIAL CALIBRATION 05/14/12
Last Update : Tue May 15 09:35:12 2012
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\051412\5M66983.D Vial: 8
Acq On : 14 May 2012 12:36 pm Operator: CAA
Sample : WG397871-06 100PPM TCL STD Inst : HPMS5
Misc : 1,1 STD51428 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 15 09:34:55 2012 Quant Results File: TCL.RES

Quant Method : C:\MSDCHEM\1\METHODS\TCL.M (RTE Integrator)
Title : MSS01 OVD 827-TCL INITIAL CALIBRATION 05/14/12
Last Update : Tue May 15 09:34:51 2012
Response via : Initial Calibration
DataAcq Meth : BNA

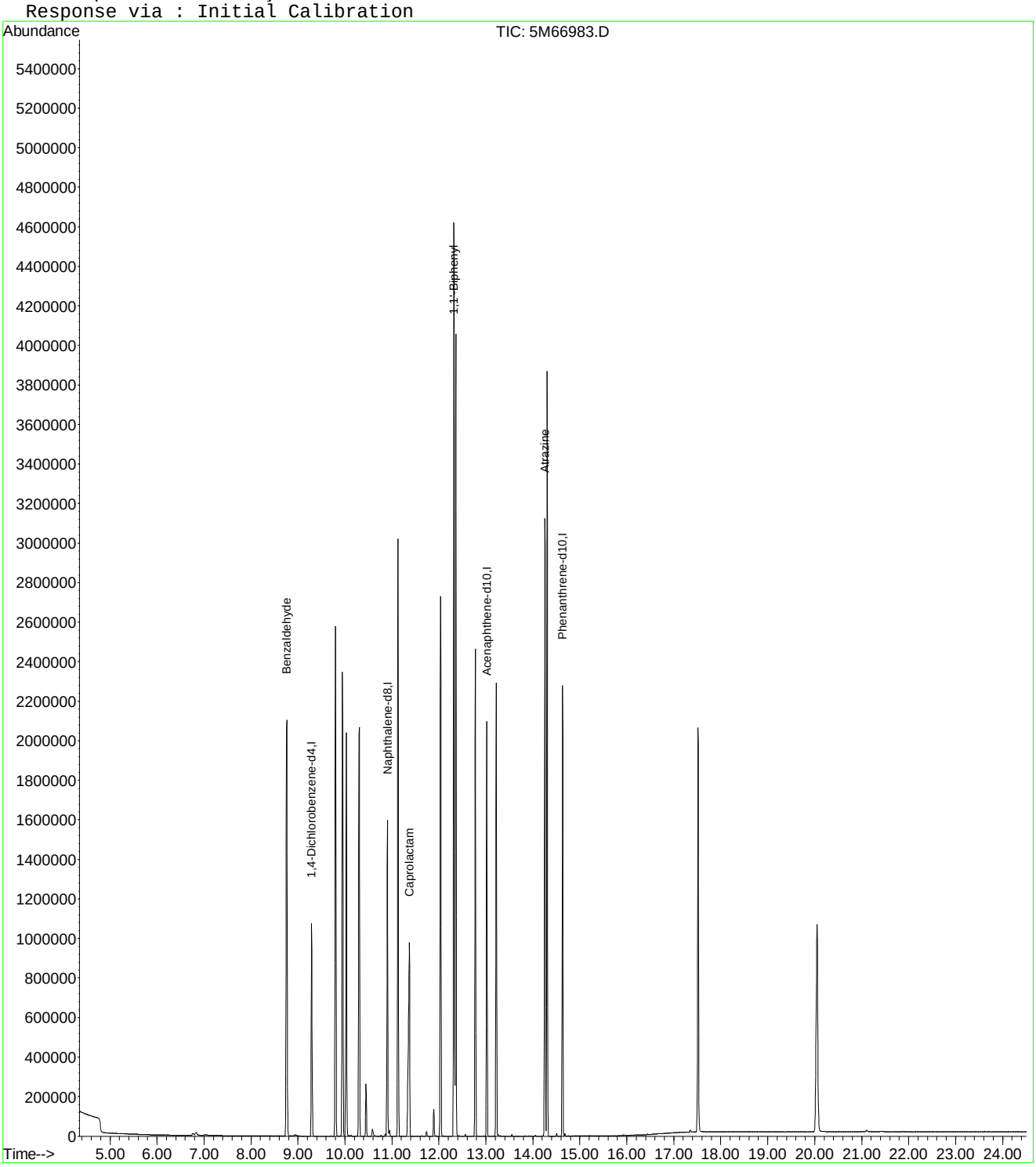
| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 1) 1,4-Dichlorobenzene-d4 | 9.29 | 152 | 250042 | 40.00 | ug/mL | 0.00 |
| 3) Naphthalene-d8 | 10.90 | 136 | 939930 | 40.00 | ug/mL | 0.00 |
| 5) Acenaphthene-d10 | 13.02 | 164 | 567258 | 40.00 | ug/mL | 0.00 |
| 7) Phenanthrene-d10 | 14.63 | 188 | 1056376 | 40.00 | ug/mL | 0.00 |
| **Target Compounds** | | | | | | Qvalue |
| 2) Benzaldehyde | 8.76 | 105 | 643723 | 98.3065 | ug/L | 98 |
| 4) Caprolactam | 11.37 | 55 | 336971 | 92.3292 | ug/L | 98 |
| 6) 1,1'-Biphenyl | 12.32 | 154 | 2004687 | 89.4049 | ug/L | 99 |
| 8) Atrazine | 14.26 | 200 | 609955 | 99.7133 | ug/L | 100 |

(#) = qualifier out of range (m) = manual integration
5M66983.D TCL.M Wed May 16 09:12:33 2012 Page 1

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\051412\5M66983.D Vial: 8
Acq On : 14 May 2012 12:36 pm Operator: CAA
Sample : WG397871-06 100PPM TCL STD Inst : HPMS5
Misc : 1,1 STD51428 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 15 9:34 2012 Quant Results File: TCL.RES

Method : C:\MSDCHEM\1\METHODS\TCL.M (RTE Integrator)
Title : MSS01 OVD 827-TCL INITIAL CALIBRATION 05/14/12
Last Update : Tue May 15 09:35:12 2012
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\051412\5M66984.D Vial: 9
Acq On : 14 May 2012 1:12 pm Operator: CAA
Sample : WG397871-07 50PPM TCL Alt Src STD Inst : HPMS5
Misc : 1,1 STD51166 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 15 09:35:24 2012 Quant Results File: TCL.RES

Quant Method : C:\MSDCHEM\1\METHODS\TCL.M (RTE Integrator)
Title : MSS01 OVD 827-TCL INITIAL CALIBRATION 05/14/12
Last Update : Tue May 15 09:35:12 2012
Response via : Initial Calibration
DataAcq Meth : BNA

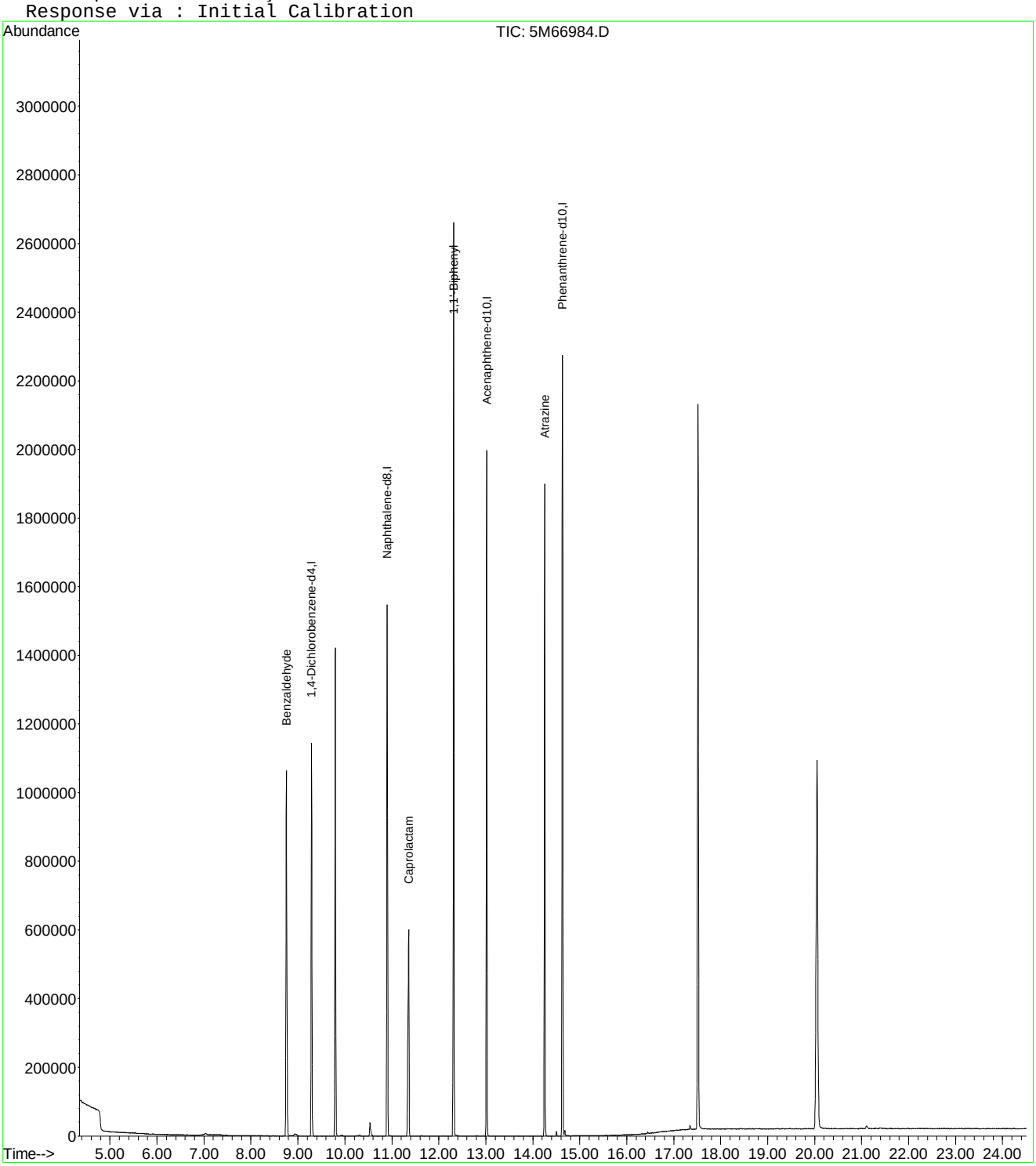
| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 1) 1,4-Dichlorobenzene-d4 | 9.29 | 152 | 261183 | 40.00 | ug/mL | 0.00 |
| 3) Naphthalene-d8 | 10.90 | 136 | 962903 | 40.00 | ug/mL | 0.00 |
| 5) Acenaphthene-d10 | 13.02 | 164 | 557184 | 40.00 | ug/mL | 0.00 |
| 7) Phenanthrene-d10 | 14.63 | 188 | 1033768 | 40.00 | ug/mL | 0.00 |
| **Target Compounds** | | | | | | Qvalue |
| 2) Benzaldehyde | 8.76 | 105 | 291569 | 43.8090 | ug/L | 99 |
| 4) Caprolactam | 11.36 | 55 | 164539 | 48.5055 | ug/L | 99 |
| 6) 1,1'-Biphenyl | 12.31 | 154 | 1066315 | 49.2450 | ug/L | 99 |
| 8) Atrazine | 14.25 | 200 | 308875 | 51.5827 | ug/L | 99 |

(#) = qualifier out of range (m) = manual integration
5M66984.D TCL.M Wed May 16 09:12:41 2012 Page 1

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\051412\5M66984.D Vial: 9
Acq On : 14 May 2012 1:12 pm Operator: CAA
Sample : WG397871-07 50PPM TCL Alt Src STD Inst : HPMS5
Misc : 1,1 STD51166 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 15 9:35 2012 Quant Results File: TCL.RES

Method : C:\MSDCHEM\1\METHODS\TCL.M (RTE Integrator)
Title : MSS01 OVD 827-TCL INITIAL CALIBRATION 05/14/12
Last Update : Tue May 15 09:35:12 2012
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\051412\5M66977.D Vial: 2
Acq On : 14 May 2012 9:02 am Operator: CAA
Sample : WG397870-02 50PPM Megamix STD Inst : HPMS5
Misc : 1,1 STD50886 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 14 09:28:54 2012 Quant Results File: MEGAMIX.RES

Quant Method : C:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
Title : OVD MSS01 8270/625/Initial cal. 05/11/12
Last Update : Fri May 11 14:12:23 2012
Response via : Initial Calibration
DataAcq Meth : BNA

| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 1) 1,4-Dichlorobenzene-d4 | 9.30 | 152 | 328467 | 40.00 | ug/ml | 0.00 |
| 30) Naphthalene-d8 | 10.91 | 136 | 1250668 | 40.00 | ug/ml | 0.00 |
| 54) Acenaphthene-d10 | 13.02 | 164 | 750342 | 40.00 | ug/ml | 0.00 |
| 87) Phenanthrene-d10 | 14.64 | 188 | 1435976 | 40.00 | ug/ml | 0.00 |
| 113) Chrysene-d12 | 17.53 | 240 | 1704599 | 40.00 | ug/ml | 0.00 |
| 128) Perylene-d12 | 20.07 | 264 | 1479147 | 40.00 | ug/ml | 0.00 |
| **System Monitoring Compounds** | | | | | | |
| 8) 2-Fluorophenol | 7.72 | 112 | 448901 | 49.5694 | ug/ml | 0.00 |
| Spiked Amount 100.000 | Range 21 - 100 | | Recovery = 49.57% | | | |
| 12) Phenol-d5 | 8.83 | 99 | 535558 | 49.5996 | ug/ml | 0.00 |
| Spiked Amount 100.000 | Range 10 - 94 | | Recovery = 49.60% | | | |
| 31) Nitrobenzene-d5 | 10.01 | 82 | 511374 | 50.1430 | ug/ml | 0.00 |
| Spiked Amount 50.000 | Range 35 - 114 | | Recovery = 100.28% | | | |
| 59) 2-Fluorobiphenyl | 12.21 | 172 | 1298419 | 51.3293 | ug/ml | 0.00 |
| Spiked Amount 50.000 | Range 43 - 116 | | Recovery = 102.66% | | | |
| 86) 2,4,6-Tribromophenol | 13.90 | 330 | 217603 | 53.4887 | ug/ml | 0.00 |
| Spiked Amount 100.000 | Range 10 - 123 | | Recovery = 53.49% | | | |
| 117) p-Terphenyl-d14 | 16.26 | 244 | 1396788 | 51.1433 | ug/ml | 0.00 |
| Spiked Amount 50.000 | Range 33 - 141 | | Recovery = 102.28% | | | |
| **Target Compounds** | | | | | | Qvalue |
| 2) 1,4-Dioxane | 5.11 | 88 | 194429m | 48.1905 | ug/ml | |
| 3) n-Nitrosodimethylamine | 5.78 | 74 | 269621 | 50.4856 | ug/ml | 99 |
| 4) Pyridine | 5.79 | 79 | 469594 | 49.6624 | ug/ml | 99 |
| 5) 2-Picoline | 6.93 | 93 | 512387 | 49.2870 | ug/ml | 100 |
| 6) n-Nitrosomethylethylamine | 7.11 | 88 | 216001 | 49.7723 | ug/ml | 99 |
| 7) Methyl Methanesulfonate | 7.52 | 80 | 257438 | 48.8457 | ug/ml | 99 |
| 9) n-Nitrosodiethylamine | 8.02 | 102 | 227277 | 50.0610 | ug/ml | 99 |
| 10) Ethyl Methanesulfonate | 8.37 | 79 | 331261 | 48.8615 | ug/ml | 100 |
| 11) Aniline | 8.92 | 93 | 750362 | 50.0829 | ug/ml | 100 |
| 13) Phenol | 8.85 | 94 | 557634 | 49.8600 | ug/ml | 100 |
| 14) bis(2-Chloroethyl)ether | 8.96 | 63 | 302328 | 48.5182 | ug/ml | 98 |
| 15) Pentachloroethane | 8.95 | 167 | 217475 | 50.2663 | ug/ml | 99 |
| 16) 2-Chlorophenol | 9.07 | 128 | 518179 | 49.7609 | ug/ml | 100 |
| 17) 1,3-Dichlorobenzene | 9.25 | 146 | 610481 | 50.3092 | ug/ml | 100 |
| 18) 1,4-Dichlorobenzene | 9.32 | 146 | 638908 | 50.2631 | ug/ml | 100 |
| 19) Benzyl Alcohol | 9.45 | 108 | 333961 | 50.9732 | ug/ml | 99 |
| 20) 1,2-Dichlorobenzene | 9.55 | 146 | 586498 | 50.3768 | ug/ml | 100 |
| 21) 2-Methylphenol | 9.59 | 107 | 409810 | 50.4763 | ug/ml | 100 |
| 22) bis(2-Chloroisopropyl)ethe | 9.64 | 45 | 611920 | 48.9678 | ug/ml | 100 |
| 23) 3-,4-Methylphenol | 9.76 | 107 | 522991 | 50.5614 | ug/ml | 99 |
| 24) n-Nitrosopyrrolidine | 9.80 | 100 | 220326 | 53.9559 | ug/ml | 98 |
| 25) n-Nitrosodipropylamine | 9.81 | 70 | 283496 | 47.5711 | ug/ml | 99 |
| 26) Acetophenone | 9.80 | 105 | 623049 | 48.6399 | ug/ml | 99 |
| 27) n-Nitrosomorpholine | 9.81 | 56 | 236920 | 56.0950 | ug/ml | 99 |
| 28) o-Toluidine | 9.86 | 106 | 812226 | 50.6789 | ug/ml | 100 |
| 29) Hexachloroethane | 9.95 | 117 | 231573 | 50.7882 | ug/ml | 100 |
| 32) Nitrobenzene | 10.03 | 77 | 498471 | 50.2594 | ug/ml | 100 |
| 33) n-Nitrosopiperidine | 10.22 | 114 | 250278 | 49.8269 | ug/ml | 99 |
| 34) Isophorone | 10.31 | 82 | 866625 | 49.2529 | ug/ml | 100 |
| 35) 2-Nitrophenol | 10.43 | 139 | 307063 | 51.6687 | ug/ml | 98 |
| 36) 2,4-Dimethylphenol | 10.42 | 122 | 480509 | 50.7444 | ug/ml | 100 |
| 37) 0,0,0-Triethyl Phosphoroth | 10.55 | 198 | 296291 | 51.2932 | ug/ml | 100 |
| 38) bis(2-Chloroethoxy)methane | 10.55 | 93 | 673283 | 49.9467 | ug/ml | 99 |

(#) = qualifier out of range (m) = manual integration
5M66977.D MEGAMIX.M Wed May 16 08:13:16 2012 Page 1

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\051412\5M66977.D Vial: 2
Acq On : 14 May 2012 9:02 am Operator: CAA
Sample : WG397870-02 50PPM Megamix STD Inst : HPMS5
Misc : 1,1 STD50886 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 14 09:28:54 2012 Quant Results File: MEGAMIX.RES

Quant Method : C:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
Title : OVD MSS01 8270/625/Initial cal. 05/11/12
Last Update : Fri May 11 14:12:23 2012
Response via : Initial Calibration
DataAcq Meth : BNA

| | Compound | R.T. | QIon | Response | Conc | Unit | Qvalue |
|---|---|---|---|---|---|---|---|
| 39) | Benzoic Acid | 10.52 | 105 | 261858m | 43.4060 | ug/ml | |
| 40) | 2,4-Dichlorophenol | 10.72 | 162 | 481271 | 50.5912 | ug/ml | 100 |
| 41) | a,a-Dimethylphenethylamine | 10.77 | 58 | 1306843m | 50.2259 | ug/ml | |
| 42) | 1,2,4-Trichlorobenzene | 10.84 | 180 | 547294 | 50.2962 | ug/ml | 99 |
| 43) | Naphthalene | 10.94 | 128 | 1542842 | 50.5122 | ug/ml | 100 |
| 44) | 4-Chloroaniline | 10.98 | 127 | 678498 | 51.1831 | ug/ml | 100 |
| 45) | 2,6-Dichlorophenol | 11.01 | 162 | 496067 | 51.0854 | ug/ml | 100 |
| 46) | Hexachloropropene | 11.08 | 213 | 380159 | 53.1353 | ug/ml | 99 |
| 47) | Hexachlorobutadiene | 11.13 | 225 | 333146 | 51.2488 | ug/ml | 100 |
| 48) | n-Nitrosodi-n-Butylamine | 11.39 | 84 | 400722 | 55.7896 | ug/ml | 99 |
| 49) | p-Phenylenediamine | 11.42 | 108 | 366207 | 52.5362 | ug/ml | 100 |
| 50) | 4-Chloro-3-Methylphenol | 11.54 | 107 | 441457 | 50.8351 | ug/ml | 99 |
| 51) | Safrole | 11.64 | 162 | 460389 | 50.9464 | ug/ml | 99 |
| 52) | 2-Methylnaphthalene | 11.77 | 142 | 1077173 | 50.8100 | ug/ml | 100 |
| 53) | 1-Methylnaphthalene | 11.91 | 142 | 1023021 | 51.1717 | ug/ml | 99 |
| 55) | 1,2,4,5-Tetrachlorobenzene | 12.03 | 216 | 573685 | 51.7512 | ug/ml | 100 |
| 56) | Hexachlorocyclopentadiene | 12.04 | 237 | 359004 | 55.9579 | ug/ml | 99 |
| 57) | 2,4,6-Trichlorophenol | 12.13 | 196 | 387771 | 51.1766 | ug/ml | 100 |
| 58) | 2,4,5-Trichlorophenol | 12.18 | 196 | 404249 | 51.5090 | ug/ml | 99 |
| 60) | Isosafrole | 12.25 | 162 | 481170 | 50.1606 | ug/ml | 99 |
| 61) | 2-Chloronaphthalene | 12.36 | 162 | 1093776 | 50.5003 | ug/ml | 99 |
| 62) | 1-Chloronaphthalene | 12.41 | 162 | 1053172 | 51.0047 | ug/ml | 100 |
| 63) | 2-Nitroaniline | 12.48 | 65 | 275997 | 51.3842 | ug/ml | 99 |
| 64) | 1,4-Naphthoquinone | 12.55 | 158 | 233906 | 45.2795 | ug/ml | 99 |
| 65) | Dimethylphthalate | 12.69 | 163 | 1216373 | 50.0720 | ug/ml | 100 |
| 66) | 1,3-Dinitrobenzene | 12.73 | 168 | 231524 | 50.8725 | ug/ml | 100 |
| 67) | 2,6-Dinitrotoluene | 12.78 | 165 | 300994 | 50.5990 | ug/ml | 100 |
| 68) | Acenaphthylene | 12.86 | 152 | 1682262 | 51.3151 | ug/ml | 100 |
| 69) | 3-Nitroaniline | 12.95 | 138 | 315520 | 51.3208 | ug/ml | 100 |
| 70) | 2,4-Dinitrophenol | 13.07 | 184 | 153051 | 48.0084 | ug/ml | 83 |
| 71) | Acenaphthene | 13.06 | 154 | 1072189 | 51.2706 | ug/ml | 99 |
| 72) | 4-Nitrophenol | 13.09 | 65 | 215330 | 50.3692 | ug/ml | 98 |
| 73) | 2,4-Dinitrotoluene | 13.23 | 165 | 391924 | 52.1509 | ug/ml | 100 |
| 74) | Pentachlorobenzene | 13.26 | 250 | 542567 | 52.1266 | ug/ml | 100 |
| 75) | Dibenzofuran | 13.23 | 168 | 1481547 | 51.0733 | ug/ml | 100 |
| 76) | 2,3,4,6-Tetrachlorophenol | 13.40 | 232 | 361191 | 54.3030 | ug/ml | 100 |
| 77) | 1-Naphthylamine | 13.32 | 143 | 1126030 | 54.0331 | ug/ml | 98 |
| 78) | 2-Naphthylamine | 13.40 | 143 | 1072439 | 59.2637 | ug/ml | 99 |
| 79) | Diethylphthalate | 13.46 | 149 | 1185122 | 50.1039 | ug/ml | 100 |
| 80) | Thionazin | 13.56 | 107 | 174120 | 51.8051 | ug/ml | 99 |
| 81) | Fluorene | 13.62 | 166 | 1316189 | 51.6143 | ug/ml | 100 |
| 82) | 4-Chlorophenyl Phenyl Ethe | 13.57 | 204 | 654118 | 53.1050 | ug/ml | 100 |
| 83) | 4-Nitroaniline | 13.64 | 138 | 332495 | 52.8117 | ug/ml | 100 |
| 84) | 5-Nitro-o-Toluidine | 13.63 | 152 | 402114 | 52.1905 | ug/ml | 99 |
| 85) | 1,2-Diphenylhydrazine | 13.75 | 77 | 1029188 | 50.4322 | ug/ml | 100 |
| 88) | 4,6-Dinitro-2-Methylphenol | 13.69 | 198 | 232594 | 50.8942 | ug/ml | 96 |
| 89) | n-Nitrosodiphenylamine | 13.70 | 169 | 1151786 | 51.7306 | ug/ml | 100 |
| 90) | Sulfotepp | 13.92 | 322 | 272861 | 52.3825 | ug/ml | 100 |
| 91) | Sym-Trinitrobenzene | 14.00 | 75 | 282105 | 52.6628 | ug/ml | 99 |
| 92) | Diallate | 14.03 | 86 | 368991 | 48.2280 | ug/ml | 99 |
| 93) | Phenacetin | 14.03 | 108 | 539754 | 51.0059 | ug/ml | 99 |
| 94) | Phorate | 14.05 | 75 | 579183 | 50.0307 | ug/ml# | 100 |
| 95) | 4-Bromophenyl Phenyl Ether | 14.11 | 248 | 421260 | 51.1471 | ug/ml | 100 |
| 96) | Hexachlorobenzene | 14.31 | 284 | 474569 | 51.3230 | ug/ml | 100 |

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

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\051412\5M66977.D Vial: 2
Acq On : 14 May 2012 9:02 am Operator: CAA
Sample : WG397870-02 50PPM Megamix STD Inst : HPMS5
Misc : 1,1 STD50886 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 14 09:28:54 2012 Quant Results File: MEGAMIX.RES

Quant Method : C:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
Title : OVD MSS01 8270/625/Initial cal. 05/11/12
Last Update : Fri May 11 14:12:23 2012
Response via : Initial Calibration
DataAcq Meth : BNA

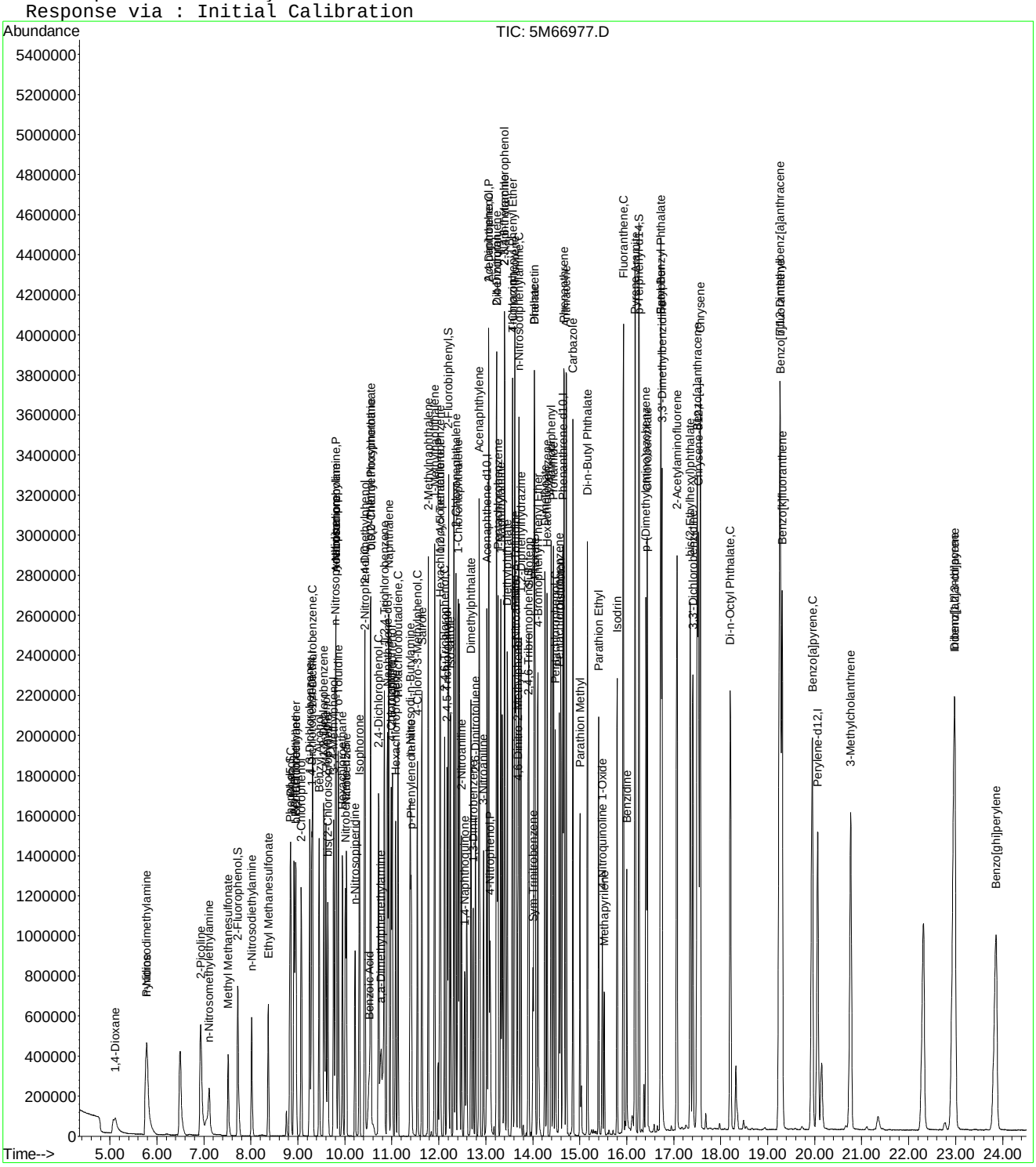
| | Compound | R.T. | QIon | Response | Conc | Unit | Qvalue |
|---|---|---|---|---|---|---|---|
| 97) | Dimethoate | 14.26 | 87 | 302072 | 50.6871 | ug/ml | 99 |
| 98) | 4-Aminobiphenyl | 14.39 | 169 | 1304943 | 53.4155 | ug/ml | 100 |
| 99) | Pentachlorophenol | 14.48 | 266 | 308556 | 51.5797 | ug/ml | 100 |
| 100) | Pronamide | 14.44 | 173 | 590062 | 50.7712 | ug/ml | 100 |
| 101) | Pentachloronitrobenzene | 14.56 | 237 | 172079 | 50.2235 | ug/ml | 100 |
| 102) | Disulfoton | 14.59 | 88 | 541039 | 50.4621 | ug/ml | 100 |
| 103) | Phenanthrene | 14.67 | 178 | 1862115 | 50.4633 | ug/ml | 100 |
| 104) | Anthracene | 14.72 | 178 | 1902563 | 50.9169 | ug/ml | 100 |
| 105) | Carbazole | 14.86 | 167 | 1739295 | 50.9951 | ug/ml | 100 |
| 106) | Parathion Methyl | 15.01 | 109 | 317508 | 51.3506 | ug/ml | 99 |
| 107) | Di-n-Butyl Phthalate | 15.17 | 149 | 1943584 | 49.4733 | ug/ml | 100 |
| 108) | Parathion Ethyl | 15.40 | 97 | 214885 | 50.2613 | ug/ml | 99 |
| 109) | 4-Nitroquinoline 1-Oxide | 15.48 | 190 | 155352 | 47.7074 | ug/ml | 99 |
| 110) | Methapyrilene | 15.52 | 58 | 232757 | 35.0571 | ug/ml | 99 |
| 111) | Isodrin | 15.80 | 193 | 213273 | 49.8760 | ug/ml | 100 |
| 112) | Fluoranthene | 15.93 | 202 | 2032338 | 50.6013 | ug/ml | 100 |
| 114) | Benzidine | 16.00 | 184 | 648606 | 68.7319 | ug/ml | 100 |
| 115) | Pyrene | 16.18 | 202 | 2050461 | 50.5491 | ug/ml | 100 |
| 116) | Aramite | 16.19 | 185 | 119566 | 53.0993 | ug/ml | 99 |
| 118) | p-(Dimethylamino)azobenzen | 16.41 | 225 | 504623 | 51.3251 | ug/ml | 99 |
| 119) | Chlorobenzilate | 16.44 | 251 | 698862 | 51.3697 | ug/ml | 100 |
| 120) | Famphur | 16.73 | 218 | 8364 | 67.2086 | ug/ml# | 63 |
| 121) | Butyl Benzyl Phthalate | 16.73 | 149 | 832671 | 50.6350 | ug/ml | 100 |
| 122) | 3,3'-Dimethylbenzidine | 16.75 | 212 | 1578973 | 57.0423 | ug/ml | 100 |
| 123) | 2-Acetylaminofluorene | 17.07 | 181 | 927305 | 52.5950 | ug/ml | 100 |
| 124) | bis(2-Ethylhexyl)phthalate | 17.35 | 149 | 1247694 | 49.0721 | ug/ml | 100 |
| 125) | 3,3'-Dichlorobenzidine | 17.41 | 252 | 768496 | 51.6945 | ug/ml | 100 |
| 126) | Benzo[a]anthracene | 17.50 | 228 | 2162950 | 50.4383 | ug/ml | 100 |
| 127) | Chrysene | 17.56 | 228 | 2021236 | 50.7084 | ug/ml | 100 |
| 129) | Di-n-Octyl Phthalate | 18.20 | 149 | 2111130 | 49.7544 | ug/ml | 99 |
| 130) | 7,12-Dimethylbenz[a]anthra | 19.26 | 256 | 1064494 | 52.2268 | ug/ml | 100 |
| 131) | Benzo[b]fluoranthene | 19.27 | 252 | 2376958 | 49.7140 | ug/ml | 93 |
| 132) | Benzo[k]fluoranthene | 19.31 | 252 | 1938348 | 50.0238 | ug/ml | 100 |
| 133) | Benzo[a]pyrene | 19.95 | 252 | 2041469 | 51.0241 | ug/ml | 100 |
| 134) | 3-Methylcholanthrene | 20.77 | 268 | 1110076 | 52.1658 | ug/ml | 100 |
| 135) | Indeno[1,2,3-cd]pyrene | 22.98 | 276 | 2345154 | 51.4666 | ug/ml | 99 |
| 136) | Dibenz[ah]anthracene | 22.97 | 278 | 1989146 | 51.7582 | ug/ml | 100 |
| 137) | Benzo[ghi]perylene | 23.86 | 276 | 1783993 | 50.0957 | ug/ml | 99 |

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

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\051412\5M66977.D Vial: 2
Acq On : 14 May 2012 9:02 am Operator: CAA
Sample : WG397870-02 50PPM Megamix STD Inst : HPMS5
Misc : 1,1 STD50886 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 16 8:12 2012 Quant Results File: MEGAMIX.RES

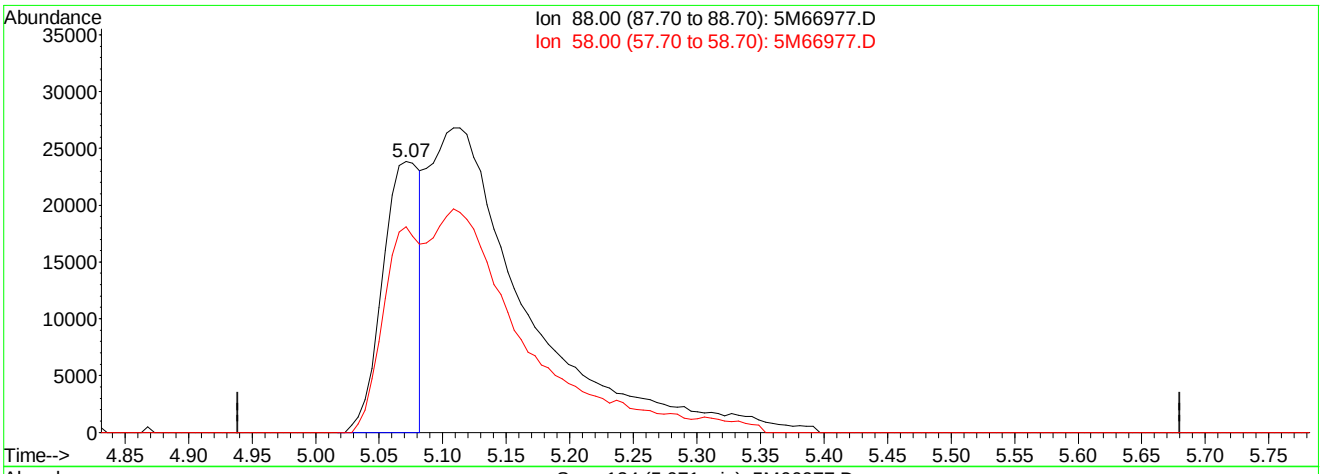
Method : C:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
Title : OVD MSS01 8270/625/Initial cal. 05/11/12
Last Update : Wed May 16 07:20:56 2012
Response via : Initial Calibration

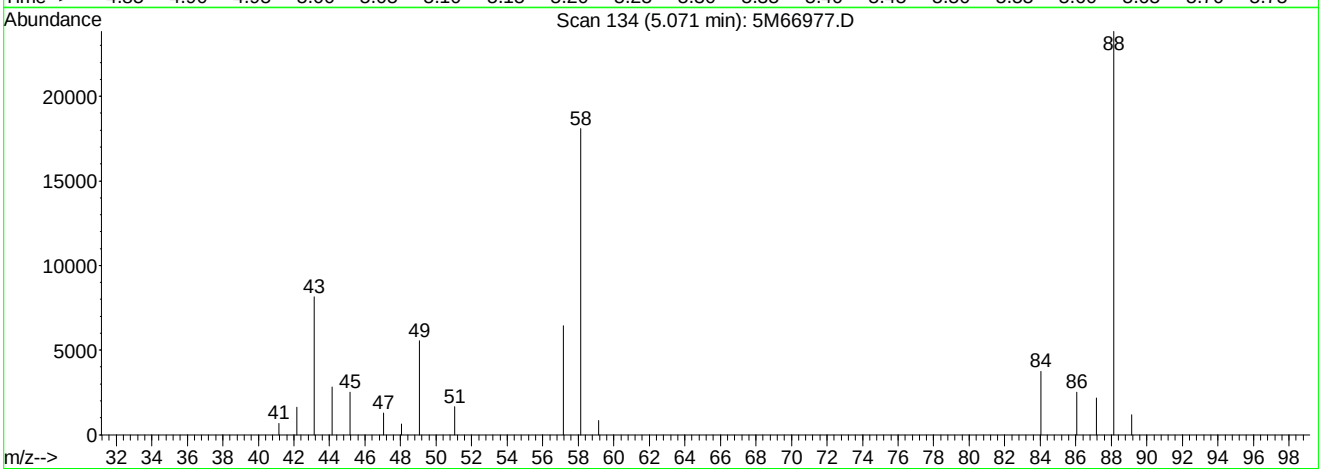


Quantitation Report (Qedit)

Data File : C:\MSDCHEM\1\DATA\051412\5M66977.D Vial: 2
Acq On : 14 May 2012 9:02 am Operator: CAA
Sample : WG397870-02 50PPM Megamix STD Inst : HPMS5
Misc : 1,1 STD50886 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 14 9:28 2012 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
Title : OVD MSS01 8270/625/Initial cal. 05/11/12
Last Update : Wed May 16 07:20:56 2012
Response via : Multiple Level Calibration




TIC: 5M66977.D

(2) 1,4-Dioxane

5.07min 12.11ug/ml

response 48854

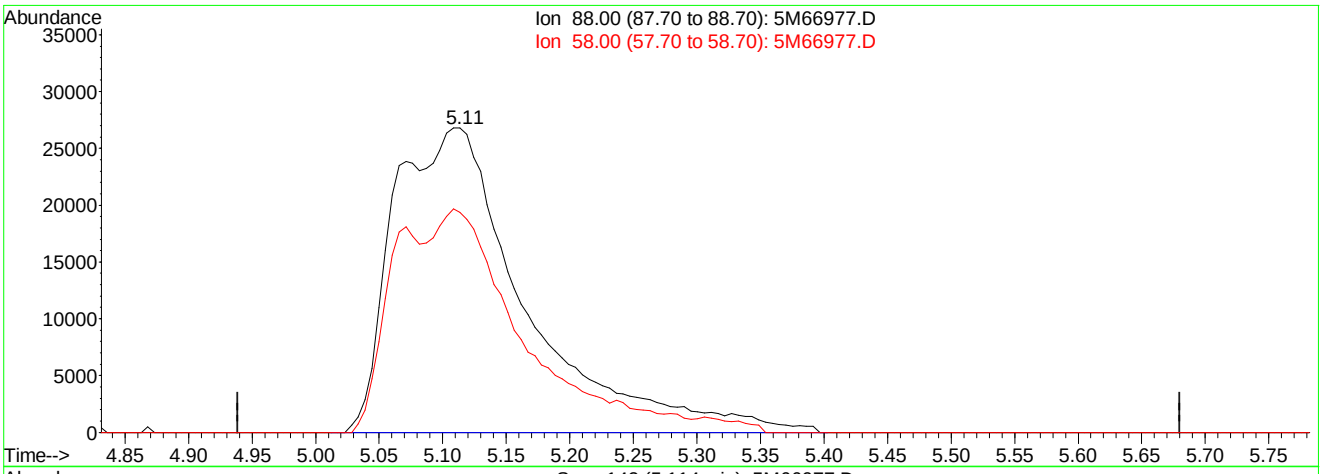
| Ion | Exp% | Act% |
|---|---|---|
| 88.00 | 100 | 100 |
| 58.00 | 0.00 | 73.70# |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

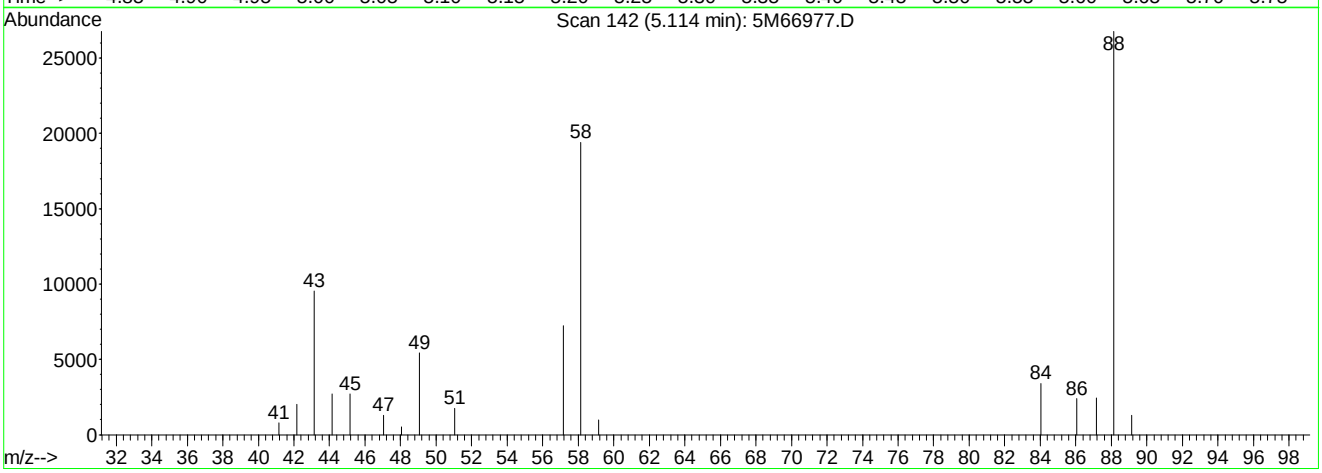
5M66977.D MEGAMIX.M Wed May 16 08:12:34 2012

Quantitation Report (Qedit)

Data File : C:\MSDCHEM\1\DATA\051412\5M66977.D Vial: 2
Acq On : 14 May 2012 9:02 am Operator: CAA
Sample : WG397870-02 50PPM Megamix STD Inst : HPMS5
Misc : 1,1 STD50886 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 16 8:12 2012 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
Title : OVD MSS01 8270/625/Initial cal. 05/11/12
Last Update : Wed May 16 07:20:56 2012
Response via : Multiple Level Calibration




TIC: 5M66977.D

(2) 1,4-Dioxane

5.11min 48.19ug/ml mint

response 194429

| Ion | Exp% | Act% |
|---|---|---|
| 88.00 | 100 | 100 |
| 58.00 | 0.00 | 18.52# |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

5M66977.D MEGAMIX.M Wed May 16 2012

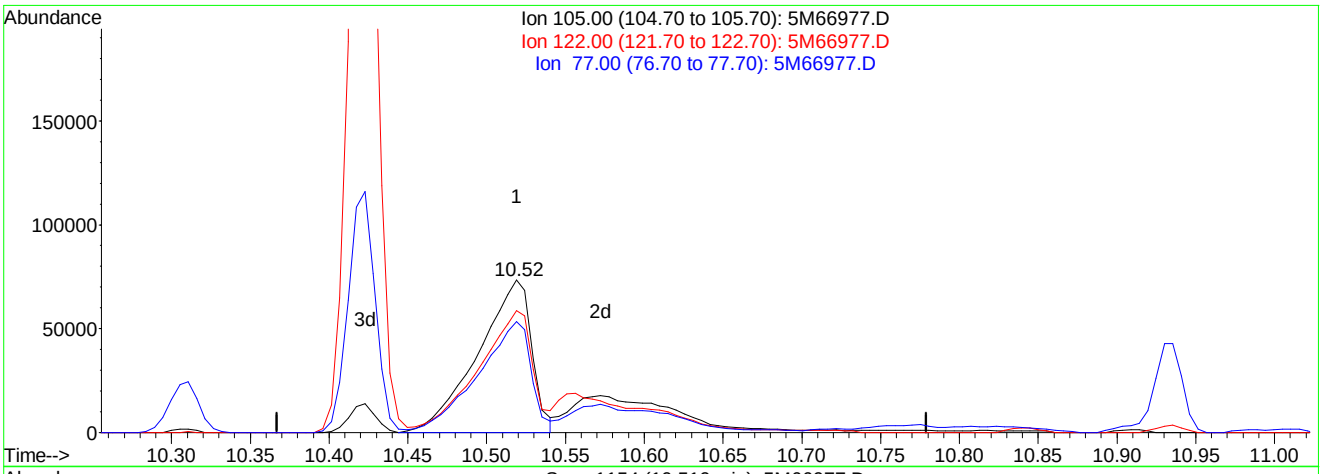
Analyst: 05/17/2012 11:31 Supervisor: 05/22/2012 11:44

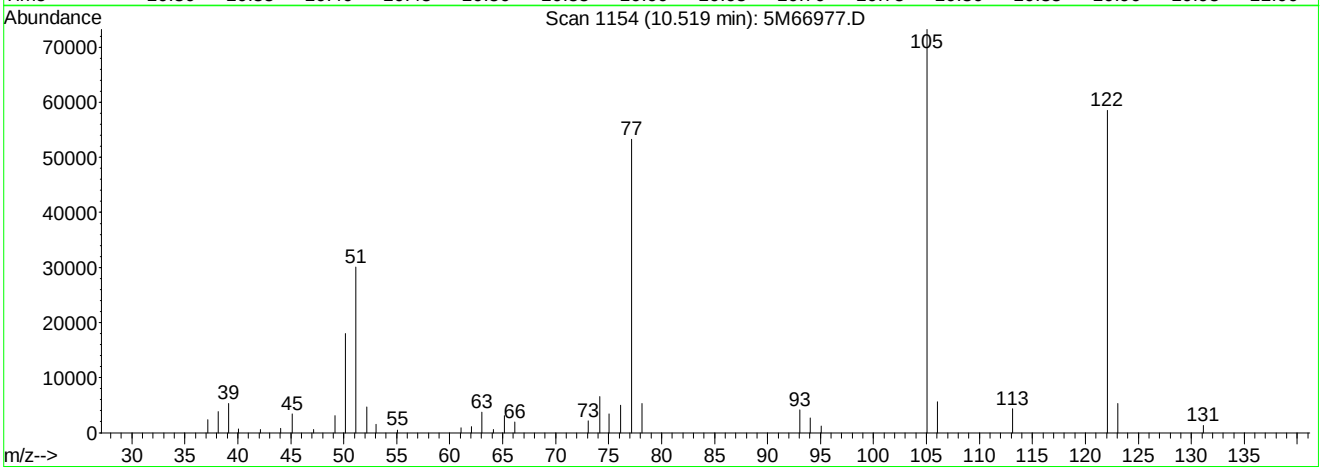
#2 - Data system splits the peak incorrectly or integrates a false peak as a rider peak

Quantitation Report (Qedit)

Data File : C:\MSDCHEM\1\DATA\051412\5M66977.D Vial: 2
Acq On : 14 May 2012 9:02 am Operator: CAA
Sample : WG397870-02 50PPM Megamix STD Inst : HPMS5
Misc : 1,1 STD50886 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 16 8:12 2012 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
Title : OVD MSS01 8270/625/Initial cal. 05/11/12
Last Update : Wed May 16 07:20:56 2012
Response via : Single Level Calibration




TIC: 5M66977.D

(39) Benzoic Acid

10.52min 32.07ug/ml

response 172733

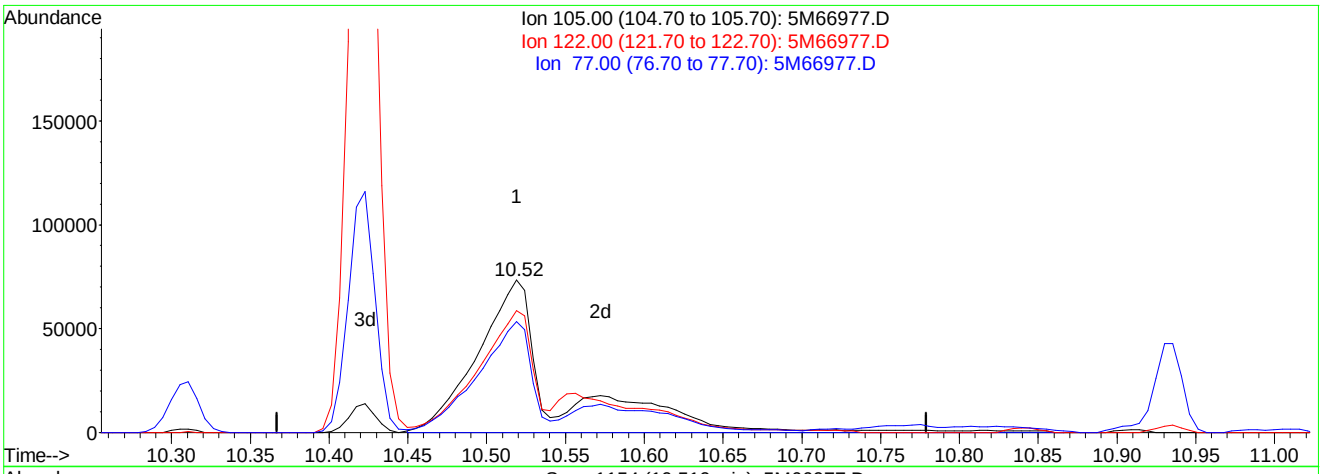
| Ion | Exp% | Act% |
|---|---|---|
| 105.00 | 100 | 100 |
| 122.00 | 57.00 | 80.56# |
| 77.00 | 51.30 | 71.85# |
| 0.00 | 0.00 | 0.00 |

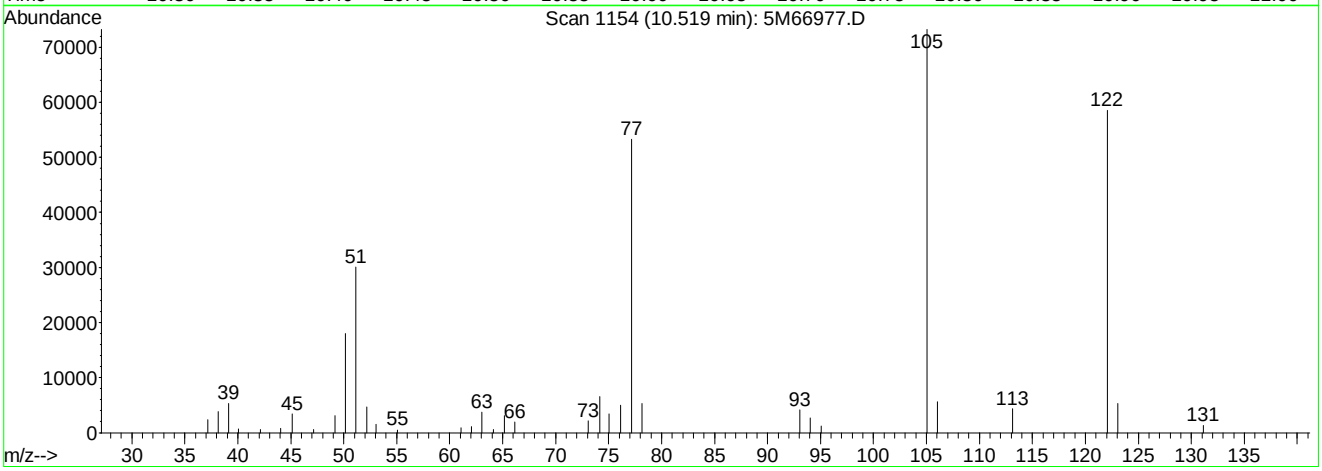
5M66977.D MEGAMIX.M Wed May 16 08:12:43 2012

Quantitation Report (Qedit)

Data File : C:\MSDCHEM\1\DATA\051412\5M66977.D Vial: 2
Acq On : 14 May 2012 9:02 am Operator: CAA
Sample : WG397870-02 50PPM Megamix STD Inst : HPMS5
Misc : 1,1 STD50886 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 16 8:12 2012 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
Title : OVD MSS01 8270/625/Initial cal. 05/11/12
Last Update : Wed May 16 07:20:56 2012
Response via : Single Level Calibration




TIC: 5M66977.D

(39) Benzoic Acid

10.52min 43.41ug/ml mint

response 261858

| Ion | Exp% | Act% |
|---|---|---|
| 105.00 | 100 | 100 |
| 122.00 | 57.00 | 53.14 |
| 77.00 | 51.30 | 47.39 |
| 0.00 | 0.00 | 0.00 |

5M66977.D MEGAMIX.M Wed May 16 [illegible] 2012

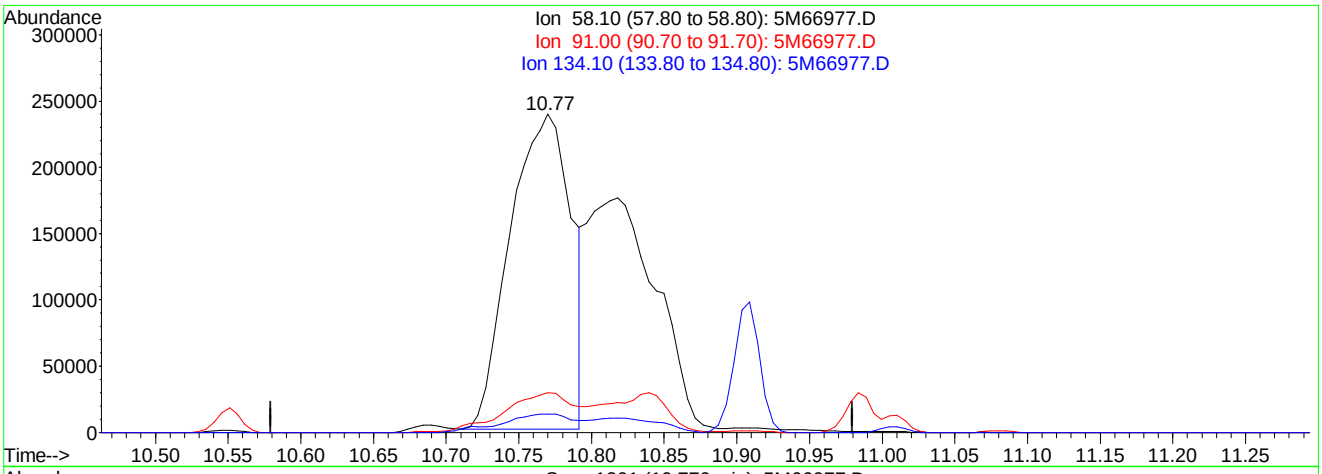
Analyst: 05/17/2012 11:31 Supervisor: 05/22/2012 11:44

#2 - Data system splits the peak incorrectly or integrates a false peak as a rider peak

Quantitation Report (Qedit)

Data File : C:\MSDCHEM\1\DATA\051412\5M66977.D Vial: 2
Acq On : 14 May 2012 9:02 am Operator: CAA
Sample : WG397870-02 50PPM Megamix STD Inst : HPMS5
Misc : 1,1 STD50886 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 16 8:12 2012 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
Title : OVD MSS01 8270/625/Initial cal. 05/11/12
Last Update : Wed May 16 07:20:56 2012
Response via : Multiple Level Calibration




TIC: 5M66977.D

(41) a,a-Dimethylphenethylamine

10.77min 26.54ug/ml

response 690585

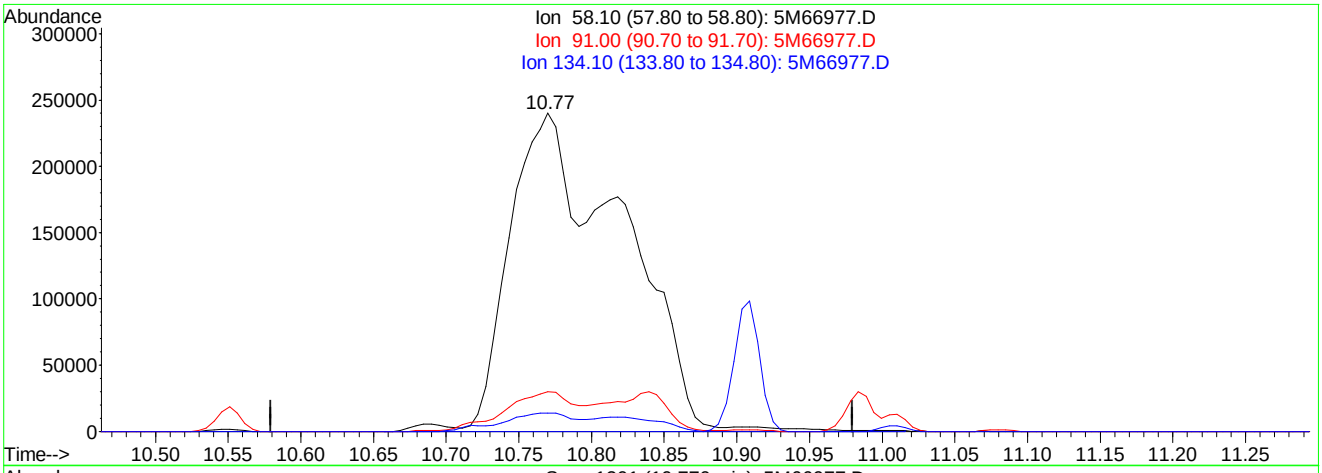
| Ion | Exp% | Act% |
|---|---|---|
| 58.10 | 100 | 100 |
| 91.00 | 9.00 | 14.79# |
| 134.10 | 4.40 | 7.06# |
| 0.00 | 0.00 | 0.00 |

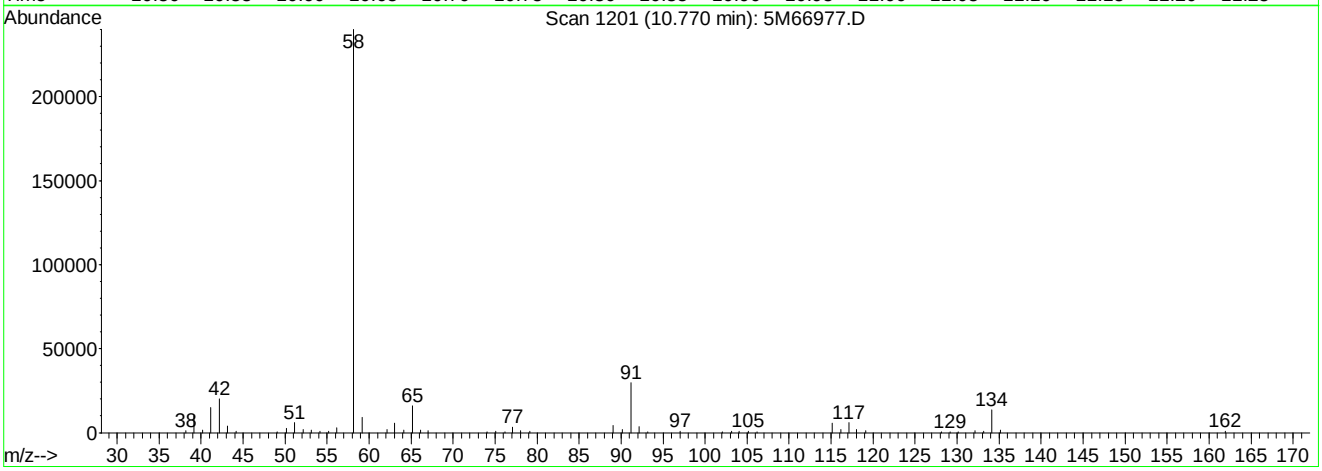
5M66977.D MEGAMIX.M Wed May 16 08:12:51 2012

Quantitation Report (Qedit)

Data File : C:\MSDCHEM\1\DATA\051412\5M66977.D Vial: 2
Acq On : 14 May 2012 9:02 am Operator: CAA
Sample : WG397870-02 50PPM Megamix STD Inst : HPMS5
Misc : 1,1 STD50886 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 16 8:12 2012 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
Title : OVD MSS01 8270/625/Initial cal. 05/11/12
Last Update : Wed May 16 07:20:56 2012
Response via : Multiple Level Calibration




TIC: 5M66977.D

(41) a,a-Dimethylphenethylamine

10.77min 50.23ug/ml mint

response 1306843

| Ion | Exp% | Act% |
|---|---|---|
| 58.10 | 100 | 100 |
| 91.00 | 9.00 | 7.82 |
| 134.10 | 4.40 | 3.73 |
| 0.00 | 0.00 | 0.00 |

5M66977.D MEGAMIX.M Wed May 16 [illegible] 2012

Analyst: 05/17/2012 11:31 Supervisor: 05/22/2012 11:44

#2 - Data system splits the peak incorrectly or integrates a false peak as a rider peak

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\051612\5M67011.D Vial: 2
Acq On : 16 May 2012 8:59 am Operator: CAA
Sample : WG398115-02 50PPM Megamix STD Inst : HPMS5
Misc : 1,1 STD50886 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 16 09:23:54 2012 Quant Results File: MEGAMIX.RES

Quant Method : C:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
Title : OVD MSS01 8270/625/Initial cal. 05/11/12
Last Update : Wed May 16 08:13:18 2012
Response via : Initial Calibration
DataAcq Meth : BNA

| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 1) 1,4-Dichlorobenzene-d4 | 9.29 | 152 | 378021 | 40.00 | ug/ml | 0.00 |
| 30) Naphthalene-d8 | 10.91 | 136 | 1420031 | 40.00 | ug/ml | 0.00 |
| 54) Acenaphthene-d10 | 13.03 | 164 | 855698 | 40.00 | ug/ml | 0.00 |
| 87) Phenanthrene-d10 | 14.64 | 188 | 1626861 | 40.00 | ug/ml | 0.00 |
| 113) Chrysene-d12 | 17.53 | 240 | 1920701 | 40.00 | ug/ml | 0.00 |
| 128) Perylene-d12 | 20.07 | 264 | 1642220 | 40.00 | ug/ml | 0.00 |
| **System Monitoring Compounds** | | | | | | |
| 8) 2-Fluorophenol | 7.73 | 112 | 509496 | 48.8855 | ug/ml | 0.00 |
| Spiked Amount 100.000 | Range 21 - 100 | | Recovery = 48.89% | | | |
| 12) Phenol-d5 | 8.84 | 99 | 604893 | 48.6772 | ug/ml | 0.00 |
| Spiked Amount 100.000 | Range 10 - 94 | | Recovery = 48.68% | | | |
| 31) Nitrobenzene-d5 | 10.02 | 82 | 575483 | 49.6991 | ug/ml | 0.00 |
| Spiked Amount 50.000 | Range 35 - 114 | | Recovery = 99.40% | | | |
| 59) 2-Fluorobiphenyl | 12.21 | 172 | 1484804 | 51.4705 | ug/ml | 0.00 |
| Spiked Amount 50.000 | Range 43 - 116 | | Recovery = 102.94% | | | |
| 86) 2,4,6-Tribromophenol | 13.90 | 330 | 252531 | 54.4316 | ug/ml | 0.00 |
| Spiked Amount 100.000 | Range 10 - 123 | | Recovery = 54.43% | | | |
| 117) p-Terphenyl-d14 | 16.26 | 244 | 1563596 | 50.8096 | ug/ml | 0.00 |
| Spiked Amount 50.000 | Range 33 - 141 | | Recovery = 101.62% | | | |
| **Target Compounds** | | | | | | Qvalue |
| 2) 1,4-Dioxane | 5.12 | 88 | 217850m | 46.9174 | ug/ml | |
| 3) n-Nitrosodimethylamine | 5.79 | 74 | 302238 | 49.1744 | ug/ml | 98 |
| 4) Pyridine | 5.80 | 79 | 522246 | 47.9906 | ug/ml | 99 |
| 5) 2-Picoline | 6.94 | 93 | 574741 | 48.0378 | ug/ml | 100 |
| 6) n-Nitrosomethylethylamine | 7.12 | 88 | 241644 | 48.3820 | ug/ml | 99 |
| 7) Methyl Methanesulfonate | 7.52 | 80 | 294575 | 48.5652 | ug/ml | 98 |
| 9) n-Nitrosodiethylamine | 8.02 | 102 | 257497 | 49.2824 | ug/ml | 98 |
| 10) Ethyl Methanesulfonate | 8.38 | 79 | 373704 | 47.8961 | ug/ml | 100 |
| 11) Aniline | 8.92 | 93 | 831709 | 48.2354 | ug/ml | 100 |
| 13) Phenol | 8.85 | 94 | 628980 | 48.8670 | ug/ml | 100 |
| 14) bis(2-Chloroethyl)ether | 8.96 | 63 | 342840 | 47.8073 | ug/ml | 99 |
| 15) Pentachloroethane | 8.95 | 167 | 251981 | 50.6070 | ug/ml | 99 |
| 16) 2-Chlorophenol | 9.08 | 128 | 595486 | 49.6885 | ug/ml | 99 |
| 17) 1,3-Dichlorobenzene | 9.26 | 146 | 702518 | 50.3047 | ug/ml | 100 |
| 18) 1,4-Dichlorobenzene | 9.32 | 146 | 742842 | 50.7789 | ug/ml | 99 |
| 19) Benzyl Alcohol | 9.46 | 108 | 375276 | 49.7706 | ug/ml | 99 |
| 20) 1,2-Dichlorobenzene | 9.56 | 146 | 676072 | 50.4583 | ug/ml | 100 |
| 21) 2-Methylphenol | 9.60 | 107 | 463655 | 49.6222 | ug/ml | 99 |
| 22) bis(2-Chloroisopropyl)ethe | 9.64 | 45 | 675845 | 46.9936 | ug/ml | 99 |
| 23) 3-,4-Methylphenol | 9.76 | 107 | 595197 | 49.9990 | ug/ml | 99 |
| 24) n-Nitrosopyrrolidine | 9.81 | 100 | 248383 | 52.8532 | ug/ml | 96 |
| 25) n-Nitrosodipropylamine | 9.82 | 70 | 319529 | 46.5889 | ug/ml | 99 |
| 26) Acetophenone | 9.81 | 105 | 719916 | 48.8346 | ug/ml | 99 |
| 27) n-Nitrosomorpholine | 9.82 | 56 | 265346 | 54.3836 | ug/ml | 99 |
| 28) o-Toluidine | 9.87 | 106 | 925079 | 50.1539 | ug/ml | 100 |
| 29) Hexachloroethane | 9.95 | 117 | 264630 | 50.4301 | ug/ml | 98 |
| 32) Nitrobenzene | 10.04 | 77 | 557276 | 49.4871 | ug/ml | 99 |
| 33) n-Nitrosopiperidine | 10.22 | 114 | 283981 | 49.7937 | ug/ml | 100 |
| 34) Isophorone | 10.31 | 82 | 981012 | 49.1042 | ug/ml | 99 |
| 35) 2-Nitrophenol | 10.43 | 139 | 349201 | 51.7511 | ug/ml | 97 |
| 36) 2,4-Dimethylphenol | 10.43 | 122 | 546096 | 50.7925 | ug/ml | 99 |
| 37) 0,0,0-Triethyl Phosphoroth | 10.56 | 198 | 341456 | 52.0620 | ug/ml | 99 |
| 38) bis(2-Chloroethoxy)methane | 10.54 | 93 | 764868 | 49.9735 | ug/ml | 99 |

(#) = qualifier out of range (m) = manual integration
5M67011.D MEGAMIX.M Thu May 17 09:58:23 2012 Page 1

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\051612\5M67011.D Vial: 2
Acq On : 16 May 2012 8:59 am Operator: CAA
Sample : WG398115-02 50PPM Megamix STD Inst : HPMS5
Misc : 1,1 STD50886 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 16 09:23:54 2012 Quant Results File: MEGAMIX.RES

Quant Method : C:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
Title : OVD MSS01 8270/625/Initial cal. 05/11/12
Last Update : Wed May 16 08:13:18 2012
Response via : Initial Calibration
DataAcq Meth : BNA

| | Compound | R.T. | QIon | Response | Conc Unit | Qvalue |
|---|---|---|---|---|---|---|
| 39) | Benzoic Acid | 10.52 | 105 | 221414m | 34.9061 ug/ml | |
| 40) | 2,4-Dichlorophenol | 10.73 | 162 | 554546 | 51.3413 ug/ml | 100 |
| 41) | a,a-Dimethylphenethylamine | 10.78 | 58 | 1440723m | 48.7673 ug/ml | |
| 42) | 1,2,4-Trichlorobenzene | 10.84 | 180 | 634631 | 51.3665 ug/ml | 100 |
| 43) | Naphthalene | 10.93 | 128 | 1753267 | 50.5554 ug/ml | 100 |
| 44) | 4-Chloroaniline | 10.99 | 127 | 756143 | 50.2373 ug/ml | 100 |
| 45) | 2,6-Dichlorophenol | 11.01 | 162 | 565733 | 51.3112 ug/ml | 100 |
| 46) | Hexachloropropene | 11.08 | 213 | 438870 | 54.0254 ug/ml | 100 |
| 47) | Hexachlorobutadiene | 11.13 | 225 | 385462 | 52.2246 ug/ml | 99 |
| 48) | n-Nitrosodi-n-Butylamine | 11.39 | 84 | 455963 | 55.9092 ug/ml | 99 |
| 49) | p-Phenylenediamine | 11.42 | 108 | 393205 | 49.0201 ug/ml | 99 |
| 50) | 4-Chloro-3-Methylphenol | 11.55 | 107 | 495005 | 50.2029 ug/ml | 98 |
| 51) | Safrole | 11.64 | 162 | 524109 | 51.0804 ug/ml | 99 |
| 52) | 2-Methylnaphthalene | 11.78 | 142 | 1229885 | 51.0943 ug/ml | 100 |
| 53) | 1-Methylnaphthalene | 11.92 | 142 | 1165975 | 51.3664 ug/ml | 100 |
| 55) | 1,2,4,5-Tetrachlorobenzene | 12.02 | 216 | 656042 | 51.8940 ug/ml | 100 |
| 56) | Hexachlorocyclopentadiene | 12.04 | 237 | 413057 | 56.4561 ug/ml | 99 |
| 57) | 2,4,6-Trichlorophenol | 12.13 | 196 | 444669 | 51.4603 ug/ml | 100 |
| 58) | 2,4,5-Trichlorophenol | 12.18 | 196 | 463332 | 51.7684 ug/ml | 100 |
| 60) | Isosafrole | 12.25 | 162 | 554852 | 50.7201 ug/ml | 100 |
| 61) | 2-Chloronaphthalene | 12.37 | 162 | 1251399 | 50.6641 ug/ml | 100 |
| 62) | 1-Chloronaphthalene | 12.41 | 162 | 1197581 | 50.8574 ug/ml | 100 |
| 63) | 2-Nitroaniline | 12.48 | 65 | 302621 | 49.4041 ug/ml | 99 |
| 64) | 1,4-Naphthoquinone | 12.55 | 158 | 271857 | 46.5647 ug/ml | 99 |
| 65) | Dimethylphthalate | 12.69 | 163 | 1385320 | 50.0054 ug/ml | 100 |
| 66) | 1,3-Dinitrobenzene | 12.73 | 168 | 261426 | 50.3703 ug/ml | 99 |
| 67) | 2,6-Dinitrotoluene | 12.78 | 165 | 341937 | 50.4045 ug/ml | 100 |
| 68) | Acenaphthylene | 12.86 | 152 | 1914871 | 51.2189 ug/ml | 100 |
| 69) | 3-Nitroaniline | 12.95 | 138 | 353615 | 50.4355 ug/ml | 99 |
| 70) | 2,4-Dinitrophenol | 13.07 | 184 | 183138 | 49.9118 ug/ml | 75 |
| 71) | Acenaphthene | 13.07 | 154 | 1225621 | 51.3916 ug/ml | 99 |
| 72) | 4-Nitrophenol | 13.10 | 65 | 237374 | 48.6891 ug/ml | 96 |
| 73) | 2,4-Dinitrotoluene | 13.23 | 165 | 443780 | 51.7805 ug/ml | 99 |
| 74) | Pentachlorobenzene | 13.26 | 250 | 622013 | 52.4016 ug/ml | 99 |
| 75) | Dibenzofuran | 13.23 | 168 | 1680487 | 50.7986 ug/ml | 100 |
| 76) | 2,3,4,6-Tetrachlorophenol | 13.40 | 232 | 410906 | 54.1712 ug/ml | 99 |
| 77) | 1-Naphthylamine | 13.32 | 143 | 1260609 | 53.0431 ug/ml | 99 |
| 78) | 2-Naphthylamine | 13.40 | 143 | 1202671 | 58.2776 ug/ml | 100 |
| 79) | Diethylphthalate | 13.46 | 149 | 1347541 | 49.9562 ug/ml | 100 |
| 80) | Thionazin | 13.56 | 107 | 195578 | 51.0249 ug/ml | 99 |
| 81) | Fluorene | 13.62 | 166 | 1503970 | 51.7166 ug/ml | 100 |
| 82) | 4-Chlorophenyl Phenyl Ethe | 13.57 | 204 | 741594 | 52.7940 ug/ml | 100 |
| 83) | 4-Nitroaniline | 13.65 | 138 | 368576 | 51.3346 ug/ml | 98 |
| 84) | 5-Nitro-o-Toluidine | 13.64 | 152 | 456158 | 51.9154 ug/ml | 99 |
| 85) | 1,2-Diphenylhydrazine | 13.75 | 77 | 1133850 | 48.7200 ug/ml | 99 |
| 88) | 4,6-Dinitro-2-Methylphenol | 13.69 | 198 | 267396 | 51.6442 ug/ml | 93 |
| 89) | n-Nitrosodiphenylamine | 13.71 | 169 | 1302866 | 51.6502 ug/ml | 99 |
| 90) | Sulfotepp | 13.92 | 322 | 316128 | 53.5679 ug/ml | 98 |
| 91) | Sym-Trinitrobenzene | 14.01 | 75 | 313836 | 51.7121 ug/ml | 98 |
| 92) | Diallate | 14.03 | 86 | 412330 | 47.5691 ug/ml | 98 |
| 93) | Phenacetin | 14.04 | 108 | 597546 | 49.8417 ug/ml | 99 |
| 94) | Phorate | 14.05 | 75 | 621165 | 46.5461 ug/ml# | 97 |
| 95) | 4-Bromophenyl Phenyl Ether | 14.11 | 248 | 482674 | 51.7275 ug/ml | 100 |
| 96) | Hexachlorobenzene | 14.31 | 284 | 543243 | 51.8565 ug/ml | 99 |

(#) = qualifier out of range (m) = manual integration
5M67011.D MEGAMIX.M Thu May 17 09:58:23 2012 Page 2

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\051612\5M67011.D Vial: 2
Acq On : 16 May 2012 8:59 am Operator: CAA
Sample : WG398115-02 50PPM Megamix STD Inst : HPMS5
Misc : 1,1 STD50886 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 16 09:23:54 2012 Quant Results File: MEGAMIX.RES

Quant Method : C:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
Title : OVD MSS01 8270/625/Initial cal. 05/11/12
Last Update : Wed May 16 08:13:18 2012
Response via : Initial Calibration
DataAcq Meth : BNA

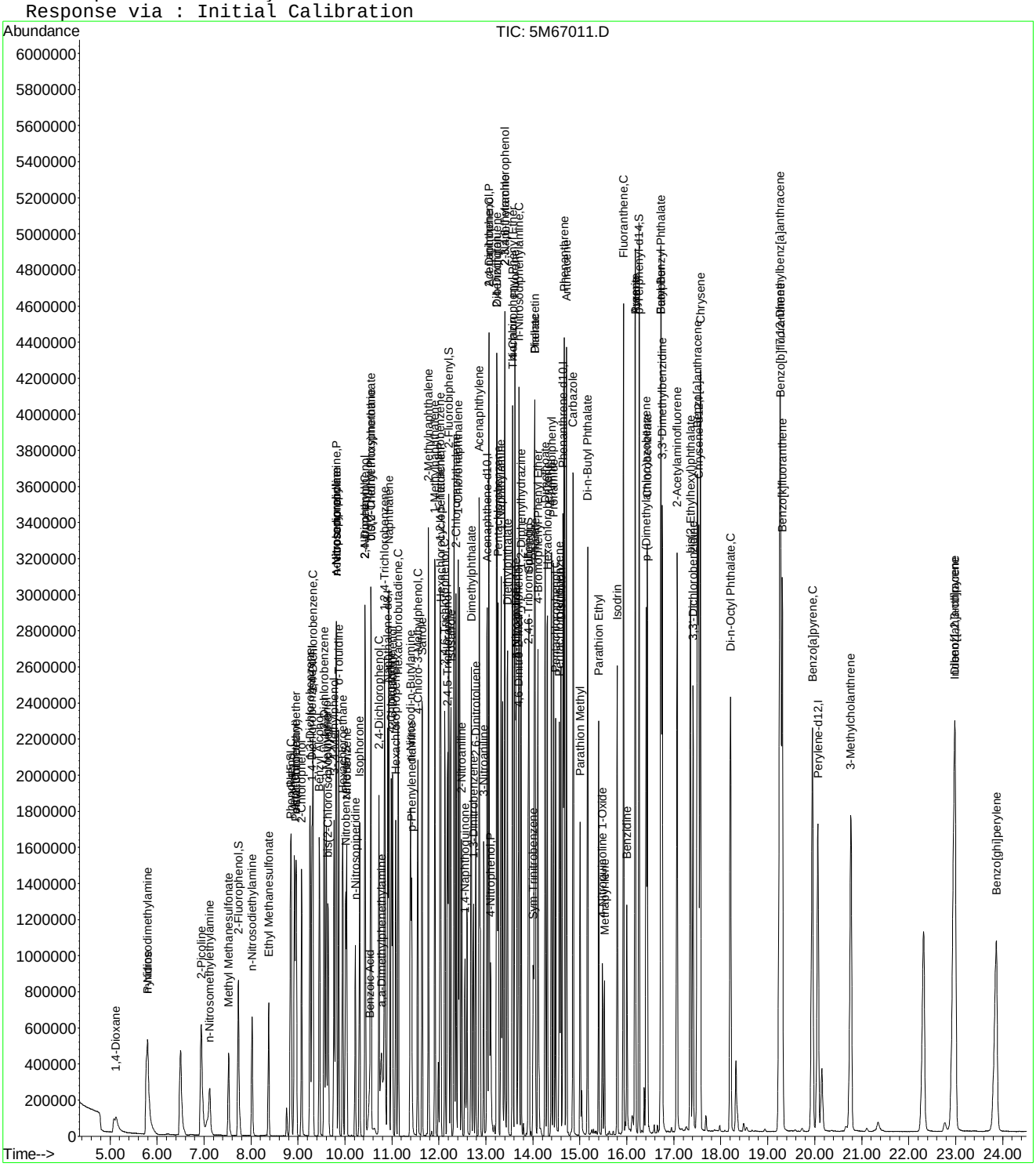
| | Compound | R.T. | QIon | Response | Conc | Unit | Qvalue |
|---|---|---|---|---|---|---|---|
| 97) | Dimethoate | 14.26 | 87 | 342494 | 50.7490 | ug/ml | 99 |
| 98) | 4-Aminobiphenyl | 14.40 | 169 | 1452045 | 52.4629 | ug/ml | 100 |
| 99) | Pentachlorophenol | 14.49 | 266 | 360957 | 53.2595 | ug/ml | 100 |
| 100) | Pronamide | 14.44 | 173 | 669172 | 50.8223 | ug/ml | 99 |
| 101) | Pentachloronitrobenzene | 14.57 | 237 | 195866 | 50.4586 | ug/ml | 100 |
| 102) | Disulfoton | 14.60 | 88 | 605830 | 49.8751 | ug/ml | 100 |
| 103) | Phenanthrene | 14.67 | 178 | 2095048 | 50.1141 | ug/ml | 100 |
| 104) | Anthracene | 14.72 | 178 | 2142674 | 50.6146 | ug/ml | 100 |
| 105) | Carbazole | 14.86 | 167 | 1955790 | 50.6144 | ug/ml | 99 |
| 106) | Parathion Methyl | 15.00 | 109 | 350123 | 49.3508 | ug/ml | 95 |
| 107) | Di-n-Butyl Phthalate | 15.16 | 149 | 2174901 | 48.8657 | ug/ml | 100 |
| 108) | Parathion Ethyl | 15.40 | 97 | 241948 | 49.9513 | ug/ml | 98 |
| 109) | 4-Nitroquinoline 1-Oxide | 15.48 | 190 | 139943 | 37.1373 | ug/ml | 98 |
| 110) | Methapyrilene | 15.52 | 58 | 261847 | 40.4926 | ug/ml | 99 |
| 111) | Isodrin | 15.79 | 193 | 243313 | 50.2247 | ug/ml | 100 |
| 112) | Fluoranthene | 15.93 | 202 | 2277403 | 50.0498 | ug/ml | 99 |
| 114) | Benzidine | 16.00 | 184 | 668641 | 62.8829 | ug/ml | 100 |
| 115) | Pyrene | 16.18 | 202 | 2279576 | 49.8745 | ug/ml | 99 |
| 116) | Aramite | 16.18 | 185 | 133094 | 52.4568 | ug/ml | 99 |
| 118) | p-(Dimethylamino)azobenzen | 16.41 | 225 | 566884 | 51.1705 | ug/ml | 98 |
| 119) | Chlorobenzilate | 16.44 | 251 | 803106 | 52.3903 | ug/ml | 99 |
| 120) | Famphur | 16.72 | 218 | 9318 | 66.4501 | ug/ml# | 65 |
| 121) | Butyl Benzyl Phthalate | 16.73 | 149 | 923342 | 49.6372 | ug/ml | 99 |
| 122) | 3,3'-Dimethylbenzidine | 16.75 | 212 | 1721669 | 55.1994 | ug/ml | 100 |
| 123) | 2-Acetylaminofluorene | 17.07 | 181 | 1025569 | 51.6237 | ug/ml | 100 |
| 124) | bis(2-Ethylhexyl)phthalate | 17.35 | 149 | 1394711 | 48.6826 | ug/ml | 100 |
| 125) | 3,3'-Dichlorobenzidine | 17.41 | 252 | 860294 | 51.3585 | ug/ml | 99 |
| 126) | Benzo[a]anthracene | 17.50 | 228 | 2437422 | 50.4438 | ug/ml | 100 |
| 127) | Chrysene | 17.57 | 228 | 2263842 | 50.4048 | ug/ml | 100 |
| 129) | Di-n-Octyl Phthalate | 18.20 | 149 | 2362292 | 50.1453 | ug/ml | 99 |
| 130) | 7,12-Dimethylbenz[a]anthra | 19.26 | 256 | 1199002 | 52.9846 | ug/ml | 100 |
| 131) | Benzo[b]fluoranthene | 19.28 | 252 | 2766246 | 52.1108 | ug/ml | 97 |
| 132) | Benzo[k]fluoranthene | 19.31 | 252 | 2351907 | 54.6694 | ug/ml | 96 |
| 133) | Benzo[a]pyrene | 19.95 | 252 | 2274401 | 51.2011 | ug/ml | 100 |
| 134) | 3-Methylcholanthrene | 20.77 | 268 | 1218856 | 51.5900 | ug/ml | 100 |
| 135) | Indeno[1,2,3-cd]pyrene | 22.99 | 276 | 2547694 | 50.3595 | ug/ml | 99 |
| 136) | Dibenz[ah]anthracene | 22.98 | 278 | 2142302 | 50.2081 | ug/ml | 99 |
| 137) | Benzo[ghi]perylene | 23.87 | 276 | 1909552 | 48.2969 | ug/ml | 99 |

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

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\051612\5M67011.D Vial: 2
Acq On : 16 May 2012 8:59 am Operator: CAA
Sample : WG398115-02 50PPM Megamix STD Inst : HPMS5
Misc : 1,1 STD50886 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 17 9:58 2012 Quant Results File: MEGAMIX.RES

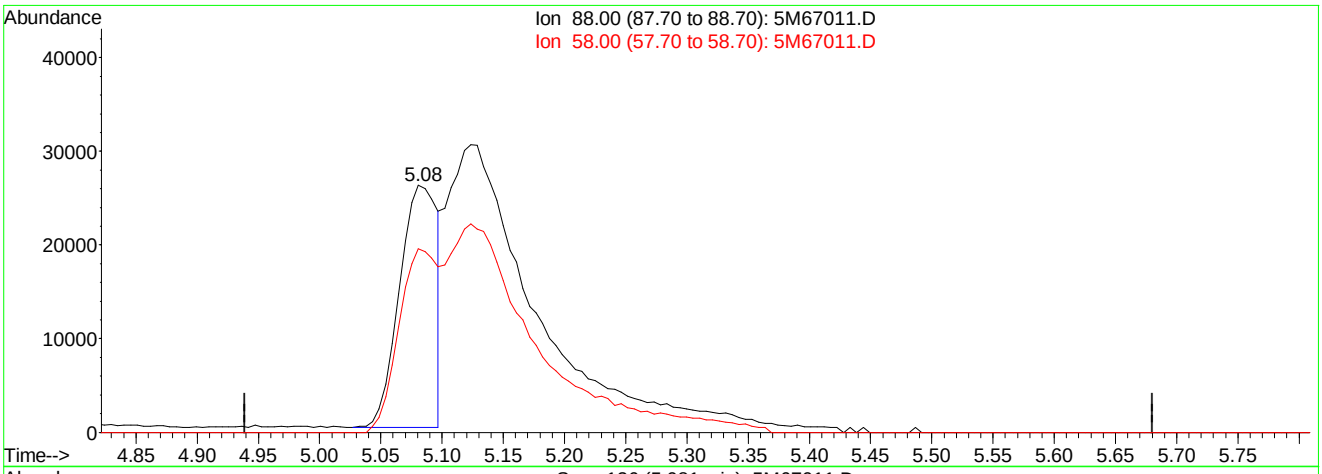
Method : C:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
Title : OVD MSS01 8270/625/Initial cal. 05/11/12
Last Update : Wed May 16 09:36:02 2012
Response via : Initial Calibration

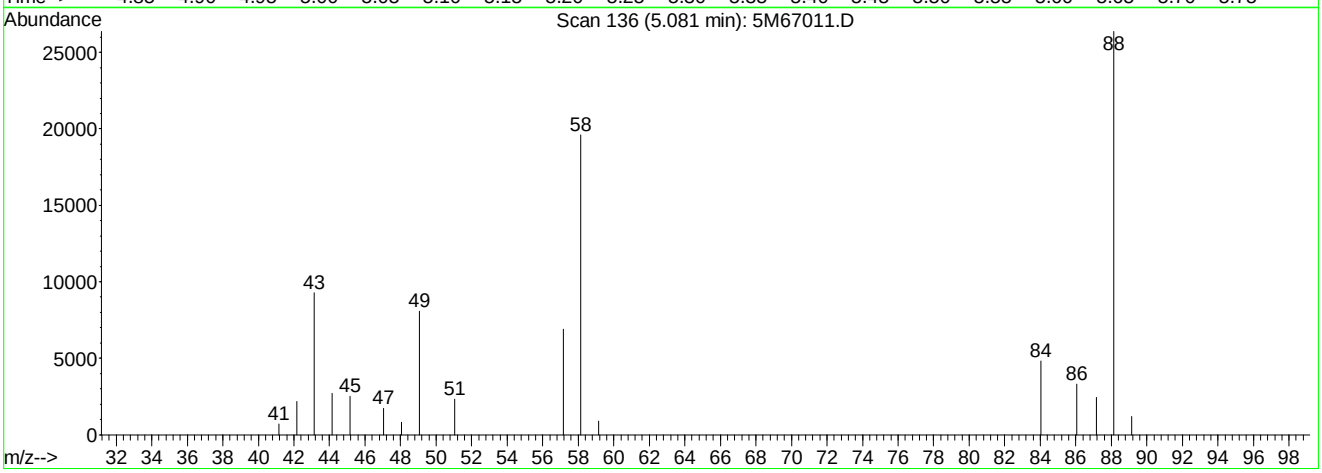


Quantitation Report (Qedit)

Data File : C:\MSDCHEM\1\DATA\051612\5M67011.D Vial: 2
Acq On : 16 May 2012 8:59 am Operator: CAA
Sample : WG398115-02 50PPM Megamix STD Inst : HPMS5
Misc : 1,1 STD50886 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 16 9:23 2012 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
Title : OVD MSS01 8270/625/Initial cal. 05/11/12
Last Update : Wed May 16 09:36:02 2012
Response via : Multiple Level Calibration




TIC: 5M67011.D

(2) 1,4-Dioxane

5.08min 11.96ug/ml

response 55523

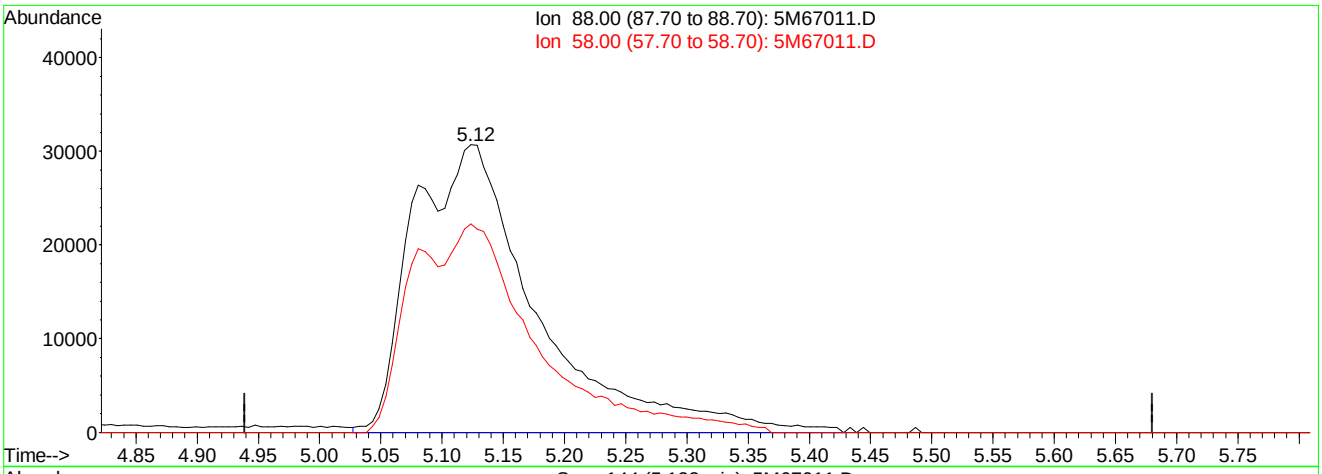
| Ion | Exp% | Act% |
|---|---|---|
| 88.00 | 100 | 100 |
| 58.00 | 0.00 | 76.81# |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

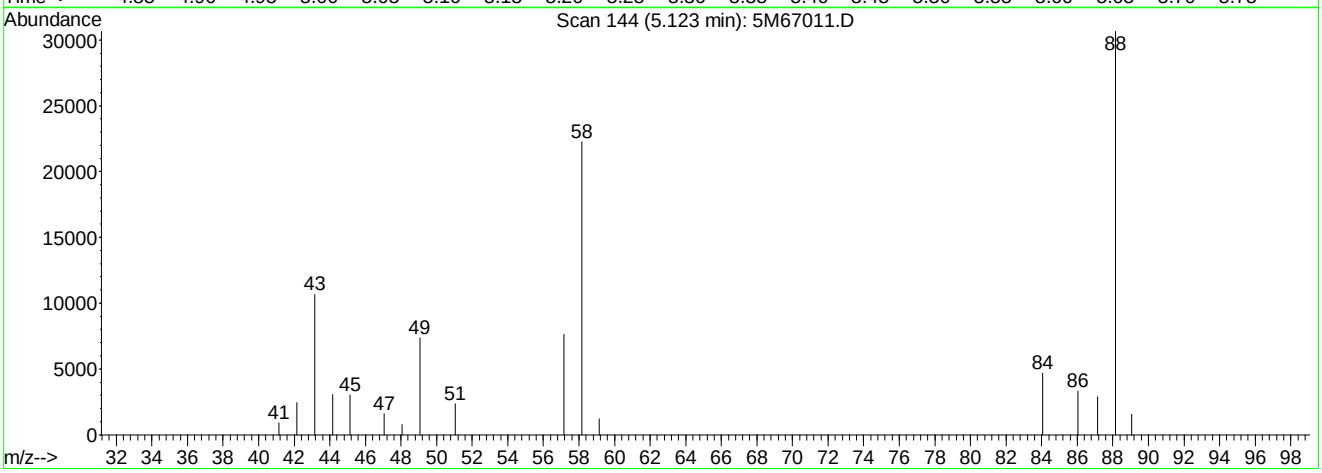
5M67011.D MEGAMIX.M Thu May 17 09:57:39 2012

Quantitation Report (Qedit)

Data File : C:\MSDCHEM\1\DATA\051612\5M67011.D Vial: 2
Acq On : 16 May 2012 8:59 am Operator: CAA
Sample : WG398115-02 50PPM Megamix STD Inst : HPMS5
Misc : 1,1 STD50886 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 17 9:57 2012 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
Title : OVD MSS01 8270/625/Initial cal. 05/11/12
Last Update : Wed May 16 09:36:02 2012
Response via : Multiple Level Calibration




TIC: 5M67011.D

(2) 1,4-Dioxane

5.12min 46.92ug/ml mint

response 217850

| Ion | Exp% | Act% |
|---|---|---|
| 88.00 | 100 | 100 |
| 58.00 | 0.00 | 19.58# |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

5M67011.D MEGAMIX.M Thu May 17 2012

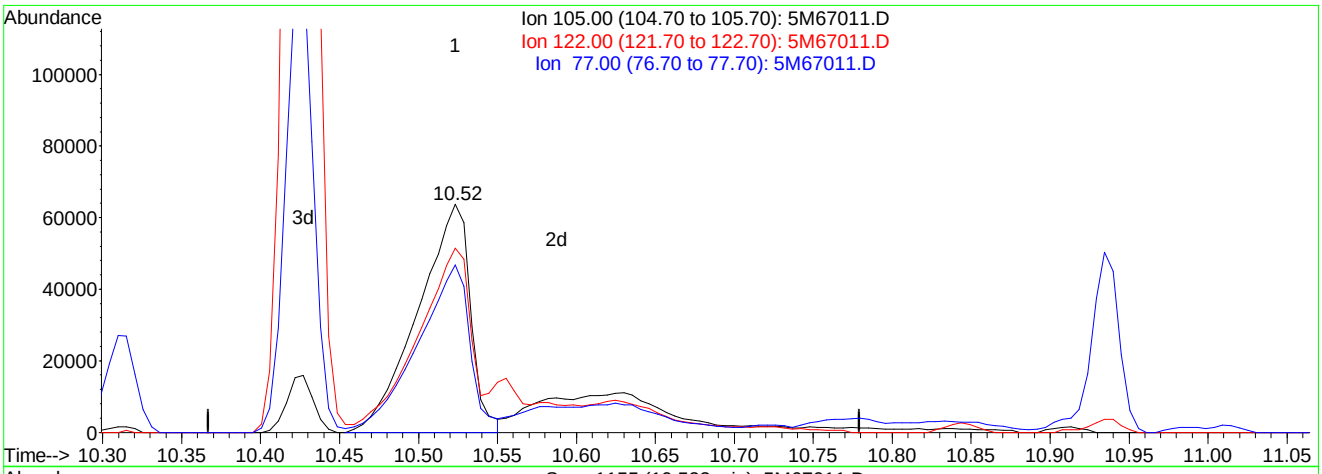
Analyst: 05/17/2012 11:25 Supervisor: 05/17/2012 12:32

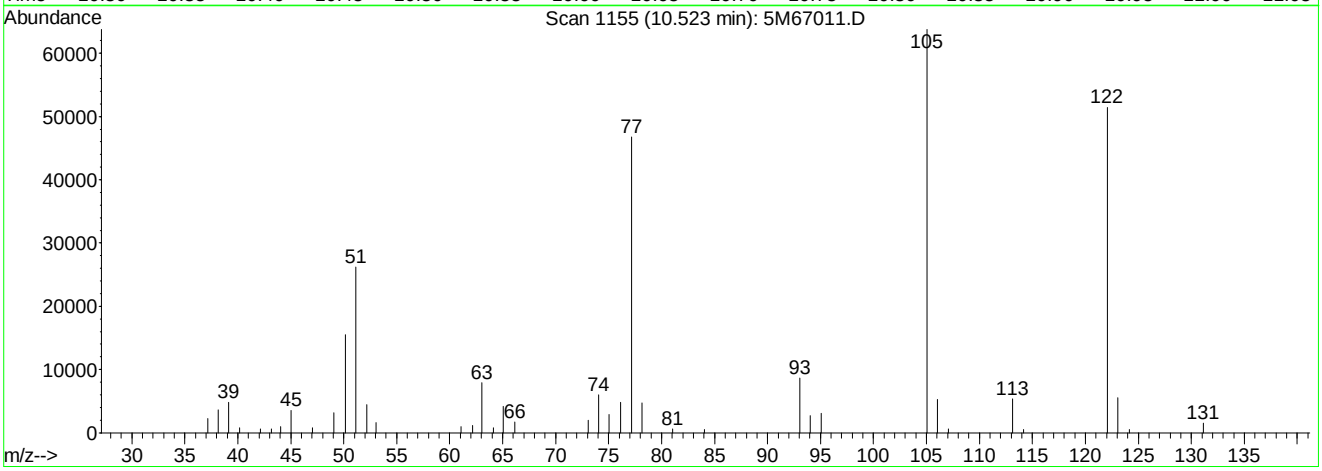
#2 - Data system splits the peak incorrectly or integrates a false peak as a rider peak

Quantitation Report (Qedit)

Data File : C:\MSDCHEM\1\DATA\051612\5M67011.D Vial: 2
Acq On : 16 May 2012 8:59 am Operator: CAA
Sample : WG398115-02 50PPM Megamix STD Inst : HPMS5
Misc : 1,1 STD50886 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 17 9:57 2012 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
Title : OVD MSS01 8270/625/Initial cal. 05/11/12
Last Update : Wed May 16 09:36:02 2012
Response via : Single Level Calibration




TIC: 5M67011.D

(39) Benzoic Acid

10.52min 26.54ug/ml

response 146680

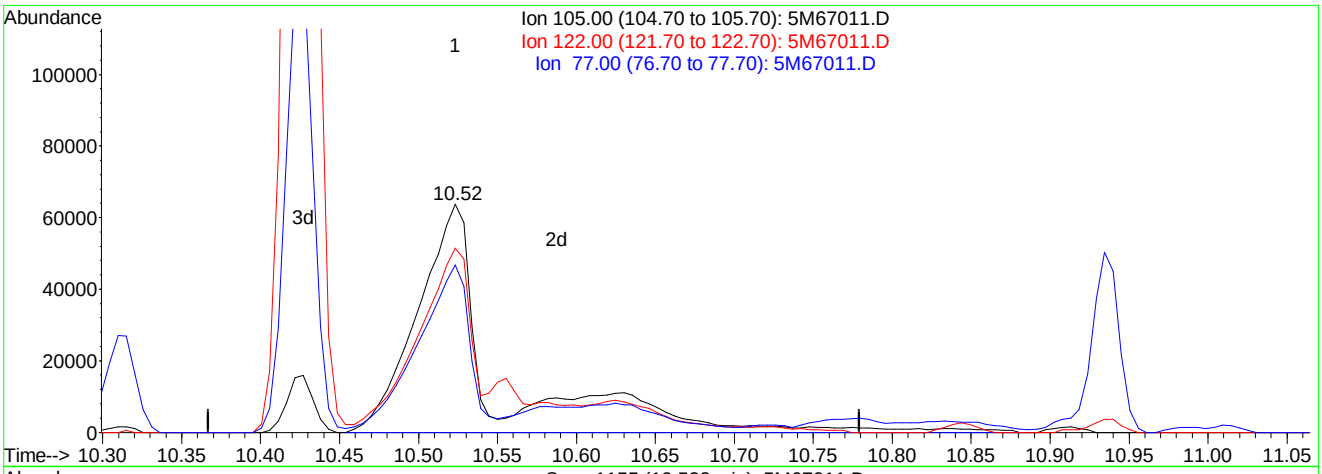
| Ion | Exp% | Act% |
|---|---|---|
| 105.00 | 100 | 100 |
| 122.00 | 57.00 | 75.35 |
| 77.00 | 51.30 | 69.36 |
| 0.00 | 0.00 | 0.00 |

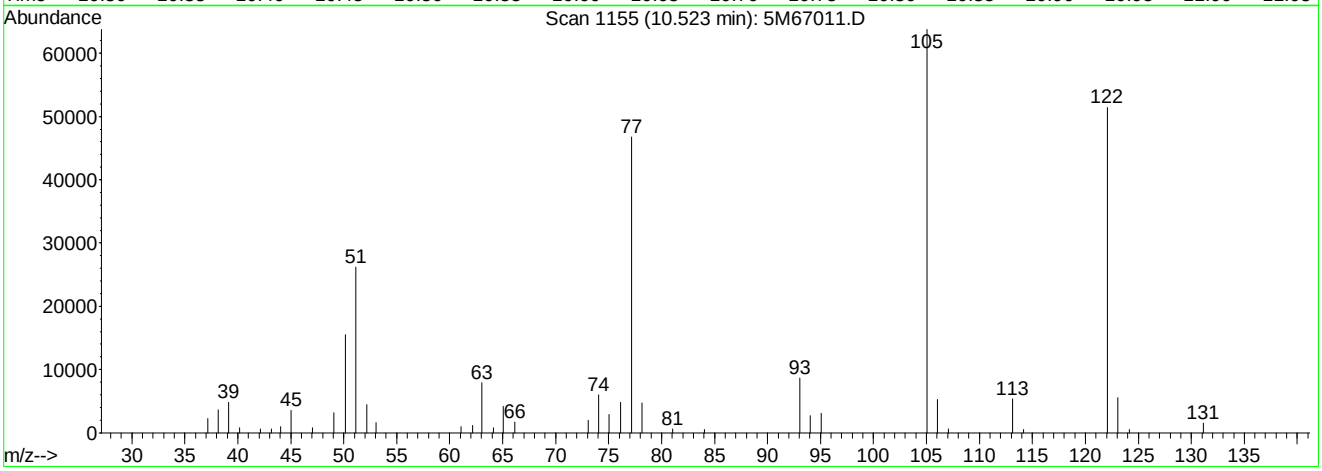
5M67011.D MEGAMIX.M Thu May 17 09:57:50 2012

Quantitation Report (Qedit)

Data File : C:\MSDCHEM\1\DATA\051612\5M67011.D Vial: 2
Acq On : 16 May 2012 8:59 am Operator: CAA
Sample : WG398115-02 50PPM Megamix STD Inst : HPMS5
Misc : 1,1 STD50886 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 17 9:57 2012 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
Title : OVD MSS01 8270/625/Initial cal. 05/11/12
Last Update : Wed May 16 09:36:02 2012
Response via : Single Level Calibration




TIC: 5M67011.D

(39) Benzoic Acid

10.52min 34.91ug/ml mint

response 221414

| Ion | Exp% | Act% |
|---|---|---|
| 105.00 | 100 | 100 |
| 122.00 | 57.00 | 49.92 |
| 77.00 | 51.30 | 45.95 |
| 0.00 | 0.00 | 0.00 |

5M67011.D MEGAMIX.M Thu May 17 [illegible] 2012

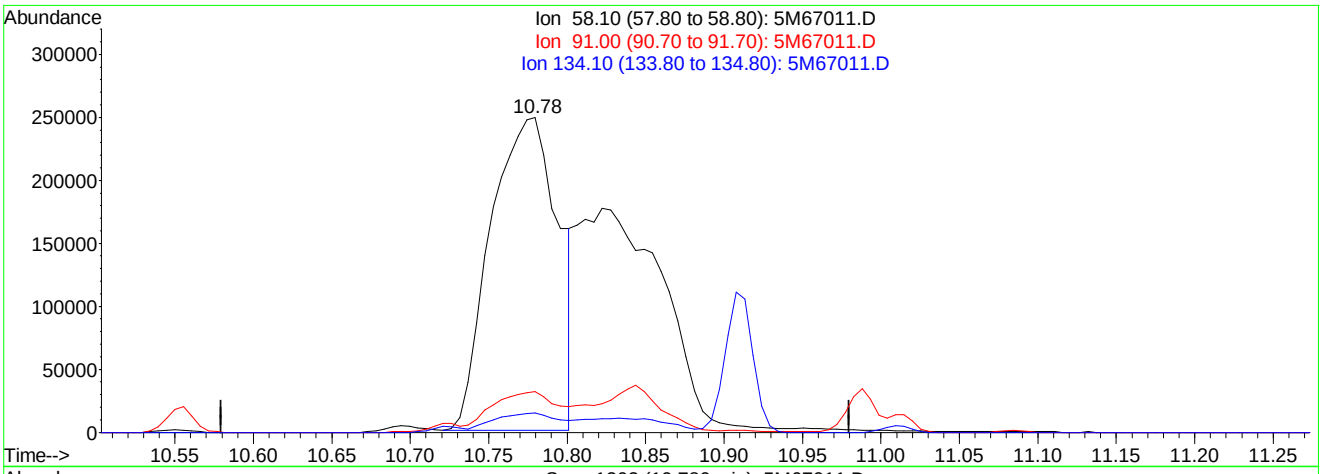
Analyst: 05/17/2012 11:25 Supervisor: 05/17/2012 12:32

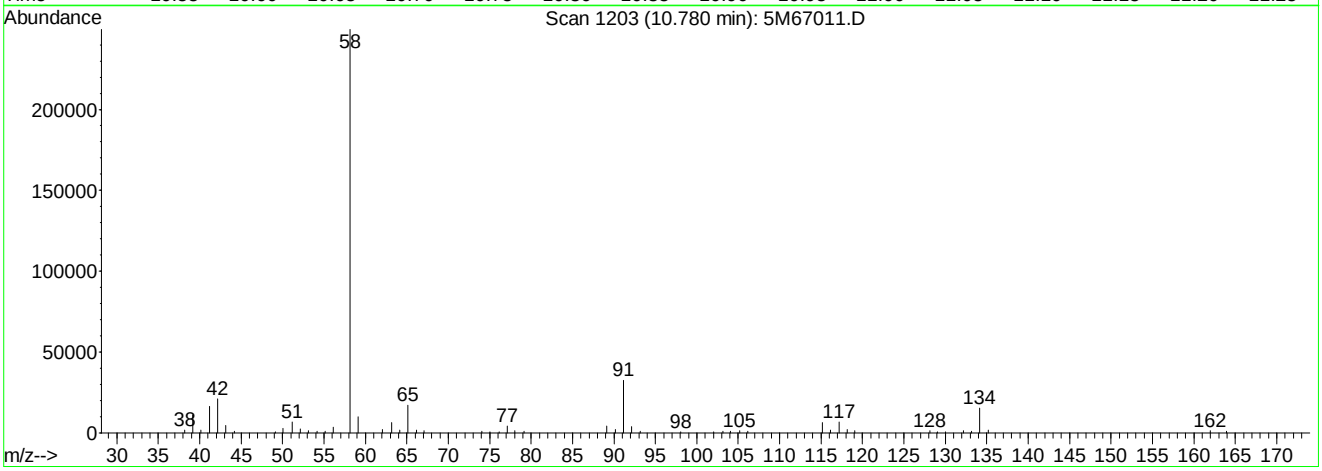
#2 - Data system splits the peak incorrectly or integrates a false peak as a rider peak

Quantitation Report (Qedit)

Data File : C:\MSDCHEM\1\DATA\051612\5M67011.D Vial: 2
Acq On : 16 May 2012 8:59 am Operator: CAA
Sample : WG398115-02 50PPM Megamix STD Inst : HPMS5
Misc : 1,1 STD50886 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 17 9:57 2012 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
Title : OVD MSS01 8270/625/Initial cal. 05/11/12
Last Update : Wed May 16 09:36:02 2012
Response via : Multiple Level Calibration




TIC: 5M67011.D

(41) a,a-Dimethylphenethylamine

10.78min 25.06ug/ml

response 740432

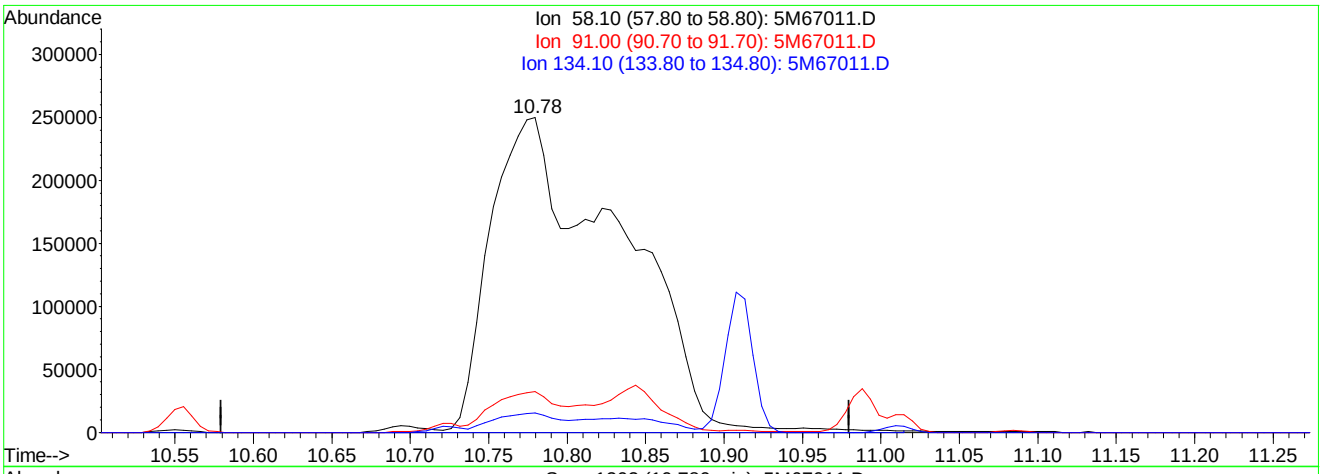
| Ion | Exp% | Act% |
|---|---|---|
| 58.10 | 100 | 100 |
| 91.00 | 9.00 | 12.51# |
| 134.10 | 4.40 | 4.48 |
| 0.00 | 0.00 | 0.00 |

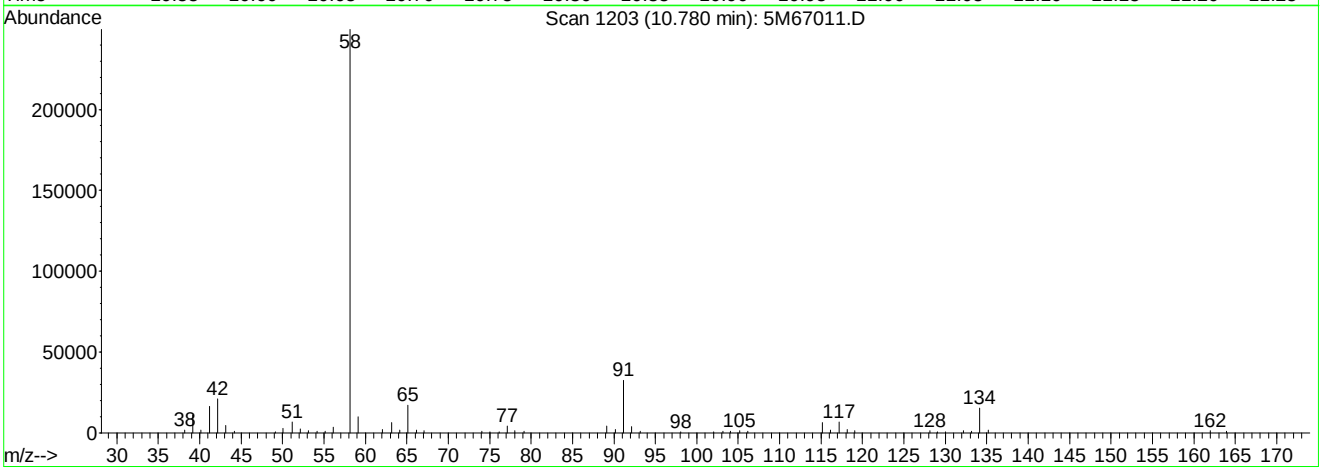
5M67011.D MEGAMIX.M Thu May 17 09:57:58 2012

Quantitation Report (Qedit)

Data File : C:\MSDCHEM\1\DATA\051612\5M67011.D Vial: 2
Acq On : 16 May 2012 8:59 am Operator: CAA
Sample : WG398115-02 50PPM Megamix STD Inst : HPMS5
Misc : 1,1 STD50886 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 17 9:58 2012 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
Title : OVD MSS01 8270/625/Initial cal. 05/11/12
Last Update : Wed May 16 09:36:02 2012
Response via : Multiple Level Calibration




TIC: 5M67011.D

(41) a,a-Dimethylphenethylamine

10.78min 48.77ug/ml mint

response 1440723

| Ion | Exp% | Act% |
|---|---|---|
| 58.10 | 100 | 100 |
| 91.00 | 9.00 | 6.43# |
| 134.10 | 4.40 | 2.30# |
| 0.00 | 0.00 | 0.00 |

5M67011.D MEGAMIX.M Thu May 17 2012

Analyst: 05/17/2012 11:25 Supervisor: 05/17/2012 12:32

#2 - Data system splits the peak incorrectly or integrates a false peak as a rider peak

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\051612\5M67012.D Vial: 3
Acq On : 16 May 2012 9:35 am Operator: CAA
Sample : WG395530-01 50PPM TCL STD Inst : HPMS5
Misc : 1,1 STD51428 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 16 09:59:52 2012 Quant Results File: TCL.RES

Quant Method : C:\MSDCHEM\1\METHODS\TCL.M (RTE Integrator)
Title : MSS01 OVD 827-TCL INITIAL CALIBRATION 05/14/12
Last Update : Wed May 16 09:13:02 2012
Response via : Initial Calibration
DataAcq Meth : BNA

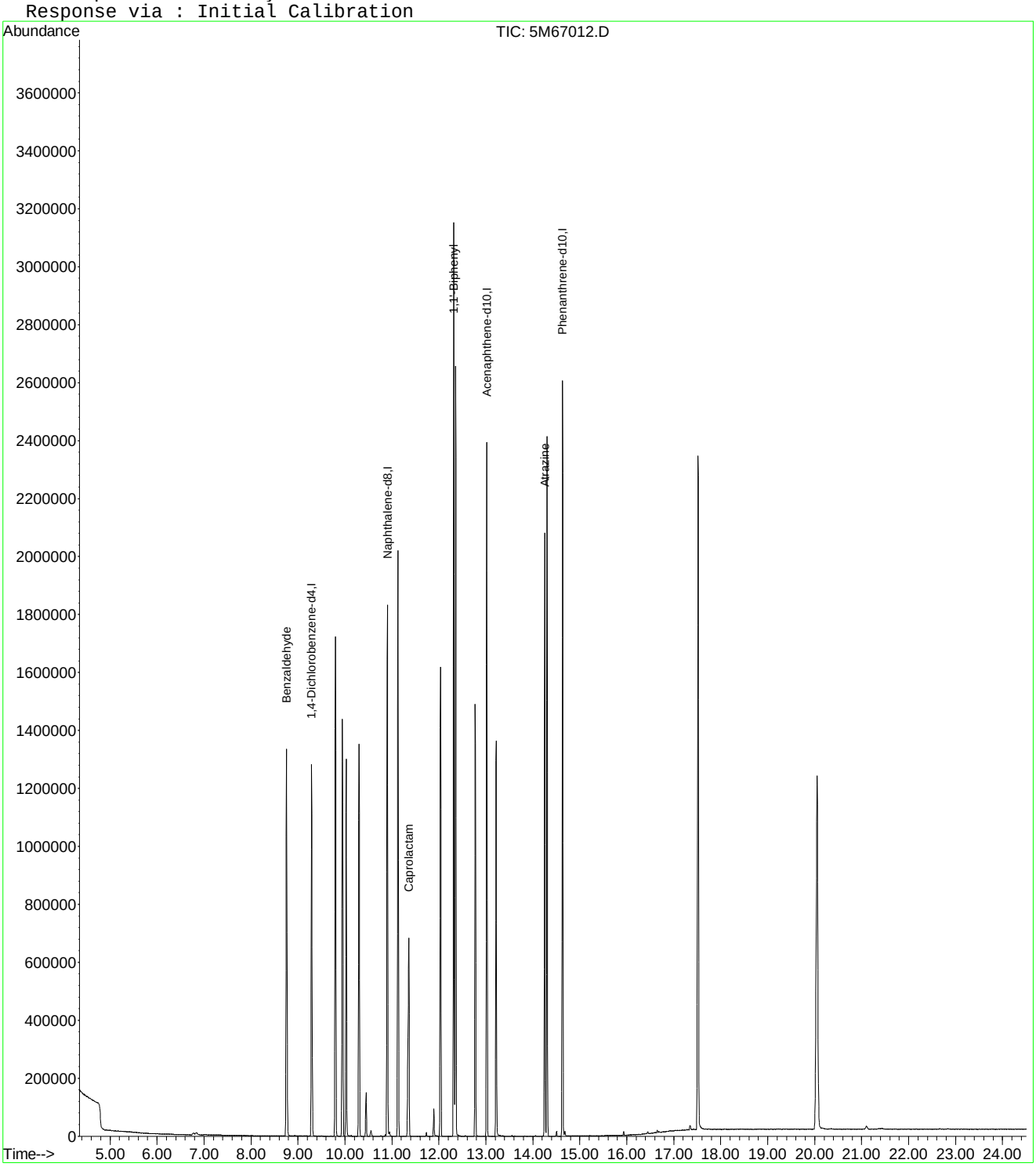
| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 1) 1,4-Dichlorobenzene-d4 | 9.29 | 152 | 293356 | 40.00 | ug/mL | 0.00 |
| 3) Naphthalene-d8 | 10.90 | 136 | 1084423 | 40.00 | ug/mL | 0.00 |
| 5) Acenaphthene-d10 | 13.02 | 164 | 647336 | 40.00 | ug/mL | 0.00 |
| 7) Phenanthrene-d10 | 14.63 | 188 | 1196693 | 40.00 | ug/mL | 0.00 |
| **Target Compounds** | | | | | | Qvalue |
| 2) Benzaldehyde | 8.76 | 105 | 373082 | 49.9087 | ug/L | 100 |
| 4) Caprolactam | 11.36 | 55 | 195026 | 51.0503 | ug/L | 100 |
| 6) 1,1'-Biphenyl | 12.32 | 154 | 1284275 | 51.0509 | ug/L | 100 |
| 8) Atrazine | 14.26 | 200 | 361539 | 52.1575 | ug/L | 99 |

(#) = qualifier out of range (m) = manual integration
5M67012.D TCL.M Thu May 17 10:58:27 2012 Page 1

Quantitation Report (Not Reviewed)

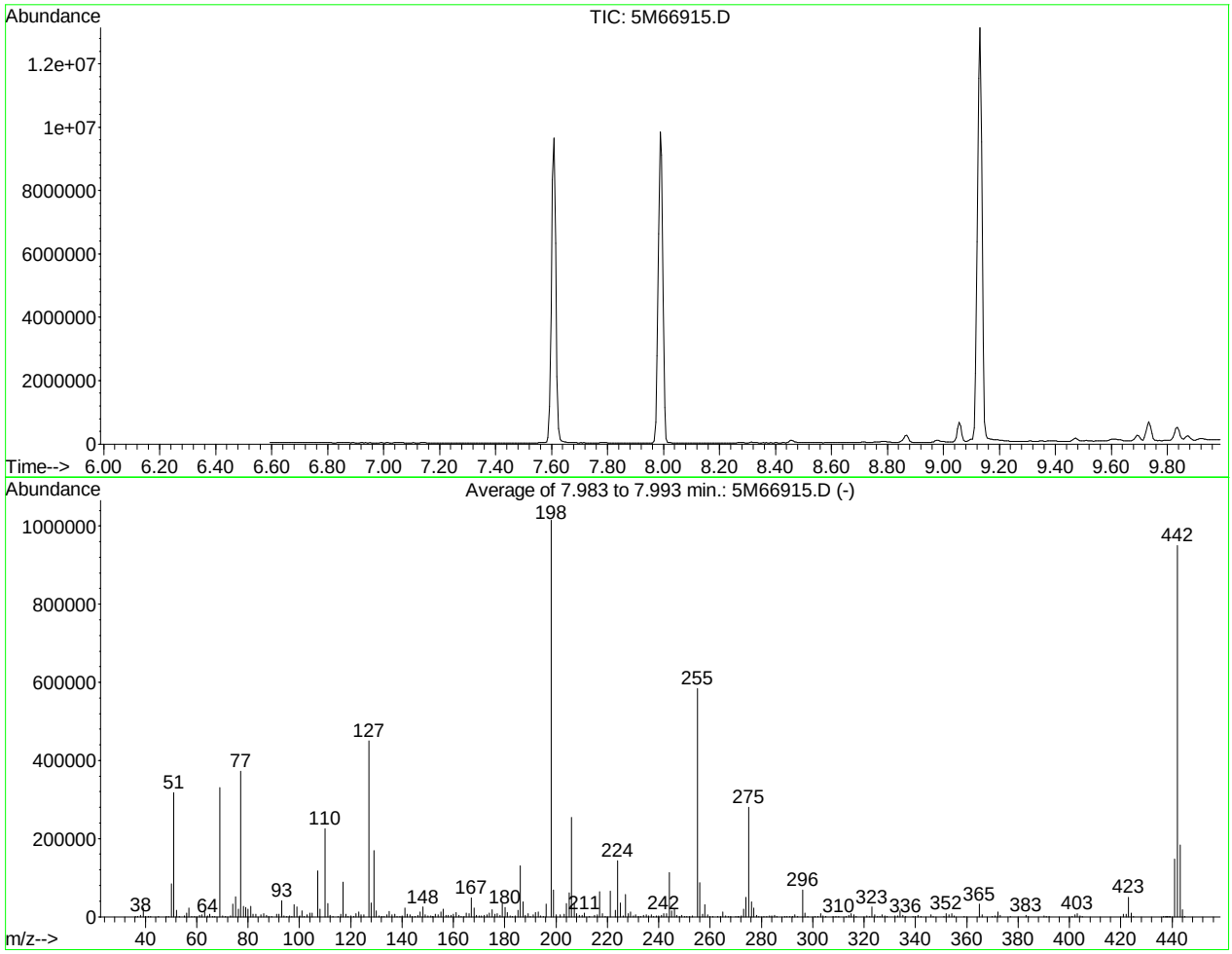
Data File : C:\MSDCHEM\1\DATA\051612\5M67012.D Vial: 3
Acq On : 16 May 2012 9:35 am Operator: CAA
Sample : WG395530-01 50PPM TCL STD Inst : HPMS5
Misc : 1,1 STD51428 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 16 9:59 2012 Quant Results File: TCL.RES

Method : C:\MSDCHEM\1\METHODS\TCL.M (RTE Integrator)
Title : MSS01 OVD 827-TCL INITIAL CALIBRATION 05/14/12
Last Update : Wed May 16 09:13:02 2012
Response via : Initial Calibration



# 2.2.1.5 Raw QC Data

Data File : C:\MSDCHEM\1\DATA\051112\5M66915.D Vial: 1
Acq On : 11 May 2012 8:42 am Operator: CAA
Sample : WG397707-01 50PPM DFTPP STD Inst : HPMS5
Misc : 1,1 STD50659 Multiplr: 1.00
MS Integration Params: RTEINT.P
Method : C:\MSDCHEM\1\METHODS\DFTPP.M (RTE Integrator)
Title : DFTPP




AutoFind: Scans 261, 262, 263; Background Corrected with Scan 254

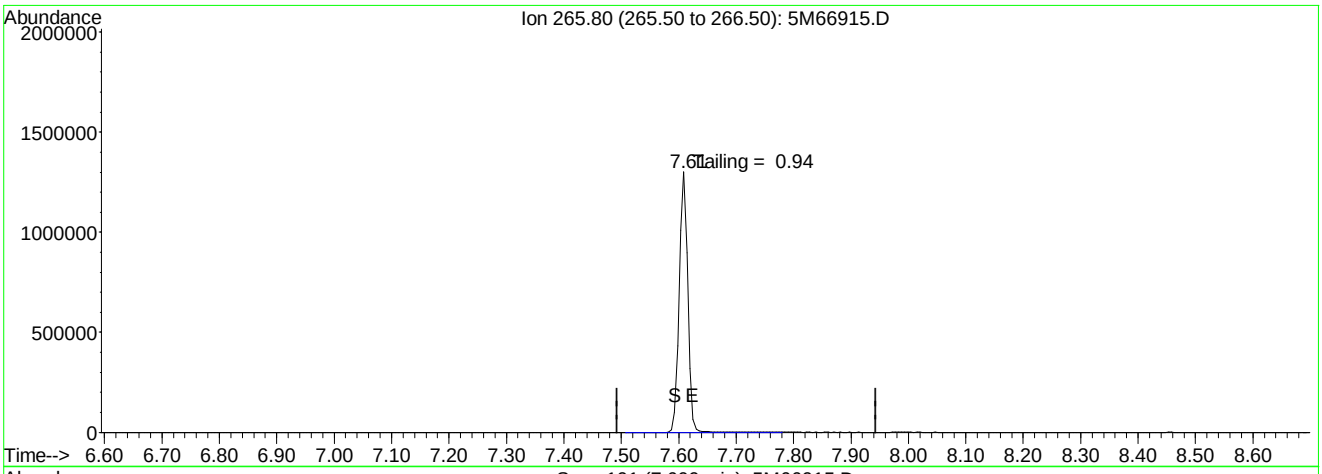
| Target Mass | Rel. to Mass | Lower Limit% | Upper Limit% | Rel. Abn% | Raw Abn | Result Pass/Fail |
|---|---|---|---|---|---|---|
| 51 | 198 | 30 | 60 | 31.3 | 318182 | PASS |
| 68 | 69 | 0.00 | 2 | 0.0 | 0 | PASS |
| 69 | 198 | 0.00 | 100 | 32.6 | 331242 | PASS |
| 70 | 69 | 0.00 | 2 | 0.6 | 1946 | PASS |
| 127 | 198 | 40 | 60 | 44.4 | 450880 | PASS |
| 197 | 198 | 0.00 | 1 | 0.0 | 0 | PASS |
| 198 | 198 | 100 | 100 | 100.0 | 1015360 | PASS |
| 199 | 198 | 5 | 9 | 6.7 | 68533 | PASS |
| 275 | 198 | 10 | 30 | 27.6 | 280725 | PASS |
| 365 | 198 | 1 | 100 | 3.1 | 31778 | PASS |
| 441 | 443 | 0.01 | 100 | 80.2 | 147186 | PASS |
| 442 | 198 | 40 | 100 | 93.6 | 950357 | PASS |
| 443 | 442 | 17 | 23 | 19.3 | 183528 | PASS |

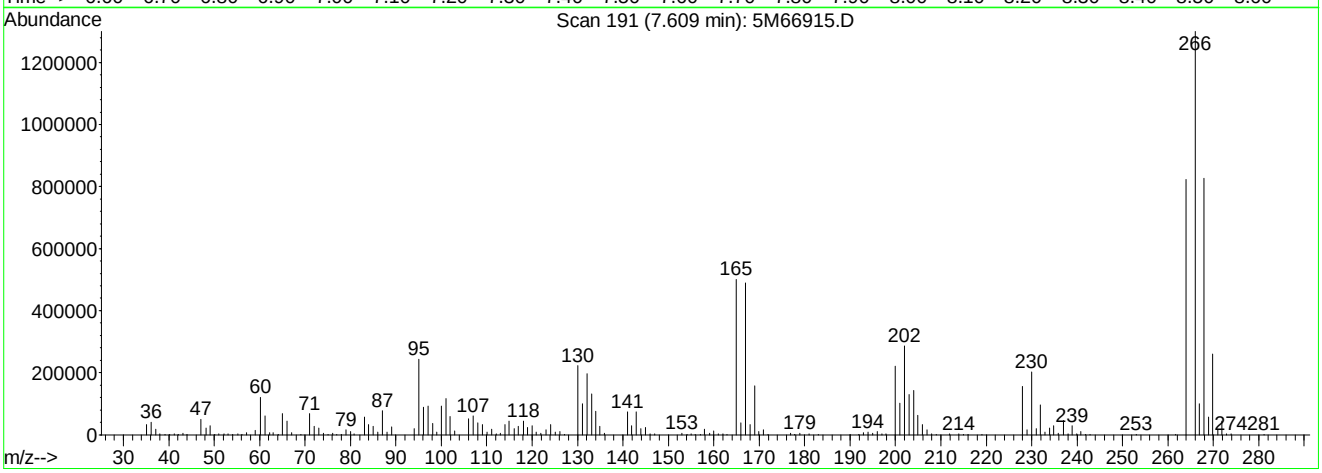
5M66915.D DFTPP.M Mon May 14 14:44:08 2012

Quantitation Report (Qedit)

Data File : C:\MSDCHEM\1\DATA\051112\5M66915.D Vial: 1
Acq On : 11 May 2012 8:42 am Operator: CAA
Sample : WG397707-01 50PPM DFTPP STD Inst : HPMS5
Misc : 1,1 STD50659 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 14 14:44 2012 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\DFTPP.M (RTE Integrator)
Title : DFTPP
Last Update : Mon May 14 14:44:19 2012
Response via : Single Level Calibration




TIC: 5M66915.D

(1) Pentachlorophenol

7.61min 0.00ug/ml

response 1343861

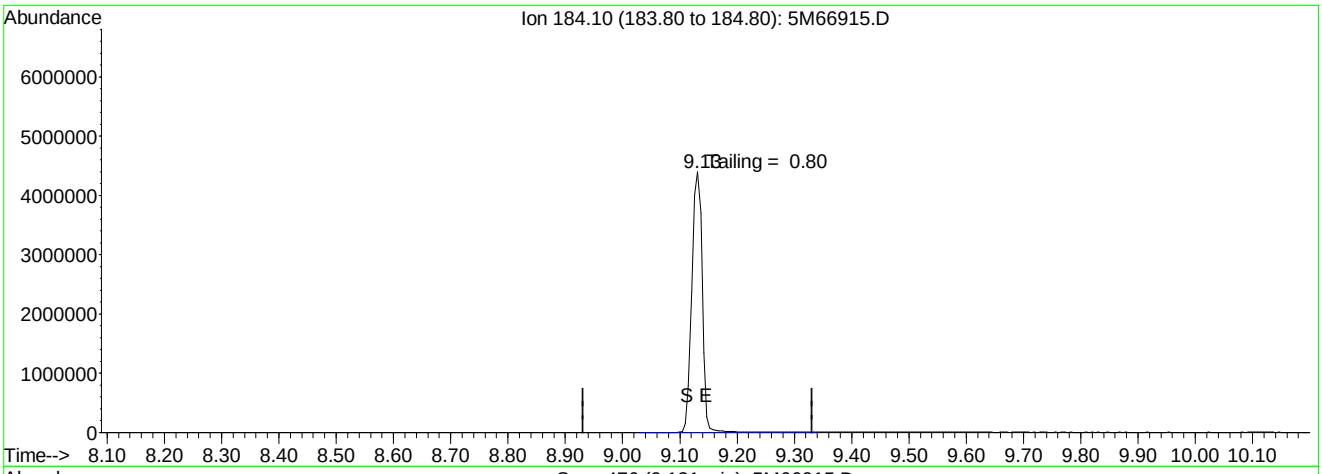
| Ion | Exp% | Act% |
|---|---|---|
| 265.80 | 100 | 100 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

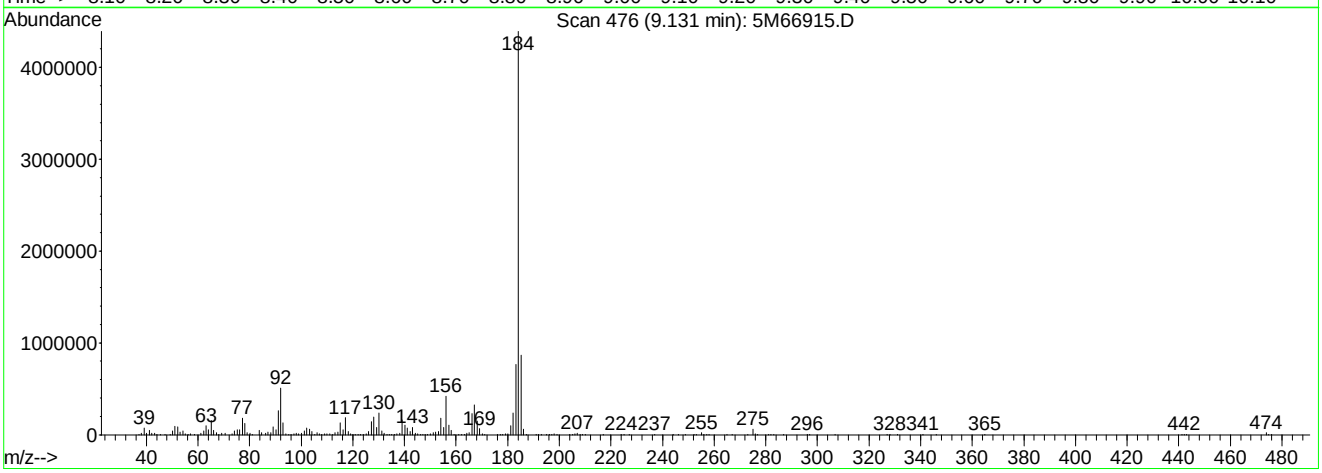
5M66915.D DFTPP.M Mon May 14 14:44:30 2012

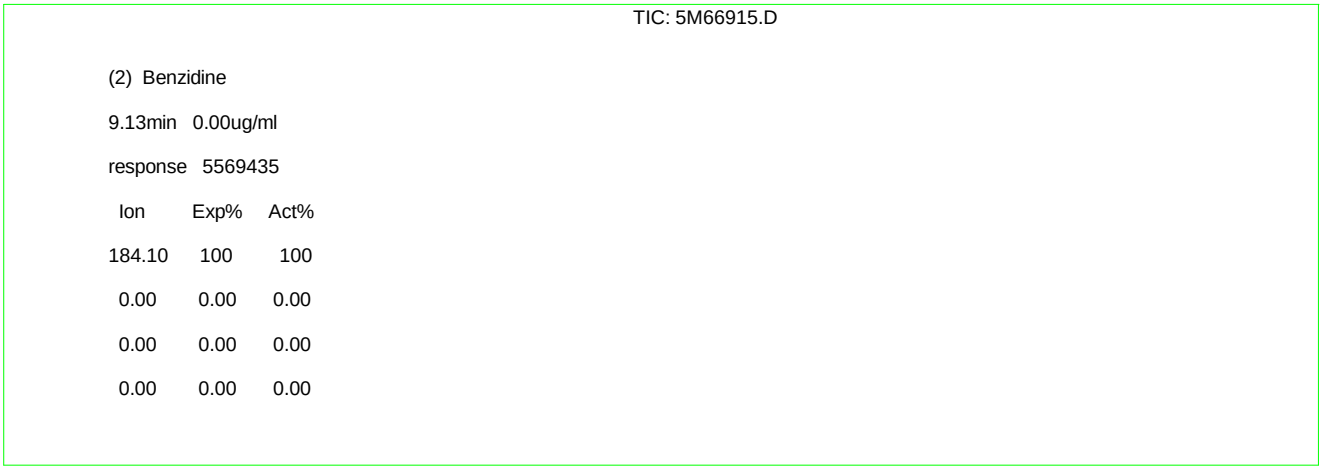
Quantitation Report (Qedit)

Data File : C:\MSDCHEM\1\DATA\051112\5M66915.D Vial: 1
Acq On : 11 May 2012 8:42 am Operator: CAA
Sample : WG397707-01 50PPM DFTPP STD Inst : HPMS5
Misc : 1,1 STD50659 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 14 14:44 2012 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\DFTPP.M (RTE Integrator)
Title : DFTPP
Last Update : Mon May 14 14:44:19 2012
Response via : Single Level Calibration




(2) Benzidine

9.13min 0.00ug/ml

response 5569435

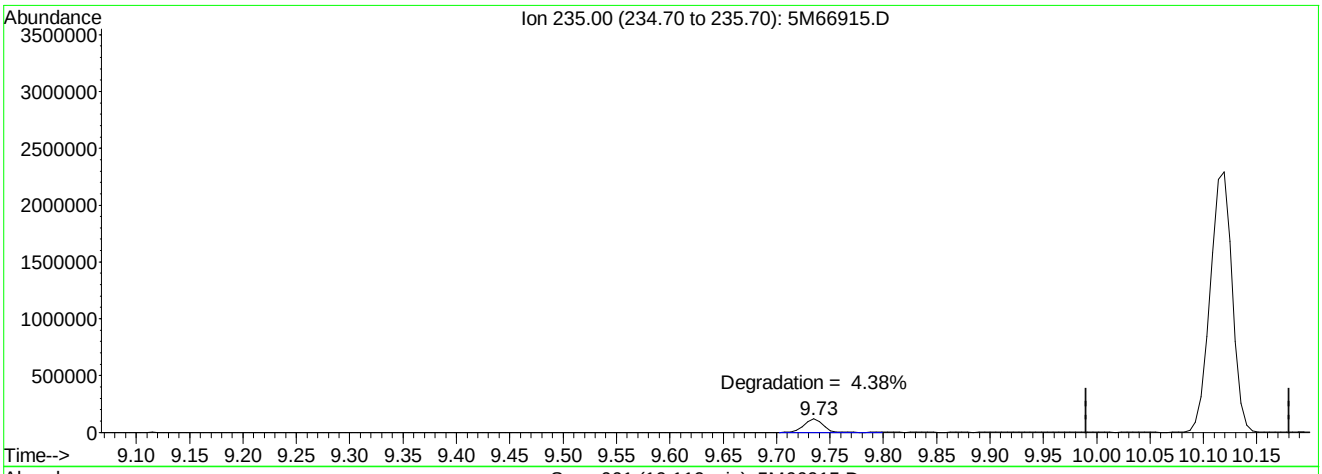
| Ion | Exp% | Act% |
|---|---|---|
| 184.10 | 100 | 100 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

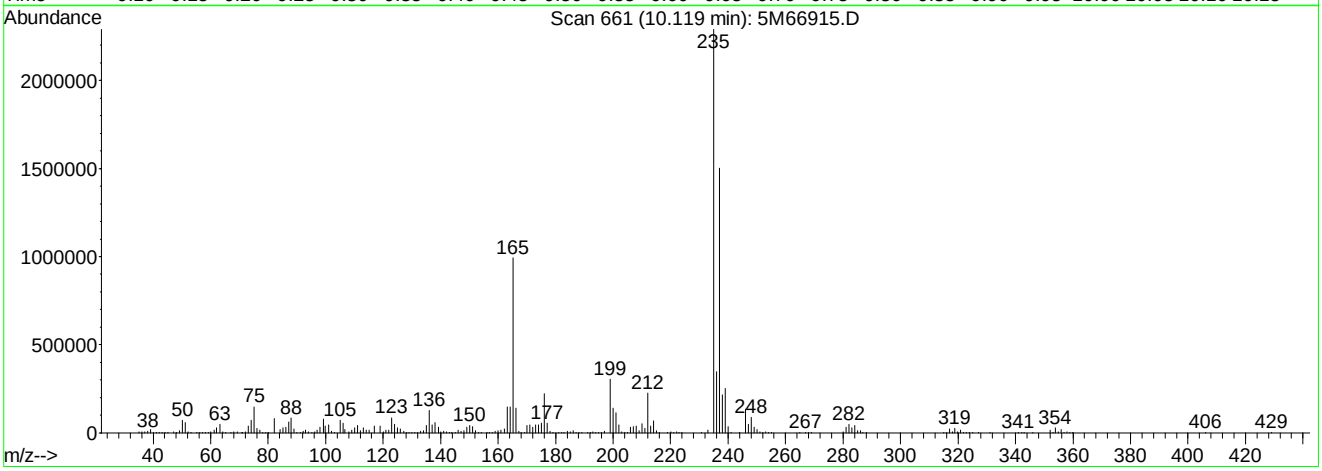
5M66915.D DFTPP.M Mon May 14 14:44:36 2012

Quantitation Report (Qedit)

Data File : C:\MSDCHEM\1\DATA\051112\5M66915.D Vial: 1
Acq On : 11 May 2012 8:42 am Operator: CAA
Sample : WG397707-01 50PPM DFTPP STD Inst : HPMS5
Misc : 1,1 STD50659 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 14 14:44 2012 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\DFTPP.M (RTE Integrator)
Title : DFTPP
Last Update : Mon May 14 14:44:19 2012
Response via : Single Level Calibration




TIC: 5M66915.D

(3) DDT

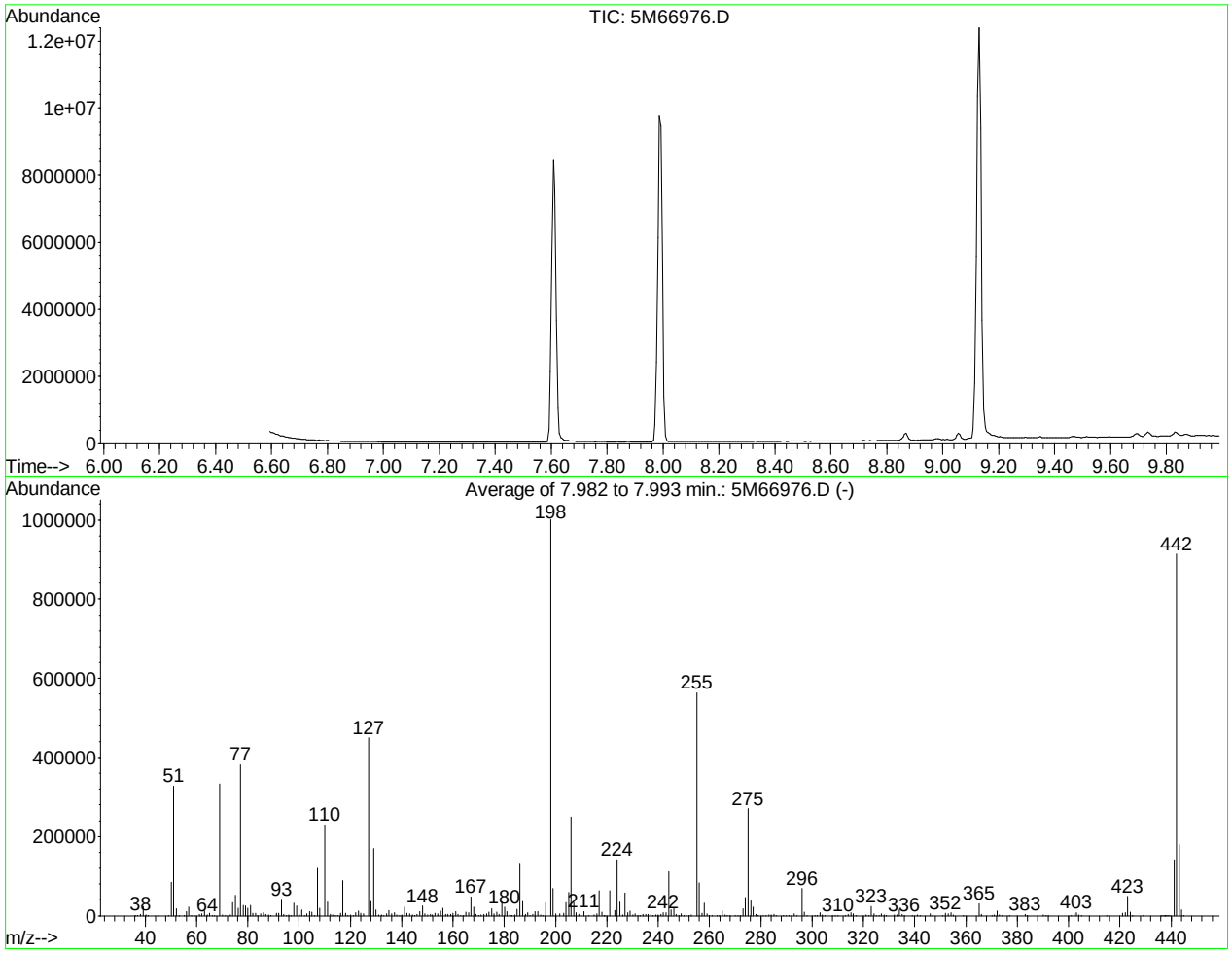
10.12min 0.00ug/ml

response 3267536

| Ion | Exp% | Act% |
|---|---|---|
| 235.00 | 100 | 100 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

5M66915.D DFTPP.M Mon May 14 14:44:45 2012

Data File : C:\MSDCHEM\1\DATA\051412\5M66976.D Vial: 1
Acq On : 14 May 2012 8:42 am Operator: CAA
Sample : WG397870-01 50PPM DFTPP STD Inst : HPMS5
Misc : 1,1 STD50659 Multiplr: 1.00
MS Integration Params: RTEINT.P
Method : C:\MSDCHEM\1\METHODS\DFTPP.M (RTE Integrator)
Title : DFTPP




AutoFind: Scans 261, 262, 263; Background Corrected with Scan 254

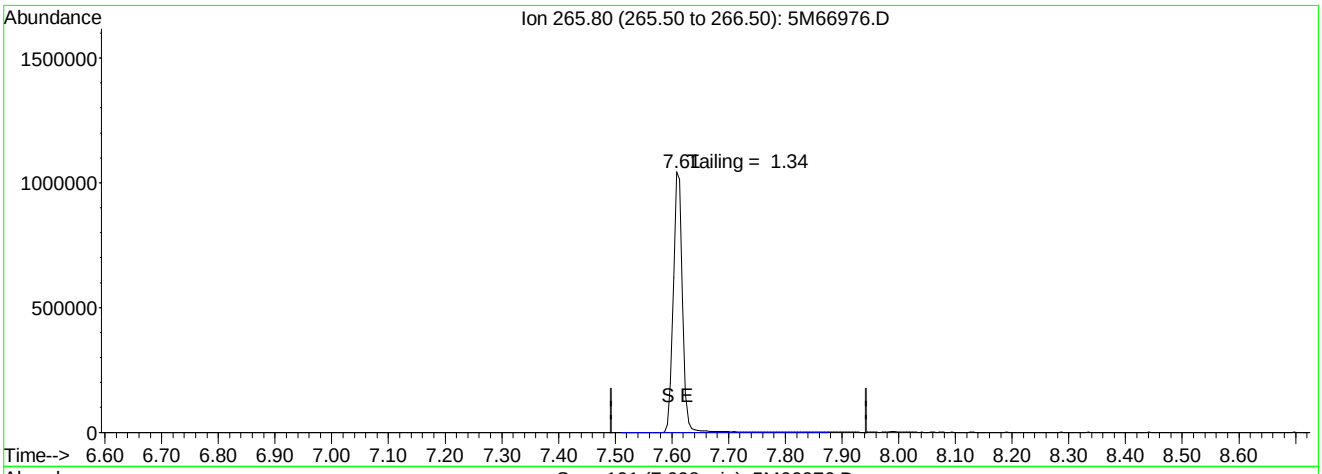
| Target Mass | Rel. to Mass | Lower Limit% | Upper Limit% | Rel. Abn% | Raw Abn | Result Pass/Fail |
|---|---|---|---|---|---|---|
| 51 | 198 | 30 | 60 | 32.7 | 327705 | PASS |
| 68 | 69 | 0.00 | 2 | 0.0 | 0 | PASS |
| 69 | 198 | 0.00 | 100 | 33.3 | 333461 | PASS |
| 70 | 69 | 0.00 | 2 | 0.6 | 2145 | PASS |
| 127 | 198 | 40 | 60 | 44.9 | 449728 | PASS |
| 197 | 198 | 0.00 | 1 | 0.0 | 0 | PASS |
| 198 | 198 | 100 | 100 | 100.0 | 1001237 | PASS |
| 199 | 198 | 5 | 9 | 6.9 | 68613 | PASS |
| 275 | 198 | 10 | 30 | 27.1 | 270848 | PASS |
| 365 | 198 | 1 | 100 | 3.1 | 30698 | PASS |
| 441 | 443 | 0.01 | 100 | 78.8 | 141536 | PASS |
| 442 | 198 | 40 | 100 | 91.3 | 914005 | PASS |
| 443 | 442 | 17 | 23 | 19.6 | 179597 | PASS |

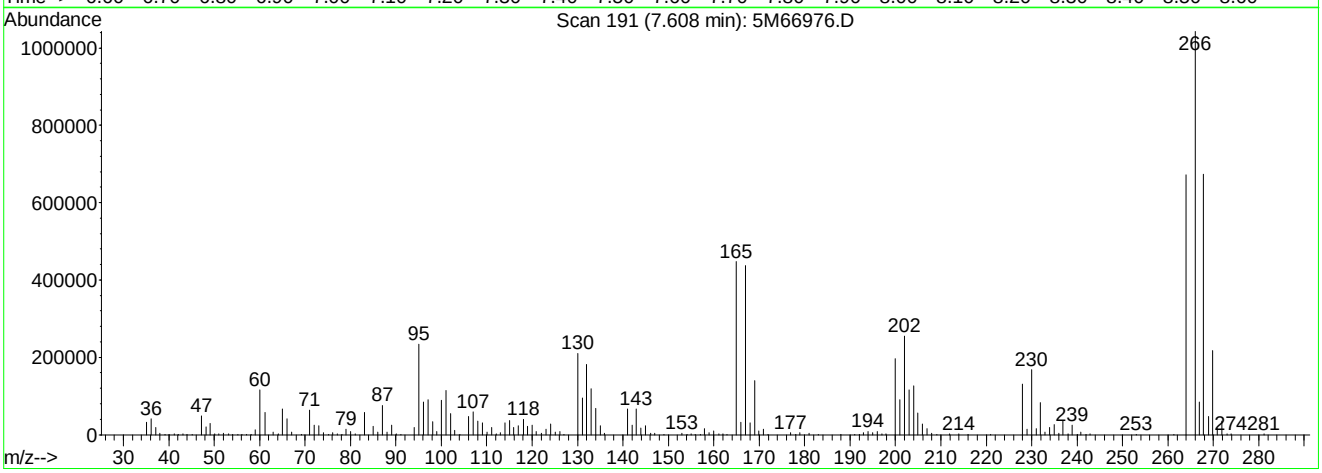
5M66976.D DFTPP.M Wed May 16 08:12:02 2012

Quantitation Report (Qedit)

Data File : C:\MSDCHEM\1\DATA\051412\5M66976.D Vial: 1
Acq On : 14 May 2012 8:42 am Operator: CAA
Sample : WG397870-01 50PPM DFTPP STD Inst : HPMS5
Misc : 1,1 STD50659 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 16 8:12 2012 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\DFTPP.M (RTE Integrator)
Title : DFTPP
Last Update : Mon May 14 14:44:19 2012
Response via : Single Level Calibration




TIC: 5M66976.D

(1) Pentachlorophenol

7.61min 0.00ug/ml

response 1189877

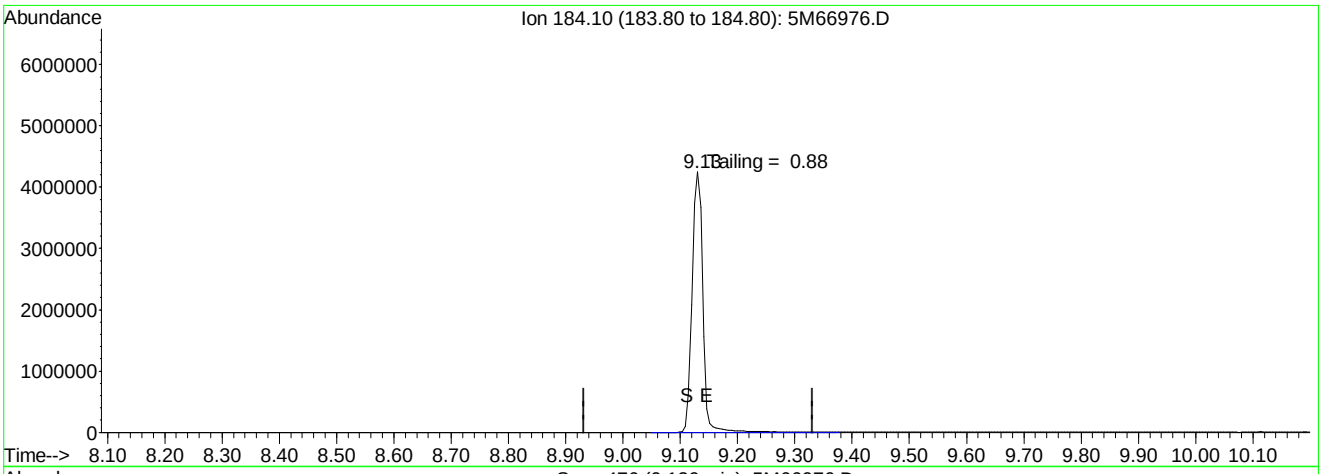
| Ion | Exp% | Act% |
|---|---|---|
| 265.80 | 100 | 100 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

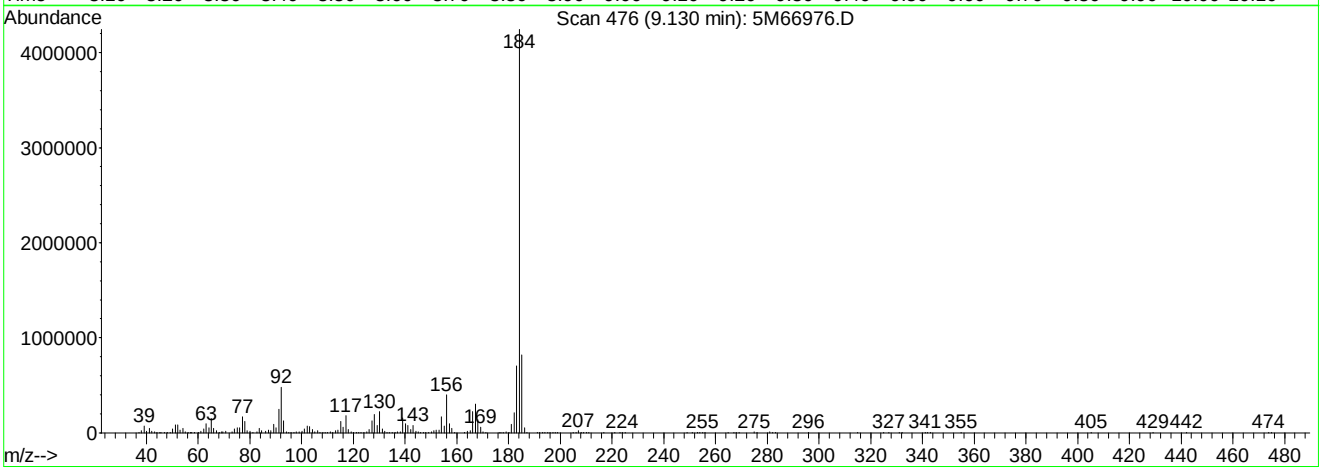
5M66976.D DFTPP.M Wed May 16 08:12:09 2012

Quantitation Report (Qedit)

Data File : C:\MSDCHEM\1\DATA\051412\5M66976.D Vial: 1
Acq On : 14 May 2012 8:42 am Operator: CAA
Sample : WG397870-01 50PPM DFTPP STD Inst : HPMS5
Misc : 1,1 STD50659 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 16 8:12 2012 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\DFTPP.M (RTE Integrator)
Title : DFTPP
Last Update : Mon May 14 14:44:19 2012
Response via : Single Level Calibration




TIC: 5M66976.D

(2) Benzidine

9.13min 0.00ug/ml

response 5512294

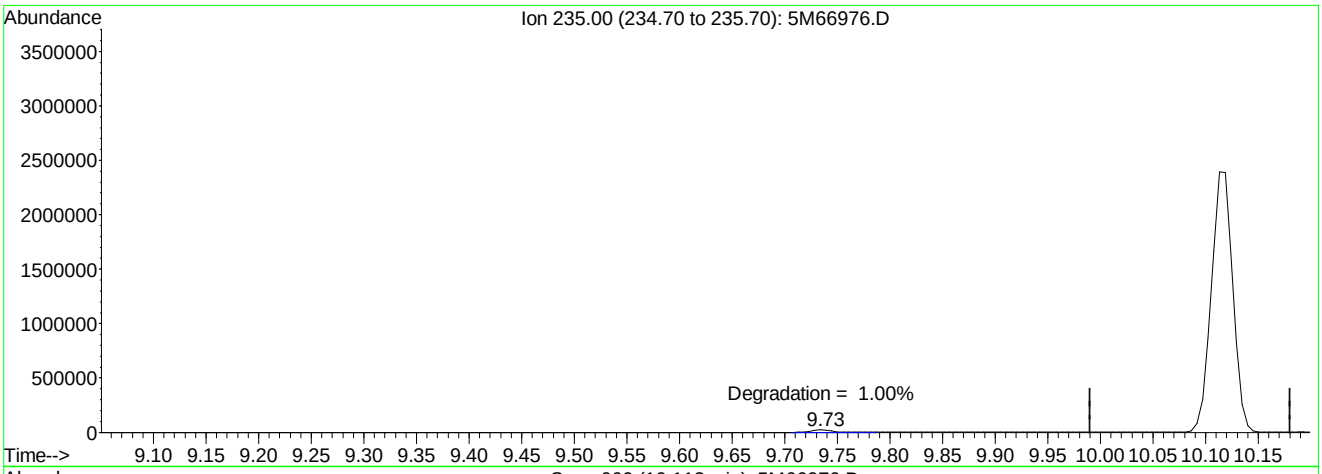
| Ion | Exp% | Act% |
|---|---|---|
| 184.10 | 100 | 100 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

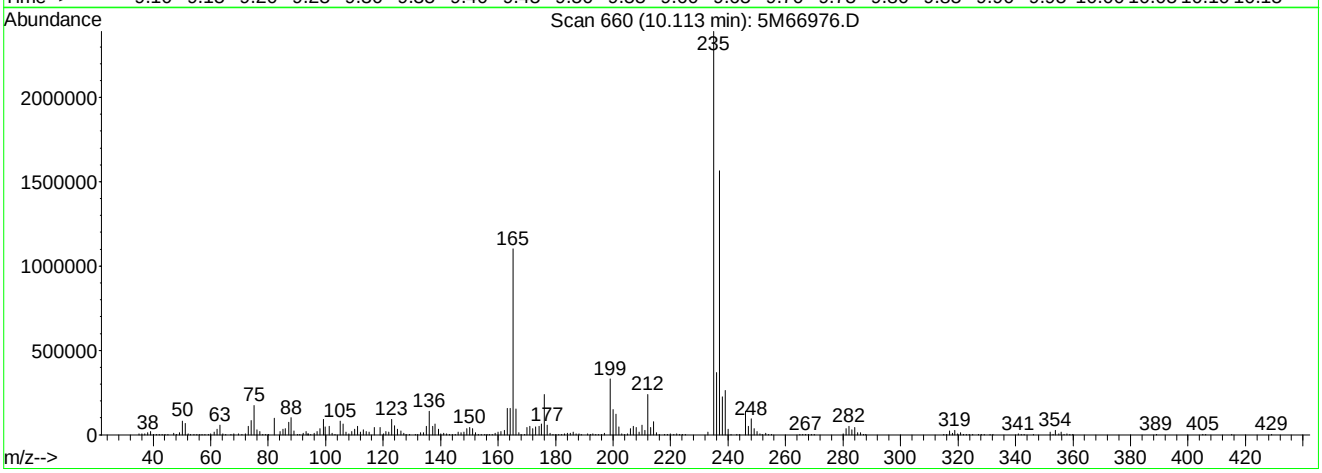
5M66976.D DFTPP.M Wed May 16 08:12:14 2012

Quantitation Report (Qedit)

Data File : C:\MSDCHEM\1\DATA\051412\5M66976.D Vial: 1
Acq On : 14 May 2012 8:42 am Operator: CAA
Sample : WG397870-01 50PPM DFTPP STD Inst : HPMS5
Misc : 1,1 STD50659 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 16 8:12 2012 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\DFTPP.M (RTE Integrator)
Title : DFTPP
Last Update : Mon May 14 14:44:19 2012
Response via : Single Level Calibration




TIC: 5M66976.D

(3) DDT

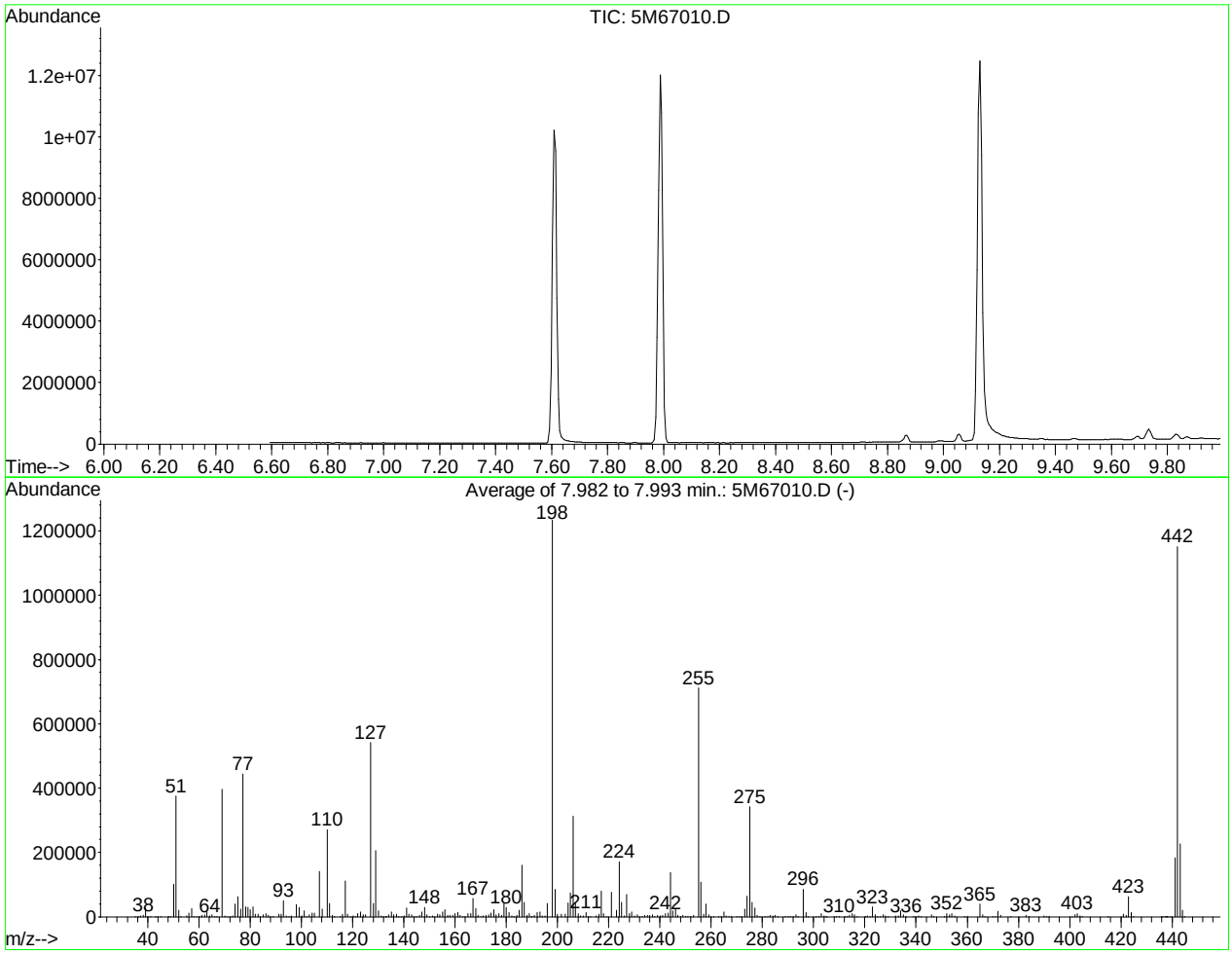
10.11min 0.00ug/ml

response 3388238

| Ion | Exp% | Act% |
|---|---|---|
| 235.00 | 100 | 100 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

5M66976.D DFTPP.M Wed May 16 08:12:24 2012

Data File : C:\MSDCHEM\1\DATA\051612\5M67010.D Vial: 1
Acq On : 16 May 2012 8:38 am Operator: CAA
Sample : WG398115-01 50PPM DFTPP STD Inst : HPMS5
Misc : 1,1 STD50659 Multiplr: 1.00
MS Integration Params: RTEINT.P
Method : C:\MSDCHEM\1\METHODS\DFTPP.M (RTE Integrator)
Title : DFTPP




AutoFind: Scans 261, 262, 263; Background Corrected with Scan 254

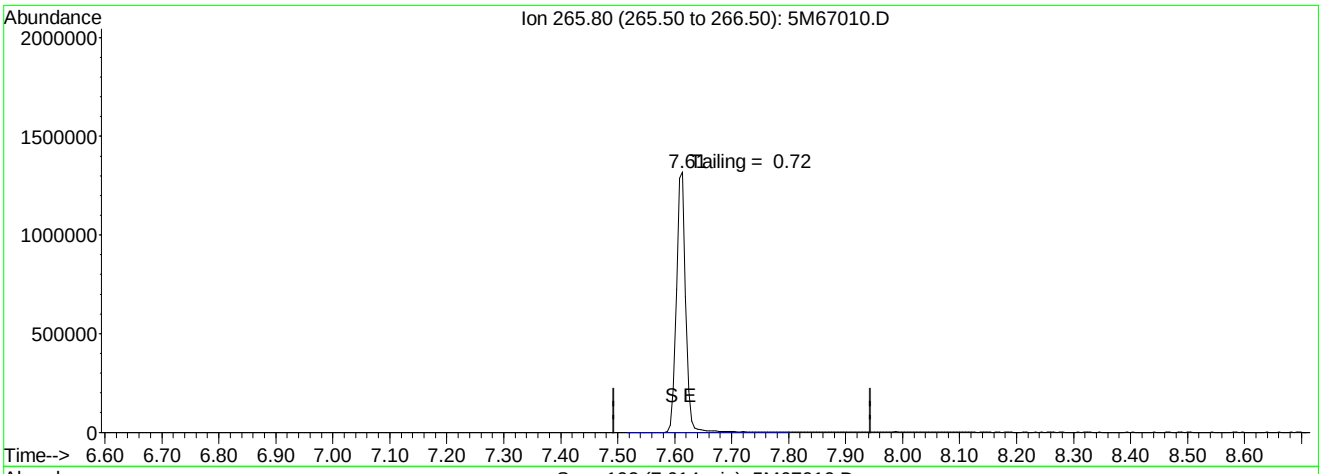
| Target Mass | Rel. to Mass | Lower Limit% | Upper Limit% | Rel. Abn% | Raw Abn | Result Pass/Fail |
|---|---|---|---|---|---|---|
| 51 | 198 | 30 | 60 | 30.5 | 376079 | PASS |
| 68 | 69 | 0.00 | 2 | 0.0 | 0 | PASS |
| 69 | 198 | 0.00 | 100 | 32.1 | 396309 | PASS |
| 70 | 69 | 0.00 | 2 | 0.6 | 2223 | PASS |
| 127 | 198 | 40 | 60 | 43.9 | 541973 | PASS |
| 197 | 198 | 0.00 | 1 | 0.0 | 0 | PASS |
| 198 | 198 | 100 | 100 | 100.0 | 1233685 | PASS |
| 199 | 198 | 5 | 9 | 7.0 | 85885 | PASS |
| 275 | 198 | 10 | 30 | 27.8 | 342485 | PASS |
| 365 | 198 | 1 | 100 | 3.3 | 40282 | PASS |
| 441 | 443 | 0.01 | 100 | 80.3 | 182200 | PASS |
| 442 | 198 | 40 | 100 | 93.4 | 1151893 | PASS |
| 443 | 442 | 17 | 23 | 19.7 | 226936 | PASS |

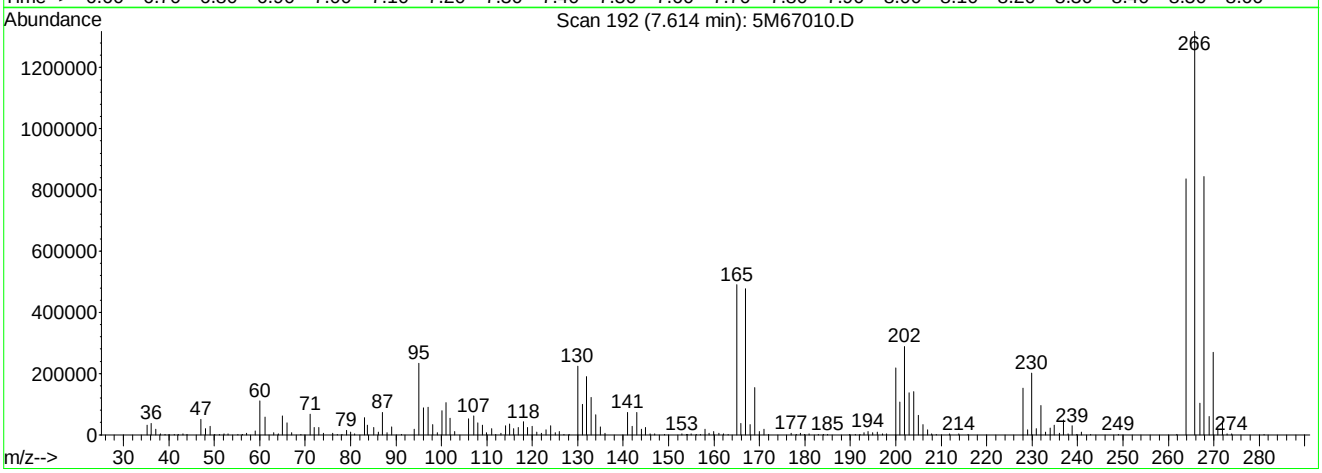
5M67010.D DFTPP.M Thu May 17 09:57:08 2012

Quantitation Report (Qedit)

Data File : C:\MSDCHEM\1\DATA\051612\5M67010.D Vial: 1
Acq On : 16 May 2012 8:38 am Operator: CAA
Sample : WG398115-01 50PPM DFTPP STD Inst : HPMS5
Misc : 1,1 STD50659 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 16 8:49 2012 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\DFTPP.M (RTE Integrator)
Title : DFTPP
Last Update : Mon May 14 14:44:19 2012
Response via : Single Level Calibration




TIC: 5M67010.D

(1) Pentachlorophenol

7.61min 0.00ug/ml

response 1496727

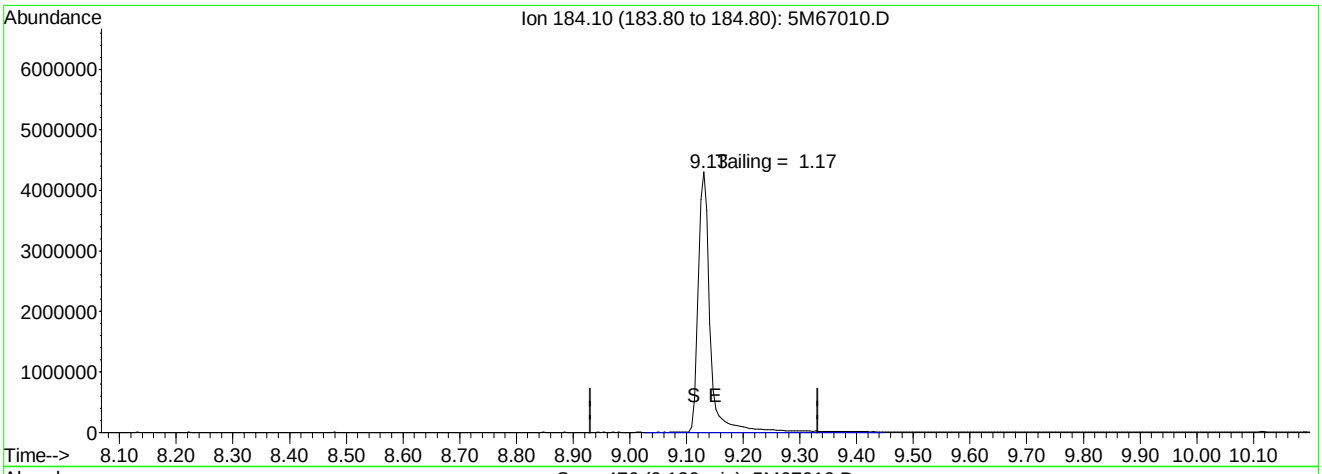
| Ion | Exp% | Act% |
|---|---|---|
| 265.80 | 100 | 100 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

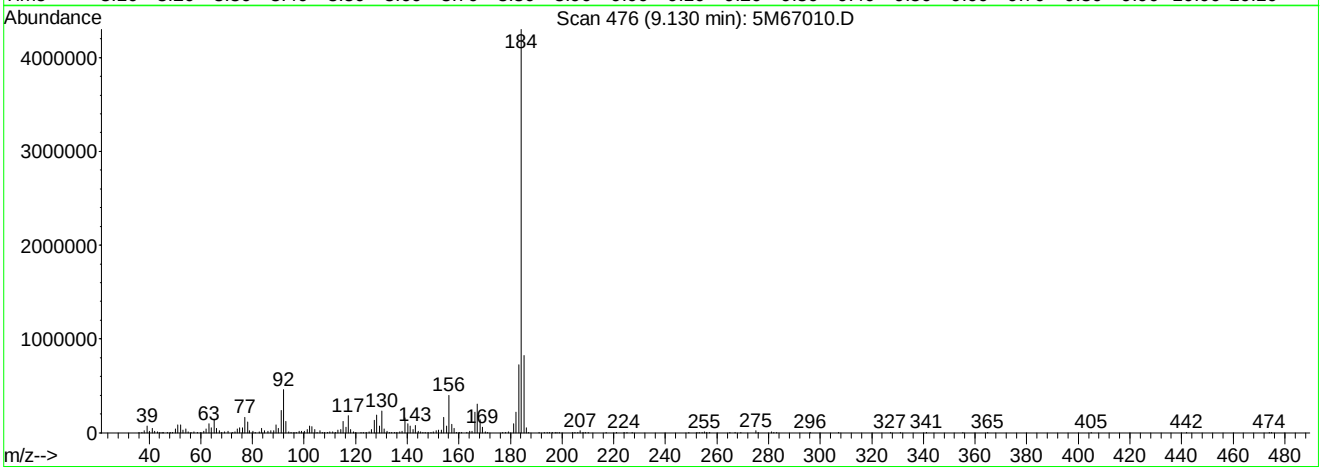
5M67010.D DFTPP.M Thu May 17 09:57:13 2012

Quantitation Report (Qedit)

Data File : C:\MSDCHEM\1\DATA\051612\5M67010.D Vial: 1
Acq On : 16 May 2012 8:38 am Operator: CAA
Sample : WG398115-01 50PPM DFTPP STD Inst : HPMS5
Misc : 1,1 STD50659 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 16 8:49 2012 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\DFTPP.M (RTE Integrator)
Title : DFTPP
Last Update : Mon May 14 14:44:19 2012
Response via : Single Level Calibration




TIC: 5M67010.D

(2) Benzidine

9.13min 0.00ug/ml

response 6301714

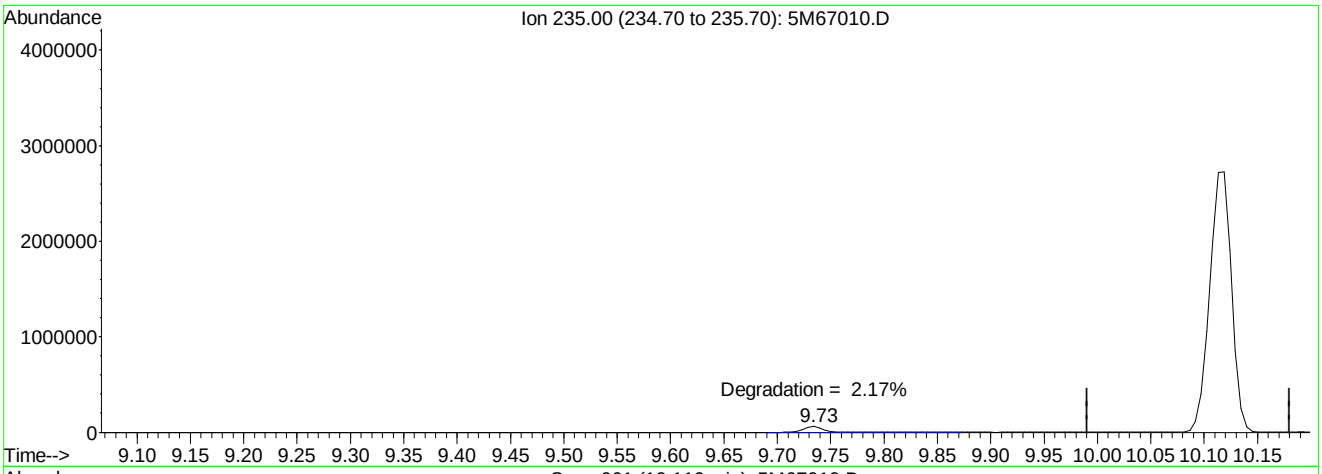
| Ion | Exp% | Act% |
|---|---|---|
| 184.10 | 100 | 100 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

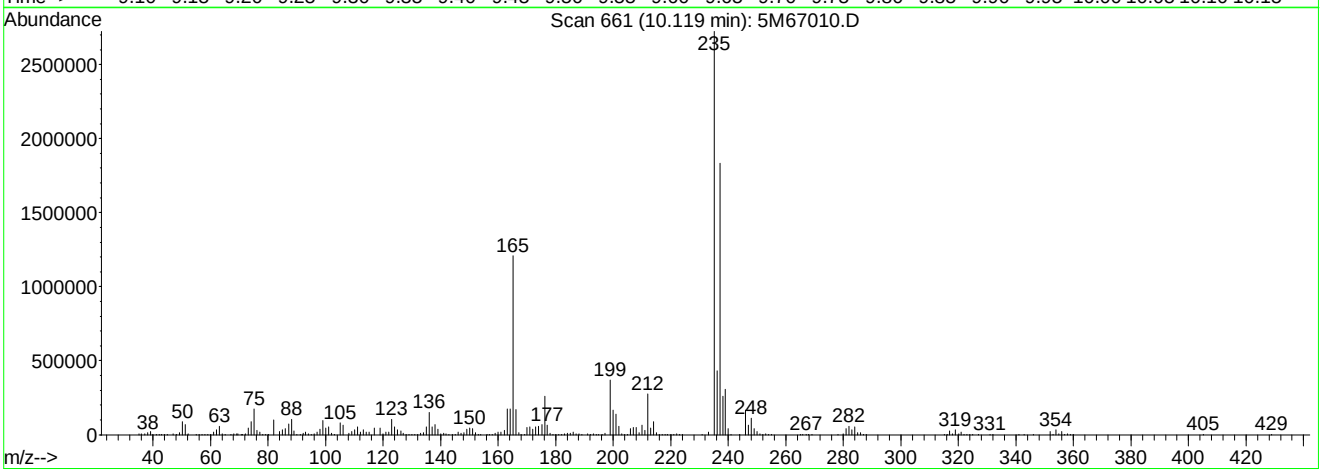
5M67010.D DFTPP.M Thu May 17 09:57:18 2012

Quantitation Report (Qedit)

Data File : C:\MSDCHEM\1\DATA\051612\5M67010.D Vial: 1
Acq On : 16 May 2012 8:38 am Operator: CAA
Sample : WG398115-01 50PPM DFTPP STD Inst : HPMS5
Misc : 1,1 STD50659 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 16 8:49 2012 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\DFTPP.M (RTE Integrator)
Title : DFTPP
Last Update : Mon May 14 14:44:19 2012
Response via : Single Level Calibration




TIC: 5M67010.D

(3) DDT

10.12min 0.00ug/ml

response 3880336

| Ion | Exp% | Act% |
|---|---|---|
| 235.00 | 100 | 100 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

5M67010.D DFTPP.M Thu May 17 09:57:25 2012

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\051612\5M67014.D Vial: 5
Acq On : 16 May 2012 10:46 am Operator: CAA
Sample : WG397434-02 BLK 05/09 REMIX Inst : HPMS5
Misc : 1,1 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 17 09:58:41 2012 Quant Results File: MEGAMIX.RES

Quant Method : C:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
Title : OVD MSS01 8270/625/Initial cal. 05/11/12
Last Update : Thu May 17 09:58:26 2012
Response via : Initial Calibration
DataAcq Meth : BNA

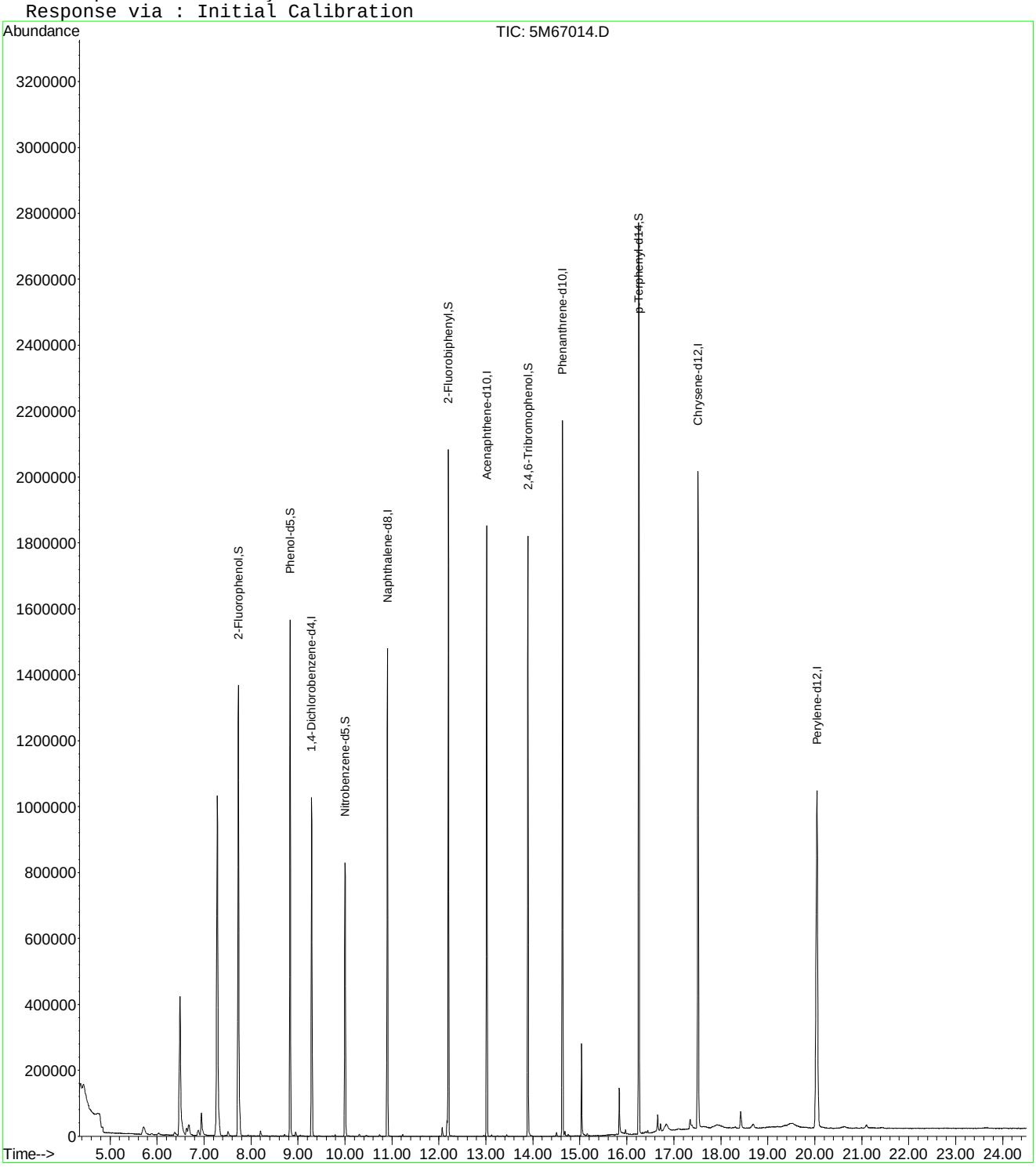
| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 1) 1,4-Dichlorobenzene-d4 | 9.29 | 152 | 233432 | 40.00 | ug/ml | -0.01 |
| 30) Naphthalene-d8 | 10.90 | 136 | 867297 | 40.00 | ug/ml | -0.01 |
| 54) Acenaphthene-d10 | 13.02 | 164 | 509551 | 40.00 | ug/ml | -0.01 |
| 87) Phenanthrene-d10 | 14.63 | 188 | 949615 | 40.00 | ug/ml | -0.02 |
| 113) Chrysene-d12 | 17.52 | 240 | 1123012 | 40.00 | ug/ml | -0.02 |
| 128) Perylene-d12 | 20.05 | 264 | 1017459 | 40.00 | ug/ml | -0.03 |
| **System Monitoring Compounds** | | | | | | |
| 8) 2-Fluorophenol | 7.73 | 112 | 625576 | 97.2019 | ug/ml | 0.00 |
| Spiked Amount 100.000 | Range 21 - 100 | | Recovery = 97.20% | | | |
| 12) Phenol-d5 | 8.83 | 99 | 711158 | 92.6764 | ug/ml | 0.00 |
| Spiked Amount 100.000 | Range 10 - 94 | | Recovery = 92.68% | | | |
| 31) Nitrobenzene-d5 | 10.00 | 82 | 329616 | 46.6073 | ug/ml | -0.02 |
| Spiked Amount 50.000 | Range 35 - 114 | | Recovery = 93.22% | | | |
| 59) 2-Fluorobiphenyl | 12.20 | 172 | 813693 | 47.3677 | ug/ml | -0.01 |
| Spiked Amount 50.000 | Range 43 - 116 | | Recovery = 94.74% | | | |
| 86) 2,4,6-Tribromophenol | 13.89 | 330 | 291766 | 105.6097 | ug/ml | -0.02 |
| Spiked Amount 100.000 | Range 10 - 123 | | Recovery = 105.61% | | | |
| 117) p-Terphenyl-d14 | 16.25 | 244 | 1109938 | 61.6872 | ug/ml | -0.01 |
| Spiked Amount 50.000 | Range 33 - 141 | | Recovery = 123.38% | | | |
| **Target Compounds** | | | | | | Qvalue |
| 121) Butyl Benzyl Phthalate | 16.72 | 149 | 469 | Below Cal | # | 75 |

(#) = qualifier out of range (m) = manual integration
5M67014.D MEGAMIX.M Thu May 17 10:31:30 2012 Page 1

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\051612\5M67014.D Vial: 5
Acq On : 16 May 2012 10:46 am Operator: CAA
Sample : WG397434-02 BLK 05/09 REMIX Inst : HPMS5
Misc : 1,1 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 17 9:58 2012 Quant Results File: MEGAMIX.RES

Method : C:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
Title : OVD MSS01 8270/625/Initial cal. 05/11/12
Last Update : Thu May 17 09:58:26 2012
Response via : Initial Calibration




5M67014.D MEGAMIX.M Thu May 17 10:31:30 2012 Page 2

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\051612\5M67014.D Vial: 5
Acq On : 16 May 2012 10:46 am Operator: CAA
Sample : WG397434-02 BLK 05/09 REMIX Inst : HPMS5
Misc : 1,1 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 17 10:58:51 2012 Quant Results File: TCL.RES

Quant Method : C:\MSDCHEM\1\METHODS\TCL.M (RTE Integrator)
Title : MSS01 OVD 827-TCL INITIAL CALIBRATION 05/14/12
Last Update : Thu May 17 10:58:29 2012
Response via : Initial Calibration
DataAcq Meth : BNA

| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 1) 1,4-Dichlorobenzene-d4 | 9.29 | 152 | 233432 | 40.00 | ug/mL | 0.00 |
| 3) Naphthalene-d8 | 10.90 | 136 | 867297 | 40.00 | ug/mL | 0.00 |
| 5) Acenaphthene-d10 | 13.02 | 164 | 509551 | 40.00 | ug/mL | 0.00 |
| 7) Phenanthrene-d10 | 14.63 | 188 | 949615 | 40.00 | ug/mL | 0.00 |

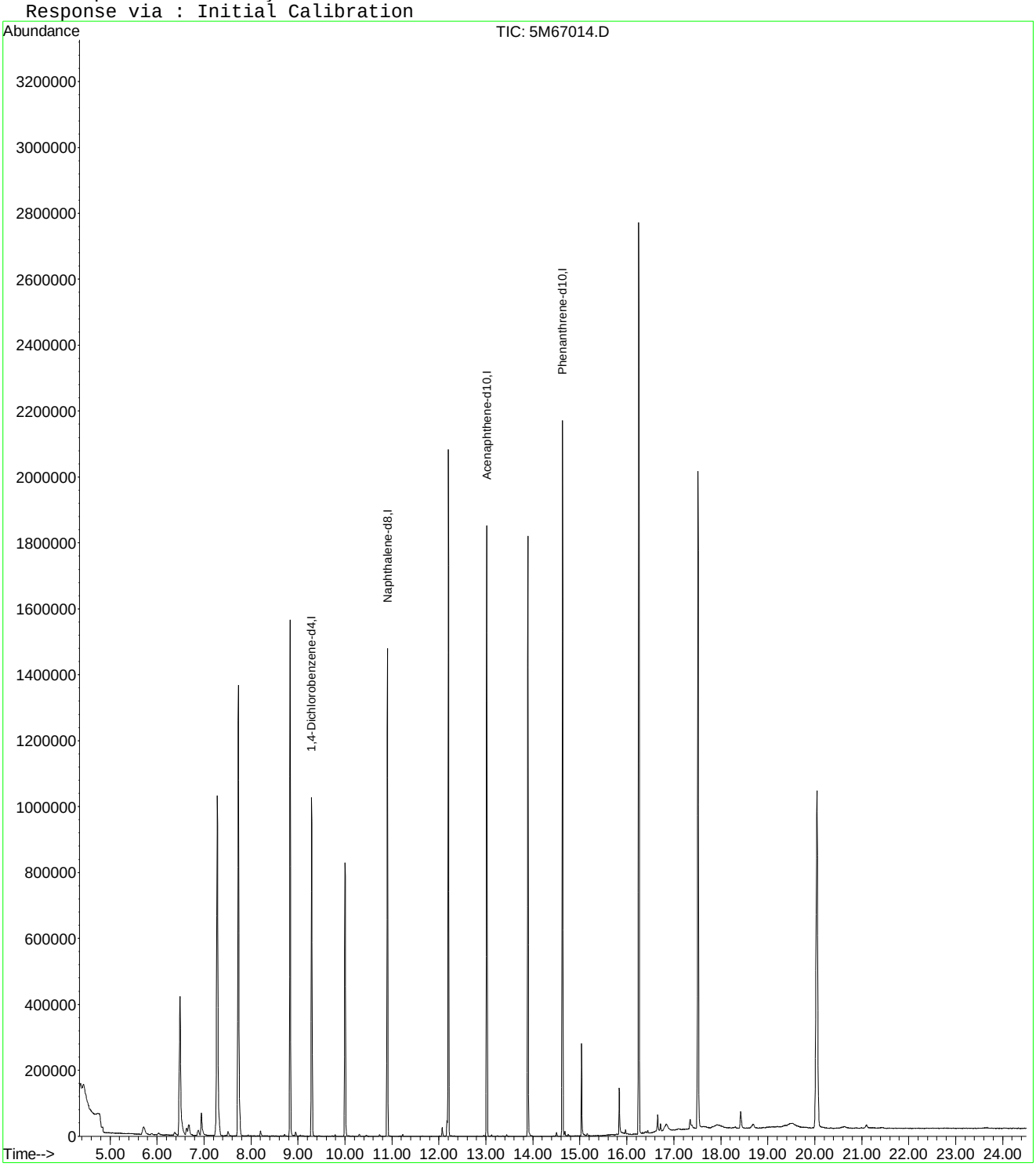
Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration
5M67014.D TCL.M Thu May 17 10:58:51 2012 Page 1

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\051612\5M67014.D Vial: 5
Acq On : 16 May 2012 10:46 am Operator: CAA
Sample : WG397434-02 BLK 05/09 REMIX Inst : HPMS5
Misc : 1,1 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 17 10:58 2012 Quant Results File: TCL.RES

Method : C:\MSDCHEM\1\METHODS\TCL.M (RTE Integrator)
Title : MSS01 OVD 827-TCL INITIAL CALIBRATION 05/14/12
Last Update : Thu May 17 10:58:29 2012
Response via : Initial Calibration



LSC Area Percent Report

Data File : C:\MSDCHEM\1\DATA\051612\5M67014.D Vial: 5
Acq On : 16 May 2012 10:46 am Operator: CAA
Sample : WG397434-02 BLK 05/09 REMIX Inst : HPMS5
Misc : 1,1 Multiplr: 1.00
MS Integration Params: LSCINT.P

Method : C:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
Title : OVD MSS01 8270/625/Initial cal. 05/11/12
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 1 % of largest Peak
Start Thrs: 0.05 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

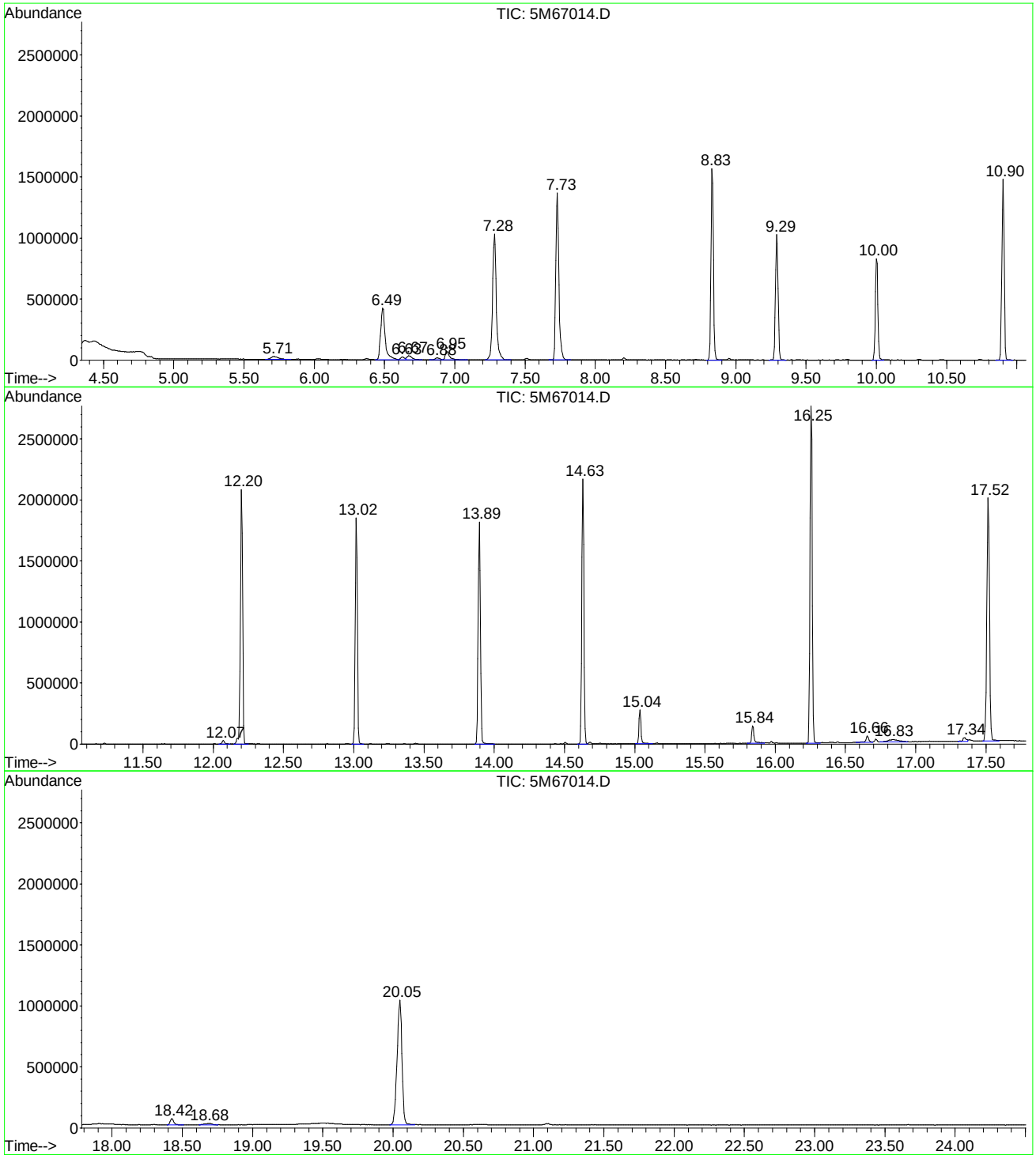
If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Signal : TIC

| peak # | R.T. min | first scan | max scan | last scan | PK TY | peak height | corr. area | corr. % max. | % of total |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 5.711 | 243 | 254 | 276 | rVB4 | 23683 | 93458 | 3.09% | 0.324% |
| 2 | 6.486 | 390 | 399 | 420 | rBV | 421813 | 939298 | 31.06% | 3.253% |
| 3 | 6.630 | 420 | 426 | 430 | rVV | 21584 | 44263 | 1.46% | 0.153% |
| 4 | 6.673 | 430 | 434 | 451 | rVB2 | 32183 | 78851 | 2.61% | 0.273% |
| 5 | 6.876 | 462 | 472 | 479 | rBV3 | 16317 | 38280 | 1.27% | 0.133% |
| 6 | 6.945 | 479 | 485 | 511 | rVB | 68784 | 146846 | 4.86% | 0.509% |
| 7 | 7.282 | 536 | 548 | 569 | rVB | 1032028 | 1921143 | 63.53% | 6.653% |
| 8 | 7.730 | 621 | 632 | 649 | rVB | 1367844 | 2047762 | 67.72% | 7.092% |
| 9 | 8.831 | 831 | 838 | 851 | rBV | 1567207 | 1915710 | 63.35% | 6.634% |
| 10 | 9.290 | 914 | 924 | 936 | rBB | 1027610 | 1325681 | 43.84% | 4.591% |
| 11 | 10.000 | 1051 | 1057 | 1067 | rBV | 829646 | 1014166 | 33.54% | 3.512% |
| 12 | 10.903 | 1216 | 1226 | 1238 | rBB | 1480214 | 1689993 | 55.89% | 5.853% |
| 13 | 12.073 | 1439 | 1445 | 1453 | rBB | 26414 | 31057 | 1.03% | 0.108% |
| 14 | 12.201 | 1459 | 1469 | 1478 | rBV | 2083365 | 2271764 | 75.13% | 7.867% |
| 15 | 13.018 | 1616 | 1622 | 1631 | rBB | 1853152 | 1974026 | 65.28% | 6.836% |
| 16 | 13.894 | 1780 | 1786 | 1806 | rBB | 1820695 | 2040966 | 67.50% | 7.068% |
| 17 | 14.631 | 1917 | 1924 | 1930 | rBV | 2171382 | 2224027 | 73.55% | 7.702% |
| 18 | 15.037 | 1994 | 2000 | 2016 | rBV | 280106 | 282896 | 9.36% | 0.980% |
| 19 | 15.838 | 2143 | 2150 | 2166 | rBV | 141679 | 175164 | 5.79% | 0.607% |
| 20 | 16.255 | 2222 | 2228 | 2240 | rBV | 2767274 | 3023858 | 100.00% | 10.472% |
| 21 | 16.655 | 2288 | 2303 | 2310 | rBV | 53665 | 83704 | 2.77% | 0.290% |
| 22 | 16.831 | 2320 | 2336 | 2356 | rBV3 | 20506 | 113412 | 3.75% | 0.393% |
| 23 | 17.344 | 2424 | 2432 | 2437 | rBV | 30120 | 51463 | 1.70% | 0.178% |
| 24 | 17.515 | 2457 | 2464 | 2478 | rBV | 1995050 | 2703458 | 89.40% | 9.362% |
| 25 | 18.423 | 2628 | 2634 | 2649 | rBV2 | 51616 | 96117 | 3.18% | 0.333% |
| 26 | 18.679 | 2671 | 2682 | 2695 | rBV8 | 12247 | 43155 | 1.43% | 0.149% |
| 27 | 20.047 | 2925 | 2938 | 2958 | rBV | 1023857 | 2505064 | 82.84% | 8.675% |

Sum of corrected areas: 28875582

File : C:\MSDCHEM\1\DATA\051612\5M67014.D
Operator : CAA
Acquired : 16 May 2012 10:46 am using AcqMethod BNA
Instrument : HPMS5
Sample Name: WG397434-02 BLK 05/09 REMIX
Misc Info : 1,1
Vial Number: 5
Quant File :MEGAMIX.RES (RTE Integrator)



Data File : C:\MSDCHEM\1\DATA\051612\5M67014.D Vial: 5
Acq On : 16 May 2012 10:46 am Operator: CAA
Sample : WG397434-02 BLK 05/09 REMIX Inst : HPMS5
Misc : 1,1 Multiplr: 1.00
MS Integration Params: LSCINT.P

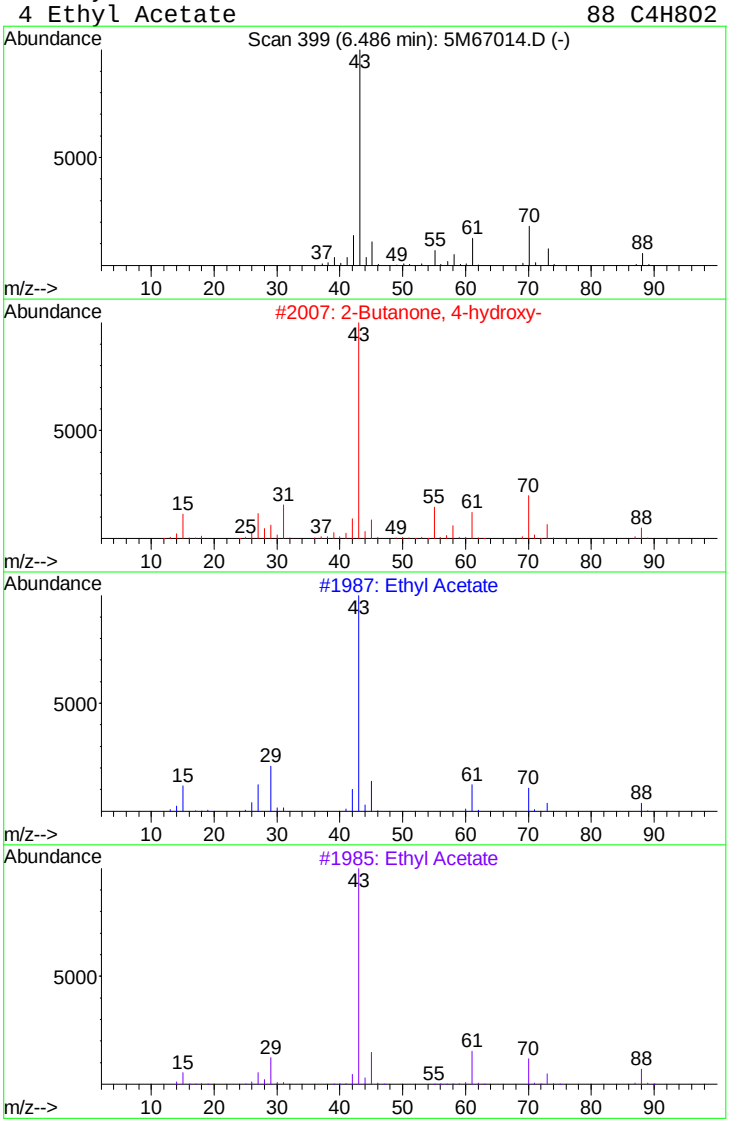
Quant Method : C:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
Title : OVD MSS01 8270/625/Initial cal. 05/11/12
Library : K:\ORGANICS\SEMIVOA\8270\NIST02.L

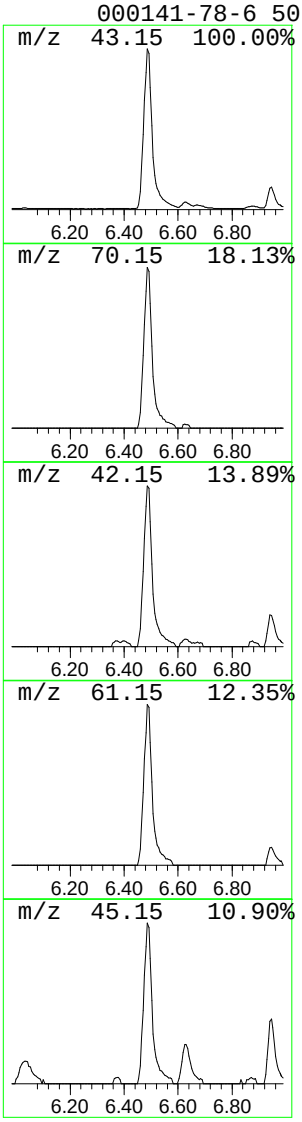
**********

Peak Number 1 2-Butanone, 4-hydroxy- Concentration Rank 2

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 6.49 | 28.34 ug/ml | 939298 | 1,4-Dichlorobenzene-d4 | 9.29 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | 2-Butanone, 4-hydroxy- | 88 | C4H8O2 | 000590-90-9 | 87 |
| 2 | Ethyl Acetate | 88 | C4H8O2 | 000141-78-6 | 53 |
| 3 | Ethyl Acetate | 88 | C4H8O2 | 000141-78-6 | 53 |
| 4 | Ethyl Acetate | 88 | C4H8O2 | 000141-78-6 | 50 |



Data File : C:\MSDCHEM\1\DATA\051612\5M67014.D Vial: 5
Acq On : 16 May 2012 10:46 am Operator: CAA
Sample : WG397434-02 BLK 05/09 REMIX Inst : HPMS5
Misc : 1,1 Multiplr: 1.00
MS Integration Params: LSCINT.P

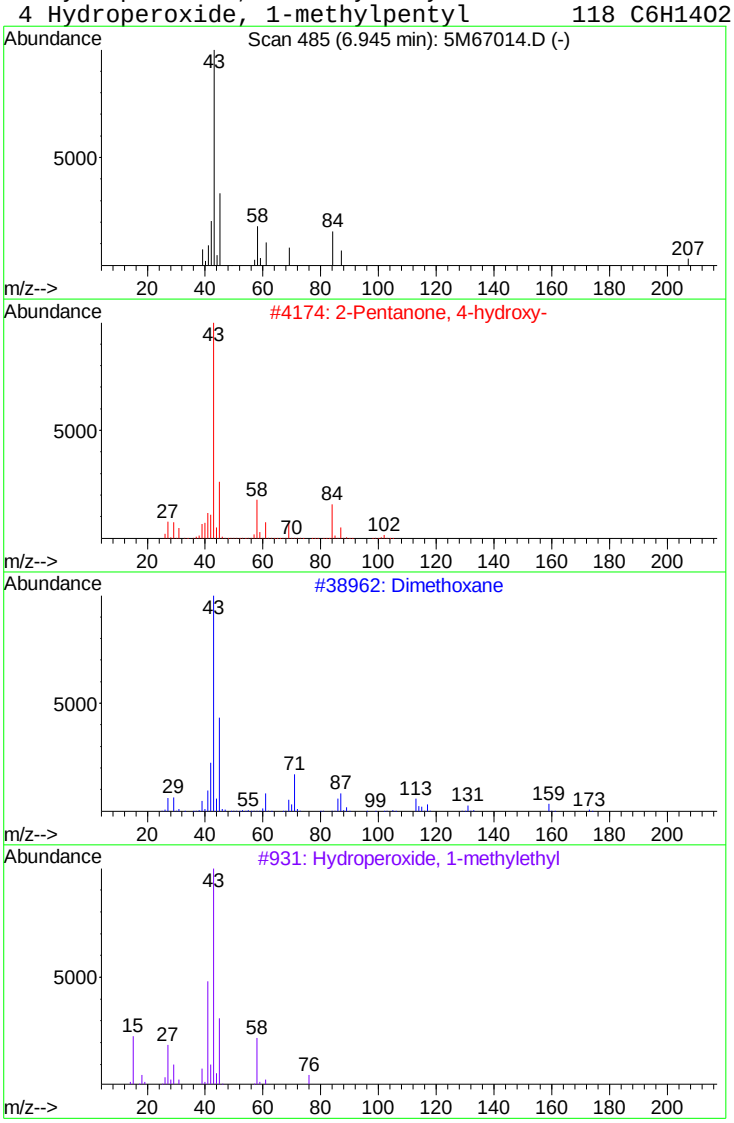
Quant Method : C:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
Title : OVD MSS01 8270/625/Initial cal. 05/11/12
Library : K:\ORGANICS\SEMIVOA\8270\NIST02.L

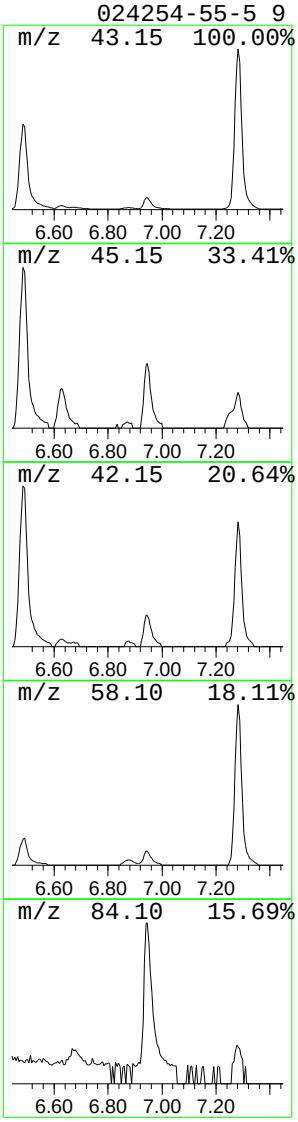
**********

Peak Number 2 2-Pentanone, 4-hydroxy- Concentration Rank 4

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 6.95 | 4.43 ug/ml | 146846 | 1,4-Dichlorobenzene-d4 | 9.29 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | 2-Pentanone, 4-hydroxy- | 102 | C5H10O2 | 004161-60-8 | 72 |
| 2 | Dimethoxane | 174 | C8H14O4 | 000828-00-2 | 59 |
| 3 | Hydroperoxide, 1-methylethyl | 76 | C3H8O2 | 003031-75-2 | 25 |
| 4 | Hydroperoxide, 1-methylpentyl | 118 | C6H14O2 | 024254-55-5 | 9 |



Data File : C:\MSDCHEM\1\DATA\051612\5M67014.D Vial: 5
Acq On : 16 May 2012 10:46 am Operator: CAA
Sample : WG397434-02 BLK 05/09 REMIX Inst : HPMS5
Misc : 1,1 Multiplr: 1.00
MS Integration Params: LSCINT.P

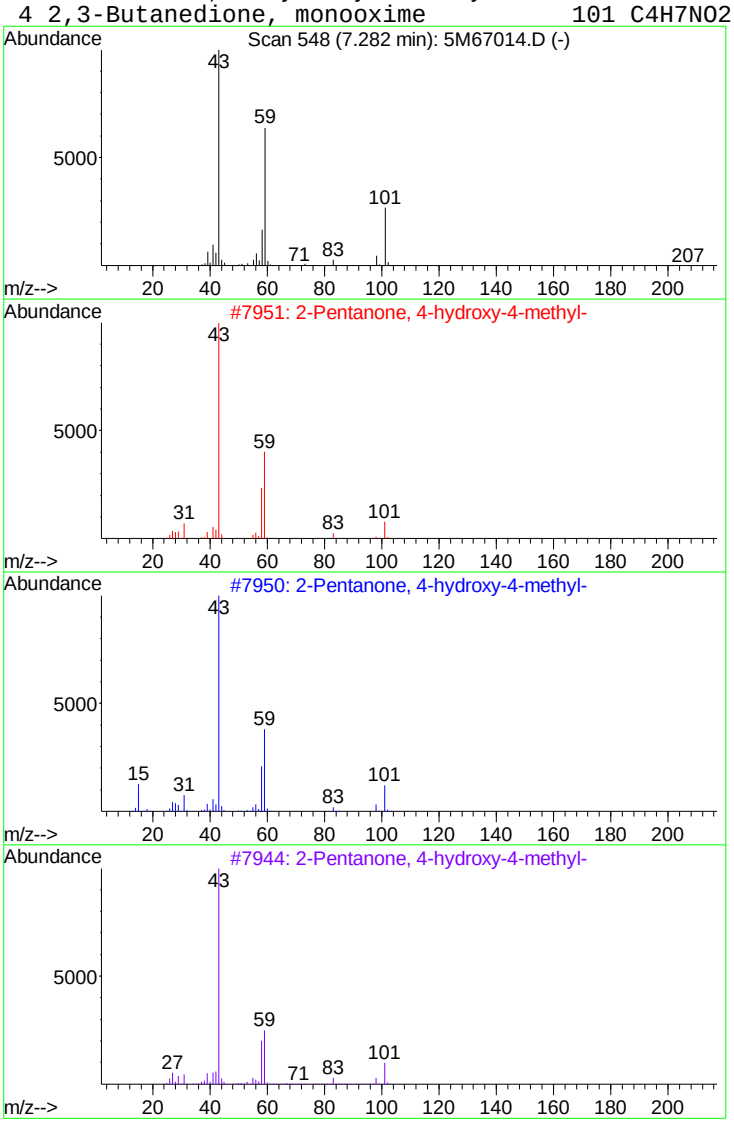
Quant Method : C:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
Title : OVD MSS01 8270/625/Initial cal. 05/11/12
Library : K:\ORGANICS\SEMIVOA\8270\NIST02.L

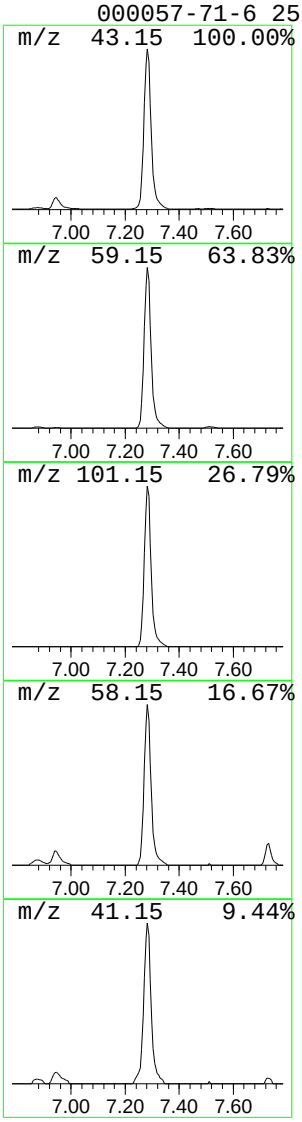
**********

Peak Number 3 2-Pentanone, 4-hydroxy-4-me... Concentration Rank 1

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 7.28 | 57.97 ug/ml | 1921140 | 1,4-Dichlorobenzene-d4 | 9.29 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | 2-Pentanone, 4-hydroxy-4-methyl- | 116 | C6H12O2 | 000123-42-2 | 56 |
| 2 | 2-Pentanone, 4-hydroxy-4-methyl- | 116 | C6H12O2 | 000123-42-2 | 50 |
| 3 | 2-Pentanone, 4-hydroxy-4-methyl- | 116 | C6H12O2 | 000123-42-2 | 38 |
| 4 | 2,3-Butanedione, monooxime | 101 | C4H7NO2 | 000057-71-6 | 25 |



Data File : C:\MSDCHEM\1\DATA\051612\5M67014.D Vial: 5
Acq On : 16 May 2012 10:46 am Operator: CAA
Sample : WG397434-02 BLK 05/09 REMIX Inst : HPMS5
Misc : 1,1 Multiplr: 1.00
MS Integration Params: LSCINT.P

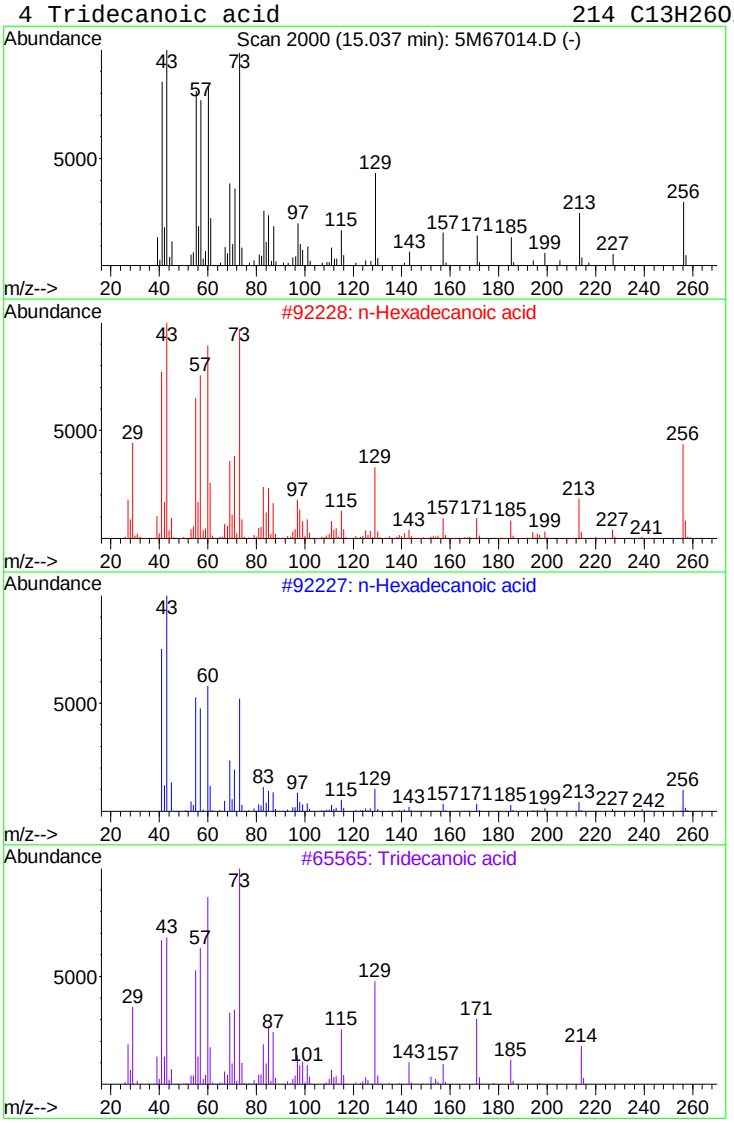
Quant Method : C:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
Title : OVD MSS01 8270/625/Initial cal. 05/11/12
Library : K:\ORGANICS\SEMIVOA\8270\NIST02.L

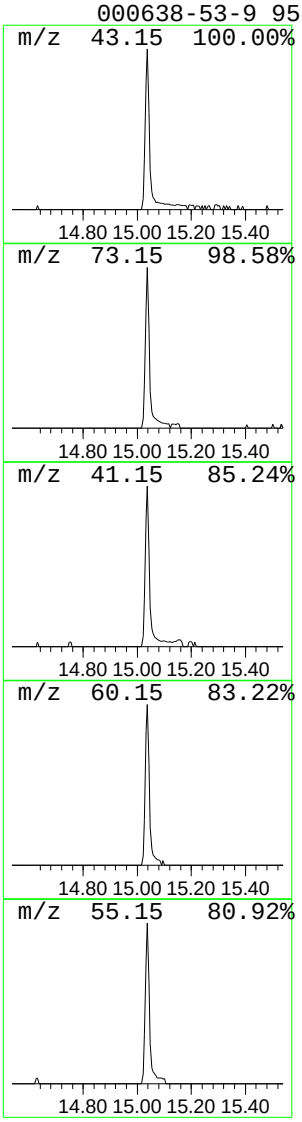
**********

Peak Number 4 n-Hexadecanoic acid Concentration Rank 3

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 15.04 | 5.09 ug/ml | 282896 | Phenanthrene-d10 | 14.63 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | n-Hexadecanoic acid | 256 | C16H32O2 | 000057-10-3 | 98 |
| 2 | n-Hexadecanoic acid | 256 | C16H32O2 | 000057-10-3 | 96 |
| 3 | Tridecanoic acid | 214 | C13H26O2 | 000638-53-9 | 95 |
| 4 | Tridecanoic acid | 214 | C13H26O2 | 000638-53-9 | 95 |



Tentatively Identified Compound (LSC) summary

Operator ID: CAA  Date Acquired: 16 May 2012  10:46 am
Data File: C:\MSDCHEM\1\DATA\051612\5M67014.D
Name: WG397434-02 BLK 05/09 REMIX
Misc: 1,1
Method: C:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
Title: OVD MSS01 8270/625/Initial cal. 05/11/12
Library Searched: K:\ORGANICS\SEMIVOA\8270\NIST02.L

| | | | | | Internal Standard | | | |
|---|---|---|---|---|---|---|---|---|
| TIC Top Hit name | RT | EstConc | Units | Response | # | RT | Resp | Conc |
| 2-Butanone, 4-hyd... | 6.49 | 28.3 | ug/ml | 939298 | 1 | 9.29 | 1325680 | 40.0 |
| 2-Pentanone, 4-hy... | 6.95 | 4.4 | ug/ml | 146846 | 1 | 9.29 | 1325680 | 40.0 |
| 2-Pentanone, 4-hy... | 7.28 | 58.0 | ug/ml | 1921140 | 1 | 9.29 | 1325680 | 40.0 |
| n-Hexadecanoic acid | 15.04 | 5.1 | ug/ml | 282896 | 4 | 14.63 | 2224030 | 40.0 |

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\051612\5M67015.D Vial: 6
Acq On : 16 May 2012 11:22 am Operator: CAA
Sample : WG397434-03 LCS 05/09 REMIX Inst : HPMS5
Misc : 1,1 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 17 09:58:41 2012 Quant Results File: MEGAMIX.RES

Quant Method : C:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
Title : OVD MSS01 8270/625/Initial cal. 05/11/12
Last Update : Thu May 17 09:58:26 2012
Response via : Initial Calibration
DataAcq Meth : BNA

| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 1) 1,4-Dichlorobenzene-d4 | 9.29 | 152 | 244445 | 40.00 | ug/ml | -0.01 |
| 30) Naphthalene-d8 | 10.90 | 136 | 936906 | 40.00 | ug/ml | -0.01 |
| 54) Acenaphthene-d10 | 13.02 | 164 | 559655 | 40.00 | ug/ml | 0.00 |
| 87) Phenanthrene-d10 | 14.64 | 188 | 1106824 | 40.00 | ug/ml | -0.01 |
| 113) Chrysene-d12 | 17.53 | 240 | 1301127 | 40.00 | ug/ml | -0.01 |
| 128) Perylene-d12 | 20.06 | 264 | 1102258 | 40.00 | ug/ml | -0.02 |
| **System Monitoring Compounds** | | | | | | |
| 8) 2-Fluorophenol | 7.73 | 112 | 665120 | 98.6902 | ug/ml | 0.00 |
| Spiked Amount 100.000 | Range 21 - 100 | | Recovery = 98.69% | | | |
| 12) Phenol-d5 | 8.84 | 99 | 778173 | 96.8408 | ug/ml | 0.00 |
| Spiked Amount 100.000 | Range 10 - 94 | | Recovery = 96.84%# | | | |
| 31) Nitrobenzene-d5 | 10.00 | 82 | 360922 | 47.2423 | ug/ml | -0.01 |
| Spiked Amount 50.000 | Range 35 - 114 | | Recovery = 94.48% | | | |
| 59) 2-Fluorobiphenyl | 12.21 | 172 | 966597 | 51.2312 | ug/ml | 0.00 |
| Spiked Amount 50.000 | Range 43 - 116 | | Recovery = 102.46% | | | |
| 86) 2,4,6-Tribromophenol | 13.90 | 330 | 361721 | 119.2092 | ug/ml | -0.01 |
| Spiked Amount 100.000 | Range 10 - 123 | | Recovery = 119.21% | | | |
| 117) p-Terphenyl-d14 | 16.26 | 244 | 1260630 | 60.4712 | ug/ml | 0.00 |
| Spiked Amount 50.000 | Range 33 - 141 | | Recovery = 120.94% | | | |
| **Target Compounds** | | | | | | Qvalue |
| 2) 1,4-Dioxane | 5.09 | 88 | 103803m | 34.5717 | ug/ml | |
| 3) n-Nitrosodimethylamine | 5.77 | 74 | 185166 | 46.5893 | ug/ml | 92 |
| 4) Pyridine | 5.77 | 79 | 240635 | 34.1959 | ug/ml | 99 |
| 5) 2-Picoline | 6.92 | 93 | 304877 | 39.4067 | ug/ml | 100 |
| 6) n-Nitrosomethylethylamine | 7.11 | 88 | 138593 | 42.9125 | ug/ml | 96 |
| 7) Methyl Methanesulfonate | 7.51 | 80 | 170045 | 43.3539 | ug/ml | 97 |
| 9) n-Nitrosodiethylamine | 8.01 | 102 | 152538 | 45.1474 | ug/ml | 98 |
| 10) Ethyl Methanesulfonate | 8.37 | 79 | 210409 | 41.7034 | ug/ml | 99 |
| 11) Aniline | 8.92 | 93 | 401621 | 36.0201 | ug/ml | 97 |
| 13) Phenol | 8.85 | 94 | 393924 | 47.3288 | ug/ml | 94 |
| 14) bis(2-Chloroethyl)ether | 8.96 | 63 | 231648 | 49.9535 | ug/ml | 97 |
| 15) Pentachloroethane | 8.94 | 167 | 112320 | 34.8847 | ug/ml | 99 |
| 16) 2-Chlorophenol | 9.07 | 128 | 361682 | 46.6709 | ug/ml | 99 |
| 17) 1,3-Dichlorobenzene | 9.25 | 146 | 302585 | 33.5068 | ug/ml | 99 |
| 18) 1,4-Dichlorobenzene | 9.31 | 146 | 329716 | 34.8547 | ug/ml | 100 |
| 19) Benzyl Alcohol | 9.45 | 108 | 242637 | 49.7638 | ug/ml | 97 |
| 20) 1,2-Dichlorobenzene | 9.55 | 146 | 320676 | 37.0118 | ug/ml | 99 |
| 21) 2-Methylphenol | 9.59 | 107 | 284130 | 47.0254 | ug/ml | 98 |
| 22) bis(2-Chloroisopropyl)ethe | 9.63 | 45 | 450092 | 48.3980 | ug/ml | 99 |
| 23) 3-,4-Methylphenol | 9.76 | 107 | 425084 | 55.2217 | ug/ml | 91 |
| 24) n-Nitrosopyrrolidine | 9.79 | 100 | 160020 | 52.6573 | ug/ml | 95 |
| 25) n-Nitrosodipropylamine | 9.81 | 70 | 222455 | 50.1590 | ug/ml | 100 |
| 26) Acetophenone | 9.80 | 105 | 877153 | 92.0145 | ug/ml | 99 |
| 27) n-Nitrosomorpholine | 9.81 | 56 | 170071 | 53.8362 | ug/ml | 100 |
| 28) o-Toluidine | 9.86 | 106 | 437689 | 36.6967 | ug/ml | 99 |
| 29) Hexachloroethane | 9.95 | 117 | 97957 | 28.8683 | ug/ml | 100 |
| 32) Nitrobenzene | 10.03 | 77 | 364858 | 49.1075 | ug/ml | 99 |
| 33) n-Nitrosopiperidine | 10.21 | 114 | 173101 | 46.0031 | ug/ml | 95 |
| 34) Isophorone | 10.30 | 82 | 666589 | 50.5714 | ug/ml | 100 |
| 35) 2-Nitrophenol | 10.43 | 139 | 219675 | 49.3431 | ug/ml | 99 |
| 36) 2,4-Dimethylphenol | 10.42 | 122 | 370923 | 52.2897 | ug/ml | 99 |
| 37) 0,0,0-Triethyl Phosphoroth | 10.55 | 198 | 231096 | 53.4048 | ug/ml | 99 |
| 38) bis(2-Chloroethoxy)methane | 10.54 | 93 | 550530 | 54.5175 | ug/ml | 98 |

(#) = qualifier out of range (m) = manual integration
5M67015.D MEGAMIX.M Thu May 17 10:01:50 2012 Page 1

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\051612\5M67015.D Vial: 6
Acq On : 16 May 2012 11:22 am Operator: CAA
Sample : WG397434-03 LCS 05/09 REMIX Inst : HPMS5
Misc : 1,1 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 17 09:58:41 2012 Quant Results File: MEGAMIX.RES

Quant Method : C:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
Title : OVD MSS01 8270/625/Initial cal. 05/11/12
Last Update : Thu May 17 09:58:26 2012
Response via : Initial Calibration
DataAcq Meth : BNA

| | Compound | R.T. | QIon | Response | Conc Unit | Qvalue |
|---|---|---|---|---|---|---|
| 39) | Benzoic Acid | 10.49 | 105 | 82933m | 24.1878 ug/ml | |
| 40) | 2,4-Dichlorophenol | 10.72 | 162 | 352707 | 49.4932 ug/ml | 100 |
| 41) | a,a-Dimethylphenethylamine | 10.77 | 58 | 866872 | 44.4739 ug/ml# | 90 |
| 42) | 1,2,4-Trichlorobenzene | 10.84 | 180 | 318585 | 39.0828 ug/ml | 99 |
| 43) | Naphthalene | 10.93 | 128 | 1086816 | 47.4982 ug/ml | 100 |
| 44) | 4-Chloroaniline | 10.98 | 127 | 389066 | 39.1785 ug/ml | 98 |
| 45) | 2,6-Dichlorophenol | 11.01 | 162 | 359091 | 49.3637 ug/ml | 100 |
| 46) | Hexachloropropene | 11.08 | 213 | 116824 | 21.7970 ug/ml | 99 |
| 47) | Hexachlorobutadiene | 11.13 | 225 | 184123 | 37.8097 ug/ml | 99 |
| 48) | n-Nitrosodi-n-Butylamine | 11.38 | 84 | 289323 | 53.7698 ug/ml | 99 |
| 49) | p-Phenylenediamine | 11.44 | 108 | 10020 | 3.5431 ug/ml# | 74 |
| 50) | 4-Chloro-3-Methylphenol | 11.54 | 107 | 332349 | 51.0876 ug/ml | 100 |
| 51) | Safrole | 11.64 | 162 | 311380 | 45.9965 ug/ml | 98 |
| 52) | 2-Methylnaphthalene | 11.77 | 142 | 772428 | 48.6371 ug/ml | 99 |
| 53) | 1-Methylnaphthalene | 11.91 | 142 | 688560 | 45.9762 ug/ml | 99 |
| 55) | 1,2,4,5-Tetrachlorobenzene | 12.02 | 216 | 389733 | 47.1360 ug/ml | 100 |
| 56) | Hexachlorocyclopentadiene | 12.03 | 237 | 46156 | 9.6456 ug/ml | 98 |
| 57) | 2,4,6-Trichlorophenol | 12.12 | 196 | 292766 | 51.8031 ug/ml | 100 |
| 58) | 2,4,5-Trichlorophenol | 12.18 | 196 | 316741 | 54.1099 ug/ml | 99 |
| 60) | Isosafrole | 12.25 | 162 | 602386 | 84.1934 ug/ml | 99 |
| 61) | 2-Chloronaphthalene | 12.36 | 162 | 936123 | 57.9479 ug/ml | 100 |
| 62) | 1-Chloronaphthalene | 12.40 | 162 | 722866 | 46.9361 ug/ml | 100 |
| 63) | 2-Nitroaniline | 12.48 | 65 | 206359 | 51.5096 ug/ml | 97 |
| 64) | 1,4-Naphthoquinone | 12.55 | 158 | 10845 | Below Cal | 93 |
| 65) | Dimethylphthalate | 12.68 | 163 | 1000340 | 55.2096 ug/ml | 100 |
| 66) | 1,3-Dinitrobenzene | 12.73 | 168 | 167162 | 49.2452 ug/ml | 99 |
| 67) | 2,6-Dinitrotoluene | 12.78 | 165 | 237273 | 53.4775 ug/ml | 98 |
| 68) | Acenaphthylene | 12.85 | 152 | 1326056 | 54.2316 ug/ml | 100 |
| 69) | 3-Nitroaniline | 12.95 | 138 | 211657 | 46.1571 ug/ml | 99 |
| 70) | 2,4-Dinitrophenol | 13.06 | 184 | 148165 | 59.5211 ug/ml# | 51 |
| 71) | Acenaphthene | 13.05 | 154 | 842126 | 53.9899 ug/ml | 97 |
| 72) | 4-Nitrophenol | 13.09 | 65 | 152316 | 47.7688 ug/ml | 90 |
| 73) | 2,4-Dinitrotoluene | 13.23 | 165 | 329024 | 58.6984 ug/ml | 97 |
| 74) | Pentachlorobenzene | 13.26 | 250 | 397745 | 51.2330 ug/ml | 99 |
| 75) | Dibenzofuran | 13.23 | 168 | 1209674 | 55.9095 ug/ml | 100 |
| 76) | 2,3,4,6-Tetrachlorophenol | 13.40 | 232 | 263492 | 53.1121 ug/ml | 99 |
| 77) | 1-Naphthylamine | 13.32 | 143 | 511672 | 32.9185 ug/ml | 97 |
| 78) | 2-Naphthylamine | 13.39 | 143 | 522507 | 38.7121 ug/ml | 97 |
| 79) | Diethylphthalate | 13.46 | 149 | 991225 | 56.1849 ug/ml | 100 |
| 80) | Thionazin | 13.56 | 107 | 150236 | 59.9289 ug/ml | 99 |
| 81) | Fluorene | 13.62 | 166 | 1066842 | 56.0907 ug/ml | 97 |
| 82) | 4-Chlorophenyl Phenyl Ethe | 13.57 | 204 | 527976 | 57.4689 ug/ml | 99 |
| 83) | 4-Nitroaniline | 13.64 | 138 | 242489 | 51.6387 ug/ml | 98 |
| 84) | 5-Nitro-o-Toluidine | 13.63 | 152 | 270040 | 46.9904 ug/ml | 95 |
| 85) | 1,2-Diphenylhydrazine | 13.74 | 77 | 785983 | 51.6375 ug/ml | 99 |
| 88) | 4,6-Dinitro-2-Methylphenol | 13.68 | 198 | 208784 | 59.2701 ug/ml | 86 |
| 89) | n-Nitrosodiphenylamine | 13.70 | 169 | 1600777 | 93.2771 ug/ml | 99 |
| 90) | Sulfotepp | 13.91 | 322 | 226720 | 56.4681 ug/ml | 99 |
| 91) | Sym-Trinitrobenzene | 13.99 | 75 | 195300 | 47.3003 ug/ml | 98 |
| 92) | Diallate | 14.03 | 86 | 531479 | 90.1235 ug/ml | 88 |
| 93) | Phenacetin | 14.03 | 108 | 413158 | 50.6535 ug/ml | 94 |
| 94) | Phorate | 14.05 | 75 | 478514 | 55.0019 ug/ml# | 98 |
| 95) | 4-Bromophenyl Phenyl Ether | 14.11 | 248 | 346047 | 54.5098 ug/ml | 99 |
| 96) | Hexachlorobenzene | 14.30 | 284 | 387184 | 54.3249 ug/ml | 100 |

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

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\051612\5M67015.D Vial: 6
Acq On : 16 May 2012 11:22 am Operator: CAA
Sample : WG397434-03 LCS 05/09 REMIX Inst : HPMS5
Misc : 1,1 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 17 09:58:41 2012 Quant Results File: MEGAMIX.RES

Quant Method : C:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
Title : OVD MSS01 8270/625/Initial cal. 05/11/12
Last Update : Thu May 17 09:58:26 2012
Response via : Initial Calibration
DataAcq Meth : BNA

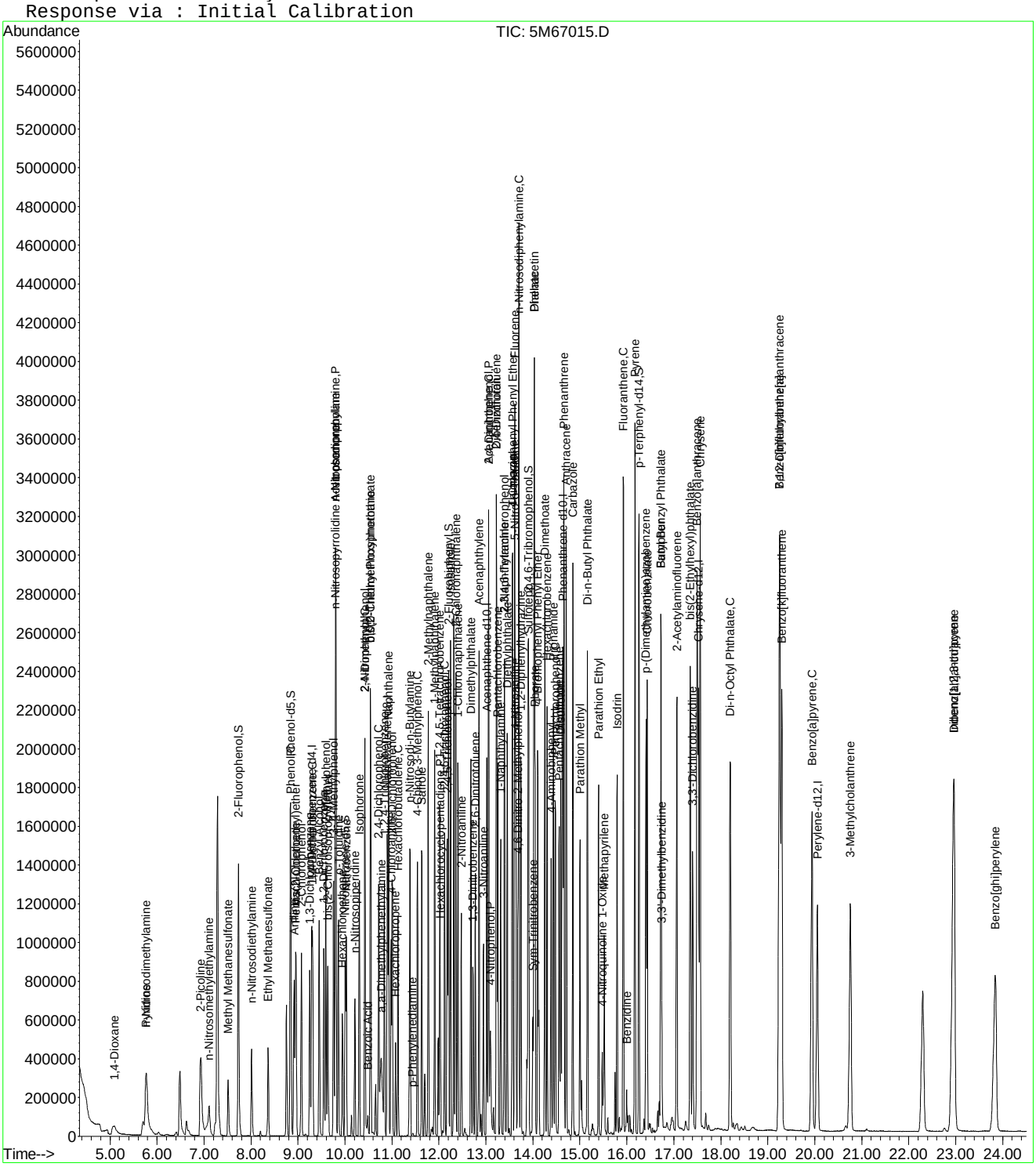
| | Compound | R.T. | QIon | Response | Conc | Unit | Qvalue |
|---|---|---|---|---|---|---|---|
| 97) | Dimethoate | 14.25 | 87 | 294644 | 81.2445 | ug/ml | 99 |
| 98) | 4-Aminobiphenyl | 14.39 | 169 | 638689 | 33.9183 | ug/ml | 100 |
| 99) | Pentachlorophenol | 14.48 | 266 | 267635 | 58.0439 | ug/ml | 99 |
| 100) | Pronamide | 14.44 | 173 | 460908 | 51.4520 | ug/ml | 100 |
| 101) | Pentachloronitrobenzene | 14.56 | 237 | 135582 | 51.3393 | ug/ml | 98 |
| 102) | Disulfoton | 14.59 | 88 | 419245 | 50.7310 | ug/ml | 99 |
| 103) | Phenanthrene | 14.66 | 178 | 1574571 | 55.3605 | ug/ml | 99 |
| 104) | Anthracene | 14.71 | 178 | 1446383 | 50.2198 | ug/ml | 100 |
| 105) | Carbazole | 14.85 | 167 | 1410648 | 53.6590 | ug/ml | 99 |
| 106) | Parathion Methyl | 15.00 | 109 | 298075 | 72.1581 | ug/ml | 96 |
| 107) | Di-n-Butyl Phthalate | 15.16 | 149 | 1649510 | 54.4742 | ug/ml | 100 |
| 108) | Parathion Ethyl | 15.40 | 97 | 183214 | 55.5975 | ug/ml | 100 |
| 109) | 4-Nitroquinoline 1-Oxide | 15.47 | 190 | 56609 | 22.6956 | ug/ml | 92 |
| 110) | Methapyrilene | 15.52 | 58 | 303641 | 84.8629 | ug/ml | 97 |
| 111) | Isodrin | 15.79 | 193 | 168356 | 51.0802 | ug/ml | 99 |
| 112) | Fluoranthene | 15.93 | 202 | 1709924 | 55.2346 | ug/ml | 99 |
| 114) | Benzidine | 16.00 | 184 | 127854 | 17.7498 | ug/ml | 100 |
| 115) | Pyrene | 16.17 | 202 | 1766245 | 57.0448 | ug/ml | 100 |
| 118) | p-(Dimethylamino)azobenzen | 16.41 | 225 | 392609 | 52.3149 | ug/ml | 99 |
| 119) | Chlorobenzilate | 16.44 | 251 | 555151 | 53.4600 | ug/ml | 99 |
| 120) | Famphur | 16.72 | 218 | 55259 | 581.7229 | ug/ml# | 1 |
| 121) | Butyl Benzyl Phthalate | 16.72 | 149 | 795933 | 67.8666 | ug/ml | 98 |
| 122) | 3,3'-Dimethylbenzidine | 16.75 | 212 | 291529 | 13.7977 | ug/ml# | 96 |
| 123) | 2-Acetylaminofluorene | 17.07 | 181 | 695578 | 51.6857 | ug/ml | 100 |
| 124) | bis(2-Ethylhexyl)phthalate | 17.35 | 149 | 1089936 | 56.1604 | ug/ml | 100 |
| 125) | 3,3'-Dichlorobenzidine | 17.40 | 252 | 479142 | 42.2250 | ug/ml | 100 |
| 126) | Benzo[a]anthracene | 17.50 | 228 | 1772033 | 54.1363 | ug/ml | 100 |
| 127) | Chrysene | 17.56 | 228 | 1738562 | 57.1420 | ug/ml | 100 |
| 129) | Di-n-Octyl Phthalate | 18.20 | 149 | 1826054 | 57.7508 | ug/ml | 100 |
| 130) | 7,12-Dimethylbenz[a]anthra | 19.25 | 256 | 767483 | 50.5297 | ug/ml | 100 |
| 131) | Benzo[b]fluoranthene | 19.26 | 252 | 2009744m | 56.4061 | ug/ml | |
| 132) | Benzo[k]fluoranthene | 19.30 | 252 | 1705908 | 59.0783 | ug/ml | 99 |
| 133) | Benzo[a]pyrene | 19.94 | 252 | 1653331 | 55.4524 | ug/ml | 100 |
| 134) | 3-Methylcholanthrene | 20.76 | 268 | 815461 | 51.4239 | ug/ml | 100 |
| 135) | Indeno[1,2,3-cd]pyrene | 22.97 | 276 | 1897879 | 55.8921 | ug/ml | 99 |
| 136) | Dibenz[ah]anthracene | 22.96 | 278 | 1588260 | 55.4578 | ug/ml | 99 |
| 137) | Benzo[ghi]perylene | 23.84 | 276 | 1440027 | 54.2633 | ug/ml | 99 |

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

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\051612\5M67015.D Vial: 6
Acq On : 16 May 2012 11:22 am Operator: CAA
Sample : WG397434-03 LCS 05/09 REMIX Inst : HPMS5
Misc : 1,1 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 17 10:00 2012 Quant Results File: MEGAMIX.RES

Method : C:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
Title : OVD MSS01 8270/625/Initial cal. 05/11/12
Last Update : Thu May 17 09:58:26 2012
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\051612\5M67015.D Vial: 6
Acq On : 16 May 2012 11:22 am Operator: CAA
Sample : WG397434-03 LCS 05/09 REMIX Inst : HPMS5
Misc : 1,1 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 17 10:58:55 2012 Quant Results File: TCL.RES

Quant Method : C:\MSDCHEM\1\METHODS\TCL.M (RTE Integrator)
Title : MSS01 OVD 827-TCL INITIAL CALIBRATION 05/14/12
Last Update : Thu May 17 10:58:29 2012
Response via : Initial Calibration
DataAcq Meth : BNA

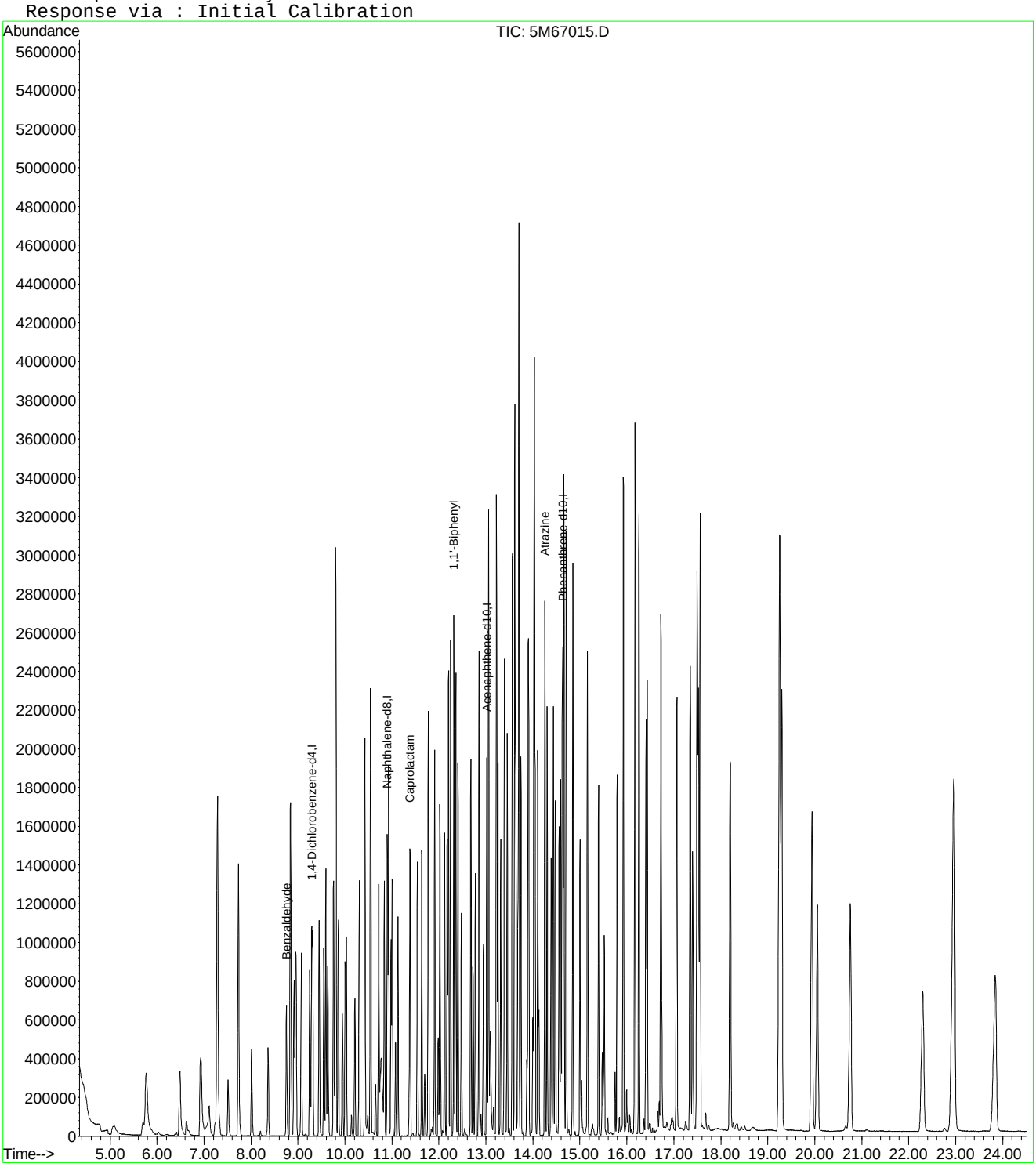
| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 1) 1,4-Dichlorobenzene-d4 | 9.29 | 152 | 244445 | 40.00 | ug/mL | 0.00 |
| 3) Naphthalene-d8 | 10.90 | 136 | 936906 | 40.00 | ug/mL | 0.00 |
| 5) Acenaphthene-d10 | 13.02 | 164 | 559655 | 40.00 | ug/mL | 0.00 |
| 7) Phenanthrene-d10 | 14.64 | 188 | 1107955 | 40.00 | ug/mL | 0.00 |
| **Target Compounds** | | | | | | Qvalue |
| 2) Benzaldehyde | 8.76 | 105 | 186464 | 29.9351 | ug/L | 98 |
| 4) Caprolactam | 11.39 | 55 | 176105 | 53.3556 | ug/L | 92 |
| 6) 1,1'-Biphenyl | 12.32 | 154 | 1012255 | 46.5420 | ug/L | 100 |
| 8) Atrazine | 14.26 | 200 | 278852 | 43.4506 | ug/L | 99 |

(#) = qualifier out of range (m) = manual integration
5M67015.D TCL.M Thu May 17 10:58:56 2012 Page 1

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\051612\5M67015.D Vial: 6
Acq On : 16 May 2012 11:22 am Operator: CAA
Sample : WG397434-03 LCS 05/09 REMIX Inst : HPMS5
Misc : 1,1 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 17 10:58 2012 Quant Results File: TCL.RES

Method : C:\MSDCHEM\1\METHODS\TCL.M (RTE Integrator)
Title : MSS01 OVD 827-TCL INITIAL CALIBRATION 05/14/12
Last Update : Thu May 17 10:58:29 2012
Response via : Initial Calibration

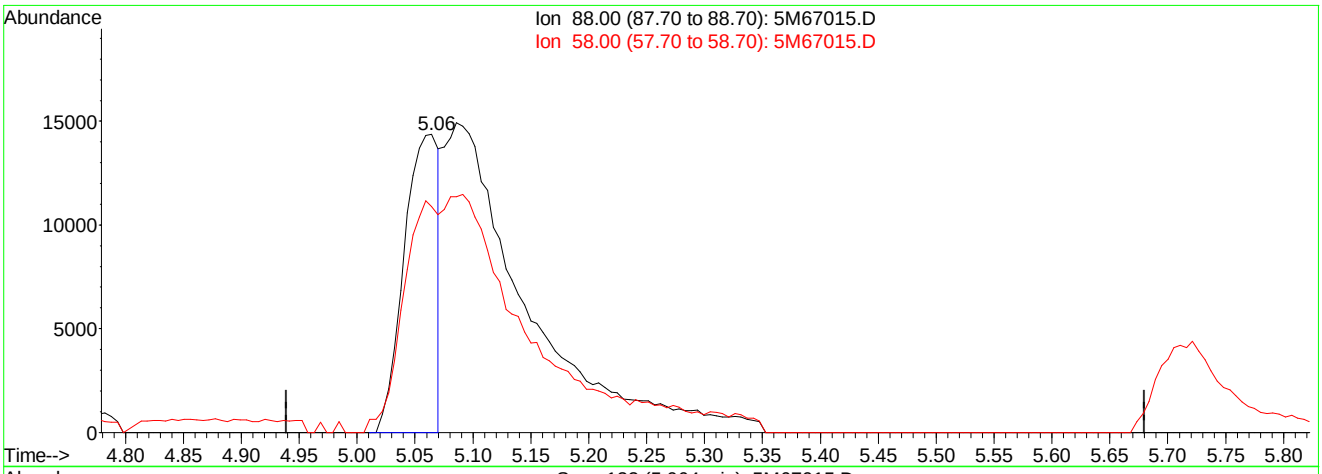


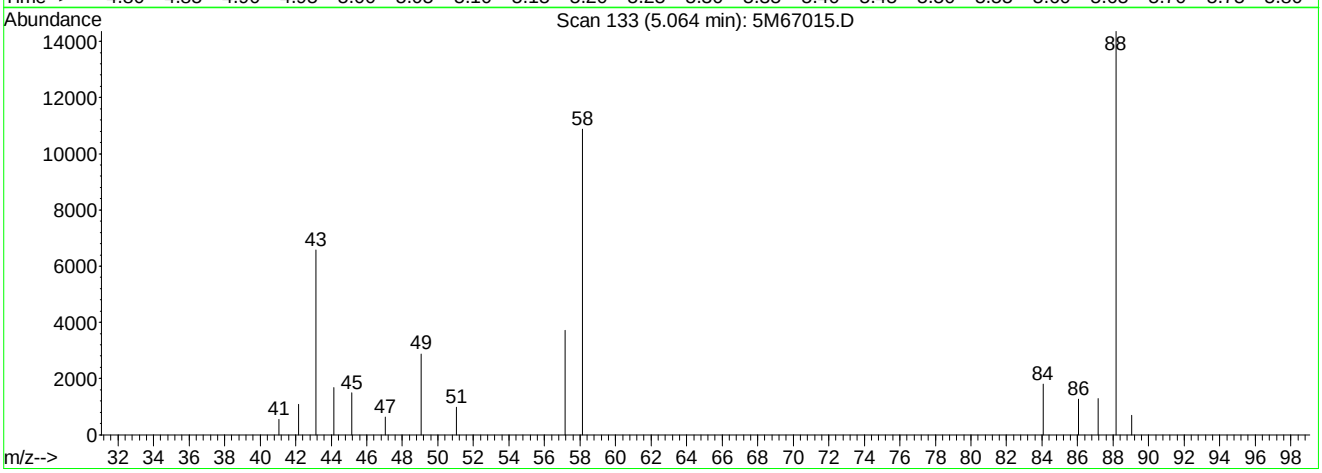

5M67015.D TCL.M Thu May 17 10:58:56 2012 Page 2

Quantitation Report (Qedit)

Data File : C:\MSDCHEM\1\DATA\051612\5M67015.D Vial: 6
Acq On : 16 May 2012 11:22 am Operator: CAA
Sample : WG397434-03 LCS 05/09 REMIX Inst : HPMS5
Misc : 1,1 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 17 9:58 2012 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
Title : OVD MSS01 8270/625/Initial cal. 05/11/12
Last Update : Thu May 17 09:58:26 2012
Response via : Multiple Level Calibration




TIC: 5M67015.D

(2) 1,4-Dioxane

5.06min 9.91ug/ml

response 29770

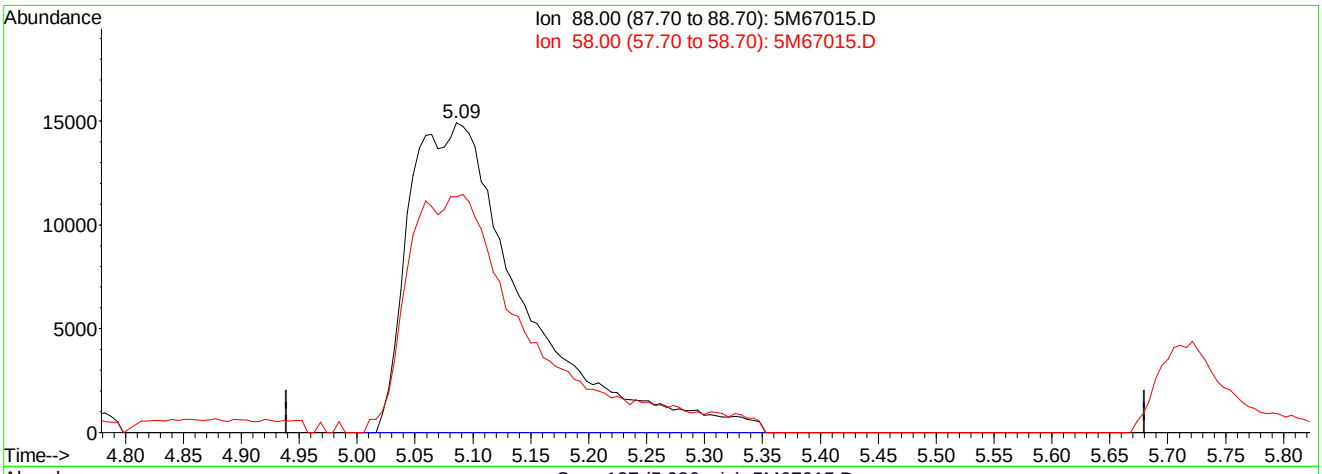
| Ion | Exp% | Act% |
|---|---|---|
| 88.00 | 100 | 100 |
| 58.00 | 0.00 | 79.49# |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

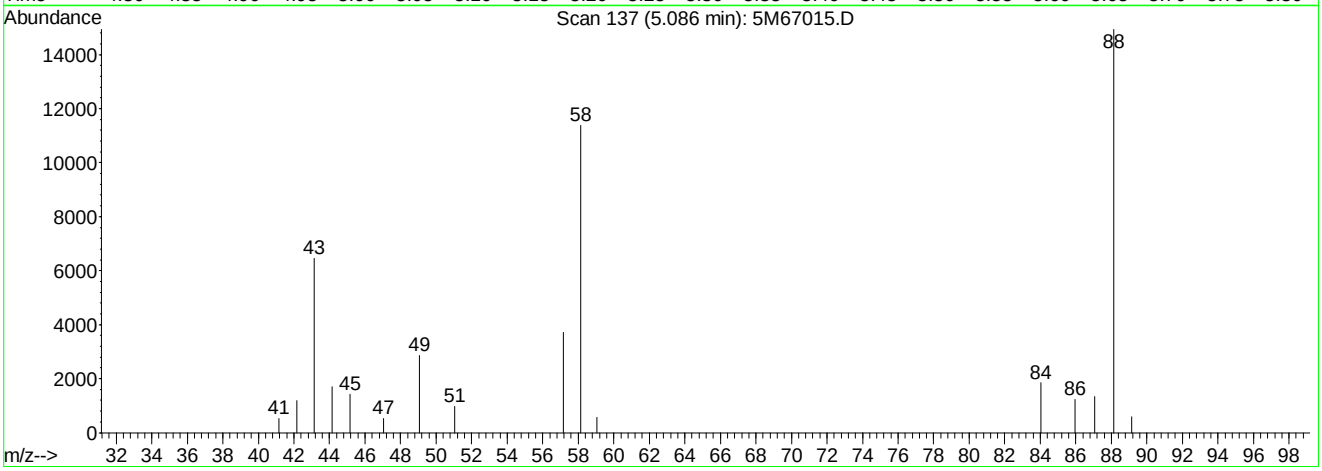
5M67015.D MEGAMIX.M Thu May 17 10:00:04 2012

Quantitation Report (Qedit)

Data File : C:\MSDCHEM\1\DATA\051612\5M67015.D Vial: 6
Acq On : 16 May 2012 11:22 am Operator: CAA
Sample : WG397434-03 LCS 05/09 REMIX Inst : HPMS5
Misc : 1,1 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 17 10:00 2012 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
Title : OVD MSS01 8270/625/Initial cal. 05/11/12
Last Update : Thu May 17 09:58:26 2012
Response via : Multiple Level Calibration




TIC: 5M67015.D

(2) 1,4-Dioxane

5.09min 34.57ug/ml mint

response 103803

| Ion | Exp% | Act% |
|---|---|---|
| 88.00 | 100 | 100 |
| 58.00 | 0.00 | 22.80# |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

5M67015.D MEGAMIX.M Thu May 17 2012

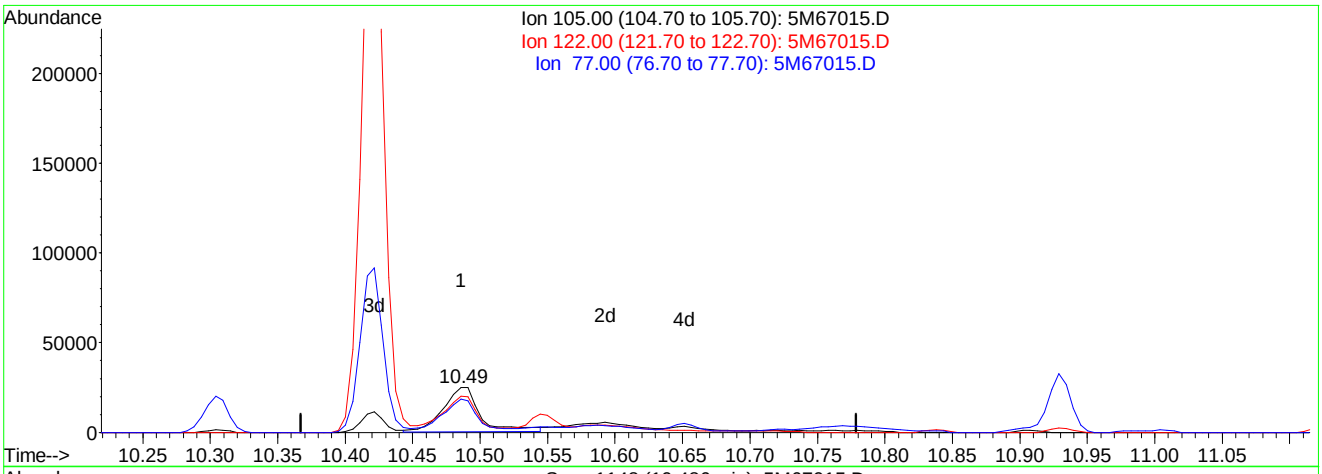
Analyst: 05/17/2012 11:25 Supervisor: 05/17/2012 12:32

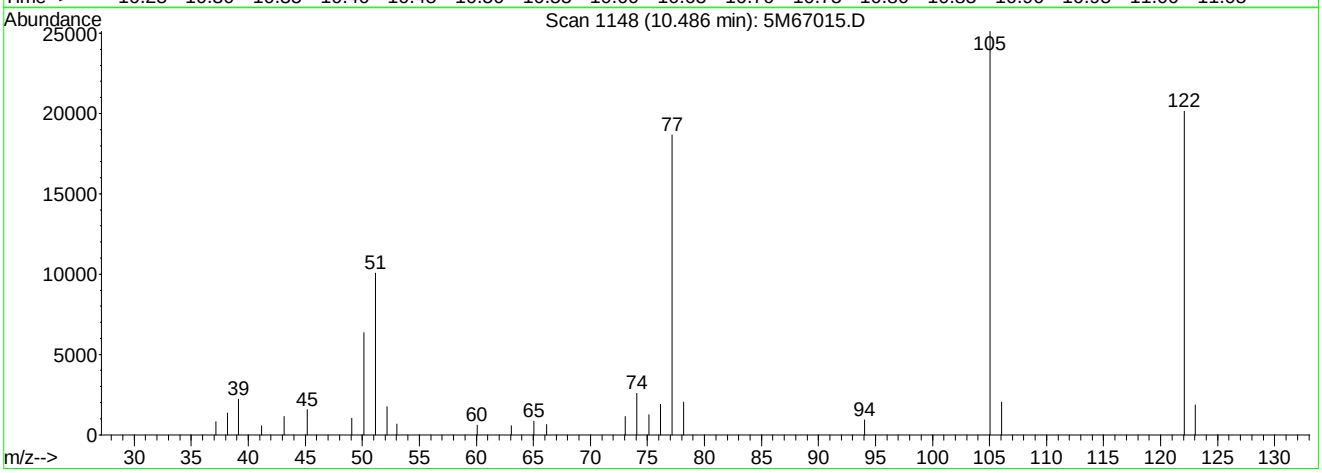
#2 - Data system splits the peak incorrectly or integrates a false peak as a rider peak

Quantitation Report (Qedit)

Data File : C:\MSDCHEM\1\DATA\051612\5M67015.D Vial: 6
Acq On : 16 May 2012 11:22 am Operator: CAA
Sample : WG397434-03 LCS 05/09 REMIX Inst : HPMS5
Misc : 1,1 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 17 10:00 2012 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
Title : OVD MSS01 8270/625/Initial cal. 05/11/12
Last Update : Thu May 17 09:58:26 2012
Response via : Single Level Calibration




TIC: 5M67015.D

(39) Benzoic Acid

10.49min 18.30ug/ml

response 48237

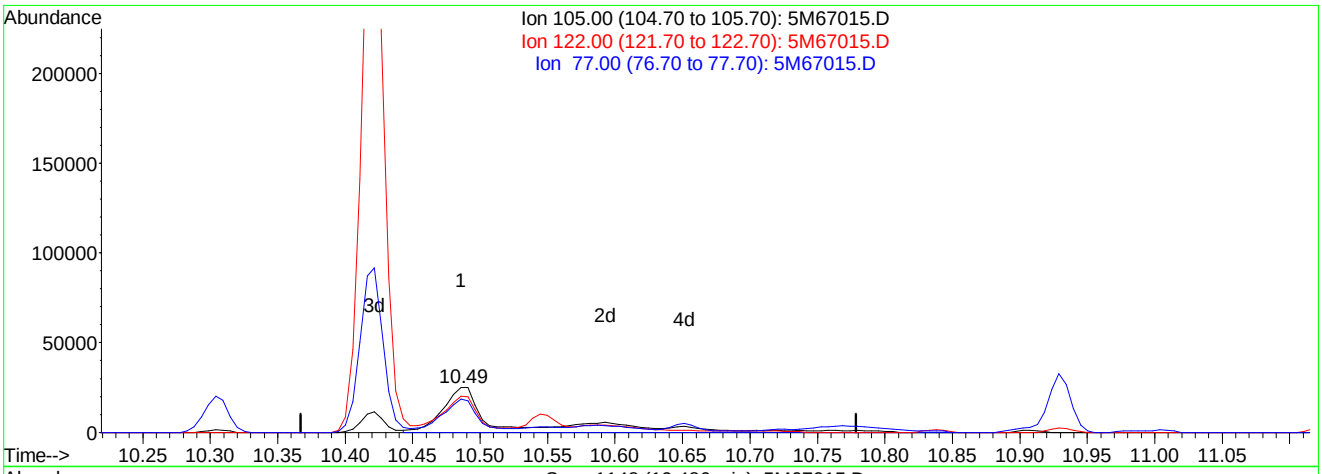
| Ion | Exp% | Act% |
|---|---|---|
| 105.00 | 100 | 100 |
| 122.00 | 57.00 | 63.83 |
| 77.00 | 51.30 | 58.96 |
| 0.00 | 0.00 | 0.00 |

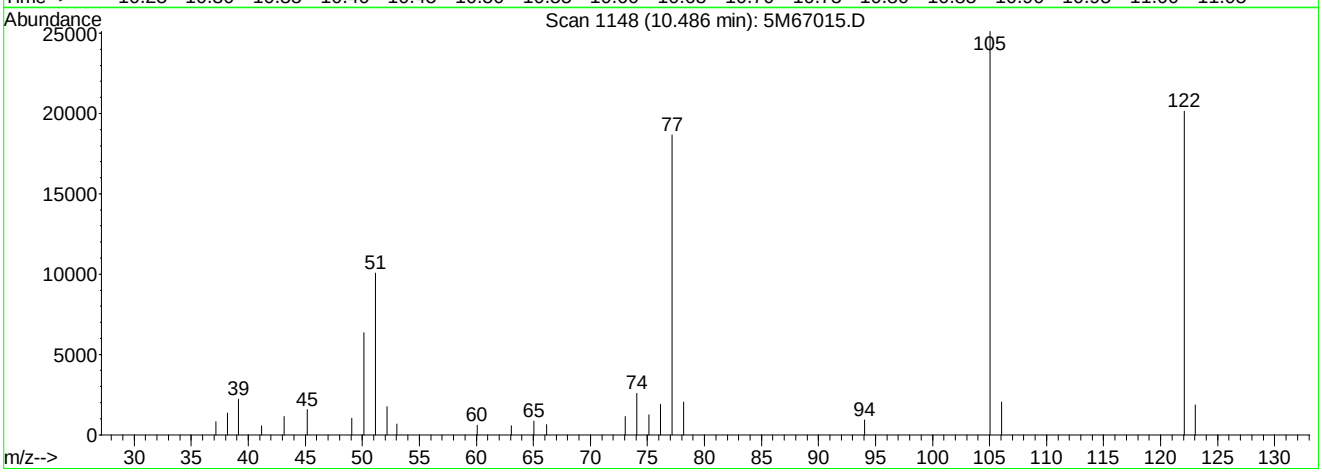
5M67015.D MEGAMIX.M Thu May 17 10:00:14 2012

Quantitation Report (Qedit)

Data File : C:\MSDCHEM\1\DATA\051612\5M67015.D Vial: 6
Acq On : 16 May 2012 11:22 am Operator: CAA
Sample : WG397434-03 LCS 05/09 REMIX Inst : HPMS5
Misc : 1,1 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 17 10:00 2012 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
Title : OVD MSS01 8270/625/Initial cal. 05/11/12
Last Update : Thu May 17 09:58:26 2012
Response via : Single Level Calibration




TIC: 5M67015.D

(39) Benzoic Acid

10.49min 24.19ug/ml mint

response 82933

| Ion | Exp% | Act% |
|---|---|---|
| 105.00 | 100 | 100 |
| 122.00 | 57.00 | 37.13 |
| 77.00 | 51.30 | 34.29 |
| 0.00 | 0.00 | 0.00 |

5M67015.D MEGAMIX.M Thu May 17 ) 2012

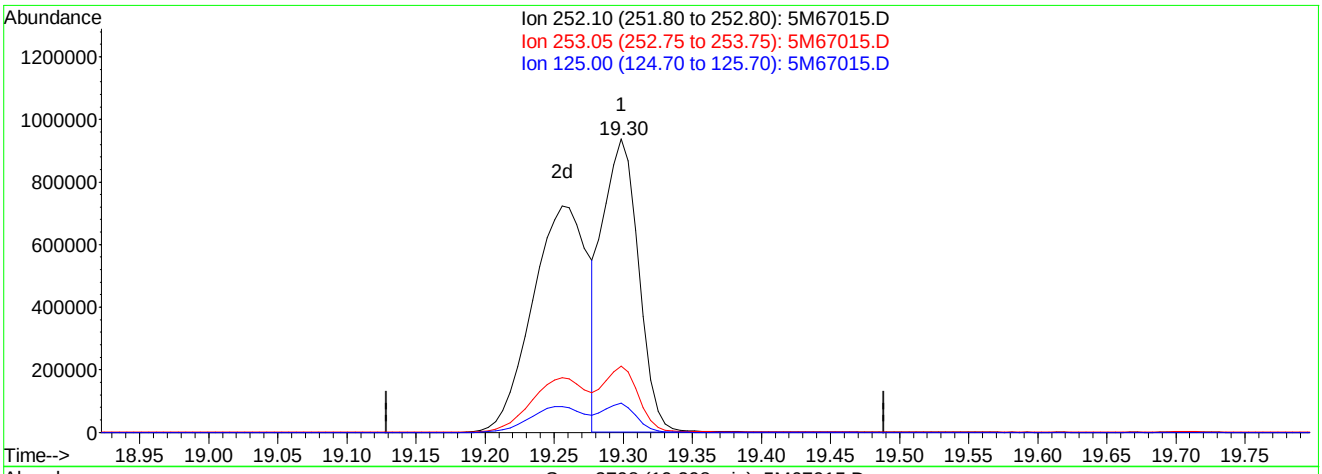
Analyst: 05/17/2012 11:25 Supervisor: 05/17/2012 12:32

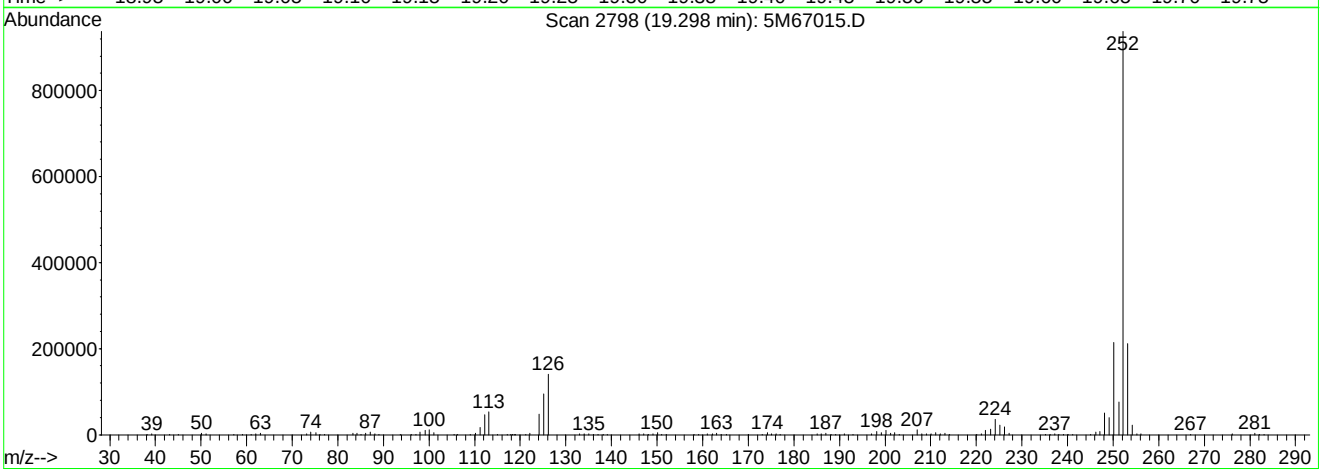
#2 - Data system splits the peak incorrectly or integrates a false peak as a rider peak

Quantitation Report (Qedit)

Data File : C:\MSDCHEM\1\DATA\051612\5M67015.D Vial: 6
Acq On : 16 May 2012 11:22 am Operator: CAA
Sample : WG397434-03 LCS 05/09 REMIX Inst : HPMS5
Misc : 1,1 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 17 10:00 2012 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
Title : OVD MSS01 8270/625/Initial cal. 05/11/12
Last Update : Thu May 17 09:58:26 2012
Response via : Multiple Level Calibration




TIC: 5M67015.D

(131) Benzo[b]fluoranthene

19.30min 47.91ug/ml

response 1706903

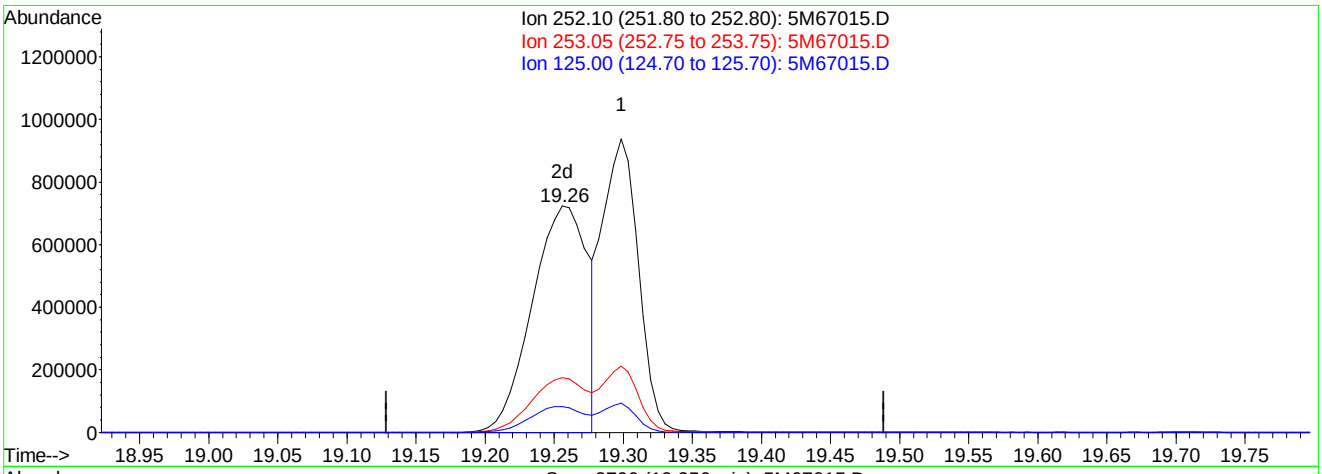
| Ion | Exp% | Act% |
|---|---|---|
| 252.10 | 100 | 100 |
| 253.05 | 22.00 | 22.05 |
| 125.00 | 10.90 | 9.38 |
| 0.00 | 0.00 | 0.00 |

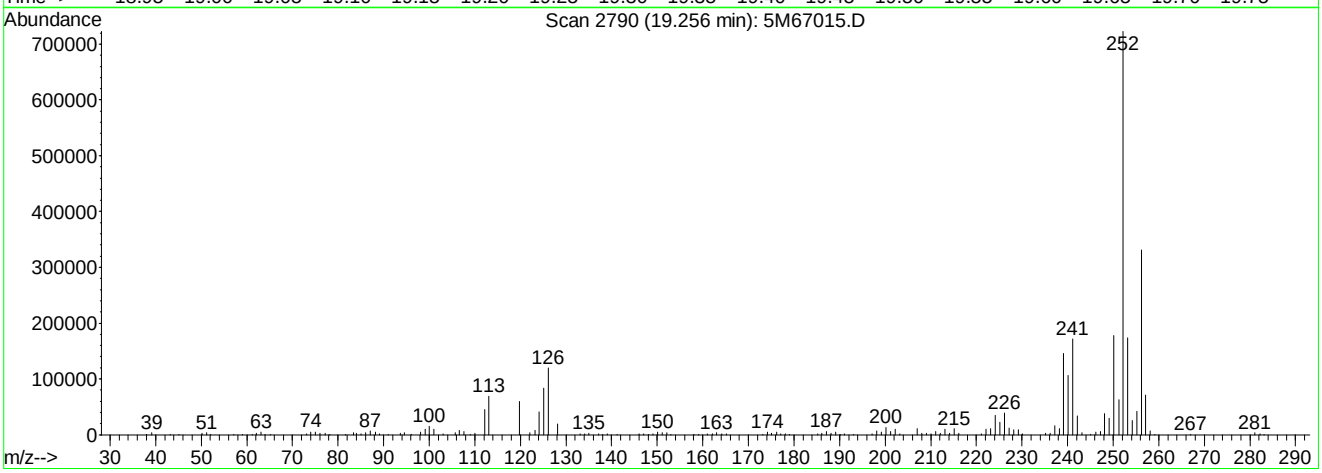
5M67015.D MEGAMIX.M Thu May 17 10:00:33 2012

Quantitation Report (Qedit)

Data File : C:\MSDCHEM\1\DATA\051612\5M67015.D Vial: 6
Acq On : 16 May 2012 11:22 am Operator: CAA
Sample : WG397434-03 LCS 05/09 REMIX Inst : HPMS5
Misc : 1,1 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 17 10:00 2012 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
Title : OVD MSS01 8270/625/Initial cal. 05/11/12
Last Update : Thu May 17 09:58:26 2012
Response via : Multiple Level Calibration




TIC: 5M67015.D

(131) Benzo[b]fluoranthene

19.26min 56.41ug/ml mint

response 2009744

| Ion | Exp% | Act% |
|---|---|---|
| 252.10 | 100 | 100 |
| 253.05 | 22.00 | 18.73 |
| 125.00 | 10.90 | 7.96 |
| 0.00 | 0.00 | 0.00 |

5M67015.D MEGAMIX.M Thu May 17 ; 2012

Analyst: 05/17/2012 11:25 Supervisor: 05/17/2012 12:32

#3 - Improperly integrated isomers and/or coeluting compounds

# 2.2.2 Semivolatiles GC/MS Data (827-PAHL)

# 2.2.2.1 Summary Data

**Login Number:** L12050284
**Department**: Semivolatiles
**Analyst:** Cassie A. Augenstein

**METHOD**

**Preparation** 3510C

**Analysis** SW-846 8270C

**HOLDING TIMES**

**Sample Preparation:** All holding times were met.

**Sample Analysis:** All holding times were met.

**PREPARATION**

Sample 01 had an initial pH of approximately 4; it was adjusted with NaOH.

**CALIBRATION**

**Initial Calibration:** For all compounds that yielded a %RSD greater than 15%, linear or higher order equations were applied. All acceptance criteria were met.

**Alternate Source Standards:** All acceptance criteria were met.

**Continuing Calibration and Tune:** All acceptance criteria were met.

**BATCH QA/QC**

**Method Blank:** All acceptance criteria were met.

**Laboratory Control Sample:** All acceptance criteria were met.

**Matrix Spikes:** The MS/MSD results were not associated with this sample delivery group.

**SAMPLES**

**Samples:** All acceptance criteria were met.

**Internal Standards:** All acceptance criteria were met.

**Surrogates:** Recoveries out of range were observed for the following surrogate: 2-Fluorobiphenyl. Please see the applicable QC report for a detailed presentation of the failures.

**Manual Integration Reason Codes**

**Reason #1: Data System Fails to Select Correct Peak** In some cases the chromatography system selects and integrates the 'wrong peak'. In this case the analyst must correct the selection and force the system to integrate the proper peak. Other times the system may miss the peak completely.

**Reason #2: Data System Splits the Peak Incorrectly or Integrates a False Peak as a Rider Peak** This phenomena is common at low concentrations where the signal:noise ratio is low. A single compound (peak) is incorrectly split into multiple peaks or integrated as a main peak with one or more rider peaks resulting in low area counts for the target compound.

**Reason #3: Improperly Integrated Isomers and/or coeluting compounds.** This system often fails to distinguish coeluting compounds and or isomers. The integration areas and concentrations are wrong, and they must be corrected by manual integration. Prime examples are benzo(k)fluoranthene and benzo(b)fluoranthene which are often unresolved and integrated improperly when both are present at low concentrations in standards or samples.

**Reason #4: System Establishes Incorrect Baseline** There are numerous situations in chromatography where the system establishes the baseline incorrectly. Some baseline errors will be obvious to the analyst and should be corrected

via manual procedures.

**Reason #5: Miscellaneous** Other situations involving integration errors may require in-depth review and technical judgment. These cases should be brought to the attention of the laboratory management. If the form of manual integration is not clearly covered by these four cases, then review and approval by the Managing Director or the QAO will be required.

I certify that this data package is in compliance with the terms and conditions agreed to by the client and Microbac Laboratories Inc., both technically and for completeness, except for the conditions noted above. Release of the data contained in this hard copy data package has been authorized by the Laboratory Manager or designated person, as verified by the following signature.

**Narrative ID:** 46540
**Approved By:** Mike Cochran

Certificate of Analysis

**Sample #:** L12050284-01 **PrePrep Method:** N/A **Instrument:** HPMS7
**Client ID:** BBLD-PIT-SSP-050812 **Prep Method:** 3510C **Prep Date:** 05/14/2012 12:25
**Matrix:** Water **Analytical Method:** 8270C **Cal Date:** 04/04/2012 12:53
**Workgroup #:** WG397981 **Analyst:** CAA **Run Date:** 05/15/2012 19:49
**Collect Date:** 05/08/2012 10:01 **Dilution:** 1 **File ID:** 7M55038
**Sample Tag:** 01 **Units:** ug/L

| Analyte | CAS # | Result | Qual | RL | MDL |
|---|---|---|---|---|---|
| 2-Methylnaphthalene | 91-57-6 | 0.150 | | 0.0556 | 0.0278 |
| Acenaphthene | 83-32-9 | | U | 0.0556 | 0.0278 |
| Acenaphthylene | 208-96-8 | | U | 0.0556 | 0.0278 |
| Anthracene | 120-12-7 | 0.0519 | | 0.0556 | 0.0278 |
| Benzo(a)anthracene | 56-55-3 | 0.214 | | 0.0556 | 0.0278 |
| Benzo(a)pyrene | 50-32-8 | 0.202 | | 0.0556 | 0.0278 |
| Benzo(b)fluoranthene | 205-99-2 | 0.232 | | 0.0556 | 0.0278 |
| Benzo(g,h,i)perylene | 191-24-2 | 0.168 | | 0.0556 | 0.0278 |
| Benzo(k)fluoranthene | 207-08-9 | 0.220 | | 0.0556 | 0.0278 |
| Chrysene | 218-01-9 | 0.274 | | 0.0556 | 0.0278 |
| Dibenzo(a,h)anthracene | 53-70-3 | 0.0619 | | 0.0556 | 0.0278 |
| Fluoranthene | 206-44-0 | 0.517 | | 0.0556 | 0.0278 |
| Fluorene | 86-73-7 | | U | 0.0556 | 0.0278 |
| Indeno(1,2,3-cd)pyrene | 193-39-5 | 0.153 | | 0.0556 | 0.0278 |
| Naphthalene | 91-20-3 | 1.74 | | 0.0556 | 0.0278 |
| Phenanthrene | 85-01-8 | 0.323 | | 0.0556 | 0.0278 |
| Pyrene | 129-00-0 | 0.374 | | 0.0556 | 0.0278 |

| Surrogate | Recovery | Lower Limit | Upper Limit | Q |
|---|---|---|---|---|
| 2-Fluorobiphenyl | 46.0 | 43 | 116 | |
| Nitrobenzene-d5 | 51.8 | 35 | 114 | |
| p-Terphenyl-d14 | 67.6 | 33 | 141 | |

| | |
|---|---|
| U | Not detected at or above adjusted sample detection limit. |

**Sample #:** L12050284-03 **PrePrep Method:** N/A **Instrument:** HPMS7
**Client ID:** PZ-07-050812 **Prep Method:** 3510C **Prep Date:** 05/14/2012 12:25
**Matrix:** Water **Analytical Method:** 8270C **Cal Date:** 04/04/2012 12:53
**Workgroup #:** WG397981 **Analyst:** CAA **Run Date:** 05/15/2012 11:02
**Collect Date:** 05/08/2012 10:10 **Dilution:** 1 **File ID:** 7M55019
**Sample Tag:** 01 **Units:** ug/L

| Analyte | CAS # | Result | Qual | RL | MDL |
|---|---|---|---|---|---|
| 2-Methylnaphthalene | 91-57-6 | | U | 0.0538 | 0.0269 |
| Acenaphthene | 83-32-9 | 0.164 | | 0.0538 | 0.0269 |

Certificate of Analysis

| Analyte | CAS # | Result | Qual | RL | MDL |
|---|---|---|---|---|---|
| Acenaphthylene | 208-96-8 | | U | 0.0538 | 0.0269 |
| Anthracene | 120-12-7 | 0.203 | | 0.0538 | 0.0269 |
| Benzo(a)anthracene | 56-55-3 | 0.0606 | | 0.0538 | 0.0269 |
| Benzo(a)pyrene | 50-32-8 | 0.0274 | | 0.0538 | 0.0269 |
| Benzo(b)fluoranthene | 205-99-2 | 0.0321 | | 0.0538 | 0.0269 |
| Benzo(g,h,i)perylene | 191-24-2 | | U | 0.0538 | 0.0269 |
| Benzo(k)fluoranthene | 207-08-9 | 0.0286 | | 0.0538 | 0.0269 |
| Chrysene | 218-01-9 | 0.0690 | | 0.0538 | 0.0269 |
| Dibenzo(a,h)anthracene | 53-70-3 | | U | 0.0538 | 0.0269 |
| Fluoranthene | 206-44-0 | 0.734 | | 0.0538 | 0.0269 |
| Fluorene | 86-73-7 | 0.191 | | 0.0538 | 0.0269 |
| Indeno(1,2,3-cd)pyrene | 193-39-5 | | U | 0.0538 | 0.0269 |
| Naphthalene | 91-20-3 | | U | 0.0538 | 0.0269 |
| Phenanthrene | 85-01-8 | 0.0370 | | 0.0538 | 0.0269 |
| Pyrene | 129-00-0 | 0.470 | | 0.0538 | 0.0269 |

| Surrogate | Recovery | Lower Limit | Upper Limit | Q |
|---|---|---|---|---|
| 2-Fluorobiphenyl | 42.4 | 43 | 116 | * |
| Nitrobenzene-d5 | 46.6 | 35 | 114 | |
| p-Terphenyl-d14 | 108 | 33 | 141 | |

| | |
|---|---|
| U | Not detected at or above adjusted sample detection limit. |

**Sample #:** L12050284-05
**Client ID:** MW-18-050812
**Matrix:** Water
**Workgroup #:** WG397981
**Collect Date:** 05/08/2012 11:00
**Sample Tag:** 01

**PrePrep Method:** N/A
**Prep Method:** 3510C
**Analytical Method:** 8270C
**Analyst:** CAA
**Dilution:** 1
**Units:** ug/L

**Instrument:** HPMS7
**Prep Date:** 05/14/2012 12:25
**Cal Date:** 04/04/2012 12:53
**Run Date:** 05/15/2012 11:30
**File ID:** 7M55020

| Analyte | CAS # | Result | Qual | RL | MDL |
|---|---|---|---|---|---|
| 2-Methylnaphthalene | 91-57-6 | | U | 0.0556 | 0.0278 |
| Acenaphthene | 83-32-9 | | U | 0.0556 | 0.0278 |
| Acenaphthylene | 208-96-8 | | U | 0.0556 | 0.0278 |
| Anthracene | 120-12-7 | | U | 0.0556 | 0.0278 |
| Benzo(a)anthracene | 56-55-3 | | U | 0.0556 | 0.0278 |
| Benzo(a)pyrene | 50-32-8 | | U | 0.0556 | 0.0278 |
| Benzo(b)fluoranthene | 205-99-2 | | U | 0.0556 | 0.0278 |
| Benzo(g,h,i)perylene | 191-24-2 | | U | 0.0556 | 0.0278 |
| Benzo(k)fluoranthene | 207-08-9 | | U | 0.0556 | 0.0278 |
| Chrysene | 218-01-9 | | U | 0.0556 | 0.0278 |
| Dibenzo(a,h)anthracene | 53-70-3 | | U | 0.0556 | 0.0278 |

Certificate of Analysis

| Analyte | CAS # | Result | Qual | RL | MDL |
|---|---|---|---|---|---|
| Fluoranthene | 206-44-0 | | U | 0.0556 | 0.0278 |
| Fluorene | 86-73-7 | | U | 0.0556 | 0.0278 |
| Indeno(1,2,3-cd)pyrene | 193-39-5 | | U | 0.0556 | 0.0278 |
| Naphthalene | 91-20-3 | | U | 0.0556 | 0.0278 |
| Phenanthrene | 85-01-8 | | U | 0.0556 | 0.0278 |
| Pyrene | 129-00-0 | 0.0328 | | 0.0556 | 0.0278 |

| Surrogate | Recovery | Lower Limit | Upper Limit | Q |
|---|---|---|---|---|
| 2-Fluorobiphenyl | 69.7 | 43 | 116 | |
| Nitrobenzene-d5 | 81.4 | 35 | 114 | |
| p-Terphenyl-d14 | 107 | 33 | 141 | |

| | |
|---|---|
| U | Not detected at or above adjusted sample detection limit. |

**Sample #:** L12050284-07
**Client ID:** TW-01-050812
**Matrix:** Water
**Workgroup #:** WG397981
**Collect Date:** 05/08/2012 14:50
**Sample Tag:** 01

**PrePrep Method:** N/A
**Prep Method:** 3510C
**Analytical Method:** 8270C
**Analyst:** CAA
**Dilution:** 1
**Units:** ug/L

**Instrument:** HPMS7
**Prep Date:** 05/14/2012 12:25
**Cal Date:** 04/04/2012 12:53
**Run Date:** 05/15/2012 11:58
**File ID:** 7M55021

| Analyte | CAS # | Result | Qual | RL | MDL |
|---|---|---|---|---|---|
| 2-Methylnaphthalene | 91-57-6 | | U | 0.0510 | 0.0255 |
| Acenaphthene | 83-32-9 | | U | 0.0510 | 0.0255 |
| Acenaphthylene | 208-96-8 | | U | 0.0510 | 0.0255 |
| Anthracene | 120-12-7 | | U | 0.0510 | 0.0255 |
| Benzo(a)anthracene | 56-55-3 | 0.0338 | | 0.0510 | 0.0255 |
| Benzo(a)pyrene | 50-32-8 | | U | 0.0510 | 0.0255 |
| Benzo(b)fluoranthene | 205-99-2 | | U | 0.0510 | 0.0255 |
| Benzo(g,h,i)perylene | 191-24-2 | | U | 0.0510 | 0.0255 |
| Benzo(k)fluoranthene | 207-08-9 | 0.0276 | | 0.0510 | 0.0255 |
| Chrysene | 218-01-9 | 0.0360 | | 0.0510 | 0.0255 |
| Dibenzo(a,h)anthracene | 53-70-3 | | U | 0.0510 | 0.0255 |
| Fluoranthene | 206-44-0 | 0.0761 | | 0.0510 | 0.0255 |
| Fluorene | 86-73-7 | | U | 0.0510 | 0.0255 |
| Indeno(1,2,3-cd)pyrene | 193-39-5 | | U | 0.0510 | 0.0255 |
| Naphthalene | 91-20-3 | | U | 0.0510 | 0.0255 |
| Phenanthrene | 85-01-8 | 0.0432 | | 0.0510 | 0.0255 |
| Pyrene | 129-00-0 | 0.0622 | | 0.0510 | 0.0255 |

| Surrogate | Recovery | Lower Limit | Upper Limit | Q |
|---|---|---|---|---|
| 2-Fluorobiphenyl | 76.6 | 43 | 116 | |
| Nitrobenzene-d5 | 87.9 | 35 | 114 | |

| | | | | |
|---|---|---|---|---|
| p-Terphenyl-d14 | 96.3 | 33 | 141 | |

| | |
|---|---|
| U | Not detected at or above adjusted sample detection limit. |

**Sample #:** L12050284-10 **PrePrep Method:** N/A **Instrument:** HPMS7
**Client ID:** DUP-GW-050812 **Prep Method:** 3510C **Prep Date:** 05/14/2012 12:25
**Matrix:** Water **Analytical Method:** 8270C **Cal Date:** 04/04/2012 12:53
**Workgroup #:** WG397981 **Analyst:** CAA **Run Date:** 05/15/2012 12:26
**Collect Date:** 05/08/2012 15:00 **Dilution:** 1 **File ID:** 7M55022
**Sample Tag:** 01 **Units:** ug/L

| Analyte | CAS # | Result | Qual | RL | MDL |
|---|---|---|---|---|---|
| 2-Methylnaphthalene | 91-57-6 | | U | 0.0521 | 0.0260 |
| Acenaphthene | 83-32-9 | | U | 0.0521 | 0.0260 |
| Acenaphthylene | 208-96-8 | | U | 0.0521 | 0.0260 |
| Anthracene | 120-12-7 | | U | 0.0521 | 0.0260 |
| Benzo(a)anthracene | 56-55-3 | | U | 0.0521 | 0.0260 |
| Benzo(a)pyrene | 50-32-8 | | U | 0.0521 | 0.0260 |
| Benzo(b)fluoranthene | 205-99-2 | | U | 0.0521 | 0.0260 |
| Benzo(g,h,i)perylene | 191-24-2 | | U | 0.0521 | 0.0260 |
| Benzo(k)fluoranthene | 207-08-9 | | U | 0.0521 | 0.0260 |
| Chrysene | 218-01-9 | | U | 0.0521 | 0.0260 |
| Dibenzo(a,h)anthracene | 53-70-3 | | U | 0.0521 | 0.0260 |
| Fluoranthene | 206-44-0 | 0.0366 | | 0.0521 | 0.0260 |
| Fluorene | 86-73-7 | | U | 0.0521 | 0.0260 |
| Indeno(1,2,3-cd)pyrene | 193-39-5 | | U | 0.0521 | 0.0260 |
| Naphthalene | 91-20-3 | | U | 0.0521 | 0.0260 |
| Phenanthrene | 85-01-8 | | U | 0.0521 | 0.0260 |
| Pyrene | 129-00-0 | 0.0283 | | 0.0521 | 0.0260 |

| Surrogate | Recovery | Lower Limit | Upper Limit | Q |
|---|---|---|---|---|
| 2-Fluorobiphenyl | 79.0 | 43 | 116 | |
| Nitrobenzene-d5 | 93.1 | 35 | 114 | |
| p-Terphenyl-d14 | 102 | 33 | 141 | |

| | |
|---|---|
| U | Not detected at or above adjusted sample detection limit. |

**Sample #:** L12050284-12 **PrePrep Method:** N/A **Instrument:** HPMS7
**Client ID:** EB-050812-GW **Prep Method:** 3510C **Prep Date:** 05/14/2012 12:25
**Matrix:** Water **Analytical Method:** 8270C **Cal Date:** 04/04/2012 12:53
**Workgroup #:** WG397981 **Analyst:** CAA **Run Date:** 05/15/2012 12:54
**Collect Date:** 05/08/2012 13:10 **Dilution:** 1 **File ID:** 7M55023
**Sample Tag:** 01 **Units:** ug/L

Certificate of Analysis

| Analyte | CAS # | Result | Qual | RL | MDL |
|---|---|---|---|---|---|
| 2-Methylnaphthalene | 91-57-6 | | U | 0.0549 | 0.0275 |
| Acenaphthene | 83-32-9 | | U | 0.0549 | 0.0275 |
| Acenaphthylene | 208-96-8 | | U | 0.0549 | 0.0275 |
| Anthracene | 120-12-7 | | U | 0.0549 | 0.0275 |
| Benzo(a)anthracene | 56-55-3 | | U | 0.0549 | 0.0275 |
| Benzo(a)pyrene | 50-32-8 | | U | 0.0549 | 0.0275 |
| Benzo(b)fluoranthene | 205-99-2 | | U | 0.0549 | 0.0275 |
| Benzo(g,h,i)perylene | 191-24-2 | | U | 0.0549 | 0.0275 |
| Benzo(k)fluoranthene | 207-08-9 | | U | 0.0549 | 0.0275 |
| Chrysene | 218-01-9 | | U | 0.0549 | 0.0275 |
| Dibenzo(a,h)anthracene | 53-70-3 | | U | 0.0549 | 0.0275 |
| Fluoranthene | 206-44-0 | | U | 0.0549 | 0.0275 |
| Fluorene | 86-73-7 | | U | 0.0549 | 0.0275 |
| Indeno(1,2,3-cd)pyrene | 193-39-5 | | U | 0.0549 | 0.0275 |
| Naphthalene | 91-20-3 | | U | 0.0549 | 0.0275 |
| Phenanthrene | 85-01-8 | | U | 0.0549 | 0.0275 |
| Pyrene | 129-00-0 | | U | 0.0549 | 0.0275 |

| Surrogate | Recovery | Lower Limit | Upper Limit | Q |
|---|---|---|---|---|
| 2-Fluorobiphenyl | 79.1 | 43 | 116 | |
| Nitrobenzene-d5 | 92.2 | 35 | 114 | |
| p-Terphenyl-d14 | 101 | 33 | 141 | |

| | |
|---|---|
| U | Not detected at or above adjusted sample detection limit. |

# 2.2.2.2 QC Summary Data

## Example 8270 Calculations

**1.0 Calculating the Response Factor (RF) from the initial calibration (ICAL) data:**

RF = [ (Ax) (Cis) ] / [ (Ais) (Cx) ]

| where: | Example |
|---|---|
| Ax = Area of the characteristic ion for the compound being measured: | 1261197 |
| Cis = Concentration of the specific internal standard (ug/mL) | 40 |
| Ais = Area of the characteristic ion of the specific internal standard | 608044 |
| Cx = Concentration of the compound in the standard being measured (ug/mL) | 50 |
| RF = Calculated Response Factor | **1.65935** |

**2.0 Calculating the concentration ( C ) of a compound in water using the data from the prep log and quantitation report: ***

Cx = [ (Ax) (Cis) (Vf) (D)] / [ (Ais) (RF) (Vi) ]

| where: | Example |
|---|---|
| Ax = Area of the characteristic ion for the compound being measured | 367250 |
| Cis = Concentration of the specific internal standard (ug/mL) | 40 |
| Vf = Final volume of sample extract from prep log (mL) | 1 |
| D = Dilution factor for sample as a multiplier ( 10x = 10) | 1 |
| Ais = Area of the characteristic ion of the specific internal standard | 511641 |
| RF = Average RF from the ICAL | 1.65935 |
| Vi = Initial volume of sample extracted from prep log (mL) | 1021 |
| Cx = Concentration of the compound in the sample being measured (ug/mL) | 0.016947 |
| Cx = Concentration of the compound in the sample being measured (ug/L) | **16.947** |

**3.0 Calculating the concentration ( C ) of a compound in soil using the data from the prep log and quantitation report: ***

Cx = [ (Ax) (Cis) (Vf) (D)] / [ (Ais) (RF) (Wi) ]

| where: | Example |
|---|---|
| Ax = Area of the characteristic ion for the compound being measured | 367250 |
| Cis = Concentration of the specific internal standard (ug/mL) | 40 |
| Vf = Final volume of sample extract from prep log (mL) | 1 |
| D = Dilution factor for sample as a multiplier ( 10x = 10) | 1 |
| Ais = Area of the characteristic ion of the specific internal standard | 511641 |
| RF = Average RF from the ICAL | 1.65935 |
| Wi = Initial weight of sample extracted ( g ) from prep log | 30 |
| Cx = Concentration of the compound in the sample being measured (ug/g) | 0.576763 |
| Cx = Concentration of the compound in the sample being measured (ug/kg) | **576.7627** |

Dry weight correction:

| | |
|---|---|
| Percent solids (PCT_S) | 50 |
| Cd = (Cx) (100)/PCT_S | **1153.525** ug/kg |

* Concentrations appearing on the instrument quantitation reports are on-column results and do not take into account initial volume, final volume, and the dilution factor.

**4.0 Concentration from Linear Regression**

**Step 1: Retrieve Curve Data From Plot, y = mx + b**

y = response ratio = response of analyte / response of IS = Ax/Ais

x = amount ratio = concentration analyte/concentration internal standard = Cx / Cis

m = slope from curve plot

b = intercept from curve plot

**Step 2: Calculate y from Quantitation Report**

y = 16790/784838 = 0.02139

**Step 3: Solve for x**

x = (y - b)/m = [( 0.02139 -( - 0.0435)]/ 0.0783 = 0.829

**Step 4: Solve for analyte concentration Cx**

Cx = Cis ( x ) = (25.0)(0.829) = 20.72 ug/L

**Example Spreadsheet Calculation:**

| | | |
|---|---|---|
| Slope from curve, m: | 0.0783 | |
| Intercept from curve, b: | -0.0435 | |
| Area of analyte, Ax: | 16790 | |
| Area of Internal Standard , Ais: | 784484 | |
| Concentration of IS, Cis | 25.00 | ug/L |
| Response Ratio ( y) : | 0.021403 | |
| Amount Ratio: | 0.828897 | |
| Concentration (Cx): | 20.72241 | ug/L |

**5.0 Concentration from Quadratic Regression**

**Step 1 - Retrieve Curve Data from Plot, y = Ax^2 + Bx + C**
Where:
Ax^2 + Bx + (C - y) = 0
A, B, C = constants from the ICAL quadratic regression
y = Response ratio = Area of analyte/Area of internal standard (IS)
x = Amount ratio = Concentration of analyte/concentration of IS

**Step 2: Calculate y from Quantitation Report**

y = Ax/Ais

**Step 3: Solve for x using the quadratic formula**
Ax^2 + Bx + C - y = 0

$$x = \frac{b \pm \sqrt{\left(b^2 - 4a(c - y)\right)}}{2a}$$ (Two possible solutions)

**Step 4: Solve for analyte concentration Cx**

Cx = ( Cis )( Amount ratio)

**Example Spreadsheet Calculation:**

| | | |
|---|---|---|
| Value of A from plot: | **0.0259** | |
| Value of B from plot: | **0.0596** | |
| Value of C from plot: | **-0.0165** | |
| Area of analyte from quantitation report: | **203233** | |
| Area of IS from quantiation report: | **1425653** | |
| Response ratio, y: | **0.142554** | |
| C - y: | **-0.15905** | |
| Root 1 - Computed amount ratio , X1: | **-3.88278** | |
| Root 2 - Computed amount ratio , X2: | **1.581623** | use this solution |
| Concentration of IS, Cis: | **40.00** | |
| Concentration of analyte, Cx: | **63.26** | ug/L |

# Microbac Laboratories Inc.
## Sample Extract Log

**Workgroup:** WG397890
**Analyst:** CAF
**Spike Analyst:** CAF
**Method:** 3510C
**Run Date:** 05/14/2012 12:25
**SOP:** EXA01 Revison 15
**Spike Witness:** CPD
**Surr Solution:** STD50786

**Methylene Chloride Lot #:** COA16058
**Sodium Sulfate,Anhydrous,Granular ( Lot #** COA16124

| | SAMPLE # | Type | Reference | pH | Prod | Init Amnt | Surr Amnt | Spike Amnt | Spike Sol | Final Vol | Color |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | L12050284-01 | SAMP | | N | 827-PAHL | 900 mL | .25 mL | | | 1 mL | Colored |
| 2 | L12050284-03 | SAMP | | N | 827-PAHL | 930 mL | .25 mL | | | 1 mL | Transparent |
| 3 | L12050284-05 | SAMP | | N | 827-PAHL | 900 mL | .25 mL | | | 1 mL | Transparent |
| 4 | L12050284-07 | SAMP | | N | 827-PAHL | 980 mL | .25 mL | | | 1 mL | Colored |
| 5 | L12050284-10 | SAMP | | N | 827-PAHL | 960 mL | .25 mL | | | 1 mL | Transparent |
| 6 | L12050284-12 | SAMP | | N | 827-PAHL | 910 mL | .25 mL | | | 1 mL | Transparent |
| 7 | L12050299-01 | SAMP | | N | 827-PAHL | 1000 mL | .25 mL | | | 1 mL | Colored |
| 8 | L12050299-02 | SAMP | | N | 827-PAHL | 870 mL | .25 mL | | | 1 mL | Transparent |
| 9 | L12050317-01 | SAMP | | N | 827-PAHL | 850 mL | .25 mL | | | 1 mL | Transparent |
| 10 | L12050317-03 | SAMP | | N | 827-PAHL | 940 mL | .25 mL | | | 1 mL | Transparent |
| 11 | L12050317-05 | RS01 | | N | 827-PAHL | 1000 mL | .25 mL | | | 1 mL | Transparent |
| 12 | L12050317-07 | SAMP | | N | 827-PAHL | 850 mL | .25 mL | | | 1 mL | Colored |
| 13 | L12050317-09 | SAMP | | N | 827-PAHL | 900 mL | .25 mL | | | 1 mL | Colored |
| 14 | L12050317-11 | SAMP | | N | 827-PAHL | 920 mL | .25 mL | | | 1 mL | Colored |
| 15 | L12050317-13 | SAMP | | N | 827-PAHL | 900 mL | .25 mL | | | 1 mL | Colored |
| 16 | L12050317-15 | MS01 | L12050317-05 | N | 827-PAHL | 930 mL | .25 mL | 1 mL | STD50386 | 1 mL | Transparent |
| 17 | L12050317-17 | SD01 | L12050317-05 | N | 827-PAHL | 980 mL | .25 mL | 1 mL | STD50386 | 1 mL | Transparent |
| 18 | L12050317-19 | SAMP | | N | 827-PAHL | 910 mL | .25 mL | | | 1 mL | Transparent |
| 19 | L12050338-05 | SAMP | | N | 827-PAHL | 950 mL | .25 mL | | | 1 mL | Transparent |
| 20 | L12050338-06 | SAMP | | N | 827-PAHL | 960 mL | .25 mL | | | 1 mL | Transparent |
| 21 | WG397890-01 | REF | L12050317-05 | N | 827-PAHL | 1000 mL | .25 mL | | | 1 mL | Transparent |
| 22 | WG397890-02 | BLANK | | N | 827-PAHL | 1000 mL | .25 mL | | | 1 mL | Transparent |
| 23 | WG397890-03 | LCS | | N | 827-PAHL | 1000 mL | .25 mL | 1 mL | STD50386 | 1 mL | Transparent |
| 24 | WG397890-04 | MS | L12050317-05 | N | 827-PAHL | 930 mL | .25 mL | 1 mL | STD50386 | 1 mL | Transparent |
| 25 | WG397890-05 | MSD | L12050317-05 | N | 827-PAHL | 980 mL | .25 mL | 1 mL | STD50386 | 1 mL | Transparent |

| | |
|---|---|
| L12050284-01 | INITIAL PH~4, ADJUSTED WITH 10N NAOH |
| L12050299-01 | EMULSIONS(N) |
| L12050317-01 | EMULSIONS(N) |
| L12050317-13 | EMULSIONS(N) |

**Analyst:** Cheryl A. Flowers

**Reviewer:** [signature]

EXTRACT - Modified 10/22/2008
PDF ID: 2413756
Report generated: 05/17/2012 13:19

# Microbac Laboratories Inc.

## Instrument Run Log

Instrument: HPMS7 Dataset: 040412
Analyst1: CAA Analyst2: NA
Method: 8270L SOP: MSS03 Rev: 10

Maintenance Log ID: 41246 Syringe Filter Lot#:

Column 1 ID: RXI-5MS Column 2 ID: NA
Workgroups: WG394108
Internal STD: STD50749 Surrogate STD: NA Calibration STD
CCV STD: LCS STD: MS/MSD STD:

Comments:

| Seq. | File ID | Sample Information | Mat | Dil | Reference | Date/Time |
|---|---|---|---|---|---|---|
| 1 | 7M54726 | WG394111-01 5PPM DFTPP STD | 1 | 1 | STD50659 | 04/04/12 08:53 |
| 2 | 7M54727 | WG394111-02 1PPM PAHL STD | 1 | 1 | STD49560 | 04/04/12 09:10 |
| 3 | 7M54728 | WG394111-02 1PPM PAHL STD | 1 | 1 | STD49560 | 04/04/12 09:39 |
| 4 | 7M54729 | WG394111-03 10PPM PAHL STD | 1 | 1 | STD49560 | 04/04/12 10:35 |
| 5 | 7M54730 | WG394111-04 5PPM PAHL STD | 1 | 1 | STD49560 | 04/04/12 11:03 |
| 6 | 7M54731 | WG394111-05 2.5PPM PAHL STD | 1 | 1 | STD49560 | 04/04/12 11:30 |
| 7 | 7M54732 | WG394111-06 0.5PPM PAHL STD | 1 | 1 | STD49560 | 04/04/12 11:58 |
| 8 | 7M54733 | WG394111-07 0.1PPM PAHL STD | 1 | 1 | STD49560 | 04/04/12 12:26 |
| 9 | 7M54734 | WG394111-08 0.05PPM PAHL STD | 1 | 1 | STD49560 | 04/04/12 12:53 |
| 10 | 7M54735 | WG394111-09 1PPM PAHL Alt Src STD | 1 | 1 | STD49584 | 04/04/12 13:21 |
| 11 | 7M54736 | WG393926-01 BLK 04/03 | 7 | 1 | SOIL | 04/04/12 13:49 |
| 12 | 7M54737 | WG393926-02 LCS 04/03 | 7 | 1 | SOIL | 04/04/12 14:17 |
| 13 | 7M54738 | WG393926-03 LCS DUP 04/03 | 7 | 1 | SOIL | 04/04/12 14:45 |
| 14 | 7M54739 | L12040002-01 LOD | 7 | 1 | SOIL | 04/04/12 15:12 |
| 15 | 7M54740 | L12040004-01 LOQ | 7 | 1 | SOIL | 04/04/12 15:40 |
| 16 | 7M54741 | L12040039-04 | 7 | 1 | SOIL | 04/04/12 16:08 |
| 17 | 7M54742 | L12040039-08 | 7 | 1 | SOIL | 04/04/12 16:36 |

**Comments**

| Seq. | Rerun | Dil. | Reason | Analytes |
|---|---|---|---|---|
| 2 | X | | | |
| | WG394111-02 1PPM PAHL STD - Pyrene fails high. | | | |
| 3 | | | | |
| | WG394111-02 1PPM PAHL STD - Pyrene fails high, run ICAL. | | | |
| 17 | X | 10 | Over Calibration Range | #3, 4, 5 |
| | L12040039-08 - SS NBZ high - SMI. | | | |

Page: 1 Approved: 09-APR-12

# Microbac Laboratories Inc.

## Instrument Run Log

Instrument: HPMS7 Dataset: 051512
Analyst1: CAA Analyst2: NA
Method: 8270L SOP: MSS03 Rev: 10

Maintenance Log ID: 41758 Syringe Filter Lot#:

Column 1 ID: RXI-5MS Column 2 ID: NA
Workgroups: WG397981
Internal STD: STD51409 Surrogate STD: NA Calibration STD
CCV STD: LCS STD: MS/MSD STD:

Comments:

| Seq. | File ID | Sample Information | Mat | Dil | Reference | Date/Time |
|---|---|---|---|---|---|---|
| 1 | 7M55015 | WG397984-01 5PPM DFTPP STD | 1 | 1 | STD50659 | 05/15/12 09:22 |
| 2 | 7M55016 | WG397984-02 1PPM PAHL STD | 1 | 1 | STD49560 | 05/15/12 09:39 |
| 3 | 7M55017 | WG397890-02 BLK 05/14 | 1 | 1 | | 05/15/12 10:07 |
| 4 | 7M55018 | WG397890-03 LCS 05/14 | 1 | 1 | | 05/15/12 10:34 |
| 5 | 7M55019 | L12050284-03 | 1 | 1 | | 05/15/12 11:02 |
| 6 | 7M55020 | L12050284-05 | 1 | 1 | | 05/15/12 11:30 |
| 7 | 7M55021 | L12050284-07 | 1 | 1 | | 05/15/12 11:58 |
| 8 | 7M55022 | L12050284-10 | 1 | 1 | | 05/15/12 12:26 |
| 9 | 7M55023 | L12050284-12 | 1 | 1 | | 05/15/12 12:54 |
| 10 | 7M55024 | L12050299-01 | 1 | 1 | | 05/15/12 13:21 |
| 11 | 7M55025 | L12050299-02 | 1 | 1 | | 05/15/12 13:49 |
| 12 | 7M55026 | L12050317-01 | 1 | 1 | | 05/15/12 14:17 |
| 13 | 7M55027 | L12050317-03 | 1 | 1 | | 05/15/12 14:44 |
| 14 | 7M55028 | L12050317-05 REF | 1 | 1 | | 05/15/12 15:12 |
| 15 | 7M55029 | L12050317-15 MS | 1 | 1 | | 05/15/12 15:40 |
| 16 | 7M55030 | L12050317-17 MSD | 1 | 1 | | 05/15/12 16:08 |
| 17 | 7M55031 | L12050317-19 | 1 | 1 | | 05/15/12 16:36 |
| 18 | 7M55032 | L12050338-05 | 1 | 1 | | 05/15/12 17:03 |
| 19 | 7M55033 | L12050338-06 | 1 | 1 | | 05/15/12 17:31 |
| 20 | 7M55034 | L12050317-07 | 1 | 1 | | 05/15/12 17:59 |
| 21 | 7M55035 | L12050317-11 | 1 | 1 | | 05/15/12 18:26 |
| 22 | 7M55036 | L12050317-13 | 1 | 1 | | 05/15/12 18:54 |
| 23 | 7M55037 | L12050317-09 | 1 | 1 | | 05/15/12 19:21 |
| 24 | 7M55038 | L12050284-01 | 1 | 1 | | 05/15/12 19:49 |

**Comments**

| Seq. | Rerun | Dil. | Reason | Analytes |
|---|---|---|---|---|
| 5 | | | | |
| | L12050284-03 - SS FBP low. | | | |
| 10 | | | | |
| | L12050299-01 - SS TPH marginally low. | | | |
| 17 | | | | |
| | L12050317-19 - SS NBZ high. | | | |

Page: 1 Approved: 17-MAY-12

**Microbac Laboratories Inc.**

Instrument Run Log

Instrument: HPMS7 Dataset: 051512
Analyst1: CAA Analyst2: NA
Method: 8270L SOP: MSS03 Rev: 10

Maintenance Log ID: 41758 Syringe Filter Lot#:

Column 1 ID: RXI-5MS Column 2 ID: NA
Workgroups: WG397981
Internal STD: STD51409 Surrogate STD: NA
CCV STD: LCS STD:

**Comments**

| Seq. | Rerun | Dil. | Reason | Analytes |
|---|---|---|---|---|
| 18 | X | 1 | | |
| | L12050338-05 - SS NBZ high, remix and run. | | | |
| 19 | X | 1 | Internal standard failure | Istd 1 low. |
| | L12050338-06 - SS NBZ high, remix and run. | | | |
| 20 | | | | |
| | L12050317-07 - Istd 1 low - SMI; SS NBZ high. | | | |
| 22 | | | | |
| | L12050317-13 - SS TPH low. | | | |

Page: 2 Approved: 17-MAY-12

Microbac Laboratories Inc.

Data Checklist

Date: 04-APR-2012
Analyst: CAA
Analyst: NA
Method: 8270L
Instrument: HPMS7
Curve Workgroup: NA
Runlog ID: 46039
Analytical Workgroups: L12040002, L12040004, L12040039

| | |
|---|---|
| ANALYTICAL | |
| System Performance Check | X |
| DFTPP (MS) | X |
| Endrin/DDT breakdown (8081/MS) | NA |
| Pentachlorophenol/benzidine tailing (MS) | NA |
| Eluent check (IC)/system pressure (HPLC) | NA |
| Window standard (FID) | NA |
| Initial Calibration | X |
| Average RF | X |
| Linear regression or higher order curve | NA |
| Alternate source standard (ICV) % Difference | X |
| Continuing Calibration (CCV) | NA |
| % D/% Drift | NA |
| Minimum response factors (MS) | NA |
| Continuing calibration blank (CCB) (IC) | NA |
| Special standards | NA |
| Blanks | X |
| TCL hits | X |
| Surrogate recoveries | X |
| LCS/LCSD (Laboratory Control Sample) | X |
| Recoveries | X |
| Surrogate recoveries | X |
| MS/MSD/Sample duplicates | NA |
| Recoveries | NA |
| %RPD | NA |
| Samples | X |
| TCL hits | X |
| Mass spectra (MS/HPLC)/2nd column confirmations (ECD/FID/HPLC) | X |
| Surrogate recoveries | X |
| Internal standard areas (MS) | X |
| Library searches (MS) | NA |
| Calculations & correct factors | X |
| Compounds above calibration range | X |
| Reruns | NA |
| Manual integrations | X |
| Project/client specific requirements | X |
| | |
| REPORTING | |
| Upload batch form | X |
| KOBRA workgroup data/forms/bench sheets | X |
| Case narratives | NA |
| Check for completeness | X |
| Primary Reviewer | CAA |
| | |
| SUPERVISORY/SECONDARY REVIEW | |
| Check for compliance with method and project specific requirements | X |
| Check the completeness/accuracy of reported information | X |
| Data qualifiers | X |
| Secondary Reviewer | MDC |

Primary Reviewer:
05-APR-2012

Secondary Reviewer:
09-APR-2012

CHECKLIST1 - Modified 03/05/2008
Generated: APR-09-2012 12:24:01

Microbac Laboratories Inc.

Data Checklist

Date: 15-MAY-2012
Analyst: CAA
Analyst: NA
Method: 8270L
Instrument: HPMS7
Curve Workgroup: NA
Runlog ID: 46802
Analytical Workgroups: L12050284, L12050299, L12050317, L12050338

| | |
|---|---|
| ANALYTICAL | |
| System Performance Check | X |
| DFTPP (MS) | X |
| Endrin/DDT breakdown (8081/MS) | NA |
| Pentachlorophenol/benzidine tailing (MS) | NA |
| Eluent check (IC)/system pressure (HPLC) | NA |
| Window standard (FID) | NA |
| Initial Calibration | NA |
| Average RF | NA |
| Linear regression or higher order curve | NA |
| Alternate source standard (ICV) % Difference | NA |
| Continuing Calibration (CCV) | X |
| % D/% Drift | X |
| Minimum response factors (MS) | X |
| Continuing calibration blank (CCB) (IC) | NA |
| Special standards | NA |
| Blanks | X |
| TCL hits | X |
| Surrogate recoveries | X |
| LCS/LCSD (Laboratory Control Sample) | X |
| Recoveries | X |
| Surrogate recoveries | X |
| MS/MSD/Sample duplicates | X |
| Recoveries | X |
| %RPD | X |
| Samples | X |
| TCL hits | X |
| Mass spectra (MS/HPLC)/2nd column confirmations (ECD/FID/HPLC) | X |
| Surrogate recoveries | X |
| Internal standard areas (MS) | X |
| Library searches (MS) | NA |
| Calculations & correct factors | X |
| Compounds above calibration range | NA |
| Reruns | NA |
| Manual integrations | X |
| Project/client specific requirements | X |
| | |
| REPORTING | |
| Upload batch form | X |
| KOBRA workgroup data/forms/bench sheets | X |
| Case narratives | NA |
| Check for completeness | X |
| Primary Reviewer | CAA |
| | |
| SUPERVISORY/SECONDARY REVIEW | |
| Check for compliance with method and project specific requirements | X |
| Check the completeness/accuracy of reported information | X |
| Data qualifiers | X |
| Secondary Reviewer | MDC |

Primary Reviewer:
17-MAY-2012

Secondary Reviewer:
17-MAY-2012

CHECKLIST1 - Modified 03/05/2008
Generated: MAY-17-2012 13:55:05

Microbac Laboratories Inc.

# HOLDING TIMES
# EQUIVALENT TO AFCEE FORM 9

Analytical Method: 8270C AAB#: WG397981

Login Number: L12050284

| Client ID | ID | Date Collected | TCLP Date | Time Held | Max Hold | Q | Extract Date | Time Held | Max Hold | Q | Run Date | Time Held | Max Hold | Q |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| BBLD-PIT-SSP-050812 | 01 | 05/08/12 | | | | | 05/14/12 | 6.1 | 7 | | 05/15/12 | 1.3 | 40 | |
| PZ-07-050812 | 03 | 05/08/12 | | | | | 05/14/12 | 6.1 | 7 | | 05/15/12 | .9 | 40 | |
| MW-18-050812 | 05 | 05/08/12 | | | | | 05/14/12 | 6.1 | 7 | | 05/15/12 | 1 | 40 | |
| TW-01-050812 | 07 | 05/08/12 | | | | | 05/14/12 | 5.9 | 7 | | 05/15/12 | 1 | 40 | |
| DUP-GW-050812 | 10 | 05/08/12 | | | | | 05/14/12 | 5.9 | 7 | | 05/15/12 | 1 | 40 | |
| EB-050812-GW | 12 | 05/08/12 | | | | | 05/14/12 | 6 | 7 | | 05/15/12 | 1 | 40 | |

* = SEE PROJECT QAPP REQUIREMENTS

HOLD_TIMES - Modified 03/06/2008
PDF File ID: 2419122
Report generated 05/17/2012 14:35

Login Number: L12050284
Instrument Id: HPMS7
Workgroup (AAB#): WG397981

Method: 8270L
CAL ID: HPMS7-04-APR-12
Matrix: Water

| Sample Number | Dilution | Tag | 1 | 2 | 3 |
|---|---|---|---|---|---|
| L12050284-01 | 1.00 | 01 | 46.0 | 51.8 | 67.6 |
| L12050284-03 | 1.00 | 01 | 42.4 | 46.6 | 108 |
| L12050284-05 | 1.00 | 01 | 69.7 | 81.4 | 107 |
| L12050284-07 | 1.00 | 01 | 76.6 | 87.9 | 96.3 |
| L12050284-10 | 1.00 | 01 | 79.0 | 93.1 | 102 |
| L12050284-12 | 1.00 | 01 | 79.1 | 92.2 | 101 |
| WG397890-02 | 1.00 | 01 | 67.9 | 79.3 | 109 |
| WG397890-03 | 1.00 | 01 | 76.8 | 86.9 | 105 |

| Surrogates | Surrogate Limits | | |
|---|---|---|---|
| 1 - 2-Fluorobiphenyl | 43 | - | 116 |
| 2 - Nitrobenzene-d5 | 35 | - | 114 |
| 3 - p-Terphenyl-d14 | 33 | - | 141 |

Underline = Result out of surrogate limits

DL = surrogate diluted out
ND = surrogate not detected

SURROGATES - Modified 03/06/2008
PDF File ID: 2419135
Report generated: 05/17/2012 14:36

Microbac Laboratories Inc.

## METHOD BLANK SUMMARY

Login Number: L12050284
Work Group: WG397981
Blank File ID: 7M55017
Blank Sample ID: WG397890-02
Prep Date: 05/14/12 12:25
Instrument ID: HPMS7
Analyzed Date: 05/15/12 10:07
Method: 8270C
Analyst: CAA

This Method Blank Applies To The Following Samples:

| Client ID | Lab Sample ID | Lab File ID | Time Analyzed | TAG |
|---|---|---|---|---|
| LCS | WG397890-03 | 7M55018 | 05/15/12 10:34 | 01 |
| PZ-07-050812 | L12050284-03 | 7M55019 | 05/15/12 11:02 | 01 |
| MW-18-050812 | L12050284-05 | 7M55020 | 05/15/12 11:30 | 01 |
| TW-01-050812 | L12050284-07 | 7M55021 | 05/15/12 11:58 | 01 |
| DUP-GW-050812 | L12050284-10 | 7M55022 | 05/15/12 12:26 | 01 |
| EB-050812-GW | L12050284-12 | 7M55023 | 05/15/12 12:54 | 01 |
| BBLD-PIT-SSP-050812 | L12050284-01 | 7M55038 | 05/15/12 19:49 | 01 |

Report Name: BLANK_SUMMARY
PDF File ID: 2419123
Report generated 05/17/2012 14:35

# Microbac Laboratories Inc.
## METHOD BLANK REPORT

Login Number: L12050284 Prep Date: 05/14/12 12:25 Sample ID: WG397890-02
Instrument ID: HPMS7 Run Date: 05/15/12 10:07 Prep Method: 3510C
File ID: 7M55017 Analyst: CAA Method: 8270C
Workgroup (AAB#): WG397981 Matrix: Water Units: ug/L
Contract #: Cal ID: HPMS7-04-APR-12

| Analytes | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| 2-Methylnaphthalene | 0.0250 | 0.0500 | 0.0250 | 1 | U |
| Acenaphthene | 0.0250 | 0.0500 | 0.0250 | 1 | U |
| Acenaphthylene | 0.0250 | 0.0500 | 0.0250 | 1 | U |
| Anthracene | 0.0250 | 0.0500 | 0.0250 | 1 | U |
| Benzo(a)anthracene | 0.0250 | 0.0500 | 0.0250 | 1 | U |
| Benzo(a)pyrene | 0.0250 | 0.0500 | 0.0250 | 1 | U |
| Benzo(b)fluoranthene | 0.0250 | 0.0500 | 0.0250 | 1 | U |
| Benzo(g,h,i)perylene | 0.0250 | 0.0500 | 0.0250 | 1 | U |
| Benzo(k)fluoranthene | 0.0250 | 0.0500 | 0.0250 | 1 | U |
| Chrysene | 0.0250 | 0.0500 | 0.0250 | 1 | U |
| Dibenzo(a,h)anthracene | 0.0250 | 0.0500 | 0.0250 | 1 | U |
| Fluoranthene | 0.0250 | 0.0500 | 0.0250 | 1 | U |
| Fluorene | 0.0250 | 0.0500 | 0.0250 | 1 | U |
| Indeno(1,2,3-cd)pyrene | 0.0250 | 0.0500 | 0.0250 | 1 | U |
| Naphthalene | 0.0250 | 0.0500 | 0.0250 | 1 | U |
| Phenanthrene | 0.0250 | 0.0500 | 0.0250 | 1 | U |
| Pyrene | 0.0250 | 0.0500 | 0.0250 | 1 | U |

| Surrogates | % Recovery | Surrogate Limits | | | Qualifier |
|---|---|---|---|---|---|
| 2-Fluorobiphenyl | 67.9 | 43 | - | 116 | PASS |
| Nitrobenzene-d5 | 79.3 | 35 | - | 114 | PASS |
| p-Terphenyl-d14 | 109 | 33 | - | 141 | PASS |

MDL Method Detection Limit
RL Reporting/Practical Quantitation Limit
ND Analyte Not detected at or above reporting limit
* |Analyte concentration| > RL

Report Name:BLANK
PDF ID: 2419124
17-MAY-2012 14:35

Login Number: L12050284 Run Date: 05/15/2012 Sample ID: WG397890-03
Instrument ID: HPMS7 Run Time: 10:34 Prep Method: 3510C
File ID: 7M55018 Analyst: CAA Method: 8270C
Workgroup (AAB#): WG397981 Matrix: Water Units: ug/L
QC Key: WATERLOO Lot#: STD50386 Cal ID: HPMS7-04-APR-12

| Analytes | Expected | Found | % Rec | LCS Limits | Q |
|---|---|---|---|---|---|
| 2-Methylnaphthalene | 1.00 | 0.951 | 95.1 | 30 - 105 | |
| Acenaphthene | 1.00 | 0.849 | 84.9 | 30 - 110 | |
| Acenaphthylene | 1.00 | 0.773 | 77.3 | 30 - 115 | |
| Anthracene | 1.00 | 0.973 | 97.3 | 30 - 130 | |
| Benzo(a)anthracene | 1.00 | 0.915 | 91.5 | 50 - 150 | |
| Benzo(a)pyrene | 1.00 | 1.03 | 103 | 50 - 140 | |
| Benzo(b)fluoranthene | 1.00 | 0.936 | 93.6 | 40 - 150 | |
| Benzo(g,h,i)perylene | 1.00 | 0.915 | 91.5 | 30 - 150 | |
| Benzo(k)fluoranthene | 1.00 | 0.991 | 99.1 | 40 - 150 | |
| Chrysene | 1.00 | 1.01 | 101 | 45 - 145 | |
| Dibenzo(a,h)anthracene | 1.00 | 0.904 | 90.4 | 25 - 155 | |
| Fluoranthene | 1.00 | 1.07 | 107 | 40 - 150 | |
| Fluorene | 1.00 | 0.841 | 84.1 | 30 - 120 | |
| Indeno(1,2,3-cd)pyrene | 1.00 | 0.950 | 95.0 | 35 - 150 | |
| Naphthalene | 1.00 | 0.872 | 87.2 | 30 - 100 | |
| Phenanthrene | 1.00 | 0.901 | 90.1 | 30 - 130 | |
| Pyrene | 1.00 | 1.00 | 100 | 50 - 150 | |

| Surrogates | % Recovery | Surrogate Limits | Qualifier |
|---|---|---|---|
| 2-Fluorobiphenyl | 76.8 | 43 - 116 | PASS |
| Nitrobenzene-d5 | 86.9 | 35 - 114 | PASS |
| p-Terphenyl-d14 | 105 | 33 - 141 | PASS |

* EXCEEDS %REC LIMIT

LCS - Modified 03/06/2008
PDF File ID: 2419125
Report generated: 05/17/2012 14:36

## DFTPP

Login Number: L12050284
Instrument: HPMS7
Analyst: CAA
Workgroup: WG394111

Tune ID: WG394111-01
Run Date: 04/04/2012
Run Time: 08:53
File ID: 7M54726
Cal ID: HPMS7-04-APR-12

| Target Mass | Rel. to Mass | Lower Limit% | Upper Limit% | Rel. Abn% | Raw Abn | Result Pass/Fail |
|---|---|---|---|---|---|---|
| 51.0 | 198 | 30.0 | 60.0 | 50.9 | 302042 | PASS |
| 68.0 | 69.0 | 0 | 2.00 | 0 | 0 | PASS |
| 69.0 | 198 | 0 | 100 | 49.9 | 296108 | PASS |
| 70.0 | 69.0 | 0 | 2.00 | 0.173 | 512 | PASS |
| 127 | 198 | 40.0 | 60.0 | 59.2 | 351488 | PASS |
| 197 | 198 | 0 | 1.00 | 0 | 0 | PASS |
| 198 | 198 | 100 | 100 | 100 | 593642 | PASS |
| 199 | 198 | 5.00 | 9.00 | 7.09 | 42109 | PASS |
| 275 | 198 | 10.0 | 30.0 | 23.3 | 138533 | PASS |
| 365 | 198 | 1.00 | 100 | 2.46 | 14602 | PASS |
| 441 | 443 | 0.0100 | 100 | 72.5 | 60485 | PASS |
| 442 | 198 | 40.0 | 100 | 70.5 | 418261 | PASS |
| 443 | 442 | 17.0 | 23.0 | 20.0 | 83453 | PASS |

This check relates to the following samples:

| Lab ID | Client ID | Tag | Date Analyzed | Q |
|---|---|---|---|---|
| WG394111-02 | STD-CCV | 01 | 04/04/2012 09:39 | |
| WG394111-03 | STD | 01 | 04/04/2012 10:35 | |
| WG394111-04 | STD | 01 | 04/04/2012 11:03 | |
| WG394111-05 | STD | 01 | 04/04/2012 11:30 | |
| WG394111-06 | STD | 01 | 04/04/2012 11:58 | |
| WG394111-07 | STD | 01 | 04/04/2012 12:26 | |
| WG394111-08 | STD | 01 | 04/04/2012 12:53 | |
| WG394111-09 | SSCV | 01 | 04/04/2012 13:21 | |

* Sample past 12 hour tune limit

TUNE - Modified 03/06/2008
PDF File ID: 2419130
Report generated 05/17/2012 14:36

## DFTPP

Login Number: L12050284
Instrument: HPMS7
Analyst: CAA
Workgroup: WG397984

Tune ID: WG397984-01
Run Date: 05/15/2012
Run Time: 09:22
File ID: 7M55015
Cal ID: HPMS7-04-APR-12

| Target Mass | Rel. to Mass | Lower Limit% | Upper Limit% | Rel. Abn% | Raw Abn | Result Pass/Fail |
|---|---|---|---|---|---|---|
| 51.0 | 198 | 30.0 | 60.0 | 43.6 | 122360 | PASS |
| 68.0 | 69.0 | 0 | 2.00 | 0.178 | 219 | PASS |
| 69.0 | 198 | 0 | 100 | 43.9 | 123001 | PASS |
| 70.0 | 69.0 | 0 | 2.00 | 1.32 | 1620 | PASS |
| 127 | 198 | 40.0 | 60.0 | 57.3 | 160578 | PASS |
| 197 | 198 | 0 | 1.00 | 0 | 0 | PASS |
| 198 | 198 | 100 | 100 | 100 | 280426 | PASS |
| 199 | 198 | 5.00 | 9.00 | 7.17 | 20119 | PASS |
| 275 | 198 | 10.0 | 30.0 | 22.4 | 62800 | PASS |
| 365 | 198 | 1.00 | 100 | 2.80 | 7843 | PASS |
| 441 | 443 | 0.0100 | 100 | 73.5 | 26784 | PASS |
| 442 | 198 | 40.0 | 100 | 64.5 | 180877 | PASS |
| 443 | 442 | 17.0 | 23.0 | 20.1 | 36418 | PASS |

This check relates to the following samples:

| Lab ID | Client ID | Tag | Date Analyzed | Q |
|---|---|---|---|---|
| WG397984-02 | CCV | 01 | 05/15/2012 09:39 | |
| WG397890-02 | BLANK | 01 | 05/15/2012 10:07 | |
| WG397890-03 | LCS | 01 | 05/15/2012 10:34 | |
| L12050284-03 | PZ-07-050812 | 01 | 05/15/2012 11:02 | |
| L12050284-05 | MW-18-050812 | 01 | 05/15/2012 11:30 | |
| L12050284-07 | TW-01-050812 | 01 | 05/15/2012 11:58 | |
| L12050284-10 | DUP-GW-050812 | 01 | 05/15/2012 12:26 | |
| L12050284-12 | EB-050812-GW | 01 | 05/15/2012 12:54 | |
| L12050284-01 | BBLD-PIT-SSP-050812 | 01 | 05/15/2012 19:49 | |

* Sample past 12 hour tune limit

TUNE - Modified 03/06/2008
PDF File ID: 2419130
Report generated 05/17/2012 14:36

**Microbac Laboratories Inc.**
**INITIAL CALIBRATION SUMMARY**

**Login Number:** L12050284 **Instrument ID:** HPMS7
**Analytical Method:** 8270C **Initial Calibration Date:** 04-APR-12 12:53
**ICAL Workgroup:** WG394111 **Column ID:** F

| Analyte | | AVG RF | % RSD | LINEAR (R) | QUAD ($R^2$) |
|---|---|---|---|---|---|
| Acenaphthene | CCC | 1.265 | 8.40 | | |
| Benzo[a]pyrene | CCC | 1.284 | 7.43 | | |
| Fluoranthene | CCC | 1.303 | 11.3 | | |
| 2-Methylnaphthalene | | 0.7214 | 6.62 | | |
| Acenaphthylene | | 2.211 | 7.32 | | |
| Anthracene | | 1.249 | 3.76 | | |
| Benzo[a]anthracene | | 1.297 | 7.77 | | |
| Benzo[b]fluoranthene | | 1.380 | 7.88 | | |
| Benzo[ghi]perylene | | 1.240 | 5.94 | | |
| Benzo[k]fluoranthene | | 1.305 | 10.2 | | |
| Chrysene | | 1.291 | 10.9 | | |
| Dibenz[ah]anthracene | | 1.190 | 4.82 | | |
| Fluorene | | 1.503 | 12.2 | | |
| Indeno[1,2,3-cd]pyrene | | 1.406 | 4.98 | | |
| Naphthalene | | 1.184 | 11.0 | | |
| Phenanthrene | | 1.244 | 7.24 | | |
| Pyrene | | 1.607 | 11.0 | | |

**R = Correlation coefficient; 0.995 minimum**
**$R^2$ = Coefficient of determination; 0.99 minimum**

**If the %RSD is greater than the limit specified by the method or project QAP, then linear or quadratic equations will be used.**

**INT_CAL - Modified 03/06/2008**
**PDF File ID: 2419126**
**Report generated 05/17/2012 14:36**

**Microbac Laboratories Inc.**

**INITIAL CALIBRATION DATA**

**Login Number:** L12050284
**Analytical Method:** 8270C
**Instrument ID:** HPMS7
**Initial Calibration Date:** 04-APR-12 12:53
**Column ID:** F

| Analyte | WG394111-02 | | | WG394111-03 | | | WG394111-04 | | |
|---|---|---|---|---|---|---|---|---|---|
| | CONC | RESP | RF | CONC | RESP | RF | CONC | RESP | RF |
| Acenaphthene | 1.00 | 101608.000 | 1.193 | 10.0 | 743637.000 | 1.162 | 5.00 | 356386.000 | 1.212 |
| Benzo[a]pyrene | 1.00 | 148527.000 | 1.275 | 10.0 | 1081378.00 | 1.179 | 5.00 | 525392.000 | 1.241 |
| Fluoranthene | 1.00 | 183927.000 | 1.284 | 10.0 | 1136279.00 | 1.081 | 5.00 | 627208.000 | 1.292 |
| 2-Methylnaphthalene | 1.00 | 112240.000 | 0.7314 | 10.0 | 851242.000 | 0.6603 | 5.00 | 396960.000 | 0.7307 |
| Acenaphthylene | 1.00 | 169525.000 | 1.991 | 10.0 | 1359329.00 | 2.123 | 5.00 | 644671.000 | 2.192 |
| Anthracene | 1.00 | 177663.000 | 1.240 | 10.0 | 1226008.00 | 1.166 | 5.00 | 603655.000 | 1.244 |
| Benzo[a]anthracene | 1.00 | 151964.000 | 1.287 | 10.0 | 1071059.00 | 1.159 | 5.00 | 597051.000 | 1.276 |
| Benzo[b]fluoranthene | 1.00 | 153733.000 | 1.320 | 10.0 | 1150949.00 | 1.254 | 5.00 | 633809.000 | 1.496 |
| Benzo[ghi]perylene | 1.00 | 144004.000 | 1.236 | 10.0 | 1226855.00 | 1.337 | 5.00 | 511152.000 | 1.207 |
| Benzo[k]fluoranthene | 1.00 | 143781.000 | 1.234 | 10.0 | 1050437.00 | 1.145 | 5.00 | 559677.000 | 1.321 |
| Chrysene | 1.00 | 148985.000 | 1.261 | 10.0 | 1017304.00 | 1.101 | 5.00 | 566428.000 | 1.210 |
| Dibenz[ah]anthracene | 1.00 | 142338.000 | 1.222 | 10.0 | 1055300.00 | 1.150 | 5.00 | 503437.000 | 1.189 |
| Fluorene | 1.00 | 126450.000 | 1.485 | 10.0 | 903709.000 | 1.412 | 5.00 | 440591.000 | 1.498 |
| Indeno[1,2,3-cd]pyrene | 1.00 | 167498.000 | 1.438 | 10.0 | 1239153.00 | 1.351 | 5.00 | 591189.000 | 1.396 |
| Naphthalene | 1.00 | 174314.000 | 1.136 | 10.0 | 1299479.00 | 1.008 | 5.00 | 598766.000 | 1.102 |
| Phenanthrene | 1.00 | 174346.000 | 1.217 | 10.0 | 1204227.00 | 1.145 | 5.00 | 578333.000 | 1.192 |
| Pyrene | 1.00 | 208192.000 | 1.763 | 10.0 | 1269832.00 | 1.374 | 5.00 | 697024.000 | 1.489 |

**INT_CAL - Modified 03/06/2008**
**PDF File ID: 2419126**
**Report generated 05/17/2012 14:36**

**Microbac Laboratories Inc.**

**INITIAL CALIBRATION DATA**

**Login Number:** L12050284
**Analytical Method:** 8270C
**Instrument ID:** HPMS7
**Initial Calibration Date:** 04-APR-12 12:53
**Column ID:** F

| Analyte | WG394111-05 | | | WG394111-06 | | | WG394111-07 | | |
|---|---|---|---|---|---|---|---|---|---|
| | CONC | RESP | RF | CONC | RESP | RF | CONC | RESP | RF |
| Acenaphthene | 2.50 | 175018.000 | 1.349 | 0.500 | 43592.0000 | 1.197 | 0.100 | 8476.00000 | 1.458 |
| Benzo[a]pyrene | 2.50 | 260806.000 | 1.271 | 0.500 | 65422.0000 | 1.279 | 0.100 | 13356.0000 | 1.486 |
| Fluoranthene | 2.50 | 284981.000 | 1.161 | 0.500 | 66304.0000 | 1.367 | 0.100 | 13816.0000 | 1.494 |
| 2-Methylnaphthalene | 2.50 | 175530.000 | 0.6506 | 0.500 | 48164.0000 | 0.7742 | 0.100 | 8513.00000 | 0.7607 |
| Acenaphthylene | 2.50 | 301490.000 | 2.323 | 0.500 | 77288.0000 | 2.122 | 0.100 | 14501.0000 | 2.494 |
| Anthracene | 2.50 | 307296.000 | 1.252 | 0.500 | 61358.0000 | 1.265 | 0.100 | 12272.0000 | 1.327 |
| Benzo[a]anthracene | 2.50 | 266063.000 | 1.267 | 0.500 | 59958.0000 | 1.285 | 0.100 | 12524.0000 | 1.497 |
| Benzo[b]fluoranthene | 2.50 | 285961.000 | 1.394 | 0.500 | 68495.0000 | 1.340 | 0.100 | 13954.0000 | 1.552 |
| Benzo[ghi]perylene | 2.50 | 255121.000 | 1.244 | 0.500 | 56433.0000 | 1.104 | 0.100 | 11654.0000 | 1.297 |
| Benzo[k]fluoranthene | 2.50 | 257800.000 | 1.257 | 0.500 | 66287.0000 | 1.296 | 0.100 | 14143.0000 | 1.573 |
| Chrysene | 2.50 | 258320.000 | 1.230 | 0.500 | 61514.0000 | 1.318 | 0.100 | 12906.0000 | 1.543 |
| Dibenz[ah]anthracene | 2.50 | 256480.000 | 1.250 | 0.500 | 55466.0000 | 1.085 | 0.100 | 11135.0000 | 1.239 |
| Fluorene | 2.50 | 216247.000 | 1.666 | 0.500 | 46685.0000 | 1.282 | 0.100 | 10569.0000 | 1.817 |
| Indeno[1,2,3-cd]pyrene | 2.50 | 302188.000 | 1.473 | 0.500 | 65450.0000 | 1.280 | 0.100 | 13218.0000 | 1.471 |
| Naphthalene | 2.50 | 307088.000 | 1.138 | 0.500 | 75307.0000 | 1.211 | 0.100 | 15669.0000 | 1.400 |
| Phenanthrene | 2.50 | 309124.000 | 1.260 | 0.500 | 59636.0000 | 1.230 | 0.100 | 13238.0000 | 1.431 |
| Pyrene | 2.50 | 314739.000 | 1.499 | 0.500 | 74252.0000 | 1.591 | 0.100 | 15836.0000 | 1.893 |

**INT_CAL - Modified 03/06/2008**
**PDF File ID: 2419126**
**Report generated 05/17/2012 14:36**

**Microbac Laboratories Inc.**

**INITIAL CALIBRATION DATA**

**Login Number:** L12050284
**Analytical Method:** 8270C
**Instrument ID:** HPMS7
**Initial Calibration Date:** 04-APR-12 12:53
**Column ID:** F

| Analyte | WG394111-08 | | |
|---|---|---|---|
| | CONC | RESP | RF |
| Acenaphthene | 0.0500 | 3814.00000 | 1.286 |
| Benzo[a]pyrene | 0.0500 | 5055.00000 | 1.260 |
| Fluoranthene | 0.0500 | 6400.00000 | 1.443 |
| 2-Methylnaphthalene | 0.0500 | 4045.00000 | 0.7420 |
| Acenaphthylene | 0.0500 | 6622.00000 | 2.232 |
| Anthracene | 0.0500 | 5552.00000 | 1.252 |
| Benzo[a]anthracene | 0.0500 | 6304.00000 | 1.312 |
| Benzo[b]fluoranthene | 0.0500 | 5216.00000 | 1.301 |
| Benzo[ghi]perylene | 0.0500 | 5026.00000 | 1.253 |
| Benzo[k]fluoranthene | 0.0500 | 5257.00000 | 1.311 |
| Chrysene | 0.0500 | 6585.00000 | 1.371 |
| Dibenz[ah]anthracene | 0.0500 | 4789.00000 | 1.194 |
| Fluorene | 0.0500 | 4039.00000 | 1.361 |
| Indeno[1,2,3-cd]pyrene | 0.0500 | 5744.00000 | 1.432 |
| Naphthalene | 0.0500 | 7045.00000 | 1.292 |
| Phenanthrene | 0.0500 | 5467.00000 | 1.233 |
| Pyrene | 0.0500 | 7890.00000 | 1.643 |

**INT_CAL - Modified 03/06/2008**
**PDF File ID: 2419126**
**Report generated 05/17/2012 14:36**

Microbac Laboratories Inc.
ALTERNATE SOURCE CALIBRATION REPORT

Login Number: L12050284 Run Date: 04/04/2012 Sample ID: WG394111-09
Instrument ID: HPMS7 Run Time: 13:21 Method: 8270C
File ID: 7M54735 Analyst: CAA QC Key: WATERLOO
ICal Workgroup: WG394111 Cal ID: HPMS7 - 04-APR-12

| Analyte | | Expected | Found | Units | RF | %D | UCL | Q |
|---|---|---|---|---|---|---|---|---|
| Acenaphthene | CCC | 1000 | 983 | ug/L | 1.24 | 1.70 | 30 | |
| Benzo[a]pyrene | CCC | 1000 | 944 | ug/L | 1.21 | 5.60 | 30 | |
| Fluoranthene | CCC | 1000 | 887 | ug/L | 1.16 | 11.4 | 30 | |
| 2-Methylnaphthalene | | 1000 | 1020 | ug/L | 0.737 | 2.20 | 30 | |
| Acenaphthylene | | 1000 | 1060 | ug/L | 2.34 | 6.00 | 30 | |
| Anthracene | | 1000 | 981 | ug/L | 1.23 | 1.90 | 30 | |
| Benzo[a]anthracene | | 1000 | 921 | ug/L | 1.19 | 7.90 | 30 | |
| Benzo[b]fluoranthene | | 1000 | 863 | ug/L | 1.19 | 13.8 | 30 | |
| Benzo[ghi]perylene | | 1000 | 986 | ug/L | 1.22 | 1.40 | 30 | |
| Benzo[k]fluoranthene | | 1000 | 887 | ug/L | 1.16 | 11.3 | 30 | |
| Chrysene | | 1000 | 935 | ug/L | 1.21 | 6.50 | 30 | |
| Dibenz[ah]anthracene | | 1000 | 978 | ug/L | 1.16 | 2.20 | 30 | |
| Fluorene | | 1000 | 973 | ug/L | 1.46 | 2.70 | 30 | |
| Indeno[1,2,3-cd]pyrene | | 1000 | 995 | ug/L | 1.40 | 0.500 | 30 | |
| Naphthalene | | 1000 | 944 | ug/L | 1.12 | 5.60 | 30 | |
| Phenanthrene | | 1000 | 936 | ug/L | 1.16 | 6.40 | 30 | |
| Pyrene | | 1000 | 940 | ug/L | 1.51 | 6.10 | 30 | |

* Exceeds %D Limit

CCC Calibration Check Compounds
SPCC System Performance Check Compounds

ALT - Modified 09/06/2007
Version 1.5 PDF File ID: 2419129
Report generated 05/17/2012 14:36

Microbac Laboratories Inc.
CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L12050284 Run Date: 05/15/2012 Sample ID: WG397984-02
Instrument ID: HPMS7 Run Time: 09:39 Method: 8270C
File ID: 7M55016 Analyst: CAA QC Key: WATERLOO
Workgroup (AAB#): WG397981 Cal ID: HPMS7 - 04-APR-12
Matrix: WATER

| Analyte | | Expected | Found | UNITS | RF | %D | UCL | Q |
|---|---|---|---|---|---|---|---|---|
| Acenaphthene | CCC | 1000 | 909 | ug/L | 1.15 | 9.08 | 20 | |
| Benzo[a]pyrene | CCC | 1000 | 988 | ug/L | 1.27 | 1.25 | 20 | |
| Fluoranthene | CCC | 1000 | 978 | ug/L | 1.27 | 2.24 | 20 | |
| 2-Methylnaphthalene | | 1000 | 1010 | ug/L | 0.727 | 0.830 | 20 | |
| Acenaphthylene | | 1000 | 858 | ug/L | 1.90 | 14.2 | 20 | |
| Anthracene | | 1000 | 963 | ug/L | 1.20 | 3.74 | 20 | |
| Benzo[a]anthracene | | 1000 | 922 | ug/L | 1.20 | 7.77 | 20 | |
| Benzo[b]fluoranthene | | 1000 | 856 | ug/L | 1.18 | 14.4 | 20 | |
| Benzo[ghi]perylene | | 1000 | 982 | ug/L | 1.22 | 1.79 | 20 | |
| Benzo[k]fluoranthene | | 1000 | 1040 | ug/L | 1.35 | 3.76 | 20 | |
| Chrysene | | 1000 | 992 | ug/L | 1.28 | 0.850 | 20 | |
| Dibenz[ah]anthracene | | 1000 | 1010 | ug/L | 1.20 | 0.910 | 20 | |
| Fluorene | | 1000 | 895 | ug/L | 1.35 | 10.5 | 20 | |
| Indeno[1,2,3-cd]pyrene | | 1000 | 1020 | ug/L | 1.43 | 1.67 | 20 | |
| Naphthalene | | 1000 | 975 | ug/L | 1.15 | 2.46 | 20 | |
| Phenanthrene | | 1000 | 869 | ug/L | 1.08 | 13.1 | 20 | |
| Pyrene | | 1000 | 931 | ug/L | 1.50 | 6.86 | 20 | |

* Exceeds %D Criteria

CCC Calibration Check Compounds
SPCC System Performance Check Compounds

CCV - Modified 03/05/2008
PDF File ID: 2419132
Report generated 05/17/2012 14:36

Microbac Laboratories Inc.

INTERNAL STANDARD AREA SUMMARY
(COMPARED TO CCV)

Login Number: L12050284
Instrument ID: HPMS7
Workgroup (AAB#): WG397981

CCV Number: WG397984-02
CAL ID: HPMS7-04-APR-12
Matrix: WATER

| Sample Number | Dilution | Tag | IS-1 | IS-2 | IS-3 | IS-4 | IS-5 |
|---|---|---|---|---|---|---|---|
| WG397984-02 | NA | NA | 81289 | 119462 | 131945 | 115352 | 127293 |
| Upper Limit | NA | NA | 162578 | 238924 | 263890 | 230704 | 254586 |
| Lower Limit | NA | NA | 40645 | 59731 | 65973 | 57676 | 63647 |
| L12050284-01 | 1.00 | 01 | 75261 | 98877 | 115328 | 88161 | 104820 |
| L12050284-03 | 1.00 | 01 | 69903 | 109643 | 104450 | 103312 | 111578 |
| L12050284-05 | 1.00 | 01 | 70590 | 112393 | 106339 | 105562 | 114175 |
| L12050284-07 | 1.00 | 01 | 71007 | 118659 | 107321 | 111182 | 114600 |
| L12050284-10 | 1.00 | 01 | 71317 | 111979 | 105307 | 104426 | 112779 |
| L12050284-12 | 1.00 | 01 | 67551 | 105715 | 102436 | 98473 | 108093 |
| WG397890-02 | 1.00 | 01 | 69941 | 108237 | 104981 | 101867 | 110772 |
| WG397890-03 | 1.00 | 01 | 71207 | 113524 | 109181 | 106800 | 113917 |

IS-1 - Acenaphthene-d10
IS-2 - Chrysene-d12
IS-3 - Naphthalene-d8
IS-4 - Perylene-d12
IS-5 - Phenanthrene-d10

Underline = Response outside limits

INTERNAL_STD - Modified 03/06/2008
PDF File ID: 2419134
Report generated 05/17/2012 14:36

Microbac Laboratories Inc.

INTERNAL STANDARD RETENTION TIME SUMMARY
(COMPARED TO CCV)

Login Number: L12050284 CCV Number: WG397984-02
Instrument ID: HPMS7 CAL ID: HPMS7-04-APR-12
Workgroup (AAB#): WG397981 Matrix: WATER

| Sample Number | Dilution | Tag | IS-1 | IS-2 | IS-3 | IS-4 | IS-5 |
|---|---|---|---|---|---|---|---|
| WG397984-02 | NA | NA | 8.21 | 13.46 | 6.02 | 15.69 | 10.08 |
| Upper Limit | NA | NA | 8.71 | 13.96 | 6.52 | 16.19 | 10.58 |
| Lower Limit | NA | NA | 7.71 | 12.96 | 5.52 | 15.19 | 9.58 |
| L12050284-01 | 1.00 | 01 | 8.21 | 13.47 | 6.02 | 15.7 | 10.08 |
| L12050284-03 | 1.00 | 01 | 8.21 | 13.46 | 6.02 | 15.69 | 10.08 |
| L12050284-05 | 1.00 | 01 | 8.22 | 13.46 | 6.02 | 15.69 | 10.08 |
| L12050284-07 | 1.00 | 01 | 8.21 | 13.46 | 6.02 | 15.69 | 10.08 |
| L12050284-10 | 1.00 | 01 | 8.21 | 13.46 | 6.02 | 15.7 | 10.08 |
| L12050284-12 | 1.00 | 01 | 8.22 | 13.46 | 6.02 | 15.69 | 10.08 |
| WG397890-02 | 1.00 | 01 | 8.21 | 13.46 | 6.01 | 15.69 | 10.08 |
| WG397890-03 | 1.00 | 01 | 8.21 | 13.46 | 6.02 | 15.69 | 10.08 |

IS-1 - Acenaphthene-d10
IS-2 - Chrysene-d12
IS-3 - Naphthalene-d8
IS-4 - Perylene-d12
IS-5 - Phenanthrene-d10

Underline = Response outside limits

INTERNAL_STD_RT - Modified 03/06/2008
PDF File ID: 2419136
Report generated 05/17/2012 14:36

# 2.2.2.3 Sample Data

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\051512\7M55038.D Vial: 24
Acq On : 15 May 2012 7:49 pm Operator: CAA
Sample : L12050284-01 Inst : HPMS7
Misc : 1,1 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 16 07:16:27 2012 Quant Results File: SIMPAHL.RES

Quant Method : C:\MSDCHEM\1\METHODS\SIMPAHL.M (RTE Integrator)
Title : OVD MSS03 SIMPAHL ICAL 04/04/12
Last Update : Wed May 16 07:16:11 2012
Response via : Initial Calibration
DataAcq Meth : PAHLSIM

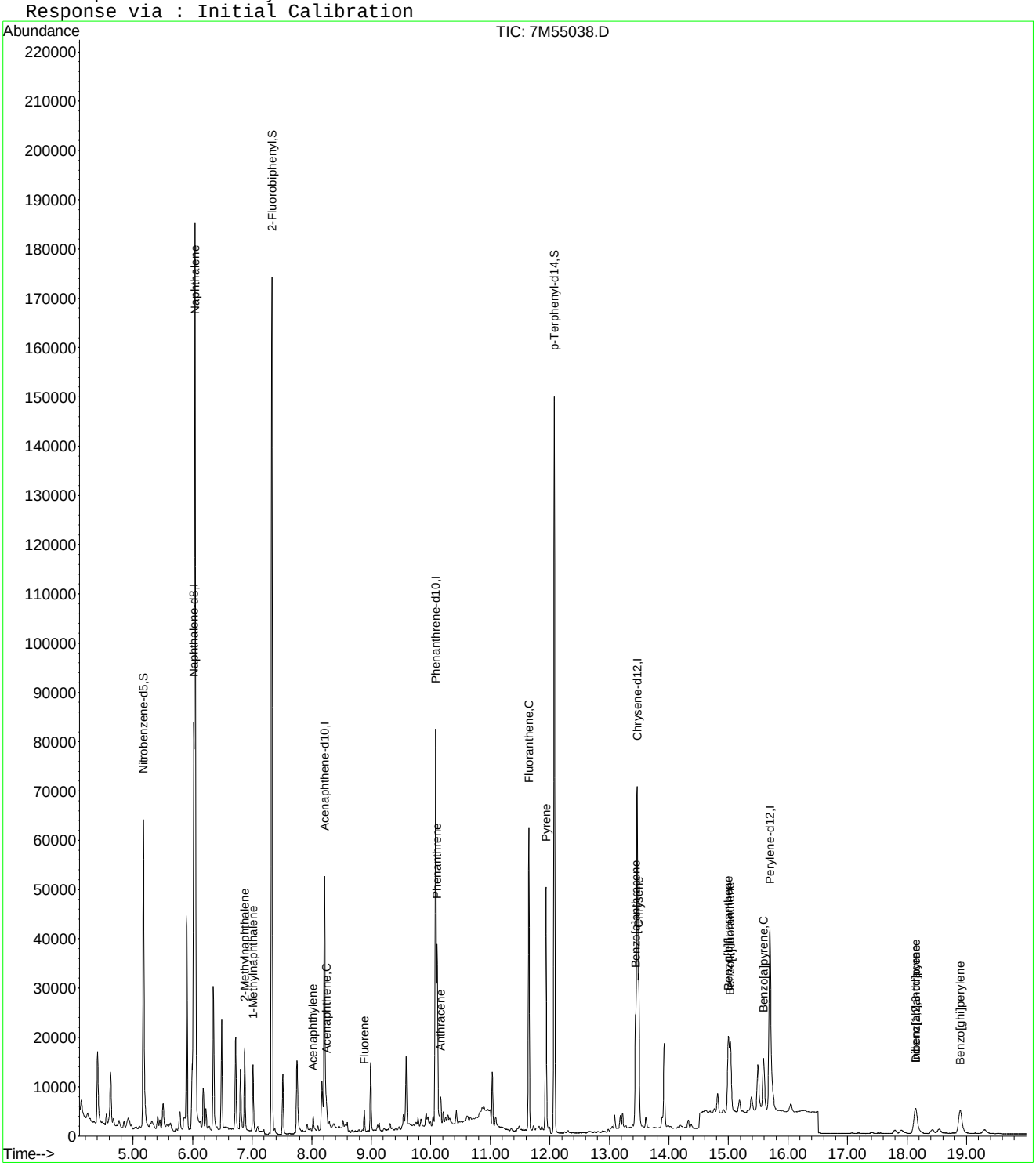
| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 1) Naphthalene-d8 | 6.02 | 136 | 115328 | 1.00 | ug/ml | 0.00 |
| 6) Acenaphthene-d10 | 8.21 | 164 | 75261 | 1.00 | ug/ml | 0.00 |
| 11) Phenanthrene-d10 | 10.08 | 188 | 104820 | 1.00 | ug/ml | 0.00 |
| 15) Chrysene-d12 | 13.47 | 240 | 98877 | 1.00 | ug/ml | 0.00 |
| 20) Perylene-d12 | 15.70 | 264 | 88161 | 1.00 | ug/ml | 0.00 |
| **System Monitoring Compounds** | | | | | | |
| 2) Nitrobenzene-d5 | 5.17 | 82 | 62404 | 1.2956 | ug/ml | 0.00 |
| Spiked Amount 2.500 | Range 35 - 114 | | Recovery = 52.00% | | | |
| 7) 2-Fluorobiphenyl | 7.33 | 172 | 143168 | 1.1501 | ug/ml | 0.00 |
| Spiked Amount 2.500 | Range 43 - 116 | | Recovery = 46.00% | | | |
| 17) p-Terphenyl-d14 | 12.07 | 244 | 155087 | 1.6906 | ug/ml | 0.00 |
| Spiked Amount 2.500 | Range 33 - 141 | | Recovery = 67.60% | | | |
| **Target Compounds** | | | | | | Qvalue |
| 3) Naphthalene | 6.04 | 128 | 213601 | 1.5644 | ug/ml | 100 |
| 4) 2-Methylnaphthalene | 6.87 | 142 | 11249 | 0.1352 | ug/ml | 97 |
| 5) 1-Methylnaphthalene | 7.01 | 142 | 9507 | 0.1119 | ug/ml | 97 |
| 8) Acenaphthylene | 8.02 | 152 | 3566 | 0.0214 | ug/ml | 87 |
| 9) Acenaphthene | 8.25 | 154 | 1956 | 0.0205 | ug/ml | 80 |
| 10) Fluorene | 8.88 | 166 | 2705 | 0.0239 | ug/ml | 84 |
| 12) Phenanthrene | 10.11 | 178 | 37909 | 0.2907 | ug/ml | 95 |
| 13) Anthracene | 10.17 | 178 | 6115 | 0.0467 | ug/ml | 93 |
| 14) Fluoranthene | 11.65 | 202 | 63614 | 0.4657 | ug/ml | 100 |
| 16) Pyrene | 11.94 | 202 | 53463 | 0.3364 | ug/ml | 92 |
| 18) Benzo[a]anthracene | 13.44 | 228 | 24681 | 0.1924 | ug/ml | 94 |
| 19) Chrysene | 13.49 | 228 | 31411 | 0.2462 | ug/ml | 83 |
| 21) Benzo[b]fluoranthene | 15.00 | 252 | 25390 | 0.2088 | ug/ml | 95 |
| 22) Benzo[k]fluoranthene | 15.03 | 252 | 22820m | 0.1983 | ug/ml | |
| 23) Benzo[a]pyrene | 15.59 | 252 | 20576 | 0.1817 | ug/ml | 95 |
| 24) Indeno[1,2,3-cd]pyrene | 18.14 | 276 | 17059 | 0.1377 | ug/ml | 100 |
| 25) Dibenz[ah]anthracene | 18.14 | 278 | 5842 | 0.0557 | ug/ml | 100 |
| 26) Benzo[ghi]perylene | 18.89 | 276 | 16568 | 0.1516 | ug/ml | 99 |

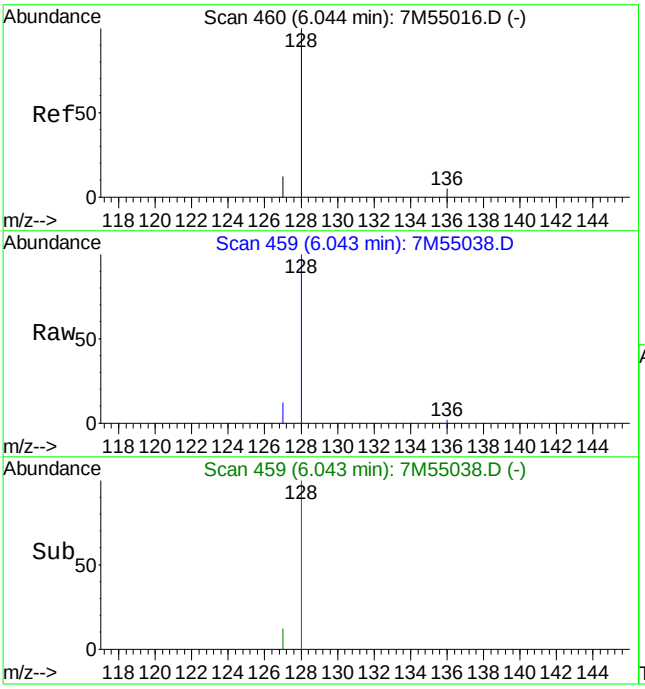
(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\051512\7M55038.D Vial: 24
Acq On : 15 May 2012 7:49 pm Operator: CAA
Sample : L12050284-01 Inst : HPMS7
Misc : 1,1 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 17 11:55 2012 Quant Results File: SIMPAHL.RES

Method : C:\MSDCHEM\1\METHODS\SIMPAHL.M (RTE Integrator)
Title : OVD MSS03 SIMPAHL ICAL 04/04/12
Last Update : Thu May 17 11:52:38 2012
Response via : Initial Calibration

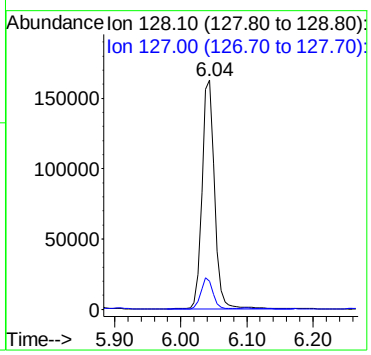


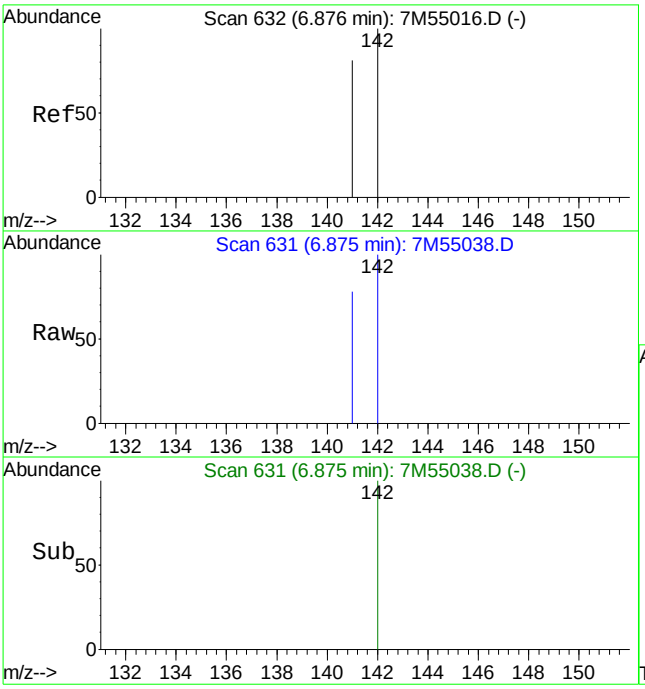



#3
Naphthalene
Concen: 1.56 ug/ml
RT: 6.04 min Scan# 459
Delta R.T. -0.00 min
Lab File: 7M55038.D
Acq: 15 May 2012 7:49 pm

Tgt Ion:128 Resp: 213601

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 128 | 100 | | |
| 127 | 12.9 | 7.7 | 18.1 |

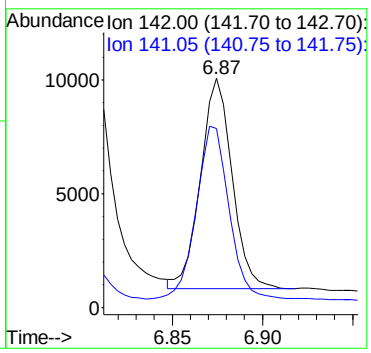


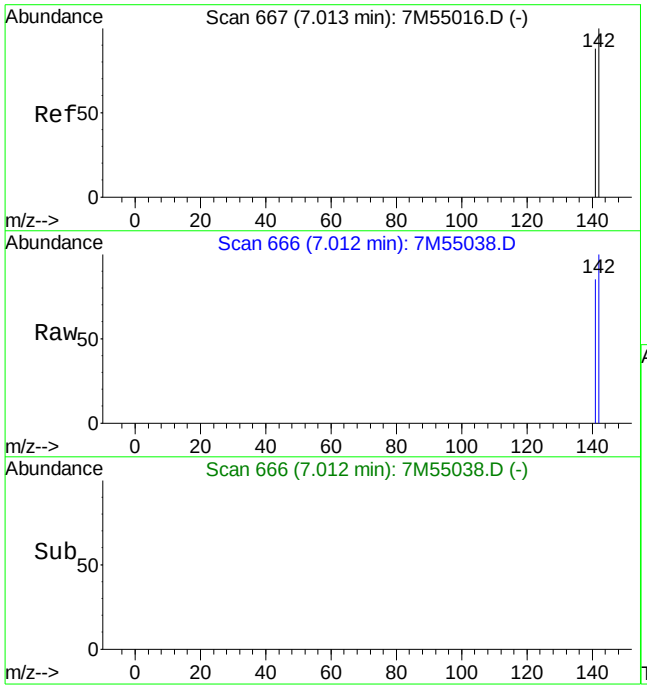




#4
2-Methylnaphthalene
Concen: 0.14 ug/ml
RT: 6.87 min Scan# 631
Delta R.T. -0.00 min
Lab File: 7M55038.D
Acq: 15 May 2012 7:49 pm

Tgt Ion:142 Resp: 11249

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 142 | 100 | | |
| 141 | 86.4 | 50.2 | 117.0 |

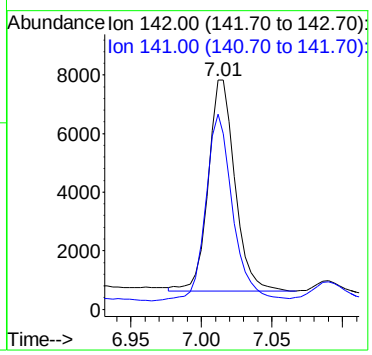


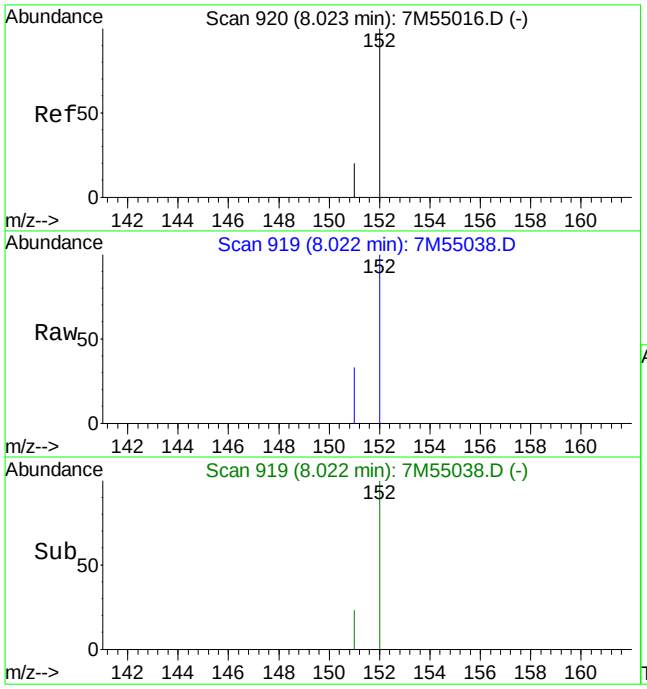



#5
1-Methylnaphthalene
Concen: 0.11 ug/ml
RT: 7.01 min Scan# 666
Delta R.T. -0.01 min
Lab File: 7M55038.D
Acq: 15 May 2012 7:49 pm

Tgt Ion:142 Resp: 9507

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 142 | 100 | | |
| 141 | 89.4 | 52.1 | 121.5 |

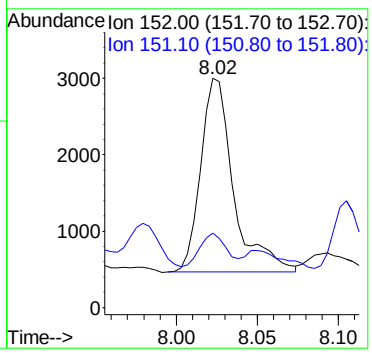


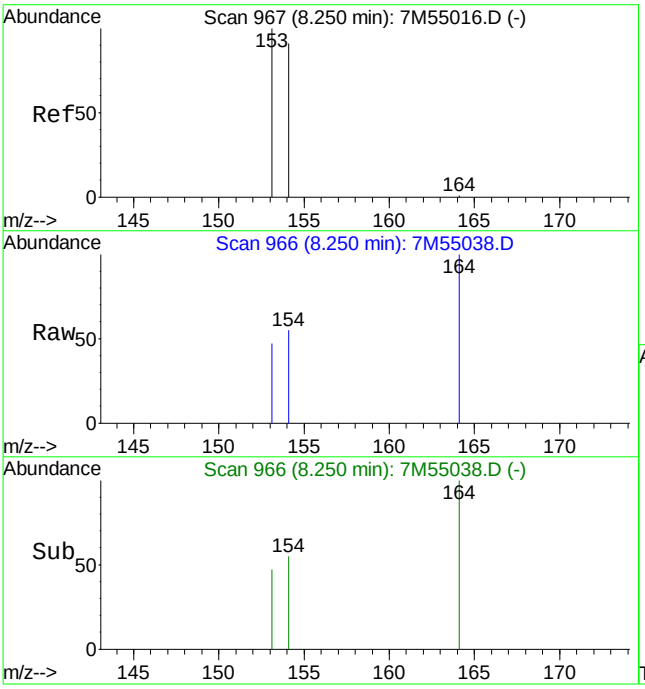




#8
Acenaphthylene
Concen: 0.02 ug/ml
RT: 8.02 min Scan# 919
Delta R.T. -0.00 min
Lab File: 7M55038.D
Acq: 15 May 2012 7:49 pm

Tgt Ion:152 Resp: 3566

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 152 | 100 | | |
| 151 | 13.6 | 11.8 | 27.4 |

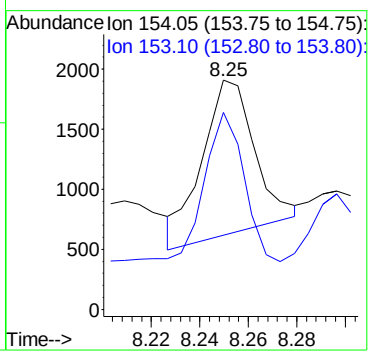


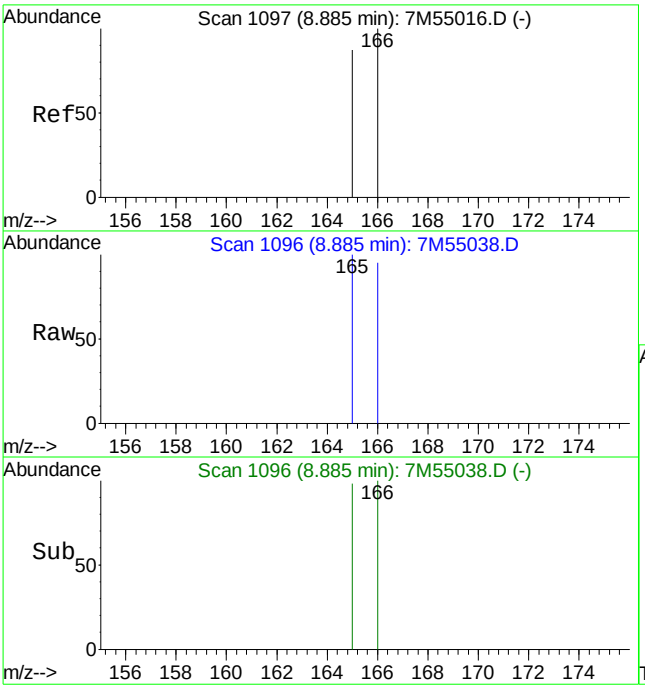



#9
Acenaphthene
Concen: 0.02 ug/ml
RT: 8.25 min Scan# 966
Delta R.T. -0.00 min
Lab File: 7M55038.D
Acq: 15 May 2012 7:49 pm

Tgt Ion:154 Resp: 1956

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 154 | 100 | | |
| 153 | 84.7 | 63.1 | 147.1 |

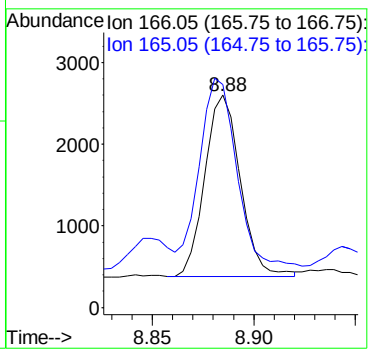


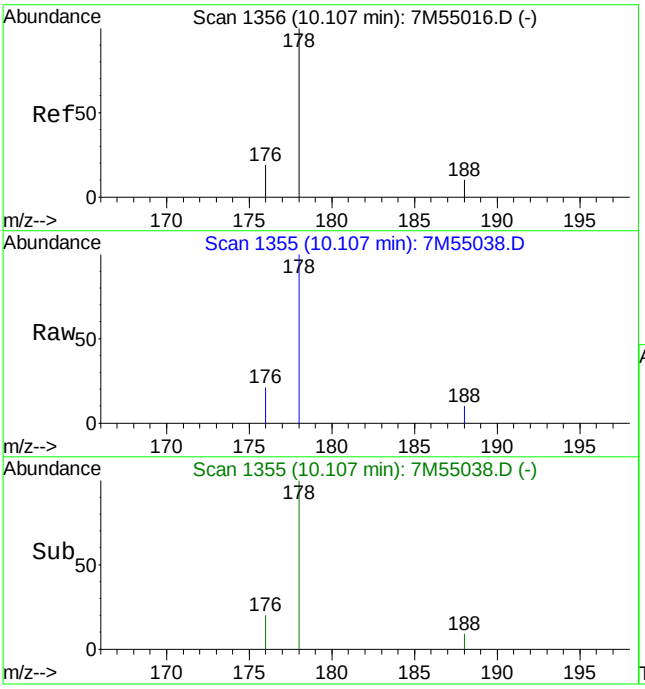




#10
Fluorene
Concen: 0.02 ug/ml
RT: 8.88 min Scan# 1096
Delta R.T. 0.00 min
Lab File: 7M55038.D
Acq: 15 May 2012 7:49 pm

Tgt Ion:166 Resp: 2705

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 166 | 100 | | |
| 165 | 105.8 | 54.5 | 127.1 |

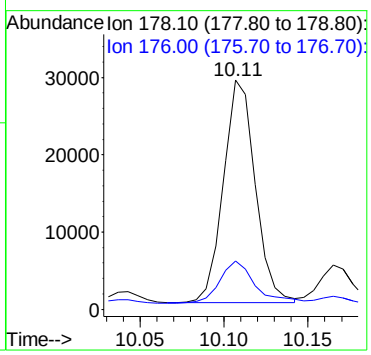


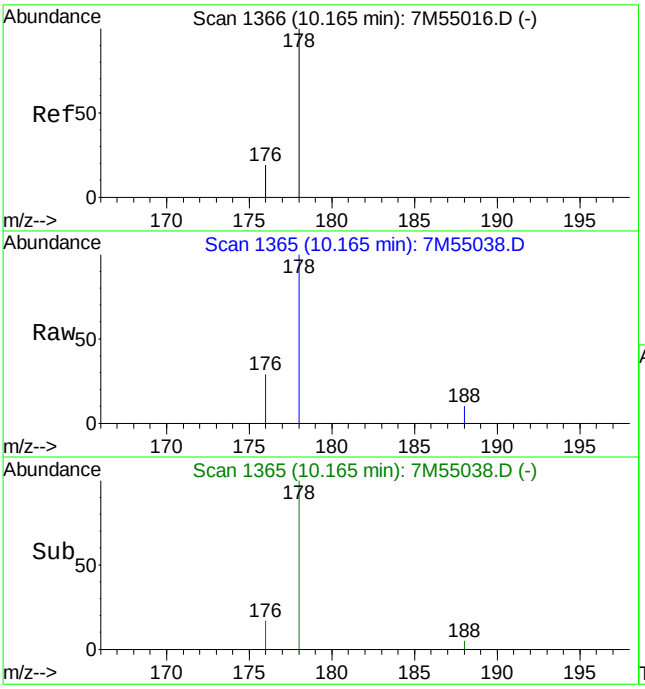



#12
Phenanthrene
Concen: 0.29 ug/ml
RT: 10.11 min Scan# 1355
Delta R.T. -0.01 min
Lab File: 7M55038.D
Acq: 15 May 2012 7:49 pm

Tgt Ion:178 Resp: 37909

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 178 | 100 | | |
| 176 | 21.2 | 11.4 | 26.6 |

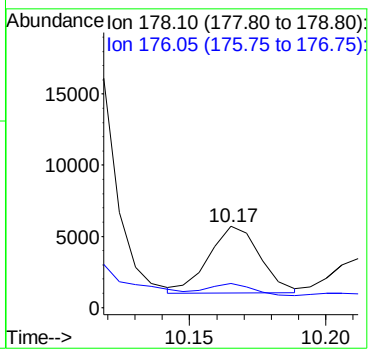


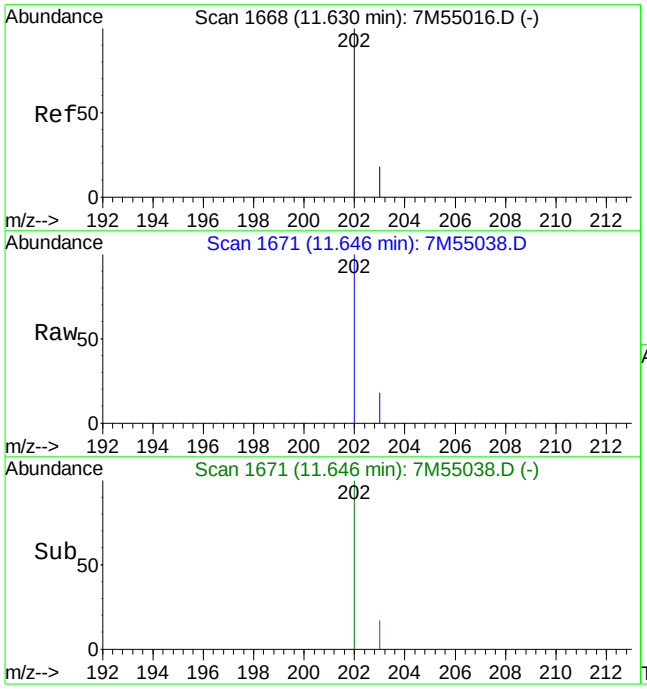




#13
Anthracene
Concen: 0.05 ug/ml
RT: 10.17 min Scan# 1365
Delta R.T. -0.01 min
Lab File: 7M55038.D
Acq: 15 May 2012 7:49 pm

Tgt Ion:178 Resp: 6115

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 178 | 100 | | |
| 176 | 15.2 | 10.9 | 25.5 |

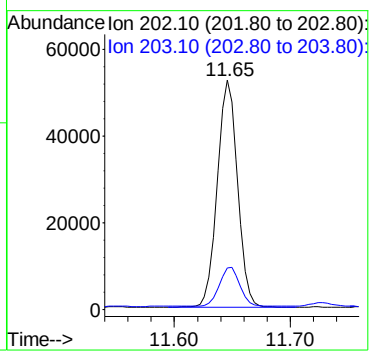


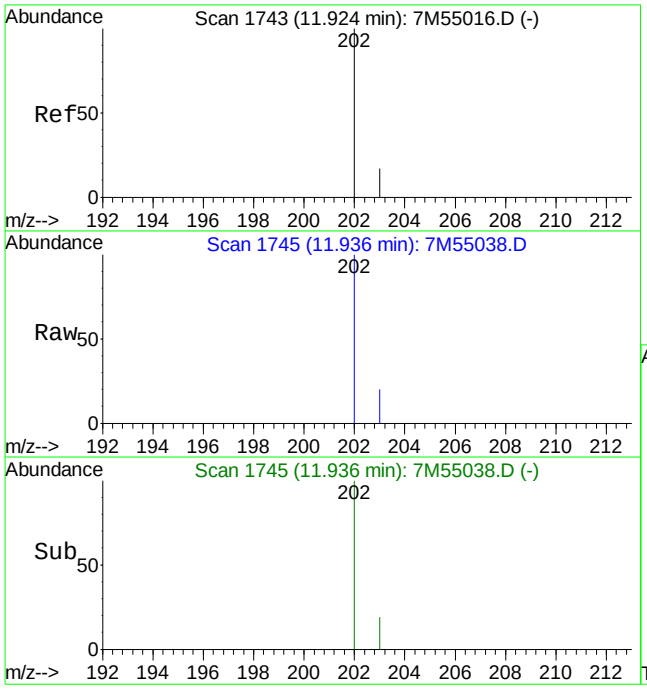



#14
Fluoranthene
Concen: 0.47 ug/ml
RT: 11.65 min Scan# 1671
Delta R.T. 0.01 min
Lab File: 7M55038.D
Acq: 15 May 2012 7:49 pm

Tgt Ion:202 Resp: 63614

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 202 | 100 | | |
| 203 | 17.6 | 10.6 | 24.6 |

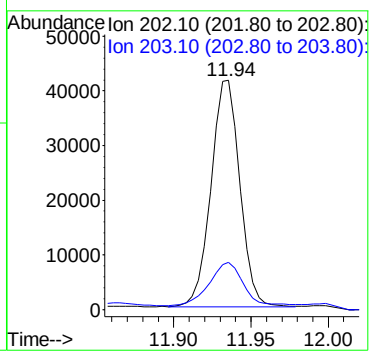


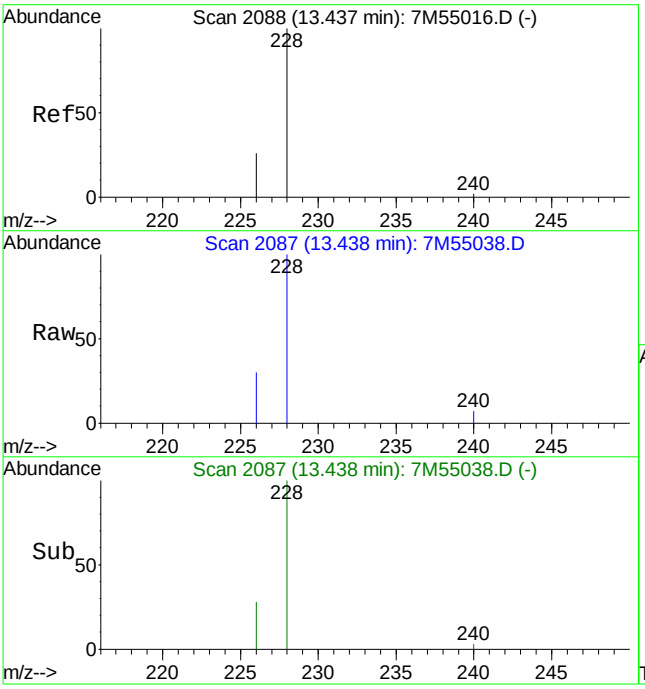




#16
Pyrene
Concen: 0.34 ug/ml
RT: 11.94 min Scan# 1745
Delta R.T. 0.01 min
Lab File: 7M55038.D
Acq: 15 May 2012 7:49 pm

Tgt Ion:202 Resp: 53463

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 202 | 100 | | |
| 203 | 22.0 | 11.0 | 25.6 |

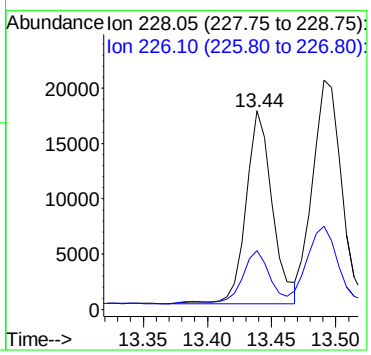


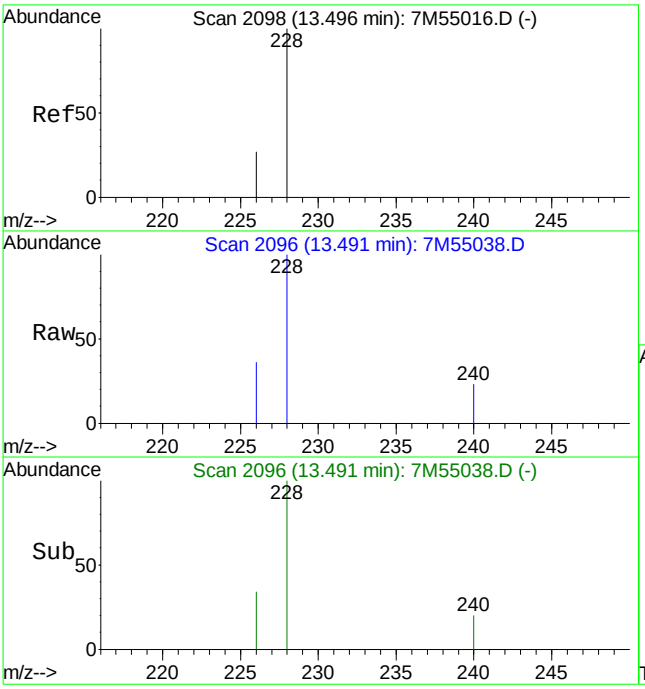



#18
Benzo[a]anthracene
Concen: 0.19 ug/ml
RT: 13.44 min Scan# 2087
Delta R.T. 0.00 min
Lab File: 7M55038.D
Acq: 15 May 2012 7:49 pm

Tgt Ion:228 Resp: 24681

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 228 | 100 | | |
| 226 | 28.8 | 15.4 | 36.0 |

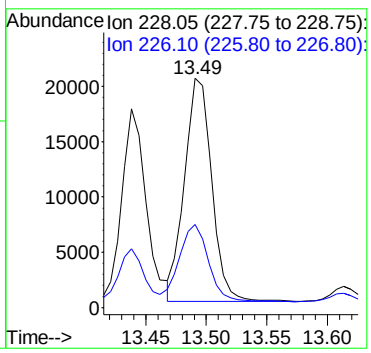


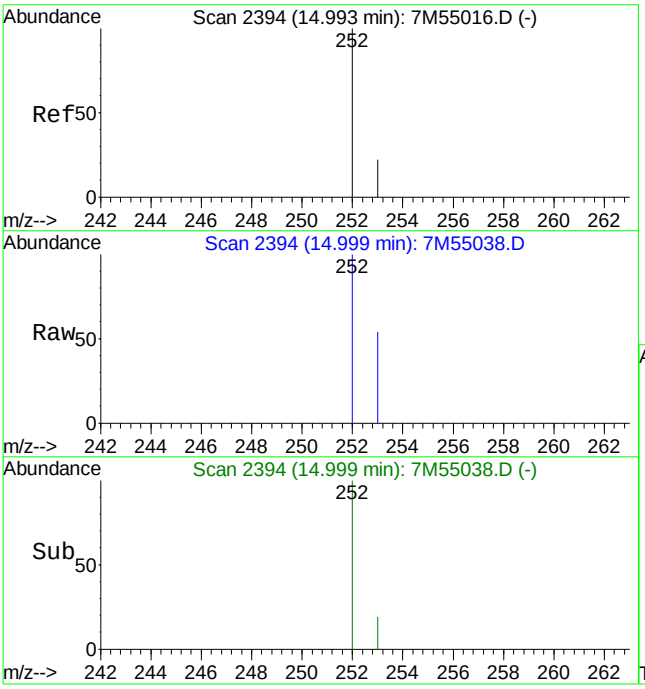




#19
Chrysene
Concen: 0.25 ug/ml
RT: 13.49 min Scan# 2096
Delta R.T. 0.00 min
Lab File: 7M55038.D
Acq: 15 May 2012 7:49 pm

Tgt Ion:228 Resp: 31411

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 228 | 100 | | |
| 226 | 37.5 | 17.2 | 40.0 |

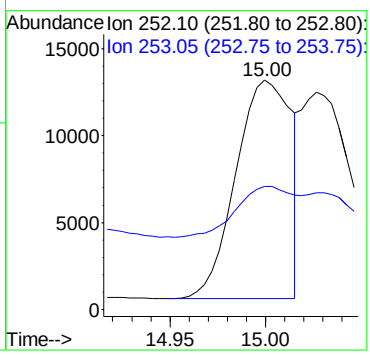


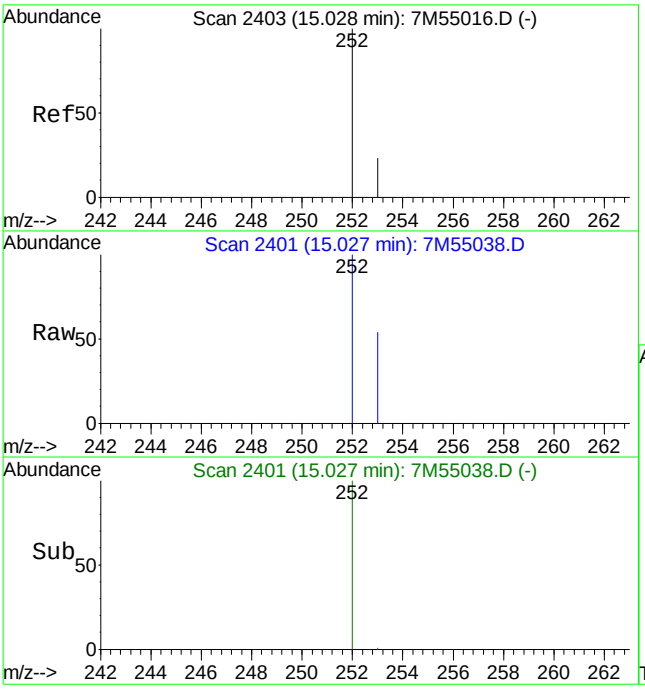



#21
Benzo[b]fluoranthene
Concen: 0.21 ug/ml
RT: 15.00 min Scan# 2394
Delta R.T. 0.01 min
Lab File: 7M55038.D
Acq: 15 May 2012 7:49 pm

Tgt Ion:252 Resp: 25390

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 252 | 100 | | |
| 253 | 25.2 | 16.7 | 39.1 |

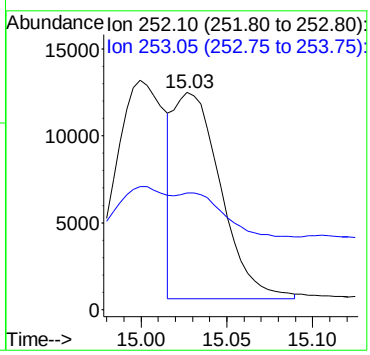


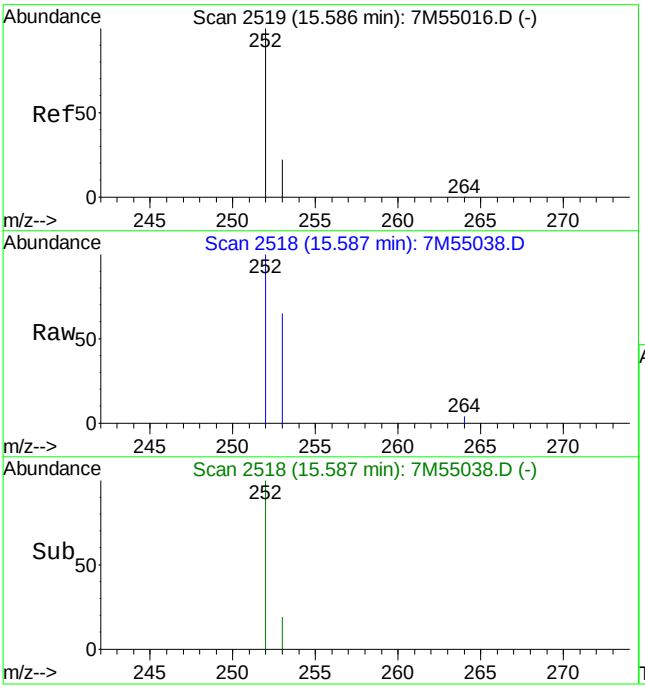




#22
Benzo[k]fluoranthene
Concen: 0.20 ug/ml m
RT: 15.03 min Scan# 2401
Delta R.T. -0.00 min
Lab File: 7M55038.D
Acq: 15 May 2012 7:49 pm

Tgt Ion:252 Resp: 22820

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 252 | 100 | | |
| 253 | 28.0 | 16.6 | 38.8 |

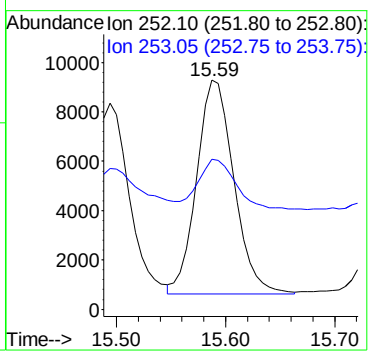


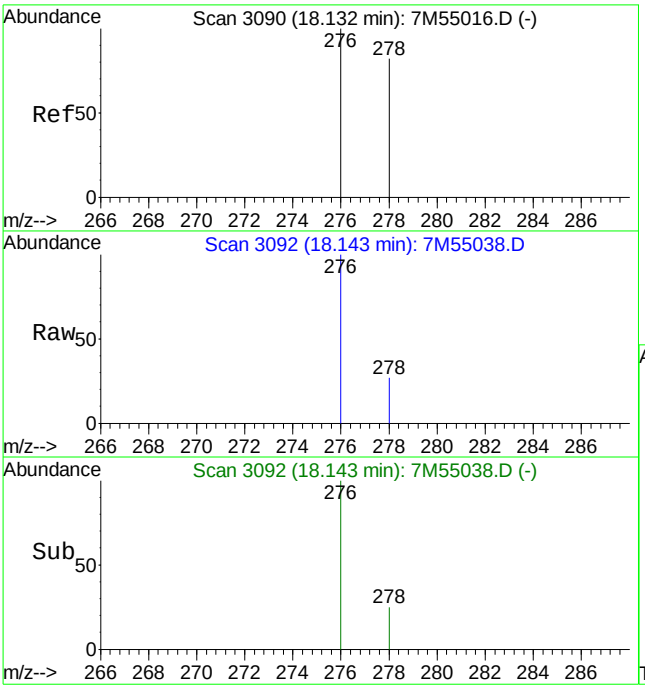



#23
Benzo[a]pyrene
Concen: 0.18 ug/ml
RT: 15.59 min Scan# 2518
Delta R.T. 0.00 min
Lab File: 7M55038.D
Acq: 15 May 2012 7:49 pm

Tgt Ion:252 Resp: 20576

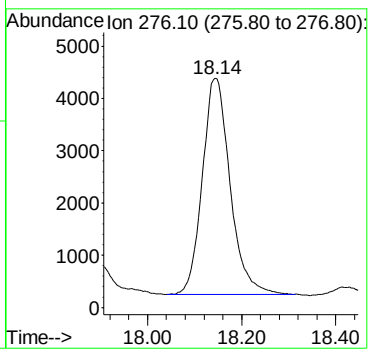
| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 252 | 100 | | |
| 253 | 23.9 | 13.0 | 30.4 |

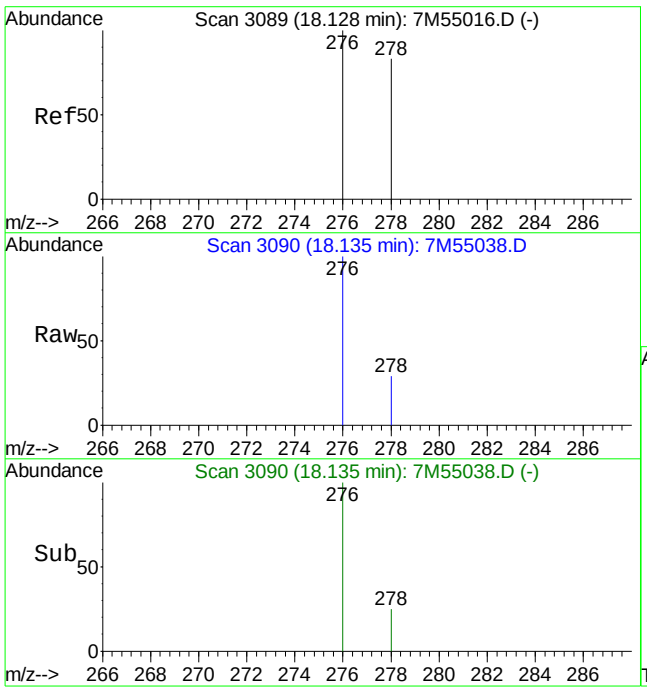



#24
Indeno[1,2,3-cd]pyrene
Concen: 0.14 ug/ml
RT: 18.14 min Scan# 3092
Delta R.T. 0.00 min
Lab File: 7M55038.D
Acq: 15 May 2012 7:49 pm

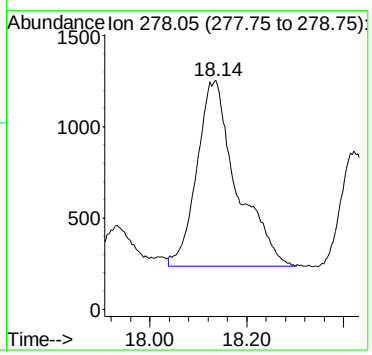
Tgt Ion:276 Resp: 17059

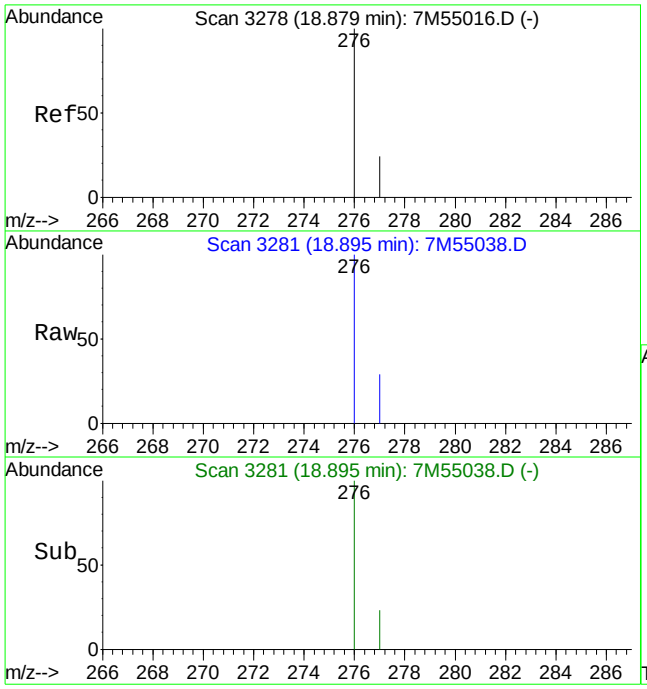





#25
Dibenz[ah]anthracene
Concen: 0.06 ug/ml
RT: 18.14 min Scan# 3090
Delta R.T. -0.00 min
Lab File: 7M55038.D
Acq: 15 May 2012 7:49 pm

Tgt Ion:278 Resp: 5842

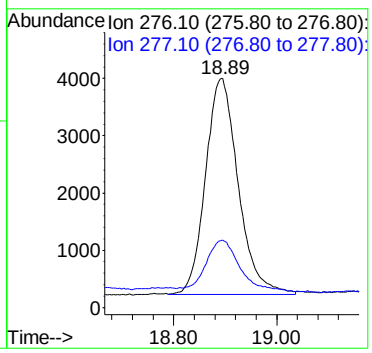



#26
Benzo[ghi]perylene
Concen: 0.15 ug/ml
RT: 18.89 min Scan# 3281
Delta R.T. 0.02 min
Lab File: 7M55038.D
Acq: 15 May 2012 7:49 pm

Tgt Ion:276 Resp: 16568

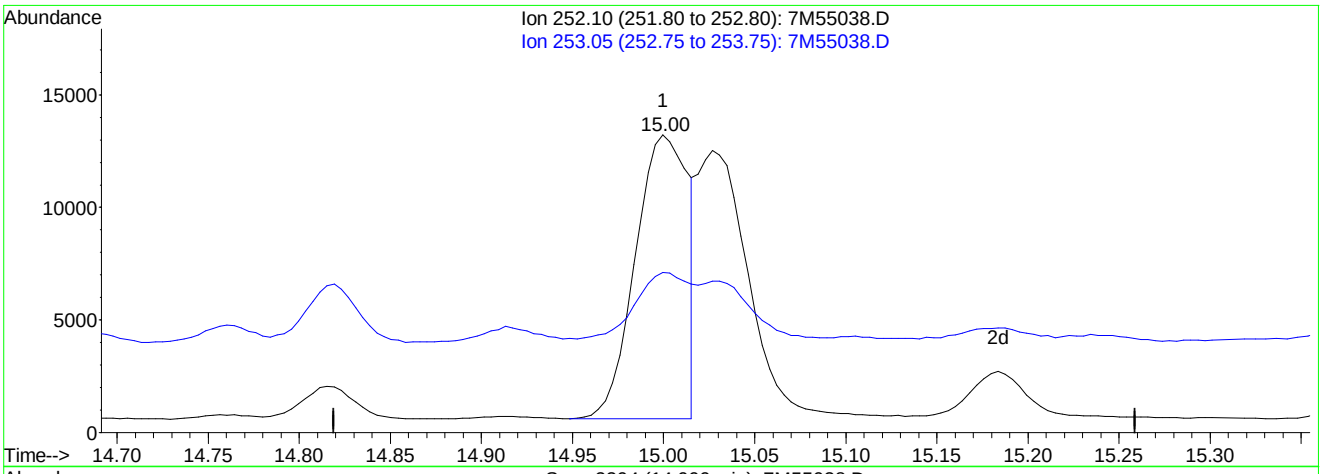
| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 276 | 100 | | |
| 277 | 23.8 | 14.5 | 33.7 |

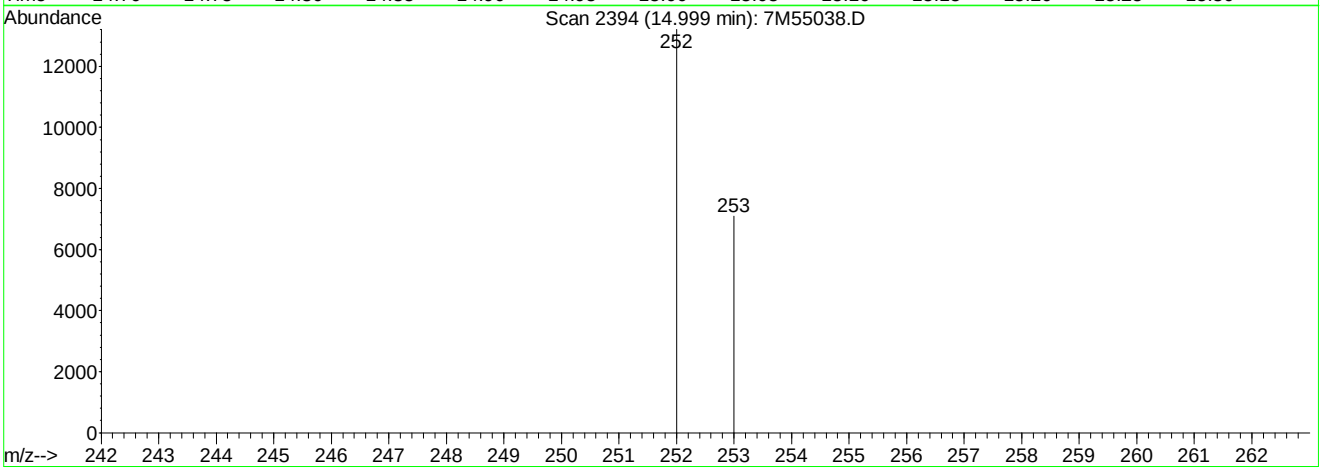


Quantitation Report (Qedit)

Data File : C:\MSDCHEM\1\DATA\051512\7M55038.D Vial: 24
Acq On : 15 May 2012 7:49 pm Operator: CAA
Sample : L12050284-01 Inst : HPMS7
Misc : 1,1 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 16 7:16 2012 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\SIMPAHL.M (RTE Integrator)
Title : OVD MSS03 SIMPAHL ICAL 04/04/12
Last Update : Thu May 17 11:52:38 2012
Response via : Multiple Level Calibration




TIC: 7M55038.D

(22) Benzo[k]fluoranthene

15.00min 0.22ug/ml

response 25390

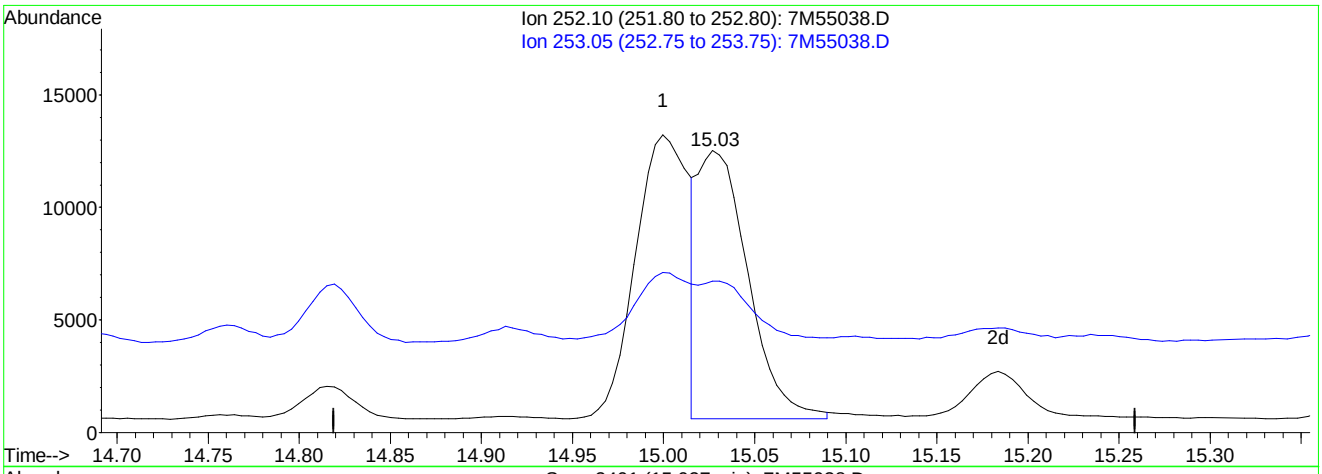
| Ion | Exp% | Act% |
|---|---|---|
| 252.10 | 100 | 100 |
| 253.05 | 27.70 | 25.19 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

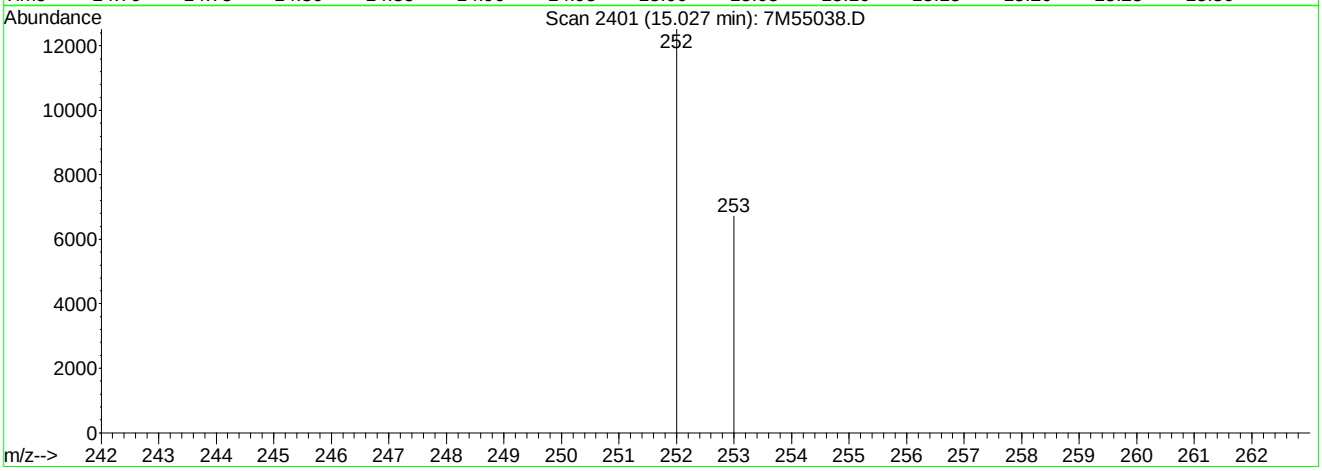
7M55038.D SIMPAHL.M Thu May 17 11:54:56 2012

Quantitation Report (Qedit)

Data File : C:\MSDCHEM\1\DATA\051512\7M55038.D Vial: 24
Acq On : 15 May 2012 7:49 pm Operator: CAA
Sample : L12050284-01 Inst : HPMS7
Misc : 1,1 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 17 11:55 2012 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\SIMPAHL.M (RTE Integrator)
Title : OVD MSS03 SIMPAHL ICAL 04/04/12
Last Update : Thu May 17 11:52:38 2012
Response via : Multiple Level Calibration




TIC: 7M55038.D

(22) Benzo[k]fluoranthene

15.03min 0.20ug/ml mint

response 22820

| Ion | Exp% | Act% |
|---|---|---|
| 252.10 | 100 | 100 |
| 253.05 | 27.70 | 28.02 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

7M55038.D SIMPAHL.M Thu May 17 2012

Analyst: 05/17/2012 13:43 Supervisor: 05/17/2012 13:58

#3 - Improperly integrated isomers and/or coeluting compounds

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\051512\7M55019.D Vial: 5
Acq On : 15 May 2012 11:02 am Operator: CAA
Sample : L12050284-03 Inst : HPMS7
Misc : 1,1 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 16 07:16:24 2012 Quant Results File: SIMPAHL.RES

Quant Method : C:\MSDCHEM\1\METHODS\SIMPAHL.M (RTE Integrator)
Title : OVD MSS03 SIMPAHL ICAL 04/04/12
Last Update : Wed May 16 07:16:11 2012
Response via : Initial Calibration
DataAcq Meth : PAHLSIM

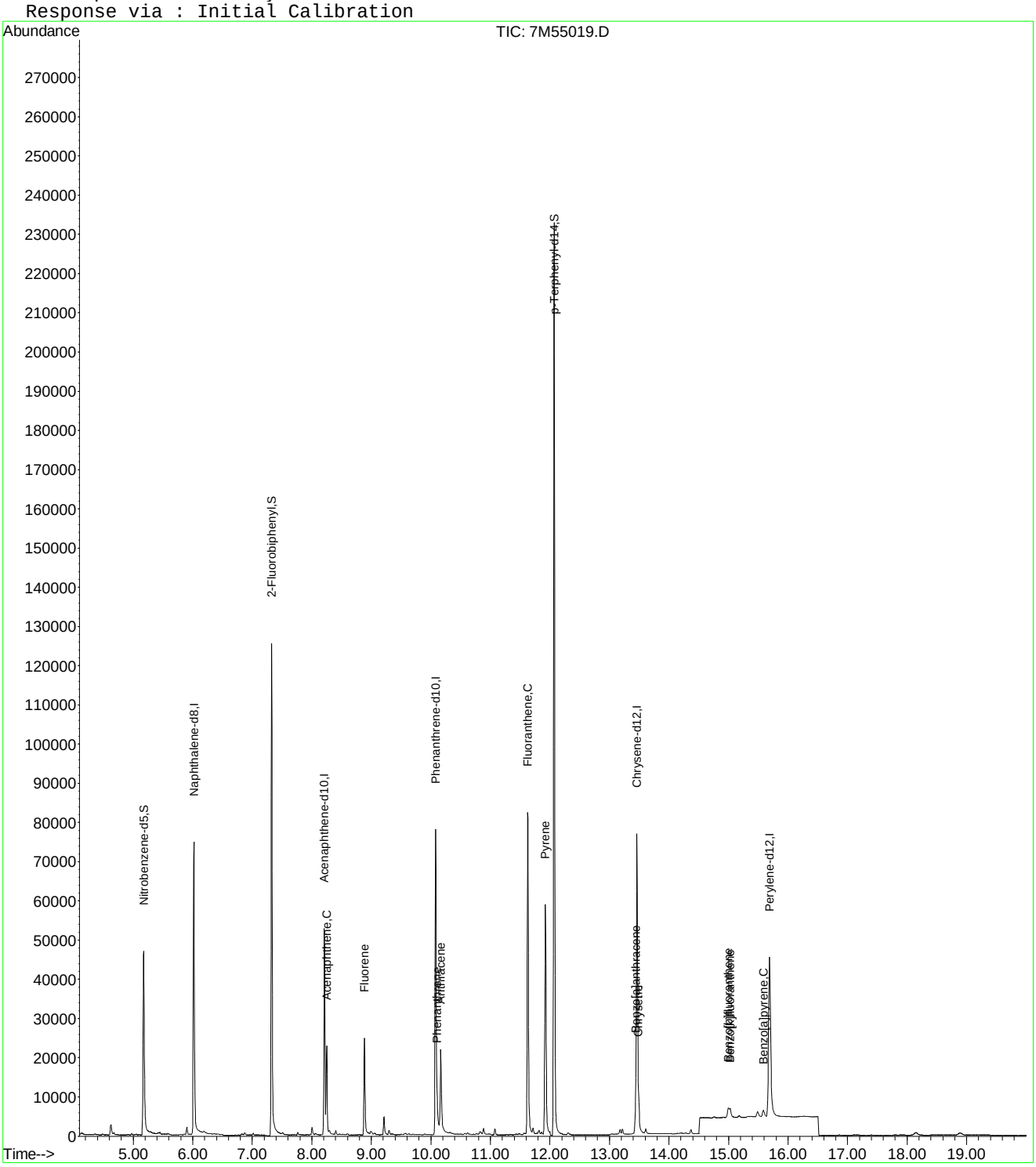
| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 1) Naphthalene-d8 | 6.02 | 136 | 104450 | 1.00 | ug/ml | 0.00 |
| 6) Acenaphthene-d10 | 8.21 | 164 | 69903 | 1.00 | ug/ml | 0.00 |
| 11) Phenanthrene-d10 | 10.08 | 188 | 111578 | 1.00 | ug/ml | 0.00 |
| 15) Chrysene-d12 | 13.46 | 240 | 109643 | 1.00 | ug/ml | 0.00 |
| 20) Perylene-d12 | 15.69 | 264 | 103312 | 1.00 | ug/ml | 0.00 |
| **System Monitoring Compounds** | | | | | | |
| 2) Nitrobenzene-d5 | 5.17 | 82 | 50857 | 1.1659 | ug/ml | 0.00 |
| Spiked Amount 2.500 | Range 35 - 114 | | Recovery = 46.80% | | | |
| 7) 2-Fluorobiphenyl | 7.33 | 172 | 122497 | 1.0595 | ug/ml | 0.00 |
| Spiked Amount 2.500 | Range 43 - 116 | | Recovery = 42.40%# | | | |
| 17) p-Terphenyl-d14 | 12.07 | 244 | 274242 | 2.6960 | ug/ml | 0.00 |
| Spiked Amount 2.500 | Range 33 - 141 | | Recovery = 108.00% | | | |
| **Target Compounds** | | | | | | Qvalue |
| 9) Acenaphthene | 8.25 | 154 | 13458 | 0.1522 | ug/ml | 99 |
| 10) Fluorene | 8.89 | 166 | 18646 | 0.1775 | ug/ml | 99 |
| 12) Phenanthrene | 10.11 | 178 | 4771 | 0.0344 | ug/ml | 100 |
| 13) Anthracene | 10.17 | 178 | 26268 | 0.1884 | ug/ml | 99 |
| 14) Fluoranthene | 11.63 | 202 | 99271 | 0.6827 | ug/ml | 100 |
| 16) Pyrene | 11.92 | 202 | 77105 | 0.4375 | ug/ml | 96 |
| 18) Benzo[a]anthracene | 13.44 | 228 | 8014 | 0.0563 | ug/ml | 85 |
| 19) Chrysene | 13.49 | 228 | 9083 | 0.0642 | ug/ml | 98 |
| 21) Benzo[b]fluoranthene | 15.00 | 252 | 4252 | 0.0298 | ug/ml | 86 |
| 22) Benzo[k]fluoranthene | 15.02 | 252 | 3585m | 0.0266 | ug/ml | |
| 23) Benzo[a]pyrene | 15.59 | 252 | 3383 | 0.0255 | ug/ml | 84 |

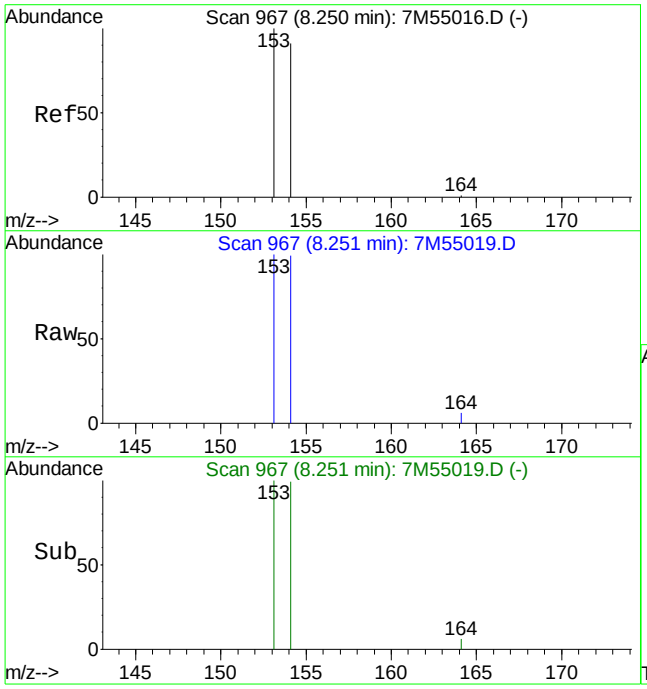
(#) = qualifier out of range (m) = manual integration
7M55019.D SIMPAHL.M Thu May 17 13:17:15 2012 Page 1

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\051512\7M55019.D Vial: 5
Acq On : 15 May 2012 11:02 am Operator: CAA
Sample : L12050284-03 Inst : HPMS7
Misc : 1,1 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 17 11:53 2012 Quant Results File: SIMPAHL.RES

Method : C:\MSDCHEM\1\METHODS\SIMPAHL.M (RTE Integrator)
Title : OVD MSS03 SIMPAHL ICAL 04/04/12
Last Update : Thu May 17 11:52:38 2012
Response via : Initial Calibration

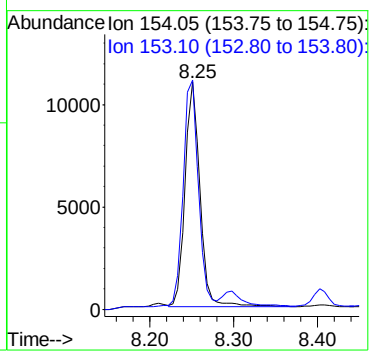


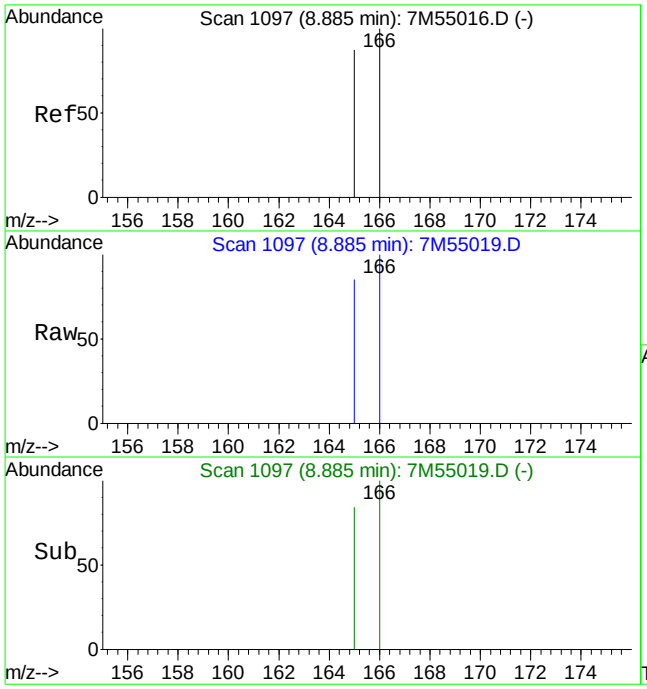



#9
Acenaphthene
Concen: 0.15 ug/ml
RT: 8.25 min Scan# 967
Delta R.T. 0.00 min
Lab File: 7M55019.D
Acq: 15 May 2012 11:02 am

Tgt Ion:154 Resp: 13458

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 154 | 100 | | |
| 153 | 103.6 | 63.1 | 147.1 |

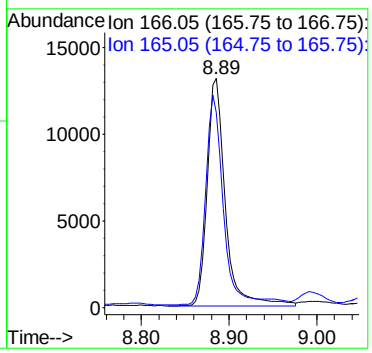


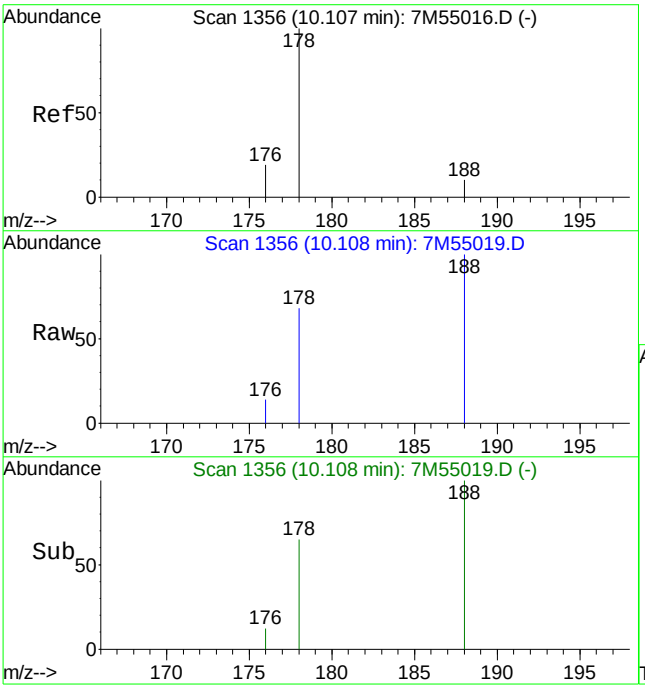




#10
Fluorene
Concen: 0.18 ug/ml
RT: 8.89 min Scan# 1097
Delta R.T. 0.00 min
Lab File: 7M55019.D
Acq: 15 May 2012 11:02 am

Tgt Ion:166 Resp: 18646

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 166 | 100 | | |
| 165 | 89.4 | 54.5 | 127.1 |

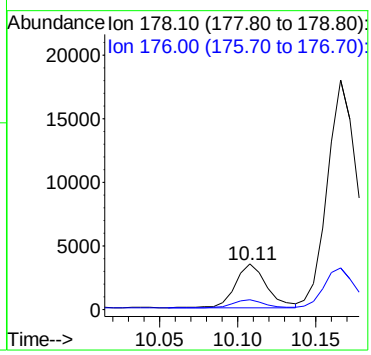


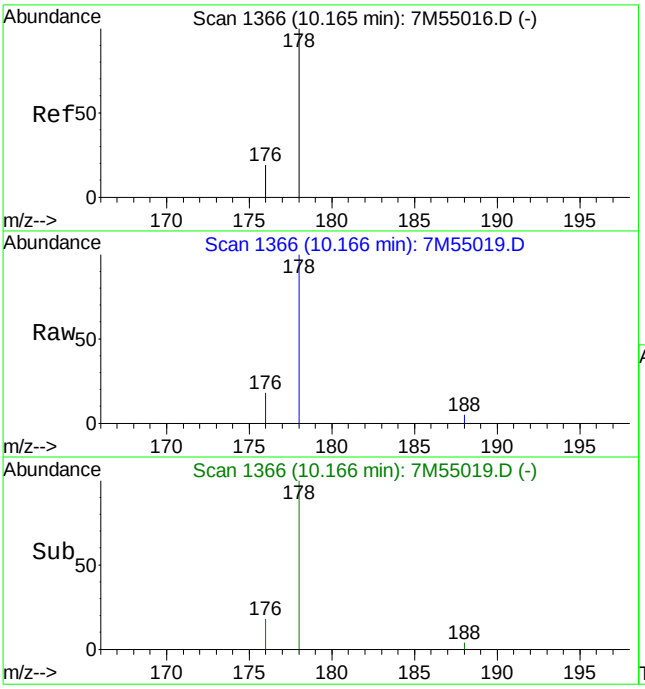



#12
Phenanthrene
Concen: 0.03 ug/ml
RT: 10.11 min Scan# 1356
Delta R.T. -0.00 min
Lab File: 7M55019.D
Acq: 15 May 2012 11:02 am

Tgt Ion:178 Resp: 4771

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 178 | 100 | | |
| 176 | 19.2 | 11.4 | 26.6 |

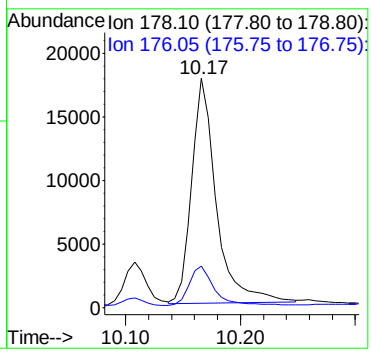


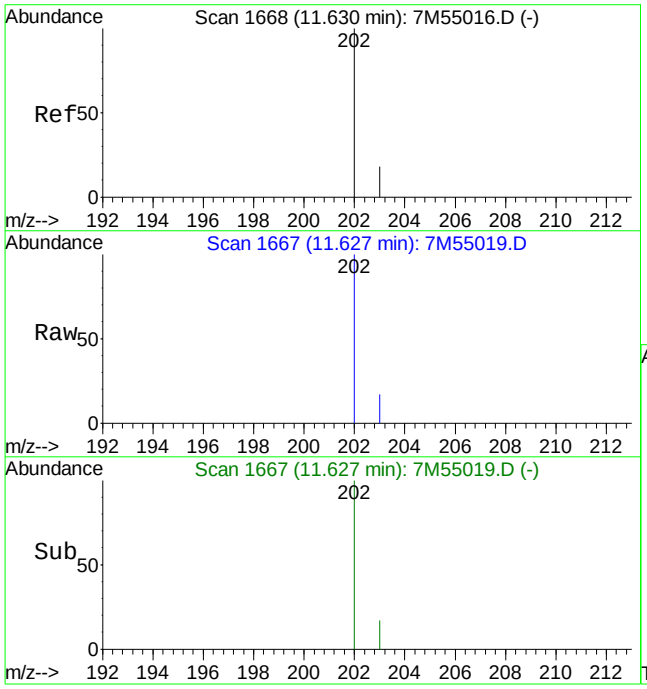




#13
Anthracene
Concen: 0.19 ug/ml
RT: 10.17 min Scan# 1366
Delta R.T. -0.00 min
Lab File: 7M55019.D
Acq: 15 May 2012 11:02 am

Tgt Ion:178 Resp: 26268

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 178 | 100 | | |
| 176 | 17.8 | 10.9 | 25.5 |

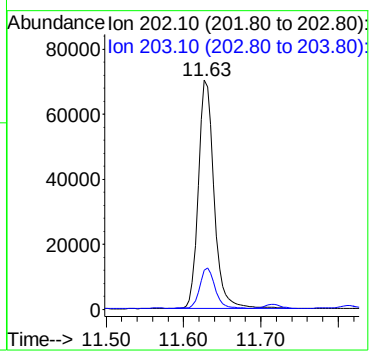


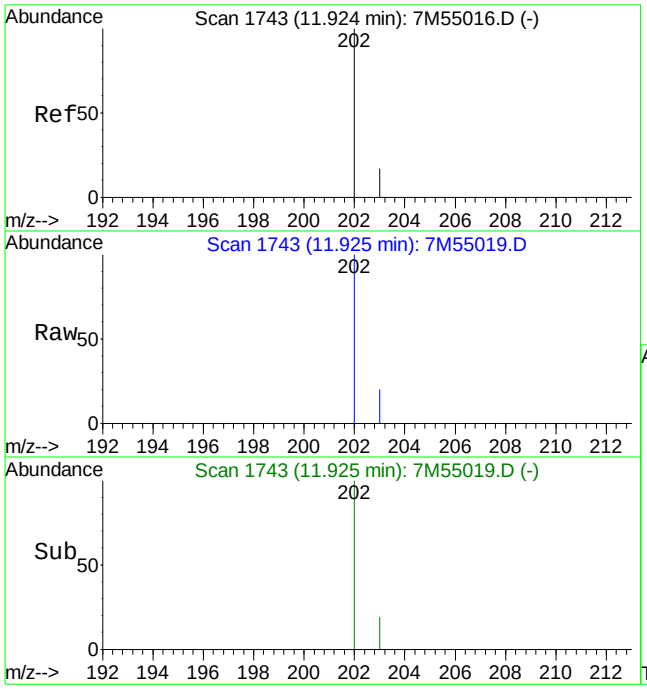



#14
Fluoranthene
Concen: 0.68 ug/ml
RT: 11.63 min Scan# 1667
Delta R.T. -0.01 min
Lab File: 7M55019.D
Acq: 15 May 2012 11:02 am

Tgt Ion:202 Resp: 99271

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 202 | 100 | | |
| 203 | 17.5 | 10.6 | 24.6 |

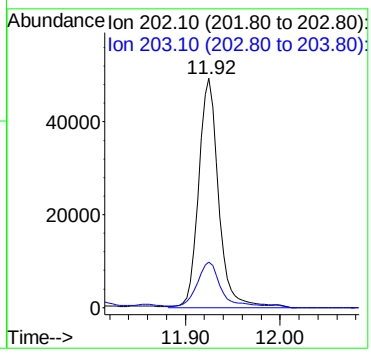


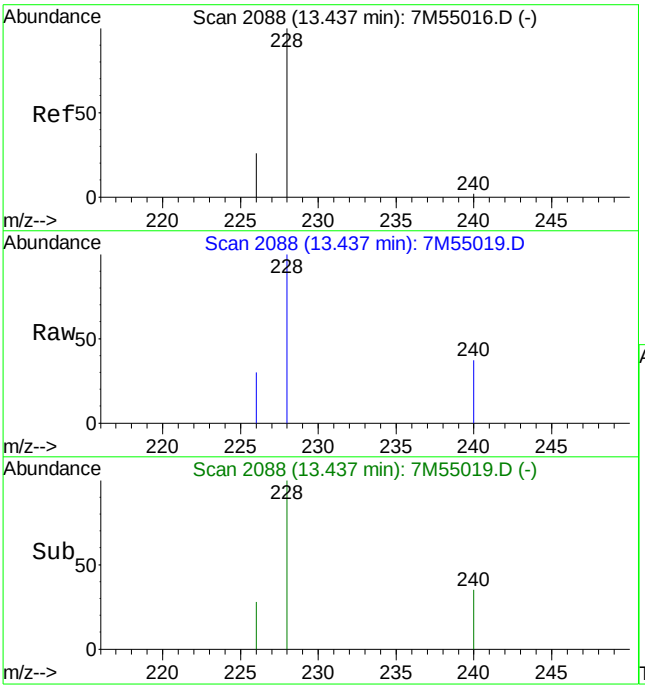




#16
Pyrene
Concen: 0.44 ug/ml
RT: 11.92 min Scan# 1743
Delta R.T. -0.00 min
Lab File: 7M55019.D
Acq: 15 May 2012 11:02 am

Tgt Ion:202 Resp: 77105

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 202 | 100 | | |
| 203 | 20.0 | 11.0 | 25.6 |

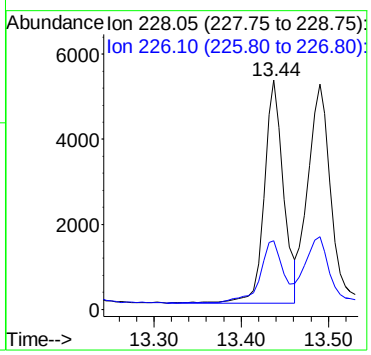


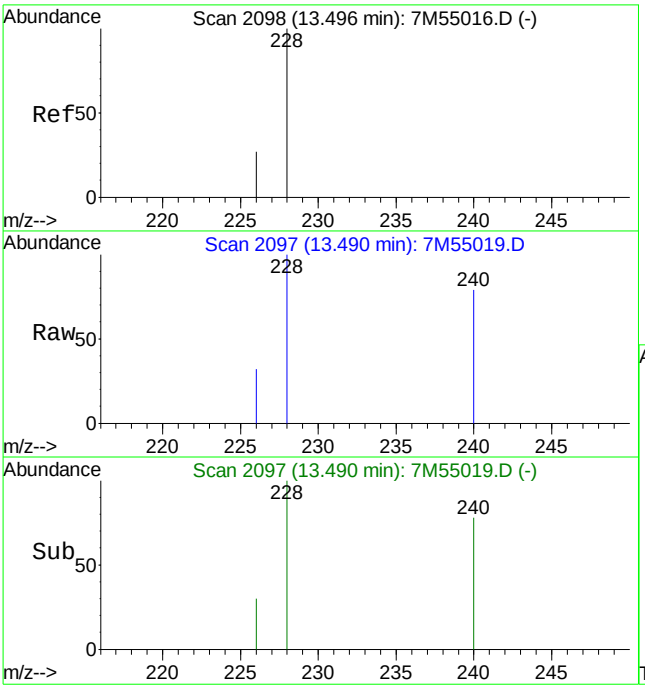



#18
Benzo[a]anthracene
Concen: 0.06 ug/ml
RT: 13.44 min Scan# 2088
Delta R.T. 0.00 min
Lab File: 7M55019.D
Acq: 15 May 2012 11:02 am

Tgt Ion:228 Resp: 8014

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 228 | 100 | | |
| 226 | 33.2 | 15.4 | 36.0 |

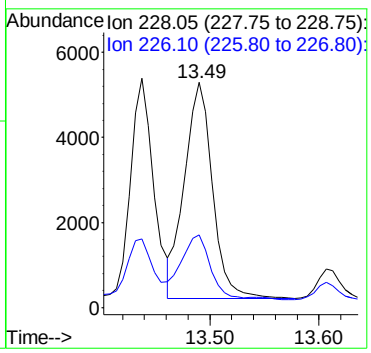


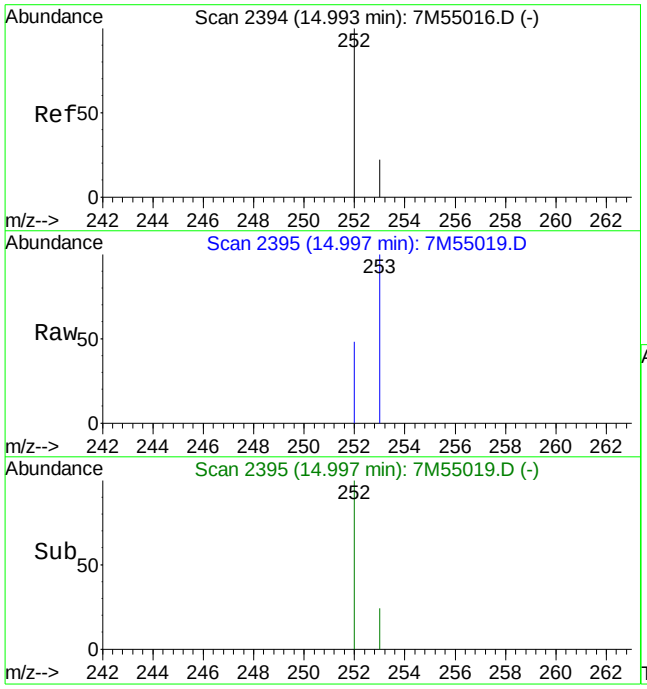




#19
Chrysene
Concen: 0.06 ug/ml
RT: 13.49 min Scan# 2097
Delta R.T. 0.00 min
Lab File: 7M55019.D
Acq: 15 May 2012 11:02 am

Tgt Ion:228 Resp: 9083

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 228 | 100 | | |
| 226 | 29.9 | 17.2 | 40.0 |

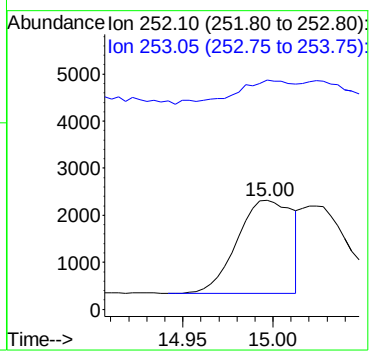


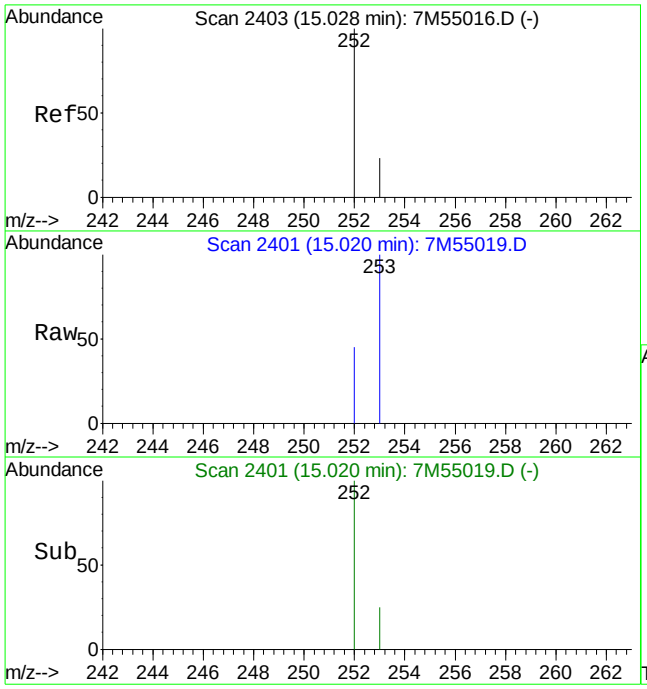



#21
Benzo[b]fluoranthene
Concen: 0.03 ug/ml
RT: 15.00 min Scan# 2395
Delta R.T. 0.00 min
Lab File: 7M55019.D
Acq: 15 May 2012 11:02 am

Tgt Ion:252 Resp: 4252

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 252 | 100 | | |
| 253 | 20.5 | 16.7 | 39.1 |

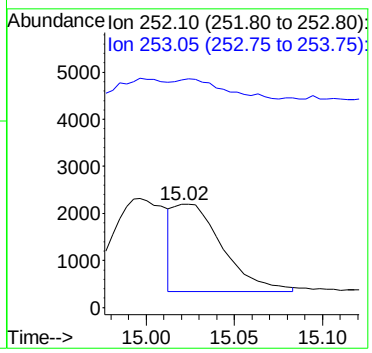


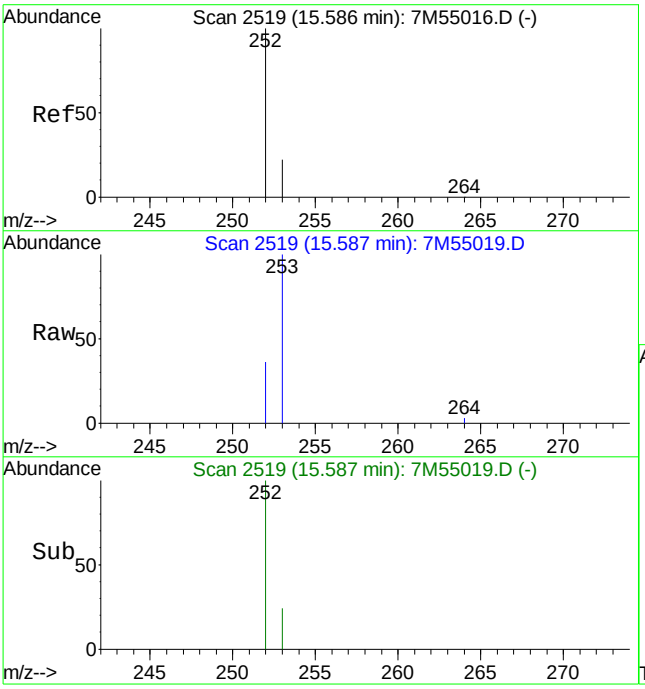




#22
Benzo[k]fluoranthene
Concen: 0.03 ug/ml m
RT: 15.02 min Scan# 2401
Delta R.T. -0.01 min
Lab File: 7M55019.D
Acq: 15 May 2012 11:02 am

Tgt Ion:252 Resp: 3585

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 252 | 100 | | |
| 253 | 24.3 | 16.6 | 38.8 |

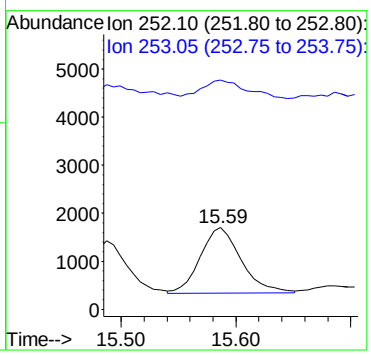





#23
Benzo[a]pyrene
Concen: 0.03 ug/ml
RT: 15.59 min Scan# 2519
Delta R.T. -0.00 min
Lab File: 7M55019.D
Acq: 15 May 2012 11:02 am

Tgt Ion:252 Resp: 3383

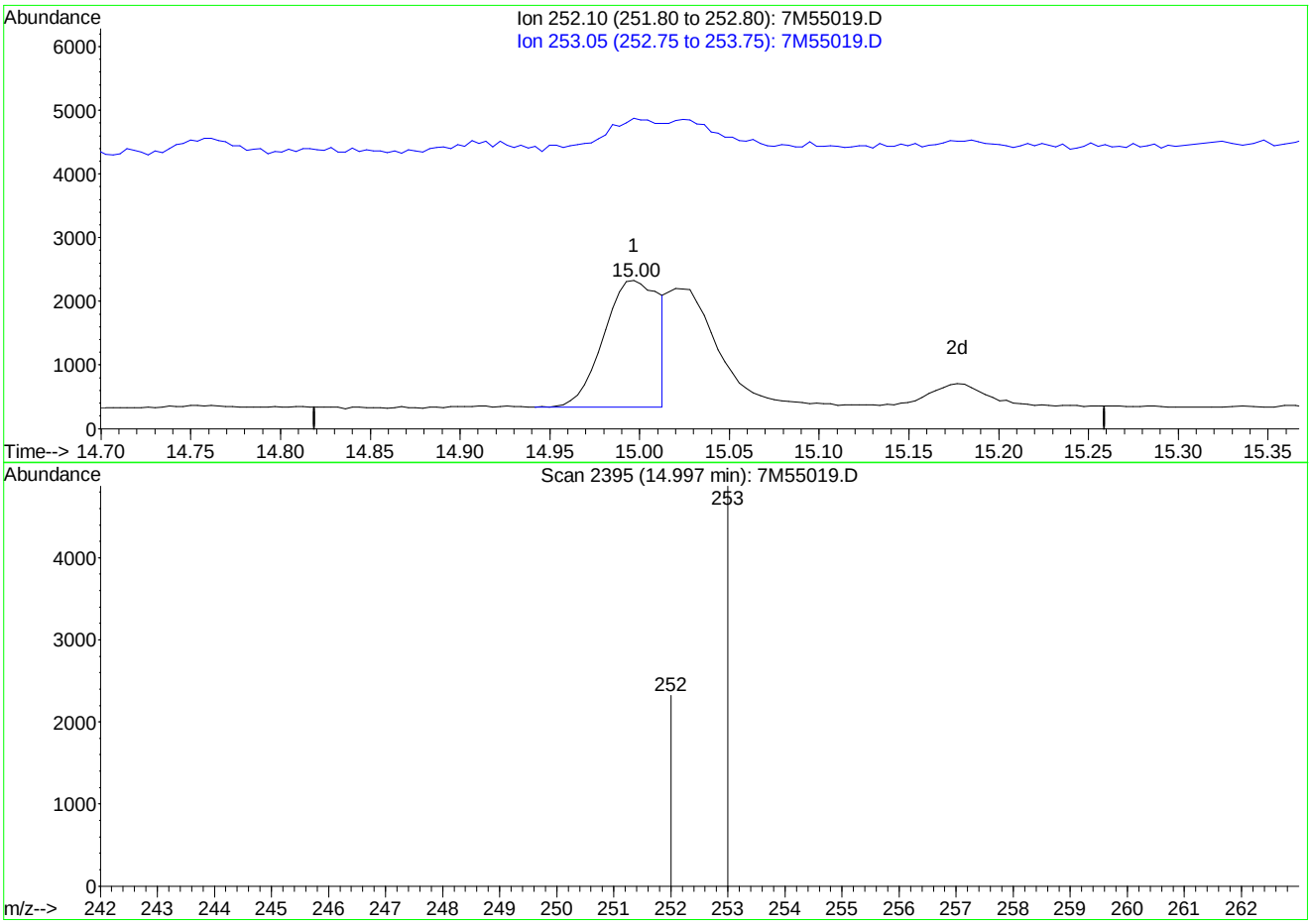
| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 252 | 100 | | |
| 253 | 29.2 | 13.0 | 30.4 |



Quantitation Report (Qedit)

Data File : C:\MSDCHEM\1\DATA\051512\7M55019.D Vial: 5
Acq On : 15 May 2012 11:02 am Operator: CAA
Sample : L12050284-03 Inst : HPMS7
Misc : 1,1 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 16 7:16 2012 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\SIMPAHL.M (RTE Integrator)
Title : OVD MSS03 SIMPAHL ICAL 04/04/12
Last Update : Thu May 17 11:52:38 2012
Response via : Multiple Level Calibration




TIC: 7M55019.D

(22) Benzo[k]fluoranthene

15.00min 0.03ug/ml

response 4252

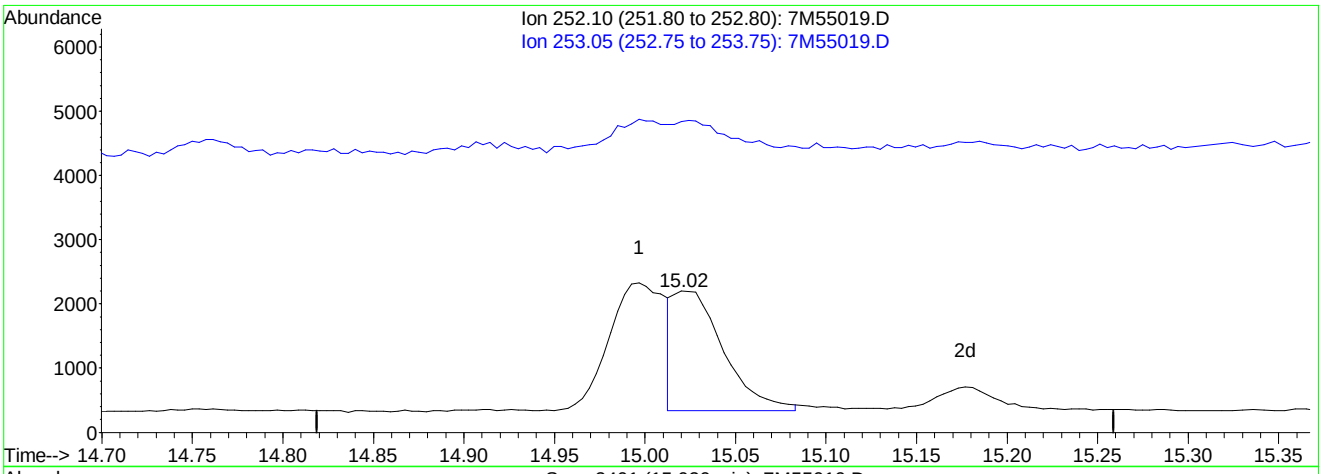
| Ion | Exp% | Act% |
|---|---|---|
| 252.10 | 100 | 100 |
| 253.05 | 27.70 | 20.51 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

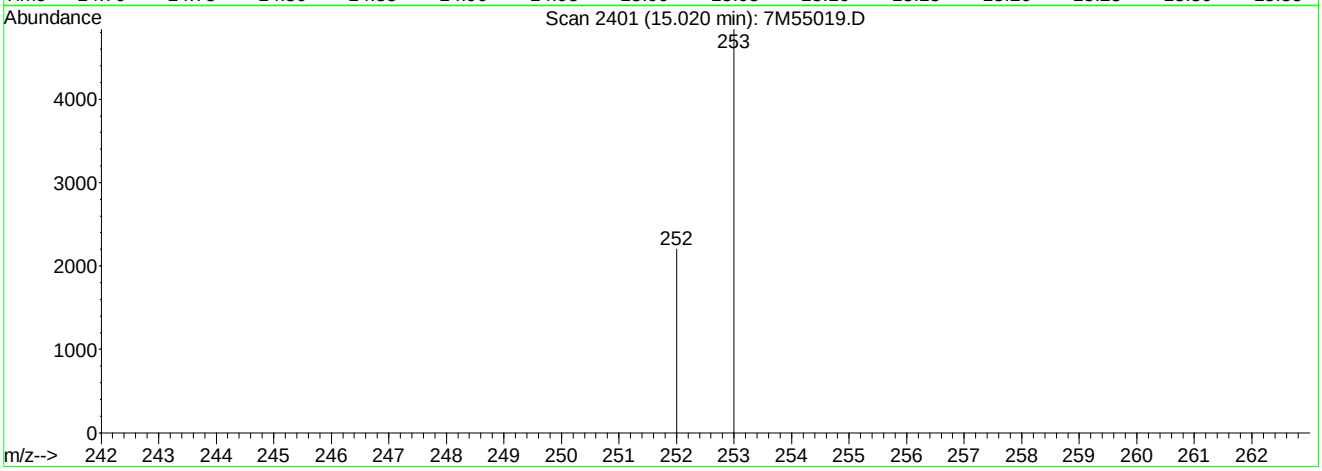
7M55019.D SIMPAHL.M Thu May 17 11:52:58 2012

Quantitation Report (Qedit)

Data File : C:\MSDCHEM\1\DATA\051512\7M55019.D Vial: 5
Acq On : 15 May 2012 11:02 am Operator: CAA
Sample : L12050284-03 Inst : HPMS7
Misc : 1,1 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 17 11:53 2012 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\SIMPAHL.M (RTE Integrator)
Title : OVD MSS03 SIMPAHL ICAL 04/04/12
Last Update : Thu May 17 11:52:38 2012
Response via : Multiple Level Calibration




TIC: 7M55019.D

(22) Benzo[k]fluoranthene

15.02min 0.03ug/ml mint

response 3585

| Ion | Exp% | Act% |
|---|---|---|
| 252.10 | 100 | 100 |
| 253.05 | 27.70 | 24.32 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

7M55019.D SIMPAHL.M Thu May 17 [illegible] 2012

Analyst: 05/17/2012 13:42 Supervisor: 05/17/2012 13:58

#3 - Improperly integrated isomers and/or coeluting compounds

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\051512\7M55020.D Vial: 6
Acq On : 15 May 2012 11:30 am Operator: CAA
Sample : L12050284-05 Inst : HPMS7
Misc : 1,1 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 16 07:16:24 2012 Quant Results File: SIMPAHL.RES

Quant Method : C:\MSDCHEM\1\METHODS\SIMPAHL.M (RTE Integrator)
Title : OVD MSS03 SIMPAHL ICAL 04/04/12
Last Update : Wed May 16 07:16:11 2012
Response via : Initial Calibration
DataAcq Meth : PAHLSIM

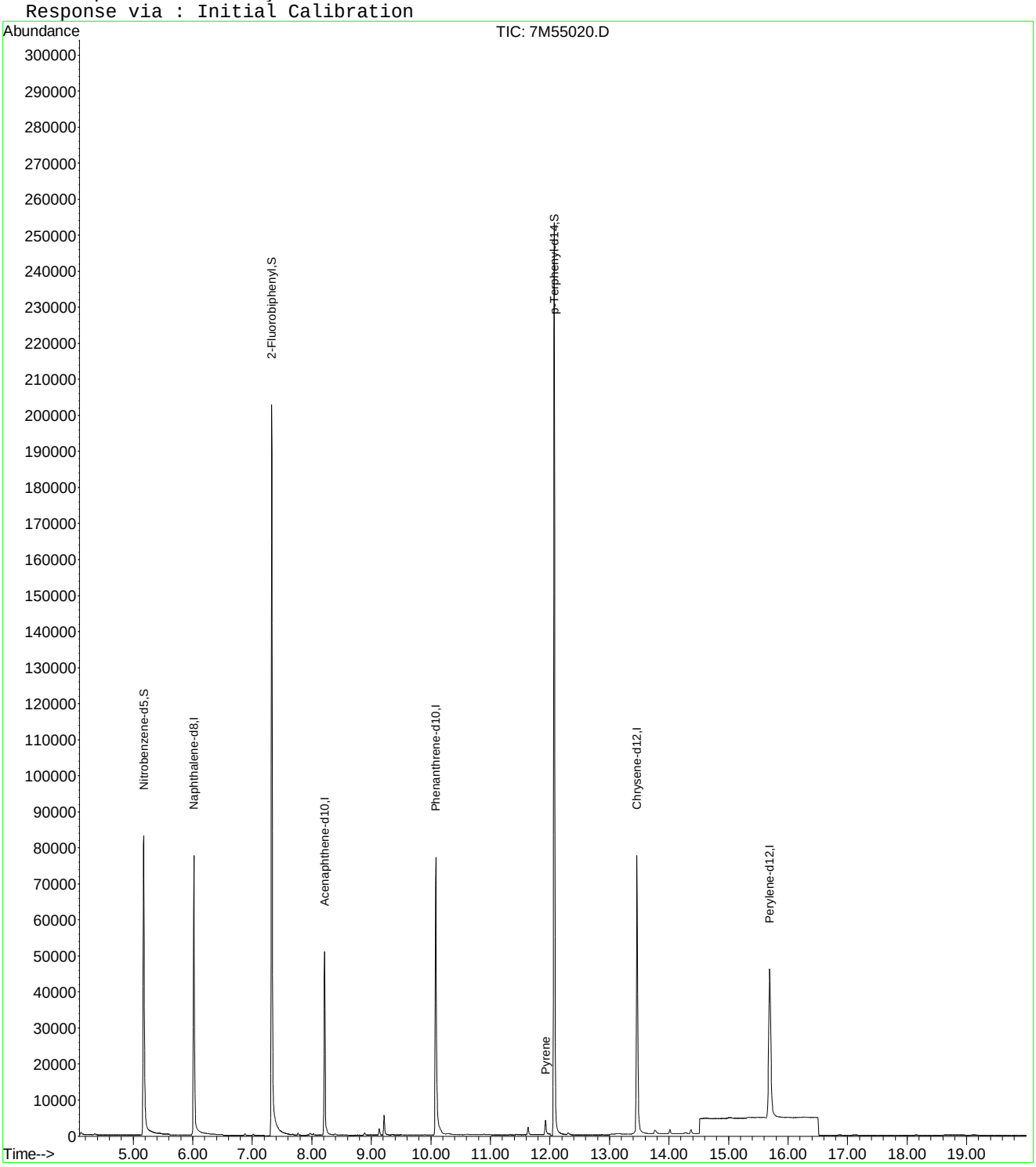
| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 1) Naphthalene-d8 | 6.02 | 136 | 106339 | 1.00 | ug/ml | 0.00 |
| 6) Acenaphthene-d10 | 8.22 | 164 | 70590 | 1.00 | ug/ml | 0.00 |
| 11) Phenanthrene-d10 | 10.08 | 188 | 114175 | 1.00 | ug/ml | 0.00 |
| 15) Chrysene-d12 | 13.46 | 240 | 112393 | 1.00 | ug/ml | 0.00 |
| 20) Perylene-d12 | 15.69 | 264 | 105562 | 1.00 | ug/ml | 0.00 |
| **System Monitoring Compounds** | | | | | | |
| 2) Nitrobenzene-d5 | 5.18 | 82 | 90407 | 2.0357 | ug/ml | 0.00 |
| Spiked Amount 2.500 | Range 35 - 114 | | Recovery = 81.60% | | | |
| 7) 2-Fluorobiphenyl | 7.33 | 172 | 203397 | 1.7421 | ug/ml | 0.00 |
| Spiked Amount 2.500 | Range 43 - 116 | | Recovery = 69.60% | | | |
| 17) p-Terphenyl-d14 | 12.07 | 244 | 278642 | 2.6722 | ug/ml | 0.00 |
| Spiked Amount 2.500 | Range 33 - 141 | | Recovery = 106.80% | | | |
| **Target Compounds** | | | | | | Qvalue |
| 16) Pyrene | 11.93 | 202 | 5334 | 0.0295 | ug/ml | 91 |

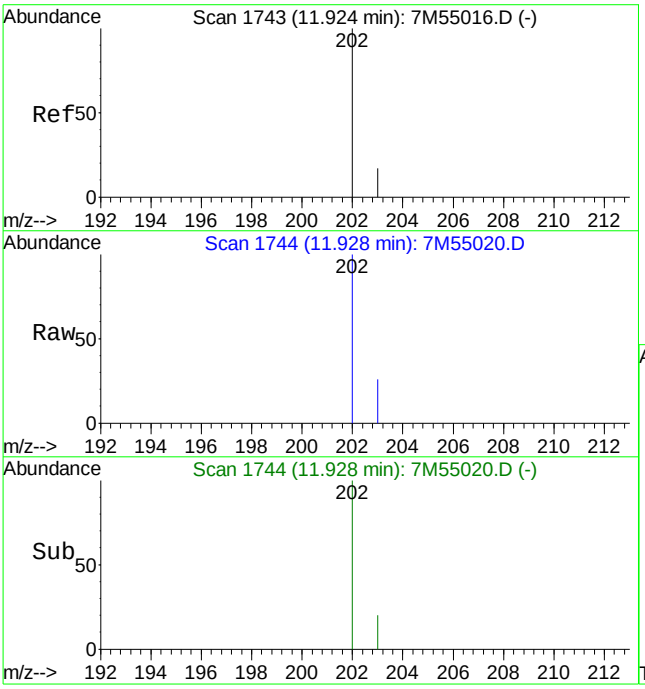
(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\051512\7M55020.D Vial: 6
Acq On : 15 May 2012 11:30 am Operator: CAA
Sample : L12050284-05 Inst : HPMS7
Misc : 1,1 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 16 7:16 2012 Quant Results File: SIMPAHL.RES

Method : C:\MSDCHEM\1\METHODS\SIMPAHL.M (RTE Integrator)
Title : OVD MSS03 SIMPAHL ICAL 04/04/12
Last Update : Thu May 17 11:52:38 2012
Response via : Initial Calibration

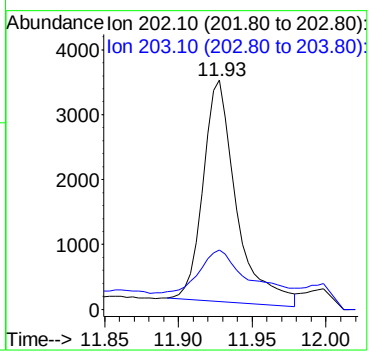





#16
Pyrene
Concen: 0.03 ug/ml
RT: 11.93 min Scan# 1744
Delta R.T. 0.00 min
Lab File: 7M55020.D
Acq: 15 May 2012 11:30 am

Tgt Ion:202 Resp: 5334

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 202 | 100 | | |
| 203 | 22.5 | 11.0 | 25.6 |



Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\051512\7M55021.D Vial: 7
Acq On : 15 May 2012 11:58 am Operator: CAA
Sample : L12050284-07 Inst : HPMS7
Misc : 1,1 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 16 07:16:24 2012 Quant Results File: SIMPAHL.RES

Quant Method : C:\MSDCHEM\1\METHODS\SIMPAHL.M (RTE Integrator)
Title : OVD MSS03 SIMPAHL ICAL 04/04/12
Last Update : Wed May 16 07:16:11 2012
Response via : Initial Calibration
DataAcq Meth : PAHLSIM

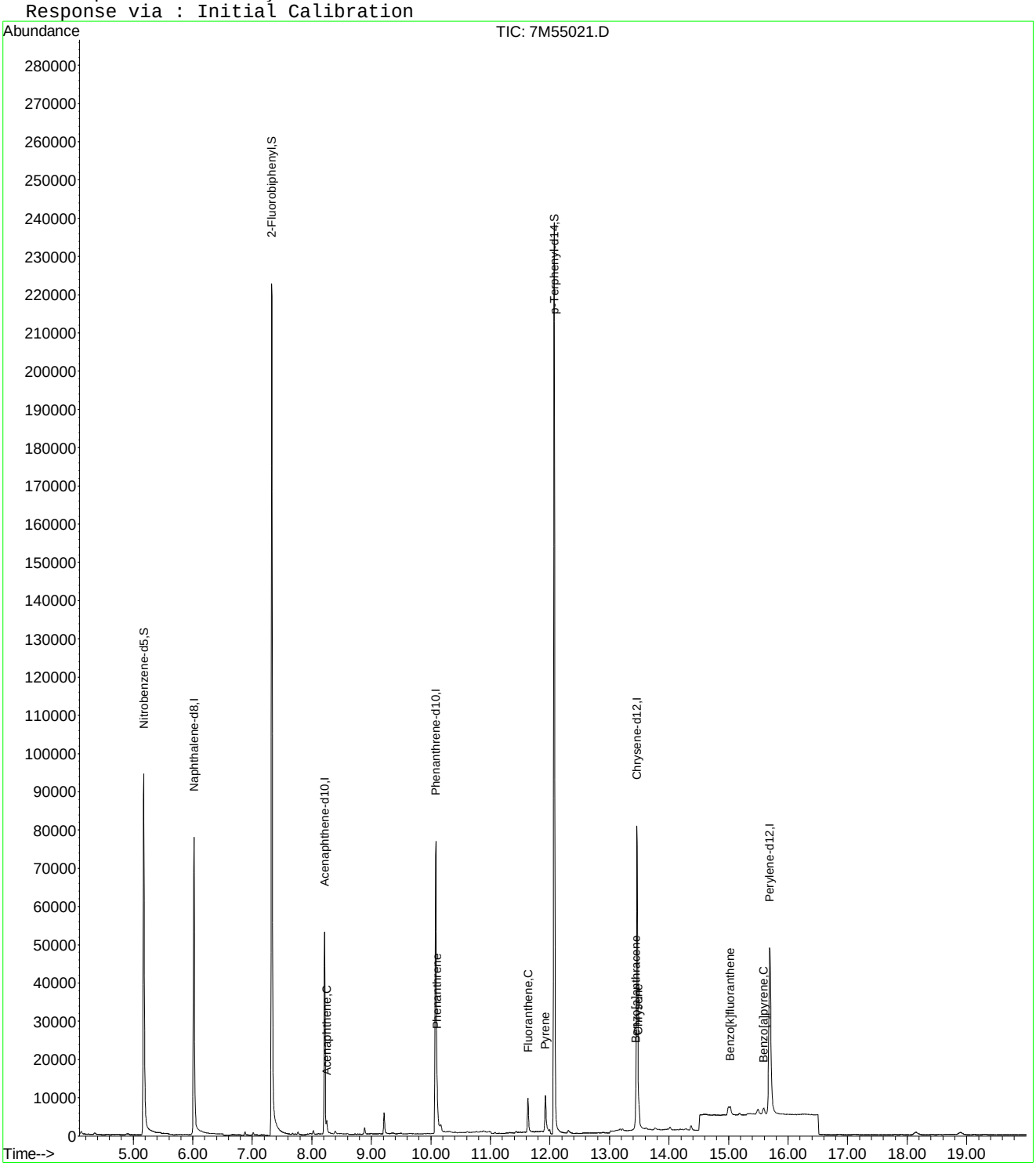
| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 1) Naphthalene-d8 | 6.02 | 136 | 107321 | 1.00 | ug/ml | 0.00 |
| 6) Acenaphthene-d10 | 8.21 | 164 | 71007 | 1.00 | ug/ml | 0.00 |
| 11) Phenanthrene-d10 | 10.08 | 188 | 114600 | 1.00 | ug/ml | 0.00 |
| 15) Chrysene-d12 | 13.46 | 240 | 118659 | 1.00 | ug/ml | 0.00 |
| 20) Perylene-d12 | 15.69 | 264 | 111182 | 1.00 | ug/ml | 0.00 |
| **System Monitoring Compounds** | | | | | | |
| 2) Nitrobenzene-d5 | 5.17 | 82 | 98500 | 2.1976 | ug/ml | 0.00 |
| Spiked Amount 2.500 | Range 35 - 114 | | Recovery = 88.00% | | | |
| 7) 2-Fluorobiphenyl | 7.33 | 172 | 224866 | 1.9147 | ug/ml | 0.00 |
| Spiked Amount 2.500 | Range 43 - 116 | | Recovery = 76.40% | | | |
| 17) p-Terphenyl-d14 | 12.07 | 244 | 264917 | 2.4065 | ug/ml | 0.00 |
| Spiked Amount 2.500 | Range 33 - 141 | | Recovery = 96.40% | | | |
| **Target Compounds** | | | | | | Qvalue |
| 9) Acenaphthene | 8.26 | 154 | 1942 | 0.0216 | ug/ml | 79 |
| 12) Phenanthrene | 10.11 | 178 | 6033 | 0.0423 | ug/ml | 99 |
| 14) Fluoranthene | 11.63 | 202 | 11140 | 0.0746 | ug/ml | 94 |
| 16) Pyrene | 11.92 | 202 | 11621 | 0.0609 | ug/ml | 89 |
| 18) Benzo[a]anthracene | 13.44 | 228 | 5094 | 0.0331 | ug/ml# | 60 |
| 19) Chrysene | 13.49 | 228 | 5399 | 0.0353 | ug/ml | 89 |
| 22) Benzo[k]fluoranthene | 15.03 | 252 | 3921m | 0.0270 | ug/ml | |
| 23) Benzo[a]pyrene | 15.59 | 252 | 3274 | 0.0229 | ug/ml | 90 |

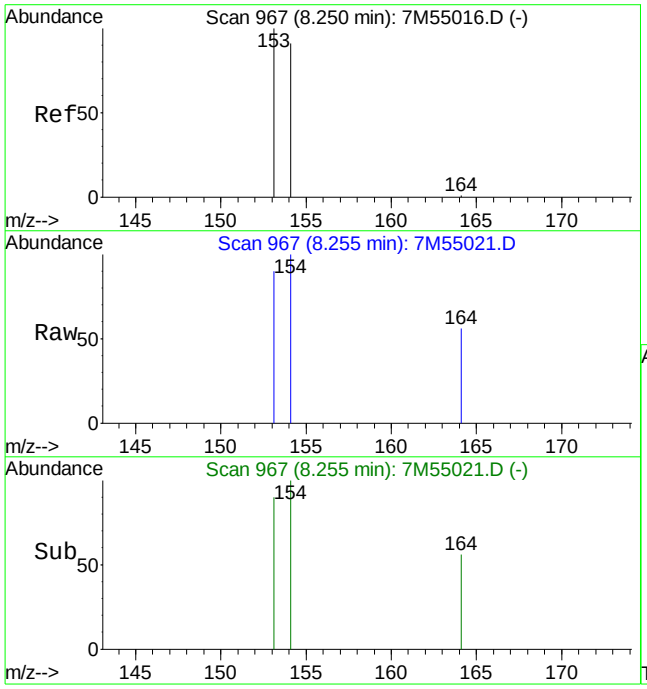
(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\051512\7M55021.D Vial: 7
Acq On : 15 May 2012 11:58 am Operator: CAA
Sample : L12050284-07 Inst : HPMS7
Misc : 1,1 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 17 11:53 2012 Quant Results File: SIMPAHL.RES

Method : C:\MSDCHEM\1\METHODS\SIMPAHL.M (RTE Integrator)
Title : OVD MSS03 SIMPAHL ICAL 04/04/12
Last Update : Thu May 17 11:52:38 2012
Response via : Initial Calibration

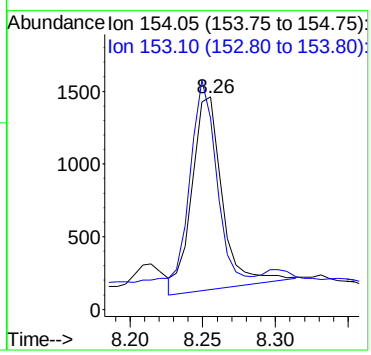


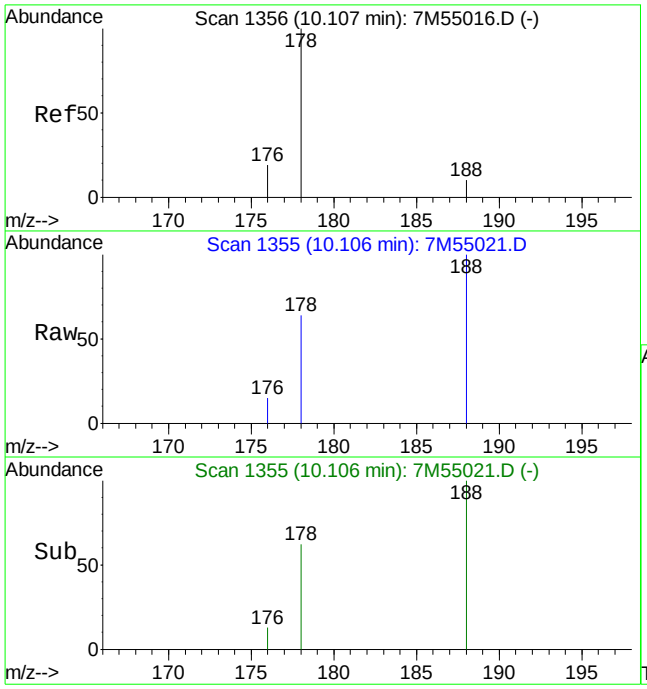



#9
Acenaphthene
Concen: 0.02 ug/ml
RT: 8.26 min Scan# 967
Delta R.T. 0.01 min
Lab File: 7M55021.D
Acq: 15 May 2012 11:58 am

Tgt Ion:154 Resp: 1942

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 154 | 100 | | |
| 153 | 83.5 | 63.1 | 147.1 |

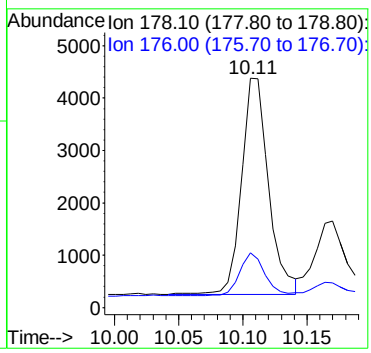


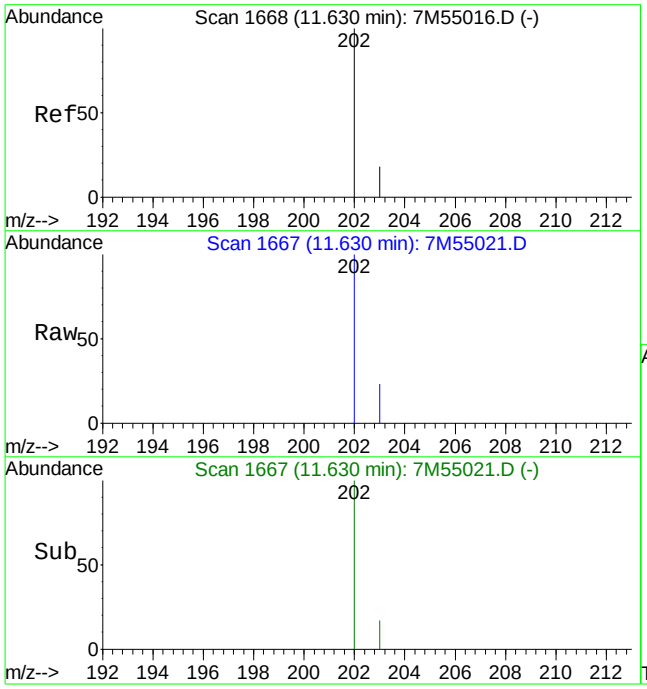




#12
Phenanthrene
Concen: 0.04 ug/ml
RT: 10.11 min Scan# 1355
Delta R.T. -0.01 min
Lab File: 7M55021.D
Acq: 15 May 2012 11:58 am

Tgt Ion:178 Resp: 6033

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 178 | 100 | | |
| 176 | 18.4 | 11.4 | 26.6 |

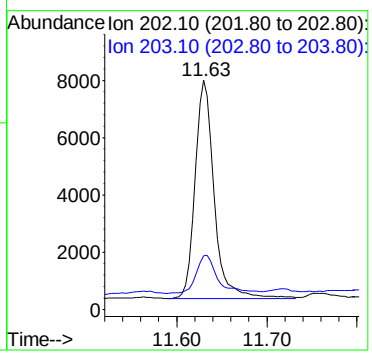


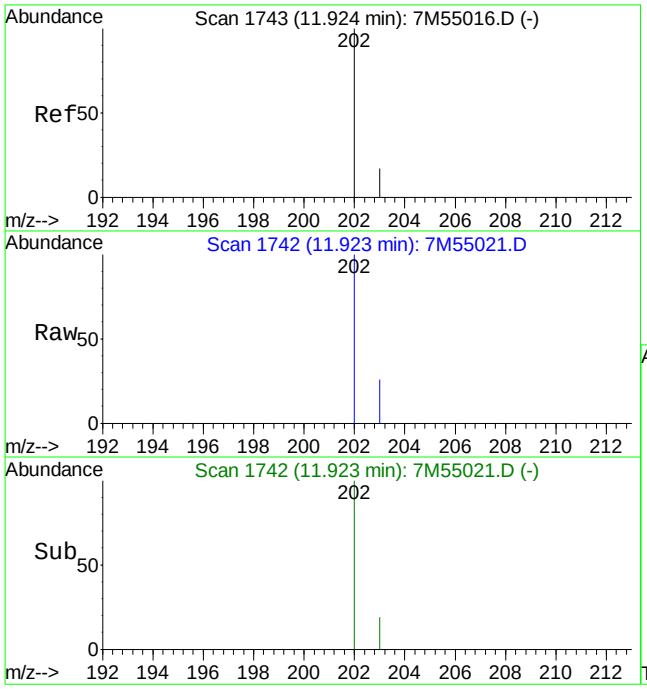



#14
Fluoranthene
Concen: 0.07 ug/ml
RT: 11.63 min Scan# 1667
Delta R.T. -0.00 min
Lab File: 7M55021.D
Acq: 15 May 2012 11:58 am

Tgt Ion:202 Resp: 11140

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 202 | 100 | | |
| 203 | 20.1 | 10.6 | 24.6 |

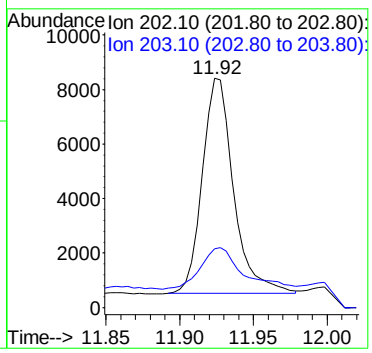


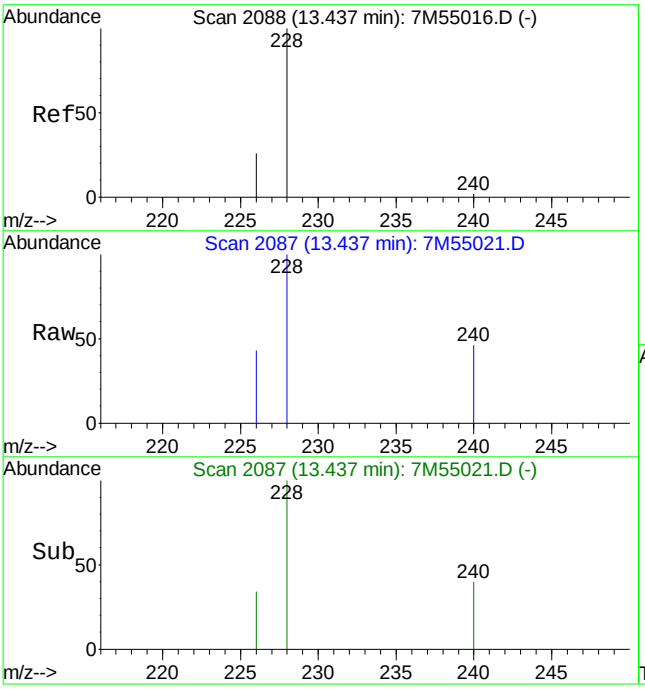




#16
Pyrene
Concen: 0.06 ug/ml
RT: 11.92 min Scan# 1742
Delta R.T. -0.00 min
Lab File: 7M55021.D
Acq: 15 May 2012 11:58 am

Tgt Ion:202 Resp: 11621

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 202 | 100 | | |
| 203 | 23.4 | 11.0 | 25.6 |

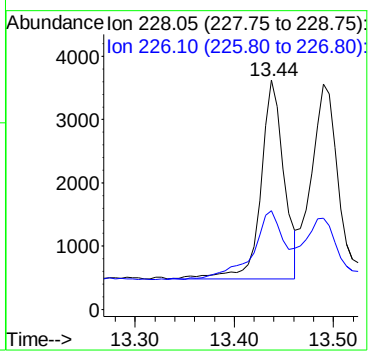


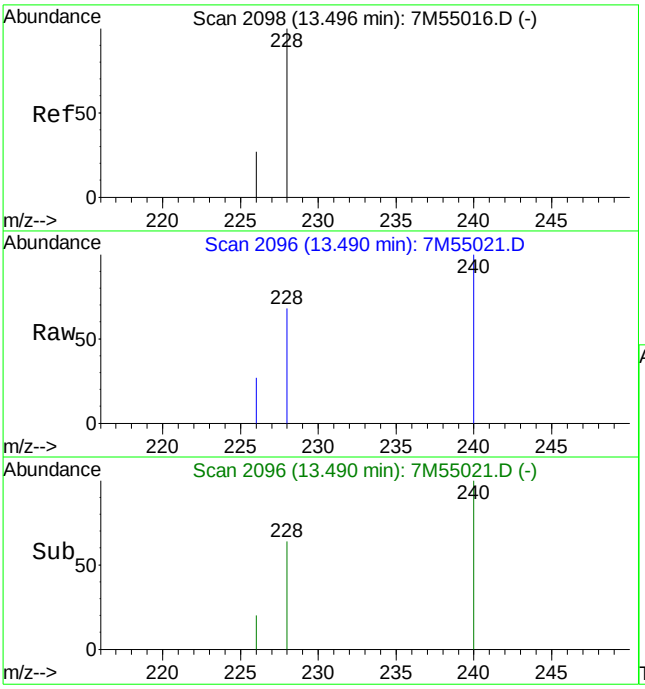



#18
Benzo[a]anthracene
Concen: 0.03 ug/ml
RT: 13.44 min Scan# 2087
Delta R.T. -0.00 min
Lab File: 7M55021.D
Acq: 15 May 2012 11:58 am

Tgt Ion:228 Resp: 5094

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 228 | 100 | | |
| 226 | 46.0 | 15.4 | 36.0# |

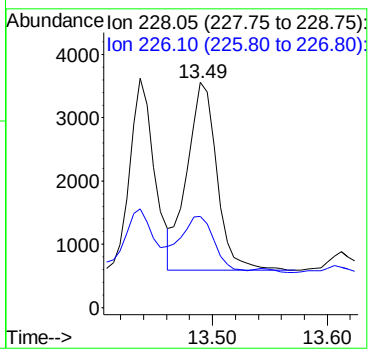


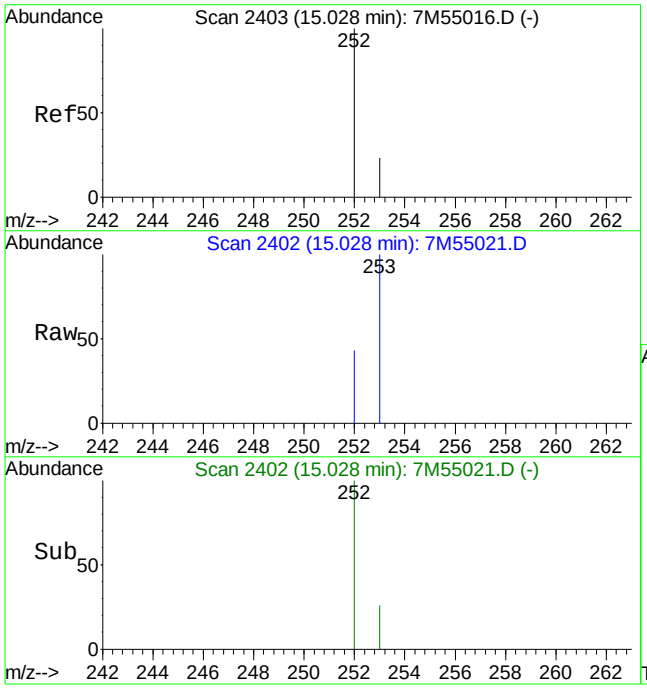




#19
Chrysene
Concen: 0.04 ug/ml
RT: 13.49 min Scan# 2096
Delta R.T. -0.00 min
Lab File: 7M55021.D
Acq: 15 May 2012 11:58 am

Tgt Ion:228 Resp: 5399

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 228 | 100 | | |
| 226 | 34.2 | 17.2 | 40.0 |

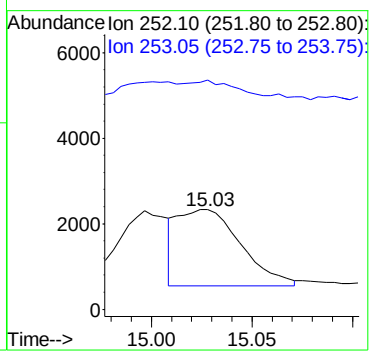


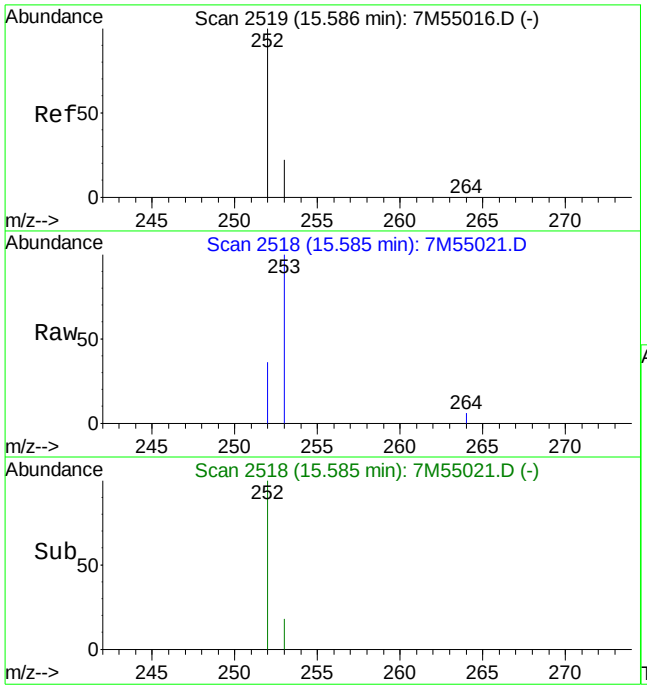



#22
Benzo[k]fluoranthene
Concen: 0.03 ug/ml m
RT: 15.03 min Scan# 2402
Delta R.T. 0.00 min
Lab File: 7M55021.D
Acq: 15 May 2012 11:58 am

Tgt Ion:252 Resp: 3921

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 252 | 100 | | |
| 253 | 24.3 | 16.6 | 38.8 |

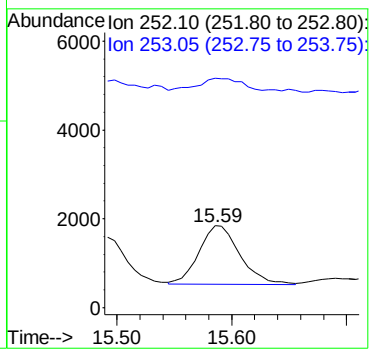



#23
Benzo[a]pyrene
Concen: 0.02 ug/ml
RT: 15.59 min Scan# 2518
Delta R.T. -0.00 min
Lab File: 7M55021.D
Acq: 15 May 2012 11:58 am

Tgt Ion:252 Resp: 3274

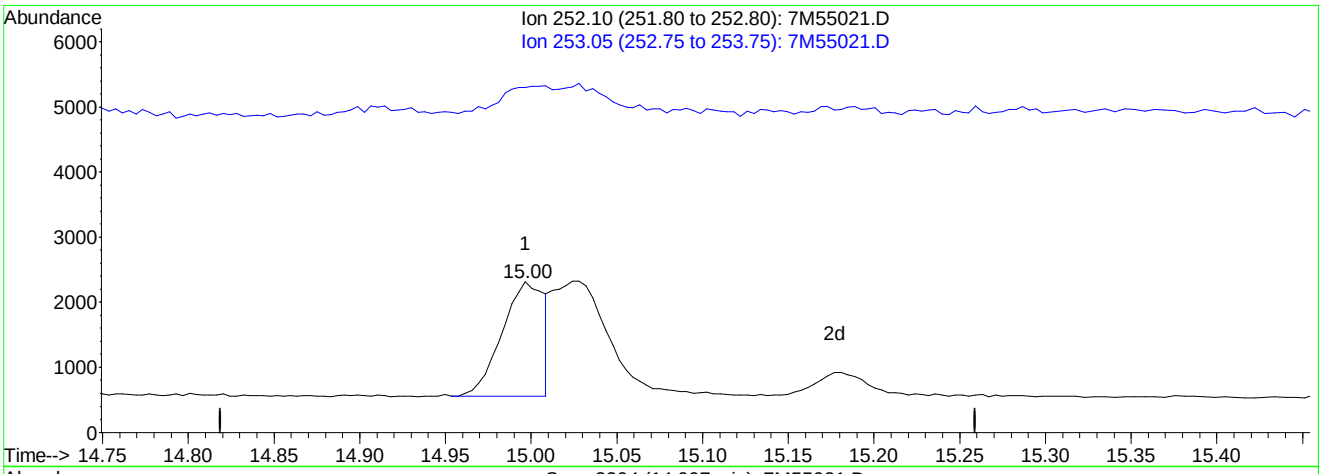
| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 252 | 100 | | |
| 253 | 26.6 | 13.0 | 30.4 |

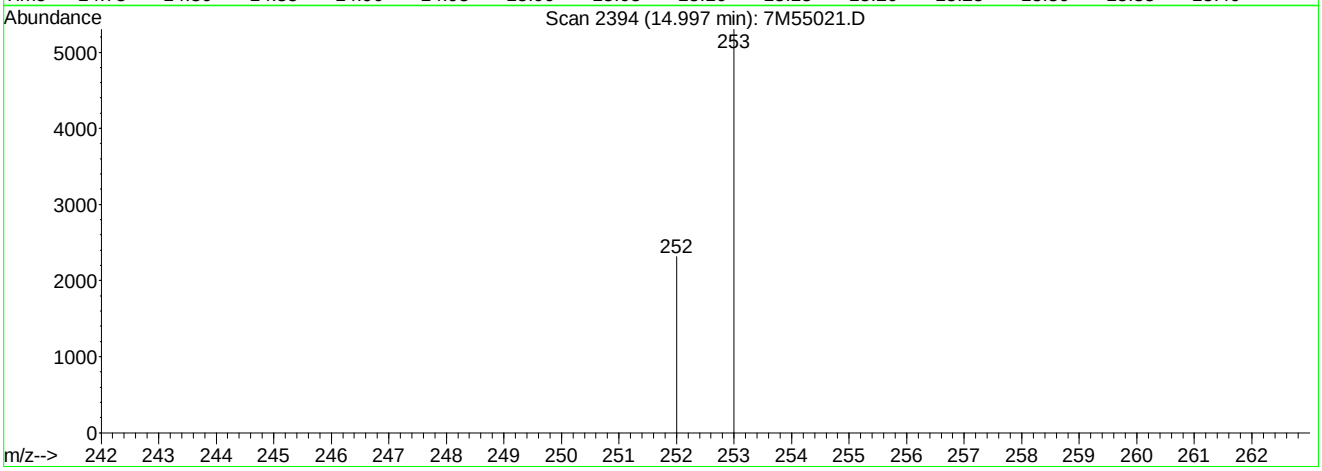


Quantitation Report (Qedit)

Data File : C:\MSDCHEM\1\DATA\051512\7M55021.D Vial: 7
Acq On : 15 May 2012 11:58 am Operator: CAA
Sample : L12050284-07 Inst : HPMS7
Misc : 1,1 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 16 7:16 2012 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\SIMPAHL.M (RTE Integrator)
Title : OVD MSS03 SIMPAHL ICAL 04/04/12
Last Update : Thu May 17 11:52:38 2012
Response via : Multiple Level Calibration




TIC: 7M55021.D

(22) Benzo[k]fluoranthene

15.00min 0.02ug/ml

response 3026

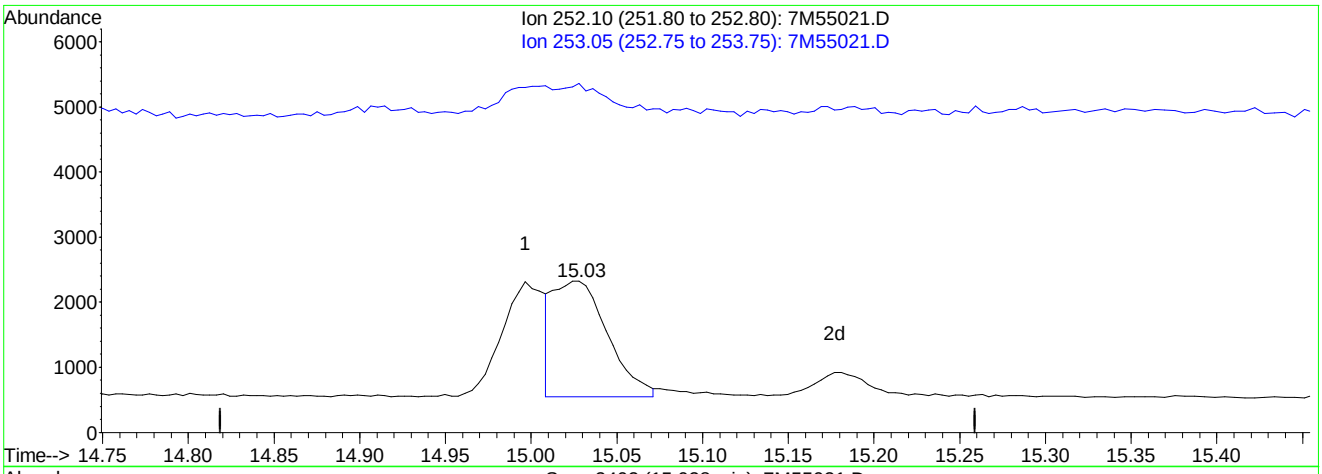
| Ion | Exp% | Act% |
|---|---|---|
| 252.10 | 100 | 100 |
| 253.05 | 27.70 | 31.53 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

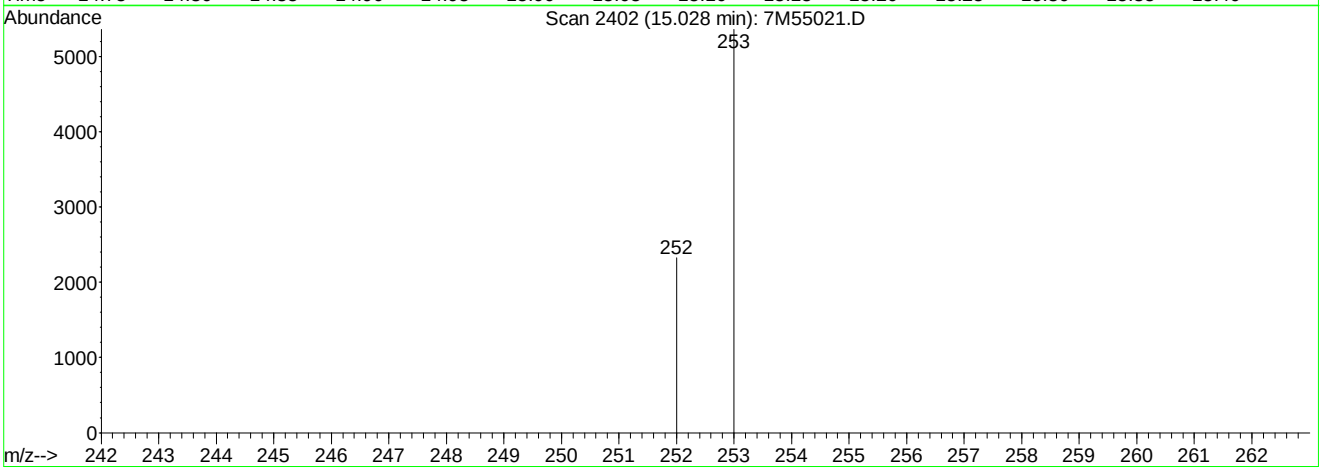
7M55021.D SIMPAHL.M Thu May 17 11:53:13 2012

Quantitation Report (Qedit)

Data File : C:\MSDCHEM\1\DATA\051512\7M55021.D Vial: 7
Acq On : 15 May 2012 11:58 am Operator: CAA
Sample : L12050284-07 Inst : HPMS7
Misc : 1,1 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 17 11:53 2012 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\SIMPAHL.M (RTE Integrator)
Title : OVD MSS03 SIMPAHL ICAL 04/04/12
Last Update : Thu May 17 11:52:38 2012
Response via : Multiple Level Calibration




TIC: 7M55021.D

(22) Benzo[k]fluoranthene

15.03min 0.03ug/ml mint

response 3921

| Ion | Exp% | Act% |
|---|---|---|
| 252.10 | 100 | 100 |
| 253.05 | 27.70 | 24.33 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

7M55021.D SIMPAHL.M Thu May 17 ) 2012

Analyst: 05/17/2012 13:42 Supervisor: 05/17/2012 13:58

#3 - Improperly integrated isomers and/or coeluting compounds

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\051512\7M55022.D Vial: 8
Acq On : 15 May 2012 12:26 pm Operator: CAA
Sample : L12050284-10 Inst : HPMS7
Misc : 1,1 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 16 07:16:24 2012 Quant Results File: SIMPAHL.RES

Quant Method : C:\MSDCHEM\1\METHODS\SIMPAHL.M (RTE Integrator)
Title : OVD MSS03 SIMPAHL ICAL 04/04/12
Last Update : Wed May 16 07:16:11 2012
Response via : Initial Calibration
DataAcq Meth : PAHLSIM

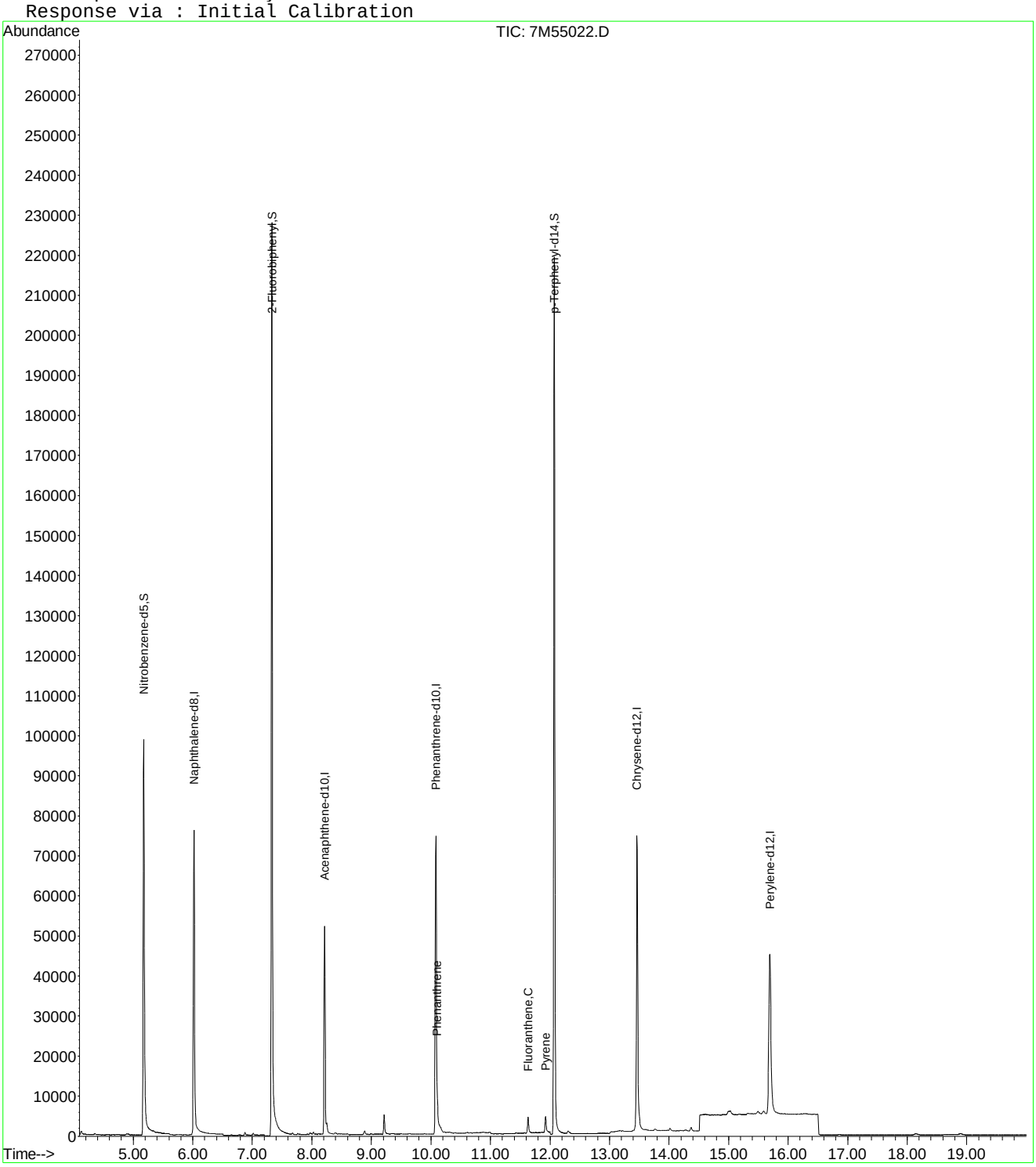
| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 1) Naphthalene-d8 | 6.02 | 136 | 105307 | 1.00 | ug/ml | 0.00 |
| 6) Acenaphthene-d10 | 8.21 | 164 | 71317 | 1.00 | ug/ml | 0.00 |
| 11) Phenanthrene-d10 | 10.08 | 188 | 112779 | 1.00 | ug/ml | 0.00 |
| 15) Chrysene-d12 | 13.46 | 240 | 111979 | 1.00 | ug/ml | 0.00 |
| 20) Perylene-d12 | 15.70 | 264 | 104426 | 1.00 | ug/ml | 0.00 |
| **System Monitoring Compounds** | | | | | | |
| 2) Nitrobenzene-d5 | 5.17 | 82 | 102326 | 2.3267 | ug/ml | 0.00 |
| Spiked Amount 2.500 | Range 35 - 114 | | Recovery = 93.20% | | | |
| 7) 2-Fluorobiphenyl | 7.33 | 172 | 233041 | 1.9757 | ug/ml | 0.00 |
| Spiked Amount 2.500 | Range 43 - 116 | | Recovery = 79.20% | | | |
| 17) p-Terphenyl-d14 | 12.07 | 244 | 265886 | 2.5593 | ug/ml | 0.00 |
| Spiked Amount 2.500 | Range 33 - 141 | | Recovery = 102.40% | | | |
| **Target Compounds** | | | | | | Qvalue |
| 12) Phenanthrene | 10.11 | 178 | 2954 | 0.0211 | ug/ml | 99 |
| 14) Fluoranthene | 11.63 | 202 | 5157 | 0.0351 | ug/ml | 91 |
| 16) Pyrene | 11.93 | 202 | 4889 | 0.0272 | ug/ml | 94 |

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

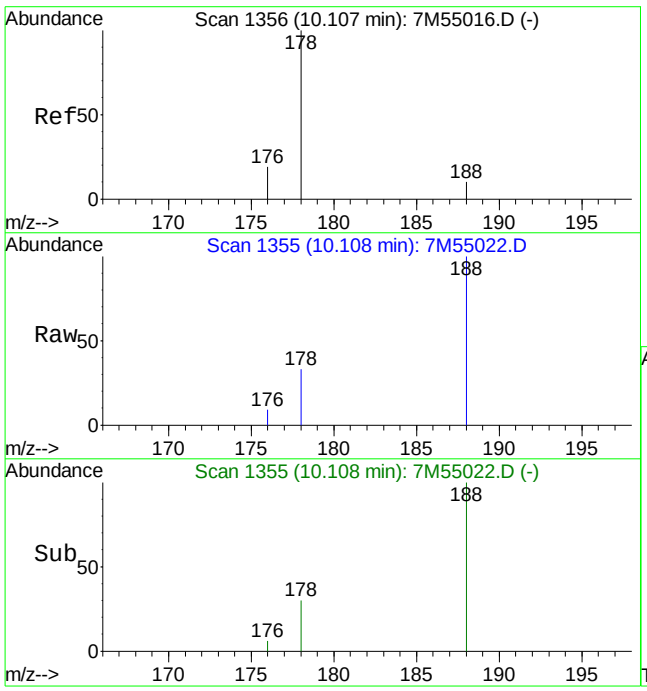
Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\051512\7M55022.D Vial: 8
Acq On : 15 May 2012 12:26 pm Operator: CAA
Sample : L12050284-10 Inst : HPMS7
Misc : 1,1 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 16 7:16 2012 Quant Results File: SIMPAHL.RES

Method : C:\MSDCHEM\1\METHODS\SIMPAHL.M (RTE Integrator)
Title : OVD MSS03 SIMPAHL ICAL 04/04/12
Last Update : Thu May 17 11:52:38 2012
Response via : Initial Calibration



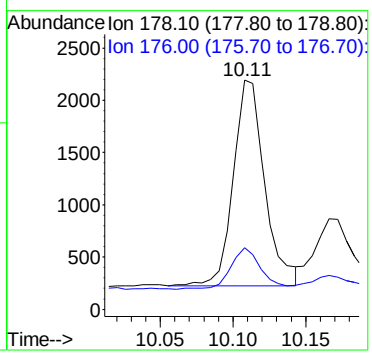

7M55022.D SIMPAHL.M Thu May 17 13:17:19 2012 Page 2

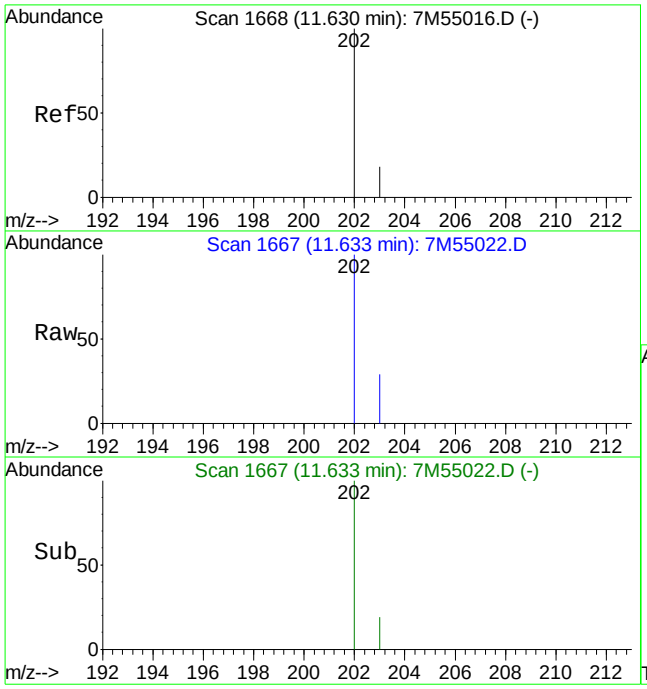



#12
Phenanthrene
Concen: 0.02 ug/ml
RT: 10.11 min Scan# 1355
Delta R.T. -0.00 min
Lab File: 7M55022.D
Acq: 15 May 2012 12:26 pm

Tgt Ion:178 Resp: 2954

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 178 | 100 | | |
| 176 | 19.5 | 11.4 | 26.6 |

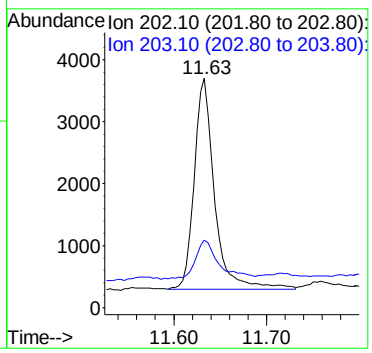


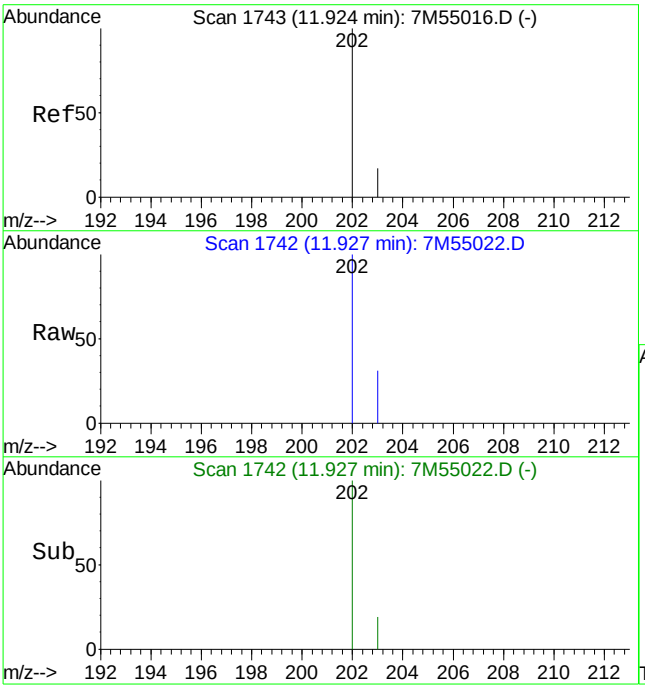




#14
Fluoranthene
Concen: 0.04 ug/ml
RT: 11.63 min Scan# 1667
Delta R.T. -0.00 min
Lab File: 7M55022.D
Acq: 15 May 2012 12:26 pm

Tgt Ion:202 Resp: 5157

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 202 | 100 | | |
| 203 | 21.5 | 10.6 | 24.6 |

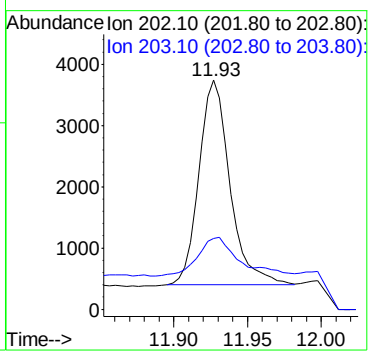





#16
Pyrene
Concen: 0.03 ug/ml
RT: 11.93 min Scan# 1742
Delta R.T. 0.00 min
Lab File: 7M55022.D
Acq: 15 May 2012 12:26 pm

Tgt Ion:202 Resp: 4889

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 202 | 100 | | |
| 203 | 20.8 | 11.0 | 25.6 |



Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\051512\7M55023.D Vial: 9
Acq On : 15 May 2012 12:54 pm Operator: CAA
Sample : L12050284-12 Inst : HPMS7
Misc : 1,1 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 16 07:16:25 2012 Quant Results File: SIMPAHL.RES

Quant Method : C:\MSDCHEM\1\METHODS\SIMPAHL.M (RTE Integrator)
Title : OVD MSS03 SIMPAHL ICAL 04/04/12
Last Update : Wed May 16 07:16:11 2012
Response via : Initial Calibration
DataAcq Meth : PAHLSIM

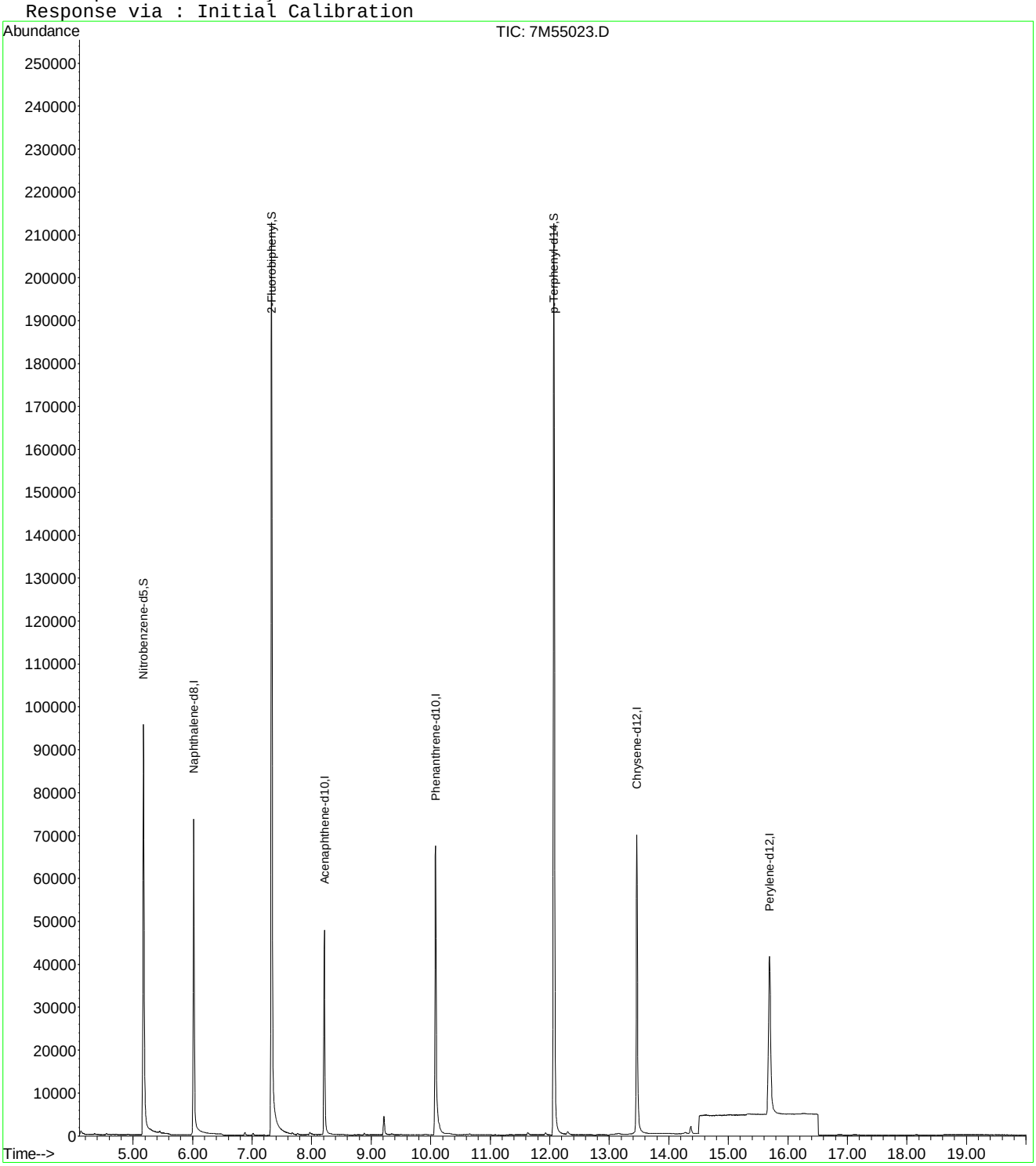
| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 1) Naphthalene-d8 | 6.02 | 136 | 102436 | 1.00 | ug/ml | 0.00 |
| 6) Acenaphthene-d10 | 8.22 | 164 | 67551 | 1.00 | ug/ml | 0.00 |
| 11) Phenanthrene-d10 | 10.08 | 188 | 108093 | 1.00 | ug/ml | 0.00 |
| 15) Chrysene-d12 | 13.46 | 240 | 105715 | 1.00 | ug/ml | 0.00 |
| 20) Perylene-d12 | 15.69 | 264 | 98473 | 1.00 | ug/ml | 0.00 |
| **System Monitoring Compounds** | | | | | | |
| 2) Nitrobenzene-d5 | 5.17 | 82 | 98596 | 2.3047 | ug/ml | 0.00 |
| Spiked Amount 2.500 | Range 35 - 114 | | Recovery = 92.00% | | | |
| 7) 2-Fluorobiphenyl | 7.33 | 172 | 220904 | 1.9772 | ug/ml | 0.00 |
| Spiked Amount 2.500 | Range 43 - 116 | | Recovery = 79.20% | | | |
| 17) p-Terphenyl-d14 | 12.07 | 244 | 247402 | 2.5225 | ug/ml | 0.00 |
| Spiked Amount 2.500 | Range 33 - 141 | | Recovery = 100.80% | | | |
| **Target Compounds** | | | | | | Qvalue |

(#) = qualifier out of range (m) = manual integration
7M55023.D SIMPAHL.M Thu May 17 13:17:20 2012 Page 1

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\051512\7M55023.D Vial: 9
Acq On : 15 May 2012 12:54 pm Operator: CAA
Sample : L12050284-12 Inst : HPMS7
Misc : 1,1 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 16 7:16 2012 Quant Results File: SIMPAHL.RES

Method : C:\MSDCHEM\1\METHODS\SIMPAHL.M (RTE Integrator)
Title : OVD MSS03 SIMPAHL ICAL 04/04/12
Last Update : Thu May 17 11:52:38 2012
Response via : Initial Calibration



# 2.2.2.4 Standards Data

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\040412\7M54728.D Vial: 2
Acq On : 4 Apr 2012 9:39 am Operator: CAA
Sample : WG394111-02 1PPM PAHL STD Inst : HPMS7
Misc : 1,1 STD49560 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 05 10:56:38 2012 Quant Results File: SIMPAHL.RES

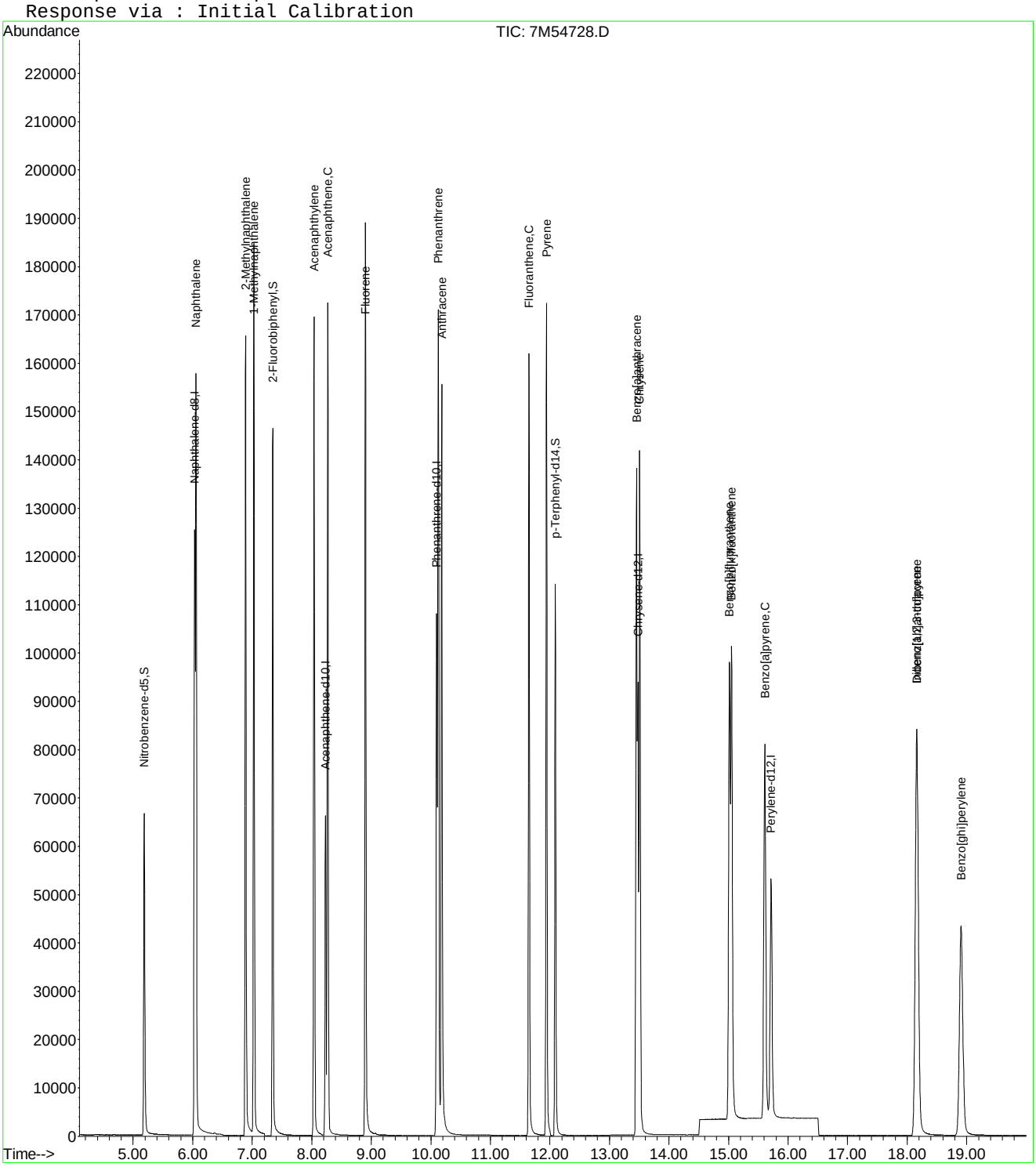
Quant Method : C:\MSDCHEM\1\METHODS\SIMPAHL.M (RTE Integrator)
Title : OVD MSS03 SIMPAHL ICAL 04/04/12
Last Update : Thu Apr 05 10:56:28 2012
Response via : Initial Calibration
DataAcq Meth : PAHLSIM

| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 1) Naphthalene-d8 | 6.03 | 136 | 153463 | 1.00 | ug/ml | 0.00 |
| 6) Acenaphthene-d10 | 8.23 | 164 | 85143 | 1.00 | ug/ml | 0.00 |
| 11) Phenanthrene-d10 | 10.10 | 188 | 143225 | 1.00 | ug/ml | 0.00 |
| 15) Chrysene-d12 | 13.48 | 240 | 118114 | 1.00 | ug/ml | 0.00 |
| 20) Perylene-d12 | 15.71 | 264 | 116508 | 1.00 | ug/ml | 0.00 |
| **System Monitoring Compounds** | | | | | | |
| 2) Nitrobenzene-d5 | 5.18 | 82 | 63871 | 0.9809 | ug/ml | 0.00 |
| Spiked Amount 2.500 | Range 35 - 114 | | Recovery = 39.20% | | | |
| 7) 2-Fluorobiphenyl | 7.35 | 172 | 137427 | 1.0163 | ug/ml | 0.00 |
| Spiked Amount 2.500 | Range 43 - 116 | | Recovery = 40.80%# | | | |
| 17) p-Terphenyl-d14 | 12.09 | 244 | 118698 | 1.1101 | ug/ml | 0.00 |
| Spiked Amount 2.500 | Range 33 - 141 | | Recovery = 44.40% | | | |
| **Target Compounds** | | | | | | Qvalue |
| 3) Naphthalene | 6.05 | 128 | 174314 | 0.9550 | ug/ml | 100 |
| 4) 2-Methylnaphthalene | 6.89 | 142 | 112240 | 1.0173 | ug/ml | 100 |
| 5) 1-Methylnaphthalene | 7.03 | 142 | 119453 | 1.0871 | ug/ml | 99 |
| 8) Acenaphthylene | 8.04 | 152 | 169525 | 0.9990 | ug/ml | 100 |
| 9) Acenaphthene | 8.27 | 154 | 101608 | 0.9584 | ug/ml | 100 |
| 10) Fluorene | 8.90 | 166 | 126450 | 1.0464 | ug/ml | 100 |
| 12) Phenanthrene | 10.13 | 178 | 174346 | 0.9841 | ug/ml | 100 |
| 13) Anthracene | 10.18 | 178 | 177663 | 1.0067 | ug/ml | 100 |
| 14) Fluoranthene | 11.65 | 202 | 183927 | 0.9372 | ug/ml | 100 |
| 16) Pyrene | 11.94 | 202 | 208192 | 1.1119 | ug/ml | 100 |
| 18) Benzo[a]anthracene | 13.46 | 228 | 151964 | 0.9952 | ug/ml | 100 |
| 19) Chrysene | 13.51 | 228 | 148985 | 0.9748 | ug/ml | 100 |
| 21) Benzo[b]fluoranthene | 15.01 | 252 | 153733 | 0.9700 | ug/ml | 96 |
| 22) Benzo[k]fluoranthene | 15.05 | 252 | 143781 | 0.9822 | ug/ml | 96 |
| 23) Benzo[a]pyrene | 15.61 | 252 | 148527 | 0.9919 | ug/ml | 100 |
| 24) Indeno[1,2,3-cd]pyrene | 18.16 | 276 | 167498 | 0.9689 | ug/ml | 100 |
| 25) Dibenz[ah]anthracene | 18.16 | 278 | 142338 | 0.9814 | ug/ml | 100 |
| 26) Benzo[ghi]perylene | 18.91 | 276 | 144004 | 0.9548 | ug/ml | 100 |

(#) = qualifier out of range (m) = manual integration
7M54728.D SIMPAHL.M Thu Apr 05 13:50:13 2012 Page 1

Data File : C:\MSDCHEM\1\DATA\040412\7M54728.D Vial: 2
Acq On : 4 Apr 2012 9:39 am Operator: CAA
Sample : WG394111-02 1PPM PAHL STD Inst : HPMS7
Misc : 1,1 STD49560 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 5 10:56 2012 Quant Results File: SIMPAHL.RES

Method : C:\MSDCHEM\1\METHODS\SIMPAHL.M (RTE Integrator)
Title : OVD MSS03 SIMPAHL ICAL 04/04/12
Last Update : Thu Apr 05 10:58:29 2012
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\040412\7M54729.D Vial: 3
Acq On : 4 Apr 2012 10:35 am Operator: CAA
Sample : WG394111-03 10PPM PAHL STD Inst : HPMS7
Misc : 1,1 STD49560 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 05 10:56:53 2012 Quant Results File: SIMPAHL.RES

Quant Method : C:\MSDCHEM\1\METHODS\SIMPAHL.M (RTE Integrator)
Title : OVD MSS03 SIMPAHL ICAL 04/04/12
Last Update : Thu Apr 05 10:56:49 2012
Response via : Initial Calibration
DataAcq Meth : PAHLSIM

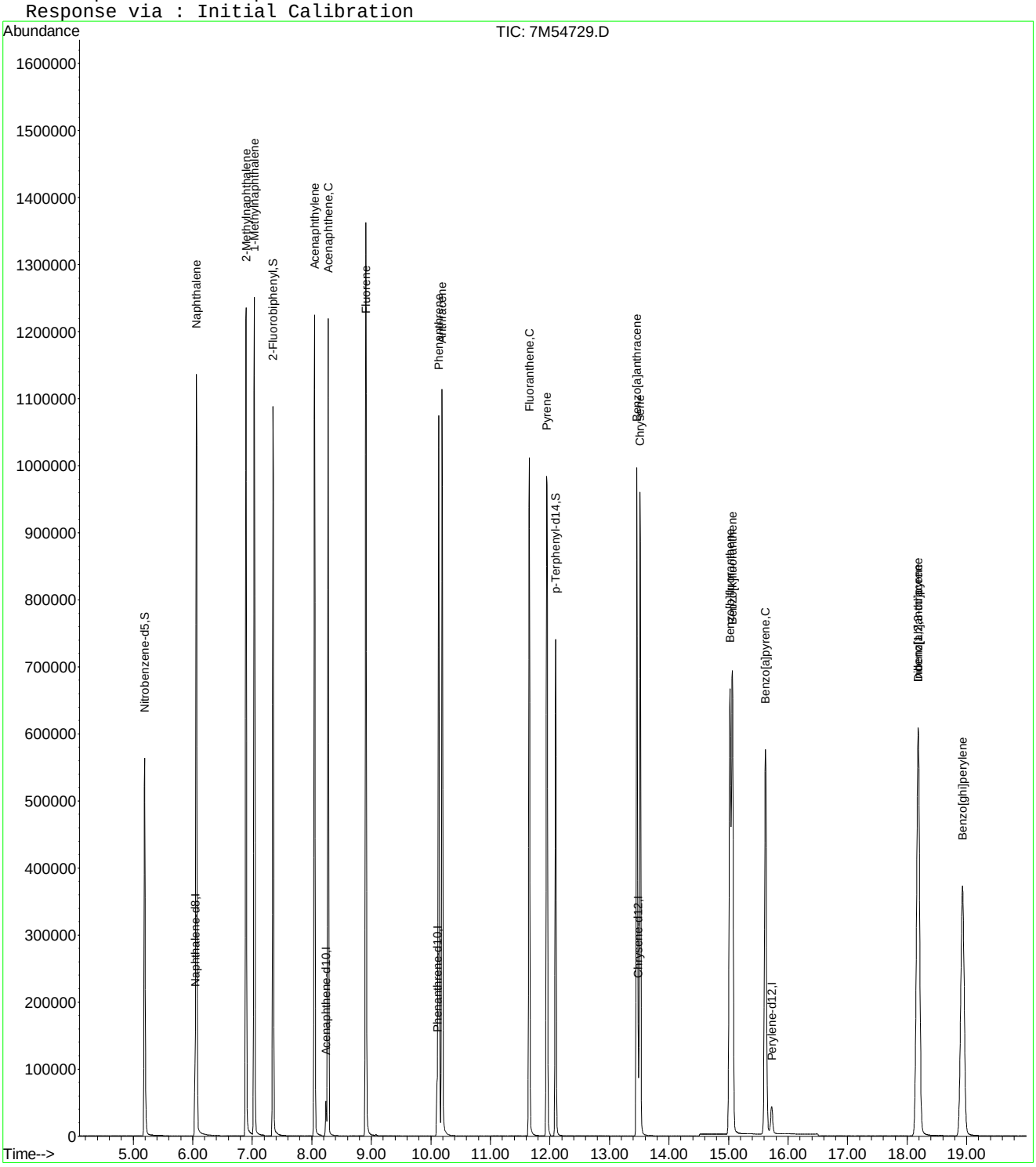
| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 1) Naphthalene-d8 | 6.04 | 136 | 128908 | 1.00 | ug/ml | 0.00 |
| 6) Acenaphthene-d10 | 8.24 | 164 | 64023 | 1.00 | ug/ml | 0.00 |
| 11) Phenanthrene-d10 | 10.10 | 188 | 105133 | 1.00 | ug/ml | 0.00 |
| 15) Chrysene-d12 | 13.49 | 240 | 92409 | 1.00 | ug/ml | 0.00 |
| 20) Perylene-d12 | 15.73 | 264 | 91750 | 1.00 | ug/ml | 0.01 |
| **System Monitoring Compounds** | | | | | | |
| 2) Nitrobenzene-d5 | 5.19 | 82 | 514649 | 10.5523 | ug/ml | 0.00 |
| Spiked Amount 2.500 | Range 35 - 114 | | Recovery = 422.00%# | | | |
| 7) 2-Fluorobiphenyl | 7.35 | 172 | 982495 | 10.8849 | ug/ml | 0.00 |
| Spiked Amount 2.500 | Range 43 - 116 | | Recovery = 435.20%# | | | |
| 17) p-Terphenyl-d14 | 12.09 | 244 | 752352 | 9.8300 | ug/ml | 0.00 |
| Spiked Amount 2.500 | Range 33 - 141 | | Recovery = 393.20%# | | | |
| **Target Compounds** | | | | | | Qvalue |
| 3) Naphthalene | 6.06 | 128 | 1299479 | 9.4803 | ug/ml | 98 |
| 4) 2-Methylnaphthalene | 6.90 | 142 | 851242 | 10.1225 | ug/ml | 100 |
| 5) 1-Methylnaphthalene | 7.03 | 142 | 819176 | 9.7675 | ug/ml | 100 |
| 8) Acenaphthylene | 8.04 | 152 | 1359329 | 12.0426 | ug/ml | 98 |
| 9) Acenaphthene | 8.27 | 154 | 743637 | 10.6172 | ug/ml | 99 |
| 10) Fluorene | 8.91 | 166 | 903709 | 11.2386 | ug/ml | 99 |
| 12) Phenanthrene | 10.13 | 178 | 1204227 | 10.3551 | ug/ml | 98 |
| 13) Anthracene | 10.19 | 178 | 1226008 | 10.6044 | ug/ml | 98 |
| 14) Fluoranthene | 11.65 | 202 | 1136279 | 8.8360 | ug/ml | 98 |
| 16) Pyrene | 11.95 | 202 | 1269832 | 9.4356 | ug/ml | 99 |
| 18) Benzo[a]anthracene | 13.46 | 228 | 1071059 | 10.0680 | ug/ml | 98 |
| 19) Chrysene | 13.51 | 228 | 1017304 | 9.5093 | ug/ml | 98 |
| 21) Benzo[b]fluoranthene | 15.03 | 252 | 1150949 | 10.3919 | ug/ml | 98 |
| 22) Benzo[k]fluoranthene | 15.06 | 252 | 1050437 | 10.2151 | ug/ml | 98 |
| 23) Benzo[a]pyrene | 15.62 | 252 | 1081378 | 10.2910 | ug/ml | 98 |
| 24) Indeno[1,2,3-cd]pyrene | 18.19 | 276 | 1239153 | 10.1969 | ug/ml | 100 |
| 25) Dibenz[ah]anthracene | 18.19 | 278 | 1055300 | 10.3692 | ug/ml | 100 |
| 26) Benzo[ghi]perylene | 18.93 | 276 | 1226855 | 11.5835 | ug/ml | 99 |

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

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\040412\7M54729.D Vial: 3
Acq On : 4 Apr 2012 10:35 am Operator: CAA
Sample : WG394111-03 10PPM PAHL STD Inst : HPMS7
Misc : 1,1 STD49560 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 5 10:56 2012 Quant Results File: SIMPAHL.RES

Method : C:\MSDCHEM\1\METHODS\SIMPAHL.M (RTE Integrator)
Title : OVD MSS03 SIMPAHL ICAL 04/04/12
Last Update : Thu Apr 05 10:58:29 2012
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\040412\7M54730.D Vial: 4
Acq On : 4 Apr 2012 11:03 am Operator: CAA
Sample : WG394111-04 5PPM PAHL STD Inst : HPMS7
Misc : 1,1 STD49560 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 05 10:57:08 2012 Quant Results File: SIMPAHL.RES

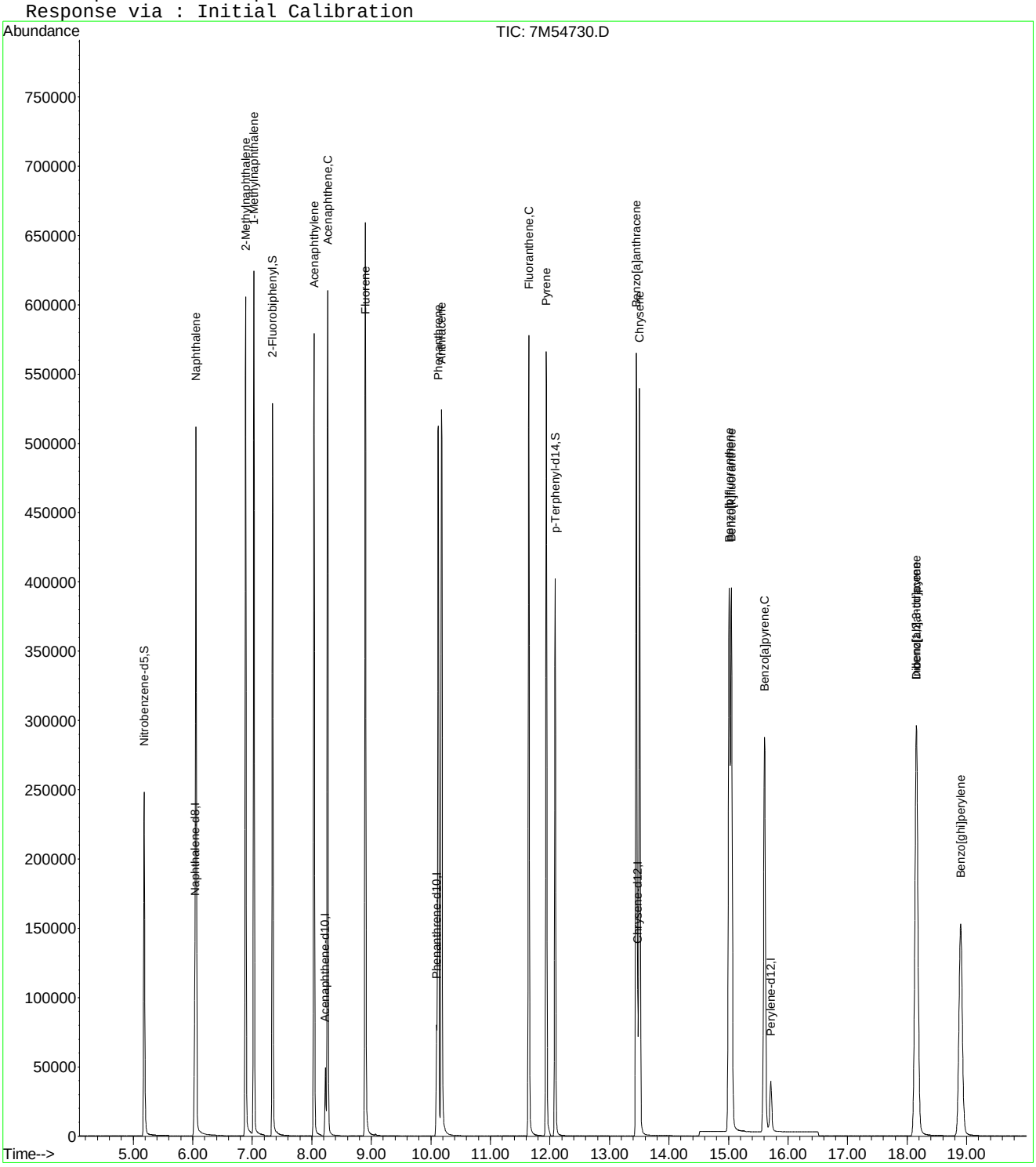
Quant Method : C:\MSDCHEM\1\METHODS\SIMPAHL.M (RTE Integrator)
Title : OVD MSS03 SIMPAHL ICAL 04/04/12
Last Update : Thu Apr 05 10:57:04 2012
Response via : Initial Calibration
DataAcq Meth : PAHLSIM

| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 1) Naphthalene-d8 | 6.03 | 136 | 108655 | 1.00 | ug/ml | 0.00 |
| 6) Acenaphthene-d10 | 8.23 | 164 | 58819 | 1.00 | ug/ml | 0.00 |
| 11) Phenanthrene-d10 | 10.10 | 188 | 97058 | 1.00 | ug/ml | 0.00 |
| 15) Chrysene-d12 | 13.48 | 240 | 93620 | 1.00 | ug/ml | 0.00 |
| 20) Perylene-d12 | 15.71 | 264 | 84709 | 1.00 | ug/ml | 0.00 |
| **System Monitoring Compounds** | | | | | | |
| 2) Nitrobenzene-d5 | 5.18 | 82 | 227669 | 5.6709 | ug/ml | 0.00 |
| Spiked Amount 2.500 | Range 35 - 114 | | Recovery = 226.80%# | | | |
| 7) 2-Fluorobiphenyl | 7.34 | 172 | 476716 | 5.7218 | ug/ml | 0.00 |
| Spiked Amount 2.500 | Range 43 - 116 | | Recovery = 228.80%# | | | |
| 17) p-Terphenyl-d14 | 12.09 | 244 | 401697 | 5.1543 | ug/ml | 0.00 |
| Spiked Amount 2.500 | Range 33 - 141 | | Recovery = 206.00%# | | | |
| **Target Compounds** | | | | | | Qvalue |
| 3) Naphthalene | 6.06 | 128 | 598766 | 5.2004 | ug/ml | 99 |
| 4) 2-Methylnaphthalene | 6.89 | 142 | 396960 | 5.6167 | ug/ml | 100 |
| 5) 1-Methylnaphthalene | 7.03 | 142 | 401769 | 5.7396 | ug/ml | 100 |
| 8) Acenaphthylene | 8.04 | 152 | 644671 | 6.1053 | ug/ml | 99 |
| 9) Acenaphthene | 8.27 | 154 | 356386 | 5.5560 | ug/ml | 100 |
| 10) Fluorene | 8.90 | 166 | 440591 | 5.9040 | ug/ml | 100 |
| 12) Phenanthrene | 10.13 | 178 | 578333 | 5.3513 | ug/ml | 100 |
| 13) Anthracene | 10.18 | 178 | 603655 | 5.6342 | ug/ml | 99 |
| 14) Fluoranthene | 11.64 | 202 | 627208 | 5.3565 | ug/ml | 99 |
| 16) Pyrene | 11.94 | 202 | 697024 | 5.0790 | ug/ml | 100 |
| 18) Benzo[a]anthracene | 13.45 | 228 | 597051 | 5.5085 | ug/ml | 98 |
| 19) Chrysene | 13.51 | 228 | 566428 | 5.2679 | ug/ml | 99 |
| 21) Benzo[b]fluoranthene | 15.01 | 252 | 633809 | 6.1547 | ug/ml | 99 |
| 22) Benzo[k]fluoranthene | 15.05 | 252 | 559677 | 5.8368 | ug/ml | 99 |
| 23) Benzo[a]pyrene | 15.60 | 252 | 525392 | 5.3975 | ug/ml | 99 |
| 24) Indeno[1,2,3-cd]pyrene | 18.16 | 276 | 591189 | 5.3721 | ug/ml | 100 |
| 25) Dibenz[ah]anthracene | 18.16 | 278 | 503437 | 5.4570 | ug/ml | 100 |
| 26) Benzo[ghi]perylene | 18.90 | 276 | 511152 | 5.2233 | ug/ml | 100 |

(#) = qualifier out of range (m) = manual integration
7M54730.D SIMPAHL.M Thu Apr 05 13:50:25 2012 Page 1

Data File : C:\MSDCHEM\1\DATA\040412\7M54730.D Vial: 4
Acq On : 4 Apr 2012 11:03 am Operator: CAA
Sample : WG394111-04 5PPM PAHL STD Inst : HPMS7
Misc : 1,1 STD49560 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 5 10:57 2012 Quant Results File: SIMPAHL.RES

Method : C:\MSDCHEM\1\METHODS\SIMPAHL.M (RTE Integrator)
Title : OVD MSS03 SIMPAHL ICAL 04/04/12
Last Update : Thu Apr 05 10:58:29 2012
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\040412\7M54731.D Vial: 5
Acq On : 4 Apr 2012 11:30 am Operator: CAA
Sample : WG394111-05 2.5PPM PAHL STD Inst : HPMS7
Misc : 1,1 STD49560 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 05 10:57:22 2012 Quant Results File: SIMPAHL.RES

Quant Method : C:\MSDCHEM\1\METHODS\SIMPAHL.M (RTE Integrator)
Title : OVD MSS03 SIMPAHL ICAL 04/04/12
Last Update : Thu Apr 05 10:57:18 2012
Response via : Initial Calibration
DataAcq Meth : PAHLSIM

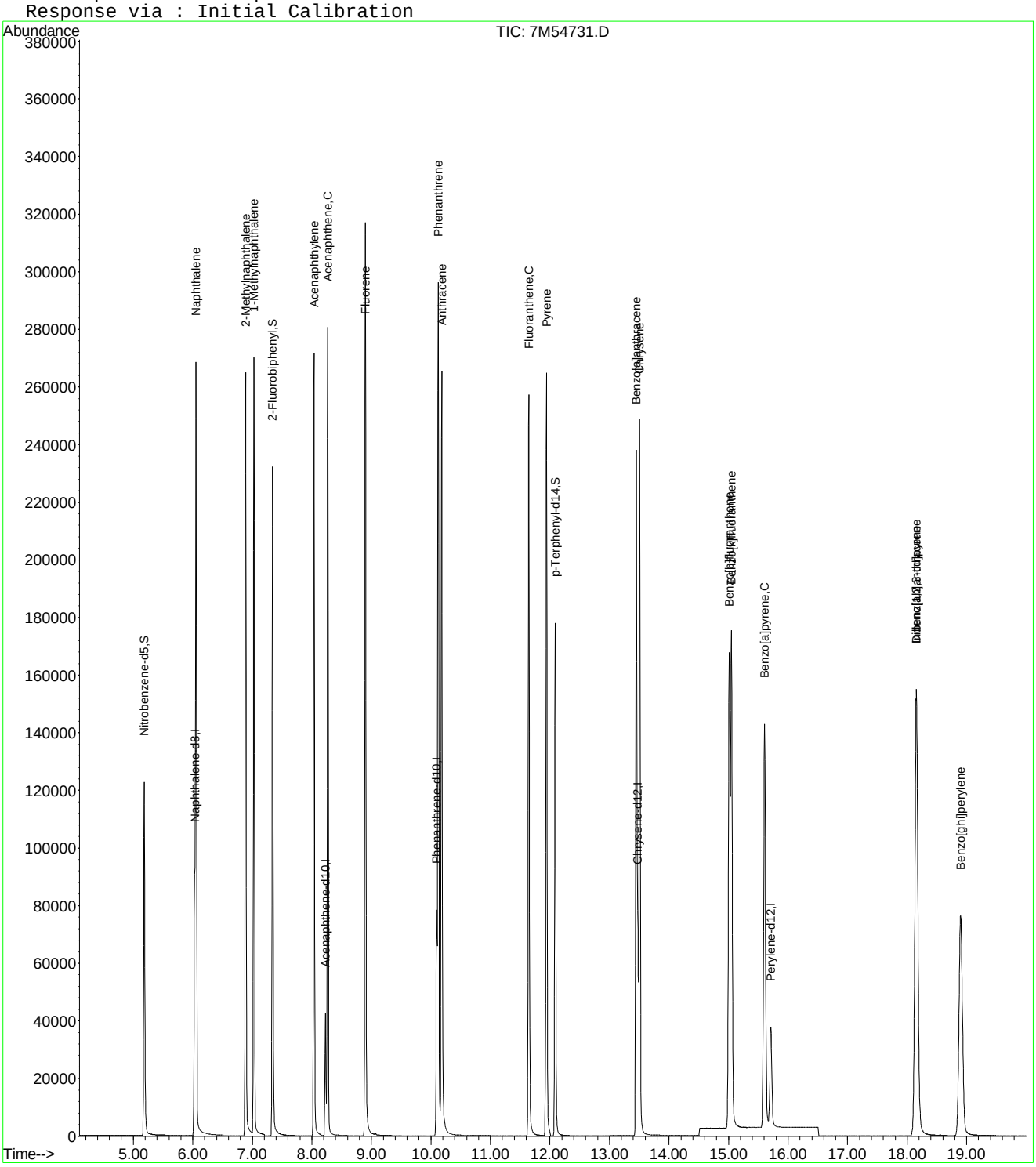
| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 1) Naphthalene-d8 | 6.03 | 136 | 107923 | 1.00 | ug/ml | 0.00 |
| 6) Acenaphthene-d10 | 8.23 | 164 | 51916 | 1.00 | ug/ml | 0.00 |
| 11) Phenanthrene-d10 | 10.10 | 188 | 98158 | 1.00 | ug/ml | 0.00 |
| 15) Chrysene-d12 | 13.48 | 240 | 84003 | 1.00 | ug/ml | 0.00 |
| 20) Perylene-d12 | 15.71 | 264 | 82066 | 1.00 | ug/ml | 0.00 |
| **System Monitoring Compounds** | | | | | | |
| 2) Nitrobenzene-d5 | 5.18 | 82 | 112962 | 2.5073 | ug/ml | 0.00 |
| Spiked Amount 2.500 | Range 35 - 114 | | Recovery = 100.40% | | | |
| 7) 2-Fluorobiphenyl | 7.34 | 172 | 212151 | 2.5509 | ug/ml | 0.00 |
| Spiked Amount 2.500 | Range 43 - 116 | | Recovery = 102.00% | | | |
| 17) p-Terphenyl-d14 | 12.09 | 244 | 187122 | 2.4047 | ug/ml | 0.00 |
| Spiked Amount 2.500 | Range 33 - 141 | | Recovery = 96.00% | | | |
| **Target Compounds** | | | | | | Qvalue |
| 3) Naphthalene | 6.05 | 128 | 307088 | 2.4019 | ug/ml | 100 |
| 4) 2-Methylnaphthalene | 6.89 | 142 | 175530 | 2.2161 | ug/ml | 100 |
| 5) 1-Methylnaphthalene | 7.03 | 142 | 176814 | 2.2516 | ug/ml | 100 |
| 8) Acenaphthylene | 8.04 | 152 | 301490 | 2.8308 | ug/ml | 99 |
| 9) Acenaphthene | 8.27 | 154 | 175018 | 2.7418 | ug/ml | 94 |
| 10) Fluorene | 8.90 | 166 | 216247 | 2.8919 | ug/ml | 100 |
| 12) Phenanthrene | 10.12 | 178 | 309124 | 2.5215 | ug/ml | 100 |
| 13) Anthracene | 10.18 | 178 | 307296 | 2.5122 | ug/ml | 100 |
| 14) Fluoranthene | 11.65 | 202 | 284981 | 2.1436 | ug/ml | 100 |
| 16) Pyrene | 11.94 | 202 | 314739 | 2.3011 | ug/ml | 100 |
| 18) Benzo[a]anthracene | 13.45 | 228 | 266063 | 2.4304 | ug/ml | 100 |
| 19) Chrysene | 13.51 | 228 | 258320 | 2.3925 | ug/ml | 99 |
| 21) Benzo[b]fluoranthene | 15.01 | 252 | 285961 | 2.5037 | ug/ml | 96 |
| 22) Benzo[k]fluoranthene | 15.05 | 252 | 257800 | 2.4437 | ug/ml | 96 |
| 23) Benzo[a]pyrene | 15.60 | 252 | 260806 | 2.4638 | ug/ml | 100 |
| 24) Indeno[1,2,3-cd]pyrene | 18.16 | 276 | 302188 | 2.5265 | ug/ml | 100 |
| 25) Dibenz[ah]anthracene | 18.16 | 278 | 256480 | 2.5534 | ug/ml | 100 |
| 26) Benzo[ghi]perylene | 18.89 | 276 | 255121 | 2.4055 | ug/ml | 100 |

(#) = qualifier out of range (m) = manual integration
7M54731.D SIMPAHL.M Thu Apr 05 13:50:26 2012 Page 1

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\040412\7M54731.D Vial: 5
Acq On : 4 Apr 2012 11:30 am Operator: CAA
Sample : WG394111-05 2.5PPM PAHL STD Inst : HPMS7
Misc : 1,1 STD49560 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 5 10:57 2012 Quant Results File: SIMPAHL.RES

Method : C:\MSDCHEM\1\METHODS\SIMPAHL.M (RTE Integrator)
Title : OVD MSS03 SIMPAHL ICAL 04/04/12
Last Update : Thu Apr 05 10:58:29 2012
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\040412\7M54732.D Vial: 6
Acq On : 4 Apr 2012 11:58 am Operator: CAA
Sample : WG394111-06 0.5PPM PAHL STD Inst : HPMS7
Misc : 1,1 STD49560 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 05 10:57:36 2012 Quant Results File: SIMPAHL.RES

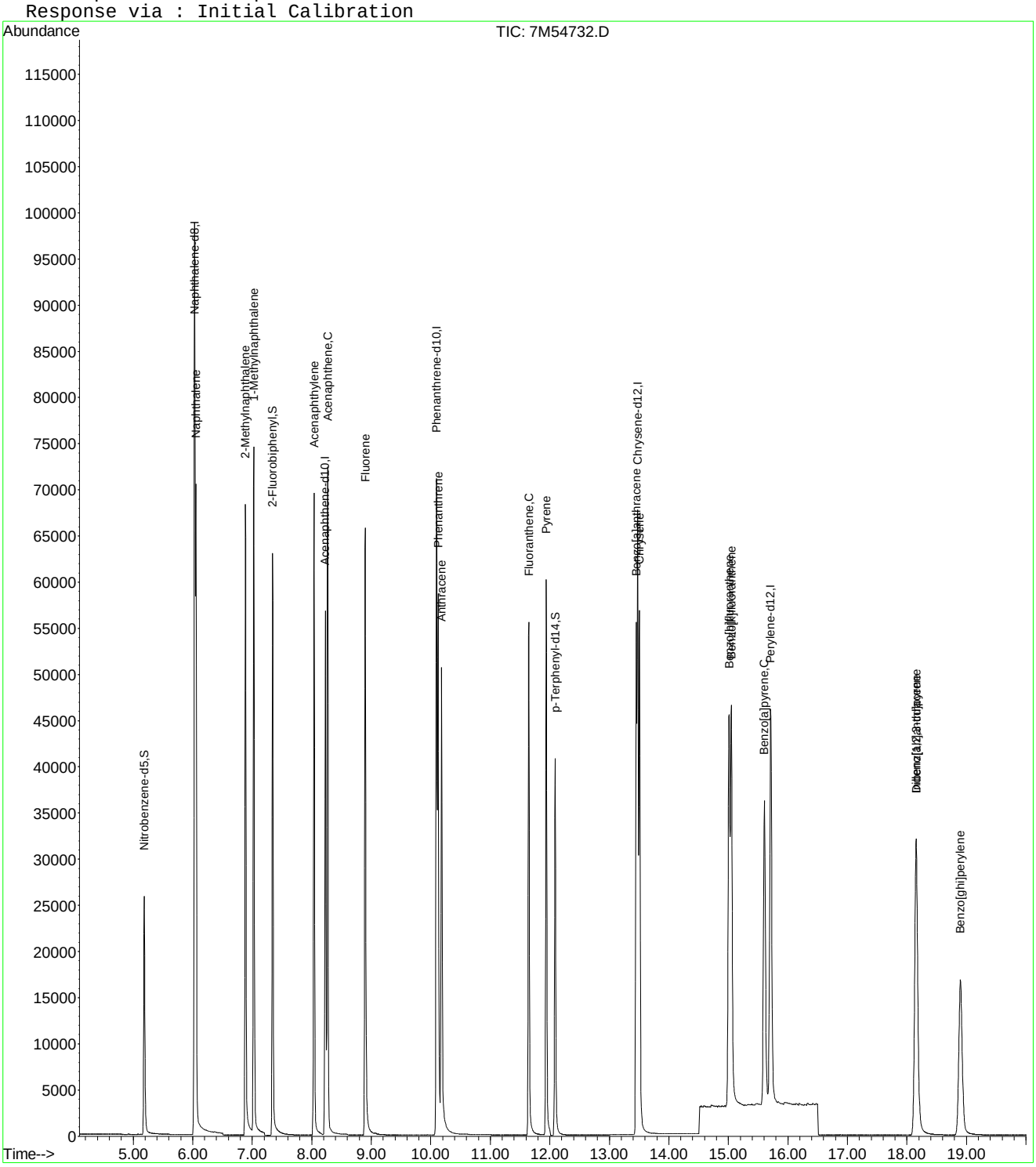
Quant Method : C:\MSDCHEM\1\METHODS\SIMPAHL.M (RTE Integrator)
Title : OVD MSS03 SIMPAHL ICAL 04/04/12
Last Update : Thu Apr 05 10:57:31 2012
Response via : Initial Calibration
DataAcq Meth : PAHLSIM

| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 1) Naphthalene-d8 | 6.03 | 136 | 124416 | 1.00 | ug/ml | 0.00 |
| 6) Acenaphthene-d10 | 8.23 | 164 | 72846 | 1.00 | ug/ml | 0.00 |
| 11) Phenanthrene-d10 | 10.09 | 188 | 97007 | 1.00 | ug/ml | 0.00 |
| 15) Chrysene-d12 | 13.48 | 240 | 93356 | 1.00 | ug/ml | 0.00 |
| 20) Perylene-d12 | 15.71 | 264 | 102269 | 1.00 | ug/ml | 0.00 |
| **System Monitoring Compounds** | | | | | | |
| 2) Nitrobenzene-d5 | 5.18 | 82 | 25264 | 0.4849 | ug/ml | 0.00 |
| Spiked Amount 2.500 | Range 35 - 114 | | Recovery = 19.20%# | | | |
| 7) 2-Fluorobiphenyl | 7.34 | 172 | 59769 | 0.5074 | ug/ml | 0.00 |
| Spiked Amount 2.500 | Range 43 - 116 | | Recovery = 20.40%# | | | |
| 17) p-Terphenyl-d14 | 12.09 | 244 | 43554 | 0.5033 | ug/ml | 0.00 |
| Spiked Amount 2.500 | Range 33 - 141 | | Recovery = 20.00%# | | | |
| **Target Compounds** | | | | | | Qvalue |
| 3) Naphthalene | 6.05 | 128 | 75307 | 0.5106 | ug/ml | 100 |
| 4) 2-Methylnaphthalene | 6.89 | 142 | 48164 | 0.5252 | ug/ml | 100 |
| 5) 1-Methylnaphthalene | 7.03 | 142 | 49560 | 0.5450 | ug/ml | 100 |
| 8) Acenaphthylene | 8.04 | 152 | 77288 | 0.5039 | ug/ml | 99 |
| 9) Acenaphthene | 8.27 | 154 | 43592 | 0.4783 | ug/ml | 100 |
| 10) Fluorene | 8.90 | 166 | 46685 | 0.4326 | ug/ml | 99 |
| 12) Phenanthrene | 10.12 | 178 | 59636 | 0.4896 | ug/ml | 99 |
| 13) Anthracene | 10.18 | 178 | 61358 | 0.5065 | ug/ml | 99 |
| 14) Fluoranthene | 11.65 | 202 | 66304 | 0.5157 | ug/ml | 100 |
| 16) Pyrene | 11.94 | 202 | 74252 | 0.4885 | ug/ml | 100 |
| 18) Benzo[a]anthracene | 13.45 | 228 | 59958 | 0.4920 | ug/ml | 100 |
| 19) Chrysene | 13.51 | 228 | 61514 | 0.5123 | ug/ml | 99 |
| 21) Benzo[b]fluoranthene | 15.01 | 252 | 68495 | 0.4786 | ug/ml | 100 |
| 22) Benzo[k]fluoranthene | 15.05 | 252 | 66287 | 0.5040 | ug/ml | 99 |
| 23) Benzo[a]pyrene | 15.60 | 252 | 65422 | 0.4974 | ug/ml | 99 |
| 24) Indeno[1,2,3-cd]pyrene | 18.16 | 276 | 65450 | 0.4291 | ug/ml | 100 |
| 25) Dibenz[ah]anthracene | 18.16 | 278 | 55466 | 0.4329 | ug/ml | 100 |
| 26) Benzo[ghi]perylene | 18.90 | 276 | 56433 | 0.4188 | ug/ml | 100 |

(#) = qualifier out of range (m) = manual integration
7M54732.D SIMPAHL.M Thu Apr 05 13:50:26 2012 Page 1

Data File : C:\MSDCHEM\1\DATA\040412\7M54732.D Vial: 6
Acq On : 4 Apr 2012 11:58 am Operator: CAA
Sample : WG394111-06 0.5PPM PAHL STD Inst : HPMS7
Misc : 1,1 STD49560 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 5 10:57 2012 Quant Results File: SIMPAHL.RES

Method : C:\MSDCHEM\1\METHODS\SIMPAHL.M (RTE Integrator)
Title : OVD MSS03 SIMPAHL ICAL 04/04/12
Last Update : Thu Apr 05 10:58:29 2012
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\040412\7M54733.D Vial: 7
Acq On : 4 Apr 2012 12:26 pm Operator: CAA
Sample : WG394111-07 0.1PPM PAHL STD Inst : HPMS7
Misc : 1,1 STD49560 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 05 10:57:49 2012 Quant Results File: SIMPAHL.RES

Quant Method : C:\MSDCHEM\1\METHODS\SIMPAHL.M (RTE Integrator)
Title : OVD MSS03 SIMPAHL ICAL 04/04/12
Last Update : Thu Apr 05 10:57:45 2012
Response via : Initial Calibration
DataAcq Meth : PAHLSIM

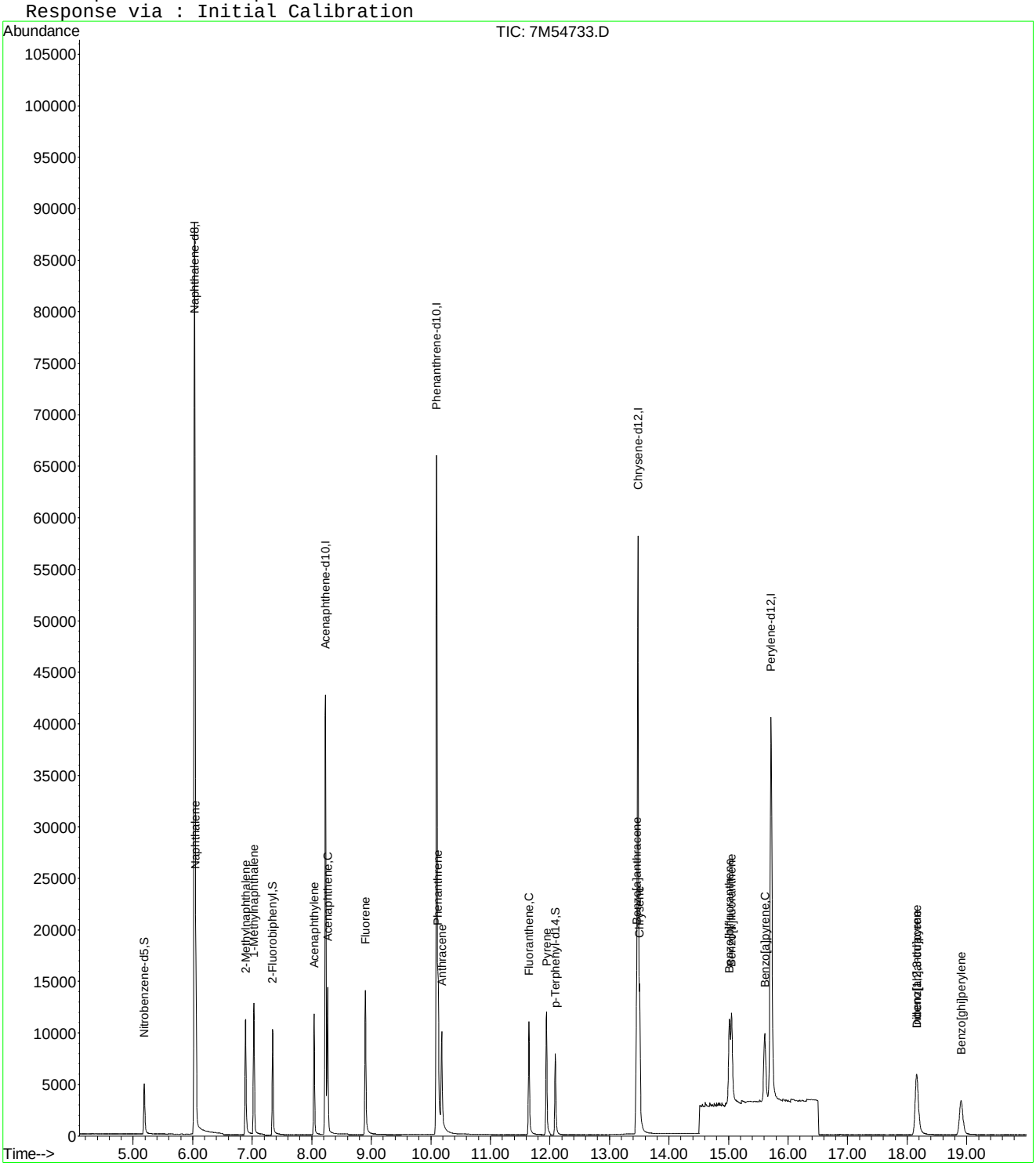
| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 1) Naphthalene-d8 | 6.03 | 136 | 111904 | 1.00 | ug/ml | 0.00 |
| 6) Acenaphthene-d10 | 8.23 | 164 | 58154 | 1.00 | ug/ml | 0.00 |
| 11) Phenanthrene-d10 | 10.10 | 188 | 92508 | 1.00 | ug/ml | 0.00 |
| 15) Chrysene-d12 | 13.48 | 240 | 83643 | 1.00 | ug/ml | 0.00 |
| 20) Perylene-d12 | 15.71 | 264 | 89887 | 1.00 | ug/ml | 0.00 |
| **System Monitoring Compounds** | | | | | | |
| 2) Nitrobenzene-d5 | 5.18 | 82 | 5189 | 0.1113 | ug/ml | 0.00 |
| Spiked Amount 2.500 | Range 35 - 114 | | Recovery = | 4.40%# | | |
| 7) 2-Fluorobiphenyl | 7.35 | 172 | 10392 | 0.1100 | ug/ml | 0.00 |
| Spiked Amount 2.500 | Range 43 - 116 | | Recovery = | 4.40%# | | |
| 17) p-Terphenyl-d14 | 12.09 | 244 | 9041 | 0.1167 | ug/ml | 0.00 |
| Spiked Amount 2.500 | Range 33 - 141 | | Recovery = | 4.80%# | | |
| **Target Compounds** | | | | | | Qvalue |
| 3) Naphthalene | 6.05 | 128 | 15669 | 0.1186 | ug/ml | 99 |
| 4) 2-Methylnaphthalene | 6.89 | 142 | 8513 | 0.1029 | ug/ml | 100 |
| 5) 1-Methylnaphthalene | 7.03 | 142 | 8710 | 0.1041 | ug/ml | 100 |
| 8) Acenaphthylene | 8.04 | 152 | 14501 | 0.1174 | ug/ml | 93 |
| 9) Acenaphthene | 8.27 | 154 | 8476 | 0.1173 | ug/ml | 99 |
| 10) Fluorene | 8.90 | 166 | 10569 | 0.1243 | ug/ml | 100 |
| 12) Phenanthrene | 10.13 | 178 | 13238 | 0.1141 | ug/ml | 99 |
| 13) Anthracene | 10.18 | 178 | 12272 | 0.1062 | ug/ml | 99 |
| 14) Fluoranthene | 11.64 | 202 | 13816 | 0.1127 | ug/ml | 99 |
| 16) Pyrene | 11.94 | 202 | 15836 | 0.1165 | ug/ml | 96 |
| 18) Benzo[a]anthracene | 13.45 | 228 | 12524 | 0.1149 | ug/ml | 99 |
| 19) Chrysene | 13.51 | 228 | 12906 | 0.1199 | ug/ml | 100 |
| 21) Benzo[b]fluoranthene | 15.01 | 252 | 13954 | 0.1108 | ug/ml# | 80 |
| 22) Benzo[k]fluoranthene | 15.05 | 252 | 14143 | 0.1224 | ug/ml# | 53 |
| 23) Benzo[a]pyrene | 15.61 | 252 | 13356 | 0.1158 | ug/ml | 89 |
| 24) Indeno[1,2,3-cd]pyrene | 18.16 | 276 | 13218 | 0.1025 | ug/ml | 100 |
| 25) Dibenz[ah]anthracene | 18.16 | 278 | 11135 | 0.1026 | ug/ml | 100 |
| 26) Benzo[ghi]perylene | 18.91 | 276 | 11654 | 0.1023 | ug/ml | 99 |

(#) = qualifier out of range (m) = manual integration
7M54733.D SIMPAHL.M Thu Apr 05 13:50:27 2012 Page 1

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\040412\7M54733.D Vial: 7
Acq On : 4 Apr 2012 12:26 pm Operator: CAA
Sample : WG394111-07 0.1PPM PAHL STD Inst : HPMS7
Misc : 1,1 STD49560 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 5 10:57 2012 Quant Results File: SIMPAHL.RES

Method : C:\MSDCHEM\1\METHODS\SIMPAHL.M (RTE Integrator)
Title : OVD MSS03 SIMPAHL ICAL 04/04/12
Last Update : Thu Apr 05 10:58:29 2012
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\040412\7M54734.D Vial: 8
Acq On : 4 Apr 2012 12:53 pm Operator: CAA
Sample : WG394111-08 0.05PPM PAHL STD Inst : HPMS7
Misc : 1,1 STD49560 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 05 10:58:18 2012 Quant Results File: SIMPAHL.RES

Quant Method : C:\MSDCHEM\1\METHODS\SIMPAHL.M (RTE Integrator)
Title : OVD MSS03 SIMPAHL ICAL 04/04/12
Last Update : Thu Apr 05 10:58:13 2012
Response via : Initial Calibration
DataAcq Meth : PAHLSIM

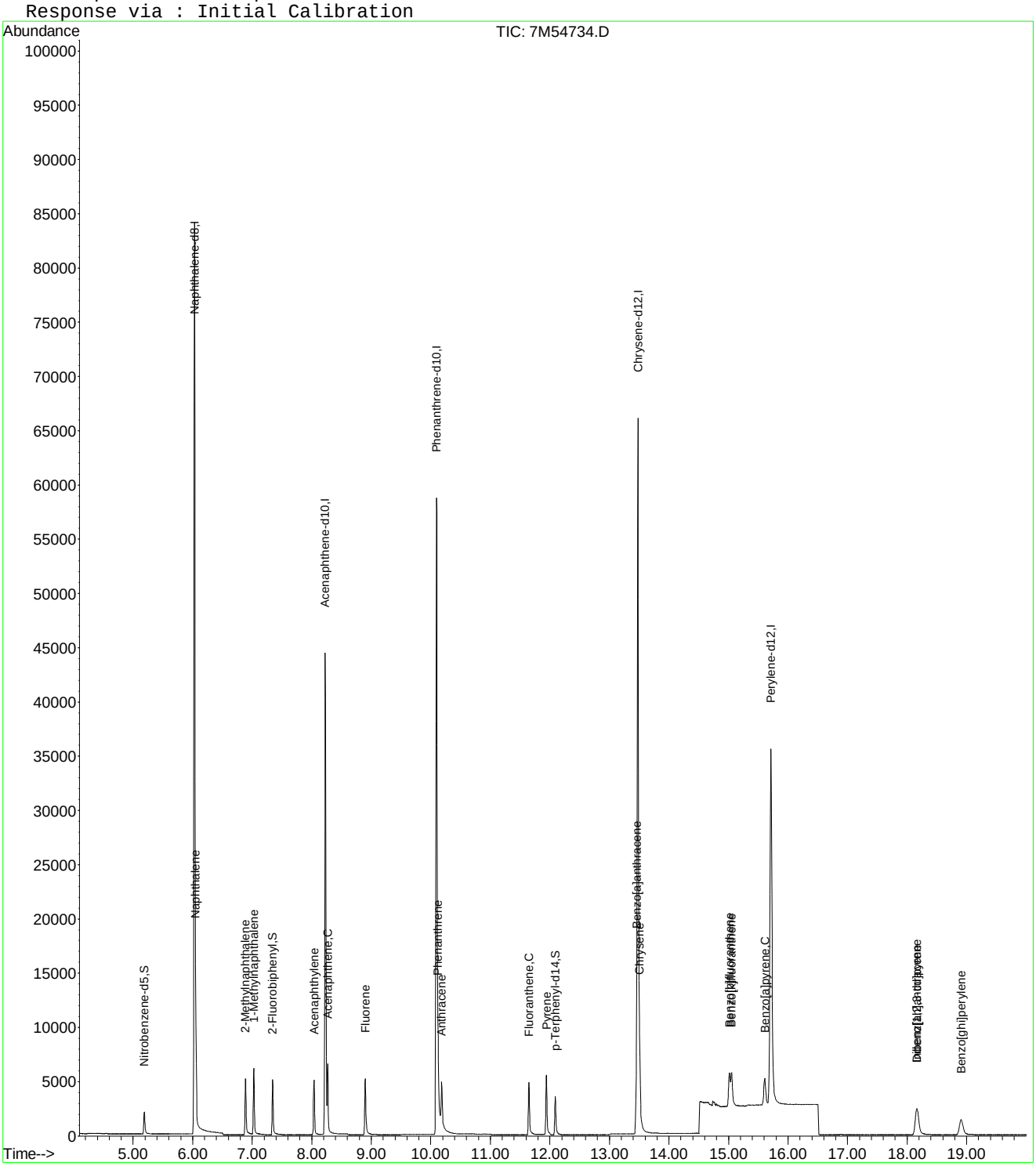
| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 1) Naphthalene-d8 | 6.03 | 136 | 109028 | 1.00 | ug/ml | 0.00 |
| 6) Acenaphthene-d10 | 8.23 | 164 | 59339 | 1.00 | ug/ml | 0.00 |
| 11) Phenanthrene-d10 | 10.09 | 188 | 88697 | 1.00 | ug/ml | 0.00 |
| 15) Chrysene-d12 | 13.48 | 240 | 96074 | 1.00 | ug/ml | 0.00 |
| 20) Perylene-d12 | 15.71 | 264 | 80216 | 1.00 | ug/ml | 0.00 |
| **System Monitoring Compounds** | | | | | | |
| 2) Nitrobenzene-d5 | 5.18 | 82 | 2183 | 0.0475 | ug/ml | 0.00 |
| Spiked Amount 2.500 | Range 35 - 114 | | Recovery = | 2.00%# | | |
| 7) 2-Fluorobiphenyl | 7.34 | 172 | 5179 | 0.0537 | ug/ml | 0.00 |
| Spiked Amount 2.500 | Range 43 - 116 | | Recovery = | 2.00%# | | |
| 17) p-Terphenyl-d14 | 12.09 | 244 | 4381 | 0.0489 | ug/ml | 0.00 |
| Spiked Amount 2.500 | Range 33 - 141 | | Recovery = | 2.00%# | | |
| **Target Compounds** | | | | | | Qvalue |
| 3) Naphthalene | 6.05 | 128 | 7045 | 0.0548 | ug/ml | 99 |
| 4) 2-Methylnaphthalene | 6.89 | 142 | 4045 | 0.0513 | ug/ml | 100 |
| 5) 1-Methylnaphthalene | 7.03 | 142 | 4209 | 0.0527 | ug/ml | 98 |
| 8) Acenaphthylene | 8.04 | 152 | 6622 | 0.0516 | ug/ml | 92 |
| 9) Acenaphthene | 8.27 | 154 | 3814 | 0.0512 | ug/ml | 100 |
| 10) Fluorene | 8.90 | 166 | 4039 | 0.0455 | ug/ml | 100 |
| 12) Phenanthrene | 10.12 | 178 | 5467 | 0.0492 | ug/ml | 99 |
| 13) Anthracene | 10.18 | 178 | 5552 | 0.0505 | ug/ml | 98 |
| 14) Fluoranthene | 11.65 | 202 | 6400 | 0.0549 | ug/ml | 98 |
| 16) Pyrene | 11.94 | 202 | 7890 | 0.0504 | ug/ml | 91 |
| 18) Benzo[a]anthracene | 13.46 | 228 | 6304 | 0.0506 | ug/ml | 100 |
| 19) Chrysene | 13.51 | 228 | 6585 | 0.0532 | ug/ml | 99 |
| 21) Benzo[b]fluoranthene | 15.01 | 252 | 5216 | 0.0465 | ug/ml | 96 |
| 22) Benzo[k]fluoranthene | 15.05 | 252 | 5257 | 0.0502 | ug/ml# | 53 |
| 23) Benzo[a]pyrene | 15.61 | 252 | 5055 | 0.0490 | ug/ml | 99 |
| 24) Indeno[1,2,3-cd]pyrene | 18.16 | 276 | 5744 | 0.0508 | ug/ml | 100 |
| 25) Dibenz[ah]anthracene | 18.16 | 278 | 4789 | 0.0501 | ug/ml | 100 |
| 26) Benzo[ghi]perylene | 18.91 | 276 | 5026 | 0.0503 | ug/ml | 100 |

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

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\040412\7M54734.D Vial: 8
Acq On : 4 Apr 2012 12:53 pm Operator: CAA
Sample : WG394111-08 0.05PPM PAHL STD Inst : HPMS7
Misc : 1,1 STD49560 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 5 10:58 2012 Quant Results File: SIMPAHL.RES

Method : C:\MSDCHEM\1\METHODS\SIMPAHL.M (RTE Integrator)
Title : OVD MSS03 SIMPAHL ICAL 04/04/12
Last Update : Thu Apr 05 10:58:29 2012
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\040412\7M54735.D Vial: 9
Acq On : 4 Apr 2012 1:21 pm Operator: CAA
Sample : WG394111-09 1PPM PAHL Alt Src STD Inst : HPMS7
Misc : 1,1 STD49584 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 05 14:06:24 2012 Quant Results File: SIMPAHL.RES

Quant Method : C:\MSDCHEM\1\METHODS\SIMPAHL.M (RTE Integrator)
Title : OVD MSS03 SIMPAHL ICAL 04/04/12
Last Update : Thu Apr 05 13:51:14 2012
Response via : Initial Calibration
DataAcq Meth : PAHLSIM

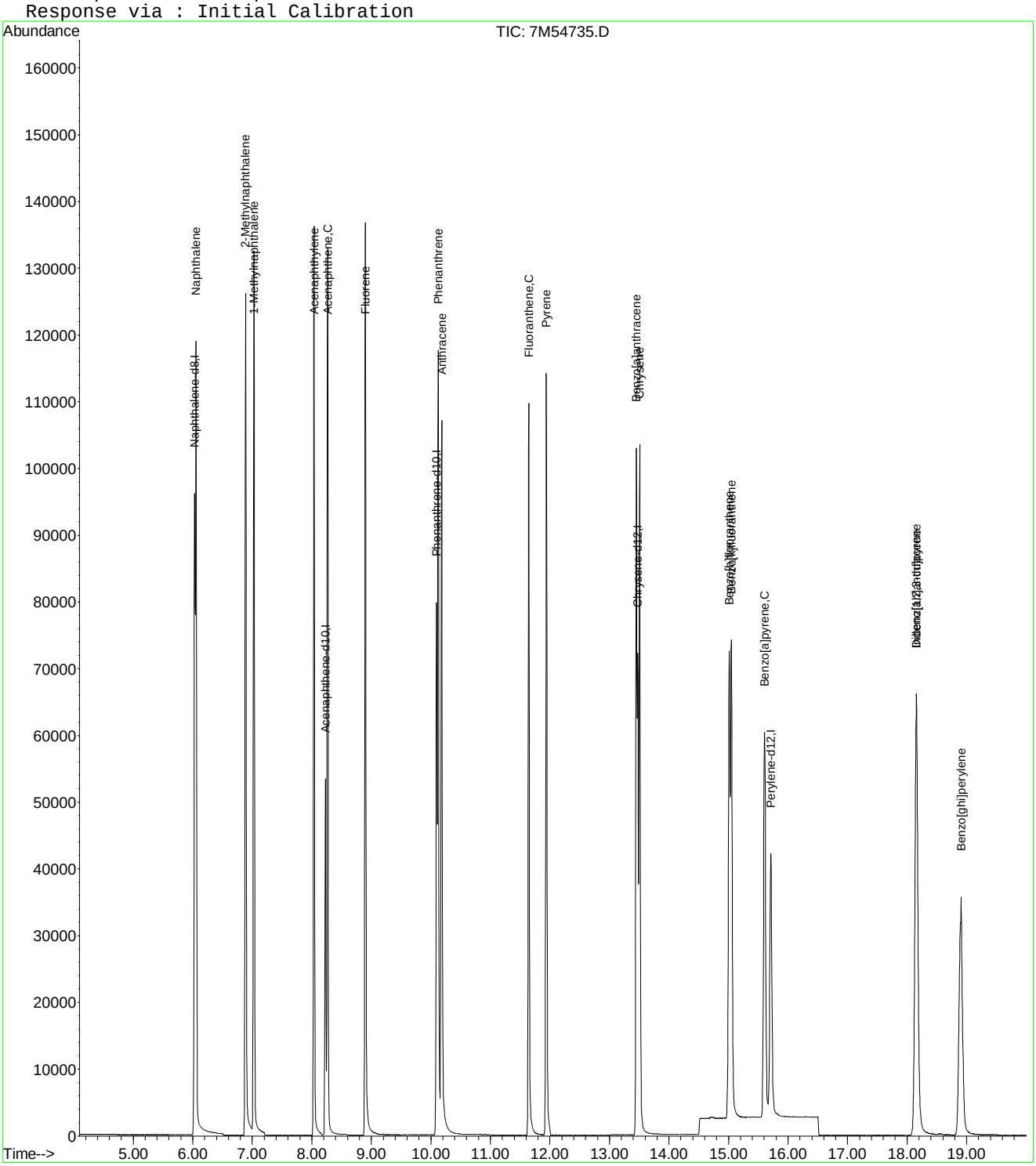
| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 1) Naphthalene-d8 | 6.03 | 136 | 120214 | 1.00 | ug/ml | 0.00 |
| 6) Acenaphthene-d10 | 8.23 | 164 | 64322 | 1.00 | ug/ml | 0.00 |
| 11) Phenanthrene-d10 | 10.09 | 188 | 106999 | 1.00 | ug/ml | 0.00 |
| 15) Chrysene-d12 | 13.48 | 240 | 92251 | 1.00 | ug/ml | 0.00 |
| 20) Perylene-d12 | 15.71 | 264 | 93409 | 1.00 | ug/ml | 0.00 |
| **System Monitoring Compounds** | | | | | | |
| 2) Nitrobenzene-d5 | 5.20 | 82 | 39 | 0.0008 | ug/ml | 0.01 |
| Spiked Amount 2.500 | Range 35 - 114 | | Recovery = | 0.00%# | | |
| 7) 2-Fluorobiphenyl | 7.34 | 172 | 27 | 0.0003 | ug/ml | 0.00 |
| Spiked Amount 2.500 | Range 43 - 116 | | Recovery = | 0.00%# | | |
| 17) p-Terphenyl-d14 | 12.09 | 244 | 82 | 0.0010 | ug/ml | 0.00 |
| Spiked Amount 2.500 | Range 33 - 141 | | Recovery = | 0.00%# | | |
| **Target Compounds** | | | | | | Qvalue |
| 3) Naphthalene | 6.06 | 128 | 134414 | 0.9444 | ug/ml | 100 |
| 4) 2-Methylnaphthalene | 6.89 | 142 | 88598 | 1.0216 | ug/ml | 100 |
| 5) 1-Methylnaphthalene | 7.03 | 142 | 87630 | 0.9897 | ug/ml | 100 |
| 8) Acenaphthylene | 8.04 | 152 | 150796 | 1.0604 | ug/ml | 99 |
| 9) Acenaphthene | 8.27 | 154 | 80009 | 0.9833 | ug/ml | 100 |
| 10) Fluorene | 8.90 | 166 | 94027 | 0.9726 | ug/ml | 100 |
| 12) Phenanthrene | 10.12 | 178 | 124612 | 0.9362 | ug/ml | 100 |
| 13) Anthracene | 10.18 | 178 | 131148 | 0.9810 | ug/ml | 100 |
| 14) Fluoranthene | 11.65 | 202 | 123616 | 0.8865 | ug/ml | 100 |
| 16) Pyrene | 11.94 | 202 | 139306 | 0.9395 | ug/ml | 99 |
| 18) Benzo[a]anthracene | 13.45 | 228 | 110200 | 0.9207 | ug/ml | 99 |
| 19) Chrysene | 13.51 | 228 | 111347 | 0.9352 | ug/ml | 100 |
| 21) Benzo[b]fluoranthene | 15.01 | 252 | 111147 | 0.8625 | ug/ml | 100 |
| 22) Benzo[k]fluoranthene | 15.05 | 252 | 108157 | 0.8870 | ug/ml | 99 |
| 23) Benzo[a]pyrene | 15.60 | 252 | 113304 | 0.9444 | ug/ml | 99 |
| 24) Indeno[1,2,3-cd]pyrene | 18.16 | 276 | 130669 | 0.9952 | ug/ml | 100 |
| 25) Dibenz[ah]anthracene | 18.16 | 278 | 108696 | 0.9781 | ug/ml | 100 |
| 26) Benzo[ghi]perylene | 18.91 | 276 | 114195 | 0.9863 | ug/ml | 100 |

(#) = qualifier out of range (m) = manual integration
7M54735.D SIMPAHL.M Thu Apr 05 14:06:31 2012 Page 1

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\040412\7M54735.D Vial: 9
Acq On : 4 Apr 2012 1:21 pm Operator: CAA
Sample : WG394111-09 1PPM PAHL Alt Src STD Inst : HPMS7
Misc : 1,1 STD49584 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 5 14:06 2012 Quant Results File: SIMPAHL.RES

Method : C:\MSDCHEM\1\METHODS\SIMPAHL.M (RTE Integrator)
Title : OVD MSS03 SIMPAHL ICAL 04/04/12
Last Update : Thu Apr 05 13:51:14 2012
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\051512\7M55016.D Vial: 2
Acq On : 15 May 2012 9:39 am Operator: CAA
Sample : WG397984-02 1PPM PAHL STD Inst : HPMS7
Misc : 1,1 STD49560 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 16 07:15:56 2012 Quant Results File: SIMPAHL.RES

Quant Method : C:\MSDCHEM\1\METHODS\SIMPAHL.M (RTE Integrator)
Title : OVD MSS03 SIMPAHL ICAL 04/04/12
Last Update : Wed May 16 07:15:53 2012
Response via : Initial Calibration
DataAcq Meth : PAHLSIM

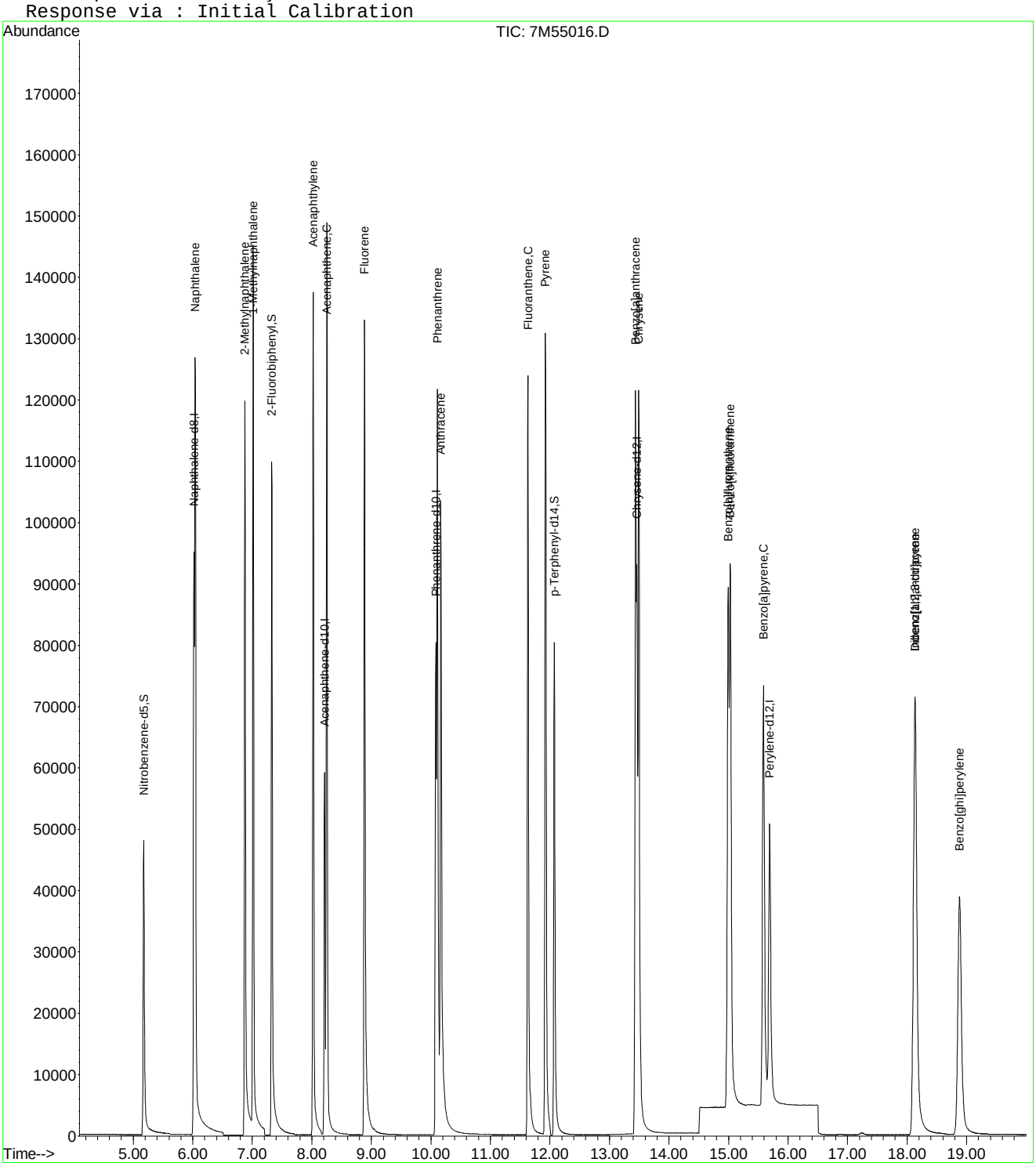
| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 1) Naphthalene-d8 | 6.02 | 136 | 131945 | 1.00 | ug/ml | 0.00 |
| 6) Acenaphthene-d10 | 8.21 | 164 | 81289 | 1.00 | ug/ml | 0.00 |
| 11) Phenanthrene-d10 | 10.08 | 188 | 127293 | 1.00 | ug/ml | 0.00 |
| 15) Chrysene-d12 | 13.46 | 240 | 119462 | 1.00 | ug/ml | 0.00 |
| 20) Perylene-d12 | 15.69 | 264 | 115352 | 1.00 | ug/ml | 0.00 |
| **System Monitoring Compounds** | | | | | | |
| 2) Nitrobenzene-d5 | 5.17 | 82 | 52932 | 0.9606 | ug/ml | 0.00 |
| Spiked Amount 2.500 | Range 35 - 114 | | Recovery = 38.40% | | | |
| 7) 2-Fluorobiphenyl | 7.33 | 172 | 121944 | 0.9070 | ug/ml | 0.00 |
| Spiked Amount 2.500 | Range 43 - 116 | | Recovery = 36.40%# | | | |
| 17) p-Terphenyl-d14 | 12.07 | 244 | 102239 | 0.9225 | ug/ml | 0.00 |
| Spiked Amount 2.500 | Range 33 - 141 | | Recovery = 36.80% | | | |
| **Target Compounds** | | | | | | Qvalue |
| 3) Naphthalene | 6.04 | 128 | 152374 | 0.9754 | ug/ml | 100 |
| 4) 2-Methylnaphthalene | 6.88 | 142 | 95978 | 1.0083 | ug/ml | 99 |
| 5) 1-Methylnaphthalene | 7.01 | 142 | 100861 | 1.0378 | ug/ml | 99 |
| 8) Acenaphthylene | 8.02 | 152 | 154221 | 0.8581 | ug/ml | 100 |
| 9) Acenaphthene | 8.25 | 154 | 93497 | 0.9092 | ug/ml | 100 |
| 10) Fluorene | 8.89 | 166 | 109357 | 0.8950 | ug/ml | 100 |
| 12) Phenanthrene | 10.11 | 178 | 137582 | 0.8689 | ug/ml | 100 |
| 13) Anthracene | 10.17 | 178 | 153099 | 0.9626 | ug/ml | 100 |
| 14) Fluoranthene | 11.63 | 202 | 162165 | 0.9776 | ug/ml | 100 |
| 16) Pyrene | 11.92 | 202 | 178834 | 0.9314 | ug/ml | 100 |
| 18) Benzo[a]anthracene | 13.44 | 228 | 142952 | 0.9223 | ug/ml | 99 |
| 19) Chrysene | 13.50 | 228 | 152866 | 0.9915 | ug/ml | 100 |
| 21) Benzo[b]fluoranthene | 14.99 | 252 | 136285 | 0.8564 | ug/ml | 91 |
| 22) Benzo[k]fluoranthene | 15.03 | 252 | 156238 | 1.0376 | ug/ml | 86 |
| 23) Benzo[a]pyrene | 15.59 | 252 | 146301 | 0.9875 | ug/ml | 99 |
| 24) Indeno[1,2,3-cd]pyrene | 18.13 | 276 | 164848 | 1.0167 | ug/ml | 100 |
| 25) Dibenz[ah]anthracene | 18.13 | 278 | 138490 | 1.0091 | ug/ml | 100 |
| 26) Benzo[ghi]perylene | 18.88 | 276 | 140423 | 0.9821 | ug/ml | 99 |

(#) = qualifier out of range (m) = manual integration
7M55016.D SIMPAHL.M Wed May 16 07:16:09 2012 Page 1

Quantitation Report (QT Reviewed)

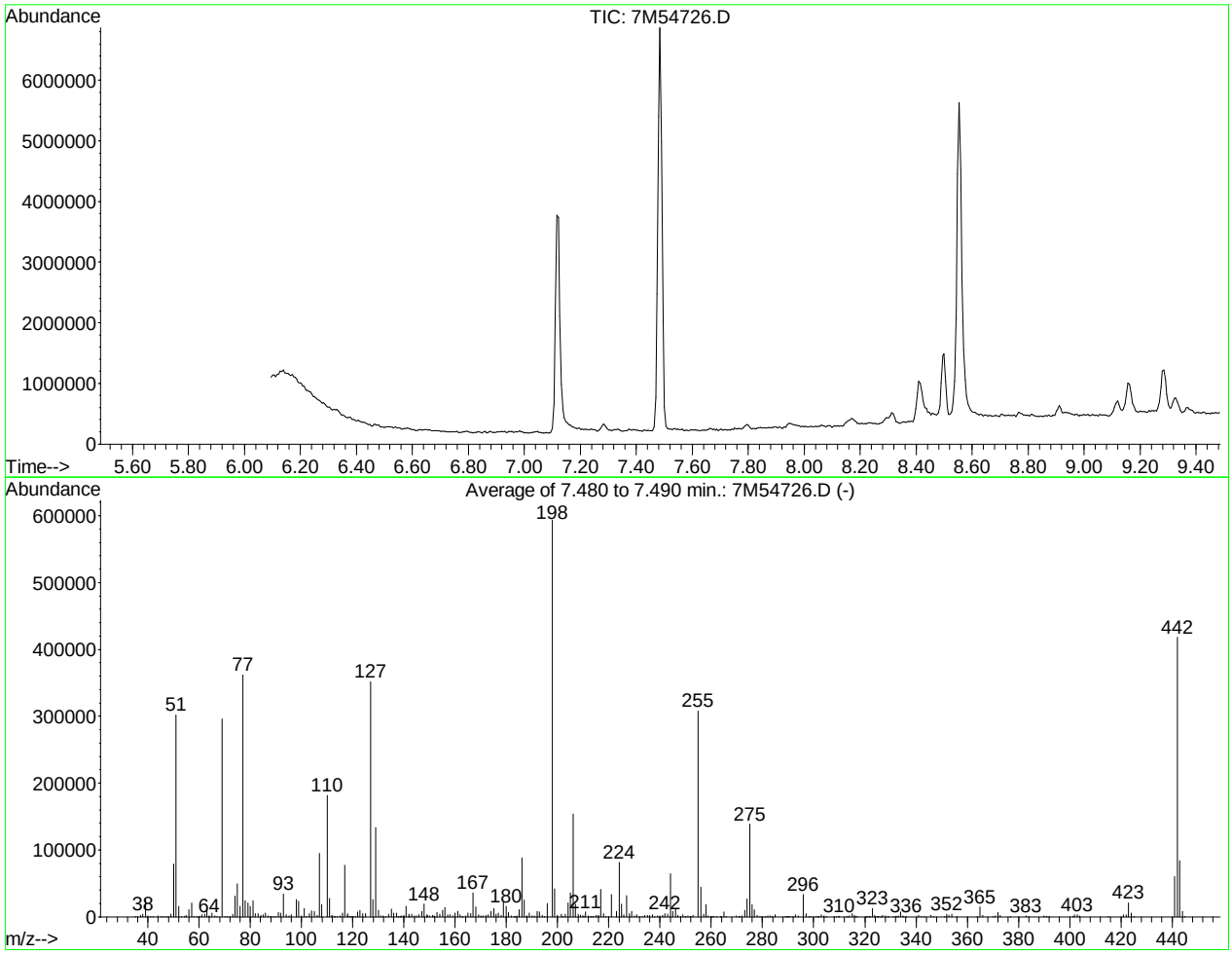
Data File : C:\MSDCHEM\1\DATA\051512\7M55016.D Vial: 2
Acq On : 15 May 2012 9:39 am Operator: CAA
Sample : WG397984-02 1PPM PAHL STD Inst : HPMS7
Misc : 1,1 STD49560 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 16 7:15 2012 Quant Results File: SIMPAHL.RES

Method : C:\MSDCHEM\1\METHODS\SIMPAHL.M (RTE Integrator)
Title : OVD MSS03 SIMPAHL ICAL 04/04/12
Last Update : Wed May 16 07:15:53 2012
Response via : Initial Calibration



# 2.2.2.5 Raw QC Data

Data File : C:\MSDCHEM\1\DATA\040412\7M54726.D Vial: 1
Acq On : 4 Apr 2012 8:53 am Operator: CAA
Sample : WG394111-01 5PPM DFTPP STD Inst : HPMS7
Misc : 1,1 STD50659 Multiplr: 1.00
MS Integration Params: rteint.p
Method : C:\MSDCHEM\1\METHODS\DFTPP.M (RTE Integrator)
Title : DFTPP

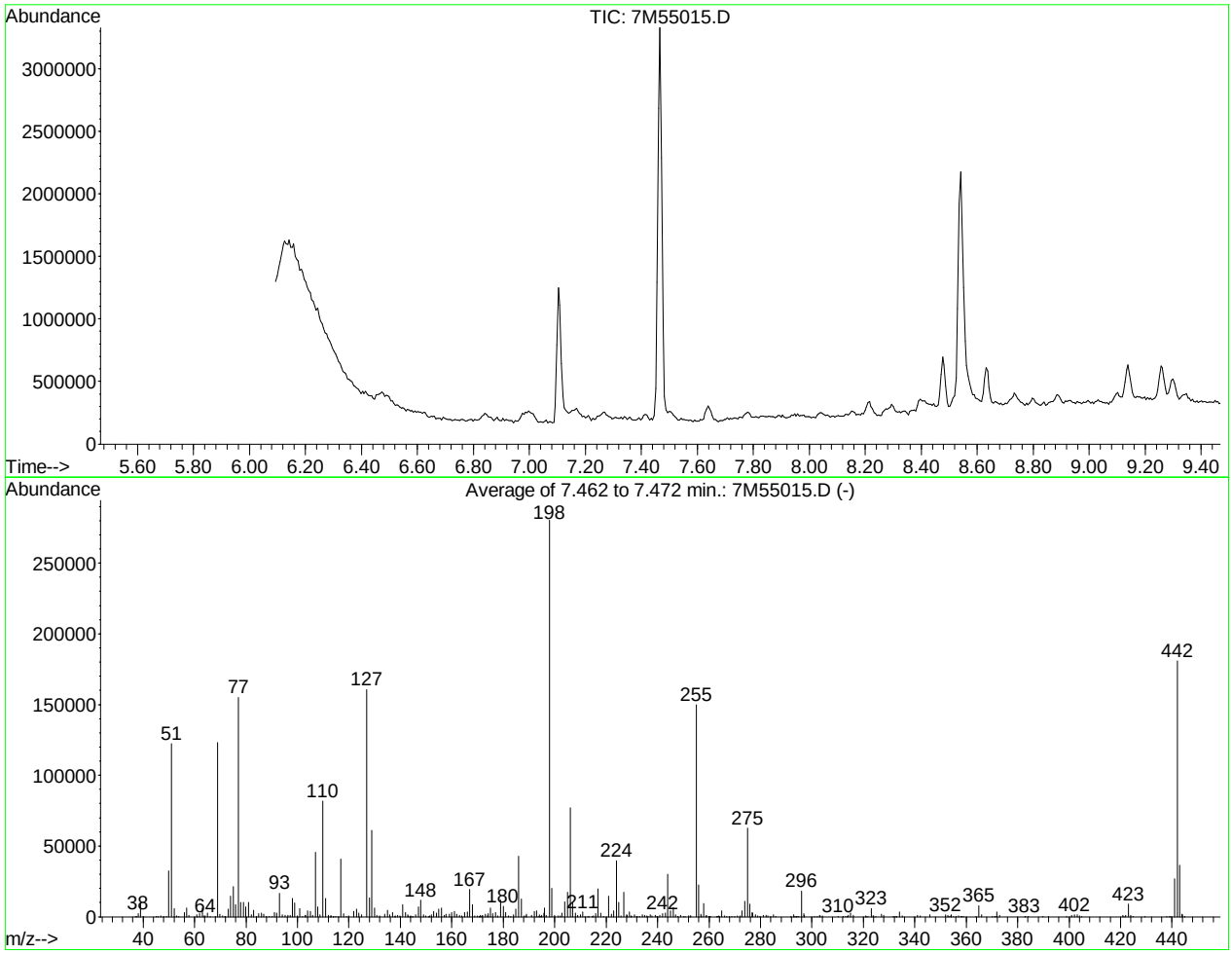



AutoFind: Scans 260, 261, 262; Background Corrected with Scan 254

| Target Mass | Rel. to Mass | Lower Limit% | Upper Limit% | Rel. Abn% | Raw Abn | Result Pass/Fail |
|---|---|---|---|---|---|---|
| 51 | 198 | 30 | 60 | 50.9 | 302042 | PASS |
| 68 | 69 | 0.00 | 2 | 0.0 | 0 | PASS |
| 69 | 198 | 0.00 | 100 | 49.9 | 296108 | PASS |
| 70 | 69 | 0.00 | 2 | 0.2 | 512 | PASS |
| 127 | 198 | 40 | 60 | 59.2 | 351488 | PASS |
| 197 | 198 | 0.00 | 1 | 0.0 | 0 | PASS |
| 198 | 198 | 100 | 100 | 100.0 | 593642 | PASS |
| 199 | 198 | 5 | 9 | 7.1 | 42109 | PASS |
| 275 | 198 | 10 | 30 | 23.3 | 138533 | PASS |
| 365 | 198 | 1 | 100 | 2.5 | 14602 | PASS |
| 441 | 443 | 0.01 | 100 | 72.5 | 60485 | PASS |
| 442 | 198 | 40 | 100 | 70.5 | 418261 | PASS |
| 443 | 442 | 17 | 23 | 20.0 | 83453 | PASS |

7M54726.D DFTPP.M Thu Apr 05 13:50:01 2012

Data File : C:\MSDCHEM\1\DATA\051512\7M55015.D Vial: 1
Acq On : 15 May 2012 9:22 am Operator: CAA
Sample : WG397984-01 5PPM DFTPP STD Inst : HPMS7
Misc : 1,1 STD50659 Multiplr: 1.00
MS Integration Params: rteint.p
Method : C:\MSDCHEM\1\METHODS\DFTPP.M (RTE Integrator)
Title : DFTPP




AutoFind: Scans 257, 258, 259; Background Corrected with Scan 249

| Target Mass | Rel. to Mass | Lower Limit% | Upper Limit% | Rel. Abn% | Raw Abn | Result Pass/Fail |
|---|---|---|---|---|---|---|
| 51 | 198 | 30 | 60 | 43.6 | 122360 | PASS |
| 68 | 69 | 0.00 | 2 | 0.2 | 219 | PASS |
| 69 | 198 | 0.00 | 100 | 43.9 | 123001 | PASS |
| 70 | 69 | 0.00 | 2 | 1.3 | 1620 | PASS |
| 127 | 198 | 40 | 60 | 57.3 | 160578 | PASS |
| 197 | 198 | 0.00 | 1 | 0.0 | 0 | PASS |
| 198 | 198 | 100 | 100 | 100.0 | 280426 | PASS |
| 199 | 198 | 5 | 9 | 7.2 | 20119 | PASS |
| 275 | 198 | 10 | 30 | 22.4 | 62800 | PASS |
| 365 | 198 | 1 | 100 | 2.8 | 7843 | PASS |
| 441 | 443 | 0.01 | 100 | 73.5 | 26784 | PASS |
| 442 | 198 | 40 | 100 | 64.5 | 180877 | PASS |
| 443 | 442 | 17 | 23 | 20.1 | 36418 | PASS |

7M55015.D DFTPP.M Wed May 16 07:15:18 2012

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\051512\7M55017.D Vial: 3
Acq On : 15 May 2012 10:07 am Operator: CAA
Sample : WG397890-02 BLK 05/14 Inst : HPMS7
Misc : 1,1 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 16 07:16:23 2012 Quant Results File: SIMPAHL.RES

Quant Method : C:\MSDCHEM\1\METHODS\SIMPAHL.M (RTE Integrator)
Title : OVD MSS03 SIMPAHL ICAL 04/04/12
Last Update : Wed May 16 07:16:11 2012
Response via : Initial Calibration
DataAcq Meth : PAHLSIM

| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 1) Naphthalene-d8 | 6.01 | 136 | 104981 | 1.00 | ug/ml | 0.00 |
| 6) Acenaphthene-d10 | 8.21 | 164 | 69941 | 1.00 | ug/ml | 0.00 |
| 11) Phenanthrene-d10 | 10.08 | 188 | 110772 | 1.00 | ug/ml | 0.00 |
| 15) Chrysene-d12 | 13.46 | 240 | 108237 | 1.00 | ug/ml | 0.00 |
| 20) Perylene-d12 | 15.69 | 264 | 101867 | 1.00 | ug/ml | 0.00 |
| **System Monitoring Compounds** | | | | | | |
| 2) Nitrobenzene-d5 | 5.17 | 82 | 86874 | 1.9814 | ug/ml | 0.00 |
| Spiked Amount 2.500 | Range 35 - 114 | | Recovery = 79.20% | | | |
| 7) 2-Fluorobiphenyl | 7.33 | 172 | 196252 | 1.6965 | ug/ml | 0.00 |
| Spiked Amount 2.500 | Range 43 - 116 | | Recovery = 68.00% | | | |
| 17) p-Terphenyl-d14 | 12.07 | 244 | 274532 | 2.7339 | ug/ml | 0.00 |
| Spiked Amount 2.500 | Range 33 - 141 | | Recovery = 109.20% | | | |

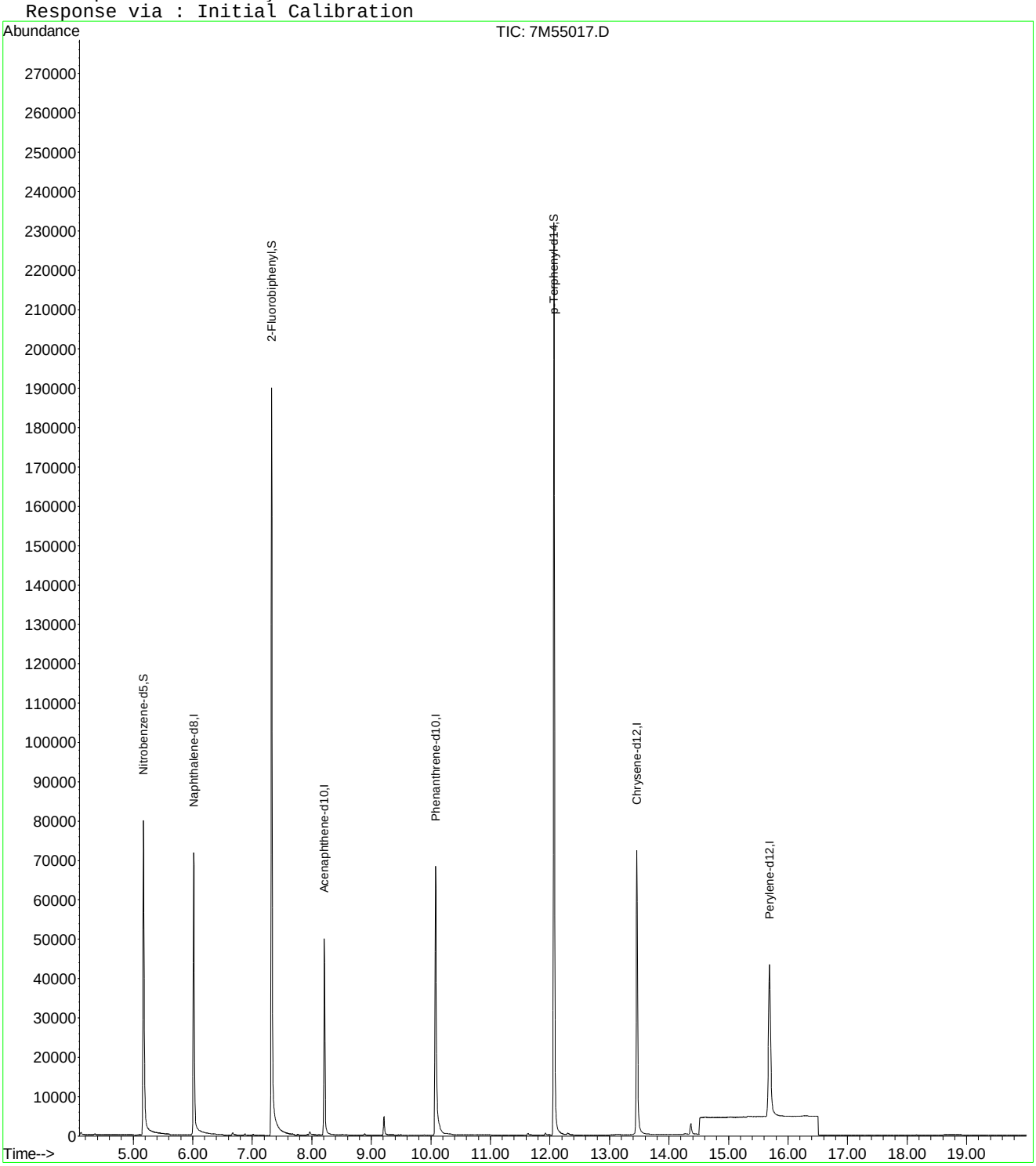
Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration
7M55017.D SIMPAHL.M Thu May 17 13:17:14 2012 Page 1

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\051512\7M55017.D Vial: 3
Acq On : 15 May 2012 10:07 am Operator: CAA
Sample : WG397890-02 BLK 05/14 Inst : HPMS7
Misc : 1,1 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 16 7:16 2012 Quant Results File: SIMPAHL.RES

Method : C:\MSDCHEM\1\METHODS\SIMPAHL.M (RTE Integrator)
Title : OVD MSS03 SIMPAHL ICAL 04/04/12
Last Update : Thu May 17 11:52:38 2012
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\051512\7M55018.D Vial: 4
Acq On : 15 May 2012 10:34 am Operator: CAA
Sample : WG397890-03 LCS 05/14 Inst : HPMS7
Misc : 1,1 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 16 07:16:24 2012 Quant Results File: SIMPAHL.RES

Quant Method : C:\MSDCHEM\1\METHODS\SIMPAHL.M (RTE Integrator)
Title : OVD MSS03 SIMPAHL ICAL 04/04/12
Last Update : Wed May 16 07:16:11 2012
Response via : Initial Calibration
DataAcq Meth : PAHLSIM

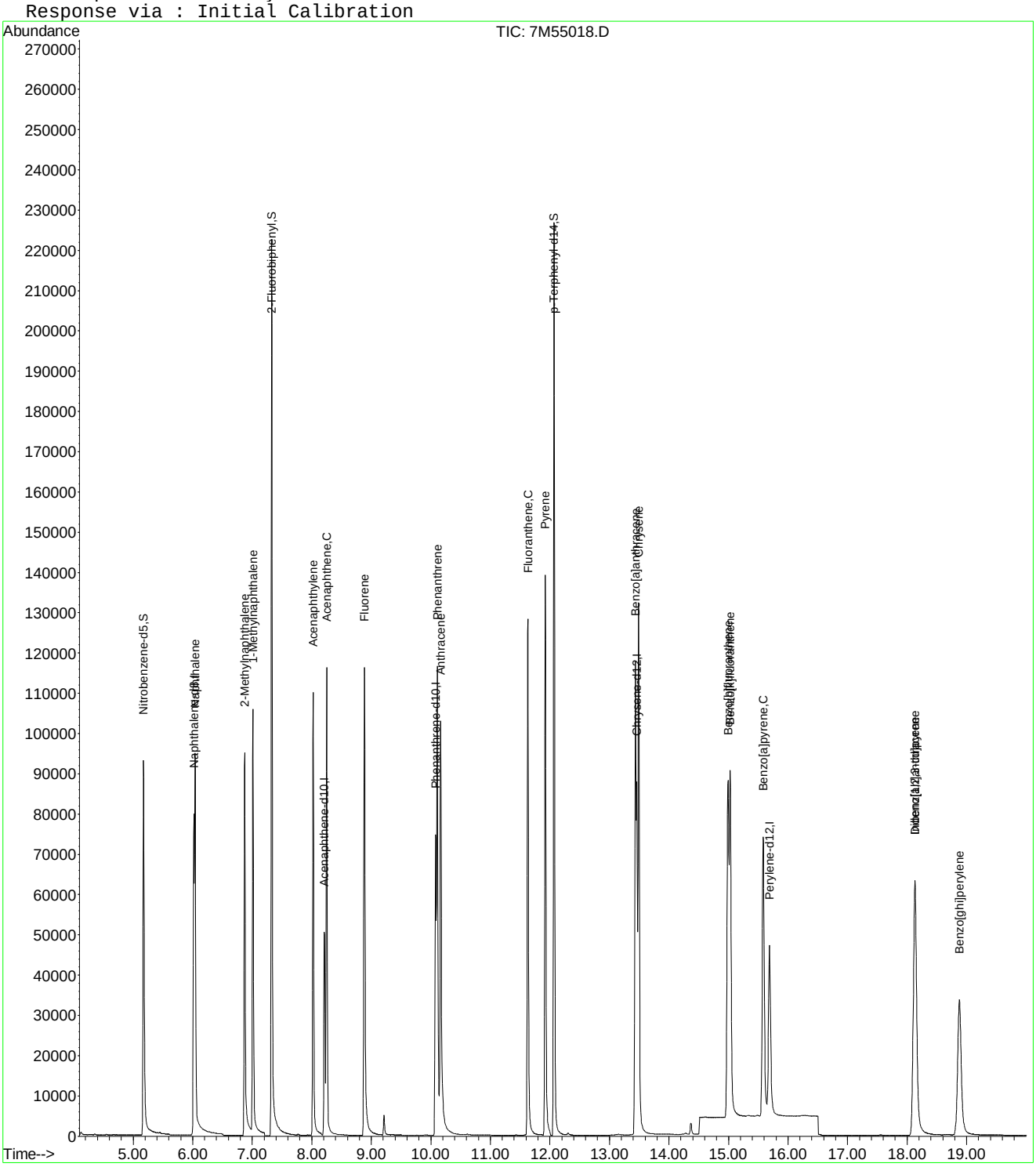
| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 1) Naphthalene-d8 | 6.02 | 136 | 109181 | 1.00 | ug/ml | 0.00 |
| 6) Acenaphthene-d10 | 8.21 | 164 | 71207 | 1.00 | ug/ml | 0.00 |
| 11) Phenanthrene-d10 | 10.08 | 188 | 113917 | 1.00 | ug/ml | 0.00 |
| 15) Chrysene-d12 | 13.46 | 240 | 113524 | 1.00 | ug/ml | 0.00 |
| 20) Perylene-d12 | 15.69 | 264 | 106800 | 1.00 | ug/ml | 0.00 |
| **System Monitoring Compounds** | | | | | | |
| 2) Nitrobenzene-d5 | 5.17 | 82 | 99076 | 2.1728 | ug/ml | 0.00 |
| Spiked Amount 2.500 | Range 35 - 114 | | Recovery = 86.80% | | | |
| 7) 2-Fluorobiphenyl | 7.33 | 172 | 226176 | 1.9204 | ug/ml | 0.00 |
| Spiked Amount 2.500 | Range 43 - 116 | | Recovery = 76.80% | | | |
| 17) p-Terphenyl-d14 | 12.07 | 244 | 277673 | 2.6364 | ug/ml | 0.00 |
| Spiked Amount 2.500 | Range 33 - 141 | | Recovery = 105.60% | | | |
| **Target Compounds** | | | | | | Qvalue |
| 3) Naphthalene | 6.04 | 128 | 112706 | 0.8719 | ug/ml | 99 |
| 4) 2-Methylnaphthalene | 6.87 | 142 | 74888 | 0.9508 | ug/ml | 99 |
| 5) 1-Methylnaphthalene | 7.01 | 142 | 72271 | 0.8987 | ug/ml | 99 |
| 8) Acenaphthylene | 8.02 | 152 | 121736 | 0.7732 | ug/ml | 99 |
| 9) Acenaphthene | 8.25 | 154 | 76458 | 0.8488 | ug/ml | 94 |
| 10) Fluorene | 8.88 | 166 | 89965 | 0.8406 | ug/ml | 100 |
| 12) Phenanthrene | 10.11 | 178 | 127649 | 0.9008 | ug/ml | 99 |
| 13) Anthracene | 10.16 | 178 | 138539 | 0.9733 | ug/ml | 100 |
| 14) Fluoranthene | 11.63 | 202 | 158551 | 1.0680 | ug/ml | 100 |
| 16) Pyrene | 11.92 | 202 | 182753 | 1.0016 | ug/ml | 99 |
| 18) Benzo[a]anthracene | 13.44 | 228 | 134736 | 0.9148 | ug/ml | 99 |
| 19) Chrysene | 13.49 | 228 | 147454 | 1.0064 | ug/ml | 99 |
| 21) Benzo[b]fluoranthene | 14.99 | 252 | 137915 | 0.9361 | ug/ml | 87 |
| 22) Benzo[k]fluoranthene | 15.03 | 252 | 138128 | 0.9908 | ug/ml | 89 |
| 23) Benzo[a]pyrene | 15.58 | 252 | 140799 | 1.0264 | ug/ml | 99 |
| 24) Indeno[1,2,3-cd]pyrene | 18.13 | 276 | 142633 | 0.9501 | ug/ml | 100 |
| 25) Dibenz[ah]anthracene | 18.13 | 278 | 114824 | 0.9037 | ug/ml | 100 |
| 26) Benzo[ghi]perylene | 18.88 | 276 | 121072 | 0.9146 | ug/ml | 98 |

(#) = qualifier out of range (m) = manual integration
7M55018.D SIMPAHL.M Thu May 17 11:55:14 2012 Page 1

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\051512\7M55018.D Vial: 4
Acq On : 15 May 2012 10:34 am Operator: CAA
Sample : WG397890-03 LCS 05/14 Inst : HPMS7
Misc : 1,1 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 16 7:16 2012 Quant Results File: SIMPAHL.RES

Method : C:\MSDCHEM\1\METHODS\SIMPAHL.M (RTE Integrator)
Title : OVD MSS03 SIMPAHL ICAL 04/04/12
Last Update : Thu May 17 11:52:38 2012
Response via : Initial Calibration



# 2.3 Metals Data

# 2.3.1 Metals I C P Data

# 2.3.1.1 Summary Data

**Login Number:** L12050284
**Department**: Metals
**Analyst:** Kim Rhodes

**METHOD**

**Preparation:** SW-846 3005

**Analysis:** SW-846 6010

**HOLDING TIMES**

**Sample Preparation:** All holding times were met.

**Sample Analysis:** All holding times were met.

**PREPARATION**

Sample preparation proceeded normally.

**CALIBRATION**

**Initial Calibration:** All acceptance criteria were met.

**Alternate Source Standards:** All acceptance criteria were met.

**Interference Check Standards:** All acceptance criteria were met.

**Continuing Calibration Verification:** All acceptance criteria were met.

**Continuing Calibration Blank:** All acceptance criteria were met.

**BATCH QA/QC**

**Method Blank:** All acceptance criteria were met.

**Laboratory Control Sample:** All acceptance criteria were met.

**Serial Dilution/Post Digestion Spikes:** WG397934 - All acceptance criteria were met.

**Matrix Spikes:** All acceptance criteria were met.

**SAMPLES**

**Samples:** WG397934 - Client samples 02, 03 and 04 required dilution analyses in order to obtain results for sodium within the linear range.

**Narrative ID:** 46811
**Approved By:** Maren Beery

## Certificate of Analysis

**Sample #:** L12050284-01 | **PrePrep Method:** N/A | **Instrument:** PE-ICP2
**Client ID:** BBLD-PIT-SSP-050812 | **Prep Method:** 3005A | **Prep Date:** 05/14/2012 07:48
**Matrix:** Water | **Analytical Method:** 6010B | **Cal Date:** 05/21/2012 13:35
**Workgroup #:** WG397934 | **Analyst:** KHR | **Run Date:** 05/21/2012 15:04
**Collect Date:** 05/08/2012 10:01 | **Dilution:** 1 | **File ID:** P2.052112.150405
**Sample Tag:** 01 | **Units:** mg/L

| Analyte | CAS # | Result | Qual | RL | MDL |
|---|---|---|---|---|---|
| Aluminum, Total | 7429-90-5 | 3.67 | | 0.100 | 0.0500 |
| Barium, Total | 7440-39-3 | 0.153 | | 0.0100 | 0.00250 |
| Beryllium, Total | 7440-41-7 | | U | 0.00200 | 0.000500 |
| Cadmium, Total | 7440-43-9 | 0.0216 | | 0.000500 | 0.000250 |
| Calcium, Total | 7440-70-2 | 127 | | 0.200 | 0.100 |
| Chromium, Total | 7440-47-3 | 0.161 | | 0.00500 | 0.00250 |
| Cobalt, Total | 7440-48-4 | 0.0138 | | 0.0200 | 0.00250 |
| Copper, Total | 7440-50-8 | 0.0342 | | 0.0200 | 0.00500 |
| Iron, Total | 7439-89-6 | 29.3 | | 0.100 | 0.0250 |
| Magnesium, Total | 7439-95-4 | 26.2 | | 0.500 | 0.250 |
| Manganese, Total | 7439-96-5 | 0.605 | | 0.0100 | 0.00500 |
| Nickel, Total | 7440-02-0 | 1.10 | | 0.0400 | 0.00500 |
| Potassium, Total | 7440-09-7 | 21.5 | | 1.00 | 0.250 |
| Silver, Total | 7440-22-4 | | U | 0.0100 | 0.00500 |
| Sodium, Total | 7440-23-5 | 159 | | 0.500 | 0.250 |
| Vanadium, Total | 7440-62-2 | 0.0187 | | 0.0100 | 0.00500 |
| Zinc, Total | 7440-66-6 | 3.98 | | 0.0200 | 0.00500 |

| | |
|---|---|
| U | Not detected at or above adjusted sample detection limit. |

**Sample #:** L12050284-02 | **PrePrep Method:** N/A | **Instrument:** PE-ICP2
**Client ID:** BBLD-PIT-SSP-050812 | **Prep Method:** 3005A | **Prep Date:** 05/14/2012 07:48
**Matrix:** Water | **Analytical Method:** 6010B | **Cal Date:** 05/21/2012 13:35
**Workgroup #:** WG397934 | **Analyst:** KHR | **Run Date:** 05/21/2012 15:10
**Collect Date:** 05/08/2012 10:01 | **Dilution:** 1 | **File ID:** P2.052112.151006
**Sample Tag:** 01 | **Units:** mg/L

| Analyte | CAS # | Result | Qual | RL | MDL |
|---|---|---|---|---|---|
| Aluminum, Dissolved | 7429-90-5 | | U | 0.100 | 0.0500 |
| Barium, Dissolved | 7440-39-3 | 1.16 | | 0.0100 | 0.00250 |
| Beryllium, Dissolved | 7440-41-7 | | U | 0.00200 | 0.000500 |
| Cadmium, Dissolved | 7440-43-9 | 0.000707 | | 0.000500 | 0.000250 |
| Calcium, Dissolved | 7440-70-2 | 299 | | 0.200 | 0.100 |
| Chromium, Dissolved | 7440-47-3 | 0.0559 | | 0.00500 | 0.00250 |

Certificate of Analysis

| Analyte | CAS # | Result | Qual | RL | MDL |
|---|---|---|---|---|---|
| Cobalt, Dissolved | 7440-48-4 | | U | 0.0200 | 0.00250 |
| Copper, Dissolved | 7440-50-8 | | U | 0.0200 | 0.00500 |
| Iron, Dissolved | 7439-89-6 | 0.106 | | 0.100 | 0.0250 |
| Magnesium, Dissolved | 7439-95-4 | 131 | | 0.500 | 0.250 |
| Manganese, Dissolved | 7439-96-5 | 0.0531 | | 0.0100 | 0.00500 |
| Nickel, Dissolved | 7440-02-0 | 0.0827 | | 0.0400 | 0.00500 |
| Potassium, Dissolved | 7440-09-7 | 84.3 | | 1.00 | 0.250 |
| Silver, Dissolved | 7440-22-4 | | U | 0.0100 | 0.00500 |
| Vanadium, Dissolved | 7440-62-2 | 0.0111 | | 0.0100 | 0.00500 |
| Zinc, Dissolved | 7440-66-6 | 0.0332 | | 0.0200 | 0.00500 |

| | |
|---|---|
| E | Semiquantitative result (out of calibration range) |
| U | Not detected at or above adjusted sample detection limit. |

**Sample #:** L12050284-02
**Client ID:** BBLD-PIT-SSP-050812
**Matrix:** Water
**Workgroup #:** WG397934
**Collect Date:** 05/08/2012 10:01
**Sample Tag:** DL01

**PrePrep Method:** N/A
**Prep Method:** 3005A
**Analytical Method:** 6010B
**Analyst:** KHR
**Dilution:** 100
**Units:** mg/L

**Instrument:** PE-ICP2
**Prep Date:** 05/14/2012 07:48
**Cal Date:** 05/21/2012 13:35
**Run Date:** 05/21/2012 16:39
**File ID:** P2.052112.163901

| Analyte | CAS # | Result | Qual | RL | MDL |
|---|---|---|---|---|---|
| Sodium, Dissolved | 7440-23-5 | 595 | | 50.0 | 25.0 |

| | |
|---|---|
| U | Not detected at or above adjusted sample detection limit. |

**Sample #:** L12050284-03
**Client ID:** PZ-07-050812
**Matrix:** Water
**Workgroup #:** WG397934
**Collect Date:** 05/08/2012 10:10
**Sample Tag:** 01

**PrePrep Method:** N/A
**Prep Method:** 3005A
**Analytical Method:** 6010B
**Analyst:** KHR
**Dilution:** 1
**Units:** mg/L

**Instrument:** PE-ICP2
**Prep Date:** 05/14/2012 07:48
**Cal Date:** 05/21/2012 13:35
**Run Date:** 05/21/2012 15:17
**File ID:** P2.052112.151716

| Analyte | CAS # | Result | Qual | RL | MDL |
|---|---|---|---|---|---|
| Aluminum, Total | 7429-90-5 | | U | 0.100 | 0.0500 |
| Barium, Total | 7440-39-3 | 0.122 | | 0.0100 | 0.00250 |
| Beryllium, Total | 7440-41-7 | | U | 0.00200 | 0.000500 |
| Cadmium, Total | 7440-43-9 | 0.00124 | | 0.000500 | 0.000250 |
| Calcium, Total | 7440-70-2 | 155 | | 0.200 | 0.100 |
| Chromium, Total | 7440-47-3 | | U | 0.00500 | 0.00250 |
| Cobalt, Total | 7440-48-4 | | U | 0.0200 | 0.00250 |
| Copper, Total | 7440-50-8 | | U | 0.0200 | 0.00500 |

Certificate of Analysis

| Analyte | CAS # | Result | Qual | RL | MDL |
|---|---|---|---|---|---|
| Iron, Total | 7439-89-6 | 1.72 | | 0.100 | 0.0250 |
| Magnesium, Total | 7439-95-4 | 45.0 | | 0.500 | 0.250 |
| Manganese, Total | 7439-96-5 | 0.175 | | 0.0100 | 0.00500 |
| Nickel, Total | 7440-02-0 | | U | 0.0400 | 0.00500 |
| Potassium, Total | 7440-09-7 | 4.54 | | 1.00 | 0.250 |
| Silver, Total | 7440-22-4 | | U | 0.0100 | 0.00500 |
| Vanadium, Total | 7440-62-2 | 0.00838 | | 0.0100 | 0.00500 |
| Zinc, Total | 7440-66-6 | 0.126 | | 0.0200 | 0.00500 |

| | |
|---|---|
| U | Not detected at or above adjusted sample detection limit. |

**Sample #:** L12050284-03 **PrePrep Method:** N/A **Instrument:** PE-ICP2
**Client ID:** PZ-07-050812 **Prep Method:** 3005A **Prep Date:** 05/14/2012 07:48
**Matrix:** Water **Analytical Method:** 6010B **Cal Date:** 05/21/2012 13:35
**Workgroup #:** WG397934 **Analyst:** KHR **Run Date:** 05/21/2012 16:58
**Collect Date:** 05/08/2012 10:10 **Dilution:** 100 **File ID:** P2.052112.165850
**Sample Tag:** DL01 **Units:** mg/L

| Analyte | CAS # | Result | Qual | RL | MDL |
|---|---|---|---|---|---|
| Sodium, Total | 7440-23-5 | 219 | | 50.0 | 25.0 |

| | |
|---|---|
| U | Not detected at or above adjusted sample detection limit. |

**Sample #:** L12050284-04 **PrePrep Method:** N/A **Instrument:** PE-ICP2
**Client ID:** PZ-07-050812 **Prep Method:** 3005A **Prep Date:** 05/14/2012 07:48
**Matrix:** Water **Analytical Method:** 6010B **Cal Date:** 05/21/2012 13:35
**Workgroup #:** WG397934 **Analyst:** KHR **Run Date:** 05/21/2012 15:49
**Collect Date:** 05/08/2012 10:10 **Dilution:** 1 **File ID:** P2.052112.154956
**Sample Tag:** 01 **Units:** mg/L

| Analyte | CAS # | Result | Qual | RL | MDL |
|---|---|---|---|---|---|
| Aluminum, Dissolved | 7429-90-5 | | U | 0.100 | 0.0500 |
| Barium, Dissolved | 7440-39-3 | 0.116 | | 0.0100 | 0.00250 |
| Beryllium, Dissolved | 7440-41-7 | | U | 0.00200 | 0.000500 |
| Cadmium, Dissolved | 7440-43-9 | | U | 0.000500 | 0.000250 |
| Calcium, Dissolved | 7440-70-2 | 148 | | 0.200 | 0.100 |
| Chromium, Dissolved | 7440-47-3 | | U | 0.00500 | 0.00250 |
| Cobalt, Dissolved | 7440-48-4 | | U | 0.0200 | 0.00250 |
| Copper, Dissolved | 7440-50-8 | | U | 0.0200 | 0.00500 |
| Iron, Dissolved | 7439-89-6 | 1.57 | | 0.100 | 0.0250 |
| Magnesium, Dissolved | 7439-95-4 | 42.6 | | 0.500 | 0.250 |
| Manganese, Dissolved | 7439-96-5 | 0.169 | | 0.0100 | 0.00500 |

Certificate of Analysis

| Analyte | CAS # | Result | Qual | RL | MDL |
|---|---|---|---|---|---|
| Nickel, Dissolved | 7440-02-0 | | U | 0.0400 | 0.00500 |
| Potassium, Dissolved | 7440-09-7 | 4.35 | | 1.00 | 0.250 |
| Silver, Dissolved | 7440-22-4 | | U | 0.0100 | 0.00500 |
| Vanadium, Dissolved | 7440-62-2 | 0.00519 | | 0.0100 | 0.00500 |
| Zinc, Dissolved | 7440-66-6 | | U | 0.0200 | 0.00500 |

| | |
|---|---|
| U | Not detected at or above adjusted sample detection limit. |

**Sample #:** L12050284-04 **PrePrep Method:** N/A **Instrument:** PE-ICP2
**Client ID:** PZ-07-050812 **Prep Method:** 3005A **Prep Date:** 05/14/2012 07:48
**Matrix:** Water **Analytical Method:** 6010B **Cal Date:** 05/21/2012 13:35
**Workgroup #:** WG397934 **Analyst:** KHR **Run Date:** 05/21/2012 17:18
**Collect Date:** 05/08/2012 10:10 **Dilution:** 100 **File ID:** P2.052112.171834
**Sample Tag:** DL01 **Units:** mg/L

| Analyte | CAS # | Result | Qual | RL | MDL |
|---|---|---|---|---|---|
| Sodium, Dissolved | 7440-23-5 | 243 | | 50.0 | 25.0 |

| | |
|---|---|
| U | Not detected at or above adjusted sample detection limit. |

**Sample #:** L12050284-05 **PrePrep Method:** N/A **Instrument:** PE-ICP2
**Client ID:** MW-18-050812 **Prep Method:** 3005A **Prep Date:** 05/14/2012 07:48
**Matrix:** Water **Analytical Method:** 6010B **Cal Date:** 05/21/2012 13:35
**Workgroup #:** WG397934 **Analyst:** KHR **Run Date:** 05/21/2012 15:56
**Collect Date:** 05/08/2012 11:00 **Dilution:** 1 **File ID:** P2.052112.155600
**Sample Tag:** 01 **Units:** mg/L

| Analyte | CAS # | Result | Qual | RL | MDL |
|---|---|---|---|---|---|
| Aluminum, Total | 7429-90-5 | | U | 0.100 | 0.0500 |
| Barium, Total | 7440-39-3 | 0.141 | | 0.0100 | 0.00250 |
| Beryllium, Total | 7440-41-7 | | U | 0.00200 | 0.000500 |
| Cadmium, Total | 7440-43-9 | | U | 0.000500 | 0.000250 |
| Calcium, Total | 7440-70-2 | 160 | | 0.200 | 0.100 |
| Chromium, Total | 7440-47-3 | | U | 0.00500 | 0.00250 |
| Cobalt, Total | 7440-48-4 | | U | 0.0200 | 0.00250 |
| Copper, Total | 7440-50-8 | | U | 0.0200 | 0.00500 |
| Iron, Total | 7439-89-6 | 15.7 | | 0.100 | 0.0250 |
| Magnesium, Total | 7439-95-4 | 29.8 | | 0.500 | 0.250 |
| Manganese, Total | 7439-96-5 | 0.287 | | 0.0100 | 0.00500 |
| Nickel, Total | 7440-02-0 | | U | 0.0400 | 0.00500 |
| Potassium, Total | 7440-09-7 | 6.67 | | 1.00 | 0.250 |
| Silver, Total | 7440-22-4 | | U | 0.0100 | 0.00500 |

Certificate of Analysis

| Analyte | CAS # | Result | Qual | RL | MDL |
|---|---|---|---|---|---|
| Sodium, Total | 7440-23-5 | 161 | | 0.500 | 0.250 |
| Vanadium, Total | 7440-62-2 | | U | 0.0100 | 0.00500 |
| Zinc, Total | 7440-66-6 | | U | 0.0200 | 0.00500 |

| | |
|---|---|
| U | Not detected at or above adjusted sample detection limit. |

**Sample #:** L12050284-06
**Client ID:** MW-18-050812
**Matrix:** Water
**Workgroup #:** WG397934
**Collect Date:** 05/08/2012 11:00
**Sample Tag:** 01

**PrePrep Method:** N/A
**Prep Method:** 3005A
**Analytical Method:** 6010B
**Analyst:** KHR
**Dilution:** 1
**Units:** mg/L

**Instrument:** PE-ICP2
**Prep Date:** 05/14/2012 07:48
**Cal Date:** 05/21/2012 13:35
**Run Date:** 05/21/2012 16:01
**File ID:** P2.052112.160159

| Analyte | CAS # | Result | Qual | RL | MDL |
|---|---|---|---|---|---|
| Aluminum, Dissolved | 7429-90-5 | | U | 0.100 | 0.0500 |
| Barium, Dissolved | 7440-39-3 | 0.145 | | 0.0100 | 0.00250 |
| Beryllium, Dissolved | 7440-41-7 | | U | 0.00200 | 0.000500 |
| Cadmium, Dissolved | 7440-43-9 | 0.000401 | | 0.000500 | 0.000250 |
| Calcium, Dissolved | 7440-70-2 | 164 | | 0.200 | 0.100 |
| Chromium, Dissolved | 7440-47-3 | | U | 0.00500 | 0.00250 |
| Cobalt, Dissolved | 7440-48-4 | | U | 0.0200 | 0.00250 |
| Copper, Dissolved | 7440-50-8 | | U | 0.0200 | 0.00500 |
| Iron, Dissolved | 7439-89-6 | 15.9 | | 0.100 | 0.0250 |
| Magnesium, Dissolved | 7439-95-4 | 30.0 | | 0.500 | 0.250 |
| Manganese, Dissolved | 7439-96-5 | 0.310 | | 0.0100 | 0.00500 |
| Nickel, Dissolved | 7440-02-0 | | U | 0.0400 | 0.00500 |
| Potassium, Dissolved | 7440-09-7 | 6.83 | | 1.00 | 0.250 |
| Silver, Dissolved | 7440-22-4 | | U | 0.0100 | 0.00500 |
| Sodium, Dissolved | 7440-23-5 | 168 | | 0.500 | 0.250 |
| Vanadium, Dissolved | 7440-62-2 | 0.00646 | | 0.0100 | 0.00500 |
| Zinc, Dissolved | 7440-66-6 | | U | 0.0200 | 0.00500 |

| | |
|---|---|
| U | Not detected at or above adjusted sample detection limit. |

**Sample #:** L12050284-07
**Client ID:** TW-01-050812
**Matrix:** Water
**Workgroup #:** WG397934
**Collect Date:** 05/08/2012 14:50
**Sample Tag:** 01

**PrePrep Method:** N/A
**Prep Method:** 3005A
**Analytical Method:** 6010B
**Analyst:** KHR
**Dilution:** 1
**Units:** mg/L

**Instrument:** PE-ICP2
**Prep Date:** 05/14/2012 07:48
**Cal Date:** 05/21/2012 13:35
**Run Date:** 05/21/2012 16:08
**File ID:** P2.052112.160803

Certificate of Analysis

| Analyte | CAS # | Result | Qual | RL | MDL |
|---|---|---|---|---|---|
| Aluminum, Total | 7429-90-5 | 0.148 | | 0.100 | 0.0500 |
| Barium, Total | 7440-39-3 | 0.172 | | 0.0100 | 0.00250 |
| Beryllium, Total | 7440-41-7 | | U | 0.00200 | 0.000500 |
| Cadmium, Total | 7440-43-9 | 0.000483 | | 0.000500 | 0.000250 |
| Calcium, Total | 7440-70-2 | 253 | | 0.200 | 0.100 |
| Chromium, Total | 7440-47-3 | | U | 0.00500 | 0.00250 |
| Cobalt, Total | 7440-48-4 | | U | 0.0200 | 0.00250 |
| Copper, Total | 7440-50-8 | | U | 0.0200 | 0.00500 |
| Iron, Total | 7439-89-6 | 44.3 | | 0.100 | 0.0250 |
| Magnesium, Total | 7439-95-4 | 61.5 | | 0.500 | 0.250 |
| Manganese, Total | 7439-96-5 | 0.451 | | 0.0100 | 0.00500 |
| Nickel, Total | 7440-02-0 | | U | 0.0400 | 0.00500 |
| Potassium, Total | 7440-09-7 | 10.4 | | 1.00 | 0.250 |
| Silver, Total | 7440-22-4 | | U | 0.0100 | 0.00500 |
| Sodium, Total | 7440-23-5 | 59.1 | | 0.500 | 0.250 |
| Vanadium, Total | 7440-62-2 | 0.00752 | | 0.0100 | 0.00500 |
| Zinc, Total | 7440-66-6 | 0.103 | | 0.0200 | 0.00500 |

| | |
|---|---|
| U | Not detected at or above adjusted sample detection limit. |

**Sample #:** L12050284-08
**Client ID:** TW-01-050812
**Matrix:** Water
**Workgroup #:** WG397934
**Collect Date:** 05/08/2012 14:50
**Sample Tag:** 01

**PrePrep Method:** N/A
**Prep Method:** 3005A
**Analytical Method:** 6010B
**Analyst:** KHR
**Dilution:** 1
**Units:** mg/L

**Instrument:** PE-ICP2
**Prep Date:** 05/14/2012 07:48
**Cal Date:** 05/21/2012 13:35
**Run Date:** 05/21/2012 16:14
**File ID:** P2.052112.161403

| Analyte | CAS # | Result | Qual | RL | MDL |
|---|---|---|---|---|---|
| Aluminum, Dissolved | 7429-90-5 | | U | 0.100 | 0.0500 |
| Barium, Dissolved | 7440-39-3 | 0.174 | | 0.0100 | 0.00250 |
| Beryllium, Dissolved | 7440-41-7 | | U | 0.00200 | 0.000500 |
| Cadmium, Dissolved | 7440-43-9 | | U | 0.000500 | 0.000250 |
| Calcium, Dissolved | 7440-70-2 | 260 | | 0.200 | 0.100 |
| Chromium, Dissolved | 7440-47-3 | | U | 0.00500 | 0.00250 |
| Cobalt, Dissolved | 7440-48-4 | | U | 0.0200 | 0.00250 |
| Copper, Dissolved | 7440-50-8 | | U | 0.0200 | 0.00500 |
| Iron, Dissolved | 7439-89-6 | 44.7 | | 0.100 | 0.0250 |
| Magnesium, Dissolved | 7439-95-4 | 61.2 | | 0.500 | 0.250 |
| Manganese, Dissolved | 7439-96-5 | 0.448 | | 0.0100 | 0.00500 |
| Nickel, Dissolved | 7440-02-0 | | U | 0.0400 | 0.00500 |
| Potassium, Dissolved | 7440-09-7 | 10.8 | | 1.00 | 0.250 |

Certificate of Analysis

| Analyte | CAS # | Result | Qual | RL | MDL |
|---|---|---|---|---|---|
| Silver, Dissolved | 7440-22-4 | | U | 0.0100 | 0.00500 |
| Sodium, Dissolved | 7440-23-5 | 64.7 | | 0.500 | 0.250 |
| Vanadium, Dissolved | 7440-62-2 | 0.00619 | | 0.0100 | 0.00500 |
| Zinc, Dissolved | 7440-66-6 | 0.0775 | | 0.0200 | 0.00500 |

| | |
|---|---|
| U | Not detected at or above adjusted sample detection limit. |

**Sample #:** L12050284-10 **PrePrep Method:** N/A **Instrument:** PE-ICP2
**Client ID:** DUP-GW-050812 **Prep Method:** 3005A **Prep Date:** 05/14/2012 07:48
**Matrix:** Water **Analytical Method:** 6010B **Cal Date:** 05/21/2012 13:35
**Workgroup #:** WG397934 **Analyst:** KHR **Run Date:** 05/21/2012 16:20
**Collect Date:** 05/08/2012 15:00 **Dilution:** 1 **File ID:** P2.052112.162003
**Sample Tag:** 01 **Units:** mg/L

| Analyte | CAS # | Result | Qual | RL | MDL |
|---|---|---|---|---|---|
| Aluminum, Total | 7429-90-5 | 0.173 | | 0.100 | 0.0500 |
| Barium, Total | 7440-39-3 | 0.176 | | 0.0100 | 0.00250 |
| Beryllium, Total | 7440-41-7 | | U | 0.00200 | 0.000500 |
| Cadmium, Total | 7440-43-9 | 0.000379 | | 0.000500 | 0.000250 |
| Calcium, Total | 7440-70-2 | 250 | | 0.200 | 0.100 |
| Chromium, Total | 7440-47-3 | | U | 0.00500 | 0.00250 |
| Cobalt, Total | 7440-48-4 | | U | 0.0200 | 0.00250 |
| Copper, Total | 7440-50-8 | | U | 0.0200 | 0.00500 |
| Iron, Total | 7439-89-6 | 44.8 | | 0.100 | 0.0250 |
| Magnesium, Total | 7439-95-4 | 61.7 | | 0.500 | 0.250 |
| Manganese, Total | 7439-96-5 | 0.451 | | 0.0100 | 0.00500 |
| Nickel, Total | 7440-02-0 | | U | 0.0400 | 0.00500 |
| Potassium, Total | 7440-09-7 | 10.3 | | 1.00 | 0.250 |
| Silver, Total | 7440-22-4 | | U | 0.0100 | 0.00500 |
| Sodium, Total | 7440-23-5 | 59.0 | | 0.500 | 0.250 |
| Vanadium, Total | 7440-62-2 | 0.00715 | | 0.0100 | 0.00500 |
| Zinc, Total | 7440-66-6 | 0.103 | | 0.0200 | 0.00500 |

| | |
|---|---|
| U | Not detected at or above adjusted sample detection limit. |

**Sample #:** L12050284-11 **PrePrep Method:** N/A **Instrument:** PE-ICP2
**Client ID:** DUP-GW-050812 **Prep Method:** 3005A **Prep Date:** 05/14/2012 07:48
**Matrix:** Water **Analytical Method:** 6010B **Cal Date:** 05/21/2012 13:35
**Workgroup #:** WG397934 **Analyst:** KHR **Run Date:** 05/21/2012 16:26
**Collect Date:** 05/08/2012 15:00 **Dilution:** 1 **File ID:** P2.052112.162603
**Sample Tag:** 01 **Units:** mg/L

Certificate of Analysis

| Analyte | CAS # | Result | Qual | RL | MDL |
|---|---|---|---|---|---|
| Aluminum, Dissolved | 7429-90-5 | | U | 0.100 | 0.0500 |
| Barium, Dissolved | 7440-39-3 | 0.174 | | 0.0100 | 0.00250 |
| Beryllium, Dissolved | 7440-41-7 | | U | 0.00200 | 0.000500 |
| Cadmium, Dissolved | 7440-43-9 | 0.000363 | | 0.000500 | 0.000250 |
| Calcium, Dissolved | 7440-70-2 | 255 | | 0.200 | 0.100 |
| Chromium, Dissolved | 7440-47-3 | | U | 0.00500 | 0.00250 |
| Cobalt, Dissolved | 7440-48-4 | | U | 0.0200 | 0.00250 |
| Copper, Dissolved | 7440-50-8 | | U | 0.0200 | 0.00500 |
| Iron, Dissolved | 7439-89-6 | 44.4 | | 0.100 | 0.0250 |
| Magnesium, Dissolved | 7439-95-4 | 62.1 | | 0.500 | 0.250 |
| Manganese, Dissolved | 7439-96-5 | 0.441 | | 0.0100 | 0.00500 |
| Nickel, Dissolved | 7440-02-0 | | U | 0.0400 | 0.00500 |
| Potassium, Dissolved | 7440-09-7 | 10.5 | | 1.00 | 0.250 |
| Silver, Dissolved | 7440-22-4 | | U | 0.0100 | 0.00500 |
| Sodium, Dissolved | 7440-23-5 | 61.4 | | 0.500 | 0.250 |
| Vanadium, Dissolved | 7440-62-2 | 0.00618 | | 0.0100 | 0.00500 |
| Zinc, Dissolved | 7440-66-6 | 0.0723 | | 0.0200 | 0.00500 |

| | |
|---|---|
| U | Not detected at or above adjusted sample detection limit. |

**Sample #:** L12050284-12
**Client ID:** EB-050812-GW
**Matrix:** Water
**Workgroup #:** WG397934
**Collect Date:** 05/08/2012 13:10
**Sample Tag:** 01

**PrePrep Method:** N/A
**Prep Method:** 3005A
**Analytical Method:** 6010B
**Analyst:** KHR
**Dilution:** 1
**Units:** mg/L

**Instrument:** PE-ICP2
**Prep Date:** 05/14/2012 07:48
**Cal Date:** 05/21/2012 13:35
**Run Date:** 05/21/2012 16:32
**File ID:** P2.052112.163204

| Analyte | CAS # | Result | Qual | RL | MDL |
|---|---|---|---|---|---|
| Aluminum, Total | 7429-90-5 | | U | 0.100 | 0.0500 |
| Barium, Total | 7440-39-3 | | U | 0.0100 | 0.00250 |
| Beryllium, Total | 7440-41-7 | | U | 0.00200 | 0.000500 |
| Cadmium, Total | 7440-43-9 | | U | 0.000500 | 0.000250 |
| Calcium, Total | 7440-70-2 | 0.176 | | 0.200 | 0.100 |
| Chromium, Total | 7440-47-3 | | U | 0.00500 | 0.00250 |
| Cobalt, Total | 7440-48-4 | | U | 0.0200 | 0.00250 |
| Copper, Total | 7440-50-8 | | U | 0.0200 | 0.00500 |
| Iron, Total | 7439-89-6 | | U | 0.100 | 0.0250 |
| Magnesium, Total | 7439-95-4 | | U | 0.500 | 0.250 |
| Manganese, Total | 7439-96-5 | | U | 0.0100 | 0.00500 |
| Nickel, Total | 7440-02-0 | | U | 0.0400 | 0.00500 |
| Potassium, Total | 7440-09-7 | | U | 1.00 | 0.250 |

Certificate of Analysis

| Analyte | CAS # | Result | Qual | RL | MDL |
|---|---|---|---|---|---|
| Silver, Total | 7440-22-4 | | U | 0.0100 | 0.00500 |
| Sodium, Total | 7440-23-5 | 0.251 | | 0.500 | 0.250 |
| Vanadium, Total | 7440-62-2 | | U | 0.0100 | 0.00500 |
| Zinc, Total | 7440-66-6 | | U | 0.0200 | 0.00500 |

| | |
|---|---|
| U | Not detected at or above adjusted sample detection limit. |

# 2.3.1.2 QC Summary Data

**Example 6010 Calculations**
**Perkin Elmer Optima 4300 DV**

**1.0 Initial Calibration (ICAL) Parameters**
The system performs linear regression from data consisting of a blank and three standards.

**2.0 Calculating the concentration (C) of an element in water using data from prep log, run log, and quantitation report (note:the data system performs this calculation automatically when correction factors have been entered):**

$$Cx = Cs \times \frac{Vf}{Vi} \times D$$

| Where: | **Example:** |
|---|---|
| $Cs$ = Concentration computed by the data system in ug/mL (ppm) | 0.1 |
| $Vf$ = Final volume (mL) | 50 |
| $Vi$ = Initial volume (mL) | 50 |
| $D$ = Dilution factor as a multiplier (10X = 10) | 1 |
| | |
| $Cx$ = Concentration of element in ug/mL (mg/L) | 0.1 |

**3.0 Calculating the concentration (C) of an element in soil using data from prep log, run log, and quantitation report (note: the data system performs this calculation automatically when correction factors have been entered):**

$$Cx = Cs \times \frac{Vf}{Vi} \times D$$

| Where: | **Example:** |
|---|---|
| $Cs$ = Concentration computed by the data system (mg/L) (ppm) | 0.1 |
| $Vf$ = Final volume (mL) | 50 |
| $Vi$ = Initial weight (g) | 1 |
| $D$ = Dilution factor as a multiplier (10X = 10) | 1 |
| | |
| $Cx$ = Concentration of element in ug/g (mg/kg) | 5 |

**4.0 Adjusting the concentration to dry weight:**

$$Cdry = \frac{Cx \times 100}{Px}$$

| Where: | **Example:** |
|---|---|
| $Cx$ = Concentration calculated as received (wet basis) | 5 |
| $Px$ = Percent solids of sample (%wt) | 80 |
| | |
| $Cdry$ = Concentration calculated as dry weight (mg/kg) | 6.25 |

# Microbac Laboratories Inc.
## Metals Digest Log

**Workgroup:** WG397855
**Analyst:** REK
**Spike Analyst:** REK
**Method:** 3005A
**Run Date:** 05/14/2012 07:48
**Hotblock Start Temp:** 94.9 @ 06:40
**Hotblock End Temp:** 94.8 @ 10:40

**SOP:** ME401 Revison 14
**Spike Solution:** STD51357
**Spike Witness:** BRG
**HNO3 Lot #:** COA16033
**Digestion Tubes Lot #:** COA16053
**HCL Lot #:** COA16113
**ICP;WG397704 Filter Lot** COA16155

| | SAMPLE # | Type | Matrix | Initial Amount | Final Volume | Spike Amount | Due Date |
|---|---|---|---|---|---|---|---|
| 1 | WG397855-02 | BLANK | 1 | 50 mL | 50 mL | | |
| 2 | WG397855-03 | LCS | 1 | 50 mL | 50 mL | 5 mL | |
| 3 | L12050284-01 | SAMP | 1 | 50 mL | 50 mL | | 05/23/12 |
| 4 | L12050284-02 | SAMP | 1 | 50 mL | 50 mL | | 05/23/12 |
| 5 | L12050284-03 | SAMP | 1 | 50 mL | 50 mL | | 05/23/12 |
| 6 | L12050284-04 | SAMP | 1 | 50 mL | 50 mL | | 05/23/12 |
| 7 | L12050284-05 | SAMP | 1 | 50 mL | 50 mL | | 05/23/12 |
| 8 | L12050284-06 | SAMP | 1 | 50 mL | 50 mL | | 05/23/12 |
| 9 | L12050284-07 | SAMP | 1 | 50 mL | 50 mL | | 05/23/12 |
| 10 | L12050284-08 | SAMP | 1 | 50 mL | 50 mL | | 05/23/12 |
| 11 | L12050284-10 | SAMP | 1 | 50 mL | 50 mL | | 05/23/12 |
| 12 | L12050284-11 | SAMP | 1 | 50 mL | 50 mL | | 05/23/12 |
| 13 | L12050284-12 | SAMP | 1 | 50 mL | 50 mL | | 05/23/12 |
| 14 | WG397855-01 | REF | 1 | 50 mL | 50 mL | | |
| 15 | L12050385-01 | SAMP | 1 | 50 mL | 50 mL | | 05/22/12 |
| 16 | L12050385-02 | SAMP | 1 | 50 mL | 50 mL | | 05/22/12 |
| 17 | L12050385-03 | SAMP | 1 | 50 mL | 50 mL | | 05/22/12 |
| 18 | L12050385-04 | SAMP | 1 | 50 mL | 50 mL | | 05/22/12 |
| 19 | WG397855-04 | MS | 1 | 50 mL | 50 mL | 5 mL | |
| 20 | WG397855-05 | MSD | 1 | 50 mL | 50 mL | 5 mL | |

| | |
|---|---|
| L12050284-03 | filtered digestate |

Analyst:

Reviewer:

HB_DIG - Modified 09/30/2009
PDF ID: 2412837
Report generated: 05/14/2012 10:49

**Microbac Laboratories Inc.**

Instrument Run Log

Instrument: PE-ICP2 Dataset: 052112H5.CSV
Analyst1: KHR Analyst2: N/A
Method: 6010 SOP: ME600E Rev: 12
Maintenance Log ID: 41816

Calibration Std: STD51734 ICV Std: STD51703 Post Spike: STD51356
ICSA: STD51761 ICSAB: STD51675 Int. Std: RGT17310
CCV: STD51781 LLCCV: STD51734

Workgroups: 397934, 398452, 398607

Comments:

| Seq. | File ID | Sample | ID | Prep | Dil | Reference | Date/Time |
|---|---|---|---|---|---|---|---|
| 1 | P2.052112.130839 | WG398670-01 | Calibration Point | | 1 | | 05/21/12 13:08 |
| 2 | P2.052112.131532 | WG398670-02 | Calibration Point | | 1 | | 05/21/12 13:15 |
| 3 | P2.052112.132227 | WG398670-03 | Calibration Point | | 1 | | 05/21/12 13:22 |
| 4 | P2.052112.132922 | WG398670-04 | Calibration Point | | 1 | | 05/21/12 13:29 |
| 5 | P2.052112.133521 | WG398670-05 | Calibration Point | | 1 | | 05/21/12 13:35 |
| 6 | P2.052112.134125 | WG398670-06 | Initial Calibration Verification | | 1 | | 05/21/12 13:41 |
| 7 | P2.052112.134723 | WG398670-07 | Initial Calib Blank | | 1 | | 05/21/12 13:47 |
| 8 | P2.052112.135417 | WG398670-08 | Low Level Initial Calibration V | | 1 | | 05/21/12 13:54 |
| 9 | P2.052112.140111 | WG398670-09 | Low Level Initial Calibration V | | 1 | | 05/21/12 14:01 |
| 10 | P2.052112.140806 | WG398670-10 | Interference Check | | 1 | | 05/21/12 14:08 |
| 11 | P2.052112.141402 | WG398670-11 | Interference Check | | 1 | | 05/21/12 14:14 |
| 12 | P2.052112.141958 | WG398670-12 | CCV | | 1 | | 05/21/12 14:19 |
| 13 | P2.052112.142558 | WG398670-13 | CCB | | 1 | | 05/21/12 14:25 |
| 14 | P2.052112.143251 | WG397855-02 | Method/Prep Blank | 50/50 | 1 | | 05/21/12 14:32 |
| 15 | P2.052112.143946 | WG397855-03 | Laboratory Control S | 50/50 | 1 | | 05/21/12 14:39 |
| 16 | P2.052112.144545 | WG397855-01 | Reference Sample | | 1 | L12050385-01 | 05/21/12 14:45 |
| 17 | P2.052112.145152 | WG397855-04 | Matrix Spike | 50/50 | 1 | L12050385-01 | 05/21/12 14:51 |
| 18 | P2.052112.145758 | WG397855-05 | Matrix Spike Duplica | 50/50 | 1 | L12050385-01 | 05/21/12 14:57 |
| 19 | P2.052112.150405 | L12050284-01 | BBLD-PIT-SSP-050812 | 50/50 | 1 | | 05/21/12 15:04 |
| 20 | P2.052112.151006 | L12050284-02 | BBLD-PIT-SSP-050812 | 50/50 | 1 | | 05/21/12 15:10 |
| 21 | P2.052112.151716 | L12050284-03 | PZ-07-050812 | 50/50 | 1 | | 05/21/12 15:17 |
| 22 | P2.052112.152313 | WG397934-03 | Post Digestion Spike | | 1 | L12050284-03 | 05/21/12 15:23 |
| 23 | P2.052112.152911 | WG397934-04 | Serial Dilution | | 5 | L12050284-03 | 05/21/12 15:29 |
| 24 | P2.052112.153700 | WG398670-14 | CCV | | 1 | | 05/21/12 15:37 |
| 25 | P2.052112.154300 | WG398670-15 | CCB | | 1 | | 05/21/12 15:43 |
| 26 | P2.052112.154956 | L12050284-04 | PZ-07-050812 | 50/50 | 1 | | 05/21/12 15:49 |
| 27 | P2.052112.155600 | L12050284-05 | MW-18-050812 | 50/50 | 1 | | 05/21/12 15:56 |
| 28 | P2.052112.160159 | L12050284-06 | MW-18-050812 | 50/50 | 1 | | 05/21/12 16:01 |
| 29 | P2.052112.160803 | L12050284-07 | TW-01-050812 | 50/50 | 1 | | 05/21/12 16:08 |
| 30 | P2.052112.161403 | L12050284-08 | TW-01-050812 | 50/50 | 1 | | 05/21/12 16:14 |
| 31 | P2.052112.162003 | L12050284-10 | DUP-GW-050812 | 50/50 | 1 | | 05/21/12 16:20 |
| 32 | P2.052112.162603 | L12050284-11 | DUP-GW-050812 | 50/50 | 1 | | 05/21/12 16:26 |
| 33 | P2.052112.163204 | L12050284-12 | EB-050812-GW | 50/50 | 1 | | 05/21/12 16:32 |
| 34 | P2.052112.163901 | L12050284-02 | BBLD-PIT-SSP-050812 | 50/50 | 100 | | 05/21/12 16:39 |

Page: 1 Approved: May 22, 2012

Maren Berry

**Microbac Laboratories Inc.**

Instrument Run Log

Instrument: PE-ICP2 Dataset: 052112H5.CSV
Analyst1: KHR Analyst2: N/A
Method: 6010 SOP: ME600E Rev: 12
Maintenance Log ID: 41816

Calibration Std: STD51734 ICV Std: STD51703 Post Spike: STD51356
ICSA: STD51761 ICSAB: STD51675 Int. Std: RGT17310
CCV: STD51781 LLCCV: STD51734

Workgroups: 397934, 398452, 398607

Comments:

| Seq. | File ID | Sample | ID | Prep | Dil | Reference | Date/Time |
|---|---|---|---|---|---|---|---|
| 35 | P2.052112.164557 | WG398670-16 | CCV | | 1 | | 05/21/12 16:45 |
| 36 | P2.052112.165157 | WG398670-17 | CCB | | 1 | | 05/21/12 16:51 |
| 37 | P2.052112.165850 | L12050284-03 | PZ-07-050812 | 50/50 | 100 | | 05/21/12 16:58 |
| 38 | P2.052112.170543 | WG397934-03 | Post Digestion Spike | | 100 | L12050284-03 | 05/21/12 17:05 |
| 39 | P2.052112.171140 | WG397934-04 | Serial Dilution | | 500 | L12050284-03 | 05/21/12 17:11 |
| 40 | P2.052112.171834 | L12050284-04 | PZ-07-050812 | 50/50 | 100 | | 05/21/12 17:18 |
| 41 | P2.052112.172529 | WG398670-18 | CCV | | 1 | | 05/21/12 17:25 |
| 42 | P2.052112.173129 | WG398670-19 | CCB | | 1 | | 05/21/12 17:31 |
| 43 | P2.052112.173837 | WG398670-20 | Interference Check | | 1 | | 05/21/12 17:38 |
| 44 | P2.052112.174434 | WG398670-21 | Interference Check | | 1 | | 05/21/12 17:44 |
| 45 | P2.052112.175030 | WG398670-22 | CCV | | 1 | | 05/21/12 17:50 |
| 46 | P2.052112.175629 | WG398670-23 | CCB | | 1 | | 05/21/12 17:56 |
| 47 | P2.052112.180323 | L12050489-01 | 2050701-02 | 5/50 | 5 | | 05/21/12 18:03 |
| 48 | P2.052112.180926 | L-01 | 01 + 0.25PPM CR PB | | 5 | | 05/21/12 18:09 |
| 49 | P2.052112.181531 | L-01 | 01 + 0.50PPM CR PB | | 5 | | 05/21/12 18:15 |
| 50 | P2.052112.182133 | L-01 | 01 + 0.75PPM CR PB | | 5 | | 05/21/12 18:21 |
| 51 | P2.052112.182736 | WG398670-24 | CCV | | 1 | | 05/21/12 18:27 |
| 52 | P2.052112.183337 | WG398670-25 | CCB | | 1 | | 05/21/12 18:33 |
| 53 | P2.052112.184030 | WG398551-02 | Method/Prep Blank | 50/50 | 1 | | 05/21/12 18:40 |
| 54 | P2.052112.184730 | WG398551-03 | Laboratory Control S | 50/50 | 1 | | 05/21/12 18:47 |
| 55 | P2.052112.185330 | L12050563-01 | 1205GWMPW019-1-U | | 1 | WG398551-01 | 05/21/12 18:53 |
| 56 | P2.052112.185930 | WG398551-04 | Matrix Spike | 50/50 | 1 | L12050563-01 | 05/21/12 18:59 |
| 57 | P2.052112.190530 | WG398551-05 | Matrix Spike Duplica | 50/50 | 1 | L12050563-01 | 05/21/12 19:05 |
| 58 | P2.052112.191127 | L12050563-02 | 1205GWMPW019-1-F | 50/50 | 1 | | 05/21/12 19:11 |
| 59 | P2.052112.191724 | L12050563-03 | 1205GWMPW019-2-U | 50/50 | 1 | | 05/21/12 19:17 |
| 60 | P2.052112.192321 | L12050563-04 | 1205GWMPW019-2-F | 50/50 | 1 | | 05/21/12 19:23 |
| 61 | P2.052112.192919 | WG398607-01 | Post Digestion Spike | | 1 | L12050563-04 | 05/21/12 19:29 |
| 62 | P2.052112.193517 | WG398607-02 | Serial Dilution | | 5 | L12050563-04 | 05/21/12 19:35 |
| 63 | P2.052112.194212 | WG398670-26 | CCV | | 1 | | 05/21/12 19:42 |
| 64 | P2.052112.194813 | WG398670-27 | CCB | | 1 | | 05/21/12 19:48 |
| 65 | P2.052112.195506 | L12050581-02 | MW21042712 | 50/50 | 1 | | 05/21/12 19:55 |
| 66 | P2.052112.200203 | L12050581-03 | MW45042712 | 50/50 | 1 | | 05/21/12 20:02 |
| 67 | P2.052112.200903 | L12050616-03 | LF1-HM21-MAY2012-0 | 50/50 | 1 | | 05/21/12 20:09 |
| 68 | P2.052112.201503 | L12050616-04 | LF1-W5WNITC-MAY2012-0 | 50/50 | 1 | | 05/21/12 20:15 |

Page: 2 Approved: May 22, 2012

Maren Berry

Microbac

**Microbac Laboratories Inc.**

Instrument Run Log

Instrument: PE-ICP2 Dataset: 052112H5.CSV
Analyst1: KHR Analyst2: N/A
Method: 6010 SOP: ME600E Rev: 12
Maintenance Log ID: 41816

Calibration Std: STD51734 ICV Std: STD51703 Post Spike: STD51356
ICSA: STD51761 ICSAB: STD51675 Int. Std: RGT17310
CCV: STD51781 LLCCV: STD51734

Workgroups: 397934, 398452, 398607

Comments:

| Seq. | File ID | Sample | ID | Prep | Dil | Reference | Date/Time |
|---|---|---|---|---|---|---|---|
| 69 | P2.052112.202102 | L12050616-05 | LF1-W4WNITC-MAY2012-0 | 50/50 | 1 | | 05/21/12 20:21 |
| 70 | P2.052112.202707 | L12050616-06 | LF1-FD-1-MAY2012-0 | 50/50 | 1 | | 05/21/12 20:27 |
| 71 | P2.052112.203308 | L12050616-07 | LF1-FD-1-MAY2012-1 | 50/50 | 1 | | 05/21/12 20:33 |
| 72 | P2.052112.203906 | L12050616-08 | LF1-FD-2-MAY2012-0 | 50/50 | 1 | | 05/21/12 20:39 |
| 73 | P2.052112.204504 | WG398670-28 | CCV | | 1 | | 05/21/12 20:45 |
| 74 | P2.052112.205104 | WG398670-29 | CCB | | 1 | | 05/21/12 20:51 |
| 75 | P2.052112.205757 | WG398670-30 | Low Level Continuing Calibra | | 1 | | 05/21/12 20:57 |
| 76 | P2.052112.210452 | WG398670-31 | Low Level Continuing Calibra | | 1 | | 05/21/12 21:04 |

Page: 3 Approved: May 22, 2012

Maren Berry

Microbac Laboratories Inc.

Data Checklist

Date: 21-MAY-2012
Analyst: KHR
Analyst: NA
Method: 6010
Instrument: PE-ICP2
Curve Workgroup: 398670
Runlog ID: 46890
Analytical Workgroups: 397934, 398452, 398607

| | |
|---|---|
| Calibration/Linearity | X |
| ICV/CCV | X |
| ICV RSD <= 3% (EPA 200.7 only) | |
| ICB/CCB | X |
| ICSA/ICSAB | X |
| CRI | X |
| Blank/LCS | X |
| MS/MSD | X |
| Post Spike/Serial Dilution | X |
| Upload Results | X |
| Data Qualifiers | |
| Generate PDF Instrument Data | X |
| Sign/Annotate PDF Data | X |
| Upload Curve Data | X |
| Workgroup Forms | |
| Case Narrative | X |
| Client Forms | X |
| Level X | |
| Level 3 | |
| Level 4 | 284, 563, 581, 616 |
| Check for compliance with method and project specific requirements | X |
| Check the completeness of reported information | X |
| Check the information for the report narrative | X |
| Primary Reviewer | KHR |
| Secondary Reviewer | MMB |
| | |
| Comments | |

Primary Reviewer:
22-MAY-2012

Secondary Reviewer:
22-MAY-2012

CHECKLIST1 - Modified 03/05/2008
Generated: MAY-22-2012 17:41:34

Microbac Laboratories Inc.

# HOLDING TIMES
# EQUIVALENT TO AFCEE FORM 9

Analytical Method: 6010B AAB#: WG397934

Login Number: L12050284

| Client ID | ID | Date Collected | TCLP Date | Time Held | Max Hold | Q | Extract Date | Time Held | Max Hold | Q | Run Date | Time Held | Max Hold | Q |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| BBLD-PIT-SSP-050812 | 01 | 05/08/12 | | | | | 05/14/12 | 5.9 | 180 | | 05/21/12 | 13.2 | 180 | |
| BBLD-PIT-SSP-050812 | 02 | 05/08/12 | | | | | 05/14/12 | 5.9 | 180 | | 05/21/12 | 13.2 | 180 | |
| BBLD-PIT-SSP-050812 | 02 | 05/08/12 | | | | | 05/14/12 | 5.9 | 180 | | 05/21/12 | 13.3 | 180 | |
| PZ-07-050812 | 03 | 05/08/12 | | | | | 05/14/12 | 5.9 | 180 | | 05/21/12 | 13.3 | 180 | |
| PZ-07-050812 | 03 | 05/08/12 | | | | | 05/14/12 | 5.9 | 180 | | 05/21/12 | 13.2 | 180 | |
| PZ-07-050812 | 04 | 05/08/12 | | | | | 05/14/12 | 5.9 | 180 | | 05/21/12 | 13.2 | 180 | |
| PZ-07-050812 | 04 | 05/08/12 | | | | | 05/14/12 | 5.9 | 180 | | 05/21/12 | 13.3 | 180 | |
| MW-18-050812 | 05 | 05/08/12 | | | | | 05/14/12 | 5.9 | 180 | | 05/21/12 | 13.2 | 180 | |
| MW-18-050812 | 06 | 05/08/12 | | | | | 05/14/12 | 5.9 | 180 | | 05/21/12 | 13.2 | 180 | |
| TW-01-050812 | 07 | 05/08/12 | | | | | 05/14/12 | 5.7 | 180 | | 05/21/12 | 13.1 | 180 | |
| TW-01-050812 | 08 | 05/08/12 | | | | | 05/14/12 | 5.7 | 180 | | 05/21/12 | 13.1 | 180 | |
| DUP-GW-050812 | 10 | 05/08/12 | | | | | 05/14/12 | 5.7 | 180 | | 05/21/12 | 13.1 | 180 | |
| DUP-GW-050812 | 11 | 05/08/12 | | | | | 05/14/12 | 5.7 | 180 | | 05/21/12 | 13.1 | 180 | |
| EB-050812-GW | 12 | 05/08/12 | | | | | 05/14/12 | 5.8 | 180 | | 05/21/12 | 13.1 | 180 | |

* = SEE PROJECT QAPP REQUIREMENTS

HOLD_TIMES - Modified 03/06/2008
PDF File ID: 2424421
Report generated 05/22/2012 08:31

Microbac Laboratories Inc.

## METHOD BLANK SUMMARY

Login Number: L12050284
Work Group: WG397934
Blank File ID: P2.052112.143251
Blank Sample ID: WG397855-02
Prep Date: 05/14/12 07:48
Instrument ID: PE-ICP2
Analyzed Date: 05/21/12 14:32
Method: 6010B
Analyst: KHR

This Method Blank Applies To The Following Samples:

| Client ID | Lab Sample ID | Lab File ID | Time Analyzed | TAG |
|---|---|---|---|---|
| LCS | WG397855-03 | P2.051512.150608 | 05/15/12 15:06 | 01 |
| LCS | WG397855-03 | P2.052112.143946 | 05/21/12 14:39 | 02 |
| BBLD-PIT-SSP-050812 | L12050284-01 | P2.052112.150405 | 05/21/12 15:04 | 01 |
| BBLD-PIT-SSP-050812 | L12050284-02 | P2.052112.151006 | 05/21/12 15:10 | 01 |
| PZ-07-050812 | L12050284-03 | P2.052112.151716 | 05/21/12 15:17 | 01 |
| PZ-07-050812 | L12050284-04 | P2.052112.154956 | 05/21/12 15:49 | 01 |
| MW-18-050812 | L12050284-05 | P2.052112.155600 | 05/21/12 15:56 | 01 |
| MW-18-050812 | L12050284-06 | P2.052112.160159 | 05/21/12 16:01 | 01 |
| TW-01-050812 | L12050284-07 | P2.052112.160803 | 05/21/12 16:08 | 01 |
| TW-01-050812 | L12050284-08 | P2.052112.161403 | 05/21/12 16:14 | 01 |
| DUP-GW-050812 | L12050284-10 | P2.052112.162003 | 05/21/12 16:20 | 01 |
| DUP-GW-050812 | L12050284-11 | P2.052112.162603 | 05/21/12 16:26 | 01 |
| EB-050812-GW | L12050284-12 | P2.052112.163204 | 05/21/12 16:32 | 01 |
| BBLD-PIT-SSP-050812 | L12050284-02 | P2.052112.163901 | 05/21/12 16:39 | DL01 |
| PZ-07-050812 | L12050284-03 | P2.052112.165850 | 05/21/12 16:58 | DL01 |
| PZ-07-050812 | L12050284-04 | P2.052112.171834 | 05/21/12 17:18 | DL01 |

Report Name: BLANK_SUMMARY
PDF File ID: 2424422
Report generated 05/22/2012 08:32

Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number: L12050284 Prep Date: 05/14/12 07:48 Sample ID: WG397855-02
Instrument ID: PE-ICP2 Run Date: 05/21/12 14:32 Prep Method: 3005A
File ID: P2.052112.143251 Analyst: KHR Method: 6010B
Workgroup (AAB#): WG397934 Matrix: Water Units: mg/L
Contract #: Cal ID: PE-ICP-21-MAY-12

| Analytes | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| Aluminum, Total | 0.0500 | 0.100 | 0.0500 | 1 | U |
| Barium, Total | 0.00250 | 0.0100 | 0.00250 | 1 | U |
| Beryllium, Total | 0.000500 | 0.00200 | 0.000500 | 1 | U |
| Cadmium, Total | 0.000250 | 0.000500 | 0.000250 | 1 | U |
| Calcium, Total | 0.100 | 0.200 | 0.100 | 1 | U |
| Chromium, Total | 0.00250 | 0.00500 | 0.00250 | 1 | U |
| Cobalt, Total | 0.00250 | 0.0200 | 0.00250 | 1 | U |
| Copper, Total | 0.00500 | 0.0200 | 0.00500 | 1 | U |
| Iron, Total | 0.0250 | 0.100 | 0.0250 | 1 | U |
| Magnesium, Total | 0.250 | 0.500 | 0.250 | 1 | U |
| Manganese, Total | 0.00500 | 0.0100 | 0.00500 | 1 | U |
| Nickel, Total | 0.00500 | 0.0400 | 0.00500 | 1 | U |
| Potassium, Total | 0.250 | 1.00 | 0.250 | 1 | U |
| Silver, Total | 0.00500 | 0.0100 | 0.00500 | 1 | U |
| Sodium, Total | 0.250 | 0.500 | 0.250 | 1 | U |
| Vanadium, Total | 0.00500 | 0.0100 | 0.00500 | 1 | U |
| Zinc, Total | 0.00500 | 0.0200 | 0.00500 | 1 | U |

MDL Method Detection Limit
RL Reporting/Practical Quantitation Limit
ND Analyte Not detected at or above reporting limit
* |Analyte concentration| > RL

Report Name:BLANK
PDF ID: 2424423
22-MAY-2012 08:32

# Microbac Laboratories Inc.
## LABORATORY CONTROL SAMPLE (LCS)

Login Number: L12050284 Run Date: 05/21/2012 Sample ID: WG397855-03
Instrument ID: PE-ICP2 Run Time: 14:39 Prep Method: 3005A
File ID: P2.052112.143946 Analyst: KHR Method: 6010B
Workgroup (AAB#): WG397934 Matrix: Water Units: mg/L
QC Key: WATERLOO Lot#: STD51357 Cal ID: PE-ICP-21-MAY-12

| Analytes | Expected | Found | % Rec | LCS Limits | Q |
|---|---|---|---|---|---|
| Aluminum, Total | 5.00 | 5.03 | 101 | 85 - 115 | |
| Barium, Total | 0.500 | 0.499 | 99.7 | 85 - 115 | |
| Beryllium, Total | 0.0250 | 0.0241 | 96.5 | 85 - 115 | |
| Cadmium, Total | 0.0250 | 0.0237 | 94.8 | 85 - 115 | |
| Calcium, Total | 5.00 | 4.97 | 99.3 | 85 - 115 | |
| Chromium, Total | 0.250 | 0.249 | 99.8 | 85 - 115 | |
| Cobalt, Total | 0.100 | 0.101 | 101 | 85 - 115 | |
| Copper, Total | 0.250 | 0.243 | 97.2 | 85 - 115 | |
| Iron, Total | 2.00 | 1.97 | 98.3 | 85 - 115 | |
| Magnesium, Total | 5.00 | 5.02 | 100 | 85 - 115 | |
| Manganese, Total | 0.250 | 0.250 | 99.9 | 85 - 115 | |
| Nickel, Total | 0.250 | 0.253 | 101 | 85 - 115 | |
| Potassium, Total | 25.0 | 25.6 | 102 | 85 - 115 | |
| Silver, Total | 0.200 | 0.198 | 99.1 | 85 - 115 | |
| Sodium, Total | 25.0 | 26.9 | 108 | 85 - 115 | |
| Vanadium, Total | 0.500 | 0.501 | 100 | 85 - 115 | |
| Zinc, Total | 0.500 | 0.511 | 102 | 85 - 115 | |

LCS - Modified 03/06/2008
PDF File ID: 2424424
Report generated: 05/22/2012 08:32

Microbac Laboratories Inc.

MATRIX SPIKE AND MATRIX SPIKE DUP (MS/MSD)

Loginnum:L12050284 Cal ID:PE-ICP2- Worknum:WG397934

Instrument ID:PE-ICP2 Contract #: Method:6010B

Parent ID:WG397855-01 File ID:P2.052112.144545 Dil:1 Matrix:WATER

Sample ID:WG397855-04 MS File ID:P2.052112.145152 Dil:1 Units:mg/L

Sample ID:WG397855-05 MSD File ID:P2.052112.145758 Dil:1

| Analyte | Parent | MS Spiked | MS Found | MS %Rec | MSD Spiked | MSD Found | MSD %Rec | %RPD | %Rec Limits | RPD Limit | Q |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Aluminum | ND | 5.00 | 5.10 | 102 | 5.00 | 5.18 | 104 | 1.65 | 85 - 115 | 20 | |
| Barium | 0.130 | 0.500 | 0.648 | 104 | 0.500 | 0.663 | 107 | 2.34 | 85 - 115 | 20 | |
| Beryllium | ND | 0.0250 | 0.0249 | 99.7 | 0.0250 | 0.0256 | 102 | 2.44 | 85 - 115 | 20 | |
| Cadmium | 0.000287 | 0.0250 | 0.0243 | 96.2 | 0.0250 | 0.0248 | 98.2 | 2.06 | 85 - 115 | 20 | |
| Calcium | 33.6 | 5.00 | 39.6 | 121 | 5.00 | 41.2 | 152 | 3.93 | 85 - 115 | 20 | * |
| Chromium | ND | 0.250 | 0.255 | 102 | 0.250 | 0.261 | 104 | 2.24 | 85 - 115 | 20 | |
| Cobalt | ND | 0.100 | 0.101 | 101 | 0.100 | 0.103 | 103 | 1.87 | 85 - 115 | 20 | |
| Copper | ND | 0.250 | 0.250 | 100 | 0.250 | 0.257 | 103 | 2.58 | 85 - 115 | 20 | |
| Iron | 1.68 | 2.00 | 3.69 | 100 | 2.00 | 3.85 | 108 | 4.22 | 85 - 115 | 20 | |
| Magnesium | 28.9 | 5.00 | 34.1 | 104 | 5.00 | 35.2 | 125 | 3.06 | 85 - 115 | 20 | * |
| Manganese | 0.945 | 0.250 | 1.23 | 112 | 0.250 | 1.26 | 124 | 2.35 | 85 - 115 | 20 | * |
| Nickel | ND | 0.250 | 0.249 | 99.5 | 0.250 | 0.255 | 102 | 2.48 | 85 - 115 | 20 | |
| Potassium | 0.468 | 25.0 | 26.1 | 103 | 25.0 | 26.7 | 105 | 2.32 | 85 - 115 | 20 | |
| Silver | ND | 0.200 | 0.204 | 102 | 0.200 | 0.209 | 105 | 2.31 | 85 - 115 | 20 | |
| Vanadium | 0.00975 | 0.500 | 0.526 | 103 | 0.500 | 0.538 | 106 | 2.25 | 85 - 115 | 20 | |
| Zinc | ND | 0.500 | 0.518 | 104 | 0.500 | 0.528 | 106 | 1.94 | 85 - 115 | 20 | |

* FAILS %REC LIMIT

# FAILS RPD LIMIT

NOTE: This is an internal quality control sample.

WG_MS_MSD_DRYWT - Modified 05/26/2011

PDF File ID: 2424425

Report generated 05/22/2012 08:32

**Microbac Laboratories Inc.**
Serial Dilution Report

**Login:** L12050284 **Worknum:** WG397934
**Instrument:** PE-ICP2 **Method:** 6010B
**Serial Dil:** WG397934-04 **File ID:** P2.052112.171140 **Dil:** 500 **Units:** mg/L
**Sample:** L12050284-03 **File ID:** P2.052112.165850 **Dil:** 100

| Analyte | Sample | Qual | Serial Dil | Qual | % Diff | Q |
|---|---|---|---|---|---|---|
| Aluminum | ND | U | ND | U | | |
| Barium | ND | U | ND | U | | |
| Beryllium | ND | U | ND | U | | |
| Cadmium | ND | U | ND | U | | |
| Calcium | 148 | X | 170 | X | 15.40 | |
| Chromium | ND | U | ND | U | | |
| Cobalt | ND | U | ND | U | | |
| Copper | ND | U | ND | U | | |
| Iron | ND | U | ND | U | | |
| Magnesium | 50.4 | X | ND | U | | |
| Manganese | ND | U | ND | U | | |
| Nickel | ND | U | ND | U | | |
| Potassium | ND | U | ND | U | | |
| Silver | ND | U | ND | U | | |
| Sodium | 219 | X | 220 | F | 0.40 | |
| Vanadium | ND | U | ND | U | | |
| Zinc | ND | U | ND | U | | |

U = Result is below MDL.
F = Result is greater than or equal to MDL and less than the RL.
X = Result is greater than or equal to RL and less than 50 times the MDL.
E = %D exceeds control limit of 10% and initial sample result is greater than or equal to 50 times the MDL.

**SERIAL_DIL - Modified 09/22/2008**
**PDF File ID: 2424419**
**05/22/2012 08:30**

**Microbac Laboratories Inc.**
Serial Dilution Report

**Login:** L12050284 **Worknum:** WG397934
**Instrument:** PE-ICP2 **Method:** 6010B
**Serial Dil:** WG397934-04 **File ID:** P2.052112.152911 **Dil:** 5 **Units:** mg/L
**Sample:** L12050284-03 **File ID:** P2.052112.151716 **Dil:** 1

| Analyte | Sample | Qual | Serial Dil | Qual | % Diff | Q |
|---|---|---|---|---|---|---|
| Aluminum | ND | U | ND | U | | |
| Barium | 0.122 | X | 0.121 | X | 0.78 | |
| Beryllium | ND | U | ND | U | | |
| Cadmium | 0.00124 | X | 0.00249 | F | 101.00 | |
| Calcium | 155 | | 147 | | 4.93 | |
| Chromium | ND | U | ND | U | | |
| Cobalt | ND | U | ND | U | | |
| Copper | ND | U | ND | U | | |
| Iron | 1.72 | | 1.67 | | 2.84 | |
| Magnesium | 45.0 | | 43.5 | | 3.49 | |
| Manganese | 0.175 | X | 0.169 | X | 3.68 | |
| Nickel | ND | U | ND | U | | |
| Potassium | 4.54 | X | 4.52 | F | 0.32 | |
| Silver | ND | U | ND | U | | |
| Sodium | 206 | | 200 | | 3.04 | |
| Vanadium | 0.00838 | F | ND | U | | |
| Zinc | 0.126 | X | 0.126 | X | 0.24 | |

U = Result is below MDL.
F = Result is greater than or equal to MDL and less than the RL.
X = Result is greater than or equal to RL and less than 50 times the MDL.
E = %D exceeds control limit of 10% and initial sample result is greater than or equal to 50 times the MDL.

**SERIAL_DIL - Modified 09/22/2008**
**PDF File ID: 2424419**
**05/22/2012 08:30**

**Microbac Laboratories Inc.**
**POST SPIKE REPORT**

**Sample Login ID:** L12050284 **Worknum:** WG397934
**Instrument ID:** PE-ICP2 **Method:** 6010B
**Post Spike ID:** WG397934-03 **File ID:** P2.052112.152313 **Dil:** 1 **Units:** mg/L
**Sample ID:** L12050284-03 **File ID:** P2.052112.151716 **Dil:** 1 **Matrix:** Water

| Analyte | Post Spike Result | C | Sample Result | C | Spike Added(SA) | % R | Control Limit %R | Q |
|---|---|---|---|---|---|---|---|---|
| ALUMINUM | 5.08 | | 0 | U | 5 | 101.6 | 75 - 125 | |
| BARIUM | 0.621 | | 0.122 | | .5 | 102.2 | 75 - 125 | |
| BERYLLIUM | 0.0239 | | 0 | U | .025 | 95.5 | 75 - 125 | |
| CADMIUM | 0.0238 | | 0.00124 | | .025 | 90.8 | 75 - 125 | |
| CALCIUM | 149 | | 155 | | 5 | 193.8 | 75 - 125 | N |
| CHROMIUM | 0.255 | | 0 | U | .25 | 102.0 | 75 - 125 | |
| COBALT | 0.0996 | | 0 | U | .1 | 99.6 | 75 - 125 | |
| COPPER | 0.240 | | 0 | U | .25 | 96.1 | 75 - 125 | |
| IRON | 3.56 | | 1.72 | | 2 | 100.9 | 75 - 125 | |
| MAGNESIUM | 46.0 | | 45.0 | | 5 | 109.5 | 75 - 125 | |
| MANGANESE | 0.421 | | 0.175 | | .25 | 105.3 | 75 - 125 | |
| NICKEL | 0.247 | | 0 | U | .25 | 99.0 | 75 - 125 | |
| POTASSIUM | 29.8 | | 4.54 | | 25 | 102.7 | 75 - 125 | |
| SILVER | 0.197 | | 0 | U | .2 | 98.3 | 75 - 125 | |
| SODIUM | 220 | | 206 | | 25 | 139.4 | 75 - 125 | N |
| VANADIUM | 0.527 | | 0.00838 | F | .5 | 103.8 | 75 - 125 | |
| ZINC | 0.611 | | 0.126 | | .5 | 99.6 | 75 - 125 | |

**N = % Recovery exceeds control limits**
**F = Result is between MDL and RL**
**U = Sample result is below MDL. A value of zero is used in the calculation**

**POST_SPIKE - Modified 03/06/2008**
**PDF File ID: 2424420**
**Report generated: 05/22/2012 08:30**

**Microbac Laboratories Inc.**
**POST SPIKE REPORT**

**Sample Login ID:** L12050284 **Worknum:** WG397934
**Instrument ID:** PE-ICP2 **Method:** 6010B
**Post Spike ID:** WG397934-03 **File ID:** P2.052112.170543 **Dil:** 100 **Units:** mg/L
**Sample ID:** L12050284-03 **File ID:** P2.052112.165850 **Dil:** 100 **Matrix:** Water

| Analyte | Post Spike Result | C | Sample Result | C | Spike Added(SA) | % R | Control Limit %R | Q |
|---|---|---|---|---|---|---|---|---|
| ALUMINUM | 5.07 | | 0 | U | 5 | 101.4 | 75 - 125 | |
| BARIUM | 0.520 | | 0 | U | .5 | 103.9 | 75 - 125 | |
| BERYLLIUM | 0.0253 | | 0 | U | .025 | 101.0 | 75 - 125 | |
| CADMIUM | 0.0245 | | 0 | U | .025 | 98.0 | 75 - 125 | |
| CALCIUM | 6.59 | | 1.48 | | 5 | 102.2 | 75 - 125 | |
| CHROMIUM | 0.257 | | 0 | U | .25 | 102.6 | 75 - 125 | |
| COBALT | 0.105 | | 0 | U | .1 | 104.7 | 75 - 125 | |
| COPPER | 0.244 | | 0 | U | .25 | 97.6 | 75 - 125 | |
| IRON | 2.08 | | 0 | U | 2 | 104.0 | 75 - 125 | |
| MAGNESIUM | 5.75 | | 0.504 | | 5 | 104.9 | 75 - 125 | |
| MANGANESE | 0.261 | | 0 | U | .25 | 104.3 | 75 - 125 | |
| NICKEL | 0.260 | | 0 | U | .25 | 104.2 | 75 - 125 | |
| POTASSIUM | 26.1 | | 0 | U | 25 | 104.4 | 75 - 125 | |
| SILVER | 0.204 | | 0 | U | .2 | 101.8 | 75 - 125 | |
| SODIUM | 28.4 | | 2.19 | | 25 | 104.9 | 75 - 125 | |
| VANADIUM | 0.516 | | 0 | U | .5 | 103.3 | 75 - 125 | |
| ZINC | 0.541 | | 0 | U | .5 | 108.2 | 75 - 125 | |

**N = % Recovery exceeds control limits**
**F = Result is between MDL and RL**
**U = Sample result is below MDL. A value of zero is used in the calculation**

**POST_SPIKE - Modified 03/06/2008**
**PDF File ID: 2424420**
**Report generated: 05/22/2012 08:30**

# Microbac Laboratories Inc.
## Initial Calibration Summary

| | | | |
|---|---|---|---|
| Login: | **L12050284** | Workgroup (AAB#): | **WG397934** |
| Analytical Method: | **6010B** | Instrument ID: | **PE-ICP2** |
| ICAL Worknum: | **WG398670** | Initial Calibration Date: | **21-MAY-2012 13:35** |

| | WG398670-01 | | WG398670-02 | | WG398670-03 | | WG398670-04 | | WG398670-05 | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Conc | INT | Conc | INT | Conc | INT | Conc | INT | Conc | INT | R | Q |
| ALUMINUM | 0 | -23.2 | .1 | 472 | .2 | 939 | 10 | 45900 | 20 | 91700 | 1 | |
| BARIUM | 0 | -195 | .01 | 1640 | .02 | 3290 | 1 | 160000 | 2 | 319000 | .999998 | |
| BERYLLIUM | 0 | -1700 | .0005 | 653 | .001 | 1320 | .05 | 70900 | .1 | 142000 | 1 | |
| CADMIUM | 0 | 54.8 | .0005 | 33.4 | .001 | 57.0 | .05 | 2970 | .1 | 5920 | .999999 | |
| CALCIUM | 0 | -59.8 | NA | NA | .2 | 82.1 | 10 | 4340 | 20 | 8910 | .999919 | |
| CHROMIUM | 0 | 205 | .005 | 591 | .01 | 1190 | .5 | 58400 | 1 | 117000 | 1 | |
| COBALT | 0 | -4.91 | .002 | 97.9 | .004 | 169 | .1 | 8090 | .4 | 16100 | .999998 | |
| COPPER | 0 | -603 | .005 | 1280 | .01 | 2400 | .5 | 126000 | 1 | 251000 | .99999 | |
| IRON | 0 | 46.3 | .04 | 393 | .08 | 774 | 4 | 39200 | 8 | 78800 | .999998 | |
| MAGNESIUM | 0 | 12.2 | .1 | 260 | .2 | 516 | 10 | 24900 | 20 | 50000 | .999997 | |
| MANGANESE | 0 | 509 | .005 | 4710 | .01 | 8930 | .5 | 451000 | 1 | 879000 | .999922 | |
| NICKEL | 0 | -176 | .005 | 379 | .01 | 738 | .5 | 36000 | 1 | 71200 | .999985 | |
| POTASSIUM | 0 | -43.4 | .5 | 1100 | 1 | 2490 | 50 | 107000 | 100 | 213000 | .999999 | |
| SILVER | 0 | -109 | .004 | 1330 | .008 | 2650 | .4 | 130000 | .8 | 258000 | .99999 | |
| SODIUM | 0 | 762 | .5 | 8260 | 1 | 15700 | 50 | 775000 | 100 | 1540000 | 1 | |
| VANADIUM | 0 | 11800 | .01 | 2210 | .02 | 3710 | 1 | 191000 | 2 | 379000 | .999989 | |
| ZINC | 0 | 55.9 | .01 | 540 | .02 | 1070 | 1 | 50600 | 2 | 100000 | .999992 | |

**INT = Instrument intensity**
**R = Coefficient of correlation**
**Q = Data Qualifier**
*** = Out of Compliance; R < 0.995**

INT_CAL_ICP - Modified 03/06/2008
PDF File ID: 2424428
Report generated: 22-MAY-2012 08:31

Microbac Laboratories Inc.
INITIAL CALIBRATION BLANK (ICB)

Login Number: L12050284 Run Date: 05/21/2012 Sample ID: WG398670-07
Instrument ID: PE-ICP2 Run Time: 13:47 Method: 6010B
File ID: P2.052112.134723 Analyst: KHR Units: mg/L
Workgroup (AAB#): WG397934 Cal ID: PE-ICP2 - 21-MAY-12
Matrix: WATER

| Analytes | MDL | RDL | Concentration | Qualifier |
|---|---|---|---|---|
| ALUMINUM | .05 | .1 | .05 | U |
| BARIUM | .0025 | .01 | .0025 | U |
| BERYLLIUM | .0005 | .002 | .0005 | U |
| CADMIUM | .00025 | .0005 | .00025 | U |
| CALCIUM | .1 | .2 | .1 | U |
| CHROMIUM | .0025 | .005 | .0025 | U |
| COBALT | .0025 | .02 | .0025 | U |
| COPPER | .005 | .02 | .005 | U |
| IRON | .025 | .1 | .025 | U |
| MAGNESIUM | .25 | .5 | .25 | U |
| MANGANESE | .005 | .01 | .005 | U |
| NICKEL | .005 | .04 | .005 | U |
| POTASSIUM | .25 | 1 | .25 | U |
| SILVER | .005 | .01 | .005 | U |
| SODIUM | .25 | .5 | .25 | U |
| VANADIUM | .005 | .01 | .005 | U |
| ZINC | .005 | .02 | .005 | U |

ICB - Modified 07/14/2009
PDF File ID: 2424430
Report generated 05/22/2012 08:31

Microbac Laboratories Inc.

CONTINUING CALIBRATION BLANK (CCB)

Login Number: L12050284 Run Date: 05/21/2012 Sample ID: WG398670-13

Instrument ID: PE-ICP2 Run Time: 14:25 Method: 6010B

File ID: P2.052112.142558 Analyst: KHR Units: mg/L

Workgroup (AAB#): WG397934 Cal ID: PE-ICP - 21-MAY-12

Matrix: WATER QAPP: WATERLOO

| Analytes | MDL | RDL | Concentration | Qualifier |
|---|---|---|---|---|
| Aluminum | 0.0500 | 0.100 | 0.0500 | U |
| Barium | 0.00250 | 0.0100 | 0.00250 | U |
| Beryllium | 0.000500 | 0.00200 | 0.000500 | U |
| Cadmium | 0.000250 | 0.000500 | 0.000250 | U |
| Calcium | 0.100 | 0.200 | 0.100 | U |
| Chromium | 0.00250 | 0.00500 | 0.00250 | U |
| Cobalt | 0.00250 | 0.0200 | 0.00250 | U |
| Copper | 0.00500 | 0.0200 | 0.00500 | U |
| Iron | 0.0250 | 0.100 | 0.0250 | U |
| Magnesium | 0.250 | 0.500 | 0.250 | U |
| Manganese | 0.00500 | 0.0100 | 0.00500 | U |
| Nickel | 0.00500 | 0.0400 | 0.00500 | U |
| Potassium | 0.250 | 1.00 | 0.250 | U |
| Silver | 0.00500 | 0.0100 | 0.00500 | U |
| Sodium | 0.250 | 0.500 | 0.250 | U |
| Vanadium | 0.00500 | 0.0100 | 0.00500 | U |
| Zinc | 0.00500 | 0.0200 | 0.00500 | U |

U = Result is less than MDL.
F = Result is between MDL and RL.
* = Result is above RL.

CCB - Modified 03/05/2008
PDF File ID: 2424433
Report generated 05/22/2012 08:31

Microbac Laboratories Inc.

CONTINUING CALIBRATION BLANK (CCB)

Login Number: L12050284 Run Date: 05/21/2012 Sample ID: WG398670-15

Instrument ID: PE-ICP2 Run Time: 15:43 Method: 6010B

File ID: P2.052112.154300 Analyst: KHR Units: mg/L

Workgroup (AAB#): WG397934 Cal ID: PE-ICP - 21-MAY-12

Matrix: WATER QAPP: WATERLOO

| Analytes | MDL | RDL | Concentration | Qualifier |
|---|---|---|---|---|
| Aluminum | 0.0500 | 0.100 | 0.0500 | U |
| Barium | 0.00250 | 0.0100 | 0.00250 | U |
| Beryllium | 0.000500 | 0.00200 | 0.000500 | U |
| Cadmium | 0.000250 | 0.000500 | 0.000250 | U |
| Calcium | 0.100 | 0.200 | 0.100 | U |
| Chromium | 0.00250 | 0.00500 | 0.00250 | U |
| Cobalt | 0.00250 | 0.0200 | 0.00250 | U |
| Copper | 0.00500 | 0.0200 | 0.00500 | U |
| Iron | 0.0250 | 0.100 | 0.0250 | U |
| Magnesium | 0.250 | 0.500 | 0.250 | U |
| Manganese | 0.00500 | 0.0100 | 0.00500 | U |
| Nickel | 0.00500 | 0.0400 | 0.00500 | U |
| Potassium | 0.250 | 1.00 | 0.250 | U |
| Silver | 0.00500 | 0.0100 | 0.00500 | U |
| Sodium | 0.250 | 0.500 | 0.250 | U |
| Vanadium | 0.00500 | 0.0100 | 0.00500 | U |
| Zinc | 0.00500 | 0.0200 | 0.00500 | U |

U = Result is less than MDL.
F = Result is between MDL and RL.
* = Result is above RL.

CCB - Modified 03/05/2008
PDF File ID: 2424433
Report generated 05/22/2012 08:31

Microbac Laboratories Inc.

CONTINUING CALIBRATION BLANK (CCB)

Login Number: L12050284 Run Date: 05/21/2012 Sample ID: WG398670-17

Instrument ID: PE-ICP2 Run Time: 16:51 Method: 6010B

File ID: P2.052112.165157 Analyst: KHR Units: mg/L

Workgroup (AAB#): WG397934 Cal ID: PE-ICP - 21-MAY-12

Matrix: WATER QAPP: WATERLOO

| Analytes | MDL | RDL | Concentration | Qualifier |
|---|---|---|---|---|
| Aluminum | 0.0500 | 0.100 | 0.0500 | U |
| Barium | 0.00250 | 0.0100 | 0.00250 | U |
| Beryllium | 0.000500 | 0.00200 | 0.000500 | U |
| Cadmium | 0.000250 | 0.000500 | 0.000250 | U |
| Calcium | 0.100 | 0.200 | 0.100 | U |
| Chromium | 0.00250 | 0.00500 | 0.00250 | U |
| Cobalt | 0.00250 | 0.0200 | 0.00250 | U |
| Copper | 0.00500 | 0.0200 | 0.00500 | U |
| Iron | 0.0250 | 0.100 | 0.0250 | U |
| Magnesium | 0.250 | 0.500 | 0.250 | U |
| Manganese | 0.00500 | 0.0100 | 0.00500 | U |
| Nickel | 0.00500 | 0.0400 | 0.00500 | U |
| Potassium | 0.250 | 1.00 | 0.250 | U |
| Silver | 0.00500 | 0.0100 | 0.00500 | U |
| Sodium | 0.250 | 0.500 | 0.250 | U |
| Vanadium | 0.00500 | 0.0100 | 0.00500 | U |
| Zinc | 0.00500 | 0.0200 | 0.00500 | U |

U = Result is less than MDL.
F = Result is between MDL and RL.
* = Result is above RL.

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CONTINUING CALIBRATION BLANK (CCB)

Login Number: L12050284 Run Date: 05/21/2012 Sample ID: WG398670-19

Instrument ID: PE-ICP2 Run Time: 17:31 Method: 6010B

File ID: P2.052112.173129 Analyst: KHR Units: mg/L

Workgroup (AAB#): WG397934 Cal ID: PE-ICP - 21-MAY-12

Matrix: WATER QAPP: WATERLOO

| Analytes | MDL | RDL | Concentration | Qualifier |
|---|---|---|---|---|
| Aluminum | 0.0500 | 0.100 | 0.0500 | U |
| Barium | 0.00250 | 0.0100 | 0.00250 | U |
| Beryllium | 0.000500 | 0.00200 | 0.000500 | U |
| Cadmium | 0.000250 | 0.000500 | 0.000250 | U |
| Calcium | 0.100 | 0.200 | 0.100 | U |
| Chromium | 0.00250 | 0.00500 | 0.00250 | U |
| Cobalt | 0.00250 | 0.0200 | 0.00250 | U |
| Copper | 0.00500 | 0.0200 | 0.00500 | U |
| Iron | 0.0250 | 0.100 | 0.0250 | U |
| Magnesium | 0.250 | 0.500 | 0.250 | U |
| Manganese | 0.00500 | 0.0100 | 0.00500 | U |
| Nickel | 0.00500 | 0.0400 | 0.00500 | U |
| Potassium | 0.250 | 1.00 | 0.250 | U |
| Silver | 0.00500 | 0.0100 | 0.00500 | U |
| Sodium | 0.250 | 0.500 | 0.250 | U |
| Vanadium | 0.00500 | 0.0100 | 0.00500 | U |
| Zinc | 0.00500 | 0.0200 | 0.00500 | U |

U = Result is less than MDL.
F = Result is between MDL and RL.
* = Result is above RL.

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CONTINUING CALIBRATION BLANK (CCB)

Login Number: L12050284 Run Date: 05/21/2012 Sample ID: WG398670-23

Instrument ID: PE-ICP2 Run Time: 17:56 Method: 6010B

File ID: P2.052112.175629 Analyst: KHR Units: mg/L

Workgroup (AAB#): WG397934 Cal ID: PE-ICP - 21-MAY-12

Matrix: WATER QAPP: WATERLOO

| Analytes | MDL | RDL | Concentration | Qualifier |
|---|---|---|---|---|
| Aluminum | 0.0500 | 0.100 | 0.0500 | U |
| Barium | 0.00250 | 0.0100 | 0.00250 | U |
| Beryllium | 0.000500 | 0.00200 | 0.000500 | U |
| Cadmium | 0.000250 | 0.000500 | 0.000250 | U |
| Calcium | 0.100 | 0.200 | 0.100 | U |
| Chromium | 0.00250 | 0.00500 | 0.00250 | U |
| Cobalt | 0.00250 | 0.0200 | 0.00250 | U |
| Copper | 0.00500 | 0.0200 | 0.00500 | U |
| Iron | 0.0250 | 0.100 | 0.0250 | U |
| Magnesium | 0.250 | 0.500 | 0.250 | U |
| Manganese | 0.00500 | 0.0100 | 0.00500 | U |
| Nickel | 0.00500 | 0.0400 | 0.00500 | U |
| Potassium | 0.250 | 1.00 | 0.250 | U |
| Silver | 0.00500 | 0.0100 | 0.00500 | U |
| Sodium | 0.250 | 0.500 | 0.250 | U |
| Vanadium | 0.00500 | 0.0100 | 0.00500 | U |
| Zinc | 0.00500 | 0.0200 | 0.00500 | U |

U = Result is less than MDL.
F = Result is between MDL and RL.
* = Result is above RL.

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Microbac Laboratories Inc.

INITIAL CALIBRATION VERIFICATION (ICV)
(Alternate Source)

Login Number: L12050284 Run Date: 05/21/2012 Sample ID: WG398670-06
Instrument ID: PE-ICP2 Run Time: 13:41 Method: 6010B
File ID: P2.052112.134125 Analyst: KHR Units: mg/L
Workgroup (AAB#): WG397934 Cal ID: PE-ICP - 21-MAY-12
QC Key: WATERLOO

| Analyte | | Expected | Found | %REC | LIMITS | Q |
|---|---|---|---|---|---|---|
| Aluminum | | 10 | 9.75 | 97.5 | 90 - 110 | |
| Barium | | 1 | 0.992 | 99.2 | 90 - 110 | |
| Beryllium | | .05 | 0.0477 | 95.5 | 90 - 110 | |
| Cadmium | | .05 | 0.0477 | 95.5 | 90 - 110 | |
| Calcium | | 10 | 10.1 | 101 | 90 - 110 | |
| Chromium | | .5 | 0.489 | 97.8 | 90 - 110 | |
| Cobalt | | .2 | 0.196 | 97.8 | 90 - 110 | |
| Copper | | .5 | 0.497 | 99.3 | 90 - 110 | |
| Iron | | 4 | 3.91 | 97.8 | 90 - 110 | |
| Magnesium | | 10 | 9.66 | 96.6 | 90 - 110 | |
| Manganese | | .5 | 0.502 | 100 | 90 - 110 | |
| Nickel | | .5 | 0.497 | 99.4 | 90 - 110 | |
| Potassium | | 50 | 48.6 | 97.2 | 90 - 110 | |
| Silver | | .4 | 0.384 | 96.0 | 90 - 110 | |
| Sodium | | 50 | 48.0 | 96.1 | 90 - 110 | |
| Vanadium | | 1 | 0.974 | 97.4 | 90 - 110 | |
| Zinc | | 1 | 0.998 | 99.8 | 90 - 110 | |

* Exceeds LIMITS Limit

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Microbac Laboratories Inc.

CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L12050284 Run Date: 05/21/2012 Sample ID: WG398670-12

Instrument ID: PE-ICP2 Run Time: 14:19 Method: 6010B

File ID: P2.052112.141958 Analyst: KHR QC Key: WATERLOO

Workgroup (AAB#): WG397934 Cal ID: PE-ICP - 21-MAY-12

Matrix: WATER

| Analyte | | Expected | Found | UNITS | %REC | LIMITS | | Q |
|---|---|---|---|---|---|---|---|---|
| Aluminum | | 10.0 | 9.72 | mg/L | 97.2 | 90 - 110 | | |
| Barium | | 1.00 | 0.995 | mg/L | 99.5 | 90 - 110 | | |
| Beryllium | | 0.0500 | 0.0485 | mg/L | 97.1 | 90 - 110 | | |
| Cadmium | | 0.0500 | 0.0480 | mg/L | 95.9 | 90 - 110 | | |
| Calcium | | 10.0 | 10.2 | mg/L | 102 | 90 - 110 | | |
| Chromium | | 0.500 | 0.496 | mg/L | 99.2 | 90 - 110 | | |
| Cobalt | | 0.200 | 0.199 | mg/L | 99.4 | 90 - 110 | | |
| Copper | | 0.500 | 0.492 | mg/L | 98.3 | 90 - 110 | | |
| Iron | | 4.00 | 3.93 | mg/L | 98.3 | 90 - 110 | | |
| Magnesium | | 10.0 | 9.78 | mg/L | 97.8 | 90 - 110 | | |
| Manganese | | 0.500 | 0.504 | mg/L | 101 | 90 - 110 | | |
| Nickel | | 0.500 | 0.498 | mg/L | 99.6 | 90 - 110 | | |
| Potassium | | 50.0 | 49.2 | mg/L | 98.5 | 90 - 110 | | |
| Silver | | 0.400 | 0.397 | mg/L | 99.3 | 90 - 110 | | |
| Sodium | | 50.0 | 49.7 | mg/L | 99.5 | 90 - 110 | | |
| Vanadium | | 1.00 | 0.993 | mg/L | 99.3 | 90 - 110 | | |
| Zinc | | 1.00 | 1.00 | mg/L | 100 | 90 - 110 | | |

* Exceeds LIMITS Criteria

CCV - Modified 03/05/2008

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Microbac Laboratories Inc.

CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L12050284 Run Date: 05/21/2012 Sample ID: WG398670-14

Instrument ID: PE-ICP2 Run Time: 15:37 Method: 6010B

File ID: P2.052112.153700 Analyst: KHR QC Key: WATERLOO

Workgroup (AAB#): WG397934 Cal ID: PE-ICP - 21-MAY-12

Matrix: WATER

| Analyte | | Expected | Found | UNITS | %REC | LIMITS | | Q |
|---|---|---|---|---|---|---|---|---|
| Aluminum | | 10.0 | 9.87 | mg/L | 98.7 | 90 - 110 | | |
| Barium | | 1.00 | 1.02 | mg/L | 102 | 90 - 110 | | |
| Beryllium | | 0.0500 | 0.0489 | mg/L | 97.9 | 90 - 110 | | |
| Cadmium | | 0.0500 | 0.0484 | mg/L | 96.8 | 90 - 110 | | |
| Calcium | | 10.0 | 10.3 | mg/L | 103 | 90 - 110 | | |
| Chromium | | 0.500 | 0.507 | mg/L | 101 | 90 - 110 | | |
| Cobalt | | 0.200 | 0.203 | mg/L | 101 | 90 - 110 | | |
| Copper | | 0.500 | 0.495 | mg/L | 98.9 | 90 - 110 | | |
| Iron | | 4.00 | 3.95 | mg/L | 98.8 | 90 - 110 | | |
| Magnesium | | 10.0 | 9.91 | mg/L | 99.1 | 90 - 110 | | |
| Manganese | | 0.500 | 0.515 | mg/L | 103 | 90 - 110 | | |
| Nickel | | 0.500 | 0.509 | mg/L | 102 | 90 - 110 | | |
| Potassium | | 50.0 | 49.9 | mg/L | 99.8 | 90 - 110 | | |
| Silver | | 0.400 | 0.400 | mg/L | 100 | 90 - 110 | | |
| Sodium | | 50.0 | 49.3 | mg/L | 98.7 | 90 - 110 | | |
| Vanadium | | 1.00 | 1.02 | mg/L | 102 | 90 - 110 | | |
| Zinc | | 1.00 | 1.03 | mg/L | 103 | 90 - 110 | | |

* Exceeds LIMITS Criteria

CCV - Modified 03/05/2008

PDF File ID: 2424432

Report generated 05/22/2012 08:31

Microbac Laboratories Inc.

CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L12050284 Run Date: 05/21/2012 Sample ID: WG398670-16

Instrument ID: PE-ICP2 Run Time: 16:45 Method: 6010B

File ID: P2.052112.164557 Analyst: KHR QC Key: WATERLOO

Workgroup (AAB#): WG397934 Cal ID: PE-ICP - 21-MAY-12

Matrix: WATER

| Analyte | | Expected | Found | UNITS | %REC | LIMITS | | Q |
|---|---|---|---|---|---|---|---|---|
| Aluminum | | 10.0 | 10.2 | mg/L | 102 | 90 - 110 | | |
| Barium | | 1.00 | 1.03 | mg/L | 103 | 90 - 110 | | |
| Beryllium | | 0.0500 | 0.0496 | mg/L | 99.2 | 90 - 110 | | |
| Cadmium | | 0.0500 | 0.0491 | mg/L | 98.2 | 90 - 110 | | |
| Calcium | | 10.0 | 10.5 | mg/L | 105 | 90 - 110 | | |
| Chromium | | 0.500 | 0.510 | mg/L | 102 | 90 - 110 | | |
| Cobalt | | 0.200 | 0.205 | mg/L | 103 | 90 - 110 | | |
| Copper | | 0.500 | 0.510 | mg/L | 102 | 90 - 110 | | |
| Iron | | 4.00 | 4.08 | mg/L | 102 | 90 - 110 | | |
| Magnesium | | 10.0 | 10.2 | mg/L | 102 | 90 - 110 | | |
| Manganese | | 0.500 | 0.521 | mg/L | 104 | 90 - 110 | | |
| Nickel | | 0.500 | 0.512 | mg/L | 102 | 90 - 110 | | |
| Potassium | | 50.0 | 51.5 | mg/L | 103 | 90 - 110 | | |
| Silver | | 0.400 | 0.409 | mg/L | 102 | 90 - 110 | | |
| Sodium | | 50.0 | 50.5 | mg/L | 101 | 90 - 110 | | |
| Vanadium | | 1.00 | 1.02 | mg/L | 102 | 90 - 110 | | |
| Zinc | | 1.00 | 1.02 | mg/L | 102 | 90 - 110 | | |

* Exceeds LIMITS Criteria

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Microbac Laboratories Inc.
CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L12050284 Run Date: 05/21/2012 Sample ID: WG398670-18
Instrument ID: PE-ICP2 Run Time: 17:25 Method: 6010B
File ID: P2.052112.172529 Analyst: KHR QC Key: WATERLOO
Workgroup (AAB#): WG397934 Cal ID: PE-ICP - 21-MAY-12
Matrix: WATER

| Analyte | | Expected | Found | UNITS | %REC | LIMITS | | Q |
|---|---|---|---|---|---|---|---|---|
| Aluminum | | 10.0 | 10.1 | mg/L | 101 | 90 - 110 | | |
| Barium | | 1.00 | 1.04 | mg/L | 104 | 90 - 110 | | |
| Beryllium | | 0.0500 | 0.0496 | mg/L | 99.2 | 90 - 110 | | |
| Cadmium | | 0.0500 | 0.0486 | mg/L | 97.2 | 90 - 110 | | |
| Calcium | | 10.0 | 10.3 | mg/L | 103 | 90 - 110 | | |
| Chromium | | 0.500 | 0.516 | mg/L | 103 | 90 - 110 | | |
| Cobalt | | 0.200 | 0.205 | mg/L | 102 | 90 - 110 | | |
| Copper | | 0.500 | 0.504 | mg/L | 101 | 90 - 110 | | |
| Iron | | 4.00 | 4.11 | mg/L | 103 | 90 - 110 | | |
| Magnesium | | 10.0 | 10.3 | mg/L | 103 | 90 - 110 | | |
| Manganese | | 0.500 | 0.525 | mg/L | 105 | 90 - 110 | | |
| Nickel | | 0.500 | 0.517 | mg/L | 103 | 90 - 110 | | |
| Potassium | | 50.0 | 51.1 | mg/L | 102 | 90 - 110 | | |
| Silver | | 0.400 | 0.406 | mg/L | 102 | 90 - 110 | | |
| Sodium | | 50.0 | 51.3 | mg/L | 103 | 90 - 110 | | |
| Vanadium | | 1.00 | 1.03 | mg/L | 103 | 90 - 110 | | |
| Zinc | | 1.00 | 1.05 | mg/L | 105 | 90 - 110 | | |

* Exceeds LIMITS Criteria

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Microbac Laboratories Inc.

CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L12050284 Run Date: 05/21/2012 Sample ID: WG398670-22

Instrument ID: PE-ICP2 Run Time: 17:50 Method: 6010B

File ID: P2.052112.175030 Analyst: KHR QC Key: WATERLOO

Workgroup (AAB#): WG397934 Cal ID: PE-ICP - 21-MAY-12

Matrix: WATER

| Analyte | | Expected | Found | UNITS | %REC | LIMITS | | Q |
|---|---|---|---|---|---|---|---|---|
| Aluminum | | 10.0 | 10.3 | mg/L | 103 | 90 - 110 | | |
| Barium | | 1.00 | 1.06 | mg/L | 106 | 90 - 110 | | |
| Beryllium | | 0.0500 | 0.0509 | mg/L | 102 | 90 - 110 | | |
| Cadmium | | 0.0500 | 0.0499 | mg/L | 99.7 | 90 - 110 | | |
| Calcium | | 10.0 | 10.6 | mg/L | 106 | 90 - 110 | | |
| Chromium | | 0.500 | 0.526 | mg/L | 105 | 90 - 110 | | |
| Cobalt | | 0.200 | 0.211 | mg/L | 106 | 90 - 110 | | |
| Copper | | 0.500 | 0.508 | mg/L | 102 | 90 - 110 | | |
| Iron | | 4.00 | 4.18 | mg/L | 105 | 90 - 110 | | |
| Magnesium | | 10.0 | 10.5 | mg/L | 105 | 90 - 110 | | |
| Manganese | | 0.500 | 0.525 | mg/L | 105 | 90 - 110 | | |
| Nickel | | 0.500 | 0.546 | mg/L | 109 | 90 - 110 | | |
| Potassium | | 50.0 | 52.6 | mg/L | 105 | 90 - 110 | | |
| Silver | | 0.400 | 0.409 | mg/L | 102 | 90 - 110 | | |
| Sodium | | 50.0 | 52.7 | mg/L | 105 | 90 - 110 | | |
| Vanadium | | 1.00 | 1.05 | mg/L | 105 | 90 - 110 | | |
| Zinc | | 1.00 | 1.06 | mg/L | 106 | 90 - 110 | | |

* Exceeds LIMITS Criteria

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**Microbac Laboratories Inc.**
**INTERFERENCE CHECK SAMPLES**

**Login number:** L12050284 **Workgroup (AAB#):** WG397934
**Instrument ID:** PE-ICP2 **Method:** 6010B
**Sol. A :** WG398670-10 **File ID:** P2.052112.140806 **Units:** mg/L
**Sol. AB :** WG398670-11 **File ID:** P2.052112.141402 **Matrix:** Water

| | Sol. A | | | Sol. AB | | | |
|---|---|---|---|---|---|---|---|
| ANALYTE | True | Found | %Recovery | True | Found | %Recovery | Q |
| Aluminum | 250 | 237 | 94.8 | 250 | 242 | 96.8 | |
| Barium | NS | 0.00128 | NS | 0.250 | 0.248 | 99.2 | |
| Beryllium | NS | -0.00116 | NS | 0.250 | 0.243 | 97.2 | |
| Cadmium | NS | 0.000110 | NS | 0.500 | 0.411 | 82.2 | |
| Calcium | 250 | 247 | 98.8 | 250 | 253 | 101 | |
| Chromium | NS | 0.00361 | NS | 0.250 | 0.255 | 102 | |
| Cobalt | NS | -0.00177 | NS | 0.250 | 0.232 | 92.8 | |
| Copper | NS | 0.00123 | NS | 0.250 | 0.247 | 98.8 | |
| Iron | 100 | 89.3 | 89.3 | 100 | 90.7 | 90.7 | |
| Magnesium | 250 | 236 | 94.4 | 250 | 238 | 95.2 | |
| Manganese | NS | -0.00170 | NS | 0.250 | 0.240 | 96.0 | |
| Nickel | NS | -0.000470 | NS | 0.500 | 0.472 | 94.4 | |
| Potassium | NS | -0.0676 | NS | 5.00 | 4.85 | 97.0 | |
| Silver | NS | -0.00156 | NS | 0.500 | 0.495 | 99.0 | |
| Sodium | NS | -0.00204 | NS | 5.00 | 5.05 | 101 | |
| Vanadium | NS | 0.00299 | NS | 0.250 | 0.250 | 100 | |
| Zinc | NS | 0.00424 | NS | 0.500 | 0.470 | 94.0 | |

**NS = Not spiked**
*** = Recovery of spiked element is outside acceptance limit of 80% - 120% of true value.**
**# = Result for unspiked element is outside the acceptance limits of (+/-) the project reporting limit (RL).**
**+ = Result for unspiked element is outside the acceptance limits of (+/-) 2 times the project method detection limit (MDL). This criteria is only applicable to specific QAPPs.**

**ICS - Modified 03/06/2008**
**PDF File ID: 2424431**
**Report generated 05/22/2012 08:31**

**Microbac Laboratories Inc.**
**INTERFERENCE CHECK SAMPLES**

**Login number:** L12050284 **Workgroup (AAB#):** WG397934
**Instrument ID:** PE-ICP2 **Method:** 6010B
**Sol. A :** WG398670-20 **File ID:** P2.052112.173837 **Units:** mg/L
**Sol. AB :** WG398670-21 **File ID:** P2.052112.174434 **Matrix:** Water

| | Sol. A | | | Sol. AB | | | |
|---|---|---|---|---|---|---|---|
| ANALYTE | True | Found | %Recovery | True | Found | %Recovery | Q |
| Aluminum | 250 | 250 | 100 | 250 | 247 | 98.8 | |
| Barium | NS | 0.00131 | NS | 0.250 | 0.256 | 102 | |
| Beryllium | NS | -0.00153 | NS | 0.250 | 0.247 | 98.8 | |
| Cadmium | NS | 0.0000300 | NS | 0.500 | 0.419 | 83.8 | |
| Calcium | 250 | 256 | 102 | 250 | 255 | 102 | |
| Chromium | NS | 0.00371 | NS | 0.250 | 0.262 | 105 | |
| Cobalt | NS | -0.00185 | NS | 0.250 | 0.239 | 95.6 | |
| Copper | NS | 0.00125 | NS | 0.250 | 0.248 | 99.2 | |
| Iron | 100 | 94.7 | 94.7 | 100 | 92.8 | 92.8 | |
| Magnesium | 250 | 250 | 100 | 250 | 244 | 97.6 | |
| Manganese | NS | -0.00184 | NS | 0.250 | 0.247 | 98.8 | |
| Nickel | NS | -0.000650 | NS | 0.500 | 0.485 | 97.0 | |
| Potassium | NS | -0.0966 | NS | 5.00 | 4.99 | 99.8 | |
| Silver | NS | -0.00113 | NS | 0.500 | 0.500 | 100 | |
| Sodium | NS | -0.00160 | NS | 5.00 | 5.15 | 103 | |
| Vanadium | NS | 0.00338 | NS | 0.250 | 0.255 | 102 | |
| Zinc | NS | 0.00142 | NS | 0.500 | 0.485 | 97.0 | |

**NS = Not spiked**
*** = Recovery of spiked element is outside acceptance limit of 80% - 120% of true value.**
**# = Result for unspiked element is outside the acceptance limits of (+/-) the project reporting limit (RL).**
**+ = Result for unspiked element is outside the acceptance limits of (+/-) 2 times the project method detection limit (MDL). This criteria is only applicable to specific QAPPs.**

**ICS - Modified 03/06/2008**
**PDF File ID: 2424431**
**Report generated 05/22/2012 08:31**

**Microbac Laboratories Inc.**
**INTERELEMENT CORRECTION FACTORS (ANNUALLY)**

**Login Number:** L12050284 **Date:** 12/30/2011
**Insturment ID:** PE-ICP2 **Method:** 6010B

| Analyte | Wave Length | AG | AL | AS | B | BA |
|---|---|---|---|---|---|---|
| ALUMINUM | 396.15 | 0 | 0 | 0.206 | 0 | 0 |
| ANTIMONY | 206.84 | 0 | 0 | -0.740 | 0 | 0 |
| ARSENIC | 188.98 | 0 | 0.0776 | 0 | 0 | 0 |
| BARIUM | 233.53 | 0 | 0 | 0 | 0 | 0 |
| BERYLLIUM | 234.86 | 0 | 0 | 0 | 0 | 0 |
| BORON | 249.68 | 0 | 1.12 | 0 | 0 | 0 |
| CADMIUM | 228.80 | 0 | 0 | 3.00 | 0 | 0 |
| CALCIUM | 227.55 | 0 | 0.195 | 10.0 | 0 | 0 |
| CHROMIUM | 267.72 | 0 | -0.00252 | 0 | 0 | 0 |
| COBALT | 228.62 | 0 | 0 | 0 | 0 | 0.337 |
| COPPER | 327.39 | 0 | 0 | 0 | 0 | 0 |
| IRON | 239.56 | 0 | 0 | 0 | 0 | 0 |
| LEAD | 220.35 | 0 | -0.0265 | 0 | 0 | 0 |
| LITHIUM | 670.78 | 0 | 0 | 0 | 0 | 0 |
| MAGNESIUM | 279.08 | 0 | 0 | 0 | 0 | 0 |
| MANGANESE | 257.61 | -0.185 | 0 | -0.231 | -0.0949 | -0.230 |
| MOLYBDENUM | 202.03 | 0 | 0 | 0 | 0 | 0 |
| NICKEL | 231.60 | 0 | 0 | 0 | 0 | 0 |
| POTASSIUM | 766.49 | 0 | 0 | 0 | 0 | 0 |
| SELENIUM | 196.03 | 0 | 0.147 | 0 | 0 | 0 |
| SILICON | 251.61 | 0 | 0 | 0 | 0 | 0 |
| SILVER | 328.07 | 0 | 0 | 0 | 0 | 0 |
| SODIUM | 589.59 | 0 | 0 | 0 | 0 | 0 |
| STRONTIUM | 407.77 | 0 | 0 | 0 | 0 | 0 |
| THALLIUM | 190.80 | 0 | 0 | 0 | 0 | 0 |
| TIN | 189.93 | 0 | 0 | 0 | 0 | 0 |
| TITANIUM | 334.94 | 0 | 0 | 0 | 0 | 0 |
| VANADIUM | 290.88 | 0 | 0 | 0.200 | 0 | 0.0400 |
| ZINC | 206.20 | 0 | 0 | 0 | 0 | 0 |

**CORR_FACTORS - Modified 03/05/2008**
**PDF File ID: 2424427**
**Report generated: 05/22/2012 08:31**

**Microbac Laboratories Inc.**
**INTERELEMENT CORRECTION FACTORS (ANNUALLY)**

**Login Number:** L12050284 **Date:** 12/30/2011
**Insturment ID:** PE-ICP2 **Method:** 6010B

| Analyte | Wave Length | BE | CA | CD | CO | CR |
|---|---|---|---|---|---|---|
| ALUMINUM | 396.15 | 0 | 0 | 0 | 0 | 0 |
| ANTIMONY | 206.84 | 0 | 0 | 0 | 0 | 6.33 |
| ARSENIC | 188.98 | 0 | 0.0200 | 0 | 0 | -6.59 |
| BARIUM | 233.53 | 0 | 0 | 0 | 0 | 0 |
| BERYLLIUM | 234.86 | 0 | 0 | 0 | 0 | -0.0733 |
| BORON | 249.68 | 0 | 0 | 24.1 | 5.90 | 1.50 |
| CADMIUM | 228.80 | 0 | 0 | 0 | 0 | 0 |
| CALCIUM | 227.55 | 0 | 0 | 0 | 300 | 0 |
| CHROMIUM | 267.72 | 0 | 0 | 0 | 0 | 0 |
| COBALT | 228.62 | 0 | 0 | 0 | 0 | -0.244 |
| COPPER | 327.39 | 0 | 0 | 0 | 0.380 | -0.0400 |
| IRON | 239.56 | 0 | 0 | 0 | 1.91 | 0 |
| LEAD | 220.35 | 0 | -0.0480 | 0 | 0.116 | -0.0700 |
| LITHIUM | 670.78 | 0 | 0 | 0 | 0 | 0 |
| MAGNESIUM | 279.08 | 0 | 0 | 0 | 0 | 0 |
| MANGANESE | 257.61 | -1.04 | 0 | -0.755 | -0.0418 | -0.110 |
| MOLYBDENUM | 202.03 | 0 | 0 | 0 | 0 | 0 |
| NICKEL | 231.60 | 0 | 0 | 0 | -0.566 | 0 |
| POTASSIUM | 766.49 | 0 | 0 | 0 | 0 | 0 |
| SELENIUM | 196.03 | 0 | -0.300 | 0 | -1.52 | 0 |
| SILICON | 251.61 | 0 | 0 | 0 | 0 | 0 |
| SILVER | 328.07 | 0 | 0 | 0 | 0 | 0 |
| SODIUM | 589.59 | 0 | 0 | 0 | 0 | 0 |
| STRONTIUM | 407.77 | 0 | 0 | 0 | 0 | 0 |
| THALLIUM | 190.80 | 0 | 0.400 | 0 | 3.48 | 0 |
| TIN | 189.93 | 0 | 0 | 0 | 0 | 0 |
| TITANIUM | 334.94 | 0 | -0.0100 | 0 | 0 | 0.297 |
| VANADIUM | 290.88 | 0 | 0 | 0 | 0 | 0 |
| ZINC | 206.20 | 0 | 0 | 0 | 0 | -3.64 |

**CORR_FACTORS - Modified 03/05/2008**
**PDF File ID: 2424427**
**Report generated: 05/22/2012 08:31**

**Microbac Laboratories Inc.**
**INTERELEMENT CORRECTION FACTORS (ANNUALLY)**

**Login Number:** L12050284 **Date:** 12/30/2011
**Insturment ID:** PE-ICP2 **Method:** 6010B

| Analyte | Wave Length | CU | FE | K | LI | MG |
|---|---|---|---|---|---|---|
| ALUMINUM | 396.15 | 0 | 0.0192 | 0 | 0 | 0 |
| ANTIMONY | 206.84 | 0 | 0 | 0 | 0 | 0 |
| ARSENIC | 188.98 | 0 | -0.00250 | 0 | 0 | 0 |
| BARIUM | 233.53 | 0 | -0.0187 | 0 | 0 | 0 |
| BERYLLIUM | 234.86 | 0 | 0.210 | 0 | 0 | 0 |
| BORON | 249.68 | 0 | -4.66 | 0 | 0 | 0 |
| CADMIUM | 228.80 | 0 | -0.00420 | 0 | 0 | 0 |
| CALCIUM | 227.55 | -2.00 | 100 | 0 | 0 | 0.104 |
| CHROMIUM | 267.72 | 0 | 0.0391 | 0 | 0 | 0 |
| COBALT | 228.62 | 0 | 0.0262 | 0 | 0 | 0 |
| COPPER | 327.39 | 0 | -0.0688 | 0 | 0.154 | 0 |
| IRON | 239.56 | 0 | 0 | 0 | 0 | 0.0276 |
| LEAD | 220.35 | 0.740 | 0.0440 | 0 | 0 | 0 |
| LITHIUM | 670.78 | 0 | 0 | 0 | 0 | 0 |
| MAGNESIUM | 279.08 | 0 | 0.540 | 0 | 0 | 0 |
| MANGANESE | 257.61 | -0.0457 | -0.0580 | -0.0181 | -0.794 | 0.0147 |
| MOLYBDENUM | 202.03 | 0 | -0.0494 | 0 | 0 | 0 |
| NICKEL | 231.60 | 0 | 0 | 0 | 0 | 0 |
| POTASSIUM | 766.49 | 0 | 0 | 0 | 0 | 0 |
| SELENIUM | 196.03 | 0 | -0.465 | 0 | 0 | 0 |
| SILICON | 251.61 | 0 | 0 | 0 | 0 | 0 |
| SILVER | 328.07 | 0.0717 | 0.0240 | 0 | 0 | 0 |
| SODIUM | 589.59 | 0 | 0 | 0 | 0 | 0 |
| STRONTIUM | 407.77 | 0 | 0.120 | 0 | 0 | 0 |
| THALLIUM | 190.80 | 0 | 0 | 0 | 0 | 0 |
| TIN | 189.93 | 0 | 0 | 0 | 0 | 0 |
| TITANIUM | 334.94 | 0 | 0 | 0 | 0 | 0 |
| VANADIUM | 290.88 | 0 | 0.134 | 0 | 0 | 0 |
| ZINC | 206.20 | -0.200 | 0.0198 | 0 | 0 | 0 |

**CORR_FACTORS - Modified 03/05/2008**
**PDF File ID: 2424427**
**Report generated: 05/22/2012 08:31**

**Microbac Laboratories Inc.**
**INTERELEMENT CORRECTION FACTORS (ANNUALLY)**

**Login Number:** L12050284 **Date:** 12/30/2011
**Insturment ID:** PE-ICP2 **Method:** 6010B

| Analyte | Wave Length | MN | MO | NA | NI | PB |
|---|---|---|---|---|---|---|
| ALUMINUM | 396.15 | 0 | 13.5 | 0 | 0 | 0 |
| ANTIMONY | 206.84 | 0 | -7.69 | 0 | 0 | 0 |
| ARSENIC | 188.98 | 0 | 6.00 | 0 | 0 | 0 |
| BARIUM | 233.53 | 0 | -0.548 | 0 | 0 | 0 |
| BERYLLIUM | 234.86 | -0.131 | -1.50 | 0 | -0.00974 | 0 |
| BORON | 249.68 | 0 | -2.20 | 0 | 0 | 0 |
| CADMIUM | 228.80 | 0 | -0.00900 | 0 | -0.398 | 0 |
| CALCIUM | 227.55 | 0 | -8.00 | 0 | -900 | 0 |
| CHROMIUM | 267.72 | 0.434 | -0.00100 | 0 | 0 | 0 |
| COBALT | 228.62 | 0 | -0.125 | 0 | 0.129 | 0 |
| COPPER | 327.39 | 0 | -0.0774 | 0 | 0.150 | 0.257 |
| IRON | 239.56 | 0.480 | 0 | 0 | 0 | 0.407 |
| LEAD | 220.35 | 0.100 | -5.00 | 0 | 0.100 | 0 |
| LITHIUM | 670.78 | 0 | 0 | 0 | 0 | 0 |
| MAGNESIUM | 279.08 | 0 | -5.00 | 0 | 0 | 0.0252 |
| MANGANESE | 257.61 | 0 | -0.0482 | -0.00916 | -0.0340 | -0.0413 |
| MOLYBDENUM | 202.03 | -0.209 | 0 | 0 | 0.120 | 0 |
| NICKEL | 231.60 | 0 | 0 | 0 | 0 | 0 |
| POTASSIUM | 766.49 | 0 | 0 | 1.00 | 0 | 0 |
| SELENIUM | 196.03 | 0.451 | 0.300 | 0 | 0.0940 | 0 |
| SILICON | 251.61 | 0 | 15.0 | 0 | 0 | 0 |
| SILVER | 328.07 | 0.130 | 0.100 | 0 | 0 | 0 |
| SODIUM | 589.59 | 0 | 0 | 0 | 0 | 0 |
| STRONTIUM | 407.77 | 0 | 0 | 0 | 0 | 0 |
| THALLIUM | 190.80 | -1.50 | 1.20 | 0 | 0 | 0 |
| TIN | 189.93 | 0 | 0 | 0 | 0 | 0 |
| TITANIUM | 334.94 | 0 | 0 | 0 | 0 | 0 |
| VANADIUM | 290.88 | 0 | 0.578 | 0 | 0 | 0 |
| ZINC | 206.20 | 0 | 0.180 | 0 | -0.200 | -0.100 |

**CORR_FACTORS - Modified 03/05/2008**
**PDF File ID: 2424427**
**Report generated: 05/22/2012 08:31**

**Microbac Laboratories Inc.**
**INTERELEMENT CORRECTION FACTORS (ANNUALLY)**

**Login Number:** L12050284 **Date:** 12/30/2011
**Insturment ID:** PE-ICP2 **Method:** 6010B

| Analyte | Wave Length | SB | SE | SI | SN | SR |
|---|---|---|---|---|---|---|
| ALUMINUM | 396.15 | 0 | 0 | 0 | 0 | 0 |
| ANTIMONY | 206.84 | 0 | 0 | 0 | 0 | 0 |
| ARSENIC | 188.98 | 0 | 0 | 0 | 0 | 0 |
| BARIUM | 233.53 | 0 | 0 | 0 | 0 | 0 |
| BERYLLIUM | 234.86 | 0 | 0 | 0 | 0 | 0 |
| BORON | 249.68 | 0 | 0 | 0 | 0 | 0 |
| CADMIUM | 228.80 | 0 | 0 | 0 | 0 | 0 |
| CALCIUM | 227.55 | 0 | 0 | 0 | 0 | 0 |
| CHROMIUM | 267.72 | 0 | 0 | 0 | 0 | 0 |
| COBALT | 228.62 | 0 | 0 | 0 | 0 | 0 |
| COPPER | 327.39 | 0 | 0.148 | 0 | 0 | 0 |
| IRON | 239.56 | 0 | 0 | 0 | 0 | 0 |
| LEAD | 220.35 | -0.0100 | 0 | 0 | 0 | 0 |
| LITHIUM | 670.78 | 0 | 0 | 0 | 0 | 0 |
| MAGNESIUM | 279.08 | 0 | -0.0924 | 0 | 0 | 0 |
| MANGANESE | 257.61 | -0.0505 | -0.0281 | -0.185 | -0.0445 | -0.625 |
| MOLYBDENUM | 202.03 | 0 | 0 | 0 | 0 | 0 |
| NICKEL | 231.60 | -0.0500 | -0.0100 | 0 | 0 | 0 |
| POTASSIUM | 766.49 | 0 | 0 | 0 | 0 | 0 |
| SELENIUM | 196.03 | 0 | 0 | 0 | 0 | 0 |
| SILICON | 251.61 | 0 | 0 | 0 | 0 | 0 |
| SILVER | 328.07 | 0 | 0 | 0 | 0 | 0.200 |
| SODIUM | 589.59 | 0 | 0 | 0 | 0 | 0 |
| STRONTIUM | 407.77 | 0 | 0 | 0 | 0 | 0 |
| THALLIUM | 190.80 | 0 | 0 | 0 | 0 | 0 |
| TIN | 189.93 | 0 | 0 | 0 | 0 | 0 |
| TITANIUM | 334.94 | 0 | 0 | 0 | 0 | 0 |
| VANADIUM | 290.88 | 0 | 0 | 0 | 0 | 0 |
| ZINC | 206.20 | -0.300 | 0 | 0 | 0 | 0 |

**CORR_FACTORS - Modified 03/05/2008**
**PDF File ID: 2424427**
**Report generated: 05/22/2012 08:31**

**Microbac Laboratories Inc.**
**INTERELEMENT CORRECTION FACTORS (ANNUALLY)**

**Login Number:** L12050284 **Date:** 12/30/2011
**Insturment ID:** PE-ICP2 **Method:** 6010B

| Analyte | Wave Length | TI | TL | V | ZN |
|---|---|---|---|---|---|
| ALUMINUM | 396.15 | 0 | 0 | 0 | 0 |
| ANTIMONY | 206.84 | 0 | 0 | 0.000100 | 0 |
| ARSENIC | 188.98 | 0 | 0 | 0.0930 | 0 |
| BARIUM | 233.53 | 0 | 0 | -2.29 | 0 |
| BERYLLIUM | 234.86 | 0 | 0 | 0 | 0 |
| BORON | 249.68 | 0 | 0 | 0 | 0 |
| CADMIUM | 228.80 | 0 | 0 | 0.0800 | 0 |
| CALCIUM | 227.55 | 3.00 | 0 | 60.0 | 0 |
| CHROMIUM | 267.72 | 0 | 0 | -0.567 | -0.0400 |
| COBALT | 228.62 | 2.21 | 0 | 0 | 0 |
| COPPER | 327.39 | -1.05 | 0 | -0.700 | -0.0613 |
| IRON | 239.56 | 0 | 0 | 0 | 0 |
| LEAD | 220.35 | 0 | 0 | 0.0560 | 0 |
| LITHIUM | 670.78 | 0 | 0 | 0 | 0 |
| MAGNESIUM | 279.08 | 0 | 0 | 0 | 0 |
| MANGANESE | 257.61 | -0.00931 | -0.0414 | -0.0601 | -0.0552 |
| MOLYBDENUM | 202.03 | 0 | 0 | -0.288 | 0 |
| NICKEL | 231.60 | 0 | 0.617 | 0 | 0 |
| POTASSIUM | 766.49 | 0 | 0 | 0 | 0 |
| SELENIUM | 196.03 | -0.220 | 0 | -0.126 | 0 |
| SILICON | 251.61 | 0 | 0 | 0 | 0 |
| SILVER | 328.07 | 0 | 0 | -1.67 | 0 |
| SODIUM | 589.59 | 0 | 0 | 0 | 0 |
| STRONTIUM | 407.77 | 0 | 0 | 0 | 0 |
| THALLIUM | 190.80 | -12.0 | 0 | -1.41 | 0 |
| TIN | 189.93 | 0 | 0 | 0 | 0 |
| TITANIUM | 334.94 | 0 | 0 | 0 | 0 |
| VANADIUM | 290.88 | 0 | 0 | 0 | 0 |
| ZINC | 206.20 | 0 | 0 | -0.100 | 0 |

**CORR_FACTORS - Modified 03/05/2008**
**PDF File ID: 2424427**
**Report generated: 05/22/2012 08:31**

**Microbac Laboratories Inc.**
**LINEAR RANGE (QUARTERLY)**

**Login Number:** L12050284 **Date:** 03/27/2012
**Insturment ID:** PE-ICP2 **Method:** 6010B

| Analyte | Integration Time (Sec.) | Concentration (mg/L) |
|---|---|---|
| Aluminum | 10.00 | 450.0 |
| Antimony | 10.00 | 45.0 |
| Arsenic | 10.00 | 9.0 |
| Barium | 10.00 | 9.0 |
| Beryllium | 10.00 | 4.5 |
| Boron | 10.00 | 45.0 |
| Cadmium | 10.00 | 4.5 |
| Calcium | 10.00 | 450.0 |
| Chromium | 10.00 | 45.0 |
| Cobalt | 10.00 | 45.0 |
| Copper | 10.00 | 45.0 |
| Iron | 10.00 | 450.0 |
| Lead | 10.00 | 90.0 |
| Lithium | 10.00 | 1.8 |
| Magnesium | 10.00 | 450.0 |
| Manganese | 10.00 | 27.0 |
| Molybdenum | 10.00 | 45.0 |
| Nickel | 10.00 | 45.0 |
| Potassium | 10.00 | 90.0 |
| Selenium | 10.00 | 45.0 |
| Silicon | 10.00 | 36.0 |
| Silver | 10.00 | 4.5 |
| Sodium | 10.00 | 360.0 |
| Strontium | 10.00 | 1.8 |
| Thallium | 10.00 | 45.0 |
| Tin | 10.00 | 45.0 |
| Titanium | 10.00 | 9.0 |
| Vanadium | 10.00 | 45.0 |
| Zinc | 10.00 | 45.0 |

**Comments:**
**All analytes passed acceptance criteria at the specified concentration.**

**LINEAR_RANGE - Modified 03/06/2008**
**PDF File ID: 2424426**
**Report generated: 05/22/2012 08:31**

# 2.3.1.3 Raw Data

==========

**Analysis Begun**

**Start Time: 5/21/2012 1:08:38 PM** **Plasma On Time: 5/21/2012 11:33:15 AM**
**Logged In Analyst: peicp2** **Technique: ICP Continuous**
**Spectrometer Model: Optima 4300 DV, S/N 077N4011401** **Autosampler Model: Cetac**

**Sample Information File: C:\pe\peicp2\Sample Information\MONDAY1.sif**
**Batch ID:**
**Results Data Set: 052112H5**
**Results Library: C:\pe\peicp2\Results\Results.mdb**

==========

**Sequence No.: 1** **Autosampler Location: 1**
**Sample ID: S0** **Date Collected: 5/21/2012 1:08:39 PM**
**Analyst:** **Data Type: Original**
**Initial Sample Wt:** **Initial Sample Vol:**
**Dilution:** **Sample Prep Vol:**

---

**Nebulizer Parameters: S0**

| Analyte | Back Pressure | Flow |
|---|---|---|
| All | 155.0 kPa | 0.50 L/min |

---

**Mean Data: S0**

| Analyte | Mean Corrected Intensity | Std.Dev. | RSD | Calib Conc. | Units |
|---|---|---|---|---|---|
| Y 371.029 | 2183266.6 | 15564.62 | 0.71% | | |
| YRADIAL | 200530.3 | 1503.95 | 0.75% | | |
| Ga 417.206 | 1249337.5 | 21595.35 | 1.73% | | |
| GaRADIAL | 58721.8 | 1150.41 | 1.96% | | |
| Ag 328.068† | -109.3 | 64.65 | 59.15% | [0.00] | mg/L |
| Al 396.153† | -23.2 | 5.22 | 22.54% | [0.00] | mg/L |
| As 188.979† | -21.0 | 6.54 | 31.16% | [0.00] | mg/L |
| Ba 233.527† | -195.3 | 15.18 | 7.77% | [0.00] | mg/L |
| Be 234.861† | -1701.5 | 11.68 | 0.69% | [0.00] | mg/L |
| B 249.677† | 66.3 | 30.70 | 46.29% | [0.00] | mg/L |
| Ca 227.546† | -59.8 | 13.31 | 22.25% | [0.00] | mg/L |
| Cd 228.802† | 54.8 | 1.71 | 3.12% | [0.00] | mg/L |
| Co 228.616† | -4.9 | 6.96 | 141.66% | [0.00] | mg/L |
| Cr 267.716† | 204.5 | 12.23 | 5.98% | [0.00] | mg/L |
| Cu 327.393† | -603.1 | 62.24 | 10.32% | [0.00] | mg/L |
| Fe 239.562† | 46.3 | 8.77 | 18.94% | [0.00] | mg/L |
| Mg 279.077† | 12.2 | 3.20 | 26.19% | [0.00] | mg/L |
| Mn 257.610† | 509.1 | 8.07 | 1.58% | [0.00] | mg/L |
| Mo 202.031† | 91.5 | 4.35 | 4.75% | [0.00] | mg/L |
| Ni 231.604† | -175.6 | 10.93 | 6.23% | [0.00] | mg/L |
| Pb 220.353† | -114.6 | 5.14 | 4.49% | [0.00] | mg/L |
| Sb 206.836† | 9.6 | 2.97 | 30.84% | [0.00] | mg/L |
| Se 196.026† | 15.6 | 4.41 | 28.37% | [0.00] | mg/L |
| Si 251.611† | 1530.3 | 26.93 | 1.76% | [0.00] | mg/L |
| Sn 189.927† | 26.8 | 4.49 | 16.76% | [0.00] | mg/L |
| Ti 334.940† | 939.5 | 105.65 | 11.25% | [0.00] | mg/L |
| Tl 190.801† | -73.9 | 2.49 | 3.38% | [0.00] | mg/L |
| V 290.880† | 11821.1 | 54.82 | 0.46% | [0.00] | mg/L |
| Zn 206.200† | 55.9 | 3.15 | 5.63% | [0.00] | mg/L |
| K 766.490† | -43.4 | 15.56 | 35.82% | [0.00] | mg/L |
| Na 589.592† | 762.2 | 115.80 | 15.19% | [0.00] | mg/L |
| Sr 407.771† | -688.4 | 26.83 | 3.90% | [0.00] | mg/L |
| Li 670.784† | 121.4 | 103.13 | 84.92% | [0.00] | mg/L |

==========

**Sequence No.: 2** **Autosampler Location: 2**
**Sample ID: S1** **Date Collected: 5/21/2012 1:15:32 PM**
**Analyst:** **Data Type: Original**
**Initial Sample Wt:** **Initial Sample Vol:**
**Dilution:** **Sample Prep Vol:**

---

**Nebulizer Parameters: S1**

Approved: May 22, 2012

| Analyte | Back Pressure | Flow |
|---|---|---|
| All | 154.0 kPa | 0.50 L/min |

---

**Mean Data: S1**

| Analyte | Mean Corrected Intensity | Std.Dev. | RSD | Conc. | Calib Units |
|---|---|---|---|---|---|
| Y 371.029 | 2113470.1 | 29226.90 | 1.38% | | |
| YRADIAL | 197477.5 | 1377.18 | 0.70% | | |
| Ga 417.206 | 1203057.2 | 11176.95 | 0.93% | | |
| GaRADIAL | 57525.9 | 1148.86 | 2.00% | | |
| Ag 328.068† | 1325.8 | 72.10 | 5.44% | [0.0040] | mg/L |
| Al 396.153† | 471.9 | 9.36 | 1.98% | [0.10] | mg/L |
| Ba 233.527† | 1644.2 | 30.53 | 1.86% | [0.010] | mg/L |
| Be 234.861† | 652.8 | 10.10 | 1.55% | [0.0005] | mg/L |
| Cd 228.802† | 33.4 | 2.03 | 6.09% | [0.00050] | mg/L |
| Co 228.616† | 97.9 | 6.96 | 7.10% | [0.0020] | mg/L |
| Cr 267.716† | 590.8 | 17.54 | 2.97% | [0.0050] | mg/L |
| Cu 327.393† | 1282.5 | 139.36 | 10.87% | [0.0050] | mg/L |
| Fe 239.562† | 393.1 | 8.19 | 2.08% | [0.040] | mg/L |
| Mg 279.077† | 259.8 | 13.53 | 5.21% | [0.10] | mg/L |
| Mn 257.610† | 4713.2 | 107.02 | 2.27% | [0.0050] | mg/L |
| Mo 202.031† | 364.4 | 11.52 | 3.16% | [0.010] | mg/L |
| Ni 231.604† | 378.8 | 7.05 | 1.86% | [0.0050] | mg/L |
| Pb 220.353† | 60.3 | 12.09 | 20.06% | [0.0050] | mg/L |
| Sb 206.836† | 51.9 | 3.51 | 6.76% | [0.012] | mg/L |
| Si 251.611† | 2242.7 | 64.42 | 2.87% | [0.050] | mg/L |
| Sn 189.927† | 118.1 | 8.43 | 7.13% | [0.010] | mg/L |
| Ti 334.940† | 9949.0 | 239.82 | 2.41% | [0.010] | mg/L |
| V 290.880† | 2213.2 | 268.95 | 12.15% | [0.010] | mg/L |
| Zn 206.200† | 540.5 | 17.68 | 3.27% | [0.010] | mg/L |
| K 766.490† | 1097.9 | 42.16 | 3.84% | [0.50] | mg/L |
| Na 589.592† | 8258.7 | 141.75 | 1.72% | [0.50] | mg/L |
| Sr 407.771† | 18903.1 | 647.08 | 3.42% | [0.010] | mg/L |
| Li 670.784† | 904.3 | 40.25 | 4.45% | [0.010] | mg/L |

==========

**Sequence No.: 3** **Autosampler Location: 3**
**Sample ID: S2** **Date Collected: 5/21/2012 1:22:27 PM**
**Analyst:** **Data Type: Original**
**Initial Sample Wt:** **Initial Sample Vol:**
**Dilution:** **Sample Prep Vol:**

---

**Nebulizer Parameters: S2**

| Analyte | Back Pressure | Flow |
|---|---|---|
| All | 155.0 kPa | 0.50 L/min |

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**Mean Data: S2**

| Analyte | Mean Corrected Intensity | Std.Dev. | RSD | Conc. | Calib Units |
|---|---|---|---|---|---|
| Y 371.029 | 2176763.6 | 6918.87 | 0.32% | | |
| YRADIAL | 201560.4 | 4572.26 | 2.27% | | |
| Ga 417.206 | 1222551.5 | 23735.66 | 1.94% | | |
| GaRADIAL | 58988.3 | 557.44 | 0.95% | | |
| Ag 328.068† | 2653.4 | 132.39 | 4.99% | [0.0080] | mg/L |
| Al 396.153† | 939.0 | 23.42 | 2.49% | [0.20] | mg/L |
| As 188.979† | 24.2 | 0.64 | 2.64% | [0.0080] | mg/L |
| Ba 233.527† | 3287.6 | 65.60 | 2.00% | [0.020] | mg/L |
| Be 234.861† | 1318.5 | 8.12 | 0.62% | [0.0010] | mg/L |
| B 249.677† | 856.9 | 29.45 | 3.44% | [0.010] | mg/L |
| Ca 227.546† | 82.1 | 17.44 | 21.24% | [0.20] | mg/L |
| Cd 228.802† | 57.0 | 10.61 | 18.62% | [0.0010] | mg/L |
| Co 228.616† | 168.8 | 1.05 | 0.62% | [0.0040] | mg/L |
| Cr 267.716† | 1186.8 | 8.02 | 0.68% | [0.010] | mg/L |
| Cu 327.393† | 2402.4 | 155.82 | 6.49% | [0.010] | mg/L |
| Fe 239.562† | 774.3 | 19.99 | 2.58% | [0.080] | mg/L |
| Mg 279.077† | 516.1 | 20.53 | 3.98% | [0.20] | mg/L |
| Mn 257.610† | 8933.2 | 75.88 | 0.85% | [0.010] | mg/L |
| Mo 202.031† | 716.4 | 22.17 | 3.09% | [0.020] | mg/L |
| Ni 231.604† | 737.8 | 11.40 | 1.55% | [0.010] | mg/L |

Approved: May 22, 2012

| | | | | | |
|---|---|---|---|---|---|
| Pb 220.353† | 124.5 | 22.23 | 17.85% | [0.010] | mg/L |
| Sb 206.836† | 95.6 | 0.90 | 0.94% | [0.024] | mg/L |
| Se 196.026† | 11.8 | 3.69 | 31.36% | [0.0080] | mg/L |
| Si 251.611† | 4321.0 | 174.14 | 4.03% | [0.10] | mg/L |
| Sn 189.927† | 211.4 | 2.20 | 1.04% | [0.020] | mg/L |
| Ti 334.940† | 19353.6 | 356.21 | 1.84% | [0.020] | mg/L |
| Tl 190.801† | 31.2 | 13.97 | 44.81% | [0.010] | mg/L |
| V 290.880† | 3708.3 | 639.00 | 17.23% | [0.020] | mg/L |
| Zn 206.200† | 1066.9 | 18.13 | 1.70% | [0.020] | mg/L |
| K 766.490† | 2491.2 | 44.71 | 1.79% | [1.00] | mg/L |
| Na 589.592† | 15650.6 | 326.91 | 2.09% | [1.00] | mg/L |
| Sr 407.771† | 36605.4 | 797.19 | 2.18% | [0.020] | mg/L |
| Li 670.784† | 2001.0 | 12.38 | 0.62% | [0.020] | mg/L |

**Sequence No.: 4** **Autosampler Location: 4**
**Sample ID: S3** **Date Collected: 5/21/2012 1:29:22 PM**
**Analyst:** **Data Type: Original**
**Initial Sample Wt:** **Initial Sample Vol:**
**Dilution:** **Sample Prep Vol:**

**Nebulizer Parameters: S3**

| Analyte | Back Pressure | Flow |
|---|---|---|
| All | 154.0 kPa | 0.50 L/min |

**Mean Data: S3**

| Analyte | Mean Corrected Intensity | Std.Dev. | RSD | Calib Conc. | Units |
|---|---|---|---|---|---|
| Y 371.029 | 2085988.2 | 24178.04 | 1.16% | | |
| YRADIAL | 200702.1 | 3366.90 | 1.68% | | |
| Ga 417.206 | 1159388.0 | 30483.86 | 2.63% | | |
| GaRADIAL | 58830.7 | 946.82 | 1.61% | | |
| Ag 328.068† | 130024.8 | 5702.94 | 4.39% | [0.40] | mg/L |
| Al 396.153† | 45871.5 | 384.08 | 0.84% | [10.00] | mg/L |
| As 188.979† | 1154.8 | 28.04 | 2.43% | [0.40] | mg/L |
| Ba 233.527† | 159895.6 | 1490.90 | 0.93% | [1.00] | mg/L |
| Be 234.861† | 70927.6 | 2703.10 | 3.81% | [0.05] | mg/L |
| B 249.677† | 43717.3 | 1999.38 | 4.57% | [0.50] | mg/L |
| Ca 227.546† | 4341.9 | 140.39 | 3.23% | [10.00] | mg/L |
| Cd 228.802† | 2968.1 | 139.20 | 4.69% | [0.05] | mg/L |
| Co 228.616† | 8091.6 | 96.69 | 1.19% | [0.20] | mg/L |
| Cr 267.716† | 58369.7 | 794.58 | 1.36% | [0.50] | mg/L |
| Cu 327.393† | 126494.9 | 5651.11 | 4.47% | [0.50] | mg/L |
| Fe 239.562† | 39224.1 | 345.48 | 0.88% | [4.00] | mg/L |
| Mg 279.077† | 24888.7 | 247.65 | 1.00% | [10.00] | mg/L |
| Mn 257.610† | 450862.4 | 4537.81 | 1.01% | [0.50] | mg/L |
| Mo 202.031† | 36506.1 | 365.45 | 1.00% | [1.00] | mg/L |
| Ni 231.604† | 36002.1 | 248.21 | 0.69% | [0.50] | mg/L |
| Pb 220.353† | 5595.5 | 65.56 | 1.17% | [0.50] | mg/L |
| Sb 206.836† | 4886.1 | 167.13 | 3.42% | [1.20] | mg/L |
| Se 196.026† | 706.8 | 23.59 | 3.34% | [0.40] | mg/L |
| Si 251.611† | 220522.9 | 8660.88 | 3.93% | [5.00] | mg/L |
| Sn 189.927† | 10524.6 | 113.20 | 1.08% | [1.00] | mg/L |
| Ti 334.940† | 971582.4 | 5661.42 | 0.58% | [1.00] | mg/L |
| Tl 190.801† | 1878.1 | 26.47 | 1.41% | [0.50] | mg/L |
| V 290.880† | 191230.6 | 2628.09 | 1.37% | [1.00] | mg/L |
| Zn 206.200† | 50583.2 | 299.42 | 0.59% | [1.00] | mg/L |
| K 766.490† | 107110.3 | 508.06 | 0.47% | [50.00] | mg/L |
| Na 589.592† | 775347.2 | 9918.07 | 1.28% | [50.00] | mg/L |
| Sr 407.771† | 1817789.7 | 38436.41 | 2.11% | [1.00] | mg/L |
| Li 670.784† | 98189.9 | 1090.77 | 1.11% | [1.00] | mg/L |

**Sequence No.: 5** **Autosampler Location: 5**
**Sample ID: S4** **Date Collected: 5/21/2012 1:35:21 PM**
**Analyst:** **Data Type: Original**
**Initial Sample Wt:** **Initial Sample Vol:**
**Dilution:** **Sample Prep Vol:**

Approved: May 22, 2012

**Nebulizer Parameters: S4**

| Analyte | Back Pressure | Flow |
|---|---|---|
| All | 155.0 kPa | 0.50 L/min |

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**Mean Data: S4**

| Analyte | Mean Corrected Intensity | Std.Dev. | RSD | Calib Conc. | Units |
|---|---|---|---|---|---|
| Y 371.029 | 2063804.2 | 2543.39 | 0.12% | | |
| YRADIAL | 195904.5 | 3752.76 | 1.92% | | |
| Ga 417.206 | 1154280.7 | 21227.84 | 1.84% | | |
| GaRADIAL | 58351.3 | 441.16 | 0.76% | | |
| Ag 328.068† | 257629.8 | 5514.35 | 2.14% | [0.80] | mg/L |
| Al 396.153† | 91688.3 | 170.83 | 0.19% | [20.00] | mg/L |
| As 188.979† | 2345.7 | 36.63 | 1.56% | [0.80] | mg/L |
| Ba 233.527† | 318552.6 | 622.38 | 0.20% | [2.00] | mg/L |
| Be 234.861† | 141833.3 | 4147.69 | 2.92% | [0.10] | mg/L |
| B 249.677† | 86698.9 | 2761.37 | 3.19% | [1.00] | mg/L |
| Ca 227.546† | 8905.5 | 217.55 | 2.44% | [20.00] | mg/L |
| Cd 228.802† | 5918.0 | 209.46 | 3.54% | [0.10] | mg/L |
| Co 228.616† | 16120.5 | 87.66 | 0.54% | [0.40] | mg/L |
| Cr 267.716† | 116777.5 | 543.10 | 0.47% | [1.00] | mg/L |
| Cu 327.393† | 250674.9 | 5635.52 | 2.25% | [1.00] | mg/L |
| Fe 239.562† | 78796.3 | 675.19 | 0.86% | [8.00] | mg/L |
| Mg 279.077† | 50024.2 | 490.57 | 0.98% | [20.00] | mg/L |
| Mn 257.610† | 878954.2 | 4189.12 | 0.48% | [1.00] | mg/L |
| Mo 202.031† | 73932.2 | 274.18 | 0.37% | [2.00] | mg/L |
| Ni 231.604† | 71176.1 | 707.69 | 0.99% | [1.00] | mg/L |
| Pb 220.353† | 11109.9 | 40.51 | 0.36% | [1.00] | mg/L |
| Sb 206.836† | 9784.4 | 230.66 | 2.36% | [2.40] | mg/L |
| Se 196.026† | 1418.0 | 29.72 | 2.10% | [0.80] | mg/L |
| Si 251.611† | 434246.8 | 6059.49 | 1.40% | [10.00] | mg/L |
| Sn 189.927† | 21101.6 | 87.99 | 0.42% | [2.00] | mg/L |
| Ti 334.940† | 1978295.5 | 7323.35 | 0.37% | [2.00] | mg/L |
| Tl 190.801† | 3685.6 | 24.12 | 0.65% | [1.00] | mg/L |
| V 290.880† | 378834.4 | 3440.29 | 0.91% | [2.00] | mg/L |
| Zn 206.200† | 100293.9 | 526.09 | 0.52% | [2.00] | mg/L |
| K 766.490† | 213098.8 | 957.52 | 0.45% | [100.00] | mg/L |
| Na 589.592† | 1537741.9 | 21982.47 | 1.43% | [100.00] | mg/L |
| Sr 407.771† | 3663529.1 | 111599.29 | 3.05% | [2.00] | mg/L |
| Li 670.784† | 192029.2 | 3186.17 | 1.66% | [2.00] | mg/L |

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**Calibration Summary**

| Analyte | Stds. | Equation | Intercept | Slope | Curvature | Corr. Coef. | Reslope |
|---|---|---|---|---|---|---|---|
| Ag 328.068 | 4 | Lin, Calc Int | 186.6 | 322400 | 0.00000 | 0.999990 | |
| Al 396.153 | 4 | Lin, Calc Int | 14.6 | 4584 | 0.00000 | 1.000000 | |
| As 188.979 | 3 | Wt. Lin | 1.0 | 2908 | 0.00000 | 0.999967 | |
| Ba 233.527 | 4 | Lin, Calc Int | 125.1 | 159300 | 0.00000 | 0.999998 | |
| Be 234.861 | 4 | Lin, Calc Int | -47.5 | 1419000 | 0.00000 | 1.000000 | |
| B 249.677 | 3 | Lin, Calc Int | 62.4 | 86770 | 0.00000 | 0.999990 | |
| Ca 227.546 | 3 | Lin, Calc Int | -23.3 | 444.5 | 0.00000 | 0.999919 | |
| Cd 228.802 | 4 | Lin, Calc Int | 1.6 | 59200 | 0.00000 | 0.999999 | |
| Co 228.616 | 4 | Lin, Calc Int | 11.7 | 40300 | 0.00000 | 0.999998 | |
| Cr 267.716 | 4 | Lin, Calc Int | 5.7 | 116800 | 0.00000 | 1.000000 | |
| Cu 327.393 | 4 | Lin, Calc Int | 120.7 | 251000 | 0.00000 | 0.999990 | |
| Fe 239.562 | 4 | Lin, Calc Int | -26.2 | 9845 | 0.00000 | 0.999998 | |
| Mg 279.077 | 4 | Lin, Calc Int | -7.4 | 2499 | 0.00000 | 0.999997 | |
| Mn 257.610 | 4 | Lin, Calc Int | 1562.9 | 881600 | 0.00000 | 0.999922 | |
| Mo 202.031 | 4 | Lin, Calc Int | -66.1 | 36910 | 0.00000 | 0.999982 | |
| Ni 231.604 | 4 | Lin, Calc Int | 66.9 | 71260 | 0.00000 | 0.999985 | |
| Pb 220.353 | 4 | Lin, Calc Int | 10.7 | 11110 | 0.00000 | 0.999994 | |
| Sb 206.836 | 4 | Lin, Calc Int | -0.5 | 4076 | 0.00000 | 1.000000 | |
| Se 196.026 | 3 | Wt. Lin | -2.4 | 1774 | 0.00000 | 1.000000 | |
| Si 251.611 | 4 | Lin, Calc Int | 439.1 | 43510 | 0.00000 | 0.999971 | |
| Sn 189.927 | 4 | Lin, Calc Int | 0.8 | 10550 | 0.00000 | 0.999999 | |
| Ti 334.940 | 4 | Lin, Calc Int | -2303.7 | 987000 | 0.00000 | 0.999963 | |
| Tl 190.801 | 3 | Lin, Calc Int | 3.8 | 3695 | 0.00000 | 0.999946 | |
| V 290.880 | 4 | Lin, Calc Int | 301.1 | 189600 | 0.00000 | 0.999989 | |
| Zn 206.200 | 4 | Lin, Calc Int | 86.5 | 50180 | 0.00000 | 0.999992 | |
| K 766.490 | 4 | Non Lin, Calc Int | 119.7 | 2150 | -0.20352 | 0.999999 | |

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| | | | | | | |
|---|---|---|---|---|---|---|
| Na 589.592 | 4 | Non Lin, Calc Int | 154.8 | 15630 | -2.55974 | 1.000000 |
| Sr 407.771 | 4 | Lin, Calc Int | -1565.9 | 1830000 | 0.00000 | 0.999993 |
| Li 670.784 | 4 | Lin, Calc Int | 278.6 | 96280 | 0.00000 | 0.999940 |

**Sequence No.: 6** **Autosampler Location: 11**
**Sample ID: ICV 2nd Vendor** **Date Collected: 5/21/2012 1:41:25 PM**
**Analyst:** **Data Type: Original**
**Initial Sample Wt:** **Initial Sample Vol:**
**Dilution:** **Sample Prep Vol:**

**Nebulizer Parameters: ICV 2nd Vendor**

| Analyte | Back Pressure | Flow |
|---|---|---|
| All | 155.0 kPa | 0.50 L/min |

**Mean Data: ICV 2nd Vendor**

| Analyte | Mean Corrected Intensity | Calib. Conc. | Units | Std.Dev. | Sample Conc. | Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 2133618.2 | | | | | | 45092.14 | 2.11% |
| YRADIAL | 205618.5 | | | | | | 4068.35 | 1.98% |
| Ga 417.206 | 1188362.7 | | | | | | 17599.45 | 1.48% |
| GaRADIAL | 60452.3 | | | | | | 946.35 | 1.57% |
| Ag 328.068† | 122836.5 | 0.384 | mg/L | 0.0119 | 0.384 | mg/L | 0.0119 | 3.09% |
| QC value within limits for Ag 328.068 Recovery = 95.98% | | | | | | | | |
| Al 396.153† | 45010.2 | 9.75 | mg/L | 0.030 | 9.75 | mg/L | 0.030 | 0.31% |
| QC value within limits for Al 396.153 Recovery = 97.51% | | | | | | | | |
| As 188.979† | 1137.0 | 0.386 | mg/L | 0.0062 | 0.386 | mg/L | 0.0062 | 1.62% |
| QC value within limits for As 188.979 Recovery = 96.52% | | | | | | | | |
| Ba 233.527† | 158201.8 | 0.992 | mg/L | 0.0283 | 0.992 | mg/L | 0.0283 | 2.85% |
| QC value within limits for Ba 233.527 Recovery = 99.25% | | | | | | | | |
| Be 234.861† | 68343.0 | 0.0477 | mg/L | 0.00153 | 0.0477 | mg/L | 0.00153 | 3.21% |
| QC value within limits for Be 234.861 Recovery = 95.49% | | | | | | | | |
| B 249.677† | 42246.2 | 0.482 | mg/L | 0.0189 | 0.482 | mg/L | 0.0189 | 3.92% |
| QC value within limits for B 249.677 Recovery = 96.47% | | | | | | | | |
| Ca 227.546† | 4264.7 | 10.1 | mg/L | 0.18 | 10.1 | mg/L | 0.18 | 1.82% |
| QC value within limits for Ca 227.546 Recovery = 101.04% | | | | | | | | |
| Cd 228.802† | 2907.0 | 0.0477 | mg/L | 0.00147 | 0.0477 | mg/L | 0.00147 | 3.07% |
| QC value within limits for Cd 228.802 Recovery = 95.47% | | | | | | | | |
| Co 228.616† | 7931.9 | 0.196 | mg/L | 0.0048 | 0.196 | mg/L | 0.0048 | 2.46% |
| QC value within limits for Co 228.616 Recovery = 97.84% | | | | | | | | |
| Cr 267.716† | 57030.4 | 0.489 | mg/L | 0.0132 | 0.489 | mg/L | 0.0132 | 2.69% |
| QC value within limits for Cr 267.716 Recovery = 97.78% | | | | | | | | |
| Cu 327.393† | 124346.5 | 0.497 | mg/L | 0.0158 | 0.497 | mg/L | 0.0158 | 3.18% |
| QC value within limits for Cu 327.393 Recovery = 99.31% | | | | | | | | |
| Fe 239.562† | 38513.3 | 3.91 | mg/L | 0.004 | 3.91 | mg/L | 0.004 | 0.11% |
| QC value within limits for Fe 239.562 Recovery = 97.85% | | | | | | | | |
| Mg 279.077† | 24105.4 | 9.66 | mg/L | 0.022 | 9.66 | mg/L | 0.022 | 0.23% |
| QC value within limits for Mg 279.077 Recovery = 96.63% | | | | | | | | |
| Mn 257.610† | 443966.9 | 0.502 | mg/L | 0.0154 | 0.502 | mg/L | 0.0154 | 3.07% |
| QC value within limits for Mn 257.610 Recovery = 100.48% | | | | | | | | |
| Mo 202.031† | 34556.5 | 0.939 | mg/L | 0.0266 | 0.939 | mg/L | 0.0266 | 2.84% |
| QC value less than the lower limit for Mo 202.031 Recovery = 93.87% | | | | | | | | |
| Ni 231.604† | 35522.1 | 0.497 | mg/L | 0.0151 | 0.497 | mg/L | 0.0151 | 3.03% |
| QC value within limits for Ni 231.604 Recovery = 99.44% | | | | | | | | |
| Pb 220.353† | 5540.7 | 0.499 | mg/L | 0.0109 | 0.499 | mg/L | 0.0109 | 2.19% |
| QC value within limits for Pb 220.353 Recovery = 99.77% | | | | | | | | |
| Sb 206.836† | 4878.5 | 1.20 | mg/L | 0.021 | 1.20 | mg/L | 0.021 | 1.73% |
| QC value within limits for Sb 206.836 Recovery = 99.65% | | | | | | | | |
| Se 196.026† | 700.1 | 0.397 | mg/L | 0.0034 | 0.397 | mg/L | 0.0034 | 0.86% |
| QC value within limits for Se 196.026 Recovery = 99.35% | | | | | | | | |
| Si 251.611† | 209066.1 | 4.78 | mg/L | 0.131 | 4.78 | mg/L | 0.131 | 2.73% |
| QC value within limits for Si 251.611 Recovery = 95.70% | | | | | | | | |
| Sn 189.927† | 10552.3 | 1.00 | mg/L | 0.023 | 1.00 | mg/L | 0.023 | 2.33% |
| QC value within limits for Sn 189.927 Recovery = 100.06% | | | | | | | | |
| Ti 334.940† | 952071.9 | 0.968 | mg/L | 0.0055 | 0.968 | mg/L | 0.0055 | 0.57% |
| QC value within limits for Ti 334.940 Recovery = 96.82% | | | | | | | | |
| Tl 190.801† | 1861.2 | 0.517 | mg/L | 0.0091 | 0.517 | mg/L | 0.0091 | 1.76% |
| QC value within limits for Tl 190.801 Recovery = 103.33% | | | | | | | | |
| V 290.880† | 185143.0 | 0.974 | mg/L | 0.0305 | 0.974 | mg/L | 0.0305 | 3.13% |
| QC value within limits for V 290.880 Recovery = 97.41% | | | | | | | | |

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Zn 206.200† 49926.7 0.998 mg/L 0.0284 0.998 mg/L 0.0284 2.84%
QC value within limits for Zn 206.200 Recovery = 99.78%
K 766.490† 104286.1 48.6 mg/L 0.17 48.6 mg/L 0.17 0.35%
QC value within limits for K 766.490 Recovery = 97.25%
Na 589.592† 745157.5 48.0 mg/L 0.18 48.0 mg/L 0.18 0.38%
QC value within limits for Na 589.592 Recovery = 96.07%
Sr 407.771† 1766564.2 0.966 mg/L 0.0061 0.966 mg/L 0.0061 0.63%
QC value within limits for Sr 407.771 Recovery = 96.60%
Li 670.784† 95880.8 0.993 mg/L 0.0094 0.993 mg/L 0.0094 0.95%
QC value within limits for Li 670.784 Recovery = 99.29%
QC Failed. Continue with analysis.

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**Sequence No.: 7** **Autosampler Location: 1**
**Sample ID: ICB** **Date Collected: 5/21/2012 1:47:23 PM**
**Analyst:** **Data Type: Original**
**Initial Sample Wt:** **Initial Sample Vol:**
**Dilution:** **Sample Prep Vol:**

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**Nebulizer Parameters: ICB**

| Analyte | Back Pressure | Flow |
|---|---|---|
| All | 155.0 kPa | 0.50 L/min |

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**Mean Data: ICB**

| Analyte | Mean Corrected Intensity | Calib. Conc. | Units | Std.Dev. | Sample Conc. | Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 2195654.4 | | | | | | 16529.61 | 0.75% |
| YRADIAL | 205592.8 | | | | | | 1858.72 | 0.90% |
| Ga 417.206 | 1290747.2 | | | | | | 17549.95 | 1.36% |
| GaRADIAL | 60323.9 | | | | | | 1166.76 | 1.93% |
| Ag 328.068† | 102.3 | -0.00026 | mg/L | 0.000270 | -0.00026 | mg/L | 0.000270 | 103.06% |
| QC value within limits for Ag 328.068 Recovery = Not calculated | | | | | | | | |
| Al 396.153† | 13.6 | -0.00031 | mg/L | 0.000935 | -0.00031 | mg/L | 0.000935 | 302.44% |
| QC value within limits for Al 396.153 Recovery = Not calculated | | | | | | | | |
| As 188.979† | 1.4 | 0.00014 | mg/L | 0.000705 | 0.00014 | mg/L | 0.000705 | 502.86% |
| QC value within limits for As 188.979 Recovery = Not calculated | | | | | | | | |
| Ba 233.527† | -7.9 | -0.00083 | mg/L | 0.000029 | -0.00083 | mg/L | 0.000029 | 3.43% |
| QC value within limits for Ba 233.527 Recovery = Not calculated | | | | | | | | |
| Be 234.861† | 71.7 | 0.00008 | mg/L | 0.000003 | 0.00008 | mg/L | 0.000003 | 3.04% |
| QC value within limits for Be 234.861 Recovery = Not calculated | | | | | | | | |
| B 249.677† | 77.7 | 0.00018 | mg/L | 0.000130 | 0.00018 | mg/L | 0.000130 | 72.63% |
| QC value within limits for B 249.677 Recovery = Not calculated | | | | | | | | |
| Ca 227.546† | 6.7 | 0.0667 | mg/L | 0.00260 | 0.0667 | mg/L | 0.00260 | 3.90% |
| QC value within limits for Ca 227.546 Recovery = Not calculated | | | | | | | | |
| Cd 228.802† | -3.4 | -0.00008 | mg/L | 0.000176 | -0.00008 | mg/L | 0.000176 | 207.12% |
| QC value within limits for Cd 228.802 Recovery = Not calculated | | | | | | | | |
| Co 228.616† | 18.4 | 0.00016 | mg/L | 0.000102 | 0.00016 | mg/L | 0.000102 | 62.17% |
| QC value within limits for Co 228.616 Recovery = Not calculated | | | | | | | | |
| Cr 267.716† | -3.4 | -0.00008 | mg/L | 0.000140 | -0.00008 | mg/L | 0.000140 | 177.70% |
| QC value within limits for Cr 267.716 Recovery = Not calculated | | | | | | | | |
| Cu 327.393† | 40.0 | -0.00032 | mg/L | 0.000304 | -0.00032 | mg/L | 0.000304 | 95.62% |
| QC value within limits for Cu 327.393 Recovery = Not calculated | | | | | | | | |
| Fe 239.562† | 10.8 | 0.00376 | mg/L | 0.000475 | 0.00376 | mg/L | 0.000475 | 12.63% |
| QC value within limits for Fe 239.562 Recovery = Not calculated | | | | | | | | |
| Mg 279.077† | 4.9 | 0.00495 | mg/L | 0.000971 | 0.00495 | mg/L | 0.000971 | 19.61% |
| QC value within limits for Mg 279.077 Recovery = Not calculated | | | | | | | | |
| Mn 257.610† | 127.1 | -0.00163 | mg/L | 0.000027 | -0.00163 | mg/L | 0.000027 | 1.66% |
| QC value within limits for Mn 257.610 Recovery = Not calculated | | | | | | | | |
| Mo 202.031† | -8.1 | 0.00157 | mg/L | 0.000043 | 0.00157 | mg/L | 0.000043 | 2.74% |
| QC value within limits for Mo 202.031 Recovery = Not calculated | | | | | | | | |
| Ni 231.604† | -10.4 | -0.00108 | mg/L | 0.000117 | -0.00108 | mg/L | 0.000117 | 10.82% |
| QC value within limits for Ni 231.604 Recovery = Not calculated | | | | | | | | |
| Pb 220.353† | 17.4 | 0.00061 | mg/L | 0.000588 | 0.00061 | mg/L | 0.000588 | 97.04% |
| QC value within limits for Pb 220.353 Recovery = Not calculated | | | | | | | | |
| Sb 206.836† | 2.8 | 0.00080 | mg/L | 0.001276 | 0.00080 | mg/L | 0.001276 | 159.52% |
| QC value within limits for Sb 206.836 Recovery = Not calculated | | | | | | | | |
| Se 196.026† | -7.7 | -0.00296 | mg/L | 0.002929 | -0.00296 | mg/L | 0.002929 | 99.08% |
| QC value within limits for Se 196.026 Recovery = Not calculated | | | | | | | | |
| Si 251.611† | 28.1 | -0.00946 | mg/L | 0.000644 | -0.00946 | mg/L | 0.000644 | 6.80% |
| QC value within limits for Si 251.611 Recovery = Not calculated | | | | | | | | |

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| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Sn 189.927† | 24.1 | 0.00221 mg/L | 0.000328 | 0.00221 mg/L | 0.000328 | 14.85% | |
| QC value within limits for Sn 189.927 Recovery = Not calculated | | | | | | | |
| Ti 334.940† | 79.9 | 0.00243 mg/L | 0.000111 | 0.00243 mg/L | 0.000111 | 4.58% | |
| QC value within limits for Ti 334.940 Recovery = Not calculated | | | | | | | |
| Tl 190.801† | -1.6 | -0.00145 mg/L | 0.003456 | -0.00145 mg/L | 0.003456 | 237.89% | |
| QC value within limits for Tl 190.801 Recovery = Not calculated | | | | | | | |
| V 290.880† | 139.5 | -0.00085 mg/L | 0.000955 | -0.00085 mg/L | 0.000955 | 111.98% | |
| QC value within limits for V 290.880 Recovery = Not calculated | | | | | | | |
| Zn 206.200† | -0.9 | -0.00174 mg/L | 0.000051 | -0.00174 mg/L | 0.000051 | 2.94% | |
| QC value within limits for Zn 206.200 Recovery = Not calculated | | | | | | | |
| K 766.490† | 32.2 | -0.0407 mg/L | 0.05296 | -0.0407 mg/L | 0.05296 | 130.19% | |
| QC value within limits for K 766.490 Recovery = Not calculated | | | | | | | |
| Na 589.592† | 36.1 | -0.00759 mg/L | 0.004970 | -0.00759 mg/L | 0.004970 | 65.44% | |
| QC value within limits for Na 589.592 Recovery = Not calculated | | | | | | | |
| Sr 407.771† | 48.2 | 0.00088 mg/L | 0.000009 | 0.00088 mg/L | 0.000009 | 1.04% | |
| QC value within limits for Sr 407.771 Recovery = Not calculated | | | | | | | |
| Li 670.784† | -70.5 | -0.00363 mg/L | 0.000609 | -0.00363 mg/L | 0.000609 | 16.79% | |
| QC value within limits for Li 670.784 Recovery = Not calculated | | | | | | | |

All analyte(s) passed QC.

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**Sequence No.: 8** **Autosampler Location: 14**
**Sample ID: LLICV** **Date Collected: 5/21/2012 1:54:17 PM**
**Analyst: KHR** **Data Type: Original**
**Initial Sample Wt:** **Initial Sample Vol:**
**Dilution:** **Sample Prep Vol:**

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**Nebulizer Parameters: LLICV**

| Analyte | Back Pressure | Flow |
|---|---|---|
| All | 155.0 kPa | 0.50 L/min |

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**Mean Data: LLICV**

| Analyte | Mean Corrected Intensity | Calib. Conc. | Units | Std.Dev. | Sample Conc. | Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 2181396.3 | | | | | | 17956.99 | 0.82% |
| YRADIAL | 202771.8 | | | | | | 4778.24 | 2.36% |
| Ga 417.206 | 1230062.9 | | | | | | 11832.04 | 0.96% |
| GaRADIAL | 59031.3 | | | | | | 1099.47 | 1.86% |
| Ag 328.068† | 1318.9 | 0.00355 | mg/L | 0.000182 | 0.00355 | mg/L | 0.000182 | 5.13% |
| Al 396.153† | 478.9 | 0.101 | mg/L | 0.0025 | 0.101 | mg/L | 0.0025 | 2.47% |
| As 188.979† | 15.9 | 0.00506 | mg/L | 0.000462 | 0.00506 | mg/L | 0.000462 | 9.12% |
| Ba 233.527† | 1643.4 | 0.00953 | mg/L | 0.000106 | 0.00953 | mg/L | 0.000106 | 1.11% |
| Be 234.861† | 639.6 | 0.00048 | mg/L | 0.000012 | 0.00048 | mg/L | 0.000012 | 2.60% |
| B 249.677† | 472.6 | 0.00469 | mg/L | 0.000351 | 0.00469 | mg/L | 0.000351 | 7.49% |
| Ca 227.546† | 47.1 | 0.163 | mg/L | 0.0262 | 0.163 | mg/L | 0.0262 | 16.12% |
| Cd 228.802† | 33.7 | 0.00052 | mg/L | 0.000148 | 0.00052 | mg/L | 0.000148 | 28.41% |
| Co 228.616† | 87.9 | 0.00188 | mg/L | 0.000192 | 0.00188 | mg/L | 0.000192 | 10.20% |
| Cr 267.716† | 600.4 | 0.00510 | mg/L | 0.000072 | 0.00510 | mg/L | 0.000072 | 1.41% |
| Cu 327.393† | 1238.1 | 0.00447 | mg/L | 0.000096 | 0.00447 | mg/L | 0.000096 | 2.15% |
| Fe 239.562† | 384.7 | 0.0417 | mg/L | 0.00130 | 0.0417 | mg/L | 0.00130 | 3.11% |
| Mg 279.077† | 259.9 | 0.107 | mg/L | 0.0044 | 0.107 | mg/L | 0.0044 | 4.14% |
| Mn 257.610† | 4592.5 | 0.00344 | mg/L | 0.000065 | 0.00344 | mg/L | 0.000065 | 1.90% |
| Mo 202.031† | 356.0 | 0.0114 | mg/L | 0.00006 | 0.0114 | mg/L | 0.00006 | 0.56% |
| Ni 231.604† | 389.0 | 0.00452 | mg/L | 0.000340 | 0.00452 | mg/L | 0.000340 | 7.52% |
| Pb 220.353† | 71.8 | 0.00551 | mg/L | 0.000731 | 0.00551 | mg/L | 0.000731 | 13.27% |
| Sb 206.836† | 48.6 | 0.0120 | mg/L | 0.00059 | 0.0120 | mg/L | 0.00059 | 4.93% |
| Se 196.026† | 9.0 | 0.00646 | mg/L | 0.002892 | 0.00646 | mg/L | 0.002892 | 44.79% |
| Si 251.611† | 2297.0 | 0.0426 | mg/L | 0.00052 | 0.0426 | mg/L | 0.00052 | 1.22% |
| Sn 189.927† | 115.6 | 0.0109 | mg/L | 0.00041 | 0.0109 | mg/L | 0.00041 | 3.75% |
| Ti 334.940† | 9773.8 | 0.0123 | mg/L | 0.00006 | 0.0123 | mg/L | 0.00006 | 0.45% |
| Tl 190.801† | 22.2 | 0.00515 | mg/L | 0.000574 | 0.00515 | mg/L | 0.000574 | 11.15% |
| V 290.880† | 2057.0 | 0.00925 | mg/L | 0.001287 | 0.00925 | mg/L | 0.001287 | 13.91% |
| Zn 206.200† | 594.9 | 0.0102 | mg/L | 0.00035 | 0.0102 | mg/L | 0.00035 | 3.45% |
| K 766.490† | 1155.2 | 0.481 | mg/L | 0.0233 | 0.481 | mg/L | 0.0233 | 4.84% |
| Na 589.592† | 8127.1 | 0.510 | mg/L | 0.0074 | 0.510 | mg/L | 0.0074 | 1.46% |
| Sr 407.771† | 18759.8 | 0.0111 | mg/L | 0.00031 | 0.0111 | mg/L | 0.00031 | 2.81% |
| Li 670.784† | 967.0 | 0.00715 | mg/L | 0.000410 | 0.00715 | mg/L | 0.000410 | 5.74% |

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**Sequence No.: 9** **Autosampler Location: 15**

Approved: May 22, 2012

Sample ID: LLICV
Analyst: KHR
Initial Sample Wt:
Dilution:

Date Collected: 5/21/2012 2:01:11 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

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**Nebulizer Parameters: LLICV**

| Analyte | Back Pressure | Flow |
|---|---|---|
| All | 155.0 kPa | 0.50 L/min |

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**Mean Data: LLICV**

| Analyte | Mean Corrected Intensity | Calib. Conc. | Calib. Units | Std.Dev. | Sample Conc. | Sample Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 2170240.4 | | | | | | 27130.08 | 1.25% |
| YRADIAL | 199183.3 | | | | | | 4016.90 | 2.02% |
| Ga 417.206 | 1228614.4 | | | | | | 22512.66 | 1.83% |
| GaRADIAL | 58465.2 | | | | | | 1812.87 | 3.10% |
| Ag 328.068† | 2626.3 | 0.00764 | mg/L | 0.000204 | 0.00764 | mg/L | 0.000204 | 2.67% |
| Al 396.153† | 957.8 | 0.204 | mg/L | 0.0047 | 0.204 | mg/L | 0.0047 | 2.31% |
| As 188.979† | 23.7 | 0.00771 | mg/L | 0.001579 | 0.00771 | mg/L | 0.001579 | 20.47% |
| Ba 233.527† | 3293.4 | 0.0199 | mg/L | 0.00029 | 0.0199 | mg/L | 0.00029 | 1.48% |
| Be 234.861† | 1343.6 | 0.00097 | mg/L | 0.000010 | 0.00097 | mg/L | 0.000010 | 1.04% |
| B 249.677† | 868.7 | 0.00921 | mg/L | 0.000452 | 0.00921 | mg/L | 0.000452 | 4.91% |
| Ca 227.546† | 89.8 | 0.264 | mg/L | 0.0044 | 0.264 | mg/L | 0.0044 | 1.68% |
| Cd 228.802† | 60.5 | 0.00097 | mg/L | 0.000183 | 0.00097 | mg/L | 0.000183 | 18.87% |
| Co 228.616† | 178.7 | 0.00413 | mg/L | 0.000032 | 0.00413 | mg/L | 0.000032 | 0.79% |
| Cr 267.716† | 1212.8 | 0.0103 | mg/L | 0.00024 | 0.0103 | mg/L | 0.00024 | 2.34% |
| Cu 327.393† | 2512.9 | 0.00957 | mg/L | 0.000609 | 0.00957 | mg/L | 0.000609 | 6.37% |
| Fe 239.562† | 843.2 | 0.0883 | mg/L | 0.00889 | 0.0883 | mg/L | 0.00889 | 10.07% |
| Mg 279.077† | 514.8 | 0.209 | mg/L | 0.0055 | 0.209 | mg/L | 0.0055 | 2.63% |
| Mn 257.610† | 9186.5 | 0.00866 | mg/L | 0.000159 | 0.00866 | mg/L | 0.000159 | 1.84% |
| Mo 202.031† | 733.6 | 0.0217 | mg/L | 0.00019 | 0.0217 | mg/L | 0.00019 | 0.89% |
| Ni 231.604† | 747.4 | 0.00954 | mg/L | 0.000112 | 0.00954 | mg/L | 0.000112 | 1.17% |
| Pb 220.353† | 131.3 | 0.0109 | mg/L | 0.00148 | 0.0109 | mg/L | 0.00148 | 13.61% |
| Sb 206.836† | 91.7 | 0.0226 | mg/L | 0.00187 | 0.0226 | mg/L | 0.00187 | 8.27% |
| Se 196.026† | 12.2 | 0.00825 | mg/L | 0.002749 | 0.00825 | mg/L | 0.002749 | 33.34% |
| Si 251.611† | 4508.3 | 0.0933 | mg/L | 0.00362 | 0.0933 | mg/L | 0.00362 | 3.88% |
| Sn 189.927† | 221.9 | 0.0210 | mg/L | 0.00130 | 0.0210 | mg/L | 0.00130 | 6.19% |
| Ti 334.940† | 19485.4 | 0.0221 | mg/L | 0.00032 | 0.0221 | mg/L | 0.00032 | 1.45% |
| Tl 190.801† | 36.9 | 0.00925 | mg/L | 0.002226 | 0.00925 | mg/L | 0.002226 | 24.06% |
| V 290.880† | 3852.3 | 0.0187 | mg/L | 0.00309 | 0.0187 | mg/L | 0.00309 | 16.51% |
| Zn 206.200† | 1137.5 | 0.0210 | mg/L | 0.00037 | 0.0210 | mg/L | 0.00037 | 1.75% |
| K 766.490† | 2550.8 | 1.13 | mg/L | 0.023 | 1.13 | mg/L | 0.023 | 2.02% |
| Na 589.592† | 16265.2 | 1.03 | mg/L | 0.040 | 1.03 | mg/L | 0.040 | 3.85% |
| Sr 407.771† | 37735.1 | 0.0215 | mg/L | 0.00043 | 0.0215 | mg/L | 0.00043 | 2.01% |
| Li 670.784† | 2072.1 | 0.0186 | mg/L | 0.00075 | 0.0186 | mg/L | 0.00075 | 4.04% |

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Sequence No.: 10
Sample ID: ICSA
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 12
Date Collected: 5/21/2012 2:08:06 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

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**Nebulizer Parameters: ICSA**

| Analyte | Back Pressure | Flow |
|---|---|---|
| All | 155.0 kPa | 0.50 L/min |

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**Mean Data: ICSA**

| Analyte | Mean Corrected Intensity | Calib. Conc. | Calib. Units | Std.Dev. | Sample Conc. | Sample Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 2026448.5 | | | | | | 1217.05 | 0.06% |
| YRADIAL | 201125.3 | | | | | | 3466.75 | 1.72% |
| Ga 417.206 | 1181022.5 | | | | | | 28030.64 | 2.37% |
| GaRADIAL | 60154.3 | | | | | | 1039.19 | 1.73% |
| Ag 328.068† | -13084.9 | -0.00156 | mg/L | 0.000660 | -0.00156 | mg/L | 0.000660 | 42.21% |
| QC value within limits for Ag 328.068 Recovery = Not calculated | | | | | | | | |
| Al 396.153† | 1084665.9 | 237 | mg/L | 4.9 | 237 | mg/L | 4.9 | 2.08% |
| QC value within limits for Al 396.153 Recovery = 94.65% | | | | | | | | |

Approved: May 22, 2012

Kym H. Rhoden

As 188.979† -18.4 -0.00076 mg/L 0.003408 -0.00076 mg/L 0.003408 451.01%
QC value within limits for As 188.979 Recovery = Not calculated
Ba 233.527† 686.2 0.00128 mg/L 0.000137 0.00128 mg/L 0.000137 10.71%
QC value within limits for Ba 233.527 Recovery = Not calculated
Be 234.861† 26576.7 -0.00116 mg/L 0.000224 -0.00116 mg/L 0.000224 19.41%
QC value less than the lower limit for Be 234.861 Recovery = Not calculated
B 249.677† 4031.8 0.00733 mg/L 0.002739 0.00733 mg/L 0.002739 37.38%
QC value within limits for B 249.677 Recovery = Not calculated
Ca 227.546† 108736.3 247 mg/L 7.6 247 mg/L 7.6 3.07%
QC value within limits for Ca 227.546 Recovery = 98.74%
Cd 228.802† 15.8 0.00010 mg/L 0.000171 0.00010 mg/L 0.000171 163.35%
QC value within limits for Cd 228.802 Recovery = Not calculated
Co 228.616† 31.9 -0.00177 mg/L 0.000235 -0.00177 mg/L 0.000235 13.27%
QC value within limits for Co 228.616 Recovery = Not calculated
Cr 267.716† 138.8 0.00361 mg/L 0.000050 0.00361 mg/L 0.000050 1.38%
QC value greater than the upper limit for Cr 267.716 Recovery = Not calculated
Cu 327.393† -1451.0 0.00123 mg/L 0.000129 0.00123 mg/L 0.000129 10.42%
QC value within limits for Cu 327.393 Recovery = Not calculated
Fe 239.562† 879368.1 89.3 mg/L 1.91 89.3 mg/L 1.91 2.14%
QC value within limits for Fe 239.562 Recovery = 89.32%
Mg 279.077† 589143.5 236 mg/L 5.0 236 mg/L 5.0 2.11%
QC value within limits for Mg 279.077 Recovery = 94.28%
Mn 257.610† -2140.5 -0.00170 mg/L 0.000523 -0.00170 mg/L 0.000523 30.85%
QC value within limits for Mn 257.610 Recovery = Not calculated
Mo 202.031† -70.6 0.00426 mg/L 0.000223 0.00426 mg/L 0.000223 5.24%
QC value within limits for Mo 202.031 Recovery = Not calculated
Ni 231.604† 33.2 -0.00047 mg/L 0.000496 -0.00047 mg/L 0.000496 105.88%
QC value within limits for Ni 231.604 Recovery = Not calculated
Pb 220.353† -414.9 -0.00456 mg/L 0.001370 -0.00456 mg/L 0.001370 30.08%
QC value within limits for Pb 220.353 Recovery = Not calculated
Sb 206.836† -23.2 -0.00229 mg/L 0.002700 -0.00229 mg/L 0.002700 117.91%
QC value within limits for Sb 206.836 Recovery = Not calculated
Se 196.026† -43.0 0.00086 mg/L 0.003950 0.00086 mg/L 0.003950 457.65%
QC value within limits for Se 196.026 Recovery = Not calculated
Si 251.611† 2279.9 0.0423 mg/L 0.00112 0.0423 mg/L 0.00112 2.64%
QC value within limits for Si 251.611 Recovery = Not calculated
Sn 189.927† -342.1 -0.0325 mg/L 0.00106 -0.0325 mg/L 0.00106 3.26%
QC value within limits for Sn 189.927 Recovery = Not calculated
Ti 334.940† -34536.6 0.00405 mg/L 0.002711 0.00405 mg/L 0.002711 66.97%
QC value within limits for Ti 334.940 Recovery = Not calculated
Tl 190.801† -44.7 -0.00710 mg/L 0.006024 -0.00710 mg/L 0.006024 84.81%
QC value within limits for Tl 190.801 Recovery = Not calculated
V 290.880† 3347.7 0.00299 mg/L 0.002361 0.00299 mg/L 0.002361 78.95%
QC value within limits for V 290.880 Recovery = Not calculated
Zn 206.200† 384.5 0.00424 mg/L 0.000549 0.00424 mg/L 0.000549 12.92%
QC value within limits for Zn 206.200 Recovery = Not calculated
K 766.490† -25.6 -0.0676 mg/L 0.05625 -0.0676 mg/L 0.05625 83.27%
QC value within limits for K 766.490 Recovery = Not calculated
Na 589.592† 122.9 -0.00204 mg/L 0.003772 -0.00204 mg/L 0.003772 184.59%
QC value within limits for Na 589.592 Recovery = Not calculated
Sr 407.771† 1621.6 -0.00364 mg/L 0.000180 -0.00364 mg/L 0.000180 4.95%
QC value within limits for Sr 407.771 Recovery = Not calculated
Li 670.784† 99.4 -0.00186 mg/L 0.000988 -0.00186 mg/L 0.000988 53.11%
QC value within limits for Li 670.784 Recovery = Not calculated
QC Failed. Continue with analysis.

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**Sequence No.: 11** **Autosampler Location: 13**
**Sample ID: ICSAB** **Date Collected: 5/21/2012 2:14:02 PM**
**Analyst:** **Data Type: Original**
**Initial Sample Wt:** **Initial Sample Vol:**
**Dilution:** **Sample Prep Vol:**

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**Nebulizer Parameters: ICSAB**

| Analyte | Back Pressure | Flow |
|---|---|---|
| All | 155.0 kPa | 0.50 L/min |

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**Mean Data: ICSAB**

| Analyte | Mean Corrected Intensity | Calib. Conc. | Units | Std.Dev. | Sample Conc. | Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|

Approved: May 22, 2012

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Y 371.029 | 1967574.7 | | | | | 19244.67 | 0.98% |
| YRADIAL | 199395.5 | | | | | 3222.84 | 1.62% |
| Ga 417.206 | 1143330.0 | | | | | 11106.88 | 0.97% |
| GaRADIAL | 59312.2 | | | | | 636.40 | 1.07% |
| Ag 328.068† | 146520.6 | 0.495 mg/L | 0.0101 | 0.495 mg/L | | 0.0101 | 2.04% |
| QC value within limits for Ag 328.068 Recovery = 98.92% | | | | | | | |
| Al 396.153† | 1107063.1 | 242 mg/L | 1.0 | 242 mg/L | | 1.0 | 0.41% |
| QC value within limits for Al 396.153 Recovery = 96.60% | | | | | | | |
| As 188.979† | 652.9 | 0.230 mg/L | 0.0023 | 0.230 mg/L | | 0.0023 | 1.02% |
| QC value within limits for As 188.979 Recovery = 92.12% | | | | | | | |
| Ba 233.527† | 39981.6 | 0.248 mg/L | 0.0008 | 0.248 mg/L | | 0.0008 | 0.32% |
| QC value within limits for Ba 233.527 Recovery = 99.14% | | | | | | | |
| Be 234.861† | 372805.4 | 0.243 mg/L | 0.0045 | 0.243 mg/L | | 0.0045 | 1.85% |
| QC value within limits for Be 234.861 Recovery = 97.03% | | | | | | | |
| B 249.677† | 3647.2 | -0.00938 mg/L | 0.003746 | -0.00938 mg/L | | 0.003746 | 39.94% |
| QC value within limits for B 249.677 Recovery = Not calculated | | | | | | | |
| Ca 227.546† | 111284.3 | 253 mg/L | 6.7 | 253 mg/L | | 6.7 | 2.65% |
| QC value within limits for Ca 227.546 Recovery = 101.19% | | | | | | | |
| Cd 228.802† | 24376.7 | 0.411 mg/L | 0.0040 | 0.411 mg/L | | 0.0040 | 0.96% |
| QC value within limits for Cd 228.802 Recovery = 82.27% | | | | | | | |
| Co 228.616† | 9463.9 | 0.232 mg/L | 0.0031 | 0.232 mg/L | | 0.0031 | 1.33% |
| QC value within limits for Co 228.616 Recovery = 92.87% | | | | | | | |
| Cr 267.716† | 29493.3 | 0.255 mg/L | 0.0019 | 0.255 mg/L | | 0.0019 | 0.73% |
| QC value within limits for Cr 267.716 Recovery = 102.09% | | | | | | | |
| Cu 327.393† | 60235.9 | 0.247 mg/L | 0.0059 | 0.247 mg/L | | 0.0059 | 2.38% |
| QC value within limits for Cu 327.393 Recovery = 98.85% | | | | | | | |
| Fe 239.562† | 893024.8 | 90.7 mg/L | 0.66 | 90.7 mg/L | | 0.66 | 0.73% |
| QC value within limits for Fe 239.562 Recovery = 90.71% | | | | | | | |
| Mg 279.077† | 594837.7 | 238 mg/L | 1.6 | 238 mg/L | | 1.6 | 0.68% |
| QC value within limits for Mg 279.077 Recovery = 95.19% | | | | | | | |
| Mn 257.610† | 210783.8 | 0.240 mg/L | 0.0013 | 0.240 mg/L | | 0.0013 | 0.54% |
| QC value within limits for Mn 257.610 Recovery = 95.98% | | | | | | | |
| Mo 202.031† | -39.0 | 0.00535 mg/L | 0.000280 | 0.00535 mg/L | | 0.000280 | 5.22% |
| QC value within limits for Mo 202.031 Recovery = Not calculated | | | | | | | |
| Ni 231.604† | 33729.0 | 0.472 mg/L | 0.0058 | 0.472 mg/L | | 0.0058 | 1.23% |
| QC value within limits for Ni 231.604 Recovery = 94.39% | | | | | | | |
| Pb 220.353† | 4854.0 | 0.470 mg/L | 0.0049 | 0.470 mg/L | | 0.0049 | 1.04% |
| QC value within limits for Pb 220.353 Recovery = 93.99% | | | | | | | |
| Sb 206.836† | 1941.3 | 0.478 mg/L | 0.0078 | 0.478 mg/L | | 0.0078 | 1.62% |
| QC value within limits for Sb 206.836 Recovery = 95.63% | | | | | | | |
| Se 196.026† | 367.1 | 0.233 mg/L | 0.0044 | 0.233 mg/L | | 0.0044 | 1.90% |
| QC value within limits for Se 196.026 Recovery = 93.03% | | | | | | | |
| Si 251.611† | -830.8 | -0.0292 mg/L | 0.00048 | -0.0292 mg/L | | 0.00048 | 1.65% |
| QC value within limits for Si 251.611 Recovery = Not calculated | | | | | | | |
| Sn 189.927† | -345.5 | -0.0328 mg/L | 0.00136 | -0.0328 mg/L | | 0.00136 | 4.14% |
| QC value within limits for Sn 189.927 Recovery = Not calculated | | | | | | | |
| Ti 334.940† | -35289.3 | 0.00407 mg/L | 0.002785 | 0.00407 mg/L | | 0.002785 | 68.42% |
| QC value within limits for Ti 334.940 Recovery = Not calculated | | | | | | | |
| Tl 190.801† | 1709.5 | 0.468 mg/L | 0.0062 | 0.468 mg/L | | 0.0062 | 1.33% |
| QC value within limits for Tl 190.801 Recovery = 93.59% | | | | | | | |
| V 290.880† | 50205.7 | 0.250 mg/L | 0.0043 | 0.250 mg/L | | 0.0043 | 1.74% |
| QC value within limits for V 290.880 Recovery = 99.96% | | | | | | | |
| Zn 206.200† | 23638.4 | 0.470 mg/L | 0.0040 | 0.470 mg/L | | 0.0040 | 0.84% |
| QC value within limits for Zn 206.200 Recovery = 94.00% | | | | | | | |
| K 766.490† | 10556.0 | 4.85 mg/L | 0.054 | 4.85 mg/L | | 0.054 | 1.11% |
| QC value within limits for K 766.490 Recovery = 97.02% | | | | | | | |
| Na 589.592† | 79022.4 | 5.05 mg/L | 0.043 | 5.05 mg/L | | 0.043 | 0.86% |
| QC value within limits for Na 589.592 Recovery = 100.99% | | | | | | | |
| Sr 407.771† | 1732.5 | -0.00371 mg/L | 0.000145 | -0.00371 mg/L | | 0.000145 | 3.90% |
| QC value within limits for Sr 407.771 Recovery = Not calculated | | | | | | | |
| Li 670.784† | 80.4 | -0.00206 mg/L | 0.000314 | -0.00206 mg/L | | 0.000314 | 15.27% |
| QC value within limits for Li 670.784 Recovery = Not calculated | | | | | | | |

All analyte(s) passed QC.

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**Sequence No.: 12** **Autosampler Location: 6**
**Sample ID: CCV** **Date Collected: 5/21/2012 2:19:58 PM**
**Analyst:** **Data Type: Original**
**Initial Sample Wt:** **Initial Sample Vol:**
**Dilution:** **Sample Prep Vol:**

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Approved: May 22, 2012

**Nebulizer Parameters: CCV**

| Analyte | Back Pressure | Flow |
|---|---|---|
| All | 155.0 kPa | 0.50 L/min |

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**Mean Data: CCV**

| Analyte | Mean Corrected Intensity | Calib. Conc. | Units | Std.Dev. | Sample Conc. | Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 2128068.5 | | | | | | 8934.49 | 0.42% |
| YRADIAL | 204907.0 | | | | | | 2451.21 | 1.20% |
| Ga 417.206 | 1196654.4 | | | | | | 47178.48 | 3.94% |
| GaRADIAL | 59795.5 | | | | | | 502.59 | 0.84% |
| Ag 328.068† | 127120.5 | 0.397 | mg/L | 0.0232 | 0.397 | mg/L | 0.0232 | 5.83% |
| QC value within limits for Ag 328.068 Recovery = 99.31% | | | | | | | | |
| Al 396.153† | 44900.8 | 9.72 | mg/L | 0.057 | 9.72 | mg/L | 0.057 | 0.59% |
| QC value within limits for Al 396.153 Recovery = 97.25% | | | | | | | | |
| As 188.979† | 1136.4 | 0.386 | mg/L | 0.0136 | 0.386 | mg/L | 0.0136 | 3.53% |
| QC value within limits for As 188.979 Recovery = 96.42% | | | | | | | | |
| Ba 233.527† | 158554.7 | 0.995 | mg/L | 0.0128 | 0.995 | mg/L | 0.0128 | 1.29% |
| QC value within limits for Ba 233.527 Recovery = 99.47% | | | | | | | | |
| Be 234.861† | 69463.6 | 0.0485 | mg/L | 0.00258 | 0.0485 | mg/L | 0.00258 | 5.32% |
| QC value within limits for Be 234.861 Recovery = 97.09% | | | | | | | | |
| B 249.677† | 42167.0 | 0.481 | mg/L | 0.0324 | 0.481 | mg/L | 0.0324 | 6.72% |
| QC value within limits for B 249.677 Recovery = 96.28% | | | | | | | | |
| Ca 227.546† | 4303.9 | 10.2 | mg/L | 0.43 | 10.2 | mg/L | 0.43 | 4.25% |
| QC value within limits for Ca 227.546 Recovery = 101.92% | | | | | | | | |
| Cd 228.802† | 2920.4 | 0.0480 | mg/L | 0.00280 | 0.0480 | mg/L | 0.00280 | 5.83% |
| QC value within limits for Cd 228.802 Recovery = 95.95% | | | | | | | | |
| Co 228.616† | 8051.8 | 0.199 | mg/L | 0.0012 | 0.199 | mg/L | 0.0012 | 0.61% |
| QC value within limits for Co 228.616 Recovery = 99.36% | | | | | | | | |
| Cr 267.716† | 57834.5 | 0.496 | mg/L | 0.0134 | 0.496 | mg/L | 0.0134 | 2.70% |
| QC value within limits for Cr 267.716 Recovery = 99.16% | | | | | | | | |
| Cu 327.393† | 123072.4 | 0.492 | mg/L | 0.0290 | 0.492 | mg/L | 0.0290 | 5.91% |
| QC value within limits for Cu 327.393 Recovery = 98.30% | | | | | | | | |
| Fe 239.562† | 38706.8 | 3.93 | mg/L | 0.007 | 3.93 | mg/L | 0.007 | 0.18% |
| QC value within limits for Fe 239.562 Recovery = 98.34% | | | | | | | | |
| Mg 279.077† | 24404.1 | 9.78 | mg/L | 0.027 | 9.78 | mg/L | 0.027 | 0.28% |
| QC value within limits for Mg 279.077 Recovery = 97.83% | | | | | | | | |
| Mn 257.610† | 445296.4 | 0.504 | mg/L | 0.0049 | 0.504 | mg/L | 0.0049 | 0.98% |
| QC value within limits for Mn 257.610 Recovery = 100.79% | | | | | | | | |
| Mo 202.031† | 36106.7 | 0.981 | mg/L | 0.0216 | 0.981 | mg/L | 0.0216 | 2.20% |
| QC value within limits for Mo 202.031 Recovery = 98.07% | | | | | | | | |
| Ni 231.604† | 35590.8 | 0.498 | mg/L | 0.0052 | 0.498 | mg/L | 0.0052 | 1.05% |
| QC value within limits for Ni 231.604 Recovery = 99.63% | | | | | | | | |
| Pb 220.353† | 5571.3 | 0.502 | mg/L | 0.0021 | 0.502 | mg/L | 0.0021 | 0.43% |
| QC value within limits for Pb 220.353 Recovery = 100.33% | | | | | | | | |
| Sb 206.836† | 4793.0 | 1.17 | mg/L | 0.052 | 1.17 | mg/L | 0.052 | 4.44% |
| QC value within limits for Sb 206.836 Recovery = 97.90% | | | | | | | | |
| Se 196.026† | 698.6 | 0.397 | mg/L | 0.0158 | 0.397 | mg/L | 0.0158 | 3.98% |
| QC value within limits for Se 196.026 Recovery = 99.14% | | | | | | | | |
| Si 251.611† | 212294.2 | 4.86 | mg/L | 0.231 | 4.86 | mg/L | 0.231 | 4.75% |
| QC value within limits for Si 251.611 Recovery = 97.17% | | | | | | | | |
| Sn 189.927† | 10486.5 | 0.994 | mg/L | 0.0077 | 0.994 | mg/L | 0.0077 | 0.78% |
| QC value within limits for Sn 189.927 Recovery = 99.44% | | | | | | | | |
| Ti 334.940† | 959692.7 | 0.976 | mg/L | 0.0020 | 0.976 | mg/L | 0.0020 | 0.20% |
| QC value within limits for Ti 334.940 Recovery = 97.60% | | | | | | | | |
| Tl 190.801† | 1858.0 | 0.516 | mg/L | 0.0062 | 0.516 | mg/L | 0.0062 | 1.21% |
| QC value within limits for Tl 190.801 Recovery = 103.18% | | | | | | | | |
| V 290.880† | 188815.6 | 0.993 | mg/L | 0.0215 | 0.993 | mg/L | 0.0215 | 2.16% |
| QC value within limits for V 290.880 Recovery = 99.34% | | | | | | | | |
| Zn 206.200† | 50138.3 | 1.00 | mg/L | 0.025 | 1.00 | mg/L | 0.025 | 2.45% |
| QC value within limits for Zn 206.200 Recovery = 100.21% | | | | | | | | |
| K 766.490† | 105615.3 | 49.2 | mg/L | 0.42 | 49.2 | mg/L | 0.42 | 0.86% |
| QC value within limits for K 766.490 Recovery = 98.49% | | | | | | | | |
| Na 589.592† | 771233.5 | 49.7 | mg/L | 0.49 | 49.7 | mg/L | 0.49 | 0.99% |
| QC value within limits for Na 589.592 Recovery = 99.46% | | | | | | | | |
| Sr 407.771† | 1797252.2 | 0.983 | mg/L | 0.0136 | 0.983 | mg/L | 0.0136 | 1.39% |
| QC value within limits for Sr 407.771 Recovery = 98.28% | | | | | | | | |
| Li 670.784† | 96308.0 | 0.997 | mg/L | 0.0100 | 0.997 | mg/L | 0.0100 | 1.00% |
| QC value within limits for Li 670.784 Recovery = 99.74% | | | | | | | | |

All analyte(s) passed QC.

Approved: May 22, 2012

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**Sequence No.: 13** **Autosampler Location: 1**
**Sample ID: CCB** **Date Collected: 5/21/2012 2:25:58 PM**
**Analyst:** **Data Type: Original**
**Initial Sample Wt:** **Initial Sample Vol:**
**Dilution:** **Sample Prep Vol:**

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**Nebulizer Parameters: CCB**

| Analyte | Back Pressure | Flow |
|---|---|---|
| All | 155.0 kPa | 0.50 L/min |

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**Mean Data: CCB**

| Analyte | Mean Corrected Intensity | Calib. Conc. | Units | Std.Dev. | Sample Conc. | Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 2212038.3 | | | | | | 46555.68 | 2.10% |
| YRADIAL | 204014.1 | | | | | | 2225.57 | 1.09% |
| Ga 417.206 | 1270501.6 | | | | | | 42678.13 | 3.36% |
| GaRADIAL | 60239.9 | | | | | | 2742.40 | 4.55% |
| Ag 328.068† | 154.7 | -0.00010 | mg/L | 0.000069 | -0.00010 | mg/L | 0.000069 | 69.59% |
| QC value within limits for Ag 328.068 Recovery = Not calculated | | | | | | | | |
| Al 396.153† | 16.4 | 0.00029 | mg/L | 0.001250 | 0.00029 | mg/L | 0.001250 | 430.43% |
| QC value within limits for Al 396.153 Recovery = Not calculated | | | | | | | | |
| As 188.979† | 2.0 | 0.00036 | mg/L | 0.001159 | 0.00036 | mg/L | 0.001159 | 324.26% |
| QC value within limits for As 188.979 Recovery = Not calculated | | | | | | | | |
| Ba 233.527† | 41.3 | -0.00052 | mg/L | 0.000312 | -0.00052 | mg/L | 0.000312 | 59.52% |
| QC value within limits for Ba 233.527 Recovery = Not calculated | | | | | | | | |
| Be 234.861† | 38.1 | 0.00006 | mg/L | 0.000035 | 0.00006 | mg/L | 0.000035 | 59.46% |
| QC value within limits for Be 234.861 Recovery = Not calculated | | | | | | | | |
| B 249.677† | 67.6 | 0.00006 | mg/L | 0.000087 | 0.00006 | mg/L | 0.000087 | 141.76% |
| QC value within limits for B 249.677 Recovery = Not calculated | | | | | | | | |
| Ca 227.546† | 11.6 | 0.0783 | mg/L | 0.00889 | 0.0783 | mg/L | 0.00889 | 11.35% |
| QC value within limits for Ca 227.546 Recovery = Not calculated | | | | | | | | |
| Cd 228.802† | -2.4 | -0.00007 | mg/L | 0.000131 | -0.00007 | mg/L | 0.000131 | 186.34% |
| QC value within limits for Cd 228.802 Recovery = Not calculated | | | | | | | | |
| Co 228.616† | 7.5 | -0.00011 | mg/L | 0.000267 | -0.00011 | mg/L | 0.000267 | 248.56% |
| QC value within limits for Co 228.616 Recovery = Not calculated | | | | | | | | |
| Cr 267.716† | -11.6 | -0.00015 | mg/L | 0.000044 | -0.00015 | mg/L | 0.000044 | 29.48% |
| QC value within limits for Cr 267.716 Recovery = Not calculated | | | | | | | | |
| Cu 327.393† | -39.7 | -0.00064 | mg/L | 0.000227 | -0.00064 | mg/L | 0.000227 | 35.73% |
| QC value within limits for Cu 327.393 Recovery = Not calculated | | | | | | | | |
| Fe 239.562† | 49.3 | 0.00767 | mg/L | 0.000576 | 0.00767 | mg/L | 0.000576 | 7.51% |
| QC value within limits for Fe 239.562 Recovery = Not calculated | | | | | | | | |
| Mg 279.077† | 12.9 | 0.00815 | mg/L | 0.000789 | 0.00815 | mg/L | 0.000789 | 9.68% |
| QC value within limits for Mg 279.077 Recovery = Not calculated | | | | | | | | |
| Mn 257.610† | 113.5 | -0.00164 | mg/L | 0.000018 | -0.00164 | mg/L | 0.000018 | 1.09% |
| QC value within limits for Mn 257.610 Recovery = Not calculated | | | | | | | | |
| Mo 202.031† | -4.0 | 0.00168 | mg/L | 0.000252 | 0.00168 | mg/L | 0.000252 | 14.96% |
| QC value within limits for Mo 202.031 Recovery = Not calculated | | | | | | | | |
| Ni 231.604† | 23.2 | -0.00061 | mg/L | 0.000185 | -0.00061 | mg/L | 0.000185 | 30.12% |
| QC value within limits for Ni 231.604 Recovery = Not calculated | | | | | | | | |
| Pb 220.353† | 10.2 | -0.00004 | mg/L | 0.001687 | -0.00004 | mg/L | 0.001687 | >999.9% |
| QC value within limits for Pb 220.353 Recovery = Not calculated | | | | | | | | |
| Sb 206.836† | 2.6 | 0.00076 | mg/L | 0.001372 | 0.00076 | mg/L | 0.001372 | 180.76% |
| QC value within limits for Sb 206.836 Recovery = Not calculated | | | | | | | | |
| Se 196.026† | 0.4 | 0.00161 | mg/L | 0.004139 | 0.00161 | mg/L | 0.004139 | 257.02% |
| QC value within limits for Se 196.026 Recovery = Not calculated | | | | | | | | |
| Si 251.611† | 3.0 | -0.0100 | mg/L | 0.00131 | -0.0100 | mg/L | 0.00131 | 13.02% |
| QC value within limits for Si 251.611 Recovery = Not calculated | | | | | | | | |
| Sn 189.927† | 7.6 | 0.00065 | mg/L | 0.000441 | 0.00065 | mg/L | 0.000441 | 68.21% |
| QC value within limits for Sn 189.927 Recovery = Not calculated | | | | | | | | |
| Ti 334.940† | 113.4 | 0.00246 | mg/L | 0.000122 | 0.00246 | mg/L | 0.000122 | 4.98% |
| QC value within limits for Ti 334.940 Recovery = Not calculated | | | | | | | | |
| Tl 190.801† | 1.1 | -0.00071 | mg/L | 0.001189 | -0.00071 | mg/L | 0.001189 | 168.01% |
| QC value within limits for Tl 190.801 Recovery = Not calculated | | | | | | | | |
| V 290.880† | -49.1 | -0.00185 | mg/L | 0.001428 | -0.00185 | mg/L | 0.001428 | 77.25% |
| QC value within limits for V 290.880 Recovery = Not calculated | | | | | | | | |
| Zn 206.200† | 0.4 | -0.00172 | mg/L | 0.000109 | -0.00172 | mg/L | 0.000109 | 6.34% |
| QC value within limits for Zn 206.200 Recovery = Not calculated | | | | | | | | |
| K 766.490† | 53.4 | -0.0308 | mg/L | 0.02868 | -0.0308 | mg/L | 0.02868 | 93.12% |
| QC value within limits for K 766.490 Recovery = Not calculated | | | | | | | | |

Approved: May 22, 2012

Lynn H. Rhoden

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Na 589.592† | 75.1 | -0.00510 mg/L | 0.005140 | -0.00510 mg/L | 0.005140 | 100.79% | |
| QC value within limits for Na 589.592 Recovery = Not calculated | | | | | | | |
| Sr 407.771† | 58.8 | 0.00089 mg/L | 0.000009 | 0.00089 mg/L | 0.000009 | 1.04% | |
| QC value within limits for Sr 407.771 Recovery = Not calculated | | | | | | | |
| Li 670.784† | -45.8 | -0.00337 mg/L | 0.001233 | -0.00337 mg/L | 0.001233 | 36.60% | |
| QC value within limits for Li 670.784 Recovery = Not calculated | | | | | | | |

All analyte(s) passed QC.

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**Sequence No.: 14** **Autosampler Location: 16**
**Sample ID: PBW 91 WG397855-02** **Date Collected: 5/21/2012 2:32:51 PM**
**Analyst: KHR** **Data Type: Original**
**Initial Sample Wt:** **Initial Sample Vol:**
**Dilution:** **Sample Prep Vol:**

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**Nebulizer Parameters: PBW 91 WG397855-02**

| Analyte | Back Pressure | Flow |
|---|---|---|
| All | 154.0 kPa | 0.50 L/min |

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**Mean Data: PBW 91 WG397855-02**

| Analyte | Mean Corrected Intensity | Calib. Conc. | Units | Std.Dev. | Sample Conc. | Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 2213015.8 | | | | | | 50295.08 | 2.27% |
| YRADIAL | 203691.1 | | | | | | 6715.89 | 3.30% |
| Ga 417.206 | 1332744.2 | | | | | | 21652.53 | 1.62% |
| GaRADIAL | 60934.7 | | | | | | 2411.83 | 3.96% |
| Ag 328.068† | -41.9 | -0.00071 | mg/L | 0.000350 | -0.00071 | mg/L | 0.000350 | 49.43% |
| Al 396.153† | 24.6 | 0.00209 | mg/L | 0.008812 | 0.00209 | mg/L | 0.008812 | 420.67% |
| As 188.979† | 0.6 | -0.00015 | mg/L | 0.001206 | -0.00015 | mg/L | 0.001206 | 784.88% |
| Ba 233.527† | 32.3 | -0.00058 | mg/L | 0.000142 | -0.00058 | mg/L | 0.000142 | 24.44% |
| Be 234.861† | 110.8 | 0.00011 | mg/L | 0.000030 | 0.00011 | mg/L | 0.000030 | 27.31% |
| B 249.677† | -47.2 | -0.00126 | mg/L | 0.000051 | -0.00126 | mg/L | 0.000051 | 4.07% |
| Ca 227.546† | 11.2 | 0.0767 | mg/L | 0.01046 | 0.0767 | mg/L | 0.01046 | 13.65% |
| Cd 228.802† | -1.0 | -0.00004 | mg/L | 0.000187 | -0.00004 | mg/L | 0.000187 | 433.11% |
| Co 228.616† | 14.1 | 0.00006 | mg/L | 0.000227 | 0.00006 | mg/L | 0.000227 | 400.76% |
| Cr 267.716† | -11.4 | -0.00015 | mg/L | 0.000050 | -0.00015 | mg/L | 0.000050 | 34.10% |
| Cu 327.393† | 137.6 | 0.00007 | mg/L | 0.000533 | 0.00007 | mg/L | 0.000533 | 754.12% |
| Fe 239.562† | 16.8 | 0.00437 | mg/L | 0.001715 | 0.00437 | mg/L | 0.001715 | 39.25% |
| Mg 279.077† | 29.3 | 0.0147 | mg/L | 0.00838 | 0.0147 | mg/L | 0.00838 | 57.04% |
| Mn 257.610† | 5.6 | -0.00177 | mg/L | 0.000011 | -0.00177 | mg/L | 0.000011 | 0.65% |
| Mo 202.031† | -9.8 | 0.00153 | mg/L | 0.000178 | 0.00153 | mg/L | 0.000178 | 11.68% |
| Ni 231.604† | -21.3 | -0.00124 | mg/L | 0.000142 | -0.00124 | mg/L | 0.000142 | 11.52% |
| Pb 220.353† | 11.3 | 0.00006 | mg/L | 0.000587 | 0.00006 | mg/L | 0.000587 | >999.9% |
| Sb 206.836† | -3.6 | -0.00077 | mg/L | 0.000885 | -0.00077 | mg/L | 0.000885 | 115.10% |
| Se 196.026† | -1.1 | 0.00073 | mg/L | 0.001199 | 0.00073 | mg/L | 0.001199 | 164.30% |
| Si 251.611† | -575.1 | -0.0233 | mg/L | 0.00032 | -0.0233 | mg/L | 0.00032 | 1.36% |
| Sn 189.927† | -2.2 | -0.00029 | mg/L | 0.000456 | -0.00029 | mg/L | 0.000456 | 156.89% |
| Ti 334.940† | -7.0 | 0.00234 | mg/L | 0.000089 | 0.00234 | mg/L | 0.000089 | 3.80% |
| Tl 190.801† | 3.0 | -0.00020 | mg/L | 0.002634 | -0.00020 | mg/L | 0.002634 | >999.9% |
| V 290.880† | 225.1 | -0.00040 | mg/L | 0.000298 | -0.00040 | mg/L | 0.000298 | 74.21% |
| Zn 206.200† | 109.6 | 0.00046 | mg/L | 0.000092 | 0.00046 | mg/L | 0.000092 | 20.22% |
| K 766.490† | 13.8 | -0.0492 | mg/L | 0.01107 | -0.0492 | mg/L | 0.01107 | 22.49% |
| Na 589.592† | 7.0 | -0.00945 | mg/L | 0.005654 | -0.00945 | mg/L | 0.005654 | 59.81% |
| Sr 407.771† | -38.0 | 0.00083 | mg/L | 0.000090 | 0.00083 | mg/L | 0.000090 | 10.75% |
| Li 670.784† | -59.5 | -0.00351 | mg/L | 0.000812 | -0.00351 | mg/L | 0.000812 | 23.13% |

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**Sequence No.: 15** **Autosampler Location: 17**
**Sample ID: LCSW 91 WG397855-03** **Date Collected: 5/21/2012 2:39:46 PM**
**Analyst: KHR** **Data Type: Original**
**Initial Sample Wt:** **Initial Sample Vol:**
**Dilution:** **Sample Prep Vol:**

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**Nebulizer Parameters: LCSW 91 WG397855-03**

| Analyte | Back Pressure | Flow |
|---|---|---|
| All | 154.0 kPa | 0.50 L/min |

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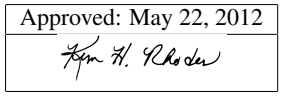
**Mean Data: LCSW 91 WG397855-03**

Approved: May 22, 2012



| Analyte | Mean Corrected Intensity | Calib. Conc. | Units | Std.Dev. | Sample Conc. | Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 2142719.0 | | | | | | 18480.23 | 0.86% |
| YRADIAL | 202927.8 | | | | | | 3256.61 | 1.60% |
| Ga 417.206 | 1232660.7 | | | | | | 19814.29 | 1.61% |
| GaRADIAL | 58403.9 | | | | | | 456.18 | 0.78% |
| Ag 328.068† | 63492.5 | 0.198 | mg/L | 0.0055 | 0.198 | mg/L | 0.0055 | 2.77% |
| Al 396.153† | 23250.4 | 5.03 | mg/L | 0.018 | 5.03 | mg/L | 0.018 | 0.36% |
| As 188.979† | 559.9 | 0.190 | mg/L | 0.0034 | 0.190 | mg/L | 0.0034 | 1.77% |
| Ba 233.527† | 79525.0 | 0.499 | mg/L | 0.0097 | 0.499 | mg/L | 0.0097 | 1.95% |
| Be 234.861† | 34509.9 | 0.0241 | mg/L | 0.00052 | 0.0241 | mg/L | 0.00052 | 2.17% |
| B 249.677† | 82787.0 | 0.951 | mg/L | 0.0279 | 0.951 | mg/L | 0.0279 | 2.93% |
| Ca 227.546† | 2081.8 | 4.97 | mg/L | 0.087 | 4.97 | mg/L | 0.087 | 1.76% |
| Cd 228.802† | 1442.4 | 0.0237 | mg/L | 0.00095 | 0.0237 | mg/L | 0.00095 | 4.01% |
| Co 228.616† | 4104.6 | 0.101 | mg/L | 0.0009 | 0.101 | mg/L | 0.0009 | 0.89% |
| Cr 267.716† | 29099.4 | 0.249 | mg/L | 0.0050 | 0.249 | mg/L | 0.0050 | 2.00% |
| Cu 327.393† | 60929.8 | 0.243 | mg/L | 0.0062 | 0.243 | mg/L | 0.0062 | 2.54% |
| Fe 239.562† | 19342.1 | 1.97 | mg/L | 0.033 | 1.97 | mg/L | 0.033 | 1.70% |
| Mg 279.077† | 12508.0 | 5.02 | mg/L | 0.056 | 5.02 | mg/L | 0.056 | 1.12% |
| Mn 257.610† | 221396.8 | 0.250 | mg/L | 0.0043 | 0.250 | mg/L | 0.0043 | 1.74% |
| Mo 202.031† | 18381.7 | 0.500 | mg/L | 0.0089 | 0.500 | mg/L | 0.0089 | 1.78% |
| Ni 231.604† | 18092.0 | 0.253 | mg/L | 0.0045 | 0.253 | mg/L | 0.0045 | 1.79% |
| Pb 220.353† | 2788.8 | 0.251 | mg/L | 0.0034 | 0.251 | mg/L | 0.0034 | 1.35% |
| Sb 206.836† | 2372.1 | 0.582 | mg/L | 0.0109 | 0.582 | mg/L | 0.0109 | 1.87% |
| Se 196.026† | 351.4 | 0.200 | mg/L | 0.0064 | 0.200 | mg/L | 0.0064 | 3.19% |
| Si 251.611† | 105848.9 | 2.42 | mg/L | 0.045 | 2.42 | mg/L | 0.045 | 1.86% |
| Sn 189.927† | 5937.9 | 0.563 | mg/L | 0.0071 | 0.563 | mg/L | 0.0071 | 1.27% |
| Ti 334.940† | 488944.7 | 0.498 | mg/L | 0.0019 | 0.498 | mg/L | 0.0019 | 0.38% |
| Tl 190.801† | 951.5 | 0.264 | mg/L | 0.0047 | 0.264 | mg/L | 0.0047 | 1.77% |
| V 290.880† | 95288.8 | 0.501 | mg/L | 0.0079 | 0.501 | mg/L | 0.0079 | 1.58% |
| Zn 206.200† | 25621.8 | 0.511 | mg/L | 0.0063 | 0.511 | mg/L | 0.0063 | 1.24% |
| K 766.490† | 55095.6 | 25.6 | mg/L | 0.17 | 25.6 | mg/L | 0.17 | 0.67% |
| Na 589.592† | 419159.3 | 26.9 | mg/L | 0.38 | 26.9 | mg/L | 0.38 | 1.40% |
| Sr 407.771† | 930368.7 | 0.509 | mg/L | 0.0070 | 0.509 | mg/L | 0.0070 | 1.38% |
| Li 670.784† | 50852.8 | 0.525 | mg/L | 0.0050 | 0.525 | mg/L | 0.0050 | 0.94% |

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**Sequence No.: 16** **Autosampler Location: 18**
**Sample ID: L1205038501 WG397855-01** **Date Collected: 5/21/2012 2:45:45 PM**
**Analyst: KHR** **Data Type: Original**
**Initial Sample Wt:** **Initial Sample Vol:**
**Dilution:** **Sample Prep Vol:**

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**Nebulizer Parameters: L1205038501 WG397855-01**

| Analyte | Back Pressure | Flow |
|---|---|---|
| All | 154.0 kPa | 0.50 L/min |

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**Mean Data: L1205038501 WG397855-01**

| Analyte | Mean Corrected Intensity | Calib. Conc. | Units | Std.Dev. | Sample Conc. | Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 2011376.1 | | | | | | 7909.51 | 0.39% |
| YRADIAL | 201034.1 | | | | | | 3664.72 | 1.82% |
| Ga 417.206 | 1192417.0 | | | | | | 32252.47 | 2.70% |
| GaRADIAL | 59760.8 | | | | | | 1182.93 | 1.98% |
| Ag 328.068† | 147.9 | 0.00048 | mg/L | 0.000309 | 0.00048 | mg/L | 0.000309 | 64.90% |
| Al 396.153† | 5.5 | -0.00202 | mg/L | 0.000815 | -0.00202 | mg/L | 0.000815 | 40.35% |
| As 188.979† | -1.4 | -0.00065 | mg/L | 0.003555 | -0.00065 | mg/L | 0.003555 | 550.63% |
| Ba 233.527† | 20839.3 | 0.130 | mg/L | 0.0015 | 0.130 | mg/L | 0.0015 | 1.17% |
| Be 234.861† | 659.4 | 0.00022 | mg/L | 0.000003 | 0.00022 | mg/L | 0.000003 | 1.25% |
| B 249.677† | 28107.7 | 0.322 | mg/L | 0.0152 | 0.322 | mg/L | 0.0152 | 4.70% |
| Ca 227.546† | 14882.2 | 33.6 | mg/L | 1.29 | 33.6 | mg/L | 1.29 | 3.84% |
| Cd 228.802† | 18.5 | 0.00029 | mg/L | 0.000111 | 0.00029 | mg/L | 0.000111 | 38.66% |
| Co 228.616† | 41.3 | 0.00066 | mg/L | 0.000243 | 0.00066 | mg/L | 0.000243 | 36.85% |
| Cr 267.716† | 150.3 | 0.00118 | mg/L | 0.000101 | 0.00118 | mg/L | 0.000101 | 8.56% |
| Cu 327.393† | -18.9 | -0.00041 | mg/L | 0.000522 | -0.00041 | mg/L | 0.000522 | 126.70% |
| Fe 239.562† | 16520.0 | 1.68 | mg/L | 0.042 | 1.68 | mg/L | 0.042 | 2.53% |
| Mg 279.077† | 72339.3 | 28.9 | mg/L | 0.59 | 28.9 | mg/L | 0.59 | 2.04% |
| Mn 257.610† | 834998.8 | 0.945 | mg/L | 0.0049 | 0.945 | mg/L | 0.0049 | 0.52% |
| Mo 202.031† | 70.7 | 0.00399 | mg/L | 0.000235 | 0.00399 | mg/L | 0.000235 | 5.88% |
| Ni 231.604† | 38.8 | -0.00039 | mg/L | 0.000504 | -0.00039 | mg/L | 0.000504 | 128.31% |

Approved: May 22, 2012

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Pb 220.353† | 4.4 | -0.00101 | mg/L | 0.000990 | -0.00101 | mg/L | 0.000990 97.74% |
| Sb 206.836† | -3.0 | -0.00054 | mg/L | 0.000931 | -0.00054 | mg/L | 0.000931 170.91% |
| Se 196.026† | 2.6 | 0.00305 | mg/L | 0.004566 | 0.00305 | mg/L | 0.004566 149.85% |
| Si 251.611† | 676089.7 | 15.5 | mg/L | 0.33 | 15.5 | mg/L | 0.33 2.10% |
| Sn 189.927† | -181.1 | -0.0173 | mg/L | 0.00043 | -0.0173 | mg/L | 0.00043 2.47% |
| Ti 334.940† | -5203.2 | 0.00209 | mg/L | 0.000581 | 0.00209 | mg/L | 0.000581 27.76% |
| Tl 190.801† | -10.1 | -0.00473 | mg/L | 0.003726 | -0.00473 | mg/L | 0.003726 78.76% |
| V 290.880† | 2318.1 | 0.00975 | mg/L | 0.000341 | 0.00975 | mg/L | 0.000341 3.50% |
| Zn 206.200† | 210.9 | 0.00246 | mg/L | 0.001093 | 0.00246 | mg/L | 0.001093 44.49% |
| K 766.490† | 2525.5 | 0.468 | mg/L | 0.0479 | 0.468 | mg/L | 0.0479 10.23% |
| Na 589.592† | 9086666.5 | 651 | mg/L | 16.8 | 651 | mg/L | 16.8 2.58% |
| Sr 407.771† | 437356.9 | 0.239 | mg/L | 0.0011 | 0.239 | mg/L | 0.0011 0.47% |
| Li 670.784† | -51.0 | -0.00342 | mg/L | 0.001504 | -0.00342 | mg/L | 0.001504 43.94% |

**Sequence No.: 17** **Autosampler Location: 19**
**Sample ID: L1205038501S WG397855-04** **Date Collected: 5/21/2012 2:51:52 PM**
**Analyst: KHR** **Data Type: Original**
**Initial Sample Wt:** **Initial Sample Vol:**
**Dilution:** **Sample Prep Vol:**

**Nebulizer Parameters: L1205038501S WG397855-04**

| Analyte | Back Pressure | Flow |
|---|---|---|
| All | 154.0 kPa | 0.50 L/min |

**Mean Data: L1205038501S WG397855-04**

| Analyte | Mean Corrected Intensity | Calib. Conc. | Units | Std.Dev. | Sample Conc. | Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 1957610.8 | | | | | | 6955.58 | 0.36% |
| YRADIAL | 199976.8 | | | | | | 4272.24 | 2.14% |
| Ga 417.206 | 1162462.4 | | | | | | 35364.40 | 3.04% |
| GaRADIAL | 59516.2 | | | | | | 1458.30 | 2.45% |
| Ag 328.068† | 65254.2 | 0.204 | mg/L | 0.0080 | 0.204 | mg/L | 0.0080 | 3.92% |
| Al 396.153† | 23534.4 | 5.10 | mg/L | 0.017 | 5.10 | mg/L | 0.017 | 0.33% |
| As 188.979† | 584.3 | 0.198 | mg/L | 0.0065 | 0.198 | mg/L | 0.0065 | 3.26% |
| Ba 233.527† | 103342.4 | 0.648 | mg/L | 0.0033 | 0.648 | mg/L | 0.0033 | 0.50% |
| Be 234.861† | 36041.1 | 0.0249 | mg/L | 0.00101 | 0.0249 | mg/L | 0.00101 | 4.04% |
| B 249.677† | 115196.6 | 1.32 | mg/L | 0.053 | 1.32 | mg/L | 0.053 | 3.98% |
| Ca 227.546† | 17461.7 | 39.6 | mg/L | 1.47 | 39.6 | mg/L | 1.47 | 3.71% |
| Cd 228.802† | 1483.6 | 0.0243 | mg/L | 0.00140 | 0.0243 | mg/L | 0.00140 | 5.77% |
| Co 228.616† | 4120.9 | 0.101 | mg/L | 0.0004 | 0.101 | mg/L | 0.0004 | 0.35% |
| Cr 267.716† | 29749.0 | 0.255 | mg/L | 0.0022 | 0.255 | mg/L | 0.0022 | 0.85% |
| Cu 327.393† | 62705.0 | 0.250 | mg/L | 0.0091 | 0.250 | mg/L | 0.0091 | 3.62% |
| Fe 239.562† | 36287.7 | 3.69 | mg/L | 0.031 | 3.69 | mg/L | 0.031 | 0.85% |
| Mg 279.077† | 85318.7 | 34.1 | mg/L | 0.28 | 34.1 | mg/L | 0.28 | 0.81% |
| Mn 257.610† | 1082035.4 | 1.23 | mg/L | 0.007 | 1.23 | mg/L | 0.007 | 0.57% |
| Mo 202.031† | 18905.3 | 0.515 | mg/L | 0.0044 | 0.515 | mg/L | 0.0044 | 0.85% |
| Ni 231.604† | 17804.6 | 0.249 | mg/L | 0.0011 | 0.249 | mg/L | 0.0011 | 0.45% |
| Pb 220.353† | 2786.4 | 0.250 | mg/L | 0.0008 | 0.250 | mg/L | 0.0008 | 0.32% |
| Sb 206.836† | 2422.2 | 0.594 | mg/L | 0.0232 | 0.594 | mg/L | 0.0232 | 3.91% |
| Se 196.026† | 356.8 | 0.203 | mg/L | 0.0073 | 0.203 | mg/L | 0.0073 | 3.60% |
| Si 251.611† | 811869.7 | 18.6 | mg/L | 0.50 | 18.6 | mg/L | 0.50 | 2.66% |
| Sn 189.927† | 6428.2 | 0.610 | mg/L | 0.0023 | 0.610 | mg/L | 0.0023 | 0.37% |
| Ti 334.940† | 499258.0 | 0.514 | mg/L | 0.0034 | 0.514 | mg/L | 0.0034 | 0.66% |
| Tl 190.801† | 890.1 | 0.246 | mg/L | 0.0026 | 0.246 | mg/L | 0.0026 | 1.06% |
| V 290.880† | 100241.8 | 0.526 | mg/L | 0.0075 | 0.526 | mg/L | 0.0075 | 1.43% |
| Zn 206.200† | 25975.9 | 0.518 | mg/L | 0.0030 | 0.518 | mg/L | 0.0030 | 0.58% |
| K 766.490† | 57557.0 | 26.1 | mg/L | 0.10 | 26.1 | mg/L | 0.10 | 0.37% |
| Na 589.592† | 9453097.6 | 681 | mg/L | 25.5 | 681 | mg/L | 25.5 | 3.75% |
| Sr 407.771† | 1357651.6 | 0.742 | mg/L | 0.0162 | 0.742 | mg/L | 0.0162 | 2.18% |
| Li 670.784† | 48537.1 | 0.501 | mg/L | 0.0030 | 0.501 | mg/L | 0.0030 | 0.61% |

**Sequence No.: 18** **Autosampler Location: 20**
**Sample ID: L1205038501SD WG397855-05** **Date Collected: 5/21/2012 2:57:58 PM**
**Analyst: KHR** **Data Type: Original**
**Initial Sample Wt:** **Initial Sample Vol:**
**Dilution:** **Sample Prep Vol:**

Approved: May 22, 2012

**Nebulizer Parameters: L1205038501SD WG397855-05**

| Analyte | Back Pressure | Flow |
|---|---|---|
| All | 154.0 kPa | 0.50 L/min |

**Mean Data: L1205038501SD WG397855-05**

| Analyte | Mean Corrected Intensity | Calib. Conc. | Calib. Units | Std.Dev. | Sample Conc. | Sample Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 1939349.8 | | | | | | 34834.37 | 1.80% |
| YRADIAL | 194320.0 | | | | | | 6221.11 | 3.20% |
| Ga 417.206 | 1142719.2 | | | | | | 6458.33 | 0.57% |
| GaRADIAL | 58083.8 | | | | | | 1300.42 | 2.24% |
| Ag 328.068† | 66767.3 | 0.209 | mg/L | 0.0033 | 0.209 | mg/L | 0.0033 | 1.58% |
| Al 396.153† | 23927.0 | 5.18 | mg/L | 0.026 | 5.18 | mg/L | 0.026 | 0.51% |
| As 188.979† | 602.1 | 0.204 | mg/L | 0.0027 | 0.204 | mg/L | 0.0027 | 1.32% |
| Ba 233.527† | 105784.3 | 0.663 | mg/L | 0.0124 | 0.663 | mg/L | 0.0124 | 1.87% |
| Be 234.861† | 36955.5 | 0.0256 | mg/L | 0.00038 | 0.0256 | mg/L | 0.00038 | 1.50% |
| B 249.677† | 118921.1 | 1.37 | mg/L | 0.022 | 1.37 | mg/L | 0.022 | 1.64% |
| Ca 227.546† | 18164.6 | 41.2 | mg/L | 0.71 | 41.2 | mg/L | 0.71 | 1.72% |
| Cd 228.802† | 1515.1 | 0.0248 | mg/L | 0.00088 | 0.0248 | mg/L | 0.00088 | 3.53% |
| Co 228.616† | 4198.6 | 0.103 | mg/L | 0.0018 | 0.103 | mg/L | 0.0018 | 1.78% |
| Cr 267.716† | 30424.2 | 0.261 | mg/L | 0.0017 | 0.261 | mg/L | 0.0017 | 0.66% |
| Cu 327.393† | 64338.3 | 0.257 | mg/L | 0.0024 | 0.257 | mg/L | 0.0024 | 0.92% |
| Fe 239.562† | 37852.5 | 3.85 | mg/L | 0.042 | 3.85 | mg/L | 0.042 | 1.10% |
| Mg 279.077† | 87973.3 | 35.2 | mg/L | 0.42 | 35.2 | mg/L | 0.42 | 1.18% |
| Mn 257.610† | 1107694.3 | 1.26 | mg/L | 0.011 | 1.26 | mg/L | 0.011 | 0.85% |
| Mo 202.031† | 19324.7 | 0.526 | mg/L | 0.0046 | 0.526 | mg/L | 0.0046 | 0.87% |
| Ni 231.604† | 18250.0 | 0.255 | mg/L | 0.0036 | 0.255 | mg/L | 0.0036 | 1.42% |
| Pb 220.353† | 2823.9 | 0.253 | mg/L | 0.0059 | 0.253 | mg/L | 0.0059 | 2.32% |
| Sb 206.836† | 2480.5 | 0.608 | mg/L | 0.0065 | 0.608 | mg/L | 0.0065 | 1.07% |
| Se 196.026† | 365.8 | 0.209 | mg/L | 0.0021 | 0.209 | mg/L | 0.0021 | 0.99% |
| Si 251.611† | 835961.3 | 19.2 | mg/L | 0.31 | 19.2 | mg/L | 0.31 | 1.60% |
| Sn 189.927† | 6009.0 | 0.570 | mg/L | 0.0112 | 0.570 | mg/L | 0.0112 | 1.96% |
| Ti 334.940† | 508081.4 | 0.523 | mg/L | 0.0020 | 0.523 | mg/L | 0.0020 | 0.38% |
| Tl 190.801† | 892.3 | 0.247 | mg/L | 0.0046 | 0.247 | mg/L | 0.0046 | 1.87% |
| V 290.880† | 102518.2 | 0.538 | mg/L | 0.0028 | 0.538 | mg/L | 0.0028 | 0.52% |
| Zn 206.200† | 26482.5 | 0.528 | mg/L | 0.0058 | 0.528 | mg/L | 0.0058 | 1.11% |
| K 766.490† | 58945.2 | 26.7 | mg/L | 0.08 | 26.7 | mg/L | 0.08 | 0.29% |
| Na 589.592† | 9898057.0 | 718 | mg/L | 18.5 | 718 | mg/L | 18.5 | 2.58% |
| Sr 407.771† | 1409769.3 | 0.770 | mg/L | 0.0138 | 0.770 | mg/L | 0.0138 | 1.80% |
| Li 670.784† | 49159.2 | 0.508 | mg/L | 0.0040 | 0.508 | mg/L | 0.0040 | 0.78% |

**Sequence No.: 19** **Autosampler Location: 21**
**Sample ID: L1205028401** **Date Collected: 5/21/2012 3:04:05 PM**
**Analyst: KHR** **Data Type: Original**
**Initial Sample Wt:** **Initial Sample Vol:**
**Dilution:** **Sample Prep Vol:**

**Nebulizer Parameters: L1205028401**

| Analyte | Back Pressure | Flow |
|---|---|---|
| All | 154.0 kPa | 0.50 L/min |

**Mean Data: L1205028401**

| Analyte | Mean Corrected Intensity | Calib. Conc. | Calib. Units | Std.Dev. | Sample Conc. | Sample Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 2055569.1 | | | | | | 30881.84 | 1.50% |
| YRADIAL | 198985.7 | | | | | | 1649.63 | 0.83% |
| Ga 417.206 | 1237394.9 | | | | | | 48174.72 | 3.89% |
| GaRADIAL | 59257.3 | | | | | | 203.40 | 0.34% |
| Ag 328.068† | -3277.1 | 0.00204 | mg/L | 0.000278 | 0.00204 | mg/L | 0.000278 | 13.63% |
| Al 396.153† | 17106.0 | 3.67 | mg/L | 0.023 | 3.67 | mg/L | 0.023 | 0.63% |
| As 188.979† | 32.6 | 0.00895 | mg/L | 0.001851 | 0.00895 | mg/L | 0.001851 | 20.67% |
| Ba 233.527† | 24453.6 | 0.153 | mg/L | 0.0032 | 0.153 | mg/L | 0.0032 | 2.07% |
| Be 234.861† | 8580.6 | -0.00002 | mg/L | 0.000161 | -0.00002 | mg/L | 0.000161 | >999.9% |
| B 249.677† | 8273.2 | 0.0822 | mg/L | 0.00578 | 0.0822 | mg/L | 0.00578 | 7.03% |
| Ca 227.546† | 55907.8 | 127 | mg/L | 6.9 | 127 | mg/L | 6.9 | 5.44% |
| Cd 228.802† | 1283.9 | 0.0216 | mg/L | 0.00109 | 0.0216 | mg/L | 0.00109 | 5.04% |
| Co 228.616† | 537.7 | 0.0138 | mg/L | 0.00016 | 0.0138 | mg/L | 0.00016 | 1.17% |
| Cr 267.716† | 18907.4 | 0.161 | mg/L | 0.0045 | 0.161 | mg/L | 0.0045 | 2.79% |

Approved: May 22, 2012

| | | | | | | |
|---|---|---|---|---|---|---|
| Cu 327.393† | 8037.9 | 0.0342 mg/L | 0.00215 | 0.0342 mg/L | 0.00215 | 6.27% |
| Fe 239.562† | 288461.9 | 29.3 mg/L | 0.26 | 29.3 mg/L | 0.26 | 0.87% |
| Mg 279.077† | 65379.8 | 26.2 mg/L | 0.20 | 26.2 mg/L | 0.20 | 0.77% |
| Mn 257.610† | 534258.6 | 0.605 mg/L | 0.0101 | 0.605 mg/L | 0.0101 | 1.67% |
| Mo 202.031† | 35654.8 | 0.969 mg/L | 0.0180 | 0.969 mg/L | 0.0180 | 1.86% |
| Ni 231.604† | 78760.5 | 1.10 mg/L | 0.016 | 1.10 mg/L | 0.016 | 1.41% |
| Pb 220.353† | 14.8 | -0.00025 mg/L | 0.003119 | -0.00025 mg/L | 0.003119 | >999.9% |
| Sb 206.836† | -18.2 | -0.00239 mg/L | 0.001041 | -0.00239 mg/L | 0.001041 | 43.51% |
| Se 196.026† | -0.9 | 0.00986 mg/L | 0.000934 | 0.00986 mg/L | 0.000934 | 9.47% |
| Si 251.611† | 347983.7 | 7.98 mg/L | 0.356 | 7.98 mg/L | 0.356 | 4.46% |
| Sn 189.927† | -274.8 | -0.0261 mg/L | 0.00363 | -0.0261 mg/L | 0.00363 | 13.87% |
| Ti 334.940† | 40660.4 | 0.0624 mg/L | 0.00332 | 0.0624 mg/L | 0.00332 | 5.32% |
| Tl 190.801† | -40.4 | -0.0118 mg/L | 0.00295 | -0.0118 mg/L | 0.00295 | 25.06% |
| V 290.880† | 4442.5 | 0.0187 mg/L | 0.00268 | 0.0187 mg/L | 0.00268 | 14.34% |
| Zn 206.200† | 199571.8 | 3.98 mg/L | 0.085 | 3.98 mg/L | 0.085 | 2.14% |
| K 766.490† | 46614.1 | 21.5 mg/L | 0.18 | 21.5 mg/L | 0.18 | 0.82% |
| Na 589.592† | 2416228.4 | 159 mg/L | 3.1 | 159 mg/L | 3.1 | 1.93% |
| Sr 407.771† | 1468160.1 | 0.800 mg/L | 0.0216 | 0.800 mg/L | 0.0216 | 2.70% |
| Li 670.784† | 3159.2 | 0.0299 mg/L | 0.00083 | 0.0299 mg/L | 0.00083 | 2.78% |

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**Sequence No.: 20** **Autosampler Location: 22**
**Sample ID: L1205028402** **Date Collected: 5/21/2012 3:10:06 PM**
**Analyst: KHR** **Data Type: Original**
**Initial Sample Wt:** **Initial Sample Vol:**
**Dilution:** **Sample Prep Vol:**

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**Nebulizer Parameters: L1205028402**

| Analyte | Back Pressure | Flow |
|---|---|---|
| All | 154.0 kPa | 0.50 L/min |

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**Mean Data: L1205028402**

| Analyte | Mean Corrected Intensity | Calib. Conc. | Units | Std.Dev. | Sample Conc. | Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 1945596.4 | | | | | | 19786.80 | 1.02% |
| YRADIAL | 198771.6 | | | | | | 4463.03 | 2.25% |
| Ga 417.206 | 1241516.2 | | | | | | 35900.81 | 2.89% |
| GaRADIAL | 62163.8 | | | | | | 721.88 | 1.16% |
| Ag 328.068† | 1438.2 | 0.00298 | mg/L | 0.000455 | 0.00298 | mg/L | 0.000455 | 15.26% |
| Al 396.153† | 117.8 | 0.0205 | mg/L | 0.00271 | 0.0205 | mg/L | 0.00271 | 13.19% |
| As 188.979† | 191.6 | 0.0654 | mg/L | 0.00163 | 0.0654 | mg/L | 0.00163 | 2.48% |
| Ba 233.527† | 185409.5 | 1.16 | mg/L | 0.013 | 1.16 | mg/L | 0.013 | 1.09% |
| Be 234.861† | 201.0 | 0.00017 | mg/L | 0.000011 | 0.00017 | mg/L | 0.000011 | 6.60% |
| B 249.677† | 32233.9 | 0.371 | mg/L | 0.0128 | 0.371 | mg/L | 0.0128 | 3.46% |
| Ca 227.546† | 132629.9 | 299 | mg/L | 10.8 | 299 | mg/L | 10.8 | 3.63% |
| Cd 228.802† | 62.6 | 0.00071 | mg/L | 0.000201 | 0.00071 | mg/L | 0.000201 | 28.43% |
| Co 228.616† | 66.7 | 0.00111 | mg/L | 0.000227 | 0.00111 | mg/L | 0.000227 | 20.37% |
| Cr 267.716† | 6537.6 | 0.0559 | mg/L | 0.00061 | 0.0559 | mg/L | 0.00061 | 1.08% |
| Cu 327.393† | -661.4 | -0.00317 | mg/L | 0.000393 | -0.00317 | mg/L | 0.000393 | 12.37% |
| Fe 239.562† | 1046.3 | 0.106 | mg/L | 0.0029 | 0.106 | mg/L | 0.0029 | 2.76% |
| Mg 279.077† | 327720.9 | 131 | mg/L | 2.7 | 131 | mg/L | 2.7 | 2.04% |
| Mn 257.610† | 48343.7 | 0.0531 | mg/L | 0.00036 | 0.0531 | mg/L | 0.00036 | 0.67% |
| Mo 202.031† | 1004.4 | 0.0290 | mg/L | 0.00041 | 0.0290 | mg/L | 0.00041 | 1.42% |
| Ni 231.604† | 5959.3 | 0.0827 | mg/L | 0.00076 | 0.0827 | mg/L | 0.00076 | 0.92% |
| Pb 220.353† | 13.6 | 0.00264 | mg/L | 0.001881 | 0.00264 | mg/L | 0.001881 | 71.24% |
| Sb 206.836† | 5.9 | 0.00127 | mg/L | 0.000461 | 0.00127 | mg/L | 0.000461 | 36.35% |
| Se 196.026† | -0.4 | 0.00118 | mg/L | 0.001606 | 0.00118 | mg/L | 0.001606 | 136.70% |
| Si 251.611† | 600468.7 | 13.8 | mg/L | 0.22 | 13.8 | mg/L | 0.22 | 1.61% |
| Sn 189.927† | -351.2 | -0.0334 | mg/L | 0.00101 | -0.0334 | mg/L | 0.00101 | 3.01% |
| Ti 334.940† | -42937.6 | 0.00358 | mg/L | 0.001794 | 0.00358 | mg/L | 0.001794 | 50.06% |
| Tl 190.801† | -68.1 | -0.0200 | mg/L | 0.00260 | -0.0200 | mg/L | 0.00260 | 13.02% |
| V 290.880† | 3072.4 | 0.0111 | mg/L | 0.00379 | 0.0111 | mg/L | 0.00379 | 34.07% |
| Zn 206.200† | 1728.1 | 0.0332 | mg/L | 0.00054 | 0.0332 | mg/L | 0.00054 | 1.62% |
| K 766.490† | 181251.9 | 84.3 | mg/L | 0.51 | 84.3 | mg/L | 0.51 | 0.61% |
| Na 589.592† | 8361370.7 | 592 | mg/L | 2.9 | 592 | mg/L | 2.9 | 0.49% |
| Sr 407.771† | 8898631.0 | 4.86 | mg/L | 0.145 | 4.86 | mg/L | 0.145 | 2.99% |
| Li 670.784† | 15431.1 | 0.157 | mg/L | 0.0051 | 0.157 | mg/L | 0.0051 | 3.22% |

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**Sequence No.: 21** **Autosampler Location: 23**

Approved: May 22, 2012

**Sample ID: L1205028403** **Date Collected: 5/21/2012 3:17:16 PM**
**Analyst: KHR** **Data Type: Original**
**Initial Sample Wt:** **Initial Sample Vol:**
**Dilution:** **Sample Prep Vol:**

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**Nebulizer Parameters: L1205028403**

| Analyte | Back Pressure | Flow |
|---|---|---|
| All | 154.0 kPa | 0.50 L/min |

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**Mean Data: L1205028403**

| Analyte | Mean Corrected Intensity | Calib. Conc. | Calib. Units | Std.Dev. | Sample Conc. | Sample Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 2056810.1 | | | | | | 32721.36 | 1.59% |
| YRADIAL | 197865.9 | | | | | | 4776.55 | 2.41% |
| Ga 417.206 | 1276532.2 | | | | | | 39178.77 | 3.07% |
| GaRADIAL | 60229.5 | | | | | | 1162.93 | 1.93% |
| Ag 328.068† | 655.9 | 0.00221 | mg/L | 0.000659 | 0.00221 | mg/L | 0.000659 | 29.75% |
| Al 396.153† | 20.1 | 0.00106 | mg/L | 0.003387 | 0.00106 | mg/L | 0.003387 | 319.29% |
| As 188.979† | -8.8 | -0.00321 | mg/L | 0.001959 | -0.00321 | mg/L | 0.001959 | 61.05% |
| Ba 233.527† | 19626.2 | 0.122 | mg/L | 0.0031 | 0.122 | mg/L | 0.0031 | 2.51% |
| Be 234.861† | 746.1 | 0.00020 | mg/L | 0.000085 | 0.00020 | mg/L | 0.000085 | 43.33% |
| B 249.677† | 13093.3 | 0.149 | mg/L | 0.0045 | 0.149 | mg/L | 0.0045 | 3.04% |
| Ca 227.546† | 68756.0 | 155 | mg/L | 6.0 | 155 | mg/L | 6.0 | 3.91% |
| Cd 228.802† | 74.1 | 0.00124 | mg/L | 0.000109 | 0.00124 | mg/L | 0.000109 | 8.80% |
| Co 228.616† | 19.0 | 0.00015 | mg/L | 0.000419 | 0.00015 | mg/L | 0.000419 | 280.90% |
| Cr 267.716† | 257.4 | 0.00210 | mg/L | 0.000075 | 0.00210 | mg/L | 0.000075 | 3.57% |
| Cu 327.393† | -54.1 | -0.00057 | mg/L | 0.000507 | -0.00057 | mg/L | 0.000507 | 89.38% |
| Fe 239.562† | 16883.6 | 1.72 | mg/L | 0.039 | 1.72 | mg/L | 0.039 | 2.30% |
| Mg 279.077† | 112544.5 | 45.0 | mg/L | 1.04 | 45.0 | mg/L | 1.04 | 2.31% |
| Mn 257.610† | 156074.0 | 0.175 | mg/L | 0.0041 | 0.175 | mg/L | 0.0041 | 2.37% |
| Mo 202.031† | 119.9 | 0.00516 | mg/L | 0.000612 | 0.00516 | mg/L | 0.000612 | 11.84% |
| Ni 231.604† | 147.0 | 0.00113 | mg/L | 0.000480 | 0.00113 | mg/L | 0.000480 | 42.62% |
| Pb 220.353† | 12.7 | 0.00117 | mg/L | 0.000703 | 0.00117 | mg/L | 0.000703 | 59.92% |
| Sb 206.836† | -6.4 | -0.00139 | mg/L | 0.002953 | -0.00139 | mg/L | 0.002953 | 212.93% |
| Se 196.026† | -3.1 | 0.00007 | mg/L | 0.003954 | 0.00007 | mg/L | 0.003954 | >999.9% |
| Si 251.611† | 391109.8 | 8.98 | mg/L | 0.300 | 8.98 | mg/L | 0.300 | 3.34% |
| Sn 189.927† | -309.1 | -0.0294 | mg/L | 0.00090 | -0.0294 | mg/L | 0.00090 | 3.08% |
| Ti 334.940† | -23137.1 | 0.00210 | mg/L | 0.002188 | 0.00210 | mg/L | 0.002188 | 103.96% |
| Tl 190.801† | -29.5 | -0.00944 | mg/L | 0.001546 | -0.00944 | mg/L | 0.001546 | 16.39% |
| V 290.880† | 2138.9 | 0.00838 | mg/L | 0.000667 | 0.00838 | mg/L | 0.000667 | 7.96% |
| Zn 206.200† | 6405.6 | 0.126 | mg/L | 0.0017 | 0.126 | mg/L | 0.0017 | 1.39% |
| K 766.490† | 10308.9 | 4.54 | mg/L | 0.069 | 4.54 | mg/L | 0.069 | 1.53% |
| Na 589.592† | 3110150.0 | 206 | mg/L | 4.6 | 206 | mg/L | 4.6 | 2.23% |
| Sr 407.771† | Saturated2 | | | | | | | |
| Li 670.784† | 3485.5 | 0.0333 | mg/L | 0.00035 | 0.0333 | mg/L | 0.00035 | 1.05% |

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**Sequence No.: 22** **Autosampler Location: 24**
**Sample ID: L1205028403PS WG397934-03** **Date Collected: 5/21/2012 3:23:13 PM**
**Analyst: KHR** **Data Type: Original**
**Initial Sample Wt:** **Initial Sample Vol:**
**Dilution:** **Sample Prep Vol:**

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**Nebulizer Parameters: L1205028403PS WG397934-03**

| Analyte | Back Pressure | Flow |
|---|---|---|
| All | 154.0 kPa | 0.50 L/min |

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**Mean Data: L1205028403PS WG397934-03**

| Analyte | Mean Corrected Intensity | Calib. Conc. | Calib. Units | Std.Dev. | Sample Conc. | Sample Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 2003467.7 | | | | | | 26600.97 | 1.33% |
| YRADIAL | 196208.9 | | | | | | 411.71 | 0.21% |
| Ga 417.206 | 1225716.5 | | | | | | 33624.51 | 2.74% |
| GaRADIAL | 59072.8 | | | | | | 414.01 | 0.70% |
| Ag 328.068† | 62754.2 | 0.197 | mg/L | 0.0044 | 0.197 | mg/L | 0.0044 | 2.23% |
| Al 396.153† | 23460.8 | 5.08 | mg/L | 0.006 | 5.08 | mg/L | 0.006 | 0.12% |
| As 188.979† | 566.3 | 0.192 | mg/L | 0.0043 | 0.192 | mg/L | 0.0043 | 2.25% |
| Ba 233.527† | 99036.4 | 0.621 | mg/L | 0.0083 | 0.621 | mg/L | 0.0083 | 1.34% |

Approved: May 22, 2012

Kym H. Rhoden

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Be 234.861† | 34615.8 | 0.0239 | mg/L | 0.00073 | 0.0239 | mg/L | 0.00073 3.04% |
| B 249.677† | 97224.4 | 1.12 | mg/L | 0.027 | 1.12 | mg/L | 0.027 2.44% |
| Ca 227.546† | 66083.7 | 149 | mg/L | 4.2 | 149 | mg/L | 4.2 2.79% |
| Cd 228.802† | 1451.3 | 0.0238 | mg/L | 0.00094 | 0.0238 | mg/L | 0.00094 3.93% |
| Co 228.616† | 4044.0 | 0.0996 | mg/L | 0.00183 | 0.0996 | mg/L | 0.00183 1.83% |
| Cr 267.716† | 29737.6 | 0.255 | mg/L | 0.0019 | 0.255 | mg/L | 0.0019 0.75% |
| Cu 327.393† | 60147.8 | 0.240 | mg/L | 0.0048 | 0.240 | mg/L | 0.0048 2.01% |
| Fe 239.562† | 35067.3 | 3.56 | mg/L | 0.007 | 3.56 | mg/L | 0.007 0.18% |
| Mg 279.077† | 114955.6 | 46.0 | mg/L | 0.19 | 46.0 | mg/L | 0.19 0.42% |
| Mn 257.610† | 372359.6 | 0.421 | mg/L | 0.0071 | 0.421 | mg/L | 0.0071 1.69% |
| Mo 202.031† | 18885.1 | 0.514 | mg/L | 0.0095 | 0.514 | mg/L | 0.0095 1.85% |
| Ni 231.604† | 17709.9 | 0.247 | mg/L | 0.0043 | 0.247 | mg/L | 0.0043 1.73% |
| Pb 220.353† | 2789.2 | 0.252 | mg/L | 0.0052 | 0.252 | mg/L | 0.0052 2.08% |
| Sb 206.836† | 2367.8 | 0.580 | mg/L | 0.0146 | 0.580 | mg/L | 0.0146 2.52% |
| Se 196.026† | 342.4 | 0.195 | mg/L | 0.0113 | 0.195 | mg/L | 0.0113 5.76% |
| Si 251.611† | 528938.1 | 12.1 | mg/L | 0.16 | 12.1 | mg/L | 0.16 1.31% |
| Sn 189.927† | -318.3 | -0.0303 | mg/L | 0.00076 | -0.0303 | mg/L | 0.00076 2.53% |
| Ti 334.940† | 483724.1 | 0.515 | mg/L | 0.0047 | 0.515 | mg/L | 0.0047 0.90% |
| Tl 190.801† | 879.4 | 0.244 | mg/L | 0.0067 | 0.244 | mg/L | 0.0067 2.76% |
| V 290.880† | 100454.0 | 0.527 | mg/L | 0.0065 | 0.527 | mg/L | 0.0065 1.23% |
| Zn 206.200† | 30651.9 | 0.611 | mg/L | 0.0025 | 0.611 | mg/L | 0.0025 0.40% |
| K 766.490† | 64383.8 | 29.8 | mg/L | 0.25 | 29.8 | mg/L | 0.25 0.82% |
| Na 589.592† | 3317390.3 | 220 | mg/L | 3.0 | 220 | mg/L | 3.0 1.38% |
| Sr 407.771† | Saturated2 | | | | | | |
| Li 670.784† | 53397.3 | 0.552 | mg/L | 0.0069 | 0.552 | mg/L | 0.0069 1.25% |

**Sequence No.: 23** **Autosampler Location: 25**
**Sample ID: L1205028403DL WG397934-04** **Date Collected: 5/21/2012 3:29:11 PM**
**Analyst: KHR** **Data Type: Original**
**Initial Sample Wt:** **Initial Sample Vol:**
**Dilution:** **Sample Prep Vol:**

**Nebulizer Parameters: L1205028403DL WG397934-04**

| Analyte | Back Pressure | Flow |
|---|---|---|
| All | 154.0 kPa | 0.50 L/min |

**Mean Data: L1205028403DL WG397934-04**

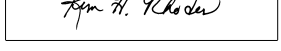
| Analyte | Mean Corrected Intensity | Calib. Conc. | Units | Std.Dev. | Sample Conc. | Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 2143531.1 | | | | | | 8902.80 | 0.42% |
| YRADIAL | 204169.9 | | | | | | 4942.09 | 2.42% |
| Ga 417.206 | 1278481.0 | | | | | | 34087.71 | 2.67% |
| GaRADIAL | 61717.9 | | | | | | 1192.21 | 1.93% |
| Ag 328.068† | 256.4 | 0.00016 | mg/L | 0.000310 | 0.00016 | mg/L | 0.000310 | 194.42% |
| Al 396.153† | 39.2 | 0.00522 | mg/L | 0.002014 | 0.00522 | mg/L | 0.002014 | 38.61% |
| As 188.979† | -12.3 | -0.00454 | mg/L | 0.001457 | -0.00454 | mg/L | 0.001457 | 32.06% |
| Ba 233.527† | 3994.8 | 0.0243 | mg/L | 0.00005 | 0.0243 | mg/L | 0.00005 | 0.20% |
| Be 234.861† | 273.8 | 0.00016 | mg/L | 0.000028 | 0.00016 | mg/L | 0.000028 | 17.75% |
| B 249.677† | 2871.6 | 0.0322 | mg/L | 0.00149 | 0.0322 | mg/L | 0.00149 | 4.64% |
| Ca 227.546† | 13054.5 | 29.4 | mg/L | 1.14 | 29.4 | mg/L | 1.14 | 3.89% |
| Cd 228.802† | 29.8 | 0.00050 | mg/L | 0.000328 | 0.00050 | mg/L | 0.000328 | 65.81% |
| Co 228.616† | 21.4 | 0.00023 | mg/L | 0.000177 | 0.00023 | mg/L | 0.000177 | 75.80% |
| Cr 267.716† | 47.9 | 0.00035 | mg/L | 0.000127 | 0.00035 | mg/L | 0.000127 | 36.02% |
| Cu 327.393† | 7.8 | -0.00042 | mg/L | 0.000427 | -0.00042 | mg/L | 0.000427 | 101.43% |
| Fe 239.562† | 3259.5 | 0.334 | mg/L | 0.0146 | 0.334 | mg/L | 0.0146 | 4.36% |
| Mg 279.077† | 21717.0 | 8.69 | mg/L | 0.383 | 8.69 | mg/L | 0.383 | 4.40% |
| Mn 257.610† | 31325.9 | 0.0338 | mg/L | 0.00063 | 0.0338 | mg/L | 0.00063 | 1.87% |
| Mo 202.031† | 45.4 | 0.00305 | mg/L | 0.000053 | 0.00305 | mg/L | 0.000053 | 1.73% |
| Ni 231.604† | 67.4 | 0.00001 | mg/L | 0.000311 | 0.00001 | mg/L | 0.000311 | >999.9% |
| Pb 220.353† | 4.0 | -0.00042 | mg/L | 0.001045 | -0.00042 | mg/L | 0.001045 | 250.88% |
| Sb 206.836† | -6.7 | -0.00150 | mg/L | 0.001493 | -0.00150 | mg/L | 0.001493 | 99.24% |
| Se 196.026† | 1.9 | 0.00252 | mg/L | 0.002319 | 0.00252 | mg/L | 0.002319 | 92.17% |
| Si 251.611† | 78173.2 | 1.79 | mg/L | 0.027 | 1.79 | mg/L | 0.027 | 1.54% |
| Sn 189.927† | -177.7 | -0.0169 | mg/L | 0.00058 | -0.0169 | mg/L | 0.00058 | 3.44% |
| Ti 334.940† | -4511.1 | 0.00218 | mg/L | 0.000488 | 0.00218 | mg/L | 0.000488 | 22.43% |
| Tl 190.801† | -19.4 | -0.00634 | mg/L | 0.001842 | -0.00634 | mg/L | 0.001842 | 29.06% |
| V 290.880† | 1128.7 | 0.00411 | mg/L | 0.002036 | 0.00411 | mg/L | 0.002036 | 49.52% |
| Zn 206.200† | 1353.4 | 0.0252 | mg/L | 0.00021 | 0.0252 | mg/L | 0.00021 | 0.81% |
| K 766.490† | 2149.4 | 0.904 | mg/L | 0.0251 | 0.904 | mg/L | 0.0251 | 2.78% |

Approved: May 22, 2012

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Na 589.592† | 620207.9 | 39.9 mg/L | 0.33 | 39.9 mg/L | 0.33 | 0.82% |
| Sr 407.771† | 1915160.8 | 1.05 mg/L | 0.006 | 1.05 mg/L | 0.006 | 0.59% |
| Li 670.784† | 676.0 | 0.00413 mg/L | 0.001160 | 0.00413 mg/L | 0.001160 | 28.10% |

User canceled analysis.

Approved: May 22, 2012



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**Analysis Begun**

**Start Time: 5/21/2012 3:36:58 PM** **Plasma On Time: 5/21/2012 11:33:15 AM**
**Logged In Analyst: peicp2** **Technique: ICP Continuous**
**Spectrometer Model: Optima 4300 DV, S/N 077N4011401** **Autosampler Model: Cetac**

**Sample Information File: C:\pe\peicp2\Sample Information\MONDAY1.sif**
**Batch ID:**
**Results Data Set: 052112H5**
**Results Library: C:\pe\peicp2\Results\Results.mdb**

==========

**Method Loaded**
**Method Name: 200.7-6010 PE-ICP2.1** **Method Last Saved: 5/18/2012 7:40:23 AM**
**IEC File: CA227_LiBeMOD.iec** **SMF File:**
**Method Description: STANDARD**

==========

**Sequence No.: 1** **Autosampler Location: 6**
**Sample ID: CCV** **Date Collected: 5/21/2012 3:37:00 PM**
**Analyst:** **Data Type: Original**
**Initial Sample Wt:** **Initial Sample Vol:**
**Dilution:** **Sample Prep Vol:**

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**Nebulizer Parameters: CCV**

| Analyte | Back Pressure | Flow |
|---|---|---|
| All | 154.0 kPa | 0.50 L/min |

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**Mean Data: CCV**

| Analyte | Mean Corrected Intensity | Calib. Conc. | Units | Std.Dev. | Sample Conc. | Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 2090106.7 | | | | | | 21627.55 | 1.03% |
| YRADIAL | 203348.9 | | | | | | 7997.88 | 3.93% |
| Ga 417.206 | 1186663.2 | | | | | | 34397.08 | 2.90% |
| GaRADIAL | 59970.9 | | | | | | 1801.07 | 3.00% |
| Ag 328.068† | 128016.1 | 0.400 | mg/L | 0.0099 | 0.400 | mg/L | 0.0099 | 2.46% |
| QC value within limits for Ag 328.068 Recovery = 100.02% | | | | | | | | |
| Al 396.153† | 45597.7 | 9.87 | mg/L | 0.018 | 9.87 | mg/L | 0.018 | 0.18% |
| QC value within limits for Al 396.153 Recovery = 98.75% | | | | | | | | |
| As 188.979† | 1160.2 | 0.394 | mg/L | 0.0079 | 0.394 | mg/L | 0.0079 | 2.01% |
| QC value within limits for As 188.979 Recovery = 98.42% | | | | | | | | |
| Ba 233.527† | 162456.9 | 1.02 | mg/L | 0.018 | 1.02 | mg/L | 0.018 | 1.79% |
| QC value within limits for Ba 233.527 Recovery = 101.92% | | | | | | | | |
| Be 234.861† | 70005.8 | 0.0489 | mg/L | 0.00094 | 0.0489 | mg/L | 0.00094 | 1.92% |
| QC value within limits for Be 234.861 Recovery = 97.87% | | | | | | | | |
| B 249.677† | 42425.9 | 0.484 | mg/L | 0.0119 | 0.484 | mg/L | 0.0119 | 2.45% |
| QC value within limits for B 249.677 Recovery = 96.87% | | | | | | | | |
| Ca 227.546† | 4358.0 | 10.3 | mg/L | 0.31 | 10.3 | mg/L | 0.31 | 2.96% |
| QC value within limits for Ca 227.546 Recovery = 103.22% | | | | | | | | |
| Cd 228.802† | 2948.0 | 0.0484 | mg/L | 0.00210 | 0.0484 | mg/L | 0.00210 | 4.33% |
| QC value within limits for Cd 228.802 Recovery = 96.82% | | | | | | | | |
| Co 228.616† | 8216.0 | 0.203 | mg/L | 0.0031 | 0.203 | mg/L | 0.0031 | 1.55% |
| QC value within limits for Co 228.616 Recovery = 101.40% | | | | | | | | |
| Cr 267.716† | 59148.5 | 0.507 | mg/L | 0.0071 | 0.507 | mg/L | 0.0071 | 1.40% |
| QC value within limits for Cr 267.716 Recovery = 101.41% | | | | | | | | |
| Cu 327.393† | 123854.0 | 0.495 | mg/L | 0.0113 | 0.495 | mg/L | 0.0113 | 2.29% |
| QC value within limits for Cu 327.393 Recovery = 98.93% | | | | | | | | |
| Fe 239.562† | 38899.3 | 3.95 | mg/L | 0.040 | 3.95 | mg/L | 0.040 | 1.01% |
| QC value within limits for Fe 239.562 Recovery = 98.83% | | | | | | | | |
| Mg 279.077† | 24720.5 | 9.91 | mg/L | 0.161 | 9.91 | mg/L | 0.161 | 1.63% |
| QC value within limits for Mg 279.077 Recovery = 99.10% | | | | | | | | |
| Mn 257.610† | 455400.7 | 0.515 | mg/L | 0.0102 | 0.515 | mg/L | 0.0102 | 1.98% |
| QC value within limits for Mn 257.610 Recovery = 103.08% | | | | | | | | |
| Mo 202.031† | 37066.1 | 1.01 | mg/L | 0.017 | 1.01 | mg/L | 0.017 | 1.73% |
| QC value within limits for Mo 202.031 Recovery = 100.67% | | | | | | | | |
| Ni 231.604† | 36363.7 | 0.509 | mg/L | 0.0091 | 0.509 | mg/L | 0.0091 | 1.78% |
| QC value within limits for Ni 231.604 Recovery = 101.80% | | | | | | | | |
| Pb 220.353† | 5694.5 | 0.513 | mg/L | 0.0078 | 0.513 | mg/L | 0.0078 | 1.52% |

Approved: May 22, 2012

QC value within limits for Pb 220.353 Recovery = 102.55%
Sb 206.836† 4856.1 1.19 mg/L 0.033 1.19 mg/L 0.033 2.73%
QC value within limits for Sb 206.836 Recovery = 99.19%
Se 196.026† 698.3 0.396 mg/L 0.0109 0.396 mg/L 0.0109 2.74%
QC value within limits for Se 196.026 Recovery = 99.10%
Si 251.611† 214984.8 4.92 mg/L 0.089 4.92 mg/L 0.089 1.80%
QC value within limits for Si 251.611 Recovery = 98.40%
Sn 189.927† 10902.6 1.03 mg/L 0.017 1.03 mg/L 0.017 1.60%
QC value within limits for Sn 189.927 Recovery = 103.38%
Ti 334.940† 979967.0 0.997 mg/L 0.0053 0.997 mg/L 0.0053 0.53%
QC value within limits for Ti 334.940 Recovery = 99.65%
Tl 190.801† 1898.2 0.527 mg/L 0.0064 0.527 mg/L 0.0064 1.22%
QC value within limits for Tl 190.801 Recovery = 105.42%
V 290.880† 193659.1 1.02 mg/L 0.016 1.02 mg/L 0.016 1.60%
QC value within limits for V 290.880 Recovery = 101.90%
Zn 206.200† 51469.9 1.03 mg/L 0.011 1.03 mg/L 0.011 1.02%
QC value within limits for Zn 206.200 Recovery = 102.87%
K 766.490† 107032.1 49.9 mg/L 0.07 49.9 mg/L 0.07 0.15%
QC value within limits for K 766.490 Recovery = 99.82%
Na 589.592† 765044.3 49.3 mg/L 1.94 49.3 mg/L 1.94 3.92%
QC value within limits for Na 589.592 Recovery = 98.66%
Sr 407.771† 1796810.3 0.983 mg/L 0.0492 0.983 mg/L 0.0492 5.00%
QC value within limits for Sr 407.771 Recovery = 98.25%
Li 670.784† 97848.0 1.01 mg/L 0.008 1.01 mg/L 0.008 0.80%
QC value within limits for Li 670.784 Recovery = 101.34%
All analyte(s) passed QC.

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**Sequence No.: 2** **Autosampler Location: 1**
**Sample ID: CCB** **Date Collected: 5/21/2012 3:43:00 PM**
**Analyst:** **Data Type: Original**
**Initial Sample Wt:** **Initial Sample Vol:**
**Dilution:** **Sample Prep Vol:**

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**Nebulizer Parameters: CCB**

| Analyte | Back Pressure | Flow |
|---|---|---|
| All | 154.0 kPa | 0.50 L/min |

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**Mean Data: CCB**

| Analyte | Mean Corrected Intensity | Calib. Conc. | Units | Std.Dev. | Sample Conc. | Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 2112992.6 | | | | | | 38730.79 | 1.83% |
| YRADIAL | 194497.8 | | | | | | 1062.52 | 0.55% |
| Ga 417.206 | 1245906.5 | | | | | | 32095.77 | 2.58% |
| GaRADIAL | 57894.1 | | | | | | 1940.36 | 3.35% |
| Ag 328.068† | 169.7 | -0.00005 | mg/L | 0.000525 | -0.00005 | mg/L | 0.000525 | >999.9% |
| QC value within limits for Ag 328.068 Recovery = Not calculated | | | | | | | | |
| Al 396.153† | 31.0 | 0.00345 | mg/L | 0.002591 | 0.00345 | mg/L | 0.002591 | 75.14% |
| QC value within limits for Al 396.153 Recovery = Not calculated | | | | | | | | |
| As 188.979† | 1.2 | 0.00007 | mg/L | 0.001805 | 0.00007 | mg/L | 0.001805 | >999.9% |
| QC value within limits for As 188.979 Recovery = Not calculated | | | | | | | | |
| Ba 233.527† | 18.3 | -0.00067 | mg/L | 0.000102 | -0.00067 | mg/L | 0.000102 | 15.29% |
| QC value within limits for Ba 233.527 Recovery = Not calculated | | | | | | | | |
| Be 234.861† | -4.2 | 0.00003 | mg/L | 0.000032 | 0.00003 | mg/L | 0.000032 | 104.60% |
| QC value within limits for Be 234.861 Recovery = Not calculated | | | | | | | | |
| B 249.677† | 150.9 | 0.00102 | mg/L | 0.000074 | 0.00102 | mg/L | 0.000074 | 7.25% |
| QC value within limits for B 249.677 Recovery = Not calculated | | | | | | | | |
| Ca 227.546† | 11.7 | 0.0777 | mg/L | 0.04182 | 0.0777 | mg/L | 0.04182 | 53.80% |
| QC value within limits for Ca 227.546 Recovery = Not calculated | | | | | | | | |
| Cd 228.802† | 2.1 | 0.00001 | mg/L | 0.000066 | 0.00001 | mg/L | 0.000066 | 968.29% |
| QC value within limits for Cd 228.802 Recovery = Not calculated | | | | | | | | |
| Co 228.616† | 10.7 | -0.00003 | mg/L | 0.000095 | -0.00003 | mg/L | 0.000095 | 359.55% |
| QC value within limits for Co 228.616 Recovery = Not calculated | | | | | | | | |
| Cr 267.716† | 4.0 | -0.00002 | mg/L | 0.000061 | -0.00002 | mg/L | 0.000061 | 396.63% |
| QC value within limits for Cr 267.716 Recovery = Not calculated | | | | | | | | |
| Cu 327.393† | 25.8 | -0.00037 | mg/L | 0.000130 | -0.00037 | mg/L | 0.000130 | 34.65% |
| QC value within limits for Cu 327.393 Recovery = Not calculated | | | | | | | | |
| Fe 239.562† | 13.1 | 0.00399 | mg/L | 0.000706 | 0.00399 | mg/L | 0.000706 | 17.67% |
| QC value within limits for Fe 239.562 Recovery = Not calculated | | | | | | | | |
| Mg 279.077† | 25.9 | 0.0134 | mg/L | 0.00374 | 0.0134 | mg/L | 0.00374 | 27.97% |

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QC value within limits for Mg 279.077 Recovery = Not calculated
Mn 257.610† 170.6 -0.00158 mg/L 0.000033 -0.00158 mg/L 0.000033 2.10%
QC value within limits for Mn 257.610 Recovery = Not calculated
Mo 202.031† 4.3 0.00191 mg/L 0.000320 0.00191 mg/L 0.000320 16.79%
QC value within limits for Mo 202.031 Recovery = Not calculated
Ni 231.604† -22.4 -0.00125 mg/L 0.000208 -0.00125 mg/L 0.000208 16.64%
QC value within limits for Ni 231.604 Recovery = Not calculated
Pb 220.353† 2.9 -0.00070 mg/L 0.000727 -0.00070 mg/L 0.000727 103.89%
QC value within limits for Pb 220.353 Recovery = Not calculated
Sb 206.836† 1.6 0.00051 mg/L 0.001075 0.00051 mg/L 0.001075 209.88%
QC value within limits for Sb 206.836 Recovery = Not calculated
Se 196.026† -3.5 -0.00063 mg/L 0.005270 -0.00063 mg/L 0.005270 830.29%
QC value within limits for Se 196.026 Recovery = Not calculated
Si 251.611† 400.5 -0.00091 mg/L 0.001634 -0.00091 mg/L 0.001634 179.52%
QC value within limits for Si 251.611 Recovery = Not calculated
Sn 189.927† 11.2 0.00099 mg/L 0.000238 0.00099 mg/L 0.000238 24.12%
QC value within limits for Sn 189.927 Recovery = Not calculated
Ti 334.940† 140.4 0.00249 mg/L 0.000106 0.00249 mg/L 0.000106 4.26%
QC value within limits for Ti 334.940 Recovery = Not calculated
Tl 190.801† -5.6 -0.00253 mg/L 0.002903 -0.00253 mg/L 0.002903 114.87%
QC value within limits for Tl 190.801 Recovery = Not calculated
V 290.880† 230.7 -0.00037 mg/L 0.001062 -0.00037 mg/L 0.001062 285.19%
QC value within limits for V 290.880 Recovery = Not calculated
Zn 206.200† 1.4 -0.00170 mg/L 0.000152 -0.00170 mg/L 0.000152 8.95%
QC value within limits for Zn 206.200 Recovery = Not calculated
K 766.490† 59.7 -0.0279 mg/L 0.01710 -0.0279 mg/L 0.01710 61.29%
QC value within limits for K 766.490 Recovery = Not calculated
Na 589.592† 384.9 0.0147 mg/L 0.01208 0.0147 mg/L 0.01208 82.05%
QC value within limits for Na 589.592 Recovery = Not calculated
Sr 407.771† 162.6 0.00094 mg/L 0.000008 0.00094 mg/L 0.000008 0.85%
QC value within limits for Sr 407.771 Recovery = Not calculated
Li 670.784† -62.2 -0.00354 mg/L 0.000490 -0.00354 mg/L 0.000490 13.83%
QC value within limits for Li 670.784 Recovery = Not calculated
All analyte(s) passed QC.

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**Sequence No.: 3** **Autosampler Location: 26**
**Sample ID: L1205028404** **Date Collected: 5/21/2012 3:49:56 PM**
**Analyst: KHR** **Data Type: Original**
**Initial Sample Wt:** **Initial Sample Vol:**
**Dilution:** **Sample Prep Vol:**

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**Nebulizer Parameters: L1205028404**

| Analyte | Back Pressure | Flow |
|---|---|---|
| All | 154.0 kPa | 0.50 L/min |

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**Mean Data: L1205028404**

| Analyte | Mean Corrected Intensity | Calib. Conc. | Units | Std.Dev. | Sample Conc. | Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 2061709.3 | | | | | | 38039.02 | 1.85% |
| YRADIAL | 201759.3 | | | | | | 681.38 | 0.34% |
| Ga 417.206 | 1256668.4 | | | | | | 11577.42 | 0.92% |
| GaRADIAL | 60975.1 | | | | | | 703.17 | 1.15% |
| Ag 328.068† | 652.8 | 0.00113 | mg/L | 0.000194 | 0.00113 | mg/L | 0.000194 | 17.25% |
| Al 396.153† | -67.4 | -0.0180 | mg/L | 0.00051 | -0.0180 | mg/L | 0.00051 | 2.84% |
| As 188.979† | -6.0 | -0.00226 | mg/L | 0.002068 | -0.00226 | mg/L | 0.002068 | 91.53% |
| Ba 233.527† | 18669.4 | 0.116 | mg/L | 0.0022 | 0.116 | mg/L | 0.0022 | 1.90% |
| Be 234.861† | 700.1 | 0.00020 | mg/L | 0.000129 | 0.00020 | mg/L | 0.000129 | 66.31% |
| B 249.677† | 12621.8 | 0.144 | mg/L | 0.0015 | 0.144 | mg/L | 0.0015 | 1.05% |
| Ca 227.546† | 65920.0 | 148 | mg/L | 0.7 | 148 | mg/L | 0.7 | 0.45% |
| Cd 228.802† | 14.4 | 0.00023 | mg/L | 0.000149 | 0.00023 | mg/L | 0.000149 | 66.24% |
| Co 228.616† | 30.3 | 0.00043 | mg/L | 0.000181 | 0.00043 | mg/L | 0.000181 | 41.84% |
| Cr 267.716† | 238.2 | 0.00194 | mg/L | 0.000121 | 0.00194 | mg/L | 0.000121 | 6.27% |
| Cu 327.393† | -310.2 | -0.00161 | mg/L | 0.000522 | -0.00161 | mg/L | 0.000522 | 32.48% |
| Fe 239.562† | 15451.1 | 1.57 | mg/L | 0.019 | 1.57 | mg/L | 0.019 | 1.24% |
| Mg 279.077† | 106475.1 | 42.6 | mg/L | 0.42 | 42.6 | mg/L | 0.42 | 0.99% |
| Mn 257.610† | 150716.0 | 0.169 | mg/L | 0.0038 | 0.169 | mg/L | 0.0038 | 2.24% |
| Mo 202.031† | 115.9 | 0.00505 | mg/L | 0.000114 | 0.00505 | mg/L | 0.000114 | 2.26% |
| Ni 231.604† | 126.5 | 0.00084 | mg/L | 0.000477 | 0.00084 | mg/L | 0.000477 | 56.85% |
| Pb 220.353† | 17.8 | 0.00159 | mg/L | 0.001210 | 0.00159 | mg/L | 0.001210 | 76.21% |

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| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Sb 206.836† | -10.1 | -0.00229 | mg/L | 0.000171 | -0.00229 | mg/L | 0.000171 7.48% |
| Se 196.026† | -3.6 | -0.00025 | mg/L | 0.000153 | -0.00025 | mg/L | 0.000153 60.95% |
| Si 251.611† | 307088.2 | 7.05 | mg/L | 0.076 | 7.05 | mg/L | 0.076 1.08% |
| Sn 189.927† | -299.6 | -0.0285 | mg/L | 0.00126 | -0.0285 | mg/L | 0.00126 4.43% |
| Ti 334.940† | -22530.5 | 0.00176 | mg/L | 0.001416 | 0.00176 | mg/L | 0.001416 80.40% |
| Tl 190.801† | -33.8 | -0.0106 | mg/L | 0.00300 | -0.0106 | mg/L | 0.00300 28.32% |
| V 290.880† | 1520.2 | 0.00519 | mg/L | 0.002440 | 0.00519 | mg/L | 0.002440 46.96% |
| Zn 206.200† | 116.8 | 0.00059 | mg/L | 0.000235 | 0.00059 | mg/L | 0.000235 40.02% |
| K 766.490† | 9903.6 | 4.35 | mg/L | 0.031 | 4.35 | mg/L | 0.031 0.71% |
| Na 589.592† | 3028054.3 | 200 | mg/L | 1.8 | 200 | mg/L | 1.8 0.90% |
| Sr 407.771† | 9218663.4 | 5.04 | mg/L | 0.032 | 5.04 | mg/L | 0.032 0.64% |
| Li 670.784† | 3383.1 | 0.0322 | mg/L | 0.00115 | 0.0322 | mg/L | 0.00115 3.57% |

**Sequence No.: 4** **Autosampler Location: 27**
**Sample ID: L1205028405** **Date Collected: 5/21/2012 3:56:00 PM**
**Analyst: KHR** **Data Type: Original**
**Initial Sample Wt:** **Initial Sample Vol:**
**Dilution:** **Sample Prep Vol:**

**Nebulizer Parameters: L1205028405**

| Analyte | Back Pressure | Flow |
|---|---|---|
| All | 154.0 kPa | 0.50 L/min |

**Mean Data: L1205028405**

| Analyte | Mean Corrected Intensity | Calib. Conc. | Units | Std.Dev. | Sample Conc. | Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 2059398.5 | | | | | | 30717.17 | 1.49% |
| YRADIAL | 198107.3 | | | | | | 2587.68 | 1.31% |
| Ga 417.206 | 1226991.9 | | | | | | 19154.31 | 1.56% |
| GaRADIAL | 61110.0 | | | | | | 569.90 | 0.93% |
| Ag 328.068† | -1306.3 | 0.00203 | mg/L | 0.000105 | 0.00203 | mg/L | 0.000105 | 5.17% |
| Al 396.153† | -83.8 | -0.0197 | mg/L | 0.00980 | -0.0197 | mg/L | 0.00980 | 49.65% |
| As 188.979† | -15.1 | -0.00379 | mg/L | 0.001840 | -0.00379 | mg/L | 0.001840 | 48.50% |
| Ba 233.527† | 22704.6 | 0.141 | mg/L | 0.0025 | 0.141 | mg/L | 0.0025 | 1.76% |
| Be 234.861† | 4677.5 | -0.00015 | mg/L | 0.000055 | -0.00015 | mg/L | 0.000055 | 36.74% |
| B 249.677† | 12281.4 | 0.134 | mg/L | 0.0036 | 0.134 | mg/L | 0.0036 | 2.67% |
| Ca 227.546† | 70869.8 | 160 | mg/L | 2.2 | 160 | mg/L | 2.2 | 1.36% |
| Cd 228.802† | 14.4 | 0.00022 | mg/L | 0.000362 | 0.00022 | mg/L | 0.000362 | 167.70% |
| Co 228.616† | 41.0 | 0.00032 | mg/L | 0.000255 | 0.00032 | mg/L | 0.000255 | 80.58% |
| Cr 267.716† | 75.7 | 0.00003 | mg/L | 0.000076 | 0.00003 | mg/L | 0.000076 | 289.36% |
| Cu 327.393† | -453.2 | -0.00099 | mg/L | 0.000852 | -0.00099 | mg/L | 0.000852 | 86.43% |
| Fe 239.562† | 154933.4 | 15.7 | mg/L | 0.11 | 15.7 | mg/L | 0.11 | 0.68% |
| Mg 279.077† | 74500.4 | 29.8 | mg/L | 0.50 | 29.8 | mg/L | 0.50 | 1.68% |
| Mn 257.610† | 254477.1 | 0.287 | mg/L | 0.0066 | 0.287 | mg/L | 0.0066 | 2.31% |
| Mo 202.031† | 18.8 | 0.00314 | mg/L | 0.000341 | 0.00314 | mg/L | 0.000341 | 10.87% |
| Ni 231.604† | 94.0 | 0.00038 | mg/L | 0.000472 | 0.00038 | mg/L | 0.000472 | 122.89% |
| Pb 220.353† | 26.5 | 0.00116 | mg/L | 0.003463 | 0.00116 | mg/L | 0.003463 | 297.57% |
| Sb 206.836† | -8.0 | -0.00127 | mg/L | 0.000831 | -0.00127 | mg/L | 0.000831 | 65.28% |
| Se 196.026† | -3.4 | 0.00407 | mg/L | 0.002472 | 0.00407 | mg/L | 0.002472 | 60.75% |
| Si 251.611† | 271579.8 | 6.23 | mg/L | 0.027 | 6.23 | mg/L | 0.027 | 0.43% |
| Sn 189.927† | -313.7 | -0.0298 | mg/L | 0.00041 | -0.0298 | mg/L | 0.00041 | 1.37% |
| Ti 334.940† | -23316.8 | 0.00264 | mg/L | 0.002056 | 0.00264 | mg/L | 0.002056 | 78.01% |
| Tl 190.801† | -34.5 | -0.0109 | mg/L | 0.00195 | -0.0109 | mg/L | 0.00195 | 17.89% |
| V 290.880† | 1568.3 | 0.00468 | mg/L | 0.000556 | 0.00468 | mg/L | 0.000556 | 11.89% |
| Zn 206.200† | 145.6 | 0.00088 | mg/L | 0.000124 | 0.00088 | mg/L | 0.000124 | 14.09% |
| K 766.490† | 14789.5 | 6.67 | mg/L | 0.028 | 6.67 | mg/L | 0.028 | 0.43% |
| Na 589.592† | 2457723.0 | 161 | mg/L | 1.2 | 161 | mg/L | 1.2 | 0.76% |
| Sr 407.771† | 2672696.4 | 1.46 | mg/L | 0.018 | 1.46 | mg/L | 0.018 | 1.23% |
| Li 670.784† | 3795.7 | 0.0365 | mg/L | 0.00038 | 0.0365 | mg/L | 0.00038 | 1.04% |

**Sequence No.: 5** **Autosampler Location: 28**
**Sample ID: L1205028406** **Date Collected: 5/21/2012 4:01:59 PM**
**Analyst: KHR** **Data Type: Original**
**Initial Sample Wt:** **Initial Sample Vol:**
**Dilution:** **Sample Prep Vol:**

**Nebulizer Parameters: L1205028406**

Approved: May 22, 2012

| Analyte | Back Pressure | Flow |
|---|---|---|
| All | 154.0 kPa | 0.50 L/min |

**Mean Data: L1205028406**

| Analyte | Mean Corrected Intensity | Calib. Conc. | Units | Std.Dev. | Sample Conc. | Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 2038768.7 | | | | | | 17728.32 | 0.87% |
| YRADIAL | 196500.1 | | | | | | 1527.59 | 0.78% |
| Ga 417.206 | 1228046.1 | | | | | | 41888.99 | 3.41% |
| GaRADIAL | 59641.4 | | | | | | 782.86 | 1.31% |
| Ag 328.068† | -1424.9 | 0.00172 | mg/L | 0.000149 | 0.00172 | mg/L | 0.000149 | 8.70% |
| Al 396.153† | -85.4 | -0.0201 | mg/L | 0.01498 | -0.0201 | mg/L | 0.01498 | 74.62% |
| As 188.979† | -11.9 | -0.00268 | mg/L | 0.001167 | -0.00268 | mg/L | 0.001167 | 43.63% |
| Ba 233.527† | 23303.9 | 0.145 | mg/L | 0.0018 | 0.145 | mg/L | 0.0018 | 1.24% |
| Be 234.861† | 4713.4 | -0.00016 | mg/L | 0.000035 | -0.00016 | mg/L | 0.000035 | 22.50% |
| B 249.677† | 12504.7 | 0.137 | mg/L | 0.0063 | 0.137 | mg/L | 0.0063 | 4.59% |
| Ca 227.546† | 72785.1 | 164 | mg/L | 6.0 | 164 | mg/L | 6.0 | 3.64% |
| Cd 228.802† | 25.7 | 0.00040 | mg/L | 0.000110 | 0.00040 | mg/L | 0.000110 | 27.45% |
| Co 228.616† | 48.4 | 0.00050 | mg/L | 0.000245 | 0.00050 | mg/L | 0.000245 | 49.17% |
| Cr 267.716† | 81.8 | 0.00007 | mg/L | 0.000251 | 0.00007 | mg/L | 0.000251 | 341.02% |
| Cu 327.393† | -374.0 | -0.00066 | mg/L | 0.000648 | -0.00066 | mg/L | 0.000648 | 98.36% |
| Fe 239.562† | 156360.5 | 15.9 | mg/L | 0.06 | 15.9 | mg/L | 0.06 | 0.38% |
| Mg 279.077† | 74989.7 | 30.0 | mg/L | 0.43 | 30.0 | mg/L | 0.43 | 1.44% |
| Mn 257.610† | 274359.3 | 0.310 | mg/L | 0.0052 | 0.310 | mg/L | 0.0052 | 1.67% |
| Mo 202.031† | 16.6 | 0.00309 | mg/L | 0.000040 | 0.00309 | mg/L | 0.000040 | 1.29% |
| Ni 231.604† | 76.8 | 0.00014 | mg/L | 0.000453 | 0.00014 | mg/L | 0.000453 | 320.10% |
| Pb 220.353† | 23.0 | 0.00085 | mg/L | 0.000852 | 0.00085 | mg/L | 0.000852 | 99.90% |
| Sb 206.836† | -9.6 | -0.00166 | mg/L | 0.000441 | -0.00166 | mg/L | 0.000441 | 26.65% |
| Se 196.026† | -2.6 | 0.00457 | mg/L | 0.006084 | 0.00457 | mg/L | 0.006084 | 133.18% |
| Si 251.611† | 277889.4 | 6.38 | mg/L | 0.154 | 6.38 | mg/L | 0.154 | 2.41% |
| Sn 189.927† | -319.8 | -0.0304 | mg/L | 0.00107 | -0.0304 | mg/L | 0.00107 | 3.51% |
| Ti 334.940† | -24326.4 | 0.00226 | mg/L | 0.002558 | 0.00226 | mg/L | 0.002558 | 113.19% |
| Tl 190.801† | -34.4 | -0.0109 | mg/L | 0.00393 | -0.0109 | mg/L | 0.00393 | 36.10% |
| V 290.880† | 1908.5 | 0.00646 | mg/L | 0.001935 | 0.00646 | mg/L | 0.001935 | 29.97% |
| Zn 206.200† | 104.1 | 0.00005 | mg/L | 0.000070 | 0.00005 | mg/L | 0.000070 | 133.29% |
| K 766.490† | 15165.1 | 6.83 | mg/L | 0.052 | 6.83 | mg/L | 0.052 | 0.77% |
| Na 589.592† | 2557534.5 | 168 | mg/L | 2.5 | 168 | mg/L | 2.5 | 1.48% |
| Sr 407.771† | 2736167.7 | 1.49 | mg/L | 0.005 | 1.49 | mg/L | 0.005 | 0.36% |
| Li 670.784† | 3853.5 | 0.0371 | mg/L | 0.00070 | 0.0371 | mg/L | 0.00070 | 1.89% |

**Sequence No.: 6** **Autosampler Location: 29**
**Sample ID: L1205028407** **Date Collected: 5/21/2012 4:08:03 PM**
**Analyst: KHR** **Data Type: Original**
**Initial Sample Wt:** **Initial Sample Vol:**
**Dilution:** **Sample Prep Vol:**

**Nebulizer Parameters: L1205028407**

| Analyte | Back Pressure | Flow |
|---|---|---|
| All | 154.0 kPa | 0.50 L/min |

**Mean Data: L1205028407**

| Analyte | Mean Corrected Intensity | Calib. Conc. | Units | Std.Dev. | Sample Conc. | Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 2013249.7 | | | | | | 17382.35 | 0.86% |
| YRADIAL | 191475.7 | | | | | | 3113.64 | 1.63% |
| Ga 417.206 | 1212044.1 | | | | | | 29214.28 | 2.41% |
| GaRADIAL | 59687.4 | | | | | | 1109.25 | 1.86% |
| Ag 328.068† | -5191.3 | 0.00266 | mg/L | 0.000256 | 0.00266 | mg/L | 0.000256 | 9.60% |
| Al 396.153† | 667.9 | 0.148 | mg/L | 0.0016 | 0.148 | mg/L | 0.0016 | 1.08% |
| As 188.979† | -20.2 | -0.00241 | mg/L | 0.002452 | -0.00241 | mg/L | 0.002452 | 101.73% |
| Ba 233.527† | 27661.2 | 0.172 | mg/L | 0.0013 | 0.172 | mg/L | 0.0013 | 0.76% |
| Be 234.861† | 12970.9 | -0.00067 | mg/L | 0.000276 | -0.00067 | mg/L | 0.000276 | 41.24% |
| B 249.677† | 30819.2 | 0.335 | mg/L | 0.0061 | 0.335 | mg/L | 0.0061 | 1.83% |
| Ca 227.546† | 112024.7 | 253 | mg/L | 6.2 | 253 | mg/L | 6.2 | 2.46% |
| Cd 228.802† | 32.8 | 0.00048 | mg/L | 0.000353 | 0.00048 | mg/L | 0.000353 | 73.12% |
| Co 228.616† | 62.3 | 0.00011 | mg/L | 0.000312 | 0.00011 | mg/L | 0.000312 | 292.38% |
| Cr 267.716† | 385.5 | 0.00164 | mg/L | 0.000110 | 0.00164 | mg/L | 0.000110 | 6.72% |
| Cu 327.393† | -410.3 | 0.00159 | mg/L | 0.000699 | 0.00159 | mg/L | 0.000699 | 44.08% |

Approved: May 22, 2012

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Fe 239.562† | 436540.4 | 44.3 | mg/L | 0.40 | 44.3 | mg/L | 0.40 | 0.91% |
| Mg 279.077† | 153676.4 | 61.5 | mg/L | 1.11 | 61.5 | mg/L | 1.11 | 1.80% |
| Mn 257.610† | 398051.9 | 0.451 | mg/L | 0.0048 | 0.451 | mg/L | 0.0048 | 1.06% |
| Mo 202.031† | -0.5 | 0.00405 | mg/L | 0.000344 | 0.00405 | mg/L | 0.000344 | 8.48% |
| Ni 231.604† | 184.2 | 0.00165 | mg/L | 0.000396 | 0.00165 | mg/L | 0.000396 | 24.01% |
| Pb 220.353† | 212.6 | 0.0161 | mg/L | 0.00131 | 0.0161 | mg/L | 0.00131 | 8.14% |
| Sb 206.836† | -5.6 | 0.00036 | mg/L | 0.001097 | 0.00036 | mg/L | 0.001097 | 303.79% |
| Se 196.026† | -14.8 | 0.00621 | mg/L | 0.002184 | 0.00621 | mg/L | 0.002184 | 35.18% |
| Si 251.611† | 412565.7 | 9.47 | mg/L | 0.140 | 9.47 | mg/L | 0.140 | 1.47% |
| Sn 189.927† | -297.4 | -0.0283 | mg/L | 0.00096 | -0.0283 | mg/L | 0.00096 | 3.40% |
| Ti 334.940† | -33158.9 | 0.00655 | mg/L | 0.002874 | 0.00655 | mg/L | 0.002874 | 43.86% |
| Tl 190.801† | -49.1 | -0.0151 | mg/L | 0.00173 | -0.0151 | mg/L | 0.00173 | 11.43% |
| V 290.880† | 2685.4 | 0.00752 | mg/L | 0.002731 | 0.00752 | mg/L | 0.002731 | 36.32% |
| Zn 206.200† | 5273.6 | 0.103 | mg/L | 0.0011 | 0.103 | mg/L | 0.0011 | 1.04% |
| K 766.490† | 22529.5 | 10.4 | mg/L | 0.06 | 10.4 | mg/L | 0.06 | 0.61% |
| Na 589.592† | 915539.3 | 59.1 | mg/L | 0.86 | 59.1 | mg/L | 0.86 | 1.45% |
| Sr 407.771† | 2442126.7 | 1.33 | mg/L | 0.009 | 1.33 | mg/L | 0.009 | 0.67% |
| Li 670.784† | 6896.1 | 0.0687 | mg/L | 0.00076 | 0.0687 | mg/L | 0.00076 | 1.11% |

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**Sequence No.: 7** **Autosampler Location: 30**
**Sample ID: L1205028408** **Date Collected: 5/21/2012 4:14:03 PM**
**Analyst: KHR** **Data Type: Original**
**Initial Sample Wt:** **Initial Sample Vol:**
**Dilution:** **Sample Prep Vol:**

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**Nebulizer Parameters: L1205028408**

| Analyte | Back Pressure | Flow |
|---|---|---|
| All | 154.0 kPa | 0.50 L/min |

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**Mean Data: L1205028408**

| Analyte | Mean Corrected Intensity | Calib. Conc. | Units | Std.Dev. | Sample Conc. | Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 2044824.4 | | | | | | 22697.84 | 1.11% |
| YRADIAL | 198825.2 | | | | | | 1954.79 | 0.98% |
| Ga 417.206 | 1237662.9 | | | | | | 21878.15 | 1.77% |
| GaRADIAL | 59250.4 | | | | | | 381.82 | 0.64% |
| Ag 328.068† | -5385.9 | 0.00219 | mg/L | 0.000345 | 0.00219 | mg/L | 0.000345 | 15.76% |
| Al 396.153† | -75.4 | -0.0144 | mg/L | 0.00483 | -0.0144 | mg/L | 0.00483 | 33.47% |
| As 188.979† | -16.7 | -0.00118 | mg/L | 0.000651 | -0.00118 | mg/L | 0.000651 | 55.15% |
| Ba 233.527† | 27999.4 | 0.174 | mg/L | 0.0003 | 0.174 | mg/L | 0.0003 | 0.15% |
| Be 234.861† | 13052.2 | -0.00068 | mg/L | 0.000109 | -0.00068 | mg/L | 0.000109 | 15.94% |
| B 249.677† | 31542.3 | 0.344 | mg/L | 0.0141 | 0.344 | mg/L | 0.0141 | 4.10% |
| Ca 227.546† | 114956.4 | 260 | mg/L | 11.7 | 260 | mg/L | 11.7 | 4.50% |
| Cd 228.802† | 14.8 | 0.00017 | mg/L | 0.000059 | 0.00017 | mg/L | 0.000059 | 34.17% |
| Co 228.616† | 72.7 | 0.00037 | mg/L | 0.000155 | 0.00037 | mg/L | 0.000155 | 42.18% |
| Cr 267.716† | 83.7 | -0.00096 | mg/L | 0.000065 | -0.00096 | mg/L | 0.000065 | 6.75% |
| Cu 327.393† | -1069.5 | -0.00102 | mg/L | 0.000345 | -0.00102 | mg/L | 0.000345 | 33.82% |
| Fe 239.562† | 439669.3 | 44.7 | mg/L | 0.21 | 44.7 | mg/L | 0.21 | 0.48% |
| Mg 279.077† | 153037.4 | 61.2 | mg/L | 0.45 | 61.2 | mg/L | 0.45 | 0.74% |
| Mn 257.610† | 395733.6 | 0.448 | mg/L | 0.0009 | 0.448 | mg/L | 0.0009 | 0.20% |
| Mo 202.031† | -7.3 | 0.00388 | mg/L | 0.000224 | 0.00388 | mg/L | 0.000224 | 5.78% |
| Ni 231.604† | 139.6 | 0.00102 | mg/L | 0.000388 | 0.00102 | mg/L | 0.000388 | 37.91% |
| Pb 220.353† | 52.0 | 0.00164 | mg/L | 0.002367 | 0.00164 | mg/L | 0.002367 | 143.97% |
| Sb 206.836† | -3.5 | 0.00089 | mg/L | 0.001075 | 0.00089 | mg/L | 0.001075 | 120.43% |
| Se 196.026† | -22.9 | 0.00171 | mg/L | 0.003148 | 0.00171 | mg/L | 0.003148 | 184.39% |
| Si 251.611† | 412682.7 | 9.48 | mg/L | 0.278 | 9.48 | mg/L | 0.278 | 2.94% |
| Sn 189.927† | -347.7 | -0.0330 | mg/L | 0.00102 | -0.0330 | mg/L | 0.00102 | 3.09% |
| Ti 334.940† | -38368.1 | 0.00227 | mg/L | 0.003208 | 0.00227 | mg/L | 0.003208 | 141.59% |
| Tl 190.801† | -26.3 | -0.00900 | mg/L | 0.003934 | -0.00900 | mg/L | 0.003934 | 43.69% |
| V 290.880† | 2436.1 | 0.00619 | mg/L | 0.002397 | 0.00619 | mg/L | 0.002397 | 38.75% |
| Zn 206.200† | 4018.0 | 0.0775 | mg/L | 0.00054 | 0.0775 | mg/L | 0.00054 | 0.70% |
| K 766.490† | 23484.9 | 10.8 | mg/L | 0.16 | 10.8 | mg/L | 0.16 | 1.47% |
| Na 589.592† | 1000139.7 | 64.7 | mg/L | 0.35 | 64.7 | mg/L | 0.35 | 0.54% |
| Sr 407.771† | 2519075.8 | 1.37 | mg/L | 0.005 | 1.37 | mg/L | 0.005 | 0.40% |
| Li 670.784† | 7166.4 | 0.0715 | mg/L | 0.00186 | 0.0715 | mg/L | 0.00186 | 2.60% |

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**Sequence No.: 8** **Autosampler Location: 31**
**Sample ID: L1205028410** **Date Collected: 5/21/2012 4:20:03 PM**

Approved: May 22, 2012

**Analyst: KHR** **Data Type: Original**
**Initial Sample Wt:** **Initial Sample Vol:**
**Dilution:** **Sample Prep Vol:**

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**Nebulizer Parameters: L1205028410**

| Analyte | Back Pressure | Flow |
|---|---|---|
| All | 154.0 kPa | 0.50 L/min |

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**Mean Data: L1205028410**

| Analyte | Mean Corrected Intensity | Calib. Conc. | Units | Std.Dev. | Sample Conc. | Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 1994502.3 | | | | | | 22879.93 | 1.15% |
| YRADIAL | 191288.4 | | | | | | 2121.85 | 1.11% |
| Ga 417.206 | 1220048.8 | | | | | | 25148.23 | 2.06% |
| GaRADIAL | 60187.0 | | | | | | 454.05 | 0.75% |
| Ag 328.068† | -5142.6 | 0.00301 | mg/L | 0.000796 | 0.00301 | mg/L | 0.000796 | 26.40% |
| Al 396.153† | 782.6 | 0.173 | mg/L | 0.0049 | 0.173 | mg/L | 0.0049 | 2.84% |
| As 188.979† | -16.7 | -0.00116 | mg/L | 0.003244 | -0.00116 | mg/L | 0.003244 | 279.77% |
| Ba 233.527† | 28273.7 | 0.176 | mg/L | 0.0035 | 0.176 | mg/L | 0.0035 | 1.98% |
| Be 234.861† | 13112.5 | -0.00067 | mg/L | 0.000243 | -0.00067 | mg/L | 0.000243 | 36.25% |
| B 249.677† | 30399.4 | 0.330 | mg/L | 0.0114 | 0.330 | mg/L | 0.0114 | 3.46% |
| Ca 227.546† | 110419.2 | 250 | mg/L | 9.7 | 250 | mg/L | 9.7 | 3.87% |
| Cd 228.802† | 27.1 | 0.00038 | mg/L | 0.000242 | 0.00038 | mg/L | 0.000242 | 63.85% |
| Co 228.616† | 55.1 | -0.00009 | mg/L | 0.000239 | -0.00009 | mg/L | 0.000239 | 276.68% |
| Cr 267.716† | 414.0 | 0.00187 | mg/L | 0.000568 | 0.00187 | mg/L | 0.000568 | 30.35% |
| Cu 327.393† | -265.1 | 0.00220 | mg/L | 0.000197 | 0.00220 | mg/L | 0.000197 | 8.92% |
| Fe 239.562† | 441039.8 | 44.8 | mg/L | 0.17 | 44.8 | mg/L | 0.17 | 0.38% |
| Mg 279.077† | 154252.2 | 61.7 | mg/L | 0.40 | 61.7 | mg/L | 0.40 | 0.64% |
| Mn 257.610† | 397799.6 | 0.451 | mg/L | 0.0071 | 0.451 | mg/L | 0.0071 | 1.57% |
| Mo 202.031† | -13.5 | 0.00372 | mg/L | 0.000080 | 0.00372 | mg/L | 0.000080 | 2.14% |
| Ni 231.604† | 181.8 | 0.00162 | mg/L | 0.000174 | 0.00162 | mg/L | 0.000174 | 10.79% |
| Pb 220.353† | 228.2 | 0.0174 | mg/L | 0.00192 | 0.0174 | mg/L | 0.00192 | 11.00% |
| Sb 206.836† | -2.9 | 0.00104 | mg/L | 0.001261 | 0.00104 | mg/L | 0.001261 | 121.61% |
| Se 196.026† | -18.6 | 0.00416 | mg/L | 0.006002 | 0.00416 | mg/L | 0.006002 | 144.23% |
| Si 251.611† | 408649.9 | 9.38 | mg/L | 0.250 | 9.38 | mg/L | 0.250 | 2.67% |
| Sn 189.927† | -342.2 | -0.0325 | mg/L | 0.00086 | -0.0325 | mg/L | 0.00086 | 2.63% |
| Ti 334.940† | -32731.0 | 0.00644 | mg/L | 0.003212 | 0.00644 | mg/L | 0.003212 | 49.84% |
| Tl 190.801† | -31.6 | -0.0104 | mg/L | 0.00554 | -0.0104 | mg/L | 0.00554 | 53.34% |
| V 290.880† | 2622.3 | 0.00715 | mg/L | 0.002266 | 0.00715 | mg/L | 0.002266 | 31.71% |
| Zn 206.200† | 5304.1 | 0.103 | mg/L | 0.0006 | 0.103 | mg/L | 0.0006 | 0.58% |
| K 766.490† | 22467.2 | 10.3 | mg/L | 0.10 | 10.3 | mg/L | 0.10 | 1.01% |
| Na 589.592† | 912816.7 | 59.0 | mg/L | 0.64 | 59.0 | mg/L | 0.64 | 1.08% |
| Sr 407.771† | 2455438.1 | 1.34 | mg/L | 0.006 | 1.34 | mg/L | 0.006 | 0.44% |
| Li 670.784† | 6990.8 | 0.0697 | mg/L | 0.00061 | 0.0697 | mg/L | 0.00061 | 0.88% |

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**Sequence No.: 9** **Autosampler Location: 32**
**Sample ID: L1205028411** **Date Collected: 5/21/2012 4:26:03 PM**
**Analyst: KHR** **Data Type: Original**
**Initial Sample Wt:** **Initial Sample Vol:**
**Dilution:** **Sample Prep Vol:**

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**Nebulizer Parameters: L1205028411**

| Analyte | Back Pressure | Flow |
|---|---|---|
| All | 154.0 kPa | 0.50 L/min |

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**Mean Data: L1205028411**

| Analyte | Mean Corrected Intensity | Calib. Conc. | Units | Std.Dev. | Sample Conc. | Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 2002620.5 | | | | | | 21655.27 | 1.08% |
| YRADIAL | 194011.8 | | | | | | 3964.32 | 2.04% |
| Ga 417.206 | 1224080.5 | | | | | | 43320.07 | 3.54% |
| GaRADIAL | 59855.4 | | | | | | 1093.02 | 1.83% |
| Ag 328.068† | -5137.7 | 0.00286 | mg/L | 0.000243 | 0.00286 | mg/L | 0.000243 | 8.50% |
| Al 396.153† | -104.3 | -0.0207 | mg/L | 0.00837 | -0.0207 | mg/L | 0.00837 | 40.39% |
| As 188.979† | -18.9 | -0.00195 | mg/L | 0.001638 | -0.00195 | mg/L | 0.001638 | 84.03% |
| Ba 233.527† | 28072.6 | 0.174 | mg/L | 0.0012 | 0.174 | mg/L | 0.0012 | 0.67% |
| Be 234.861† | 13106.1 | -0.00059 | mg/L | 0.000246 | -0.00059 | mg/L | 0.000246 | 41.69% |

Approved: May 22, 2012

Kym H. Rhoden

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|---|---|---|---|---|---|---|---|
| B 249.677† | 30883.1 | 0.336 | mg/L | 0.0149 | 0.336 | mg/L | 0.0149 4.43% |
| Ca 227.546† | 112930.6 | 255 | mg/L | 11.6 | 255 | mg/L | 11.6 4.54% |
| Cd 228.802† | 25.8 | 0.00036 | mg/L | 0.000284 | 0.00036 | mg/L | 0.000284 78.29% |
| Co 228.616† | 67.3 | 0.00024 | mg/L | 0.000250 | 0.00024 | mg/L | 0.000250 105.21% |
| Cr 267.716† | 104.3 | -0.00077 | mg/L | 0.000406 | -0.00077 | mg/L | 0.000406 52.59% |
| Cu 327.393† | -1026.4 | -0.00087 | mg/L | 0.000397 | -0.00087 | mg/L | 0.000397 45.69% |
| Fe 239.562† | 437267.9 | 44.4 | mg/L | 0.17 | 44.4 | mg/L | 0.17 0.37% |
| Mg 279.077† | 155134.4 | 62.1 | mg/L | 1.74 | 62.1 | mg/L | 1.74 2.80% |
| Mn 257.610† | 389673.4 | 0.441 | mg/L | 0.0054 | 0.441 | mg/L | 0.0054 1.23% |
| Mo 202.031† | -20.8 | 0.00350 | mg/L | 0.000179 | 0.00350 | mg/L | 0.000179 5.10% |
| Ni 231.604† | 187.4 | 0.00169 | mg/L | 0.000422 | 0.00169 | mg/L | 0.000422 24.89% |
| Pb 220.353† | 56.1 | 0.00201 | mg/L | 0.002438 | 0.00201 | mg/L | 0.002438 121.50% |
| Sb 206.836† | -7.3 | -0.00005 | mg/L | 0.000710 | -0.00005 | mg/L | 0.000710 >999.9% |
| Se 196.026† | -12.2 | 0.00769 | mg/L | 0.002778 | 0.00769 | mg/L | 0.002778 36.14% |
| Si 251.611† | 405704.8 | 9.31 | mg/L | 0.297 | 9.31 | mg/L | 0.297 3.19% |
| Sn 189.927† | -356.5 | -0.0339 | mg/L | 0.00167 | -0.0339 | mg/L | 0.00167 4.91% |
| Ti 334.940† | -38124.1 | 0.00183 | mg/L | 0.004147 | 0.00183 | mg/L | 0.004147 226.74% |
| Tl 190.801† | -37.5 | -0.0120 | mg/L | 0.00212 | -0.0120 | mg/L | 0.00212 17.57% |
| V 290.880† | 2435.7 | 0.00618 | mg/L | 0.002182 | 0.00618 | mg/L | 0.002182 35.30% |
| Zn 206.200† | 3757.8 | 0.0723 | mg/L | 0.00061 | 0.0723 | mg/L | 0.00061 0.84% |
| K 766.490† | 22790.7 | 10.5 | mg/L | 0.05 | 10.5 | mg/L | 0.05 0.49% |
| Na 589.592† | 951014.2 | 61.4 | mg/L | 1.81 | 61.4 | mg/L | 1.81 2.94% |
| Sr 407.771† | 2478450.0 | 1.35 | mg/L | 0.013 | 1.35 | mg/L | 0.013 0.99% |
| Li 670.784† | 6886.5 | 0.0686 | mg/L | 0.00063 | 0.0686 | mg/L | 0.00063 0.91% |

**Sequence No.: 10** **Autosampler Location: 33**
**Sample ID: L1205028412** **Date Collected: 5/21/2012 4:32:04 PM**
**Analyst: KHR** **Data Type: Original**
**Initial Sample Wt:** **Initial Sample Vol:**
**Dilution:** **Sample Prep Vol:**

**Nebulizer Parameters: L1205028412**

| Analyte | Back Pressure | Flow |
|---|---|---|
| All | 154.0 kPa | 0.50 L/min |

**Mean Data: L1205028412**

| Analyte | Mean Corrected Intensity | Calib. Conc. | Units | Std.Dev. | Sample Conc. | Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 2184714.5 | | | | | | 45129.32 | 2.07% |
| YRADIAL | 207733.0 | | | | | | 2631.21 | 1.27% |
| Ga 417.206 | 1294651.7 | | | | | | 35764.82 | 2.76% |
| GaRADIAL | 62145.8 | | | | | | 1301.29 | 2.09% |
| Ag 328.068† | 45.0 | -0.00044 | mg/L | 0.000098 | -0.00044 | mg/L | 0.000098 | 22.28% |
| Al 396.153† | -5.6 | -0.00449 | mg/L | 0.002326 | -0.00449 | mg/L | 0.002326 | 51.78% |
| As 188.979† | 1.2 | 0.00006 | mg/L | 0.002433 | 0.00006 | mg/L | 0.002433 | >999.9% |
| Ba 233.527† | 5.6 | -0.00075 | mg/L | 0.000076 | -0.00075 | mg/L | 0.000076 | 10.18% |
| Be 234.861† | 16.1 | 0.00004 | mg/L | 0.000043 | 0.00004 | mg/L | 0.000043 | 96.67% |
| B 249.677† | 39.8 | -0.00025 | mg/L | 0.000371 | -0.00025 | mg/L | 0.000371 | 145.50% |
| Ca 227.546† | 55.2 | 0.176 | mg/L | 0.0186 | 0.176 | mg/L | 0.0186 | 10.57% |
| Cd 228.802† | -10.1 | -0.00020 | mg/L | 0.000175 | -0.00020 | mg/L | 0.000175 | 87.80% |
| Co 228.616† | 9.1 | -0.00007 | mg/L | 0.000177 | -0.00007 | mg/L | 0.000177 | 264.79% |
| Cr 267.716† | -0.1 | -0.00005 | mg/L | 0.000048 | -0.00005 | mg/L | 0.000048 | 94.67% |
| Cu 327.393† | -49.7 | -0.00068 | mg/L | 0.000380 | -0.00068 | mg/L | 0.000380 | 56.14% |
| Fe 239.562† | 18.0 | 0.00449 | mg/L | 0.002667 | 0.00449 | mg/L | 0.002667 | 59.38% |
| Mg 279.077† | 18.0 | 0.0102 | mg/L | 0.00815 | 0.0102 | mg/L | 0.00815 | 79.96% |
| Mn 257.610† | 196.6 | -0.00155 | mg/L | 0.000019 | -0.00155 | mg/L | 0.000019 | 1.22% |
| Mo 202.031† | -11.9 | 0.00147 | mg/L | 0.000181 | 0.00147 | mg/L | 0.000181 | 12.33% |
| Ni 231.604† | -18.0 | -0.00119 | mg/L | 0.000365 | -0.00119 | mg/L | 0.000365 | 30.68% |
| Pb 220.353† | 12.0 | 0.00011 | mg/L | 0.001319 | 0.00011 | mg/L | 0.001319 | >999.9% |
| Sb 206.836† | -2.3 | -0.00043 | mg/L | 0.000100 | -0.00043 | mg/L | 0.000100 | 23.07% |
| Se 196.026† | -0.6 | 0.00101 | mg/L | 0.002116 | 0.00101 | mg/L | 0.002116 | 210.08% |
| Si 251.611† | 299.7 | -0.00322 | mg/L | 0.001533 | -0.00322 | mg/L | 0.001533 | 47.59% |
| Sn 189.927† | 5.7 | 0.00046 | mg/L | 0.001326 | 0.00046 | mg/L | 0.001326 | 287.75% |
| Ti 334.940† | -72.3 | 0.00229 | mg/L | 0.000038 | 0.00229 | mg/L | 0.000038 | 1.65% |
| Tl 190.801† | -8.2 | -0.00322 | mg/L | 0.001660 | -0.00322 | mg/L | 0.001660 | 51.46% |
| V 290.880† | 49.4 | -0.00133 | mg/L | 0.000554 | -0.00133 | mg/L | 0.000554 | 41.73% |
| Zn 206.200† | 117.9 | 0.00062 | mg/L | 0.000052 | 0.00062 | mg/L | 0.000052 | 8.29% |
| K 766.490† | 111.5 | -0.00405 | mg/L | 0.027156 | -0.00405 | mg/L | 0.027156 | 670.18% |
| Na 589.592† | 4077.0 | 0.251 | mg/L | 0.0099 | 0.251 | mg/L | 0.0099 | 3.93% |

Approved: May 22, 2012

Kym H. Rhoden

| | | | | | | |
|---|---|---|---|---|---|---|
| Sr 407.771† | -0.3 | 0.00085 mg/L | 0.000013 | 0.00085 mg/L | 0.000013 | 1.49% |
| Li 670.784† | -16.5 | -0.00306 mg/L | 0.000617 | -0.00306 mg/L | 0.000617 | 20.13% |

**Sequence No.: 11** **Autosampler Location: 34**
**Sample ID: L1205028402 0.01** **Date Collected: 5/21/2012 4:39:01 PM**
**Analyst: KHR** **Data Type: Original**
**Initial Sample Wt:** **Initial Sample Vol:**
**Dilution:** **Sample Prep Vol:**

**Nebulizer Parameters: L1205028402 0.01**

| Analyte | Back Pressure | Flow |
|---|---|---|
| All | 154.0 kPa | 0.50 L/min |

**Mean Data: L1205028402 0.01**

| Analyte | Mean Corrected Intensity | Calib. Conc. | Units | Std.Dev. | Sample Conc. | Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 2119114.2 | | | | | | 25699.98 | 1.21% |
| YRADIAL | 197902.8 | | | | | | 4776.35 | 2.41% |
| Ga 417.206 | 1256875.4 | | | | | | 11029.54 | 0.88% |
| GaRADIAL | 60319.2 | | | | | | 761.80 | 1.26% |
| Ag 328.068† | 54.4 | -0.00041 | mg/L | 0.000324 | -0.00041 | mg/L | 0.000324 | 78.06% |
| Al 396.153† | -1.2 | -0.00354 | mg/L | 0.003297 | -0.00354 | mg/L | 0.003297 | 93.18% |
| As 188.979† | 6.0 | 0.00172 | mg/L | 0.001267 | 0.00172 | mg/L | 0.001267 | 73.79% |
| Ba 233.527† | 2023.2 | 0.0119 | mg/L | 0.00018 | 0.0119 | mg/L | 0.00018 | 1.50% |
| Be 234.861† | 131.3 | 0.00013 | mg/L | 0.000027 | 0.00013 | mg/L | 0.000027 | 21.74% |
| B 249.677† | 271.5 | 0.00242 | mg/L | 0.000242 | 0.00242 | mg/L | 0.000242 | 10.02% |
| Ca 227.546† | 1294.8 | 2.97 | mg/L | 0.043 | 2.97 | mg/L | 0.043 | 1.44% |
| Cd 228.802† | -19.6 | -0.00037 | mg/L | 0.000103 | -0.00037 | mg/L | 0.000103 | 27.94% |
| Co 228.616† | 2.2 | -0.00024 | mg/L | 0.000078 | -0.00024 | mg/L | 0.000078 | 32.38% |
| Cr 267.716† | 47.8 | 0.00036 | mg/L | 0.000182 | 0.00036 | mg/L | 0.000182 | 50.66% |
| Cu 327.393† | -57.6 | -0.00071 | mg/L | 0.000815 | -0.00071 | mg/L | 0.000815 | 115.25% |
| Fe 239.562† | 40.6 | 0.00676 | mg/L | 0.000249 | 0.00676 | mg/L | 0.000249 | 3.68% |
| Mg 279.077† | 3600.6 | 1.44 | mg/L | 0.042 | 1.44 | mg/L | 0.042 | 2.88% |
| Mn 257.610† | 539.4 | -0.00116 | mg/L | 0.000037 | -0.00116 | mg/L | 0.000037 | 3.16% |
| Mo 202.031† | -5.3 | 0.00165 | mg/L | 0.000219 | 0.00165 | mg/L | 0.000219 | 13.28% |
| Ni 231.604† | 25.7 | -0.00058 | mg/L | 0.000327 | -0.00058 | mg/L | 0.000327 | 56.54% |
| Pb 220.353† | 25.1 | 0.00132 | mg/L | 0.000423 | 0.00132 | mg/L | 0.000423 | 32.18% |
| Sb 206.836† | -2.7 | -0.00053 | mg/L | 0.001259 | -0.00053 | mg/L | 0.001259 | 236.99% |
| Se 196.026† | -2.7 | -0.00018 | mg/L | 0.003018 | -0.00018 | mg/L | 0.003018 | >999.9% |
| Si 251.611† | 6148.7 | 0.131 | mg/L | 0.0009 | 0.131 | mg/L | 0.0009 | 0.67% |
| Sn 189.927† | -33.4 | -0.00325 | mg/L | 0.000727 | -0.00325 | mg/L | 0.000727 | 22.41% |
| Ti 334.940† | -670.1 | 0.00210 | mg/L | 0.000164 | 0.00210 | mg/L | 0.000164 | 7.82% |
| Tl 190.801† | 0.8 | -0.00079 | mg/L | 0.001226 | -0.00079 | mg/L | 0.001226 | 155.43% |
| V 290.880† | 539.3 | 0.00122 | mg/L | 0.001148 | 0.00122 | mg/L | 0.001148 | 94.30% |
| Zn 206.200† | 15.1 | -0.00142 | mg/L | 0.000127 | -0.00142 | mg/L | 0.000127 | 8.96% |
| K 766.490† | 1873.4 | 0.810 | mg/L | 0.0291 | 0.810 | mg/L | 0.0291 | 3.59% |
| Na 589.592† | 93111.6 | 5.95 | mg/L | 0.171 | 5.95 | mg/L | 0.171 | 2.87% |
| Sr 407.771† | 97694.6 | 0.0542 | mg/L | 0.00109 | 0.0542 | mg/L | 0.00109 | 2.01% |
| Li 670.784† | -18.3 | -0.00308 | mg/L | 0.000560 | -0.00308 | mg/L | 0.000560 | 18.18% |

**Sequence No.: 12** **Autosampler Location: 6**
**Sample ID: CCV** **Date Collected: 5/21/2012 4:45:57 PM**
**Analyst:** **Data Type: Original**
**Initial Sample Wt:** **Initial Sample Vol:**
**Dilution:** **Sample Prep Vol:**

**Nebulizer Parameters: CCV**

| Analyte | Back Pressure | Flow |
|---|---|---|
| All | 154.0 kPa | 0.50 L/min |

**Mean Data: CCV**

| Analyte | Mean Corrected Intensity | Calib. Conc. | Units | Std.Dev. | Sample Conc. | Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 2098950.1 | | | | | | 35428.21 | 1.69% |
| YRADIAL | 198052.6 | | | | | | 5101.55 | 2.58% |
| Ga 417.206 | 1181035.4 | | | | | | 5846.10 | 0.49% |

Approved: May 22, 2012

Kym H. Rhoden

| | | | | | | |
|---|---|---|---|---|---|---|
| GaRADIAL | 58562.8 | | | | 1506.09 | 2.57% |
| Ag 328.068† | 130740.3 | 0.409 mg/L | 0.0045 | 0.409 mg/L | 0.0045 | 1.10% |
| QC value within limits for Ag 328.068 Recovery = 102.15% | | | | | | |
| Al 396.153† | 46922.5 | 10.2 mg/L | 0.16 | 10.2 mg/L | 0.16 | 1.54% |
| QC value within limits for Al 396.153 Recovery = 101.63% | | | | | | |
| As 188.979† | 1172.5 | 0.398 mg/L | 0.0049 | 0.398 mg/L | 0.0049 | 1.24% |
| QC value within limits for As 188.979 Recovery = 99.48% | | | | | | |
| Ba 233.527† | 163641.4 | 1.03 mg/L | 0.032 | 1.03 mg/L | 0.032 | 3.08% |
| QC value within limits for Ba 233.527 Recovery = 102.66% | | | | | | |
| Be 234.861† | 70998.9 | 0.0496 mg/L | 0.00059 | 0.0496 mg/L | 0.00059 | 1.20% |
| QC value within limits for Be 234.861 Recovery = 99.22% | | | | | | |
| B 249.677† | 43177.9 | 0.493 mg/L | 0.0072 | 0.493 mg/L | 0.0072 | 1.46% |
| QC value within limits for B 249.677 Recovery = 98.59% | | | | | | |
| Ca 227.546† | 4417.1 | 10.5 mg/L | 0.03 | 10.5 mg/L | 0.03 | 0.31% |
| QC value within limits for Ca 227.546 Recovery = 104.60% | | | | | | |
| Cd 228.802† | 2990.8 | 0.0491 mg/L | 0.00078 | 0.0491 mg/L | 0.00078 | 1.58% |
| QC value within limits for Cd 228.802 Recovery = 98.24% | | | | | | |
| Co 228.616† | 8310.3 | 0.205 mg/L | 0.0054 | 0.205 mg/L | 0.0054 | 2.62% |
| QC value within limits for Co 228.616 Recovery = 102.55% | | | | | | |
| Cr 267.716† | 59505.1 | 0.510 mg/L | 0.0144 | 0.510 mg/L | 0.0144 | 2.82% |
| QC value within limits for Cr 267.716 Recovery = 102.02% | | | | | | |
| Cu 327.393† | 127604.3 | 0.510 mg/L | 0.0073 | 0.510 mg/L | 0.0073 | 1.43% |
| QC value within limits for Cu 327.393 Recovery = 101.92% | | | | | | |
| Fe 239.562† | 40120.7 | 4.08 mg/L | 0.072 | 4.08 mg/L | 0.072 | 1.77% |
| QC value within limits for Fe 239.562 Recovery = 101.93% | | | | | | |
| Mg 279.077† | 25440.5 | 10.2 mg/L | 0.21 | 10.2 mg/L | 0.21 | 2.05% |
| QC value within limits for Mg 279.077 Recovery = 101.98% | | | | | | |
| Mn 257.610† | 460215.5 | 0.521 mg/L | 0.0172 | 0.521 mg/L | 0.0172 | 3.31% |
| QC value within limits for Mn 257.610 Recovery = 104.17% | | | | | | |
| Mo 202.031† | 37240.3 | 1.01 mg/L | 0.031 | 1.01 mg/L | 0.031 | 3.05% |
| QC value within limits for Mo 202.031 Recovery = 101.14% | | | | | | |
| Ni 231.604† | 36563.7 | 0.512 mg/L | 0.0166 | 0.512 mg/L | 0.0166 | 3.24% |
| QC value within limits for Ni 231.604 Recovery = 102.36% | | | | | | |
| Pb 220.353† | 5732.6 | 0.516 mg/L | 0.0127 | 0.516 mg/L | 0.0127 | 2.46% |
| QC value within limits for Pb 220.353 Recovery = 103.24% | | | | | | |
| Sb 206.836† | 4921.9 | 1.21 mg/L | 0.005 | 1.21 mg/L | 0.005 | 0.38% |
| QC value within limits for Sb 206.836 Recovery = 100.54% | | | | | | |
| Se 196.026† | 710.2 | 0.403 mg/L | 0.0005 | 0.403 mg/L | 0.0005 | 0.12% |
| QC value within limits for Se 196.026 Recovery = 100.78% | | | | | | |
| Si 251.611† | 219005.9 | 5.01 mg/L | 0.081 | 5.01 mg/L | 0.081 | 1.62% |
| QC value within limits for Si 251.611 Recovery = 100.25% | | | | | | |
| Sn 189.927† | 10952.1 | 1.04 mg/L | 0.028 | 1.04 mg/L | 0.028 | 2.71% |
| QC value within limits for Sn 189.927 Recovery = 103.85% | | | | | | |
| Ti 334.940† | 996188.1 | 1.01 mg/L | 0.018 | 1.01 mg/L | 0.018 | 1.73% |
| QC value within limits for Ti 334.940 Recovery = 101.30% | | | | | | |
| Tl 190.801† | 1912.2 | 0.531 mg/L | 0.0102 | 0.531 mg/L | 0.0102 | 1.92% |
| QC value within limits for Tl 190.801 Recovery = 106.22% | | | | | | |
| V 290.880† | 194801.1 | 1.02 mg/L | 0.029 | 1.02 mg/L | 0.029 | 2.85% |
| QC value within limits for V 290.880 Recovery = 102.50% | | | | | | |
| Zn 206.200† | 51196.2 | 1.02 mg/L | 0.026 | 1.02 mg/L | 0.026 | 2.50% |
| QC value within limits for Zn 206.200 Recovery = 102.33% | | | | | | |
| K 766.490† | 110520.7 | 51.5 mg/L | 0.97 | 51.5 mg/L | 0.97 | 1.89% |
| QC value within limits for K 766.490 Recovery = 103.10% | | | | | | |
| Na 589.592† | 782520.6 | 50.5 mg/L | 1.07 | 50.5 mg/L | 1.07 | 2.12% |
| QC value within limits for Na 589.592 Recovery = 100.93% | | | | | | |
| Sr 407.771† | 1836170.9 | 1.00 mg/L | 0.020 | 1.00 mg/L | 0.020 | 1.97% |
| QC value within limits for Sr 407.771 Recovery = 100.41% | | | | | | |
| Li 670.784† | 100411.0 | 1.04 mg/L | 0.020 | 1.04 mg/L | 0.020 | 1.94% |
| QC value within limits for Li 670.784 Recovery = 104.00% | | | | | | |

All analyte(s) passed QC.

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**Sequence No.: 13** **Autosampler Location: 1**
**Sample ID: CCB** **Date Collected: 5/21/2012 4:51:57 PM**
**Analyst:** **Data Type: Original**
**Initial Sample Wt:** **Initial Sample Vol:**
**Dilution:** **Sample Prep Vol:**

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**Nebulizer Parameters: CCB**

| Analyte | Back Pressure | Flow |
|---|---|---|
| All | 153.0 kPa | 0.50 L/min |

Approved: May 22, 2012

**Mean Data: CCB**

| Analyte | Mean Corrected Intensity | Calib. Conc. | Units | Std.Dev. | Sample Conc. | Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 2146865.3 | | | | | | 40937.63 | 1.91% |
| YRADIAL | 194801.1 | | | | | | 7141.91 | 3.67% |
| Ga 417.206 | 1215742.2 | | | | | | 22759.51 | 1.87% |
| GaRADIAL | 58339.8 | | | | | | 244.58 | 0.42% |
| Ag 328.068† | 78.7 | -0.00033 | mg/L | 0.000455 | -0.00033 | mg/L | 0.000455 | 135.95% |
| QC value within limits for Ag 328.068 Recovery = Not calculated | | | | | | | | |
| Al 396.153† | 13.1 | -0.00044 | mg/L | 0.001221 | -0.00044 | mg/L | 0.001221 | 280.38% |
| QC value within limits for Al 396.153 Recovery = Not calculated | | | | | | | | |
| As 188.979† | 0.4 | -0.00022 | mg/L | 0.000565 | -0.00022 | mg/L | 0.000565 | 262.24% |
| QC value within limits for As 188.979 Recovery = Not calculated | | | | | | | | |
| Ba 233.527† | -3.9 | -0.00081 | mg/L | 0.000126 | -0.00081 | mg/L | 0.000126 | 15.54% |
| QC value within limits for Ba 233.527 Recovery = Not calculated | | | | | | | | |
| Be 234.861† | -74.2 | -0.00002 | mg/L | 0.000025 | -0.00002 | mg/L | 0.000025 | 128.92% |
| QC value within limits for Be 234.861 Recovery = Not calculated | | | | | | | | |
| B 249.677† | 77.4 | 0.00018 | mg/L | 0.000348 | 0.00018 | mg/L | 0.000348 | 195.98% |
| QC value within limits for B 249.677 Recovery = Not calculated | | | | | | | | |
| Ca 227.546† | 11.4 | 0.0773 | mg/L | 0.01255 | 0.0773 | mg/L | 0.01255 | 16.23% |
| QC value within limits for Ca 227.546 Recovery = Not calculated | | | | | | | | |
| Cd 228.802† | -5.4 | -0.00012 | mg/L | 0.000054 | -0.00012 | mg/L | 0.000054 | 45.23% |
| QC value within limits for Cd 228.802 Recovery = Not calculated | | | | | | | | |
| Co 228.616† | 5.9 | -0.00015 | mg/L | 0.000246 | -0.00015 | mg/L | 0.000246 | 166.99% |
| QC value within limits for Co 228.616 Recovery = Not calculated | | | | | | | | |
| Cr 267.716† | 7.1 | 0.00001 | mg/L | 0.000105 | 0.00001 | mg/L | 0.000105 | 975.89% |
| QC value within limits for Cr 267.716 Recovery = Not calculated | | | | | | | | |
| Cu 327.393† | 51.6 | -0.00027 | mg/L | 0.000300 | -0.00027 | mg/L | 0.000300 | 110.20% |
| QC value within limits for Cu 327.393 Recovery = Not calculated | | | | | | | | |
| Fe 239.562† | 5.4 | 0.00321 | mg/L | 0.000805 | 0.00321 | mg/L | 0.000805 | 25.06% |
| QC value within limits for Fe 239.562 Recovery = Not calculated | | | | | | | | |
| Mg 279.077† | 7.2 | 0.00584 | mg/L | 0.001454 | 0.00584 | mg/L | 0.001454 | 24.89% |
| QC value within limits for Mg 279.077 Recovery = Not calculated | | | | | | | | |
| Mn 257.610† | 83.2 | -0.00168 | mg/L | 0.000015 | -0.00168 | mg/L | 0.000015 | 0.89% |
| QC value within limits for Mn 257.610 Recovery = Not calculated | | | | | | | | |
| Mo 202.031† | -7.7 | 0.00158 | mg/L | 0.000177 | 0.00158 | mg/L | 0.000177 | 11.20% |
| QC value within limits for Mo 202.031 Recovery = Not calculated | | | | | | | | |
| Ni 231.604† | -15.2 | -0.00115 | mg/L | 0.000229 | -0.00115 | mg/L | 0.000229 | 19.90% |
| QC value within limits for Ni 231.604 Recovery = Not calculated | | | | | | | | |
| Pb 220.353† | 6.5 | -0.00038 | mg/L | 0.001547 | -0.00038 | mg/L | 0.001547 | 411.72% |
| QC value within limits for Pb 220.353 Recovery = Not calculated | | | | | | | | |
| Sb 206.836† | 3.4 | 0.00097 | mg/L | 0.001269 | 0.00097 | mg/L | 0.001269 | 130.99% |
| QC value within limits for Sb 206.836 Recovery = Not calculated | | | | | | | | |
| Se 196.026† | 0.6 | 0.00173 | mg/L | 0.003357 | 0.00173 | mg/L | 0.003357 | 194.31% |
| QC value within limits for Se 196.026 Recovery = Not calculated | | | | | | | | |
| Si 251.611† | 155.4 | -0.00654 | mg/L | 0.001308 | -0.00654 | mg/L | 0.001308 | 20.00% |
| QC value within limits for Si 251.611 Recovery = Not calculated | | | | | | | | |
| Sn 189.927† | 12.2 | 0.00108 | mg/L | 0.000391 | 0.00108 | mg/L | 0.000391 | 36.34% |
| QC value within limits for Sn 189.927 Recovery = Not calculated | | | | | | | | |
| Ti 334.940† | 22.0 | 0.00237 | mg/L | 0.000119 | 0.00237 | mg/L | 0.000119 | 5.04% |
| QC value within limits for Ti 334.940 Recovery = Not calculated | | | | | | | | |
| Tl 190.801† | 0.1 | -0.00097 | mg/L | 0.003029 | -0.00097 | mg/L | 0.003029 | 310.94% |
| QC value within limits for Tl 190.801 Recovery = Not calculated | | | | | | | | |
| V 290.880† | 171.6 | -0.00068 | mg/L | 0.001579 | -0.00068 | mg/L | 0.001579 | 230.94% |
| QC value within limits for V 290.880 Recovery = Not calculated | | | | | | | | |
| Zn 206.200† | -5.2 | -0.00183 | mg/L | 0.000078 | -0.00183 | mg/L | 0.000078 | 4.29% |
| QC value within limits for Zn 206.200 Recovery = Not calculated | | | | | | | | |
| K 766.490† | -12.4 | -0.0614 | mg/L | 0.01977 | -0.0614 | mg/L | 0.01977 | 32.18% |
| QC value within limits for K 766.490 Recovery = Not calculated | | | | | | | | |
| Na 589.592† | 125.7 | -0.00186 | mg/L | 0.004323 | -0.00186 | mg/L | 0.004323 | 231.83% |
| QC value within limits for Na 589.592 Recovery = Not calculated | | | | | | | | |
| Sr 407.771† | 128.7 | 0.00092 | mg/L | 0.000035 | 0.00092 | mg/L | 0.000035 | 3.84% |
| QC value within limits for Sr 407.771 Recovery = Not calculated | | | | | | | | |
| Li 670.784† | -50.6 | -0.00342 | mg/L | 0.000525 | -0.00342 | mg/L | 0.000525 | 15.36% |
| QC value within limits for Li 670.784 Recovery = Not calculated | | | | | | | | |

All analyte(s) passed QC.

**Sequence No.: 14** **Autosampler Location: 35**
**Sample ID: L1205028403 0.01** **Date Collected: 5/21/2012 4:58:50 PM**

Approved: May 22, 2012

**Analyst: KHR** **Data Type: Original**
**Initial Sample Wt:** **Initial Sample Vol:**
**Dilution:** **Sample Prep Vol:**

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**Nebulizer Parameters: L1205028403 0.01**

| Analyte | Back Pressure | Flow |
|---|---|---|
| All | 153.0 kPa | 0.50 L/min |

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**Mean Data: L1205028403 0.01**

| Analyte | Mean Corrected Intensity | Calib. Conc. | Units | Std.Dev. | Sample Conc. | Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 2107801.3 | | | | | | 9537.60 | 0.45% |
| YRADIAL | 193459.6 | | | | | | 4534.13 | 2.34% |
| Ga 417.206 | 1250183.7 | | | | | | 28097.33 | 2.25% |
| GaRADIAL | 59107.5 | | | | | | 839.11 | 1.42% |
| Ag 328.068† | 32.0 | -0.00048 | mg/L | 0.000046 | -0.00048 | mg/L | 0.000046 | 9.51% |
| Al 396.153† | -6.9 | -0.00477 | mg/L | 0.001071 | -0.00477 | mg/L | 0.001071 | 22.45% |
| As 188.979† | 5.9 | 0.00167 | mg/L | 0.003671 | 0.00167 | mg/L | 0.003671 | 219.51% |
| Ba 233.527† | 197.3 | 0.00045 | mg/L | 0.000108 | 0.00045 | mg/L | 0.000108 | 23.77% |
| Be 234.861† | 129.9 | 0.00012 | mg/L | 0.000024 | 0.00012 | mg/L | 0.000024 | 19.52% |
| B 249.677† | 50.4 | -0.00014 | mg/L | 0.000183 | -0.00014 | mg/L | 0.000183 | 132.99% |
| Ca 227.546† | 633.3 | 1.48 | mg/L | 0.009 | 1.48 | mg/L | 0.009 | 0.64% |
| Cd 228.802† | -12.4 | -0.00025 | mg/L | 0.000104 | -0.00025 | mg/L | 0.000104 | 42.23% |
| Co 228.616† | 5.2 | -0.00016 | mg/L | 0.000258 | -0.00016 | mg/L | 0.000258 | 157.28% |
| Cr 267.716† | -8.8 | -0.00012 | mg/L | 0.000058 | -0.00012 | mg/L | 0.000058 | 47.15% |
| Cu 327.393† | -76.2 | -0.00078 | mg/L | 0.000497 | -0.00078 | mg/L | 0.000497 | 63.77% |
| Fe 239.562† | 146.4 | 0.0175 | mg/L | 0.00072 | 0.0175 | mg/L | 0.00072 | 4.10% |
| Mg 279.077† | 1251.7 | 0.504 | mg/L | 0.0183 | 0.504 | mg/L | 0.0183 | 3.63% |
| Mn 257.610† | 1605.4 | 0.00005 | mg/L | 0.000011 | 0.00005 | mg/L | 0.000011 | 22.93% |
| Mo 202.031† | -14.8 | 0.00139 | mg/L | 0.000235 | 0.00139 | mg/L | 0.000235 | 16.89% |
| Ni 231.604† | -29.6 | -0.00135 | mg/L | 0.000248 | -0.00135 | mg/L | 0.000248 | 18.35% |
| Pb 220.353† | 1.1 | -0.00086 | mg/L | 0.001002 | -0.00086 | mg/L | 0.001002 | 116.84% |
| Sb 206.836† | -0.1 | 0.00010 | mg/L | 0.000676 | 0.00010 | mg/L | 0.000676 | 679.85% |
| Se 196.026† | -7.8 | -0.00304 | mg/L | 0.005499 | -0.00304 | mg/L | 0.005499 | 180.99% |
| Si 251.611† | 3655.3 | 0.0739 | mg/L | 0.00203 | 0.0739 | mg/L | 0.00203 | 2.74% |
| Sn 189.927† | -17.3 | -0.00172 | mg/L | 0.000671 | -0.00172 | mg/L | 0.000671 | 39.04% |
| Ti 334.940† | -341.5 | 0.00221 | mg/L | 0.000168 | 0.00221 | mg/L | 0.000168 | 7.59% |
| Tl 190.801† | 4.4 | 0.00017 | mg/L | 0.001936 | 0.00017 | mg/L | 0.001936 | >999.9% |
| V 290.880† | 683.3 | 0.00200 | mg/L | 0.001865 | 0.00200 | mg/L | 0.001865 | 93.21% |
| Zn 206.200† | 76.1 | -0.00021 | mg/L | 0.000089 | -0.00021 | mg/L | 0.000089 | 42.54% |
| K 766.490† | 108.1 | -0.00758 | mg/L | 0.048493 | -0.00758 | mg/L | 0.048493 | 639.41% |
| Na 589.592† | 34452.5 | 2.19 | mg/L | 0.154 | 2.19 | mg/L | 0.154 | 7.01% |
| Sr 407.771† | 106409.1 | 0.0590 | mg/L | 0.00265 | 0.0590 | mg/L | 0.00265 | 4.50% |
| Li 670.784† | -56.1 | -0.00348 | mg/L | 0.000377 | -0.00348 | mg/L | 0.000377 | 10.83% |

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**Sequence No.: 15** **Autosampler Location: 36**
**Sample ID: L1205028403PS WG397934-03** **Date Collected: 5/21/2012 5:05:43 PM**
**Analyst: KHR** **Data Type: Original**
**Initial Sample Wt:** **Initial Sample Vol:**
**Dilution:** **Sample Prep Vol:**

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**Nebulizer Parameters: L1205028403PS WG397934-03**

| Analyte | Back Pressure | Flow |
|---|---|---|
| All | 153.0 kPa | 0.50 L/min |

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**Mean Data: L1205028403PS WG397934-03**

| Analyte | Mean Corrected Intensity | Calib. Conc. | Units | Std.Dev. | Sample Conc. | Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 2073814.9 | | | | | | 4368.69 | 0.21% |
| YRADIAL | 193700.7 | | | | | | 2019.94 | 1.04% |
| Ga 417.206 | 1214988.0 | | | | | | 34767.13 | 2.86% |
| GaRADIAL | 58860.2 | | | | | | 1015.86 | 1.73% |
| Ag 328.068† | 65218.5 | 0.204 | mg/L | 0.0066 | 0.204 | mg/L | 0.0066 | 3.26% |
| Al 396.153† | 23426.9 | 5.07 | mg/L | 0.040 | 5.07 | mg/L | 0.040 | 0.80% |
| As 188.979† | 579.3 | 0.196 | mg/L | 0.0039 | 0.196 | mg/L | 0.0039 | 2.01% |
| Ba 233.527† | 82878.9 | 0.520 | mg/L | 0.0033 | 0.520 | mg/L | 0.0033 | 0.64% |
| Be 234.861† | 36121.6 | 0.0253 | mg/L | 0.00065 | 0.0253 | mg/L | 0.00065 | 2.58% |

Approved: May 22, 2012

Kym H. Rhoden

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| B 249.677† | 85786.1 | 0.986 | mg/L | 0.0320 | 0.986 | mg/L | 0.0320 3.25% |
| Ca 227.546† | 2798.3 | 6.59 | mg/L | 0.246 | 6.59 | mg/L | 0.246 3.74% |
| Cd 228.802† | 1491.8 | 0.0245 | mg/L | 0.00111 | 0.0245 | mg/L | 0.00111 4.51% |
| Co 228.616† | 4249.2 | 0.105 | mg/L | 0.0011 | 0.105 | mg/L | 0.0011 1.08% |
| Cr 267.716† | 29932.1 | 0.257 | mg/L | 0.0018 | 0.257 | mg/L | 0.0018 0.71% |
| Cu 327.393† | 61116.8 | 0.244 | mg/L | 0.0080 | 0.244 | mg/L | 0.0080 3.29% |
| Fe 239.562† | 20449.5 | 2.08 | mg/L | 0.056 | 2.08 | mg/L | 0.056 2.71% |
| Mg 279.077† | 14337.9 | 5.75 | mg/L | 0.143 | 5.75 | mg/L | 0.143 2.48% |
| Mn 257.610† | 231181.2 | 0.261 | mg/L | 0.0014 | 0.261 | mg/L | 0.0014 0.55% |
| Mo 202.031† | 18842.3 | 0.513 | mg/L | 0.0043 | 0.513 | mg/L | 0.0043 0.83% |
| Ni 231.604† | 18643.5 | 0.260 | mg/L | 0.0027 | 0.260 | mg/L | 0.0027 1.05% |
| Pb 220.353† | 2934.6 | 0.264 | mg/L | 0.0035 | 0.264 | mg/L | 0.0035 1.31% |
| Sb 206.836† | 2463.8 | 0.604 | mg/L | 0.0172 | 0.604 | mg/L | 0.0172 2.85% |
| Se 196.026† | 382.5 | 0.218 | mg/L | 0.0072 | 0.218 | mg/L | 0.0072 3.30% |
| Si 251.611† | 114441.4 | 2.61 | mg/L | 0.062 | 2.61 | mg/L | 0.062 2.38% |
| Sn 189.927† | -60.6 | -0.00583 | mg/L | 0.000788 | -0.00583 | mg/L | 0.000788 13.52% |
| Ti 334.940† | 502096.7 | 0.512 | mg/L | 0.0065 | 0.512 | mg/L | 0.0065 1.27% |
| Tl 190.801† | 998.3 | 0.277 | mg/L | 0.0027 | 0.277 | mg/L | 0.0027 0.97% |
| V 290.880† | 98293.3 | 0.516 | mg/L | 0.0059 | 0.516 | mg/L | 0.0059 1.14% |
| Zn 206.200† | 27102.9 | 0.541 | mg/L | 0.0029 | 0.541 | mg/L | 0.0029 0.54% |
| K 766.490† | 56165.4 | 26.1 | mg/L | 0.39 | 26.1 | mg/L | 0.39 1.51% |
| Na 589.592† | 442373.6 | 28.4 | mg/L | 0.69 | 28.4 | mg/L | 0.69 2.42% |
| Sr 407.771† | 1060103.1 | 0.580 | mg/L | 0.0011 | 0.580 | mg/L | 0.0011 0.18% |
| Li 670.784† | 50724.3 | 0.524 | mg/L | 0.0058 | 0.524 | mg/L | 0.0058 1.11% |

**Sequence No.: 16** **Autosampler Location: 37**
**Sample ID: L1205028403DL WG397934-04** **Date Collected: 5/21/2012 5:11:40 PM**
**Analyst: KHR** **Data Type: Original**
**Initial Sample Wt:** **Initial Sample Vol:**
**Dilution:** **Sample Prep Vol:**

**Nebulizer Parameters: L1205028403DL WG397934-04**

| Analyte | Back Pressure | Flow |
|---|---|---|
| All | 154.0 kPa | 0.50 L/min |

**Mean Data: L1205028403DL WG397934-04**

| Analyte | Mean Corrected Intensity | Calib. Conc. | Units | Std.Dev. | Sample Conc. | Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 2084377.4 | | | | | | 23217.89 | 1.11% |
| YRADIAL | 193436.6 | | | | | | 2407.41 | 1.24% |
| Ga 417.206 | 1247982.6 | | | | | | 19558.51 | 1.57% |
| GaRADIAL | 59043.4 | | | | | | 1807.64 | 3.06% |
| Ag 328.068† | 65.2 | -0.00037 | mg/L | 0.000414 | -0.00037 | mg/L | 0.000414 | 110.71% |
| Al 396.153† | -8.6 | -0.00515 | mg/L | 0.001722 | -0.00515 | mg/L | 0.001722 | 33.44% |
| As 188.979† | -0.8 | -0.00063 | mg/L | 0.000756 | -0.00063 | mg/L | 0.000756 | 120.73% |
| Ba 233.527† | 81.0 | -0.00028 | mg/L | 0.000443 | -0.00028 | mg/L | 0.000443 | 160.05% |
| Be 234.861† | 133.5 | 0.00013 | mg/L | 0.000019 | 0.00013 | mg/L | 0.000019 | 14.66% |
| B 249.677† | 99.7 | 0.00044 | mg/L | 0.000391 | 0.00044 | mg/L | 0.000391 | 89.49% |
| Ca 227.546† | 128.7 | 0.341 | mg/L | 0.0261 | 0.341 | mg/L | 0.0261 | 7.67% |
| Cd 228.802† | -12.5 | -0.00024 | mg/L | 0.000250 | -0.00024 | mg/L | 0.000250 | 106.03% |
| Co 228.616† | 14.7 | 0.00007 | mg/L | 0.000315 | 0.00007 | mg/L | 0.000315 | 447.39% |
| Cr 267.716† | -20.8 | -0.00023 | mg/L | 0.000146 | -0.00023 | mg/L | 0.000146 | 64.58% |
| Cu 327.393† | 46.6 | -0.00029 | mg/L | 0.000532 | -0.00029 | mg/L | 0.000532 | 182.90% |
| Fe 239.562† | -18.6 | 0.00078 | mg/L | 0.000295 | 0.00078 | mg/L | 0.000295 | 38.01% |
| Mg 279.077† | 256.7 | 0.106 | mg/L | 0.0082 | 0.106 | mg/L | 0.0082 | 7.78% |
| Mn 257.610† | 306.8 | -0.00142 | mg/L | 0.000015 | -0.00142 | mg/L | 0.000015 | 1.06% |
| Mo 202.031† | -16.2 | 0.00135 | mg/L | 0.000136 | 0.00135 | mg/L | 0.000136 | 10.06% |
| Ni 231.604† | -29.0 | -0.00135 | mg/L | 0.000381 | -0.00135 | mg/L | 0.000381 | 28.32% |
| Pb 220.353† | 20.3 | 0.00086 | mg/L | 0.000458 | 0.00086 | mg/L | 0.000458 | 53.07% |
| Sb 206.836† | -1.0 | -0.00011 | mg/L | 0.000856 | -0.00011 | mg/L | 0.000856 | 780.09% |
| Se 196.026† | -2.7 | -0.00016 | mg/L | 0.000968 | -0.00016 | mg/L | 0.000968 | 601.78% |
| Si 251.611† | 345.4 | -0.00217 | mg/L | 0.000468 | -0.00217 | mg/L | 0.000468 | 21.55% |
| Sn 189.927† | -7.0 | -0.00074 | mg/L | 0.001050 | -0.00074 | mg/L | 0.001050 | 142.09% |
| Ti 334.940† | -73.3 | 0.00231 | mg/L | 0.000134 | 0.00231 | mg/L | 0.000134 | 5.80% |
| Tl 190.801† | 2.3 | -0.00039 | mg/L | 0.002842 | -0.00039 | mg/L | 0.002842 | 736.21% |
| V 290.880† | 720.6 | 0.00221 | mg/L | 0.001426 | 0.00221 | mg/L | 0.001426 | 64.54% |
| Zn 206.200† | 13.4 | -0.00146 | mg/L | 0.000076 | -0.00146 | mg/L | 0.000076 | 5.20% |
| K 766.490† | 102.3 | -0.00850 | mg/L | 0.021411 | -0.00850 | mg/L | 0.021411 | 251.83% |
| Na 589.592† | 7043.8 | 0.441 | mg/L | 0.0587 | 0.441 | mg/L | 0.0587 | 13.33% |

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| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Sr 407.771† | 21385.9 | 0.0125 | mg/L | 0.00104 | 0.0125 | mg/L | 0.00104 8.27% |
| Li 670.784† | -108.9 | -0.00402 | mg/L | 0.000597 | -0.00402 | mg/L | 0.000597 14.82% |

**Sequence No.: 17** **Autosampler Location: 38**
**Sample ID: L1205028404 0.01** **Date Collected: 5/21/2012 5:18:34 PM**
**Analyst: KHR** **Data Type: Original**
**Initial Sample Wt:** **Initial Sample Vol:**
**Dilution:** **Sample Prep Vol:**

**Nebulizer Parameters: L1205028404 0.01**

| Analyte | Back Pressure | Flow |
|---|---|---|
| All | 154.0 kPa | 0.50 L/min |

**Mean Data: L1205028404 0.01**

| Analyte | Mean Corrected Intensity | Calib. Conc. | Units | Std.Dev. | Sample Conc. | Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 2111969.1 | | | | | | 7590.93 | 0.36% |
| YRADIAL | 195902.9 | | | | | | 1782.51 | 0.91% |
| Ga 417.206 | 1250452.4 | | | | | | 32740.67 | 2.62% |
| GaRADIAL | 60064.3 | | | | | | 1032.53 | 1.72% |
| Ag 328.068† | 83.2 | -0.00032 | mg/L | 0.000543 | -0.00032 | mg/L | 0.000543 | 168.10% |
| Al 396.153† | -12.2 | -0.00595 | mg/L | 0.002529 | -0.00595 | mg/L | 0.002529 | 42.52% |
| As 188.979† | 1.6 | 0.00020 | mg/L | 0.001518 | 0.00020 | mg/L | 0.001518 | 771.72% |
| Ba 233.527† | 584.1 | 0.00288 | mg/L | 0.004261 | 0.00288 | mg/L | 0.004261 | 147.92% |
| Be 234.861† | 130.6 | 0.00012 | mg/L | 0.000022 | 0.00012 | mg/L | 0.000022 | 17.75% |
| B 249.677† | 57.5 | -0.00006 | mg/L | 0.000262 | -0.00006 | mg/L | 0.000262 | 465.36% |
| Ca 227.546† | 610.8 | 1.43 | mg/L | 0.066 | 1.43 | mg/L | 0.066 | 4.61% |
| Cd 228.802† | -11.7 | -0.00023 | mg/L | 0.000079 | -0.00023 | mg/L | 0.000079 | 34.95% |
| Co 228.616† | 17.4 | 0.00014 | mg/L | 0.000306 | 0.00014 | mg/L | 0.000306 | 223.52% |
| Cr 267.716† | -22.3 | -0.00024 | mg/L | 0.000097 | -0.00024 | mg/L | 0.000097 | 40.53% |
| Cu 327.393† | -61.5 | -0.00072 | mg/L | 0.000612 | -0.00072 | mg/L | 0.000612 | 84.95% |
| Fe 239.562† | 129.2 | 0.0158 | mg/L | 0.00155 | 0.0158 | mg/L | 0.00155 | 9.80% |
| Mg 279.077† | 1358.2 | 0.546 | mg/L | 0.0408 | 0.546 | mg/L | 0.0408 | 7.46% |
| Mn 257.610† | 1519.5 | -0.00005 | mg/L | 0.000032 | -0.00005 | mg/L | 0.000032 | 65.70% |
| Mo 202.031† | -8.9 | 0.00155 | mg/L | 0.000225 | 0.00155 | mg/L | 0.000225 | 14.49% |
| Ni 231.604† | -32.3 | -0.00139 | mg/L | 0.000278 | -0.00139 | mg/L | 0.000278 | 19.96% |
| Pb 220.353† | 15.2 | 0.00042 | mg/L | 0.001758 | 0.00042 | mg/L | 0.001758 | 422.11% |
| Sb 206.836† | -3.2 | -0.00065 | mg/L | 0.001532 | -0.00065 | mg/L | 0.001532 | 236.36% |
| Se 196.026† | -9.3 | -0.00385 | mg/L | 0.001762 | -0.00385 | mg/L | 0.001762 | 45.76% |
| Si 251.611† | 2748.6 | 0.0531 | mg/L | 0.00354 | 0.0531 | mg/L | 0.00354 | 6.67% |
| Sn 189.927† | -17.6 | -0.00175 | mg/L | 0.000626 | -0.00175 | mg/L | 0.000626 | 35.72% |
| Ti 334.940† | -433.1 | 0.00211 | mg/L | 0.000102 | 0.00211 | mg/L | 0.000102 | 4.83% |
| Tl 190.801† | 9.1 | 0.00146 | mg/L | 0.001539 | 0.00146 | mg/L | 0.001539 | 105.79% |
| V 290.880† | 654.2 | 0.00185 | mg/L | 0.000869 | 0.00185 | mg/L | 0.000869 | 47.05% |
| Zn 206.200† | 4.5 | -0.00164 | mg/L | 0.000268 | -0.00164 | mg/L | 0.000268 | 16.37% |
| K 766.490† | 93.5 | -0.0146 | mg/L | 0.06070 | -0.0146 | mg/L | 0.06070 | 415.77% |
| Na 589.592† | 38067.1 | 2.43 | mg/L | 0.166 | 2.43 | mg/L | 0.166 | 6.84% |
| Sr 407.771† | 119130.0 | 0.0659 | mg/L | 0.00256 | 0.0659 | mg/L | 0.00256 | 3.88% |
| Li 670.784† | -81.6 | -0.00374 | mg/L | 0.000728 | -0.00374 | mg/L | 0.000728 | 19.46% |

**Sequence No.: 18** **Autosampler Location: 6**
**Sample ID: CCV** **Date Collected: 5/21/2012 5:25:29 PM**
**Analyst:** **Data Type: Original**
**Initial Sample Wt:** **Initial Sample Vol:**
**Dilution:** **Sample Prep Vol:**

**Nebulizer Parameters: CCV**

| Analyte | Back Pressure | Flow |
|---|---|---|
| All | 154.0 kPa | 0.50 L/min |

**Mean Data: CCV**

| Analyte | Mean Corrected Intensity | Calib. Conc. | Units | Std.Dev. | Sample Conc. | Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 2099699.5 | | | | | | 31486.17 | 1.50% |
| YRADIAL | 196819.0 | | | | | | 1880.47 | 0.96% |
| Ga 417.206 | 1193525.7 | | | | | | 27073.71 | 2.27% |

Approved: May 22, 2012

| | | | | | | |
|---|---|---|---|---|---|---|
| GaRADIAL | 58451.8 | | | | 431.61 | 0.74% |
| Ag 328.068† | 130015.5 | 0.406 mg/L | 0.0103 | 0.406 mg/L | 0.0103 | 2.54% |
| QC value within limits for Ag 328.068 Recovery = 101.59% | | | | | | |
| Al 396.153† | 46849.1 | 10.1 mg/L | 0.04 | 10.1 mg/L | 0.04 | 0.37% |
| QC value within limits for Al 396.153 Recovery = 101.47% | | | | | | |
| As 188.979† | 1157.0 | 0.393 mg/L | 0.0095 | 0.393 mg/L | 0.0095 | 2.43% |
| QC value within limits for As 188.979 Recovery = 98.14% | | | | | | |
| Ba 233.527† | 165462.9 | 1.04 mg/L | 0.004 | 1.04 mg/L | 0.004 | 0.35% |
| QC value within limits for Ba 233.527 Recovery = 103.81% | | | | | | |
| Be 234.861† | 70978.8 | 0.0496 mg/L | 0.00119 | 0.0496 mg/L | 0.00119 | 2.39% |
| QC value within limits for Be 234.861 Recovery = 99.18% | | | | | | |
| B 249.677† | 43077.3 | 0.492 mg/L | 0.0134 | 0.492 mg/L | 0.0134 | 2.72% |
| QC value within limits for B 249.677 Recovery = 98.36% | | | | | | |
| Ca 227.546† | 4351.3 | 10.3 mg/L | 0.29 | 10.3 mg/L | 0.29 | 2.83% |
| QC value within limits for Ca 227.546 Recovery = 103.17% | | | | | | |
| Cd 228.802† | 2959.2 | 0.0486 mg/L | 0.00195 | 0.0486 mg/L | 0.00195 | 4.01% |
| QC value within limits for Cd 228.802 Recovery = 97.22% | | | | | | |
| Co 228.616† | 8294.3 | 0.205 mg/L | 0.0030 | 0.205 mg/L | 0.0030 | 1.48% |
| QC value within limits for Co 228.616 Recovery = 102.34% | | | | | | |
| Cr 267.716† | 60182.1 | 0.516 mg/L | 0.0003 | 0.516 mg/L | 0.0003 | 0.06% |
| QC value within limits for Cr 267.716 Recovery = 103.18% | | | | | | |
| Cu 327.393† | 126085.8 | 0.504 mg/L | 0.0115 | 0.504 mg/L | 0.0115 | 2.28% |
| QC value within limits for Cu 327.393 Recovery = 100.72% | | | | | | |
| Fe 239.562† | 40400.0 | 4.11 mg/L | 0.019 | 4.11 mg/L | 0.019 | 0.45% |
| QC value within limits for Fe 239.562 Recovery = 102.64% | | | | | | |
| Mg 279.077† | 25630.1 | 10.3 mg/L | 0.03 | 10.3 mg/L | 0.03 | 0.30% |
| QC value within limits for Mg 279.077 Recovery = 102.74% | | | | | | |
| Mn 257.610† | 463893.4 | 0.525 mg/L | 0.0043 | 0.525 mg/L | 0.0043 | 0.81% |
| QC value within limits for Mn 257.610 Recovery = 105.01% | | | | | | |
| Mo 202.031† | 37466.6 | 1.02 mg/L | 0.002 | 1.02 mg/L | 0.002 | 0.17% |
| QC value within limits for Mo 202.031 Recovery = 101.76% | | | | | | |
| Ni 231.604† | 36969.8 | 0.517 mg/L | 0.0041 | 0.517 mg/L | 0.0041 | 0.79% |
| QC value within limits for Ni 231.604 Recovery = 103.50% | | | | | | |
| Pb 220.353† | 5727.2 | 0.516 mg/L | 0.0071 | 0.516 mg/L | 0.0071 | 1.38% |
| QC value within limits for Pb 220.353 Recovery = 103.15% | | | | | | |
| Sb 206.836† | 4848.7 | 1.19 mg/L | 0.034 | 1.19 mg/L | 0.034 | 2.88% |
| QC value within limits for Sb 206.836 Recovery = 99.04% | | | | | | |
| Se 196.026† | 695.2 | 0.395 mg/L | 0.0131 | 0.395 mg/L | 0.0131 | 3.33% |
| QC value within limits for Se 196.026 Recovery = 98.68% | | | | | | |
| Si 251.611† | 217696.6 | 4.98 mg/L | 0.084 | 4.98 mg/L | 0.084 | 1.69% |
| QC value within limits for Si 251.611 Recovery = 99.65% | | | | | | |
| Sn 189.927† | 10913.9 | 1.03 mg/L | 0.013 | 1.03 mg/L | 0.013 | 1.23% |
| QC value within limits for Sn 189.927 Recovery = 103.49% | | | | | | |
| Ti 334.940† | 1007503.3 | 1.02 mg/L | 0.004 | 1.02 mg/L | 0.004 | 0.42% |
| QC value within limits for Ti 334.940 Recovery = 102.44% | | | | | | |
| Tl 190.801† | 1912.5 | 0.531 mg/L | 0.0072 | 0.531 mg/L | 0.0072 | 1.36% |
| QC value within limits for Tl 190.801 Recovery = 106.27% | | | | | | |
| V 290.880† | 196285.6 | 1.03 mg/L | 0.008 | 1.03 mg/L | 0.008 | 0.76% |
| QC value within limits for V 290.880 Recovery = 103.28% | | | | | | |
| Zn 206.200† | 52285.8 | 1.05 mg/L | 0.003 | 1.05 mg/L | 0.003 | 0.26% |
| QC value within limits for Zn 206.200 Recovery = 104.50% | | | | | | |
| K 766.490† | 109561.1 | 51.1 mg/L | 0.42 | 51.1 mg/L | 0.42 | 0.82% |
| QC value within limits for K 766.490 Recovery = 102.19% | | | | | | |
| Na 589.592† | 794633.7 | 51.3 mg/L | 0.65 | 51.3 mg/L | 0.65 | 1.28% |
| QC value within limits for Na 589.592 Recovery = 102.51% | | | | | | |
| Sr 407.771† | 1887599.4 | 1.03 mg/L | 0.029 | 1.03 mg/L | 0.029 | 2.81% |
| QC value within limits for Sr 407.771 Recovery = 103.22% | | | | | | |
| Li 670.784† | 99005.6 | 1.03 mg/L | 0.005 | 1.03 mg/L | 0.005 | 0.46% |
| QC value within limits for Li 670.784 Recovery = 102.54% | | | | | | |

All analyte(s) passed QC.

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**Sequence No.: 19** **Autosampler Location: 1**
**Sample ID: CCB** **Date Collected: 5/21/2012 5:31:29 PM**
**Analyst:** **Data Type: Original**
**Initial Sample Wt:** **Initial Sample Vol:**
**Dilution:** **Sample Prep Vol:**

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**Nebulizer Parameters: CCB**

| Analyte | Back Pressure | Flow |
|---|---|---|
| All | 154.0 kPa | 0.50 L/min |

Approved: May 22, 2012

**Mean Data: CCB**

| Analyte | Mean Corrected Intensity | Calib. Conc. | Units | Calib. Std.Dev. | Sample Conc. | Units | Sample Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 2124027.1 | | | | | | 21225.73 | 1.00% |
| YRADIAL | 198078.9 | | | | | | 1235.44 | 0.62% |
| Ga 417.206 | 1248726.6 | | | | | | 21829.68 | 1.75% |
| GaRADIAL | 59155.4 | | | | | | 1999.47 | 3.38% |
| Ag 328.068† | -105.5 | -0.00091 | mg/L | 0.000286 | -0.00091 | mg/L | 0.000286 | 31.46% |
| QC value within limits for Ag 328.068 Recovery = Not calculated | | | | | | | | |
| Al 396.153† | 14.8 | -0.00005 | mg/L | 0.001331 | -0.00005 | mg/L | 0.001331 | >999.9% |
| QC value within limits for Al 396.153 Recovery = Not calculated | | | | | | | | |
| As 188.979† | -1.5 | -0.00084 | mg/L | 0.000619 | -0.00084 | mg/L | 0.000619 | 73.35% |
| QC value within limits for As 188.979 Recovery = Not calculated | | | | | | | | |
| Ba 233.527† | 72.0 | -0.00033 | mg/L | 0.000843 | -0.00033 | mg/L | 0.000843 | 254.03% |
| QC value within limits for Ba 233.527 Recovery = Not calculated | | | | | | | | |
| Be 234.861† | -22.1 | 0.00002 | mg/L | 0.000026 | 0.00002 | mg/L | 0.000026 | 144.51% |
| QC value within limits for Be 234.861 Recovery = Not calculated | | | | | | | | |
| B 249.677† | 73.7 | 0.00014 | mg/L | 0.000345 | 0.00014 | mg/L | 0.000345 | 251.50% |
| QC value within limits for B 249.677 Recovery = Not calculated | | | | | | | | |
| Ca 227.546† | 5.9 | 0.0647 | mg/L | 0.02596 | 0.0647 | mg/L | 0.02596 | 40.11% |
| QC value within limits for Ca 227.546 Recovery = Not calculated | | | | | | | | |
| Cd 228.802† | -13.2 | -0.00025 | mg/L | 0.000145 | -0.00025 | mg/L | 0.000145 | 58.95% |
| QC value within limits for Cd 228.802 Recovery = Not calculated | | | | | | | | |
| Co 228.616† | 9.4 | -0.00006 | mg/L | 0.000218 | -0.00006 | mg/L | 0.000218 | 364.23% |
| QC value within limits for Co 228.616 Recovery = Not calculated | | | | | | | | |
| Cr 267.716† | 3.7 | -0.00002 | mg/L | 0.000234 | -0.00002 | mg/L | 0.000234 | >999.9% |
| QC value within limits for Cr 267.716 Recovery = Not calculated | | | | | | | | |
| Cu 327.393† | -66.3 | -0.00074 | mg/L | 0.000107 | -0.00074 | mg/L | 0.000107 | 14.44% |
| QC value within limits for Cu 327.393 Recovery = Not calculated | | | | | | | | |
| Fe 239.562† | -3.6 | 0.00230 | mg/L | 0.000741 | 0.00230 | mg/L | 0.000741 | 32.25% |
| QC value within limits for Fe 239.562 Recovery = Not calculated | | | | | | | | |
| Mg 279.077† | 15.2 | 0.00904 | mg/L | 0.002344 | 0.00904 | mg/L | 0.002344 | 25.93% |
| QC value within limits for Mg 279.077 Recovery = Not calculated | | | | | | | | |
| Mn 257.610† | 104.6 | -0.00165 | mg/L | 0.000034 | -0.00165 | mg/L | 0.000034 | 2.03% |
| QC value within limits for Mn 257.610 Recovery = Not calculated | | | | | | | | |
| Mo 202.031† | -7.2 | 0.00160 | mg/L | 0.000145 | 0.00160 | mg/L | 0.000145 | 9.12% |
| QC value within limits for Mo 202.031 Recovery = Not calculated | | | | | | | | |
| Ni 231.604† | -18.3 | -0.00119 | mg/L | 0.000199 | -0.00119 | mg/L | 0.000199 | 16.65% |
| QC value within limits for Ni 231.604 Recovery = Not calculated | | | | | | | | |
| Pb 220.353† | 19.5 | 0.00079 | mg/L | 0.000610 | 0.00079 | mg/L | 0.000610 | 77.25% |
| QC value within limits for Pb 220.353 Recovery = Not calculated | | | | | | | | |
| Sb 206.836† | 2.2 | 0.00066 | mg/L | 0.000941 | 0.00066 | mg/L | 0.000941 | 142.31% |
| QC value within limits for Sb 206.836 Recovery = Not calculated | | | | | | | | |
| Se 196.026† | -0.3 | 0.00121 | mg/L | 0.002340 | 0.00121 | mg/L | 0.002340 | 193.58% |
| QC value within limits for Se 196.026 Recovery = Not calculated | | | | | | | | |
| Si 251.611† | 59.6 | -0.00874 | mg/L | 0.001205 | -0.00874 | mg/L | 0.001205 | 13.78% |
| QC value within limits for Si 251.611 Recovery = Not calculated | | | | | | | | |
| Sn 189.927† | 11.4 | 0.00100 | mg/L | 0.000288 | 0.00100 | mg/L | 0.000288 | 28.75% |
| QC value within limits for Sn 189.927 Recovery = Not calculated | | | | | | | | |
| Ti 334.940† | 43.0 | 0.00239 | mg/L | 0.000106 | 0.00239 | mg/L | 0.000106 | 4.45% |
| QC value within limits for Ti 334.940 Recovery = Not calculated | | | | | | | | |
| Tl 190.801† | -3.3 | -0.00192 | mg/L | 0.002298 | -0.00192 | mg/L | 0.002298 | 119.98% |
| QC value within limits for Tl 190.801 Recovery = Not calculated | | | | | | | | |
| V 290.880† | 60.2 | -0.00127 | mg/L | 0.001449 | -0.00127 | mg/L | 0.001449 | 113.94% |
| QC value within limits for V 290.880 Recovery = Not calculated | | | | | | | | |
| Zn 206.200† | -6.8 | -0.00186 | mg/L | 0.000211 | -0.00186 | mg/L | 0.000211 | 11.32% |
| QC value within limits for Zn 206.200 Recovery = Not calculated | | | | | | | | |
| K 766.490† | 55.6 | -0.0298 | mg/L | 0.02543 | -0.0298 | mg/L | 0.02543 | 85.32% |
| QC value within limits for K 766.490 Recovery = Not calculated | | | | | | | | |
| Na 589.592† | 195.0 | 0.00257 | mg/L | 0.004050 | 0.00257 | mg/L | 0.004050 | 157.38% |
| QC value within limits for Na 589.592 Recovery = Not calculated | | | | | | | | |
| Sr 407.771† | 203.1 | 0.00097 | mg/L | 0.000038 | 0.00097 | mg/L | 0.000038 | 3.96% |
| QC value within limits for Sr 407.771 Recovery = Not calculated | | | | | | | | |
| Li 670.784† | 25.2 | -0.00263 | mg/L | 0.000355 | -0.00263 | mg/L | 0.000355 | 13.51% |
| QC value within limits for Li 670.784 Recovery = Not calculated | | | | | | | | |

All analyte(s) passed QC.

**Sequence No.: 20** **Autosampler Location: 12**
**Sample ID: ICSA** **Date Collected: 5/21/2012 5:38:37 PM**

Approved: May 22, 2012

Analyst: Data Type: Original
Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:

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**Nebulizer Parameters: ICSA**

| Analyte | Back Pressure | Flow |
|---|---|---|
| All | 154.0 kPa | 0.50 L/min |

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**Mean Data: ICSA**

| Analyte | Mean Corrected Intensity | Calib. Conc. | Calib. Units | Calib. Std.Dev. | Sample Conc. | Sample Units | Sample Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 1957741.6 | | | | | | 7651.25 | 0.39% |
| YRADIAL | 190861.0 | | | | | | 1421.86 | 0.74% |
| Ga 417.206 | 1154190.0 | | | | | | 38530.32 | 3.34% |
| GaRADIAL | 58092.4 | | | | | | 147.70 | 0.25% |
| Ag 328.068† | -13715.4 | -0.00113 | mg/L | 0.000280 | -0.00113 | mg/L | 0.000280 | 24.76% |
| QC value within limits for Ag 328.068 Recovery = Not calculated | | | | | | | | |
| Al 396.153† | 1148105.6 | 250 | mg/L | 2.5 | 250 | mg/L | 2.5 | 1.00% |
| QC value within limits for Al 396.153 Recovery = 100.18% | | | | | | | | |
| As 188.979† | -26.2 | -0.00305 | mg/L | 0.001319 | -0.00305 | mg/L | 0.001319 | 43.29% |
| QC value within limits for As 188.979 Recovery = Not calculated | | | | | | | | |
| Ba 233.527† | 711.6 | 0.00131 | mg/L | 0.000136 | 0.00131 | mg/L | 0.000136 | 10.41% |
| QC value within limits for Ba 233.527 Recovery = Not calculated | | | | | | | | |
| Be 234.861† | 27747.1 | -0.00153 | mg/L | 0.000193 | -0.00153 | mg/L | 0.000193 | 12.60% |
| QC value less than the lower limit for Be 234.861 Recovery = Not calculated | | | | | | | | |
| B 249.677† | 4407.0 | 0.00933 | mg/L | 0.005305 | 0.00933 | mg/L | 0.005305 | 56.84% |
| QC value within limits for B 249.677 Recovery = Not calculated | | | | | | | | |
| Ca 227.546† | 112712.6 | 256 | mg/L | 6.3 | 256 | mg/L | 6.3 | 2.46% |
| QC value within limits for Ca 227.546 Recovery = 102.37% | | | | | | | | |
| Cd 228.802† | 11.4 | 0.00003 | mg/L | 0.000266 | 0.00003 | mg/L | 0.000266 | 774.64% |
| QC value within limits for Cd 228.802 Recovery = Not calculated | | | | | | | | |
| Co 228.616† | 34.0 | -0.00185 | mg/L | 0.000280 | -0.00185 | mg/L | 0.000280 | 15.08% |
| QC value within limits for Co 228.616 Recovery = Not calculated | | | | | | | | |
| Cr 267.716† | 135.4 | 0.00371 | mg/L | 0.000248 | 0.00371 | mg/L | 0.000248 | 6.68% |
| QC value greater than the upper limit for Cr 267.716 Recovery = Not calculated | | | | | | | | |
| Cu 327.393† | -1561.6 | 0.00125 | mg/L | 0.000145 | 0.00125 | mg/L | 0.000145 | 11.65% |
| QC value within limits for Cu 327.393 Recovery = Not calculated | | | | | | | | |
| Fe 239.562† | 932425.7 | 94.7 | mg/L | 0.65 | 94.7 | mg/L | 0.65 | 0.69% |
| QC value within limits for Fe 239.562 Recovery = 94.71% | | | | | | | | |
| Mg 279.077† | 625575.6 | 250 | mg/L | 1.5 | 250 | mg/L | 1.5 | 0.59% |
| QC value within limits for Mg 279.077 Recovery = 100.10% | | | | | | | | |
| Mn 257.610† | -2397.2 | -0.00184 | mg/L | 0.000468 | -0.00184 | mg/L | 0.000468 | 25.49% |
| QC value within limits for Mn 257.610 Recovery = Not calculated | | | | | | | | |
| Mo 202.031† | -82.4 | 0.00421 | mg/L | 0.000384 | 0.00421 | mg/L | 0.000384 | 9.14% |
| QC value within limits for Mo 202.031 Recovery = Not calculated | | | | | | | | |
| Ni 231.604† | 20.1 | -0.00065 | mg/L | 0.000498 | -0.00065 | mg/L | 0.000498 | 76.44% |
| QC value within limits for Ni 231.604 Recovery = Not calculated | | | | | | | | |
| Pb 220.353† | -433.6 | -0.00433 | mg/L | 0.004635 | -0.00433 | mg/L | 0.004635 | 107.14% |
| QC value within limits for Pb 220.353 Recovery = Not calculated | | | | | | | | |
| Sb 206.836† | -33.0 | -0.00451 | mg/L | 0.002839 | -0.00451 | mg/L | 0.002839 | 62.95% |
| QC value within limits for Sb 206.836 Recovery = Not calculated | | | | | | | | |
| Se 196.026† | -46.0 | 0.00064 | mg/L | 0.003561 | 0.00064 | mg/L | 0.003561 | 554.95% |
| QC value within limits for Se 196.026 Recovery = Not calculated | | | | | | | | |
| Si 251.611† | 2668.2 | 0.0512 | mg/L | 0.00180 | 0.0512 | mg/L | 0.00180 | 3.52% |
| QC value within limits for Si 251.611 Recovery = Not calculated | | | | | | | | |
| Sn 189.927† | -338.5 | -0.0322 | mg/L | 0.00071 | -0.0322 | mg/L | 0.00071 | 2.21% |
| QC value within limits for Sn 189.927 Recovery = Not calculated | | | | | | | | |
| Ti 334.940† | -36502.5 | 0.00340 | mg/L | 0.003090 | 0.00340 | mg/L | 0.003090 | 90.93% |
| QC value within limits for Ti 334.940 Recovery = Not calculated | | | | | | | | |
| Tl 190.801† | -57.0 | -0.0101 | mg/L | 0.00440 | -0.0101 | mg/L | 0.00440 | 43.73% |
| QC value within limits for Tl 190.801 Recovery = Not calculated | | | | | | | | |
| V 290.880† | 3572.2 | 0.00338 | mg/L | 0.001511 | 0.00338 | mg/L | 0.001511 | 44.73% |
| QC value within limits for V 290.880 Recovery = Not calculated | | | | | | | | |
| Zn 206.200† | 248.1 | 0.00142 | mg/L | 0.000282 | 0.00142 | mg/L | 0.000282 | 19.82% |
| QC value within limits for Zn 206.200 Recovery = Not calculated | | | | | | | | |
| K 766.490† | -88.0 | -0.0966 | mg/L | 0.01329 | -0.0966 | mg/L | 0.01329 | 13.76% |
| QC value within limits for K 766.490 Recovery = Not calculated | | | | | | | | |
| Na 589.592† | 129.7 | -0.00160 | mg/L | 0.001238 | -0.00160 | mg/L | 0.001238 | 77.18% |
| QC value within limits for Na 589.592 Recovery = Not calculated | | | | | | | | |
| Sr 407.771† | 1741.1 | -0.00377 | mg/L | 0.000177 | -0.00377 | mg/L | 0.000177 | 4.69% |

Approved: May 22, 2012

QC value within limits for Sr 407.771 Recovery = Not calculated
Li 670.784† 85.4 -0.00201 mg/L 0.000131 -0.00201 mg/L 0.000131 6.53%
QC value within limits for Li 670.784 Recovery = Not calculated
QC Failed. Continue with analysis.

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**Sequence No.: 21** **Autosampler Location: 13**
**Sample ID: ICSAB** **Date Collected: 5/21/2012 5:44:34 PM**
**Analyst:** **Data Type: Original**
**Initial Sample Wt:** **Initial Sample Vol:**
**Dilution:** **Sample Prep Vol:**

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**Nebulizer Parameters: ICSAB**

| Analyte | Back Pressure | Flow |
|---|---|---|
| All | 153.0 kPa | 0.50 L/min |

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**Mean Data: ICSAB**

| Analyte | Mean Corrected Intensity | Calib. Conc. | Units | Std.Dev. | Sample Conc. | Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 1932185.0 | | | | | | 1361.82 | 0.07% |
| YRADIAL | 192260.6 | | | | | | 1209.86 | 0.63% |
| Ga 417.206 | 1130760.6 | | | | | | 24399.59 | 2.16% |
| GaRADIAL | 57786.0 | | | | | | 184.52 | 0.32% |
| Ag 328.068† | 148053.3 | 0.500 | mg/L | 0.0115 | 0.500 | mg/L | 0.0115 | 2.29% |
| QC value within limits for Ag 328.068 Recovery = 100.06% | | | | | | | | |
| Al 396.153† | 1130479.8 | 247 | mg/L | 2.6 | 247 | mg/L | 2.6 | 1.05% |
| QC value within limits for Al 396.153 Recovery = 98.65% | | | | | | | | |
| As 188.979† | 674.4 | 0.238 | mg/L | 0.0044 | 0.238 | mg/L | 0.0044 | 1.83% |
| QC value within limits for As 188.979 Recovery = 95.13% | | | | | | | | |
| Ba 233.527† | 41332.3 | 0.256 | mg/L | 0.0006 | 0.256 | mg/L | 0.0006 | 0.23% |
| QC value within limits for Ba 233.527 Recovery = 102.51% | | | | | | | | |
| Be 234.861† | 379290.1 | 0.247 | mg/L | 0.0047 | 0.247 | mg/L | 0.0047 | 1.91% |
| QC value within limits for Be 234.861 Recovery = 98.67% | | | | | | | | |
| B 249.677† | 3926.9 | -0.00728 | mg/L | 0.001367 | -0.00728 | mg/L | 0.001367 | 18.76% |
| QC value within limits for B 249.677 Recovery = Not calculated | | | | | | | | |
| Ca 227.546† | 112328.2 | 255 | mg/L | 7.3 | 255 | mg/L | 7.3 | 2.87% |
| QC value within limits for Ca 227.546 Recovery = 102.15% | | | | | | | | |
| Cd 228.802† | 24848.6 | 0.419 | mg/L | 0.0094 | 0.419 | mg/L | 0.0094 | 2.24% |
| QC value within limits for Cd 228.802 Recovery = 83.86% | | | | | | | | |
| Co 228.616† | 9738.7 | 0.239 | mg/L | 0.0008 | 0.239 | mg/L | 0.0008 | 0.33% |
| QC value within limits for Co 228.616 Recovery = 95.57% | | | | | | | | |
| Cr 267.716† | 30265.4 | 0.262 | mg/L | 0.0011 | 0.262 | mg/L | 0.0011 | 0.43% |
| QC value within limits for Cr 267.716 Recovery = 104.76% | | | | | | | | |
| Cu 327.393† | 60342.5 | 0.248 | mg/L | 0.0058 | 0.248 | mg/L | 0.0058 | 2.36% |
| QC value within limits for Cu 327.393 Recovery = 99.09% | | | | | | | | |
| Fe 239.562† | 913319.5 | 92.8 | mg/L | 1.09 | 92.8 | mg/L | 1.09 | 1.17% |
| QC value within limits for Fe 239.562 Recovery = 92.77% | | | | | | | | |
| Mg 279.077† | 610294.7 | 244 | mg/L | 3.0 | 244 | mg/L | 3.0 | 1.22% |
| QC value within limits for Mg 279.077 Recovery = 97.66% | | | | | | | | |
| Mn 257.610† | 216903.6 | 0.247 | mg/L | 0.0014 | 0.247 | mg/L | 0.0014 | 0.56% |
| QC value within limits for Mn 257.610 Recovery = 98.79% | | | | | | | | |
| Mo 202.031† | -62.6 | 0.00482 | mg/L | 0.000257 | 0.00482 | mg/L | 0.000257 | 5.33% |
| QC value within limits for Mo 202.031 Recovery = Not calculated | | | | | | | | |
| Ni 231.604† | 34666.5 | 0.485 | mg/L | 0.0017 | 0.485 | mg/L | 0.0017 | 0.36% |
| QC value within limits for Ni 231.604 Recovery = 97.02% | | | | | | | | |
| Pb 220.353† | 4983.3 | 0.482 | mg/L | 0.0049 | 0.482 | mg/L | 0.0049 | 1.01% |
| QC value within limits for Pb 220.353 Recovery = 96.45% | | | | | | | | |
| Sb 206.836† | 1947.9 | 0.480 | mg/L | 0.0144 | 0.480 | mg/L | 0.0144 | 3.00% |
| QC value within limits for Sb 206.836 Recovery = 95.96% | | | | | | | | |
| Se 196.026† | 365.9 | 0.232 | mg/L | 0.0041 | 0.232 | mg/L | 0.0041 | 1.78% |
| QC value within limits for Se 196.026 Recovery = 92.99% | | | | | | | | |
| Si 251.611† | -819.3 | -0.0289 | mg/L | 0.00115 | -0.0289 | mg/L | 0.00115 | 3.97% |
| QC value within limits for Si 251.611 Recovery = Not calculated | | | | | | | | |
| Sn 189.927† | -342.7 | -0.0326 | mg/L | 0.00093 | -0.0326 | mg/L | 0.00093 | 2.85% |
| QC value within limits for Sn 189.927 Recovery = Not calculated | | | | | | | | |
| Ti 334.940† | -35934.5 | 0.00377 | mg/L | 0.003173 | 0.00377 | mg/L | 0.003173 | 84.22% |
| QC value within limits for Ti 334.940 Recovery = Not calculated | | | | | | | | |
| Tl 190.801† | 1759.4 | 0.482 | mg/L | 0.0022 | 0.482 | mg/L | 0.0022 | 0.45% |
| QC value within limits for Tl 190.801 Recovery = 96.32% | | | | | | | | |
| V 290.880† | 51272.4 | 0.255 | mg/L | 0.0051 | 0.255 | mg/L | 0.0051 | 2.00% |

Approved: May 22, 2012

QC value within limits for V 290.880 Recovery = 102.09%
Zn 206.200† 24380.6 0.485 mg/L 0.0029 0.485 mg/L 0.0029 0.60%
QC value within limits for Zn 206.200 Recovery = 96.97%
K 766.490† 10861.3 4.99 mg/L 0.026 4.99 mg/L 0.026 0.53%
QC value within limits for K 766.490 Recovery = 99.86%
Na 589.592† 80540.5 5.15 mg/L 0.039 5.15 mg/L 0.039 0.75%
QC value within limits for Na 589.592 Recovery = 102.94%
Sr 407.771† 1740.0 -0.00375 mg/L 0.000136 -0.00375 mg/L 0.000136 3.62%
QC value within limits for Sr 407.771 Recovery = Not calculated
Li 670.784† 101.4 -0.00184 mg/L 0.000515 -0.00184 mg/L 0.000515 28.01%
QC value within limits for Li 670.784 Recovery = Not calculated
All analyte(s) passed QC.

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**Sequence No.: 22** **Autosampler Location: 6**
**Sample ID: CCV** **Date Collected: 5/21/2012 5:50:30 PM**
**Analyst:** **Data Type: Original**
**Initial Sample Wt:** **Initial Sample Vol:**
**Dilution:** **Sample Prep Vol:**

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**Nebulizer Parameters: CCV**

| Analyte | Back Pressure | Flow |
|---|---|---|
| All | 154.0 kPa | 0.50 L/min |

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**Mean Data: CCV**

| Analyte | Mean Corrected Intensity | Calib. Conc. | Units | Std.Dev. | Sample Conc. | Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 2032455.3 | | | | | | 22286.46 | 1.10% |
| YRADIAL | 195189.7 | | | | | | 6858.39 | 3.51% |
| Ga 417.206 | 1165142.2 | | | | | | 15789.86 | 1.36% |
| GaRADIAL | 57816.7 | | | | | | 1885.54 | 3.26% |
| Ag 328.068† | 130884.0 | 0.409 | mg/L | 0.0089 | 0.409 | mg/L | 0.0089 | 2.17% |
| QC value within limits for Ag 328.068 Recovery = 102.28% | | | | | | | | |
| Al 396.153† | 47719.6 | 10.3 | mg/L | 0.03 | 10.3 | mg/L | 0.03 | 0.28% |
| QC value within limits for Al 396.153 Recovery = 103.35% | | | | | | | | |
| As 188.979† | 1187.5 | 0.403 | mg/L | 0.0078 | 0.403 | mg/L | 0.0078 | 1.94% |
| QC value within limits for As 188.979 Recovery = 100.72% | | | | | | | | |
| Ba 233.527† | 168240.3 | 1.06 | mg/L | 0.010 | 1.06 | mg/L | 0.010 | 0.97% |
| QC value within limits for Ba 233.527 Recovery = 105.55% | | | | | | | | |
| Be 234.861† | 72904.2 | 0.0509 | mg/L | 0.00083 | 0.0509 | mg/L | 0.00083 | 1.63% |
| QC value within limits for Be 234.861 Recovery = 101.89% | | | | | | | | |
| B 249.677† | 43725.9 | 0.499 | mg/L | 0.0102 | 0.499 | mg/L | 0.0102 | 2.05% |
| QC value within limits for B 249.677 Recovery = 99.84% | | | | | | | | |
| Ca 227.546† | 4465.7 | 10.6 | mg/L | 0.18 | 10.6 | mg/L | 0.18 | 1.69% |
| QC value within limits for Ca 227.546 Recovery = 105.98% | | | | | | | | |
| Cd 228.802† | 3035.7 | 0.0499 | mg/L | 0.00154 | 0.0499 | mg/L | 0.00154 | 3.08% |
| QC value within limits for Cd 228.802 Recovery = 99.75% | | | | | | | | |
| Co 228.616† | 8555.5 | 0.211 | mg/L | 0.0033 | 0.211 | mg/L | 0.0033 | 1.56% |
| QC value within limits for Co 228.616 Recovery = 105.58% | | | | | | | | |
| Cr 267.716† | 61321.9 | 0.526 | mg/L | 0.0029 | 0.526 | mg/L | 0.0029 | 0.55% |
| QC value within limits for Cr 267.716 Recovery = 105.14% | | | | | | | | |
| Cu 327.393† | 127187.0 | 0.508 | mg/L | 0.0115 | 0.508 | mg/L | 0.0115 | 2.26% |
| QC value within limits for Cu 327.393 Recovery = 101.60% | | | | | | | | |
| Fe 239.562† | 41146.6 | 4.18 | mg/L | 0.048 | 4.18 | mg/L | 0.048 | 1.15% |
| QC value within limits for Fe 239.562 Recovery = 104.53% | | | | | | | | |
| Mg 279.077† | 26138.2 | 10.5 | mg/L | 0.11 | 10.5 | mg/L | 0.11 | 1.05% |
| QC value within limits for Mg 279.077 Recovery = 104.78% | | | | | | | | |
| Mn 257.610† | 464213.8 | 0.525 | mg/L | 0.0065 | 0.525 | mg/L | 0.0065 | 1.24% |
| QC value within limits for Mn 257.610 Recovery = 105.08% | | | | | | | | |
| Mo 202.031† | 38518.2 | 1.05 | mg/L | 0.007 | 1.05 | mg/L | 0.007 | 0.66% |
| QC value within limits for Mo 202.031 Recovery = 104.61% | | | | | | | | |
| Ni 231.604† | 38986.7 | 0.546 | mg/L | 0.0079 | 0.546 | mg/L | 0.0079 | 1.45% |
| QC value within limits for Ni 231.604 Recovery = 109.16% | | | | | | | | |
| Pb 220.353† | 5881.4 | 0.530 | mg/L | 0.0081 | 0.530 | mg/L | 0.0081 | 1.54% |
| QC value within limits for Pb 220.353 Recovery = 105.93% | | | | | | | | |
| Sb 206.836† | 4975.7 | 1.22 | mg/L | 0.020 | 1.22 | mg/L | 0.020 | 1.62% |
| QC value within limits for Sb 206.836 Recovery = 101.63% | | | | | | | | |
| Se 196.026† | 718.3 | 0.408 | mg/L | 0.0088 | 0.408 | mg/L | 0.0088 | 2.15% |
| QC value within limits for Se 196.026 Recovery = 101.95% | | | | | | | | |
| Si 251.611† | 220243.6 | 5.04 | mg/L | 0.051 | 5.04 | mg/L | 0.051 | 1.02% |

Approved: May 22, 2012

QC value within limits for Si 251.611 Recovery = 100.81%
Sn 189.927† 11193.9 1.06 mg/L 0.017 1.06 mg/L 0.017 1.61%
QC value within limits for Sn 189.927 Recovery = 106.15%
Ti 334.940† 1030156.1 1.05 mg/L 0.005 1.05 mg/L 0.005 0.52%
QC value within limits for Ti 334.940 Recovery = 104.74%
Tl 190.801† 1977.5 0.549 mg/L 0.0059 0.549 mg/L 0.0059 1.07%
QC value within limits for Tl 190.801 Recovery = 109.85%
V 290.880† 199050.6 1.05 mg/L 0.002 1.05 mg/L 0.002 0.23%
QC value within limits for V 290.880 Recovery = 104.74%
Zn 206.200† 53209.0 1.06 mg/L 0.007 1.06 mg/L 0.007 0.62%
QC value within limits for Zn 206.200 Recovery = 106.35%
K 766.490† 112755.2 52.6 mg/L 0.14 52.6 mg/L 0.14 0.27%
QC value within limits for K 766.490 Recovery = 105.19%
Na 589.592† 817351.4 52.7 mg/L 0.91 52.7 mg/L 0.91 1.72%
QC value within limits for Na 589.592 Recovery = 105.47%
Sr 407.771† 1932266.5 1.06 mg/L 0.018 1.06 mg/L 0.018 1.66%
QC value within limits for Sr 407.771 Recovery = 105.66%
Li 670.784† 101446.0 1.05 mg/L 0.001 1.05 mg/L 0.001 0.14%
QC value within limits for Li 670.784 Recovery = 105.08%
All analyte(s) passed QC.

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**Sequence No.: 23** **Autosampler Location: 1**
**Sample ID: CCB** **Date Collected: 5/21/2012 5:56:29 PM**
**Analyst:** **Data Type: Original**
**Initial Sample Wt:** **Initial Sample Vol:**
**Dilution:** **Sample Prep Vol:**

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**Nebulizer Parameters: CCB**

| Analyte | Back Pressure | Flow |
|---|---|---|
| All | 153.0 kPa | 0.50 L/min |

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**Mean Data: CCB**

| Analyte | Mean Corrected Intensity | Calib. Conc. | Units | Std.Dev. | Sample Conc. | Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 2140017.5 | | | | | | 23468.93 | 1.10% |
| YRADIAL | 195303.1 | | | | | | 4788.19 | 2.45% |
| Ga 417.206 | 1243977.2 | | | | | | 23107.18 | 1.86% |
| GaRADIAL | 58266.8 | | | | | | 496.97 | 0.85% |
| Ag 328.068† | 86.2 | -0.00031 | mg/L | 0.000258 | -0.00031 | mg/L | 0.000258 | 83.45% |
| QC value within limits for Ag 328.068 Recovery = Not calculated | | | | | | | | |
| Al 396.153† | 9.7 | -0.00117 | mg/L | 0.001798 | -0.00117 | mg/L | 0.001798 | 153.56% |
| QC value within limits for Al 396.153 Recovery = Not calculated | | | | | | | | |
| As 188.979† | 1.5 | 0.00016 | mg/L | 0.000345 | 0.00016 | mg/L | 0.000345 | 209.72% |
| QC value within limits for As 188.979 Recovery = Not calculated | | | | | | | | |
| Ba 233.527† | 13.0 | -0.00070 | mg/L | 0.000092 | -0.00070 | mg/L | 0.000092 | 13.12% |
| QC value within limits for Ba 233.527 Recovery = Not calculated | | | | | | | | |
| Be 234.861† | -18.9 | 0.00002 | mg/L | 0.000025 | 0.00002 | mg/L | 0.000025 | 131.49% |
| QC value within limits for Be 234.861 Recovery = Not calculated | | | | | | | | |
| B 249.677† | 89.5 | 0.00031 | mg/L | 0.000446 | 0.00031 | mg/L | 0.000446 | 141.96% |
| QC value within limits for B 249.677 Recovery = Not calculated | | | | | | | | |
| Ca 227.546† | 10.1 | 0.0745 | mg/L | 0.01185 | 0.0745 | mg/L | 0.01185 | 15.89% |
| QC value within limits for Ca 227.546 Recovery = Not calculated | | | | | | | | |
| Cd 228.802† | -3.9 | -0.00009 | mg/L | 0.000138 | -0.00009 | mg/L | 0.000138 | 145.60% |
| QC value within limits for Cd 228.802 Recovery = Not calculated | | | | | | | | |
| Co 228.616† | 11.6 | -0.00001 | mg/L | 0.000129 | -0.00001 | mg/L | 0.000129 | >999.9% |
| QC value within limits for Co 228.616 Recovery = Not calculated | | | | | | | | |
| Cr 267.716† | 3.3 | -0.00002 | mg/L | 0.000065 | -0.00002 | mg/L | 0.000065 | 301.04% |
| QC value within limits for Cr 267.716 Recovery = Not calculated | | | | | | | | |
| Cu 327.393† | 16.6 | -0.00041 | mg/L | 0.000576 | -0.00041 | mg/L | 0.000576 | 139.90% |
| QC value within limits for Cu 327.393 Recovery = Not calculated | | | | | | | | |
| Fe 239.562† | 40.9 | 0.00682 | mg/L | 0.001056 | 0.00682 | mg/L | 0.001056 | 15.47% |
| QC value within limits for Fe 239.562 Recovery = Not calculated | | | | | | | | |
| Mg 279.077† | 23.0 | 0.0122 | mg/L | 0.00271 | 0.0122 | mg/L | 0.00271 | 22.25% |
| QC value within limits for Mg 279.077 Recovery = Not calculated | | | | | | | | |
| Mn 257.610† | 141.0 | -0.00161 | mg/L | 0.000013 | -0.00161 | mg/L | 0.000013 | 0.80% |
| QC value within limits for Mn 257.610 Recovery = Not calculated | | | | | | | | |
| Mo 202.031† | -2.1 | 0.00173 | mg/L | 0.000305 | 0.00173 | mg/L | 0.000305 | 17.61% |
| QC value within limits for Mo 202.031 Recovery = Not calculated | | | | | | | | |
| Ni 231.604† | -4.1 | -0.00100 | mg/L | 0.000088 | -0.00100 | mg/L | 0.000088 | 8.87% |

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QC value within limits for Ni 231.604 Recovery = Not calculated
Pb 220.353† 17.2 0.00058 mg/L 0.000861 0.00058 mg/L 0.000861 147.72%
QC value within limits for Pb 220.353 Recovery = Not calculated
Sb 206.836† 2.0 0.00061 mg/L 0.001667 0.00061 mg/L 0.001667 273.08%
QC value within limits for Sb 206.836 Recovery = Not calculated
Se 196.026† 2.6 0.00285 mg/L 0.000837 0.00285 mg/L 0.000837 29.36%
QC value within limits for Se 196.026 Recovery = Not calculated
Si 251.611† 61.8 -0.00869 mg/L 0.001229 -0.00869 mg/L 0.001229 14.14%
QC value within limits for Si 251.611 Recovery = Not calculated
Sn 189.927† 6.4 0.00053 mg/L 0.000200 0.00053 mg/L 0.000200 37.62%
QC value within limits for Sn 189.927 Recovery = Not calculated
Ti 334.940† 121.4 0.00247 mg/L 0.000125 0.00247 mg/L 0.000125 5.06%
QC value within limits for Ti 334.940 Recovery = Not calculated
Tl 190.801† -7.0 -0.00291 mg/L 0.000194 -0.00291 mg/L 0.000194 6.67%
QC value within limits for Tl 190.801 Recovery = Not calculated
V 290.880† 189.9 -0.00059 mg/L 0.002052 -0.00059 mg/L 0.002052 349.10%
QC value within limits for V 290.880 Recovery = Not calculated
Zn 206.200† 4.8 -0.00163 mg/L 0.000065 -0.00163 mg/L 0.000065 4.00%
QC value within limits for Zn 206.200 Recovery = Not calculated
K 766.490† 30.8 -0.0413 mg/L 0.05533 -0.0413 mg/L 0.05533 133.93%
QC value within limits for K 766.490 Recovery = Not calculated
Na 589.592† 128.0 -0.00171 mg/L 0.002288 -0.00171 mg/L 0.002288 133.60%
QC value within limits for Na 589.592 Recovery = Not calculated
Sr 407.771† 241.6 0.00099 mg/L 0.000011 0.00099 mg/L 0.000011 1.15%
QC value within limits for Sr 407.771 Recovery = Not calculated
Li 670.784† 10.6 -0.00278 mg/L 0.001075 -0.00278 mg/L 0.001075 38.62%
QC value within limits for Li 670.784 Recovery = Not calculated
All analyte(s) passed QC.

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**Sequence No.: 24** **Autosampler Location: 39**
**Sample ID: L1205048901 0.2** **Date Collected: 5/21/2012 6:03:23 PM**
**Analyst: KHR** **Data Type: Original**
**Initial Sample Wt:** **Initial Sample Vol:**
**Dilution:** **Sample Prep Vol:**

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**Nebulizer Parameters: L1205048901 0.2**

| Analyte | Back Pressure | Flow |
|---|---|---|
| All | 154.0 kPa | 0.50 L/min |

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**Mean Data: L1205048901 0.2**

| Analyte | Mean Corrected Intensity | Calib. Conc. | Units | Std.Dev. | Sample Conc. | Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 2068830.6 | | | | | | 35598.98 | 1.72% |
| YRADIAL | 195410.6 | | | | | | 811.26 | 0.42% |
| Ga 417.206 | 1227856.6 | | | | | | 19081.75 | 1.55% |
| GaRADIAL | 58732.0 | | | | | | 424.60 | 0.72% |
| Ag 328.068† | -21172.8 | -0.00072 | mg/L | 0.000827 | -0.00072 | mg/L | 0.000827 | 114.07% |
| Al 396.153† | 25869.6 | 5.60 | mg/L | 0.113 | 5.60 | mg/L | 0.113 | 2.01% |
| As 188.979† | -31.7 | 0.00076 | mg/L | 0.002855 | 0.00076 | mg/L | 0.002855 | 375.99% |
| Ba 233.527† | 14387.7 | 0.0864 | mg/L | 0.00035 | 0.0864 | mg/L | 0.00035 | 0.40% |
| Be 234.861† | 41373.9 | -0.00343 | mg/L | 0.000654 | -0.00343 | mg/L | 0.000654 | 19.05% |
| B 249.677† | 26603.1 | 0.242 | mg/L | 0.0039 | 0.242 | mg/L | 0.0039 | 1.60% |
| Ca 227.546† | 517.3 | 6.16 | mg/L | 0.556 | 6.16 | mg/L | 0.556 | 9.03% |
| Cd 228.802† | 757.0 | 0.0126 | mg/L | 0.00034 | 0.0126 | mg/L | 0.00034 | 2.74% |
| Co 228.616† | 209.7 | 0.00220 | mg/L | 0.000212 | 0.00220 | mg/L | 0.000212 | 9.65% |
| Cr 267.716† | 10941.6 | 0.0883 | mg/L | 0.00101 | 0.0883 | mg/L | 0.00101 | 1.14% |
| Cu 327.393† | 84695.1 | 0.349 | mg/L | 0.0042 | 0.349 | mg/L | 0.0042 | 1.21% |
| Fe 239.562† | 1458722.3 | 148 | mg/L | 1.4 | 148 | mg/L | 1.4 | 0.95% |
| Mg 279.077† | 2307.0 | 0.860 | mg/L | 0.0045 | 0.860 | mg/L | 0.0045 | 0.53% |
| Mn 257.610† | 873844.9 | 0.994 | mg/L | 0.0089 | 0.994 | mg/L | 0.0089 | 0.90% |
| Mo 202.031† | 29359.5 | 0.805 | mg/L | 0.0071 | 0.805 | mg/L | 0.0071 | 0.88% |
| Ni 231.604† | 119656.4 | 1.68 | mg/L | 0.014 | 1.68 | mg/L | 0.014 | 0.86% |
| Pb 220.353† | 1401.1 | 0.113 | mg/L | 0.0047 | 0.113 | mg/L | 0.0047 | 4.15% |
| Sb 206.836† | 64.4 | 0.0230 | mg/L | 0.00160 | 0.0230 | mg/L | 0.00160 | 6.97% |
| Se 196.026† | -33.1 | 0.0274 | mg/L | 0.00787 | 0.0274 | mg/L | 0.00787 | 28.69% |
| Si 251.611† | 49497.4 | 1.12 | mg/L | 0.013 | 1.12 | mg/L | 0.013 | 1.16% |
| Sn 189.927† | 892.8 | 0.0846 | mg/L | 0.00267 | 0.0846 | mg/L | 0.00267 | 3.16% |
| Ti 334.940† | 16731.7 | 0.0194 | mg/L | 0.00022 | 0.0194 | mg/L | 0.00022 | 1.15% |
| Tl 190.801† | -26.6 | -0.00868 | mg/L | 0.005088 | -0.00868 | mg/L | 0.005088 | 58.61% |

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| | | | | | | |
|---|---|---|---|---|---|---|
| V 290.880† | 4800.8 | 0.0120 mg/L | 0.00029 | 0.0120 mg/L | 0.00029 | 2.41% |
| Zn 206.200† | 87868.8 | 1.75 mg/L | 0.022 | 1.75 mg/L | 0.022 | 1.24% |
| K 766.490† | 2041.3 | 0.553 mg/L | 0.0219 | 0.553 mg/L | 0.0219 | 3.95% |
| Na 589.592† | 5029331.6 | 341 mg/L | 4.2 | 341 mg/L | 4.2 | 1.23% |
| Sr 407.771† | 26536.4 | 0.0153 mg/L | 0.00042 | 0.0153 mg/L | 0.00042 | 2.71% |
| Li 670.784† | 116238.3 | 1.20 mg/L | 0.007 | 1.20 mg/L | 0.007 | 0.62% |

**Sequence No.: 25** **Autosampler Location: 40**
**Sample ID: 01 + 0.25PPM CR PB** **Date Collected: 5/21/2012 6:09:26 PM**
**Analyst: KHR** **Data Type: Original**
**Initial Sample Wt:** **Initial Sample Vol:**
**Dilution:** **Sample Prep Vol:**

**Nebulizer Parameters: 01 + 0.25PPM CR PB**

| Analyte | Back Pressure | Flow |
|---|---|---|
| All | 154.0 kPa | 0.50 L/min |

**Mean Data: 01 + 0.25PPM CR PB**

| Analyte | Mean Corrected Intensity | Calib. Conc. | Units | Std.Dev. | Sample Conc. | Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 2009367.2 | | | | | | 31955.36 | 1.59% |
| YRADIAL | 198303.5 | | | | | | 2163.57 | 1.09% |
| Ga 417.206 | 1202491.6 | | | | | | 33796.74 | 2.81% |
| GaRADIAL | 59677.4 | | | | | | 839.58 | 1.41% |
| Ag 328.068† | 39361.4 | 0.188 | mg/L | 0.0051 | 0.188 | mg/L | 0.0051 | 2.70% |
| Al 396.153† | 48027.8 | 10.4 | mg/L | 0.09 | 10.4 | mg/L | 0.09 | 0.83% |
| As 188.979† | 531.4 | 0.192 | mg/L | 0.0054 | 0.192 | mg/L | 0.0054 | 2.84% |
| Ba 233.527† | 95152.1 | 0.594 | mg/L | 0.0099 | 0.594 | mg/L | 0.0099 | 1.66% |
| Be 234.861† | 74702.5 | 0.0201 | mg/L | 0.00037 | 0.0201 | mg/L | 0.00037 | 1.85% |
| B 249.677† | 108729.9 | 1.19 | mg/L | 0.024 | 1.19 | mg/L | 0.024 | 2.01% |
| Ca 227.546† | 2696.0 | 11.3 | mg/L | 0.69 | 11.3 | mg/L | 0.69 | 6.15% |
| Cd 228.802† | 2149.0 | 0.0354 | mg/L | 0.00165 | 0.0354 | mg/L | 0.00165 | 4.64% |
| Co 228.616† | 4255.7 | 0.102 | mg/L | 0.0017 | 0.102 | mg/L | 0.0017 | 1.69% |
| Cr 267.716† | 40359.3 | 0.341 | mg/L | 0.0034 | 0.341 | mg/L | 0.0034 | 0.99% |
| Cu 327.393† | 147944.2 | 0.602 | mg/L | 0.0128 | 0.602 | mg/L | 0.0128 | 2.13% |
| Fe 239.562† | 1464497.0 | 149 | mg/L | 1.4 | 149 | mg/L | 1.4 | 0.93% |
| Mg 279.077† | 14617.0 | 5.79 | mg/L | 0.042 | 5.79 | mg/L | 0.042 | 0.72% |
| Mn 257.610† | 1097783.0 | 1.25 | mg/L | 0.015 | 1.25 | mg/L | 0.015 | 1.20% |
| Mo 202.031† | 48292.6 | 1.32 | mg/L | 0.022 | 1.32 | mg/L | 0.022 | 1.66% |
| Ni 231.604† | 139651.4 | 1.96 | mg/L | 0.032 | 1.96 | mg/L | 0.032 | 1.64% |
| Pb 220.353† | 4179.8 | 0.364 | mg/L | 0.0065 | 0.364 | mg/L | 0.0065 | 1.80% |
| Sb 206.836† | 2375.6 | 0.589 | mg/L | 0.0221 | 0.589 | mg/L | 0.0221 | 3.75% |
| Se 196.026† | 333.2 | 0.234 | mg/L | 0.0060 | 0.234 | mg/L | 0.0060 | 2.55% |
| Si 251.611† | 165642.6 | 3.78 | mg/L | 0.057 | 3.78 | mg/L | 0.057 | 1.50% |
| Sn 189.927† | 881.8 | 0.0835 | mg/L | 0.00081 | 0.0835 | mg/L | 0.00081 | 0.98% |
| Ti 334.940† | 504597.4 | 0.514 | mg/L | 0.0032 | 0.514 | mg/L | 0.0032 | 0.62% |
| Tl 190.801† | 844.9 | 0.234 | mg/L | 0.0021 | 0.234 | mg/L | 0.0021 | 0.90% |
| V 290.880† | 100900.2 | 0.519 | mg/L | 0.0049 | 0.519 | mg/L | 0.0049 | 0.95% |
| Zn 206.200† | 115329.7 | 2.30 | mg/L | 0.033 | 2.30 | mg/L | 0.033 | 1.43% |
| K 766.490† | 55121.0 | 25.3 | mg/L | 0.29 | 25.3 | mg/L | 0.29 | 1.15% |
| Na 589.592† | 5300950.5 | 360 | mg/L | 3.4 | 360 | mg/L | 3.4 | 0.94% |
| Sr 407.771† | 940220.0 | 0.515 | mg/L | 0.0050 | 0.515 | mg/L | 0.0050 | 0.98% |
| Li 670.784† | 165702.5 | 1.72 | mg/L | 0.046 | 1.72 | mg/L | 0.046 | 2.69% |

**Sequence No.: 26** **Autosampler Location: 41**
**Sample ID: 01 + 0.50PPM CR PB** **Date Collected: 5/21/2012 6:15:31 PM**
**Analyst: KHR** **Data Type: Original**
**Initial Sample Wt:** **Initial Sample Vol:**
**Dilution:** **Sample Prep Vol:**

**Nebulizer Parameters: 01 + 0.50PPM CR PB**

| Analyte | Back Pressure | Flow |
|---|---|---|
| All | 154.0 kPa | 0.50 L/min |

**Mean Data: 01 + 0.50PPM CR PB**

| Mean Corrected | Calib. | Sample |
|---|---|---|

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| Analyte | Intensity | Conc. | Units | Std.Dev. | Conc. | Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 1966170.9 | | | | | | 4937.24 | 0.25% |
| YRADIAL | 194361.7 | | | | | | 3116.06 | 1.60% |
| Ga 417.206 | 1154117.7 | | | | | | 28786.87 | 2.49% |
| GaRADIAL | 58390.1 | | | | | | 1246.40 | 2.13% |
| Ag 328.068† | 103633.4 | 0.391 | mg/L | 0.0122 | 0.391 | mg/L | 0.0122 | 3.13% |
| Al 396.153† | 72217.9 | 15.6 | mg/L | 0.03 | 15.6 | mg/L | 0.03 | 0.21% |
| As 188.979† | 1163.9 | 0.407 | mg/L | 0.0101 | 0.407 | mg/L | 0.0101 | 2.49% |
| Ba 233.527† | 178652.6 | 1.12 | mg/L | 0.002 | 1.12 | mg/L | 0.002 | 0.15% |
| Be 234.861† | 111979.9 | 0.0453 | mg/L | 0.00074 | 0.0453 | mg/L | 0.00074 | 1.63% |
| B 249.677† | 198120.9 | 2.21 | mg/L | 0.066 | 2.21 | mg/L | 0.066 | 3.00% |
| Ca 227.546† | 5090.8 | 17.0 | mg/L | 0.98 | 17.0 | mg/L | 0.98 | 5.77% |
| Cd 228.802† | 3723.4 | 0.0613 | mg/L | 0.00252 | 0.0613 | mg/L | 0.00252 | 4.11% |
| Co 228.616† | 8463.2 | 0.206 | mg/L | 0.0022 | 0.206 | mg/L | 0.0022 | 1.08% |
| Cr 267.716† | 70932.6 | 0.603 | mg/L | 0.0044 | 0.603 | mg/L | 0.0044 | 0.74% |
| Cu 327.393† | 215131.3 | 0.871 | mg/L | 0.0225 | 0.871 | mg/L | 0.0225 | 2.59% |
| Fe 239.562† | 1523873.7 | 155 | mg/L | 2.8 | 155 | mg/L | 2.8 | 1.80% |
| Mg 279.077† | 27298.0 | 10.9 | mg/L | 0.10 | 10.9 | mg/L | 0.10 | 0.88% |
| Mn 257.610† | 1359294.9 | 1.55 | mg/L | 0.001 | 1.55 | mg/L | 0.001 | 0.06% |
| Mo 202.031† | 68307.0 | 1.86 | mg/L | 0.011 | 1.86 | mg/L | 0.011 | 0.57% |
| Ni 231.604† | 159326.5 | 2.23 | mg/L | 0.002 | 2.23 | mg/L | 0.002 | 0.11% |
| Pb 220.353† | 7037.1 | 0.621 | mg/L | 0.0053 | 0.621 | mg/L | 0.0053 | 0.86% |
| Sb 206.836† | 4892.7 | 1.21 | mg/L | 0.029 | 1.21 | mg/L | 0.029 | 2.42% |
| Se 196.026† | 726.7 | 0.458 | mg/L | 0.0113 | 0.458 | mg/L | 0.0113 | 2.48% |
| Si 251.611† | 292014.6 | 6.68 | mg/L | 0.113 | 6.68 | mg/L | 0.113 | 1.68% |
| Sn 189.927† | 869.6 | 0.0824 | mg/L | 0.00037 | 0.0824 | mg/L | 0.00037 | 0.45% |
| Ti 334.940† | 1027758.4 | 1.05 | mg/L | 0.003 | 1.05 | mg/L | 0.003 | 0.32% |
| Tl 190.801† | 1779.7 | 0.495 | mg/L | 0.0046 | 0.495 | mg/L | 0.0046 | 0.93% |
| V 290.880† | 199504.5 | 1.04 | mg/L | 0.009 | 1.04 | mg/L | 0.009 | 0.90% |
| Zn 206.200† | 144132.6 | 2.87 | mg/L | 0.024 | 2.87 | mg/L | 0.024 | 0.84% |
| K 766.490† | 112568.2 | 52.2 | mg/L | 0.33 | 52.2 | mg/L | 0.33 | 0.64% |
| Na 589.592† | 5816973.6 | 398 | mg/L | 12.0 | 398 | mg/L | 12.0 | 3.02% |
| Sr 407.771† | 1901879.1 | 1.04 | mg/L | 0.012 | 1.04 | mg/L | 0.012 | 1.14% |
| Li 670.784† | 220229.5 | 2.28 | mg/L | 0.015 | 2.28 | mg/L | 0.015 | 0.67% |

**Sequence No.: 27** **Autosampler Location: 42**
**Sample ID: 01 + 0.75PPM CR PB** **Date Collected: 5/21/2012 6:21:33 PM**
**Analyst: KHR** **Data Type: Original**
**Initial Sample Wt:** **Initial Sample Vol:**
**Dilution:** **Sample Prep Vol:**

**Nebulizer Parameters: 01 + 0.75PPM CR PB**

| Analyte | Back Pressure | Flow |
|---|---|---|
| All | 153.0 kPa | 0.50 L/min |

**Mean Data: 01 + 0.75PPM CR PB**

| Analyte | Mean Corrected Intensity | Calib. Conc. | Units | Std.Dev. | Sample Conc. | Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 1942902.9 | | | | | | 29970.81 | 1.54% |
| YRADIAL | 192073.5 | | | | | | 2107.21 | 1.10% |
| Ga 417.206 | 1142946.1 | | | | | | 10503.78 | 0.92% |
| GaRADIAL | 57866.2 | | | | | | 1127.24 | 1.95% |
| Ag 328.068† | 168572.2 | 0.595 | mg/L | 0.0119 | 0.595 | mg/L | 0.0119 | 2.00% |
| Al 396.153† | 96048.0 | 20.8 | mg/L | 0.14 | 20.8 | mg/L | 0.14 | 0.67% |
| As 188.979† | 1781.5 | 0.617 | mg/L | 0.0061 | 0.617 | mg/L | 0.0061 | 0.99% |
| Ba 233.527† | 262847.4 | 1.65 | mg/L | 0.014 | 1.65 | mg/L | 0.014 | 0.82% |
| Be 234.861† | 147321.2 | 0.0695 | mg/L | 0.00059 | 0.0695 | mg/L | 0.00059 | 0.85% |
| B 249.677† | 286661.5 | 3.23 | mg/L | 0.065 | 3.23 | mg/L | 0.065 | 2.01% |
| Ca 227.546† | 7449.2 | 22.6 | mg/L | 0.80 | 22.6 | mg/L | 0.80 | 3.54% |
| Cd 228.802† | 5198.7 | 0.0855 | mg/L | 0.00187 | 0.0855 | mg/L | 0.00187 | 2.19% |
| Co 228.616† | 12665.3 | 0.310 | mg/L | 0.0074 | 0.310 | mg/L | 0.0074 | 2.39% |
| Cr 267.716† | 101728.3 | 0.867 | mg/L | 0.0037 | 0.867 | mg/L | 0.0037 | 0.42% |
| Cu 327.393† | 280566.3 | 1.13 | mg/L | 0.021 | 1.13 | mg/L | 0.021 | 1.82% |
| Fe 239.562† | 1565297.1 | 159 | mg/L | 2.9 | 159 | mg/L | 2.9 | 1.83% |
| Mg 279.077† | 40181.9 | 16.0 | mg/L | 0.04 | 16.0 | mg/L | 0.04 | 0.26% |
| Mn 257.610† | 1600799.7 | 1.82 | mg/L | 0.020 | 1.82 | mg/L | 0.020 | 1.08% |
| Mo 202.031† | 87601.7 | 2.38 | mg/L | 0.012 | 2.38 | mg/L | 0.012 | 0.52% |
| Ni 231.604† | 177742.3 | 2.49 | mg/L | 0.025 | 2.49 | mg/L | 0.025 | 1.00% |
| Pb 220.353† | 9883.6 | 0.878 | mg/L | 0.0191 | 0.878 | mg/L | 0.0191 | 2.17% |

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| | | | | | | |
|---|---|---|---|---|---|---|
| Sb 206.836† | 7349.0 | 1.81 mg/L | 0.021 | 1.81 mg/L | 0.021 | 1.14% |
| Se 196.026† | 1129.5 | 0.686 mg/L | 0.0079 | 0.686 mg/L | 0.0079 | 1.15% |
| Si 251.611† | 421341.8 | 9.65 mg/L | 0.048 | 9.65 mg/L | 0.048 | 0.50% |
| Sn 189.927† | 857.7 | 0.0813 mg/L | 0.00123 | 0.0813 mg/L | 0.00123 | 1.51% |
| Ti 334.940† | 1551332.2 | 1.58 mg/L | 0.011 | 1.58 mg/L | 0.011 | 0.70% |
| Tl 190.801† | 2690.6 | 0.749 mg/L | 0.0044 | 0.749 mg/L | 0.0044 | 0.59% |
| V 290.880† | 299382.0 | 1.56 mg/L | 0.011 | 1.56 mg/L | 0.011 | 0.73% |
| Zn 206.200† | 171998.6 | 3.43 mg/L | 0.028 | 3.43 mg/L | 0.028 | 0.81% |
| K 766.490† | 167837.1 | 78.2 mg/L | 0.03 | 78.2 mg/L | 0.03 | 0.04% |
| Na 589.592† | 6266696.3 | 431 mg/L | 12.0 | 431 mg/L | 12.0 | 2.79% |
| Sr 407.771† | 2834065.7 | 1.55 mg/L | 0.023 | 1.55 mg/L | 0.023 | 1.50% |
| Li 670.784† | 273297.7 | 2.84 mg/L | 0.099 | 2.84 mg/L | 0.099 | 3.49% |

**Sequence No.: 28** **Autosampler Location: 6**
**Sample ID: CCV** **Date Collected: 5/21/2012 6:27:36 PM**
**Analyst:** **Data Type: Original**
**Initial Sample Wt:** **Initial Sample Vol:**
**Dilution:** **Sample Prep Vol:**

**Nebulizer Parameters: CCV**

| Analyte | Back Pressure | Flow |
|---|---|---|
| All | 154.0 kPa | 0.50 L/min |

**Mean Data: CCV**

| Analyte | Mean Corrected Intensity | Calib. Conc. | Units | Std.Dev. | Sample Conc. | Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 2078109.1 | | | | | | 36487.00 | 1.76% |
| YRADIAL | 198583.1 | | | | | | 6310.18 | 3.18% |
| Ga 417.206 | 1221496.8 | | | | | | 14451.19 | 1.18% |
| GaRADIAL | 58633.1 | | | | | | 1547.60 | 2.64% |
| Ag 328.068† | 125444.0 | 0.392 | mg/L | 0.0104 | 0.392 | mg/L | 0.0104 | 2.66% |
| QC value within limits for Ag 328.068 Recovery = 98.03% | | | | | | | | |
| Al 396.153† | 46352.9 | 10.0 | mg/L | 0.09 | 10.0 | mg/L | 0.09 | 0.93% |
| QC value within limits for Al 396.153 Recovery = 100.39% | | | | | | | | |
| As 188.979† | 1119.9 | 0.380 | mg/L | 0.0021 | 0.380 | mg/L | 0.0021 | 0.56% |
| QC value within limits for As 188.979 Recovery = 94.96% | | | | | | | | |
| Ba 233.527† | 161996.2 | 1.02 | mg/L | 0.010 | 1.02 | mg/L | 0.010 | 0.96% |
| QC value within limits for Ba 233.527 Recovery = 101.63% | | | | | | | | |
| Be 234.861† | 68291.1 | 0.0477 | mg/L | 0.00120 | 0.0477 | mg/L | 0.00120 | 2.52% |
| QC value within limits for Be 234.861 Recovery = 95.42% | | | | | | | | |
| B 249.677† | 42352.9 | 0.484 | mg/L | 0.0142 | 0.484 | mg/L | 0.0142 | 2.93% |
| QC value within limits for B 249.677 Recovery = 96.70% | | | | | | | | |
| Ca 227.546† | 4257.4 | 10.1 | mg/L | 0.17 | 10.1 | mg/L | 0.17 | 1.72% |
| QC value within limits for Ca 227.546 Recovery = 100.99% | | | | | | | | |
| Cd 228.802† | 2856.7 | 0.0469 | mg/L | 0.00147 | 0.0469 | mg/L | 0.00147 | 3.14% |
| QC value within limits for Cd 228.802 Recovery = 93.89% | | | | | | | | |
| Co 228.616† | 8286.7 | 0.205 | mg/L | 0.0043 | 0.205 | mg/L | 0.0043 | 2.10% |
| QC value within limits for Co 228.616 Recovery = 102.26% | | | | | | | | |
| Cr 267.716† | 59072.3 | 0.506 | mg/L | 0.0048 | 0.506 | mg/L | 0.0048 | 0.94% |
| QC value within limits for Cr 267.716 Recovery = 101.28% | | | | | | | | |
| Cu 327.393† | 123457.2 | 0.493 | mg/L | 0.0135 | 0.493 | mg/L | 0.0135 | 2.74% |
| QC value within limits for Cu 327.393 Recovery = 98.62% | | | | | | | | |
| Fe 239.562† | 39680.2 | 4.03 | mg/L | 0.020 | 4.03 | mg/L | 0.020 | 0.49% |
| QC value within limits for Fe 239.562 Recovery = 100.81% | | | | | | | | |
| Mg 279.077† | 24999.8 | 10.0 | mg/L | 0.06 | 10.0 | mg/L | 0.06 | 0.57% |
| QC value within limits for Mg 279.077 Recovery = 100.22% | | | | | | | | |
| Mn 257.610† | 456825.9 | 0.517 | mg/L | 0.0068 | 0.517 | mg/L | 0.0068 | 1.31% |
| QC value within limits for Mn 257.610 Recovery = 103.40% | | | | | | | | |
| Mo 202.031† | 37150.6 | 1.01 | mg/L | 0.009 | 1.01 | mg/L | 0.009 | 0.94% |
| QC value within limits for Mo 202.031 Recovery = 100.90% | | | | | | | | |
| Ni 231.604† | 36533.3 | 0.511 | mg/L | 0.0062 | 0.511 | mg/L | 0.0062 | 1.21% |
| QC value within limits for Ni 231.604 Recovery = 102.27% | | | | | | | | |
| Pb 220.353† | 5709.6 | 0.514 | mg/L | 0.0097 | 0.514 | mg/L | 0.0097 | 1.89% |
| QC value within limits for Pb 220.353 Recovery = 102.83% | | | | | | | | |
| Sb 206.836† | 4723.7 | 1.16 | mg/L | 0.021 | 1.16 | mg/L | 0.021 | 1.78% |
| QC value within limits for Sb 206.836 Recovery = 96.48% | | | | | | | | |
| Se 196.026† | 685.6 | 0.389 | mg/L | 0.0093 | 0.389 | mg/L | 0.0093 | 2.40% |
| QC value within limits for Se 196.026 Recovery = 97.32% | | | | | | | | |
| Si 251.611† | 210771.6 | 4.82 | mg/L | 0.086 | 4.82 | mg/L | 0.086 | 1.79% |

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QC value within limits for Si 251.611 Recovery = 96.46%
Sn 189.927† 11008.3 1.04 mg/L 0.021 1.04 mg/L 0.021 2.00%
QC value within limits for Sn 189.927 Recovery = 104.39%
Ti 334.940† 993486.3 1.01 mg/L 0.007 1.01 mg/L 0.007 0.67%
QC value within limits for Ti 334.940 Recovery = 101.02%
Tl 190.801† 1915.1 0.532 mg/L 0.0057 0.532 mg/L 0.0057 1.06%
QC value within limits for Tl 190.801 Recovery = 106.37%
V 290.880† 194015.6 1.02 mg/L 0.012 1.02 mg/L 0.012 1.16%
QC value within limits for V 290.880 Recovery = 102.08%
Zn 206.200† 50575.6 1.01 mg/L 0.015 1.01 mg/L 0.015 1.50%
QC value within limits for Zn 206.200 Recovery = 101.09%
K 766.490† 109041.7 50.9 mg/L 0.63 50.9 mg/L 0.63 1.24%
QC value within limits for K 766.490 Recovery = 101.70%
Na 589.592† 800424.0 51.6 mg/L 1.33 51.6 mg/L 1.33 2.59%
QC value within limits for Na 589.592 Recovery = 103.26%
Sr 407.771† 1870764.4 1.02 mg/L 0.035 1.02 mg/L 0.035 3.43%
QC value within limits for Sr 407.771 Recovery = 102.30%
Li 670.784† 100057.9 1.04 mg/L 0.012 1.04 mg/L 0.012 1.14%
QC value within limits for Li 670.784 Recovery = 103.63%
All analyte(s) passed QC.

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**Sequence No.: 29** **Autosampler Location: 1**
**Sample ID: CCB** **Date Collected: 5/21/2012 6:33:37 PM**
**Analyst:** **Data Type: Original**
**Initial Sample Wt:** **Initial Sample Vol:**
**Dilution:** **Sample Prep Vol:**

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**Nebulizer Parameters: CCB**

| Analyte | Back Pressure | Flow |
|---|---|---|
| All | 154.0 kPa | 0.50 L/min |

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**Mean Data: CCB**

| Analyte | Mean Corrected Intensity | Calib. Conc. | Units | Std.Dev. | Sample Conc. | Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 2151070.0 | | | | | | 24110.05 | 1.12% |
| YRADIAL | 201907.0 | | | | | | 6168.83 | 3.06% |
| Ga 417.206 | 1285226.3 | | | | | | 3486.78 | 0.27% |
| GaRADIAL | 60816.1 | | | | | | 262.70 | 0.43% |
| Ag 328.068† | 41.3 | -0.00044 | mg/L | 0.000150 | -0.00044 | mg/L | 0.000150 | 34.11% |
| QC value within limits for Ag 328.068 Recovery = Not calculated | | | | | | | | |
| Al 396.153† | 40.8 | 0.00561 | mg/L | 0.001478 | 0.00561 | mg/L | 0.001478 | 26.34% |
| QC value within limits for Al 396.153 Recovery = Not calculated | | | | | | | | |
| As 188.979† | 2.1 | 0.00037 | mg/L | 0.001595 | 0.00037 | mg/L | 0.001595 | 428.45% |
| QC value within limits for As 188.979 Recovery = Not calculated | | | | | | | | |
| Ba 233.527† | 31.7 | -0.00059 | mg/L | 0.000074 | -0.00059 | mg/L | 0.000074 | 12.71% |
| QC value within limits for Ba 233.527 Recovery = Not calculated | | | | | | | | |
| Be 234.861† | 46.0 | 0.00006 | mg/L | 0.000016 | 0.00006 | mg/L | 0.000016 | 26.39% |
| QC value within limits for Be 234.861 Recovery = Not calculated | | | | | | | | |
| B 249.677† | 421.8 | 0.00414 | mg/L | 0.000254 | 0.00414 | mg/L | 0.000254 | 6.14% |
| QC value within limits for B 249.677 Recovery = Not calculated | | | | | | | | |
| Ca 227.546† | 11.9 | 0.0791 | mg/L | 0.00598 | 0.0791 | mg/L | 0.00598 | 7.55% |
| QC value within limits for Ca 227.546 Recovery = Not calculated | | | | | | | | |
| Cd 228.802† | -2.0 | -0.00006 | mg/L | 0.000150 | -0.00006 | mg/L | 0.000150 | 238.22% |
| QC value within limits for Cd 228.802 Recovery = Not calculated | | | | | | | | |
| Co 228.616† | 12.9 | 0.00003 | mg/L | 0.000184 | 0.00003 | mg/L | 0.000184 | 731.15% |
| QC value within limits for Co 228.616 Recovery = Not calculated | | | | | | | | |
| Cr 267.716† | 10.4 | 0.00004 | mg/L | 0.000207 | 0.00004 | mg/L | 0.000207 | 533.27% |
| QC value within limits for Cr 267.716 Recovery = Not calculated | | | | | | | | |
| Cu 327.393† | 84.5 | -0.00014 | mg/L | 0.000596 | -0.00014 | mg/L | 0.000596 | 428.27% |
| QC value within limits for Cu 327.393 Recovery = Not calculated | | | | | | | | |
| Fe 239.562† | 201.0 | 0.0231 | mg/L | 0.00027 | 0.0231 | mg/L | 0.00027 | 1.15% |
| QC value within limits for Fe 239.562 Recovery = Not calculated | | | | | | | | |
| Mg 279.077† | 28.1 | 0.0142 | mg/L | 0.00313 | 0.0142 | mg/L | 0.00313 | 22.04% |
| QC value within limits for Mg 279.077 Recovery = Not calculated | | | | | | | | |
| Mn 257.610† | 380.0 | -0.00134 | mg/L | 0.000026 | -0.00134 | mg/L | 0.000026 | 1.97% |
| QC value within limits for Mn 257.610 Recovery = Not calculated | | | | | | | | |
| Mo 202.031† | 1.1 | 0.00182 | mg/L | 0.000036 | 0.00182 | mg/L | 0.000036 | 2.00% |
| QC value within limits for Mo 202.031 Recovery = Not calculated | | | | | | | | |
| Ni 231.604† | 2.8 | -0.00090 | mg/L | 0.000194 | -0.00090 | mg/L | 0.000194 | 21.54% |

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QC value within limits for Ni 231.604 Recovery = Not calculated
Pb 220.353† 11.7 0.00009 mg/L 0.000486 0.00009 mg/L 0.000486 535.27%
QC value within limits for Pb 220.353 Recovery = Not calculated
Sb 206.836† 2.6 0.00077 mg/L 0.000380 0.00077 mg/L 0.000380 49.44%
QC value within limits for Sb 206.836 Recovery = Not calculated
Se 196.026† 3.4 0.00326 mg/L 0.002089 0.00326 mg/L 0.002089 64.09%
QC value within limits for Se 196.026 Recovery = Not calculated
Si 251.611† 317.6 -0.00281 mg/L 0.000557 -0.00281 mg/L 0.000557 19.78%
QC value within limits for Si 251.611 Recovery = Not calculated
Sn 189.927† 10.9 0.00096 mg/L 0.000499 0.00096 mg/L 0.000499 51.97%
QC value within limits for Sn 189.927 Recovery = Not calculated
Ti 334.940† 260.8 0.00261 mg/L 0.000110 0.00261 mg/L 0.000110 4.21%
QC value within limits for Ti 334.940 Recovery = Not calculated
Tl 190.801† 3.6 -0.00003 mg/L 0.001798 -0.00003 mg/L 0.001798 >999.9%
QC value within limits for Tl 190.801 Recovery = Not calculated
V 290.880† 330.6 0.00015 mg/L 0.001447 0.00015 mg/L 0.001447 946.07%
QC value within limits for V 290.880 Recovery = Not calculated
Zn 206.200† 9.2 -0.00154 mg/L 0.000153 -0.00154 mg/L 0.000153 9.93%
QC value within limits for Zn 206.200 Recovery = Not calculated
K 766.490† 102.4 -0.00806 mg/L 0.053519 -0.00806 mg/L 0.053519 663.72%
QC value within limits for K 766.490 Recovery = Not calculated
Na 589.592† 528.2 0.0239 mg/L 0.00931 0.0239 mg/L 0.00931 38.99%
QC value within limits for Na 589.592 Recovery = Not calculated
Sr 407.771† 386.9 0.00107 mg/L 0.000038 0.00107 mg/L 0.000038 3.61%
QC value within limits for Sr 407.771 Recovery = Not calculated
Li 670.784† -50.3 -0.00342 mg/L 0.000439 -0.00342 mg/L 0.000439 12.85%
QC value within limits for Li 670.784 Recovery = Not calculated
All analyte(s) passed QC.

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**Sequence No.: 30** **Autosampler Location: 43**
**Sample ID: PBW 63 WG398551-02** **Date Collected: 5/21/2012 6:40:30 PM**
**Analyst: KHR** **Data Type: Original**
**Initial Sample Wt:** **Initial Sample Vol:**
**Dilution:** **Sample Prep Vol:**

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**Nebulizer Parameters: PBW 63 WG398551-02**

| Analyte | Back Pressure | Flow |
|---|---|---|
| All | 154.0 kPa | 0.50 L/min |

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**Mean Data: PBW 63 WG398551-02**

| Analyte | Mean Corrected Intensity | Calib. Conc. | Units | Std.Dev. | Sample Conc. | Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 2169881.2 | | | | | | 52623.33 | 2.43% |
| YRADIAL | 202702.6 | | | | | | 1769.15 | 0.87% |
| Ga 417.206 | 1319388.5 | | | | | | 44548.68 | 3.38% |
| GaRADIAL | 61364.0 | | | | | | 1052.32 | 1.71% |
| Ag 328.068† | -10.5 | -0.00061 | mg/L | 0.000075 | -0.00061 | mg/L | 0.000075 | 12.28% |
| Al 396.153† | 0.7 | -0.00314 | mg/L | 0.001559 | -0.00314 | mg/L | 0.001559 | 49.64% |
| As 188.979† | 1.7 | 0.00024 | mg/L | 0.000947 | 0.00024 | mg/L | 0.000947 | 401.97% |
| Ba 233.527† | 42.8 | -0.00052 | mg/L | 0.000244 | -0.00052 | mg/L | 0.000244 | 47.33% |
| Be 234.861† | 82.1 | 0.00009 | mg/L | 0.000059 | 0.00009 | mg/L | 0.000059 | 66.85% |
| B 249.677† | 125.2 | 0.00072 | mg/L | 0.000145 | 0.00072 | mg/L | 0.000145 | 20.03% |
| Ca 227.546† | 15.5 | 0.0869 | mg/L | 0.02700 | 0.0869 | mg/L | 0.02700 | 31.09% |
| Cd 228.802† | -6.7 | -0.00014 | mg/L | 0.000168 | -0.00014 | mg/L | 0.000168 | 118.31% |
| Co 228.616† | 7.2 | -0.00011 | mg/L | 0.000257 | -0.00011 | mg/L | 0.000257 | 223.55% |
| Cr 267.716† | 1.3 | -0.00004 | mg/L | 0.000037 | -0.00004 | mg/L | 0.000037 | 91.47% |
| Cu 327.393† | 113.0 | -0.00003 | mg/L | 0.000747 | -0.00003 | mg/L | 0.000747 | >999.9% |
| Fe 239.562† | 113.7 | 0.0142 | mg/L | 0.00088 | 0.0142 | mg/L | 0.00088 | 6.18% |
| Mg 279.077† | 15.3 | 0.00910 | mg/L | 0.000997 | 0.00910 | mg/L | 0.000997 | 10.95% |
| Mn 257.610† | 235.4 | -0.00151 | mg/L | 0.000062 | -0.00151 | mg/L | 0.000062 | 4.14% |
| Mo 202.031† | -2.7 | 0.00172 | mg/L | 0.000362 | 0.00172 | mg/L | 0.000362 | 21.10% |
| Ni 231.604† | -0.3 | -0.00094 | mg/L | 0.000425 | -0.00094 | mg/L | 0.000425 | 45.14% |
| Pb 220.353† | 34.4 | 0.00213 | mg/L | 0.001603 | 0.00213 | mg/L | 0.001603 | 75.13% |
| Sb 206.836† | -5.0 | -0.00111 | mg/L | 0.000943 | -0.00111 | mg/L | 0.000943 | 85.01% |
| Se 196.026† | 0.5 | 0.00163 | mg/L | 0.003222 | 0.00163 | mg/L | 0.003222 | 198.02% |
| Si 251.611† | 337.2 | -0.00236 | mg/L | 0.001815 | -0.00236 | mg/L | 0.001815 | 76.81% |
| Sn 189.927† | 0.1 | -0.00007 | mg/L | 0.000407 | -0.00007 | mg/L | 0.000407 | 604.91% |
| Ti 334.940† | 123.0 | 0.00247 | mg/L | 0.000189 | 0.00247 | mg/L | 0.000189 | 7.64% |
| Tl 190.801† | -5.9 | -0.00261 | mg/L | 0.002535 | -0.00261 | mg/L | 0.002535 | 97.31% |

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| | | | | | | | |
|---|---|---|---|---|---|---|---|
| V 290.880† | -14.5 | -0.00167 | mg/L | 0.001370 | -0.00167 | mg/L | 0.001370 82.24% |
| Zn 206.200† | 91.9 | 0.00011 | mg/L | 0.000207 | 0.00011 | mg/L | 0.000207 197.13% |
| K 766.490† | 28.3 | -0.0425 | mg/L | 0.07008 | -0.0425 | mg/L | 0.07008 164.83% |
| Na 589.592† | 401.8 | 0.0158 | mg/L | 0.00900 | 0.0158 | mg/L | 0.00900 56.96% |
| Sr 407.771† | 17.4 | 0.00086 | mg/L | 0.000048 | 0.00086 | mg/L | 0.000048 5.59% |
| Li 670.784† | 28.8 | -0.00259 | mg/L | 0.000272 | -0.00259 | mg/L | 0.000272 10.49% |

**Sequence No.: 31** **Autosampler Location: 44**
**Sample ID: LCSW 63 WG398551-03** **Date Collected: 5/21/2012 6:47:30 PM**
**Analyst: KHR** **Data Type: Original**
**Initial Sample Wt:** **Initial Sample Vol:**
**Dilution:** **Sample Prep Vol:**

**Nebulizer Parameters: LCSW 63 WG398551-03**

| Analyte | Back Pressure | Flow |
|---|---|---|
| All | 154.0 kPa | 0.50 L/min |

**Mean Data: LCSW 63 WG398551-03**

| Analyte | Mean Corrected Intensity | Calib. Conc. | Units | Std.Dev. | Sample Conc. | Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 2127926.9 | | | | | | 18447.91 | 0.87% |
| YRADIAL | 200181.9 | | | | | | 3858.03 | 1.93% |
| Ga 417.206 | 1253068.9 | | | | | | 32828.62 | 2.62% |
| GaRADIAL | 60173.4 | | | | | | 360.13 | 0.60% |
| Ag 328.068† | 61292.2 | 0.191 | mg/L | 0.0036 | 0.191 | mg/L | 0.0036 | 1.90% |
| Al 396.153† | 22549.2 | 4.88 | mg/L | 0.042 | 4.88 | mg/L | 0.042 | 0.85% |
| As 188.979† | 542.7 | 0.184 | mg/L | 0.0044 | 0.184 | mg/L | 0.0044 | 2.38% |
| Ba 233.527† | 79296.6 | 0.497 | mg/L | 0.0086 | 0.497 | mg/L | 0.0086 | 1.74% |
| Be 234.861† | 33381.3 | 0.0233 | mg/L | 0.00057 | 0.0233 | mg/L | 0.00057 | 2.45% |
| B 249.677† | 79728.3 | 0.916 | mg/L | 0.0179 | 0.916 | mg/L | 0.0179 | 1.95% |
| Ca 227.546† | 1988.8 | 4.76 | mg/L | 0.120 | 4.76 | mg/L | 0.120 | 2.53% |
| Cd 228.802† | 1388.7 | 0.0228 | mg/L | 0.00087 | 0.0228 | mg/L | 0.00087 | 3.83% |
| Co 228.616† | 4049.7 | 0.0998 | mg/L | 0.00126 | 0.0998 | mg/L | 0.00126 | 1.26% |
| Cr 267.716† | 28586.7 | 0.245 | mg/L | 0.0026 | 0.245 | mg/L | 0.0026 | 1.05% |
| Cu 327.393† | 59237.0 | 0.236 | mg/L | 0.0040 | 0.236 | mg/L | 0.0040 | 1.70% |
| Fe 239.562† | 19569.6 | 1.99 | mg/L | 0.058 | 1.99 | mg/L | 0.058 | 2.90% |
| Mg 279.077† | 12511.5 | 5.02 | mg/L | 0.168 | 5.02 | mg/L | 0.168 | 3.35% |
| Mn 257.610† | 221026.9 | 0.249 | mg/L | 0.0049 | 0.249 | mg/L | 0.0049 | 1.97% |
| Mo 202.031† | 18000.9 | 0.490 | mg/L | 0.0053 | 0.490 | mg/L | 0.0053 | 1.09% |
| Ni 231.604† | 17978.6 | 0.251 | mg/L | 0.0056 | 0.251 | mg/L | 0.0056 | 2.22% |
| Pb 220.353† | 2770.9 | 0.249 | mg/L | 0.0036 | 0.249 | mg/L | 0.0036 | 1.43% |
| Sb 206.836† | 2287.0 | 0.561 | mg/L | 0.0184 | 0.561 | mg/L | 0.0184 | 3.29% |
| Se 196.026† | 330.8 | 0.189 | mg/L | 0.0057 | 0.189 | mg/L | 0.0057 | 3.01% |
| Si 251.611† | 104440.5 | 2.38 | mg/L | 0.027 | 2.38 | mg/L | 0.027 | 1.14% |
| Sn 189.927† | 6035.6 | 0.572 | mg/L | 0.0087 | 0.572 | mg/L | 0.0087 | 1.52% |
| Ti 334.940† | 483302.8 | 0.493 | mg/L | 0.0013 | 0.493 | mg/L | 0.0013 | 0.26% |
| Tl 190.801† | 940.5 | 0.261 | mg/L | 0.0018 | 0.261 | mg/L | 0.0018 | 0.71% |
| V 290.880† | 94069.6 | 0.494 | mg/L | 0.0065 | 0.494 | mg/L | 0.0065 | 1.32% |
| Zn 206.200† | 25168.3 | 0.502 | mg/L | 0.0030 | 0.502 | mg/L | 0.0030 | 0.59% |
| K 766.490† | 54043.6 | 25.1 | mg/L | 0.22 | 25.1 | mg/L | 0.22 | 0.89% |
| Na 589.592† | 398020.9 | 25.6 | mg/L | 0.43 | 25.6 | mg/L | 0.43 | 1.68% |
| Sr 407.771† | 923096.3 | 0.505 | mg/L | 0.0054 | 0.505 | mg/L | 0.0054 | 1.06% |
| Li 670.784† | 50168.3 | 0.518 | mg/L | 0.0042 | 0.518 | mg/L | 0.0042 | 0.81% |

**Sequence No.: 32** **Autosampler Location: 45**
**Sample ID: L1205056301 WG398551-01** **Date Collected: 5/21/2012 6:53:30 PM**
**Analyst: KHR** **Data Type: Original**
**Initial Sample Wt:** **Initial Sample Vol:**
**Dilution:** **Sample Prep Vol:**

**Nebulizer Parameters: L1205056301 WG398551-01**

| Analyte | Back Pressure | Flow |
|---|---|---|
| All | 153.0 kPa | 0.50 L/min |

**Mean Data: L1205056301 WG398551-01**

| Analyte | Mean Corrected Intensity | Calib. Conc. | Units | Std.Dev. | Sample Conc. | Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|

Approved: May 22, 2012

| Analyte | Intensity | Conc. | Units | Std.Dev. | Conc. | Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 2154730.0 | | | | | | 33726.67 | 1.57% |
| YRADIAL | 200960.9 | | | | | | 487.32 | 0.24% |
| Ga 417.206 | 1312371.8 | | | | | | 17951.50 | 1.37% |
| GaRADIAL | 60943.5 | | | | | | 163.97 | 0.27% |
| Ag 328.068† | 428.2 | 0.00089 | mg/L | 0.000133 | 0.00089 | mg/L | 0.000133 | 15.01% |
| Al 396.153† | -56.2 | -0.0158 | mg/L | 0.00285 | -0.0158 | mg/L | 0.00285 | 18.03% |
| As 188.979† | -14.0 | -0.00513 | mg/L | 0.001735 | -0.00513 | mg/L | 0.001735 | 33.80% |
| Ba 233.527† | 16708.9 | 0.104 | mg/L | 0.0011 | 0.104 | mg/L | 0.0011 | 1.04% |
| Be 234.861† | 395.1 | 0.00023 | mg/L | 0.000023 | 0.00023 | mg/L | 0.000023 | 10.29% |
| B 249.677† | 1099.1 | 0.0118 | mg/L | 0.00065 | 0.0118 | mg/L | 0.00065 | 5.55% |
| Ca 227.546† | 27543.7 | 62.0 | mg/L | 1.87 | 62.0 | mg/L | 1.87 | 3.01% |
| Cd 228.802† | 26.4 | 0.00044 | mg/L | 0.000191 | 0.00044 | mg/L | 0.000191 | 43.24% |
| Co 228.616† | 7.5 | -0.00012 | mg/L | 0.000449 | -0.00012 | mg/L | 0.000449 | 362.04% |
| Cr 267.716† | 59.4 | 0.00045 | mg/L | 0.000179 | 0.00045 | mg/L | 0.000179 | 40.21% |
| Cu 327.393† | 379.5 | 0.00106 | mg/L | 0.000302 | 0.00106 | mg/L | 0.000302 | 28.36% |
| Fe 239.562† | 4182.6 | 0.427 | mg/L | 0.0085 | 0.427 | mg/L | 0.0085 | 1.99% |
| Mg 279.077† | 23924.4 | 9.58 | mg/L | 0.211 | 9.58 | mg/L | 0.211 | 2.20% |
| Mn 257.610† | 59019.4 | 0.0652 | mg/L | 0.00096 | 0.0652 | mg/L | 0.00096 | 1.47% |
| Mo 202.031† | 155.0 | 0.00603 | mg/L | 0.000157 | 0.00603 | mg/L | 0.000157 | 2.60% |
| Ni 231.604† | 46.9 | -0.00028 | mg/L | 0.000278 | -0.00028 | mg/L | 0.000278 | 100.26% |
| Pb 220.353† | 42.6 | 0.00329 | mg/L | 0.001610 | 0.00329 | mg/L | 0.001610 | 48.91% |
| Sb 206.836† | -2.6 | -0.00051 | mg/L | 0.000694 | -0.00051 | mg/L | 0.000694 | 137.07% |
| Se 196.026† | 0.5 | 0.00173 | mg/L | 0.002393 | 0.00173 | mg/L | 0.002393 | 138.38% |
| Si 251.611† | 390521.8 | 8.97 | mg/L | 0.106 | 8.97 | mg/L | 0.106 | 1.18% |
| Sn 189.927† | -249.8 | -0.0238 | mg/L | 0.00037 | -0.0238 | mg/L | 0.00037 | 1.57% |
| Ti 334.940† | -9808.0 | 0.00170 | mg/L | 0.000967 | 0.00170 | mg/L | 0.000967 | 56.84% |
| Tl 190.801† | -23.3 | -0.00749 | mg/L | 0.001807 | -0.00749 | mg/L | 0.001807 | 24.12% |
| V 290.880† | 752.7 | 0.00210 | mg/L | 0.000923 | 0.00210 | mg/L | 0.000923 | 44.02% |
| Zn 206.200† | 3508.5 | 0.0682 | mg/L | 0.00111 | 0.0682 | mg/L | 0.00111 | 1.62% |
| K 766.490† | 1553.9 | 0.660 | mg/L | 0.0221 | 0.660 | mg/L | 0.0221 | 3.35% |
| Na 589.592† | 103856.4 | 6.64 | mg/L | 0.025 | 6.64 | mg/L | 0.025 | 0.38% |
| Sr 407.771† | 427015.0 | 0.233 | mg/L | 0.0022 | 0.233 | mg/L | 0.0022 | 0.94% |
| Li 670.784† | 883.5 | 0.00628 | mg/L | 0.000419 | 0.00628 | mg/L | 0.000419 | 6.66% |

**Sequence No.: 33** **Autosampler Location: 46**
**Sample ID: L1205056301S WG398551-04** **Date Collected: 5/21/2012 6:59:30 PM**
**Analyst: KHR** **Data Type: Original**
**Initial Sample Wt:** **Initial Sample Vol:**
**Dilution:** **Sample Prep Vol:**

**Nebulizer Parameters: L1205056301S WG398551-04**

| Analyte | Back Pressure | Flow |
|---|---|---|
| All | 154.0 kPa | 0.50 L/min |

**Mean Data: L1205056301S WG398551-04**

| Analyte | Mean Corrected Intensity | Calib. Conc. | Units | Std.Dev. | Sample Conc. | Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 2096559.9 | | | | | | 18046.87 | 0.86% |
| YRADIAL | 197630.2 | | | | | | 908.98 | 0.46% |
| Ga 417.206 | 1263527.8 | | | | | | 29836.45 | 2.36% |
| GaRADIAL | 58952.3 | | | | | | 670.89 | 1.14% |
| Ag 328.068† | 59444.6 | 0.186 | mg/L | 0.0054 | 0.186 | mg/L | 0.0054 | 2.91% |
| Al 396.153† | 22322.2 | 4.83 | mg/L | 0.027 | 4.83 | mg/L | 0.027 | 0.55% |
| As 188.979† | 522.9 | 0.177 | mg/L | 0.0055 | 0.177 | mg/L | 0.0055 | 3.11% |
| Ba 233.527† | 93012.6 | 0.583 | mg/L | 0.0028 | 0.583 | mg/L | 0.0028 | 0.48% |
| Be 234.861† | 32920.2 | 0.0229 | mg/L | 0.00060 | 0.0229 | mg/L | 0.00060 | 2.61% |
| B 249.677† | 79775.0 | 0.917 | mg/L | 0.0259 | 0.917 | mg/L | 0.0259 | 2.82% |
| Ca 227.546† | 31329.8 | 70.8 | mg/L | 2.17 | 70.8 | mg/L | 2.17 | 3.07% |
| Cd 228.802† | 1340.1 | 0.0220 | mg/L | 0.00107 | 0.0220 | mg/L | 0.00107 | 4.85% |
| Co 228.616† | 3888.6 | 0.0958 | mg/L | 0.00115 | 0.0958 | mg/L | 0.00115 | 1.20% |
| Cr 267.716† | 28021.8 | 0.240 | mg/L | 0.0013 | 0.240 | mg/L | 0.0013 | 0.52% |
| Cu 327.393† | 57632.8 | 0.230 | mg/L | 0.0055 | 0.230 | mg/L | 0.0055 | 2.41% |
| Fe 239.562† | 22868.9 | 2.33 | mg/L | 0.027 | 2.33 | mg/L | 0.027 | 1.17% |
| Mg 279.077† | 35650.6 | 14.3 | mg/L | 0.12 | 14.3 | mg/L | 0.12 | 0.85% |
| Mn 257.610† | 274670.1 | 0.310 | mg/L | 0.0030 | 0.310 | mg/L | 0.0030 | 0.95% |
| Mo 202.031† | 18035.1 | 0.491 | mg/L | 0.0037 | 0.491 | mg/L | 0.0037 | 0.76% |
| Ni 231.604† | 16955.4 | 0.237 | mg/L | 0.0023 | 0.237 | mg/L | 0.0023 | 0.99% |
| Pb 220.353† | 2733.4 | 0.246 | mg/L | 0.0034 | 0.246 | mg/L | 0.0034 | 1.37% |

Approved: May 22, 2012

| | | | | | | |
|---|---|---|---|---|---|---|
| Sb 206.836† | 2234.0 | 0.548 mg/L | 0.0122 | 0.548 mg/L | 0.0122 | 2.23% |
| Se 196.026† | 325.8 | 0.186 mg/L | 0.0070 | 0.186 mg/L | 0.0070 | 3.79% |
| Si 251.611† | 497917.4 | 11.4 mg/L | 0.19 | 11.4 mg/L | 0.19 | 1.70% |
| Sn 189.927† | 5687.6 | 0.539 mg/L | 0.0066 | 0.539 mg/L | 0.0066 | 1.22% |
| Ti 334.940† | 469550.8 | 0.489 mg/L | 0.0027 | 0.489 mg/L | 0.0027 | 0.55% |
| Tl 190.801† | 888.8 | 0.246 mg/L | 0.0004 | 0.246 mg/L | 0.0004 | 0.15% |
| V 290.880† | 93356.1 | 0.490 mg/L | 0.0017 | 0.490 mg/L | 0.0017 | 0.35% |
| Zn 206.200† | 26859.3 | 0.536 mg/L | 0.0051 | 0.536 mg/L | 0.0051 | 0.96% |
| K 766.490† | 54725.9 | 25.4 mg/L | 0.19 | 25.4 mg/L | 0.19 | 0.74% |
| Na 589.592† | 511072.5 | 32.9 mg/L | 0.20 | 32.9 mg/L | 0.20 | 0.60% |
| Sr 407.771† | 1355156.3 | 0.740 mg/L | 0.0080 | 0.740 mg/L | 0.0080 | 1.08% |
| Li 670.784† | 49945.8 | 0.516 mg/L | 0.0043 | 0.516 mg/L | 0.0043 | 0.84% |

**Sequence No.: 34** **Autosampler Location: 47**
**Sample ID: L1205056301SD WG398551-05** **Date Collected: 5/21/2012 7:05:30 PM**
**Analyst: KHR** **Data Type: Original**
**Initial Sample Wt:** **Initial Sample Vol:**
**Dilution:** **Sample Prep Vol:**

**Nebulizer Parameters: L1205056301SD WG398551-05**

| Analyte | Back Pressure | Flow |
|---|---|---|
| All | 154.0 kPa | 0.50 L/min |

**Mean Data: L1205056301SD WG398551-05**

| Analyte | Mean Corrected Intensity | Calib. Conc. | Calib. Units | Std.Dev. | Sample Conc. | Sample Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 2086014.5 | | | | | | 44274.28 | 2.12% |
| YRADIAL | 196650.7 | | | | | | 3118.40 | 1.59% |
| Ga 417.206 | 1261610.3 | | | | | | 19389.79 | 1.54% |
| GaRADIAL | 59352.6 | | | | | | 536.22 | 0.90% |
| Ag 328.068† | 59100.7 | 0.185 | mg/L | 0.0044 | 0.185 | mg/L | 0.0044 | 2.40% |
| Al 396.153† | 21881.7 | 4.74 | mg/L | 0.073 | 4.74 | mg/L | 0.073 | 1.53% |
| As 188.979† | 519.5 | 0.176 | mg/L | 0.0075 | 0.176 | mg/L | 0.0075 | 4.25% |
| Ba 233.527† | 93275.2 | 0.585 | mg/L | 0.0194 | 0.585 | mg/L | 0.0194 | 3.32% |
| Be 234.861† | 32688.6 | 0.0228 | mg/L | 0.00053 | 0.0228 | mg/L | 0.00053 | 2.32% |
| B 249.677† | 79461.9 | 0.913 | mg/L | 0.0300 | 0.913 | mg/L | 0.0300 | 3.28% |
| Ca 227.546† | 31343.2 | 70.8 | mg/L | 1.99 | 70.8 | mg/L | 1.99 | 2.81% |
| Cd 228.802† | 1331.8 | 0.0219 | mg/L | 0.00079 | 0.0219 | mg/L | 0.00079 | 3.63% |
| Co 228.616† | 3885.6 | 0.0957 | mg/L | 0.00210 | 0.0957 | mg/L | 0.00210 | 2.20% |
| Cr 267.716† | 28019.5 | 0.240 | mg/L | 0.0070 | 0.240 | mg/L | 0.0070 | 2.93% |
| Cu 327.393† | 57127.2 | 0.228 | mg/L | 0.0050 | 0.228 | mg/L | 0.0050 | 2.21% |
| Fe 239.562† | 22505.3 | 2.29 | mg/L | 0.024 | 2.29 | mg/L | 0.024 | 1.04% |
| Mg 279.077† | 35427.4 | 14.2 | mg/L | 0.15 | 14.2 | mg/L | 0.15 | 1.09% |
| Mn 257.610† | 275024.3 | 0.310 | mg/L | 0.0107 | 0.310 | mg/L | 0.0107 | 3.45% |
| Mo 202.031† | 17875.5 | 0.486 | mg/L | 0.0153 | 0.486 | mg/L | 0.0153 | 3.15% |
| Ni 231.604† | 17035.7 | 0.238 | mg/L | 0.0079 | 0.238 | mg/L | 0.0079 | 3.33% |
| Pb 220.353† | 2718.1 | 0.245 | mg/L | 0.0059 | 0.245 | mg/L | 0.0059 | 2.42% |
| Sb 206.836† | 2214.5 | 0.543 | mg/L | 0.0111 | 0.543 | mg/L | 0.0111 | 2.05% |
| Se 196.026† | 319.7 | 0.182 | mg/L | 0.0047 | 0.182 | mg/L | 0.0047 | 2.58% |
| Si 251.611† | 509897.3 | 11.7 | mg/L | 0.30 | 11.7 | mg/L | 0.30 | 2.53% |
| Sn 189.927† | 5666.9 | 0.537 | mg/L | 0.0106 | 0.537 | mg/L | 0.0106 | 1.97% |
| Ti 334.940† | 468807.7 | 0.488 | mg/L | 0.0082 | 0.488 | mg/L | 0.0082 | 1.69% |
| Tl 190.801† | 889.8 | 0.247 | mg/L | 0.0047 | 0.247 | mg/L | 0.0047 | 1.92% |
| V 290.880† | 93234.7 | 0.489 | mg/L | 0.0183 | 0.489 | mg/L | 0.0183 | 3.74% |
| Zn 206.200† | 26977.0 | 0.538 | mg/L | 0.0199 | 0.538 | mg/L | 0.0199 | 3.69% |
| K 766.490† | 54456.0 | 25.3 | mg/L | 0.26 | 25.3 | mg/L | 0.26 | 1.03% |
| Na 589.592† | 499524.0 | 32.1 | mg/L | 0.30 | 32.1 | mg/L | 0.30 | 0.93% |
| Sr 407.771† | 1342176.1 | 0.733 | mg/L | 0.0067 | 0.733 | mg/L | 0.0067 | 0.92% |
| Li 670.784† | 49182.4 | 0.508 | mg/L | 0.0091 | 0.508 | mg/L | 0.0091 | 1.78% |

**Sequence No.: 35** **Autosampler Location: 48**
**Sample ID: L1205056302** **Date Collected: 5/21/2012 7:11:27 PM**
**Analyst: KHR** **Data Type: Original**
**Initial Sample Wt:** **Initial Sample Vol:**
**Dilution:** **Sample Prep Vol:**

**Nebulizer Parameters: L1205056302**

Approved: May 22, 2012

Kym H. Rhoden

| Analyte | Back Pressure | Flow |
|---|---|---|
| All | 153.0 kPa | 0.50 L/min |

**Mean Data: L1205056302**

| Analyte | Mean Corrected Intensity | Calib. Conc. | Units | Std.Dev. | Sample Conc. | Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 2134608.8 | | | | | | 17966.33 | 0.84% |
| YRADIAL | 199338.4 | | | | | | 4222.61 | 2.12% |
| Ga 417.206 | 1324567.3 | | | | | | 23694.05 | 1.79% |
| GaRADIAL | 60606.5 | | | | | | 762.80 | 1.26% |
| Ag 328.068† | 283.3 | 0.00043 | mg/L | 0.000327 | 0.00043 | mg/L | 0.000327 | 76.52% |
| Al 396.153† | 4.4 | -0.00257 | mg/L | 0.013038 | -0.00257 | mg/L | 0.013038 | 508.16% |
| As 188.979† | -11.7 | -0.00436 | mg/L | 0.001198 | -0.00436 | mg/L | 0.001198 | 27.46% |
| Ba 233.527† | 16944.6 | 0.106 | mg/L | 0.0016 | 0.106 | mg/L | 0.0016 | 1.52% |
| Be 234.861† | 329.7 | 0.00018 | mg/L | 0.000067 | 0.00018 | mg/L | 0.000067 | 36.08% |
| B 249.677† | 1082.8 | 0.0116 | mg/L | 0.00111 | 0.0116 | mg/L | 0.00111 | 9.57% |
| Ca 227.546† | 27931.6 | 62.9 | mg/L | 2.81 | 62.9 | mg/L | 2.81 | 4.47% |
| Cd 228.802† | 18.3 | 0.00030 | mg/L | 0.000292 | 0.00030 | mg/L | 0.000292 | 96.27% |
| Co 228.616† | 20.1 | 0.00019 | mg/L | 0.000153 | 0.00019 | mg/L | 0.000153 | 80.94% |
| Cr 267.716† | 83.2 | 0.00065 | mg/L | 0.000227 | 0.00065 | mg/L | 0.000227 | 34.96% |
| Cu 327.393† | 99.2 | -0.00006 | mg/L | 0.000567 | -0.00006 | mg/L | 0.000567 | 997.43% |
| Fe 239.562† | 3998.3 | 0.409 | mg/L | 0.0087 | 0.409 | mg/L | 0.0087 | 2.13% |
| Mg 279.077† | 24268.8 | 9.71 | mg/L | 0.129 | 9.71 | mg/L | 0.129 | 1.32% |
| Mn 257.610† | 66834.8 | 0.0741 | mg/L | 0.00136 | 0.0741 | mg/L | 0.00136 | 1.84% |
| Mo 202.031† | 150.5 | 0.00590 | mg/L | 0.000198 | 0.00590 | mg/L | 0.000198 | 3.35% |
| Ni 231.604† | 57.6 | -0.00013 | mg/L | 0.000244 | -0.00013 | mg/L | 0.000244 | 190.81% |
| Pb 220.353† | 26.9 | 0.00188 | mg/L | 0.000143 | 0.00188 | mg/L | 0.000143 | 7.57% |
| Sb 206.836† | -0.4 | 0.00004 | mg/L | 0.001118 | 0.00004 | mg/L | 0.001118 | >999.9% |
| Se 196.026† | 7.7 | 0.00581 | mg/L | 0.000917 | 0.00581 | mg/L | 0.000917 | 15.78% |
| Si 251.611† | 389258.2 | 8.94 | mg/L | 0.168 | 8.94 | mg/L | 0.168 | 1.88% |
| Sn 189.927† | -256.6 | -0.0244 | mg/L | 0.00091 | -0.0244 | mg/L | 0.00091 | 3.71% |
| Ti 334.940† | -10389.9 | 0.00124 | mg/L | 0.000945 | 0.00124 | mg/L | 0.000945 | 76.10% |
| Tl 190.801† | -23.4 | -0.00755 | mg/L | 0.001108 | -0.00755 | mg/L | 0.001108 | 14.69% |
| V 290.880† | 768.1 | 0.00217 | mg/L | 0.002222 | 0.00217 | mg/L | 0.002222 | 102.20% |
| Zn 206.200† | 2594.4 | 0.0500 | mg/L | 0.00045 | 0.0500 | mg/L | 0.00045 | 0.89% |
| K 766.490† | 1639.9 | 0.700 | mg/L | 0.0295 | 0.700 | mg/L | 0.0295 | 4.21% |
| Na 589.592† | 107460.9 | 6.87 | mg/L | 0.058 | 6.87 | mg/L | 0.058 | 0.85% |
| Sr 407.771† | 442606.6 | 0.241 | mg/L | 0.0016 | 0.241 | mg/L | 0.0016 | 0.64% |
| Li 670.784† | 984.9 | 0.00734 | mg/L | 0.000783 | 0.00734 | mg/L | 0.000783 | 10.67% |

**Sequence No.: 36** **Autosampler Location: 49**
**Sample ID: L1205056303** **Date Collected: 5/21/2012 7:17:24 PM**
**Analyst: KHR** **Data Type: Original**
**Initial Sample Wt:** **Initial Sample Vol:**
**Dilution:** **Sample Prep Vol:**

**Nebulizer Parameters: L1205056303**

| Analyte | Back Pressure | Flow |
|---|---|---|
| All | 154.0 kPa | 0.50 L/min |

**Mean Data: L1205056303**

| Analyte | Mean Corrected Intensity | Calib. Conc. | Units | Std.Dev. | Sample Conc. | Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 2091122.6 | | | | | | 10815.37 | 0.52% |
| YRADIAL | 197502.5 | | | | | | 2489.99 | 1.26% |
| Ga 417.206 | 1281603.2 | | | | | | 33700.37 | 2.63% |
| GaRADIAL | 59836.8 | | | | | | 548.08 | 0.92% |
| Ag 328.068† | 353.3 | 0.00073 | mg/L | 0.000480 | 0.00073 | mg/L | 0.000480 | 65.87% |
| Al 396.153† | -34.4 | -0.0110 | mg/L | 0.01892 | -0.0110 | mg/L | 0.01892 | 171.89% |
| As 188.979† | -12.4 | -0.00456 | mg/L | 0.002869 | -0.00456 | mg/L | 0.002869 | 62.89% |
| Ba 233.527† | 16824.9 | 0.105 | mg/L | 0.0014 | 0.105 | mg/L | 0.0014 | 1.35% |
| Be 234.861† | 481.4 | 0.00025 | mg/L | 0.000035 | 0.00025 | mg/L | 0.000035 | 13.76% |
| B 249.677† | 928.9 | 0.00973 | mg/L | 0.000337 | 0.00973 | mg/L | 0.000337 | 3.46% |
| Ca 227.546† | 27953.6 | 63.0 | mg/L | 1.80 | 63.0 | mg/L | 1.80 | 2.86% |
| Cd 228.802† | 23.0 | 0.00038 | mg/L | 0.000202 | 0.00038 | mg/L | 0.000202 | 52.96% |
| Co 228.616† | 13.1 | 0.00001 | mg/L | 0.000186 | 0.00001 | mg/L | 0.000186 | >999.9% |
| Cr 267.716† | 95.9 | 0.00076 | mg/L | 0.000086 | 0.00076 | mg/L | 0.000086 | 11.32% |
| Cu 327.393† | 401.3 | 0.00116 | mg/L | 0.000211 | 0.00116 | mg/L | 0.000211 | 18.11% |

Approved: May 22, 2012

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Fe 239.562† | 5717.5 | 0.583 | mg/L | 0.0209 | 0.583 | mg/L | 0.0209 | 3.59% |
| Mg 279.077† | 23823.5 | 9.54 | mg/L | 0.260 | 9.54 | mg/L | 0.260 | 2.72% |
| Mn 257.610† | 66651.4 | 0.0739 | mg/L | 0.00096 | 0.0739 | mg/L | 0.00096 | 1.30% |
| Mo 202.031† | 149.9 | 0.00590 | mg/L | 0.000157 | 0.00590 | mg/L | 0.000157 | 2.67% |
| Ni 231.604† | 52.1 | -0.00021 | mg/L | 0.000372 | -0.00021 | mg/L | 0.000372 | 181.13% |
| Pb 220.353† | 28.5 | 0.00201 | mg/L | 0.000633 | 0.00201 | mg/L | 0.000633 | 31.47% |
| Sb 206.836† | -4.0 | -0.00084 | mg/L | 0.000426 | -0.00084 | mg/L | 0.000426 | 50.70% |
| Se 196.026† | 7.1 | 0.00552 | mg/L | 0.003716 | 0.00552 | mg/L | 0.003716 | 67.32% |
| Si 251.611† | 393222.6 | 9.03 | mg/L | 0.180 | 9.03 | mg/L | 0.180 | 1.99% |
| Sn 189.927† | -258.6 | -0.0246 | mg/L | 0.00072 | -0.0246 | mg/L | 0.00072 | 2.94% |
| Ti 334.940† | -10079.1 | 0.00156 | mg/L | 0.000801 | 0.00156 | mg/L | 0.000801 | 51.20% |
| Tl 190.801† | -18.2 | -0.00612 | mg/L | 0.002375 | -0.00612 | mg/L | 0.002375 | 38.84% |
| V 290.880† | 1144.4 | 0.00415 | mg/L | 0.000685 | 0.00415 | mg/L | 0.000685 | 16.50% |
| Zn 206.200† | 3895.5 | 0.0759 | mg/L | 0.00021 | 0.0759 | mg/L | 0.00021 | 0.28% |
| K 766.490† | 1668.6 | 0.714 | mg/L | 0.0325 | 0.714 | mg/L | 0.0325 | 4.55% |
| Na 589.592† | 104068.6 | 6.65 | mg/L | 0.004 | 6.65 | mg/L | 0.004 | 0.06% |
| Sr 407.771† | 427134.4 | 0.233 | mg/L | 0.0009 | 0.233 | mg/L | 0.0009 | 0.40% |
| Li 670.784† | 919.5 | 0.00666 | mg/L | 0.001526 | 0.00666 | mg/L | 0.001526 | 22.92% |

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**Sequence No.: 37** **Autosampler Location: 50**
**Sample ID: L1205056304** **Date Collected: 5/21/2012 7:23:21 PM**
**Analyst: KHR** **Data Type: Original**
**Initial Sample Wt:** **Initial Sample Vol:**
**Dilution:** **Sample Prep Vol:**

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**Nebulizer Parameters: L1205056304**

| Analyte | Back Pressure | Flow |
|---|---|---|
| All | 154.0 kPa | 0.50 L/min |

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**Mean Data: L1205056304**

| Analyte | Mean Corrected Intensity | Calib. Conc. | Units | Std.Dev. | Sample Conc. | Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 2078844.4 | | | | | | 12122.53 | 0.58% |
| YRADIAL | 196633.3 | | | | | | 2914.95 | 1.48% |
| Ga 417.206 | 1267940.0 | | | | | | 17096.61 | 1.35% |
| GaRADIAL | 59716.0 | | | | | | 657.52 | 1.10% |
| Ag 328.068† | 294.8 | 0.00047 | mg/L | 0.000322 | 0.00047 | mg/L | 0.000322 | 68.02% |
| Al 396.153† | -46.2 | -0.0136 | mg/L | 0.01074 | -0.0136 | mg/L | 0.01074 | 78.72% |
| As 188.979† | -7.5 | -0.00291 | mg/L | 0.003460 | -0.00291 | mg/L | 0.003460 | 118.85% |
| Ba 233.527† | 17477.4 | 0.109 | mg/L | 0.0009 | 0.109 | mg/L | 0.0009 | 0.80% |
| Be 234.861† | 289.7 | 0.00015 | mg/L | 0.000032 | 0.00015 | mg/L | 0.000032 | 21.17% |
| B 249.677† | 902.3 | 0.00948 | mg/L | 0.000185 | 0.00948 | mg/L | 0.000185 | 1.95% |
| Ca 227.546† | 29492.9 | 66.4 | mg/L | 1.51 | 66.4 | mg/L | 1.51 | 2.27% |
| Cd 228.802† | 23.8 | 0.00039 | mg/L | 0.000424 | 0.00039 | mg/L | 0.000424 | 107.74% |
| Co 228.616† | 84.7 | 0.00179 | mg/L | 0.000189 | 0.00179 | mg/L | 0.000189 | 10.55% |
| Cr 267.716† | 81.7 | 0.00064 | mg/L | 0.000052 | 0.00064 | mg/L | 0.000052 | 8.17% |
| Cu 327.393† | 27.5 | -0.00034 | mg/L | 0.000243 | -0.00034 | mg/L | 0.000243 | 71.23% |
| Fe 239.562† | 4153.9 | 0.424 | mg/L | 0.0084 | 0.424 | mg/L | 0.0084 | 1.98% |
| Mg 279.077† | 24772.1 | 9.91 | mg/L | 0.141 | 9.91 | mg/L | 0.141 | 1.42% |
| Mn 257.610† | 71179.8 | 0.0790 | mg/L | 0.00080 | 0.0790 | mg/L | 0.00080 | 1.02% |
| Mo 202.031† | 168.0 | 0.00638 | mg/L | 0.000256 | 0.00638 | mg/L | 0.000256 | 4.02% |
| Ni 231.604† | 49.6 | -0.00024 | mg/L | 0.000513 | -0.00024 | mg/L | 0.000513 | 212.38% |
| Pb 220.353† | 28.1 | 0.00201 | mg/L | 0.001795 | 0.00201 | mg/L | 0.001795 | 89.24% |
| Sb 206.836† | -9.0 | -0.00207 | mg/L | 0.000126 | -0.00207 | mg/L | 0.000126 | 6.09% |
| Se 196.026† | 3.3 | 0.00332 | mg/L | 0.002094 | 0.00332 | mg/L | 0.002094 | 63.12% |
| Si 251.611† | 411661.4 | 9.45 | mg/L | 0.109 | 9.45 | mg/L | 0.109 | 1.15% |
| Sn 189.927† | -263.0 | -0.0250 | mg/L | 0.00045 | -0.0250 | mg/L | 0.00045 | 1.81% |
| Ti 334.940† | -10511.4 | 0.00165 | mg/L | 0.000959 | 0.00165 | mg/L | 0.000959 | 58.28% |
| Tl 190.801† | -30.3 | -0.00942 | mg/L | 0.003738 | -0.00942 | mg/L | 0.003738 | 39.69% |
| V 290.880† | 1138.1 | 0.00412 | mg/L | 0.001560 | 0.00412 | mg/L | 0.001560 | 37.88% |
| Zn 206.200† | 2659.5 | 0.0513 | mg/L | 0.00052 | 0.0513 | mg/L | 0.00052 | 1.02% |
| K 766.490† | 1722.7 | 0.739 | mg/L | 0.0243 | 0.739 | mg/L | 0.0243 | 3.29% |
| Na 589.592† | 107985.2 | 6.91 | mg/L | 0.060 | 6.91 | mg/L | 0.060 | 0.86% |
| Sr 407.771† | 443975.8 | 0.242 | mg/L | 0.0011 | 0.242 | mg/L | 0.0011 | 0.47% |
| Li 670.784† | 943.3 | 0.00690 | mg/L | 0.000815 | 0.00690 | mg/L | 0.000815 | 11.81% |

==========

**Sequence No.: 38** **Autosampler Location: 51**
**Sample ID: L1205056304PS WG398607-01** **Date Collected: 5/21/2012 7:29:19 PM**

Approved: May 22, 2012

**Analyst: KHR** **Data Type: Original**
**Initial Sample Wt:** **Initial Sample Vol:**
**Dilution:** **Sample Prep Vol:**

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**Nebulizer Parameters: L1205056304PS WG398607-01**

| Analyte | Back Pressure | Flow |
|---|---|---|
| All | 154.0 kPa | 0.50 L/min |

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**Mean Data: L1205056304PS WG398607-01**

| Analyte | Mean Corrected Intensity | Calib. Conc. | Units | Std.Dev. | Sample Conc. | Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 2098706.9 | | | | | | 11265.38 | 0.54% |
| YRADIAL | 195260.5 | | | | | | 1958.71 | 1.00% |
| Ga 417.206 | 1257415.2 | | | | | | 29560.29 | 2.35% |
| GaRADIAL | 58825.5 | | | | | | 671.13 | 1.14% |
| Ag 328.068† | 60997.6 | 0.190 | mg/L | 0.0061 | 0.190 | mg/L | 0.0061 | 3.19% |
| Al 396.153† | 22394.2 | 4.85 | mg/L | 0.033 | 4.85 | mg/L | 0.033 | 0.68% |
| As 188.979† | 536.9 | 0.182 | mg/L | 0.0065 | 0.182 | mg/L | 0.0065 | 3.57% |
| Ba 233.527† | 94345.0 | 0.592 | mg/L | 0.0085 | 0.592 | mg/L | 0.0085 | 1.44% |
| Be 234.861† | 33783.5 | 0.0236 | mg/L | 0.00063 | 0.0236 | mg/L | 0.00063 | 2.68% |
| B 249.677† | 82082.1 | 0.943 | mg/L | 0.0299 | 0.943 | mg/L | 0.0299 | 3.17% |
| Ca 227.546† | 29199.5 | 66.0 | mg/L | 1.98 | 66.0 | mg/L | 1.98 | 2.99% |
| Cd 228.802† | 1366.8 | 0.0224 | mg/L | 0.00111 | 0.0224 | mg/L | 0.00111 | 4.94% |
| Co 228.616† | 4034.2 | 0.0994 | mg/L | 0.00062 | 0.0994 | mg/L | 0.00062 | 0.63% |
| Cr 267.716† | 28903.1 | 0.248 | mg/L | 0.0017 | 0.248 | mg/L | 0.0017 | 0.67% |
| Cu 327.393† | 57936.8 | 0.231 | mg/L | 0.0076 | 0.231 | mg/L | 0.0076 | 3.28% |
| Fe 239.562† | 22610.3 | 2.30 | mg/L | 0.008 | 2.30 | mg/L | 0.008 | 0.36% |
| Mg 279.077† | 34079.7 | 13.6 | mg/L | 0.01 | 13.6 | mg/L | 0.01 | 0.08% |
| Mn 257.610† | 285320.2 | 0.322 | mg/L | 0.0057 | 0.322 | mg/L | 0.0057 | 1.76% |
| Mo 202.031† | 18456.2 | 0.502 | mg/L | 0.0074 | 0.502 | mg/L | 0.0074 | 1.48% |
| Ni 231.604† | 17448.0 | 0.244 | mg/L | 0.0018 | 0.244 | mg/L | 0.0018 | 0.75% |
| Pb 220.353† | 2784.1 | 0.251 | mg/L | 0.0013 | 0.251 | mg/L | 0.0013 | 0.51% |
| Sb 206.836† | 2295.0 | 0.563 | mg/L | 0.0148 | 0.563 | mg/L | 0.0148 | 2.63% |
| Se 196.026† | 336.1 | 0.192 | mg/L | 0.0083 | 0.192 | mg/L | 0.0083 | 4.32% |
| Si 251.611† | 483307.3 | 11.1 | mg/L | 0.23 | 11.1 | mg/L | 0.23 | 2.07% |
| Sn 189.927† | -250.0 | -0.0238 | mg/L | 0.00067 | -0.0238 | mg/L | 0.00067 | 2.80% |
| Ti 334.940† | 478600.8 | 0.497 | mg/L | 0.0022 | 0.497 | mg/L | 0.0022 | 0.43% |
| Tl 190.801† | 895.7 | 0.248 | mg/L | 0.0011 | 0.248 | mg/L | 0.0011 | 0.46% |
| V 290.880† | 95903.6 | 0.504 | mg/L | 0.0018 | 0.504 | mg/L | 0.0018 | 0.35% |
| Zn 206.200† | 27033.8 | 0.539 | mg/L | 0.0088 | 0.539 | mg/L | 0.0088 | 1.64% |
| K 766.490† | 55386.6 | 25.7 | mg/L | 0.17 | 25.7 | mg/L | 0.17 | 0.65% |
| Na 589.592† | 500749.5 | 32.2 | mg/L | 0.55 | 32.2 | mg/L | 0.55 | 1.70% |
| Sr 407.771† | 1320691.9 | 0.721 | mg/L | 0.0125 | 0.721 | mg/L | 0.0125 | 1.74% |
| Li 670.784† | 49353.0 | 0.510 | mg/L | 0.0062 | 0.510 | mg/L | 0.0062 | 1.22% |

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**Sequence No.: 39** **Autosampler Location: 52**
**Sample ID: L1205056304DL WG398607-02** **Date Collected: 5/21/2012 7:35:17 PM**
**Analyst: KHR** **Data Type: Original**
**Initial Sample Wt:** **Initial Sample Vol:**
**Dilution:** **Sample Prep Vol:**

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**Nebulizer Parameters: L1205056304DL WG398607-02**

| Analyte | Back Pressure | Flow |
|---|---|---|
| All | 153.0 kPa | 0.50 L/min |

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**Mean Data: L1205056304DL WG398607-02**

| Analyte | Mean Corrected Intensity | Calib. Conc. | Units | Std.Dev. | Sample Conc. | Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 2115642.7 | | | | | | 18501.29 | 0.87% |
| YRADIAL | 195597.5 | | | | | | 783.04 | 0.40% |
| Ga 417.206 | 1307588.7 | | | | | | 19374.49 | 1.48% |
| GaRADIAL | 59237.1 | | | | | | 1533.63 | 2.59% |
| Ag 328.068† | 93.2 | -0.00026 | mg/L | 0.000229 | -0.00026 | mg/L | 0.000229 | 87.46% |
| Al 396.153† | -5.3 | -0.00453 | mg/L | 0.002837 | -0.00453 | mg/L | 0.002837 | 62.62% |
| As 188.979† | 0.6 | -0.00015 | mg/L | 0.002820 | -0.00015 | mg/L | 0.002820 | >999.9% |
| Ba 233.527† | 3687.1 | 0.0224 | mg/L | 0.00010 | 0.0224 | mg/L | 0.00010 | 0.44% |
| Be 234.861† | 96.0 | 0.00008 | mg/L | 0.000008 | 0.00008 | mg/L | 0.000008 | 9.30% |

Approved: May 22, 2012

Kym H. Rhoden

| | | | | | | |
|---|---|---|---|---|---|---|
| B 249.677† | 363.9 | 0.00344 mg/L | 0.000269 | 0.00344 mg/L | 0.000269 | 7.81% |
| Ca 227.546† | 5716.4 | 12.9 mg/L | 0.22 | 12.9 mg/L | 0.22 | 1.68% |
| Cd 228.802† | -8.4 | -0.00017 mg/L | 0.000094 | -0.00017 mg/L | 0.000094 | 56.23% |
| Co 228.616† | 21.7 | 0.00024 mg/L | 0.000161 | 0.00024 mg/L | 0.000161 | 66.15% |
| Cr 267.716† | 23.1 | 0.00015 mg/L | 0.000078 | 0.00015 mg/L | 0.000078 | 53.89% |
| Cu 327.393† | 91.1 | -0.00011 mg/L | 0.000082 | -0.00011 mg/L | 0.000082 | 74.70% |
| Fe 239.562† | 873.1 | 0.0913 mg/L | 0.00014 | 0.0913 mg/L | 0.00014 | 0.15% |
| Mg 279.077† | 5060.8 | 2.03 mg/L | 0.005 | 2.03 mg/L | 0.005 | 0.24% |
| Mn 257.610† | 14883.0 | 0.0151 mg/L | 0.00014 | 0.0151 mg/L | 0.00014 | 0.94% |
| Mo 202.031† | 49.1 | 0.00313 mg/L | 0.000329 | 0.00313 mg/L | 0.000329 | 10.53% |
| Ni 231.604† | -0.0 | -0.00094 mg/L | 0.000293 | -0.00094 mg/L | 0.000293 | 31.30% |
| Pb 220.353† | 28.4 | 0.00168 mg/L | 0.000545 | 0.00168 mg/L | 0.000545 | 32.50% |
| Sb 206.836† | 5.1 | 0.00137 mg/L | 0.000705 | 0.00137 mg/L | 0.000705 | 51.32% |
| Se 196.026† | -3.5 | -0.00056 mg/L | 0.001518 | -0.00056 mg/L | 0.001518 | 269.74% |
| Si 251.611† | 80990.1 | 1.85 mg/L | 0.027 | 1.85 mg/L | 0.027 | 1.45% |
| Sn 189.927† | -122.4 | -0.0117 mg/L | 0.00136 | -0.0117 mg/L | 0.00136 | 11.65% |
| Ti 334.940† | -2346.5 | 0.00189 mg/L | 0.000168 | 0.00189 mg/L | 0.000168 | 8.86% |
| Tl 190.801† | -19.2 | -0.00624 mg/L | 0.001816 | -0.00624 mg/L | 0.001816 | 29.08% |
| V 290.880† | 221.4 | -0.00048 mg/L | 0.001255 | -0.00048 mg/L | 0.001255 | 260.56% |
| Zn 206.200† | 636.4 | 0.0110 mg/L | 0.00020 | 0.0110 mg/L | 0.00020 | 1.78% |
| K 766.490† | 576.0 | 0.211 mg/L | 0.0087 | 0.211 mg/L | 0.0087 | 4.12% |
| Na 589.592† | 22236.4 | 1.41 mg/L | 0.033 | 1.41 mg/L | 0.033 | 2.37% |
| Sr 407.771† | 90863.3 | 0.0502 mg/L | 0.00105 | 0.0502 mg/L | 0.00105 | 2.09% |
| Li 670.784† | 196.4 | -0.00085 mg/L | 0.000183 | -0.00085 mg/L | 0.000183 | 21.41% |

**Sequence No.: 40** **Autosampler Location: 6**
**Sample ID: CCV** **Date Collected: 5/21/2012 7:42:12 PM**
**Analyst:** **Data Type: Original**
**Initial Sample Wt:** **Initial Sample Vol:**
**Dilution:** **Sample Prep Vol:**

**Nebulizer Parameters: CCV**

| Analyte | Back Pressure | Flow |
|---|---|---|
| All | 154.0 kPa | 0.50 L/min |

**Mean Data: CCV**

| Analyte | Mean Corrected Intensity | Calib. Conc. | Calib. Units | Calib. Std.Dev. | Sample Conc. | Sample Units | Sample Std.Dev. | Sample RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 2053134.3 | | | | | | 6051.90 | 0.29% |
| YRADIAL | 198475.5 | | | | | | 353.30 | 0.18% |
| Ga 417.206 | 1176458.1 | | | | | | 24472.93 | 2.08% |
| GaRADIAL | 58860.5 | | | | | | 89.12 | 0.15% |
| Ag 328.068† | 130842.6 | 0.409 | mg/L | 0.0108 | 0.409 | mg/L | 0.0108 | 2.63% |
| QC value within limits for Ag 328.068 Recovery = 102.24% | | | | | | | | |
| Al 396.153† | 46409.7 | 10.1 | mg/L | 0.01 | 10.1 | mg/L | 0.01 | 0.12% |
| QC value within limits for Al 396.153 Recovery = 100.51% | | | | | | | | |
| As 188.979† | 1163.4 | 0.395 | mg/L | 0.0061 | 0.395 | mg/L | 0.0061 | 1.56% |
| QC value within limits for As 188.979 Recovery = 98.68% | | | | | | | | |
| Ba 233.527† | 166319.6 | 1.04 | mg/L | 0.004 | 1.04 | mg/L | 0.004 | 0.39% |
| QC value within limits for Ba 233.527 Recovery = 104.34% | | | | | | | | |
| Be 234.861† | 71322.0 | 0.0498 | mg/L | 0.00104 | 0.0498 | mg/L | 0.00104 | 2.09% |
| QC value within limits for Be 234.861 Recovery = 99.69% | | | | | | | | |
| B 249.677† | 43101.5 | 0.492 | mg/L | 0.0106 | 0.492 | mg/L | 0.0106 | 2.15% |
| QC value within limits for B 249.677 Recovery = 98.41% | | | | | | | | |
| Ca 227.546† | 4447.0 | 10.5 | mg/L | 0.22 | 10.5 | mg/L | 0.22 | 2.08% |
| QC value within limits for Ca 227.546 Recovery = 105.34% | | | | | | | | |
| Cd 228.802† | 2978.5 | 0.0489 | mg/L | 0.00199 | 0.0489 | mg/L | 0.00199 | 4.07% |
| QC value within limits for Cd 228.802 Recovery = 97.87% | | | | | | | | |
| Co 228.616† | 8418.5 | 0.208 | mg/L | 0.0010 | 0.208 | mg/L | 0.0010 | 0.46% |
| QC value within limits for Co 228.616 Recovery = 103.90% | | | | | | | | |
| Cr 267.716† | 60238.4 | 0.516 | mg/L | 0.0026 | 0.516 | mg/L | 0.0026 | 0.51% |
| QC value within limits for Cr 267.716 Recovery = 103.28% | | | | | | | | |
| Cu 327.393† | 127514.1 | 0.509 | mg/L | 0.0135 | 0.509 | mg/L | 0.0135 | 2.65% |
| QC value within limits for Cu 327.393 Recovery = 101.85% | | | | | | | | |
| Fe 239.562† | 40017.1 | 4.07 | mg/L | 0.014 | 4.07 | mg/L | 0.014 | 0.34% |
| QC value within limits for Fe 239.562 Recovery = 101.67% | | | | | | | | |
| Mg 279.077† | 25259.1 | 10.1 | mg/L | 0.04 | 10.1 | mg/L | 0.04 | 0.35% |
| QC value within limits for Mg 279.077 Recovery = 101.26% | | | | | | | | |
| Mn 257.610† | 467946.8 | 0.530 | mg/L | 0.0028 | 0.530 | mg/L | 0.0028 | 0.53% |

Approved: May 22, 2012

QC value within limits for Mn 257.610 Recovery = 105.93%
Mo 202.031† 37781.8 1.03 mg/L 0.004 1.03 mg/L 0.004 0.34%
QC value within limits for Mo 202.031 Recovery = 102.61%
Ni 231.604† 37192.6 0.521 mg/L 0.0032 0.521 mg/L 0.0032 0.62%
QC value within limits for Ni 231.604 Recovery = 104.12%
Pb 220.353† 5815.9 0.524 mg/L 0.0006 0.524 mg/L 0.0006 0.12%
QC value within limits for Pb 220.353 Recovery = 104.74%
Sb 206.836† 4911.9 1.20 mg/L 0.029 1.20 mg/L 0.029 2.40%
QC value within limits for Sb 206.836 Recovery = 100.33%
Se 196.026† 699.5 0.397 mg/L 0.0085 0.397 mg/L 0.0085 2.15%
QC value within limits for Se 196.026 Recovery = 99.27%
Si 251.611† 219938.1 5.03 mg/L 0.082 5.03 mg/L 0.082 1.63%
QC value within limits for Si 251.611 Recovery = 100.67%
Sn 189.927† 11140.1 1.06 mg/L 0.006 1.06 mg/L 0.006 0.57%
QC value within limits for Sn 189.927 Recovery = 105.63%
Ti 334.940† 1001752.8 1.02 mg/L 0.004 1.02 mg/L 0.004 0.43%
QC value within limits for Ti 334.940 Recovery = 101.86%
Tl 190.801† 1939.1 0.538 mg/L 0.0036 0.538 mg/L 0.0036 0.68%
QC value within limits for Tl 190.801 Recovery = 107.70%
V 290.880† 198058.3 1.04 mg/L 0.014 1.04 mg/L 0.014 1.36%
QC value within limits for V 290.880 Recovery = 104.22%
Zn 206.200† 51777.1 1.03 mg/L 0.001 1.03 mg/L 0.001 0.06%
QC value within limits for Zn 206.200 Recovery = 103.49%
K 766.490† 109979.2 51.3 mg/L 0.24 51.3 mg/L 0.24 0.47%
QC value within limits for K 766.490 Recovery = 102.59%
Na 589.592† 788229.9 50.8 mg/L 1.46 50.8 mg/L 1.46 2.87%
QC value within limits for Na 589.592 Recovery = 101.68%
Sr 407.771† 1855008.7 1.01 mg/L 0.037 1.01 mg/L 0.037 3.63%
QC value within limits for Sr 407.771 Recovery = 101.43%
Li 670.784† 100065.5 1.04 mg/L 0.007 1.04 mg/L 0.007 0.65%
QC value within limits for Li 670.784 Recovery = 103.64%
All analyte(s) passed QC.

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**Sequence No.: 41** **Autosampler Location: 1**
**Sample ID: CCB** **Date Collected: 5/21/2012 7:48:13 PM**
**Analyst:** **Data Type: Original**
**Initial Sample Wt:** **Initial Sample Vol:**
**Dilution:** **Sample Prep Vol:**

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**Nebulizer Parameters: CCB**

| Analyte | Back Pressure | Flow |
|---|---|---|
| All | 154.0 kPa | 0.50 L/min |

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**Mean Data: CCB**

| Analyte | Mean Corrected Intensity | Calib. Conc. | Calib. Units | Calib. Std.Dev. | Sample Conc. | Sample Units | Sample Std.Dev. | Sample RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 2124838.6 | | | | | | 40093.33 | 1.89% |
| YRADIAL | 200016.6 | | | | | | 1964.92 | 0.98% |
| Ga 417.206 | 1247486.7 | | | | | | 36604.96 | 2.93% |
| GaRADIAL | 59949.9 | | | | | | 1856.58 | 3.10% |
| Ag 328.068† | 28.7 | -0.00048 | mg/L | 0.000083 | -0.00048 | mg/L | 0.000083 | 17.15% |
| QC value within limits for Ag 328.068 Recovery = Not calculated | | | | | | | | |
| Al 396.153† | 27.2 | 0.00262 | mg/L | 0.002130 | 0.00262 | mg/L | 0.002130 | 81.32% |
| QC value within limits for Al 396.153 Recovery = Not calculated | | | | | | | | |
| As 188.979† | -1.7 | -0.00092 | mg/L | 0.000530 | -0.00092 | mg/L | 0.000530 | 57.82% |
| QC value within limits for As 188.979 Recovery = Not calculated | | | | | | | | |
| Ba 233.527† | 32.9 | -0.00058 | mg/L | 0.000047 | -0.00058 | mg/L | 0.000047 | 8.14% |
| QC value within limits for Ba 233.527 Recovery = Not calculated | | | | | | | | |
| Be 234.861† | 9.2 | 0.00004 | mg/L | 0.000027 | 0.00004 | mg/L | 0.000027 | 73.79% |
| QC value within limits for Be 234.861 Recovery = Not calculated | | | | | | | | |
| B 249.677† | 142.8 | 0.00093 | mg/L | 0.000280 | 0.00093 | mg/L | 0.000280 | 30.18% |
| QC value within limits for B 249.677 Recovery = Not calculated | | | | | | | | |
| Ca 227.546† | 7.9 | 0.0696 | mg/L | 0.00852 | 0.0696 | mg/L | 0.00852 | 12.25% |
| QC value within limits for Ca 227.546 Recovery = Not calculated | | | | | | | | |
| Cd 228.802† | -6.0 | -0.00012 | mg/L | 0.000117 | -0.00012 | mg/L | 0.000117 | 94.05% |
| QC value within limits for Cd 228.802 Recovery = Not calculated | | | | | | | | |
| Co 228.616† | 4.0 | -0.00020 | mg/L | 0.000174 | -0.00020 | mg/L | 0.000174 | 89.16% |
| QC value within limits for Co 228.616 Recovery = Not calculated | | | | | | | | |
| Cr 267.716† | 13.6 | 0.00007 | mg/L | 0.000072 | 0.00007 | mg/L | 0.000072 | 108.88% |

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QC value within limits for Cr 267.716 Recovery = Not calculated
Cu 327.393† 67.4 -0.00021 mg/L 0.000576 -0.00021 mg/L 0.000576 277.31%
QC value within limits for Cu 327.393 Recovery = Not calculated
Fe 239.562† 121.7 0.0150 mg/L 0.00065 0.0150 mg/L 0.00065 4.34%
QC value within limits for Fe 239.562 Recovery = Not calculated
Mg 279.077† 32.6 0.0160 mg/L 0.00411 0.0160 mg/L 0.00411 25.65%
QC value within limits for Mg 279.077 Recovery = Not calculated
Mn 257.610† 270.6 -0.00147 mg/L 0.000022 -0.00147 mg/L 0.000022 1.52%
QC value within limits for Mn 257.610 Recovery = Not calculated
Mo 202.031† 6.3 0.00196 mg/L 0.000097 0.00196 mg/L 0.000097 4.95%
QC value within limits for Mo 202.031 Recovery = Not calculated
Ni 231.604† -14.4 -0.00114 mg/L 0.000211 -0.00114 mg/L 0.000211 18.49%
QC value within limits for Ni 231.604 Recovery = Not calculated
Pb 220.353† 15.2 0.00041 mg/L 0.000167 0.00041 mg/L 0.000167 41.06%
QC value within limits for Pb 220.353 Recovery = Not calculated
Sb 206.836† 4.0 0.00111 mg/L 0.000391 0.00111 mg/L 0.000391 35.11%
QC value within limits for Sb 206.836 Recovery = Not calculated
Se 196.026† 0.2 0.00145 mg/L 0.002977 0.00145 mg/L 0.002977 205.15%
QC value within limits for Se 196.026 Recovery = Not calculated
Si 251.611† 178.9 -0.00600 mg/L 0.002061 -0.00600 mg/L 0.002061 34.33%
QC value within limits for Si 251.611 Recovery = Not calculated
Sn 189.927† 8.7 0.00074 mg/L 0.000507 0.00074 mg/L 0.000507 68.16%
QC value within limits for Sn 189.927 Recovery = Not calculated
Ti 334.940† 318.7 0.00267 mg/L 0.000042 0.00267 mg/L 0.000042 1.59%
QC value within limits for Ti 334.940 Recovery = Not calculated
Tl 190.801† 1.2 -0.00070 mg/L 0.001554 -0.00070 mg/L 0.001554 223.16%
QC value within limits for Tl 190.801 Recovery = Not calculated
V 290.880† 284.7 -0.00009 mg/L 0.001490 -0.00009 mg/L 0.001490 >999.9%
QC value within limits for V 290.880 Recovery = Not calculated
Zn 206.200† 7.7 -0.00157 mg/L 0.000154 -0.00157 mg/L 0.000154 9.82%
QC value within limits for Zn 206.200 Recovery = Not calculated
K 766.490† 102.7 -0.00791 mg/L 0.030747 -0.00791 mg/L 0.030747 388.92%
QC value within limits for K 766.490 Recovery = Not calculated
Na 589.592† 462.8 0.0197 mg/L 0.00540 0.0197 mg/L 0.00540 27.40%
QC value within limits for Na 589.592 Recovery = Not calculated
Sr 407.771† 539.5 0.00115 mg/L 0.000009 0.00115 mg/L 0.000009 0.79%
QC value within limits for Sr 407.771 Recovery = Not calculated
Li 670.784† -25.5 -0.00316 mg/L 0.000600 -0.00316 mg/L 0.000600 19.01%
QC value within limits for Li 670.784 Recovery = Not calculated
All analyte(s) passed QC.

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**Sequence No.: 42** **Autosampler Location: 53**
**Sample ID: L1205058102** **Date Collected: 5/21/2012 7:55:06 PM**
**Analyst: KHR** **Data Type: Original**
**Initial Sample Wt:** **Initial Sample Vol:**
**Dilution:** **Sample Prep Vol:**

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**Nebulizer Parameters: L1205058102**

| Analyte | Back Pressure | Flow |
|---|---|---|
| All | 154.0 kPa | 0.50 L/min |

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**Mean Data: L1205058102**

| Analyte | Mean Corrected Intensity | Calib. Conc. | Units | Std.Dev. | Sample Conc. | Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 2103866.4 | | | | | | 6139.72 | 0.29% |
| YRADIAL | 195666.7 | | | | | | 3516.40 | 1.80% |
| Ga 417.206 | 1339478.4 | | | | | | 32494.12 | 2.43% |
| GaRADIAL | 60965.8 | | | | | | 1813.70 | 2.97% |
| Ag 328.068† | 338.7 | 0.00044 | mg/L | 0.000263 | 0.00044 | mg/L | 0.000263 | 59.69% |
| Al 396.153† | 26.0 | -0.00085 | mg/L | 0.000876 | -0.00085 | mg/L | 0.000876 | 102.60% |
| As 188.979† | -2.5 | -0.00141 | mg/L | 0.001718 | -0.00141 | mg/L | 0.001718 | 121.62% |
| Ba 233.527† | 7128.8 | 0.0440 | mg/L | 0.00045 | 0.0440 | mg/L | 0.00045 | 1.03% |
| Be 234.861† | 236.9 | 0.00016 | mg/L | 0.000008 | 0.00016 | mg/L | 0.000008 | 5.06% |
| B 249.677† | 40481.7 | 0.466 | mg/L | 0.0155 | 0.466 | mg/L | 0.0155 | 3.32% |
| Ca 227.546† | 24104.4 | 54.3 | mg/L | 2.33 | 54.3 | mg/L | 2.33 | 4.30% |
| Cd 228.802† | -3.3 | -0.00008 | mg/L | 0.000124 | -0.00008 | mg/L | 0.000124 | 152.35% |
| Co 228.616† | 7.3 | -0.00003 | mg/L | 0.000336 | -0.00003 | mg/L | 0.000336 | >999.9% |
| Cr 267.716† | 117.0 | 0.00094 | mg/L | 0.000111 | 0.00094 | mg/L | 0.000111 | 11.88% |
| Cu 327.393† | 69.9 | -0.00019 | mg/L | 0.000249 | -0.00019 | mg/L | 0.000249 | 131.51% |

Approved: May 22, 2012

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Fe 239.562† | 2573.6 | 0.264 | mg/L | 0.0025 | 0.264 | mg/L | 0.0025 0.96% |
| Mg 279.077† | 34203.7 | 13.7 | mg/L | 0.18 | 13.7 | mg/L | 0.18 1.31% |
| Mn 257.610† | 3851.5 | 0.00261 | mg/L | 0.000056 | 0.00261 | mg/L | 0.000056 2.15% |
| Mo 202.031† | 1742.8 | 0.0490 | mg/L | 0.00071 | 0.0490 | mg/L | 0.00071 1.45% |
| Ni 231.604† | 164.1 | 0.00137 | mg/L | 0.000171 | 0.00137 | mg/L | 0.000171 12.49% |
| Pb 220.353† | 37.2 | 0.00282 | mg/L | 0.000473 | 0.00282 | mg/L | 0.000473 16.78% |
| Sb 206.836† | 7.5 | 0.00203 | mg/L | 0.000724 | 0.00203 | mg/L | 0.000724 35.72% |
| Se 196.026† | 11.1 | 0.00768 | mg/L | 0.003390 | 0.00768 | mg/L | 0.003390 44.13% |
| Si 251.611† | 326629.1 | 7.50 | mg/L | 0.232 | 7.50 | mg/L | 0.232 3.10% |
| Sn 189.927† | -246.5 | -0.0234 | mg/L | 0.00071 | -0.0234 | mg/L | 0.00071 3.01% |
| Ti 334.940† | -10073.3 | 0.00027 | mg/L | 0.000418 | 0.00027 | mg/L | 0.000418 154.40% |
| Tl 190.801† | -30.4 | -0.00935 | mg/L | 0.000709 | -0.00935 | mg/L | 0.000709 7.58% |
| V 290.880† | 503.2 | 0.00068 | mg/L | 0.002750 | 0.00068 | mg/L | 0.002750 404.77% |
| Zn 206.200† | 208.9 | 0.00244 | mg/L | 0.000196 | 0.00244 | mg/L | 0.000196 8.02% |
| K 766.490† | 11035.4 | 5.05 | mg/L | 0.078 | 5.05 | mg/L | 0.078 1.55% |
| Na 589.592† | 455295.2 | 29.3 | mg/L | 0.55 | 29.3 | mg/L | 0.55 1.88% |
| Sr 407.771† | 1378561.9 | 0.753 | mg/L | 0.0155 | 0.753 | mg/L | 0.0155 2.06% |
| Li 670.784† | 2894.7 | 0.0272 | mg/L | 0.00106 | 0.0272 | mg/L | 0.00106 3.91% |

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**Sequence No.: 43** **Autosampler Location: 54**
**Sample ID: L1205058103** **Date Collected: 5/21/2012 8:02:03 PM**
**Analyst: KHR** **Data Type: Original**
**Initial Sample Wt:** **Initial Sample Vol:**
**Dilution:** **Sample Prep Vol:**

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**Nebulizer Parameters: L1205058103**

| Analyte | Back Pressure | Flow |
|---|---|---|
| All | 154.0 kPa | 0.50 L/min |

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**Mean Data: L1205058103**

| Analyte | Mean Corrected Intensity | Calib. Conc. | Units | Std.Dev. | Sample Conc. | Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 1968286.8 | | | | | | 21603.97 | 1.10% |
| YRADIAL | 188766.2 | | | | | | 4950.70 | 2.62% |
| Ga 417.206 | 1262566.7 | | | | | | 12265.04 | 0.97% |
| GaRADIAL | 60050.0 | | | | | | 871.86 | 1.45% |
| Ag 328.068† | 1417.8 | 0.00359 | mg/L | 0.000269 | 0.00359 | mg/L | 0.000269 | 7.48% |
| Al 396.153† | -44.8 | -0.0136 | mg/L | 0.00201 | -0.0136 | mg/L | 0.00201 | 14.75% |
| As 188.979† | -5.8 | -0.00237 | mg/L | 0.002332 | -0.00237 | mg/L | 0.002332 | 98.34% |
| Ba 233.527† | 7578.4 | 0.0468 | mg/L | 0.00018 | 0.0468 | mg/L | 0.00018 | 0.37% |
| Be 234.861† | 114.4 | 0.00011 | mg/L | 0.000024 | 0.00011 | mg/L | 0.000024 | 20.94% |
| B 249.677† | 639639.5 | 7.37 | mg/L | 0.021 | 7.37 | mg/L | 0.021 | 0.28% |
| Ca 227.546† | 120585.5 | 271 | mg/L | 2.4 | 271 | mg/L | 2.4 | 0.90% |
| Cd 228.802† | -7.3 | -0.00014 | mg/L | 0.000199 | -0.00014 | mg/L | 0.000199 | 142.26% |
| Co 228.616† | 11.4 | 0.00010 | mg/L | 0.000098 | 0.00010 | mg/L | 0.000098 | 101.09% |
| Cr 267.716† | 177.4 | 0.00147 | mg/L | 0.000267 | 0.00147 | mg/L | 0.000267 | 18.19% |
| Cu 327.393† | -478.8 | -0.00244 | mg/L | 0.000250 | -0.00244 | mg/L | 0.000250 | 10.25% |
| Fe 239.562† | 113.5 | 0.0133 | mg/L | 0.00125 | 0.0133 | mg/L | 0.00125 | 9.39% |
| Mg 279.077† | 113414.5 | 45.4 | mg/L | 0.84 | 45.4 | mg/L | 0.84 | 1.85% |
| Mn 257.610† | 2230.3 | 0.00076 | mg/L | 0.000046 | 0.00076 | mg/L | 0.000046 | 6.00% |
| Mo 202.031† | 284.3 | 0.00949 | mg/L | 0.000296 | 0.00949 | mg/L | 0.000296 | 3.11% |
| Ni 231.604† | 26.6 | -0.00056 | mg/L | 0.000240 | -0.00056 | mg/L | 0.000240 | 43.03% |
| Pb 220.353† | 16.3 | 0.00267 | mg/L | 0.000366 | 0.00267 | mg/L | 0.000366 | 13.69% |
| Sb 206.836† | 0.3 | 0.00019 | mg/L | 0.001462 | 0.00019 | mg/L | 0.001462 | 769.82% |
| Se 196.026† | 44.6 | 0.0265 | mg/L | 0.00034 | 0.0265 | mg/L | 0.00034 | 1.28% |
| Si 251.611† | 442852.6 | 10.2 | mg/L | 0.15 | 10.2 | mg/L | 0.15 | 1.47% |
| Sn 189.927† | -361.5 | -0.0344 | mg/L | 0.00047 | -0.0344 | mg/L | 0.00047 | 1.37% |
| Ti 334.940† | -48757.9 | -0.00636 | mg/L | 0.001619 | -0.00636 | mg/L | 0.001619 | 25.44% |
| Tl 190.801† | -64.4 | -0.0190 | mg/L | 0.00129 | -0.0190 | mg/L | 0.00129 | 6.80% |
| V 290.880† | 735.4 | 0.00111 | mg/L | 0.001497 | 0.00111 | mg/L | 0.001497 | 135.28% |
| Zn 206.200† | 228.1 | 0.00283 | mg/L | 0.000084 | 0.00283 | mg/L | 0.000084 | 2.97% |
| K 766.490† | 9903.4 | 4.51 | mg/L | 0.007 | 4.51 | mg/L | 0.007 | 0.16% |
| Na 589.592† | 608904.3 | 39.2 | mg/L | 0.78 | 39.2 | mg/L | 0.78 | 1.98% |
| Sr 407.771† | 2172063.0 | 1.18 | mg/L | 0.043 | 1.18 | mg/L | 0.043 | 3.67% |
| Li 670.784† | 2034.8 | 0.0182 | mg/L | 0.00051 | 0.0182 | mg/L | 0.00051 | 2.78% |

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**Sequence No.: 44** **Autosampler Location: 55**
**Sample ID: L1205061603** **Date Collected: 5/21/2012 8:09:03 PM**

Approved: May 22, 2012

**Analyst: KHR** **Data Type: Original**
**Initial Sample Wt:** **Initial Sample Vol:**
**Dilution:** **Sample Prep Vol:**

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**Nebulizer Parameters: L1205061603**

| Analyte | Back Pressure | Flow |
|---|---|---|
| All | 154.0 kPa | 0.50 L/min |

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**Mean Data: L1205061603**

| Analyte | Mean Corrected Intensity | Calib. Conc. | Units | Std.Dev. | Sample Conc. | Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 1991137.3 | | | | | | 13066.33 | 0.66% |
| YRADIAL | 191604.8 | | | | | | 1880.11 | 0.98% |
| Ga 417.206 | 1230258.4 | | | | | | 33461.80 | 2.72% |
| GaRADIAL | 58464.4 | | | | | | 328.19 | 0.56% |
| Ag 328.068† | 1007.7 | 0.00403 | mg/L | 0.000479 | 0.00403 | mg/L | 0.000479 | 11.88% |
| Al 396.153† | -51.2 | -0.0145 | mg/L | 0.00950 | -0.0145 | mg/L | 0.00950 | 65.59% |
| As 188.979† | 2.6 | 0.00098 | mg/L | 0.002614 | 0.00098 | mg/L | 0.002614 | 267.96% |
| Ba 233.527† | 7605.9 | 0.0469 | mg/L | 0.00035 | 0.0469 | mg/L | 0.00035 | 0.75% |
| Be 234.861† | 1474.0 | 0.00020 | mg/L | 0.000063 | 0.00020 | mg/L | 0.000063 | 31.34% |
| B 249.677† | 28168.5 | 0.322 | mg/L | 0.0167 | 0.322 | mg/L | 0.0167 | 5.17% |
| Ca 227.546† | 132962.6 | 299 | mg/L | 12.5 | 299 | mg/L | 12.5 | 4.18% |
| Cd 228.802† | 35.8 | 0.00060 | mg/L | 0.000219 | 0.00060 | mg/L | 0.000218 | 36.58% |
| Co 228.616† | 400.0 | 0.00962 | mg/L | 0.000218 | 0.00962 | mg/L | 0.000218 | 2.26% |
| Cr 267.716† | 228.6 | 0.00176 | mg/L | 0.000093 | 0.00176 | mg/L | 0.000093 | 5.26% |
| Cu 327.393† | -474.2 | -0.00207 | mg/L | 0.000403 | -0.00207 | mg/L | 0.000403 | 19.48% |
| Fe 239.562† | 40701.0 | 4.14 | mg/L | 0.061 | 4.14 | mg/L | 0.061 | 1.47% |
| Mg 279.077† | 74855.9 | 30.0 | mg/L | 0.50 | 30.0 | mg/L | 0.50 | 1.68% |
| Mn 257.610† | 424410.6 | 0.480 | mg/L | 0.0059 | 0.480 | mg/L | 0.0059 | 1.22% |
| Mo 202.031† | 272.0 | 0.00947 | mg/L | 0.000314 | 0.00947 | mg/L | 0.000314 | 3.32% |
| Ni 231.604† | 700.8 | 0.00889 | mg/L | 0.000298 | 0.00889 | mg/L | 0.000298 | 3.35% |
| Pb 220.353† | 16.8 | 0.00230 | mg/L | 0.002296 | 0.00230 | mg/L | 0.002296 | 99.97% |
| Sb 206.836† | -6.5 | -0.00131 | mg/L | 0.000345 | -0.00131 | mg/L | 0.000345 | 26.27% |
| Se 196.026† | -2.5 | 0.00106 | mg/L | 0.003967 | 0.00106 | mg/L | 0.003967 | 375.09% |
| Si 251.611† | 453602.9 | 10.4 | mg/L | 0.32 | 10.4 | mg/L | 0.32 | 3.08% |
| Sn 189.927† | -378.3 | -0.0360 | mg/L | 0.00102 | -0.0360 | mg/L | 0.00102 | 2.84% |
| Ti 334.940† | -45400.7 | 0.00122 | mg/L | 0.003910 | 0.00122 | mg/L | 0.003910 | 321.28% |
| Tl 190.801† | -47.0 | -0.0148 | mg/L | 0.00093 | -0.0148 | mg/L | 0.00093 | 6.31% |
| V 290.880† | 1847.6 | 0.00705 | mg/L | 0.001468 | 0.00705 | mg/L | 0.001468 | 20.82% |
| Zn 206.200† | 973.4 | 0.0176 | mg/L | 0.00028 | 0.0176 | mg/L | 0.00028 | 1.60% |
| K 766.490† | 7993.6 | 3.62 | mg/L | 0.034 | 3.62 | mg/L | 0.034 | 0.93% |
| Na 589.592† | 639537.6 | 41.2 | mg/L | 0.39 | 41.2 | mg/L | 0.39 | 0.94% |
| Sr 407.771† | 2786553.2 | 1.52 | mg/L | 0.013 | 1.52 | mg/L | 0.013 | 0.87% |
| Li 670.784† | 2664.2 | 0.0248 | mg/L | 0.00111 | 0.0248 | mg/L | 0.00111 | 4.49% |

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**Sequence No.: 45** **Autosampler Location: 56**
**Sample ID: L1205061604** **Date Collected: 5/21/2012 8:15:03 PM**
**Analyst: KHR** **Data Type: Original**
**Initial Sample Wt:** **Initial Sample Vol:**
**Dilution:** **Sample Prep Vol:**

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**Nebulizer Parameters: L1205061604**

| Analyte | Back Pressure | Flow |
|---|---|---|
| All | 154.0 kPa | 0.50 L/min |

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**Mean Data: L1205061604**

| Analyte | Mean Corrected Intensity | Calib. Conc. | Units | Std.Dev. | Sample Conc. | Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 1939987.2 | | | | | | 9351.88 | 0.48% |
| YRADIAL | 189159.3 | | | | | | 2968.54 | 1.57% |
| Ga 417.206 | 1238755.7 | | | | | | 25308.44 | 2.04% |
| GaRADIAL | 58600.2 | | | | | | 669.80 | 1.14% |
| Ag 328.068† | 2352.3 | 0.00865 | mg/L | 0.000498 | 0.00865 | mg/L | 0.000498 | 5.76% |
| Al 396.153† | -156.2 | -0.0379 | mg/L | 0.01022 | -0.0379 | mg/L | 0.01022 | 26.96% |
| As 188.979† | 67.1 | 0.0231 | mg/L | 0.00108 | 0.0231 | mg/L | 0.00108 | 4.68% |
| Ba 233.527† | 171080.8 | 1.07 | mg/L | 0.008 | 1.07 | mg/L | 0.008 | 0.78% |
| Be 234.861† | 1329.6 | 0.00002 | mg/L | 0.000082 | 0.00002 | mg/L | 0.000082 | 392.02% |

Approved: May 22, 2012

Kym H. Rhoden

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| B 249.677† | 27947.1 | 0.320 | mg/L | 0.0069 | 0.320 | mg/L | 0.0069 2.16% |
| Ca 227.546† | 307581.6 | 692 | mg/L | 15.7 | 692 | mg/L | 15.7 2.27% |
| Cd 228.802† | 43.7 | 0.00058 | mg/L | 0.000164 | 0.00058 | mg/L | 0.000164 28.01% |
| Co 228.616† | -14.1 | -0.00085 | mg/L | 0.000204 | -0.00085 | mg/L | 0.000204 24.00% |
| Cr 267.716† | 304.3 | 0.00240 | mg/L | 0.000017 | 0.00240 | mg/L | 0.000017 0.72% |
| Cu 327.393† | -1086.2 | -0.00459 | mg/L | 0.000416 | -0.00459 | mg/L | 0.000416 9.06% |
| Fe 239.562† | 42501.6 | 4.32 | mg/L | 0.035 | 4.32 | mg/L | 0.035 0.82% |
| Mg 279.077† | 318917.1 | 128 | mg/L | 0.9 | 128 | mg/L | 0.9 0.69% |
| Mn 257.610† | 65981.6 | 0.0732 | mg/L | 0.00064 | 0.0732 | mg/L | 0.00064 0.87% |
| Mo 202.031† | 556.4 | 0.0171 | mg/L | 0.00061 | 0.0171 | mg/L | 0.00061 3.56% |
| Ni 231.604† | 192.3 | 0.00177 | mg/L | 0.000701 | 0.00177 | mg/L | 0.000701 39.67% |
| Pb 220.353† | -61.3 | -0.00135 | mg/L | 0.000958 | -0.00135 | mg/L | 0.000958 70.90% |
| Sb 206.836† | -7.2 | -0.00146 | mg/L | 0.000371 | -0.00146 | mg/L | 0.000371 25.38% |
| Se 196.026† | 0.1 | 0.00265 | mg/L | 0.002703 | 0.00265 | mg/L | 0.002703 101.98% |
| Si 251.611† | 511150.3 | 11.7 | mg/L | 0.12 | 11.7 | mg/L | 0.12 1.03% |
| Sn 189.927† | -440.0 | -0.0418 | mg/L | 0.00213 | -0.0418 | mg/L | 0.00213 5.10% |
| Ti 334.940† | -107693.1 | -0.00296 | mg/L | 0.008823 | -0.00296 | mg/L | 0.008823 297.81% |
| Tl 190.801† | -57.0 | -0.0178 | mg/L | 0.00367 | -0.0178 | mg/L | 0.00367 20.64% |
| V 290.880† | 2507.9 | 0.00793 | mg/L | 0.004091 | 0.00793 | mg/L | 0.004091 51.55% |
| Zn 206.200† | 283.2 | 0.00386 | mg/L | 0.000237 | 0.00386 | mg/L | 0.000237 6.14% |
| K 766.490† | 30045.0 | 13.9 | mg/L | 0.12 | 13.9 | mg/L | 0.12 0.90% |
| Na 589.592† | 1063170.4 | 68.8 | mg/L | 0.59 | 68.8 | mg/L | 0.59 0.86% |
| Sr 407.771† | Saturated2 | | | | | | |
| Li 670.784† | 22834.3 | 0.234 | mg/L | 0.0010 | 0.234 | mg/L | 0.0010 0.42% |

**Sequence No.: 46** **Autosampler Location: 57**
**Sample ID: L1205061605** **Date Collected: 5/21/2012 8:21:02 PM**
**Analyst: KHR** **Data Type: Original**
**Initial Sample Wt:** **Initial Sample Vol:**
**Dilution:** **Sample Prep Vol:**

**Nebulizer Parameters: L1205061605**

| Analyte | Back Pressure | Flow |
|---|---|---|
| All | 154.0 kPa | 0.50 L/min |

**Mean Data: L1205061605**

| Analyte | Mean Corrected Intensity | Calib. Conc. | Units | Std.Dev. | Sample Conc. | Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 2070217.1 | | | | | | 6575.08 | 0.32% |
| YRADIAL | 196164.7 | | | | | | 3863.69 | 1.97% |
| Ga 417.206 | 1300039.0 | | | | | | 50536.02 | 3.89% |
| GaRADIAL | 59584.9 | | | | | | 784.17 | 1.32% |
| Ag 328.068† | 766.9 | 0.00208 | mg/L | 0.000361 | 0.00208 | mg/L | 0.000361 | 17.40% |
| Al 396.153† | -66.0 | -0.0176 | mg/L | 0.00305 | -0.0176 | mg/L | 0.00305 | 17.36% |
| As 188.979† | 16.5 | 0.00555 | mg/L | 0.001378 | 0.00555 | mg/L | 0.001378 | 24.81% |
| Ba 233.527† | 19367.3 | 0.121 | mg/L | 0.0007 | 0.121 | mg/L | 0.0007 | 0.58% |
| Be 234.861† | 822.9 | 0.00014 | mg/L | 0.000109 | 0.00014 | mg/L | 0.000109 | 75.49% |
| B 249.677† | 10898.4 | 0.124 | mg/L | 0.0070 | 0.124 | mg/L | 0.0070 | 5.61% |
| Ca 227.546† | 75939.3 | 171 | mg/L | 7.7 | 171 | mg/L | 7.7 | 4.53% |
| Cd 228.802† | 29.9 | 0.00045 | mg/L | 0.000255 | 0.00045 | mg/L | 0.000255 | 56.79% |
| Co 228.616† | 32.5 | 0.00048 | mg/L | 0.000296 | 0.00048 | mg/L | 0.000296 | 61.96% |
| Cr 267.716† | 1494.6 | 0.0127 | mg/L | 0.00009 | 0.0127 | mg/L | 0.00009 | 0.67% |
| Cu 327.393† | -201.1 | -0.00113 | mg/L | 0.000404 | -0.00113 | mg/L | 0.000404 | 35.70% |
| Fe 239.562† | 21199.4 | 2.16 | mg/L | 0.030 | 2.16 | mg/L | 0.030 | 1.39% |
| Mg 279.077† | 45378.9 | 18.2 | mg/L | 0.21 | 18.2 | mg/L | 0.21 | 1.18% |
| Mn 257.610† | 85820.2 | 0.0956 | mg/L | 0.00050 | 0.0956 | mg/L | 0.00050 | 0.52% |
| Mo 202.031† | 76.8 | 0.00400 | mg/L | 0.000083 | 0.00400 | mg/L | 0.000083 | 2.08% |
| Ni 231.604† | 2202.5 | 0.0300 | mg/L | 0.00035 | 0.0300 | mg/L | 0.00035 | 1.16% |
| Pb 220.353† | 11.9 | 0.00123 | mg/L | 0.002100 | 0.00123 | mg/L | 0.002100 | 170.17% |
| Sb 206.836† | -5.9 | -0.00132 | mg/L | 0.000729 | -0.00132 | mg/L | 0.000729 | 55.22% |
| Se 196.026† | -2.8 | 0.00042 | mg/L | 0.003530 | 0.00042 | mg/L | 0.003530 | 842.65% |
| Si 251.611† | 224068.5 | 5.14 | mg/L | 0.177 | 5.14 | mg/L | 0.177 | 3.44% |
| Sn 189.927† | -323.5 | -0.0308 | mg/L | 0.00062 | -0.0308 | mg/L | 0.00062 | 2.02% |
| Ti 334.940† | -27006.4 | 0.00061 | mg/L | 0.002831 | 0.00061 | mg/L | 0.002831 | 467.71% |
| Tl 190.801† | -41.5 | -0.0127 | mg/L | 0.00354 | -0.0127 | mg/L | 0.00354 | 27.98% |
| V 290.880† | 1589.4 | 0.00615 | mg/L | 0.000740 | 0.00615 | mg/L | 0.000740 | 12.04% |
| Zn 206.200† | 3845.7 | 0.0750 | mg/L | 0.00021 | 0.0750 | mg/L | 0.00021 | 0.28% |
| K 766.490† | 12278.3 | 5.63 | mg/L | 0.078 | 5.63 | mg/L | 0.078 | 1.38% |
| Na 589.592† | 484650.3 | 31.2 | mg/L | 0.25 | 31.2 | mg/L | 0.25 | 0.81% |

Approved: May 22, 2012

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Sr 407.771† | 6217258.9 | 3.39 | mg/L | 0.091 | 3.39 | mg/L | 0.091 2.67% |
| Li 670.784† | 4935.4 | 0.0484 | mg/L | 0.00065 | 0.0484 | mg/L | 0.00065 1.34% |

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**Sequence No.: 47** **Autosampler Location: 58**
**Sample ID: L1205061606** **Date Collected: 5/21/2012 8:27:07 PM**
**Analyst: KHR** **Data Type: Original**
**Initial Sample Wt:** **Initial Sample Vol:**
**Dilution:** **Sample Prep Vol:**

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**Nebulizer Parameters: L1205061606**

| Analyte | Back Pressure | Flow |
|---|---|---|
| All | 154.0 kPa | 0.50 L/min |

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**Mean Data: L1205061606**

| Analyte | Mean Corrected Intensity | Calib. Conc. | Units | Std.Dev. | Sample Conc. | Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 2030504.8 | | | | | | 20665.15 | 1.02% |
| YRADIAL | 197137.8 | | | | | | 2807.35 | 1.42% |
| Ga 417.206 | 1288001.8 | | | | | | 25671.06 | 1.99% |
| GaRADIAL | 59777.4 | | | | | | 1039.25 | 1.74% |
| Ag 328.068† | -648.2 | 0.00333 | mg/L | 0.000342 | 0.00333 | mg/L | 0.000342 | 10.27% |
| Al 396.153† | 12081.7 | 2.63 | mg/L | 0.011 | 2.63 | mg/L | 0.011 | 0.43% |
| As 188.979† | 39.7 | 0.0148 | mg/L | 0.00211 | 0.0148 | mg/L | 0.00211 | 14.23% |
| Ba 233.527† | 10880.9 | 0.0672 | mg/L | 0.00117 | 0.0672 | mg/L | 0.00117 | 1.74% |
| Be 234.861† | 4250.0 | 0.00001 | mg/L | 0.000117 | 0.00001 | mg/L | 0.000117 | >999.9% |
| B 249.677† | 122989.1 | 1.41 | mg/L | 0.056 | 1.41 | mg/L | 0.056 | 3.98% |
| Ca 227.546† | 88548.2 | 200 | mg/L | 7.9 | 200 | mg/L | 7.9 | 3.98% |
| Cd 228.802† | 113.8 | 0.00181 | mg/L | 0.000445 | 0.00181 | mg/L | 0.000445 | 24.65% |
| Co 228.616† | 67.5 | 0.00103 | mg/L | 0.000202 | 0.00103 | mg/L | 0.000202 | 19.70% |
| Cr 267.716† | 8514.4 | 0.0724 | mg/L | 0.00112 | 0.0724 | mg/L | 0.00112 | 1.55% |
| Cu 327.393† | 6441.3 | 0.0264 | mg/L | 0.00098 | 0.0264 | mg/L | 0.00098 | 3.70% |
| Fe 239.562† | 136965.3 | 13.9 | mg/L | 0.08 | 13.9 | mg/L | 0.08 | 0.54% |
| Mg 279.077† | 95320.1 | 38.1 | mg/L | 0.20 | 38.1 | mg/L | 0.20 | 0.53% |
| Mn 257.610† | 695141.3 | 0.787 | mg/L | 0.0045 | 0.787 | mg/L | 0.0045 | 0.57% |
| Mo 202.031† | 86.8 | 0.00500 | mg/L | 0.000246 | 0.00500 | mg/L | 0.000246 | 4.91% |
| Ni 231.604† | 528.2 | 0.00648 | mg/L | 0.000394 | 0.00648 | mg/L | 0.000394 | 6.08% |
| Pb 220.353† | 265.7 | 0.0233 | mg/L | 0.00110 | 0.0233 | mg/L | 0.00110 | 4.74% |
| Sb 206.836† | -6.7 | -0.00160 | mg/L | 0.002727 | -0.00160 | mg/L | 0.002727 | 170.45% |
| Se 196.026† | -9.1 | 0.00013 | mg/L | 0.004929 | 0.00013 | mg/L | 0.004929 | >999.9% |
| Si 251.611† | 613698.4 | 14.1 | mg/L | 0.27 | 14.1 | mg/L | 0.27 | 1.92% |
| Sn 189.927† | -319.7 | -0.0304 | mg/L | 0.00028 | -0.0304 | mg/L | 0.00028 | 0.94% |
| Ti 334.940† | -7000.7 | 0.0251 | mg/L | 0.00291 | 0.0251 | mg/L | 0.00291 | 11.57% |
| Tl 190.801† | -39.8 | -0.0126 | mg/L | 0.00467 | -0.0126 | mg/L | 0.00467 | 37.17% |
| V 290.880† | 3500.4 | 0.0148 | mg/L | 0.00300 | 0.0148 | mg/L | 0.00300 | 20.25% |
| Zn 206.200† | 6604.6 | 0.130 | mg/L | 0.0022 | 0.130 | mg/L | 0.0022 | 1.68% |
| K 766.490† | 24206.4 | 11.1 | mg/L | 0.13 | 11.1 | mg/L | 0.13 | 1.17% |
| Na 589.592† | 1553855.2 | 101 | mg/L | 2.3 | 101 | mg/L | 2.3 | 2.31% |
| Sr 407.771† | 1622373.1 | 0.883 | mg/L | 0.0172 | 0.883 | mg/L | 0.0172 | 1.95% |
| Li 670.784† | 1031.3 | 0.00782 | mg/L | 0.000983 | 0.00782 | mg/L | 0.000983 | 12.58% |

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**Sequence No.: 48** **Autosampler Location: 59**
**Sample ID: L1205061607** **Date Collected: 5/21/2012 8:33:08 PM**
**Analyst: KHR** **Data Type: Original**
**Initial Sample Wt:** **Initial Sample Vol:**
**Dilution:** **Sample Prep Vol:**

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**Nebulizer Parameters: L1205061607**

| Analyte | Back Pressure | Flow |
|---|---|---|
| All | 154.0 kPa | 0.50 L/min |

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**Mean Data: L1205061607**

| Analyte | Mean Corrected Intensity | Calib. Conc. | Units | Std.Dev. | Sample Conc. | Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 2037526.5 | | | | | | 39841.20 | 1.96% |
| YRADIAL | 195240.4 | | | | | | 5017.25 | 2.57% |
| Ga 417.206 | 1276568.2 | | | | | | 24465.18 | 1.92% |

Approved: May 22, 2012

Kym H. Rhoden

| | | | | | | |
|---|---|---|---|---|---|---|
| GaRADIAL | 59442.0 | | | | 373.66 | 0.63% |
| Ag 328.068† | 226.1 | 0.00160 mg/L | 0.000581 | 0.00160 mg/L | 0.000581 | 36.23% |
| Al 396.153† | 299.5 | 0.0623 mg/L | 0.00493 | 0.0623 mg/L | 0.00493 | 7.90% |
| As 188.979† | 10.1 | 0.00354 mg/L | 0.003102 | 0.00354 mg/L | 0.003102 | 87.65% |
| Ba 233.527† | 6100.9 | 0.0374 mg/L | 0.00075 | 0.0374 mg/L | 0.00075 | 2.01% |
| Be 234.861† | 1255.4 | 0.00014 mg/L | 0.000044 | 0.00014 mg/L | 0.000044 | 32.34% |
| B 249.677† | 102056.7 | 1.17 mg/L | 0.043 | 1.17 mg/L | 0.043 | 3.64% |
| Ca 227.546† | 63957.9 | 144 mg/L | 5.1 | 144 mg/L | 5.1 | 3.54% |
| Cd 228.802† | 33.7 | 0.00052 mg/L | 0.000241 | 0.00052 mg/L | 0.000241 | 46.42% |
| Co 228.616† | 34.0 | 0.00049 mg/L | 0.000021 | 0.00049 mg/L | 0.000021 | 4.26% |
| Cr 267.716† | 718.9 | 0.00597 mg/L | 0.000157 | 0.00597 mg/L | 0.000157 | 2.62% |
| Cu 327.393† | 164.2 | 0.00048 mg/L | 0.001321 | 0.00048 mg/L | 0.001321 | 277.88% |
| Fe 239.562† | 37368.6 | 3.80 mg/L | 0.117 | 3.80 mg/L | 0.117 | 3.08% |
| Mg 279.077† | 68982.3 | 27.6 mg/L | 0.80 | 27.6 mg/L | 0.80 | 2.91% |
| Mn 257.610† | 560185.0 | 0.634 mg/L | 0.0077 | 0.634 mg/L | 0.0077 | 1.21% |
| Mo 202.031† | 75.1 | 0.00415 mg/L | 0.000095 | 0.00415 mg/L | 0.000095 | 2.28% |
| Ni 231.604† | 83.7 | 0.00024 mg/L | 0.000506 | 0.00024 mg/L | 0.000506 | 211.38% |
| Pb 220.353† | 26.9 | 0.00191 mg/L | 0.001322 | 0.00191 mg/L | 0.001322 | 69.16% |
| Sb 206.836† | -6.9 | -0.00147 mg/L | 0.001407 | -0.00147 mg/L | 0.001407 | 95.92% |
| Se 196.026† | 3.9 | 0.00452 mg/L | 0.000979 | 0.00452 mg/L | 0.000979 | 21.67% |
| Si 251.611† | 410987.5 | 9.44 mg/L | 0.209 | 9.44 mg/L | 0.209 | 2.21% |
| Sn 189.927† | -317.1 | -0.0301 mg/L | 0.00073 | -0.0301 mg/L | 0.00073 | 2.41% |
| Ti 334.940† | -21597.1 | 0.00204 mg/L | 0.002430 | 0.00204 mg/L | 0.002430 | 118.86% |
| Tl 190.801† | -29.9 | -0.00998 mg/L | 0.002914 | -0.00998 mg/L | 0.002914 | 29.19% |
| V 290.880† | 1647.5 | 0.00609 mg/L | 0.001511 | 0.00609 mg/L | 0.001511 | 24.84% |
| Zn 206.200† | 656.4 | 0.0113 mg/L | 0.00022 | 0.0113 mg/L | 0.00022 | 1.93% |
| K 766.490† | 19536.6 | 8.94 mg/L | 0.092 | 8.94 mg/L | 0.092 | 1.03% |
| Na 589.592† | 1494387.5 | 97.1 mg/L | 2.61 | 97.1 mg/L | 2.61 | 2.69% |
| Sr 407.771† | 1228504.3 | 0.669 mg/L | 0.0032 | 0.669 mg/L | 0.0032 | 0.48% |
| Li 670.784† | 747.6 | 0.00487 mg/L | 0.000398 | 0.00487 mg/L | 0.000398 | 8.16% |

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**Sequence No.: 49** **Autosampler Location: 60**
**Sample ID: L1205061608** **Date Collected: 5/21/2012 8:39:06 PM**
**Analyst: KHR** **Data Type: Original**
**Initial Sample Wt:** **Initial Sample Vol:**
**Dilution:** **Sample Prep Vol:**

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**Nebulizer Parameters: L1205061608**

| Analyte | Back Pressure | Flow |
|---|---|---|
| All | 154.0 kPa | 0.50 L/min |

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**Mean Data: L1205061608**

| Analyte | Mean Corrected Intensity | Calib. Conc. | Units | Std.Dev. | Sample Conc. | Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 2046061.2 | | | | | | 13521.41 | 0.66% |
| YRADIAL | 189166.8 | | | | | | 4009.42 | 2.12% |
| Ga 417.206 | 1257280.3 | | | | | | 22518.37 | 1.79% |
| GaRADIAL | 57437.5 | | | | | | 910.40 | 1.59% |
| Ag 328.068† | 593.9 | 0.00141 | mg/L | 0.000477 | 0.00141 | mg/L | 0.000477 | 33.76% |
| Al 396.153† | 142.5 | 0.0278 | mg/L | 0.00788 | 0.0278 | mg/L | 0.00788 | 28.38% |
| As 188.979† | -2.8 | -0.00123 | mg/L | 0.002221 | -0.00123 | mg/L | 0.002221 | 180.00% |
| Ba 233.527† | 25652.5 | 0.160 | mg/L | 0.0010 | 0.160 | mg/L | 0.0010 | 0.64% |
| Be 234.861† | 385.3 | 0.00021 | mg/L | 0.000093 | 0.00021 | mg/L | 0.000093 | 43.94% |
| B 249.677† | 7758.3 | 0.0884 | mg/L | 0.00376 | 0.0884 | mg/L | 0.00376 | 4.25% |
| Ca 227.546† | 48908.7 | 110 | mg/L | 2.0 | 110 | mg/L | 2.0 | 1.80% |
| Cd 228.802† | 23.5 | 0.00038 | mg/L | 0.000129 | 0.00038 | mg/L | 0.000129 | 34.37% |
| Co 228.616† | 41.4 | 0.00072 | mg/L | 0.000174 | 0.00072 | mg/L | 0.000174 | 24.13% |
| Cr 267.716† | 8024.0 | 0.0687 | mg/L | 0.00021 | 0.0687 | mg/L | 0.00021 | 0.31% |
| Cu 327.393† | 275.2 | 0.00065 | mg/L | 0.001041 | 0.00065 | mg/L | 0.001041 | 160.58% |
| Fe 239.562† | 4753.0 | 0.485 | mg/L | 0.0072 | 0.485 | mg/L | 0.0072 | 1.48% |
| Mg 279.077† | 13557.4 | 5.43 | mg/L | 0.063 | 5.43 | mg/L | 0.063 | 1.16% |
| Mn 257.610† | 110329.4 | 0.123 | mg/L | 0.0016 | 0.123 | mg/L | 0.0016 | 1.27% |
| Mo 202.031† | 52.1 | 0.00326 | mg/L | 0.000094 | 0.00326 | mg/L | 0.000094 | 2.88% |
| Ni 231.604† | 52.1 | -0.00020 | mg/L | 0.000391 | -0.00020 | mg/L | 0.000391 | 191.13% |
| Pb 220.353† | 33.1 | 0.00278 | mg/L | 0.001652 | 0.00278 | mg/L | 0.001652 | 59.42% |
| Sb 206.836† | 2.4 | 0.00017 | mg/L | 0.001690 | 0.00017 | mg/L | 0.001690 | 988.51% |
| Se 196.026† | 9.4 | 0.00678 | mg/L | 0.001091 | 0.00678 | mg/L | 0.001091 | 16.09% |
| Si 251.611† | 328575.6 | 7.54 | mg/L | 0.058 | 7.54 | mg/L | 0.058 | 0.76% |
| Sn 189.927† | -306.1 | -0.0291 | mg/L | 0.00087 | -0.0291 | mg/L | 0.00087 | 3.00% |

Approved: May 22, 2012

Kym H. Rhoden

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|---|---|---|---|---|---|---|
| Ti 334.940† | -16644.7 | 0.00196 mg/L | 0.001281 | 0.00196 mg/L | 0.001281 | 65.22% |
| Tl 190.801† | -27.4 | -0.00874 mg/L | 0.002004 | -0.00874 mg/L | 0.002004 | 22.93% |
| V 290.880† | 1990.2 | 0.00872 mg/L | 0.001168 | 0.00872 mg/L | 0.001168 | 13.39% |
| Zn 206.200† | 1243.8 | 0.0236 mg/L | 0.00037 | 0.0236 mg/L | 0.00037 | 1.57% |
| K 766.490† | 5878.7 | 2.63 mg/L | 0.058 | 2.63 mg/L | 0.058 | 2.20% |
| Na 589.592† | 698332.1 | 45.0 mg/L | 0.19 | 45.0 mg/L | 0.19 | 0.42% |
| Sr 407.771† | 631137.2 | 0.343 mg/L | 0.0017 | 0.343 mg/L | 0.0017 | 0.51% |
| Li 670.784† | 622.8 | 0.00358 mg/L | 0.001140 | 0.00358 mg/L | 0.001140 | 31.87% |

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**Sequence No.: 50** **Autosampler Location: 6**
**Sample ID: CCV** **Date Collected: 5/21/2012 8:45:04 PM**
**Analyst:** **Data Type: Original**
**Initial Sample Wt:** **Initial Sample Vol:**
**Dilution:** **Sample Prep Vol:**

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**Nebulizer Parameters: CCV**

| Analyte | Back Pressure | Flow |
|---|---|---|
| All | 153.0 kPa | 0.50 L/min |

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**Mean Data: CCV**

| Analyte | Mean Corrected Intensity | Calib. Conc. | Units | Std.Dev. | Sample Conc. | Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 2112756.0 | | | | | | 15712.82 | 0.74% |
| YRADIAL | 198950.9 | | | | | | 3629.99 | 1.82% |
| Ga 417.206 | 1222191.9 | | | | | | 20685.06 | 1.69% |
| GaRADIAL | 58804.1 | | | | | | 654.13 | 1.11% |
| Ag 328.068† | 124917.5 | 0.390 | mg/L | 0.0063 | 0.390 | mg/L | 0.0063 | 1.62% |
| QC value within limits for Ag 328.068 Recovery = 97.61% | | | | | | | | |
| Al 396.153† | 45485.9 | 9.85 | mg/L | 0.022 | 9.85 | mg/L | 0.022 | 0.23% |
| QC value within limits for Al 396.153 Recovery = 98.52% | | | | | | | | |
| As 188.979† | 1109.9 | 0.376 | mg/L | 0.0037 | 0.376 | mg/L | 0.0037 | 0.98% |
| QC value within limits for As 188.979 Recovery = 94.12% | | | | | | | | |
| Ba 233.527† | 160187.1 | 1.00 | mg/L | 0.012 | 1.00 | mg/L | 0.012 | 1.16% |
| QC value within limits for Ba 233.527 Recovery = 100.49% | | | | | | | | |
| Be 234.861† | 68088.9 | 0.0476 | mg/L | 0.00075 | 0.0476 | mg/L | 0.00075 | 1.57% |
| QC value within limits for Be 234.861 Recovery = 95.14% | | | | | | | | |
| B 249.677† | 41369.8 | 0.472 | mg/L | 0.0067 | 0.472 | mg/L | 0.0067 | 1.41% |
| QC value within limits for B 249.677 Recovery = 94.45% | | | | | | | | |
| Ca 227.546† | 4221.9 | 10.0 | mg/L | 0.24 | 10.0 | mg/L | 0.24 | 2.36% |
| QC value within limits for Ca 227.546 Recovery = 100.12% | | | | | | | | |
| Cd 228.802† | 2849.0 | 0.0468 | mg/L | 0.00183 | 0.0468 | mg/L | 0.00183 | 3.91% |
| QC value within limits for Cd 228.802 Recovery = 93.63% | | | | | | | | |
| Co 228.616† | 8121.0 | 0.200 | mg/L | 0.0023 | 0.200 | mg/L | 0.0023 | 1.16% |
| QC value within limits for Co 228.616 Recovery = 100.21% | | | | | | | | |
| Cr 267.716† | 58472.8 | 0.501 | mg/L | 0.0035 | 0.501 | mg/L | 0.0035 | 0.70% |
| QC value within limits for Cr 267.716 Recovery = 100.25% | | | | | | | | |
| Cu 327.393† | 121220.8 | 0.484 | mg/L | 0.0056 | 0.484 | mg/L | 0.0056 | 1.16% |
| QC value within limits for Cu 327.393 Recovery = 96.83% | | | | | | | | |
| Fe 239.562† | 39126.9 | 3.98 | mg/L | 0.021 | 3.98 | mg/L | 0.021 | 0.52% |
| QC value within limits for Fe 239.562 Recovery = 99.41% | | | | | | | | |
| Mg 279.077† | 24776.2 | 9.93 | mg/L | 0.100 | 9.93 | mg/L | 0.100 | 1.01% |
| QC value within limits for Mg 279.077 Recovery = 99.32% | | | | | | | | |
| Mn 257.610† | 450806.6 | 0.510 | mg/L | 0.0064 | 0.510 | mg/L | 0.0064 | 1.26% |
| QC value within limits for Mn 257.610 Recovery = 102.04% | | | | | | | | |
| Mo 202.031† | 36456.8 | 0.990 | mg/L | 0.0051 | 0.990 | mg/L | 0.0051 | 0.52% |
| QC value within limits for Mo 202.031 Recovery = 99.02% | | | | | | | | |
| Ni 231.604† | 35922.1 | 0.503 | mg/L | 0.0049 | 0.503 | mg/L | 0.0049 | 0.98% |
| QC value within limits for Ni 231.604 Recovery = 100.56% | | | | | | | | |
| Pb 220.353† | 5606.9 | 0.505 | mg/L | 0.0059 | 0.505 | mg/L | 0.0059 | 1.16% |
| QC value within limits for Pb 220.353 Recovery = 100.97% | | | | | | | | |
| Sb 206.836† | 4676.7 | 1.15 | mg/L | 0.027 | 1.15 | mg/L | 0.027 | 2.35% |
| QC value within limits for Sb 206.836 Recovery = 95.52% | | | | | | | | |
| Se 196.026† | 666.2 | 0.378 | mg/L | 0.0076 | 0.378 | mg/L | 0.0076 | 2.00% |
| QC value within limits for Se 196.026 Recovery = 94.58% | | | | | | | | |
| Si 251.611† | 209580.6 | 4.80 | mg/L | 0.036 | 4.80 | mg/L | 0.036 | 0.75% |
| QC value within limits for Si 251.611 Recovery = 95.92% | | | | | | | | |
| Sn 189.927† | 10752.0 | 1.02 | mg/L | 0.009 | 1.02 | mg/L | 0.009 | 0.88% |
| QC value within limits for Sn 189.927 Recovery = 101.95% | | | | | | | | |
| Ti 334.940† | 979557.8 | 0.996 | mg/L | 0.0048 | 0.996 | mg/L | 0.0048 | 0.48% |

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QC value within limits for Ti 334.940 Recovery = 99.60%
Tl 190.801† 1875.5 0.521 mg/L 0.0048 0.521 mg/L 0.0048 0.92%
QC value within limits for Tl 190.801 Recovery = 104.18%
V 290.880† 191114.5 1.01 mg/L 0.005 1.01 mg/L 0.005 0.53%
QC value within limits for V 290.880 Recovery = 100.56%
Zn 206.200† 50409.0 1.01 mg/L 0.008 1.01 mg/L 0.008 0.76%
QC value within limits for Zn 206.200 Recovery = 100.75%
K 766.490† 108591.5 50.6 mg/L 0.31 50.6 mg/L 0.31 0.62%
QC value within limits for K 766.490 Recovery = 101.28%
Na 589.592† 788269.9 50.8 mg/L 0.48 50.8 mg/L 0.48 0.95%
QC value within limits for Na 589.592 Recovery = 101.68%
Sr 407.771† 1833476.2 1.00 mg/L 0.006 1.00 mg/L 0.006 0.58%
QC value within limits for Sr 407.771 Recovery = 100.26%
Li 670.784† 98214.4 1.02 mg/L 0.004 1.02 mg/L 0.004 0.41%
QC value within limits for Li 670.784 Recovery = 101.72%
All analyte(s) passed QC.

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**Sequence No.: 51** **Autosampler Location: 1**
**Sample ID: CCB** **Date Collected: 5/21/2012 8:51:04 PM**
**Analyst:** **Data Type: Original**
**Initial Sample Wt:** **Initial Sample Vol:**
**Dilution:** **Sample Prep Vol:**

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**Nebulizer Parameters: CCB**

| Analyte | Back Pressure | Flow |
|---|---|---|
| All | 153.0 kPa | 0.50 L/min |

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**Mean Data: CCB**

| Analyte | Mean Corrected Intensity | Calib. Conc. | Units | Std.Dev. | Sample Conc. | Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 2086130.9 | | | | | | 30456.37 | 1.46% |
| YRADIAL | 193752.1 | | | | | | 3829.58 | 1.98% |
| Ga 417.206 | 1244729.7 | | | | | | 22999.73 | 1.85% |
| GaRADIAL | 58694.0 | | | | | | 1562.60 | 2.66% |
| Ag 328.068† | 70.2 | -0.00036 | mg/L | 0.000649 | -0.00036 | mg/L | 0.000649 | 182.43% |
| QC value within limits for Ag 328.068 Recovery = Not calculated | | | | | | | | |
| Al 396.153† | 35.7 | 0.00447 | mg/L | 0.001602 | 0.00447 | mg/L | 0.001602 | 35.81% |
| QC value within limits for Al 396.153 Recovery = Not calculated | | | | | | | | |
| As 188.979† | -1.8 | -0.00097 | mg/L | 0.001684 | -0.00097 | mg/L | 0.001684 | 173.48% |
| QC value within limits for As 188.979 Recovery = Not calculated | | | | | | | | |
| Ba 233.527† | 30.2 | -0.00059 | mg/L | 0.000073 | -0.00059 | mg/L | 0.000073 | 12.28% |
| QC value within limits for Ba 233.527 Recovery = Not calculated | | | | | | | | |
| Be 234.861† | 2.9 | 0.00003 | mg/L | 0.000018 | 0.00003 | mg/L | 0.000018 | 54.00% |
| QC value within limits for Be 234.861 Recovery = Not calculated | | | | | | | | |
| B 249.677† | 171.0 | 0.00125 | mg/L | 0.000270 | 0.00125 | mg/L | 0.000270 | 21.60% |
| QC value within limits for B 249.677 Recovery = Not calculated | | | | | | | | |
| Ca 227.546† | 16.6 | 0.0893 | mg/L | 0.02028 | 0.0893 | mg/L | 0.02028 | 22.71% |
| QC value within limits for Ca 227.546 Recovery = Not calculated | | | | | | | | |
| Cd 228.802† | 0.9 | -0.00001 | mg/L | 0.000208 | -0.00001 | mg/L | 0.000208 | >999.9% |
| QC value within limits for Cd 228.802 Recovery = Not calculated | | | | | | | | |
| Co 228.616† | 6.3 | -0.00014 | mg/L | 0.000103 | -0.00014 | mg/L | 0.000103 | 74.86% |
| QC value within limits for Co 228.616 Recovery = Not calculated | | | | | | | | |
| Cr 267.716† | 17.3 | 0.00010 | mg/L | 0.000219 | 0.00010 | mg/L | 0.000219 | 221.22% |
| QC value within limits for Cr 267.716 Recovery = Not calculated | | | | | | | | |
| Cu 327.393† | 72.2 | -0.00019 | mg/L | 0.000677 | -0.00019 | mg/L | 0.000677 | 358.72% |
| QC value within limits for Cu 327.393 Recovery = Not calculated | | | | | | | | |
| Fe 239.562† | 69.7 | 0.00975 | mg/L | 0.000815 | 0.00975 | mg/L | 0.000815 | 8.36% |
| QC value within limits for Fe 239.562 Recovery = Not calculated | | | | | | | | |
| Mg 279.077† | 25.6 | 0.0132 | mg/L | 0.00058 | 0.0132 | mg/L | 0.00058 | 4.39% |
| QC value within limits for Mg 279.077 Recovery = Not calculated | | | | | | | | |
| Mn 257.610† | 252.7 | -0.00149 | mg/L | 0.000010 | -0.00149 | mg/L | 0.000010 | 0.65% |
| QC value within limits for Mn 257.610 Recovery = Not calculated | | | | | | | | |
| Mo 202.031† | 8.9 | 0.00203 | mg/L | 0.000107 | 0.00203 | mg/L | 0.000107 | 5.27% |
| QC value within limits for Mo 202.031 Recovery = Not calculated | | | | | | | | |
| Ni 231.604† | -8.7 | -0.00106 | mg/L | 0.000170 | -0.00106 | mg/L | 0.000170 | 16.00% |
| QC value within limits for Ni 231.604 Recovery = Not calculated | | | | | | | | |
| Pb 220.353† | 1.7 | -0.00081 | mg/L | 0.000867 | -0.00081 | mg/L | 0.000867 | 107.51% |
| QC value within limits for Pb 220.353 Recovery = Not calculated | | | | | | | | |
| Sb 206.836† | 1.9 | 0.00058 | mg/L | 0.001152 | 0.00058 | mg/L | 0.001152 | 198.59% |

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QC value within limits for Sb 206.836 Recovery = Not calculated
Se 196.026† -2.5 -0.00006 mg/L 0.003871 -0.00006 mg/L 0.003871 >999.9%
QC value within limits for Se 196.026 Recovery = Not calculated
Si 251.611† 209.4 -0.00530 mg/L 0.001344 -0.00530 mg/L 0.001344 25.34%
QC value within limits for Si 251.611 Recovery = Not calculated
Sn 189.927† 2.8 0.00018 mg/L 0.000566 0.00018 mg/L 0.000566 306.40%
QC value within limits for Sn 189.927 Recovery = Not calculated
Ti 334.940† 323.0 0.00267 mg/L 0.000115 0.00267 mg/L 0.000115 4.31%
QC value within limits for Ti 334.940 Recovery = Not calculated
Tl 190.801† -4.2 -0.00215 mg/L 0.001149 -0.00215 mg/L 0.001149 53.33%
QC value within limits for Tl 190.801 Recovery = Not calculated
V 290.880† 379.1 0.00041 mg/L 0.001546 0.00041 mg/L 0.001546 376.89%
QC value within limits for V 290.880 Recovery = Not calculated
Zn 206.200† 6.6 -0.00159 mg/L 0.000087 -0.00159 mg/L 0.000087 5.46%
QC value within limits for Zn 206.200 Recovery = Not calculated
K 766.490† 32.1 -0.0408 mg/L 0.03373 -0.0408 mg/L 0.03373 82.77%
QC value within limits for K 766.490 Recovery = Not calculated
Na 589.592† 687.3 0.0341 mg/L 0.00524 0.0341 mg/L 0.00524 15.38%
QC value within limits for Na 589.592 Recovery = Not calculated
Sr 407.771† 744.2 0.00126 mg/L 0.000035 0.00126 mg/L 0.000035 2.77%
QC value within limits for Sr 407.771 Recovery = Not calculated
Li 670.784† -69.1 -0.00361 mg/L 0.000360 -0.00361 mg/L 0.000360 9.96%
QC value within limits for Li 670.784 Recovery = Not calculated
All analyte(s) passed QC.

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**Sequence No.: 52** **Autosampler Location: 61**
**Sample ID: LLCCV** **Date Collected: 5/21/2012 8:57:57 PM**
**Analyst: KHR** **Data Type: Original**
**Initial Sample Wt:** **Initial Sample Vol:**
**Dilution:** **Sample Prep Vol:**

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**Nebulizer Parameters: LLCCV**

| Analyte | Back Pressure | Flow |
|---|---|---|
| All | 153.0 kPa | 0.50 L/min |

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**Mean Data: LLCCV**

| Analyte | Mean Corrected Intensity | Calib. Conc. | Units | Std.Dev. | Sample Conc. | Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 2097355.0 | | | | | | 22275.06 | 1.06% |
| YRADIAL | 187478.7 | | | | | | 6935.55 | 3.70% |
| Ga 417.206 | 1248514.4 | | | | | | 13110.47 | 1.05% |
| GaRADIAL | 56436.8 | | | | | | 1733.22 | 3.07% |
| Ag 328.068† | 1330.2 | 0.00358 | mg/L | 0.000344 | 0.00358 | mg/L | 0.000344 | 9.61% |
| Al 396.153† | 472.2 | 0.0990 | mg/L | 0.00312 | 0.0990 | mg/L | 0.00312 | 3.15% |
| As 188.979† | 13.0 | 0.00407 | mg/L | 0.000788 | 0.00407 | mg/L | 0.000788 | 19.36% |
| Ba 233.527† | 1648.6 | 0.00957 | mg/L | 0.000100 | 0.00957 | mg/L | 0.000100 | 1.04% |
| Be 234.861† | 664.5 | 0.00050 | mg/L | 0.000016 | 0.00050 | mg/L | 0.000016 | 3.25% |
| B 249.677† | 484.2 | 0.00483 | mg/L | 0.000048 | 0.00483 | mg/L | 0.000048 | 1.00% |
| Ca 227.546† | 48.8 | 0.166 | mg/L | 0.0274 | 0.166 | mg/L | 0.0274 | 16.48% |
| Cd 228.802† | 24.9 | 0.00038 | mg/L | 0.000043 | 0.00038 | mg/L | 0.000043 | 11.33% |
| Co 228.616† | 87.6 | 0.00187 | mg/L | 0.000265 | 0.00187 | mg/L | 0.000265 | 14.15% |
| Cr 267.716† | 619.3 | 0.00526 | mg/L | 0.000097 | 0.00526 | mg/L | 0.000097 | 1.85% |
| Cu 327.393† | 1249.4 | 0.00452 | mg/L | 0.000350 | 0.00452 | mg/L | 0.000350 | 7.75% |
| Fe 239.562† | 404.4 | 0.0437 | mg/L | 0.00119 | 0.0437 | mg/L | 0.00119 | 2.73% |
| Mg 279.077† | 275.2 | 0.113 | mg/L | 0.0065 | 0.113 | mg/L | 0.0065 | 5.75% |
| Mn 257.610† | 4585.3 | 0.00343 | mg/L | 0.000125 | 0.00343 | mg/L | 0.000125 | 3.63% |
| Mo 202.031† | 371.2 | 0.0119 | mg/L | 0.00037 | 0.0119 | mg/L | 0.00037 | 3.15% |
| Ni 231.604† | 356.7 | 0.00407 | mg/L | 0.000281 | 0.00407 | mg/L | 0.000281 | 6.91% |
| Pb 220.353† | 68.4 | 0.00521 | mg/L | 0.000929 | 0.00521 | mg/L | 0.000929 | 17.85% |
| Sb 206.836† | 45.5 | 0.0113 | mg/L | 0.00087 | 0.0113 | mg/L | 0.00087 | 7.72% |
| Se 196.026† | 5.4 | 0.00442 | mg/L | 0.003269 | 0.00442 | mg/L | 0.003269 | 73.99% |
| Si 251.611† | 2219.0 | 0.0408 | mg/L | 0.00170 | 0.0408 | mg/L | 0.00170 | 4.17% |
| Sn 189.927† | 112.3 | 0.0106 | mg/L | 0.00071 | 0.0106 | mg/L | 0.00071 | 6.76% |
| Ti 334.940† | 9662.7 | 0.0121 | mg/L | 0.00007 | 0.0121 | mg/L | 0.00007 | 0.59% |
| Tl 190.801† | 2.4 | -0.00021 | mg/L | 0.001046 | -0.00021 | mg/L | 0.001046 | 491.10% |
| V 290.880† | 1965.1 | 0.00877 | mg/L | 0.000790 | 0.00877 | mg/L | 0.000790 | 9.01% |
| Zn 206.200† | 656.1 | 0.0114 | mg/L | 0.00034 | 0.0114 | mg/L | 0.00034 | 3.01% |
| K 766.490† | 1124.0 | 0.467 | mg/L | 0.0271 | 0.467 | mg/L | 0.0271 | 5.80% |
| Na 589.592† | 8226.4 | 0.516 | mg/L | 0.0182 | 0.516 | mg/L | 0.0182 | 3.53% |

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| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Sr 407.771† | 19163.4 | 0.0113 | mg/L | 0.00017 | 0.0113 | mg/L | 0.00017 | 1.54% |
| Li 670.784† | 955.0 | 0.00703 | mg/L | 0.000605 | 0.00703 | mg/L | 0.000605 | 8.60% |

**Sequence No.: 53** **Autosampler Location: 62**
**Sample ID: LLCCV** **Date Collected: 5/21/2012 9:04:52 PM**
**Analyst: KHR** **Data Type: Original**
**Initial Sample Wt:** **Initial Sample Vol:**
**Dilution:** **Sample Prep Vol:**

**Nebulizer Parameters: LLCCV**

| Analyte | Back Pressure | Flow |
|---|---|---|
| All | 153.0 kPa | 0.50 L/min |

**Mean Data: LLCCV**

| Analyte | Mean Corrected Intensity | Calib. Conc. | Units | Std.Dev. | Sample Conc. | Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Y 371.029 | 2092832.6 | | | | | | 31825.81 | 1.52% |
| YRADIAL | 193155.7 | | | | | | 1686.12 | 0.87% |
| Ga 417.206 | 1244276.0 | | | | | | 21295.59 | 1.71% |
| GaRADIAL | 57859.1 | | | | | | 1434.22 | 2.48% |
| Ag 328.068† | 2482.5 | 0.00719 | mg/L | 0.000686 | 0.00719 | mg/L | 0.000686 | 9.54% |
| Al 396.153† | 947.6 | 0.202 | mg/L | 0.0052 | 0.202 | mg/L | 0.0052 | 2.55% |
| As 188.979† | 17.3 | 0.00552 | mg/L | 0.001679 | 0.00552 | mg/L | 0.001679 | 30.43% |
| Ba 233.527† | 3333.5 | 0.0201 | mg/L | 0.00033 | 0.0201 | mg/L | 0.00033 | 1.64% |
| Be 234.861† | 1323.9 | 0.00096 | mg/L | 0.000009 | 0.00096 | mg/L | 0.000009 | 0.97% |
| B 249.677† | 879.7 | 0.00934 | mg/L | 0.000288 | 0.00934 | mg/L | 0.000288 | 3.08% |
| Ca 227.546† | 83.0 | 0.248 | mg/L | 0.0243 | 0.248 | mg/L | 0.0243 | 9.78% |
| Cd 228.802† | 50.5 | 0.00081 | mg/L | 0.000218 | 0.00081 | mg/L | 0.000218 | 26.88% |
| Co 228.616† | 183.8 | 0.00425 | mg/L | 0.000252 | 0.00425 | mg/L | 0.000252 | 5.92% |
| Cr 267.716† | 1218.0 | 0.0104 | mg/L | 0.00010 | 0.0104 | mg/L | 0.00010 | 0.96% |
| Cu 327.393† | 2396.4 | 0.00910 | mg/L | 0.000716 | 0.00910 | mg/L | 0.000716 | 7.87% |
| Fe 239.562† | 790.4 | 0.0829 | mg/L | 0.00065 | 0.0829 | mg/L | 0.00065 | 0.78% |
| Mg 279.077† | 517.8 | 0.210 | mg/L | 0.0021 | 0.210 | mg/L | 0.0021 | 0.98% |
| Mn 257.610† | 9323.7 | 0.00882 | mg/L | 0.000180 | 0.00882 | mg/L | 0.000180 | 2.04% |
| Mo 202.031† | 748.8 | 0.0221 | mg/L | 0.00032 | 0.0221 | mg/L | 0.00032 | 1.44% |
| Ni 231.604† | 762.4 | 0.00975 | mg/L | 0.000289 | 0.00975 | mg/L | 0.000289 | 2.97% |
| Pb 220.353† | 117.7 | 0.00966 | mg/L | 0.000265 | 0.00966 | mg/L | 0.000265 | 2.74% |
| Sb 206.836† | 94.1 | 0.0232 | mg/L | 0.00052 | 0.0232 | mg/L | 0.00052 | 2.25% |
| Se 196.026† | 15.1 | 0.00989 | mg/L | 0.002346 | 0.00989 | mg/L | 0.002346 | 23.72% |
| Si 251.611† | 4146.2 | 0.0850 | mg/L | 0.00099 | 0.0850 | mg/L | 0.00099 | 1.17% |
| Sn 189.927† | 229.5 | 0.0217 | mg/L | 0.00034 | 0.0217 | mg/L | 0.00034 | 1.57% |
| Ti 334.940† | 19799.8 | 0.0224 | mg/L | 0.00037 | 0.0224 | mg/L | 0.00037 | 1.65% |
| Tl 190.801† | 37.9 | 0.00952 | mg/L | 0.001559 | 0.00952 | mg/L | 0.001559 | 16.38% |
| V 290.880† | 3957.5 | 0.0193 | mg/L | 0.00185 | 0.0193 | mg/L | 0.00185 | 9.63% |
| Zn 206.200† | 1473.6 | 0.0277 | mg/L | 0.00430 | 0.0277 | mg/L | 0.00430 | 15.49% |
| K 766.490† | 2523.8 | 1.12 | mg/L | 0.009 | 1.12 | mg/L | 0.009 | 0.85% |
| Na 589.592† | 16231.1 | 1.03 | mg/L | 0.019 | 1.03 | mg/L | 0.019 | 1.80% |
| Sr 407.771† | 37926.0 | 0.0216 | mg/L | 0.00033 | 0.0216 | mg/L | 0.00033 | 1.54% |
| Li 670.784† | 2044.7 | 0.0183 | mg/L | 0.00087 | 0.0183 | mg/L | 0.00087 | 4.72% |

Approved: May 22, 2012

# 2.3.2 Metals ICP-MS Data

# 2.3.2.1 Summary Data

**Login Number:** L12050284
**Department**: Metals
**Analyst:** Ji Hu

**METHOD**

**Preparation:** SW-846 3015

**Analysis:** SW-846 6020

**HOLDING TIMES**

**Sample Preparation:** All holding times were met.

**Sample Analysis:** All holding times were met.

**PREPARATION**

Sample preparation proceeded normally.

**CALIBRATION**

**Initial Calibration:** All acceptance criteria were met.

**Alternate Source Standards:** All acceptance criteria were met.

**Interference Check Standards:** All acceptance criteria were met.

**Continuing Calibration:** All acceptance criteria were met.

**Continuing Calibration Blank:** All acceptance criteria were met.

**Low Level Check:** All acceptance criteria were met.

**BATCH QA/QC**

**Method Blank:** All acceptance criteria were met.

**Laboratory Control Sample:** All acceptance criteria were met.

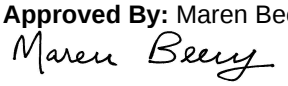
**Serial Dilution/Post Digestion Spikes:** WG398436 - The reference sample yielded a value for selenium that was less than 100 times the MDL, however, the serial dilution for selenium met the % difference criteria and so no further action was taken.

**Matrix Spikes:** All acceptance criteria were met.

**SAMPLES**

**Samples:** WG398436 - Due to high levels of nontarget analytes, client samples 01 through 11 were analyzed at dilutions for all analytes.

**Narrative ID:** 46714
**Approved By:** Maren Beery



# Certificate of Analysis

**Sample #:** L12050284-01 **PrePrep Method:** N/A **Instrument:** ICP-MS2
**Client ID:** BBLD-PIT-SSP-050812 **Prep Method:** 3015 **Prep Date:** 05/11/2012 10:37
**Matrix:** Water **Analytical Method:** 6020 **Cal Date:** 05/18/2012 09:54
**Workgroup #:** WG398436 **Analyst:** JYH **Run Date:** 05/18/2012 11:04
**Collect Date:** 05/08/2012 10:01 **Dilution:** 2 **File ID:** NI.051812.110446
**Sample Tag:** DL01 **Units:** mg/L

| Analyte | CAS # | Result | Qual | RL | MDL |
|---|---|---|---|---|---|
| Antimony, Total | 7440-36-0 | 0.00123 | | 0.00200 | 0.00100 |
| Arsenic, Total | 7440-38-2 | 0.0159 | | 0.00200 | 0.00100 |
| Lead, Total | 7439-92-1 | 0.00433 | | 0.00200 | 0.00100 |
| Selenium, Total | 7782-49-2 | 0.0135 | | 0.00200 | 0.00100 |
| Thallium, Total | 7440-28-0 | | U | 0.000400 | 0.000200 |

| | |
|---|---|
| U | Not detected at or above adjusted sample detection limit. |

**Sample #:** L12050284-02 **PrePrep Method:** N/A **Instrument:** ICP-MS2
**Client ID:** BBLD-PIT-SSP-050812 **Prep Method:** 3015 **Prep Date:** 05/11/2012 10:37
**Matrix:** Water **Analytical Method:** 6020 **Cal Date:** 05/18/2012 09:54
**Workgroup #:** WG398436 **Analyst:** JYH **Run Date:** 05/18/2012 11:07
**Collect Date:** 05/08/2012 10:01 **Dilution:** 2 **File ID:** NI.051812.110740
**Sample Tag:** DL01 **Units:** mg/L

| Analyte | CAS # | Result | Qual | RL | MDL |
|---|---|---|---|---|---|
| Antimony, Dissolved | 7440-36-0 | 0.00241 | | 0.00200 | 0.00100 |
| Arsenic, Dissolved | 7440-38-2 | 0.102 | | 0.00200 | 0.00100 |
| Lead, Dissolved | 7439-92-1 | | U | 0.00200 | 0.00100 |
| Selenium, Dissolved | 7782-49-2 | 0.00920 | | 0.00200 | 0.00100 |
| Thallium, Dissolved | 7440-28-0 | | U | 0.000400 | 0.000200 |

| | |
|---|---|
| U | Not detected at or above adjusted sample detection limit. |

**Sample #:** L12050284-03 **PrePrep Method:** N/A **Instrument:** ICP-MS2
**Client ID:** PZ-07-050812 **Prep Method:** 3015 **Prep Date:** 05/11/2012 10:37
**Matrix:** Water **Analytical Method:** 6020 **Cal Date:** 05/18/2012 09:54
**Workgroup #:** WG398436 **Analyst:** JYH **Run Date:** 05/18/2012 11:10
**Collect Date:** 05/08/2012 10:10 **Dilution:** 2 **File ID:** NI.051812.111033
**Sample Tag:** DL01 **Units:** mg/L

| Analyte | CAS # | Result | Qual | RL | MDL |
|---|---|---|---|---|---|
| Antimony, Total | 7440-36-0 | | U | 0.00200 | 0.00100 |
| Arsenic, Total | 7440-38-2 | 0.00158 | | 0.00200 | 0.00100 |
| Lead, Total | 7439-92-1 | | U | 0.00200 | 0.00100 |

Certificate of Analysis

| Analyte | CAS # | Result | Qual | RL | MDL |
|---|---|---|---|---|---|
| Selenium, Total | 7782-49-2 | 0.00326 | | 0.00200 | 0.00100 |
| Thallium, Total | 7440-28-0 | | U | 0.000400 | 0.000200 |

| | |
|---|---|
| U | Not detected at or above adjusted sample detection limit. |

**Sample #:** L12050284-04 **PrePrep Method:** N/A **Instrument:** ICP-MS2
**Client ID:** PZ-07-050812 **Prep Method:** 3015 **Prep Date:** 05/11/2012 10:37
**Matrix:** Water **Analytical Method:** 6020 **Cal Date:** 05/18/2012 09:54
**Workgroup #:** WG398436 **Analyst:** JYH **Run Date:** 05/18/2012 11:13
**Collect Date:** 05/08/2012 10:10 **Dilution:** 2 **File ID:** NI.051812.111326
**Sample Tag:** DL01 **Units:** mg/L

| Analyte | CAS # | Result | Qual | RL | MDL |
|---|---|---|---|---|---|
| Antimony, Dissolved | 7440-36-0 | | U | 0.00200 | 0.00100 |
| Arsenic, Dissolved | 7440-38-2 | 0.00142 | | 0.00200 | 0.00100 |
| Lead, Dissolved | 7439-92-1 | | U | 0.00200 | 0.00100 |
| Selenium, Dissolved | 7782-49-2 | 0.00275 | | 0.00200 | 0.00100 |
| Thallium, Dissolved | 7440-28-0 | 0.000205 | | 0.000400 | 0.000200 |

| | |
|---|---|
| U | Not detected at or above adjusted sample detection limit. |

**Sample #:** L12050284-05 **PrePrep Method:** N/A **Instrument:** ICP-MS2
**Client ID:** MW-18-050812 **Prep Method:** 3015 **Prep Date:** 05/11/2012 10:37
**Matrix:** Water **Analytical Method:** 6020 **Cal Date:** 05/18/2012 09:54
**Workgroup #:** WG398436 **Analyst:** JYH **Run Date:** 05/18/2012 11:16
**Collect Date:** 05/08/2012 11:00 **Dilution:** 2 **File ID:** NI.051812.111620
**Sample Tag:** DL01 **Units:** mg/L

| Analyte | CAS # | Result | Qual | RL | MDL |
|---|---|---|---|---|---|
| Antimony, Total | 7440-36-0 | | U | 0.00200 | 0.00100 |
| Arsenic, Total | 7440-38-2 | 0.00154 | | 0.00200 | 0.00100 |
| Lead, Total | 7439-92-1 | | U | 0.00200 | 0.00100 |
| Selenium, Total | 7782-49-2 | 0.00278 | | 0.00200 | 0.00100 |
| Thallium, Total | 7440-28-0 | 0.000228 | | 0.000400 | 0.000200 |

| | |
|---|---|
| U | Not detected at or above adjusted sample detection limit. |

Certificate of Analysis

**Sample #:** L12050284-06 **PrePrep Method:** N/A **Instrument:** ICP-MS2
**Client ID:** MW-18-050812 **Prep Method:** 3015 **Prep Date:** 05/11/2012 10:37
**Matrix:** Water **Analytical Method:** 6020 **Cal Date:** 05/18/2012 09:54
**Workgroup #:** WG398436 **Analyst:** JYH **Run Date:** 05/18/2012 11:19
**Collect Date:** 05/08/2012 11:00 **Dilution:** 2 **File ID:** NI.051812.111912
**Sample Tag:** DL01 **Units:** mg/L

| Analyte | CAS # | Result | Qual | RL | MDL |
|---|---|---|---|---|---|
| Antimony, Dissolved | 7440-36-0 | | U | 0.00200 | 0.00100 |
| Arsenic, Dissolved | 7440-38-2 | 0.00137 | | 0.00200 | 0.00100 |
| Lead, Dissolved | 7439-92-1 | | U | 0.00200 | 0.00100 |
| Selenium, Dissolved | 7782-49-2 | 0.00271 | | 0.00200 | 0.00100 |
| Thallium, Dissolved | 7440-28-0 | 0.000215 | | 0.000400 | 0.000200 |

| | |
|---|---|
| U | Not detected at or above adjusted sample detection limit. |

**Sample #:** L12050284-07 **PrePrep Method:** N/A **Instrument:** ICP-MS2
**Client ID:** TW-01-050812 **Prep Method:** 3015 **Prep Date:** 05/11/2012 10:37
**Matrix:** Water **Analytical Method:** 6020 **Cal Date:** 05/18/2012 09:54
**Workgroup #:** WG398436 **Analyst:** JYH **Run Date:** 05/18/2012 11:22
**Collect Date:** 05/08/2012 14:50 **Dilution:** 2 **File ID:** NI.051812.112205
**Sample Tag:** DL01 **Units:** mg/L

| Analyte | CAS # | Result | Qual | RL | MDL |
|---|---|---|---|---|---|
| Antimony, Total | 7440-36-0 | 0.00175 | | 0.00200 | 0.00100 |
| Arsenic, Total | 7440-38-2 | 0.00339 | | 0.00200 | 0.00100 |
| Lead, Total | 7439-92-1 | 0.0159 | | 0.00200 | 0.00100 |
| Selenium, Total | 7782-49-2 | 0.00391 | | 0.00200 | 0.00100 |
| Thallium, Total | 7440-28-0 | 0.000298 | | 0.000400 | 0.000200 |

**Sample #:** L12050284-08 **PrePrep Method:** N/A **Instrument:** ICP-MS2
**Client ID:** TW-01-050812 **Prep Method:** 3015 **Prep Date:** 05/11/2012 10:37
**Matrix:** Water **Analytical Method:** 6020 **Cal Date:** 05/18/2012 09:54
**Workgroup #:** WG398436 **Analyst:** JYH **Run Date:** 05/18/2012 11:24
**Collect Date:** 05/08/2012 14:50 **Dilution:** 2 **File ID:** NI.051812.112458
**Sample Tag:** DL01 **Units:** mg/L

| Analyte | CAS # | Result | Qual | RL | MDL |
|---|---|---|---|---|---|
| Antimony, Dissolved | 7440-36-0 | | U | 0.00200 | 0.00100 |
| Arsenic, Dissolved | 7440-38-2 | 0.00318 | | 0.00200 | 0.00100 |
| Lead, Dissolved | 7439-92-1 | | U | 0.00200 | 0.00100 |
| Selenium, Dissolved | 7782-49-2 | 0.00408 | | 0.00200 | 0.00100 |

Certificate of Analysis

| Analyte | CAS # | Result | Qual | RL | MDL |
|---|---|---|---|---|---|
| Thallium, Dissolved | 7440-28-0 | 0.000226 | | 0.000400 | 0.000200 |
| U | Not detected at or above adjusted sample detection limit. | | | | |

**Sample #:** L12050284-10 **PrePrep Method:** N/A **Instrument:** ICP-MS2
**Client ID:** DUP-GW-050812 **Prep Method:** 3015 **Prep Date:** 05/11/2012 10:37
**Matrix:** Water **Analytical Method:** 6020 **Cal Date:** 05/18/2012 09:54
**Workgroup #:** WG398436 **Analyst:** JYH **Run Date:** 05/18/2012 11:33
**Collect Date:** 05/08/2012 15:00 **Dilution:** 2 **File ID:** NI.051812.113341
**Sample Tag:** DL01 **Units:** mg/L

| Analyte | CAS # | Result | Qual | RL | MDL |
|---|---|---|---|---|---|
| Antimony, Total | 7440-36-0 | 0.00167 | | 0.00200 | 0.00100 |
| Arsenic, Total | 7440-38-2 | 0.00318 | | 0.00200 | 0.00100 |
| Lead, Total | 7439-92-1 | 0.0165 | | 0.00200 | 0.00100 |
| Selenium, Total | 7782-49-2 | 0.00310 | | 0.00200 | 0.00100 |
| Thallium, Total | 7440-28-0 | 0.000249 | | 0.000400 | 0.000200 |

**Sample #:** L12050284-11 **PrePrep Method:** N/A **Instrument:** ICP-MS2
**Client ID:** DUP-GW-050812 **Prep Method:** 3015 **Prep Date:** 05/11/2012 10:37
**Matrix:** Water **Analytical Method:** 6020 **Cal Date:** 05/18/2012 09:54
**Workgroup #:** WG398436 **Analyst:** JYH **Run Date:** 05/18/2012 11:36
**Collect Date:** 05/08/2012 15:00 **Dilution:** 2 **File ID:** NI.051812.113633
**Sample Tag:** DL01 **Units:** mg/L

| Analyte | CAS # | Result | Qual | RL | MDL |
|---|---|---|---|---|---|
| Antimony, Dissolved | 7440-36-0 | 0.00104 | | 0.00200 | 0.00100 |
| Arsenic, Dissolved | 7440-38-2 | 0.00278 | | 0.00200 | 0.00100 |
| Lead, Dissolved | 7439-92-1 | | U | 0.00200 | 0.00100 |
| Selenium, Dissolved | 7782-49-2 | 0.00342 | | 0.00200 | 0.00100 |
| Thallium, Dissolved | 7440-28-0 | 0.000309 | | 0.000400 | 0.000200 |
| U | Not detected at or above adjusted sample detection limit. | | | | |

**Sample #:** L12050284-12 **PrePrep Method:** N/A **Instrument:** ICP-MS2
**Client ID:** EB-050812-GW **Prep Method:** 3015 **Prep Date:** 05/11/2012 10:37
**Matrix:** Water **Analytical Method:** 6020 **Cal Date:** 05/18/2012 09:54
**Workgroup #:** WG398436 **Analyst:** JYH **Run Date:** 05/18/2012 11:45
**Collect Date:** 05/08/2012 13:10 **Dilution:** 1 **File ID:** NI.051812.114501
**Sample Tag:** 01 **Units:** mg/L

Certificate of Analysis

| Analyte | CAS # | Result | Qual | RL | MDL |
|---|---|---|---|---|---|
| Antimony, Total | 7440-36-0 | | U | 0.00100 | 0.000500 |
| Arsenic, Total | 7440-38-2 | | U | 0.00100 | 0.000500 |
| Lead, Total | 7439-92-1 | | U | 0.00100 | 0.000500 |
| Selenium, Total | 7782-49-2 | | U | 0.00100 | 0.000500 |
| Thallium, Total | 7440-28-0 | | U | 0.000200 | 0.000100 |

| | |
|---|---|
| U | Not detected at or above adjusted sample detection limit. |

# 2.3.2.2 QC Summary Data

**Example 6020 Calculations**
**Perkin Elmer NexION 300X**

**1.0 Initial Calibration (ICAL) Parameters**
The system performs linear regression from data consisting of a blank and three standards.

**2.0 Calculating the concentration (C) of an element in water using data from prep log, run log, and quantitation report (note:the data system performs this calculation automatically when correction factors have been entered):**

$$Cx = Cs \times \frac{Vf}{Vi} \times D$$

| Where: | **Example:** |
|---|---|
| $Cs$ = Concentration computed by the data system (ug/L) | 0.1 |
| $Vf$ = Final volume | 100 |
| $Vi$ = Initial volume | 40 |
| $D$ = Dilution factor as a multiplier (10X = 10) | 1 |
| | |
| $Cx$ = Concentration of element in (ug/L) | 0.25 |

**3.0 Calculating the concentration (C) of an element in soil using data from prep log, run log, and quantitation report (note: the data system performs this calculation automatically when correction factors have been entered):**

$$Cx = Cs \times \frac{Vf}{Vi} \times D$$

| Where: | **Example:** |
|---|---|
| $Cs$ = Concentration computed by the data system (ug/L) | 0.1 |
| $Vf$ = Final volume | 200 |
| $Vi$ = Initial volume | 0.5 |
| $D$ = Dilution factor as a multiplier (10X = 10) | 1 |
| | |
| $Cx$ = Concentration of element in (ug/kg) | 40 |

**4.0 Adjusting the concentration to dry weight:**

$$Cdry = \frac{Cx \times 100}{Px}$$

| Where: | **Example:** |
|---|---|
| $Cx$ = Concentration calculated as received (wet basis) | 40 |
| $Px$ = Percent solids of sample (%wt) | 80 |
| | |
| $Cdry$ = Concentration calculated as dry weight (ug/kg) | 50 |

**50 ug/kg = 0.050 mg/kg**

## Perkin Elmer NexION ICP/MS

STANDARDS KEY

**QC Std 1 - ICV**
**QC Std 2 - ICB**
**QC Std 3 - LLICV**
**QC Std 4 - ICSA**
**QC Std 5 - ICSAB**
**QC Std 6 - CCV**
**QC Std 7 - CCB**
**QC Std 8 - LLCCV**

Calibration Solutions

| Analyte | Stock Conc. (mg/L) | S1 (mg/L) | S2 (mg/L) | S3 (mg/L) | S4 (mg/L) |
|---|---|---|---|---|---|
| Al | 10 | 0 | 0.00005 | 0.05 | 0.1 |
| Sb | 10 | 0 | 0.00005 | 0.05 | 0.1 |
| As | 10 | 0 | 0.00005 | 0.05 | 0.1 |
| Ba | 10 | 0 | 0.00005 | 0.05 | 0.1 |
| Be | 10 | 0 | 0.00005 | 0.05 | 0.1 |
| Ca | 1000 | 0 | 0.005 | 5 | 10 |
| Cd | 10 | 0 | 0.0005 | 0.05 | 0.1 |
| Cr | 10 | 0 | 0.0005 | 0.05 | 0.1 |
| Co | 10 | 0 | 0.0005 | 0.05 | 0.1 |
| Cu | 10 | 0 | 0.0005 | 0.05 | 0.1 |
| Fe | 1000 | 0 | 0.005 | 5 | 10 |
| Pb | 10 | 0 | 0.00005 | 0.05 | 0.1 |
| Mg | 1000 | 0 | 0.005 | 5 | 10 |
| Mn | 10 | 0 | 0.00005 | 0.05 | 0.1 |
| Ni | 10 | 0 | 0.00005 | 0.05 | 0.1 |
| K | 1000 | 0 | 0.005 | 5 | 10 |
| Se | 10 | 0 | 0.00005 | 0.05 | 0.1 |
| Ag | 10 | 0 | 0.00005 | 0.05 | 0.1 |
| Na | 1000 | 0 | 0.005 | 5 | 10 |
| Tl | 10 | 0 | 0.00005 | 0.05 | 0.1 |
| V | 10 | 0 | 0.00005 | 0.05 | 0.1 |
| U | 1000 | 0 | 0.00005 | 0.05 | 0.1 |
| Zn | 10 | 0 | 0.00005 | 0.05 | 0.1 |

**Microbac Laboratories Inc.**
**Microwave Digestion Log**

**Workgroup:** WG397755
**Analyst:** VC
**Spike Analyst:** VC
**Run Date:** 05/11/2012 10:37
**Method:** 3015
**Balance:** BAL016
**Instrument:** MW-2

**SOP:** ME407 Revison 12
**Spike Solution:** STD49281
**Spike Witness:** ERP
**HNO3 Lot #:** COA16033
**Digestion Tubes Lot #:** COA16074
**MS WG# 381985 Lot #:** COA15783

| | SAMPLE # | Type | Matrix | Initial Amount | Final Volume | Initial Vessel Wt | Final Vessel Wt | Spike Amount | Due Date |
|---|---|---|---|---|---|---|---|---|---|
| 1 | WG397755-02 | BLANK | 1 | 40 mL | 100 mL | 208.174 g | 208.149 g | | |
| 2 | WG397755-03 | LCS | 1 | 40 mL | 100 mL | 208.135 g | 208.115 g | .25 mL | |
| 3 | L12050284-01 | SAMP | 1 | 40 mL | 100 mL | 209.414 g | 209.37 g | | 05/23/12 |
| 4 | L12050284-02 | SAMP | 1 | 40 mL | 100 mL | 205.621 g | 205.58 g | | 05/23/12 |
| 5 | L12050284-03 | SAMP | 1 | 40 mL | 100 mL | 207.344 g | 207.327 g | | 05/23/12 |
| 6 | L12050284-04 | SAMP | 1 | 40 mL | 100 mL | 206.918 g | 206.893 g | | 05/23/12 |
| 7 | L12050284-05 | SAMP | 1 | 40 mL | 100 mL | 206.607 g | 206.581 g | | 05/23/12 |
| 8 | L12050284-06 | SAMP | 1 | 40 mL | 100 mL | 207.503 g | 207.47 g | | 05/23/12 |
| 9 | L12050284-07 | SAMP | 1 | 40 mL | 100 mL | 207.657 g | 207.633 g | | 05/23/12 |
| 10 | L12050284-08 | SAMP | 1 | 40 mL | 100 mL | 207.71 g | 207.68 g | | 05/23/12 |
| 11 | L12050284-10 | SAMP | 1 | 40 mL | 100 mL | 208.535 g | 208.513 g | | 05/23/12 |
| 12 | L12050284-11 | SAMP | 1 | 40 mL | 100 mL | 209.469 g | 209.454 g | | 05/23/12 |
| 13 | L12050284-12 | SAMP | 1 | 40 mL | 100 mL | 205.578 g | 205.559 g | | 05/23/12 |
| 14 | L12050351-01 | SAMP | 1 | 40 mL | 100 mL | 209.883 g | 209.867 g | | 05/21/12 |
| 15 | L12050351-02 | SAMP | 1 | 40 mL | 100 mL | 208.59 g | 208.569 g | | 05/21/12 |
| 16 | L12050351-04 | SAMP | 1 | 40 mL | 100 mL | 206.279 g | 206.246 g | | 05/21/12 |
| 17 | L12050351-05 | SAMP | 1 | 40 mL | 100 mL | 208.049 g | 208.023 g | | 05/21/12 |
| 18 | WG397755-01 | REF | 1 | 40 mL | 100 mL | 206.926 g | 206.905 g | | |
| 19 | L12050351-06 | SAMP | 1 | 40 mL | 100 mL | 206.926 g | 206.905 g | | 05/21/12 |
| 20 | WG397755-04 | MS | 1 | 40 mL | 100 mL | 208.644 g | 208.622 g | .25 mL | |
| 21 | WG397755-05 | MSD | 1 | 40 mL | 100 mL | 210.124 g | 210.106 g | .25 mL | |

| | |
|---|---|
| L12050284-02 | filtered digestate |

**Analyst:** Vicki Collins

**Reviewer:** Erin Potter

MW_DIG - Modified 09/30/2009
PDF ID: 2411814
Report generated: 05/11/2012 13:49

**Microbac Laboratories Inc.**

Instrument Run Log

Instrument: ICP-MS2 Dataset: 051812A.REP
Analyst1: JYH Analyst2: N/A
Method: 6020 SOP: ME700A Rev:
Maintenance Log ID: 41784

Calibration Std: STD51595 ICV Std: STD51515 Post Spike: STD47984
ICSA: STD51516 ICSAB: STD51517 Int. Std: RGT17150
CCV: STD51596 LLCCV: STD51549

Workgroups: 397653,398436,398334,395169

Comments:

| Seq. | File ID | Sample | ID | Prep | Dil | Reference | Date/Time |
|---|---|---|---|---|---|---|---|
| 1 | NI.051812.094322 | Blank | Blank | | 1 | | 05/18/12 09:43 |
| 2 | NI.051812.094615 | WG398502-01 | Calibration Point | | 1 | | 05/18/12 09:46 |
| 3 | NI.051812.094908 | WG398502-02 | Calibration Point | | 1 | | 05/18/12 09:49 |
| 4 | NI.051812.095200 | WG398502-03 | Calibration Point | | 1 | | 05/18/12 09:52 |
| 5 | NI.051812.095454 | WG398502-04 | Calibration Point | | 1 | | 05/18/12 09:54 |
| 6 | NI.051812.095748 | WG398502-05 | Initial Calibration Verification | | 1 | | 05/18/12 09:57 |
| 7 | NI.051812.100044 | WG398502-06 | Initial Calib Blank | | 1 | | 05/18/12 10:00 |
| 8 | NI.051812.100339 | WG398502-07 | Low Level Initial Calibration V | | 1 | | 05/18/12 10:03 |
| 9 | NI.051812.100631 | WG398502-08 | Interference Check | | 1 | | 05/18/12 10:06 |
| 10 | NI.051812.100925 | WG398502-09 | Interference Check | | 1 | | 05/18/12 10:09 |
| 11 | NI.051812.101221 | WG398502-10 | CCV | | 1 | | 05/18/12 10:12 |
| 12 | NI.051812.101514 | WG398502-11 | CCB | | 1 | | 05/18/12 10:15 |
| 13 | NI.051812.101808 | L12050259-01 | W20 | 40/100 | 1 | | 05/18/12 10:18 |
| 14 | NI.051812.102700 | WG397755-02 | Method/Prep Blank | 40/100 | 1 | | 05/18/12 10:27 |
| 15 | NI.051812.102953 | WG397755-03 | Laboratory Control S | 40/100 | 1 | | 05/18/12 10:29 |
| 16 | NI.051812.103247 | WG397755-01 | Reference Sample | | 5 | L12050351-06 | 05/18/12 10:32 |
| 17 | NI.051812.103539 | WG397755-04 | Matrix Spike | 40/100 | 5 | L12050351-06 | 05/18/12 10:35 |
| 18 | NI.051812.103831 | WG397755-05 | Matrix Spike Duplica | 40/100 | 5 | L12050351-06 | 05/18/12 10:38 |
| 19 | NI.051812.104125 | L12050351-01 | LF1MW07-120509 | 40/100 | 5 | | 05/18/12 10:41 |
| 20 | NI.051812.104418 | L12050351-02 | LF1GPMW03-120509 | 40/100 | 5 | | 05/18/12 10:44 |
| 21 | NI.051812.104711 | WG398436-01 | Post Digestion Spike | | 5 | L12050351-02 | 05/18/12 10:47 |
| 22 | NI.051812.105003 | WG398436-02 | Serial Dilution | | 25 | L12050351-02 | 05/18/12 10:50 |
| 23 | NI.051812.105258 | WG398502-12 | CCV | | 1 | | 05/18/12 10:52 |
| 24 | NI.051812.105550 | WG398502-13 | CCB | | 1 | | 05/18/12 10:55 |
| 25 | NI.051812.105900 | L12050351-04 | CLAMW21-120509 | 40/100 | 5 | | 05/18/12 10:59 |
| 26 | NI.051812.110154 | L12050351-05 | CLAMW26-120509 | 40/100 | 5 | | 05/18/12 11:01 |
| 27 | NI.051812.110446 | L12050284-01 | BBLD-PIT-SSP-050812 | 40/100 | 2 | | 05/18/12 11:04 |
| 28 | NI.051812.110740 | L12050284-02 | BBLD-PIT-SSP-050812 | 40/100 | 2 | | 05/18/12 11:07 |
| 29 | NI.051812.111033 | L12050284-03 | PZ-07-050812 | 40/100 | 2 | | 05/18/12 11:10 |
| 30 | NI.051812.111326 | L12050284-04 | PZ-07-050812 | 40/100 | 2 | | 05/18/12 11:13 |
| 31 | NI.051812.111620 | L12050284-05 | MW-18-050812 | 40/100 | 2 | | 05/18/12 11:16 |
| 32 | NI.051812.111912 | L12050284-06 | MW-18-050812 | 40/100 | 2 | | 05/18/12 11:19 |
| 33 | NI.051812.112205 | L12050284-07 | TW-01-050812 | 40/100 | 2 | | 05/18/12 11:22 |
| 34 | NI.051812.112458 | L12050284-08 | TW-01-050812 | 40/100 | 2 | | 05/18/12 11:24 |

Page: 1 Approved: May 21, 2012

Maren Berry

Microbac

**Microbac Laboratories Inc.**

Instrument Run Log

Instrument: ICP-MS2 Dataset: 051812A.REP
Analyst1: JYH Analyst2: N/A
Method: 6020 SOP: ME700A Rev:
Maintenance Log ID: 41784

Calibration Std: STD51595 ICV Std: STD51515 Post Spike: STD47984
ICSA: STD51516 ICSAB: STD51517 Int. Std: RGT17150
CCV: STD51596 LLCCV: STD51549

Workgroups: 397653,398436,398334,395169

Comments:

| Seq. | File ID | Sample | ID | Prep | Dil | Reference | Date/Time |
|---|---|---|---|---|---|---|---|
| 35 | NI.051812.112753 | WG398502-14 | CCV | | 1 | | 05/18/12 11:27 |
| 36 | NI.051812.113046 | WG398502-15 | CCB | | 1 | | 05/18/12 11:30 |
| 37 | NI.051812.113341 | L12050284-10 | DUP-GW-050812 | 40/100 | 2 | | 05/18/12 11:33 |
| 38 | NI.051812.113633 | L12050284-11 | DUP-GW-050812 | 40/100 | 2 | | 05/18/12 11:36 |
| 39 | NI.051812.113927 | L12050284-12 | EB-050812-GW | | 2 | | 05/18/12 11:39 |
| 40 | NI.051812.114501 | L12050284-12 | EB-050812-GW | 40/100 | 1 | | 05/18/12 11:45 |
| 41 | NI.051812.114754 | WG398502-16 | Interference Check | | 1 | | 05/18/12 11:47 |
| 42 | NI.051812.115047 | WG398502-17 | Interference Check | | 1 | | 05/18/12 11:50 |
| 43 | NI.051812.115342 | WG398502-18 | CCV | | 1 | | 05/18/12 11:53 |
| 44 | NI.051812.115636 | WG398502-19 | CCB | | 1 | | 05/18/12 11:56 |
| 45 | NI.051812.115931 | WG398502-20 | Low Level Continuing Calibra | | 1 | | 05/18/12 11:59 |
| 46 | NI.051812.120509 | L12040384-06 | MAPEP-12-MAW26 | 40/100 | 1 | | 05/18/12 12:05 |
| 47 | NI.051812.120801 | +1 PPB AS | +1 PPB AS | | 1 | | 05/18/12 12:08 |
| 48 | NI.051812.121054 | +2 PPB AS | +2 PPB AS | | 1 | | 05/18/12 12:10 |
| 49 | NI.051812.121347 | +5 PPB AS | +5 PPB AS | | 1 | | 05/18/12 12:13 |
| 50 | NI.051812.121640 | L12050490-14 | 1205SWMDS030-1-U | 40/100 | 50 | | 05/18/12 12:16 |
| 51 | NI.051812.121933 | L12050351-02 | LF1GPMW03-120509 | | 10 | | 05/18/12 12:19 |
| 52 | NI.051812.122227 | WG398436-01 | Post Digestion Spike | | 10 | L12050351-02 | 05/18/12 12:22 |
| 53 | NI.051812.122520 | WG398436-02 | Serial Dilution | | 50 | L12050351-02 | 05/18/12 12:25 |
| 54 | NI.051812.122816 | WG398502-21 | CCV | | 1 | | 05/18/12 12:28 |
| 55 | NI.051812.123110 | WG398502-22 | CCB | | 1 | | 05/18/12 12:31 |

Page: 2 Approved: May 21, 2012

Maren Berry

Microbac

Microbac Laboratories Inc.

Data Checklist

Date: 18-MAY-2012
Analyst: JYH
Analyst: NA
Method: 6020
Instrument: ICP-MS2
Curve Workgroup: 398502
Runlog ID: 46844
Analytical Workgroups: 397653,398436,398334,395169

| | |
|---|---|
| Calibration/Linearity | X |
| ICV/CCV | X |
| ICV RSD <= 3% (EPA 200.7 only) | |
| ICB/CCB | X |
| ICSA/ICSAB | X |
| CRI | X |
| Blank/LCS | X |
| MS/MSD | X |
| Post Spike/Serial Dilution | X |
| Upload Results | X |
| Data Qualifiers | |
| Generate PDF Instrument Data | X |
| Sign/Annotate PDF Data | X |
| Upload Curve Data | X |
| Workgroup Forms | X |
| Case Narrative | 284,351 |
| Client Forms | X |
| Level X | |
| Level 3 | |
| Level 4 | 284,351,490 |
| Check for compliance with method and project specific requirements | X |
| Check the completeness of reported information | X |
| Check the information for the report narrative | X |
| Primary Reviewer | JYH |
| Secondary Reviewer | MMB |
| | |
| Comments | |

Primary Reviewer:

Secondary Reviewer:
21-MAY-2012

CHECKLIST1 - Modified 03/05/2008
Generated: MAY-21-2012 15:27:41

Microbac Laboratories Inc.

# HOLDING TIMES
# EQUIVALENT TO AFCEE FORM 9

Analytical Method: 6020 AAB#: WG398436

Login Number: L12050284

| Client ID | ID | Date Collected | TCLP Date | Time Held | Max Hold | Q | Extract Date | Time Held | Max Hold | Q | Run Date | Time Held | Max Hold | Q |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| BBLD-PIT-SSP-050812 | 01 | 05/08/12 | | | | | 05/11/12 | 3 | 180 | | 05/18/12 | 10 | 180 | |
| BBLD-PIT-SSP-050812 | 02 | 05/08/12 | | | | | 05/11/12 | 3 | 180 | | 05/18/12 | 10 | 180 | |
| PZ-07-050812 | 03 | 05/08/12 | | | | | 05/11/12 | 3 | 180 | | 05/18/12 | 10 | 180 | |
| PZ-07-050812 | 04 | 05/08/12 | | | | | 05/11/12 | 3 | 180 | | 05/18/12 | 10 | 180 | |
| MW-18-050812 | 05 | 05/08/12 | | | | | 05/11/12 | 3 | 180 | | 05/18/12 | 10 | 180 | |
| MW-18-050812 | 06 | 05/08/12 | | | | | 05/11/12 | 3 | 180 | | 05/18/12 | 10 | 180 | |
| TW-01-050812 | 07 | 05/08/12 | | | | | 05/11/12 | 2.8 | 180 | | 05/18/12 | 9.9 | 180 | |
| TW-01-050812 | 08 | 05/08/12 | | | | | 05/11/12 | 2.8 | 180 | | 05/18/12 | 9.9 | 180 | |
| DUP-GW-050812 | 10 | 05/08/12 | | | | | 05/11/12 | 2.8 | 180 | | 05/18/12 | 9.9 | 180 | |
| DUP-GW-050812 | 11 | 05/08/12 | | | | | 05/11/12 | 2.8 | 180 | | 05/18/12 | 9.9 | 180 | |
| EB-050812-GW | 12 | 05/08/12 | | | | | 05/11/12 | 2.9 | 180 | | 05/18/12 | 9.9 | 180 | |

* = SEE PROJECT QAPP REQUIREMENTS

HOLD_TIMES - Modified 03/06/2008
PDF File ID: 2422136
Report generated 05/18/2012 15:30

Microbac Laboratories Inc.

# METHOD BLANK SUMMARY

Login Number: L12050284
Work Group: WG398436
Blank File ID: NI.051812.102700
Blank Sample ID: WG397755-02
Prep Date: 05/11/12 10:37
Instrument ID: ICP-MS2
Analyzed Date: 05/18/12 10:27
Method: 6020
Analyst: JYH

This Method Blank Applies To The Following Samples:

| Client ID | Lab Sample ID | Lab File ID | Time Analyzed | TAG |
|---|---|---|---|---|
| LCS | WG397755-03 | NI.051812.102953 | 05/18/12 10:29 | 01 |
| BBLD-PIT-SSP-050812 | L12050284-01 | NI.051812.110446 | 05/18/12 11:04 | DL01 |
| BBLD-PIT-SSP-050812 | L12050284-02 | NI.051812.110740 | 05/18/12 11:07 | DL01 |
| PZ-07-050812 | L12050284-03 | NI.051812.111033 | 05/18/12 11:10 | DL01 |
| PZ-07-050812 | L12050284-04 | NI.051812.111326 | 05/18/12 11:13 | DL01 |
| MW-18-050812 | L12050284-05 | NI.051812.111620 | 05/18/12 11:16 | DL01 |
| MW-18-050812 | L12050284-06 | NI.051812.111912 | 05/18/12 11:19 | DL01 |
| TW-01-050812 | L12050284-07 | NI.051812.112205 | 05/18/12 11:22 | DL01 |
| TW-01-050812 | L12050284-08 | NI.051812.112458 | 05/18/12 11:24 | DL01 |
| DUP-GW-050812 | L12050284-10 | NI.051812.113341 | 05/18/12 11:33 | DL01 |
| DUP-GW-050812 | L12050284-11 | NI.051812.113633 | 05/18/12 11:36 | DL01 |
| EB-050812-GW | L12050284-12 | NI.051812.114501 | 05/18/12 11:45 | 01 |

Report Name: BLANK_SUMMARY
PDF File ID: 2422137
Report generated 05/18/2012 15:40

Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number: L12050284 Prep Date: 05/11/12 10:37 Sample ID: WG397755-02
Instrument ID: ICP-MS2 Run Date: 05/18/12 10:27 Prep Method: 3015
File ID: NI.051812.102700 Analyst: JYH Method: 6020
Workgroup (AAB#): WG398436 Matrix: Water Units: mg/L
Contract #: Cal ID: ICP-MS-18-MAY-12

| Analytes | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| Antimony, Total | 0.000500 | 0.00100 | 0.000500 | 1 | U |
| Arsenic, Total | 0.000500 | 0.00100 | 0.000500 | 1 | U |
| Lead, Total | 0.000500 | 0.00100 | 0.000500 | 1 | U |
| Selenium, Total | 0.000500 | 0.00100 | 0.000500 | 1 | U |
| Thallium, Total | 0.000100 | 0.000200 | 0.000100 | 1 | U |

MDL Method Detection Limit
RL Reporting/Practical Quantitation Limit
ND Analyte Not detected at or above reporting limit
* |Analyte concentration| > RL

Report Name:BLANK
PDF ID: 2422138
18-MAY-2012 15:40

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L12050284 Run Date: 05/18/2012 Sample ID: WG397755-03
Instrument ID: ICP-MS2 Run Time: 10:29 Prep Method: 3015
File ID: NI.051812.102953 Analyst: JYH Method: 6020
Workgroup (AAB#): WG398436 Matrix: Water Units: mg/L
QC Key: WATERLOO Lot#: STD49281 Cal ID: ICP-MS-18-MAY-12

| Analytes | Expected | Found | % Rec | LCS Limits | Q |
|---|---|---|---|---|---|
| Antimony, Total | 0.0625 | 0.0618 | 98.8 | 80 - 120 | |
| Arsenic, Total | 0.0625 | 0.0617 | 98.7 | 80 - 120 | |
| Lead, Total | 0.0625 | 0.0650 | 104 | 80 - 120 | |
| Selenium, Total | 0.0625 | 0.0615 | 98.4 | 80 - 120 | |
| Thallium, Total | 0.0625 | 0.0649 | 104 | 80 - 120 | |

LCS - Modified 03/06/2008
PDF File ID: 2422139
Report generated: 05/18/2012 15:40

**Microbac Laboratories Inc.**
Serial Dilution Report

**Login:** L12050284 **Worknum:** WG398436
**Instrument:** ICP-MS2 **Method:** 6020
**Serial Dil:** WG398436-02 **File ID:** NI.051812.105003 **Dil:** 25 **Units:** ug/L
**Sample:** L12050351-02 **File ID:** NI.051812.104418 **Dil:** 5

| Analyte | Sample | Qual | Serial Dil | Qual | % Diff | Q |
|---|---|---|---|---|---|---|
| Antimony | ND | U | ND | U | | |
| Arsenic | 4.01 | X | 5.08 | F | 26.50 | |
| Lead | ND | U | ND | U | | |
| Selenium | 15.3 | X | 15.5 | X | 1.65 | |
| Thallium | 0.363 | F | ND | U | | |

U = Result is below MDL.
F = Result is greater than or equal to MDL and less than the RL.
X = Result is greater than or equal to RL and less than 100 times the MDL.
E = %D exceeds control limit of 10% and initial sample result is greater than or equal to 100 times the MDL.

**SERIAL_DIL - Modified 09/22/2008**
**PDF File ID: 2422134**
**05/22/2012 16:27**

**Microbac Laboratories Inc.**
**POST SPIKE REPORT**

**Sample Login ID:** L12050284 **Worknum:** WG398436
**Instrument ID:** ICP-MS2 **Method:** 6020
**Post Spike ID:** WG398436-01 **File ID:** NI.051812.104711 **Dil:** 5 **Units:** ug/L
**Sample ID:** L12050351-02 **File ID:** NI.051812.104418 **Dil:** 5 **Matrix:** Water

| Analyte | Post Spike Result | C | Sample Result | C | Spike Added(SA) | % R | Control Limit %R | Q |
|---|---|---|---|---|---|---|---|---|
| ANTIMONY | 57.1 | | 0 | U | 50 | 114.2 | 75 - 125 | |
| ARSENIC | 60.2 | | 0.803 | | 50 | 118.8 | 75 - 125 | |
| LEAD | 58.8 | | 0 | U | 50 | 117.7 | 75 - 125 | |
| SELENIUM | 67.4 | | 3.06 | | 50 | 128.6 | 75 - 125 | N |
| THALLIUM | 59.9 | | 0.0726 | F | 50 | 119.7 | 75 - 125 | |

**N = % Recovery exceeds control limits**
**F = Result is between MDL and RL**
**U = Sample result is below MDL. A value of zero is used in the calculation**

**POST_SPIKE - Modified 03/06/2008**
**PDF File ID: 2422135**
**Report generated: 05/22/2012 16:27**

# Microbac Laboratories Inc.
## Initial Calibration Summary

| | | | |
|---|---|---|---|
| Login: | **L12050284** | Workgroup (AAB#): | **WG398436** |
| Analytical Method: | **6020** | Instrument ID: | **ICP-MS2** |
| ICAL Worknum: | **WG398502** | Initial Calibration Date: | **18-MAY-2012 09:54** |

| | WG398502-01 | | WG398502-02 | | WG398502-03 | | WG398502-04 | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Conc | INT | Conc | INT | Conc | INT | Conc | INT | R | Q |
| ANTIMONY | 0 | 17.7 | .4 | 521 | 50 | 498000 | 100 | 970000 | .999978 | |
| ARSENIC | 0 | -217 | .4 | -193 | 50 | 53600 | 100 | 105000 | .999991 | |
| LEAD | 0 | 1090 | .4 | 3400 | 50 | 2350000 | 100 | 4570000 | .999945 | |
| SELENIUM | 0 | 26.7 | .4 | 26.9 | 50 | 7180 | 100 | 13800 | .999997 | |
| THALLIUM | 0 | 62.7 | .4 | 795 | 50 | 738000 | 100 | 1420000 | .999992 | |

**INT = Instrument intensity**
**R = Coefficient of correlation**
**Q = Data Qualifier**
*** = Out of Compliance; R < 0.995**

INT_CAL_ICP - Modified 03/06/2008
PDF File ID: 2422143
Report generated: 22-MAY-2012 16:27

Microbac Laboratories Inc.
INITIAL CALIBRATION BLANK (ICB)

Login Number: L12050284 Run Date: 05/18/2012 Sample ID: WG398502-06
Instrument ID: ICP-MS2 Run Time: 10:00 Method: 6020
File ID: NI.051812.100044 Analyst: JYH Units: ug/L
Workgroup (AAB#): WG398436 Cal ID: ICP-MS2 - 18-MAY-12
Matrix: WATER

| Analytes | MDL | RDL | Concentration | Qualifier |
|---|---|---|---|---|
| ARSENIC | .2 | .4 | .2 | U |
| LEAD | .2 | .4 | .2 | U |
| ANTIMONY | .2 | .4 | .2 | U |
| SELENIUM | .2 | .4 | .2 | U |
| THALLIUM | .04 | .08 | .04 | U |

ICB - Modified 07/14/2009
PDF File ID: 2422145
Report generated 05/22/2012 16:28

Microbac Laboratories Inc.

CONTINUING CALIBRATION BLANK (CCB)

Login Number: L12050284 Run Date: 05/18/2012 Sample ID: WG398502-11

Instrument ID: ICP-MS2 Run Time: 10:15 Method: 6020

File ID: NI.051812.101514 Analyst: JYH Units: ug/L

Workgroup (AAB#): WG398436 Cal ID: ICP-MS - 18-MAY-12

Matrix: WATER QAPP: WATERLOO

| Analytes | MDL | RDL | Concentration | Qualifier |
|---|---|---|---|---|
| Antimony | 0.200 | 0.400 | 0.227 | F |
| Arsenic | 0.200 | 0.400 | 0.200 | U |
| Lead | 0.200 | 0.400 | 0.200 | U |
| Selenium | 0.200 | 0.400 | 0.200 | U |
| Thallium | 0.0400 | 0.0800 | 0.0400 | U |

U = Result is less than MDL.
F = Result is between MDL and RL.
* = Result is above RL.

CCB - Modified 03/05/2008
PDF File ID: 2422148
Report generated 05/22/2012 16:28

Microbac Laboratories Inc.

CONTINUING CALIBRATION BLANK (CCB)

Login Number: L12050284 Run Date: 05/18/2012 Sample ID: WG398502-13

Instrument ID: ICP-MS2 Run Time: 10:55 Method: 6020

File ID: NI.051812.105550 Analyst: JYH Units: ug/L

Workgroup (AAB#): WG398436 Cal ID: ICP-MS - 18-MAY-12

Matrix: WATER QAPP: WATERLOO

| Analytes | MDL | RDL | Concentration | Qualifier |
|---|---|---|---|---|
| Antimony | 0.200 | 0.400 | 0.200 | U |
| Arsenic | 0.200 | 0.400 | 0.200 | U |
| Lead | 0.200 | 0.400 | 0.200 | U |
| Selenium | 0.200 | 0.400 | 0.200 | U |
| Thallium | 0.0400 | 0.0800 | 0.0400 | U |

U = Result is less than MDL.
F = Result is between MDL and RL.
* = Result is above RL.

CCB - Modified 03/05/2008
PDF File ID: 2422148
Report generated 05/22/2012 16:28

Microbac Laboratories Inc.

CONTINUING CALIBRATION BLANK (CCB)

Login Number: L12050284 Run Date: 05/18/2012 Sample ID: WG398502-15

Instrument ID: ICP-MS2 Run Time: 11:30 Method: 6020

File ID: NI.051812.113046 Analyst: JYH Units: ug/L

Workgroup (AAB#): WG398436 Cal ID: ICP-MS - 18-MAY-12

Matrix: WATER QAPP: WATERLOO

| Analytes | MDL | RDL | Concentration | Qualifier |
|---|---|---|---|---|
| Antimony | 0.200 | 0.400 | 0.200 | U |
| Arsenic | 0.200 | 0.400 | 0.200 | U |
| Lead | 0.200 | 0.400 | 0.200 | U |
| Selenium | 0.200 | 0.400 | 0.200 | U |
| Thallium | 0.0400 | 0.0800 | 0.0400 | U |

U = Result is less than MDL.
F = Result is between MDL and RL.
* = Result is above RL.

CCB - Modified 03/05/2008
PDF File ID: 2422148
Report generated 05/22/2012 16:28

Microbac Laboratories Inc.

CONTINUING CALIBRATION BLANK (CCB)

Login Number: L12050284 Run Date: 05/18/2012 Sample ID: WG398502-19

Instrument ID: ICP-MS2 Run Time: 11:56 Method: 6020

File ID: NI.051812.115636 Analyst: JYH Units: ug/L

Workgroup (AAB#): WG398436 Cal ID: ICP-MS - 18-MAY-12

Matrix: WATER QAPP: WATERLOO

| Analytes | MDL | RDL | Concentration | Qualifier |
|---|---|---|---|---|
| Antimony | 0.200 | 0.400 | 0.200 | U |
| Arsenic | 0.200 | 0.400 | 0.200 | U |
| Lead | 0.200 | 0.400 | 0.200 | U |
| Selenium | 0.200 | 0.400 | 0.200 | U |
| Thallium | 0.0400 | 0.0800 | 0.0400 | U |

U = Result is less than MDL.
F = Result is between MDL and RL.
* = Result is above RL.

CCB - Modified 03/05/2008
PDF File ID: 2422148
Report generated 05/22/2012 16:28

Microbac Laboratories Inc.

INITIAL CALIBRATION VERIFICATION (ICV)
(Alternate Source)

Login Number: L12050284 Run Date: 05/18/2012 Sample ID: WG398502-05
Instrument ID: ICP-MS2 Run Time: 09:57 Method: 6020
File ID: NI.051812.095748 Analyst: JYH Units: ug/L
Workgroup (AAB#): WG398436 Cal ID: ICP-MS - 18-MAY-12
QC Key: WATERLOO

| Analyte | | Expected | Found | %REC | LIMITS | Q |
|---|---|---|---|---|---|---|
| Antimony | | 50 | 49.7 | 99.3 | 90 - 110 | |
| Arsenic | | 50 | 49.7 | 99.3 | 90 - 110 | |
| Lead | | 50 | 50.1 | 100 | 90 - 110 | |
| Selenium | | 50 | 49.4 | 98.8 | 90 - 110 | |
| Thallium | | 50 | 50.3 | 101 | 90 - 110 | |

* Exceeds LIMITS Limit

ICV - Modified 03/06/2008
PDF File ID: 2422144
Report generated 05/22/2012 16:27

Microbac Laboratories Inc.

CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L12050284 Run Date: 05/18/2012 Sample ID: WG398502-10

Instrument ID: ICP-MS2 Run Time: 10:12 Method: 6020

File ID: NI.051812.101221 Analyst: JYH QC Key: WATERLOO

Workgroup (AAB#): WG398436 Cal ID: ICP-MS - 18-MAY-12

Matrix: WATER

| Analyte | | Expected | Found | UNITS | %REC | LIMITS | | Q |
|---|---|---|---|---|---|---|---|---|
| Antimony | | 50.0 | 50.0 | ug/L | 100 | 90 - 110 | | |
| Arsenic | | 50.0 | 50.5 | ug/L | 101 | 90 - 110 | | |
| Lead | | 50.0 | 50.4 | ug/L | 101 | 90 - 110 | | |
| Selenium | | 50.0 | 50.7 | ug/L | 101 | 90 - 110 | | |
| Thallium | | 50.0 | 50.8 | ug/L | 102 | 90 - 110 | | |

* Exceeds LIMITS Criteria

CCV - Modified 03/05/2008

PDF File ID: 2422147

Report generated 05/22/2012 16:28

Microbac Laboratories Inc.

CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L12050284 Run Date: 05/18/2012 Sample ID: WG398502-12

Instrument ID: ICP-MS2 Run Time: 10:52 Method: 6020

File ID: NI.051812.105258 Analyst: JYH QC Key: WATERLOO

Workgroup (AAB#): WG398436 Cal ID: ICP-MS - 18-MAY-12

Matrix: WATER

| Analyte | | Expected | Found | UNITS | %REC | LIMITS | | Q |
|---|---|---|---|---|---|---|---|---|
| Antimony | | 50.0 | 49.5 | ug/L | 99.0 | 90 - 110 | | |
| Arsenic | | 50.0 | 50.9 | ug/L | 102 | 90 - 110 | | |
| Lead | | 50.0 | 50.6 | ug/L | 101 | 90 - 110 | | |
| Selenium | | 50.0 | 53.6 | ug/L | 107 | 90 - 110 | | |
| Thallium | | 50.0 | 51.4 | ug/L | 103 | 90 - 110 | | |

* Exceeds LIMITS Criteria

CCV - Modified 03/05/2008

PDF File ID: 2422147

Report generated 05/22/2012 16:28

Microbac Laboratories Inc.

CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L12050284 Run Date: 05/18/2012 Sample ID: WG398502-14

Instrument ID: ICP-MS2 Run Time: 11:27 Method: 6020

File ID: NI.051812.112753 Analyst: JYH QC Key: WATERLOO

Workgroup (AAB#): WG398436 Cal ID: ICP-MS - 18-MAY-12

Matrix: WATER

| Analyte | | Expected | Found | UNITS | %REC | LIMITS | | Q |
|---|---|---|---|---|---|---|---|---|
| Antimony | | 50.0 | 51.0 | ug/L | 102 | 90 - 110 | | |
| Arsenic | | 50.0 | 51.5 | ug/L | 103 | 90 - 110 | | |
| Lead | | 50.0 | 51.3 | ug/L | 103 | 90 - 110 | | |
| Selenium | | 50.0 | 51.8 | ug/L | 104 | 90 - 110 | | |
| Thallium | | 50.0 | 52.0 | ug/L | 104 | 90 - 110 | | |

* Exceeds LIMITS Criteria

CCV - Modified 03/05/2008

PDF File ID: 2422147

Report generated 05/22/2012 16:28

Microbac Laboratories Inc.

CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L12050284 Run Date: 05/18/2012 Sample ID: WG398502-18

Instrument ID: ICP-MS2 Run Time: 11:53 Method: 6020

File ID: NI.051812.115342 Analyst: JYH QC Key: WATERLOO

Workgroup (AAB#): WG398436 Cal ID: ICP-MS - 18-MAY-12

Matrix: WATER

| Analyte | | Expected | Found | UNITS | %REC | LIMITS | | Q |
|---|---|---|---|---|---|---|---|---|
| Antimony | | 50.0 | 51.5 | ug/L | 103 | 90 - 110 | | |
| Arsenic | | 50.0 | 51.9 | ug/L | 104 | 90 - 110 | | |
| Lead | | 50.0 | 51.2 | ug/L | 102 | 90 - 110 | | |
| Selenium | | 50.0 | 51.7 | ug/L | 103 | 90 - 110 | | |
| Thallium | | 50.0 | 51.6 | ug/L | 103 | 90 - 110 | | |

* Exceeds LIMITS Criteria

CCV - Modified 03/05/2008

PDF File ID: 2422147

Report generated 05/22/2012 16:28

**Microbac Laboratories Inc.**
**INTERFERENCE CHECK SAMPLES**

**Login number:** L12050284 **Workgroup (AAB#):** WG398436
**Instrument ID:** ICP-MS2 **Method:** 6020
**Sol. A :** WG398502-08 **File ID:** NI.051812.100631 **Units:** ug/L
**Sol. AB :** WG398502-09 **File ID:** NI.051812.100925 **Matrix:** Water

| | Sol. A | | | Sol. AB | | | |
|---|---|---|---|---|---|---|---|
| ANALYTE | True | Found | %Recovery | True | Found | %Recovery | Q |
| Antimony | NS | 0.0741 | NS | 100 | 100 | 100 | |
| Arsenic | NS | -0.0546 | NS | 100 | 102 | 102 | |
| Lead | NS | 0.0376 | NS | 100 | 102 | 102 | |
| Selenium | NS | 0.00970 | NS | 100 | 101 | 101 | |
| Thallium | NS | 0.0538 | NS | 100 | 101 | 101 | |

**NS = Not spiked**
*** = Recovery of spiked element is outside acceptance limit of 80% - 120% of true value.**
**# = Result for unspiked element is outside the acceptance limits of (+/-) the project reporting limit (RL).**
**+ = Result for unspiked element is outside the acceptance limits of (+/-) 2 times the project method detection limit (MDL). This criteria is only applicable to specific QAPPs.**

**ICS - Modified 03/06/2008**
**PDF File ID: 2422146**
**Report generated 05/22/2012 16:28**

**Microbac Laboratories Inc.**
**INTERFERENCE CHECK SAMPLES**

**Login number:** L12050284 **Workgroup (AAB#):** WG398436
**Instrument ID:** ICP-MS2 **Method:** 6020
**Sol. A :** WG398502-16 **File ID:** NI.051812.114754 **Units:** ug/L
**Sol. AB :** WG398502-17 **File ID:** NI.051812.115047 **Matrix:** Water

| | Sol. A | | | Sol. AB | | | |
|---|---|---|---|---|---|---|---|
| ANALYTE | True | Found | %Recovery | True | Found | %Recovery | Q |
| Antimony | NS | 0.0488 | NS | 100 | 103 | 103 | |
| Arsenic | NS | -0.0426 | NS | 100 | 102 | 102 | |
| Lead | NS | 0.0351 | NS | 100 | 105 | 105 | |
| Selenium | NS | 0.0224 | NS | 100 | 100 | 100 | |
| Thallium | NS | 0.0507 | NS | 100 | 103 | 103 | |

**NS = Not spiked**
*** = Recovery of spiked element is outside acceptance limit of 80% - 120% of true value.**
**# = Result for unspiked element is outside the acceptance limits of (+/-) the project reporting limit (RL).**
**+ = Result for unspiked element is outside the acceptance limits of (+/-) 2 times the project method detection limit (MDL). This criteria is only applicable to specific QAPPs.**

**ICS - Modified 03/06/2008**
**PDF File ID: 2422146**
**Report generated 05/22/2012 16:28**

# Microbac Laboratories Inc.

## INTERNAL STANDARD REPORT

**Login:** L12050284 **Analytical Method:** 6020
**Analytical Workgroup:** WG398436 **Matrix:** 1
**Instrument:** ICP-MS2 **Analyst:** JYH
**ICAL Date:** 18-MAY-2012 09:46

| | | | BISMUTH | GERMANIUM | INDIUM | TERBIUM |
|---|---|---|---|---|---|---|
| Sample | Type | Run Date | % Rec | % Rec | % Rec | % Rec |
| L12050284-01 | SAMP | 18-MAY-2012 11:04 | 102.347 | 111.542 | 110.369 | 112.29 |
| L12050284-02 | SAMP | 18-MAY-2012 11:07 | 91.89 | 107.492 | 106.759 | 108.564 |
| L12050284-03 | SAMP | 18-MAY-2012 11:10 | 97.677 | 106.25 | 107.388 | 108.845 |
| L12050284-04 | SAMP | 18-MAY-2012 11:13 | 95.332 | 103.304 | 103.559 | 105.269 |
| L12050284-05 | SAMP | 18-MAY-2012 11:16 | 97.096 | 103.949 | 105.256 | 106.163 |
| L12050284-06 | SAMP | 18-MAY-2012 11:19 | 96.527 | 103.366 | 103.3 | 104.764 |
| L12050284-07 | SAMP | 18-MAY-2012 11:22 | 96.16 | 102.769 | 102.505 | 104.402 |
| L12050284-08 | SAMP | 18-MAY-2012 11:24 | 96.265 | 101.913 | 102.527 | 104.738 |
| L12050284-10 | SAMP | 18-MAY-2012 11:33 | 93.533 | 98.6 | 98.543 | 100.405 |
| L12050284-11 | SAMP | 18-MAY-2012 11:36 | 94.772 | 97.993 | 99.836 | 100.816 |
| L12050284-12 | SAMP | 18-MAY-2012 11:45 | 96.225 | 96.669 | 96.884 | 95.742 |
| L12050351-02 | SAMP | 18-MAY-2012 10:44 | 92.355 | 109.74 | 106.659 | 108.382 |
| WG397755-02 | BLANK | 18-MAY-2012 10:27 | 100.865 | 103.393 | 103.013 | 101.712 |
| WG397755-03 | LCS | 18-MAY-2012 10:29 | 104.469 | 109.514 | 106.575 | 107.179 |
| WG398436-01 | PSPK | 18-MAY-2012 10:47 | 93.329 | 113.498 | 108.276 | 110.329 |
| WG398436-02 | SERIAL | 18-MAY-2012 10:50 | 103.708 | 112.464 | 111.042 | 109.678 |
| WG398502-05 | ICV | 18-MAY-2012 09:57 | 103.888 | 106.217 | 106.345 | 107.482 |
| WG398502-06 | ICB | 18-MAY-2012 10:00 | 99.689 | 99.301 | 99.253 | 99.235 |
| WG398502-07 | LLICV | 18-MAY-2012 10:03 | 100.104 | 99.311 | 98.873 | 99.252 |
| WG398502-08 | ICS | 18-MAY-2012 10:06 | 103.477 | 107.434 | 105.699 | 108.833 |
| WG398502-09 | ICS | 18-MAY-2012 10:09 | 103.919 | 109.426 | 107.972 | 109.439 |
| WG398502-10 | CCV | 18-MAY-2012 10:12 | 103.238 | 107.299 | 106.172 | 105.971 |
| WG398502-11 | CCB | 18-MAY-2012 10:15 | 101.742 | 102.692 | 102.764 | 101.3 |
| WG398502-12 | CCV | 18-MAY-2012 10:52 | 107.982 | 117.25 | 115.218 | 114.428 |
| WG398502-13 | CCB | 18-MAY-2012 10:55 | 100.416 | 104.527 | 105.486 | 104.537 |
| WG398502-14 | CCV | 18-MAY-2012 11:27 | 100.931 | 105.236 | 106.685 | 105.866 |
| WG398502-15 | CCB | 18-MAY-2012 11:30 | 96.37 | 98.666 | 100.465 | 98.708 |
| WG398502-16 | ICS | 18-MAY-2012 11:47 | 96.38 | 102.361 | 100.822 | 103.521 |
| WG398502-17 | ICS | 18-MAY-2012 11:50 | 100.055 | 106.46 | 105.32 | 106.827 |
| WG398502-18 | CCV | 18-MAY-2012 11:53 | 98.247 | 101.939 | 102.305 | 102.73 |
| WG398502-19 | CCB | 18-MAY-2012 11:56 | 94.866 | 97.023 | 97.34 | 96.749 |
| WG398502-20 | LLCCV | 18-MAY-2012 11:59 | 95.824 | 99.152 | 98.224 | 97.641 |

**Acceptance criteria: 30% - 120% Underlined recoveries are out of range**
**Acceptance criteria for CCVs and CCBs for method SW846-6020: 80% - 120%**

**INT_STD_ICPMS - Modified 07/28/2010**
**PDF File ID: 2422142**
**Report generated: 05/22/2012 16:26**

**Microbac Laboratories Inc.**
**LINEAR RANGE (QUARTERLY)**

**Login Number:** L12050284 **Date:** 03/16/2012
**Insturment ID:** ICP-MS2 **Method:** 6020

| Analyte | Integration Time (Sec.) | Concentration (ug/L) |
|---|---|---|
| Antimony | 1.00 | 100.0 |
| Arsenic | 1.00 | 100.0 |
| Barium | 1.00 | 100.0 |
| Cadmium | 1.00 | 100.0 |
| Chromium | 1.00 | 100.0 |
| Cobalt | 1.00 | 100.0 |
| Copper | 1.00 | 100.0 |
| Lead | 1.00 | 100.0 |
| Manganese | 1.00 | 100.0 |
| Nickel | 1.00 | 100.0 |
| Selenium | 1.00 | 100.0 |
| Silver | 1.00 | 100.0 |
| Thallium | 1.00 | 100.0 |
| Uranium | 1.00 | 100.0 |
| Vanadium | 1.00 | 100.0 |
| Zinc | 1.00 | 100.0 |

**Comments:**
**All analytes passed acceptance criteria at the specified concentration.**

**LINEAR_RANGE - Modified 03/06/2008**
**PDF File ID: 2422140**
**Report generated: 05/18/2012 15:30**

# 2.3.2.3 Raw Data

## MassCal File Name

Mass Calibration File Name default.tun
MassCal File Path C:\NexION Data\MassCal\default.tun
Peak Search Window: 1.00

## Sample Information

Sample Date/Time: Friday, May 18, 2012 09:14:47

## Mass Calibration and Resolution

| Analyte | E Mass | Meas Mass | Mass C DAC Val | Res DAC Value | Meas Peak WCustom Res |
|---|---|---|---|---|---|
| Li | 7.016 | 6.975 | 1332 | 2021 | 0.700 |
| Mg | 23.985 | 23.975 | 4705 | 2020 | 0.713 |
| In | 114.904 | 114.875 | 22863 | 2022 | 0.722 |
| U | 238.050 | 238.025 | 47468 | 2034 | 0.718 |

## Relative Std. Dev.

| Mass | Meas. Intens. RSD |
|---|---|
| 5.525 | 6.070 |
| 5.575 | 5.143 |
| 5.625 | 3.705 |
| 5.675 | 3.690 |
| 5.725 | 3.270 |
| 5.775 | 2.803 |
| 5.825 | 2.795 |
| 5.875 | 4.125 |
| 5.925 | 2.796 |
| 5.975 | 2.654 |
| 6.025 | 3.157 |
| 6.075 | 3.063 |
| 6.125 | 3.555 |
| 6.175 | 3.021 |
| 6.225 | 1.461 |
| 6.275 | 47.507 |
| 6.325 | 136.931 |
| 6.375 | 69.722 |
| 6.425 | 44.712 |
| 6.475 | 13.095 |
| 6.525 | 4.956 |
| 6.575 | 4.197 |
| 6.625 | 3.800 |
| 6.675 | 3.058 |
| 6.725 | 3.605 |
| 6.775 | 3.366 |
| 6.825 | 1.835 |
| 6.875 | 2.609 |

Report Date/Time: Friday, May 18, 2012 09:17:21
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| | |
|---|---|
| 6.925 | 2.678 |
| 6.975 | 1.989 |
| 7.025 | 1.885 |
| 7.075 | 2.628 |
| 7.125 | 2.334 |
| 7.175 | 2.269 |
| 7.225 | 1.581 |
| 7.275 | 21.030 |
| 7.325 | 223.607 |
| 7.375 | |
| 7.425 | |
| 7.475 | |
| 7.525 | 223.607 |
| 7.575 | |
| 7.625 | |
| 7.675 | |
| 7.725 | 223.607 |
| 7.775 | |
| 7.825 | 223.607 |
| 7.875 | 223.607 |
| 7.925 | |
| 7.975 | |
| 8.025 | 223.607 |
| 8.075 | |
| 8.125 | |
| 8.175 | 136.931 |
| 8.225 | 223.607 |
| 8.275 | |
| 8.325 | 223.607 |
| 8.375 | |
| 8.425 | 70.711 |
| 8.475 | 21.973 |
| 22.525 | 11.650 |
| 22.575 | 0.742 |
| 22.625 | 1.292 |
| 22.675 | 1.545 |
| 22.725 | 2.099 |
| 22.775 | 1.617 |
| 22.825 | 1.599 |
| 22.875 | 1.304 |
| 22.925 | 1.130 |
| 22.975 | 1.303 |
| 23.025 | 1.048 |
| 23.075 | 1.277 |
| 23.125 | 1.064 |
| 23.175 | 1.031 |
| 23.225 | 1.420 |



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| | |
|---|---|
| 23.275 | 1.924 |
| 23.325 | 6.397 |
| 23.375 | 104.583 |
| 23.425 | |
| 23.475 | 91.287 |
| 23.525 | 18.153 |
| 23.575 | 8.527 |
| 23.625 | 0.915 |
| 23.675 | 3.081 |
| 23.725 | 2.667 |
| 23.775 | 1.259 |
| 23.825 | 1.710 |
| 23.875 | 1.383 |
| 23.925 | 1.818 |
| 23.975 | 1.405 |
| 24.025 | 2.796 |
| 24.075 | 2.150 |
| 24.125 | 1.767 |
| 24.175 | 1.761 |
| 24.225 | 1.983 |
| 24.275 | 3.437 |
| 24.325 | 11.422 |
| 24.375 | 136.931 |
| 24.425 | 223.607 |
| 24.475 | 136.931 |
| 24.525 | 39.510 |
| 24.575 | 7.529 |
| 24.625 | 12.223 |
| 24.675 | 5.704 |
| 24.725 | 2.375 |
| 24.775 | 3.554 |
| 24.825 | 4.631 |
| 24.875 | 6.033 |
| 24.925 | 5.366 |
| 24.975 | 4.696 |
| 25.025 | 2.600 |
| 25.075 | 3.026 |
| 25.125 | 5.778 |
| 25.175 | 3.490 |
| 25.225 | 4.043 |
| 25.275 | 7.211 |
| 25.325 | 54.398 |
| 25.375 | 223.607 |
| 25.425 | 223.607 |
| 25.475 | 104.583 |
| 113.525 | 13.771 |
| 113.575 | 10.610 |



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| | |
|---|---|
| 113.625 | 2.711 |
| 113.675 | 3.636 |
| 113.725 | 4.521 |
| 113.775 | 1.312 |
| 113.825 | 1.428 |
| 113.875 | 4.484 |
| 113.925 | 2.264 |
| 113.975 | 1.522 |
| 114.025 | 2.167 |
| 114.075 | 4.782 |
| 114.125 | 0.660 |
| 114.175 | 3.992 |
| 114.225 | 4.071 |
| 114.275 | 25.364 |
| 114.325 | 58.630 |
| 114.375 | 19.351 |
| 114.425 | 10.381 |
| 114.475 | 1.686 |
| 114.525 | 1.768 |
| 114.575 | 2.395 |
| 114.625 | 2.079 |
| 114.675 | 2.848 |
| 114.725 | 1.245 |
| 114.775 | 3.574 |
| 114.825 | 2.524 |
| 114.875 | 2.438 |
| 114.925 | 2.154 |
| 114.975 | 1.153 |
| 115.025 | 1.819 |
| 115.075 | 1.562 |
| 115.125 | 1.834 |
| 115.175 | 3.441 |
| 115.225 | 4.283 |
| 115.275 | 13.154 |
| 115.325 | 69.722 |
| 115.375 | 136.931 |
| 115.425 | 25.074 |
| 115.475 | 24.103 |
| 115.525 | 5.660 |
| 115.575 | 6.169 |
| 115.625 | 4.568 |
| 115.675 | 8.084 |
| 115.725 | 4.391 |
| 115.775 | 6.936 |
| 115.825 | 3.274 |
| 115.875 | 6.081 |
| 115.925 | 5.171 |



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| | |
|---|---|
| 115.975 | 7.907 |
| 116.025 | 5.872 |
| 116.075 | 3.880 |
| 116.125 | 2.277 |
| 116.175 | 9.061 |
| 116.225 | 9.345 |
| 116.275 | 14.542 |
| 116.325 | 104.583 |
| 116.375 | 223.607 |
| 116.425 | 136.931 |
| 116.475 | 74.975 |
| 236.525 | |
| 236.575 | |
| 236.625 | |
| 236.675 | |
| 236.725 | |
| 236.775 | |
| 236.825 | |
| 236.875 | |
| 236.925 | |
| 236.975 | |
| 237.025 | |
| 237.075 | |
| 237.125 | |
| 237.175 | 223.607 |
| 237.225 | |
| 237.275 | |
| 237.325 | |
| 237.375 | 91.287 |
| 237.425 | 22.822 |
| 237.475 | 34.903 |
| 237.525 | 17.592 |
| 237.575 | 4.749 |
| 237.625 | 2.439 |
| 237.675 | 2.899 |
| 237.725 | 2.882 |
| 237.775 | 2.096 |
| 237.825 | 1.961 |
| 237.875 | 1.120 |
| 237.925 | 2.400 |
| 237.975 | 2.494 |
| 238.025 | 2.085 |
| 238.075 | 1.980 |
| 238.125 | 1.733 |
| 238.175 | 0.893 |
| 238.225 | 1.585 |
| 238.275 | 2.094 |



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| | |
|---|---|
| 238.325 | 3.713 |
| 238.375 | 1.767 |
| 238.425 | 9.233 |
| 238.475 | 14.438 |
| 238.525 | 53.429 |
| 238.575 | 223.607 |
| 238.625 | |
| 238.675 | |
| 238.725 | |
| 238.775 | |
| 238.825 | 223.607 |
| 238.875 | |
| 238.925 | |
| 238.975 | 223.607 |
| 239.025 | 223.607 |
| 239.075 | |
| 239.125 | |
| 239.175 | |
| 239.225 | |
| 239.275 | |
| 239.325 | |
| 239.375 | |
| 239.425 | |
| 239.475 | |



Approved: May 21, 2012

## Daily Performance Report

**Sample ID: Daily Performance Check**
Sample Date/Time: Friday, May 18, 2012 09:19:20
Sample Description:
Method File: C:\NexION Data\Method\ESI Daily Performance.mth
Dataset File: C:\NexION Data\DataSet\051412\Daily Performance Check.558
MassCal File: C:\NexION Data\MassCal\Default.tun
Conditions File: C:\NexION Data\Conditions\Default.dac
Dual Detector Mode: Pulse

Acq. Dead Time (ns): 33
Current Dead Time (ns): 33

Torch Z position (mm): 0.00

### Summary

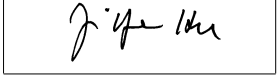
| | Analyte | Mass | Meas. Intens. Mean | Net Intens. Mean | Net Intens. SD | Net Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|
| | Be | 9.0 | 3691.9 | 3691.916 | 49.063 | 1.3 | Standard |
| | Mg | 24.0 | 36256.4 | 36256.399 | 421.795 | 1.2 | Standard |
| | In | 114.9 | 69385.6 | 69385.590 | 696.134 | 1.0 | Standard |
| | U | 238.1 | 57477.4 | 57477.420 | 488.867 | 0.9 | Standard |
| ⌈ | CeO | 155.9 | 1816.1 | 0.023 | 0.001 | 2.3 | Standard |
| \| > | Ce | 139.9 | 78030.1 | 78030.096 | 832.332 | 1.1 | Standard |
| ⌊ | Ce++ | 70.0 | 825.6 | 0.011 | 0.000 | 1.9 | Standard |
| | Bkgd | 220.0 | 0.1 | 0.067 | 0.149 | 223.6 | Standard |

### Current Conditions File Data

| Current Value | Description |
|---|---|
| 0.97 | Nebulizer Gas Flow STD/KED [NEB] |
| 1.20 | Auxiliary Gas Flow |
| 18.00 | Plasma Gas Flow |
| -8.75 | Deflector Voltage |
| 1600.00 | ICP RF Power |
| -1881.00 | Analog Stage Voltage |
| 1250.00 | Pulse Stage Voltage |
| 0.00 | Quadrupole Rod Offset STD [QRO] |
| -15.00 | Cell Rod Offset STD [CRO] |
| 12.00 | Discriminator Threshold |
| -2.00 | Cell Entrance/Exit Voltage STD |
| 0.00 | RPa |
| 0.45 | RPq |
| 1.00 | DRC Mode NEB |
| -7.00 | DRC Mode QRO |
| -1.50 | DRC Mode CRO |
| -5.00 | DRC Mode Cell Entrance/Exit Voltage |
| 0.70 | Cell Gas A |
| 200.00 | Axial Field Voltage |
| -17.00 | KED Mode CRO |
| -12.00 | KED Mode QRO |
| -5.00 | KED Mode Cell Entrance Voltage |
| -23.00 | KED Mode Cell Exit Voltage |
| 4.40 | KED Cell Gas A |
| 0.00 | KED RPa |
| 0.25 | KED RPq |
| 475.00 | KED Mode Axial Field Voltage |



Approved: May 21, 2012



## SmartTune Wizard - Summary

Optimization Summary

SmartTune file: C:\NexIONData\Wizard\SmartTune\ESI SmartTune Fullmicrobac.swz

Start Time: 5/18/2012 9:19:20 AM
End Time: 5/18/2012 9:21:40 AM

Daily Performance Check - [Passed]  Optimum value(s): N/A
Obtained Intensity (Be 9.0122): 3691.92
Obtained Intensity (Mg 23.985): 36256.40
Obtained Intensity (In 114.904): 69385.59
Obtained Intensity (U 238.05): 57477.42
Obtained Intensity (Bkgd 220): 0.07
Obtained Formula (CeO 155.9 / Ce 139.905): 0.023 (=1816.11 / 78030.10)
Obtained Formula (Ce++ 69.9527 / Ce 139.905): 0.011 (=825.62 / 78030.10)



Approved: May 21, 2012

## SmartTune Wizard - Details

```
Optimization Details

SmartTune file: C:\NexIONData\Wizard\SmartTune\ESI SmartTune Fullmicrobac.swz

Optimization Status

Start Time: 5/18/2012 9:19:20 AM



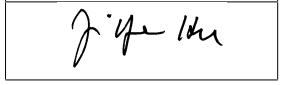
Daily Performance Check
        Optimization Settings:
                Method: C:\NexIONData\Method\ESI Daily Performance.mth.
                Intensity Criterion: Be 9.0122 > 2000
                Intensity Criterion: Mg 23.985 > 15000
                Intensity Criterion: In 114.904 > 40000
                Intensity Criterion: U 238.05 > 30000
                Intensity Criterion: Bkgd 220 <= 1
                Formula Criterion: CeO 155.9 / Ce 139.905 <= 0.025
                Formula Criterion: Ce++ 69.9527 / Ce 139.905 <= 0.03

        Optimization Results:
        Initial Try
                Obtained Intensity (Be 9.0122): 3691.92
                Obtained Intensity (Mg 23.985): 36256.40
                Obtained Intensity (In 114.904): 69385.59
                Obtained Intensity (U 238.05): 57477.42
                Obtained Intensity (Bkgd 220): 0.07
                Obtained Formula (CeO 155.9 / Ce 139.905): 0.023 (=1816.11 / 78030.10)
                Obtained Formula (Ce++ 69.9527 / Ce 139.905): 0.011 (=825.62 / 78030.10)
[Passed]  Optimum value(s): N/A

End Time: 5/18/2012 9:21:40 AM
```



Approved: May 21, 2012



# Method 6020 - Summary Report

**Sample ID: Blank**
Sample Date/Time: Friday, May 18, 2012 09:43:22
Number of Replicates: 3
Autosampler Position: 1
Sample Description:
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

## Concentration Results

| IS | Analyte | Mass | Intensity | RSD | Conc. | SD | RSD | Units | Blank Intens. | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| ⌈ | **Li** | 7 | 13492.7 | 5.8 | | | | ug/L | | Standard |
| \| | **Be** | 9 | 13.3 | 94.4 | | | | ug/L | | Standard |
| \| | **Al** | 27 | 8785.9 | 4.8 | | | | ug/L | | Standard |
| ⌊> | **Sc** | 45 | 280552.9 | 5.0 | | | | ug/L | | Standard |
| ⌈ | **Ti** | 47 | 96.3 | 8.5 | | | | ug/L | | Standard |
| \| | **V** | 51 | 3640.0 | 3.5 | | | | ug/L | | Standard |
| \| | **Cr** | 52 | 11494.7 | 2.7 | | | | ug/L | | Standard |
| \| | **Cr** | 53 | 564.2 | 10.1 | | | | ug/L | | Standard |
| \| | **Mn** | 55 | 1247.1 | 2.7 | | | | ug/L | | Standard |
| \| | **Co** | 59 | 113.7 | 9.5 | | | | ug/L | | Standard |
| \| | **Ni** | 60 | 65.7 | 16.1 | | | | ug/L | | Standard |
| \| | **Cu** | 65 | 219.0 | 1.4 | | | | ug/L | | Standard |
| \| | **Zn** | 66 | 232.0 | 14.5 | | | | ug/L | | Standard |
| \| > | **Ge** | 72 | 228255.2 | 6.0 | | | | ug/L | | Standard |
| \| | **As** | 75 | -233.1 | 9.5 | | | | ug/L | | Standard |
| \| | **Se** | 82 | 23.3 | 19.8 | | | | ug/L | | Standard |
| ⌊ | **Se-1** | 77 | 90.7 | 2.5 | | | | ug/L | | Standard |
| ⌈> | **Ga** | 71 | 208872.5 | 5.3 | | | | mg/L | | Standard |
| ⌊ | **Rb** | 85 | 28.3 | 40.8 | | | | ug/L | | Standard |
| ⌈ | **Y** | 89 | 234741.6 | 7.8 | | | | ug/L | | Standard |
| ⌊> | **Rh** | 103 | 121293.7 | 7.5 | | | | ug/L | | Standard |
| ⌈ | **Mo** | 98 | 5.5 | 44.7 | | | | ug/L | | Standard |
| \| | **Ag** | 107 | 64.0 | 19.6 | | | | ug/L | | Standard |
| \| | **Cd** | 111 | 417.3 | 6.6 | | | | mg/L | | Standard |
| \| | **Cd** | 114 | 1008.7 | 5.0 | | | | ug/L | | Standard |
| \| > | **In** | 115 | 628084.5 | 7.0 | | | | ug/L | | Standard |
| \| | **Sn** | 118 | 833.7 | 4.2 | | | | ug/L | | Standard |
| \| | **Sb** | 123 | 22.3 | 10.3 | | | | ug/L | | Standard |
| ⌊ | **Ba** | 135 | 36.0 | 11.1 | | | | ug/L | | Standard |
| ⌈ | **Ce** | 140 | 43.7 | 10.8 | | | | ug/L | | Standard |
| ⌊> | **Tb** | 159 | 691511.1 | 6.4 | | | | ug/L | | Standard |
| ⌈ | **Ho** | 165 | 6.3 | 39.7 | | | | ug/L | | Standard |
| \| | **Tl** | 203 | 71.3 | 43.1 | | | | ug/L | | Standard |
| \| | **Tl** | 205 | 177.0 | 32.8 | | | | ug/L | | Standard |
| \| | **Pb** | 206 | 268.0 | 15.4 | | | | ug/L | | Standard |
| \| | **Pb** | 207 | 244.7 | 4.8 | | | | ug/L | | Standard |
| \| | **Pb** | 208 | 1057.0 | 10.2 | | | | ug/L | | Standard |
| \| | **U** | 238 | 8.7 | 13.3 | | | | ug/L | | Standard |
| ⌊> | **Bi** | 209 | 389589.9 | 5.0 | | | | ug/L | | Standard |
| ⌈ | **Na** | 23 | 91.7 | 6.3 | | | | mg/L | | Standard |
| \| | **Mg** | 24 | 141.7 | 12.4 | | | | mg/L | | Standard |

**Sample ID: Blank**
Report Date/Time: Friday, May 18, 2012 09:45:54
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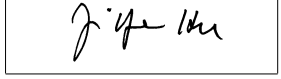

| | | | | | | |
|---|---|---|---|---|---|---|
| | **K** | 39 | 635.0 | 4.8 | mg/L | Standard |
| | **Ca** | 43 | 63.3 | 32.9 | mg/L | Standard |
| | **Fe** | 54 | 900.9 | 5.0 | mg/L | Standard |
| | **Fe** | 57 | 5947.8 | 4.3 | mg/L | Standard |
| > | **Sc-1** | 45 | 280552.9 | 5.0 | mg/L | Standard |
| | **Cl** | 35 | 931.0 | 12.8 | ug/L | Standard |
| | **Kr** | 83 | 40.2 | 4.7 | ug/L | Standard |
| | **Br** | 81 | 11862.1 | 5.0 | ug/L | Standard |
| | **P** | 31 | 77079.4 | 6.2 | ug/L | Standard |
| | **S** | 34 | 1028777.1 | 4.8 | ug/L | Standard |
| | **Sr** | 88 | 318.3 | 10.1 | ug/L | Standard |

## QC Calculated Values

| | Analyte | Mass | QC Std % Recovery | Int Std % Recovery | Spike % Recovery |
|---|---|---|---|---|---|
| | Li | 7 | | | |
| | Be | 9 | | | |
| | Al | 27 | | | |
| > | Sc | 45 | | | |
| | Ti | 47 | | | |
| | V | 51 | | | |
| | Cr | 52 | | | |
| | Cr | 53 | | | |
| | Mn | 55 | | | |
| | Co | 59 | | | |
| | Ni | 60 | | | |
| | Cu | 65 | | | |
| | Zn | 66 | | | |
| > | Ge | 72 | | | |
| | As | 75 | | | |
| | Se | 82 | | | |
| | Se-1 | 77 | | | |
| > | Ga | 71 | | | |
| | Rb | 85 | | | |
| | Y | 89 | | | |
| > | Rh | 103 | | | |
| | Mo | 98 | | | |
| | Ag | 107 | | | |
| | Cd | 111 | | | |
| | Cd | 114 | | | |
| > | In | 115 | | | |
| | Sn | 118 | | | |
| | Sb | 123 | | | |
| | Ba | 135 | | | |
| | Ce | 140 | | | |
| > | Tb | 159 | | | |
| | Ho | 165 | | | |
| | Tl | 203 | | | |
| | Tl | 205 | | | |
| | Pb | 206 | | | |

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| | | |
|---|---|---|
| | Pb | 207 |
| | Pb | 208 |
| | U | 238 |
| > | Bi | 209 |
| | Na | 23 |
| | Mg | 24 |
| | K | 39 |
| | Ca | 43 |
| | Fe | 54 |
| | Fe | 57 |
| > | Sc-1 | 45 |
| | Cl | 35 |
| | Kr | 83 |
| | Br | 81 |
| | P | 31 |
| | S | 34 |
| | Sr | 88 |

## QC Out of Limits

| Measurement Type | Analyte | Mass | Out of Limits Message |
|---|---|---|---|

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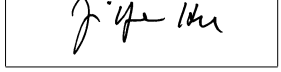

# Method 6020 - Summary Report

**Sample ID: Standard 1**
Sample Date/Time: Friday, May 18, 2012 09:46:15
Number of Replicates: 3
Autosampler Position: 1
Sample Description:
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

## Concentration Results

| IS | Analyte | Mass | Intensity | RSD | Conc. | SD | RSD | Units | Blank Intens. | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| ⌈ | **Li** | 7 | 14104.9 | 7.7 | | | | ug/L | 13493 | Standard |
| \| | **Be** | 9 | 3.3 | 86.6 | | | | ug/L | 13 | Standard |
| \| | **Al** | 27 | 8919.3 | 6.2 | | | | ug/L | 8786 | Standard |
| ⌊> | **Sc** | 45 | 292282.9 | 7.6 | | | | ug/L | 280553 | Standard |
| ⌈ | **Ti** | 47 | 89.0 | 1.9 | | | | ug/L | 96 | Standard |
| \| | **V** | 51 | 3697.5 | 5.0 | | | | ug/L | 3640 | Standard |
| \| | **Cr** | 52 | 11546.1 | 2.3 | | | | ug/L | 11495 | Standard |
| \| | **Cr** | 53 | 530.8 | 11.8 | | | | ug/L | 564 | Standard |
| \| | **Mn** | 55 | 1271.4 | 4.1 | | | | ug/L | 1247 | Standard |
| \| | **Co** | 59 | 119.3 | 0.5 | | | | ug/L | 114 | Standard |
| \| | **Ni** | 60 | 72.7 | 13.9 | | | | ug/L | 66 | Standard |
| \| | **Cu** | 65 | 230.7 | 5.0 | | | | ug/L | 219 | Standard |
| \| | **Zn** | 66 | 260.3 | 3.4 | | | | ug/L | 232 | Standard |
| \> | **Ge** | 72 | 233099.3 | 6.7 | | | | ug/L | 228255 | Standard |
| \| | **As** | 75 | -217.2 | 18.0 | | | | ug/L | -233 | Standard |
| \| | **Se** | 82 | 26.7 | 15.3 | | | | ug/L | 23 | Standard |
| ⌊ | **Se-1** | 77 | 92.7 | 7.2 | | | | ug/L | 91 | Standard |
| ⌈> | **Ga** | 71 | 214125.9 | 7.2 | | | | mg/L | 208873 | Standard |
| ⌊ | **Rb** | 85 | 21.7 | 26.6 | | | | ug/L | 28 | Standard |
| ⌈ | **Y** | 89 | 243609.6 | 8.1 | | | | ug/L | 234742 | Standard |
| ⌊> | **Rh** | 103 | 124958.2 | 9.0 | | | | ug/L | 121294 | Standard |
| ⌈ | **Mo** | 98 | 7.2 | 41.9 | | | | ug/L | 6 | Standard |
| \| | **Ag** | 107 | 60.0 | 10.0 | | | | ug/L | 64 | Standard |
| \| | **Cd** | 111 | 406.0 | 5.9 | | | | mg/L | 417 | Standard |
| \| | **Cd** | 114 | 1032.7 | 3.8 | | | | ug/L | 1009 | Standard |
| \> | **In** | 115 | 643965.3 | 7.2 | | | | ug/L | 628085 | Standard |
| \| | **Sn** | 118 | 881.4 | 5.8 | | | | ug/L | 834 | Standard |
| \| | **Sb** | 123 | 17.7 | 25.1 | | | | ug/L | 22 | Standard |
| ⌊ | **Ba** | 135 | 31.7 | 12.0 | | | | ug/L | 36 | Standard |
| ⌈ | **Ce** | 140 | 43.7 | 16.9 | | | | ug/L | 44 | Standard |
| ⌊> | **Tb** | 159 | 710573.2 | 5.2 | | | | ug/L | 691511 | Standard |
| ⌈ | **Ho** | 165 | 6.0 | 16.7 | | | | ug/L | 6 | Standard |
| \| | **Tl** | 203 | 62.7 | 21.3 | | | | ug/L | 71 | Standard |
| \| | **Tl** | 205 | 118.0 | 20.7 | | | | ug/L | 177 | Standard |
| \| | **Pb** | 206 | 265.7 | 9.1 | | | | ug/L | 268 | Standard |
| \| | **Pb** | 207 | 253.7 | 5.0 | | | | ug/L | 245 | Standard |
| \| | **Pb** | 208 | 1087.7 | 5.8 | | | | ug/L | 1057 | Standard |
| \| | **U** | 238 | 6.3 | 36.5 | | | | ug/L | 9 | Standard |
| ⌊> | **Bi** | 209 | 403234.7 | 5.0 | | | | ug/L | 389590 | Standard |
| ⌈ | **Na** | 23 | 126.7 | 34.5 | | | | mg/L | 92 | Standard |
| \| | **Mg** | 24 | 158.3 | 13.1 | | | | mg/L | 142 | Standard |

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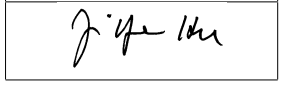

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | **K** | 39 | 681.7 | 12.5 | mg/L | 635 | Standard |
| | **Ca** | 43 | 80.0 | 16.5 | mg/L | 63 | Standard |
| | **Fe** | 54 | 880.5 | 8.5 | mg/L | 901 | Standard |
| | **Fe** | 57 | 5966.2 | 6.6 | mg/L | 5948 | Standard |
| > | **Sc-1** | 45 | 292282.9 | 7.6 | mg/L | 280553 | Standard |
| | **Cl** | 35 | 851.4 | 0.4 | ug/L | 931 | Standard |
| | **Kr** | 83 | 41.1 | 13.8 | ug/L | 40 | Standard |
| | **Br** | 81 | 12376.7 | 8.8 | ug/L | 11862 | Standard |
| | **P** | 31 | 77178.0 | 4.1 | ug/L | 77079 | Standard |
| | **S** | 34 | 1031476.4 | 4.0 | ug/L | 1028777 | Standard |
| | **Sr** | 88 | 305.0 | 10.0 | ug/L | 318 | Standard |

## QC Calculated Values

| | Analyte | Mass | QC Std % Recovery | Int Std % Recovery | Spike % Recovery |
|---|---|---|---|---|---|
| | Li | 7 | | | |
| | Be | 9 | | | |
| | Al | 27 | | | |
| > | Sc | 45 | | | |
| | Ti | 47 | | | |
| | V | 51 | | | |
| | Cr | 52 | | | |
| | Cr | 53 | | | |
| | Mn | 55 | | | |
| | Co | 59 | | | |
| | Ni | 60 | | | |
| | Cu | 65 | | | |
| | Zn | 66 | | | |
| > | Ge | 72 | | | |
| | As | 75 | | | |
| | Se | 82 | | | |
| | Se-1 | 77 | | | |
| > | Ga | 71 | | | |
| | Rb | 85 | | | |
| | Y | 89 | | | |
| > | Rh | 103 | | | |
| | Mo | 98 | | | |
| | Ag | 107 | | | |
| | Cd | 111 | | | |
| | Cd | 114 | | | |
| > | In | 115 | | | |
| | Sn | 118 | | | |
| | Sb | 123 | | | |
| | Ba | 135 | | | |
| | Ce | 140 | | | |
| > | Tb | 159 | | | |
| | Ho | 165 | | | |
| | Tl | 203 | | | |
| | Tl | 205 | | | |
| | Pb | 206 | | | |

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| | | |
|---|---|---|
| | Pb | 207 |
| | Pb | 208 |
| | U | 238 |
| > | Bi | 209 |
| | Na | 23 |
| | Mg | 24 |
| | K | 39 |
| | Ca | 43 |
| | Fe | 54 |
| | Fe | 57 |
| > | Sc-1 | 45 |
| | Cl | 35 |
| | Kr | 83 |
| | Br | 81 |
| | P | 31 |
| | S | 34 |
| | Sr | 88 |

## QC Out of Limits

| Measurement Type | Analyte | Mass | Out of Limits Message |
|---|---|---|---|

**Sample ID: Standard 1**
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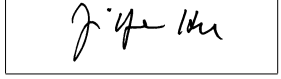

# Method 6020 - Summary Report

**Sample ID: Standard 2**
Sample Date/Time: Friday, May 18, 2012 09:49:08
Number of Replicates: 3
Autosampler Position: 2
Sample Description:
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

## Concentration Results

| IS | Analyte | Mass | Intensity | RSD | Conc. | SD | RSD | Units | Blank Intens. | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| ⌈ | **Li** | 7 | 13751.3 | 5.9 | | | | ug/L | 13493 | Standard |
| \| | **Be** | 9 | 191.7 | 5.4 | | | | ug/L | 13 | Standard |
| \| | **Al** | 27 | 10567.0 | 3.9 | | | | ug/L | 8786 | Standard |
| ⌊> | **Sc** | 45 | 287603.5 | 8.5 | | | | ug/L | 280553 | Standard |
| ⌈ | **Ti** | 47 | 267.3 | 22.6 | | | | ug/L | 96 | Standard |
| \| | **V** | 51 | 4499.2 | 5.6 | | | | ug/L | 3640 | Standard |
| \| | **Cr** | 52 | 12088.8 | 3.8 | | | | ug/L | 11495 | Standard |
| \| | **Cr** | 53 | 591.7 | 9.9 | | | | ug/L | 564 | Standard |
| \| | **Mn** | 55 | 2212.2 | 4.4 | | | | ug/L | 1247 | Standard |
| \| | **Co** | 59 | 827.0 | 5.4 | | | | ug/L | 114 | Standard |
| \| | **Ni** | 60 | 198.3 | 12.0 | | | | ug/L | 66 | Standard |
| \| | **Cu** | 65 | 346.7 | 6.6 | | | | ug/L | 219 | Standard |
| \| | **Zn** | 66 | 339.3 | 6.8 | | | | ug/L | 232 | Standard |
| \| > | **Ge** | 72 | 233591.4 | 6.2 | | | | ug/L | 228255 | Standard |
| \| | **As** | 75 | -192.6 | 15.4 | | | | ug/L | -233 | Standard |
| \| | **Se** | 82 | 26.9 | 13.2 | | | | ug/L | 23 | Standard |
| ⌊ | **Se-1** | 77 | 89.3 | 6.2 | | | | ug/L | 91 | Standard |
| ⌈ > | **Ga** | 71 | 214577.8 | 8.6 | | | | mg/L | 208873 | Standard |
| ⌊ | **Rb** | 85 | 23.3 | 12.4 | | | | ug/L | 28 | Standard |
| ⌈ | **Y** | 89 | 237657.3 | 9.6 | | | | ug/L | 234742 | Standard |
| ⌊> | **Rh** | 103 | 123691.1 | 7.6 | | | | ug/L | 121294 | Standard |
| ⌈ | **Mo** | 98 | 370.5 | 5.4 | | | | ug/L | 6 | Standard |
| \| | **Ag** | 107 | 470.0 | 13.0 | | | | ug/L | 64 | Standard |
| \| | **Cd** | 111 | 615.8 | 7.4 | | | | mg/L | 417 | Standard |
| \| | **Cd** | 114 | 1537.5 | 8.4 | | | | ug/L | 1009 | Standard |
| \| > | **In** | 115 | 634961.0 | 6.7 | | | | ug/L | 628085 | Standard |
| \| | **Sn** | 118 | 1511.1 | 2.8 | | | | ug/L | 834 | Standard |
| \| | **Sb** | 123 | 521.3 | 15.1 | | | | ug/L | 22 | Standard |
| ⌊ | **Ba** | 135 | 252.7 | 7.5 | | | | ug/L | 36 | Standard |
| ⌈ | **Ce** | 140 | 194.7 | 91.0 | | | | ug/L | 44 | Standard |
| ⌊> | **Tb** | 159 | 699841.4 | 6.6 | | | | ug/L | 691511 | Standard |
| ⌈ | **Ho** | 165 | 8.7 | 33.3 | | | | ug/L | 6 | Standard |
| \| | **Tl** | 203 | 795.4 | 8.8 | | | | ug/L | 71 | Standard |
| \| | **Tl** | 205 | 1881.8 | 11.5 | | | | ug/L | 177 | Standard |
| \| | **Pb** | 206 | 859.0 | 7.2 | | | | ug/L | 268 | Standard |
| \| | **Pb** | 207 | 741.7 | 9.3 | | | | ug/L | 245 | Standard |
| \| | **Pb** | 208 | 3403.8 | 7.4 | | | | ug/L | 1057 | Standard |
| \| | **U** | 238 | 1223.0 | 9.6 | | | | ug/L | 9 | Standard |
| ⌊> | **Bi** | 209 | 399169.3 | 6.3 | | | | ug/L | 389590 | Standard |
| ⌈ | **Na** | 23 | 141.7 | 8.9 | | | | mg/L | 92 | Standard |
| \| | **Mg** | 24 | 2858.6 | 7.9 | | | | mg/L | 142 | Standard |

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| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | **K** | 39 | 690.0 | 24.5 | | mg/L | 635 | Standard |
| | **Ca** | 43 | 70.0 | 21.4 | | mg/L | 63 | Standard |
| | **Fe** | 54 | 867.0 | 14.7 | | mg/L | 901 | Standard |
| | **Fe** | 57 | 6733.2 | 4.2 | | mg/L | 5948 | Standard |
| > | **Sc-1** | 45 | 287603.5 | 8.5 | | mg/L | 280553 | Standard |
| | **Cl** | 35 | 840.7 | 6.3 | | ug/L | 931 | Standard |
| | **Kr** | 83 | 43.3 | 2.3 | | ug/L | 40 | Standard |
| | **Br** | 81 | 12381.8 | 9.5 | | ug/L | 11862 | Standard |
| | **P** | 31 | 77075.4 | 7.2 | | ug/L | 77079 | Standard |
| | **S** | 34 | 1015933.5 | 3.0 | | ug/L | 1028777 | Standard |
| | **Sr** | 88 | 356.7 | 9.3 | | ug/L | 318 | Standard |

## QC Calculated Values

| | Analyte | Mass | QC Std % Recovery | Int Std % Recovery | Spike % Recovery |
|---|---|---|---|---|---|
| | Li | 7 | | | |
| | Be | 9 | | | |
| | Al | 27 | | | |
| > | Sc | 45 | | | |
| | Ti | 47 | | | |
| | V | 51 | | | |
| | Cr | 52 | | | |
| | Cr | 53 | | | |
| | Mn | 55 | | | |
| | Co | 59 | | | |
| | Ni | 60 | | | |
| | Cu | 65 | | | |
| | Zn | 66 | | | |
| > | Ge | 72 | | | |
| | As | 75 | | | |
| | Se | 82 | | | |
| | Se-1 | 77 | | | |
| > | Ga | 71 | | | |
| | Rb | 85 | | | |
| | Y | 89 | | | |
| > | Rh | 103 | | | |
| | Mo | 98 | | | |
| | Ag | 107 | | | |
| | Cd | 111 | | | |
| | Cd | 114 | | | |
| > | In | 115 | | | |
| | Sn | 118 | | | |
| | Sb | 123 | | | |
| | Ba | 135 | | | |
| | Ce | 140 | | | |
| > | Tb | 159 | | | |
| | Ho | 165 | | | |
| | Tl | 203 | | | |
| | Tl | 205 | | | |
| | Pb | 206 | | | |

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| | |
|---|---|
| Pb | 207 |
| Pb | 208 |
| U | 238 |
| > Bi | 209 |
| Na | 23 |
| Mg | 24 |
| K | 39 |
| Ca | 43 |
| Fe | 54 |
| Fe | 57 |
| > Sc-1 | 45 |
| Cl | 35 |
| Kr | 83 |
| Br | 81 |
| P | 31 |
| S | 34 |
| Sr | 88 |

## QC Out of Limits

| Measurement Type | Analyte | Mass | Out of Limits Message |
|---|---|---|---|

**Sample ID: Standard 2**
Report Date/Time: Friday, May 18, 2012 09:51:41
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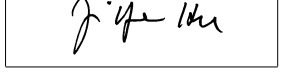

# Method 6020 - Summary Report

**Sample ID: Standard 3**
Sample Date/Time: Friday, May 18, 2012 09:52:00
Number of Replicates: 3
Autosampler Position: 3
Sample Description:
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

## Concentration Results

| IS | Analyte | Mass | Intensity | RSD | Conc. | SD | RSD | Units | Blank Intens. | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| ⌈ | **Li** | 7 | 14683.8 | 7.7 | **50.0000** | 382.315 | 764.6 | ug/L | 13493 | Standard |
| \| | **Be** | 9 | 160407.4 | 4.5 | **50.0000** | 2.213 | 4.4 | ug/L | 13 | Standard |
| \| | **Al** | 27 | 804201.2 | 4.1 | **50.0000** | 1.950 | 3.9 | ug/L | 8786 | Standard |
| ⌊> | **Sc** | 45 | 307754.7 | 7.8 | | | | ug/L | 280553 | Standard |
| ⌈ | **Ti** | 47 | 148688.8 | 5.5 | **100.0000** | 0.622 | 0.6 | ug/L | 96 | Standard |
| \| | **V** | 51 | 771860.4 | 5.0 | **50.0000** | 0.116 | 0.2 | ug/L | 3640 | Standard |
| \| | **Cr** | 52 | 568279.8 | 5.5 | **50.0000** | 0.394 | 0.8 | ug/L | 11495 | Standard |
| \| | **Cr** | 53 | 83685.8 | 4.7 | **50.0000** | 0.478 | 1.0 | ug/L | 564 | Standard |
| \| | **Mn** | 55 | 977357.8 | 4.8 | **50.0000** | 0.154 | 0.3 | ug/L | 1247 | Standard |
| \| | **Co** | 59 | 683570.6 | 5.8 | **50.0000** | 0.550 | 1.1 | ug/L | 114 | Standard |
| \| | **Ni** | 60 | 142104.6 | 4.8 | **50.0000** | 0.164 | 0.3 | ug/L | 66 | Standard |
| \| | **Cu** | 65 | 123862.1 | 5.0 | **50.0000** | 0.078 | 0.2 | ug/L | 219 | Standard |
| \| | **Zn** | 66 | 55951.2 | 3.6 | **50.0000** | 0.771 | 1.5 | ug/L | 232 | Standard |
| \| > | **Ge** | 72 | 243746.7 | 4.9 | | | | ug/L | 228255 | Standard |
| \| | **As** | 75 | 53606.4 | 5.0 | **50.0000** | 0.094 | 0.2 | ug/L | -233 | Standard |
| \| | **Se** | 82 | 7182.1 | 6.7 | **50.0000** | 0.955 | 1.9 | ug/L | 23 | Standard |
| ⌊ | **Se-1** | 77 | 3974.5 | 4.2 | **50.0000** | 0.371 | 0.7 | ug/L | 91 | Standard |
| ⌈> | **Ga** | 71 | 217877.6 | 4.7 | | | | mg/L | 208873 | Standard |
| ⌊ | **Rb** | 85 | 1088.4 | 12.2 | | | | ug/L | 28 | Standard |
| ⌈ | **Y** | 89 | 254341.6 | 7.5 | | | | ug/L | 234742 | Standard |
| ⌊> | **Rh** | 103 | 127571.2 | 6.2 | | | | ug/L | 121294 | Standard |
| ⌈ | **Mo** | 98 | 399483.8 | 6.6 | **100.0000** | 1.701 | 1.7 | ug/L | 6 | Standard |
| \| | **Ag** | 107 | 403837.3 | 6.2 | **50.0000** | 0.632 | 1.3 | ug/L | 64 | Standard |
| \| | **Cd** | 111 | 210503.5 | 4.4 | **50.0000** | 0.317 | 0.6 | mg/L | 417 | Standard |
| \| | **Cd** | 114 | 530302.1 | 4.3 | **50.0000** | 0.441 | 0.9 | ug/L | 1009 | Standard |
| \| > | **In** | 115 | 660646.4 | 5.0 | | | | ug/L | 628085 | Standard |
| \| | **Sn** | 118 | 700271.7 | 5.2 | **50.0000** | 0.475 | 0.9 | ug/L | 834 | Standard |
| \| | **Sb** | 123 | 498031.6 | 4.1 | **50.0000** | 0.512 | 1.0 | ug/L | 22 | Standard |
| ⌊ | **Ba** | 135 | 211992.7 | 4.5 | **50.0000** | 0.291 | 0.6 | ug/L | 36 | Standard |
| ⌈ | **Ce** | 140 | 833.4 | 6.2 | | | | ug/L | 44 | Standard |
| ⌊> | **Tb** | 159 | 736769.9 | 5.5 | | | | ug/L | 691511 | Standard |
| ⌈ | **Ho** | 165 | 14.3 | 10.7 | | | | ug/L | 6 | Standard |
| \| | **Tl** | 203 | 737751.2 | 3.7 | **50.0000** | 0.583 | 1.2 | ug/L | 71 | Standard |
| \| | **Tl** | 205 | 1762097.0 | 4.6 | **50.0000** | 0.337 | 0.7 | ug/L | 177 | Standard |
| \| | **Pb** | 206 | 598431.4 | 4.0 | **50.0000** | 0.583 | 1.2 | ug/L | 268 | Standard |
| \| | **Pb** | 207 | 516285.6 | 4.1 | **50.0000** | 0.225 | 0.5 | ug/L | 245 | Standard |
| \| | **Pb** | 208 | 2347369.7 | 4.3 | **50.0000** | 0.364 | 0.7 | ug/L | 1057 | Standard |
| \| | **U** | 238 | 1223808.9 | 5.1 | **50.0000** | 0.844 | 1.7 | ug/L | 9 | Standard |
| ⌊> | **Bi** | 209 | 411749.8 | 4.4 | | | | ug/L | 389590 | Standard |
| ⌈ | **Na** | 23 | 16814.4 | 6.4 | **5.0000** | 0.164 | 3.3 | mg/L | 92 | Standard |
| \| | **Mg** | 24 | 2104675.1 | 15.5 | **5.0000** | 0.619 | 12.4 | mg/L | 142 | Standard |

**Sample ID: Standard 3**
Report Date/Time: Friday, May 18, 2012 09:54:34
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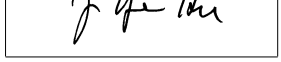


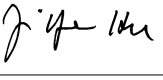
| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | **K** | 39 | 54676.9 | 3.9 | **5.0000** | 0.206 | 4.1 | mg/L | 635 | Standard |
| | **Ca** | 43 | 2346.8 | 5.8 | **5.0000** | 0.329 | 6.6 | mg/L | 63 | Standard |
| | **Fe** | 54 | 29670.3 | 3.5 | **5.0000** | 0.244 | 4.9 | mg/L | 901 | Standard |
| | **Fe** | 57 | 833311.7 | 5.3 | **5.0000** | 0.139 | 2.8 | mg/L | 5948 | Standard |
| > | **Sc-1** | 45 | 307754.7 | 7.8 | | | | mg/L | 280553 | Standard |
| | **Cl** | 35 | 870.7 | 8.9 | | | | ug/L | 931 | Standard |
| | **Kr** | 83 | 45.1 | 14.8 | | | | ug/L | 40 | Standard |
| | **Br** | 81 | 12354.2 | 6.4 | | | | ug/L | 11862 | Standard |
| | **P** | 31 | 87378.8 | 7.4 | | | | ug/L | 77079 | Standard |
| | **S** | 34 | 1001624.0 | 5.1 | | | | ug/L | 1028777 | Standard |
| | **Sr** | 88 | 760.0 | 11.7 | | | | ug/L | 318 | Standard |

## QC Calculated Values

| | Analyte | Mass | QC Std % Recovery | Int Std % Recovery | Spike % Recovery |
|---|---|---|---|---|---|
| | Li | 7 | | | |
| | Be | 9 | | | |
| | Al | 27 | | | |
| > | Sc | 45 | | | |
| | Ti | 47 | | | |
| | V | 51 | | | |
| | Cr | 52 | | | |
| | Cr | 53 | | | |
| | Mn | 55 | | | |
| | Co | 59 | | | |
| | Ni | 60 | | | |
| | Cu | 65 | | | |
| | Zn | 66 | | | |
| > | Ge | 72 | | | |
| | As | 75 | | | |
| | Se | 82 | | | |
| | Se-1 | 77 | | | |
| > | Ga | 71 | | | |
| | Rb | 85 | | | |
| | Y | 89 | | | |
| > | Rh | 103 | | | |
| | Mo | 98 | | | |
| | Ag | 107 | | | |
| | Cd | 111 | | | |
| | Cd | 114 | | | |
| > | In | 115 | | | |
| | Sn | 118 | | | |
| | Sb | 123 | | | |
| | Ba | 135 | | | |
| | Ce | 140 | | | |
| > | Tb | 159 | | | |
| | Ho | 165 | | | |
| | Tl | 203 | | | |
| | Tl | 205 | | | |
| | Pb | 206 | | | |



Approved: May 21, 2012



| | | |
|---|---|---|
| | Pb | 207 |
| | Pb | 208 |
| | U | 238 |
| > | Bi | 209 |
| | Na | 23 |
| | Mg | 24 |
| | K | 39 |
| | Ca | 43 |
| | Fe | 54 |
| | Fe | 57 |
| > | Sc-1 | 45 |
| | Cl | 35 |
| | Kr | 83 |
| | Br | 81 |
| | P | 31 |
| | S | 34 |
| | Sr | 88 |

## QC Out of Limits

| Measurement Type | Analyte | Mass | Out of Limits Message |
|---|---|---|---|

**Sample ID: Standard 3**
Report Date/Time: Friday, May 18, 2012 09:54:34
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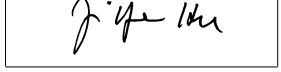
Approved: May 21, 2012



# Method 6020 - Summary Report

**Sample ID: Standard 4**
Sample Date/Time: Friday, May 18, 2012 09:54:54
Number of Replicates: 3
Autosampler Position: 4
Sample Description:
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

## Concentration Results

| IS | Analyte | Mass | Intensity | RSD | Conc. | SD | RSD | Units | Blank Intens. | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| ⌈ | **Li** | 7 | 13407.6 | 6.9 | **156.5188** | 166.677 | 106.5 | ug/L | 13493 | Standard |
| \| | **Be** | 9 | 304346.8 | 4.4 | **100.7277** | 5.218 | 5.2 | ug/L | 13 | Standard |
| \| | **Al** | 27 | 1526941.0 | 6.2 | **101.0360** | 3.387 | 3.4 | ug/L | 8786 | Standard |
| ⌊> | **Sc** | 45 | 288117.4 | 9.3 | | | | ug/L | 280553 | Standard |
| ⌈ | **Ti** | 47 | 287708.7 | 6.5 | **199.7952** | 2.913 | 1.5 | ug/L | 96 | Standard |
| \| | **V** | 51 | 1491604.6 | 5.4 | **99.9578** | 2.010 | 2.0 | ug/L | 3640 | Standard |
| \| | **Cr** | 52 | 1078751.7 | 6.2 | **99.4614** | 2.450 | 2.5 | ug/L | 11495 | Standard |
| \| | **Cr** | 53 | 160022.7 | 7.2 | **99.4094** | 1.354 | 1.4 | ug/L | 564 | Standard |
| \| | **Mn** | 55 | 1850247.3 | 6.0 | **98.8136** | 0.807 | 0.8 | ug/L | 1247 | Standard |
| \| | **Co** | 59 | 1299353.6 | 6.8 | **98.9920** | 1.336 | 1.3 | ug/L | 114 | Standard |
| \| | **Ni** | 60 | 274980.4 | 7.3 | **99.8652** | 2.305 | 2.3 | ug/L | 66 | Standard |
| \| | **Cu** | 65 | 234533.3 | 6.5 | **98.8353** | 1.914 | 1.9 | ug/L | 219 | Standard |
| \| | **Zn** | 66 | 108478.1 | 5.8 | **100.0967** | 2.150 | 2.1 | ug/L | 232 | Standard |
| \| > | **Ge** | 72 | 236440.2 | 6.2 | | | | ug/L | 228255 | Standard |
| \| | **As** | 75 | 105111.8 | 6.6 | **100.4170** | 2.608 | 2.6 | ug/L | -233 | Standard |
| \| | **Se** | 82 | 13848.6 | 7.9 | **99.7742** | 3.183 | 3.2 | ug/L | 23 | Standard |
| ⌊ | **Se-1** | 77 | 7782.7 | 6.6 | **101.0379** | 3.253 | 3.2 | ug/L | 91 | Standard |
| ⌈> | **Ga** | 71 | 212369.8 | 6.0 | | | | mg/L | 208873 | Standard |
| ⌊ | **Rb** | 85 | 2146.8 | 6.4 | | | | ug/L | 28 | Standard |
| ⌈ | **Y** | 89 | 241812.6 | 6.3 | | | | ug/L | 234742 | Standard |
| ⌊> | **Rh** | 103 | 120968.4 | 6.6 | | | | ug/L | 121294 | Standard |
| ⌈ | **Mo** | 98 | 780848.3 | 6.2 | **201.7249** | 7.082 | 3.5 | ug/L | 6 | Standard |
| \| | **Ag** | 107 | 753505.0 | 8.5 | **98.5111** | 5.484 | 5.6 | ug/L | 64 | Standard |
| \| | **Cd** | 111 | 405511.6 | 5.0 | **100.1630** | 2.768 | 2.8 | mg/L | 417 | Standard |
| \| | **Cd** | 114 | 1023480.5 | 4.6 | **100.2537** | 1.895 | 1.9 | ug/L | 1009 | Standard |
| \| > | **In** | 115 | 634703.3 | 3.8 | | | | ug/L | 628085 | Standard |
| \| | **Sn** | 118 | 1343527.3 | 5.1 | **99.9444** | 2.108 | 2.1 | ug/L | 834 | Standard |
| \| | **Sb** | 123 | 970061.8 | 4.1 | **100.6675** | 1.870 | 1.9 | ug/L | 22 | Standard |
| ⌊ | **Ba** | 135 | 409795.0 | 4.7 | **100.2929** | 2.232 | 2.2 | ug/L | 36 | Standard |
| ⌈ | **Ce** | 140 | 1547.7 | 5.1 | | | | ug/L | 44 | Standard |
| ⌊> | **Tb** | 159 | 717833.7 | 3.9 | | | | ug/L | 691511 | Standard |
| ⌈ | **Ho** | 165 | 18.0 | 16.7 | | | | ug/L | 6 | Standard |
| \| | **Tl** | 203 | 1419150.9 | 4.9 | **100.3948** | 2.250 | 2.2 | ug/L | 71 | Standard |
| \| | **Tl** | 205 | 3490729.3 | 4.8 | **101.8770** | 1.491 | 1.5 | ug/L | 177 | Standard |
| \| | **Pb** | 206 | 1148851.5 | 4.5 | **100.3099** | 1.277 | 1.3 | ug/L | 268 | Standard |
| \| | **Pb** | 207 | 986154.9 | 4.5 | **100.0606** | 1.367 | 1.4 | ug/L | 245 | Standard |
| \| | **Pb** | 208 | 4572878.7 | 4.3 | **101.0520** | 1.595 | 1.6 | ug/L | 1057 | Standard |
| \| | **U** | 238 | 2404547.0 | 5.3 | **101.4670** | 2.676 | 2.6 | ug/L | 9 | Standard |
| ⌊> | **Bi** | 209 | 392772.8 | 3.9 | | | | ug/L | 389590 | Standard |
| ⌈ | **Na** | 23 | 31623.1 | 6.6 | **10.0465** | 0.309 | 3.1 | mg/L | 92 | Standard |
| \| | **Mg** | 24 | 4630083.3 | 5.5 | **10.8215** | 0.488 | 4.5 | mg/L | 142 | Standard |

**Sample ID: Standard 4**
Report Date/Time: Friday, May 18, 2012 09:57:26
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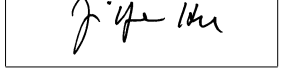

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | **K** | 39 | 101112.1 | 6.1 | **9.9697** | 0.394 | 4.0 | mg/L | 635 | Standard |
| | **Ca** | 43 | 4330.6 | 6.1 | **10.0053** | 0.352 | 3.5 | mg/L | 63 | Standard |
| | **Fe** | 54 | 54177.4 | 6.2 | **9.9493** | 0.346 | 3.5 | mg/L | 901 | Standard |
| | **Fe** | 57 | 1597698.4 | 4.9 | **10.1457** | 0.476 | 4.7 | mg/L | 5948 | Standard |
| > | **Sc-1** | 45 | 288117.4 | 9.3 | | | | mg/L | 280553 | Standard |
| | **Cl** | 35 | 822.7 | 7.8 | | | | ug/L | 931 | Standard |
| | **Kr** | 83 | 45.8 | 16.1 | | | | ug/L | 40 | Standard |
| | **Br** | 81 | 12068.2 | 8.2 | | | | ug/L | 11862 | Standard |
| | **P** | 31 | 83185.4 | 8.3 | | | | ug/L | 77079 | Standard |
| | **S** | 34 | 986409.0 | 6.2 | | | | ug/L | 1028777 | Standard |
| | **Sr** | 88 | 1068.4 | 7.7 | | | | ug/L | 318 | Standard |

## QC Calculated Values

| | Analyte | Mass | QC Std % Recovery | Int Std % Recovery | Spike % Recovery |
|---|---|---|---|---|---|
| | Li | 7 | | | |
| | Be | 9 | | | |
| | Al | 27 | | | |
| > | Sc | 45 | | | |
| | Ti | 47 | | | |
| | V | 51 | | | |
| | Cr | 52 | | | |
| | Cr | 53 | | | |
| | Mn | 55 | | | |
| | Co | 59 | | | |
| | Ni | 60 | | | |
| | Cu | 65 | | | |
| | Zn | 66 | | | |
| > | Ge | 72 | | | |
| | As | 75 | | | |
| | Se | 82 | | | |
| | Se-1 | 77 | | | |
| > | Ga | 71 | | | |
| | Rb | 85 | | | |
| | Y | 89 | | | |
| > | Rh | 103 | | | |
| | Mo | 98 | | | |
| | Ag | 107 | | | |
| | Cd | 111 | | | |
| | Cd | 114 | | | |
| > | In | 115 | | | |
| | Sn | 118 | | | |
| | Sb | 123 | | | |
| | Ba | 135 | | | |
| | Ce | 140 | | | |
| > | Tb | 159 | | | |
| | Ho | 165 | | | |
| | Tl | 203 | | | |
| | Tl | 205 | | | |
| | Pb | 206 | | | |

**Sample ID: Standard 4**
Report Date/Time: Friday, May 18, 2012 09:57:26
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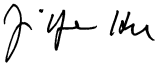
Approved: May 21, 2012



| | | |
|---|---|---|
| | Pb | 207 |
| | Pb | 208 |
| | U | 238 |
| > | Bi | 209 |
| | Na | 23 |
| | Mg | 24 |
| | K | 39 |
| | Ca | 43 |
| | Fe | 54 |
| | Fe | 57 |
| > | Sc-1 | 45 |
| | Cl | 35 |
| | Kr | 83 |
| | Br | 81 |
| | P | 31 |
| | S | 34 |
| | Sr | 88 |

## QC Out of Limits

| Measurement Type | Analyte | Mass | Out of Limits Message |
|---|---|---|---|
| Corr. Coef. | Mg | 24 | Correlation coefficient < 0.998 |

**Sample ID: Standard 4**
Report Date/Time: Friday, May 18, 2012 09:57:26
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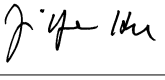
Approved: May 21, 2012



# Method 6020 - Summary Report

**Sample ID: QC Std 1**
Sample Date/Time: Friday, May 18, 2012 09:57:48
Number of Replicates: 3
Autosampler Position: 201
Sample Description:
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

## Concentration Results

| IS | Analyte | Mass | Intensity | RSD | Conc. | SD | RSD | Units | Blank Intens. | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| ⌈ | **Li** | 7 | 14213.4 | 9.4 | **44.4009** | 190.153 | 428.3 | ug/L | 13493 | Standard |
| \| | **Be** | 9 | 162173.7 | 6.0 | **51.6312** | 0.959 | 1.9 | ug/L | 13 | Standard |
| \| | **Al** | 27 | 789304.4 | 5.9 | **49.9835** | 1.256 | 2.5 | ug/L | 8786 | Standard |
| ⌊> | **Sc** | 45 | 298799.1 | 7.8 | | | | ug/L | 280553 | Standard |
| ⌈ | **Ti** | 47 | 148923.0 | 7.0 | **100.7765** | 1.779 | 1.8 | ug/L | 96 | Standard |
| \| | **V** | 51 | 763591.6 | 8.6 | **49.7005** | 1.546 | 3.1 | ug/L | 3640 | Standard |
| \| | **Cr** | 52 | 557471.7 | 7.5 | **49.5467** | 1.309 | 2.6 | ug/L | 11495 | Standard |
| \| | **Cr** | 53 | 82595.1 | 6.2 | **49.8918** | 0.289 | 0.6 | ug/L | 564 | Standard |
| \| | **Mn** | 55 | 970775.1 | 5.7 | **50.5266** | 0.431 | 0.9 | ug/L | 1247 | Standard |
| \| | **Co** | 59 | 677174.2 | 6.8 | **50.2977** | 0.633 | 1.3 | ug/L | 114 | Standard |
| \| | **Ni** | 60 | 142331.3 | 7.2 | **50.3922** | 1.035 | 2.1 | ug/L | 66 | Standard |
| \| | **Cu** | 65 | 122615.0 | 6.8 | **50.3285** | 0.784 | 1.6 | ug/L | 219 | Standard |
| \| | **Zn** | 66 | 57154.9 | 6.3 | **51.2750** | 0.379 | 0.7 | ug/L | 232 | Standard |
| \|> | **Ge** | 72 | 242445.7 | 5.9 | | | | ug/L | 228255 | Standard |
| \| | **As** | 75 | 53198.5 | 6.3 | **49.6730** | 0.529 | 1.1 | ug/L | -233 | Standard |
| \| | **Se** | 82 | 7039.8 | 7.2 | **49.3872** | 0.825 | 1.7 | ug/L | 23 | Standard |
| ⌊ | **Se-1** | 77 | 3922.2 | 7.6 | **49.0552** | 1.802 | 3.7 | ug/L | 91 | Standard |
| ⌈> | **Ga** | 71 | 218569.8 | 6.7 | | | | mg/L | 208873 | Standard |
| ⌊ | **Rb** | 85 | 1108.4 | 9.7 | | | | ug/L | 28 | Standard |
| ⌈ | **Y** | 89 | 247821.6 | 7.8 | | | | ug/L | 234742 | Standard |
| ⌊> | **Rh** | 103 | 127042.0 | 8.1 | | | | ug/L | 121294 | Standard |
| ⌈ | **Mo** | 98 | 399453.5 | 6.7 | **98.1115** | 0.466 | 0.5 | ug/L | 6 | Standard |
| \| | **Ag** | 107 | 392396.1 | 8.7 | **48.7454** | 0.961 | 2.0 | ug/L | 64 | Standard |
| \| | **Cd** | 111 | 210294.4 | 6.7 | **49.3180** | 0.110 | 0.2 | mg/L | 417 | Standard |
| \| | **Cd** | 114 | 529347.5 | 5.7 | **49.2547** | 0.670 | 1.4 | ug/L | 1009 | Standard |
| \|> | **In** | 115 | 667935.8 | 6.9 | | | | ug/L | 628085 | Standard |
| \| | **Sn** | 118 | 693113.9 | 6.0 | **48.9968** | 0.493 | 1.0 | ug/L | 834 | Standard |
| \| | **Sb** | 123 | 503027.7 | 4.6 | **49.6555** | 1.273 | 2.6 | ug/L | 22 | Standard |
| ⌊ | **Ba** | 135 | 212242.9 | 5.6 | **49.3939** | 1.024 | 2.1 | ug/L | 36 | Standard |
| ⌈ | **Ce** | 140 | 800.4 | 4.5 | | | | ug/L | 44 | Standard |
| ⌊> | **Tb** | 159 | 743247.0 | 5.5 | | | | ug/L | 691511 | Standard |
| ⌈ | **Ho** | 165 | 15.3 | 10.0 | | | | ug/L | 6 | Standard |
| \| | **Tl** | 203 | 732392.8 | 5.3 | **50.2785** | 0.196 | 0.4 | ug/L | 71 | Standard |
| \| | **Tl** | 205 | 1746771.0 | 5.9 | **49.4638** | 0.488 | 1.0 | ug/L | 177 | Standard |
| \| | **Pb** | 206 | 597745.1 | 6.3 | **50.6201** | 0.727 | 1.4 | ug/L | 268 | Standard |
| \| | **Pb** | 207 | 512525.6 | 5.2 | **50.4566** | 0.343 | 0.7 | ug/L | 245 | Standard |
| \| | **Pb** | 208 | 2335569.4 | 6.0 | **50.0583** | 0.576 | 1.1 | ug/L | 1057 | Standard |
| \| | **U** | 238 | 1216145.1 | 6.9 | **49.7789** | 1.000 | 2.0 | ug/L | 9 | Standard |
| ⌊> | **Bi** | 209 | 404735.5 | 4.9 | | | | ug/L | 389590 | Standard |
| ⌈ | **Na** | 23 | 16515.7 | 8.2 | **5.0299** | 0.111 | 2.2 | mg/L | 92 | Standard |
| \| | **Mg** | 24 | 2426822.6 | 5.4 | **5.4636** | 0.244 | 4.5 | mg/L | 142 | Standard |

**Sample ID: QC Std 1**
Report Date/Time: Friday, May 18, 2012 10:00:22
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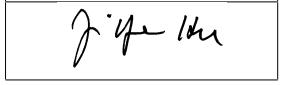
Approved: May 21, 2012



| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | **K** | 39 | 56043.6 | 5.1 | **5.2981** | 0.276 | 5.2 | mg/L | 635 | Standard |
| | **Ca** | 43 | 2333.5 | 3.9 | **5.1213** | 0.239 | 4.7 | mg/L | 63 | Standard |
| | **Fe** | 54 | 29314.6 | 6.5 | **5.1091** | 0.150 | 2.9 | mg/L | 901 | Standard |
| | **Fe** | 57 | 840264.6 | 5.2 | **5.1190** | 0.154 | 3.0 | mg/L | 5948 | Standard |
| > | **Sc-1** | 45 | 298799.1 | 7.8 | | | | mg/L | 280553 | Standard |
| | **Cl** | 35 | 867.4 | 3.8 | | | | ug/L | 931 | Standard |
| | **Kr** | 83 | 46.7 | 8.7 | | | | ug/L | 40 | Standard |
| | **Br** | 81 | 12019.8 | 7.1 | | | | ug/L | 11862 | Standard |
| | **P** | 31 | 84224.1 | 9.7 | | | | ug/L | 77079 | Standard |
| | **S** | 34 | 989235.8 | 7.6 | | | | ug/L | 1028777 | Standard |
| | **Sr** | 88 | 698.3 | 5.4 | | | | ug/L | 318 | Standard |

## QC Calculated Values

| | Analyte | Mass | QC Std % Recovery | Int Std % Recovery | Spike % Recovery |
|---|---|---|---|---|---|
| | Li | 7 | | | |
| | Be | 9 | 103.262 | | |
| | Al | 27 | 99.967 | | |
| > | Sc | 45 | | | |
| | Ti | 47 | 100.776 | | |
| | V | 51 | 99.401 | | |
| | Cr | 52 | 99.093 | | |
| | Cr | 53 | 99.784 | | |
| | Mn | 55 | 101.053 | | |
| | Co | 59 | 100.595 | | |
| | Ni | 60 | 100.784 | | |
| | Cu | 65 | 100.657 | | |
| | Zn | 66 | 102.550 | | |
| > | Ge | 72 | | 106.217 | |
| | As | 75 | 99.346 | | |
| | Se | 82 | 98.774 | | |
| | Se-1 | 77 | | | |
| > | Ga | 71 | | 104.643 | |
| | Rb | 85 | | | |
| | Y | 89 | | | |
| > | Rh | 103 | | 104.739 | |
| | Mo | 98 | 98.112 | | |
| | Ag | 107 | 97.491 | | |
| | Cd | 111 | 98.636 | | |
| | Cd | 114 | | | |
| > | In | 115 | | 106.345 | |
| | Sn | 118 | 97.994 | | |
| | Sb | 123 | 99.311 | | |
| | Ba | 135 | 98.788 | | |
| | Ce | 140 | | | |
| > | Tb | 159 | | 107.482 | |
| | Ho | 165 | | | |
| | Tl | 203 | 100.557 | | |
| | Tl | 205 | | | |
| | Pb | 206 | 101.240 | | |

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| | | | | |
|---|---|---|---|---|
| | Pb | 207 | 100.913 | |
| | Pb | 208 | 100.117 | |
| | U | 238 | 99.558 | |
| > | Bi | 209 | | 103.888 |
| | Na | 23 | 100.597 | |
| | Mg | 24 | 109.273 | |
| | K | 39 | 105.961 | |
| | Ca | 43 | 102.426 | |
| | Fe | 54 | 102.182 | |
| | Fe | 57 | 102.380 | |
| > | Sc-1 | 45 | | |
| | Cl | 35 | | |
| | Kr | 83 | | |
| | Br | 81 | | |
| | P | 31 | | |
| | S | 34 | | |
| | Sr | 88 | | |

## QC Out of Limits

| Measurement Type | Analyte | Mass | Out of Limits Message |
|---|---|---|---|

**Sample ID: QC Std 1**
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# Method 6020 - Summary Report

**Sample ID: QC Std 2**
Sample Date/Time: Friday, May 18, 2012 10:00:44
Number of Replicates: 3
Autosampler Position: 102
Sample Description:
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

## Concentration Results

| IS | Analyte | Mass | Intensity | RSD | Conc. | SD | RSD | Units | Blank Intens. | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| ⌈ | **Li** | 7 | 13104.0 | 3.9 | **-83.4984** | 439.231 | 526.0 | ug/L | 13493 | Standard |
| \| | **Be** | 9 | 25.0 | 52.9 | **-0.0046** | 0.005 | 105.9 | ug/L | 13 | Standard |
| \| | **Al** | 27 | 9496.3 | 5.8 | **0.0173** | 0.008 | 46.4 | ug/L | 8786 | Standard |
| ⌊> | **Sc** | 45 | 270370.9 | 6.5 | | | | ug/L | 280553 | Standard |
| ⌈ | **Ti** | 47 | 101.3 | 19.0 | **-0.0136** | 0.011 | 78.1 | ug/L | 96 | Standard |
| \| | **V** | 51 | 3106.3 | 5.5 | **-0.0384** | 0.005 | 12.9 | ug/L | 3640 | Standard |
| \| | **Cr** | 52 | 9753.8 | 2.5 | **-0.1430** | 0.024 | 16.6 | ug/L | 11495 | Standard |
| \| | **Cr** | 53 | 401.7 | 5.0 | **-0.0617** | 0.000 | 0.5 | ug/L | 564 | Standard |
| \| | **Mn** | 55 | 1389.1 | 10.2 | **0.0075** | 0.004 | 54.5 | ug/L | 1247 | Standard |
| \| | **Co** | 59 | 180.3 | 34.6 | **0.0004** | 0.004 | 1098.4 | ug/L | 114 | Standard |
| \| | **Ni** | 60 | 64.0 | 7.8 | **0.0015** | 0.001 | 98.3 | ug/L | 66 | Standard |
| \| | **Cu** | 65 | 260.0 | 12.2 | **0.0161** | 0.009 | 57.0 | ug/L | 219 | Standard |
| \| | **Zn** | 66 | 283.3 | 8.5 | **0.0053** | 0.017 | 317.8 | ug/L | 232 | Standard |
| \|> | **Ge** | 72 | 226659.8 | 4.9 | | | | ug/L | 228255 | Standard |
| \| | **As** | 75 | -205.3 | 14.2 | **0.0320** | 0.039 | 123.1 | ug/L | -233 | Standard |
| \| | **Se** | 82 | 27.1 | 25.7 | **0.0569** | 0.045 | 78.3 | ug/L | 23 | Standard |
| ⌊ | **Se-1** | 77 | 77.7 | 12.7 | **-0.0721** | 0.139 | 192.7 | ug/L | 91 | Standard |
| ⌈> | **Ga** | 71 | 203861.5 | 6.8 | | | | mg/L | 208873 | Standard |
| ⌊ | **Rb** | 85 | 21.7 | 35.3 | | | | ug/L | 28 | Standard |
| ⌈ | **Y** | 89 | 233597.0 | 7.5 | | | | ug/L | 234742 | Standard |
| ⌊> | **Rh** | 103 | 121887.7 | 7.4 | | | | ug/L | 121294 | Standard |
| ⌈ | **Mo** | 98 | 183.5 | 65.8 | **0.0518** | 0.030 | 57.6 | ug/L | 6 | Standard |
| \| | **Ag** | 107 | 72.3 | 38.1 | **-0.0018** | 0.003 | 192.5 | ug/L | 64 | Standard |
| \| | **Cd** | 111 | 421.5 | 12.5 | **0.0037** | 0.009 | 252.1 | mg/L | 417 | Standard |
| \| | **Cd** | 114 | 1044.4 | 7.0 | **0.0036** | 0.003 | 70.7 | ug/L | 1009 | Standard |
| \|> | **In** | 115 | 623389.7 | 5.0 | | | | ug/L | 628085 | Standard |
| \| | **Sn** | 118 | 1116.4 | 27.2 | **0.0216** | 0.020 | 93.3 | ug/L | 834 | Standard |
| \| | **Sb** | 123 | 1744.2 | 56.7 | **0.1780** | 0.097 | 54.7 | ug/L | 22 | Standard |
| ⌊ | **Ba** | 135 | 52.0 | 33.3 | **0.0011** | 0.004 | 357.0 | ug/L | 36 | Standard |
| ⌈ | **Ce** | 140 | 43.7 | 9.3 | | | | ug/L | 44 | Standard |
| ⌊> | **Tb** | 159 | 686221.6 | 5.9 | | | | ug/L | 691511 | Standard |
| ⌈ | **Ho** | 165 | 5.7 | 44.4 | | | | ug/L | 6 | Standard |
| \| | **Tl** | 203 | 119.7 | 63.3 | **0.0031** | 0.005 | 161.9 | ug/L | 71 | Standard |
| \| | **Tl** | 205 | 255.0 | 67.0 | **0.0034** | 0.005 | 136.4 | ug/L | 177 | Standard |
| \| | **Pb** | 206 | 323.0 | 17.4 | **0.0046** | 0.004 | 82.0 | ug/L | 268 | Standard |
| \| | **Pb** | 207 | 287.7 | 28.1 | **0.0054** | 0.007 | 131.6 | ug/L | 245 | Standard |
| \| | **Pb** | 208 | 1256.7 | 20.8 | **0.0040** | 0.005 | 118.8 | ug/L | 1057 | Standard |
| \| | **U** | 238 | 100.0 | 101.7 | **0.0034** | 0.004 | 119.4 | ug/L | 9 | Standard |
| ⌊> | **Bi** | 209 | 388377.5 | 5.2 | | | | ug/L | 389590 | Standard |
| ⌈ | **Na** | 23 | 118.3 | 14.8 | **-0.0006** | 0.004 | 714.8 | mg/L | 92 | Standard |
| \| | **Mg** | 24 | 335.0 | 71.4 | **-0.0008** | 0.001 | 67.8 | mg/L | 142 | Standard |

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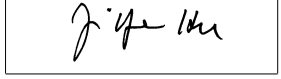

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | **K** | 39 | 686.7 | 6.2 | **0.0094** | 0.009 | 99.1 | mg/L | 635 | Standard |
| | **Ca** | 43 | 100.0 | 10.0 | **0.0877** | 0.016 | 18.3 | mg/L | 63 | Standard |
| | **Fe** | 54 | 871.1 | 3.8 | **0.0141** | 0.007 | 48.7 | mg/L | 901 | Standard |
| | **Fe** | 57 | 5227.6 | 5.3 | **-0.0026** | 0.001 | 29.3 | mg/L | 5948 | Standard |
| > | **Sc-1** | 45 | 270370.9 | 6.5 | | | | mg/L | 280553 | Standard |
| | **Cl** | 35 | 827.4 | 4.3 | | | | ug/L | 931 | Standard |
| | **Kr** | 83 | 43.3 | 16.6 | | | | ug/L | 40 | Standard |
| | **Br** | 81 | 11780.4 | 3.1 | | | | ug/L | 11862 | Standard |
| | **P** | 31 | 75938.8 | 6.9 | | | | ug/L | 77079 | Standard |
| | **S** | 34 | 934541.5 | 5.7 | | | | ug/L | 1028777 | Standard |
| | **Sr** | 88 | 301.7 | 12.9 | | | | ug/L | 318 | Standard |

## QC Calculated Values

| | Analyte | Mass | QC Std % Recovery | Int Std % Recovery | Spike % Recovery |
|---|---|---|---|---|---|
| | Li | 7 | | | |
| | Be | 9 | | | |
| | Al | 27 | | | |
| > | Sc | 45 | | | |
| | Ti | 47 | | | |
| | V | 51 | | | |
| | Cr | 52 | | | |
| | Cr | 53 | | | |
| | Mn | 55 | | | |
| | Co | 59 | | | |
| | Ni | 60 | | | |
| | Cu | 65 | | | |
| | Zn | 66 | | | |
| > | Ge | 72 | | 99.301 | |
| | As | 75 | | | |
| | Se | 82 | | | |
| | Se-1 | 77 | | | |
| > | Ga | 71 | | 97.601 | |
| | Rb | 85 | | | |
| | Y | 89 | | | |
| > | Rh | 103 | | 100.490 | |
| | Mo | 98 | | | |
| | Ag | 107 | | | |
| | Cd | 111 | | | |
| | Cd | 114 | | | |
| > | In | 115 | | 99.253 | |
| | Sn | 118 | | | |
| | Sb | 123 | | | |
| | Ba | 135 | | | |
| | Ce | 140 | | | |
| > | Tb | 159 | | 99.235 | |
| | Ho | 165 | | | |
| | Tl | 203 | | | |
| | Tl | 205 | | | |
| | Pb | 206 | | | |

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| | | | |
|---|---|---|---|
| | Pb | 207 | |
| | Pb | 208 | |
| | U | 238 | |
| > | Bi | 209 | 99.689 |
| ⌈ | Na | 23 | |
| | Mg | 24 | |
| | K | 39 | |
| | Ca | 43 | |
| | Fe | 54 | |
| | Fe | 57 | |
| > | Sc-1 | 45 | |
| | Cl | 35 | |
| | Kr | 83 | |
| | Br | 81 | |
| | P | 31 | |
| | S | 34 | |
| | Sr | 88 | |

## QC Out of Limits

| Measurement Type | Analyte | Mass | Out of Limits Message |
|---|---|---|---|

**Sample ID: QC Std 2**
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# Method 6020 - Summary Report

**Sample ID: QC Std 3**
Sample Date/Time: Friday, May 18, 2012 10:03:39
Number of Replicates: 3
Autosampler Position: 202
Sample Description:
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

## Concentration Results

| IS | Analyte | Mass | Intensity | RSD | Conc. | SD | RSD | Units | Blank Intens. | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| ⌈ | **Li** | 7 | 13412.6 | 3.9 | **-78.1149** | 197.593 | 253.0 | ug/L | 13493 | Standard |
| \| | **Be** | 9 | 18.3 | 41.7 | **-0.0072** | 0.002 | 33.3 | ug/L | 13 | Standard |
| \| | **Al** | 27 | 15102.5 | 4.7 | **0.3916** | 0.050 | 12.7 | ug/L | 8786 | Standard |
| ⌊> | **Sc** | 45 | 276620.1 | 6.9 | | | | ug/L | 280553 | Standard |
| ⌈ | **Ti** | 47 | 109.0 | 18.0 | **-0.0080** | 0.012 | 148.9 | ug/L | 96 | Standard |
| \| | **V** | 51 | 8868.7 | 3.8 | **0.3652** | 0.015 | 4.2 | ug/L | 3640 | Standard |
| \| | **Cr** | 52 | 18305.1 | 4.1 | **0.6872** | 0.043 | 6.2 | ug/L | 11495 | Standard |
| \| | **Cr** | 53 | 1646.8 | 3.0 | **0.7482** | 0.025 | 3.3 | ug/L | 564 | Standard |
| \| | **Mn** | 55 | 10272.2 | 5.3 | **0.5025** | 0.014 | 2.7 | ug/L | 1247 | Standard |
| \| | **Co** | 59 | 5184.9 | 4.4 | **0.3982** | 0.007 | 1.8 | ug/L | 114 | Standard |
| \| | **Ni** | 60 | 4311.6 | 3.9 | **1.6114** | 0.041 | 2.5 | ug/L | 66 | Standard |
| \| | **Cu** | 65 | 2050.1 | 5.3 | **0.8036** | 0.025 | 3.1 | ug/L | 219 | Standard |
| \| | **Zn** | 66 | 8592.1 | 4.9 | **8.0177** | 0.158 | 2.0 | ug/L | 232 | Standard |
| \| > | **Ge** | 72 | 226682.1 | 3.0 | | | | ug/L | 228255 | Standard |
| \| | **As** | 75 | 198.5 | 13.1 | **0.4351** | 0.029 | 6.6 | ug/L | -233 | Standard |
| \| | **Se** | 82 | 81.7 | 1.5 | **0.4699** | 0.024 | 5.0 | ug/L | 23 | Standard |
| ⌊ | **Se-1** | 77 | 111.7 | 7.6 | **0.3939** | 0.141 | 35.8 | ug/L | 91 | Standard |
| ⌈> | **Ga** | 71 | 204768.9 | 3.6 | | | | mg/L | 208873 | Standard |
| ⌊ | **Rb** | 85 | 23.3 | 24.7 | | | | ug/L | 28 | Standard |
| ⌈ | **Y** | 89 | 232436.5 | 5.7 | | | | ug/L | 234742 | Standard |
| ⌊> | **Rh** | 103 | 120353.5 | 4.8 | | | | ug/L | 121294 | Standard |
| ⌈ | **Mo** | 98 | 59.7 | 26.0 | **0.0200** | 0.004 | 18.7 | ug/L | 6 | Standard |
| \| | **Ag** | 107 | 3067.6 | 5.9 | **0.3989** | 0.005 | 1.4 | ug/L | 64 | Standard |
| \| | **Cd** | 111 | 1344.2 | 5.7 | **0.2374** | 0.002 | 1.0 | mg/L | 417 | Standard |
| \| | **Cd** | 114 | 3374.3 | 5.5 | **0.2375** | 0.003 | 1.2 | ug/L | 1009 | Standard |
| \| > | **In** | 115 | 621008.2 | 5.1 | | | | ug/L | 628085 | Standard |
| \| | **Sn** | 118 | 822.7 | 8.2 | **-0.0001** | 0.002 | 2107.4 | ug/L | 834 | Standard |
| \| | **Sb** | 123 | 4204.5 | 5.6 | **0.4420** | 0.006 | 1.3 | ug/L | 22 | Standard |
| ⌊ | **Ba** | 135 | 2925.6 | 5.6 | **0.7200** | 0.005 | 0.6 | ug/L | 36 | Standard |
| ⌈ | **Ce** | 140 | 48.7 | 16.5 | | | | ug/L | 44 | Standard |
| ⌊> | **Tb** | 159 | 686340.6 | 4.8 | | | | ug/L | 691511 | Standard |
| ⌈ | **Ho** | 165 | 6.0 | 33.3 | | | | ug/L | 6 | Standard |
| \| | **Tl** | 203 | 1199.0 | 4.5 | **0.0801** | 0.003 | 3.1 | ug/L | 71 | Standard |
| \| | **Tl** | 205 | 2852.9 | 6.1 | **0.0799** | 0.004 | 5.1 | ug/L | 177 | Standard |
| \| | **Pb** | 206 | 2611.2 | 4.3 | **0.2059** | 0.005 | 2.3 | ug/L | 268 | Standard |
| \| | **Pb** | 207 | 2139.5 | 6.5 | **0.1946** | 0.007 | 3.4 | ug/L | 245 | Standard |
| \| | **Pb** | 208 | 10058.3 | 4.9 | **0.1999** | 0.005 | 2.4 | ug/L | 1057 | Standard |
| \| | **U** | 238 | 9066.7 | 6.7 | **0.3844** | 0.013 | 3.5 | ug/L | 9 | Standard |
| ⌊> | **Bi** | 209 | 389996.7 | 3.8 | | | | ug/L | 389590 | Standard |
| ⌈ | **Na** | 23 | 90.0 | 29.4 | **-0.0108** | 0.008 | 77.2 | mg/L | 92 | Standard |
| \| | **Mg** | 24 | 610.0 | 16.6 | **-0.0002** | 0.000 | 75.6 | mg/L | 142 | Standard |

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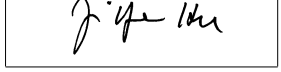

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | **K** | 39 | 663.3 | 7.2 | **0.0051** | 0.004 | 80.5 | mg/L | 635 | Standard |
| | **Ca** | 43 | 80.0 | 16.5 | **0.0327** | 0.023 | 71.2 | mg/L | 63 | Standard |
| | **Fe** | 54 | 810.9 | 3.3 | **-0.0009** | 0.016 | 1726.0 | mg/L | 901 | Standard |
| | **Fe** | 57 | 5479.3 | 1.5 | **-0.0016** | 0.002 | 141.8 | mg/L | 5948 | Standard |
| > | **Sc-1** | 45 | 276620.1 | 6.9 | | | | mg/L | 280553 | Standard |
| | **Cl** | 35 | 810.7 | 7.4 | | | | ug/L | 931 | Standard |
| | **Kr** | 83 | 39.9 | 9.5 | | | | ug/L | 40 | Standard |
| | **Br** | 81 | 11953.0 | 2.3 | | | | ug/L | 11862 | Standard |
| | **P** | 31 | 77788.1 | 6.5 | | | | ug/L | 77079 | Standard |
| | **S** | 34 | 919026.3 | 3.8 | | | | ug/L | 1028777 | Standard |
| | **Sr** | 88 | 278.3 | 19.4 | | | | ug/L | 318 | Standard |

## QC Calculated Values

| | Analyte | Mass | QC Std % Recovery | Int Std % Recovery | Spike % Recovery |
|---|---|---|---|---|---|
| | Li | 7 | | | |
| | Be | 9 | | | |
| | Al | 27 | | | |
| > | Sc | 45 | | | |
| | Ti | 47 | | | |
| | V | 51 | 91.301 | | |
| | Cr | 52 | 85.904 | | |
| | Cr | 53 | | | |
| | Mn | 55 | 100.506 | | |
| | Co | 59 | 99.547 | | |
| | Ni | 60 | 100.711 | | |
| | Cu | 65 | 100.449 | | |
| | Zn | 66 | 128.283 | | |
| > | Ge | 72 | | 99.311 | |
| | As | 75 | 108.764 | | |
| | Se | 82 | 117.485 | | |
| | Se-1 | 77 | | | |
| > | Ga | 71 | | 98.035 | |
| | Rb | 85 | | | |
| | Y | 89 | | | |
| > | Rh | 103 | | 99.225 | |
| | Mo | 98 | | | |
| | Ag | 107 | 99.721 | | |
| | Cd | 111 | 98.933 | | |
| | Cd | 114 | | | |
| > | In | 115 | | 98.873 | |
| | Sn | 118 | | | |
| | Sb | 123 | 110.488 | | |
| | Ba | 135 | 96.003 | | |
| | Ce | 140 | | | |
| > | Tb | 159 | | 99.252 | |
| | Ho | 165 | | | |
| | Tl | 203 | 100.124 | | |
| | Tl | 205 | | | |
| | Pb | 206 | | | |

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| | | | | |
|---|---|---|---|---|
| | Pb | 207 | | |
| | Pb | 208 | 99.932 | |
| | U | 238 | 96.102 | |
| > | Bi | 209 | | 100.104 |
| | Na | 23 | | |
| | Mg | 24 | | |
| | K | 39 | | |
| | Ca | 43 | | |
| | Fe | 54 | | |
| | Fe | 57 | | |
| > | Sc-1 | 45 | | |
| | Cl | 35 | | |
| | Kr | 83 | | |
| | Br | 81 | | |
| | P | 31 | | |
| | S | 34 | | |
| | Sr | 88 | | |

## QC Out of Limits

| Measurement Type | Analyte | Mass | Out of Limits Message |
|---|---|---|---|

**Sample ID: QC Std 3**
Report Date/Time: Friday, May 18, 2012 10:06:12
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# Method 6020 - Summary Report

**Sample ID: QC Std 4**
Sample Date/Time: Friday, May 18, 2012 10:06:31
Number of Replicates: 3
Autosampler Position: 203
Sample Description:
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

## Concentration Results

| IS | Analyte | Mass | Intensity | RSD | Conc. | SD | RSD | Units | Blank Intens. | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | Li | 7 | 15224.3 | 2.7 | **-230.2544** | 228.885 | 99.4 | ug/L | 13493 | Standard |
| | Be | 9 | 26.7 | 54.1 | **-0.0050** | 0.005 | 96.3 | ug/L | 13 | Standard |
| | Al | 27 | 66372019.0 | 5.0 | **4154.3051** | 73.553 | 1.8 | ug/L | 8786 | Standard |
| > | Sc | 45 | 306054.7 | 6.3 | | | | ug/L | 280553 | Standard |
| | Ti | 47 | 172418.2 | 4.1 | **115.3871** | 1.912 | 1.7 | ug/L | 96 | Standard |
| | V | 51 | 5030.0 | 5.8 | **0.0700** | 0.024 | 34.6 | ug/L | 3640 | Standard |
| | Cr | 52 | 12123.5 | 2.4 | **-0.0025** | 0.014 | 565.7 | ug/L | 11495 | Standard |
| | Cr | 53 | 3961.4 | 3.2 | **2.0600** | 0.113 | 5.5 | ug/L | 564 | Standard |
| | Mn | 55 | 2204.8 | 3.6 | **0.0438** | 0.002 | 4.8 | ug/L | 1247 | Standard |
| | Co | 59 | 512.0 | 1.7 | **0.0238** | 0.000 | 1.8 | ug/L | 114 | Standard |
| | Ni | 60 | 1751.4 | 6.2 | **0.5906** | 0.026 | 4.4 | ug/L | 66 | Standard |
| | Cu | 65 | 810.4 | 5.1 | **0.2313** | 0.008 | 3.7 | ug/L | 219 | Standard |
| | Zn | 66 | 1802.8 | 4.2 | **1.3396** | 0.046 | 3.4 | ug/L | 232 | Standard |
| > | Ge | 72 | 245223.2 | 2.8 | | | | ug/L | 228255 | Standard |
| | As | 75 | -317.8 | 8.5 | **-0.0546** | 0.022 | 41.0 | ug/L | -233 | Standard |
| | Se | 82 | 22.5 | 31.9 | **0.0097** | 0.046 | 475.0 | ug/L | 23 | Standard |
| | Se-1 | 77 | 318.3 | 3.6 | **2.8954** | 0.227 | 7.8 | ug/L | 91 | Standard |
| > | Ga | 71 | 217937.2 | 3.2 | | | | mg/L | 208873 | Standard |
| | Rb | 85 | 3985.5 | 3.8 | | | | ug/L | 28 | Standard |
| | Y | 89 | 251935.5 | 4.9 | | | | ug/L | 234742 | Standard |
| > | Rh | 103 | 124836.2 | 3.4 | | | | ug/L | 121294 | Standard |
| | Mo | 98 | 394777.1 | 3.3 | **97.5362** | 0.746 | 0.8 | ug/L | 6 | Standard |
| | Ag | 107 | 120.0 | 7.3 | **0.0037** | 0.001 | 22.7 | ug/L | 64 | Standard |
| | Cd | 111 | 793.2 | 5.0 | **0.0852** | 0.006 | 6.5 | mg/L | 417 | Standard |
| | Cd | 114 | 3556.6 | 3.5 | **0.2328** | 0.008 | 3.3 | ug/L | 1009 | Standard |
| > | In | 115 | 663877.6 | 2.6 | | | | ug/L | 628085 | Standard |
| | Sn | 118 | 1175.4 | 4.9 | **0.0210** | 0.004 | 20.9 | ug/L | 834 | Standard |
| | Sb | 123 | 786.6 | 8.1 | **0.0741** | 0.005 | 6.1 | ug/L | 22 | Standard |
| | Ba | 135 | 119.0 | 8.5 | **0.0160** | 0.002 | 10.3 | ug/L | 36 | Standard |
| | Ce | 140 | 1720.1 | 3.8 | | | | ug/L | 44 | Standard |
| > | Tb | 159 | 752590.4 | 3.2 | | | | ug/L | 691511 | Standard |
| | Ho | 165 | 16.3 | 14.1 | | | | ug/L | 6 | Standard |
| | Tl | 203 | 857.0 | 4.7 | **0.0538** | 0.004 | 7.2 | ug/L | 71 | Standard |
| | Tl | 205 | 2052.8 | 1.7 | **0.0544** | 0.002 | 4.6 | ug/L | 177 | Standard |
| | Pb | 206 | 741.7 | 7.5 | **0.0393** | 0.005 | 12.8 | ug/L | 268 | Standard |
| | Pb | 207 | 623.3 | 2.4 | **0.0377** | 0.003 | 7.3 | ug/L | 245 | Standard |
| | Pb | 208 | 2858.4 | 1.8 | **0.0376** | 0.001 | 3.8 | ug/L | 1057 | Standard |
| | U | 238 | 27.3 | 31.1 | **0.0004** | 0.000 | 92.4 | ug/L | 9 | Standard |
| > | Bi | 209 | 403134.1 | 2.5 | | | | ug/L | 389590 | Standard |
| | Na | 23 | 40452.3 | 3.6 | **12.0981** | 0.327 | 2.7 | mg/L | 92 | Standard |
| | Mg | 24 | 2080790.3 | 16.1 | **4.5494** | 0.472 | 10.4 | mg/L | 142 | Standard |

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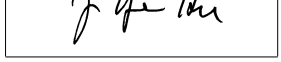

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | **K** | 39 | 53126.4 | 3.0 | **4.8951** | 0.175 | 3.6 | mg/L | 635 | Standard |
| | **Ca** | 43 | 6603.1 | 4.2 | **14.4174** | 0.523 | 3.6 | mg/L | 63 | Standard |
| | **Fe** | 54 | 67687.2 | 3.1 | **11.7210** | 0.383 | 3.3 | mg/L | 901 | Standard |
| | **Fe** | 57 | 1865835.7 | 2.7 | **11.1599** | 0.882 | 7.9 | mg/L | 5948 | Standard |
| > | **Sc-1** | 45 | 306054.7 | 6.3 | | | | mg/L | 280553 | Standard |
| | **Cl** | 35 | 64299.5 | 1.2 | | | | ug/L | 931 | Standard |
| | **Kr** | 83 | 47.0 | 9.6 | | | | ug/L | 40 | Standard |
| | **Br** | 81 | 12441.8 | 1.3 | | | | ug/L | 11862 | Standard |
| | **P** | 31 | 5182039.0 | 2.7 | | | | ug/L | 77079 | Standard |
| | **S** | 34 | 1615089.1 | 4.1 | | | | ug/L | 1028777 | Standard |
| | **Sr** | 88 | 1365.1 | 4.5 | | | | ug/L | 318 | Standard |

## QC Calculated Values

| | Analyte | Mass | QC Std % Recovery | Int Std % Recovery | Spike % Recovery |
|---|---|---|---|---|---|
| | Li | 7 | | | |
| | Be | 9 | | | |
| | Al | 27 | 83.086 | | |
| > | Sc | 45 | | | |
| | Ti | 47 | 115.387 | | |
| | V | 51 | | | |
| | Cr | 52 | | | |
| | Cr | 53 | | | |
| | Mn | 55 | | | |
| | Co | 59 | | | |
| | Ni | 60 | | | |
| | Cu | 65 | | | |
| | Zn | 66 | | | |
| > | Ge | 72 | | 107.434 | |
| | As | 75 | | | |
| | Se | 82 | | | |
| | Se-1 | 77 | | | |
| > | Ga | 71 | | 104.340 | |
| | Rb | 85 | | | |
| | Y | 89 | | | |
| > | Rh | 103 | | 102.921 | |
| | Mo | 98 | 97.536 | | |
| | Ag | 107 | | | |
| | Cd | 111 | | | |
| | Cd | 114 | | | |
| > | In | 115 | | 105.699 | |
| | Sn | 118 | | | |
| | Sb | 123 | | | |
| | Ba | 135 | | | |
| | Ce | 140 | | | |
| > | Tb | 159 | | 108.833 | |
| | Ho | 165 | | | |
| | Tl | 203 | | | |
| | Tl | 205 | | | |
| | Pb | 206 | | | |

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| | | | | |
|---|---|---|---|---|
| | Pb | 207 | | |
| | Pb | 208 | | |
| | U | 238 | | |
| > | Bi | 209 | | 103.477 |
| ⌈ | Na | 23 | 96.785 | |
| | Mg | 24 | 90.987 | |
| | K | 39 | 97.903 | |
| | Ca | 43 | 96.116 | |
| | Fe | 54 | 93.768 | |
| | Fe | 57 | 89.279 | |
| > | Sc-1 | 45 | | |
| | Cl | 35 | | |
| | Kr | 83 | | |
| | Br | 81 | | |
| | P | 31 | | |
| | S | 34 | | |
| | Sr | 88 | | |

## QC Out of Limits

| Measurement Type | Analyte | Mass | Out of Limits Message |
|---|---|---|---|

**Sample ID: QC Std 4**
Report Date/Time: Friday, May 18, 2012 10:09:05
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# Method 6020 - Summary Report

**Sample ID: QC Std 5**
Sample Date/Time: Friday, May 18, 2012 10:09:25
Number of Replicates: 3
Autosampler Position: 204
Sample Description:
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

## Concentration Results

| IS | Analyte | Mass | Intensity | RSD | Conc. | SD | RSD | Units | Blank Intens. | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **Li** | 7 | 15030.8 | 2.6 | **-150.9758** | 204.194 | 135.2 | ug/L | 13493 | Standard |
| | **Be** | 9 | 336847.3 | 3.1 | **104.6862** | 2.167 | 2.1 | ug/L | 13 | Standard |
| | **Al** | 27 | 61383225.6 | 4.4 | **3841.8998** | 115.715 | 3.0 | ug/L | 8786 | Standard |
| > | **Sc** | 45 | 305958.4 | 4.2 | | | | ug/L | 280553 | Standard |
| | **Ti** | 47 | 163433.6 | 5.2 | **107.4139** | 0.392 | 0.4 | ug/L | 96 | Standard |
| | **V** | 51 | 1565094.5 | 5.0 | **99.2533** | 0.537 | 0.5 | ug/L | 3640 | Standard |
| | **Cr** | 52 | 1133170.3 | 5.4 | **98.8789** | 0.235 | 0.2 | ug/L | 11495 | Standard |
| | **Cr** | 53 | 173277.0 | 5.3 | **101.9565** | 0.480 | 0.5 | ug/L | 564 | Standard |
| | **Mn** | 55 | 1905996.1 | 3.6 | **96.4877** | 4.932 | 5.1 | ug/L | 1247 | Standard |
| | **Co** | 59 | 1372871.1 | 5.7 | **99.0231** | 0.895 | 0.9 | ug/L | 114 | Standard |
| | **Ni** | 60 | 289998.5 | 5.5 | **99.7258** | 0.289 | 0.3 | ug/L | 66 | Standard |
| | **Cu** | 65 | 248158.8 | 5.8 | **98.9883** | 0.956 | 1.0 | ug/L | 219 | Standard |
| | **Zn** | 66 | 117121.8 | 4.0 | **102.3322** | 1.734 | 1.7 | ug/L | 232 | Standard |
| > | **Ge** | 72 | 249771.6 | 5.5 | | | | ug/L | 228255 | Standard |
| | **As** | 75 | 112445.1 | 5.1 | **101.6947** | 0.437 | 0.4 | ug/L | -233 | Standard |
| | **Se** | 82 | 14782.7 | 7.1 | **100.8072** | 1.646 | 1.6 | ug/L | 23 | Standard |
| | **Se-1** | 77 | 8299.3 | 4.6 | **102.0187** | 0.980 | 1.0 | ug/L | 91 | Standard |
| > | **Ga** | 71 | 224783.6 | 5.6 | | | | mg/L | 208873 | Standard |
| | **Rb** | 85 | 3723.8 | 10.0 | | | | ug/L | 28 | Standard |
| | **Y** | 89 | 264157.1 | 7.1 | | | | ug/L | 234742 | Standard |
| > | **Rh** | 103 | 129442.1 | 7.2 | | | | ug/L | 121294 | Standard |
| | **Mo** | 98 | 376064.9 | 6.4 | **90.9063** | 2.408 | 2.6 | ug/L | 6 | Standard |
| | **Ag** | 107 | 755538.5 | 8.3 | **92.4275** | 4.253 | 4.6 | ug/L | 64 | Standard |
| | **Cd** | 111 | 430826.5 | 4.3 | **99.5947** | 0.765 | 0.8 | mg/L | 417 | Standard |
| | **Cd** | 114 | 1083848.9 | 4.1 | **99.3672** | 0.316 | 0.3 | ug/L | 1009 | Standard |
| > | **In** | 115 | 678156.5 | 3.8 | | | | ug/L | 628085 | Standard |
| | **Sn** | 118 | 2007.8 | 8.3 | **0.0771** | 0.007 | 9.3 | ug/L | 834 | Standard |
| | **Sb** | 123 | 1033013.9 | 3.7 | **100.3302** | 0.481 | 0.5 | ug/L | 22 | Standard |
| | **Ba** | 135 | 430153.7 | 4.5 | **98.5234** | 0.937 | 1.0 | ug/L | 36 | Standard |
| | **Ce** | 140 | 1676.8 | 5.6 | | | | ug/L | 44 | Standard |
| > | **Tb** | 159 | 756781.1 | 5.1 | | | | ug/L | 691511 | Standard |
| | **Ho** | 165 | 18.3 | 13.7 | | | | ug/L | 6 | Standard |
| | **Tl** | 203 | 1473492.4 | 5.0 | **101.1223** | 0.781 | 0.8 | ug/L | 71 | Standard |
| | **Tl** | 205 | 3663718.6 | 4.3 | **103.7554** | 0.644 | 0.6 | ug/L | 177 | Standard |
| | **Pb** | 206 | 1196753.6 | 4.7 | **101.3752** | 0.365 | 0.4 | ug/L | 268 | Standard |
| | **Pb** | 207 | 1028234.7 | 5.0 | **101.2101** | 0.682 | 0.7 | ug/L | 245 | Standard |
| | **Pb** | 208 | 4760999.4 | 4.3 | **102.0712** | 0.031 | 0.0 | ug/L | 1057 | Standard |
| | **U** | 238 | 2520420.2 | 4.8 | **103.1898** | 0.839 | 0.8 | ug/L | 9 | Standard |
| > | **Bi** | 209 | 404857.0 | 4.4 | | | | ug/L | 389590 | Standard |
| | **Na** | 23 | 36732.9 | 4.4 | **10.9739** | 0.227 | 2.1 | mg/L | 92 | Standard |
| | **Mg** | 24 | 1960766.3 | 16.0 | **4.2892** | 0.500 | 11.7 | mg/L | 142 | Standard |

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| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | **K** | 39 | 49397.1 | 3.2 | **4.5443** | 0.134 | 3.0 | mg/L | 635 | Standard |
| | **Ca** | 43 | 6162.9 | 1.5 | **13.4475** | 0.513 | 3.8 | mg/L | 63 | Standard |
| | **Fe** | 54 | 64543.8 | 3.4 | **11.1661** | 0.462 | 4.1 | mg/L | 901 | Standard |
| | **Fe** | 57 | 1861432.3 | 4.3 | **11.1070** | 0.413 | 3.7 | mg/L | 5948 | Standard |
| > | **Sc-1** | 45 | 305958.4 | 4.2 | | | | mg/L | 280553 | Standard |
| | **Cl** | 35 | 60414.2 | 2.3 | | | | ug/L | 931 | Standard |
| | **Kr** | 83 | 47.7 | 6.7 | | | | ug/L | 40 | Standard |
| | **Br** | 81 | 12792.1 | 6.3 | | | | ug/L | 11862 | Standard |
| | **P** | 31 | 4789718.6 | 3.5 | | | | ug/L | 77079 | Standard |
| | **S** | 34 | 1614023.4 | 4.9 | | | | ug/L | 1028777 | Standard |
| | **Sr** | 88 | 1400.1 | 9.0 | | | | ug/L | 318 | Standard |

## QC Calculated Values

| | Analyte | Mass | QC Std % Recovery | Int Std % Recovery | Spike % Recovery |
|---|---|---|---|---|---|
| | Li | 7 | | | |
| | Be | 9 | | | |
| | Al | 27 | 76.838 | | |
| > | Sc | 45 | | | |
| | Ti | 47 | 107.414 | | |
| | V | 51 | 99.253 | | |
| | Cr | 52 | 98.879 | | |
| | Cr | 53 | | | |
| | Mn | 55 | 96.488 | | |
| | Co | 59 | 99.023 | | |
| | Ni | 60 | 99.726 | | |
| | Cu | 65 | 98.988 | | |
| | Zn | 66 | 102.332 | | |
| > | Ge | 72 | | 109.426 | |
| | As | 75 | 101.695 | | |
| | Se | 82 | 100.807 | | |
| | Se-1 | 77 | | | |
| > | Ga | 71 | | 107.618 | |
| | Rb | 85 | | | |
| | Y | 89 | | | |
| > | Rh | 103 | | 106.718 | |
| | Mo | 98 | 90.906 | | |
| | Ag | 107 | 92.427 | | |
| | Cd | 111 | 99.595 | | |
| | Cd | 114 | | | |
| > | In | 115 | | 107.972 | |
| | Sn | 118 | | | |
| | Sb | 123 | 100.330 | | |
| | Ba | 135 | 98.523 | | |
| | Ce | 140 | | | |
| > | Tb | 159 | | 109.439 | |
| | Ho | 165 | | | |
| | Tl | 203 | 101.122 | | |
| | Tl | 205 | | | |
| | Pb | 206 | 101.375 | | |

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| | | | | |
|---|---|---|---|---|
| | Pb | 207 | 101.210 | |
| | Pb | 208 | 102.071 | |
| | U | 238 | 103.190 | |
| > | Bi | 209 | | 103.919 |
| | Na | 23 | 87.791 | |
| | Mg | 24 | 85.784 | |
| | K | 39 | 90.885 | |
| | Ca | 43 | 89.650 | |
| | Fe | 54 | 89.328 | |
| | Fe | 57 | 88.856 | |
| > | Sc-1 | 45 | | |
| | Cl | 35 | | |
| | Kr | 83 | | |
| | Br | 81 | | |
| | P | 31 | | |
| | S | 34 | | |
| | Sr | 88 | | |

## QC Out of Limits

| Measurement Type | Analyte | Mass | Out of Limits Message |
|---|---|---|---|
| QC Std 5 | Al | 27 | |

**Sample ID: QC Std 5**
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# Method 6020 - Summary Report

**Sample ID: QC Std 6**
Sample Date/Time: Friday, May 18, 2012 10:12:21
Number of Replicates: 3
Autosampler Position: 101
Sample Description:
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

## Concentration Results

| IS | Analyte | Mass | Intensity | RSD | Conc. | SD | RSD | Units | Blank Intens. | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| ⌈ | **Li** | 7 | 14350.1 | 5.0 | **24.0024** | 118.550 | 493.9 | ug/L | 13493 | Standard |
| \| | **Be** | 9 | 160774.6 | 4.4 | **50.8054** | 0.551 | 1.1 | ug/L | 13 | Standard |
| \| | **Al** | 27 | 801792.6 | 4.6 | **50.3917** | 0.534 | 1.1 | ug/L | 8786 | Standard |
| ⌊> | **Sc** | 45 | 300839.4 | 5.3 | | | | ug/L | 280553 | Standard |
| ⌈ | **Ti** | 47 | 149800.5 | 5.7 | **100.3745** | 1.004 | 1.0 | ug/L | 96 | Standard |
| \| | **V** | 51 | 780190.8 | 5.1 | **50.3256** | 0.347 | 0.7 | ug/L | 3640 | Standard |
| \| | **Cr** | 52 | 572464.8 | 5.1 | **50.4132** | 0.236 | 0.5 | ug/L | 11495 | Standard |
| \| | **Cr** | 53 | 85122.5 | 6.8 | **50.8881** | 0.934 | 1.8 | ug/L | 564 | Standard |
| \| | **Mn** | 55 | 977447.1 | 6.0 | **50.3441** | 0.621 | 1.2 | ug/L | 1247 | Standard |
| \| | **Co** | 59 | 686811.8 | 5.8 | **50.5090** | 0.572 | 1.1 | ug/L | 114 | Standard |
| \| | **Ni** | 60 | 143453.4 | 5.8 | **50.2900** | 0.507 | 1.0 | ug/L | 66 | Standard |
| \| | **Cu** | 65 | 124757.4 | 5.1 | **50.7104** | 0.187 | 0.4 | ug/L | 219 | Standard |
| \| | **Zn** | 66 | 56369.1 | 4.4 | **50.0781** | 0.449 | 0.9 | ug/L | 232 | Standard |
| \| > | **Ge** | 72 | 244916.1 | 5.2 | | | | ug/L | 228255 | Standard |
| \| | **As** | 75 | 54630.8 | 4.7 | **50.5092** | 0.373 | 0.7 | ug/L | -233 | Standard |
| \| | **Se** | 82 | 7292.8 | 6.1 | **50.6602** | 0.685 | 1.4 | ug/L | 23 | Standard |
| ⌊ | **Se-1** | 77 | 4047.5 | 4.5 | **50.1695** | 0.745 | 1.5 | ug/L | 91 | Standard |
| ⌈> | **Ga** | 71 | 222303.9 | 3.9 | | | | mg/L | 208873 | Standard |
| ⌊ | **Rb** | 85 | 1111.7 | 10.2 | | | | ug/L | 28 | Standard |
| ⌈ | **Y** | 89 | 252428.1 | 4.5 | | | | ug/L | 234742 | Standard |
| ⌊> | **Rh** | 103 | 129779.4 | 6.0 | | | | ug/L | 121294 | Standard |
| ⌈ | **Mo** | 98 | 408807.9 | 5.3 | **100.5324** | 1.490 | 1.5 | ug/L | 6 | Standard |
| \| | **Ag** | 107 | 412386.5 | 6.0 | **51.3346** | 1.224 | 2.4 | ug/L | 64 | Standard |
| \| | **Cd** | 111 | 212675.5 | 5.0 | **49.9466** | 0.967 | 1.9 | mg/L | 417 | Standard |
| \| | **Cd** | 114 | 532769.8 | 3.6 | **49.6339** | 0.455 | 0.9 | ug/L | 1009 | Standard |
| \| > | **In** | 115 | 666848.6 | 4.1 | | | | ug/L | 628085 | Standard |
| \| | **Sn** | 118 | 704116.1 | 4.3 | **49.8327** | 0.350 | 0.7 | ug/L | 834 | Standard |
| \| | **Sb** | 123 | 506209.9 | 3.5 | **50.0054** | 0.652 | 1.3 | ug/L | 22 | Standard |
| ⌊ | **Ba** | 135 | 212377.9 | 3.9 | **49.4745** | 0.391 | 0.8 | ug/L | 36 | Standard |
| ⌈ | **Ce** | 140 | 827.7 | 7.3 | | | | ug/L | 44 | Standard |
| ⌊> | **Tb** | 159 | 732802.5 | 3.8 | | | | ug/L | 691511 | Standard |
| ⌈ | **Ho** | 165 | 13.0 | 7.7 | | | | ug/L | 6 | Standard |
| \| | **Tl** | 203 | 734843.7 | 4.8 | **50.7630** | 0.447 | 0.9 | ug/L | 71 | Standard |
| \| | **Tl** | 205 | 1759384.4 | 4.6 | **50.1457** | 0.455 | 0.9 | ug/L | 177 | Standard |
| \| | **Pb** | 206 | 595583.5 | 4.7 | **50.7724** | 0.648 | 1.3 | ug/L | 268 | Standard |
| \| | **Pb** | 207 | 514254.3 | 4.0 | **50.9533** | 0.285 | 0.6 | ug/L | 245 | Standard |
| \| | **Pb** | 208 | 2333991.3 | 4.3 | **50.3561** | 0.332 | 0.7 | ug/L | 1057 | Standard |
| \| | **U** | 238 | 1204661.5 | 4.8 | **49.6449** | 0.608 | 1.2 | ug/L | 9 | Standard |
| ⌊> | **Bi** | 209 | 402205.2 | 4.2 | | | | ug/L | 389590 | Standard |
| ⌈ | **Na** | 23 | 16999.6 | 6.6 | **5.1408** | 0.083 | 1.6 | mg/L | 92 | Standard |
| \| | **Mg** | 24 | 2460631.7 | 5.1 | **5.4933** | 0.102 | 1.9 | mg/L | 142 | Standard |

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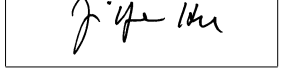

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | **K** | 39 | 54036.3 | 3.9 | **5.0627** | 0.073 | 1.5 | mg/L | 635 | Standard |
| | **Ca** | 43 | 2293.5 | 1.0 | **4.9918** | 0.222 | 4.4 | mg/L | 63 | Standard |
| | **Fe** | 54 | 29225.5 | 5.7 | **5.0520** | 0.074 | 1.5 | mg/L | 901 | Standard |
| | **Fe** | 57 | 824221.4 | 4.5 | **4.9803** | 0.058 | 1.2 | mg/L | 5948 | Standard |
| > | **Sc-1** | 45 | 300839.4 | 5.3 | | | | mg/L | 280553 | Standard |
| | **Cl** | 35 | 1470.7 | 33.3 | | | | ug/L | 931 | Standard |
| | **Kr** | 83 | 43.9 | 8.7 | | | | ug/L | 40 | Standard |
| | **Br** | 81 | 12337.5 | 4.7 | | | | ug/L | 11862 | Standard |
| | **P** | 31 | 84452.2 | 7.2 | | | | ug/L | 77079 | Standard |
| | **S** | 34 | 983604.3 | 5.3 | | | | ug/L | 1028777 | Standard |
| | **Sr** | 88 | 701.7 | 9.5 | | | | ug/L | 318 | Standard |

## QC Calculated Values

| | Analyte | Mass | QC Std % Recovery | Int Std % Recovery | Spike % Recovery |
|---|---|---|---|---|---|
| | Li | 7 | | | |
| | Be | 9 | | | |
| | Al | 27 | 100.783 | | |
| > | Sc | 45 | | | |
| | Ti | 47 | 100.375 | | |
| | V | 51 | 100.651 | | |
| | Cr | 52 | 100.826 | | |
| | Cr | 53 | | | |
| | Mn | 55 | 100.688 | | |
| | Co | 59 | 101.018 | | |
| | Ni | 60 | 100.580 | | |
| | Cu | 65 | 101.421 | | |
| | Zn | 66 | 100.156 | | |
| > | Ge | 72 | | 107.299 | |
| | As | 75 | 101.018 | | |
| | Se | 82 | 101.320 | | |
| | Se-1 | 77 | | | |
| > | Ga | 71 | | 106.430 | |
| | Rb | 85 | | | |
| | Y | 89 | | | |
| > | Rh | 103 | | 106.996 | |
| | Mo | 98 | 100.532 | | |
| | Ag | 107 | 102.669 | | |
| | Cd | 111 | 99.893 | | |
| | Cd | 114 | | | |
| > | In | 115 | | 106.172 | |
| | Sn | 118 | 99.665 | | |
| | Sb | 123 | 100.011 | | |
| | Ba | 135 | 98.949 | | |
| | Ce | 140 | | | |
| > | Tb | 159 | | 105.971 | |
| | Ho | 165 | | | |
| | Tl | 203 | 101.526 | | |
| | Tl | 205 | | | |
| | Pb | 206 | 101.545 | | |

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| | | | | |
|---|---|---|---|---|
| | Pb | 207 | 101.907 | |
| | Pb | 208 | 100.712 | |
| | U | 238 | 99.290 | |
| > | Bi | 209 | | 103.238 |
| | Na | 23 | 102.816 | |
| | Mg | 24 | 109.866 | |
| | K | 39 | 101.255 | |
| | Ca | 43 | 99.836 | |
| | Fe | 54 | 101.040 | |
| | Fe | 57 | 99.607 | |
| > | Sc-1 | 45 | | |
| | Cl | 35 | | |
| | Kr | 83 | | |
| | Br | 81 | | |
| | P | 31 | | |
| | S | 34 | | |
| | Sr | 88 | | |

## QC Out of Limits

| Measurement Type | Analyte | Mass | Out of Limits Message |
|---|---|---|---|

**Sample ID: QC Std 6**
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# Method 6020 - Summary Report

**Sample ID: QC Std 7**
Sample Date/Time: Friday, May 18, 2012 10:15:14
Number of Replicates: 3
Autosampler Position: 102
Sample Description:
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

## Concentration Results

| IS | Analyte | Mass | Intensity | RSD | Conc. | SD | RSD | Units | Blank Intens. | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| ⌈ | **Li** | 7 | 14160.0 | 6.4 | **-100.4464** | 258.259 | 257.1 | ug/L | 13493 | Standard |
| \| | **Be** | 9 | 66.7 | 127.8 | **0.0078** | 0.027 | 343.7 | ug/L | 13 | Standard |
| \| | **Al** | 27 | 15069.1 | 56.5 | **0.3263** | 0.523 | 160.2 | ug/L | 8786 | Standard |
| ⌊> | **Sc** | 45 | 290696.3 | 6.4 | | | | ug/L | 280553 | Standard |
| ⌈ | **Ti** | 47 | 138.3 | 36.9 | **0.0094** | 0.032 | 338.9 | ug/L | 96 | Standard |
| \| | **V** | 51 | 3705.3 | 15.5 | **-0.0055** | 0.030 | 539.4 | ug/L | 3640 | Standard |
| \| | **Cr** | 52 | 10610.4 | 4.3 | **-0.0939** | 0.025 | 26.3 | ug/L | 11495 | Standard |
| \| | **Cr** | 53 | 549.2 | 12.5 | **0.0215** | 0.025 | 115.1 | ug/L | 564 | Standard |
| \| | **Mn** | 55 | 1690.4 | 24.1 | **0.0210** | 0.019 | 89.2 | ug/L | 1247 | Standard |
| \| | **Co** | 59 | 304.7 | 67.3 | **0.0092** | 0.015 | 160.4 | ug/L | 114 | Standard |
| \| | **Ni** | 60 | 95.0 | 37.2 | **0.0118** | 0.012 | 98.1 | ug/L | 66 | Standard |
| \| | **Cu** | 65 | 285.3 | 12.7 | **0.0231** | 0.011 | 46.6 | ug/L | 219 | Standard |
| \| | **Zn** | 66 | 314.0 | 5.9 | **0.0250** | 0.007 | 28.3 | ug/L | 232 | Standard |
| \| > | **Ge** | 72 | 234400.0 | 5.6 | | | | ug/L | 228255 | Standard |
| \| | **As** | 75 | -189.3 | 18.5 | **0.0543** | 0.041 | 75.0 | ug/L | -233 | Standard |
| \| | **Se** | 82 | 32.4 | 25.3 | **0.0884** | 0.049 | 55.6 | ug/L | 23 | Standard |
| ⌊ | **Se-1** | 77 | 75.0 | 13.1 | **-0.1452** | 0.099 | 68.5 | ug/L | 91 | Standard |
| ⌈> | **Ga** | 71 | 210391.2 | 6.4 | | | | mg/L | 208873 | Standard |
| ⌊ | **Rb** | 85 | 21.7 | 53.3 | | | | ug/L | 28 | Standard |
| ⌈ | **Y** | 89 | 241424.4 | 6.0 | | | | ug/L | 234742 | Standard |
| ⌊> | **Rh** | 103 | 128444.2 | 8.1 | | | | ug/L | 121294 | Standard |
| ⌈ | **Mo** | 98 | 1129.1 | 152.9 | **0.2823** | 0.423 | 149.8 | ug/L | 6 | Standard |
| \| | **Ag** | 107 | 1040.8 | 160.2 | **0.1183** | 0.207 | 174.9 | ug/L | 64 | Standard |
| \| | **Cd** | 111 | 799.2 | 83.6 | **0.0890** | 0.154 | 172.7 | mg/L | 417 | Standard |
| \| | **Cd** | 114 | 1888.6 | 79.8 | **0.0786** | 0.137 | 174.8 | ug/L | 1009 | Standard |
| \| > | **In** | 115 | 645443.8 | 5.2 | | | | ug/L | 628085 | Standard |
| \| | **Sn** | 118 | 1675.5 | 76.4 | **0.0582** | 0.088 | 151.9 | ug/L | 834 | Standard |
| \| | **Sb** | 123 | 2302.1 | 86.5 | **0.2265** | 0.193 | 85.1 | ug/L | 22 | Standard |
| ⌊ | **Ba** | 135 | 267.3 | 137.7 | **0.0507** | 0.085 | 168.0 | ug/L | 36 | Standard |
| ⌈ | **Ce** | 140 | 51.7 | 18.6 | | | | ug/L | 44 | Standard |
| ⌊> | **Tb** | 159 | 700497.9 | 6.5 | | | | ug/L | 691511 | Standard |
| ⌈ | **Ho** | 165 | 6.3 | 55.5 | | | | ug/L | 6 | Standard |
| \| | **Tl** | 203 | 633.0 | 138.7 | **0.0374** | 0.058 | 156.4 | ug/L | 71 | Standard |
| \| | **Tl** | 205 | 1331.5 | 131.5 | **0.0331** | 0.048 | 144.9 | ug/L | 177 | Standard |
| \| | **Pb** | 206 | 643.7 | 84.2 | **0.0306** | 0.044 | 142.4 | ug/L | 268 | Standard |
| \| | **Pb** | 207 | 532.0 | 82.7 | **0.0283** | 0.041 | 145.0 | ug/L | 245 | Standard |
| \| | **Pb** | 208 | 2406.4 | 82.8 | **0.0275** | 0.041 | 147.1 | ug/L | 1057 | Standard |
| \| | **U** | 238 | 419.7 | 144.0 | **0.0161** | 0.024 | 149.4 | ug/L | 9 | Standard |
| ⌊> | **Bi** | 209 | 396378.5 | 6.2 | | | | ug/L | 389590 | Standard |
| ⌈ | **Na** | 23 | 115.0 | 30.4 | **-0.0045** | 0.010 | 216.4 | mg/L | 92 | Standard |
| \| | **Mg** | 24 | 1000.1 | 112.6 | **0.0006** | 0.003 | 433.6 | mg/L | 142 | Standard |

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| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | **K** | 39 | 706.7 | 5.3 | **0.0060** | 0.002 | 35.1 | mg/L | 635 | Standard |
| | **Ca** | 43 | 78.3 | 42.5 | **0.0196** | 0.072 | 367.7 | mg/L | 63 | Standard |
| | **Fe** | 54 | 920.9 | 6.4 | **0.0118** | 0.020 | 168.7 | mg/L | 901 | Standard |
| | **Fe** | 57 | 5991.2 | 5.1 | **-0.0002** | 0.003 | 1791.3 | mg/L | 5948 | Standard |
| > | **Sc-1** | 45 | 290696.3 | 6.4 | | | | mg/L | 280553 | Standard |
| | **Cl** | 35 | 1008.0 | 5.0 | | | | ug/L | 931 | Standard |
| | **Kr** | 83 | 40.1 | 2.4 | | | | ug/L | 40 | Standard |
| | **Br** | 81 | 12690.3 | 4.0 | | | | ug/L | 11862 | Standard |
| | **P** | 31 | 81982.4 | 5.0 | | | | ug/L | 77079 | Standard |
| | **S** | 34 | 1011834.6 | 4.6 | | | | ug/L | 1028777 | Standard |
| | **Sr** | 88 | 326.7 | 12.5 | | | | ug/L | 318 | Standard |

## QC Calculated Values

| | Analyte | Mass | QC Std % Recovery | Int Std % Recovery | Spike % Recovery |
|---|---|---|---|---|---|
| | Li | 7 | | | |
| | Be | 9 | | | |
| | Al | 27 | | | |
| > | Sc | 45 | | | |
| | Ti | 47 | | | |
| | V | 51 | | | |
| | Cr | 52 | | | |
| | Cr | 53 | | | |
| | Mn | 55 | | | |
| | Co | 59 | | | |
| | Ni | 60 | | | |
| | Cu | 65 | | | |
| | Zn | 66 | | | |
| > | Ge | 72 | | 102.692 | |
| | As | 75 | | | |
| | Se | 82 | | | |
| | Se-1 | 77 | | | |
| > | Ga | 71 | | 100.727 | |
| | Rb | 85 | | | |
| | Y | 89 | | | |
| > | Rh | 103 | | 105.895 | |
| | Mo | 98 | | | |
| | Ag | 107 | | | |
| | Cd | 111 | | | |
| | Cd | 114 | | | |
| > | In | 115 | | 102.764 | |
| | Sn | 118 | | | |
| | Sb | 123 | | | |
| | Ba | 135 | | | |
| | Ce | 140 | | | |
| > | Tb | 159 | | 101.300 | |
| | Ho | 165 | | | |
| | Tl | 203 | | | |
| | Tl | 205 | | | |
| | Pb | 206 | | | |

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| | | |
|---|---|---|
| Pb | 207 | |
| Pb | 208 | |
| U | 238 | |
| > Bi | 209 | 101.742 |
| Na | 23 | |
| Mg | 24 | |
| K | 39 | |
| Ca | 43 | |
| Fe | 54 | |
| Fe | 57 | |
| > Sc-1 | 45 | |
| Cl | 35 | |
| Kr | 83 | |
| Br | 81 | |
| P | 31 | |
| S | 34 | |
| Sr | 88 | |

## QC Out of Limits

| Measurement Type | Analyte | Mass | Out of Limits Message |
|---|---|---|---|

**Sample ID: QC Std 7**
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# Method 6020 - Summary Report

**Sample ID: L1205025901**
Sample Date/Time: Friday, May 18, 2012 10:18:08
Number of Replicates: 3
Autosampler Position: 205
Sample Description: 1
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

## Concentration Results

| IS | Analyte | Mass | Intensity | RSD | Conc. | SD | RSD | Units | Blank Intens. | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| ⌈ | **Li** | 7 | 263977.0 | 3.9 | **-82191.0614** | 1790.344 | 2.2 | ug/L | 13493 | Standard |
| \| | **Be** | 9 | 40.0 | 54.5 | **-0.0029** | 0.006 | 210.8 | ug/L | 13 | Standard |
| \| | **Al** | 27 | 884363.8 | 4.6 | **46.1233** | 0.276 | 0.6 | ug/L | 8786 | Standard |
| ⌊> | **Sc** | 45 | 362068.8 | 5.1 | | | | ug/L | 280553 | Standard |
| ⌈ | **Ti** | 47 | 2403.2 | 7.1 | **1.4818** | 0.087 | 5.9 | ug/L | 96 | Standard |
| \| | **V** | 51 | 10336.4 | 6.6 | **0.3959** | 0.027 | 6.9 | ug/L | 3640 | Standard |
| \| | **Cr** | 52 | 45082.1 | 4.8 | **2.8549** | 0.079 | 2.8 | ug/L | 11495 | Standard |
| \| | **Cr** | 53 | 6102.9 | 3.1 | **3.2530** | 0.046 | 1.4 | ug/L | 564 | Standard |
| \| | **Mn** | 55 | 27670.6 | 5.0 | **1.3192** | 0.023 | 1.8 | ug/L | 1247 | Standard |
| \| | **Co** | 59 | 2641.9 | 8.7 | **0.1751** | 0.011 | 6.0 | ug/L | 114 | Standard |
| \| | **Ni** | 60 | 12583.9 | 8.6 | **4.2689** | 0.230 | 5.4 | ug/L | 66 | Standard |
| \| | **Cu** | 65 | 3665.1 | 5.9 | **1.3539** | 0.041 | 3.1 | ug/L | 219 | Standard |
| \| | **Zn** | 66 | 3953.2 | 2.9 | **3.1682** | 0.031 | 1.0 | ug/L | 232 | Standard |
| \| > | **Ge** | 72 | 251612.9 | 3.4 | | | | ug/L | 228255 | Standard |
| \| | **As** | 75 | -25.1 | 114.1 | **0.2154** | 0.025 | 11.8 | ug/L | -233 | Standard |
| \| | **Se** | 82 | 185.4 | 3.9 | **1.1118** | 0.019 | 1.7 | ug/L | 23 | Standard |
| ⌊ | **Se-1** | 77 | 215.7 | 4.1 | **1.5269** | 0.182 | 11.9 | ug/L | 91 | Standard |
| ⌈> | **Ga** | 71 | 230755.4 | 3.7 | | | | mg/L | 208873 | Standard |
| ⌊ | **Rb** | 85 | 26867.2 | 7.4 | | | | ug/L | 28 | Standard |
| ⌈ | **Y** | 89 | 273916.5 | 6.9 | | | | ug/L | 234742 | Standard |
| ⌊> | **Rh** | 103 | 134428.4 | 5.2 | | | | ug/L | 121294 | Standard |
| ⌈ | **Mo** | 98 | 5180.9 | 4.4 | **1.2601** | 0.003 | 0.3 | ug/L | 6 | Standard |
| \| | **Ag** | 107 | 862.4 | 10.0 | **0.0944** | 0.007 | 7.1 | ug/L | 64 | Standard |
| \| | **Cd** | 111 | 674.1 | 5.7 | **0.0541** | 0.003 | 4.8 | mg/L | 417 | Standard |
| \| | **Cd** | 114 | 1722.1 | 0.6 | **0.0580** | 0.008 | 13.4 | ug/L | 1009 | Standard |
| \| > | **In** | 115 | 676639.4 | 4.1 | | | | ug/L | 628085 | Standard |
| \| | **Sn** | 118 | 1428.7 | 9.2 | **0.0370** | 0.005 | 14.8 | ug/L | 834 | Standard |
| \| | **Sb** | 123 | 1130.2 | 15.5 | **0.1058** | 0.013 | 12.6 | ug/L | 22 | Standard |
| ⌊ | **Ba** | 135 | 45949.6 | 4.0 | **10.5396** | 0.025 | 0.2 | ug/L | 36 | Standard |
| ⌈ | **Ce** | 140 | 9645.4 | 6.9 | | | | ug/L | 44 | Standard |
| ⌊> | **Tb** | 159 | 767386.5 | 3.5 | | | | ug/L | 691511 | Standard |
| ⌈ | **Ho** | 165 | 169.3 | 11.3 | | | | ug/L | 6 | Standard |
| \| | **Tl** | 203 | 952.4 | 3.9 | **0.0632** | 0.002 | 2.4 | ug/L | 71 | Standard |
| \| | **Tl** | 205 | 2276.2 | 5.8 | **0.0636** | 0.004 | 5.7 | ug/L | 177 | Standard |
| \| | **Pb** | 206 | 1055.4 | 4.4 | **0.0699** | 0.002 | 2.2 | ug/L | 268 | Standard |
| \| | **Pb** | 207 | 866.4 | 9.6 | **0.0653** | 0.006 | 9.7 | ug/L | 245 | Standard |
| \| | **Pb** | 208 | 3957.2 | 6.4 | **0.0649** | 0.003 | 5.1 | ug/L | 1057 | Standard |
| \| | **U** | 238 | 120191.7 | 4.0 | **5.1570** | 0.090 | 1.7 | ug/L | 9 | Standard |
| ⌊> | **Bi** | 209 | 386239.4 | 2.8 | | | | ug/L | 389590 | Standard |
| ⌈ | **Na** | 23 | 79372.6 | 4.2 | **20.0769** | 0.270 | 1.3 | mg/L | 92 | Standard |
| \| | **Mg** | 24 | 9979772.9 | 4.4 | **18.5173** | 0.172 | 0.9 | mg/L | 142 | Standard |

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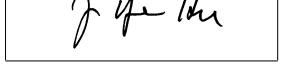

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | **K** | 39 | 14573.7 | 3.5 | **1.0856** | 0.032 | 2.9 | mg/L | 635 | Standard |
| | **Ca** | 43 | 26880.5 | 2.7 | **49.9950** | 1.454 | 2.9 | mg/L | 63 | Standard |
| | **Fe** | 54 | 1518.9 | 10.9 | **0.0661** | 0.021 | 32.3 | mg/L | 901 | Standard |
| | **Fe** | 57 | 57472.4 | 5.9 | **0.2526** | 0.002 | 1.0 | mg/L | 5948 | Standard |
| > | **Sc-1** | 45 | 362068.8 | 5.1 | | | | mg/L | 280553 | Standard |
| | **Cl** | 35 | 13710.5 | 1.6 | | | | ug/L | 931 | Standard |
| | **Kr** | 83 | 53.0 | 9.8 | | | | ug/L | 40 | Standard |
| | **Br** | 81 | 26771.1 | 2.0 | | | | ug/L | 11862 | Standard |
| | **P** | 31 | 116604.2 | 7.0 | | | | ug/L | 77079 | Standard |
| | **S** | 34 | 6145925.8 | 5.1 | | | | ug/L | 1028777 | Standard |
| | **Sr** | 88 | 12725267.6 | 7.3 | | | | ug/L | 318 | Standard |

## QC Calculated Values

| | Analyte | Mass | QC Std % Recovery | Int Std % Recovery | Spike % Recovery |
|---|---|---|---|---|---|
| | Li | 7 | | | |
| | Be | 9 | | | |
| | Al | 27 | | | |
| > | Sc | 45 | | | |
| | Ti | 47 | | | |
| | V | 51 | | | |
| | Cr | 52 | | | |
| | Cr | 53 | | | |
| | Mn | 55 | | | |
| | Co | 59 | | | |
| | Ni | 60 | | | |
| | Cu | 65 | | | |
| | Zn | 66 | | | |
| > | Ge | 72 | | 110.233 | |
| | As | 75 | | | |
| | Se | 82 | | | |
| | Se-1 | 77 | | | |
| > | Ga | 71 | | 110.477 | |
| | Rb | 85 | | | |
| | Y | 89 | | | |
| > | Rh | 103 | | 110.829 | |
| | Mo | 98 | | | |
| | Ag | 107 | | | |
| | Cd | 111 | | | |
| | Cd | 114 | | | |
| > | In | 115 | | 107.731 | |
| | Sn | 118 | | | |
| | Sb | 123 | | | |
| | Ba | 135 | | | |
| | Ce | 140 | | | |
| > | Tb | 159 | | 110.972 | |
| | Ho | 165 | | | |
| | Tl | 203 | | | |
| | Tl | 205 | | | |
| | Pb | 206 | | | |

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| | | | |
|---|---|---|---|
| | Pb | 207 | |
| | Pb | 208 | |
| | U | 238 | |
| > | Bi | 209 | 99.140 |
| | Na | 23 | |
| | Mg | 24 | |
| | K | 39 | |
| | Ca | 43 | |
| | Fe | 54 | |
| | Fe | 57 | |
| > | Sc-1 | 45 | |
| | Cl | 35 | |
| | Kr | 83 | |
| | Br | 81 | |
| | P | 31 | |
| | S | 34 | |
| | Sr | 88 | |

## QC Out of Limits

| Measurement Type | Analyte | Mass | Out of Limits Message |
|---|---|---|---|

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# Method 6020 - Summary Report

**Sample ID: PBW 51 WG397755-02**
Sample Date/Time: Friday, May 18, 2012 10:27:00
Number of Replicates: 3
Autosampler Position: 206
Sample Description: 1
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

## Concentration Results

| IS | Analyte | Mass | Intensity | RSD | Conc. | SD | RSD | Units | Blank Intens. | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| ⌈ | **Li** | 7 | 14555.4 | 7.9 | **-243.6498** | 71.680 | 29.4 | ug/L | 13493 | Standard |
| \| | **Be** | 9 | 16.7 | 34.6 | **-0.0081** | 0.002 | 19.5 | ug/L | 13 | Standard |
| \| | **Al** | 27 | 11097.4 | 4.4 | **0.0747** | 0.020 | 27.1 | ug/L | 8786 | Standard |
| ⌊> | **Sc** | 45 | 291360.0 | 6.9 | | | | ug/L | 280553 | Standard |
| ⌈ | **Ti** | 47 | 102.3 | 17.2 | **-0.0158** | 0.009 | 53.7 | ug/L | 96 | Standard |
| \| | **V** | 51 | 4599.8 | 5.8 | **0.0536** | 0.011 | 20.4 | ug/L | 3640 | Standard |
| \| | **Cr** | 52 | 14095.2 | 4.8 | **0.2249** | 0.032 | 14.3 | ug/L | 11495 | Standard |
| \| | **Cr** | 53 | 605.8 | 5.4 | **0.0557** | 0.012 | 21.0 | ug/L | 564 | Standard |
| \| | **Mn** | 55 | 1792.1 | 3.9 | **0.0263** | 0.002 | 8.0 | ug/L | 1247 | Standard |
| \| | **Co** | 59 | 136.7 | 8.8 | **-0.0034** | 0.001 | 34.2 | ug/L | 114 | Standard |
| \| | **Ni** | 60 | 68.3 | 13.1 | **0.0023** | 0.004 | 196.3 | ug/L | 66 | Standard |
| \| | **Cu** | 65 | 223.0 | 10.6 | **-0.0039** | 0.007 | 188.1 | ug/L | 219 | Standard |
| \| | **Zn** | 66 | 2155.8 | 5.0 | **1.7305** | 0.021 | 1.2 | ug/L | 232 | Standard |
| \| > | **Ge** | 72 | 236000.7 | 6.0 | | | | ug/L | 228255 | Standard |
| \| | **As** | 75 | -225.0 | 2.5 | **0.0223** | 0.009 | 39.5 | ug/L | -233 | Standard |
| \| | **Se** | 82 | 24.3 | 16.5 | **0.0296** | 0.022 | 72.9 | ug/L | 23 | Standard |
| ⌊ | **Se-1** | 77 | 95.0 | 5.3 | **0.1149** | 0.090 | 78.7 | ug/L | 91 | Standard |
| ⌈> | **Ga** | 71 | 213624.3 | 6.3 | | | | mg/L | 208873 | Standard |
| ⌊ | **Rb** | 85 | 26.7 | 43.3 | | | | ug/L | 28 | Standard |
| ⌈ | **Y** | 89 | 232952.9 | 5.9 | | | | ug/L | 234742 | Standard |
| ⌊> | **Rh** | 103 | 125495.1 | 5.9 | | | | ug/L | 121294 | Standard |
| ⌈ | **Mo** | 98 | 15.5 | 15.1 | **0.0082** | 0.001 | 8.7 | ug/L | 6 | Standard |
| \| | **Ag** | 107 | 44.0 | 6.0 | **-0.0057** | 0.001 | 9.3 | ug/L | 64 | Standard |
| \| | **Cd** | 111 | 404.0 | 8.6 | **-0.0043** | 0.003 | 77.0 | mg/L | 417 | Standard |
| \| | **Cd** | 114 | 1026.2 | 3.6 | **-0.0018** | 0.005 | 256.8 | ug/L | 1009 | Standard |
| \| > | **In** | 115 | 647008.5 | 5.3 | | | | ug/L | 628085 | Standard |
| \| | **Sn** | 118 | 961.4 | 8.5 | **0.0075** | 0.003 | 35.0 | ug/L | 834 | Standard |
| \| | **Sb** | 123 | 162.8 | 10.8 | **0.0126** | 0.001 | 9.1 | ug/L | 22 | Standard |
| ⌊ | **Ba** | 135 | 60.0 | 32.5 | **0.0025** | 0.004 | 165.7 | ug/L | 36 | Standard |
| ⌈ | **Ce** | 140 | 39.0 | 15.6 | | | | ug/L | 44 | Standard |
| ⌊> | **Tb** | 159 | 703351.3 | 5.1 | | | | ug/L | 691511 | Standard |
| ⌈ | **Ho** | 165 | 5.7 | 27.0 | | | | ug/L | 6 | Standard |
| \| | **Tl** | 203 | 80.7 | 39.2 | **0.0003** | 0.002 | 655.2 | ug/L | 71 | Standard |
| \| | **Tl** | 205 | 197.3 | 30.5 | **0.0017** | 0.002 | 87.7 | ug/L | 177 | Standard |
| \| | **Pb** | 206 | 289.7 | 7.5 | **0.0014** | 0.001 | 53.4 | ug/L | 268 | Standard |
| \| | **Pb** | 207 | 219.7 | 5.3 | **-0.0016** | 0.003 | 158.4 | ug/L | 245 | Standard |
| \| | **Pb** | 208 | 1110.7 | 5.2 | **0.0005** | 0.001 | 124.5 | ug/L | 1057 | Standard |
| \| | **U** | 238 | 10.7 | 65.8 | **-0.0003** | 0.000 | 98.2 | ug/L | 9 | Standard |
| ⌊> | **Bi** | 209 | 392960.4 | 6.1 | | | | ug/L | 389590 | Standard |
| ⌈ | **Na** | 23 | 108.3 | 5.3 | **-0.0063** | 0.004 | 68.7 | mg/L | 92 | Standard |
| \| | **Mg** | 24 | 306.7 | 13.2 | **-0.0010** | 0.000 | 5.8 | mg/L | 142 | Standard |

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Report Date/Time: Friday, May 18, 2012 10:29:33
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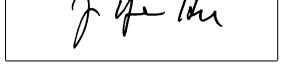

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | **K** | 39 | 690.0 | 16.4 | **0.0046** | 0.014 | 301.1 | mg/L | 635 | Standard |
| | **Ca** | 43 | 63.3 | 9.1 | **-0.0150** | 0.011 | 71.6 | mg/L | 63 | Standard |
| | **Fe** | 54 | 881.5 | 7.1 | **0.0038** | 0.014 | 379.0 | mg/L | 901 | Standard |
| | **Fe** | 57 | 7336.8 | 4.3 | **0.0082** | 0.002 | 19.4 | mg/L | 5948 | Standard |
| > | **Sc-1** | 45 | 291360.0 | 6.9 | | | | mg/L | 280553 | Standard |
| | **Cl** | 35 | 948.0 | 9.9 | | | | ug/L | 931 | Standard |
| | **Kr** | 83 | 41.1 | 9.6 | | | | ug/L | 40 | Standard |
| | **Br** | 81 | 12059.0 | 5.8 | | | | ug/L | 11862 | Standard |
| | **P** | 31 | 77404.2 | 4.7 | | | | ug/L | 77079 | Standard |
| | **S** | 34 | 1170867.0 | 4.8 | | | | ug/L | 1028777 | Standard |
| | **Sr** | 88 | 440.0 | 9.0 | | | | ug/L | 318 | Standard |

## QC Calculated Values

| | Analyte | Mass | QC Std % Recovery | Int Std % Recovery | Spike % Recovery |
|---|---|---|---|---|---|
| | Li | 7 | | | |
| | Be | 9 | | | |
| | Al | 27 | | | |
| > | Sc | 45 | | | |
| | Ti | 47 | | | |
| | V | 51 | | | |
| | Cr | 52 | | | |
| | Cr | 53 | | | |
| | Mn | 55 | | | |
| | Co | 59 | | | |
| | Ni | 60 | | | |
| | Cu | 65 | | | |
| | Zn | 66 | | | |
| > | Ge | 72 | | 103.393 | |
| | As | 75 | | | |
| | Se | 82 | | | |
| | Se-1 | 77 | | | |
| > | Ga | 71 | | 102.275 | |
| | Rb | 85 | | | |
| | Y | 89 | | | |
| > | Rh | 103 | | 103.464 | |
| | Mo | 98 | | | |
| | Ag | 107 | | | |
| | Cd | 111 | | | |
| | Cd | 114 | | | |
| > | In | 115 | | 103.013 | |
| | Sn | 118 | | | |
| | Sb | 123 | | | |
| | Ba | 135 | | | |
| | Ce | 140 | | | |
| > | Tb | 159 | | 101.712 | |
| | Ho | 165 | | | |
| | Tl | 203 | | | |
| | Tl | 205 | | | |
| | Pb | 206 | | | |

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| | | |
|---|---|---|
| | Pb | 207 |
| | Pb | 208 |
| | U | 238 |
| > | Bi | 209 |
| | Na | 23 |
| | Mg | 24 |
| | K | 39 |
| | Ca | 43 |
| | Fe | 54 |
| | Fe | 57 |
| > | Sc-1 | 45 |
| | Cl | 35 |
| | Kr | 83 |
| | Br | 81 |
| | P | 31 |
| | S | 34 |
| | Sr | 88 |

100.865

## QC Out of Limits

| Measurement Type | Analyte | Mass | Out of Limits Message |
|---|---|---|---|

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# Method 6020 - Summary Report

**Sample ID: LCSW 51 WG397755-03**
Sample Date/Time: Friday, May 18, 2012 10:29:53
Number of Replicates: 3
Autosampler Position: 207
Sample Description: 1
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

## Concentration Results

| IS | Analyte | Mass | Intensity | RSD | Conc. | SD | RSD | Units | Blank Intens. | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **Li** | 7 | 14869.0 | 4.1 | **153.3779** | 194.908 | 127.1 | ug/L | 13493 | Standard |
| | **Be** | 9 | 83479.4 | 2.1 | **24.9085** | 1.489 | 6.0 | ug/L | 13 | Standard |
| | **Al** | 27 | 465403.8 | 7.5 | **27.2557** | 0.687 | 2.5 | ug/L | 8786 | Standard |
| > | **Sc** | 45 | 319340.3 | 7.4 | | | | ug/L | 280553 | Standard |
| | **Ti** | 47 | 206.3 | 64.6 | **0.0481** | 0.085 | 176.9 | ug/L | 96 | Standard |
| | **V** | 51 | 424582.1 | 5.2 | **26.7090** | 0.487 | 1.8 | ug/L | 3640 | Standard |
| | **Cr** | 52 | 321423.5 | 5.2 | **27.2376** | 0.548 | 2.0 | ug/L | 11495 | Standard |
| | **Cr** | 53 | 45855.3 | 5.6 | **26.7109** | 0.333 | 1.2 | ug/L | 564 | Standard |
| | **Mn** | 55 | 528805.4 | 4.9 | **26.6554** | 0.129 | 0.5 | ug/L | 1247 | Standard |
| | **Co** | 59 | 362739.7 | 5.0 | **26.1302** | 0.130 | 0.5 | ug/L | 114 | Standard |
| | **Ni** | 60 | 76150.2 | 5.3 | **26.1441** | 0.304 | 1.2 | ug/L | 66 | Standard |
| | **Cu** | 65 | 66440.9 | 4.7 | **26.4101** | 0.088 | 0.3 | ug/L | 219 | Standard |
| | **Zn** | 66 | 30222.5 | 3.8 | **26.1783** | 0.409 | 1.6 | ug/L | 232 | Standard |
| > | **Ge** | 72 | 249971.5 | 4.5 | | | | ug/L | 228255 | Standard |
| | **As** | 75 | 27099.0 | 4.3 | **24.6675** | 0.290 | 1.2 | ug/L | -233 | Standard |
| | **Se** | 82 | 3624.7 | 4.9 | **24.5998** | 0.222 | 0.9 | ug/L | 23 | Standard |
| | **Se-1** | 77 | 1966.1 | 3.6 | **23.2812** | 0.329 | 1.4 | ug/L | 91 | Standard |
| > | **Ga** | 71 | 234487.0 | 6.4 | | | | mg/L | 208873 | Standard |
| | **Rb** | 85 | 61.7 | 4.7 | | | | ug/L | 28 | Standard |
| | **Y** | 89 | 259056.9 | 5.5 | | | | ug/L | 234742 | Standard |
| > | **Rh** | 103 | 138494.3 | 5.5 | | | | ug/L | 121294 | Standard |
| | **Mo** | 98 | 83.7 | 60.0 | **0.0245** | 0.012 | 47.4 | ug/L | 6 | Standard |
| | **Ag** | 107 | 213047.0 | 8.4 | **26.3949** | 1.175 | 4.5 | ug/L | 64 | Standard |
| | **Cd** | 111 | 105934.6 | 4.4 | **24.7350** | 0.224 | 0.9 | mg/L | 417 | Standard |
| | **Cd** | 114 | 260083.5 | 4.2 | **24.0822** | 0.112 | 0.5 | ug/L | 1009 | Standard |
| > | **In** | 115 | 669381.1 | 4.1 | | | | ug/L | 628085 | Standard |
| | **Sn** | 118 | 1377.4 | 4.4 | **0.0346** | 0.003 | 10.1 | ug/L | 834 | Standard |
| | **Sb** | 123 | 251068.0 | 3.7 | **24.7037** | 0.113 | 0.5 | ug/L | 22 | Standard |
| | **Ba** | 135 | 110146.0 | 3.8 | **25.5568** | 0.145 | 0.6 | ug/L | 36 | Standard |
| | **Ce** | 140 | 139.0 | 22.7 | | | | ug/L | 44 | Standard |
| > | **Tb** | 159 | 741153.3 | 4.3 | | | | ug/L | 691511 | Standard |
| | **Ho** | 165 | 11.7 | 9.9 | | | | ug/L | 6 | Standard |
| | **Tl** | 203 | 380359.1 | 4.4 | **25.9743** | 0.289 | 1.1 | ug/L | 71 | Standard |
| | **Tl** | 205 | 913698.9 | 4.6 | **25.7410** | 0.175 | 0.7 | ug/L | 177 | Standard |
| | **Pb** | 206 | 310474.9 | 3.7 | **26.1613** | 0.509 | 1.9 | ug/L | 268 | Standard |
| | **Pb** | 207 | 267281.6 | 4.4 | **26.1652** | 0.336 | 1.3 | ug/L | 245 | Standard |
| | **Pb** | 208 | 1219198.5 | 4.1 | **25.9945** | 0.468 | 1.8 | ug/L | 1057 | Standard |
| | **U** | 238 | 604978.9 | 3.7 | **24.6563** | 0.567 | 2.3 | ug/L | 9 | Standard |
| > | **Bi** | 209 | 407001.9 | 5.2 | | | | ug/L | 389590 | Standard |
| | **Na** | 23 | 171.7 | 24.8 | **0.0088** | 0.012 | 133.3 | mg/L | 92 | Standard |
| | **Mg** | 24 | 11969.6 | 70.4 | **0.0230** | 0.016 | 70.0 | mg/L | 142 | Standard |

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| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | **K** | 39 | 735.0 | 1.2 | **0.0025** | 0.005 | 192.5 | mg/L | 635 | Standard |
| | **Ca** | 43 | 90.0 | 38.9 | **0.0286** | 0.071 | 246.8 | mg/L | 63 | Standard |
| | **Fe** | 54 | 1247.2 | 11.5 | **0.0504** | 0.014 | 27.8 | mg/L | 901 | Standard |
| | **Fe** | 57 | 8285.7 | 19.2 | **0.0094** | 0.007 | 74.3 | mg/L | 5948 | Standard |
| > | **Sc-1** | 45 | 319340.3 | 7.4 | | | | mg/L | 280553 | Standard |
| | **Cl** | 35 | 1055.7 | 9.6 | | | | ug/L | 931 | Standard |
| | **Kr** | 83 | 47.3 | 7.4 | | | | ug/L | 40 | Standard |
| | **Br** | 81 | 13147.4 | 6.4 | | | | ug/L | 11862 | Standard |
| | **P** | 31 | 116381.6 | 6.8 | | | | ug/L | 77079 | Standard |
| | **S** | 34 | 1181578.4 | 5.1 | | | | ug/L | 1028777 | Standard |
| | **Sr** | 88 | 4258.9 | 14.2 | | | | ug/L | 318 | Standard |

## QC Calculated Values

| | Analyte | Mass | QC Std % Recovery | Int Std % Recovery | Spike % Recovery |
|---|---|---|---|---|---|
| | Li | 7 | | | |
| | Be | 9 | | | |
| | Al | 27 | | | |
| > | Sc | 45 | | | |
| | Ti | 47 | | | |
| | V | 51 | | | |
| | Cr | 52 | | | |
| | Cr | 53 | | | |
| | Mn | 55 | | | |
| | Co | 59 | | | |
| | Ni | 60 | | | |
| | Cu | 65 | | | |
| | Zn | 66 | | | |
| > | Ge | 72 | | 109.514 | |
| | As | 75 | | | |
| | Se | 82 | | | |
| | Se-1 | 77 | | | |
| > | Ga | 71 | | 112.263 | |
| | Rb | 85 | | | |
| | Y | 89 | | | |
| > | Rh | 103 | | 114.181 | |
| | Mo | 98 | | | |
| | Ag | 107 | | | |
| | Cd | 111 | | | |
| | Cd | 114 | | | |
| > | In | 115 | | 106.575 | |
| | Sn | 118 | | | |
| | Sb | 123 | | | |
| | Ba | 135 | | | |
| | Ce | 140 | | | |
| > | Tb | 159 | | 107.179 | |
| | Ho | 165 | | | |
| | Tl | 203 | | | |
| | Tl | 205 | | | |
| | Pb | 206 | | | |

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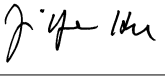

| | | | |
|---|---|---|---|
| | Pb | 207 | |
| | Pb | 208 | |
| | U | 238 | |
| > | Bi | 209 | 104.469 |
| | Na | 23 | |
| | Mg | 24 | |
| | K | 39 | |
| | Ca | 43 | |
| | Fe | 54 | |
| | Fe | 57 | |
| > | Sc-1 | 45 | |
| | Cl | 35 | |
| | Kr | 83 | |
| | Br | 81 | |
| | P | 31 | |
| | S | 34 | |
| | Sr | 88 | |

## QC Out of Limits

| Measurement Type | Analyte | Mass | Out of Limits Message |
|---|---|---|---|

**Sample ID: LCSW 51 WG397755-03**
Report Date/Time: Friday, May 18, 2012 10:32:27
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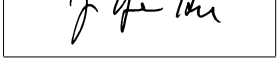

# Method 6020 - Summary Report

**Sample ID: L1205035106 WG397755-01**
Sample Date/Time: Friday, May 18, 2012 10:32:47
Number of Replicates: 3
Autosampler Position: 208
Sample Description: 5
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

## Concentration Results

| IS | Analyte | Mass | Intensity | RSD | Conc. | SD | RSD | Units | Blank Intens. | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **Li** | 7 | 529964.9 | 1.1 | **-210634.1684** | 4252.062 | 2.0 | ug/L | 13493 | Standard |
| | **Be** | 9 | 11.7 | 99.0 | **-0.0098** | 0.004 | 36.5 | ug/L | 13 | Standard |
| | **Al** | 27 | 149179.8 | 7.0 | **9.0208** | 0.780 | 8.7 | ug/L | 8786 | Standard |
| > | **Sc** | 45 | 295435.7 | 2.8 | | | | ug/L | 280553 | Standard |
| | **Ti** | 47 | 543.7 | 3.8 | **0.2933** | 0.018 | 6.1 | ug/L | 96 | Standard |
| | **V** | 51 | 6080.5 | 1.5 | **0.1547** | 0.003 | 1.8 | ug/L | 3640 | Standard |
| | **Cr** | 52 | 14403.2 | 3.2 | **0.2582** | 0.035 | 13.6 | ug/L | 11495 | Standard |
| | **Cr** | 53 | 2361.0 | 7.9 | **1.1589** | 0.136 | 11.7 | ug/L | 564 | Standard |
| | **Mn** | 55 | 3175.3 | 2.4 | **0.1009** | 0.002 | 1.8 | ug/L | 1247 | Standard |
| | **Co** | 59 | 1164.7 | 4.9 | **0.0754** | 0.003 | 4.5 | ug/L | 114 | Standard |
| | **Ni** | 60 | 6291.3 | 6.2 | **2.2760** | 0.116 | 5.1 | ug/L | 66 | Standard |
| | **Cu** | 65 | 2364.2 | 7.2 | **0.9045** | 0.055 | 6.1 | ug/L | 219 | Standard |
| | **Zn** | 66 | 3377.4 | 3.1 | **2.8737** | 0.042 | 1.4 | ug/L | 232 | Standard |
| > | **Ge** | 72 | 235054.7 | 2.0 | | | | ug/L | 228255 | Standard |
| | **As** | 75 | 407.5 | 5.7 | **0.6280** | 0.020 | 3.1 | ug/L | -233 | Standard |
| | **Se** | 82 | 910.5 | 1.2 | **6.4668** | 0.146 | 2.3 | ug/L | 23 | Standard |
| | **Se-1** | 77 | 546.7 | 2.7 | **6.0806** | 0.082 | 1.3 | ug/L | 91 | Standard |
| > | **Ga** | 71 | 205960.1 | 3.8 | | | | mg/L | 208873 | Standard |
| | **Rb** | 85 | 3037.0 | 4.0 | | | | ug/L | 28 | Standard |
| | **Y** | 89 | 232454.6 | 0.7 | | | | ug/L | 234742 | Standard |
| > | **Rh** | 103 | 116791.8 | 1.2 | | | | ug/L | 121294 | Standard |
| | **Mo** | 98 | 290.3 | 3.0 | **0.0777** | 0.003 | 4.3 | ug/L | 6 | Standard |
| | **Ag** | 107 | 51.0 | 16.8 | **-0.0048** | 0.001 | 20.6 | ug/L | 64 | Standard |
| | **Cd** | 111 | 182.9 | 17.1 | **-0.0579** | 0.008 | 13.4 | mg/L | 417 | Standard |
| | **Cd** | 114 | 432.6 | 3.2 | **-0.0591** | 0.002 | 3.3 | ug/L | 1009 | Standard |
| > | **In** | 115 | 648395.2 | 1.5 | | | | ug/L | 628085 | Standard |
| | **Sn** | 118 | 787.4 | 1.4 | **-0.0053** | 0.001 | 18.7 | ug/L | 834 | Standard |
| | **Sb** | 123 | 238.3 | 17.8 | **0.0203** | 0.004 | 21.2 | ug/L | 22 | Standard |
| | **Ba** | 135 | 3042.3 | 0.4 | **0.7173** | 0.011 | 1.6 | ug/L | 36 | Standard |
| | **Ce** | 140 | 1252.7 | 3.0 | | | | ug/L | 44 | Standard |
| > | **Tb** | 159 | 723165.8 | 0.3 | | | | ug/L | 691511 | Standard |
| | **Ho** | 165 | 24.7 | 4.7 | | | | ug/L | 6 | Standard |
| | **Tl** | 203 | 720.0 | 5.4 | **0.0494** | 0.004 | 7.5 | ug/L | 71 | Standard |
| | **Tl** | 205 | 1690.1 | 0.6 | **0.0490** | 0.001 | 1.7 | ug/L | 177 | Standard |
| | **Pb** | 206 | 642.7 | 1.6 | **0.0365** | 0.000 | 1.3 | ug/L | 268 | Standard |
| | **Pb** | 207 | 520.7 | 3.1 | **0.0328** | 0.002 | 6.2 | ug/L | 245 | Standard |
| | **Pb** | 208 | 2397.1 | 3.1 | **0.0329** | 0.001 | 3.6 | ug/L | 1057 | Standard |
| | **U** | 238 | 102376.8 | 1.8 | **4.6436** | 0.063 | 1.4 | ug/L | 9 | Standard |
| > | **Bi** | 209 | 365437.3 | 1.7 | | | | ug/L | 389590 | Standard |
| | **Na** | 23 | 255638.6 | 0.4 | **79.3749** | 1.922 | 2.4 | mg/L | 92 | Standard |
| | **Mg** | 24 | 15854948.8 | 2.8 | **36.0698** | 1.600 | 4.4 | mg/L | 142 | Standard |

**Sample ID: L1205035106 WG397755-01**
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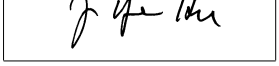

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | **K** | 39 | 7982.1 | 3.0 | **0.7077** | 0.033 | 4.7 | mg/L | 635 | Standard |
| | **Ca** | 43 | 15462.9 | 2.1 | **35.1759** | 0.810 | 2.3 | mg/L | 63 | Standard |
| | **Fe** | 54 | 439.2 | 6.7 | **-0.0793** | 0.003 | 3.9 | mg/L | 901 | Standard |
| | **Fe** | 57 | 34048.2 | 0.2 | **0.1732** | 0.006 | 3.3 | mg/L | 5948 | Standard |
| > | **Sc-1** | 45 | 295435.7 | 2.8 | | | | mg/L | 280553 | Standard |
| | **Cl** | 35 | 19812.6 | 1.6 | | | | ug/L | 931 | Standard |
| | **Kr** | 83 | 48.7 | 4.9 | | | | ug/L | 40 | Standard |
| | **Br** | 81 | 89396.4 | 2.7 | | | | ug/L | 11862 | Standard |
| | **P** | 31 | 34572.0 | 5.4 | | | | ug/L | 77079 | Standard |
| | **S** | 34 | 14054505.0 | 1.6 | | | | ug/L | 1028777 | Standard |
| | **Sr** | 88 | 10519420.2 | 3.5 | | | | ug/L | 318 | Standard |

## QC Calculated Values

| | Analyte | Mass | QC Std % Recovery | Int Std % Recovery | Spike % Recovery |
|---|---|---|---|---|---|
| | Li | 7 | | | |
| | Be | 9 | | | |
| | Al | 27 | | | |
| > | Sc | 45 | | | |
| | Ti | 47 | | | |
| | V | 51 | | | |
| | Cr | 52 | | | |
| | Cr | 53 | | | |
| | Mn | 55 | | | |
| | Co | 59 | | | |
| | Ni | 60 | | | |
| | Cu | 65 | | | |
| | Zn | 66 | | | |
| > | Ge | 72 | | 102.979 | |
| | As | 75 | | | |
| | Se | 82 | | | |
| | Se-1 | 77 | | | |
| > | Ga | 71 | | 98.606 | |
| | Rb | 85 | | | |
| | Y | 89 | | | |
| > | Rh | 103 | | 96.288 | |
| | Mo | 98 | | | |
| | Ag | 107 | | | |
| | Cd | 111 | | | |
| | Cd | 114 | | | |
| > | In | 115 | | 103.234 | |
| | Sn | 118 | | | |
| | Sb | 123 | | | |
| | Ba | 135 | | | |
| | Ce | 140 | | | |
| > | Tb | 159 | | 104.578 | |
| | Ho | 165 | | | |
| | Tl | 203 | | | |
| | Tl | 205 | | | |
| | Pb | 206 | | | |

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| | | | |
|---|---|---|---|
| | Pb | 207 | |
| | Pb | 208 | |
| | U | 238 | |
| > | Bi | 209 | 93.801 |
| | Na | 23 | |
| | Mg | 24 | |
| | K | 39 | |
| | Ca | 43 | |
| | Fe | 54 | |
| | Fe | 57 | |
| > | Sc-1 | 45 | |
| | Cl | 35 | |
| | Kr | 83 | |
| | Br | 81 | |
| | P | 31 | |
| | S | 34 | |
| | Sr | 88 | |

## QC Out of Limits

| Measurement Type | Analyte | Mass | Out of Limits Message |
|---|---|---|---|

**Sample ID: L1205035106 WG397755-01**
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# Method 6020 - Summary Report

**Sample ID: L1205035106S WG397755-04**
Sample Date/Time: Friday, May 18, 2012 10:35:39
Number of Replicates: 3
Autosampler Position: 209
Sample Description: 5
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

## Concentration Results

| IS | Analyte | Mass | Intensity | RSD | Conc. | SD | RSD | Units | Blank Intens. | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **Li** | 7 | 649125.0 | 2.0 | **-246108.0072** | 3054.690 | 1.2 | ug/L | 13493 | Standard |
| | **Be** | 9 | 21964.2 | 2.6 | **6.7049** | 0.149 | 2.2 | ug/L | 13 | Standard |
| | **Al** | 27 | 167057.7 | 5.5 | **9.6395** | 0.606 | 6.3 | ug/L | 8786 | Standard |
| > | **Sc** | 45 | 310773.3 | 0.9 | | | | ug/L | 280553 | Standard |
| | **Ti** | 47 | 472.7 | 6.1 | **0.2374** | 0.025 | 10.5 | ug/L | 96 | Standard |
| | **V** | 51 | 99351.8 | 2.7 | **6.3256** | 0.134 | 2.1 | ug/L | 3640 | Standard |
| | **Cr** | 52 | 81794.2 | 1.5 | **6.4286** | 0.132 | 2.1 | ug/L | 11495 | Standard |
| | **Cr** | 53 | 11593.6 | 2.0 | **6.8087** | 0.149 | 2.2 | ug/L | 564 | Standard |
| | **Mn** | 55 | 115571.5 | 1.7 | **6.0234** | 0.110 | 1.8 | ug/L | 1247 | Standard |
| | **Co** | 59 | 79385.8 | 2.4 | **5.9552** | 0.152 | 2.6 | ug/L | 114 | Standard |
| | **Ni** | 60 | 23659.1 | 3.0 | **8.4577** | 0.188 | 2.2 | ug/L | 66 | Standard |
| | **Cu** | 65 | 15708.1 | 1.6 | **6.4389** | 0.058 | 0.9 | ug/L | 219 | Standard |
| | **Zn** | 66 | 10214.1 | 1.2 | **9.0521** | 0.097 | 1.1 | ug/L | 232 | Standard |
| > | **Ge** | 72 | 239687.2 | 2.1 | | | | ug/L | 228255 | Standard |
| | **As** | 75 | 7695.8 | 1.0 | **7.4737** | 0.117 | 1.6 | ug/L | -233 | Standard |
| | **Se** | 82 | 2138.3 | 1.6 | **15.0848** | 0.414 | 2.7 | ug/L | 23 | Standard |
| | **Se-1** | 77 | 1165.0 | 1.4 | **13.9520** | 0.338 | 2.4 | ug/L | 91 | Standard |
| > | **Ga** | 71 | 209838.1 | 0.8 | | | | mg/L | 208873 | Standard |
| | **Rb** | 85 | 3545.4 | 1.4 | | | | ug/L | 28 | Standard |
| | **Y** | 89 | 243136.7 | 3.3 | | | | ug/L | 234742 | Standard |
| > | **Rh** | 103 | 120348.0 | 2.8 | | | | ug/L | 121294 | Standard |
| | **Mo** | 98 | 358.8 | 6.1 | **0.0942** | 0.005 | 5.6 | ug/L | 6 | Standard |
| | **Ag** | 107 | 41439.3 | 3.3 | **5.2505** | 0.107 | 2.0 | ug/L | 64 | Standard |
| | **Cd** | 111 | 25944.6 | 1.9 | **6.1242** | 0.139 | 2.3 | mg/L | 417 | Standard |
| | **Cd** | 114 | 65163.0 | 2.5 | **6.1001** | 0.114 | 1.9 | ug/L | 1009 | Standard |
| > | **In** | 115 | 654119.8 | 2.0 | | | | ug/L | 628085 | Standard |
| | **Sn** | 118 | 720.4 | 0.7 | **-0.0106** | 0.001 | 8.2 | ug/L | 834 | Standard |
| | **Sb** | 123 | 62454.1 | 2.1 | **6.2865** | 0.183 | 2.9 | ug/L | 22 | Standard |
| | **Ba** | 135 | 27789.8 | 1.0 | **6.5901** | 0.094 | 1.4 | ug/L | 36 | Standard |
| | **Ce** | 140 | 1251.1 | 1.8 | | | | ug/L | 44 | Standard |
| > | **Tb** | 159 | 727390.4 | 1.8 | | | | ug/L | 691511 | Standard |
| | **Ho** | 165 | 27.3 | 18.8 | | | | ug/L | 6 | Standard |
| | **Tl** | 203 | 81043.9 | 1.8 | **6.2527** | 0.124 | 2.0 | ug/L | 71 | Standard |
| | **Tl** | 205 | 193633.3 | 1.6 | **6.1643** | 0.085 | 1.4 | ug/L | 177 | Standard |
| | **Pb** | 206 | 64593.8 | 1.7 | **6.1328** | 0.083 | 1.3 | ug/L | 268 | Standard |
| | **Pb** | 207 | 55158.6 | 1.9 | **6.0857** | 0.104 | 1.7 | ug/L | 245 | Standard |
| | **Pb** | 208 | 252753.6 | 1.4 | **6.0728** | 0.078 | 1.3 | ug/L | 1057 | Standard |
| | **U** | 238 | 256624.8 | 1.0 | **11.8194** | 0.125 | 1.1 | ug/L | 9 | Standard |
| > | **Bi** | 209 | 359931.4 | 1.3 | | | | ug/L | 389590 | Standard |
| | **Na** | 23 | 295679.1 | 1.1 | **87.2433** | 1.029 | 1.2 | mg/L | 92 | Standard |
| | **Mg** | 24 | 18527044.8 | 2.9 | **40.0416** | 1.065 | 2.7 | mg/L | 142 | Standard |

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| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | **K** | 39 | 9062.7 | 2.9 | **0.7684** | 0.023 | 3.0 | mg/L | 635 | Standard |
| | **Ca** | 43 | 17551.8 | 1.6 | **37.9615** | 0.746 | 2.0 | mg/L | 63 | Standard |
| | **Fe** | 54 | 454.6 | 5.2 | **-0.0804** | 0.005 | 5.9 | mg/L | 901 | Standard |
| | **Fe** | 57 | 37889.0 | 2.9 | **0.1852** | 0.005 | 2.4 | mg/L | 5948 | Standard |
| > | **Sc-1** | 45 | 310773.3 | 0.9 | | | | mg/L | 280553 | Standard |
| | **Cl** | 35 | 13659.2 | 1.2 | | | | ug/L | 931 | Standard |
| | **Kr** | 83 | 55.9 | 2.4 | | | | ug/L | 40 | Standard |
| | **Br** | 81 | 73697.1 | 0.8 | | | | ug/L | 11862 | Standard |
| | **P** | 31 | 37948.3 | 3.4 | | | | ug/L | 77079 | Standard |
| | **S** | 34 | 16681649.6 | 2.7 | | | | ug/L | 1028777 | Standard |
| | **Sr** | 88 | 12968841.9 | 1.4 | | | | ug/L | 318 | Standard |

## QC Calculated Values

| | Analyte | Mass | QC Std % Recovery | Int Std % Recovery | Spike % Recovery |
|---|---|---|---|---|---|
| | Li | 7 | | | |
| | Be | 9 | | | |
| | Al | 27 | | | |
| > | Sc | 45 | | | |
| | Ti | 47 | | | |
| | V | 51 | | | |
| | Cr | 52 | | | |
| | Cr | 53 | | | |
| | Mn | 55 | | | |
| | Co | 59 | | | |
| | Ni | 60 | | | |
| | Cu | 65 | | | |
| | Zn | 66 | | | |
| > | Ge | 72 | | 105.008 | |
| | As | 75 | | | |
| | Se | 82 | | | |
| | Se-1 | 77 | | | |
| > | Ga | 71 | | 100.462 | |
| | Rb | 85 | | | |
| | Y | 89 | | | |
| > | Rh | 103 | | 99.220 | |
| | Mo | 98 | | | |
| | Ag | 107 | | | |
| | Cd | 111 | | | |
| | Cd | 114 | | | |
| > | In | 115 | | 104.145 | |
| | Sn | 118 | | | |
| | Sb | 123 | | | |
| | Ba | 135 | | | |
| | Ce | 140 | | | |
| > | Tb | 159 | | 105.189 | |
| | Ho | 165 | | | |
| | Tl | 203 | | | |
| | Tl | 205 | | | |
| | Pb | 206 | | | |

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| | | | |
|---|---|---|---|
| | Pb | 207 | |
| | Pb | 208 | |
| | U | 238 | |
| > | Bi | 209 | 92.387 |
| | Na | 23 | |
| | Mg | 24 | |
| | K | 39 | |
| | Ca | 43 | |
| | Fe | 54 | |
| | Fe | 57 | |
| > | Sc-1 | 45 | |
| | Cl | 35 | |
| | Kr | 83 | |
| | Br | 81 | |
| | P | 31 | |
| | S | 34 | |
| | Sr | 88 | |

## QC Out of Limits

| Measurement Type | Analyte | Mass | Out of Limits Message |
|---|---|---|---|



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# Method 6020 - Summary Report

**Sample ID: L1205035106SD WG397755-05**

Sample Date/Time: Friday, May 18, 2012 10:38:31
Number of Replicates: 3
Autosampler Position: 210
Sample Description: 5
Method File: C:\NexION Data\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

## Concentration Results

| IS | Analyte | Mass | Intensity | RSD | Conc. | SD | RSD | Units | Blank Intens. | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **Li** | 7 | 603560.8 | 1.8 | **-228085.4675** | 4960.749 | 2.2 | ug/L | 13493 | Standard |
| | **Be** | 9 | 20196.8 | 1.8 | **6.1561** | 0.187 | 3.0 | ug/L | 13 | Standard |
| | **Al** | 27 | 147368.6 | 2.7 | **8.4097** | 0.192 | 2.3 | ug/L | 8786 | Standard |
| > | **Sc** | 45 | 311402.1 | 3.8 | | | | ug/L | 280553 | Standard |
| | **Ti** | 47 | 464.7 | 5.3 | **0.2338** | 0.021 | 8.8 | ug/L | 96 | Standard |
| | **V** | 51 | 91473.5 | 2.2 | **5.8411** | 0.061 | 1.1 | ug/L | 3640 | Standard |
| | **Cr** | 52 | 76242.8 | 2.8 | **5.9597** | 0.052 | 0.9 | ug/L | 11495 | Standard |
| | **Cr** | 53 | 10498.6 | 2.5 | **6.1738** | 0.019 | 0.3 | ug/L | 564 | Standard |
| | **Mn** | 55 | 105490.9 | 3.2 | **5.5248** | 0.080 | 1.4 | ug/L | 1247 | Standard |
| | **Co** | 59 | 72641.8 | 2.7 | **5.4808** | 0.067 | 1.2 | ug/L | 114 | Standard |
| | **Ni** | 60 | 21633.1 | 2.1 | **7.7800** | 0.115 | 1.5 | ug/L | 66 | Standard |
| | **Cu** | 65 | 14410.2 | 2.2 | **5.9356** | 0.065 | 1.1 | ug/L | 219 | Standard |
| | **Zn** | 66 | 9757.5 | 1.9 | **8.6905** | 0.155 | 1.8 | ug/L | 232 | Standard |
| > | **Ge** | 72 | 238227.3 | 2.6 | | | | ug/L | 228255 | Standard |
| | **As** | 75 | 6888.3 | 5.6 | **6.7495** | 0.194 | 2.9 | ug/L | -233 | Standard |
| | **Se** | 82 | 1961.6 | 5.1 | **13.9023** | 0.405 | 2.9 | ug/L | 23 | Standard |
| | **Se-1** | 77 | 1103.4 | 1.9 | **13.2388** | 0.089 | 0.7 | ug/L | 91 | Standard |
| > | **Ga** | 71 | 211432.5 | 3.0 | | | | mg/L | 208873 | Standard |
| | **Rb** | 85 | 3318.7 | 2.1 | | | | ug/L | 28 | Standard |
| | **Y** | 89 | 237100.4 | 3.3 | | | | ug/L | 234742 | Standard |
| > | **Rh** | 103 | 118884.7 | 2.3 | | | | ug/L | 121294 | Standard |
| | **Mo** | 98 | 332.2 | 5.3 | **0.0893** | 0.006 | 6.2 | ug/L | 6 | Standard |
| | **Ag** | 107 | 39101.1 | 3.3 | **5.0542** | 0.105 | 2.1 | ug/L | 64 | Standard |
| | **Cd** | 111 | 23728.4 | 1.5 | **5.7069** | 0.036 | 0.6 | mg/L | 417 | Standard |
| | **Cd** | 114 | 59823.5 | 1.2 | **5.7075** | 0.041 | 0.7 | ug/L | 1009 | Standard |
| > | **In** | 115 | 641136.9 | 1.9 | | | | ug/L | 628085 | Standard |
| | **Sn** | 118 | 636.3 | 4.1 | **-0.0158** | 0.002 | 10.5 | ug/L | 834 | Standard |
| | **Sb** | 123 | 57058.1 | 1.5 | **5.8583** | 0.052 | 0.9 | ug/L | 22 | Standard |
| | **Ba** | 135 | 25142.2 | 1.6 | **6.0817** | 0.093 | 1.5 | ug/L | 36 | Standard |
| | **Ce** | 140 | 1156.7 | 2.7 | | | | ug/L | 44 | Standard |
| > | **Tb** | 159 | 720951.5 | 1.9 | | | | ug/L | 691511 | Standard |
| | **Ho** | 165 | 28.3 | 7.3 | | | | ug/L | 6 | Standard |
| | **Tl** | 203 | 73537.0 | 1.2 | **5.6197** | 0.098 | 1.7 | ug/L | 71 | Standard |
| | **Tl** | 205 | 176221.0 | 1.6 | **5.5565** | 0.048 | 0.9 | ug/L | 177 | Standard |
| | **Pb** | 206 | 58945.8 | 2.1 | **5.5415** | 0.097 | 1.8 | ug/L | 268 | Standard |
| | **Pb** | 207 | 50545.9 | 2.3 | **5.5217** | 0.089 | 1.6 | ug/L | 245 | Standard |
| | **Pb** | 208 | 230663.7 | 1.8 | **5.4873** | 0.078 | 1.4 | ug/L | 1057 | Standard |
| | **U** | 238 | 234763.4 | 2.3 | **10.7093** | 0.147 | 1.4 | ug/L | 9 | Standard |
| > | **Bi** | 209 | 363374.9 | 1.7 | | | | ug/L | 389590 | Standard |
| | **Na** | 23 | 277039.4 | 2.8 | **81.5985** | 1.432 | 1.8 | mg/L | 92 | Standard |
| | **Mg** | 24 | 17266659.2 | 2.1 | **37.2585** | 0.658 | 1.8 | mg/L | 142 | Standard |

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| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | **K** | 39 | 8730.8 | 3.0 | **0.7374** | 0.047 | 6.4 | mg/L | 635 | Standard |
| | **Ca** | 43 | 16278.7 | 3.3 | **35.1415** | 1.291 | 3.7 | mg/L | 63 | Standard |
| | **Fe** | 54 | 470.9 | 10.2 | **-0.0778** | 0.009 | 11.3 | mg/L | 901 | Standard |
| | **Fe** | 57 | 37016.8 | 2.5 | **0.1798** | 0.004 | 2.1 | mg/L | 5948 | Standard |
| > | **Sc-1** | 45 | 311402.1 | 3.8 | | | | mg/L | 280553 | Standard |
| | **Cl** | 35 | 12592.2 | 1.4 | | | | ug/L | 931 | Standard |
| | **Kr** | 83 | 58.7 | 12.3 | | | | ug/L | 40 | Standard |
| | **Br** | 81 | 70415.0 | 2.5 | | | | ug/L | 11862 | Standard |
| | **P** | 31 | 37281.0 | 7.6 | | | | ug/L | 77079 | Standard |
| | **S** | 34 | 15483417.9 | 3.0 | | | | ug/L | 1028777 | Standard |
| | **Sr** | 88 | 12252757.4 | 4.6 | | | | ug/L | 318 | Standard |

## QC Calculated Values

| | Analyte | Mass | QC Std % Recovery | Int Std % Recovery | Spike % Recovery |
|---|---|---|---|---|---|
| | Li | 7 | | | |
| | Be | 9 | | | |
| | Al | 27 | | | |
| > | Sc | 45 | | | |
| | Ti | 47 | | | |
| | V | 51 | | | |
| | Cr | 52 | | | |
| | Cr | 53 | | | |
| | Mn | 55 | | | |
| | Co | 59 | | | |
| | Ni | 60 | | | |
| | Cu | 65 | | | |
| | Zn | 66 | | | |
| > | Ge | 72 | | 104.369 | |
| | As | 75 | | | |
| | Se | 82 | | | |
| | Se-1 | 77 | | | |
| > | Ga | 71 | | 101.226 | |
| | Rb | 85 | | | |
| | Y | 89 | | | |
| > | Rh | 103 | | 98.014 | |
| | Mo | 98 | | | |
| | Ag | 107 | | | |
| | Cd | 111 | | | |
| | Cd | 114 | | | |
| > | In | 115 | | 102.078 | |
| | Sn | 118 | | | |
| | Sb | 123 | | | |
| | Ba | 135 | | | |
| | Ce | 140 | | | |
| > | Tb | 159 | | 104.257 | |
| | Ho | 165 | | | |
| | Tl | 203 | | | |
| | Tl | 205 | | | |
| | Pb | 206 | | | |

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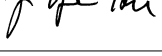

| | | | |
|---|---|---|---|
| | Pb | 207 | |
| | Pb | 208 | |
| | U | 238 | |
| > | Bi | 209 | 93.271 |
| | Na | 23 | |
| | Mg | 24 | |
| | K | 39 | |
| | Ca | 43 | |
| | Fe | 54 | |
| | Fe | 57 | |
| > | Sc-1 | 45 | |
| | Cl | 35 | |
| | Kr | 83 | |
| | Br | 81 | |
| | P | 31 | |
| | S | 34 | |
| | Sr | 88 | |

## QC Out of Limits

| Measurement Type | Analyte | Mass | Out of Limits Message |
|---|---|---|---|

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# Method 6020 - Summary Report

**Sample ID: L1205035101**
Sample Date/Time: Friday, May 18, 2012 10:41:25
Number of Replicates: 3
Autosampler Position: 211
Sample Description: 5
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

## Concentration Results

| IS | Analyte | Mass | Intensity | RSD | Conc. | SD | RSD | Units | Blank Intens. | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **Li** | 7 | 622619.6 | 1.2 | **-237903.1287** | 7073.154 | 3.0 | ug/L | 13493 | Standard |
| | **Be** | 9 | 50.0 | 50.0 | **0.0019** | 0.008 | 402.1 | ug/L | 13 | Standard |
| | **Al** | 27 | 29916.2 | 0.9 | **1.2033** | 0.032 | 2.6 | ug/L | 8786 | Standard |
| > | **Sc** | 45 | 308248.1 | 2.0 | | | | ug/L | 280553 | Standard |
| | **Ti** | 47 | 386.3 | 3.0 | **0.1773** | 0.006 | 3.3 | ug/L | 96 | Standard |
| | **V** | 51 | 6510.2 | 4.8 | **0.1741** | 0.017 | 9.9 | ug/L | 3640 | Standard |
| | **Cr** | 52 | 15889.7 | 2.5 | **0.3652** | 0.038 | 10.3 | ug/L | 11495 | Standard |
| | **Cr** | 53 | 2276.8 | 0.8 | **1.0739** | 0.009 | 0.9 | ug/L | 564 | Standard |
| | **Mn** | 55 | 2891.6 | 4.1 | **0.0823** | 0.005 | 6.6 | ug/L | 1247 | Standard |
| | **Co** | 59 | 1412.1 | 3.9 | **0.0920** | 0.005 | 4.9 | ug/L | 114 | Standard |
| | **Ni** | 60 | 7505.5 | 2.7 | **2.6605** | 0.042 | 1.6 | ug/L | 66 | Standard |
| | **Cu** | 65 | 1939.1 | 0.6 | **0.7068** | 0.007 | 1.0 | ug/L | 219 | Standard |
| | **Zn** | 66 | 3566.1 | 4.9 | **2.9765** | 0.120 | 4.0 | ug/L | 232 | Standard |
| > | **Ge** | 72 | 240287.9 | 1.4 | | | | ug/L | 228255 | Standard |
| | **As** | 75 | 441.2 | 14.9 | **0.6507** | 0.058 | 8.9 | ug/L | -233 | Standard |
| | **Se** | 82 | 997.8 | 4.4 | **6.9394** | 0.222 | 3.2 | ug/L | 23 | Standard |
| | **Se-1** | 77 | 582.3 | 3.9 | **6.3880** | 0.393 | 6.2 | ug/L | 91 | Standard |
| > | **Ga** | 71 | 208856.6 | 1.6 | | | | mg/L | 208873 | Standard |
| | **Rb** | 85 | 3210.3 | 2.7 | | | | ug/L | 28 | Standard |
| | **Y** | 89 | 241263.1 | 2.4 | | | | ug/L | 234742 | Standard |
| > | **Rh** | 103 | 122027.1 | 1.1 | | | | ug/L | 121294 | Standard |
| | **Mo** | 98 | 362.6 | 7.3 | **0.0955** | 0.008 | 8.3 | ug/L | 6 | Standard |
| | **Ag** | 107 | 85.7 | 34.9 | **-0.0005** | 0.004 | 776.4 | ug/L | 64 | Standard |
| | **Cd** | 111 | 210.8 | 9.2 | **-0.0515** | 0.004 | 7.7 | mg/L | 417 | Standard |
| | **Cd** | 114 | 502.3 | 9.5 | **-0.0527** | 0.004 | 7.7 | ug/L | 1009 | Standard |
| > | **In** | 115 | 652208.8 | 1.4 | | | | ug/L | 628085 | Standard |
| | **Sn** | 118 | 1529.4 | 1.2 | **0.0482** | 0.002 | 3.1 | ug/L | 834 | Standard |
| | **Sb** | 123 | 186.1 | 21.5 | **0.0149** | 0.004 | 26.7 | ug/L | 22 | Standard |
| | **Ba** | 135 | 3189.7 | 1.5 | **0.7481** | 0.014 | 1.8 | ug/L | 36 | Standard |
| | **Ce** | 140 | 943.0 | 2.1 | | | | ug/L | 44 | Standard |
| > | **Tb** | 159 | 730412.9 | 1.6 | | | | ug/L | 691511 | Standard |
| | **Ho** | 165 | 23.0 | 19.9 | | | | ug/L | 6 | Standard |
| | **Tl** | 203 | 792.4 | 2.8 | **0.0558** | 0.001 | 2.0 | ug/L | 71 | Standard |
| | **Tl** | 205 | 1872.4 | 5.8 | **0.0556** | 0.003 | 5.2 | ug/L | 177 | Standard |
| | **Pb** | 206 | 528.7 | 14.8 | **0.0265** | 0.007 | 26.7 | ug/L | 268 | Standard |
| | **Pb** | 207 | 459.0 | 9.9 | **0.0268** | 0.005 | 17.2 | ug/L | 245 | Standard |
| | **Pb** | 208 | 2133.4 | 13.5 | **0.0274** | 0.007 | 24.1 | ug/L | 1057 | Standard |
| | **U** | 238 | 115757.2 | 0.9 | **5.3300** | 0.080 | 1.5 | ug/L | 9 | Standard |
| > | **Bi** | 209 | 360010.1 | 1.0 | | | | ug/L | 389590 | Standard |
| | **Na** | 23 | 283268.6 | 1.1 | **84.2755** | 1.214 | 1.4 | mg/L | 92 | Standard |
| | **Mg** | 24 | 17586792.8 | 1.3 | **38.3279** | 0.629 | 1.6 | mg/L | 142 | Standard |



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| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | **K** | 39 | 9021.0 | 1.2 | **0.7715** | 0.012 | 1.5 | mg/L | 635 | Standard |
| | **Ca** | 43 | 16635.8 | 2.4 | **36.2640** | 0.208 | 0.6 | mg/L | 63 | Standard |
| | **Fe** | 54 | 456.9 | 5.9 | **-0.0794** | 0.005 | 5.8 | mg/L | 901 | Standard |
| | **Fe** | 57 | 36211.6 | 2.6 | **0.1773** | 0.010 | 5.7 | mg/L | 5948 | Standard |
| > | **Sc-1** | 45 | 308248.1 | 2.0 | | | | mg/L | 280553 | Standard |
| | **Cl** | 35 | 22246.7 | 1.1 | | | | ug/L | 931 | Standard |
| | **Kr** | 83 | 52.4 | 5.3 | | | | ug/L | 40 | Standard |
| | **Br** | 81 | 82165.5 | 1.1 | | | | ug/L | 11862 | Standard |
| | **P** | 31 | 35555.0 | 1.2 | | | | ug/L | 77079 | Standard |
| | **S** | 34 | 16275046.6 | 1.0 | | | | ug/L | 1028777 | Standard |
| | **Sr** | 88 | 12231473.5 | 1.1 | | | | ug/L | 318 | Standard |

## QC Calculated Values

| | Analyte | Mass | QC Std % Recovery | Int Std % Recovery | Spike % Recovery |
|---|---|---|---|---|---|
| | Li | 7 | | | |
| | Be | 9 | | | |
| | Al | 27 | | | |
| > | Sc | 45 | | | |
| | Ti | 47 | | | |
| | V | 51 | | | |
| | Cr | 52 | | | |
| | Cr | 53 | | | |
| | Mn | 55 | | | |
| | Co | 59 | | | |
| | Ni | 60 | | | |
| | Cu | 65 | | | |
| | Zn | 66 | | | |
| > | Ge | 72 | | 105.272 | |
| | As | 75 | | | |
| | Se | 82 | | | |
| | Se-1 | 77 | | | |
| > | Ga | 71 | | 99.992 | |
| | Rb | 85 | | | |
| | Y | 89 | | | |
| > | Rh | 103 | | 100.605 | |
| | Mo | 98 | | | |
| | Ag | 107 | | | |
| | Cd | 111 | | | |
| | Cd | 114 | | | |
| > | In | 115 | | 103.841 | |
| | Sn | 118 | | | |
| | Sb | 123 | | | |
| | Ba | 135 | | | |
| | Ce | 140 | | | |
| > | Tb | 159 | | 105.626 | |
| | Ho | 165 | | | |
| | Tl | 203 | | | |
| | Tl | 205 | | | |
| | Pb | 206 | | | |

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| | | | |
|---|---|---|---|
| | Pb | 207 | |
| | Pb | 208 | |
| | U | 238 | |
| > | Bi | 209 | 92.407 |
| | Na | 23 | |
| | Mg | 24 | |
| | K | 39 | |
| | Ca | 43 | |
| | Fe | 54 | |
| | Fe | 57 | |
| > | Sc-1 | 45 | |
| | Cl | 35 | |
| | Kr | 83 | |
| | Br | 81 | |
| | P | 31 | |
| | S | 34 | |
| | Sr | 88 | |

## QC Out of Limits

| Measurement Type | Analyte | Mass | Out of Limits Message |
|---|---|---|---|

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# Method 6020 - Summary Report

**Sample ID: L1205035102**
Sample Date/Time: Friday, May 18, 2012 10:44:18
Number of Replicates: 3
Autosampler Position: 212
Sample Description: 5
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

## Concentration Results

| IS | Analyte | Mass | Intensity | RSD | Conc. | SD | RSD | Units | Blank Intens. | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | Li | 7 | 482750.1 | 3.2 | **-161685.4418** | 1987.848 | 1.2 | ug/L | 13493 | Standard |
| | Be | 9 | 20.0 | 25.0 | **-0.0080** | 0.001 | 17.6 | ug/L | 13 | Standard |
| | Al | 27 | 142455.4 | 3.4 | **7.1961** | 0.372 | 5.2 | ug/L | 8786 | Standard |
| > | Sc | 45 | 347770.8 | 4.4 | | | | ug/L | 280553 | Standard |
| | Ti | 47 | 693.0 | 3.0 | **0.3680** | 0.022 | 5.8 | ug/L | 96 | Standard |
| | V | 51 | 7526.0 | 4.3 | **0.2209** | 0.007 | 3.0 | ug/L | 3640 | Standard |
| | Cr | 52 | 19078.3 | 2.4 | **0.5865** | 0.014 | 2.5 | ug/L | 11495 | Standard |
| | Cr | 53 | 2256.0 | 6.6 | **1.0040** | 0.056 | 5.6 | ug/L | 564 | Standard |
| | Mn | 55 | 189665.1 | 2.3 | **9.4994** | 0.176 | 1.9 | ug/L | 1247 | Standard |
| | Co | 59 | 2265.8 | 8.4 | **0.1490** | 0.009 | 5.9 | ug/L | 114 | Standard |
| | Ni | 60 | 11044.4 | 6.9 | **3.7625** | 0.151 | 4.0 | ug/L | 66 | Standard |
| | Cu | 65 | 2748.2 | 3.9 | **0.9960** | 0.011 | 1.1 | ug/L | 219 | Standard |
| | Zn | 66 | 6140.9 | 1.7 | **5.0947** | 0.085 | 1.7 | ug/L | 232 | Standard |
| > | Ge | 72 | 250486.8 | 3.0 | | | | ug/L | 228255 | Standard |
| | As | 75 | 628.0 | 1.6 | **0.8029** | 0.027 | 3.3 | ug/L | -233 | Standard |
| | Se | 82 | 470.1 | 3.1 | **3.0579** | 0.082 | 2.7 | ug/L | 23 | Standard |
| | Se-1 | 77 | 210.0 | 1.7 | **1.4675** | 0.125 | 8.5 | ug/L | 91 | Standard |
| > | Ga | 71 | 229041.1 | 3.3 | | | | mg/L | 208873 | Standard |
| | Rb | 85 | 5881.1 | 5.2 | | | | ug/L | 28 | Standard |
| | Y | 89 | 271903.6 | 5.0 | | | | ug/L | 234742 | Standard |
| > | Rh | 103 | 135632.7 | 6.4 | | | | ug/L | 121294 | Standard |
| | Mo | 98 | 660.4 | 7.1 | **0.1658** | 0.008 | 5.0 | ug/L | 6 | Standard |
| | Ag | 107 | 63.7 | 22.7 | **-0.0035** | 0.002 | 46.3 | ug/L | 64 | Standard |
| | Cd | 111 | 565.0 | 7.0 | **0.0301** | 0.006 | 19.6 | mg/L | 417 | Standard |
| | Cd | 114 | 1427.0 | 2.2 | **0.0320** | 0.005 | 15.8 | ug/L | 1009 | Standard |
| > | In | 115 | 669909.2 | 2.8 | | | | ug/L | 628085 | Standard |
| | Sn | 118 | 1082.0 | 2.2 | **0.0137** | 0.002 | 17.5 | ug/L | 834 | Standard |
| | Sb | 123 | 247.2 | 14.8 | **0.0203** | 0.003 | 14.5 | ug/L | 22 | Standard |
| | Ba | 135 | 5994.9 | 0.9 | **1.3791** | 0.029 | 2.1 | ug/L | 36 | Standard |
| | Ce | 140 | 4417.6 | 1.3 | | | | ug/L | 44 | Standard |
| > | Tb | 159 | 749471.0 | 3.0 | | | | ug/L | 691511 | Standard |
| | Ho | 165 | 56.3 | 15.3 | | | | ug/L | 6 | Standard |
| | Tl | 203 | 1008.0 | 1.9 | **0.0726** | 0.003 | 4.5 | ug/L | 71 | Standard |
| | Tl | 205 | 2349.5 | 1.3 | **0.0709** | 0.002 | 2.4 | ug/L | 177 | Standard |
| | Pb | 206 | 596.3 | 4.1 | **0.0330** | 0.002 | 4.9 | ug/L | 268 | Standard |
| | Pb | 207 | 529.3 | 7.0 | **0.0347** | 0.003 | 9.8 | ug/L | 245 | Standard |
| | Pb | 208 | 2326.4 | 3.5 | **0.0321** | 0.002 | 4.9 | ug/L | 1057 | Standard |
| | U | 238 | 160236.9 | 2.7 | **7.3818** | 0.089 | 1.2 | ug/L | 9 | Standard |
| > | Bi | 209 | 359804.7 | 2.2 | | | | ug/L | 389590 | Standard |
| | Na | 23 | 376094.6 | 1.5 | **99.2523** | 2.935 | 3.0 | mg/L | 92 | Standard |
| | Mg | 24 | 22720246.1 | 1.6 | **43.9339** | 1.934 | 4.4 | mg/L | 142 | Standard |



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| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | **K** | 39 | 9137.8 | 4.1 | **0.6864** | 0.021 | 3.0 | mg/L | 635 | Standard |
| | **Ca** | 43 | 15447.9 | 1.2 | **29.8495** | 1.011 | 3.4 | mg/L | 63 | Standard |
| | **Fe** | 54 | 947.0 | 10.3 | **-0.0130** | 0.011 | 85.3 | mg/L | 901 | Standard |
| | **Fe** | 57 | 36991.8 | 3.1 | **0.1569** | 0.006 | 3.5 | mg/L | 5948 | Standard |
| > | **Sc-1** | 45 | 347770.8 | 4.4 | | | | mg/L | 280553 | Standard |
| | **Cl** | 35 | 19291.6 | 1.1 | | | | ug/L | 931 | Standard |
| | **Kr** | 83 | 64.1 | 9.7 | | | | ug/L | 40 | Standard |
| | **Br** | 81 | 120858.5 | 1.6 | | | | ug/L | 11862 | Standard |
| | **P** | 31 | 86191.3 | 7.7 | | | | ug/L | 77079 | Standard |
| | **S** | 34 | 18155923.4 | 3.3 | | | | ug/L | 1028777 | Standard |
| | **Sr** | 88 | 11129749.7 | 2.2 | | | | ug/L | 318 | Standard |

## QC Calculated Values

| | Analyte | Mass | QC Std % Recovery | Int Std % Recovery | Spike % Recovery |
|---|---|---|---|---|---|
| | Li | 7 | | | |
| | Be | 9 | | | |
| | Al | 27 | | | |
| > | Sc | 45 | | | |
| | Ti | 47 | | | |
| | V | 51 | | | |
| | Cr | 52 | | | |
| | Cr | 53 | | | |
| | Mn | 55 | | | |
| | Co | 59 | | | |
| | Ni | 60 | | | |
| | Cu | 65 | | | |
| | Zn | 66 | | | |
| > | Ge | 72 | | 109.740 | |
| | As | 75 | | | |
| | Se | 82 | | | |
| | Se-1 | 77 | | | |
| > | Ga | 71 | | 109.656 | |
| | Rb | 85 | | | |
| | Y | 89 | | | |
| > | Rh | 103 | | 111.822 | |
| | Mo | 98 | | | |
| | Ag | 107 | | | |
| | Cd | 111 | | | |
| | Cd | 114 | | | |
| > | In | 115 | | 106.659 | |
| | Sn | 118 | | | |
| | Sb | 123 | | | |
| | Ba | 135 | | | |
| | Ce | 140 | | | |
| > | Tb | 159 | | 108.382 | |
| | Ho | 165 | | | |
| | Tl | 203 | | | |
| | Tl | 205 | | | |
| | Pb | 206 | | | |

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| | | | |
|---|---|---|---|
| | Pb | 207 | |
| | Pb | 208 | |
| | U | 238 | |
| > | Bi | 209 | 92.355 |
| | Na | 23 | |
| | Mg | 24 | |
| | K | 39 | |
| | Ca | 43 | |
| | Fe | 54 | |
| | Fe | 57 | |
| > | Sc-1 | 45 | |
| | Cl | 35 | |
| | Kr | 83 | |
| | Br | 81 | |
| | P | 31 | |
| | S | 34 | |
| | Sr | 88 | |

## QC Out of Limits

| Measurement Type | Analyte | Mass | Out of Limits Message |
|---|---|---|---|

**Sample ID: L1205035102**
Report Date/Time: Friday, May 18, 2012 10:46:51
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# Method 6020 - Summary Report

**Sample ID: L1205035102PS WG398436-01**
Sample Date/Time: Friday, May 18, 2012 10:47:11
Number of Replicates: 3
Autosampler Position: 213
Sample Description: 5
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

## Concentration Results

| IS | Analyte | Mass | Intensity | RSD | Conc. | SD | RSD | Units | Blank Intens. | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **Li** | 7 | 519257.9 | 3.5 | **-171952.9096** | 2988.016 | 1.7 | ug/L | 13493 | Standard |
| | **Be** | 9 | 208788.0 | 3.2 | **56.3170** | 0.541 | 1.0 | ug/L | 13 | Standard |
| | **Al** | 27 | 1084917.4 | 3.5 | **58.3013** | 0.643 | 1.1 | ug/L | 8786 | Standard |
| > | **Sc** | 45 | 352382.3 | 3.5 | | | | ug/L | 280553 | Standard |
| | **Ti** | 47 | 753.0 | 3.4 | **0.3908** | 0.009 | 2.2 | ug/L | 96 | Standard |
| | **V** | 51 | 1013276.4 | 3.4 | **61.8543** | 0.790 | 1.3 | ug/L | 3640 | Standard |
| | **Cr** | 52 | 724843.4 | 4.0 | **60.5542** | 0.453 | 0.7 | ug/L | 11495 | Standard |
| | **Cr** | 53 | 107090.9 | 4.1 | **60.6204** | 1.315 | 2.2 | ug/L | 564 | Standard |
| | **Mn** | 55 | 1385625.8 | 3.9 | **67.5156** | 1.400 | 2.1 | ug/L | 1247 | Standard |
| | **Co** | 59 | 823698.7 | 3.6 | **57.2848** | 0.877 | 1.5 | ug/L | 114 | Standard |
| | **Ni** | 60 | 178419.3 | 3.8 | **59.1508** | 0.964 | 1.6 | ug/L | 66 | Standard |
| | **Cu** | 65 | 143656.2 | 4.0 | **55.2092** | 0.805 | 1.5 | ug/L | 219 | Standard |
| | **Zn** | 66 | 72518.3 | 3.8 | **60.9459** | 0.515 | 0.8 | ug/L | 232 | Standard |
| > | **Ge** | 72 | 259064.3 | 3.7 | | | | ug/L | 228255 | Standard |
| | **As** | 75 | 68921.8 | 3.9 | **60.1852** | 0.763 | 1.3 | ug/L | -233 | Standard |
| | **Se** | 82 | 10251.2 | 5.5 | **67.3637** | 1.587 | 2.4 | ug/L | 23 | Standard |
| | **Se-1** | 77 | 5300.9 | 3.3 | **62.3994** | 2.214 | 3.5 | ug/L | 91 | Standard |
| > | **Ga** | 71 | 233519.0 | 3.7 | | | | mg/L | 208873 | Standard |
| | **Rb** | 85 | 5886.1 | 7.5 | | | | ug/L | 28 | Standard |
| | **Y** | 89 | 283875.5 | 3.9 | | | | ug/L | 234742 | Standard |
| > | **Rh** | 103 | 139723.3 | 7.5 | | | | ug/L | 121294 | Standard |
| | **Mo** | 98 | 871.5 | 0.7 | **0.2146** | 0.006 | 2.7 | ug/L | 6 | Standard |
| | **Ag** | 107 | 501307.5 | 6.2 | **61.1846** | 1.948 | 3.2 | ug/L | 64 | Standard |
| | **Cd** | 111 | 243038.7 | 2.5 | **55.9979** | 0.523 | 0.9 | mg/L | 417 | Standard |
| | **Cd** | 114 | 600767.8 | 2.3 | **54.8949** | 0.653 | 1.2 | ug/L | 1009 | Standard |
| > | **In** | 115 | 680064.5 | 3.2 | | | | ug/L | 628085 | Standard |
| | **Sn** | 118 | 1690.1 | 2.3 | **0.0548** | 0.004 | 7.6 | ug/L | 834 | Standard |
| | **Sb** | 123 | 589504.5 | 2.6 | **57.0999** | 0.623 | 1.1 | ug/L | 22 | Standard |
| | **Ba** | 135 | 248480.0 | 2.3 | **56.7740** | 1.171 | 2.1 | ug/L | 36 | Standard |
| | **Ce** | 140 | 4591.4 | 1.3 | | | | ug/L | 44 | Standard |
| > | **Tb** | 159 | 762940.0 | 3.0 | | | | ug/L | 691511 | Standard |
| | **Ho** | 165 | 63.0 | 12.6 | | | | ug/L | 6 | Standard |
| | **Tl** | 203 | 784014.5 | 3.0 | **59.9216** | 0.111 | 0.2 | ug/L | 71 | Standard |
| | **Tl** | 205 | 1862735.6 | 3.0 | **58.7365** | 0.290 | 0.5 | ug/L | 177 | Standard |
| | **Pb** | 206 | 627084.5 | 2.8 | **59.1461** | 0.384 | 0.6 | ug/L | 268 | Standard |
| | **Pb** | 207 | 543003.5 | 2.6 | **59.5197** | 0.280 | 0.5 | ug/L | 245 | Standard |
| | **Pb** | 208 | 2464452.5 | 2.8 | **58.8243** | 0.300 | 0.5 | ug/L | 1057 | Standard |
| | **U** | 238 | 1525268.4 | 3.2 | **69.5386** | 0.239 | 0.3 | ug/L | 9 | Standard |
| > | **Bi** | 209 | 363598.7 | 3.1 | | | | ug/L | 389590 | Standard |
| | **Na** | 23 | 384296.9 | 2.9 | **100.0202** | 0.846 | 0.8 | mg/L | 92 | Standard |
| | **Mg** | 24 | 23506396.4 | 3.0 | **44.8147** | 0.664 | 1.5 | mg/L | 142 | Standard |

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| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | **K** | 39 | 9669.8 | 3.5 | **0.7195** | 0.019 | 2.7 | mg/L | 635 | Standard |
| | **Ca** | 43 | 16330.5 | 3.2 | **31.1217** | 0.323 | 1.0 | mg/L | 63 | Standard |
| | **Fe** | 54 | 939.7 | 2.2 | **-0.0158** | 0.003 | 21.8 | mg/L | 901 | Standard |
| | **Fe** | 57 | 37635.1 | 5.4 | **0.1575** | 0.004 | 2.5 | mg/L | 5948 | Standard |
| > | **Sc-1** | 45 | 352382.3 | 3.5 | | | | mg/L | 280553 | Standard |
| | **Cl** | 35 | 19998.5 | 2.1 | | | | ug/L | 931 | Standard |
| | **Kr** | 83 | 79.0 | 2.8 | | | | ug/L | 40 | Standard |
| | **Br** | 81 | 129110.1 | 4.4 | | | | ug/L | 11862 | Standard |
| | **P** | 31 | 89121.5 | 7.6 | | | | ug/L | 77079 | Standard |
| | **S** | 34 | 18890778.3 | 2.5 | | | | ug/L | 1028777 | Standard |
| | **Sr** | 88 | 11368321.4 | 3.6 | | | | ug/L | 318 | Standard |

## QC Calculated Values

| | Analyte | Mass | QC Std % Recovery | Int Std % Recovery | Spike % Recovery |
|---|---|---|---|---|---|
| | Li | 7 | | | |
| | Be | 9 | | | |
| | Al | 27 | | | |
| > | Sc | 45 | | | |
| | Ti | 47 | | | |
| | V | 51 | | | |
| | Cr | 52 | | | |
| | Cr | 53 | | | |
| | Mn | 55 | | | |
| | Co | 59 | | | |
| | Ni | 60 | | | |
| | Cu | 65 | | | |
| | Zn | 66 | | | |
| > | Ge | 72 | | 113.498 | |
| | As | 75 | | | |
| | Se | 82 | | | |
| | Se-1 | 77 | | | |
| > | Ga | 71 | | 111.800 | |
| | Rb | 85 | | | |
| | Y | 89 | | | |
| > | Rh | 103 | | 115.194 | |
| | Mo | 98 | | | |
| | Ag | 107 | | | |
| | Cd | 111 | | | |
| | Cd | 114 | | | |
| > | In | 115 | | 108.276 | |
| | Sn | 118 | | | |
| | Sb | 123 | | | |
| | Ba | 135 | | | |
| | Ce | 140 | | | |
| > | Tb | 159 | | 110.329 | |
| | Ho | 165 | | | |
| | Tl | 203 | | | |
| | Tl | 205 | | | |
| | Pb | 206 | | | |

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| | | | |
|---|---|---|---|
| | Pb | 207 | |
| | Pb | 208 | |
| | U | 238 | |
| > | Bi | 209 | 93.329 |
| | Na | 23 | |
| | Mg | 24 | |
| | K | 39 | |
| | Ca | 43 | |
| | Fe | 54 | |
| | Fe | 57 | |
| > | Sc-1 | 45 | |
| | Cl | 35 | |
| | Kr | 83 | |
| | Br | 81 | |
| | P | 31 | |
| | S | 34 | |
| | Sr | 88 | |

## QC Out of Limits

| Measurement Type | Analyte | Mass | Out of Limits Message |
|---|---|---|---|

**Sample ID: L1205035102PS WG398436-01**
Report Date/Time: Friday, May 18, 2012 10:49:43
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# Method 6020 - Summary Report

**Sample ID: L1205035102SDL WG398436-02**
Sample Date/Time: Friday, May 18, 2012 10:50:03
Number of Replicates: 3
Autosampler Position: 214
Sample Description: 25
Method File: C:\NexION Data\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

## Concentration Results

| IS | Analyte | Mass | Intensity | RSD | Conc. | SD | RSD | Units | Blank Intens. | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | Li | 7 | 100628.2 | 2.5 | **-32819.0988** | 303.639 | 0.9 | ug/L | 13493 | Standard |
| | Be | 9 | 28.3 | 27.0 | **-0.0049** | 0.002 | 42.2 | ug/L | 13 | Standard |
| | Al | 27 | 42008.3 | 6.1 | **1.9023** | 0.123 | 6.5 | ug/L | 8786 | Standard |
| > | Sc | 45 | 314439.2 | 2.8 | | | | ug/L | 280553 | Standard |
| | Ti | 47 | 214.0 | 6.1 | **0.0502** | 0.008 | 16.0 | ug/L | 96 | Standard |
| | V | 51 | 5740.9 | 1.9 | **0.0993** | 0.011 | 11.3 | ug/L | 3640 | Standard |
| | Cr | 52 | 16014.1 | 1.3 | **0.2834** | 0.032 | 11.4 | ug/L | 11495 | Standard |
| | Cr | 53 | 1070.9 | 6.1 | **0.2918** | 0.021 | 7.3 | ug/L | 564 | Standard |
| | Mn | 55 | 34323.2 | 1.6 | **1.6205** | 0.035 | 2.2 | ug/L | 1247 | Standard |
| | Co | 59 | 543.0 | 9.4 | **0.0242** | 0.003 | 11.3 | ug/L | 114 | Standard |
| | Ni | 60 | 2089.5 | 1.5 | **0.6771** | 0.025 | 3.7 | ug/L | 66 | Standard |
| | Cu | 65 | 862.7 | 7.3 | **0.2368** | 0.016 | 6.6 | ug/L | 219 | Standard |
| | Zn | 66 | 3523.7 | 0.6 | **2.7361** | 0.093 | 3.4 | ug/L | 232 | Standard |
| > | Ge | 72 | 256705.3 | 3.7 | | | | ug/L | 228255 | Standard |
| | As | 75 | -38.4 | 65.7 | **0.2032** | 0.024 | 11.6 | ug/L | -233 | Standard |
| | Se | 82 | 115.7 | 13.0 | **0.6217** | 0.071 | 11.5 | ug/L | 23 | Standard |
| | Se-1 | 77 | 103.0 | 28.6 | **0.1104** | 0.365 | 330.6 | ug/L | 91 | Standard |
| > | Ga | 71 | 219826.0 | 3.4 | | | | mg/L | 208873 | Standard |
| | Rb | 85 | 936.7 | 8.6 | | | | ug/L | 28 | Standard |
| | Y | 89 | 247397.9 | 3.0 | | | | ug/L | 234742 | Standard |
| > | Rh | 103 | 127195.6 | 2.6 | | | | ug/L | 121294 | Standard |
| | Mo | 98 | 122.6 | 9.2 | **0.0330** | 0.002 | 6.2 | ug/L | 6 | Standard |
| | Ag | 107 | 103.7 | 11.5 | **0.0010** | 0.001 | 123.2 | ug/L | 64 | Standard |
| | Cd | 111 | 218.0 | 3.5 | **-0.0531** | 0.002 | 3.5 | mg/L | 417 | Standard |
| | Cd | 114 | 551.0 | 6.0 | **-0.0515** | 0.002 | 4.5 | ug/L | 1009 | Standard |
| > | In | 115 | 697437.1 | 2.5 | | | | ug/L | 628085 | Standard |
| | Sn | 118 | 634.3 | 0.5 | **-0.0197** | 0.001 | 6.4 | ug/L | 834 | Standard |
| | Sb | 123 | 1424.6 | 52.4 | **0.1296** | 0.067 | 51.6 | ug/L | 22 | Standard |
| | Ba | 135 | 1185.0 | 8.4 | **0.2519** | 0.016 | 6.2 | ug/L | 36 | Standard |
| | Ce | 140 | 887.0 | 4.1 | | | | ug/L | 44 | Standard |
| > | Tb | 159 | 758432.5 | 1.9 | | | | ug/L | 691511 | Standard |
| | Ho | 165 | 15.3 | 3.8 | | | | ug/L | 6 | Standard |
| | Tl | 203 | 622.0 | 8.2 | **0.0374** | 0.002 | 6.7 | ug/L | 71 | Standard |
| | Tl | 205 | 1493.1 | 8.5 | **0.0383** | 0.003 | 6.8 | ug/L | 177 | Standard |
| | Pb | 206 | 381.7 | 8.5 | **0.0086** | 0.003 | 29.8 | ug/L | 268 | Standard |
| | Pb | 207 | 312.0 | 5.1 | **0.0068** | 0.001 | 20.1 | ug/L | 245 | Standard |
| | Pb | 208 | 1564.7 | 5.6 | **0.0096** | 0.001 | 14.0 | ug/L | 1057 | Standard |
| | U | 238 | 29106.9 | 2.7 | **1.1935** | 0.015 | 1.3 | ug/L | 9 | Standard |
| > | Bi | 209 | 404035.9 | 2.4 | | | | ug/L | 389590 | Standard |
| | Na | 23 | 80838.6 | 4.1 | **23.5381** | 0.308 | 1.3 | mg/L | 92 | Standard |
| | Mg | 24 | 4249545.3 | 4.2 | **9.0740** | 0.142 | 1.6 | mg/L | 142 | Standard |



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| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | **K** | 39 | 2340.2 | 2.2 | **0.1489** | 0.003 | 1.7 | mg/L | 635 | Standard |
| | **Ca** | 43 | 3280.4 | 6.9 | **6.8745** | 0.294 | 4.3 | mg/L | 63 | Standard |
| | **Fe** | 54 | 458.2 | 8.4 | **-0.0808** | 0.005 | 6.6 | mg/L | 901 | Standard |
| | **Fe** | 57 | 16802.6 | 2.4 | **0.0599** | 0.002 | 2.9 | mg/L | 5948 | Standard |
| > | **Sc-1** | 45 | 314439.2 | 2.8 | | | | mg/L | 280553 | Standard |
| | **Cl** | 35 | 4769.4 | 2.0 | | | | ug/L | 931 | Standard |
| | **Kr** | 83 | 40.1 | 4.6 | | | | ug/L | 40 | Standard |
| | **Br** | 81 | 31859.4 | 5.1 | | | | ug/L | 11862 | Standard |
| | **P** | 31 | 35547.5 | 2.2 | | | | ug/L | 77079 | Standard |
| | **S** | 34 | 4369449.0 | 2.0 | | | | ug/L | 1028777 | Standard |
| | **Sr** | 88 | 1896248.7 | 2.8 | | | | ug/L | 318 | Standard |

## QC Calculated Values

| | Analyte | Mass | QC Std % Recovery | Int Std % Recovery | Spike % Recovery |
|---|---|---|---|---|---|
| | Li | 7 | | | |
| | Be | 9 | | | |
| | Al | 27 | | | |
| > | Sc | 45 | | | |
| | Ti | 47 | | | |
| | V | 51 | | | |
| | Cr | 52 | | | |
| | Cr | 53 | | | |
| | Mn | 55 | | | |
| | Co | 59 | | | |
| | Ni | 60 | | | |
| | Cu | 65 | | | |
| | Zn | 66 | | | |
| > | Ge | 72 | | 112.464 | |
| | As | 75 | | | |
| | Se | 82 | | | |
| | Se-1 | 77 | | | |
| > | Ga | 71 | | 105.244 | |
| | Rb | 85 | | | |
| | Y | 89 | | | |
| > | Rh | 103 | | 104.866 | |
| | Mo | 98 | | | |
| | Ag | 107 | | | |
| | Cd | 111 | | | |
| | Cd | 114 | | | |
| > | In | 115 | | 111.042 | |
| | Sn | 118 | | | |
| | Sb | 123 | | | |
| | Ba | 135 | | | |
| | Ce | 140 | | | |
| > | Tb | 159 | | 109.678 | |
| | Ho | 165 | | | |
| | Tl | 203 | | | |
| | Tl | 205 | | | |
| | Pb | 206 | | | |

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| | | | | |
|---|---|---|---|---|
| | Pb | 207 | | |
| | Pb | 208 | | |
| | U | 238 | | |
| > | Bi | 209 | | 103.708 |
| | Na | 23 | | |
| | Mg | 24 | | |
| | K | 39 | | |
| | Ca | 43 | | |
| | Fe | 54 | | |
| | Fe | 57 | | |
| > | Sc-1 | 45 | | |
| | Cl | 35 | | |
| | Kr | 83 | | |
| | Br | 81 | | |
| | P | 31 | | |
| | S | 34 | | |
| | Sr | 88 | | |

## QC Out of Limits

| Measurement Type | Analyte | Mass | Out of Limits Message |
|---|---|---|---|

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# Method 6020 - Summary Report

**Sample ID: QC Std 6**
Sample Date/Time: Friday, May 18, 2012 10:52:58
Number of Replicates: 3
Autosampler Position: 101
Sample Description:
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

## Concentration Results

| IS | Analyte | Mass | Intensity | RSD | Conc. | SD | RSD | Units | Blank Intens. | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| ⌈ | **Li** | 7 | 16809.4 | 8.0 | **-149.0810** | 163.138 | 109.4 | ug/L | 13493 | Standard |
| \| | **Be** | 9 | 181873.0 | 4.2 | **50.6145** | 1.329 | 2.6 | ug/L | 13 | Standard |
| \| | **Al** | 27 | 852985.1 | 5.1 | **47.1526** | 0.759 | 1.6 | ug/L | 8786 | Standard |
| ⌊> | **Sc** | 45 | 341878.3 | 6.6 | | | | ug/L | 280553 | Standard |
| ⌈ | **Ti** | 47 | 169134.9 | 5.9 | **103.7058** | 1.188 | 1.1 | ug/L | 96 | Standard |
| \| | **V** | 51 | 878340.1 | 5.3 | **51.8515** | 0.417 | 0.8 | ug/L | 3640 | Standard |
| \| | **Cr** | 52 | 640181.6 | 4.7 | **51.6238** | 0.270 | 0.5 | ug/L | 11495 | Standard |
| \| | **Cr** | 53 | 95541.7 | 5.6 | **52.2953** | 0.312 | 0.6 | ug/L | 564 | Standard |
| \| | **Mn** | 55 | 1105317.0 | 5.4 | **52.1069** | 0.158 | 0.3 | ug/L | 1247 | Standard |
| \| | **Co** | 59 | 759135.2 | 5.0 | **51.1009** | 0.128 | 0.3 | ug/L | 114 | Standard |
| \| | **Ni** | 60 | 159368.9 | 5.1 | **51.1385** | 0.391 | 0.8 | ug/L | 66 | Standard |
| \| | **Cu** | 65 | 136746.9 | 5.5 | **50.8589** | 0.390 | 0.8 | ug/L | 219 | Standard |
| \| | **Zn** | 66 | 61546.3 | 4.7 | **50.0289** | 0.272 | 0.5 | ug/L | 232 | Standard |
| \|> | **Ge** | 72 | 267628.7 | 5.1 | | | | ug/L | 228255 | Standard |
| \| | **As** | 75 | 60219.6 | 5.1 | **50.9395** | 0.040 | 0.1 | ug/L | -233 | Standard |
| \| | **Se** | 82 | 8430.7 | 6.4 | **53.5940** | 0.713 | 1.3 | ug/L | 23 | Standard |
| ⌊ | **Se-1** | 77 | 4326.0 | 7.4 | **48.9889** | 1.168 | 2.4 | ug/L | 91 | Standard |
| ⌈> | **Ga** | 71 | 244649.2 | 5.0 | | | | mg/L | 208873 | Standard |
| ⌊ | **Rb** | 85 | 1333.4 | 6.3 | | | | ug/L | 28 | Standard |
| ⌈ | **Y** | 89 | 280262.5 | 8.0 | | | | ug/L | 234742 | Standard |
| ⌊> | **Rh** | 103 | 148913.7 | 6.6 | | | | ug/L | 121294 | Standard |
| ⌈ | **Mo** | 98 | 457442.1 | 7.0 | **103.6133** | 3.200 | 3.1 | ug/L | 6 | Standard |
| \| | **Ag** | 107 | 477827.0 | 7.6 | **54.7886** | 2.190 | 4.0 | ug/L | 64 | Standard |
| \| | **Cd** | 111 | 231660.3 | 3.8 | **50.1469** | 0.187 | 0.4 | mg/L | 417 | Standard |
| \| | **Cd** | 114 | 572440.7 | 3.4 | **49.1449** | 0.407 | 0.8 | ug/L | 1009 | Standard |
| \|> | **In** | 115 | 723666.7 | 4.1 | | | | ug/L | 628085 | Standard |
| \| | **Sn** | 118 | 772543.8 | 3.7 | **50.3923** | 0.345 | 0.7 | ug/L | 834 | Standard |
| \| | **Sb** | 123 | 543950.8 | 3.3 | **49.5177** | 0.470 | 1.0 | ug/L | 22 | Standard |
| ⌊ | **Ba** | 135 | 229209.6 | 4.1 | **49.2055** | 0.934 | 1.9 | ug/L | 36 | Standard |
| ⌈ | **Ce** | 140 | 866.4 | 7.6 | | | | ug/L | 44 | Standard |
| ⌊> | **Tb** | 159 | 791283.1 | 4.6 | | | | ug/L | 691511 | Standard |
| ⌈ | **Ho** | 165 | 11.7 | 13.1 | | | | ug/L | 6 | Standard |
| \| | **Tl** | 203 | 777898.5 | 4.4 | **51.3830** | 0.195 | 0.4 | ug/L | 71 | Standard |
| \| | **Tl** | 205 | 1849979.3 | 4.6 | **50.4141** | 0.387 | 0.8 | ug/L | 177 | Standard |
| \| | **Pb** | 206 | 628145.1 | 4.5 | **51.1983** | 0.048 | 0.1 | ug/L | 268 | Standard |
| \| | **Pb** | 207 | 540497.9 | 4.0 | **51.2034** | 0.220 | 0.4 | ug/L | 245 | Standard |
| \| | **Pb** | 208 | 2454360.5 | 4.0 | **50.6319** | 0.177 | 0.3 | ug/L | 1057 | Standard |
| \| | **U** | 238 | 1279847.2 | 4.1 | **50.4366** | 0.205 | 0.4 | ug/L | 9 | Standard |
| ⌊> | **Bi** | 209 | 420686.7 | 4.4 | | | | ug/L | 389590 | Standard |
| ⌈ | **Na** | 23 | 18768.3 | 8.4 | **4.9973** | 0.294 | 5.9 | mg/L | 92 | Standard |
| \| | **Mg** | 24 | 2707565.6 | 5.6 | **5.3209** | 0.101 | 1.9 | mg/L | 142 | Standard |

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| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | **K** | 39 | 57684.8 | 4.8 | **4.7540** | 0.118 | 2.5 | mg/L | 635 | Standard |
| | **Ca** | 43 | 2413.5 | 6.4 | **4.6057** | 0.155 | 3.4 | mg/L | 63 | Standard |
| | **Fe** | 54 | 30251.2 | 4.2 | **4.5945** | 0.182 | 4.0 | mg/L | 901 | Standard |
| | **Fe** | 57 | 885970.7 | 3.8 | **4.7135** | 0.139 | 3.0 | mg/L | 5948 | Standard |
| > | **Sc-1** | 45 | 341878.3 | 6.6 | | | | mg/L | 280553 | Standard |
| | **Cl** | 35 | 969.0 | 11.8 | | | | ug/L | 931 | Standard |
| | **Kr** | 83 | 52.7 | 17.1 | | | | ug/L | 40 | Standard |
| | **Br** | 81 | 15574.7 | 5.8 | | | | ug/L | 11862 | Standard |
| | **P** | 31 | 82891.5 | 5.1 | | | | ug/L | 77079 | Standard |
| | **S** | 34 | 1053608.6 | 8.2 | | | | ug/L | 1028777 | Standard |
| | **Sr** | 88 | 5800.4 | 113.5 | | | | ug/L | 318 | Standard |

## QC Calculated Values

| | Analyte | Mass | QC Std % Recovery | Int Std % Recovery | Spike % Recovery |
|---|---|---|---|---|---|
| | Li | 7 | | | |
| | Be | 9 | | | |
| | Al | 27 | 94.305 | | |
| > | Sc | 45 | | | |
| | Ti | 47 | 103.706 | | |
| | V | 51 | 103.703 | | |
| | Cr | 52 | 103.248 | | |
| | Cr | 53 | | | |
| | Mn | 55 | 104.214 | | |
| | Co | 59 | 102.202 | | |
| | Ni | 60 | 102.277 | | |
| | Cu | 65 | 101.718 | | |
| | Zn | 66 | 100.058 | | |
| > | Ge | 72 | | 117.250 | |
| | As | 75 | 101.879 | | |
| | Se | 82 | 107.188 | | |
| | Se-1 | 77 | | | |
| > | Ga | 71 | | 117.128 | |
| | Rb | 85 | | | |
| | Y | 89 | | | |
| > | Rh | 103 | | 122.771 | |
| | Mo | 98 | 103.613 | | |
| | Ag | 107 | 109.577 | | |
| | Cd | 111 | 100.294 | | |
| | Cd | 114 | | | |
| > | In | 115 | | 115.218 | |
| | Sn | 118 | 100.785 | | |
| | Sb | 123 | 99.035 | | |
| | Ba | 135 | 98.411 | | |
| | Ce | 140 | | | |
| > | Tb | 159 | | 114.428 | |
| | Ho | 165 | | | |
| | Tl | 203 | 102.766 | | |
| | Tl | 205 | | | |
| | Pb | 206 | 102.397 | | |

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| | | | | |
|---|---|---|---|---|
| | Pb | 207 | 102.407 | |
| | Pb | 208 | 101.264 | |
| | U | 238 | 100.873 | |
| > | Bi | 209 | | 107.982 |
| | Na | 23 | 99.946 | |
| | Mg | 24 | 106.419 | |
| | K | 39 | 95.079 | |
| | Ca | 43 | 92.113 | |
| | Fe | 54 | 91.891 | |
| | Fe | 57 | 94.270 | |
| > | Sc-1 | 45 | | |
| | Cl | 35 | | |
| | Kr | 83 | | |
| | Br | 81 | | |
| | P | 31 | | |
| | S | 34 | | |
| | Sr | 88 | | |

## QC Out of Limits

| Measurement Type | Analyte | Mass | Out of Limits Message |
|---|---|---|---|
| Rh 103 Int Std for QC Std | Rh | 103 | Rerun sample |

**Sample ID: QC Std 6**
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# Method 6020 - Summary Report

**Sample ID: QC Std 7**
Sample Date/Time: Friday, May 18, 2012 10:55:50
Number of Replicates: 3
Autosampler Position: 102
Sample Description:
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

## Concentration Results

| IS | Analyte | Mass | Intensity | RSD | Conc. | SD | RSD | Units | Blank Intens. | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | Li | 7 | 14662.1 | 6.1 | **-3.0042** | 232.179 | 7728.4 | ug/L | 13493 | Standard |
| | Be | 9 | 28.3 | 62.0 | **-0.0046** | 0.005 | 117.7 | ug/L | 13 | Standard |
| | Al | 27 | 9634.7 | 7.7 | **-0.0530** | 0.015 | 27.5 | ug/L | 8786 | Standard |
| > | Sc | 45 | 306035.3 | 6.0 | | | | ug/L | 280553 | Standard |
| | Ti | 47 | 100.7 | 2.1 | **-0.0173** | 0.005 | 27.3 | ug/L | 96 | Standard |
| | V | 51 | 3552.5 | 5.6 | **-0.0195** | 0.004 | 19.4 | ug/L | 3640 | Standard |
| | Cr | 52 | 10841.5 | 4.6 | **-0.0897** | 0.026 | 28.9 | ug/L | 11495 | Standard |
| | Cr | 53 | 502.5 | 3.1 | **-0.0118** | 0.017 | 143.0 | ug/L | 564 | Standard |
| | Mn | 55 | 1508.4 | 6.1 | **0.0102** | 0.003 | 24.9 | ug/L | 1247 | Standard |
| | Co | 59 | 168.0 | 26.9 | **-0.0012** | 0.003 | 261.6 | ug/L | 114 | Standard |
| | Ni | 60 | 72.7 | 19.3 | **0.0033** | 0.004 | 114.3 | ug/L | 66 | Standard |
| | Cu | 65 | 276.7 | 11.8 | **0.0173** | 0.006 | 35.8 | ug/L | 219 | Standard |
| | Zn | 66 | 305.0 | 10.9 | **0.0120** | 0.030 | 246.0 | ug/L | 232 | Standard |
| > | Ge | 72 | 238587.6 | 6.7 | | | | ug/L | 228255 | Standard |
| | As | 75 | -212.6 | 16.9 | **0.0365** | 0.031 | 84.8 | ug/L | -233 | Standard |
| | Se | 82 | 34.6 | 11.1 | **0.1015** | 0.016 | 15.8 | ug/L | 23 | Standard |
| | Se-1 | 77 | 92.3 | 12.1 | **0.0650** | 0.128 | 196.3 | ug/L | 91 | Standard |
| > | Ga | 71 | 216146.6 | 6.4 | | | | mg/L | 208873 | Standard |
| | Rb | 85 | 23.3 | 24.7 | | | | ug/L | 28 | Standard |
| | Y | 89 | 247799.1 | 5.6 | | | | ug/L | 234742 | Standard |
| > | Rh | 103 | 130138.4 | 7.8 | | | | ug/L | 121294 | Standard |
| | Mo | 98 | 154.4 | 59.1 | **0.0418** | 0.021 | 49.2 | ug/L | 6 | Standard |
| | Ag | 107 | 69.0 | 31.4 | **-0.0028** | 0.002 | 81.8 | ug/L | 64 | Standard |
| | Cd | 111 | 427.3 | 4.8 | **-0.0008** | 0.006 | 802.9 | mg/L | 417 | Standard |
| | Cd | 114 | 1128.0 | 4.2 | **0.0055** | 0.003 | 49.7 | ug/L | 1009 | Standard |
| > | In | 115 | 662543.5 | 6.5 | | | | ug/L | 628085 | Standard |
| | Sn | 118 | 982.4 | 7.8 | **0.0074** | 0.003 | 43.1 | ug/L | 834 | Standard |
| | Sb | 123 | 1613.6 | 61.8 | **0.1534** | 0.091 | 59.0 | ug/L | 22 | Standard |
| | Ba | 135 | 51.7 | 17.5 | **0.0003** | 0.001 | 555.3 | ug/L | 36 | Standard |
| | Ce | 140 | 46.7 | 18.5 | | | | ug/L | 44 | Standard |
| > | Tb | 159 | 722884.0 | 6.3 | | | | ug/L | 691511 | Standard |
| | Ho | 165 | 7.7 | 41.9 | | | | ug/L | 6 | Standard |
| | Tl | 203 | 93.7 | 16.0 | **0.0013** | 0.001 | 66.8 | ug/L | 71 | Standard |
| | Tl | 205 | 259.0 | 33.5 | **0.0035** | 0.002 | 61.5 | ug/L | 177 | Standard |
| | Pb | 206 | 311.0 | 15.7 | **0.0033** | 0.003 | 83.0 | ug/L | 268 | Standard |
| | Pb | 207 | 268.0 | 8.8 | **0.0033** | 0.001 | 22.9 | ug/L | 245 | Standard |
| | Pb | 208 | 1223.4 | 11.5 | **0.0031** | 0.002 | 49.7 | ug/L | 1057 | Standard |
| | U | 238 | 83.7 | 75.1 | **0.0027** | 0.002 | 91.5 | ug/L | 9 | Standard |
| > | Bi | 209 | 391210.8 | 6.2 | | | | ug/L | 389590 | Standard |
| | Na | 23 | 111.7 | 24.7 | **-0.0069** | 0.009 | 136.3 | mg/L | 92 | Standard |
| | Mg | 24 | 381.7 | 45.3 | **-0.0009** | 0.000 | 41.2 | mg/L | 142 | Standard |

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| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | **K** | 39 | 701.7 | 6.5 | **0.0021** | 0.005 | 234.2 | mg/L | 635 | Standard |
| | **Ca** | 43 | 86.7 | 37.5 | **0.0271** | 0.062 | 228.8 | mg/L | 63 | Standard |
| | **Fe** | 54 | 852.5 | 1.2 | **-0.0091** | 0.010 | 105.8 | mg/L | 901 | Standard |
| | **Fe** | 57 | 6026.2 | 1.5 | **-0.0019** | 0.002 | 98.2 | mg/L | 5948 | Standard |
| > | **Sc-1** | 45 | 306035.3 | 6.0 | | | | mg/L | 280553 | Standard |
| | **Cl** | 35 | 869.4 | 11.6 | | | | ug/L | 931 | Standard |
| | **Kr** | 83 | 46.0 | 7.4 | | | | ug/L | 40 | Standard |
| | **Br** | 81 | 13462.7 | 6.9 | | | | ug/L | 11862 | Standard |
| | **P** | 31 | 74933.5 | 5.5 | | | | ug/L | 77079 | Standard |
| | **S** | 34 | 969170.9 | 5.9 | | | | ug/L | 1028777 | Standard |
| | **Sr** | 88 | 363.3 | 21.3 | | | | ug/L | 318 | Standard |

## QC Calculated Values

| | Analyte | Mass | QC Std % Recovery | Int Std % Recovery | Spike % Recovery |
|---|---|---|---|---|---|
| | Li | 7 | | | |
| | Be | 9 | | | |
| | Al | 27 | | | |
| > | Sc | 45 | | | |
| | Ti | 47 | | | |
| | V | 51 | | | |
| | Cr | 52 | | | |
| | Cr | 53 | | | |
| | Mn | 55 | | | |
| | Co | 59 | | | |
| | Ni | 60 | | | |
| | Cu | 65 | | | |
| | Zn | 66 | | | |
| > | Ge | 72 | | 104.527 | |
| | As | 75 | | | |
| | Se | 82 | | | |
| | Se-1 | 77 | | | |
| > | Ga | 71 | | 103.483 | |
| | Rb | 85 | | | |
| | Y | 89 | | | |
| > | Rh | 103 | | 107.292 | |
| | Mo | 98 | | | |
| | Ag | 107 | | | |
| | Cd | 111 | | | |
| | Cd | 114 | | | |
| > | In | 115 | | 105.486 | |
| | Sn | 118 | | | |
| | Sb | 123 | | | |
| | Ba | 135 | | | |
| | Ce | 140 | | | |
| > | Tb | 159 | | 104.537 | |
| | Ho | 165 | | | |
| | Tl | 203 | | | |
| | Tl | 205 | | | |
| | Pb | 206 | | | |

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| | | | |
|---|---|---|---|
| | Pb | 207 | |
| | Pb | 208 | |
| | U | 238 | |
| > | Bi | 209 | 100.416 |
| | Na | 23 | |
| | Mg | 24 | |
| | K | 39 | |
| | Ca | 43 | |
| | Fe | 54 | |
| | Fe | 57 | |
| > | Sc-1 | 45 | |
| | Cl | 35 | |
| | Kr | 83 | |
| | Br | 81 | |
| | P | 31 | |
| | S | 34 | |
| | Sr | 88 | |

## QC Out of Limits

| Measurement Type | Analyte | Mass | Out of Limits Message |
|---|---|---|---|

**Sample ID: QC Std 7**
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# Method 6020 - Summary Report

**Sample ID: L1205035104**
Sample Date/Time: Friday, May 18, 2012 10:59:00
Number of Replicates: 3
Autosampler Position: 215
Sample Description: 5
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

## Concentration Results

| IS | Analyte | Mass | Intensity | RSD | Conc. | SD | RSD | Units | Blank Intens. | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| ⌈ | **Li** | 7 | 503919.9 | 2.0 | **-198808.4348** | 278.589 | 0.1 | ug/L | 13493 | Standard |
| \| | **Be** | 9 | 191.7 | 143.8 | **0.0475** | 0.087 | 184.2 | ug/L | 13 | Standard |
| \| | **Al** | 27 | 161674.4 | 10.7 | **9.7664** | 1.081 | 11.1 | ug/L | 8786 | Standard |
| ⌊> | **Sc** | 45 | 297045.9 | 1.9 | | | | ug/L | 280553 | Standard |
| ⌈ | **Ti** | 47 | 726.4 | 29.1 | **0.4374** | 0.153 | 34.9 | ug/L | 96 | Standard |
| \| | **V** | 51 | 5680.3 | 2.9 | **0.1401** | 0.008 | 5.8 | ug/L | 3640 | Standard |
| \| | **Cr** | 52 | 14532.0 | 2.2 | **0.3142** | 0.013 | 4.1 | ug/L | 11495 | Standard |
| \| | **Cr** | 53 | 1486.7 | 14.7 | **0.6392** | 0.137 | 21.4 | ug/L | 564 | Standard |
| \| | **Mn** | 55 | 1641068.8 | 1.8 | **90.9915** | 0.427 | 0.5 | ug/L | 1247 | Standard |
| \| | **Co** | 59 | 2919.6 | 30.7 | **0.2172** | 0.071 | 32.6 | ug/L | 114 | Standard |
| \| | **Ni** | 60 | 5877.1 | 5.1 | **2.1943** | 0.093 | 4.2 | ug/L | 66 | Standard |
| \| | **Cu** | 65 | 1896.5 | 10.7 | **0.7325** | 0.087 | 11.9 | ug/L | 219 | Standard |
| \| | **Zn** | 66 | 5256.6 | 4.0 | **4.7799** | 0.164 | 3.4 | ug/L | 232 | Standard |
| \| > | **Ge** | 72 | 227690.6 | 1.4 | | | | ug/L | 228255 | Standard |
| \| | **As** | 75 | 339.8 | 59.1 | **0.5729** | 0.198 | 34.5 | ug/L | -233 | Standard |
| \| | **Se** | 82 | 455.1 | 14.3 | **3.2625** | 0.456 | 14.0 | ug/L | 23 | Standard |
| ⌊ | **Se-1** | 77 | 224.0 | 8.8 | **1.9157** | 0.255 | 13.3 | ug/L | 91 | Standard |
| ⌈> | **Ga** | 71 | 197558.9 | 3.2 | | | | mg/L | 208873 | Standard |
| ⌊ | **Rb** | 85 | 6578.1 | 2.7 | | | | ug/L | 28 | Standard |
| ⌈ | **Y** | 89 | 229016.5 | 1.8 | | | | ug/L | 234742 | Standard |
| ⌊> | **Rh** | 103 | 110203.3 | 0.8 | | | | ug/L | 121294 | Standard |
| ⌈ | **Mo** | 98 | 371.2 | 14.8 | **0.1010** | 0.016 | 16.1 | ug/L | 6 | Standard |
| \| | **Ag** | 107 | 96.0 | 73.3 | **0.0014** | 0.010 | 678.2 | ug/L | 64 | Standard |
| \| | **Cd** | 111 | 255.1 | 14.0 | **-0.0386** | 0.010 | 26.2 | mg/L | 417 | Standard |
| \| | **Cd** | 114 | 683.7 | 13.9 | **-0.0330** | 0.011 | 32.4 | ug/L | 1009 | Standard |
| \| > | **In** | 115 | 630792.4 | 1.9 | | | | ug/L | 628085 | Standard |
| \| | **Sn** | 118 | 658.3 | 4.9 | **-0.0133** | 0.003 | 25.4 | ug/L | 834 | Standard |
| \| | **Sb** | 123 | 343.0 | 15.2 | **0.0320** | 0.006 | 19.4 | ug/L | 22 | Standard |
| ⌊ | **Ba** | 135 | 4684.7 | 2.1 | **1.1421** | 0.018 | 1.5 | ug/L | 36 | Standard |
| ⌈ | **Ce** | 140 | 34775.9 | 1.2 | | | | ug/L | 44 | Standard |
| ⌊> | **Tb** | 159 | 696849.8 | 2.1 | | | | ug/L | 691511 | Standard |
| ⌈ | **Ho** | 165 | 133.3 | 17.8 | | | | ug/L | 6 | Standard |
| \| | **Tl** | 203 | 773.4 | 10.3 | **0.0563** | 0.007 | 13.2 | ug/L | 71 | Standard |
| \| | **Tl** | 205 | 1883.8 | 8.8 | **0.0580** | 0.006 | 11.2 | ug/L | 177 | Standard |
| \| | **Pb** | 206 | 630.3 | 12.0 | **0.0382** | 0.008 | 21.2 | ug/L | 268 | Standard |
| \| | **Pb** | 207 | 570.3 | 2.6 | **0.0412** | 0.003 | 6.4 | ug/L | 245 | Standard |
| \| | **Pb** | 208 | 2477.1 | 6.9 | **0.0377** | 0.005 | 12.9 | ug/L | 1057 | Standard |
| \| | **U** | 238 | 27266.9 | 4.3 | **1.2953** | 0.077 | 6.0 | ug/L | 9 | Standard |
| ⌊> | **Bi** | 209 | 348989.9 | 1.8 | | | | ug/L | 389590 | Standard |
| ⌈ | **Na** | 23 | 330557.4 | 1.3 | **102.0559** | 1.133 | 1.1 | mg/L | 92 | Standard |
| \| | **Mg** | 24 | 14053379.4 | 1.2 | **31.7796** | 0.226 | 0.7 | mg/L | 142 | Standard |

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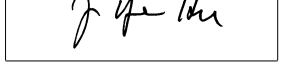

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | **K** | 39 | 7086.7 | 1.7 | **0.6174** | 0.024 | 4.0 | mg/L | 635 | Standard |
| | **Ca** | 43 | 14301.7 | 1.8 | **32.3363** | 0.165 | 0.5 | mg/L | 63 | Standard |
| | **Fe** | 54 | 884.4 | 3.2 | **0.0009** | 0.008 | 896.2 | mg/L | 901 | Standard |
| | **Fe** | 57 | 43811.6 | 4.0 | **0.2320** | 0.007 | 2.8 | mg/L | 5948 | Standard |
| > | **Sc-1** | 45 | 297045.9 | 1.9 | | | | mg/L | 280553 | Standard |
| | **Cl** | 35 | 13086.7 | 2.1 | | | | ug/L | 931 | Standard |
| | **Kr** | 83 | 53.6 | 8.5 | | | | ug/L | 40 | Standard |
| | **Br** | 81 | 68091.1 | 2.6 | | | | ug/L | 11862 | Standard |
| | **P** | 31 | 35715.7 | 10.1 | | | | ug/L | 77079 | Standard |
| | **S** | 34 | 16462566.2 | 1.9 | | | | ug/L | 1028777 | Standard |
| | **Sr** | 88 | 10211403.4 | 1.9 | | | | ug/L | 318 | Standard |

## QC Calculated Values

| | Analyte | Mass | QC Std % Recovery | Int Std % Recovery | Spike % Recovery |
|---|---|---|---|---|---|
| | Li | 7 | | | |
| | Be | 9 | | | |
| | Al | 27 | | | |
| > | Sc | 45 | | | |
| | Ti | 47 | | | |
| | V | 51 | | | |
| | Cr | 52 | | | |
| | Cr | 53 | | | |
| | Mn | 55 | | | |
| | Co | 59 | | | |
| | Ni | 60 | | | |
| | Cu | 65 | | | |
| | Zn | 66 | | | |
| > | Ge | 72 | | 99.753 | |
| | As | 75 | | | |
| | Se | 82 | | | |
| | Se-1 | 77 | | | |
| > | Ga | 71 | | 94.583 | |
| | Rb | 85 | | | |
| | Y | 89 | | | |
| > | Rh | 103 | | 90.857 | |
| | Mo | 98 | | | |
| | Ag | 107 | | | |
| | Cd | 111 | | | |
| | Cd | 114 | | | |
| > | In | 115 | | 100.431 | |
| | Sn | 118 | | | |
| | Sb | 123 | | | |
| | Ba | 135 | | | |
| | Ce | 140 | | | |
| > | Tb | 159 | | 100.772 | |
| | Ho | 165 | | | |
| | Tl | 203 | | | |
| | Tl | 205 | | | |
| | Pb | 206 | | | |

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| | | | |
|---|---|---|---|
| | Pb | 207 | |
| | Pb | 208 | |
| | U | 238 | |
| > | Bi | 209 | 89.579 |
| | Na | 23 | |
| | Mg | 24 | |
| | K | 39 | |
| | Ca | 43 | |
| | Fe | 54 | |
| | Fe | 57 | |
| > | Sc-1 | 45 | |
| | Cl | 35 | |
| | Kr | 83 | |
| | Br | 81 | |
| | P | 31 | |
| | S | 34 | |
| | Sr | 88 | |

## QC Out of Limits

| Measurement Type | Analyte | Mass | Out of Limits Message |
|---|---|---|---|

**Sample ID: L1205035104**
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# Method 6020 - Summary Report

**Sample ID: L1205035105**
Sample Date/Time: Friday, May 18, 2012 11:01:54
Number of Replicates: 3
Autosampler Position: 216
Sample Description: 5
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

## Concentration Results

| IS | Analyte | Mass | Intensity | RSD | Conc. | SD | RSD | Units | Blank Intens. | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **Li** | 7 | 463462.9 | 1.7 | **-181833.6926** | 3737.205 | 2.1 | ug/L | 13493 | Standard |
| | **Be** | 9 | 80.0 | 65.8 | **0.0120** | 0.016 | 136.4 | ug/L | 13 | Standard |
| | **Al** | 27 | 94237.3 | 2.6 | **5.4057** | 0.326 | 6.0 | ug/L | 8786 | Standard |
| > | **Sc** | 45 | 298057.2 | 3.6 | | | | ug/L | 280553 | Standard |
| | **Ti** | 47 | 574.7 | 5.6 | **0.3285** | 0.035 | 10.8 | ug/L | 96 | Standard |
| | **V** | 51 | 6036.3 | 7.8 | **0.1655** | 0.040 | 23.9 | ug/L | 3640 | Standard |
| | **Cr** | 52 | 14803.6 | 1.5 | **0.3415** | 0.047 | 13.8 | ug/L | 11495 | Standard |
| | **Cr** | 53 | 1529.2 | 2.6 | **0.6674** | 0.023 | 3.4 | ug/L | 564 | Standard |
| | **Mn** | 55 | 93830.5 | 2.8 | **5.1375** | 0.036 | 0.7 | ug/L | 1247 | Standard |
| | **Co** | 59 | 1563.7 | 9.6 | **0.1100** | 0.013 | 11.4 | ug/L | 114 | Standard |
| | **Ni** | 60 | 6859.9 | 3.0 | **2.5660** | 0.042 | 1.6 | ug/L | 66 | Standard |
| | **Cu** | 65 | 1903.8 | 3.6 | **0.7359** | 0.023 | 3.1 | ug/L | 219 | Standard |
| | **Zn** | 66 | 3534.1 | 1.2 | **3.1278** | 0.074 | 2.4 | ug/L | 232 | Standard |
| > | **Ge** | 72 | 227678.5 | 2.9 | | | | ug/L | 228255 | Standard |
| | **As** | 75 | 472.9 | 10.3 | **0.7062** | 0.056 | 7.9 | ug/L | -233 | Standard |
| | **Se** | 82 | 420.8 | 2.3 | **3.0100** | 0.091 | 3.0 | ug/L | 23 | Standard |
| | **Se-1** | 77 | 166.0 | 3.1 | **1.1284** | 0.137 | 12.1 | ug/L | 91 | Standard |
| > | **Ga** | 71 | 202790.8 | 3.5 | | | | mg/L | 208873 | Standard |
| | **Rb** | 85 | 3750.5 | 4.8 | | | | ug/L | 28 | Standard |
| | **Y** | 89 | 225990.6 | 3.0 | | | | ug/L | 234742 | Standard |
| > | **Rh** | 103 | 110683.2 | 3.9 | | | | ug/L | 121294 | Standard |
| | **Mo** | 98 | 555.6 | 0.2 | **0.1502** | 0.004 | 2.7 | ug/L | 6 | Standard |
| | **Ag** | 107 | 168.0 | 58.1 | **0.0108** | 0.013 | 115.3 | ug/L | 64 | Standard |
| | **Cd** | 111 | 339.6 | 26.5 | **-0.0171** | 0.021 | 124.8 | mg/L | 417 | Standard |
| | **Cd** | 114 | 882.5 | 24.5 | **-0.0129** | 0.020 | 156.4 | ug/L | 1009 | Standard |
| > | **In** | 115 | 624717.4 | 2.6 | | | | ug/L | 628085 | Standard |
| | **Sn** | 118 | 726.7 | 3.2 | **-0.0077** | 0.003 | 36.4 | ug/L | 834 | Standard |
| | **Sb** | 123 | 391.3 | 56.2 | **0.0372** | 0.022 | 60.3 | ug/L | 22 | Standard |
| | **Ba** | 135 | 3952.2 | 1.6 | **0.9714** | 0.024 | 2.4 | ug/L | 36 | Standard |
| | **Ce** | 140 | 695.7 | 2.8 | | | | ug/L | 44 | Standard |
| > | **Tb** | 159 | 697055.1 | 2.2 | | | | ug/L | 691511 | Standard |
| | **Ho** | 165 | 24.0 | 8.3 | | | | ug/L | 6 | Standard |
| | **Tl** | 203 | 1053.7 | 30.0 | **0.0793** | 0.026 | 33.2 | ug/L | 71 | Standard |
| | **Tl** | 205 | 2419.9 | 25.4 | **0.0762** | 0.021 | 27.6 | ug/L | 177 | Standard |
| | **Pb** | 206 | 655.0 | 27.4 | **0.0411** | 0.018 | 43.9 | ug/L | 268 | Standard |
| | **Pb** | 207 | 585.7 | 31.0 | **0.0435** | 0.021 | 49.2 | ug/L | 245 | Standard |
| | **Pb** | 208 | 2595.1 | 30.3 | **0.0411** | 0.020 | 48.7 | ug/L | 1057 | Standard |
| | **U** | 238 | 143772.2 | 2.4 | **6.8767** | 0.084 | 1.2 | ug/L | 9 | Standard |
| > | **Bi** | 209 | 346562.8 | 2.4 | | | | ug/L | 389590 | Standard |
| | **Na** | 23 | 312714.8 | 1.8 | **96.2490** | 1.763 | 1.8 | mg/L | 92 | Standard |
| | **Mg** | 24 | 15945129.8 | 1.9 | **35.9473** | 0.644 | 1.8 | mg/L | 142 | Standard |

**Sample ID: L1205035105**
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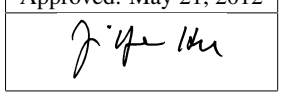

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | **K** | 39 | 7315.1 | 2.6 | **0.6372** | 0.028 | 4.4 | mg/L | 635 | Standard |
| | **Ca** | 43 | 15853.3 | 3.1 | **35.7599** | 1.324 | 3.7 | mg/L | 63 | Standard |
| | **Fe** | 54 | 423.6 | 10.5 | **-0.0828** | 0.005 | 6.5 | mg/L | 901 | Standard |
| | **Fe** | 57 | 36363.6 | 3.0 | **0.1855** | 0.002 | 1.1 | mg/L | 5948 | Standard |
| > | **Sc-1** | 45 | 298057.2 | 3.6 | | | | mg/L | 280553 | Standard |
| | **Cl** | 35 | 14214.3 | 0.7 | | | | ug/L | 931 | Standard |
| | **Kr** | 83 | 48.4 | 1.4 | | | | ug/L | 40 | Standard |
| | **Br** | 81 | 97341.8 | 2.6 | | | | ug/L | 11862 | Standard |
| | **P** | 31 | 33644.8 | 3.4 | | | | ug/L | 77079 | Standard |
| | **S** | 34 | 15895291.5 | 2.4 | | | | ug/L | 1028777 | Standard |
| | **Sr** | 88 | 10126286.2 | 2.7 | | | | ug/L | 318 | Standard |

## QC Calculated Values

| | Analyte | Mass | QC Std % Recovery | Int Std % Recovery | Spike % Recovery |
|---|---|---|---|---|---|
| | Li | 7 | | | |
| | Be | 9 | | | |
| | Al | 27 | | | |
| > | Sc | 45 | | | |
| | Ti | 47 | | | |
| | V | 51 | | | |
| | Cr | 52 | | | |
| | Cr | 53 | | | |
| | Mn | 55 | | | |
| | Co | 59 | | | |
| | Ni | 60 | | | |
| | Cu | 65 | | | |
| | Zn | 66 | | | |
| > | Ge | 72 | | 99.747 | |
| | As | 75 | | | |
| | Se | 82 | | | |
| | Se-1 | 77 | | | |
| > | Ga | 71 | | 97.088 | |
| | Rb | 85 | | | |
| | Y | 89 | | | |
| > | Rh | 103 | | 91.252 | |
| | Mo | 98 | | | |
| | Ag | 107 | | | |
| | Cd | 111 | | | |
| | Cd | 114 | | | |
| > | In | 115 | | 99.464 | |
| | Sn | 118 | | | |
| | Sb | 123 | | | |
| | Ba | 135 | | | |
| | Ce | 140 | | | |
| > | Tb | 159 | | 100.802 | |
| | Ho | 165 | | | |
| | Tl | 203 | | | |
| | Tl | 205 | | | |
| | Pb | 206 | | | |

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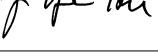

| | | | |
|---|---|---|---|
| | Pb | 207 | |
| | Pb | 208 | |
| | U | 238 | |
| > | Bi | 209 | 88.956 |
| ⌈ | Na | 23 | |
| | Mg | 24 | |
| | K | 39 | |
| | Ca | 43 | |
| | Fe | 54 | |
| | Fe | 57 | |
| > | Sc-1 | 45 | |
| | Cl | 35 | |
| | Kr | 83 | |
| | Br | 81 | |
| | P | 31 | |
| | S | 34 | |
| | Sr | 88 | |

## QC Out of Limits

| Measurement Type | Analyte | Mass | Out of Limits Message |
|---|---|---|---|

**Sample ID: L1205035105**
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# Method 6020 - Summary Report

**Sample ID: L1205028401**
Sample Date/Time: Friday, May 18, 2012 11:04:46
Number of Replicates: 3
Autosampler Position: 217
Sample Description: 2
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

## Concentration Results

| IS | Analyte | Mass | Intensity | RSD | Conc. | SD | RSD | Units | Blank Intens. | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | Li | 7 | 170903.8 | 2.1 | **-53383.8280** | 1268.115 | 2.4 | ug/L | 13493 | Standard |
| | Be | 9 | 173.3 | 12.0 | **0.0339** | 0.007 | 19.8 | ug/L | 13 | Standard |
| | Al | 27 | 10601383.2 | 2.5 | **581.9260** | 2.958 | 0.5 | ug/L | 8786 | Standard |
| > | Sc | 45 | 348453.0 | 2.5 | | | | ug/L | 280553 | Standard |
| | Ti | 47 | 21380.4 | 2.4 | **13.7092** | 0.238 | 1.7 | ug/L | 96 | Standard |
| | V | 51 | 50541.4 | 4.1 | **2.8962** | 0.119 | 4.1 | ug/L | 3640 | Standard |
| | Cr | 52 | 424967.7 | 1.7 | **35.6912** | 0.439 | 1.2 | ug/L | 11495 | Standard |
| | Cr | 53 | 62168.2 | 2.3 | **35.6735** | 0.153 | 0.4 | ug/L | 564 | Standard |
| | Mn | 55 | 2258136.0 | 2.1 | **111.9964** | 0.647 | 0.6 | ug/L | 1247 | Standard |
| | Co | 59 | 41932.6 | 2.6 | **2.9537** | 0.012 | 0.4 | ug/L | 114 | Standard |
| | Ni | 60 | 668104.1 | 0.8 | **225.4758** | 3.374 | 1.5 | ug/L | 66 | Standard |
| | Cu | 65 | 21865.4 | 1.7 | **8.4693** | 0.163 | 1.9 | ug/L | 219 | Standard |
| | Zn | 66 | 1000110.0 | 0.7 | **858.9414** | 13.908 | 1.6 | ug/L | 232 | Standard |
| > | Ge | 72 | 254600.0 | 2.2 | | | | ug/L | 228255 | Standard |
| | As | 75 | 3331.4 | 3.7 | **3.1851** | 0.043 | 1.4 | ug/L | -233 | Standard |
| | Se | 82 | 424.3 | 2.2 | **2.6982** | 0.022 | 0.8 | ug/L | 23 | Standard |
| | Se-1 | 77 | 265.0 | 6.0 | **2.0920** | 0.136 | 6.5 | ug/L | 91 | Standard |
| > | Ga | 71 | 226595.2 | 0.5 | | | | mg/L | 208873 | Standard |
| | Rb | 85 | 116573.5 | 1.4 | | | | ug/L | 28 | Standard |
| | Y | 89 | 272502.3 | 1.3 | | | | ug/L | 234742 | Standard |
| > | Rh | 103 | 134949.7 | 1.5 | | | | ug/L | 121294 | Standard |
| | Mo | 98 | 875077.8 | 1.6 | **207.0630** | 1.255 | 0.6 | ug/L | 6 | Standard |
| | Ag | 107 | 265.3 | 3.3 | **0.0205** | 0.001 | 6.7 | ug/L | 64 | Standard |
| | Cd | 111 | 24966.3 | 0.6 | **5.5507** | 0.035 | 0.6 | mg/L | 417 | Standard |
| | Cd | 114 | 66820.4 | 2.0 | **5.8985** | 0.064 | 1.1 | ug/L | 1009 | Standard |
| > | In | 115 | 693209.9 | 1.0 | | | | ug/L | 628085 | Standard |
| | Sn | 118 | 15226.0 | 1.4 | **0.9753** | 0.004 | 0.5 | ug/L | 834 | Standard |
| | Sb | 123 | 2633.5 | 3.5 | **0.2463** | 0.006 | 2.6 | ug/L | 22 | Standard |
| | Ba | 135 | 140744.2 | 2.0 | **31.5320** | 0.388 | 1.2 | ug/L | 36 | Standard |
| | Ce | 140 | 26851.8 | 1.1 | | | | ug/L | 44 | Standard |
| > | Tb | 159 | 776497.2 | 1.8 | | | | ug/L | 691511 | Standard |
| | Ho | 165 | 990.7 | 2.8 | | | | ug/L | 6 | Standard |
| | Tl | 203 | 462.3 | 16.6 | **0.0268** | 0.005 | 18.2 | ug/L | 71 | Standard |
| | Tl | 205 | 1031.4 | 19.7 | **0.0256** | 0.005 | 20.9 | ug/L | 177 | Standard |
| | Pb | 206 | 10652.1 | 3.2 | **0.8925** | 0.016 | 1.7 | ug/L | 268 | Standard |
| | Pb | 207 | 8927.0 | 1.7 | **0.8687** | 0.016 | 1.8 | ug/L | 245 | Standard |
| | Pb | 208 | 40881.0 | 2.0 | **0.8661** | 0.005 | 0.5 | ug/L | 1057 | Standard |
| | U | 238 | 1913.1 | 3.6 | **0.0788** | 0.002 | 2.3 | ug/L | 9 | Standard |
| > | Bi | 209 | 398735.5 | 1.7 | | | | ug/L | 389590 | Standard |
| | Na | 23 | 101811.0 | 1.8 | **26.7680** | 0.411 | 1.5 | mg/L | 92 | Standard |
| | Mg | 24 | 2817546.6 | 4.2 | **5.4282** | 0.091 | 1.7 | mg/L | 142 | Standard |

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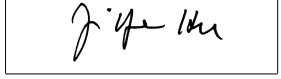

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | **K** | 39 | 49313.5 | 2.2 | **3.9745** | 0.102 | 2.6 | mg/L | 635 | Standard |
| | **Ca** | 43 | 11702.9 | 3.5 | **22.5036** | 0.240 | 1.1 | mg/L | 63 | Standard |
| | **Fe** | 54 | 33320.9 | 2.5 | **4.9711** | 0.060 | 1.2 | mg/L | 901 | Standard |
| | **Fe** | 57 | 1024088.0 | 2.0 | **5.3441** | 0.029 | 0.5 | mg/L | 5948 | Standard |
| > | **Sc-1** | 45 | 348453.0 | 2.5 | | | | mg/L | 280553 | Standard |
| | **Cl** | 35 | 32121.3 | 0.3 | | | | ug/L | 931 | Standard |
| | **Kr** | 83 | 82.6 | 6.8 | | | | ug/L | 40 | Standard |
| | **Br** | 81 | 38449.7 | 5.8 | | | | ug/L | 11862 | Standard |
| | **P** | 31 | 300958.9 | 2.2 | | | | ug/L | 77079 | Standard |
| | **S** | 34 | 16578062.0 | 2.4 | | | | ug/L | 1028777 | Standard |
| | **Sr** | 88 | 3257896.5 | 1.9 | | | | ug/L | 318 | Standard |

## QC Calculated Values

| | Analyte | Mass | QC Std % Recovery | Int Std % Recovery | Spike % Recovery |
|---|---|---|---|---|---|
| | Li | 7 | | | |
| | Be | 9 | | | |
| | Al | 27 | | | |
| > | Sc | 45 | | | |
| | Ti | 47 | | | |
| | V | 51 | | | |
| | Cr | 52 | | | |
| | Cr | 53 | | | |
| | Mn | 55 | | | |
| | Co | 59 | | | |
| | Ni | 60 | | | |
| | Cu | 65 | | | |
| | Zn | 66 | | | |
| > | Ge | 72 | | 111.542 | |
| | As | 75 | | | |
| | Se | 82 | | | |
| | Se-1 | 77 | | | |
| > | Ga | 71 | | 108.485 | |
| | Rb | 85 | | | |
| | Y | 89 | | | |
| > | Rh | 103 | | 111.259 | |
| | Mo | 98 | | | |
| | Ag | 107 | | | |
| | Cd | 111 | | | |
| | Cd | 114 | | | |
| > | In | 115 | | 110.369 | |
| | Sn | 118 | | | |
| | Sb | 123 | | | |
| | Ba | 135 | | | |
| | Ce | 140 | | | |
| > | Tb | 159 | | 112.290 | |
| | Ho | 165 | | | |
| | Tl | 203 | | | |
| | Tl | 205 | | | |
| | Pb | 206 | | | |

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| | | |
|---|---|---|
| Pb | 207 | |
| Pb | 208 | |
| U | 238 | |
| > Bi | 209 | 102.347 |
| Na | 23 | |
| Mg | 24 | |
| K | 39 | |
| Ca | 43 | |
| Fe | 54 | |
| Fe | 57 | |
| > Sc-1 | 45 | |
| Cl | 35 | |
| Kr | 83 | |
| Br | 81 | |
| P | 31 | |
| S | 34 | |
| Sr | 88 | |

## QC Out of Limits

| Measurement Type | Analyte | Mass | Out of Limits Message |
|---|---|---|---|
| Mn 55 Upper, S, EEE | Mn | 55 | |
| Ni 60 Upper, S, EEE | Ni | 60 | |
| Zn 66 Upper, S, EEE | Zn | 66 | |
| Mo 98 Upper, S, EEE | Mo | 98 | |



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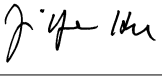

# Method 6020 - Summary Report

**Sample ID: L1205028402**
Sample Date/Time: Friday, May 18, 2012 11:07:40
Number of Replicates: 3
Autosampler Position: 218
Sample Description: 2
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

## Concentration Results

| IS | Analyte | Mass | Intensity | RSD | Conc. | SD | RSD | Units | Blank Intens. | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| ⌈ | **Li** | 7 | 826791.9 | 0.9 | **-276230.4530** | 11641.007 | 4.2 | ug/L | 13493 | Standard |
| \| | **Be** | 9 | 36.7 | 20.8 | **-0.0037** | 0.002 | 44.6 | ug/L | 13 | Standard |
| \| | **Al** | 27 | 158744.4 | 3.0 | **7.9378** | 0.305 | 3.8 | ug/L | 8786 | Standard |
| ⌊> | **Sc** | 45 | 353991.0 | 4.4 | | | | ug/L | 280553 | Standard |
| ⌈ | **Ti** | 47 | 4336.0 | 1.5 | **2.8178** | 0.099 | 3.5 | ug/L | 96 | Standard |
| \| | **V** | 51 | 36882.7 | 0.9 | **2.1318** | 0.063 | 3.0 | ug/L | 3640 | Standard |
| \| | **Cr** | 52 | 150214.5 | 2.0 | **12.4013** | 0.280 | 2.3 | ug/L | 11495 | Standard |
| \| | **Cr** | 53 | 25421.3 | 1.6 | **14.9543** | 0.240 | 1.6 | ug/L | 564 | Standard |
| \| | **Mn** | 55 | 228771.6 | 1.9 | **11.7126** | 0.121 | 1.0 | ug/L | 1247 | Standard |
| \| | **Co** | 59 | 9783.8 | 1.8 | **0.7048** | 0.015 | 2.1 | ug/L | 114 | Standard |
| \| | **Ni** | 60 | 61788.4 | 2.0 | **21.6173** | 0.399 | 1.8 | ug/L | 66 | Standard |
| \| | **Cu** | 65 | 2386.9 | 2.6 | **0.8724** | 0.028 | 3.2 | ug/L | 219 | Standard |
| \| | **Zn** | 66 | 18437.5 | 1.9 | **16.1670** | 0.133 | 0.8 | ug/L | 232 | Standard |
| \|> | **Ge** | 72 | 245355.8 | 2.6 | | | | ug/L | 228255 | Standard |
| \| | **As** | 75 | 21944.6 | 1.3 | **20.3957** | 0.312 | 1.5 | ug/L | -233 | Standard |
| \| | **Se** | 82 | 285.6 | 6.9 | **1.8405** | 0.119 | 6.4 | ug/L | 23 | Standard |
| ⌊ | **Se-1** | 77 | 442.3 | 11.0 | **4.4650** | 0.693 | 15.5 | ug/L | 91 | Standard |
| ⌈> | **Ga** | 71 | 219618.9 | 1.9 | | | | mg/L | 208873 | Standard |
| ⌊ | **Rb** | 85 | 414267.3 | 1.0 | | | | ug/L | 28 | Standard |
| ⌈ | **Y** | 89 | 267694.7 | 3.9 | | | | ug/L | 234742 | Standard |
| ⌊> | **Rh** | 103 | 127835.4 | 3.3 | | | | ug/L | 121294 | Standard |
| ⌈ | **Mo** | 98 | 26244.0 | 3.0 | **6.4236** | 0.075 | 1.2 | ug/L | 6 | Standard |
| \| | **Ag** | 107 | 162.3 | 5.2 | **0.0088** | 0.001 | 16.8 | ug/L | 64 | Standard |
| \| | **Cd** | 111 | 516.7 | 7.2 | **0.0188** | 0.009 | 48.4 | mg/L | 417 | Standard |
| \| | **Cd** | 114 | 1446.7 | 4.3 | **0.0336** | 0.005 | 13.8 | ug/L | 1009 | Standard |
| \|> | **In** | 115 | 670535.3 | 2.1 | | | | ug/L | 628085 | Standard |
| \| | **Sn** | 118 | 2262.8 | 3.9 | **0.0968** | 0.003 | 3.2 | ug/L | 834 | Standard |
| \| | **Sb** | 123 | 4937.0 | 1.5 | **0.4811** | 0.005 | 1.0 | ug/L | 22 | Standard |
| ⌊ | **Ba** | 135 | 1033594.2 | 1.0 | **239.5241** | 2.995 | 1.3 | ug/L | 36 | Standard |
| ⌈ | **Ce** | 140 | 2043.8 | 2.7 | | | | ug/L | 44 | Standard |
| ⌊> | **Tb** | 159 | 750729.6 | 1.9 | | | | ug/L | 691511 | Standard |
| ⌈ | **Ho** | 165 | 2371.2 | 1.5 | | | | ug/L | 6 | Standard |
| \| | **Tl** | 203 | 329.0 | 6.9 | **0.0202** | 0.002 | 7.9 | ug/L | 71 | Standard |
| \| | **Tl** | 205 | 782.7 | 5.6 | **0.0211** | 0.002 | 7.6 | ug/L | 177 | Standard |
| \| | **Pb** | 206 | 494.7 | 5.5 | **0.0236** | 0.002 | 8.6 | ug/L | 268 | Standard |
| \| | **Pb** | 207 | 419.7 | 8.0 | **0.0227** | 0.003 | 13.1 | ug/L | 245 | Standard |
| \| | **Pb** | 208 | 1924.0 | 4.6 | **0.0226** | 0.001 | 6.1 | ug/L | 1057 | Standard |
| \| | **U** | 238 | 698.7 | 1.8 | **0.0316** | 0.001 | 1.6 | ug/L | 9 | Standard |
| ⌊> | **Bi** | 209 | 357992.6 | 1.7 | | | | ug/L | 389590 | Standard |
| ⌈ | **Na** | 23 | 338099.1 | 0.7 | **87.6746** | 3.325 | 3.8 | mg/L | 92 | Standard |
| \| | **Mg** | 24 | 13562986.1 | 1.3 | **25.7758** | 1.421 | 5.5 | mg/L | 142 | Standard |

**Sample ID: L1205028402**
Report Date/Time: Friday, May 18, 2012 11:10:13
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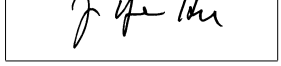

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | **K** | 39 | 169910.8 | 1.1 | **13.6437** | 0.548 | 4.0 | mg/L | 635 | Standard |
| | **Ca** | 43 | 25593.3 | 2.1 | **48.6794** | 1.611 | 3.3 | mg/L | 63 | Standard |
| | **Fe** | 54 | 714.5 | 10.8 | **-0.0502** | 0.016 | 31.5 | mg/L | 901 | Standard |
| | **Fe** | 57 | 48268.4 | 1.7 | **0.2121** | 0.013 | 6.3 | mg/L | 5948 | Standard |
| > | **Sc-1** | 45 | 353991.0 | 4.4 | | | | mg/L | 280553 | Standard |
| | **Cl** | 35 | 56993.3 | 1.1 | | | | ug/L | 931 | Standard |
| | **Kr** | 83 | 64.0 | 4.1 | | | | ug/L | 40 | Standard |
| | **Br** | 81 | 47650.7 | 1.3 | | | | ug/L | 11862 | Standard |
| | **P** | 31 | 171608.9 | 1.1 | | | | ug/L | 77079 | Standard |
| | **S** | 34 | 16221912.0 | 0.6 | | | | ug/L | 1028777 | Standard |
| | **Sr** | 88 | 20282827.8 | 1.2 | | | | ug/L | 318 | Standard |

## QC Calculated Values

| | Analyte | Mass | QC Std % Recovery | Int Std % Recovery | Spike % Recovery |
|---|---|---|---|---|---|
| | Li | 7 | | | |
| | Be | 9 | | | |
| | Al | 27 | | | |
| > | Sc | 45 | | | |
| | Ti | 47 | | | |
| | V | 51 | | | |
| | Cr | 52 | | | |
| | Cr | 53 | | | |
| | Mn | 55 | | | |
| | Co | 59 | | | |
| | Ni | 60 | | | |
| | Cu | 65 | | | |
| | Zn | 66 | | | |
| > | Ge | 72 | | 107.492 | |
| | As | 75 | | | |
| | Se | 82 | | | |
| | Se-1 | 77 | | | |
| > | Ga | 71 | | 105.145 | |
| | Rb | 85 | | | |
| | Y | 89 | | | |
| > | Rh | 103 | | 105.393 | |
| | Mo | 98 | | | |
| | Ag | 107 | | | |
| | Cd | 111 | | | |
| | Cd | 114 | | | |
| > | In | 115 | | 106.759 | |
| | Sn | 118 | | | |
| | Sb | 123 | | | |
| | Ba | 135 | | | |
| | Ce | 140 | | | |
| > | Tb | 159 | | 108.564 | |
| | Ho | 165 | | | |
| | Tl | 203 | | | |
| | Tl | 205 | | | |
| | Pb | 206 | | | |

**Sample ID: L1205028402**
Report Date/Time: Friday, May 18, 2012 11:10:13
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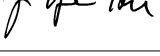

| | | | |
|---|---|---|---|
| | Pb | 207 | |
| | Pb | 208 | |
| | U | 238 | |
| > | Bi | 209 | 91.890 |
| | Na | 23 | |
| | Mg | 24 | |
| | K | 39 | |
| | Ca | 43 | |
| | Fe | 54 | |
| | Fe | 57 | |
| > | Sc-1 | 45 | |
| | Cl | 35 | |
| | Kr | 83 | |
| | Br | 81 | |
| | P | 31 | |
| | S | 34 | |
| | Sr | 88 | |

## QC Out of Limits

| Measurement Type | Analyte | Mass | Out of Limits Message |
|---|---|---|---|
| Ba 135 Upper, S, EEE | Ba | 135 | |



Approved: May 21, 2012

# Method 6020 - Summary Report

**Sample ID: L1205028403**
Sample Date/Time: Friday, May 18, 2012 11:10:33
Number of Replicates: 3
Autosampler Position: 219
Sample Description: 2
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

## Concentration Results

| IS | Analyte | Mass | Intensity | RSD | Conc. | SD | RSD | Units | Blank Intens. | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **Li** | 7 | 177215.9 | 2.7 | **-60376.0550** | 412.110 | 0.7 | ug/L | 13493 | Standard |
| | **Be** | 9 | 18.3 | 41.7 | **-0.0081** | 0.002 | 26.5 | ug/L | 13 | Standard |
| | **Al** | 27 | 49475.8 | 4.6 | **2.2799** | 0.194 | 8.5 | ug/L | 8786 | Standard |
| > | **Sc** | 45 | 323094.0 | 3.1 | | | | ug/L | 280553 | Standard |
| | **Ti** | 47 | 742.7 | 11.6 | **0.4153** | 0.041 | 9.8 | ug/L | 96 | Standard |
| | **V** | 51 | 8226.4 | 2.3 | **0.2832** | 0.028 | 10.1 | ug/L | 3640 | Standard |
| | **Cr** | 52 | 15774.2 | 4.1 | **0.3416** | 0.052 | 15.3 | ug/L | 11495 | Standard |
| | **Cr** | 53 | 6463.9 | 1.3 | **3.6088** | 0.125 | 3.5 | ug/L | 564 | Standard |
| | **Mn** | 55 | 671393.1 | 3.3 | **34.9102** | 0.209 | 0.6 | ug/L | 1247 | Standard |
| | **Co** | 59 | 1821.8 | 5.2 | **0.1214** | 0.002 | 2.0 | ug/L | 114 | Standard |
| | **Ni** | 60 | 5168.2 | 3.6 | **1.8081** | 0.004 | 0.2 | ug/L | 66 | Standard |
| | **Cu** | 65 | 1265.7 | 2.1 | **0.4227** | 0.014 | 3.3 | ug/L | 219 | Standard |
| | **Zn** | 66 | 29116.6 | 4.0 | **25.9840** | 0.283 | 1.1 | ug/L | 232 | Standard |
| > | **Ge** | 72 | 242521.8 | 3.5 | | | | ug/L | 228255 | Standard |
| | **As** | 75 | 86.1 | 80.1 | **0.3164** | 0.063 | 20.0 | ug/L | -233 | Standard |
| | **Se** | 82 | 113.4 | 4.1 | **0.6524** | 0.019 | 2.9 | ug/L | 23 | Standard |
| | **Se-1** | 77 | 341.0 | 3.9 | **3.2316** | 0.262 | 8.1 | ug/L | 91 | Standard |
| > | **Ga** | 71 | 213400.3 | 3.6 | | | | mg/L | 208873 | Standard |
| | **Rb** | 85 | 12797.1 | 6.4 | | | | ug/L | 28 | Standard |
| | **Y** | 89 | 243925.1 | 2.1 | | | | ug/L | 234742 | Standard |
| > | **Rh** | 103 | 124938.8 | 4.9 | | | | ug/L | 121294 | Standard |
| | **Mo** | 98 | 1596.4 | 5.1 | **0.3924** | 0.014 | 3.7 | ug/L | 6 | Standard |
| | **Ag** | 107 | 44.0 | 21.7 | **-0.0059** | 0.001 | 16.9 | ug/L | 64 | Standard |
| | **Cd** | 111 | 1261.7 | 6.7 | **0.1912** | 0.010 | 5.3 | mg/L | 417 | Standard |
| | **Cd** | 114 | 3152.3 | 5.0 | **0.1902** | 0.005 | 2.6 | ug/L | 1009 | Standard |
| > | **In** | 115 | 674485.8 | 3.3 | | | | ug/L | 628085 | Standard |
| | **Sn** | 118 | 906.7 | 4.6 | **0.0009** | 0.005 | 480.4 | ug/L | 834 | Standard |
| | **Sb** | 123 | 330.2 | 8.3 | **0.0284** | 0.003 | 11.0 | ug/L | 22 | Standard |
| | **Ba** | 135 | 101492.0 | 3.0 | **23.3696** | 0.181 | 0.8 | ug/L | 36 | Standard |
| | **Ce** | 140 | 728.7 | 1.4 | | | | ug/L | 44 | Standard |
| > | **Tb** | 159 | 752671.9 | 3.2 | | | | ug/L | 691511 | Standard |
| | **Ho** | 165 | 117.7 | 14.8 | | | | ug/L | 6 | Standard |
| | **Tl** | 203 | 535.7 | 10.9 | **0.0338** | 0.005 | 14.4 | ug/L | 71 | Standard |
| | **Tl** | 205 | 1298.7 | 13.3 | **0.0352** | 0.006 | 16.5 | ug/L | 177 | Standard |
| | **Pb** | 206 | 1759.1 | 1.4 | **0.1348** | 0.002 | 1.4 | ug/L | 268 | Standard |
| | **Pb** | 207 | 1479.4 | 0.6 | **0.1311** | 0.005 | 3.7 | ug/L | 245 | Standard |
| | **Pb** | 208 | 6716.2 | 0.7 | **0.1293** | 0.003 | 2.3 | ug/L | 1057 | Standard |
| | **U** | 238 | 1729.4 | 4.7 | **0.0746** | 0.002 | 2.4 | ug/L | 9 | Standard |
| > | **Bi** | 209 | 380541.5 | 2.5 | | | | ug/L | 389590 | Standard |
| | **Na** | 23 | 127988.5 | 2.4 | **36.3048** | 0.270 | 0.7 | mg/L | 92 | Standard |
| | **Mg** | 24 | 4511883.8 | 3.4 | **9.3789** | 0.174 | 1.9 | mg/L | 142 | Standard |

**Sample ID: L1205028403**
Report Date/Time: Friday, May 18, 2012 11:13:06
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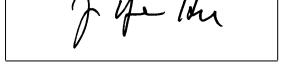
Approved: May 21, 2012



| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | **K** | 39 | 11217.5 | 3.0 | **0.9271** | 0.016 | 1.8 | mg/L | 635 | Standard |
| | **Ca** | 43 | 13617.8 | 2.6 | **28.2902** | 0.221 | 0.8 | mg/L | 63 | Standard |
| | **Fe** | 54 | 2428.5 | 12.5 | **0.2437** | 0.040 | 16.6 | mg/L | 901 | Standard |
| | **Fe** | 57 | 83975.8 | 5.0 | **0.4378** | 0.012 | 2.7 | mg/L | 5948 | Standard |
| > | **Sc-1** | 45 | 323094.0 | 3.1 | | | | mg/L | 280553 | Standard |
| | **Cl** | 35 | 37454.3 | 2.3 | | | | ug/L | 931 | Standard |
| | **Kr** | 83 | 46.3 | 6.2 | | | | ug/L | 40 | Standard |
| | **Br** | 81 | 33098.6 | 1.3 | | | | ug/L | 11862 | Standard |
| | **P** | 31 | 85768.9 | 3.3 | | | | ug/L | 77079 | Standard |
| | **S** | 34 | 3523113.8 | 3.4 | | | | ug/L | 1028777 | Standard |
| | **Sr** | 88 | 18899133.6 | 4.2 | | | | ug/L | 318 | Standard |

## QC Calculated Values

| | Analyte | Mass | QC Std % Recovery | Int Std % Recovery | Spike % Recovery |
|---|---|---|---|---|---|
| | Li | 7 | | | |
| | Be | 9 | | | |
| | Al | 27 | | | |
| > | Sc | 45 | | | |
| | Ti | 47 | | | |
| | V | 51 | | | |
| | Cr | 52 | | | |
| | Cr | 53 | | | |
| | Mn | 55 | | | |
| | Co | 59 | | | |
| | Ni | 60 | | | |
| | Cu | 65 | | | |
| | Zn | 66 | | | |
| > | Ge | 72 | | 106.250 | |
| | As | 75 | | | |
| | Se | 82 | | | |
| | Se-1 | 77 | | | |
| > | Ga | 71 | | 102.168 | |
| | Rb | 85 | | | |
| | Y | 89 | | | |
| > | Rh | 103 | | 103.005 | |
| | Mo | 98 | | | |
| | Ag | 107 | | | |
| | Cd | 111 | | | |
| | Cd | 114 | | | |
| > | In | 115 | | 107.388 | |
| | Sn | 118 | | | |
| | Sb | 123 | | | |
| | Ba | 135 | | | |
| | Ce | 140 | | | |
| > | Tb | 159 | | 108.845 | |
| | Ho | 165 | | | |
| | Tl | 203 | | | |
| | Tl | 205 | | | |
| | Pb | 206 | | | |

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| | | | |
|---|---|---|---|
| | Pb | 207 | |
| | Pb | 208 | |
| | U | 238 | |
| > | Bi | 209 | 97.677 |
| | Na | 23 | |
| | Mg | 24 | |
| | K | 39 | |
| | Ca | 43 | |
| | Fe | 54 | |
| | Fe | 57 | |
| > | Sc-1 | 45 | |
| | Cl | 35 | |
| | Kr | 83 | |
| | Br | 81 | |
| | P | 31 | |
| | S | 34 | |
| | Sr | 88 | |

## QC Out of Limits

| Measurement Type | Analyte | Mass | Out of Limits Message |
|---|---|---|---|

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# Method 6020 - Summary Report

**Sample ID: L1205028404**
Sample Date/Time: Friday, May 18, 2012 11:13:26
Number of Replicates: 3
Autosampler Position: 220
Sample Description: 2
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

## Concentration Results

| IS | Analyte | Mass | Intensity | RSD | Conc. | SD | RSD | Units | Blank Intens. | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **Li** | 7 | 181127.9 | 1.0 | **-62980.0704** | 3107.170 | 4.9 | ug/L | 13493 | Standard |
| | **Be** | 9 | 21.7 | 26.6 | **-0.0070** | 0.002 | 24.7 | ug/L | 13 | Standard |
| | **Al** | 27 | 63412.4 | 0.5 | **3.1653** | 0.120 | 3.8 | ug/L | 8786 | Standard |
| > | **Sc** | 45 | 318041.2 | 3.7 | | | | ug/L | 280553 | Standard |
| | **Ti** | 47 | 705.3 | 5.3 | **0.4044** | 0.018 | 4.4 | ug/L | 96 | Standard |
| | **V** | 51 | 7769.3 | 5.1 | **0.2670** | 0.018 | 6.7 | ug/L | 3640 | Standard |
| | **Cr** | 52 | 16893.1 | 2.7 | **0.4867** | 0.039 | 8.0 | ug/L | 11495 | Standard |
| | **Cr** | 53 | 6955.8 | 3.5 | **4.0248** | 0.080 | 2.0 | ug/L | 564 | Standard |
| | **Mn** | 55 | 687417.0 | 1.4 | **36.7656** | 0.140 | 0.4 | ug/L | 1247 | Standard |
| | **Co** | 59 | 1934.1 | 3.8 | **0.1339** | 0.003 | 2.5 | ug/L | 114 | Standard |
| | **Ni** | 60 | 5246.9 | 1.0 | **1.8895** | 0.051 | 2.7 | ug/L | 66 | Standard |
| | **Cu** | 65 | 1019.7 | 3.2 | **0.3332** | 0.012 | 3.7 | ug/L | 219 | Standard |
| | **Zn** | 66 | 2867.9 | 3.9 | **2.3933** | 0.145 | 6.0 | ug/L | 232 | Standard |
| > | **Ge** | 72 | 235796.0 | 1.7 | | | | ug/L | 228255 | Standard |
| | **As** | 75 | 48.6 | 82.9 | **0.2839** | 0.039 | 13.6 | ug/L | -233 | Standard |
| | **Se** | 82 | 96.2 | 14.4 | **0.5496** | 0.088 | 16.0 | ug/L | 23 | Standard |
| | **Se-1** | 77 | 346.3 | 4.7 | **3.4218** | 0.210 | 6.1 | ug/L | 91 | Standard |
| > | **Ga** | 71 | 208795.2 | 3.8 | | | | mg/L | 208873 | Standard |
| | **Rb** | 85 | 12753.7 | 5.0 | | | | ug/L | 28 | Standard |
| | **Y** | 89 | 237666.2 | 0.7 | | | | ug/L | 234742 | Standard |
| > | **Rh** | 103 | 119519.4 | 2.6 | | | | ug/L | 121294 | Standard |
| | **Mo** | 98 | 1671.9 | 12.1 | **0.4265** | 0.058 | 13.6 | ug/L | 6 | Standard |
| | **Ag** | 107 | 45.7 | 16.4 | **-0.0055** | 0.001 | 16.4 | ug/L | 64 | Standard |
| | **Cd** | 111 | 295.8 | 3.5 | **-0.0308** | 0.003 | 10.0 | mg/L | 417 | Standard |
| | **Cd** | 114 | 774.6 | 2.2 | **-0.0265** | 0.003 | 9.9 | ug/L | 1009 | Standard |
| > | **In** | 115 | 650436.4 | 1.7 | | | | ug/L | 628085 | Standard |
| | **Sn** | 118 | 836.0 | 5.8 | **-0.0019** | 0.003 | 178.4 | ug/L | 834 | Standard |
| | **Sb** | 123 | 275.0 | 9.3 | **0.0239** | 0.002 | 9.5 | ug/L | 22 | Standard |
| | **Ba** | 135 | 104196.4 | 1.6 | **24.8783** | 0.142 | 0.6 | ug/L | 36 | Standard |
| | **Ce** | 140 | 689.0 | 3.8 | | | | ug/L | 44 | Standard |
| > | **Tb** | 159 | 727948.8 | 2.2 | | | | ug/L | 691511 | Standard |
| | **Ho** | 165 | 119.7 | 16.3 | | | | ug/L | 6 | Standard |
| | **Tl** | 203 | 619.0 | 4.5 | **0.0410** | 0.002 | 4.4 | ug/L | 71 | Standard |
| | **Tl** | 205 | 1533.7 | 1.2 | **0.0434** | 0.001 | 1.6 | ug/L | 177 | Standard |
| | **Pb** | 206 | 490.3 | 5.3 | **0.0215** | 0.003 | 12.0 | ug/L | 268 | Standard |
| | **Pb** | 207 | 398.7 | 3.0 | **0.0188** | 0.002 | 10.1 | ug/L | 245 | Standard |
| | **Pb** | 208 | 1862.0 | 4.2 | **0.0195** | 0.002 | 11.4 | ug/L | 1057 | Standard |
| | **U** | 238 | 1747.1 | 2.0 | **0.0773** | 0.003 | 3.7 | ug/L | 9 | Standard |
| > | **Bi** | 209 | 371404.3 | 1.8 | | | | ug/L | 389590 | Standard |
| | **Na** | 23 | 129714.6 | 1.1 | **37.4019** | 1.153 | 3.1 | mg/L | 92 | Standard |
| | **Mg** | 24 | 4653232.0 | 1.9 | **9.8318** | 0.280 | 2.8 | mg/L | 142 | Standard |

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| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | **K** | 39 | 11437.7 | 2.6 | **0.9637** | 0.057 | 5.9 | mg/L | 635 | Standard |
| | **Ca** | 43 | 13966.4 | 2.2 | **29.5023** | 1.158 | 3.9 | mg/L | 63 | Standard |
| | **Fe** | 54 | 2412.7 | 1.9 | **0.2485** | 0.021 | 8.6 | mg/L | 901 | Standard |
| | **Fe** | 57 | 85827.5 | 2.1 | **0.4567** | 0.023 | 5.1 | mg/L | 5948 | Standard |
| > | **Sc-1** | 45 | 318041.2 | 3.7 | | | | mg/L | 280553 | Standard |
| | **Cl** | 35 | 38801.6 | 0.8 | | | | ug/L | 931 | Standard |
| | **Kr** | 83 | 42.8 | 11.5 | | | | ug/L | 40 | Standard |
| | **Br** | 81 | 30520.7 | 1.7 | | | | ug/L | 11862 | Standard |
| | **P** | 31 | 86525.6 | 1.5 | | | | ug/L | 77079 | Standard |
| | **S** | 34 | 3517057.4 | 2.5 | | | | ug/L | 1028777 | Standard |
| | **Sr** | 88 | 19459290.0 | 3.0 | | | | ug/L | 318 | Standard |

## QC Calculated Values

| | Analyte | Mass | QC Std % Recovery | Int Std % Recovery | Spike % Recovery |
|---|---|---|---|---|---|
| | Li | 7 | | | |
| | Be | 9 | | | |
| | Al | 27 | | | |
| > | Sc | 45 | | | |
| | Ti | 47 | | | |
| | V | 51 | | | |
| | Cr | 52 | | | |
| | Cr | 53 | | | |
| | Mn | 55 | | | |
| | Co | 59 | | | |
| | Ni | 60 | | | |
| | Cu | 65 | | | |
| | Zn | 66 | | | |
| > | Ge | 72 | | 103.304 | |
| | As | 75 | | | |
| | Se | 82 | | | |
| | Se-1 | 77 | | | |
| > | Ga | 71 | | 99.963 | |
| | Rb | 85 | | | |
| | Y | 89 | | | |
| > | Rh | 103 | | 98.537 | |
| | Mo | 98 | | | |
| | Ag | 107 | | | |
| | Cd | 111 | | | |
| | Cd | 114 | | | |
| > | In | 115 | | 103.559 | |
| | Sn | 118 | | | |
| | Sb | 123 | | | |
| | Ba | 135 | | | |
| | Ce | 140 | | | |
| > | Tb | 159 | | 105.269 | |
| | Ho | 165 | | | |
| | Tl | 203 | | | |
| | Tl | 205 | | | |
| | Pb | 206 | | | |



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| | | | |
|---|---|---|---|
| | Pb | 207 | |
| | Pb | 208 | |
| | U | 238 | |
| > | Bi | 209 | 95.332 |
| | Na | 23 | |
| | Mg | 24 | |
| | K | 39 | |
| | Ca | 43 | |
| | Fe | 54 | |
| | Fe | 57 | |
| > | Sc-1 | 45 | |
| | Cl | 35 | |
| | Kr | 83 | |
| | Br | 81 | |
| | P | 31 | |
| | S | 34 | |
| | Sr | 88 | |

## QC Out of Limits

| Measurement Type | Analyte | Mass | Out of Limits Message |
|---|---|---|---|



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# Method 6020 - Summary Report

**Sample ID: L1205028405**
Sample Date/Time: Friday, May 18, 2012 11:16:20
Number of Replicates: 3
Autosampler Position: 221
Sample Description: 2
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

## Concentration Results

| IS | Analyte | Mass | Intensity | RSD | Conc. | SD | RSD | Units | Blank Intens. | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **Li** | 7 | 201985.4 | 3.8 | **-71637.0319** | 2215.968 | 3.1 | ug/L | 13493 | Standard |
| | **Be** | 9 | 80.0 | 130.5 | **0.0098** | 0.030 | 303.5 | ug/L | 13 | Standard |
| | **Al** | 27 | 57587.9 | 6.4 | **2.8505** | 0.244 | 8.6 | ug/L | 8786 | Standard |
| > | **Sc** | 45 | 314785.4 | 4.4 | | | | ug/L | 280553 | Standard |
| | **Ti** | 47 | 715.7 | 16.1 | **0.4076** | 0.067 | 16.3 | ug/L | 96 | Standard |
| | **V** | 51 | 4585.9 | 4.4 | **0.0511** | 0.018 | 34.6 | ug/L | 3640 | Standard |
| | **Cr** | 52 | 11050.7 | 1.8 | **-0.0655** | 0.014 | 21.6 | ug/L | 11495 | Standard |
| | **Cr** | 53 | 2855.3 | 13.2 | **1.4498** | 0.218 | 15.1 | ug/L | 564 | Standard |
| | **Mn** | 55 | 1150752.9 | 1.6 | **61.2198** | 0.645 | 1.1 | ug/L | 1247 | Standard |
| | **Co** | 59 | 2293.2 | 21.9 | **0.1598** | 0.034 | 21.0 | ug/L | 114 | Standard |
| | **Ni** | 60 | 4341.0 | 12.1 | **1.5466** | 0.148 | 9.6 | ug/L | 66 | Standard |
| | **Cu** | 65 | 699.3 | 12.2 | **0.1955** | 0.030 | 15.3 | ug/L | 219 | Standard |
| | **Zn** | 66 | 2835.9 | 19.8 | **2.3391** | 0.450 | 19.3 | ug/L | 232 | Standard |
| > | **Ge** | 72 | 237268.8 | 2.6 | | | | ug/L | 228255 | Standard |
| | **As** | 75 | 74.5 | 39.4 | **0.3079** | 0.028 | 8.9 | ug/L | -233 | Standard |
| | **Se** | 82 | 97.8 | 10.7 | **0.5564** | 0.060 | 10.8 | ug/L | 23 | Standard |
| | **Se-1** | 77 | 226.3 | 10.4 | **1.8224** | 0.284 | 15.6 | ug/L | 91 | Standard |
| > | **Ga** | 71 | 205310.6 | 2.7 | | | | mg/L | 208873 | Standard |
| | **Rb** | 85 | 14705.5 | 0.8 | | | | ug/L | 28 | Standard |
| | **Y** | 89 | 245329.7 | 3.0 | | | | ug/L | 234742 | Standard |
| > | **Rh** | 103 | 121656.8 | 3.1 | | | | ug/L | 121294 | Standard |
| | **Mo** | 98 | 245.0 | 59.3 | **0.0646** | 0.035 | 53.6 | ug/L | 6 | Standard |
| | **Ag** | 107 | 68.3 | 56.8 | **-0.0028** | 0.005 | 166.9 | ug/L | 64 | Standard |
| | **Cd** | 111 | 442.4 | 11.9 | **0.0027** | 0.011 | 396.3 | mg/L | 417 | Standard |
| | **Cd** | 114 | 1118.3 | 7.1 | **0.0046** | 0.005 | 118.2 | ug/L | 1009 | Standard |
| > | **In** | 115 | 661094.3 | 1.9 | | | | ug/L | 628085 | Standard |
| | **Sn** | 118 | 847.0 | 9.3 | **-0.0022** | 0.004 | 205.2 | ug/L | 834 | Standard |
| | **Sb** | 123 | 252.2 | 16.7 | **0.0212** | 0.004 | 17.7 | ug/L | 22 | Standard |
| | **Ba** | 135 | 128260.8 | 2.4 | **30.1302** | 0.146 | 0.5 | ug/L | 36 | Standard |
| | **Ce** | 140 | 720.4 | 4.4 | | | | ug/L | 44 | Standard |
| > | **Tb** | 159 | 734132.3 | 1.6 | | | | ug/L | 691511 | Standard |
| | **Ho** | 165 | 28.0 | 14.3 | | | | ug/L | 6 | Standard |
| | **Tl** | 203 | 693.3 | 3.6 | **0.0456** | 0.001 | 1.9 | ug/L | 71 | Standard |
| | **Tl** | 205 | 1628.1 | 5.3 | **0.0453** | 0.002 | 3.7 | ug/L | 177 | Standard |
| | **Pb** | 206 | 914.7 | 6.2 | **0.0591** | 0.004 | 6.2 | ug/L | 268 | Standard |
| | **Pb** | 207 | 767.4 | 2.5 | **0.0569** | 0.002 | 3.8 | ug/L | 245 | Standard |
| | **Pb** | 208 | 3534.5 | 4.3 | **0.0571** | 0.002 | 3.6 | ug/L | 1057 | Standard |
| | **U** | 238 | 2051.1 | 34.6 | **0.0892** | 0.031 | 35.0 | ug/L | 9 | Standard |
| > | **Bi** | 209 | 378276.5 | 1.8 | | | | ug/L | 389590 | Standard |
| | **Na** | 23 | 106801.8 | 1.4 | **31.1213** | 1.337 | 4.3 | mg/L | 92 | Standard |
| | **Mg** | 24 | 3116917.4 | 2.7 | **6.6574** | 0.329 | 4.9 | mg/L | 142 | Standard |

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| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | **K** | 39 | 16962.8 | 4.0 | **1.4760** | 0.098 | 6.6 | mg/L | 635 | Standard |
| | **Ca** | 43 | 14687.1 | 2.6 | **31.3490** | 0.704 | 2.2 | mg/L | 63 | Standard |
| | **Fe** | 54 | 18899.7 | 1.9 | **3.0646** | 0.102 | 3.3 | mg/L | 901 | Standard |
| | **Fe** | 57 | 590997.0 | 1.4 | **3.4040** | 0.148 | 4.3 | mg/L | 5948 | Standard |
| > | **Sc-1** | 45 | 314785.4 | 4.4 | | | | mg/L | 280553 | Standard |
| | **Cl** | 35 | 35732.4 | 0.7 | | | | ug/L | 931 | Standard |
| | **Kr** | 83 | 51.9 | 4.9 | | | | ug/L | 40 | Standard |
| | **Br** | 81 | 34735.6 | 3.0 | | | | ug/L | 11862 | Standard |
| | **P** | 31 | 55960.2 | 7.8 | | | | ug/L | 77079 | Standard |
| | **S** | 34 | 1706578.3 | 6.2 | | | | ug/L | 1028777 | Standard |
| | **Sr** | 88 | 5492097.9 | 3.0 | | | | ug/L | 318 | Standard |

## QC Calculated Values

| | Analyte | Mass | QC Std % Recovery | Int Std % Recovery | Spike % Recovery |
|---|---|---|---|---|---|
| | Li | 7 | | | |
| | Be | 9 | | | |
| | Al | 27 | | | |
| > | Sc | 45 | | | |
| | Ti | 47 | | | |
| | V | 51 | | | |
| | Cr | 52 | | | |
| | Cr | 53 | | | |
| | Mn | 55 | | | |
| | Co | 59 | | | |
| | Ni | 60 | | | |
| | Cu | 65 | | | |
| | Zn | 66 | | | |
| > | Ge | 72 | | 103.949 | |
| | As | 75 | | | |
| | Se | 82 | | | |
| | Se-1 | 77 | | | |
| > | Ga | 71 | | 98.295 | |
| | Rb | 85 | | | |
| | Y | 89 | | | |
| > | Rh | 103 | | 100.299 | |
| | Mo | 98 | | | |
| | Ag | 107 | | | |
| | Cd | 111 | | | |
| | Cd | 114 | | | |
| > | In | 115 | | 105.256 | |
| | Sn | 118 | | | |
| | Sb | 123 | | | |
| | Ba | 135 | | | |
| | Ce | 140 | | | |
| > | Tb | 159 | | 106.163 | |
| | Ho | 165 | | | |
| | Tl | 203 | | | |
| | Tl | 205 | | | |
| | Pb | 206 | | | |

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| | | | |
|---|---|---|---|
| | Pb | 207 | |
| | Pb | 208 | |
| | U | 238 | |
| > | Bi | 209 | 97.096 |
| | Na | 23 | |
| | Mg | 24 | |
| | K | 39 | |
| | Ca | 43 | |
| | Fe | 54 | |
| | Fe | 57 | |
| > | Sc-1 | 45 | |
| | Cl | 35 | |
| | Kr | 83 | |
| | Br | 81 | |
| | P | 31 | |
| | S | 34 | |
| | Sr | 88 | |

## QC Out of Limits

| Measurement Type | Analyte | Mass | Out of Limits Message |
|---|---|---|---|



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# Method 6020 - Summary Report

**Sample ID: L1205028406**
Sample Date/Time: Friday, May 18, 2012 11:19:12
Number of Replicates: 3
Autosampler Position: 222
Sample Description: 2
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

## Concentration Results

| IS | Analyte | Mass | Intensity | RSD | Conc. | SD | RSD | Units | Blank Intens. | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **Li** | 7 | 191763.3 | 3.1 | **-69238.6402** | 1241.524 | 1.8 | ug/L | 13493 | Standard |
| | **Be** | 9 | 10.0 | 132.3 | **-0.0105** | 0.004 | 37.4 | ug/L | 13 | Standard |
| | **Al** | 27 | 22007.6 | 3.2 | **0.7114** | 0.020 | 2.9 | ug/L | 8786 | Standard |
| > | **Sc** | 45 | 308440.6 | 4.7 | | | | ug/L | 280553 | Standard |
| | **Ti** | 47 | 527.3 | 1.4 | **0.2809** | 0.019 | 6.7 | ug/L | 96 | Standard |
| | **V** | 51 | 4267.9 | 4.2 | **0.0313** | 0.010 | 32.9 | ug/L | 3640 | Standard |
| | **Cr** | 52 | 11013.0 | 1.9 | **-0.0627** | 0.029 | 46.0 | ug/L | 11495 | Standard |
| | **Cr** | 53 | 2216.0 | 3.9 | **1.0625** | 0.057 | 5.4 | ug/L | 564 | Standard |
| | **Mn** | 55 | 1200776.9 | 3.4 | **64.2474** | 0.792 | 1.2 | ug/L | 1247 | Standard |
| | **Co** | 59 | 2006.5 | 5.8 | **0.1393** | 0.003 | 1.9 | ug/L | 114 | Standard |
| | **Ni** | 60 | 3871.8 | 8.5 | **1.3856** | 0.070 | 5.1 | ug/L | 66 | Standard |
| | **Cu** | 65 | 615.3 | 1.8 | **0.1622** | 0.010 | 6.1 | ug/L | 219 | Standard |
| | **Zn** | 66 | 2909.6 | 5.3 | **2.4279** | 0.036 | 1.5 | ug/L | 232 | Standard |
| > | **Ge** | 72 | 235937.4 | 4.1 | | | | ug/L | 228255 | Standard |
| | **As** | 75 | 37.1 | 32.4 | **0.2732** | 0.013 | 4.7 | ug/L | -233 | Standard |
| | **Se** | 82 | 95.1 | 6.9 | **0.5415** | 0.026 | 4.7 | ug/L | 23 | Standard |
| | **Se-1** | 77 | 209.0 | 4.6 | **1.6120** | 0.025 | 1.5 | ug/L | 91 | Standard |
| > | **Ga** | 71 | 207876.6 | 4.6 | | | | mg/L | 208873 | Standard |
| | **Rb** | 85 | 14797.2 | 5.0 | | | | ug/L | 28 | Standard |
| | **Y** | 89 | 233187.1 | 3.4 | | | | ug/L | 234742 | Standard |
| > | **Rh** | 103 | 118926.0 | 5.0 | | | | ug/L | 121294 | Standard |
| | **Mo** | 98 | 141.9 | 11.4 | **0.0400** | 0.003 | 7.2 | ug/L | 6 | Standard |
| | **Ag** | 107 | 43.3 | 5.8 | **-0.0058** | 0.001 | 9.7 | ug/L | 64 | Standard |
| | **Cd** | 111 | 358.0 | 2.4 | **-0.0155** | 0.006 | 37.8 | mg/L | 417 | Standard |
| | **Cd** | 114 | 968.6 | 5.6 | **-0.0077** | 0.002 | 25.4 | ug/L | 1009 | Standard |
| > | **In** | 115 | 648812.7 | 4.3 | | | | ug/L | 628085 | Standard |
| | **Sn** | 118 | 972.7 | 7.1 | **0.0081** | 0.002 | 30.2 | ug/L | 834 | Standard |
| | **Sb** | 123 | 193.2 | 12.5 | **0.0157** | 0.002 | 10.7 | ug/L | 22 | Standard |
| | **Ba** | 135 | 128614.0 | 3.6 | **30.7935** | 0.308 | 1.0 | ug/L | 36 | Standard |
| | **Ce** | 140 | 279.3 | 3.6 | | | | ug/L | 44 | Standard |
| > | **Tb** | 159 | 724452.4 | 3.6 | | | | ug/L | 691511 | Standard |
| | **Ho** | 165 | 17.7 | 14.2 | | | | ug/L | 6 | Standard |
| | **Tl** | 203 | 653.3 | 1.2 | **0.0430** | 0.001 | 2.9 | ug/L | 71 | Standard |
| | **Tl** | 205 | 1606.8 | 1.9 | **0.0451** | 0.003 | 5.8 | ug/L | 177 | Standard |
| | **Pb** | 206 | 527.7 | 6.4 | **0.0243** | 0.002 | 7.0 | ug/L | 268 | Standard |
| | **Pb** | 207 | 449.7 | 9.9 | **0.0236** | 0.004 | 15.2 | ug/L | 245 | Standard |
| | **Pb** | 208 | 2068.4 | 5.3 | **0.0237** | 0.001 | 6.2 | ug/L | 1057 | Standard |
| | **U** | 238 | 1595.1 | 5.9 | **0.0695** | 0.002 | 3.1 | ug/L | 9 | Standard |
| > | **Bi** | 209 | 376059.6 | 3.3 | | | | ug/L | 389590 | Standard |
| | **Na** | 23 | 107677.9 | 0.8 | **32.0268** | 1.346 | 4.2 | mg/L | 92 | Standard |
| | **Mg** | 24 | 3083694.3 | 1.6 | **6.7204** | 0.213 | 3.2 | mg/L | 142 | Standard |

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| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | **K** | 39 | 16961.2 | 5.9 | **1.5057** | 0.073 | 4.8 | mg/L | 635 | Standard |
| | **Ca** | 43 | 14425.2 | 4.6 | **31.4090** | 0.523 | 1.7 | mg/L | 63 | Standard |
| | **Fe** | 54 | 18939.7 | 4.1 | **3.1359** | 0.049 | 1.6 | mg/L | 901 | Standard |
| | **Fe** | 57 | 586391.2 | 3.9 | **3.4443** | 0.044 | 1.3 | mg/L | 5948 | Standard |
| > | **Sc-1** | 45 | 308440.6 | 4.7 | | | | mg/L | 280553 | Standard |
| | **Cl** | 35 | 35057.5 | 1.4 | | | | ug/L | 931 | Standard |
| | **Kr** | 83 | 46.9 | 10.7 | | | | ug/L | 40 | Standard |
| | **Br** | 81 | 34084.2 | 3.9 | | | | ug/L | 11862 | Standard |
| | **P** | 31 | 52101.2 | 4.9 | | | | ug/L | 77079 | Standard |
| | **S** | 34 | 1631820.7 | 4.0 | | | | ug/L | 1028777 | Standard |
| | **Sr** | 88 | 5497137.4 | 2.8 | | | | ug/L | 318 | Standard |

## QC Calculated Values

| | Analyte | Mass | QC Std % Recovery | Int Std % Recovery | Spike % Recovery |
|---|---|---|---|---|---|
| | Li | 7 | | | |
| | Be | 9 | | | |
| | Al | 27 | | | |
| > | Sc | 45 | | | |
| | Ti | 47 | | | |
| | V | 51 | | | |
| | Cr | 52 | | | |
| | Cr | 53 | | | |
| | Mn | 55 | | | |
| | Co | 59 | | | |
| | Ni | 60 | | | |
| | Cu | 65 | | | |
| | Zn | 66 | | | |
| > | Ge | 72 | | 103.366 | |
| | As | 75 | | | |
| | Se | 82 | | | |
| | Se-1 | 77 | | | |
| > | Ga | 71 | | 99.523 | |
| | Rb | 85 | | | |
| | Y | 89 | | | |
| > | Rh | 103 | | 98.048 | |
| | Mo | 98 | | | |
| | Ag | 107 | | | |
| | Cd | 111 | | | |
| | Cd | 114 | | | |
| > | In | 115 | | 103.300 | |
| | Sn | 118 | | | |
| | Sb | 123 | | | |
| | Ba | 135 | | | |
| | Ce | 140 | | | |
| > | Tb | 159 | | 104.764 | |
| | Ho | 165 | | | |
| | Tl | 203 | | | |
| | Tl | 205 | | | |
| | Pb | 206 | | | |

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| | | | |
|---|---|---|---|
| | Pb | 207 | |
| | Pb | 208 | |
| | U | 238 | |
| > | Bi | 209 | 96.527 |
| | Na | 23 | |
| | Mg | 24 | |
| | K | 39 | |
| | Ca | 43 | |
| | Fe | 54 | |
| | Fe | 57 | |
| > | Sc-1 | 45 | |
| | Cl | 35 | |
| | Kr | 83 | |
| | Br | 81 | |
| | P | 31 | |
| | S | 34 | |
| | Sr | 88 | |

## QC Out of Limits

| Measurement Type | Analyte | Mass | Out of Limits Message |
|---|---|---|---|

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# Method 6020 - Summary Report

**Sample ID: L1205028407**
Sample Date/Time: Friday, May 18, 2012 11:22:05
Number of Replicates: 3
Autosampler Position: 223
Sample Description: 2
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

## Concentration Results

| IS | Analyte | Mass | Intensity | RSD | Conc. | SD | RSD | Units | Blank Intens. | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| ⌈ | **Li** | 7 | 321045.3 | 2.4 | **-119811.3662** | 2285.462 | 1.9 | ug/L | 13493 | Standard |
| \| | **Be** | 9 | 46.7 | 61.9 | **0.0011** | 0.009 | 882.0 | ug/L | 13 | Standard |
| \| | **Al** | 27 | 412849.4 | 2.3 | **24.9871** | 0.406 | 1.6 | ug/L | 8786 | Standard |
| ⌊> | **Sc** | 45 | 308318.1 | 2.3 | | | | ug/L | 280553 | Standard |
| ⌈ | **Ti** | 47 | 1627.1 | 4.5 | **1.0544** | 0.087 | 8.2 | ug/L | 96 | Standard |
| \| | **V** | 51 | 5677.5 | 4.2 | **0.1288** | 0.027 | 20.7 | ug/L | 3640 | Standard |
| \| | **Cr** | 52 | 19071.3 | 1.9 | **0.7001** | 0.042 | 6.0 | ug/L | 11495 | Standard |
| \| | **Cr** | 53 | 2098.5 | 5.2 | **0.9955** | 0.046 | 4.6 | ug/L | 564 | Standard |
| \| | **Mn** | 55 | 1711931.9 | 2.7 | **92.1466** | 0.815 | 0.9 | ug/L | 1247 | Standard |
| \| | **Co** | 59 | 3543.4 | 0.9 | **0.2585** | 0.010 | 4.0 | ug/L | 114 | Standard |
| \| | **Ni** | 60 | 6285.0 | 3.2 | **2.2796** | 0.065 | 2.9 | ug/L | 66 | Standard |
| \| | **Cu** | 65 | 1983.8 | 2.5 | **0.7462** | 0.042 | 5.7 | ug/L | 219 | Standard |
| \| | **Zn** | 66 | 28059.0 | 2.4 | **25.8930** | 0.221 | 0.9 | ug/L | 232 | Standard |
| \| > | **Ge** | 72 | 234576.7 | 3.0 | | | | ug/L | 228255 | Standard |
| \| | **As** | 75 | 458.0 | 4.3 | **0.6775** | 0.019 | 2.8 | ug/L | -233 | Standard |
| \| | **Se** | 82 | 127.3 | 2.1 | **0.7812** | 0.047 | 6.1 | ug/L | 23 | Standard |
| ⌊ | **Se-1** | 77 | 113.3 | 4.0 | **0.3623** | 0.022 | 6.2 | ug/L | 91 | Standard |
| ⌈> | **Ga** | 71 | 204731.6 | 3.4 | | | | mg/L | 208873 | Standard |
| ⌊ | **Rb** | 85 | 37463.0 | 4.9 | | | | ug/L | 28 | Standard |
| ⌈ | **Y** | 89 | 233498.7 | 3.6 | | | | ug/L | 234742 | Standard |
| ⌊> | **Rh** | 103 | 117928.2 | 3.5 | | | | ug/L | 121294 | Standard |
| ⌈ | **Mo** | 98 | 246.7 | 56.7 | **0.0677** | 0.038 | 55.7 | ug/L | 6 | Standard |
| \| | **Ag** | 107 | 148.0 | 89.7 | **0.0080** | 0.018 | 222.0 | ug/L | 64 | Standard |
| \| | **Cd** | 111 | 1009.7 | 8.2 | **0.1443** | 0.026 | 18.1 | mg/L | 417 | Standard |
| \| | **Cd** | 114 | 2509.8 | 6.6 | **0.1423** | 0.022 | 15.3 | ug/L | 1009 | Standard |
| \| > | **In** | 115 | 643817.0 | 2.4 | | | | ug/L | 628085 | Standard |
| \| | **Sn** | 118 | 8504.1 | 1.9 | **0.5616** | 0.005 | 0.9 | ug/L | 834 | Standard |
| \| | **Sb** | 123 | 3454.6 | 3.6 | **0.3498** | 0.021 | 6.1 | ug/L | 22 | Standard |
| ⌊ | **Ba** | 135 | 153830.0 | 2.7 | **37.1098** | 0.120 | 0.3 | ug/L | 36 | Standard |
| ⌈ | **Ce** | 140 | 5109.2 | 4.8 | | | | ug/L | 44 | Standard |
| ⌊> | **Tb** | 159 | 721949.0 | 2.3 | | | | ug/L | 691511 | Standard |
| ⌈ | **Ho** | 165 | 90.7 | 8.4 | | | | ug/L | 6 | Standard |
| \| | **Tl** | 203 | 871.4 | 29.6 | **0.0595** | 0.021 | 34.6 | ug/L | 71 | Standard |
| \| | **Tl** | 205 | 2084.2 | 30.2 | **0.0601** | 0.021 | 34.5 | ug/L | 177 | Standard |
| \| | **Pb** | 206 | 36539.3 | 1.8 | **3.3223** | 0.027 | 0.8 | ug/L | 268 | Standard |
| \| | **Pb** | 207 | 29826.7 | 2.5 | **3.1499** | 0.028 | 0.9 | ug/L | 245 | Standard |
| \| | **Pb** | 208 | 138679.2 | 1.9 | **3.1899** | 0.020 | 0.6 | ug/L | 1057 | Standard |
| \| | **U** | 238 | 1672.4 | 22.2 | **0.0735** | 0.018 | 24.6 | ug/L | 9 | Standard |
| ⌊> | **Bi** | 209 | 374629.0 | 2.0 | | | | ug/L | 389590 | Standard |
| ⌈ | **Na** | 23 | 40794.9 | 2.3 | **12.0975** | 0.074 | 0.6 | mg/L | 92 | Standard |
| \| | **Mg** | 24 | 5925840.8 | 4.1 | **12.9048** | 0.236 | 1.8 | mg/L | 142 | Standard |

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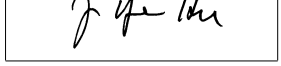

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | **K** | 39 | 23958.9 | 2.1 | **2.1533** | 0.018 | 0.8 | mg/L | 635 | Standard |
| | **Ca** | 43 | 23246.2 | 1.9 | **50.7400** | 1.126 | 2.2 | mg/L | 63 | Standard |
| | **Fe** | 54 | 50179.4 | 2.4 | **8.5725** | 0.141 | 1.6 | mg/L | 901 | Standard |
| | **Fe** | 57 | 1543987.4 | 2.8 | **9.1314** | 0.051 | 0.6 | mg/L | 5948 | Standard |
| > | **Sc-1** | 45 | 308318.1 | 2.3 | | | | mg/L | 280553 | Standard |
| | **Cl** | 35 | 11505.0 | 2.4 | | | | ug/L | 931 | Standard |
| | **Kr** | 83 | 41.0 | 11.3 | | | | ug/L | 40 | Standard |
| | **Br** | 81 | 42095.9 | 2.4 | | | | ug/L | 11862 | Standard |
| | **P** | 31 | 79943.2 | 4.9 | | | | ug/L | 77079 | Standard |
| | **S** | 34 | 2771450.0 | 2.4 | | | | ug/L | 1028777 | Standard |
| | **Sr** | 88 | 4803333.6 | 5.0 | | | | ug/L | 318 | Standard |

## QC Calculated Values

| | Analyte | Mass | QC Std % Recovery | Int Std % Recovery | Spike % Recovery |
|---|---|---|---|---|---|
| | Li | 7 | | | |
| | Be | 9 | | | |
| | Al | 27 | | | |
| > | Sc | 45 | | | |
| | Ti | 47 | | | |
| | V | 51 | | | |
| | Cr | 52 | | | |
| | Cr | 53 | | | |
| | Mn | 55 | | | |
| | Co | 59 | | | |
| | Ni | 60 | | | |
| | Cu | 65 | | | |
| | Zn | 66 | | | |
| > | Ge | 72 | | 102.769 | |
| | As | 75 | | | |
| | Se | 82 | | | |
| | Se-1 | 77 | | | |
| > | Ga | 71 | | 98.017 | |
| | Rb | 85 | | | |
| | Y | 89 | | | |
| > | Rh | 103 | | 97.225 | |
| | Mo | 98 | | | |
| | Ag | 107 | | | |
| | Cd | 111 | | | |
| | Cd | 114 | | | |
| > | In | 115 | | 102.505 | |
| | Sn | 118 | | | |
| | Sb | 123 | | | |
| | Ba | 135 | | | |
| | Ce | 140 | | | |
| > | Tb | 159 | | 104.402 | |
| | Ho | 165 | | | |
| | Tl | 203 | | | |
| | Tl | 205 | | | |
| | Pb | 206 | | | |

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| | | | |
|---|---|---|---|
| | Pb | 207 | |
| | Pb | 208 | |
| | U | 238 | |
| > | Bi | 209 | 96.160 |
| | Na | 23 | |
| | Mg | 24 | |
| | K | 39 | |
| | Ca | 43 | |
| | Fe | 54 | |
| | Fe | 57 | |
| > | Sc-1 | 45 | |
| | Cl | 35 | |
| | Kr | 83 | |
| | Br | 81 | |
| | P | 31 | |
| | S | 34 | |
| | Sr | 88 | |

## QC Out of Limits

| Measurement Type | Analyte | Mass | Out of Limits Message |
|---|---|---|---|

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# Method 6020 - Summary Report

**Sample ID: L1205028408**
Sample Date/Time: Friday, May 18, 2012 11:24:58
Number of Replicates: 3
Autosampler Position: 224
Sample Description: 2
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

## Concentration Results

| IS | Analyte | Mass | Intensity | RSD | Conc. | SD | RSD | Units | Blank Intens. | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **Li** | 7 | 319946.4 | 3.0 | **-118522.8943** | 2080.630 | 1.8 | ug/L | 13493 | Standard |
| | **Be** | 9 | 11.7 | 65.5 | **-0.0099** | 0.002 | 23.6 | ug/L | 13 | Standard |
| | **Al** | 27 | 47153.4 | 4.3 | **2.2529** | 0.087 | 3.9 | ug/L | 8786 | Standard |
| > | **Sc** | 45 | 310420.7 | 2.6 | | | | ug/L | 280553 | Standard |
| | **Ti** | 47 | 725.4 | 2.3 | **0.4256** | 0.009 | 2.0 | ug/L | 96 | Standard |
| | **V** | 51 | 4554.4 | 6.2 | **0.0547** | 0.008 | 15.0 | ug/L | 3640 | Standard |
| | **Cr** | 52 | 13226.1 | 2.4 | **0.1613** | 0.018 | 11.5 | ug/L | 11495 | Standard |
| | **Cr** | 53 | 2336.0 | 4.7 | **1.1574** | 0.039 | 3.3 | ug/L | 564 | Standard |
| | **Mn** | 55 | 1687067.8 | 3.0 | **91.5890** | 1.542 | 1.7 | ug/L | 1247 | Standard |
| | **Co** | 59 | 3168.7 | 5.8 | **0.2316** | 0.009 | 4.0 | ug/L | 114 | Standard |
| | **Ni** | 60 | 6089.2 | 5.7 | **2.2255** | 0.068 | 3.1 | ug/L | 66 | Standard |
| | **Cu** | 65 | 930.0 | 3.6 | **0.3010** | 0.022 | 7.2 | ug/L | 219 | Standard |
| | **Zn** | 66 | 22216.9 | 2.3 | **20.6254** | 0.317 | 1.5 | ug/L | 232 | Standard |
| > | **Ge** | 72 | 232622.2 | 3.8 | | | | ug/L | 228255 | Standard |
| | **As** | 75 | 412.6 | 12.3 | **0.6365** | 0.039 | 6.1 | ug/L | -233 | Standard |
| | **Se** | 82 | 131.3 | 7.9 | **0.8166** | 0.043 | 5.3 | ug/L | 23 | Standard |
| | **Se-1** | 77 | 194.3 | 6.4 | **1.4544** | 0.085 | 5.9 | ug/L | 91 | Standard |
| > | **Ga** | 71 | 203297.2 | 3.0 | | | | mg/L | 208873 | Standard |
| | **Rb** | 85 | 38298.4 | 5.0 | | | | ug/L | 28 | Standard |
| | **Y** | 89 | 233171.6 | 4.9 | | | | ug/L | 234742 | Standard |
| > | **Rh** | 103 | 116938.2 | 4.9 | | | | ug/L | 121294 | Standard |
| | **Mo** | 98 | 169.6 | 12.6 | **0.0474** | 0.004 | 9.0 | ug/L | 6 | Standard |
| | **Ag** | 107 | 42.0 | 17.2 | **-0.0059** | 0.001 | 18.7 | ug/L | 64 | Standard |
| | **Cd** | 111 | 301.2 | 8.8 | **-0.0288** | 0.006 | 20.8 | mg/L | 417 | Standard |
| | **Cd** | 114 | 779.5 | 3.0 | **-0.0253** | 0.000 | 0.8 | ug/L | 1009 | Standard |
| > | **In** | 115 | 643955.4 | 3.0 | | | | ug/L | 628085 | Standard |
| | **Sn** | 118 | 815.7 | 7.7 | **-0.0028** | 0.003 | 119.8 | ug/L | 834 | Standard |
| | **Sb** | 123 | 1852.2 | 2.2 | **0.1856** | 0.002 | 0.9 | ug/L | 22 | Standard |
| | **Ba** | 135 | 152908.2 | 3.2 | **36.8797** | 0.081 | 0.2 | ug/L | 36 | Standard |
| | **Ce** | 140 | 816.7 | 4.6 | | | | ug/L | 44 | Standard |
| > | **Tb** | 159 | 724277.0 | 4.0 | | | | ug/L | 691511 | Standard |
| | **Ho** | 165 | 27.3 | 12.8 | | | | ug/L | 6 | Standard |
| | **Tl** | 203 | 681.0 | 0.4 | **0.0451** | 0.002 | 3.6 | ug/L | 71 | Standard |
| | **Tl** | 205 | 1662.8 | 0.1 | **0.0469** | 0.002 | 3.7 | ug/L | 177 | Standard |
| | **Pb** | 206 | 522.0 | 4.0 | **0.0239** | 0.001 | 4.9 | ug/L | 268 | Standard |
| | **Pb** | 207 | 452.3 | 2.2 | **0.0241** | 0.002 | 9.8 | ug/L | 245 | Standard |
| | **Pb** | 208 | 2054.4 | 1.8 | **0.0236** | 0.001 | 4.1 | ug/L | 1057 | Standard |
| | **U** | 238 | 1387.4 | 2.7 | **0.0606** | 0.002 | 3.8 | ug/L | 9 | Standard |
| > | **Bi** | 209 | 375039.3 | 3.3 | | | | ug/L | 389590 | Standard |
| | **Na** | 23 | 42375.9 | 2.3 | **12.4871** | 0.389 | 3.1 | mg/L | 92 | Standard |
| | **Mg** | 24 | 6137598.0 | 1.4 | **13.2831** | 0.274 | 2.1 | mg/L | 142 | Standard |

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| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | **K** | 39 | 24817.0 | 2.9 | **2.2171** | 0.034 | 1.5 | mg/L | 635 | Standard |
| | **Ca** | 43 | 23775.3 | 2.4 | **51.5374** | 0.457 | 0.9 | mg/L | 63 | Standard |
| | **Fe** | 54 | 50869.0 | 1.1 | **8.6354** | 0.222 | 2.6 | mg/L | 901 | Standard |
| | **Fe** | 57 | 1555324.0 | 2.2 | **9.1378** | 0.107 | 1.2 | mg/L | 5948 | Standard |
| > | **Sc-1** | 45 | 310420.7 | 2.6 | | | | mg/L | 280553 | Standard |
| | **Cl** | 35 | 37619.3 | 1.2 | | | | ug/L | 931 | Standard |
| | **Kr** | 83 | 46.3 | 6.3 | | | | ug/L | 40 | Standard |
| | **Br** | 81 | 46360.0 | 2.1 | | | | ug/L | 11862 | Standard |
| | **P** | 31 | 74337.8 | 2.8 | | | | ug/L | 77079 | Standard |
| | **S** | 34 | 2781766.5 | 3.4 | | | | ug/L | 1028777 | Standard |
| | **Sr** | 88 | 4964836.6 | 2.8 | | | | ug/L | 318 | Standard |

## QC Calculated Values

| | Analyte | Mass | QC Std % Recovery | Int Std % Recovery | Spike % Recovery |
|---|---|---|---|---|---|
| | Li | 7 | | | |
| | Be | 9 | | | |
| | Al | 27 | | | |
| > | Sc | 45 | | | |
| | Ti | 47 | | | |
| | V | 51 | | | |
| | Cr | 52 | | | |
| | Cr | 53 | | | |
| | Mn | 55 | | | |
| | Co | 59 | | | |
| | Ni | 60 | | | |
| | Cu | 65 | | | |
| | Zn | 66 | | | |
| > | Ge | 72 | | 101.913 | |
| | As | 75 | | | |
| | Se | 82 | | | |
| | Se-1 | 77 | | | |
| > | Ga | 71 | | 97.331 | |
| | Rb | 85 | | | |
| | Y | 89 | | | |
| > | Rh | 103 | | 96.409 | |
| | Mo | 98 | | | |
| | Ag | 107 | | | |
| | Cd | 111 | | | |
| | Cd | 114 | | | |
| > | In | 115 | | 102.527 | |
| | Sn | 118 | | | |
| | Sb | 123 | | | |
| | Ba | 135 | | | |
| | Ce | 140 | | | |
| > | Tb | 159 | | 104.738 | |
| | Ho | 165 | | | |
| | Tl | 203 | | | |
| | Tl | 205 | | | |
| | Pb | 206 | | | |

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| | | | |
|---|---|---|---|
| | Pb | 207 | |
| | Pb | 208 | |
| | U | 238 | |
| > | Bi | 209 | 96.265 |
| | Na | 23 | |
| | Mg | 24 | |
| | K | 39 | |
| | Ca | 43 | |
| | Fe | 54 | |
| | Fe | 57 | |
| > | Sc-1 | 45 | |
| | Cl | 35 | |
| | Kr | 83 | |
| | Br | 81 | |
| | P | 31 | |
| | S | 34 | |
| | Sr | 88 | |

## QC Out of Limits

| Measurement Type | Analyte | Mass | Out of Limits Message |
|---|---|---|---|

**Sample ID: L1205028408**
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# Method 6020 - Summary Report

**Sample ID: QC Std 6**
Sample Date/Time: Friday, May 18, 2012 11:27:53
Number of Replicates: 3
Autosampler Position: 101
Sample Description:
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

## Concentration Results

| IS | Analyte | Mass | Intensity | RSD | Conc. | SD | RSD | Units | Blank Intens. | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| ⌈ | **Li** | 7 | 14895.7 | 4.1 | **-135.1785** | 123.527 | 91.4 | ug/L | 13493 | Standard |
| \| | **Be** | 9 | 169798.9 | 4.2 | **53.1237** | 1.489 | 2.8 | ug/L | 13 | Standard |
| \| | **Al** | 27 | 804377.5 | 3.7 | **50.0640** | 1.760 | 3.5 | ug/L | 8786 | Standard |
| ⌊> | **Sc** | 45 | 304033.9 | 6.0 | | | | ug/L | 280553 | Standard |
| ⌈ | **Ti** | 47 | 153760.8 | 5.5 | **105.0862** | 0.627 | 0.6 | ug/L | 96 | Standard |
| \| | **V** | 51 | 803237.0 | 6.6 | **52.8232** | 0.444 | 0.8 | ug/L | 3640 | Standard |
| \| | **Cr** | 52 | 587386.5 | 6.0 | **52.7883** | 0.231 | 0.4 | ug/L | 11495 | Standard |
| \| | **Cr** | 53 | 84700.6 | 4.7 | **51.6873** | 0.805 | 1.6 | ug/L | 564 | Standard |
| \| | **Mn** | 55 | 1004122.2 | 4.4 | **52.7812** | 0.883 | 1.7 | ug/L | 1247 | Standard |
| \| | **Co** | 59 | 694745.5 | 5.2 | **52.1197** | 0.436 | 0.8 | ug/L | 114 | Standard |
| \| | **Ni** | 60 | 147142.3 | 5.3 | **52.6208** | 0.545 | 1.0 | ug/L | 66 | Standard |
| \| | **Cu** | 65 | 125388.7 | 5.4 | **51.9781** | 0.347 | 0.7 | ug/L | 219 | Standard |
| \| | **Zn** | 66 | 57047.0 | 3.7 | **51.7150** | 1.237 | 2.4 | ug/L | 232 | Standard |
| \| > | **Ge** | 72 | 240206.8 | 6.0 | | | | ug/L | 228255 | Standard |
| \| | **As** | 75 | 54618.1 | 5.4 | **51.4852** | 0.321 | 0.6 | ug/L | -233 | Standard |
| \| | **Se** | 82 | 7308.4 | 7.4 | **51.7528** | 0.770 | 1.5 | ug/L | 23 | Standard |
| ⌊ | **Se-1** | 77 | 4076.9 | 3.5 | **51.5906** | 1.379 | 2.7 | ug/L | 91 | Standard |
| ⌈> | **Ga** | 71 | 213053.7 | 5.5 | | | | mg/L | 208873 | Standard |
| ⌊ | **Rb** | 85 | 1198.4 | 2.1 | | | | ug/L | 28 | Standard |
| ⌈ | **Y** | 89 | 246778.8 | 7.3 | | | | ug/L | 234742 | Standard |
| ⌊> | **Rh** | 103 | 128425.6 | 7.4 | | | | ug/L | 121294 | Standard |
| ⌈ | **Mo** | 98 | 409958.2 | 6.8 | **100.2990** | 2.551 | 2.5 | ug/L | 6 | Standard |
| \| | **Ag** | 107 | 407224.9 | 8.8 | **50.4061** | 2.181 | 4.3 | ug/L | 64 | Standard |
| \| | **Cd** | 111 | 217611.1 | 5.2 | **50.8596** | 0.361 | 0.7 | mg/L | 417 | Standard |
| \| | **Cd** | 114 | 547649.5 | 4.1 | **50.7772** | 0.263 | 0.5 | ug/L | 1009 | Standard |
| \| > | **In** | 115 | 670069.0 | 4.6 | | | | ug/L | 628085 | Standard |
| \| | **Sn** | 118 | 721873.0 | 4.6 | **50.8472** | 0.048 | 0.1 | ug/L | 834 | Standard |
| \| | **Sb** | 123 | 519070.1 | 4.1 | **51.0283** | 0.292 | 0.6 | ug/L | 22 | Standard |
| ⌊ | **Ba** | 135 | 216291.0 | 5.0 | **50.1346** | 0.246 | 0.5 | ug/L | 36 | Standard |
| ⌈ | **Ce** | 140 | 875.7 | 5.8 | | | | ug/L | 44 | Standard |
| ⌊> | **Tb** | 159 | 732078.4 | 4.9 | | | | ug/L | 691511 | Standard |
| ⌈ | **Ho** | 165 | 11.3 | 35.7 | | | | ug/L | 6 | Standard |
| \| | **Tl** | 203 | 735162.4 | 4.2 | **51.9608** | 0.317 | 0.6 | ug/L | 71 | Standard |
| \| | **Tl** | 205 | 1745301.0 | 4.4 | **50.8891** | 0.136 | 0.3 | ug/L | 177 | Standard |
| \| | **Pb** | 206 | 594642.9 | 4.0 | **51.8655** | 0.393 | 0.8 | ug/L | 268 | Standard |
| \| | **Pb** | 207 | 508754.6 | 4.6 | **51.5570** | 0.125 | 0.2 | ug/L | 245 | Standard |
| \| | **Pb** | 208 | 2322316.6 | 4.3 | **51.2543** | 0.145 | 0.3 | ug/L | 1057 | Standard |
| \| | **U** | 238 | 1202794.1 | 4.7 | **50.7052** | 0.097 | 0.2 | ug/L | 9 | Standard |
| ⌊> | **Bi** | 209 | 393215.6 | 4.6 | | | | ug/L | 389590 | Standard |
| ⌈ | **Na** | 23 | 17468.4 | 5.6 | **5.2333** | 0.195 | 3.7 | mg/L | 92 | Standard |
| \| | **Mg** | 24 | 2385790.0 | 18.4 | **5.2441** | 0.698 | 13.3 | mg/L | 142 | Standard |

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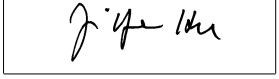

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | **K** | 39 | 56453.4 | 3.3 | **5.2400** | 0.195 | 3.7 | mg/L | 635 | Standard |
| | **Ca** | 43 | 2265.2 | 2.3 | **4.8751** | 0.213 | 4.4 | mg/L | 63 | Standard |
| | **Fe** | 54 | 29665.8 | 5.4 | **5.0774** | 0.118 | 2.3 | mg/L | 901 | Standard |
| | **Fe** | 57 | 866805.4 | 4.1 | **5.1870** | 0.126 | 2.4 | mg/L | 5948 | Standard |
| > | **Sc-1** | 45 | 304033.9 | 6.0 | | | | mg/L | 280553 | Standard |
| | **Cl** | 35 | 1299.1 | 22.8 | | | | ug/L | 931 | Standard |
| | **Kr** | 83 | 43.2 | 14.4 | | | | ug/L | 40 | Standard |
| | **Br** | 81 | 13744.6 | 10.2 | | | | ug/L | 11862 | Standard |
| | **P** | 31 | 75923.1 | 8.3 | | | | ug/L | 77079 | Standard |
| | **S** | 34 | 949185.9 | 6.9 | | | | ug/L | 1028777 | Standard |
| | **Sr** | 88 | 1333.4 | 45.2 | | | | ug/L | 318 | Standard |

## QC Calculated Values

| | Analyte | Mass | QC Std % Recovery | Int Std % Recovery | Spike % Recovery |
|---|---|---|---|---|---|
| | Li | 7 | | | |
| | Be | 9 | | | |
| | Al | 27 | 100.128 | | |
| > | Sc | 45 | | | |
| | Ti | 47 | 105.086 | | |
| | V | 51 | 105.646 | | |
| | Cr | 52 | 105.577 | | |
| | Cr | 53 | | | |
| | Mn | 55 | 105.562 | | |
| | Co | 59 | 104.239 | | |
| | Ni | 60 | 105.242 | | |
| | Cu | 65 | 103.956 | | |
| | Zn | 66 | 103.430 | | |
| > | Ge | 72 | | 105.236 | |
| | As | 75 | 102.970 | | |
| | Se | 82 | 103.506 | | |
| | Se-1 | 77 | | | |
| > | Ga | 71 | | 102.002 | |
| | Rb | 85 | | | |
| | Y | 89 | | | |
| > | Rh | 103 | | 105.880 | |
| | Mo | 98 | 100.299 | | |
| | Ag | 107 | 100.812 | | |
| | Cd | 111 | 101.719 | | |
| | Cd | 114 | | | |
| > | In | 115 | | 106.685 | |
| | Sn | 118 | 101.694 | | |
| | Sb | 123 | 102.057 | | |
| | Ba | 135 | 100.269 | | |
| | Ce | 140 | | | |
| > | Tb | 159 | | 105.866 | |
| | Ho | 165 | | | |
| | Tl | 203 | 103.922 | | |
| | Tl | 205 | | | |
| | Pb | 206 | 103.731 | | |

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| | | | | |
|---|---|---|---|---|
| | Pb | 207 | 103.114 | |
| | Pb | 208 | 102.509 | |
| | U | 238 | 101.410 | |
| > | Bi | 209 | | 100.931 |
| | Na | 23 | 104.666 | |
| | Mg | 24 | 104.882 | |
| | K | 39 | 104.800 | |
| | Ca | 43 | 97.502 | |
| | Fe | 54 | 101.547 | |
| | Fe | 57 | 103.741 | |
| > | Sc-1 | 45 | | |
| | Cl | 35 | | |
| | Kr | 83 | | |
| | Br | 81 | | |
| | P | 31 | | |
| | S | 34 | | |
| | Sr | 88 | | |

## QC Out of Limits

| Measurement Type | Analyte | Mass | Out of Limits Message |
|---|---|---|---|

**Sample ID: QC Std 6**
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# Method 6020 - Summary Report

**Sample ID: QC Std 7**
Sample Date/Time: Friday, May 18, 2012 11:30:46
Number of Replicates: 3
Autosampler Position: 102
Sample Description:
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

## Concentration Results

| IS | Analyte | Mass | Intensity | RSD | Conc. | SD | RSD | Units | Blank Intens. | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| ⌈ | **Li** | 7 | 13781.3 | 6.1 | **-111.1952** | 117.918 | 106.0 | ug/L | 13493 | Standard |
| \| | **Be** | 9 | 23.3 | 24.7 | **-0.0056** | 0.002 | 29.7 | ug/L | 13 | Standard |
| \| | **Al** | 27 | 10020.0 | 6.0 | **0.0248** | 0.030 | 120.7 | ug/L | 8786 | Standard |
| ⌊> | **Sc** | 45 | 282057.4 | 4.1 | | | | ug/L | 280553 | Standard |
| ⌈ | **Ti** | 47 | 105.7 | 4.3 | **-0.0097** | 0.001 | 10.8 | ug/L | 96 | Standard |
| \| | **V** | 51 | 3286.3 | 3.5 | **-0.0237** | 0.019 | 82.1 | ug/L | 3640 | Standard |
| \| | **Cr** | 52 | 10057.7 | 2.6 | **-0.1067** | 0.043 | 40.4 | ug/L | 11495 | Standard |
| \| | **Cr** | 53 | 486.7 | 2.1 | **-0.0041** | 0.012 | 296.4 | ug/L | 564 | Standard |
| \| | **Mn** | 55 | 1764.8 | 32.0 | **0.0304** | 0.037 | 122.9 | ug/L | 1247 | Standard |
| \| | **Co** | 59 | 199.7 | 22.1 | **0.0022** | 0.004 | 189.3 | ug/L | 114 | Standard |
| \| | **Ni** | 60 | 67.3 | 25.0 | **0.0031** | 0.007 | 233.2 | ug/L | 66 | Standard |
| \| | **Cu** | 65 | 224.7 | 4.8 | **0.0016** | 0.008 | 494.1 | ug/L | 219 | Standard |
| \| | **Zn** | 66 | 243.0 | 2.5 | **-0.0317** | 0.009 | 29.7 | ug/L | 232 | Standard |
| \| > | **Ge** | 72 | 225210.9 | 4.8 | | | | ug/L | 228255 | Standard |
| \| | **As** | 75 | -189.4 | 4.6 | **0.0479** | 0.005 | 10.1 | ug/L | -233 | Standard |
| \| | **Se** | 82 | 30.3 | 8.0 | **0.0843** | 0.026 | 30.6 | ug/L | 23 | Standard |
| ⌊ | **Se-1** | 77 | 71.0 | 4.2 | **-0.1583** | 0.016 | 10.1 | ug/L | 91 | Standard |
| ⌈> | **Ga** | 71 | 203137.3 | 3.8 | | | | mg/L | 208873 | Standard |
| ⌊ | **Rb** | 85 | 46.7 | 34.4 | | | | ug/L | 28 | Standard |
| ⌈ | **Y** | 89 | 231700.3 | 7.9 | | | | ug/L | 234742 | Standard |
| ⌊> | **Rh** | 103 | 120638.0 | 7.9 | | | | ug/L | 121294 | Standard |
| ⌈ | **Mo** | 98 | 142.5 | 36.9 | **0.0411** | 0.012 | 29.7 | ug/L | 6 | Standard |
| \| | **Ag** | 107 | 79.0 | 17.9 | **-0.0009** | 0.002 | 196.8 | ug/L | 64 | Standard |
| \| | **Cd** | 111 | 410.6 | 6.0 | **-0.0001** | 0.003 | 4423.7 | mg/L | 417 | Standard |
| \| | **Cd** | 114 | 1060.7 | 4.5 | **0.0041** | 0.003 | 81.1 | ug/L | 1009 | Standard |
| \| > | **In** | 115 | 631002.3 | 5.9 | | | | ug/L | 628085 | Standard |
| \| | **Sn** | 118 | 930.7 | 11.1 | **0.0069** | 0.004 | 63.8 | ug/L | 834 | Standard |
| \| | **Sb** | 123 | 1376.3 | 66.5 | **0.1369** | 0.087 | 63.7 | ug/L | 22 | Standard |
| ⌊ | **Ba** | 135 | 71.7 | 32.1 | **0.0061** | 0.007 | 111.9 | ug/L | 36 | Standard |
| ⌈ | **Ce** | 140 | 46.7 | 11.8 | | | | ug/L | 44 | Standard |
| ⌊> | **Tb** | 159 | 682578.8 | 5.5 | | | | ug/L | 691511 | Standard |
| ⌈ | **Ho** | 165 | 9.0 | 19.2 | | | | ug/L | 6 | Standard |
| \| | **Tl** | 203 | 167.3 | 43.3 | **0.0072** | 0.006 | 84.0 | ug/L | 71 | Standard |
| \| | **Tl** | 205 | 399.3 | 37.6 | **0.0084** | 0.005 | 63.4 | ug/L | 177 | Standard |
| \| | **Pb** | 206 | 344.0 | 22.2 | **0.0079** | 0.009 | 112.1 | ug/L | 268 | Standard |
| \| | **Pb** | 207 | 293.7 | 14.8 | **0.0074** | 0.006 | 82.5 | ug/L | 245 | Standard |
| \| | **Pb** | 208 | 1363.7 | 16.1 | **0.0078** | 0.007 | 87.8 | ug/L | 1057 | Standard |
| \| | **U** | 238 | 153.7 | 72.9 | **0.0062** | 0.005 | 87.1 | ug/L | 9 | Standard |
| ⌊> | **Bi** | 209 | 375448.5 | 5.5 | | | | ug/L | 389590 | Standard |
| ⌈ | **Na** | 23 | 130.0 | 13.9 | **0.0018** | 0.007 | 404.4 | mg/L | 92 | Standard |
| \| | **Mg** | 24 | 2255.4 | 143.1 | **0.0039** | 0.008 | 207.4 | mg/L | 142 | Standard |

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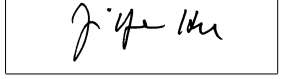

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | **K** | 39 | 735.0 | 12.4 | **0.0110** | 0.009 | 84.6 | mg/L | 635 | Standard |
| | **Ca** | 43 | 78.3 | 42.5 | **0.0281** | 0.089 | 316.2 | mg/L | 63 | Standard |
| | **Fe** | 54 | 847.5 | 4.8 | **0.0025** | 0.013 | 496.9 | mg/L | 901 | Standard |
| | **Fe** | 57 | 5539.4 | 8.8 | **-0.0019** | 0.005 | 245.1 | mg/L | 5948 | Standard |
| > | **Sc-1** | 45 | 282057.4 | 4.1 | | | | mg/L | 280553 | Standard |
| | **Cl** | 35 | 1006.4 | 2.1 | | | | ug/L | 931 | Standard |
| | **Kr** | 83 | 39.3 | 6.9 | | | | ug/L | 40 | Standard |
| | **Br** | 81 | 12418.4 | 6.6 | | | | ug/L | 11862 | Standard |
| | **P** | 31 | 72865.1 | 5.4 | | | | ug/L | 77079 | Standard |
| | **S** | 34 | 905297.1 | 2.4 | | | | ug/L | 1028777 | Standard |
| | **Sr** | 88 | 1471.8 | 133.8 | | | | ug/L | 318 | Standard |

## QC Calculated Values

| | Analyte | Mass | QC Std % Recovery | Int Std % Recovery | Spike % Recovery |
|---|---|---|---|---|---|
| | Li | 7 | | | |
| | Be | 9 | | | |
| | Al | 27 | | | |
| > | Sc | 45 | | | |
| | Ti | 47 | | | |
| | V | 51 | | | |
| | Cr | 52 | | | |
| | Cr | 53 | | | |
| | Mn | 55 | | | |
| | Co | 59 | | | |
| | Ni | 60 | | | |
| | Cu | 65 | | | |
| | Zn | 66 | | | |
| > | Ge | 72 | | 98.666 | |
| | As | 75 | | | |
| | Se | 82 | | | |
| | Se-1 | 77 | | | |
| > | Ga | 71 | | 97.254 | |
| | Rb | 85 | | | |
| | Y | 89 | | | |
| > | Rh | 103 | | 99.459 | |
| | Mo | 98 | | | |
| | Ag | 107 | | | |
| | Cd | 111 | | | |
| | Cd | 114 | | | |
| > | In | 115 | | 100.465 | |
| | Sn | 118 | | | |
| | Sb | 123 | | | |
| | Ba | 135 | | | |
| | Ce | 140 | | | |
| > | Tb | 159 | | 98.708 | |
| | Ho | 165 | | | |
| | Tl | 203 | | | |
| | Tl | 205 | | | |
| | Pb | 206 | | | |

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| | | | |
|---|---|---|---|
| | Pb | 207 | |
| | Pb | 208 | |
| | U | 238 | |
| > | Bi | 209 | 96.370 |
| | Na | 23 | |
| | Mg | 24 | |
| | K | 39 | |
| | Ca | 43 | |
| | Fe | 54 | |
| | Fe | 57 | |
| > | Sc-1 | 45 | |
| | Cl | 35 | |
| | Kr | 83 | |
| | Br | 81 | |
| | P | 31 | |
| | S | 34 | |
| | Sr | 88 | |

## QC Out of Limits

| Measurement Type | Analyte | Mass | Out of Limits Message |
|---|---|---|---|

**Sample ID: QC Std 7**
Report Date/Time: Friday, May 18, 2012 11:33:20
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# Method 6020 - Summary Report

**Sample ID: L1205028410**
Sample Date/Time: Friday, May 18, 2012 11:33:41
Number of Replicates: 3
Autosampler Position: 225
Sample Description: 2
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

## Concentration Results

| IS | Analyte | Mass | Intensity | RSD | Conc. | SD | RSD | Units | Blank Intens. | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| ⌈ | **Li** | 7 | 302341.6 | 2.8 | **-116231.0189** | 2905.183 | 2.5 | ug/L | 13493 | Standard |
| \| | **Be** | 9 | 31.7 | 9.1 | **-0.0034** | 0.001 | 35.4 | ug/L | 13 | Standard |
| \| | **Al** | 27 | 771446.8 | 1.2 | **48.7907** | 1.518 | 3.1 | ug/L | 8786 | Standard |
| ⌊> | **Sc** | 45 | 298907.8 | 2.8 | | | | ug/L | 280553 | Standard |
| ⌈ | **Ti** | 47 | 1701.8 | 1.2 | **1.1554** | 0.006 | 0.5 | ug/L | 96 | Standard |
| \| | **V** | 51 | 5071.3 | 2.1 | **0.1018** | 0.005 | 4.8 | ug/L | 3640 | Standard |
| \| | **Cr** | 52 | 17236.1 | 2.7 | **0.5953** | 0.023 | 3.9 | ug/L | 11495 | Standard |
| \| | **Cr** | 53 | 1745.1 | 1.9 | **0.8201** | 0.010 | 1.2 | ug/L | 564 | Standard |
| \| | **Mn** | 55 | 1591454.9 | 2.4 | **89.2666** | 0.924 | 1.0 | ug/L | 1247 | Standard |
| \| | **Co** | 59 | 3246.7 | 4.6 | **0.2460** | 0.008 | 3.3 | ug/L | 114 | Standard |
| \| | **Ni** | 60 | 5754.8 | 5.3 | **2.1732** | 0.084 | 3.8 | ug/L | 66 | Standard |
| \| | **Cu** | 65 | 1956.5 | 3.8 | **0.7688** | 0.023 | 3.0 | ug/L | 219 | Standard |
| \| | **Zn** | 66 | 27400.1 | 2.3 | **26.3532** | 0.212 | 0.8 | ug/L | 232 | Standard |
| \| > | **Ge** | 72 | 225059.4 | 1.5 | | | | ug/L | 228255 | Standard |
| \| | **As** | 75 | 397.9 | 7.4 | **0.6357** | 0.026 | 4.1 | ug/L | -233 | Standard |
| \| | **Se** | 82 | 101.0 | 1.6 | **0.6200** | 0.019 | 3.1 | ug/L | 23 | Standard |
| ⌊ | **Se-1** | 77 | 104.7 | 1.5 | **0.3066** | 0.027 | 8.7 | ug/L | 91 | Standard |
| ⌈> | **Ga** | 71 | 196984.1 | 1.6 | | | | mg/L | 208873 | Standard |
| ⌊ | **Rb** | 85 | 34881.8 | 4.4 | | | | ug/L | 28 | Standard |
| ⌈ | **Y** | 89 | 229835.7 | 4.5 | | | | ug/L | 234742 | Standard |
| ⌊> | **Rh** | 103 | 110525.6 | 3.3 | | | | ug/L | 121294 | Standard |
| ⌈ | **Mo** | 98 | 164.3 | 14.3 | **0.0478** | 0.006 | 12.4 | ug/L | 6 | Standard |
| \| | **Ag** | 107 | 87.3 | 6.9 | **0.0004** | 0.001 | 207.4 | ug/L | 64 | Standard |
| \| | **Cd** | 111 | 446.3 | 1.9 | **0.0109** | 0.001 | 10.2 | mg/L | 417 | Standard |
| \| | **Cd** | 114 | 1132.5 | 6.0 | **0.0132** | 0.004 | 33.8 | ug/L | 1009 | Standard |
| \| > | **In** | 115 | 618934.3 | 2.1 | | | | ug/L | 628085 | Standard |
| \| | **Sn** | 118 | 7265.4 | 4.1 | **0.4919** | 0.012 | 2.4 | ug/L | 834 | Standard |
| \| | **Sb** | 123 | 3167.2 | 1.5 | **0.3332** | 0.007 | 2.1 | ug/L | 22 | Standard |
| ⌊ | **Ba** | 135 | 145483.7 | 2.1 | **36.5100** | 0.295 | 0.8 | ug/L | 36 | Standard |
| ⌈ | **Ce** | 140 | 5250.6 | 3.1 | | | | ug/L | 44 | Standard |
| ⌊> | **Tb** | 159 | 694311.1 | 1.8 | | | | ug/L | 691511 | Standard |
| ⌈ | **Ho** | 165 | 95.0 | 6.9 | | | | ug/L | 6 | Standard |
| \| | **Tl** | 203 | 721.4 | 4.4 | **0.0497** | 0.002 | 3.8 | ug/L | 71 | Standard |
| \| | **Tl** | 205 | 1720.1 | 1.9 | **0.0501** | 0.001 | 2.8 | ug/L | 177 | Standard |
| \| | **Pb** | 206 | 36542.7 | 1.9 | **3.4163** | 0.018 | 0.5 | ug/L | 268 | Standard |
| \| | **Pb** | 207 | 30383.1 | 2.6 | **3.2998** | 0.040 | 1.2 | ug/L | 245 | Standard |
| \| | **Pb** | 208 | 139869.7 | 2.1 | **3.3082** | 0.018 | 0.6 | ug/L | 1057 | Standard |
| \| | **U** | 238 | 1386.4 | 5.8 | **0.0623** | 0.003 | 4.7 | ug/L | 9 | Standard |
| ⌊> | **Bi** | 209 | 364396.8 | 1.5 | | | | ug/L | 389590 | Standard |
| ⌈ | **Na** | 23 | 39112.1 | 0.4 | **11.9688** | 0.304 | 2.5 | mg/L | 92 | Standard |
| \| | **Mg** | 24 | 5621879.2 | 0.8 | **12.6391** | 0.403 | 3.2 | mg/L | 142 | Standard |

**Sample ID: L1205028410**
Report Date/Time: Friday, May 18, 2012 11:36:14
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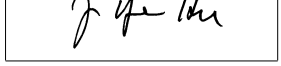

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | **K** | 39 | 22797.1 | 1.2 | **2.1136** | 0.083 | 3.9 | mg/L | 635 | Standard |
| | **Ca** | 43 | 21925.9 | 1.3 | **49.3666** | 1.004 | 2.0 | mg/L | 63 | Standard |
| | **Fe** | 54 | 49354.4 | 0.8 | **8.7024** | 0.208 | 2.4 | mg/L | 901 | Standard |
| | **Fe** | 57 | 1467493.8 | 1.4 | **8.9551** | 0.186 | 2.1 | mg/L | 5948 | Standard |
| > | **Sc-1** | 45 | 298907.8 | 2.8 | | | | mg/L | 280553 | Standard |
| | **Cl** | 35 | 11069.7 | 1.6 | | | | ug/L | 931 | Standard |
| | **Kr** | 83 | 39.1 | 6.0 | | | | ug/L | 40 | Standard |
| | **Br** | 81 | 36914.1 | 1.4 | | | | ug/L | 11862 | Standard |
| | **P** | 31 | 77453.3 | 1.8 | | | | ug/L | 77079 | Standard |
| | **S** | 34 | 2554315.0 | 3.3 | | | | ug/L | 1028777 | Standard |
| | **Sr** | 88 | 4548665.1 | 2.5 | | | | ug/L | 318 | Standard |

## QC Calculated Values

| | Analyte | Mass | QC Std % Recovery | Int Std % Recovery | Spike % Recovery |
|---|---|---|---|---|---|
| | Li | 7 | | | |
| | Be | 9 | | | |
| | Al | 27 | | | |
| > | Sc | 45 | | | |
| | Ti | 47 | | | |
| | V | 51 | | | |
| | Cr | 52 | | | |
| | Cr | 53 | | | |
| | Mn | 55 | | | |
| | Co | 59 | | | |
| | Ni | 60 | | | |
| | Cu | 65 | | | |
| | Zn | 66 | | | |
| > | Ge | 72 | | 98.600 | |
| | As | 75 | | | |
| | Se | 82 | | | |
| | Se-1 | 77 | | | |
| > | Ga | 71 | | 94.308 | |
| | Rb | 85 | | | |
| | Y | 89 | | | |
| > | Rh | 103 | | 91.122 | |
| | Mo | 98 | | | |
| | Ag | 107 | | | |
| | Cd | 111 | | | |
| | Cd | 114 | | | |
| > | In | 115 | | 98.543 | |
| | Sn | 118 | | | |
| | Sb | 123 | | | |
| | Ba | 135 | | | |
| | Ce | 140 | | | |
| > | Tb | 159 | | 100.405 | |
| | Ho | 165 | | | |
| | Tl | 203 | | | |
| | Tl | 205 | | | |
| | Pb | 206 | | | |



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| | | | |
|---|---|---|---|
| | Pb | 207 | |
| | Pb | 208 | |
| | U | 238 | |
| > | Bi | 209 | 93.533 |
| | Na | 23 | |
| | Mg | 24 | |
| | K | 39 | |
| | Ca | 43 | |
| | Fe | 54 | |
| | Fe | 57 | |
| > | Sc-1 | 45 | |
| | Cl | 35 | |
| | Kr | 83 | |
| | Br | 81 | |
| | P | 31 | |
| | S | 34 | |
| | Sr | 88 | |

## QC Out of Limits

| Measurement Type | Analyte | Mass | Out of Limits Message |
|---|---|---|---|

**Sample ID: L1205028410**
Report Date/Time: Friday, May 18, 2012 11:36:14
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# Method 6020 - Summary Report

**Sample ID: L1205028411**
Sample Date/Time: Friday, May 18, 2012 11:36:33
Number of Replicates: 3
Autosampler Position: 226
Sample Description: 2
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

## Concentration Results

| IS | Analyte | Mass | Intensity | RSD | Conc. | SD | RSD | Units | Blank Intens. | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **Li** | 7 | 297444.5 | 4.1 | **-112699.6444** | 697.455 | 0.6 | ug/L | 13493 | Standard |
| | **Be** | 9 | 61.7 | 57.5 | **0.0060** | 0.011 | 187.0 | ug/L | 13 | Standard |
| | **Al** | 27 | 246500.1 | 3.0 | **14.9430** | 0.474 | 3.2 | ug/L | 8786 | Standard |
| > | **Sc** | 45 | 302815.2 | 4.6 | | | | ug/L | 280553 | Standard |
| | **Ti** | 47 | 821.0 | 3.6 | **0.5166** | 0.024 | 4.7 | ug/L | 96 | Standard |
| | **V** | 51 | 4762.7 | 2.9 | **0.0823** | 0.012 | 14.5 | ug/L | 3640 | Standard |
| | **Cr** | 52 | 13077.0 | 2.4 | **0.1974** | 0.046 | 23.1 | ug/L | 11495 | Standard |
| | **Cr** | 53 | 1783.4 | 5.4 | **0.8521** | 0.012 | 1.4 | ug/L | 564 | Standard |
| | **Mn** | 55 | 1539313.5 | 3.4 | **86.9076** | 0.958 | 1.1 | ug/L | 1247 | Standard |
| | **Co** | 59 | 3098.7 | 5.6 | **0.2359** | 0.014 | 5.8 | ug/L | 114 | Standard |
| | **Ni** | 60 | 5443.6 | 5.4 | **2.0676** | 0.028 | 1.3 | ug/L | 66 | Standard |
| | **Cu** | 65 | 912.7 | 2.2 | **0.3092** | 0.015 | 5.0 | ug/L | 219 | Standard |
| | **Zn** | 66 | 19210.8 | 3.2 | **18.5212** | 0.324 | 1.8 | ug/L | 232 | Standard |
| > | **Ge** | 72 | 223675.0 | 4.4 | | | | ug/L | 228255 | Standard |
| | **As** | 75 | 316.4 | 5.1 | **0.5567** | 0.025 | 4.4 | ug/L | -233 | Standard |
| | **Se** | 82 | 108.5 | 3.7 | **0.6832** | 0.057 | 8.3 | ug/L | 23 | Standard |
| | **Se-1** | 77 | 151.7 | 3.6 | **0.9713** | 0.147 | 15.1 | ug/L | 91 | Standard |
| > | **Ga** | 71 | 199182.2 | 6.1 | | | | mg/L | 208873 | Standard |
| | **Rb** | 85 | 33969.7 | 4.1 | | | | ug/L | 28 | Standard |
| | **Y** | 89 | 224543.2 | 3.8 | | | | ug/L | 234742 | Standard |
| > | **Rh** | 103 | 112022.4 | 4.2 | | | | ug/L | 121294 | Standard |
| | **Mo** | 98 | 175.1 | 23.7 | **0.0501** | 0.011 | 22.3 | ug/L | 6 | Standard |
| | **Ag** | 107 | 206.7 | 92.4 | **0.0161** | 0.026 | 158.4 | ug/L | 64 | Standard |
| | **Cd** | 111 | 378.2 | 26.8 | **-0.0075** | 0.026 | 349.5 | mg/L | 417 | Standard |
| | **Cd** | 114 | 967.0 | 29.1 | **-0.0045** | 0.029 | 636.7 | ug/L | 1009 | Standard |
| > | **In** | 115 | 627055.5 | 2.1 | | | | ug/L | 628085 | Standard |
| | **Sn** | 118 | 1258.1 | 26.6 | **0.0323** | 0.026 | 80.2 | ug/L | 834 | Standard |
| | **Sb** | 123 | 2022.8 | 13.3 | **0.2086** | 0.029 | 13.9 | ug/L | 22 | Standard |
| | **Ba** | 135 | 140676.4 | 2.9 | **34.8416** | 0.354 | 1.0 | ug/L | 36 | Standard |
| | **Ce** | 140 | 2575.9 | 4.5 | | | | ug/L | 44 | Standard |
| > | **Tb** | 159 | 697151.5 | 2.4 | | | | ug/L | 691511 | Standard |
| | **Ho** | 165 | 40.0 | 7.5 | | | | ug/L | 6 | Standard |
| | **Tl** | 203 | 891.7 | 16.6 | **0.0618** | 0.012 | 18.7 | ug/L | 71 | Standard |
| | **Tl** | 205 | 2191.8 | 21.8 | **0.0641** | 0.015 | 23.3 | ug/L | 177 | Standard |
| | **Pb** | 206 | 775.4 | 16.3 | **0.0482** | 0.012 | 24.2 | ug/L | 268 | Standard |
| | **Pb** | 207 | 688.0 | 17.8 | **0.0503** | 0.013 | 26.7 | ug/L | 245 | Standard |
| | **Pb** | 208 | 3043.1 | 18.5 | **0.0476** | 0.013 | 28.0 | ug/L | 1057 | Standard |
| | **U** | 238 | 1599.4 | 12.7 | **0.0711** | 0.009 | 13.2 | ug/L | 9 | Standard |
| > | **Bi** | 209 | 369220.9 | 2.4 | | | | ug/L | 389590 | Standard |
| | **Na** | 23 | 39760.5 | 2.7 | **12.0122** | 0.261 | 2.2 | mg/L | 92 | Standard |
| | **Mg** | 24 | 5743106.6 | 4.9 | **12.7364** | 0.040 | 0.3 | mg/L | 142 | Standard |

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| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | **K** | 39 | 23042.5 | 0.8 | **2.1098** | 0.087 | 4.1 | mg/L | 635 | Standard |
| | **Ca** | 43 | 22196.2 | 1.0 | **49.3748** | 2.031 | 4.1 | mg/L | 63 | Standard |
| | **Fe** | 54 | 46506.1 | 2.0 | **8.0876** | 0.279 | 3.4 | mg/L | 901 | Standard |
| | **Fe** | 57 | 1442089.4 | 1.8 | **8.6901** | 0.249 | 2.9 | mg/L | 5948 | Standard |
| > | **Sc-1** | 45 | 302815.2 | 4.6 | | | | mg/L | 280553 | Standard |
| | **Cl** | 35 | 28427.3 | 1.7 | | | | ug/L | 931 | Standard |
| | **Kr** | 83 | 45.3 | 12.9 | | | | ug/L | 40 | Standard |
| | **Br** | 81 | 41518.5 | 2.4 | | | | ug/L | 11862 | Standard |
| | **P** | 31 | 72583.0 | 5.6 | | | | ug/L | 77079 | Standard |
| | **S** | 34 | 2599464.5 | 3.2 | | | | ug/L | 1028777 | Standard |
| | **Sr** | 88 | 4573640.9 | 4.8 | | | | ug/L | 318 | Standard |

## QC Calculated Values

| | Analyte | Mass | QC Std % Recovery | Int Std % Recovery | Spike % Recovery |
|---|---|---|---|---|---|
| | Li | 7 | | | |
| | Be | 9 | | | |
| | Al | 27 | | | |
| > | Sc | 45 | | | |
| | Ti | 47 | | | |
| | V | 51 | | | |
| | Cr | 52 | | | |
| | Cr | 53 | | | |
| | Mn | 55 | | | |
| | Co | 59 | | | |
| | Ni | 60 | | | |
| | Cu | 65 | | | |
| | Zn | 66 | | | |
| > | Ge | 72 | | 97.993 | |
| | As | 75 | | | |
| | Se | 82 | | | |
| | Se-1 | 77 | | | |
| > | Ga | 71 | | 95.361 | |
| | Rb | 85 | | | |
| | Y | 89 | | | |
| > | Rh | 103 | | 92.356 | |
| | Mo | 98 | | | |
| | Ag | 107 | | | |
| | Cd | 111 | | | |
| | Cd | 114 | | | |
| > | In | 115 | | 99.836 | |
| | Sn | 118 | | | |
| | Sb | 123 | | | |
| | Ba | 135 | | | |
| | Ce | 140 | | | |
| > | Tb | 159 | | 100.816 | |
| | Ho | 165 | | | |
| | Tl | 203 | | | |
| | Tl | 205 | | | |
| | Pb | 206 | | | |



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| | | | |
|---|---|---|---|
| | Pb | 207 | |
| | Pb | 208 | |
| | U | 238 | |
| > | Bi | 209 | 94.772 |
| | Na | 23 | |
| | Mg | 24 | |
| | K | 39 | |
| | Ca | 43 | |
| | Fe | 54 | |
| | Fe | 57 | |
| > | Sc-1 | 45 | |
| | Cl | 35 | |
| | Kr | 83 | |
| | Br | 81 | |
| | P | 31 | |
| | S | 34 | |
| | Sr | 88 | |

## QC Out of Limits

| Measurement Type | Analyte | Mass | Out of Limits Message |
|---|---|---|---|



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# Method 6020 - Summary Report

**Sample ID: L1205028412**
Sample Date/Time: Friday, May 18, 2012 11:39:27
Number of Replicates: 3
Autosampler Position: 227
Sample Description: 2
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

## Concentration Results

| IS | Analyte | Mass | Intensity | RSD | Conc. | SD | RSD | Units | Blank Intens. | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | Li | 7 | 13369.2 | 5.0 | **-193.6099** | 221.052 | 114.2 | ug/L | 13493 | Standard |
| | Be | 9 | 11.7 | 49.5 | **-0.0093** | 0.002 | 22.8 | ug/L | 13 | Standard |
| | Al | 27 | 15437.9 | 2.8 | **0.4399** | 0.037 | 8.4 | ug/L | 8786 | Standard |
| > | Sc | 45 | 270239.5 | 6.1 | | | | ug/L | 280553 | Standard |
| | Ti | 47 | 97.3 | 6.2 | **-0.0146** | 0.003 | 20.0 | ug/L | 96 | Standard |
| | V | 51 | 3466.6 | 4.5 | **-0.0072** | 0.013 | 176.9 | ug/L | 3640 | Standard |
| | Cr | 52 | 10449.9 | 1.9 | **-0.0510** | 0.036 | 70.6 | ug/L | 11495 | Standard |
| | Cr | 53 | 698.3 | 5.0 | **0.1427** | 0.033 | 23.2 | ug/L | 564 | Standard |
| | Mn | 55 | 1919.5 | 4.8 | **0.0398** | 0.002 | 4.8 | ug/L | 1247 | Standard |
| | Co | 59 | 123.7 | 1.7 | **-0.0038** | 0.000 | 10.3 | ug/L | 114 | Standard |
| | Ni | 60 | 161.0 | 7.6 | **0.0397** | 0.003 | 8.7 | ug/L | 66 | Standard |
| | Cu | 65 | 552.0 | 3.5 | **0.1507** | 0.007 | 4.8 | ug/L | 219 | Standard |
| | Zn | 66 | 2268.8 | 4.2 | **1.9732** | 0.027 | 1.4 | ug/L | 232 | Standard |
| > | Ge | 72 | 221462.2 | 5.2 | | | | ug/L | 228255 | Standard |
| | As | 75 | -200.5 | 13.5 | **0.0326** | 0.034 | 105.2 | ug/L | -233 | Standard |
| | Se | 82 | 27.6 | 12.7 | **0.0682** | 0.035 | 51.7 | ug/L | 23 | Standard |
| | Se-1 | 77 | 88.0 | 10.1 | **0.1022** | 0.183 | 178.8 | ug/L | 91 | Standard |
| > | Ga | 71 | 198154.6 | 5.2 | | | | mg/L | 208873 | Standard |
| | Rb | 85 | 81.7 | 43.0 | | | | ug/L | 28 | Standard |
| | Y | 89 | 223000.4 | 6.6 | | | | ug/L | 234742 | Standard |
| > | Rh | 103 | 114976.1 | 7.3 | | | | ug/L | 121294 | Standard |
| | Mo | 98 | 30.5 | 12.6 | **0.0123** | 0.001 | 6.3 | ug/L | 6 | Standard |
| | Ag | 107 | 37.3 | 17.8 | **-0.0063** | 0.001 | 19.0 | ug/L | 64 | Standard |
| | Cd | 111 | 271.9 | 7.2 | **-0.0333** | 0.003 | 10.1 | mg/L | 417 | Standard |
| | Cd | 114 | 711.7 | 7.6 | **-0.0291** | 0.003 | 9.1 | ug/L | 1009 | Standard |
| > | In | 115 | 618805.1 | 5.2 | | | | ug/L | 628085 | Standard |
| | Sn | 118 | 2833.3 | 7.6 | **0.1536** | 0.007 | 4.4 | ug/L | 834 | Standard |
| | Sb | 123 | 164.9 | 6.8 | **0.0136** | 0.000 | 2.4 | ug/L | 22 | Standard |
| | Ba | 135 | 199.0 | 17.5 | **0.0380** | 0.007 | 17.9 | ug/L | 36 | Standard |
| | Ce | 140 | 71.3 | 11.9 | | | | ug/L | 44 | Standard |
| > | Tb | 159 | 671005.2 | 5.3 | | | | ug/L | 691511 | Standard |
| | Ho | 165 | 9.7 | 43.1 | | | | ug/L | 6 | Standard |
| | Tl | 203 | 512.3 | 9.1 | **0.0325** | 0.003 | 8.3 | ug/L | 71 | Standard |
| | Tl | 205 | 1204.4 | 11.2 | **0.0327** | 0.003 | 10.7 | ug/L | 177 | Standard |
| | Pb | 206 | 369.3 | 8.9 | **0.0098** | 0.003 | 28.5 | ug/L | 268 | Standard |
| | Pb | 207 | 291.7 | 9.5 | **0.0069** | 0.002 | 22.6 | ug/L | 245 | Standard |
| | Pb | 208 | 1371.0 | 6.6 | **0.0076** | 0.001 | 18.6 | ug/L | 1057 | Standard |
| | U | 238 | 6.7 | 37.7 | **-0.0005** | 0.000 | 24.2 | ug/L | 9 | Standard |
| > | Bi | 209 | 376497.0 | 4.7 | | | | ug/L | 389590 | Standard |
| | Na | 23 | 318.3 | 12.6 | **0.0673** | 0.010 | 14.5 | mg/L | 92 | Standard |
| | Mg | 24 | 6318.0 | 9.1 | **0.0140** | 0.001 | 3.6 | mg/L | 142 | Standard |

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| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | **K** | 39 | 773.4 | 9.2 | **0.0182** | 0.005 | 28.4 | mg/L | 635 | Standard |
| | **Ca** | 43 | 70.0 | 25.8 | **0.0119** | 0.036 | 305.2 | mg/L | 63 | Standard |
| | **Fe** | 54 | 642.5 | 4.8 | **-0.0309** | 0.014 | 43.8 | mg/L | 901 | Standard |
| | **Fe** | 57 | 5494.3 | 2.0 | **-0.0007** | 0.002 | 359.7 | mg/L | 5948 | Standard |
| > | **Sc-1** | 45 | 270239.5 | 6.1 | | | | mg/L | 280553 | Standard |
| | **Cl** | 35 | 7202.0 | 2.5 | | | | ug/L | 931 | Standard |
| | **Kr** | 83 | 39.1 | 10.9 | | | | ug/L | 40 | Standard |
| | **Br** | 81 | 12435.1 | 2.7 | | | | ug/L | 11862 | Standard |
| | **P** | 31 | 49666.5 | 6.1 | | | | ug/L | 77079 | Standard |
| | **S** | 34 | 924167.2 | 5.0 | | | | ug/L | 1028777 | Standard |
| | **Sr** | 88 | 2756.9 | 11.1 | | | | ug/L | 318 | Standard |

## QC Calculated Values

| | Analyte | Mass | QC Std % Recovery | Int Std % Recovery | Spike % Recovery |
|---|---|---|---|---|---|
| | Li | 7 | | | |
| | Be | 9 | | | |
| | Al | 27 | | | |
| > | Sc | 45 | | | |
| | Ti | 47 | | | |
| | V | 51 | | | |
| | Cr | 52 | | | |
| | Cr | 53 | | | |
| | Mn | 55 | | | |
| | Co | 59 | | | |
| | Ni | 60 | | | |
| | Cu | 65 | | | |
| | Zn | 66 | | | |
| > | Ge | 72 | | | 97.024 |
| | As | 75 | | | |
| | Se | 82 | | | |
| | Se-1 | 77 | | | |
| > | Ga | 71 | | | 94.869 |
| | Rb | 85 | | | |
| | Y | 89 | | | |
| > | Rh | 103 | | | 94.792 |
| | Mo | 98 | | | |
| | Ag | 107 | | | |
| | Cd | 111 | | | |
| | Cd | 114 | | | |
| > | In | 115 | | | 98.523 |
| | Sn | 118 | | | |
| | Sb | 123 | | | |
| | Ba | 135 | | | |
| | Ce | 140 | | | |
| > | Tb | 159 | | | 97.035 |
| | Ho | 165 | | | |
| | Tl | 203 | | | |
| | Tl | 205 | | | |
| | Pb | 206 | | | |



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| | | | |
|---|---|---|---|
| | Pb | 207 | |
| | Pb | 208 | |
| | U | 238 | |
| > | Bi | 209 | 96.639 |
| | Na | 23 | |
| | Mg | 24 | |
| | K | 39 | |
| | Ca | 43 | |
| | Fe | 54 | |
| | Fe | 57 | |
| > | Sc-1 | 45 | |
| | Cl | 35 | |
| | Kr | 83 | |
| | Br | 81 | |
| | P | 31 | |
| | S | 34 | |
| | Sr | 88 | |

## QC Out of Limits

| Measurement Type | Analyte | Mass | Out of Limits Message |
|---|---|---|---|

**Sample ID: L1205028412**
Report Date/Time: Friday, May 18, 2012 11:42:00
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# Method 6020 - Summary Report

**Sample ID: L1205028412**
Sample Date/Time: Friday, May 18, 2012 11:45:01
Number of Replicates: 3
Autosampler Position: 227
Sample Description: 1
Method File: C:\NexION Data\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

## Concentration Results

| IS | Analyte | Mass | Intensity | RSD | Conc. | SD | RSD | Units | Blank Intens. | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **Li** | 7 | 14126.6 | 7.2 | **-441.3595** | 347.109 | 78.6 | ug/L | 13493 | Standard |
| | **Be** | 9 | 73.3 | 126.2 | **0.0114** | 0.031 | 272.3 | ug/L | 13 | Standard |
| | **Al** | 27 | 15180.9 | 4.0 | **0.4061** | 0.029 | 7.1 | ug/L | 8786 | Standard |
| > | **Sc** | 45 | 274072.1 | 5.9 | | | | ug/L | 280553 | Standard |
| | **Ti** | 47 | 175.0 | 76.8 | **0.0433** | 0.100 | 229.9 | ug/L | 96 | Standard |
| | **V** | 51 | 3576.4 | 1.5 | **0.0014** | 0.002 | 174.6 | ug/L | 3640 | Standard |
| | **Cr** | 52 | 10385.9 | 2.1 | **-0.0547** | 0.012 | 21.3 | ug/L | 11495 | Standard |
| | **Cr** | 53 | 881.7 | 9.0 | **0.2657** | 0.045 | 17.0 | ug/L | 564 | Standard |
| | **Mn** | 55 | 5583.3 | 118.0 | **0.2493** | 0.376 | 150.8 | ug/L | 1247 | Standard |
| | **Co** | 59 | 357.7 | 122.4 | **0.0153** | 0.036 | 232.8 | ug/L | 114 | Standard |
| | **Ni** | 60 | 274.7 | 87.1 | **0.0840** | 0.093 | 110.5 | ug/L | 66 | Standard |
| | **Cu** | 65 | 403.0 | 19.1 | **0.0841** | 0.035 | 41.3 | ug/L | 219 | Standard |
| | **Zn** | 66 | 2437.5 | 14.1 | **2.1473** | 0.331 | 15.4 | ug/L | 232 | Standard |
| > | **Ge** | 72 | 220652.3 | 2.4 | | | | ug/L | 228255 | Standard |
| | **As** | 75 | -218.5 | 2.5 | **0.0141** | 0.011 | 76.6 | ug/L | -233 | Standard |
| | **Se** | 82 | 21.9 | 21.6 | **0.0241** | 0.040 | 164.7 | ug/L | 23 | Standard |
| | **Se-1** | 77 | 102.3 | 7.4 | **0.3015** | 0.077 | 25.5 | ug/L | 91 | Standard |
| > | **Ga** | 71 | 199530.0 | 4.1 | | | | mg/L | 208873 | Standard |
| | **Rb** | 85 | 93.3 | 34.4 | | | | ug/L | 28 | Standard |
| | **Y** | 89 | 217723.5 | 1.9 | | | | ug/L | 234742 | Standard |
| > | **Rh** | 103 | 113427.4 | 1.8 | | | | ug/L | 121294 | Standard |
| | **Mo** | 98 | 78.9 | 81.8 | **0.0253** | 0.017 | 66.7 | ug/L | 6 | Standard |
| | **Ag** | 107 | 55.3 | 49.5 | **-0.0038** | 0.004 | 93.0 | ug/L | 64 | Standard |
| | **Cd** | 111 | 279.8 | 4.9 | **-0.0301** | 0.002 | 7.9 | mg/L | 417 | Standard |
| | **Cd** | 114 | 691.8 | 8.1 | **-0.0299** | 0.005 | 15.5 | ug/L | 1009 | Standard |
| > | **In** | 115 | 608514.2 | 2.1 | | | | ug/L | 628085 | Standard |
| | **Sn** | 118 | 2665.6 | 4.6 | **0.1443** | 0.005 | 3.8 | ug/L | 834 | Standard |
| | **Sb** | 123 | 151.9 | 37.8 | **0.0124** | 0.006 | 47.0 | ug/L | 22 | Standard |
| | **Ba** | 135 | 240.3 | 52.0 | **0.0492** | 0.031 | 62.1 | ug/L | 36 | Standard |
| | **Ce** | 140 | 65.7 | 13.6 | | | | ug/L | 44 | Standard |
| > | **Tb** | 159 | 662066.0 | 3.9 | | | | ug/L | 691511 | Standard |
| | **Ho** | 165 | 8.7 | 29.0 | | | | ug/L | 6 | Standard |
| | **Tl** | 203 | 450.3 | 16.0 | **0.0280** | 0.005 | 19.1 | ug/L | 71 | Standard |
| | **Tl** | 205 | 1049.4 | 10.4 | **0.0281** | 0.003 | 10.9 | ug/L | 177 | Standard |
| | **Pb** | 206 | 323.0 | 11.0 | **0.0057** | 0.003 | 54.0 | ug/L | 268 | Standard |
| | **Pb** | 207 | 278.7 | 7.2 | **0.0056** | 0.002 | 33.4 | ug/L | 245 | Standard |
| | **Pb** | 208 | 1252.7 | 8.7 | **0.0050** | 0.002 | 43.1 | ug/L | 1057 | Standard |
| | **U** | 238 | 59.3 | 115.6 | **0.0019** | 0.003 | 162.1 | ug/L | 9 | Standard |
| > | **Bi** | 209 | 374882.3 | 2.3 | | | | ug/L | 389590 | Standard |
| | **Na** | 23 | 493.3 | 67.0 | **0.1228** | 0.105 | 85.5 | mg/L | 92 | Standard |
| | **Mg** | 24 | 9607.3 | 67.3 | **0.0216** | 0.015 | 69.6 | mg/L | 142 | Standard |



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| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | **K** | 39 | 788.4 | 15.7 | **0.0188** | 0.013 | 67.2 | mg/L | 635 | Standard |
| | **Ca** | 43 | 113.3 | 55.2 | **0.1146** | 0.144 | 126.0 | mg/L | 63 | Standard |
| | **Fe** | 54 | 662.3 | 25.1 | **-0.0297** | 0.029 | 95.9 | mg/L | 901 | Standard |
| | **Fe** | 57 | 6079.6 | 13.8 | **0.0026** | 0.005 | 175.6 | mg/L | 5948 | Standard |
| > | **Sc-1** | 45 | 274072.1 | 5.9 | | | | mg/L | 280553 | Standard |
| | **Cl** | 35 | 6739.8 | 2.1 | | | | ug/L | 931 | Standard |
| | **Kr** | 83 | 39.2 | 3.2 | | | | ug/L | 40 | Standard |
| | **Br** | 81 | 11745.4 | 0.4 | | | | ug/L | 11862 | Standard |
| | **P** | 31 | 48807.0 | 5.2 | | | | ug/L | 77079 | Standard |
| | **S** | 34 | 920807.3 | 3.5 | | | | ug/L | 1028777 | Standard |
| | **Sr** | 88 | 5881.7 | 87.5 | | | | ug/L | 318 | Standard |

## QC Calculated Values

| | Analyte | Mass | QC Std % Recovery | Int Std % Recovery | Spike % Recovery |
|---|---|---|---|---|---|
| | Li | 7 | | | |
| | Be | 9 | | | |
| | Al | 27 | | | |
| > | Sc | 45 | | | |
| | Ti | 47 | | | |
| | V | 51 | | | |
| | Cr | 52 | | | |
| | Cr | 53 | | | |
| | Mn | 55 | | | |
| | Co | 59 | | | |
| | Ni | 60 | | | |
| | Cu | 65 | | | |
| | Zn | 66 | | | |
| > | Ge | 72 | | 96.669 | |
| | As | 75 | | | |
| | Se | 82 | | | |
| | Se-1 | 77 | | | |
| > | Ga | 71 | | 95.527 | |
| | Rb | 85 | | | |
| | Y | 89 | | | |
| > | Rh | 103 | | 93.515 | |
| | Mo | 98 | | | |
| | Ag | 107 | | | |
| | Cd | 111 | | | |
| | Cd | 114 | | | |
| > | In | 115 | | 96.884 | |
| | Sn | 118 | | | |
| | Sb | 123 | | | |
| | Ba | 135 | | | |
| | Ce | 140 | | | |
| > | Tb | 159 | | 95.742 | |
| | Ho | 165 | | | |
| | Tl | 203 | | | |
| | Tl | 205 | | | |
| | Pb | 206 | | | |

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| | | |
|---|---|---|
| | Pb | 207 |
| | Pb | 208 |
| | U | 238 |
| > | Bi | 209 |
| | Na | 23 |
| | Mg | 24 |
| | K | 39 |
| | Ca | 43 |
| | Fe | 54 |
| | Fe | 57 |
| > | Sc-1 | 45 |
| | Cl | 35 |
| | Kr | 83 |
| | Br | 81 |
| | P | 31 |
| | S | 34 |
| | Sr | 88 |

96.225

## QC Out of Limits

| Measurement Type | Analyte | Mass | Out of Limits Message |
|---|---|---|---|

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# Method 6020 - Summary Report

**Sample ID: QC Std 4**
Sample Date/Time: Friday, May 18, 2012 11:47:54
Number of Replicates: 3
Autosampler Position: 203
Sample Description:
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

## Concentration Results

| IS | Analyte | Mass | Intensity | RSD | Conc. | SD | RSD | Units | Blank Intens. | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | Li | 7 | 14725.5 | 2.7 | **-121.3048** | 145.046 | 119.6 | ug/L | 13493 | Standard |
| | Be | 9 | 31.7 | 55.5 | **-0.0036** | 0.005 | 138.4 | ug/L | 13 | Standard |
| | Al | 27 | 64611544.2 | 5.1 | **4107.8380** | 156.937 | 3.8 | ug/L | 8786 | Standard |
| > | Sc | 45 | 301263.7 | 5.0 | | | | ug/L | 280553 | Standard |
| | Ti | 47 | 168144.2 | 5.2 | **118.0967** | 2.058 | 1.7 | ug/L | 96 | Standard |
| | V | 51 | 4407.9 | 7.8 | **0.0433** | 0.013 | 30.9 | ug/L | 3640 | Standard |
| | Cr | 52 | 11684.8 | 2.7 | **0.0104** | 0.014 | 136.4 | ug/L | 11495 | Standard |
| | Cr | 53 | 3223.7 | 6.7 | **1.7099** | 0.073 | 4.2 | ug/L | 564 | Standard |
| | Mn | 55 | 2316.8 | 12.1 | **0.0553** | 0.011 | 20.0 | ug/L | 1247 | Standard |
| | Co | 59 | 474.7 | 7.7 | **0.0227** | 0.002 | 7.4 | ug/L | 114 | Standard |
| | Ni | 60 | 1682.8 | 5.7 | **0.5957** | 0.011 | 1.9 | ug/L | 66 | Standard |
| | Cu | 65 | 706.0 | 7.9 | **0.2030** | 0.015 | 7.4 | ug/L | 219 | Standard |
| | Zn | 66 | 1868.1 | 3.1 | **1.4809** | 0.018 | 1.2 | ug/L | 232 | Standard |
| > | Ge | 72 | 233643.1 | 3.9 | | | | ug/L | 228255 | Standard |
| | As | 75 | -291.2 | 15.3 | **-0.0426** | 0.032 | 76.0 | ug/L | -233 | Standard |
| | Se | 82 | 23.0 | 13.5 | **0.0224** | 0.026 | 116.0 | ug/L | 23 | Standard |
| | Se-1 | 77 | 257.3 | 3.8 | **2.2831** | 0.131 | 5.7 | ug/L | 91 | Standard |
| > | Ga | 71 | 207936.5 | 3.4 | | | | mg/L | 208873 | Standard |
| | Rb | 85 | 3745.5 | 6.7 | | | | ug/L | 28 | Standard |
| | Y | 89 | 240130.5 | 5.9 | | | | ug/L | 234742 | Standard |
| > | Rh | 103 | 117340.9 | 4.5 | | | | ug/L | 121294 | Standard |
| | Mo | 98 | 379530.2 | 4.6 | **98.2913** | 1.025 | 1.0 | ug/L | 6 | Standard |
| | Ag | 107 | 130.3 | 1.8 | **0.0058** | 0.001 | 11.3 | ug/L | 64 | Standard |
| | Cd | 111 | 722.9 | 12.4 | **0.0766** | 0.017 | 21.6 | mg/L | 417 | Standard |
| | Cd | 114 | 3360.2 | 3.8 | **0.2296** | 0.003 | 1.3 | ug/L | 1009 | Standard |
| > | In | 115 | 633249.6 | 3.6 | | | | ug/L | 628085 | Standard |
| | Sn | 118 | 1086.4 | 11.4 | **0.0184** | 0.009 | 46.9 | ug/L | 834 | Standard |
| | Sb | 123 | 506.9 | 5.0 | **0.0488** | 0.003 | 5.7 | ug/L | 22 | Standard |
| | Ba | 135 | 122.0 | 13.5 | **0.0181** | 0.003 | 17.6 | ug/L | 36 | Standard |
| | Ce | 140 | 1691.4 | 5.4 | | | | ug/L | 44 | Standard |
| > | Tb | 159 | 715856.1 | 3.6 | | | | ug/L | 691511 | Standard |
| | Ho | 165 | 14.3 | 16.1 | | | | ug/L | 6 | Standard |
| | Tl | 203 | 756.7 | 9.0 | **0.0507** | 0.006 | 11.7 | ug/L | 71 | Standard |
| | Tl | 205 | 1815.1 | 5.0 | **0.0514** | 0.002 | 3.8 | ug/L | 177 | Standard |
| | Pb | 206 | 658.0 | 6.5 | **0.0363** | 0.003 | 7.7 | ug/L | 268 | Standard |
| | Pb | 207 | 560.0 | 8.8 | **0.0354** | 0.004 | 11.2 | ug/L | 245 | Standard |
| | Pb | 208 | 2557.8 | 3.9 | **0.0351** | 0.001 | 2.0 | ug/L | 1057 | Standard |
| | U | 238 | 18.3 | 13.7 | **0.0001** | 0.000 | 172.4 | ug/L | 9 | Standard |
| > | Bi | 209 | 375487.1 | 3.2 | | | | ug/L | 389590 | Standard |
| | Na | 23 | 41396.7 | 8.5 | **12.5540** | 0.616 | 4.9 | mg/L | 92 | Standard |
| | Mg | 24 | 2265059.5 | 11.8 | **5.0570** | 0.650 | 12.9 | mg/L | 142 | Standard |

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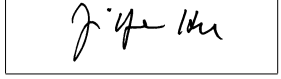

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | **K** | 39 | 52562.8 | 4.7 | **4.9157** | 0.168 | 3.4 | mg/L | 635 | Standard |
| | **Ca** | 43 | 6481.4 | 5.7 | **14.3712** | 0.808 | 5.6 | mg/L | 63 | Standard |
| | **Fe** | 54 | 67023.8 | 3.9 | **11.7828** | 0.336 | 2.8 | mg/L | 901 | Standard |
| | **Fe** | 57 | 1903633.7 | 3.7 | **11.5413** | 0.378 | 3.3 | mg/L | 5948 | Standard |
| > | **Sc-1** | 45 | 301263.7 | 5.0 | | | | mg/L | 280553 | Standard |
| | **Cl** | 35 | 64314.6 | 1.9 | | | | ug/L | 931 | Standard |
| | **Kr** | 83 | 49.7 | 9.1 | | | | ug/L | 40 | Standard |
| | **Br** | 81 | 12174.1 | 6.3 | | | | ug/L | 11862 | Standard |
| | **P** | 31 | 5170162.2 | 3.9 | | | | ug/L | 77079 | Standard |
| | **S** | 34 | 1580703.2 | 5.3 | | | | ug/L | 1028777 | Standard |
| | **Sr** | 88 | 1621.8 | 37.9 | | | | ug/L | 318 | Standard |

## QC Calculated Values

| | Analyte | Mass | QC Std % Recovery | Int Std % Recovery | Spike % Recovery |
|---|---|---|---|---|---|
| | Li | 7 | | | |
| | Be | 9 | | | |
| | Al | 27 | 82.157 | | |
| > | Sc | 45 | | | |
| | Ti | 47 | 118.097 | | |
| | V | 51 | | | |
| | Cr | 52 | | | |
| | Cr | 53 | | | |
| | Mn | 55 | | | |
| | Co | 59 | | | |
| | Ni | 60 | | | |
| | Cu | 65 | | | |
| | Zn | 66 | | | |
| > | Ge | 72 | | 102.361 | |
| | As | 75 | | | |
| | Se | 82 | | | |
| | Se-1 | 77 | | | |
| > | Ga | 71 | | 99.552 | |
| | Rb | 85 | | | |
| | Y | 89 | | | |
| > | Rh | 103 | | 96.741 | |
| | Mo | 98 | 98.291 | | |
| | Ag | 107 | | | |
| | Cd | 111 | | | |
| | Cd | 114 | | | |
| > | In | 115 | | 100.822 | |
| | Sn | 118 | | | |
| | Sb | 123 | | | |
| | Ba | 135 | | | |
| | Ce | 140 | | | |
| > | Tb | 159 | | 103.521 | |
| | Ho | 165 | | | |
| | Tl | 203 | | | |
| | Tl | 205 | | | |
| | Pb | 206 | | | |

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| | | | | |
|---|---|---|---|---|
| | Pb | 207 | | |
| | Pb | 208 | | |
| | U | 238 | | |
| > | Bi | 209 | | 96.380 |
| | Na | 23 | 100.432 | |
| | Mg | 24 | 101.140 | |
| | K | 39 | 98.315 | |
| | Ca | 43 | 95.808 | |
| | Fe | 54 | 94.262 | |
| | Fe | 57 | 92.330 | |
| > | Sc-1 | 45 | | |
| | Cl | 35 | | |
| | Kr | 83 | | |
| | Br | 81 | | |
| | P | 31 | | |
| | S | 34 | | |
| | Sr | 88 | | |

## QC Out of Limits

| Measurement Type | Analyte | Mass | Out of Limits Message |
|---|---|---|---|

**Sample ID: QC Std 4**
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# Method 6020 - Summary Report

**Sample ID: QC Std 5**
Sample Date/Time: Friday, May 18, 2012 11:50:47
Number of Replicates: 3
Autosampler Position: 204
Sample Description:
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

## Concentration Results

| IS | Analyte | Mass | Intensity | RSD | Conc. | SD | RSD | Units | Blank Intens. | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **Li** | 7 | 14865.6 | 5.3 | **-151.7113** | 126.414 | 83.3 | ug/L | 13493 | Standard |
| | **Be** | 9 | 342075.7 | 4.0 | **107.5907** | 2.700 | 2.5 | ug/L | 13 | Standard |
| | **Al** | 27 | 61715224.4 | 3.7 | **3910.1660** | 104.071 | 2.7 | ug/L | 8786 | Standard |
| > | **Sc** | 45 | 302199.2 | 3.1 | | | | ug/L | 280553 | Standard |
| | **Ti** | 47 | 160959.0 | 5.3 | **108.7261** | 2.737 | 2.5 | ug/L | 96 | Standard |
| | **V** | 51 | 1590080.5 | 4.4 | **103.6730** | 2.576 | 2.5 | ug/L | 3640 | Standard |
| | **Cr** | 52 | 1145943.3 | 3.7 | **102.8747** | 2.778 | 2.7 | ug/L | 11495 | Standard |
| | **Cr** | 53 | 170229.8 | 4.7 | **102.9534** | 0.157 | 0.2 | ug/L | 564 | Standard |
| | **Mn** | 55 | 1888867.2 | 1.7 | **98.3106** | 5.426 | 5.5 | ug/L | 1247 | Standard |
| | **Co** | 59 | 1345434.5 | 4.5 | **99.7672** | 0.894 | 0.9 | ug/L | 114 | Standard |
| | **Ni** | 60 | 285057.1 | 4.1 | **100.7864** | 1.094 | 1.1 | ug/L | 66 | Standard |
| | **Cu** | 65 | 243544.8 | 4.4 | **99.8800** | 0.502 | 0.5 | ug/L | 219 | Standard |
| | **Zn** | 66 | 115088.3 | 2.5 | **103.3790** | 2.407 | 2.3 | ug/L | 232 | Standard |
| > | **Ge** | 72 | 242999.8 | 4.9 | | | | ug/L | 228255 | Standard |
| | **As** | 75 | 110136.0 | 3.4 | **102.4143** | 1.631 | 1.6 | ug/L | -233 | Standard |
| | **Se** | 82 | 14284.5 | 4.0 | **100.2195** | 1.910 | 1.9 | ug/L | 23 | Standard |
| | **Se-1** | 77 | 8183.5 | 3.6 | **103.4262** | 1.667 | 1.6 | ug/L | 91 | Standard |
| > | **Ga** | 71 | 212398.2 | 4.0 | | | | mg/L | 208873 | Standard |
| | **Rb** | 85 | 3597.1 | 5.5 | | | | ug/L | 28 | Standard |
| | **Y** | 89 | 252985.5 | 4.3 | | | | ug/L | 234742 | Standard |
| > | **Rh** | 103 | 122105.5 | 4.9 | | | | ug/L | 121294 | Standard |
| | **Mo** | 98 | 362805.0 | 2.5 | **89.9829** | 0.700 | 0.8 | ug/L | 6 | Standard |
| | **Ag** | 107 | 707666.4 | 5.4 | **88.8121** | 2.022 | 2.3 | ug/L | 64 | Standard |
| | **Cd** | 111 | 425431.7 | 2.6 | **100.8554** | 1.222 | 1.2 | mg/L | 417 | Standard |
| | **Cd** | 114 | 1076588.1 | 2.5 | **101.2122** | 0.755 | 0.7 | ug/L | 1009 | Standard |
| > | **In** | 115 | 661495.6 | 3.2 | | | | ug/L | 628085 | Standard |
| | **Sn** | 118 | 1966.1 | 3.2 | **0.0778** | 0.002 | 2.2 | ug/L | 834 | Standard |
| | **Sb** | 123 | 1031911.4 | 1.9 | **102.7768** | 1.657 | 1.6 | ug/L | 22 | Standard |
| | **Ba** | 135 | 427859.9 | 2.9 | **100.4981** | 1.693 | 1.7 | ug/L | 36 | Standard |
| | **Ce** | 140 | 1640.1 | 7.3 | | | | ug/L | 44 | Standard |
| > | **Tb** | 159 | 738723.1 | 3.6 | | | | ug/L | 691511 | Standard |
| | **Ho** | 165 | 17.7 | 37.7 | | | | ug/L | 6 | Standard |
| | **Tl** | 203 | 1443212.1 | 3.1 | **102.8878** | 0.364 | 0.4 | ug/L | 71 | Standard |
| | **Tl** | 205 | 3642112.4 | 2.6 | **107.1323** | 0.438 | 0.4 | ug/L | 177 | Standard |
| | **Pb** | 206 | 1166741.2 | 2.9 | **102.6617** | 0.739 | 0.7 | ug/L | 268 | Standard |
| | **Pb** | 207 | 1003189.1 | 3.0 | **102.5783** | 0.430 | 0.4 | ug/L | 245 | Standard |
| | **Pb** | 208 | 4700523.3 | 2.7 | **104.6747** | 0.752 | 0.7 | ug/L | 1057 | Standard |
| | **U** | 238 | 2500557.9 | 3.0 | **106.3493** | 1.570 | 1.5 | ug/L | 9 | Standard |
| > | **Bi** | 209 | 389803.5 | 3.0 | | | | ug/L | 389590 | Standard |
| | **Na** | 23 | 38413.7 | 2.8 | **11.6217** | 0.151 | 1.3 | mg/L | 92 | Standard |
| | **Mg** | 24 | 1971390.0 | 15.2 | **4.3694** | 0.525 | 12.0 | mg/L | 142 | Standard |

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| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | **K** | 39 | 50353.7 | 4.8 | **4.6899** | 0.193 | 4.1 | mg/L | 635 | Standard |
| | **Ca** | 43 | 6157.9 | 1.0 | **13.5983** | 0.305 | 2.2 | mg/L | 63 | Standard |
| | **Fe** | 54 | 63945.7 | 4.0 | **11.1924** | 0.298 | 2.7 | mg/L | 901 | Standard |
| | **Fe** | 57 | 1853709.4 | 3.4 | **11.1966** | 0.316 | 2.8 | mg/L | 5948 | Standard |
| > | **Sc-1** | 45 | 302199.2 | 3.1 | | | | mg/L | 280553 | Standard |
| | **Cl** | 35 | 60748.9 | 2.1 | | | | ug/L | 931 | Standard |
| | **Kr** | 83 | 53.9 | 21.4 | | | | ug/L | 40 | Standard |
| | **Br** | 81 | 12389.2 | 1.7 | | | | ug/L | 11862 | Standard |
| | **P** | 31 | 4794209.2 | 3.1 | | | | ug/L | 77079 | Standard |
| | **S** | 34 | 1530391.6 | 4.8 | | | | ug/L | 1028777 | Standard |
| | **Sr** | 88 | 1381.7 | 2.1 | | | | ug/L | 318 | Standard |

## QC Calculated Values

| | Analyte | Mass | QC Std % Recovery | Int Std % Recovery | Spike % Recovery |
|---|---|---|---|---|---|
| | Li | 7 | | | |
| | Be | 9 | | | |
| | Al | 27 | 78.203 | | |
| > | Sc | 45 | | | |
| | Ti | 47 | 108.726 | | |
| | V | 51 | 103.673 | | |
| | Cr | 52 | 102.875 | | |
| | Cr | 53 | | | |
| | Mn | 55 | 98.311 | | |
| | Co | 59 | 99.767 | | |
| | Ni | 60 | 100.786 | | |
| | Cu | 65 | 99.880 | | |
| | Zn | 66 | 103.379 | | |
| > | Ge | 72 | | 106.460 | |
| | As | 75 | 102.414 | | |
| | Se | 82 | 100.220 | | |
| | Se-1 | 77 | | | |
| > | Ga | 71 | | 101.688 | |
| | Rb | 85 | | | |
| | Y | 89 | | | |
| > | Rh | 103 | | 100.669 | |
| | Mo | 98 | 89.983 | | |
| | Ag | 107 | 88.812 | | |
| | Cd | 111 | 100.855 | | |
| | Cd | 114 | | | |
| > | In | 115 | | 105.320 | |
| | Sn | 118 | | | |
| | Sb | 123 | 102.777 | | |
| | Ba | 135 | 100.498 | | |
| | Ce | 140 | | | |
| > | Tb | 159 | | 106.827 | |
| | Ho | 165 | | | |
| | Tl | 203 | 102.888 | | |
| | Tl | 205 | | | |
| | Pb | 206 | 102.662 | | |

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| | | | | |
|---|---|---|---|---|
| | Pb | 207 | 102.578 | |
| | Pb | 208 | 104.675 | |
| | U | 238 | 106.349 | |
| > | Bi | 209 | | 100.055 |
| | Na | 23 | 92.974 | |
| | Mg | 24 | 87.388 | |
| | K | 39 | 93.798 | |
| | Ca | 43 | 90.655 | |
| | Fe | 54 | 89.540 | |
| | Fe | 57 | 89.572 | |
| > | Sc-1 | 45 | | |
| | Cl | 35 | | |
| | Kr | 83 | | |
| | Br | 81 | | |
| | P | 31 | | |
| | S | 34 | | |
| | Sr | 88 | | |

## QC Out of Limits

| Measurement Type | Analyte | Mass | Out of Limits Message |
|---|---|---|---|
| QC Std 5 | Al | 27 | |

**Sample ID: QC Std 5**
Report Date/Time: Friday, May 18, 2012 11:53:20
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# Method 6020 - Summary Report

**Sample ID: QC Std 6**
Sample Date/Time: Friday, May 18, 2012 11:53:42
Number of Replicates: 3
Autosampler Position: 101
Sample Description:
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

## Concentration Results

| IS | Analyte | Mass | Intensity | RSD | Conc. | SD | RSD | Units | Blank Intens. | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| ⌈ | **Li** | 7 | 13676.2 | 6.5 | **194.3843** | 113.986 | 58.6 | ug/L | 13493 | Standard |
| \| | **Be** | 9 | 160066.8 | 3.8 | **51.5454** | 0.795 | 1.5 | ug/L | 13 | Standard |
| \| | **Al** | 27 | 799684.9 | 3.5 | **51.2416** | 1.357 | 2.6 | ug/L | 8786 | Standard |
| ⌊> | **Sc** | 45 | 295212.1 | 4.5 | | | | ug/L | 280553 | Standard |
| ⌈ | **Ti** | 47 | 148279.4 | 5.4 | **104.5617** | 1.318 | 1.3 | ug/L | 96 | Standard |
| \| | **V** | 51 | 771046.8 | 5.1 | **52.3454** | 0.491 | 0.9 | ug/L | 3640 | Standard |
| \| | **Cr** | 52 | 569758.0 | 4.6 | **52.8580** | 0.387 | 0.7 | ug/L | 11495 | Standard |
| \| | **Cr** | 53 | 83415.9 | 3.7 | **52.5366** | 0.578 | 1.1 | ug/L | 564 | Standard |
| \| | **Mn** | 55 | 958865.7 | 5.3 | **51.9817** | 0.655 | 1.3 | ug/L | 1247 | Standard |
| \| | **Co** | 59 | 668972.6 | 5.4 | **51.7743** | 0.661 | 1.3 | ug/L | 114 | Standard |
| \| | **Ni** | 60 | 138930.6 | 6.1 | **51.2496** | 1.093 | 2.1 | ug/L | 66 | Standard |
| \| | **Cu** | 65 | 120739.7 | 4.2 | **51.6591** | 0.467 | 0.9 | ug/L | 219 | Standard |
| \| | **Zn** | 66 | 55382.2 | 4.6 | **51.7758** | 0.356 | 0.7 | ug/L | 232 | Standard |
| \| > | **Ge** | 72 | 232680.1 | 4.2 | | | | ug/L | 228255 | Standard |
| \| | **As** | 75 | 53355.5 | 5.2 | **51.8935** | 0.582 | 1.1 | ug/L | -233 | Standard |
| \| | **Se** | 82 | 7079.9 | 7.9 | **51.7315** | 1.993 | 3.9 | ug/L | 23 | Standard |
| ⌊ | **Se-1** | 77 | 3914.8 | 3.7 | **51.0869** | 0.258 | 0.5 | ug/L | 91 | Standard |
| ⌈> | **Ga** | 71 | 210234.5 | 5.3 | | | | mg/L | 208873 | Standard |
| ⌊ | **Rb** | 85 | 1045.0 | 17.0 | | | | ug/L | 28 | Standard |
| ⌈ | **Y** | 89 | 241955.0 | 7.3 | | | | ug/L | 234742 | Standard |
| ⌊> | **Rh** | 103 | 123250.8 | 6.8 | | | | ug/L | 121294 | Standard |
| ⌈ | **Mo** | 98 | 394169.1 | 5.2 | **100.6206** | 0.513 | 0.5 | ug/L | 6 | Standard |
| \| | **Ag** | 107 | 404717.6 | 7.9 | **52.2570** | 1.565 | 3.0 | ug/L | 64 | Standard |
| \| | **Cd** | 111 | 210268.4 | 4.9 | **51.2617** | 0.257 | 0.5 | mg/L | 417 | Standard |
| \| | **Cd** | 114 | 531937.8 | 3.8 | **51.4474** | 0.668 | 1.3 | ug/L | 1009 | Standard |
| \| > | **In** | 115 | 642559.2 | 5.0 | | | | ug/L | 628085 | Standard |
| \| | **Sn** | 118 | 700136.9 | 4.1 | **51.4444** | 0.505 | 1.0 | ug/L | 834 | Standard |
| \| | **Sb** | 123 | 502478.0 | 3.9 | **51.5239** | 0.648 | 1.3 | ug/L | 22 | Standard |
| ⌊ | **Ba** | 135 | 210437.7 | 4.2 | **50.8859** | 0.453 | 0.9 | ug/L | 36 | Standard |
| ⌈ | **Ce** | 140 | 815.0 | 5.3 | | | | ug/L | 44 | Standard |
| ⌊> | **Tb** | 159 | 710389.2 | 4.5 | | | | ug/L | 691511 | Standard |
| ⌈ | **Ho** | 165 | 12.0 | 46.4 | | | | ug/L | 6 | Standard |
| \| | **Tl** | 203 | 710454.6 | 4.9 | **51.5652** | 0.694 | 1.3 | ug/L | 71 | Standard |
| \| | **Tl** | 205 | 1706925.5 | 4.5 | **51.1186** | 0.369 | 0.7 | ug/L | 177 | Standard |
| \| | **Pb** | 206 | 573902.9 | 4.2 | **51.4111** | 0.548 | 1.1 | ug/L | 268 | Standard |
| \| | **Pb** | 207 | 498786.5 | 4.4 | **51.9212** | 0.442 | 0.9 | ug/L | 245 | Standard |
| \| | **Pb** | 208 | 2256362.1 | 4.2 | **51.1507** | 0.247 | 0.5 | ug/L | 1057 | Standard |
| \| | **U** | 238 | 1180091.8 | 4.3 | **51.1037** | 0.379 | 0.7 | ug/L | 9 | Standard |
| ⌊> | **Bi** | 209 | 382760.0 | 3.8 | | | | ug/L | 389590 | Standard |
| ⌈ | **Na** | 23 | 17233.2 | 6.3 | **5.3134** | 0.194 | 3.6 | mg/L | 92 | Standard |
| \| | **Mg** | 24 | 2337390.9 | 17.0 | **5.2974** | 0.698 | 13.2 | mg/L | 142 | Standard |

**Sample ID: QC Std 6**
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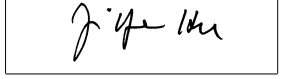

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | **K** | 39 | 54175.1 | 4.3 | **5.1725** | 0.118 | 2.3 | mg/L | 635 | Standard |
| | **Ca** | 43 | 2323.5 | 4.5 | **5.1539** | 0.220 | 4.3 | mg/L | 63 | Standard |
| | **Fe** | 54 | 28859.4 | 4.1 | **5.0865** | 0.089 | 1.7 | mg/L | 901 | Standard |
| | **Fe** | 57 | 827398.8 | 4.2 | **5.0952** | 0.087 | 1.7 | mg/L | 5948 | Standard |
| > | **Sc-1** | 45 | 295212.1 | 4.5 | | | | mg/L | 280553 | Standard |
| | **Cl** | 35 | 1420.1 | 26.0 | | | | ug/L | 931 | Standard |
| | **Kr** | 83 | 40.6 | 10.7 | | | | ug/L | 40 | Standard |
| | **Br** | 81 | 11732.9 | 6.0 | | | | ug/L | 11862 | Standard |
| | **P** | 31 | 75026.8 | 7.5 | | | | ug/L | 77079 | Standard |
| | **S** | 34 | 887739.7 | 3.2 | | | | ug/L | 1028777 | Standard |
| | **Sr** | 88 | 665.0 | 25.3 | | | | ug/L | 318 | Standard |

## QC Calculated Values

| | Analyte | Mass | QC Std % Recovery | Int Std % Recovery | Spike % Recovery |
|---|---|---|---|---|---|
| | Li | 7 | | | |
| | Be | 9 | | | |
| | Al | 27 | 102.483 | | |
| > | Sc | 45 | | | |
| | Ti | 47 | 104.562 | | |
| | V | 51 | 104.691 | | |
| | Cr | 52 | 105.716 | | |
| | Cr | 53 | | | |
| | Mn | 55 | 103.963 | | |
| | Co | 59 | 103.549 | | |
| | Ni | 60 | 102.499 | | |
| | Cu | 65 | 103.318 | | |
| | Zn | 66 | 103.552 | | |
| > | Ge | 72 | | 101.939 | |
| | As | 75 | 103.787 | | |
| | Se | 82 | 103.463 | | |
| | Se-1 | 77 | | | |
| > | Ga | 71 | | 100.652 | |
| | Rb | 85 | | | |
| | Y | 89 | | | |
| > | Rh | 103 | | 101.614 | |
| | Mo | 98 | 100.621 | | |
| | Ag | 107 | 104.514 | | |
| | Cd | 111 | 102.523 | | |
| | Cd | 114 | | | |
| > | In | 115 | | 102.305 | |
| | Sn | 118 | 102.889 | | |
| | Sb | 123 | 103.048 | | |
| | Ba | 135 | 101.772 | | |
| | Ce | 140 | | | |
| > | Tb | 159 | | 102.730 | |
| | Ho | 165 | | | |
| | Tl | 203 | 103.130 | | |
| | Tl | 205 | | | |
| | Pb | 206 | 102.822 | | |

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| | | | | |
|---|---|---|---|---|
| | Pb | 207 | 103.842 | |
| | Pb | 208 | 102.301 | |
| | U | 238 | 102.207 | |
| > | Bi | 209 | | 98.247 |
| | Na | 23 | 106.268 | |
| | Mg | 24 | 105.948 | |
| | K | 39 | 103.451 | |
| | Ca | 43 | 103.077 | |
| | Fe | 54 | 101.729 | |
| | Fe | 57 | 101.904 | |
| > | Sc-1 | 45 | | |
| | Cl | 35 | | |
| | Kr | 83 | | |
| | Br | 81 | | |
| | P | 31 | | |
| | S | 34 | | |
| | Sr | 88 | | |

## QC Out of Limits

| Measurement Type | Analyte | Mass | Out of Limits Message |
|---|---|---|---|

**Sample ID: QC Std 6**
Report Date/Time: Friday, May 18, 2012 11:56:16
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# Method 6020 - Summary Report

**Sample ID: QC Std 7**
Sample Date/Time: Friday, May 18, 2012 11:56:36
Number of Replicates: 3
Autosampler Position: 102
Sample Description:
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

## Concentration Results

| IS | Analyte | Mass | Intensity | RSD | Conc. | SD | RSD | Units | Blank Intens. | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| ⌈ | **Li** | 7 | 13754.6 | 6.2 | **-113.9070** | 23.395 | 20.5 | ug/L | 13493 | Standard |
| \| | **Be** | 9 | 75.0 | 57.7 | **0.0116** | 0.013 | 116.1 | ug/L | 13 | Standard |
| \| | **Al** | 27 | 28373.8 | 93.9 | **1.2402** | 1.705 | 137.5 | ug/L | 8786 | Standard |
| ⌊> | **Sc** | 45 | 281545.2 | 6.3 | | | | ug/L | 280553 | Standard |
| ⌈ | **Ti** | 47 | 167.3 | 51.4 | **0.0362** | 0.058 | 160.4 | ug/L | 96 | Standard |
| \| | **V** | 51 | 3643.9 | 15.1 | **0.0048** | 0.029 | 617.7 | ug/L | 3640 | Standard |
| \| | **Cr** | 52 | 10338.9 | 5.2 | **-0.0625** | 0.033 | 53.4 | ug/L | 11495 | Standard |
| \| | **Cr** | 53 | 548.3 | 9.0 | **0.0432** | 0.043 | 99.4 | ug/L | 564 | Standard |
| \| | **Mn** | 55 | 2331.5 | 54.4 | **0.0620** | 0.066 | 106.9 | ug/L | 1247 | Standard |
| \| | **Co** | 59 | 429.3 | 71.4 | **0.0207** | 0.023 | 112.3 | ug/L | 114 | Standard |
| \| | **Ni** | 60 | 127.3 | 59.0 | **0.0260** | 0.027 | 102.4 | ug/L | 66 | Standard |
| \| | **Cu** | 65 | 239.3 | 23.4 | **0.0091** | 0.020 | 219.7 | ug/L | 219 | Standard |
| \| | **Zn** | 66 | 265.0 | 27.8 | **-0.0075** | 0.062 | 820.7 | ug/L | 232 | Standard |
| \| > | **Ge** | 72 | 221459.0 | 6.1 | | | | ug/L | 228255 | Standard |
| \| | **As** | 75 | -188.7 | 19.0 | **0.0451** | 0.036 | 79.3 | ug/L | -233 | Standard |
| \| | **Se** | 82 | 24.6 | 36.1 | **0.0430** | 0.061 | 141.7 | ug/L | 23 | Standard |
| ⌊ | **Se-1** | 77 | 85.3 | 4.1 | **0.0605** | 0.052 | 85.4 | ug/L | 91 | Standard |
| ⌈> | **Ga** | 71 | 198235.5 | 6.7 | | | | mg/L | 208873 | Standard |
| ⌊ | **Rb** | 85 | 30.0 | 83.3 | | | | ug/L | 28 | Standard |
| ⌈ | **Y** | 89 | 225003.1 | 7.7 | | | | ug/L | 234742 | Standard |
| ⌊> | **Rh** | 103 | 116891.9 | 6.9 | | | | ug/L | 121294 | Standard |
| ⌈ | **Mo** | 98 | 218.6 | 38.8 | **0.0624** | 0.021 | 33.2 | ug/L | 6 | Standard |
| \| | **Ag** | 107 | 169.3 | 49.7 | **0.0115** | 0.011 | 93.3 | ug/L | 64 | Standard |
| \| | **Cd** | 111 | 454.5 | 22.9 | **0.0143** | 0.024 | 170.8 | mg/L | 417 | Standard |
| \| | **Cd** | 114 | 1142.9 | 12.8 | **0.0157** | 0.012 | 78.7 | ug/L | 1009 | Standard |
| \| > | **In** | 115 | 611376.8 | 5.6 | | | | ug/L | 628085 | Standard |
| \| | **Sn** | 118 | 976.4 | 11.6 | **0.0127** | 0.006 | 50.0 | ug/L | 834 | Standard |
| \| | **Sb** | 123 | 1796.6 | 49.0 | **0.1868** | 0.086 | 46.1 | ug/L | 22 | Standard |
| ⌊ | **Ba** | 135 | 184.0 | 98.6 | **0.0344** | 0.044 | 129.1 | ug/L | 36 | Standard |
| ⌈ | **Ce** | 140 | 50.0 | 9.2 | | | | ug/L | 44 | Standard |
| ⌊> | **Tb** | 159 | 669027.2 | 6.6 | | | | ug/L | 691511 | Standard |
| ⌈ | **Ho** | 165 | 7.7 | 58.8 | | | | ug/L | 6 | Standard |
| \| | **Tl** | 203 | 442.7 | 105.7 | **0.0275** | 0.034 | 123.7 | ug/L | 71 | Standard |
| \| | **Tl** | 205 | 1080.7 | 103.3 | **0.0291** | 0.033 | 114.7 | ug/L | 177 | Standard |
| \| | **Pb** | 206 | 560.7 | 68.8 | **0.0277** | 0.034 | 123.1 | ug/L | 268 | Standard |
| \| | **Pb** | 207 | 465.0 | 69.7 | **0.0257** | 0.033 | 129.6 | ug/L | 245 | Standard |
| \| | **Pb** | 208 | 2215.8 | 70.4 | **0.0276** | 0.035 | 126.9 | ug/L | 1057 | Standard |
| \| | **U** | 238 | 602.0 | 107.8 | **0.0260** | 0.028 | 108.0 | ug/L | 9 | Standard |
| ⌊> | **Bi** | 209 | 369588.1 | 5.5 | | | | ug/L | 389590 | Standard |
| ⌈ | **Na** | 23 | 176.7 | 51.9 | **0.0161** | 0.027 | 167.4 | mg/L | 92 | Standard |
| \| | **Mg** | 24 | 4811.7 | 135.1 | **0.0095** | 0.015 | 155.3 | mg/L | 142 | Standard |

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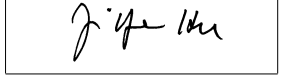

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | **K** | 39 | 683.3 | 6.2 | **0.0061** | 0.007 | 115.7 | mg/L | 635 | Standard |
| | **Ca** | 43 | 130.0 | 15.4 | **0.1505** | 0.049 | 32.6 | mg/L | 63 | Standard |
| | **Fe** | 54 | 914.2 | 11.5 | **0.0160** | 0.026 | 164.6 | mg/L | 901 | Standard |
| | **Fe** | 57 | 6454.8 | 27.0 | **0.0039** | 0.010 | 258.1 | mg/L | 5948 | Standard |
| > | **Sc-1** | 45 | 281545.2 | 6.3 | | | | mg/L | 280553 | Standard |
| | **Cl** | 35 | 1053.0 | 11.3 | | | | ug/L | 931 | Standard |
| | **Kr** | 83 | 38.0 | 13.7 | | | | ug/L | 40 | Standard |
| | **Br** | 81 | 11665.3 | 4.2 | | | | ug/L | 11862 | Standard |
| | **P** | 31 | 73496.7 | 6.8 | | | | ug/L | 77079 | Standard |
| | **S** | 34 | 919864.2 | 3.7 | | | | ug/L | 1028777 | Standard |
| | **Sr** | 88 | 1866.9 | 121.7 | | | | ug/L | 318 | Standard |

## QC Calculated Values

| | Analyte | Mass | QC Std % Recovery | Int Std % Recovery | Spike % Recovery |
|---|---|---|---|---|---|
| | Li | 7 | | | |
| | Be | 9 | | | |
| | Al | 27 | | | |
| > | Sc | 45 | | | |
| | Ti | 47 | | | |
| | V | 51 | | | |
| | Cr | 52 | | | |
| | Cr | 53 | | | |
| | Mn | 55 | | | |
| | Co | 59 | | | |
| | Ni | 60 | | | |
| | Cu | 65 | | | |
| | Zn | 66 | | | |
| > | Ge | 72 | | 97.023 | |
| | As | 75 | | | |
| | Se | 82 | | | |
| | Se-1 | 77 | | | |
| > | Ga | 71 | | 94.907 | |
| | Rb | 85 | | | |
| | Y | 89 | | | |
| > | Rh | 103 | | 96.371 | |
| | Mo | 98 | | | |
| | Ag | 107 | | | |
| | Cd | 111 | | | |
| | Cd | 114 | | | |
| > | In | 115 | | 97.340 | |
| | Sn | 118 | | | |
| | Sb | 123 | | | |
| | Ba | 135 | | | |
| | Ce | 140 | | | |
| > | Tb | 159 | | 96.749 | |
| | Ho | 165 | | | |
| | Tl | 203 | | | |
| | Tl | 205 | | | |
| | Pb | 206 | | | |

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| | | | |
|---|---|---|---|
| | Pb | 207 | |
| | Pb | 208 | |
| | U | 238 | |
| > | Bi | 209 | 94.866 |
| | Na | 23 | |
| | Mg | 24 | |
| | K | 39 | |
| | Ca | 43 | |
| | Fe | 54 | |
| | Fe | 57 | |
| > | Sc-1 | 45 | |
| | Cl | 35 | |
| | Kr | 83 | |
| | Br | 81 | |
| | P | 31 | |
| | S | 34 | |
| | Sr | 88 | |

## QC Out of Limits

| Measurement Type | Analyte | Mass | Out of Limits Message |
|---|---|---|---|

**Sample ID: QC Std 7**
Report Date/Time: Friday, May 18, 2012 11:59:09
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# Method 6020 - Summary Report

**Sample ID: QC Std 8**
Sample Date/Time: Friday, May 18, 2012 11:59:31
Number of Replicates: 3
Autosampler Position: 202
Sample Description:
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

## Concentration Results

| IS | Analyte | Mass | Intensity | RSD | Conc. | SD | RSD | Units | Blank Intens. | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| ⌈ | **Li** | 7 | 14058.2 | 6.2 | **-88.8292** | 177.732 | 200.1 | ug/L | 13493 | Standard |
| \| | **Be** | 9 | 248.3 | 140.7 | **0.0639** | 0.107 | 166.7 | ug/L | 13 | Standard |
| \| | **Al** | 27 | 42038.8 | 72.8 | **2.0630** | 1.836 | 89.0 | ug/L | 8786 | Standard |
| ⌊> | **Sc** | 45 | 289040.9 | 6.1 | | | | ug/L | 280553 | Standard |
| ⌈ | **Ti** | 47 | 266.3 | 100.0 | **0.1013** | 0.181 | 178.6 | ug/L | 96 | Standard |
| \| | **V** | 51 | 9656.4 | 5.5 | **0.4214** | 0.023 | 5.3 | ug/L | 3640 | Standard |
| \| | **Cr** | 52 | 19417.8 | 3.7 | **0.7990** | 0.032 | 4.0 | ug/L | 11495 | Standard |
| \| | **Cr** | 53 | 1931.8 | 10.3 | **0.9332** | 0.073 | 7.8 | ug/L | 564 | Standard |
| \| | **Mn** | 55 | 12035.9 | 17.3 | **0.5999** | 0.088 | 14.6 | ug/L | 1247 | Standard |
| \| | **Co** | 59 | 6124.3 | 24.0 | **0.4711** | 0.095 | 20.1 | ug/L | 114 | Standard |
| \| | **Ni** | 60 | 4514.3 | 10.5 | **1.6881** | 0.106 | 6.3 | ug/L | 66 | Standard |
| \| | **Cu** | 65 | 2178.2 | 14.4 | **0.8592** | 0.097 | 11.3 | ug/L | 219 | Standard |
| \| | **Zn** | 66 | 9069.4 | 4.7 | **8.4945** | 0.090 | 1.1 | ug/L | 232 | Standard |
| \| > | **Ge** | 72 | 226318.8 | 4.3 | | | | ug/L | 228255 | Standard |
| \| | **As** | 75 | 253.3 | 20.7 | **0.4885** | 0.041 | 8.4 | ug/L | -233 | Standard |
| \| | **Se** | 82 | 81.6 | 16.7 | **0.4675** | 0.080 | 17.2 | ug/L | 23 | Standard |
| ⌊ | **Se-1** | 77 | 109.0 | 10.6 | **0.3557** | 0.105 | 29.5 | ug/L | 91 | Standard |
| ⌈> | **Ga** | 71 | 202299.3 | 5.6 | | | | mg/L | 208873 | Standard |
| ⌊ | **Rb** | 85 | 131.7 | 130.6 | | | | ug/L | 28 | Standard |
| ⌈ | **Y** | 89 | 229119.2 | 3.6 | | | | ug/L | 234742 | Standard |
| ⌊> | **Rh** | 103 | 118954.6 | 3.9 | | | | ug/L | 121294 | Standard |
| ⌈ | **Mo** | 98 | 722.6 | 127.7 | **0.1964** | 0.247 | 126.0 | ug/L | 6 | Standard |
| \| | **Ag** | 107 | 3617.8 | 17.0 | **0.4752** | 0.078 | 16.4 | ug/L | 64 | Standard |
| \| | **Cd** | 111 | 1616.3 | 16.0 | **0.3088** | 0.064 | 20.6 | mg/L | 417 | Standard |
| \| | **Cd** | 114 | 3978.0 | 16.8 | **0.3003** | 0.064 | 21.3 | ug/L | 1009 | Standard |
| \| > | **In** | 115 | 616927.7 | 3.0 | | | | ug/L | 628085 | Standard |
| \| | **Sn** | 118 | 1003.0 | 31.6 | **0.0141** | 0.024 | 171.5 | ug/L | 834 | Standard |
| \| | **Sb** | 123 | 4640.3 | 10.8 | **0.4910** | 0.044 | 9.1 | ug/L | 22 | Standard |
| ⌊ | **Ba** | 135 | 3292.7 | 10.7 | **0.8172** | 0.082 | 10.0 | ug/L | 36 | Standard |
| ⌈ | **Ce** | 140 | 45.7 | 16.4 | | | | ug/L | 44 | Standard |
| ⌊> | **Tb** | 159 | 675199.6 | 4.0 | | | | ug/L | 691511 | Standard |
| ⌈ | **Ho** | 165 | 6.7 | 22.9 | | | | ug/L | 6 | Standard |
| \| | **Tl** | 203 | 1582.8 | 25.2 | **0.1121** | 0.028 | 24.9 | ug/L | 71 | Standard |
| \| | **Tl** | 205 | 3795.2 | 24.7 | **0.1122** | 0.026 | 23.6 | ug/L | 177 | Standard |
| \| | **Pb** | 206 | 2831.6 | 13.7 | **0.2359** | 0.028 | 12.1 | ug/L | 268 | Standard |
| \| | **Pb** | 207 | 2432.2 | 9.7 | **0.2355** | 0.017 | 7.3 | ug/L | 245 | Standard |
| \| | **Pb** | 208 | 11022.9 | 11.1 | **0.2320** | 0.021 | 8.8 | ug/L | 1057 | Standard |
| \| | **U** | 238 | 10065.7 | 16.7 | **0.4446** | 0.054 | 12.2 | ug/L | 9 | Standard |
| ⌊> | **Bi** | 209 | 373319.2 | 4.4 | | | | ug/L | 389590 | Standard |
| ⌈ | **Na** | 23 | 175.0 | 37.5 | **0.0152** | 0.022 | 146.6 | mg/L | 92 | Standard |
| \| | **Mg** | 24 | 6620.5 | 85.6 | **0.0137** | 0.014 | 99.1 | mg/L | 142 | Standard |

**Sample ID: QC Std 8**
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| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | **K** | 39 | 745.0 | 22.7 | **0.0097** | 0.012 | 125.3 | mg/L | 635 | Standard |
| | **Ca** | 43 | 73.3 | 21.9 | **0.0093** | 0.037 | 392.2 | mg/L | 63 | Standard |
| | **Fe** | 54 | 904.0 | 6.3 | **0.0089** | 0.006 | 64.1 | mg/L | 901 | Standard |
| | **Fe** | 57 | 6826.6 | 27.4 | **0.0049** | 0.009 | 187.4 | mg/L | 5948 | Standard |
| > | **Sc-1** | 45 | 289040.9 | 6.1 | | | | mg/L | 280553 | Standard |
| | **Cl** | 35 | 1002.4 | 8.5 | | | | ug/L | 931 | Standard |
| | **Kr** | 83 | 37.0 | 6.3 | | | | ug/L | 40 | Standard |
| | **Br** | 81 | 11924.7 | 4.6 | | | | ug/L | 11862 | Standard |
| | **P** | 31 | 80459.7 | 17.1 | | | | ug/L | 77079 | Standard |
| | **S** | 34 | 939867.9 | 4.9 | | | | ug/L | 1028777 | Standard |
| | **Sr** | 88 | 23156.1 | 168.6 | | | | ug/L | 318 | Standard |

## QC Calculated Values

| | Analyte | Mass | QC Std % Recovery | Int Std % Recovery | Spike % Recovery |
|---|---|---|---|---|---|
| | Li | 7 | | | |
| | Be | 9 | | | |
| | Al | 27 | | | |
| > | Sc | 45 | | | |
| | Ti | 47 | | | |
| | V | 51 | 105.353 | | |
| | Cr | 52 | 99.879 | | |
| | Cr | 53 | | | |
| | Mn | 55 | 119.973 | | |
| | Co | 59 | 117.775 | | |
| | Ni | 60 | 105.504 | | |
| | Cu | 65 | 107.402 | | |
| | Zn | 66 | 135.912 | | |
| > | Ge | 72 | | 99.152 | |
| | As | 75 | 122.128 | | |
| | Se | 82 | 116.879 | | |
| | Se-1 | 77 | | | |
| > | Ga | 71 | | 96.853 | |
| | Rb | 85 | | | |
| | Y | 89 | | | |
| > | Rh | 103 | | 98.072 | |
| | Mo | 98 | | | |
| | Ag | 107 | 118.806 | | |
| | Cd | 111 | 128.651 | | |
| | Cd | 114 | | | |
| > | In | 115 | | 98.224 | |
| | Sn | 118 | | | |
| | Sb | 123 | 122.747 | | |
| | Ba | 135 | 108.954 | | |
| | Ce | 140 | | | |
| > | Tb | 159 | | 97.641 | |
| | Ho | 165 | | | |
| | Tl | 203 | 140.171 | | |
| | Tl | 205 | | | |
| | Pb | 206 | | | |

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| | | | | |
|---|---|---|---|---|
| | Pb | 207 | | |
| | Pb | 208 | 115.981 | |
| | U | 238 | 111.162 | |
| > | Bi | 209 | | 95.824 |
| | Na | 23 | | |
| | Mg | 24 | | |
| | K | 39 | | |
| | Ca | 43 | | |
| | Fe | 54 | | |
| | Fe | 57 | | |
| > | Sc-1 | 45 | | |
| | Cl | 35 | | |
| | Kr | 83 | | |
| | Br | 81 | | |
| | P | 31 | | |
| | S | 34 | | |
| | Sr | 88 | | |

## QC Out of Limits

| Measurement Type | Analyte | Mass | Out of Limits Message |
|---|---|---|---|
| QC Std 8 | Zn | 66 | |
| QC Std 8 | Cd | 111 | |
| QC Std 8 | Tl | 203 | |



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# Method 6020 - Summary Report

**Sample ID: L1204038406**
Sample Date/Time: Friday, May 18, 2012 12:05:09
Number of Replicates: 3
Autosampler Position: 228
Sample Description: 1
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

## Concentration Results

| IS | Analyte | Mass | Intensity | RSD | Conc. | SD | RSD | Units | Blank Intens. | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **Li** | 7 | 115814.5 | 8.2 | **-62810.3766** | 931.303 | 1.5 | ug/L | 13493 | Standard |
| | **Be** | 9 | 500822.3 | 6.6 | **233.9423** | 1.352 | 0.6 | ug/L | 13 | Standard |
| | **Al** | 27 | 55243.9 | 3.4 | **4.5505** | 0.179 | 3.9 | ug/L | 8786 | Standard |
| > | **Sc** | 45 | 203511.8 | 6.8 | | | | ug/L | 280553 | Standard |
| | **Ti** | 47 | 1261.4 | 8.6 | **1.4700** | 0.100 | 6.8 | ug/L | 96 | Standard |
| | **V** | 51 | 4448110.2 | 5.6 | **530.6926** | 20.805 | 3.9 | ug/L | 3640 | Standard |
| | **Cr** | 52 | 3841837.1 | 6.2 | **635.2554** | 28.285 | 4.5 | ug/L | 11495 | Standard |
| | **Cr** | 53 | 623721.4 | 5.9 | **690.9100** | 29.363 | 4.2 | ug/L | 564 | Standard |
| | **Mn** | 55 | 72530.4 | 8.6 | **6.8299** | 0.695 | 10.2 | ug/L | 1247 | Standard |
| | **Co** | 59 | 3844114.6 | 6.2 | **520.6768** | 22.595 | 4.3 | ug/L | 114 | Standard |
| | **Ni** | 60 | 1984.8 | 11.1 | **1.2581** | 0.116 | 9.3 | ug/L | 66 | Standard |
| | **Cu** | 65 | 454365.1 | 5.0 | **340.6037** | 10.325 | 3.0 | ug/L | 219 | Standard |
| | **Zn** | 66 | 530668.6 | 4.1 | **872.2405** | 17.720 | 2.0 | ug/L | 232 | Standard |
| > | **Ge** | 72 | 132970.5 | 2.5 | | | | ug/L | 228255 | Standard |
| | **As** | 75 | 1304.6 | 47.4 | **2.4340** | 1.012 | 41.6 | ug/L | -233 | Standard |
| | **Se** | 82 | 6286.8 | 8.5 | **80.4878** | 5.404 | 6.7 | ug/L | 23 | Standard |
| | **Se-1** | 77 | 3685.8 | 7.9 | **84.8369** | 5.333 | 6.3 | ug/L | 91 | Standard |
| > | **Ga** | 71 | 122406.4 | 4.4 | | | | mg/L | 208873 | Standard |
| | **Rb** | 85 | 1568630.8 | 7.0 | | | | ug/L | 28 | Standard |
| | **Y** | 89 | 139486.1 | 2.6 | | | | ug/L | 234742 | Standard |
| > | **Rh** | 103 | 63327.9 | 4.1 | | | | ug/L | 121294 | Standard |
| | **Mo** | 98 | 697.1 | 8.3 | **0.3215** | 0.018 | 5.5 | ug/L | 6 | Standard |
| | **Ag** | 107 | 42.0 | 14.9 | **-0.0017** | 0.001 | 88.6 | ug/L | 64 | Standard |
| | **Cd** | 111 | 357706.3 | 6.1 | **155.6952** | 4.857 | 3.1 | mg/L | 417 | Standard |
| | **Cd** | 114 | 926442.8 | 5.0 | **159.9471** | 3.151 | 2.0 | ug/L | 1009 | Standard |
| > | **In** | 115 | 360155.8 | 3.2 | | | | ug/L | 628085 | Standard |
| | **Sn** | 118 | 1145.0 | 7.8 | **0.0874** | 0.007 | 8.0 | ug/L | 834 | Standard |
| | **Sb** | 123 | 5686971.1 | 5.9 | **1039.5112** | 29.955 | 2.9 | ug/L | 22 | Standard |
| | **Ba** | 135 | 761733.4 | 4.5 | **328.5139** | 4.954 | 1.5 | ug/L | 36 | Standard |
| | **Ce** | 140 | 350.3 | 12.5 | | | | ug/L | 44 | Standard |
| > | **Tb** | 159 | 420720.1 | 2.1 | | | | ug/L | 691511 | Standard |
| | **Ho** | 165 | 18.0 | 20.0 | | | | ug/L | 6 | Standard |
| | **Tl** | 203 | 2828488.0 | 3.4 | **396.3199** | 15.154 | 3.8 | ug/L | 71 | Standard |
| | **Tl** | 205 | 6725336.6 | 3.4 | **388.7818** | 15.313 | 3.9 | ug/L | 177 | Standard |
| | **Pb** | 206 | 2034800.0 | 7.0 | **351.9983** | 27.203 | 7.7 | ug/L | 268 | Standard |
| | **Pb** | 207 | 1649007.0 | 2.9 | **331.4175** | 10.830 | 3.3 | ug/L | 245 | Standard |
| | **Pb** | 208 | 7926290.8 | 3.9 | **346.9340** | 15.135 | 4.4 | ug/L | 1057 | Standard |
| | **U** | 238 | 1157663.4 | 4.9 | **96.7595** | 5.112 | 5.3 | ug/L | 9 | Standard |
| > | **Bi** | 209 | 198372.6 | 1.3 | | | | ug/L | 389590 | Standard |
| | **Na** | 23 | 22561.8 | 6.0 | **10.1344** | 0.218 | 2.2 | mg/L | 92 | Standard |
| | **Mg** | 24 | 2048437.4 | 16.4 | **6.7345** | 0.686 | 10.2 | mg/L | 142 | Standard |

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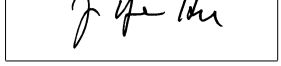

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | **K** | 39 | 11718812.0 | 4.8 | **1643.9529** | 32.640 | 2.0 | mg/L | 635 | Standard |
| | **Ca** | 43 | 8359.0 | 2.4 | **27.6369** | 1.795 | 6.5 | mg/L | 63 | Standard |
| | **Fe** | 54 | 593.6 | 7.8 | **-0.0018** | 0.018 | 967.0 | mg/L | 901 | Standard |
| | **Fe** | 57 | 21271.6 | 4.3 | **0.1536** | 0.005 | 3.2 | mg/L | 5948 | Standard |
| > | **Sc-1** | 45 | 203511.8 | 6.8 | | | | mg/L | 280553 | Standard |
| | **Cl** | 35 | 3444.4 | 2.3 | | | | ug/L | 931 | Standard |
| | **Kr** | 83 | 53.3 | 13.7 | | | | ug/L | 40 | Standard |
| | **Br** | 81 | 13712.9 | 0.6 | | | | ug/L | 11862 | Standard |
| | **P** | 31 | 70522.9 | 8.8 | | | | ug/L | 77079 | Standard |
| | **S** | 34 | 904676.2 | 9.2 | | | | ug/L | 1028777 | Standard |
| | **Sr** | 88 | 1549381.9 | 8.2 | | | | ug/L | 318 | Standard |

## QC Calculated Values

| | Analyte | Mass | QC Std % Recovery | Int Std % Recovery | Spike % Recovery |
|---|---|---|---|---|---|
| | Li | 7 | | | |
| | Be | 9 | | | |
| | Al | 27 | | | |
| > | Sc | 45 | | | |
| | Ti | 47 | | | |
| | V | 51 | | | |
| | Cr | 52 | | | |
| | Cr | 53 | | | |
| | Mn | 55 | | | |
| | Co | 59 | | | |
| | Ni | 60 | | | |
| | Cu | 65 | | | |
| | Zn | 66 | | | |
| > | Ge | 72 | | | 58.255 |
| | As | 75 | | | |
| | Se | 82 | | | |
| | Se-1 | 77 | | | |
| > | Ga | 71 | | | 58.603 |
| | Rb | 85 | | | |
| | Y | 89 | | | |
| > | Rh | 103 | | | 52.210 |
| | Mo | 98 | | | |
| | Ag | 107 | | | |
| | Cd | 111 | | | |
| | Cd | 114 | | | |
| > | In | 115 | | | 57.342 |
| | Sn | 118 | | | |
| | Sb | 123 | | | |
| | Ba | 135 | | | |
| | Ce | 140 | | | |
| > | Tb | 159 | | | 60.841 |
| | Ho | 165 | | | |
| | Tl | 203 | | | |
| | Tl | 205 | | | |
| | Pb | 206 | | | |

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| | | |
|---|---|---|
| | Pb | 207 |
| | Pb | 208 |
| | U | 238 |
| > | Bi | 209 |
| | Na | 23 |
| | Mg | 24 |
| | K | 39 |
| | Ca | 43 |
| | Fe | 54 |
| | Fe | 57 |
| > | Sc-1 | 45 |
| | Cl | 35 |
| | Kr | 83 |
| | Br | 81 |
| | P | 31 |
| | S | 34 |
| | Sr | 88 |

50.918

## QC Out of Limits

| Measurement Type | Analyte | Mass | Out of Limits Message |
|---|---|---|---|
| V 51 Upper, S, EEE | V | 51 | |
| Cr 52 Upper, S, EEE | Cr | 52 | |
| Cr 53 Upper, S, EEE | Cr | 53 | |
| Co 59 Upper, S, EEE | Co | 59 | |
| Cu 65 Upper, S, EEE | Cu | 65 | |
| Zn 66 Upper, S, EEE | Zn | 66 | |
| Cd 111 Upper, S, EEE | Cd | 111 | |
| Cd 114 Upper, S, EEE | Cd | 114 | |
| Sb 123 Upper, S, EEE | Sb | 123 | |
| Ba 135 Upper, S, EEE | Ba | 135 | |
| Tl 203 Upper, S, EEE | Tl | 203 | |
| Tl 205 Upper, S, EEE | Tl | 205 | |
| Pb 206 Upper, S, EEE | Pb | 206 | |
| Pb 207 Upper, S, EEE | Pb | 207 | |
| Pb 208 Upper, S, EEE | Pb | 208 | |



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# Method 6020 - Summary Report

**Sample ID: L1204038406**
Sample Date/Time: Friday, May 18, 2012 12:05:09
Number of Replicates: 3
Autosampler Position: 228
Sample Description: 1
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

## Concentration Results

| IS | Analyte | Mass | Intensity | RSD | Conc. | SD | RSD | Units | Blank Intens. | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **Li** | 7 | 115814.5 | 8.2 | **-83122.4784** | 1227.939 | 1.5 | ug/L | 11199 | Standard |
| | **Be** | 9 | 500822.3 | 6.6 | **232.1298** | 1.341 | 0.6 | ug/L | 32 | Standard |
| | **Al** | 27 | 55243.9 | 3.4 | **4.1063** | 0.162 | 4.0 | ug/L | 8269 | Standard |
| > | **Sc** | 45 | 203511.8 | 6.8 | | | | ug/L | 236213 | Standard |
| | **Ti** | 47 | 1261.4 | 8.6 | **1.4055** | 0.094 | 6.7 | ug/L | 80 | Standard |
| | **V** | 51 | 4448110.2 | 5.6 | **497.3075** | 19.496 | 3.9 | ug/L | 2896 | Standard |
| | **Cr** | 52 | 3841837.1 | 6.2 | **606.2784** | 26.994 | 4.5 | ug/L | 9114 | Standard |
| | **Cr** | 53 | 623721.4 | 5.9 | **640.6983** | 27.225 | 4.2 | ug/L | 308 | Standard |
| | **Mn** | 55 | 72530.4 | 8.6 | **6.4029** | 0.660 | 10.3 | ug/L | 2605 | Standard |
| | **Co** | 59 | 3844114.6 | 6.2 | **492.9960** | 21.393 | 4.3 | ug/L | 105 | Standard |
| | **Ni** | 60 | 1984.8 | 11.1 | **1.1908** | 0.110 | 9.3 | ug/L | 60 | Standard |
| | **Cu** | 65 | 454365.1 | 5.0 | **322.5125** | 9.778 | 3.0 | ug/L | 206 | Standard |
| | **Zn** | 66 | 530668.6 | 4.1 | **828.8220** | 16.837 | 2.0 | ug/L | 223 | Standard |
| > | **Ge** | 72 | 132970.5 | 2.5 | | | | ug/L | 187901 | Standard |
| | **As** | 75 | -723.7 | 61.9 | **-0.9998** | 0.791 | 79.1 | ug/L | -188 | Standard |
| | **Se** | 82 | 6286.8 | 8.5 | **76.5706** | 5.148 | 6.7 | ug/L | 31 | Standard |
| | **Se-1** | 77 | 3685.8 | 7.9 | **82.5957** | 5.169 | 6.3 | ug/L | 78 | Standard |
| > | **Ga** | 71 | 122406.4 | 4.4 | | | | mg/L | 166057 | Standard |
| | **Rb** | 85 | 1568630.8 | 7.0 | | | | ug/L | 32 | Standard |
| | **Y** | 89 | 139486.1 | 2.6 | | | | ug/L | 197830 | Standard |
| > | **Rh** | 103 | 63327.9 | 4.1 | | | | ug/L | 98840 | Standard |
| | **Mo** | 98 | 697.1 | 8.3 | **0.2973** | 0.017 | 5.7 | ug/L | 9 | Standard |
| | **Ag** | 107 | 42.0 | 14.9 | **0.0020** | 0.001 | 72.8 | ug/L | 38 | Standard |
| | **Cd** | 111 | 357706.3 | 6.1 | **152.0062** | 4.742 | 3.1 | mg/L | 349 | Standard |
| | **Cd** | 114 | 926442.8 | 5.0 | **153.7470** | 3.029 | 2.0 | ug/L | 861 | Standard |
| > | **In** | 115 | 360155.8 | 3.2 | | | | ug/L | 512450 | Standard |
| | **Sn** | 118 | 1145.0 | 7.8 | **0.0906** | 0.007 | 7.6 | ug/L | 667 | Standard |
| | **Sb** | 123 | 5686971.1 | 5.9 | **1007.1197** | 29.022 | 2.9 | ug/L | 91 | Standard |
| | **Ba** | 135 | 761733.4 | 4.5 | **313.9206** | 4.734 | 1.5 | ug/L | 39 | Standard |
| | **Ce** | 140 | 350.3 | 12.5 | | | | ug/L | 38 | Standard |
| > | **Tb** | 159 | 420720.1 | 2.1 | | | | ug/L | 575936 | Standard |
| | **Ho** | 165 | 18.0 | 20.0 | | | | ug/L | 6 | Standard |
| | **Tl** | 203 | 2828488.0 | 3.4 | **382.7662** | 14.636 | 3.8 | ug/L | 70 | Standard |
| | **Tl** | 205 | 6725336.6 | 3.4 | **362.6771** | 14.285 | 3.9 | ug/L | 176 | Standard |
| | **Pb** | 206 | 2034800.0 | 7.0 | **339.3053** | 26.222 | 7.7 | ug/L | 231 | Standard |
| | **Pb** | 207 | 1649007.0 | 2.9 | **319.4463** | 10.439 | 3.3 | ug/L | 186 | Standard |
| | **Pb** | 208 | 7926290.8 | 3.9 | **330.2566** | 14.408 | 4.4 | ug/L | 871 | Standard |
| | **U** | 238 | 1157663.4 | 4.9 | **91.9138** | 4.856 | 5.3 | ug/L | 4 | Standard |
| > | **Bi** | 209 | 198372.6 | 1.3 | | | | ug/L | 325045 | Standard |
| | **Na** | 23 | 22561.8 | 6.0 | **9.1341** | 0.197 | 2.2 | mg/L | 100 | Standard |
| | **Mg** | 24 | 2048437.4 | 16.4 | **5.8027** | 0.591 | 10.2 | mg/L | 157 | Standard |

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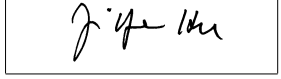

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | **K** | 39 | 11718812.0 | 4.8 | **1483.5802** | 29.457 | 2.0 | mg/L | 1078 | Standard |
| | **Ca** | 43 | 8359.0 | 2.4 | **24.6291** | 1.604 | 6.5 | mg/L | 78 | Standard |
| | **Fe** | 54 | 593.6 | 7.8 | **-0.0242** | 0.017 | 68.2 | mg/L | 838 | Standard |
| | **Fe** | 57 | 21271.6 | 4.3 | **0.1416** | 0.005 | 3.3 | mg/L | 5541 | Standard |
| > | **Sc-1** | 45 | 203511.8 | 6.8 | | | | mg/L | 236213 | Standard |
| | **Cl** | 35 | 3444.4 | 2.3 | | | | ug/L | 928 | Standard |
| | **Kr** | 83 | 53.3 | 13.7 | | | | ug/L | 38 | Standard |
| | **Br** | 81 | 13712.9 | 0.6 | | | | ug/L | 10543 | Standard |
| | **P** | 31 | 70522.9 | 8.8 | | | | ug/L | 63122 | Standard |
| | **S** | 34 | 904676.2 | 9.2 | | | | ug/L | 807533 | Standard |
| | **Sr** | 88 | 1549381.9 | 8.2 | | | | ug/L | 228 | Standard |

## QC Calculated Values

| | Analyte | Mass | QC Std % Recovery | Int Std % Recovery | Spike % Recovery |
|---|---|---|---|---|---|
| | Li | 7 | | | |
| | Be | 9 | | | |
| | Al | 27 | | | |
| > | Sc | 45 | | | |
| | Ti | 47 | | | |
| | V | 51 | | | |
| | Cr | 52 | | | |
| | Cr | 53 | | | |
| | Mn | 55 | | | |
| | Co | 59 | | | |
| | Ni | 60 | | | |
| | Cu | 65 | | | |
| | Zn | 66 | | | |
| > | Ge | 72 | | 70.766 | |
| | As | 75 | | | |
| | Se | 82 | | | |
| | Se-1 | 77 | | | |
| > | Ga | 71 | | 73.714 | |
| | Rb | 85 | | | |
| | Y | 89 | | | |
| > | Rh | 103 | | 64.071 | |
| | Mo | 98 | | | |
| | Ag | 107 | | | |
| | Cd | 111 | | | |
| | Cd | 114 | | | |
| > | In | 115 | | 70.281 | |
| | Sn | 118 | | | |
| | Sb | 123 | | | |
| | Ba | 135 | | | |
| | Ce | 140 | | | |
| > | Tb | 159 | | 73.050 | |
| | Ho | 165 | | | |
| | Tl | 203 | | | |
| | Tl | 205 | | | |
| | Pb | 206 | | | |

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| | | |
|---|---|---|
| | Pb | 207 |
| | Pb | 208 |
| | U | 238 |
| > | Bi | 209 |
| | Na | 23 |
| | Mg | 24 |
| | K | 39 |
| | Ca | 43 |
| | Fe | 54 |
| | Fe | 57 |
| > | Sc-1 | 45 |
| | Cl | 35 |
| | Kr | 83 |
| | Br | 81 |
| | P | 31 |
| | S | 34 |
| | Sr | 88 |

61.029

## QC Out of Limits

| Measurement Type | Analyte | Mass | Out of Limits Message |
|---|---|---|---|
| V 51 Upper, S, EEE | V | 51 | |
| Cr 52 Upper, S, EEE | Cr | 52 | |
| Cr 53 Upper, S, EEE | Cr | 53 | |
| Co 59 Upper, S, EEE | Co | 59 | |
| Cu 65 Upper, S, EEE | Cu | 65 | |
| Zn 66 Upper, S, EEE | Zn | 66 | |
| As 75 Lower | As | 75 | |
| Cd 111 Upper, S, EEE | Cd | 111 | |
| Cd 114 Upper, S, EEE | Cd | 114 | |
| Sb 123 Upper, S, EEE | Sb | 123 | |
| Ba 135 Upper, S, EEE | Ba | 135 | |
| Tl 203 Upper, S, EEE | Tl | 203 | |
| Tl 205 Upper, S, EEE | Tl | 205 | |
| Pb 206 Upper, S, EEE | Pb | 206 | |
| Pb 207 Upper, S, EEE | Pb | 207 | |
| Pb 208 Upper, S, EEE | Pb | 208 | |



Approved: May 21, 2012

# Method 6020 - Summary Report

**Sample ID: +1 PPB AS**

Sample Date/Time: Friday, May 18, 2012 12:08:01
Number of Replicates: 3
Autosampler Position: 229
Sample Description: 1
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

## Concentration Results

| IS | Analyte | Mass | Intensity | RSD | Conc. | SD | RSD | Units | Blank Intens. | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **Li** | 7 | 104342.8 | 7.8 | **-57893.6577** | 2197.302 | 3.8 | ug/L | 13493 | Standard |
| | **Be** | 9 | 466171.3 | 4.3 | **224.4740** | 3.904 | 1.7 | ug/L | 13 | Standard |
| | **Al** | 27 | 58804.0 | 3.2 | **5.0502** | 0.107 | 2.1 | ug/L | 8786 | Standard |
| > | **Sc** | 45 | 197472.3 | 5.1 | | | | ug/L | 280553 | Standard |
| | **Ti** | 47 | 1228.7 | 8.5 | **1.4639** | 0.086 | 5.9 | ug/L | 96 | Standard |
| | **V** | 51 | 4277259.1 | 4.8 | **521.9969** | 15.422 | 3.0 | ug/L | 3640 | Standard |
| | **Cr** | 52 | 3638215.9 | 5.1 | **615.3647** | 19.569 | 3.2 | ug/L | 11495 | Standard |
| | **Cr** | 53 | 600457.0 | 5.0 | **680.2975** | 16.363 | 2.4 | ug/L | 564 | Standard |
| | **Mn** | 55 | 74381.4 | 4.4 | **7.1568** | 0.098 | 1.4 | ug/L | 1247 | Standard |
| | **Co** | 59 | 3743337.0 | 5.2 | **518.5586** | 11.499 | 2.2 | ug/L | 114 | Standard |
| | **Ni** | 60 | 1903.1 | 7.7 | **1.2340** | 0.069 | 5.6 | ug/L | 66 | Standard |
| | **Cu** | 65 | 444863.9 | 4.4 | **341.0962** | 6.280 | 1.8 | ug/L | 219 | Standard |
| | **Zn** | 66 | 513307.3 | 4.1 | **862.9658** | 13.732 | 1.6 | ug/L | 232 | Standard |
| > | **Ge** | 72 | 130026.0 | 3.5 | | | | ug/L | 228255 | Standard |
| | **As** | 75 | 1704.9 | 7.9 | **3.1913** | 0.196 | 6.1 | ug/L | -233 | Standard |
| | **Se** | 82 | 5963.2 | 4.2 | **78.1279** | 1.839 | 2.4 | ug/L | 23 | Standard |
| | **Se-1** | 77 | 3578.4 | 3.9 | **84.2715** | 1.152 | 1.4 | ug/L | 91 | Standard |
| > | **Ga** | 71 | 118886.5 | 2.8 | | | | mg/L | 208873 | Standard |
| | **Rb** | 85 | 1468049.9 | 2.6 | | | | ug/L | 28 | Standard |
| | **Y** | 89 | 139286.1 | 3.4 | | | | ug/L | 234742 | Standard |
| > | **Rh** | 103 | 61759.1 | 3.9 | | | | ug/L | 121294 | Standard |
| | **Mo** | 98 | 665.6 | 5.0 | **0.3232** | 0.016 | 5.0 | ug/L | 6 | Standard |
| | **Ag** | 107 | 59.7 | 47.0 | **0.0030** | 0.006 | 212.0 | ug/L | 64 | Standard |
| | **Cd** | 111 | 330291.7 | 4.8 | **151.2231** | 2.982 | 2.0 | mg/L | 417 | Standard |
| | **Cd** | 114 | 870483.7 | 4.6 | **158.0599** | 2.459 | 1.6 | ug/L | 1009 | Standard |
| > | **In** | 115 | 342515.4 | 3.8 | | | | ug/L | 628085 | Standard |
| | **Sn** | 118 | 1070.7 | 4.9 | **0.0850** | 0.003 | 3.3 | ug/L | 834 | Standard |
| | **Sb** | 123 | 5309179.2 | 4.6 | **1020.8551** | 19.045 | 1.9 | ug/L | 22 | Standard |
| | **Ba** | 135 | 732396.4 | 4.2 | **332.2327** | 6.946 | 2.1 | ug/L | 36 | Standard |
| | **Ce** | 140 | 335.7 | 18.0 | | | | ug/L | 44 | Standard |
| > | **Tb** | 159 | 407898.6 | 3.5 | | | | ug/L | 691511 | Standard |
| | **Ho** | 165 | 17.3 | 8.8 | | | | ug/L | 6 | Standard |
| | **Tl** | 203 | 2787751.1 | 3.3 | **392.7731** | 5.620 | 1.4 | ug/L | 71 | Standard |
| | **Tl** | 205 | 6633020.5 | 3.3 | **385.5506** | 5.044 | 1.3 | ug/L | 177 | Standard |
| | **Pb** | 206 | 1940926.6 | 3.5 | **337.5335** | 4.885 | 1.4 | ug/L | 268 | Standard |
| | **Pb** | 207 | 1628925.0 | 3.6 | **329.1896** | 5.300 | 1.6 | ug/L | 245 | Standard |
| | **Pb** | 208 | 7770549.2 | 3.4 | **341.9846** | 4.806 | 1.4 | ug/L | 1057 | Standard |
| | **U** | 238 | 1103008.5 | 4.6 | **92.6819** | 2.260 | 2.4 | ug/L | 9 | Standard |
| > | **Bi** | 209 | 197224.1 | 2.3 | | | | ug/L | 389590 | Standard |
| | **Na** | 23 | 21251.6 | 2.4 | **9.8410** | 0.271 | 2.8 | mg/L | 92 | Standard |
| | **Mg** | 24 | 2006879.2 | 13.4 | **6.8172** | 0.743 | 10.9 | mg/L | 142 | Standard |

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| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | **K** | 39 | 11362461.5 | 4.4 | **1641.9143** | 39.296 | 2.4 | mg/L | 635 | Standard |
| | **Ca** | 43 | 8372.3 | 2.3 | **28.4968** | 1.375 | 4.8 | mg/L | 63 | Standard |
| | **Fe** | 54 | 727.9 | 5.9 | **0.0388** | 0.003 | 7.1 | mg/L | 901 | Standard |
| | **Fe** | 57 | 21597.1 | 4.9 | **0.1623** | 0.002 | 1.0 | mg/L | 5948 | Standard |
| > | **Sc-1** | 45 | 197472.3 | 5.1 | | | | mg/L | 280553 | Standard |
| | **Cl** | 35 | 3406.4 | 3.2 | | | | ug/L | 931 | Standard |
| | **Kr** | 83 | 64.0 | 4.5 | | | | ug/L | 40 | Standard |
| | **Br** | 81 | 14550.3 | 2.2 | | | | ug/L | 11862 | Standard |
| | **P** | 31 | 68318.2 | 5.9 | | | | ug/L | 77079 | Standard |
| | **S** | 34 | 839020.6 | 4.8 | | | | ug/L | 1028777 | Standard |
| | **Sr** | 88 | 1492386.4 | 3.6 | | | | ug/L | 318 | Standard |

## QC Calculated Values

| | Analyte | Mass | QC Std % Recovery | Int Std % Recovery | Spike % Recovery |
|---|---|---|---|---|---|
| | Li | 7 | | | |
| | Be | 9 | | | |
| | Al | 27 | | | |
| > | Sc | 45 | | | |
| | Ti | 47 | | | |
| | V | 51 | | | |
| | Cr | 52 | | | |
| | Cr | 53 | | | |
| | Mn | 55 | | | |
| | Co | 59 | | | |
| | Ni | 60 | | | |
| | Cu | 65 | | | |
| | Zn | 66 | | | |
| > | Ge | 72 | | 56.965 | |
| | As | 75 | | | |
| | Se | 82 | | | |
| | Se-1 | 77 | | | |
| > | Ga | 71 | | 56.918 | |
| | Rb | 85 | | | |
| | Y | 89 | | | |
| > | Rh | 103 | | 50.917 | |
| | Mo | 98 | | | |
| | Ag | 107 | | | |
| | Cd | 111 | | | |
| | Cd | 114 | | | |
| > | In | 115 | | 54.533 | |
| | Sn | 118 | | | |
| | Sb | 123 | | | |
| | Ba | 135 | | | |
| | Ce | 140 | | | |
| > | Tb | 159 | | 58.987 | |
| | Ho | 165 | | | |
| | Tl | 203 | | | |
| | Tl | 205 | | | |
| | Pb | 206 | | | |

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| | | | |
|---|---|---|---|
| | Pb | 207 | |
| | Pb | 208 | |
| | U | 238 | |
| > | Bi | 209 | 50.624 |
| | Na | 23 | |
| | Mg | 24 | |
| | K | 39 | |
| | Ca | 43 | |
| | Fe | 54 | |
| | Fe | 57 | |
| > | Sc-1 | 45 | |
| | Cl | 35 | |
| | Kr | 83 | |
| | Br | 81 | |
| | P | 31 | |
| | S | 34 | |
| | Sr | 88 | |

## QC Out of Limits

| Measurement Type | Analyte | Mass | Out of Limits Message |
|---|---|---|---|
| V 51 Upper, S, EEE | V | 51 | |
| Cr 52 Upper, S, EEE | Cr | 52 | |
| Cr 53 Upper, S, EEE | Cr | 53 | |
| Co 59 Upper, S, EEE | Co | 59 | |
| Cu 65 Upper, S, EEE | Cu | 65 | |
| Zn 66 Upper, S, EEE | Zn | 66 | |
| Cd 111 Upper, S, EEE | Cd | 111 | |
| Cd 114 Upper, S, EEE | Cd | 114 | |
| Sb 123 Upper, S, EEE | Sb | 123 | |
| Ba 135 Upper, S, EEE | Ba | 135 | |
| Tl 203 Upper, S, EEE | Tl | 203 | |
| Tl 205 Upper, S, EEE | Tl | 205 | |
| Pb 206 Upper, S, EEE | Pb | 206 | |
| Pb 207 Upper, S, EEE | Pb | 207 | |
| Pb 208 Upper, S, EEE | Pb | 208 | |



Approved: May 21, 2012

# Method 6020 - Summary Report

**Sample ID: +2 PPB AS**

Sample Date/Time: Friday, May 18, 2012 12:10:54
Number of Replicates: 3
Autosampler Position: 230
Sample Description: 1
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

## Concentration Results

| IS | Analyte | Mass | Intensity | RSD | Conc. | SD | RSD | Units | Blank Intens. | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| ⌈ | **Li** | 7 | 96406.7 | 6.9 | **-53341.6233** | 2693.711 | 5.0 | ug/L | 13493 | Standard |
| \| | **Be** | 9 | 444220.5 | 5.5 | **214.8896** | 11.377 | 5.3 | ug/L | 13 | Standard |
| \| | **Al** | 27 | 56592.5 | 7.4 | **4.8525** | 0.214 | 4.4 | ug/L | 8786 | Standard |
| ⌊> | **Sc** | 45 | 197133.9 | 9.8 | | | | ug/L | 280553 | Standard |
| ⌈ | **Ti** | 47 | 1203.0 | 7.3 | **1.4508** | 0.034 | 2.4 | ug/L | 96 | Standard |
| \| | **V** | 51 | 4113294.7 | 6.9 | **508.0045** | 12.673 | 2.5 | ug/L | 3640 | Standard |
| \| | **Cr** | 52 | 3482488.0 | 7.1 | **596.0136** | 14.288 | 2.4 | ug/L | 11495 | Standard |
| \| | **Cr** | 53 | 587024.3 | 5.9 | **673.2978** | 4.669 | 0.7 | ug/L | 564 | Standard |
| \| | **Mn** | 55 | 62654.5 | 5.2 | **6.0940** | 0.019 | 0.3 | ug/L | 1247 | Standard |
| \| | **Co** | 59 | 3687188.6 | 5.9 | **517.1764** | 3.800 | 0.7 | ug/L | 114 | Standard |
| \| | **Ni** | 60 | 1949.1 | 12.5 | **1.2782** | 0.103 | 8.1 | ug/L | 66 | Standard |
| \| | **Cu** | 65 | 434191.6 | 5.8 | **337.0193** | 1.692 | 0.5 | ug/L | 219 | Standard |
| \| | **Zn** | 66 | 499707.4 | 5.4 | **850.5219** | 0.904 | 0.1 | ug/L | 232 | Standard |
| \| > | **Ge** | 72 | 128436.1 | 5.3 | | | | ug/L | 228255 | Standard |
| \| | **As** | 75 | 2505.9 | 11.6 | **4.6242** | 0.289 | 6.2 | ug/L | -233 | Standard |
| \| | **Se** | 82 | 6027.3 | 6.1 | **79.9244** | 0.691 | 0.9 | ug/L | 23 | Standard |
| ⌊ | **Se-1** | 77 | 3540.1 | 6.4 | **84.3711** | 0.984 | 1.2 | ug/L | 91 | Standard |
| ⌈> | **Ga** | 71 | 118190.7 | 7.1 | | | | mg/L | 208873 | Standard |
| ⌊ | **Rb** | 85 | 1474340.3 | 5.1 | | | | ug/L | 28 | Standard |
| ⌈ | **Y** | 89 | 140408.7 | 5.0 | | | | ug/L | 234742 | Standard |
| ⌊> | **Rh** | 103 | 62183.9 | 4.9 | | | | ug/L | 121294 | Standard |
| ⌈ | **Mo** | 98 | 682.6 | 5.6 | **0.3462** | 0.008 | 2.4 | ug/L | 6 | Standard |
| \| | **Ag** | 107 | 37.0 | 21.1 | **-0.0020** | 0.002 | 78.9 | ug/L | 64 | Standard |
| \| | **Cd** | 111 | 311933.2 | 6.7 | **149.3139** | 1.259 | 0.8 | mg/L | 417 | Standard |
| \| | **Cd** | 114 | 823944.4 | 5.8 | **156.4619** | 0.508 | 0.3 | ug/L | 1009 | Standard |
| \| > | **In** | 115 | 327560.7 | 5.9 | | | | ug/L | 628085 | Standard |
| \| | **Sn** | 118 | 1018.4 | 5.2 | **0.0843** | 0.003 | 3.4 | ug/L | 834 | Standard |
| \| | **Sb** | 123 | 5029536.3 | 6.1 | **1011.2401** | 3.132 | 0.3 | ug/L | 22 | Standard |
| ⌊ | **Ba** | 135 | 704318.8 | 5.0 | **334.1745** | 2.802 | 0.8 | ug/L | 36 | Standard |
| ⌈ | **Ce** | 140 | 273.0 | 19.6 | | | | ug/L | 44 | Standard |
| ⌊> | **Tb** | 159 | 396814.4 | 5.7 | | | | ug/L | 691511 | Standard |
| ⌈ | **Ho** | 165 | 17.0 | 11.8 | | | | ug/L | 6 | Standard |
| \| | **Tl** | 203 | 2750988.0 | 4.6 | **389.9379** | 3.379 | 0.9 | ug/L | 71 | Standard |
| \| | **Tl** | 205 | 6563143.3 | 4.9 | **383.7628** | 3.873 | 1.0 | ug/L | 177 | Standard |
| \| | **Pb** | 206 | 1897836.7 | 4.8 | **332.0280** | 2.869 | 0.9 | ug/L | 268 | Standard |
| \| | **Pb** | 207 | 1586518.9 | 5.0 | **322.5309** | 3.267 | 1.0 | ug/L | 245 | Standard |
| \| | **Pb** | 208 | 7620046.0 | 4.7 | **337.3795** | 2.627 | 0.8 | ug/L | 1057 | Standard |
| \| | **U** | 238 | 1070289.6 | 5.9 | **90.4623** | 1.870 | 2.1 | ug/L | 9 | Standard |
| ⌊> | **Bi** | 209 | 196037.4 | 4.1 | | | | ug/L | 389590 | Standard |
| ⌈ | **Na** | 23 | 21246.6 | 5.7 | **9.8742** | 0.426 | 4.3 | mg/L | 92 | Standard |
| \| | **Mg** | 24 | 1992763.2 | 14.7 | **6.7806** | 0.587 | 8.7 | mg/L | 142 | Standard |

**Sample ID: +2 PPB AS**
Report Date/Time: Friday, May 18, 2012 12:13:27
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| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | **K** | 39 | 11081613.6 | 5.7 | **1608.0768** | 73.483 | 4.6 | mg/L | 635 | Standard |
| | **Ca** | 43 | 8207.2 | 3.2 | **28.0696** | 2.024 | 7.2 | mg/L | 63 | Standard |
| | **Fe** | 54 | 750.9 | 16.8 | **0.0484** | 0.053 | 109.1 | mg/L | 901 | Standard |
| | **Fe** | 57 | 20967.9 | 8.5 | **0.1570** | 0.003 | 1.8 | mg/L | 5948 | Standard |
| > | **Sc-1** | 45 | 197133.9 | 9.8 | | | | mg/L | 280553 | Standard |
| | **Cl** | 35 | 3430.1 | 2.6 | | | | ug/L | 931 | Standard |
| | **Kr** | 83 | 61.9 | 11.6 | | | | ug/L | 40 | Standard |
| | **Br** | 81 | 14391.8 | 5.2 | | | | ug/L | 11862 | Standard |
| | **P** | 31 | 67761.2 | 9.5 | | | | ug/L | 77079 | Standard |
| | **S** | 34 | 830639.3 | 5.1 | | | | ug/L | 1028777 | Standard |
| | **Sr** | 88 | 1488667.4 | 6.8 | | | | ug/L | 318 | Standard |

## QC Calculated Values

| | Analyte | Mass | QC Std % Recovery | Int Std % Recovery | Spike % Recovery |
|---|---|---|---|---|---|
| | Li | 7 | | | |
| | Be | 9 | | | |
| | Al | 27 | | | |
| > | Sc | 45 | | | |
| | Ti | 47 | | | |
| | V | 51 | | | |
| | Cr | 52 | | | |
| | Cr | 53 | | | |
| | Mn | 55 | | | |
| | Co | 59 | | | |
| | Ni | 60 | | | |
| | Cu | 65 | | | |
| | Zn | 66 | | | |
| > | Ge | 72 | | | 56.269 |
| | As | 75 | | | |
| | Se | 82 | | | |
| | Se-1 | 77 | | | |
| > | Ga | 71 | | | 56.585 |
| | Rb | 85 | | | |
| | Y | 89 | | | |
| > | Rh | 103 | | | 51.267 |
| | Mo | 98 | | | |
| | Ag | 107 | | | |
| | Cd | 111 | | | |
| | Cd | 114 | | | |
| > | In | 115 | | | 52.152 |
| | Sn | 118 | | | |
| | Sb | 123 | | | |
| | Ba | 135 | | | |
| | Ce | 140 | | | |
| > | Tb | 159 | | | 57.384 |
| | Ho | 165 | | | |
| | Tl | 203 | | | |
| | Tl | 205 | | | |
| | Pb | 206 | | | |

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| | | | |
|---|---|---|---|
| | Pb | 207 | |
| | Pb | 208 | |
| | U | 238 | |
| > | Bi | 209 | 50.319 |
| | Na | 23 | |
| | Mg | 24 | |
| | K | 39 | |
| | Ca | 43 | |
| | Fe | 54 | |
| | Fe | 57 | |
| > | Sc-1 | 45 | |
| | Cl | 35 | |
| | Kr | 83 | |
| | Br | 81 | |
| | P | 31 | |
| | S | 34 | |
| | Sr | 88 | |

## QC Out of Limits

| Measurement Type | Analyte | Mass | Out of Limits Message |
|---|---|---|---|
| V 51 Upper, S, EEE | V | 51 | |
| Cr 52 Upper, S, EEE | Cr | 52 | |
| Cr 53 Upper, S, EEE | Cr | 53 | |
| Co 59 Upper, S, EEE | Co | 59 | |
| Cu 65 Upper, S, EEE | Cu | 65 | |
| Zn 66 Upper, S, EEE | Zn | 66 | |
| Cd 111 Upper, S, EEE | Cd | 111 | |
| Cd 114 Upper, S, EEE | Cd | 114 | |
| Sb 123 Upper, S, EEE | Sb | 123 | |
| Ba 135 Upper, S, EEE | Ba | 135 | |
| Tl 203 Upper, S, EEE | Tl | 203 | |
| Tl 205 Upper, S, EEE | Tl | 205 | |
| Pb 206 Upper, S, EEE | Pb | 206 | |
| Pb 207 Upper, S, EEE | Pb | 207 | |
| Pb 208 Upper, S, EEE | Pb | 208 | |



Approved: May 21, 2012

# Method 6020 - Summary Report

**Sample ID: +5 PPB AS**

Sample Date/Time: Friday, May 18, 2012 12:13:47
Number of Replicates: 3
Autosampler Position: 231
Sample Description: 1
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

## Concentration Results

| IS | Analyte | Mass | Intensity | RSD | Conc. | SD | RSD | Units | Blank Intens. | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| ⌈ | **Li** | 7 | 88756.7 | 6.9 | **-49277.2075** | 2488.095 | 5.0 | ug/L | 13493 | Standard |
| \| | **Be** | 9 | 424921.7 | 4.4 | **207.8558** | 5.544 | 2.7 | ug/L | 13 | Standard |
| \| | **Al** | 27 | 53989.5 | 4.7 | **4.6642** | 0.148 | 3.2 | ug/L | 8786 | Standard |
| ⌊> | **Sc** | 45 | 194411.4 | 5.1 | | | | ug/L | 280553 | Standard |
| ⌈ | **Ti** | 47 | 1181.7 | 6.0 | **1.4350** | 0.062 | 4.3 | ug/L | 96 | Standard |
| \| | **V** | 51 | 3975334.3 | 6.3 | **494.3534** | 15.357 | 3.1 | ug/L | 3640 | Standard |
| \| | **Cr** | 52 | 3330770.5 | 5.2 | **574.2303** | 16.086 | 2.8 | ug/L | 11495 | Standard |
| \| | **Cr** | 53 | 568856.4 | 4.4 | **657.1784** | 13.711 | 2.1 | ug/L | 564 | Standard |
| \| | **Mn** | 55 | 53154.1 | 2.9 | **5.1972** | 0.060 | 1.2 | ug/L | 1247 | Standard |
| \| | **Co** | 59 | 3605305.5 | 4.4 | **509.3282** | 10.822 | 2.1 | ug/L | 114 | Standard |
| \| | **Ni** | 60 | 1941.8 | 6.3 | **1.2846** | 0.045 | 3.5 | ug/L | 66 | Standard |
| \| | **Cu** | 65 | 423762.5 | 4.1 | **331.2880** | 5.052 | 1.5 | ug/L | 219 | Standard |
| \| | **Zn** | 66 | 486018.0 | 3.7 | **833.1428** | 13.830 | 1.7 | ug/L | 232 | Standard |
| \|> | **Ge** | 72 | 127540.7 | 3.8 | | | | ug/L | 228255 | Standard |
| \| | **As** | 75 | 4084.1 | 6.8 | **7.4472** | 0.224 | 3.0 | ug/L | -233 | Standard |
| \| | **Se** | 82 | 5906.3 | 5.9 | **78.8525** | 2.020 | 2.6 | ug/L | 23 | Standard |
| ⌊ | **Se-1** | 77 | 3412.1 | 4.9 | **81.8752** | 1.700 | 2.1 | ug/L | 91 | Standard |
| ⌈> | **Ga** | 71 | 118384.4 | 3.6 | | | | mg/L | 208873 | Standard |
| ⌊ | **Rb** | 85 | 1424153.9 | 5.4 | | | | ug/L | 28 | Standard |
| ⌈ | **Y** | 89 | 139377.3 | 4.6 | | | | ug/L | 234742 | Standard |
| ⌊> | **Rh** | 103 | 61975.4 | 5.2 | | | | ug/L | 121294 | Standard |
| ⌈ | **Mo** | 98 | 677.5 | 8.9 | **0.3562** | 0.025 | 6.9 | ug/L | 6 | Standard |
| \| | **Ag** | 107 | 38.0 | 16.0 | **-0.0013** | 0.002 | 150.3 | ug/L | 64 | Standard |
| \| | **Cd** | 111 | 294128.0 | 6.5 | **146.0644** | 2.236 | 1.5 | mg/L | 417 | Standard |
| \| | **Cd** | 114 | 783942.2 | 4.8 | **154.4832** | 1.084 | 0.7 | ug/L | 1009 | Standard |
| \|> | **In** | 115 | 315692.4 | 5.2 | | | | ug/L | 628085 | Standard |
| \| | **Sn** | 118 | 1016.0 | 6.5 | **0.0896** | 0.010 | 11.4 | ug/L | 834 | Standard |
| \| | **Sb** | 123 | 4810862.5 | 4.5 | **1004.0597** | 15.080 | 1.5 | ug/L | 22 | Standard |
| ⌊ | **Ba** | 135 | 675313.7 | 4.4 | **332.4612** | 4.386 | 1.3 | ug/L | 36 | Standard |
| ⌈ | **Ce** | 140 | 325.3 | 31.9 | | | | ug/L | 44 | Standard |
| ⌊> | **Tb** | 159 | 380365.2 | 4.2 | | | | ug/L | 691511 | Standard |
| ⌈ | **Ho** | 165 | 13.3 | 37.0 | | | | ug/L | 6 | Standard |
| \| | **Tl** | 203 | 2670912.5 | 4.0 | **384.8046** | 8.674 | 2.3 | ug/L | 71 | Standard |
| \| | **Tl** | 205 | 6391819.3 | 4.0 | **379.9073** | 7.894 | 2.1 | ug/L | 177 | Standard |
| \| | **Pb** | 206 | 1829230.1 | 3.9 | **325.3034** | 7.374 | 2.3 | ug/L | 268 | Standard |
| \| | **Pb** | 207 | 1536531.6 | 4.1 | **317.5253** | 6.838 | 2.2 | ug/L | 245 | Standard |
| \| | **Pb** | 208 | 7383189.8 | 3.9 | **332.2719** | 6.988 | 2.1 | ug/L | 1057 | Standard |
| \| | **U** | 238 | 1018182.3 | 5.3 | **87.4742** | 2.439 | 2.8 | ug/L | 9 | Standard |
| ⌊> | **Bi** | 209 | 192889.5 | 3.1 | | | | ug/L | 389590 | Standard |
| ⌈ | **Na** | 23 | 20508.9 | 2.9 | **9.6451** | 0.271 | 2.8 | mg/L | 92 | Standard |
| \| | **Mg** | 24 | 1825154.7 | 2.7 | **6.3105** | 0.204 | 3.2 | mg/L | 142 | Standard |

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| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | **K** | 39 | 10712089.8 | 4.4 | **1572.6177** | 53.696 | 3.4 | mg/L | 635 | Standard |
| | **Ca** | 43 | 7640.3 | 0.6 | **26.4065** | 1.261 | 4.8 | mg/L | 63 | Standard |
| | **Fe** | 54 | 748.1 | 9.3 | **0.0485** | 0.030 | 61.7 | mg/L | 901 | Standard |
| | **Fe** | 57 | 19667.8 | 6.6 | **0.1472** | 0.006 | 4.2 | mg/L | 5948 | Standard |
| > | **Sc-1** | 45 | 194411.4 | 5.1 | | | | mg/L | 280553 | Standard |
| | **Cl** | 35 | 3358.0 | 4.2 | | | | ug/L | 931 | Standard |
| | **Kr** | 83 | 65.4 | 4.6 | | | | ug/L | 40 | Standard |
| | **Br** | 81 | 14014.0 | 4.4 | | | | ug/L | 11862 | Standard |
| | **P** | 31 | 66315.2 | 6.3 | | | | ug/L | 77079 | Standard |
| | **S** | 34 | 818823.1 | 4.3 | | | | ug/L | 1028777 | Standard |
| | **Sr** | 88 | 1467406.4 | 4.4 | | | | ug/L | 318 | Standard |

## QC Calculated Values

| | Analyte | Mass | QC Std % Recovery | Int Std % Recovery | Spike % Recovery |
|---|---|---|---|---|---|
| | Li | 7 | | | |
| | Be | 9 | | | |
| | Al | 27 | | | |
| > | Sc | 45 | | | |
| | Ti | 47 | | | |
| | V | 51 | | | |
| | Cr | 52 | | | |
| | Cr | 53 | | | |
| | Mn | 55 | | | |
| | Co | 59 | | | |
| | Ni | 60 | | | |
| | Cu | 65 | | | |
| | Zn | 66 | | | |
| > | Ge | 72 | | 55.876 | |
| | As | 75 | | | |
| | Se | 82 | | | |
| | Se-1 | 77 | | | |
| > | Ga | 71 | | 56.678 | |
| | Rb | 85 | | | |
| | Y | 89 | | | |
| > | Rh | 103 | | 51.095 | |
| | Mo | 98 | | | |
| | Ag | 107 | | | |
| | Cd | 111 | | | |
| | Cd | 114 | | | |
| > | In | 115 | | 50.263 | |
| | Sn | 118 | | | |
| | Sb | 123 | | | |
| | Ba | 135 | | | |
| | Ce | 140 | | | |
| > | Tb | 159 | | 55.005 | |
| | Ho | 165 | | | |
| | Tl | 203 | | | |
| | Tl | 205 | | | |
| | Pb | 206 | | | |

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| | | |
|---|---|---|
| | Pb | 207 |
| | Pb | 208 |
| | U | 238 |
| > | Bi | 209 |
| | Na | 23 |
| | Mg | 24 |
| | K | 39 |
| | Ca | 43 |
| | Fe | 54 |
| | Fe | 57 |
| > | Sc-1 | 45 |
| | Cl | 35 |
| | Kr | 83 |
| | Br | 81 |
| | P | 31 |
| | S | 34 |
| | Sr | 88 |

49.511

## QC Out of Limits

| Measurement Type | Analyte | Mass | Out of Limits Message |
|---|---|---|---|
| V 51 Upper, S, EEE | V | 51 | |
| Cr 52 Upper, S, EEE | Cr | 52 | |
| Cr 53 Upper, S, EEE | Cr | 53 | |
| Co 59 Upper, S, EEE | Co | 59 | |
| Cu 65 Upper, S, EEE | Cu | 65 | |
| Zn 66 Upper, S, EEE | Zn | 66 | |
| Cd 111 Upper, S, EEE | Cd | 111 | |
| Cd 114 Upper, S, EEE | Cd | 114 | |
| Sb 123 Upper, S, EEE | Sb | 123 | |
| Ba 135 Upper, S, EEE | Ba | 135 | |
| Tl 203 Upper, S, EEE | Tl | 203 | |
| Tl 205 Upper, S, EEE | Tl | 205 | |
| Pb 206 Upper, S, EEE | Pb | 206 | |
| Pb 207 Upper, S, EEE | Pb | 207 | |
| Pb 208 Upper, S, EEE | Pb | 208 | |



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# Method 6020 - Summary Report

**Sample ID: L1205049014**
Sample Date/Time: Friday, May 18, 2012 12:16:40
Number of Replicates: 3
Autosampler Position: 232
Sample Description: 50
Method File: C:\NexION Data\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

## Concentration Results

| IS | Analyte | Mass | Intensity | RSD | Conc. | SD | RSD | Units | Blank Intens. | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **Li** | 7 | 9156.1 | 1.0 | **114.3833** | 423.384 | 370.1 | ug/L | 13493 | Standard |
| | **Be** | 9 | 723.4 | 157.1 | **0.3613** | 0.595 | 164.6 | ug/L | 13 | Standard |
| | **Al** | 27 | 21353.4 | 4.9 | **1.4368** | 0.064 | 4.4 | ug/L | 8786 | Standard |
| > | **Sc** | 45 | 195702.2 | 7.6 | | | | ug/L | 280553 | Standard |
| | **Ti** | 47 | 120.7 | 1.7 | **0.0314** | 0.007 | 23.9 | ug/L | 96 | Standard |
| | **V** | 51 | 6350.4 | 88.9 | **0.3643** | 0.585 | 160.5 | ug/L | 3640 | Standard |
| | **Cr** | 52 | 12689.2 | 49.6 | **0.6043** | 0.944 | 156.2 | ug/L | 11495 | Standard |
| | **Cr** | 53 | 1013.4 | 110.8 | **0.6035** | 1.067 | 176.9 | ug/L | 564 | Standard |
| | **Mn** | 55 | 10236.5 | 15.7 | **0.6967** | 0.078 | 11.2 | ug/L | 1247 | Standard |
| | **Co** | 59 | 4852.7 | 157.9 | **0.5371** | 0.878 | 163.5 | ug/L | 114 | Standard |
| | **Ni** | 60 | 200.3 | 12.6 | **0.0793** | 0.007 | 9.2 | ug/L | 66 | Standard |
| | **Cu** | 65 | 936.7 | 84.3 | **0.4756** | 0.515 | 108.3 | ug/L | 219 | Standard |
| | **Zn** | 66 | 1853.1 | 41.9 | **2.1832** | 1.175 | 53.8 | ug/L | 232 | Standard |
| > | **Ge** | 72 | 168173.6 | 5.9 | | | | ug/L | 228255 | Standard |
| | **As** | 75 | 95.2 | 46.8 | **0.3661** | 0.061 | 16.7 | ug/L | -233 | Standard |
| | **Se** | 82 | 682.6 | 3.1 | **6.7889** | 0.195 | 2.9 | ug/L | 23 | Standard |
| | **Se-1** | 77 | 432.0 | 6.3 | **6.8431** | 0.458 | 6.7 | ug/L | 91 | Standard |
| > | **Ga** | 71 | 147518.7 | 7.1 | | | | mg/L | 208873 | Standard |
| | **Rb** | 85 | 768.4 | 98.5 | | | | ug/L | 28 | Standard |
| | **Y** | 89 | 176479.3 | 3.4 | | | | ug/L | 234742 | Standard |
| > | **Rh** | 103 | 89768.9 | 5.0 | | | | ug/L | 121294 | Standard |
| | **Mo** | 98 | 36.6 | 22.2 | **0.0177** | 0.002 | 13.8 | ug/L | 6 | Standard |
| | **Ag** | 107 | 24.0 | 27.3 | **-0.0068** | 0.001 | 21.5 | ug/L | 64 | Standard |
| | **Cd** | 111 | 537.6 | 25.3 | **0.0895** | 0.060 | 66.5 | mg/L | 417 | Standard |
| | **Cd** | 114 | 1454.2 | 23.1 | **0.1048** | 0.059 | 56.2 | ug/L | 1009 | Standard |
| > | **In** | 115 | 444815.9 | 5.4 | | | | ug/L | 628085 | Standard |
| | **Sn** | 118 | 639.7 | 4.0 | **0.0053** | 0.001 | 20.8 | ug/L | 834 | Standard |
| | **Sb** | 123 | 3855.6 | 56.2 | **0.5766** | 0.352 | 61.1 | ug/L | 22 | Standard |
| | **Ba** | 135 | 1480.7 | 17.9 | **0.5096** | 0.123 | 24.1 | ug/L | 36 | Standard |
| | **Ce** | 140 | 114.0 | 18.3 | | | | ug/L | 44 | Standard |
| > | **Tb** | 159 | 514178.0 | 6.1 | | | | ug/L | 691511 | Standard |
| | **Ho** | 165 | 7.7 | 15.1 | | | | ug/L | 6 | Standard |
| | **Tl** | 203 | 807.4 | 131.5 | **0.0699** | 0.102 | 145.2 | ug/L | 71 | Standard |
| | **Tl** | 205 | 1892.9 | 124.4 | **0.0686** | 0.093 | 135.6 | ug/L | 177 | Standard |
| | **Pb** | 206 | 833.4 | 93.9 | **0.0709** | 0.094 | 132.1 | ug/L | 268 | Standard |
| | **Pb** | 207 | 749.0 | 100.2 | **0.0752** | 0.104 | 138.6 | ug/L | 245 | Standard |
| | **Pb** | 208 | 3633.3 | 101.1 | **0.0808** | 0.111 | 137.4 | ug/L | 1057 | Standard |
| | **U** | 238 | 2003.3 | 133.0 | **0.1109** | 0.152 | 137.0 | ug/L | 9 | Standard |
| > | **Bi** | 209 | 311862.3 | 5.7 | | | | ug/L | 389590 | Standard |
| | **Na** | 23 | 358.3 | 8.5 | **0.1285** | 0.025 | 19.1 | mg/L | 92 | Standard |
| | **Mg** | 24 | 67346.3 | 5.4 | **0.2307** | 0.027 | 11.8 | mg/L | 142 | Standard |

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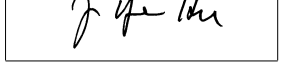

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | **K** | 39 | 15800.1 | 136.5 | **2.3725** | 3.407 | 143.6 | mg/L | 635 | Standard |
| | **Ca** | 43 | 576.7 | 8.2 | **1.8265** | 0.024 | 1.3 | mg/L | 63 | Standard |
| | **Fe** | 54 | 735.8 | 5.2 | **0.0432** | 0.012 | 27.5 | mg/L | 901 | Standard |
| | **Fe** | 57 | 6318.0 | 3.0 | **0.0213** | 0.003 | 13.2 | mg/L | 5948 | Standard |
| > | **Sc-1** | 45 | 195702.2 | 7.6 | | | | mg/L | 280553 | Standard |
| | **Cl** | 35 | 873.0 | 6.9 | | | | ug/L | 931 | Standard |
| | **Kr** | 83 | 38.3 | 12.6 | | | | ug/L | 40 | Standard |
| | **Br** | 81 | 8837.6 | 3.4 | | | | ug/L | 11862 | Standard |
| | **P** | 31 | 50859.5 | 4.4 | | | | ug/L | 77079 | Standard |
| | **S** | 34 | 718049.6 | 1.9 | | | | ug/L | 1028777 | Standard |
| | **Sr** | 88 | 36732.8 | 2.1 | | | | ug/L | 318 | Standard |

## QC Calculated Values

| | Analyte | Mass | QC Std % Recovery | Int Std % Recovery | Spike % Recovery |
|---|---|---|---|---|---|
| | Li | 7 | | | |
| | Be | 9 | | | |
| | Al | 27 | | | |
| > | Sc | 45 | | | |
| | Ti | 47 | | | |
| | V | 51 | | | |
| | Cr | 52 | | | |
| | Cr | 53 | | | |
| | Mn | 55 | | | |
| | Co | 59 | | | |
| | Ni | 60 | | | |
| | Cu | 65 | | | |
| | Zn | 66 | | | |
| > | Ge | 72 | | 73.678 | |
| | As | 75 | | | |
| | Se | 82 | | | |
| | Se-1 | 77 | | | |
| > | Ga | 71 | | 70.626 | |
| | Rb | 85 | | | |
| | Y | 89 | | | |
| > | Rh | 103 | | 74.010 | |
| | Mo | 98 | | | |
| | Ag | 107 | | | |
| | Cd | 111 | | | |
| | Cd | 114 | | | |
| > | In | 115 | | 70.821 | |
| | Sn | 118 | | | |
| | Sb | 123 | | | |
| | Ba | 135 | | | |
| | Ce | 140 | | | |
| > | Tb | 159 | | 74.356 | |
| | Ho | 165 | | | |
| | Tl | 203 | | | |
| | Tl | 205 | | | |
| | Pb | 206 | | | |



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| | | |
|---|---|---|
| | Pb | 207 |
| | Pb | 208 |
| | U | 238 |
| > | Bi | 209 |
| | Na | 23 |
| | Mg | 24 |
| | K | 39 |
| | Ca | 43 |
| | Fe | 54 |
| | Fe | 57 |
| > | Sc-1 | 45 |
| | Cl | 35 |
| | Kr | 83 |
| | Br | 81 |
| | P | 31 |
| | S | 34 |
| | Sr | 88 |

80.049

## QC Out of Limits

| Measurement Type | Analyte | Mass | Out of Limits Message |
|---|---|---|---|

**Sample ID: L1205049014**
Report Date/Time: Friday, May 18, 2012 12:19:13
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# Method 6020 - Summary Report

**Sample ID: L1205035102**
Sample Date/Time: Friday, May 18, 2012 12:19:33
Number of Replicates: 3
Autosampler Position: 233
Sample Description: 10
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

## Concentration Results

| IS | Analyte | Mass | Intensity | RSD | Conc. | SD | RSD | Units | Blank Intens. | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **Li** | 7 | 106409.0 | 1.0 | **-50318.1274** | 1706.739 | 3.4 | ug/L | 13493 | Standard |
| | **Be** | 9 | 61.7 | 18.7 | **0.0120** | 0.004 | 30.8 | ug/L | 13 | Standard |
| | **Al** | 27 | 51803.5 | 4.4 | **3.6771** | 0.070 | 1.9 | ug/L | 8786 | Standard |
| > | **Sc** | 45 | 228950.3 | 4.0 | | | | ug/L | 280553 | Standard |
| | **Ti** | 47 | 711.0 | 3.0 | **0.5512** | 0.032 | 5.9 | ug/L | 96 | Standard |
| | **V** | 51 | 8120.7 | 1.7 | **0.4479** | 0.009 | 1.9 | ug/L | 3640 | Standard |
| | **Cr** | 52 | 29496.7 | 3.5 | **2.4551** | 0.046 | 1.9 | ug/L | 11495 | Standard |
| | **Cr** | 53 | 3924.7 | 5.4 | **2.8354** | 0.165 | 5.8 | ug/L | 564 | Standard |
| | **Mn** | 55 | 39063.0 | 2.9 | **2.6240** | 0.009 | 0.4 | ug/L | 1247 | Standard |
| | **Co** | 59 | 1805.4 | 7.2 | **0.1636** | 0.008 | 4.8 | ug/L | 114 | Standard |
| | **Ni** | 60 | 9572.7 | 3.6 | **4.4654** | 0.031 | 0.7 | ug/L | 66 | Standard |
| | **Cu** | 65 | 957.0 | 3.8 | **0.4229** | 0.016 | 3.8 | ug/L | 219 | Standard |
| | **Zn** | 66 | 3943.8 | 4.2 | **4.4393** | 0.153 | 3.4 | ug/L | 232 | Standard |
| > | **Ge** | 72 | 183218.7 | 2.9 | | | | ug/L | 228255 | Standard |
| | **As** | 75 | 2959.3 | 2.0 | **3.8779** | 0.078 | 2.0 | ug/L | -233 | Standard |
| | **Se** | 82 | 69.7 | 7.1 | **0.5041** | 0.058 | 11.5 | ug/L | 23 | Standard |
| | **Se-1** | 77 | 111.3 | 23.1 | **0.7460** | 0.414 | 55.5 | ug/L | 91 | Standard |
| > | **Ga** | 71 | 161925.1 | 4.5 | | | | mg/L | 208873 | Standard |
| | **Rb** | 85 | 57121.0 | 5.0 | | | | ug/L | 28 | Standard |
| | **Y** | 89 | 190889.4 | 3.8 | | | | ug/L | 234742 | Standard |
| > | **Rh** | 103 | 95464.7 | 3.5 | | | | ug/L | 121294 | Standard |
| | **Mo** | 98 | 3945.8 | 3.7 | **1.3539** | 0.015 | 1.1 | ug/L | 6 | Standard |
| | **Ag** | 107 | 48.7 | 17.5 | **-0.0029** | 0.001 | 44.0 | ug/L | 64 | Standard |
| | **Cd** | 111 | 369.1 | 7.3 | **0.0187** | 0.011 | 57.5 | mg/L | 417 | Standard |
| | **Cd** | 114 | 1054.2 | 6.8 | **0.0362** | 0.007 | 19.4 | ug/L | 1009 | Standard |
| > | **In** | 115 | 479466.2 | 2.6 | | | | ug/L | 628085 | Standard |
| | **Sn** | 118 | 950.0 | 0.8 | **0.0310** | 0.003 | 9.7 | ug/L | 834 | Standard |
| | **Sb** | 123 | 1754.7 | 7.8 | **0.2371** | 0.017 | 7.2 | ug/L | 22 | Standard |
| | **Ba** | 135 | 162311.9 | 2.9 | **52.5826** | 0.254 | 0.5 | ug/L | 36 | Standard |
| | **Ce** | 140 | 361.3 | 2.6 | | | | ug/L | 44 | Standard |
| > | **Tb** | 159 | 558724.9 | 1.6 | | | | ug/L | 691511 | Standard |
| | **Ho** | 165 | 367.3 | 4.5 | | | | ug/L | 6 | Standard |
| | **Tl** | 203 | 635.3 | 11.4 | **0.0502** | 0.006 | 11.5 | ug/L | 71 | Standard |
| | **Tl** | 205 | 1565.4 | 9.6 | **0.0525** | 0.005 | 9.3 | ug/L | 177 | Standard |
| | **Pb** | 206 | 486.0 | 10.7 | **0.0286** | 0.005 | 17.5 | ug/L | 268 | Standard |
| | **Pb** | 207 | 379.0 | 12.5 | **0.0235** | 0.005 | 23.4 | ug/L | 245 | Standard |
| | **Pb** | 208 | 1810.4 | 6.7 | **0.0254** | 0.003 | 10.9 | ug/L | 1057 | Standard |
| | **U** | 238 | 188.3 | 25.6 | **0.0091** | 0.002 | 26.7 | ug/L | 9 | Standard |
| > | **Bi** | 209 | 317768.6 | 1.2 | | | | ug/L | 389590 | Standard |
| | **Na** | 23 | 67299.3 | 4.2 | **26.9248** | 0.284 | 1.1 | mg/L | 92 | Standard |
| | **Mg** | 24 | 2214558.1 | 14.1 | **6.4880** | 0.795 | 12.3 | mg/L | 142 | Standard |



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| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | **K** | 39 | 35030.5 | 4.2 | **4.3013** | 0.082 | 1.9 | mg/L | 635 | Standard |
| | **Ca** | 43 | 5065.8 | 3.3 | **14.7848** | 0.648 | 4.4 | mg/L | 63 | Standard |
| | **Fe** | 54 | 852.0 | 11.8 | **0.0404** | 0.019 | 46.6 | mg/L | 901 | Standard |
| | **Fe** | 57 | 15227.7 | 2.3 | **0.0839** | 0.003 | 3.0 | mg/L | 5948 | Standard |
| > | **Sc-1** | 45 | 228950.3 | 4.0 | | | | mg/L | 280553 | Standard |
| | **Cl** | 35 | 12025.1 | 2.6 | | | | ug/L | 931 | Standard |
| | **Kr** | 83 | 38.7 | 9.1 | | | | ug/L | 40 | Standard |
| | **Br** | 81 | 14501.9 | 1.6 | | | | ug/L | 11862 | Standard |
| | **P** | 31 | 73638.7 | 4.0 | | | | ug/L | 77079 | Standard |
| | **S** | 34 | 2959068.8 | 2.9 | | | | ug/L | 1028777 | Standard |
| | **Sr** | 88 | 3098682.5 | 4.2 | | | | ug/L | 318 | Standard |

## QC Calculated Values

| | Analyte | Mass | QC Std % Recovery | Int Std % Recovery | Spike % Recovery |
|---|---|---|---|---|---|
| | Li | 7 | | | |
| | Be | 9 | | | |
| | Al | 27 | | | |
| > | Sc | 45 | | | |
| | Ti | 47 | | | |
| | V | 51 | | | |
| | Cr | 52 | | | |
| | Cr | 53 | | | |
| | Mn | 55 | | | |
| | Co | 59 | | | |
| | Ni | 60 | | | |
| | Cu | 65 | | | |
| | Zn | 66 | | | |
| > | Ge | 72 | | 80.269 | |
| | As | 75 | | | |
| | Se | 82 | | | |
| | Se-1 | 77 | | | |
| > | Ga | 71 | | 77.523 | |
| | Rb | 85 | | | |
| | Y | 89 | | | |
| > | Rh | 103 | | 78.705 | |
| | Mo | 98 | | | |
| | Ag | 107 | | | |
| | Cd | 111 | | | |
| | Cd | 114 | | | |
| > | In | 115 | | 76.338 | |
| | Sn | 118 | | | |
| | Sb | 123 | | | |
| | Ba | 135 | | | |
| | Ce | 140 | | | |
| > | Tb | 159 | | 80.798 | |
| | Ho | 165 | | | |
| | Tl | 203 | | | |
| | Tl | 205 | | | |
| | Pb | 206 | | | |



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| | | | |
|---|---|---|---|
| | Pb | 207 | |
| | Pb | 208 | |
| | U | 238 | |
| > | Bi | 209 | 81.565 |
| | Na | 23 | |
| | Mg | 24 | |
| | K | 39 | |
| | Ca | 43 | |
| | Fe | 54 | |
| | Fe | 57 | |
| > | Sc-1 | 45 | |
| | Cl | 35 | |
| | Kr | 83 | |
| | Br | 81 | |
| | P | 31 | |
| | S | 34 | |
| | Sr | 88 | |

## QC Out of Limits

| Measurement Type | Analyte | Mass | Out of Limits Message |
|---|---|---|---|

**Sample ID: L1205035102**
Report Date/Time: Friday, May 18, 2012 12:22:07
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# Method 6020 - Summary Report

**Sample ID: L1205035102PS WG398436-01**
Sample Date/Time: Friday, May 18, 2012 12:22:27
Number of Replicates: 3
Autosampler Position: 234
Sample Description: 10
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

## Concentration Results

| IS | Analyte | Mass | Intensity | RSD | Conc. | SD | RSD | Units | Blank Intens. | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **Li** | 7 | 117092.7 | 3.4 | **-51162.1949** | 1489.669 | 2.9 | ug/L | 13493 | Standard |
| | **Be** | 9 | 132710.4 | 0.9 | **50.9010** | 2.434 | 4.8 | ug/L | 13 | Standard |
| | **Al** | 27 | 814119.8 | 3.8 | **62.1932** | 1.412 | 2.3 | ug/L | 8786 | Standard |
| > | **Sc** | 45 | 248198.5 | 5.3 | | | | ug/L | 280553 | Standard |
| | **Ti** | 47 | 768.7 | 0.5 | **0.5559** | 0.021 | 3.8 | ug/L | 96 | Standard |
| | **V** | 51 | 654401.5 | 3.6 | **52.5870** | 0.423 | 0.8 | ug/L | 3640 | Standard |
| | **Cr** | 52 | 484110.2 | 3.0 | **53.1677** | 0.695 | 1.3 | ug/L | 11495 | Standard |
| | **Cr** | 53 | 73148.7 | 2.3 | **54.5422** | 1.228 | 2.3 | ug/L | 564 | Standard |
| | **Mn** | 55 | 826877.8 | 2.3 | **53.0860** | 1.233 | 2.3 | ug/L | 1247 | Standard |
| | **Co** | 59 | 569911.5 | 2.8 | **52.2310** | 1.177 | 2.3 | ug/L | 114 | Standard |
| | **Ni** | 60 | 128962.7 | 2.2 | **56.3550** | 1.570 | 2.8 | ug/L | 66 | Standard |
| | **Cu** | 65 | 105197.4 | 2.6 | **53.2840** | 1.254 | 2.4 | ug/L | 219 | Standard |
| | **Zn** | 66 | 52031.5 | 1.7 | **57.6265** | 1.242 | 2.2 | ug/L | 232 | Standard |
| > | **Ge** | 72 | 196635.9 | 3.7 | | | | ug/L | 228255 | Standard |
| | **As** | 75 | 49194.8 | 2.8 | **56.6348** | 1.443 | 2.5 | ug/L | -233 | Standard |
| | **Se** | 82 | 5988.0 | 3.2 | **51.8370** | 0.526 | 1.0 | ug/L | 23 | Standard |
| | **Se-1** | 77 | 3415.7 | 2.8 | **52.7908** | 0.956 | 1.8 | ug/L | 91 | Standard |
| > | **Ga** | 71 | 172693.4 | 4.9 | | | | mg/L | 208873 | Standard |
| | **Rb** | 85 | 60107.4 | 2.8 | | | | ug/L | 28 | Standard |
| | **Y** | 89 | 209764.6 | 5.1 | | | | ug/L | 234742 | Standard |
| > | **Rh** | 103 | 104112.5 | 5.4 | | | | ug/L | 121294 | Standard |
| | **Mo** | 98 | 4174.7 | 2.6 | **1.3110** | 0.023 | 1.8 | ug/L | 6 | Standard |
| | **Ag** | 107 | 325236.7 | 3.0 | **51.5444** | 1.149 | 2.2 | ug/L | 64 | Standard |
| | **Cd** | 111 | 171044.2 | 2.9 | **51.1267** | 0.898 | 1.8 | mg/L | 417 | Standard |
| | **Cd** | 114 | 445603.1 | 2.5 | **52.8325** | 1.258 | 2.4 | ug/L | 1009 | Standard |
| > | **In** | 115 | 524257.1 | 4.2 | | | | ug/L | 628085 | Standard |
| | **Sn** | 118 | 1460.4 | 3.2 | **0.0690** | 0.002 | 3.4 | ug/L | 834 | Standard |
| | **Sb** | 123 | 422428.0 | 1.6 | **53.1091** | 1.483 | 2.8 | ug/L | 22 | Standard |
| | **Ba** | 135 | 348541.4 | 2.0 | **103.3465** | 2.323 | 2.2 | ug/L | 36 | Standard |
| | **Ce** | 140 | 429.7 | 3.7 | | | | ug/L | 44 | Standard |
| > | **Tb** | 159 | 607306.6 | 4.4 | | | | ug/L | 691511 | Standard |
| | **Ho** | 165 | 365.0 | 0.7 | | | | ug/L | 6 | Standard |
| | **Tl** | 203 | 639907.1 | 1.8 | **52.6073** | 1.984 | 3.8 | ug/L | 71 | Standard |
| | **Tl** | 205 | 1524157.7 | 3.1 | **51.6727** | 1.376 | 2.7 | ug/L | 177 | Standard |
| | **Pb** | 206 | 517635.0 | 2.3 | **52.4944** | 1.318 | 2.5 | ug/L | 268 | Standard |
| | **Pb** | 207 | 444753.3 | 2.9 | **52.4071** | 1.163 | 2.2 | ug/L | 245 | Standard |
| | **Pb** | 208 | 2022837.5 | 2.6 | **51.9111** | 1.287 | 2.5 | ug/L | 1057 | Standard |
| | **U** | 238 | 1034897.0 | 3.1 | **50.7261** | 1.044 | 2.1 | ug/L | 9 | Standard |
| > | **Bi** | 209 | 338383.1 | 4.6 | | | | ug/L | 389590 | Standard |
| | **Na** | 23 | 68243.5 | 4.4 | **25.1917** | 0.248 | 1.0 | mg/L | 92 | Standard |
| | **Mg** | 24 | 2247799.0 | 13.5 | **6.0883** | 0.832 | 13.7 | mg/L | 142 | Standard |

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| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | **K** | 39 | 35705.4 | 2.5 | **4.0449** | 0.145 | 3.6 | mg/L | 635 | Standard |
| | **Ca** | 43 | 5114.2 | 2.2 | **13.7800** | 0.988 | 7.2 | mg/L | 63 | Standard |
| | **Fe** | 54 | 833.7 | 7.8 | **0.0212** | 0.009 | 44.0 | mg/L | 901 | Standard |
| | **Fe** | 57 | 16203.7 | 3.5 | **0.0816** | 0.002 | 2.7 | mg/L | 5948 | Standard |
| > | **Sc-1** | 45 | 248198.5 | 5.3 | | | | mg/L | 280553 | Standard |
| | **Cl** | 35 | 12031.1 | 1.3 | | | | ug/L | 931 | Standard |
| | **Kr** | 83 | 46.6 | 0.8 | | | | ug/L | 40 | Standard |
| | **Br** | 81 | 15155.1 | 3.4 | | | | ug/L | 11862 | Standard |
| | **P** | 31 | 79599.0 | 6.0 | | | | ug/L | 77079 | Standard |
| | **S** | 34 | 3126127.2 | 2.0 | | | | ug/L | 1028777 | Standard |
| | **Sr** | 88 | 3144997.7 | 6.0 | | | | ug/L | 318 | Standard |

## QC Calculated Values

| | Analyte | Mass | QC Std % Recovery | Int Std % Recovery | Spike % Recovery |
|---|---|---|---|---|---|
| | Li | 7 | | | |
| | Be | 9 | | | |
| | Al | 27 | | | |
| > | Sc | 45 | | | |
| | Ti | 47 | | | |
| | V | 51 | | | |
| | Cr | 52 | | | |
| | Cr | 53 | | | |
| | Mn | 55 | | | |
| | Co | 59 | | | |
| | Ni | 60 | | | |
| | Cu | 65 | | | |
| | Zn | 66 | | | |
| > | Ge | 72 | | 86.147 | |
| | As | 75 | | | |
| | Se | 82 | | | |
| | Se-1 | 77 | | | |
| > | Ga | 71 | | 82.679 | |
| | Rb | 85 | | | |
| | Y | 89 | | | |
| > | Rh | 103 | | 85.835 | |
| | Mo | 98 | | | |
| | Ag | 107 | | | |
| | Cd | 111 | | | |
| | Cd | 114 | | | |
| > | In | 115 | | 83.469 | |
| | Sn | 118 | | | |
| | Sb | 123 | | | |
| | Ba | 135 | | | |
| | Ce | 140 | | | |
| > | Tb | 159 | | 87.823 | |
| | Ho | 165 | | | |
| | Tl | 203 | | | |
| | Tl | 205 | | | |
| | Pb | 206 | | | |



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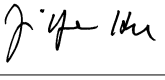

| | | | |
|---|---|---|---|
| | Pb | 207 | |
| | Pb | 208 | |
| | U | 238 | |
| > | Bi | 209 | 86.856 |
| | Na | 23 | |
| | Mg | 24 | |
| | K | 39 | |
| | Ca | 43 | |
| | Fe | 54 | |
| | Fe | 57 | |
| > | Sc-1 | 45 | |
| | Cl | 35 | |
| | Kr | 83 | |
| | Br | 81 | |
| | P | 31 | |
| | S | 34 | |
| | Sr | 88 | |

## QC Out of Limits

| Measurement Type | Analyte | Mass | Out of Limits Message |
|---|---|---|---|
| Ba 135 Upper, S, EEE | Ba | 135 | |



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# Method 6020 - Summary Report

**Sample ID: L1205035102SDL WG398436-02**
Sample Date/Time: Friday, May 18, 2012 12:25:20
Number of Replicates: 3
Autosampler Position: 235
Sample Description: 50
Method File: C:\NexION Data\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

## Concentration Results

| IS | Analyte | Mass | Intensity | RSD | Conc. | SD | RSD | Units | Blank Intens. | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **Li** | 7 | 33488.8 | 6.9 | **-11500.6614** | 311.778 | 2.7 | ug/L | 13493 | Standard |
| | **Be** | 9 | 51.7 | 40.3 | **0.0073** | 0.007 | 101.2 | ug/L | 13 | Standard |
| | **Al** | 27 | 34841.8 | 5.5 | **2.2007** | 0.067 | 3.0 | ug/L | 8786 | Standard |
| > | **Sc** | 45 | 233655.1 | 5.8 | | | | ug/L | 280553 | Standard |
| | **Ti** | 47 | 232.3 | 7.7 | **0.1147** | 0.015 | 12.9 | ug/L | 96 | Standard |
| | **V** | 51 | 4899.5 | 5.2 | **0.1544** | 0.002 | 1.2 | ug/L | 3640 | Standard |
| | **Cr** | 52 | 15911.0 | 3.2 | **0.7590** | 0.036 | 4.8 | ug/L | 11495 | Standard |
| | **Cr** | 53 | 1258.4 | 5.1 | **0.6584** | 0.087 | 13.2 | ug/L | 564 | Standard |
| | **Mn** | 55 | 12139.9 | 4.4 | **0.7398** | 0.010 | 1.4 | ug/L | 1247 | Standard |
| | **Co** | 59 | 587.3 | 22.9 | **0.0421** | 0.013 | 30.1 | ug/L | 114 | Standard |
| | **Ni** | 60 | 2147.5 | 4.0 | **0.9511** | 0.019 | 2.0 | ug/L | 66 | Standard |
| | **Cu** | 65 | 503.3 | 9.2 | **0.1664** | 0.011 | 6.7 | ug/L | 219 | Standard |
| | **Zn** | 66 | 2245.5 | 1.1 | **2.3268** | 0.118 | 5.1 | ug/L | 232 | Standard |
| > | **Ge** | 72 | 189532.1 | 5.1 | | | | ug/L | 228255 | Standard |
| | **As** | 75 | 495.8 | 4.7 | **0.8272** | 0.021 | 2.5 | ug/L | -233 | Standard |
| | **Se** | 82 | 41.6 | 8.7 | **0.2295** | 0.032 | 13.9 | ug/L | 23 | Standard |
| | **Se-1** | 77 | 70.0 | 11.2 | **0.0135** | 0.166 | 1228.1 | ug/L | 91 | Standard |
| > | **Ga** | 71 | 167549.7 | 5.3 | | | | mg/L | 208873 | Standard |
| | **Rb** | 85 | 11993.1 | 6.6 | | | | ug/L | 28 | Standard |
| | **Y** | 89 | 201768.5 | 5.1 | | | | ug/L | 234742 | Standard |
| > | **Rh** | 103 | 100875.3 | 5.1 | | | | ug/L | 121294 | Standard |
| | **Mo** | 98 | 824.6 | 5.6 | **0.2669** | 0.006 | 2.4 | ug/L | 6 | Standard |
| | **Ag** | 107 | 166.3 | 13.8 | **0.0154** | 0.003 | 16.9 | ug/L | 64 | Standard |
| | **Cd** | 111 | 362.9 | 11.6 | **0.0083** | 0.010 | 120.9 | mg/L | 417 | Standard |
| | **Cd** | 114 | 983.6 | 1.9 | **0.0184** | 0.004 | 21.5 | ug/L | 1009 | Standard |
| > | **In** | 115 | 514908.4 | 4.4 | | | | ug/L | 628085 | Standard |
| | **Sn** | 118 | 837.0 | 5.2 | **0.0142** | 0.003 | 19.5 | ug/L | 834 | Standard |
| | **Sb** | 123 | 1746.2 | 36.6 | **0.2174** | 0.073 | 33.5 | ug/L | 22 | Standard |
| | **Ba** | 135 | 34085.4 | 5.4 | **10.2704** | 0.117 | 1.1 | ug/L | 36 | Standard |
| | **Ce** | 140 | 130.3 | 3.9 | | | | ug/L | 44 | Standard |
| > | **Tb** | 159 | 579786.8 | 4.9 | | | | ug/L | 691511 | Standard |
| | **Ho** | 165 | 82.0 | 7.3 | | | | ug/L | 6 | Standard |
| | **Tl** | 203 | 391.3 | 17.9 | **0.0272** | 0.005 | 18.7 | ug/L | 71 | Standard |
| | **Tl** | 205 | 923.4 | 19.2 | **0.0276** | 0.005 | 18.7 | ug/L | 177 | Standard |
| | **Pb** | 206 | 420.0 | 11.1 | **0.0194** | 0.005 | 27.6 | ug/L | 268 | Standard |
| | **Pb** | 207 | 337.3 | 19.5 | **0.0162** | 0.006 | 39.9 | ug/L | 245 | Standard |
| | **Pb** | 208 | 1601.0 | 12.6 | **0.0176** | 0.004 | 23.2 | ug/L | 1057 | Standard |
| | **U** | 238 | 133.0 | 28.0 | **0.0058** | 0.002 | 27.4 | ug/L | 9 | Standard |
| > | **Bi** | 209 | 333880.7 | 4.6 | | | | ug/L | 389590 | Standard |
| | **Na** | 23 | 14268.4 | 4.3 | **5.5648** | 0.101 | 1.8 | mg/L | 92 | Standard |
| | **Mg** | 24 | 504441.0 | 3.4 | **1.4499** | 0.039 | 2.7 | mg/L | 142 | Standard |



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| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | **K** | 39 | 9219.5 | 8.8 | **1.0622** | 0.074 | 7.0 | mg/L | 635 | Standard |
| | **Ca** | 43 | 1105.0 | 3.9 | **3.0399** | 0.273 | 9.0 | mg/L | 63 | Standard |
| | **Fe** | 54 | 912.7 | 4.2 | **0.0512** | 0.017 | 34.2 | mg/L | 901 | Standard |
| | **Fe** | 57 | 9136.1 | 0.7 | **0.0338** | 0.004 | 11.2 | mg/L | 5948 | Standard |
| > | **Sc-1** | 45 | 233655.1 | 5.8 | | | | mg/L | 280553 | Standard |
| | **Cl** | 35 | 3360.7 | 3.8 | | | | ug/L | 931 | Standard |
| | **Kr** | 83 | 36.3 | 14.8 | | | | ug/L | 40 | Standard |
| | **Br** | 81 | 10817.2 | 4.7 | | | | ug/L | 11862 | Standard |
| | **P** | 31 | 63265.5 | 6.2 | | | | ug/L | 77079 | Standard |
| | **S** | 34 | 1458375.2 | 4.0 | | | | ug/L | 1028777 | Standard |
| | **Sr** | 88 | 667170.2 | 6.0 | | | | ug/L | 318 | Standard |

## QC Calculated Values

| | Analyte | Mass | QC Std % Recovery | Int Std % Recovery | Spike % Recovery |
|---|---|---|---|---|---|
| | Li | 7 | | | |
| | Be | 9 | | | |
| | Al | 27 | | | |
| > | Sc | 45 | | | |
| | Ti | 47 | | | |
| | V | 51 | | | |
| | Cr | 52 | | | |
| | Cr | 53 | | | |
| | Mn | 55 | | | |
| | Co | 59 | | | |
| | Ni | 60 | | | |
| | Cu | 65 | | | |
| | Zn | 66 | | | |
| > | Ge | 72 | | 83.035 | |
| | As | 75 | | | |
| | Se | 82 | | | |
| | Se-1 | 77 | | | |
| > | Ga | 71 | | 80.216 | |
| | Rb | 85 | | | |
| | Y | 89 | | | |
| > | Rh | 103 | | 83.166 | |
| | Mo | 98 | | | |
| | Ag | 107 | | | |
| | Cd | 111 | | | |
| | Cd | 114 | | | |
| > | In | 115 | | 81.981 | |
| | Sn | 118 | | | |
| | Sb | 123 | | | |
| | Ba | 135 | | | |
| | Ce | 140 | | | |
| > | Tb | 159 | | 83.843 | |
| | Ho | 165 | | | |
| | Tl | 203 | | | |
| | Tl | 205 | | | |
| | Pb | 206 | | | |

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| | | |
|---|---|---|
| | Pb | 207 |
| | Pb | 208 |
| | U | 238 |
| > | Bi | 209 |
| | Na | 23 |
| | Mg | 24 |
| | K | 39 |
| | Ca | 43 |
| | Fe | 54 |
| | Fe | 57 |
| > | Sc-1 | 45 |
| | Cl | 35 |
| | Kr | 83 |
| | Br | 81 |
| | P | 31 |
| | S | 34 |
| | Sr | 88 |

85.701

## QC Out of Limits

| Measurement Type | Analyte | Mass | Out of Limits Message |
|---|---|---|---|

**Sample ID: L1205035102SDL WG398436-02**
Report Date/Time: Friday, May 18, 2012 12:27:53
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# Method 6020 - Summary Report

**Sample ID: QC Std 6**
Sample Date/Time: Friday, May 18, 2012 12:28:16
Number of Replicates: 3
Autosampler Position: 101
Sample Description:
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

## Concentration Results

| IS | Analyte | Mass | Intensity | RSD | Conc. | SD | RSD | Units | Blank Intens. | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| ⌈ | **Li** | 7 | 11370.9 | 2.7 | **283.2541** | 273.747 | 96.6 | ug/L | 13493 | Standard |
| \| | **Be** | 9 | 134508.0 | 2.6 | **51.2184** | 2.402 | 4.7 | ug/L | 13 | Standard |
| \| | **Al** | 27 | 773446.2 | 4.2 | **58.6312** | 1.433 | 2.4 | ug/L | 8786 | Standard |
| ⌊> | **Sc** | 45 | 250029.5 | 6.1 | | | | ug/L | 280553 | Standard |
| ⌈ | **Ti** | 47 | 128236.3 | 6.0 | **103.8080** | 2.381 | 2.3 | ug/L | 96 | Standard |
| \| | **V** | 51 | 676766.0 | 4.9 | **52.7577** | 1.007 | 1.9 | ug/L | 3640 | Standard |
| \| | **Cr** | 52 | 485174.0 | 4.4 | **51.6558** | 0.725 | 1.4 | ug/L | 11495 | Standard |
| \| | **Cr** | 53 | 72536.1 | 6.0 | **52.4216** | 1.593 | 3.0 | ug/L | 564 | Standard |
| \| | **Mn** | 55 | 834035.5 | 4.7 | **51.9198** | 0.516 | 1.0 | ug/L | 1247 | Standard |
| \| | **Co** | 59 | 592322.6 | 4.9 | **52.6422** | 0.805 | 1.5 | ug/L | 114 | Standard |
| \| | **Ni** | 60 | 125006.9 | 4.5 | **52.9656** | 0.413 | 0.8 | ug/L | 66 | Standard |
| \| | **Cu** | 65 | 109008.3 | 4.9 | **53.5391** | 0.622 | 1.2 | ug/L | 219 | Standard |
| \| | **Zn** | 66 | 49197.8 | 2.8 | **52.8356** | 0.542 | 1.0 | ug/L | 232 | Standard |
| \| > | **Ge** | 72 | 202643.0 | 3.7 | | | | ug/L | 228255 | Standard |
| \| | **As** | 75 | 46524.4 | 4.2 | **51.9661** | 0.447 | 0.9 | ug/L | -233 | Standard |
| \| | **Se** | 82 | 6118.6 | 6.2 | **51.3570** | 1.318 | 2.6 | ug/L | 23 | Standard |
| ⌊ | **Se-1** | 77 | 3428.7 | 4.9 | **51.3598** | 0.593 | 1.2 | ug/L | 91 | Standard |
| ⌈> | **Ga** | 71 | 179894.2 | 3.6 | | | | mg/L | 208873 | Standard |
| ⌊ | **Rb** | 85 | 1381.7 | 26.0 | | | | ug/L | 28 | Standard |
| ⌈ | **Y** | 89 | 214073.4 | 4.1 | | | | ug/L | 234742 | Standard |
| ⌊> | **Rh** | 103 | 108733.4 | 4.9 | | | | ug/L | 121294 | Standard |
| ⌈ | **Mo** | 98 | 361649.1 | 4.7 | **108.0090** | 1.937 | 1.8 | ug/L | 6 | Standard |
| \| | **Ag** | 107 | 332548.4 | 4.9 | **50.2794** | 0.970 | 1.9 | ug/L | 64 | Standard |
| \| | **Cd** | 111 | 177602.8 | 3.6 | **50.6591** | 0.181 | 0.4 | mg/L | 417 | Standard |
| \| | **Cd** | 114 | 460991.8 | 3.4 | **52.1510** | 0.089 | 0.2 | ug/L | 1009 | Standard |
| \| > | **In** | 115 | 549104.0 | 3.3 | | | | ug/L | 628085 | Standard |
| \| | **Sn** | 118 | 591976.2 | 4.0 | **50.8765** | 0.608 | 1.2 | ug/L | 834 | Standard |
| \| | **Sb** | 123 | 434763.0 | 3.6 | **52.1577** | 1.573 | 3.0 | ug/L | 22 | Standard |
| ⌊ | **Ba** | 135 | 188899.3 | 3.6 | **53.4382** | 0.942 | 1.8 | ug/L | 36 | Standard |
| ⌈ | **Ce** | 140 | 717.4 | 7.4 | | | | ug/L | 44 | Standard |
| ⌊> | **Tb** | 159 | 627871.9 | 4.4 | | | | ug/L | 691511 | Standard |
| ⌈ | **Ho** | 165 | 11.7 | 42.3 | | | | ug/L | 6 | Standard |
| \| | **Tl** | 203 | 659132.9 | 3.4 | **52.1373** | 0.296 | 0.6 | ug/L | 71 | Standard |
| \| | **Tl** | 205 | 1572421.6 | 3.5 | **51.3130** | 0.254 | 0.5 | ug/L | 177 | Standard |
| \| | **Pb** | 206 | 534750.6 | 3.3 | **52.1954** | 0.225 | 0.4 | ug/L | 268 | Standard |
| \| | **Pb** | 207 | 456818.0 | 4.0 | **51.8086** | 0.473 | 0.9 | ug/L | 245 | Standard |
| \| | **Pb** | 208 | 2088215.3 | 3.4 | **51.5800** | 0.180 | 0.3 | ug/L | 1057 | Standard |
| \| | **U** | 238 | 1056254.2 | 4.7 | **49.8275** | 0.851 | 1.7 | ug/L | 9 | Standard |
| ⌊> | **Bi** | 209 | 351295.0 | 3.1 | | | | ug/L | 389590 | Standard |
| ⌈ | **Na** | 23 | 15736.5 | 6.1 | **5.7339** | 0.110 | 1.9 | mg/L | 92 | Standard |
| \| | **Mg** | 24 | 2352269.4 | 4.9 | **6.3211** | 0.087 | 1.4 | mg/L | 142 | Standard |

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| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | **K** | 39 | 61086.9 | 17.0 | **6.8902** | 0.940 | 13.6 | mg/L | 635 | Standard |
| | **Ca** | 43 | 2195.2 | 11.1 | **5.7566** | 0.406 | 7.1 | mg/L | 63 | Standard |
| | **Fe** | 54 | 29106.9 | 6.8 | **6.0866** | 0.196 | 3.2 | mg/L | 901 | Standard |
| | **Fe** | 57 | 793978.3 | 4.2 | **5.7830** | 0.191 | 3.3 | mg/L | 5948 | Standard |
| > | **Sc-1** | 45 | 250029.5 | 6.1 | | | | mg/L | 280553 | Standard |
| | **Cl** | 35 | 960.4 | 12.7 | | | | ug/L | 931 | Standard |
| | **Kr** | 83 | 39.3 | 5.2 | | | | ug/L | 40 | Standard |
| | **Br** | 81 | 10748.0 | 7.7 | | | | ug/L | 11862 | Standard |
| | **P** | 31 | 71556.1 | 8.6 | | | | ug/L | 77079 | Standard |
| | **S** | 34 | 855045.4 | 5.3 | | | | ug/L | 1028777 | Standard |
| | **Sr** | 88 | 2918.8 | 85.6 | | | | ug/L | 318 | Standard |

## QC Calculated Values

| | Analyte | Mass | QC Std % Recovery | Int Std % Recovery | Spike % Recovery |
|---|---|---|---|---|---|
| | Li | 7 | | | |
| | Be | 9 | | | |
| | Al | 27 | 117.262 | | |
| > | Sc | 45 | | | |
| | Ti | 47 | 103.808 | | |
| | V | 51 | 105.515 | | |
| | Cr | 52 | 103.312 | | |
| | Cr | 53 | | | |
| | Mn | 55 | 103.840 | | |
| | Co | 59 | 105.284 | | |
| | Ni | 60 | 105.931 | | |
| | Cu | 65 | 107.078 | | |
| | Zn | 66 | 105.671 | | |
| > | Ge | 72 | | 88.779 | |
| | As | 75 | 103.932 | | |
| | Se | 82 | 102.714 | | |
| | Se-1 | 77 | | | |
| > | Ga | 71 | | 86.126 | |
| | Rb | 85 | | | |
| | Y | 89 | | | |
| > | Rh | 103 | | 89.645 | |
| | Mo | 98 | 108.009 | | |
| | Ag | 107 | 100.559 | | |
| | Cd | 111 | 101.318 | | |
| | Cd | 114 | | | |
| > | In | 115 | | 87.425 | |
| | Sn | 118 | 101.753 | | |
| | Sb | 123 | 104.315 | | |
| | Ba | 135 | 106.876 | | |
| | Ce | 140 | | | |
| > | Tb | 159 | | 90.797 | |
| | Ho | 165 | | | |
| | Tl | 203 | 104.275 | | |
| | Tl | 205 | | | |
| | Pb | 206 | 104.391 | | |

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| | | | | |
|---|---|---|---|---|
| | Pb | 207 | 103.617 | |
| | Pb | 208 | 103.160 | |
| | U | 238 | 99.655 | |
| > | Bi | 209 | | 90.170 |
| | Na | 23 | 114.679 | |
| | Mg | 24 | 126.422 | |
| | K | 39 | 137.804 | |
| | Ca | 43 | 115.132 | |
| | Fe | 54 | 121.733 | |
| | Fe | 57 | 115.660 | |
| > | Sc-1 | 45 | | |
| | Cl | 35 | | |
| | Kr | 83 | | |
| | Br | 81 | | |
| | P | 31 | | |
| | S | 34 | | |
| | Sr | 88 | | |

## QC Out of Limits

| Measurement Type | Analyte | Mass | Out of Limits Message |
|---|---|---|---|
| QC Std 6 | Al | 27 | |
| QC Std 6 | Na | 23 | |
| QC Std 6 | Mg | 24 | |
| QC Std 6 | K | 39 | |
| QC Std 6 | Ca | 43 | |
| QC Std 6 | Fe | 54 | |
| QC Std 6 | Fe | 57 | |



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# Method 6020 - Summary Report

**Sample ID: QC Std 7**
Sample Date/Time: Friday, May 18, 2012 12:31:10
Number of Replicates: 3
Autosampler Position: 102
Sample Description:
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

## Concentration Results

| IS | Analyte | Mass | Intensity | RSD | Conc. | SD | RSD | Units | Blank Intens. | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | Li | 7 | 10553.7 | 6.1 | **366.6311** | 86.444 | 23.6 | ug/L | 13493 | Standard |
| | Be | 9 | 25.0 | 40.0 | **-0.0032** | 0.005 | 140.6 | ug/L | 13 | Standard |
| | Al | 27 | 15025.8 | 2.6 | **0.5693** | 0.035 | 6.1 | ug/L | 8786 | Standard |
| > | Sc | 45 | 235085.5 | 4.6 | | | | ug/L | 280553 | Standard |
| | Ti | 47 | 94.3 | 15.0 | **-0.0045** | 0.008 | 177.3 | ug/L | 96 | Standard |
| | V | 51 | 2697.5 | 0.9 | **-0.0275** | 0.011 | 39.3 | ug/L | 3640 | Standard |
| | Cr | 52 | 8622.5 | 1.7 | **-0.0783** | 0.049 | 62.5 | ug/L | 11495 | Standard |
| | Cr | 53 | 317.5 | 11.1 | **-0.0724** | 0.041 | 56.1 | ug/L | 564 | Standard |
| | Mn | 55 | 3468.1 | 3.4 | **0.1638** | 0.006 | 3.4 | ug/L | 1247 | Standard |
| | Co | 59 | 159.0 | 7.1 | **0.0015** | 0.002 | 132.8 | ug/L | 114 | Standard |
| | Ni | 60 | 165.7 | 5.2 | **0.0531** | 0.004 | 8.2 | ug/L | 66 | Standard |
| | Cu | 65 | 313.7 | 7.2 | **0.0684** | 0.005 | 7.0 | ug/L | 219 | Standard |
| | Zn | 66 | 308.3 | 10.6 | **0.0906** | 0.020 | 22.6 | ug/L | 232 | Standard |
| > | Ge | 72 | 187747.3 | 5.5 | | | | ug/L | 228255 | Standard |
| | As | 75 | -162.5 | 10.1 | **0.0413** | 0.030 | 72.4 | ug/L | -233 | Standard |
| | Se | 82 | 33.4 | 21.6 | **0.1560** | 0.051 | 33.0 | ug/L | 23 | Standard |
| | Se-1 | 77 | 68.0 | 7.8 | **-0.0120** | 0.081 | 673.4 | ug/L | 91 | Standard |
| > | Ga | 71 | 166331.7 | 5.8 | | | | mg/L | 208873 | Standard |
| | Rb | 85 | 78.3 | 31.5 | | | | ug/L | 28 | Standard |
| | Y | 89 | 199974.0 | 7.3 | | | | ug/L | 234742 | Standard |
| > | Rh | 103 | 103111.6 | 7.3 | | | | ug/L | 121294 | Standard |
| | Mo | 98 | 98.6 | 56.7 | **0.0347** | 0.016 | 45.5 | ug/L | 6 | Standard |
| | Ag | 107 | 84.3 | 18.5 | **0.0021** | 0.002 | 84.5 | ug/L | 64 | Standard |
| | Cd | 111 | 341.8 | 12.1 | **0.0006** | 0.007 | 1105.0 | mg/L | 417 | Standard |
| | Cd | 114 | 896.3 | 5.3 | **0.0067** | 0.006 | 83.0 | ug/L | 1009 | Standard |
| > | In | 115 | 520284.9 | 6.1 | | | | ug/L | 628085 | Standard |
| | Sn | 118 | 772.0 | 13.0 | **0.0073** | 0.005 | 71.3 | ug/L | 834 | Standard |
| | Sb | 123 | 1270.8 | 57.1 | **0.1541** | 0.082 | 53.5 | ug/L | 22 | Standard |
| | Ba | 135 | 44.7 | 6.5 | **0.0015** | 0.001 | 40.3 | ug/L | 36 | Standard |
| | Ce | 140 | 39.7 | 20.2 | | | | ug/L | 44 | Standard |
| > | Tb | 159 | 584293.7 | 6.6 | | | | ug/L | 691511 | Standard |
| | Ho | 165 | 5.3 | 21.7 | | | | ug/L | 6 | Standard |
| | Tl | 203 | 88.3 | 30.2 | **0.0019** | 0.002 | 101.7 | ug/L | 71 | Standard |
| | Tl | 205 | 251.3 | 19.3 | **0.0046** | 0.001 | 28.7 | ug/L | 177 | Standard |
| | Pb | 206 | 276.0 | 16.5 | **0.0043** | 0.004 | 90.3 | ug/L | 268 | Standard |
| | Pb | 207 | 242.0 | 9.6 | **0.0048** | 0.002 | 48.5 | ug/L | 245 | Standard |
| | Pb | 208 | 1107.0 | 9.4 | **0.0046** | 0.002 | 32.9 | ug/L | 1057 | Standard |
| | U | 238 | 88.7 | 13.2 | **0.0037** | 0.001 | 20.9 | ug/L | 9 | Standard |
| > | Bi | 209 | 335355.1 | 5.8 | | | | ug/L | 389590 | Standard |
| | Na | 23 | 135.0 | 24.3 | **0.0117** | 0.011 | 90.5 | mg/L | 92 | Standard |
| | Mg | 24 | 411.7 | 11.0 | **-0.0005** | 0.000 | 32.2 | mg/L | 142 | Standard |

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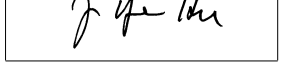

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | **K** | 39 | 1343.4 | 5.6 | **0.0996** | 0.004 | 3.7 | mg/L | 635 | Standard |
| | **Ca** | 43 | 90.0 | 20.0 | **0.0956** | 0.042 | 44.2 | mg/L | 63 | Standard |
| | **Fe** | 54 | 906.6 | 2.5 | **0.0481** | 0.006 | 12.4 | mg/L | 901 | Standard |
| | **Fe** | 57 | 5589.4 | 6.3 | **0.0055** | 0.002 | 28.0 | mg/L | 5948 | Standard |
| > | **Sc-1** | 45 | 235085.5 | 4.6 | | | | mg/L | 280553 | Standard |
| | **Cl** | 35 | 851.4 | 4.9 | | | | ug/L | 931 | Standard |
| | **Kr** | 83 | 35.4 | 1.4 | | | | ug/L | 40 | Standard |
| | **Br** | 81 | 10313.5 | 4.9 | | | | ug/L | 11862 | Standard |
| | **P** | 31 | 65322.8 | 8.1 | | | | ug/L | 77079 | Standard |
| | **S** | 34 | 835062.0 | 5.4 | | | | ug/L | 1028777 | Standard |
| | **Sr** | 88 | 256.7 | 21.4 | | | | ug/L | 318 | Standard |

## QC Calculated Values

| | Analyte | Mass | QC Std % Recovery | Int Std % Recovery | Spike % Recovery |
|---|---|---|---|---|---|
| | Li | 7 | | | |
| | Be | 9 | | | |
| | Al | 27 | | | |
| > | Sc | 45 | | | |
| | Ti | 47 | | | |
| | V | 51 | | | |
| | Cr | 52 | | | |
| | Cr | 53 | | | |
| | Mn | 55 | | | |
| | Co | 59 | | | |
| | Ni | 60 | | | |
| | Cu | 65 | | | |
| | Zn | 66 | | | |
| > | Ge | 72 | | 82.253 | |
| | As | 75 | | | |
| | Se | 82 | | | |
| | Se-1 | 77 | | | |
| > | Ga | 71 | | 79.633 | |
| | Rb | 85 | | | |
| | Y | 89 | | | |
| > | Rh | 103 | | 85.010 | |
| | Mo | 98 | | | |
| | Ag | 107 | | | |
| | Cd | 111 | | | |
| | Cd | 114 | | | |
| > | In | 115 | | 82.837 | |
| | Sn | 118 | | | |
| | Sb | 123 | | | |
| | Ba | 135 | | | |
| | Ce | 140 | | | |
| > | Tb | 159 | | 84.495 | |
| | Ho | 165 | | | |
| | Tl | 203 | | | |
| | Tl | 205 | | | |
| | Pb | 206 | | | |

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| | | | |
|---|---|---|---|
| | Pb | 207 | |
| | Pb | 208 | |
| | U | 238 | |
| > | Bi | 209 | 86.079 |
| | Na | 23 | |
| | Mg | 24 | |
| | K | 39 | |
| | Ca | 43 | |
| | Fe | 54 | |
| | Fe | 57 | |
| > | Sc-1 | 45 | |
| | Cl | 35 | |
| | Kr | 83 | |
| | Br | 81 | |
| | P | 31 | |
| | S | 34 | |
| | Sr | 88 | |

## QC Out of Limits

| Measurement Type | Analyte | Mass | Out of Limits Message |
|---|---|---|---|
| Ga 71 Int Std for QC Std | Ga | 71 | Rerun sample |

**Sample ID: QC Std 7**
Report Date/Time: Friday, May 18, 2012 12:33:43
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# 2.3.3 Metals CVAA Data (Mercury)

# 2.3.3.1 Summary Data

**Login Number:** L12050284
**Department**: Metals - AA
**Analyst:** Pierce Morris

**METHOD**

**Preparation:** SW-846 7470

**Analysis:** SW-846 7470

**HOLDING TIMES**

**Sample Preparation:** All holding times were met.

**Sample Analysis:** All holding times were met.

**PREPARATION**

Sample preparation proceeded normally.

**CALIBRATION**

**Initial Calibration:** All acceptance criteria were met.

**Alternate Source Standards:** All acceptance criteria were met.

**Interference Check Standards:** All acceptance criteria were met.

**Continuing Calibration Verification:** All acceptance criteria were met.

**Continuing Calibration Blank:** All acceptance criteria were met.

**BATCH QA/QC**

**Method Blank:** All acceptance criteria were met.

**Laboratory Control Sample:** All acceptance criteria were met.

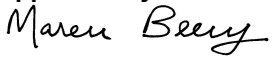
**Serial Dilution/Post Digestion Spikes:** WG397918 - All acceptance criteria were met.

**Matrix Spikes:** All acceptance criteria were met.

**SAMPLES**

**Samples:** All acceptance criteria were met.

**Narrative ID:** 46883
**Approved By:** Maren Beery



# Certificate of Analysis

**Sample #:** L12050284-01 **PrePrep Method:** N/A **Instrument:** HYDRA
**Client ID:** BBLD-PIT-SSP-050812 **Prep Method:** 7470A **Prep Date:** 05/10/2012 08:28
**Matrix:** Water **Analytical Method:** 7470A **Cal Date:** 05/14/2012 11:36
**Workgroup #:** WG397918 **Analyst:** PDM **Run Date:** 05/14/2012 14:09
**Collect Date:** 05/08/2012 10:01 **Dilution:** 1 **File ID:** HY.051412.140901
**Sample Tag:** 01 **Units:** mg/L

| Analyte | CAS # | Result | Qual | RL | MDL |
|---|---|---|---|---|---|
| Mercury | 7439-97-6 | 0.000252 | | 0.000200 | 0.000100 |

**Sample #:** L12050284-02 **PrePrep Method:** N/A **Instrument:** HYDRA
**Client ID:** BBLD-PIT-SSP-050812 **Prep Method:** 7470A **Prep Date:** 05/10/2012 08:28
**Matrix:** Water **Analytical Method:** 7470A **Cal Date:** 05/14/2012 11:36
**Workgroup #:** WG397918 **Analyst:** PDM **Run Date:** 05/14/2012 14:10
**Collect Date:** 05/08/2012 10:01 **Dilution:** 1 **File ID:** HY.051412.141049
**Sample Tag:** 01 **Units:** mg/L

| Analyte | CAS # | Result | Qual | RL | MDL |
|---|---|---|---|---|---|
| Mercury, Dissolved | 7439-97-6 | | U | 0.000200 | 0.000100 |
| U | Not detected at or above adjusted sample detection limit. | | | | |

**Sample #:** L12050284-03 **PrePrep Method:** N/A **Instrument:** HYDRA
**Client ID:** PZ-07-050812 **Prep Method:** 7470A **Prep Date:** 05/10/2012 08:28
**Matrix:** Water **Analytical Method:** 7470A **Cal Date:** 05/14/2012 11:36
**Workgroup #:** WG397918 **Analyst:** PDM **Run Date:** 05/14/2012 14:12
**Collect Date:** 05/08/2012 10:10 **Dilution:** 1 **File ID:** HY.051412.141233
**Sample Tag:** 01 **Units:** mg/L

| Analyte | CAS # | Result | Qual | RL | MDL |
|---|---|---|---|---|---|
| Mercury | 7439-97-6 | | U | 0.000200 | 0.000100 |
| U | Not detected at or above adjusted sample detection limit. | | | | |

**Sample #:** L12050284-04 **PrePrep Method:** N/A **Instrument:** HYDRA
**Client ID:** PZ-07-050812 **Prep Method:** 7470A **Prep Date:** 05/10/2012 08:28
**Matrix:** Water **Analytical Method:** 7470A **Cal Date:** 05/14/2012 11:36
**Workgroup #:** WG397918 **Analyst:** PDM **Run Date:** 05/14/2012 14:14
**Collect Date:** 05/08/2012 10:10 **Dilution:** 1 **File ID:** HY.051412.141419
**Sample Tag:** 01 **Units:** mg/L

| Analyte | CAS # | Result | Qual | RL | MDL |
|---|---|---|---|---|---|
| Mercury, Dissolved | 7439-97-6 | | U | 0.000200 | 0.000100 |

| | |
|---|---|
| U | Not detected at or above adjusted sample detection limit. |

**Sample #:** L12050284-05 **PrePrep Method:** N/A **Instrument:** HYDRA
**Client ID:** MW-18-050812 **Prep Method:** 7470A **Prep Date:** 05/10/2012 08:28
**Matrix:** Water **Analytical Method:** 7470A **Cal Date:** 05/14/2012 11:36
**Workgroup #:** WG397918 **Analyst:** PDM **Run Date:** 05/14/2012 14:16
**Collect Date:** 05/08/2012 11:00 **Dilution:** 1 **File ID:** HY.051412.141614
**Sample Tag:** 01 **Units:** mg/L

| Analyte | CAS # | Result | Qual | RL | MDL |
|---|---|---|---|---|---|
| Mercury | 7439-97-6 | | U | 0.000200 | 0.000100 |
| U | Not detected at or above adjusted sample detection limit. | | | | |

**Sample #:** L12050284-06 **PrePrep Method:** N/A **Instrument:** HYDRA
**Client ID:** MW-18-050812 **Prep Method:** 7470A **Prep Date:** 05/10/2012 08:28
**Matrix:** Water **Analytical Method:** 7470A **Cal Date:** 05/14/2012 11:36
**Workgroup #:** WG397918 **Analyst:** PDM **Run Date:** 05/14/2012 14:21
**Collect Date:** 05/08/2012 11:00 **Dilution:** 1 **File ID:** HY.051412.142145
**Sample Tag:** 01 **Units:** mg/L

| Analyte | CAS # | Result | Qual | RL | MDL |
|---|---|---|---|---|---|
| Mercury, Dissolved | 7439-97-6 | | U | 0.000200 | 0.000100 |
| U | Not detected at or above adjusted sample detection limit. | | | | |

**Sample #:** L12050284-07 **PrePrep Method:** N/A **Instrument:** HYDRA
**Client ID:** TW-01-050812 **Prep Method:** 7470A **Prep Date:** 05/10/2012 08:28
**Matrix:** Water **Analytical Method:** 7470A **Cal Date:** 05/14/2012 11:36
**Workgroup #:** WG397918 **Analyst:** PDM **Run Date:** 05/14/2012 14:23
**Collect Date:** 05/08/2012 14:50 **Dilution:** 1 **File ID:** HY.051412.142328
**Sample Tag:** 01 **Units:** mg/L

| Analyte | CAS # | Result | Qual | RL | MDL |
|---|---|---|---|---|---|
| Mercury | 7439-97-6 | | U | 0.000200 | 0.000100 |
| U | Not detected at or above adjusted sample detection limit. | | | | |

Certificate of Analysis

**Sample #:** L12050284-08 **PrePrep Method:** N/A **Instrument:** HYDRA
**Client ID:** TW-01-050812 **Prep Method:** 7470A **Prep Date:** 05/10/2012 08:28
**Matrix:** Water **Analytical Method:** 7470A **Cal Date:** 05/14/2012 11:36
**Workgroup #:** WG397918 **Analyst:** PDM **Run Date:** 05/14/2012 14:25
**Collect Date:** 05/08/2012 14:50 **Dilution:** 1 **File ID:** HY.051412.142511
**Sample Tag:** 01 **Units:** mg/L

| Analyte | CAS # | Result | Qual | RL | MDL |
|---|---|---|---|---|---|
| Mercury, Dissolved | 7439-97-6 | | U | 0.000200 | 0.000100 |

| | |
|---|---|
| U | Not detected at or above adjusted sample detection limit. |

**Sample #:** L12050284-10 **PrePrep Method:** N/A **Instrument:** HYDRA
**Client ID:** DUP-GW-050812 **Prep Method:** 7470A **Prep Date:** 05/10/2012 08:28
**Matrix:** Water **Analytical Method:** 7470A **Cal Date:** 05/14/2012 11:36
**Workgroup #:** WG397918 **Analyst:** PDM **Run Date:** 05/14/2012 14:26
**Collect Date:** 05/08/2012 15:00 **Dilution:** 1 **File ID:** HY.051412.142658
**Sample Tag:** 01 **Units:** mg/L

| Analyte | CAS # | Result | Qual | RL | MDL |
|---|---|---|---|---|---|
| Mercury | 7439-97-6 | | U | 0.000200 | 0.000100 |

| | |
|---|---|
| U | Not detected at or above adjusted sample detection limit. |

**Sample #:** L12050284-11 **PrePrep Method:** N/A **Instrument:** HYDRA
**Client ID:** DUP-GW-050812 **Prep Method:** 7470A **Prep Date:** 05/10/2012 08:28
**Matrix:** Water **Analytical Method:** 7470A **Cal Date:** 05/14/2012 11:36
**Workgroup #:** WG397918 **Analyst:** PDM **Run Date:** 05/14/2012 14:28
**Collect Date:** 05/08/2012 15:00 **Dilution:** 1 **File ID:** HY.051412.142841
**Sample Tag:** 01 **Units:** mg/L

| Analyte | CAS # | Result | Qual | RL | MDL |
|---|---|---|---|---|---|
| Mercury, Dissolved | 7439-97-6 | | U | 0.000200 | 0.000100 |

| | |
|---|---|
| U | Not detected at or above adjusted sample detection limit. |

**Sample #:** L12050284-12 **PrePrep Method:** N/A **Instrument:** HYDRA
**Client ID:** EB-050812-GW **Prep Method:** 7470A **Prep Date:** 05/10/2012 08:28
**Matrix:** Water **Analytical Method:** 7470A **Cal Date:** 05/14/2012 11:36
**Workgroup #:** WG397918 **Analyst:** PDM **Run Date:** 05/14/2012 14:30
**Collect Date:** 05/08/2012 13:10 **Dilution:** 1 **File ID:** HY.051412.143025
**Sample Tag:** 01 **Units:** mg/L

Certificate of Analysis

| Analyte | CAS # | Result | Qual | RL | MDL |
|---|---|---|---|---|---|
| Mercury | 7439-97-6 | | U | 0.000200 | 0.000100 |

| | |
|---|---|
| U | Not detected at or above adjusted sample detection limit. |

# 2.3.3.2 QC Summary

**Example Cold Vapor Mercury Calculations**
**Hydra AA Mercury Analyzer**

**1.0 Initial Calibration (ICAL) Parameters**
The system performs linear regression from data consisting of a blank and five standards.

**2.0 Calculating the concentration (C) of an element in water using data from run log and quantitation report (note:the data system performs this calculation automatically when correction factors have been entered):**

$$Cx = Cs \times \frac{Vf}{Vi} \times D$$

| Where: | **Example:** |
|---|---|
| $Cs$ = Concentration computed by the data system (ug/L) | 0.1 |
| $Vf$ = Diluted to Volume (mL) | 40 |
| $Vi$ = Aliquot Volume (mL) | 40 |
| $D$ = Manual dilution factor, if required (10X = 10) | 1 |
| | |
| $Cx$ = Concentration of element in ppb (ug/L) | 0.1 |

**3.0 Calculating the concentration (C) of an element in soil using data from prep log and quantitation report (note: the data system performs this calculation automatically when correction factors have been entered):**

$$Cx = Cs \times \frac{Vf}{Ws} \times D$$

| Where: | **Example:** |
|---|---|
| $Cs$ = Concentration computed by the data system (ug/L) | 0.1 |
| $Vf$ = Diluted to volume (mL) | 40 |
| $Ws$ = Aliquot weight (g) | 0.6 |
| $D$ = Manual dilution factor | 1 |
| | |
| $Cx$ = Concentration of element in ug/kg | 6.67 |

**4.0 Adjusting the concentration to dry weight:**

$$Cdry = \frac{Cx \times 100}{Px}$$

| | |
|---|---|
| 1 $Cx$ = Concentration calculated as received (wet basis) | 6.67 |
| $Px$ = Percent solids of sample (%wt) | 80 |
| | |
| $Cdry$ = Concentration calculated as dry weight (ug/kg) | 8.33 |

**8.33 ug/kg = 0.00833 mg/kg**

# Microbac Laboratories Inc.
## Metals Digest Log

Workgroup: WG397608
Analyst: BRG
Spike Analyst: BRG
Method: 7470A
Run Date: 05/10/2012 08:28
Hotblock Start Temp: 93.5 @ 07:30
Hotblock End Temp: 96.4 @ 09:30

SOP: ME404 Revison 13
Spike Solution: STD51611
Spike Witness: VC
H2SO4 Lot #: COA16022
HNO3 Lot #: COA16033
Digestion Tubes Lot #: COA16053
K2S2O8 1:1 Lot #: RGT16987
KMnO4 1:1 Lot #: RGT17201
Mercury Water ICV Lot #: STD51613
HG H2O STDS 10PPM Lot #: STD51619

| | SAMPLE # | Type | Matrix | Initial Amount | Final Volume | Spike Amount | Due Date |
|---|---|---|---|---|---|---|---|
| 1 | WG397608-02 | BLANK | 1 | 40 mL | 40 mL | | |
| 2 | WG397608-03 | LCS | 1 | 40 mL | 40 mL | 4 mL | |
| 3 | L12050256-57 | SAMP | 1 | 40 mL | 40 mL | | 05/18/12 |
| 4 | L12050256-58 | SAMP | 1 | 40 mL | 40 mL | | 05/18/12 |
| 5 | L12050284-01 | SAMP | 1 | 40 mL | 40 mL | | 05/23/12 |
| 6 | L12050284-02 | SAMP | 1 | 40 mL | 40 mL | | 05/23/12 |
| 7 | L12050284-03 | SAMP | 1 | 40 mL | 40 mL | | 05/23/12 |
| 8 | L12050284-04 | SAMP | 1 | 40 mL | 40 mL | | 05/23/12 |
| 9 | L12050284-05 | SAMP | 1 | 40 mL | 40 mL | | 05/23/12 |
| 10 | L12050284-06 | SAMP | 1 | 40 mL | 40 mL | | 05/23/12 |
| 11 | L12050284-07 | SAMP | 1 | 40 mL | 40 mL | | 05/23/12 |
| 12 | L12050284-08 | SAMP | 1 | 40 mL | 40 mL | | 05/23/12 |
| 13 | L12050284-10 | SAMP | 1 | 40 mL | 40 mL | | 05/23/12 |
| 14 | L12050284-11 | SAMP | 1 | 40 mL | 40 mL | | 05/23/12 |
| 15 | L12050284-12 | SAMP | 1 | 40 mL | 40 mL | | 05/23/12 |
| 16 | WG397608-01 | REF | 1 | 40 mL | 40 mL | | |
| 17 | L12050297-02 | SAMP | 1 | 40 mL | 40 mL | | 05/18/12 |
| 18 | L12050297-04 | SAMP | 1 | 40 mL | 40 mL | | 05/18/12 |
| 19 | L12050297-06 | SAMP | 1 | 40 mL | 40 mL | | 05/18/12 |
| 20 | L12050297-08 | SAMP | 1 | 40 mL | 40 mL | | 05/18/12 |
| 21 | L12050297-09 | SAMP | 1 | 40 mL | 40 mL | | 05/18/12 |
| 22 | L12050297-10 | SAMP | 1 | 40 mL | 40 mL | | 05/18/12 |
| 23 | L12050297-12 | SAMP | 1 | 40 mL | 40 mL | | 05/18/12 |
| 24 | WG397608-04 | MS | 1 | 36 mL | 40 mL | 4 mL | |
| 25 | WG397608-05 | MSD | 1 | 36 mL | 40 mL | 4 mL | |

Analyst: Brenda Gregory

Reviewer:

HB_DIG - Modified 09/30/2009
PDF ID: 2409196
Report generated: 05/10/2012 10:39

**Microbac Laboratories Inc.**

Instrument Run Log

Instrument: HYDRA  Dataset: 051412C.PRN
Analyst1: PDM  Analyst2: N/A
Method: 7470  SOP: ME404  Rev: 13
Maintenance Log ID: 41704

Calibration Std: STD51619  ICV Std: STD51613  Post Spike: STD51619
ICSA: N/A  ICSAB: N/A  Int. Std:
CCV:  LLCCV:

Workgroups: 397910,397918

Comments:

| Seq. | File ID | Sample | ID | Prep | Dil | Reference | Date/Time |
|---|---|---|---|---|---|---|---|
| 1 | HY.051412.112739 | WG397933-01 | Calibration Point | | 1 | | 05/14/12 11:27 |
| 2 | HY.051412.112922 | WG397933-02 | Calibration Point | | 1 | | 05/14/12 11:29 |
| 3 | HY.051412.113109 | WG397933-03 | Calibration Point | | 1 | | 05/14/12 11:31 |
| 4 | HY.051412.113311 | WG397933-04 | Calibration Point | | 1 | | 05/14/12 11:33 |
| 5 | HY.051412.113453 | WG397933-05 | Calibration Point | | 1 | | 05/14/12 11:34 |
| 6 | HY.051412.113637 | WG397933-06 | Calibration Point | | 1 | | 05/14/12 11:36 |
| 7 | HY.051412.113832 | WG397933-07 | Initial Calibration Verification | | 1 | | 05/14/12 11:38 |
| 8 | HY.051412.114014 | WG397933-08 | Initial Calib Blank | | 1 | | 05/14/12 11:40 |
| 9 | HY.051412.114157 | WG397933-09 | CCV | | 1 | | 05/14/12 11:41 |
| 10 | HY.051412.114350 | WG397933-10 | CCB | | 1 | | 05/14/12 11:43 |
| 11 | HY.051412.121936 | WG397635-02 | Method/Prep Blank | 4/40 | 1 | | 05/14/12 12:19 |
| 12 | HY.051412.122150 | WG397635-03 | Laboratory Control S | 4/40 | 1 | | 05/14/12 12:21 |
| 13 | HY.051412.122333 | WG397561-01 | Fluid Blank | | 1 | | 05/14/12 12:23 |
| 14 | HY.051412.122516 | L12050228-01 | FLOOR | 4/40 | 1 | | 05/14/12 12:25 |
| 15 | HY.051412.122659 | WG397910-01 | Post Digestion Spike | | 1 | L12050228-01 | 05/14/12 12:26 |
| 16 | HY.051412.122841 | L12050228-02 | FILTER | 4/40 | 1 | | 05/14/12 12:28 |
| 17 | HY.051412.123044 | L12050228-03 | POWDER | 4/40 | 1 | | 05/14/12 12:30 |
| 18 | HY.051412.123228 | L12050229-01 | COMPOSITE (5-2-12) | 4/40 | 1 | | 05/14/12 12:32 |
| 19 | HY.051412.123413 | L12050246-01 | 2050329-01 | 4/40 | 1 | | 05/14/12 12:34 |
| 20 | HY.051412.123555 | L12050246-02 | 2050329-02 | 4/40 | 1 | | 05/14/12 12:35 |
| 21 | HY.051412.123747 | WG397933-11 | CCV | | 1 | | 05/14/12 12:37 |
| 22 | HY.051412.123943 | WG397933-12 | CCB | | 1 | | 05/14/12 12:39 |
| 23 | HY.051412.124126 | L12050246-03 | 2050329-03 | 4/40 | 1 | | 05/14/12 12:41 |
| 24 | HY.051412.124318 | L12050246-04 | 2050329-04 | 4/40 | 1 | | 05/14/12 12:43 |
| 25 | HY.051412.124500 | L12050246-05 | 2050329-05 | 4/40 | 1 | | 05/14/12 12:45 |
| 26 | HY.051412.124645 | L12050246-06 | 2050329-06 | 4/40 | 1 | | 05/14/12 12:46 |
| 27 | HY.051412.124829 | L12050246-07 | 2050329-07 | 4/40 | 1 | | 05/14/12 12:48 |
| 28 | HY.051412.125025 | L12050246-08 | 2050329-08 | 4/40 | 1 | | 05/14/12 12:50 |
| 29 | HY.051412.125208 | L12050246-09 | 2050329-09 | 4/40 | 1 | | 05/14/12 12:52 |
| 30 | HY.051412.125351 | L12050246-10 | 2050329-10 | 4/40 | 1 | | 05/14/12 12:53 |
| 31 | HY.051412.125534 | L12050246-11 | 2050329-11 | 4/40 | 1 | | 05/14/12 12:55 |
| 32 | HY.051412.125728 | L12050246-12 | 2050329-12 | 4/40 | 1 | | 05/14/12 12:57 |
| 33 | HY.051412.125915 | WG397933-13 | CCV | | 1 | | 05/14/12 12:59 |
| 34 | HY.051412.130100 | WG397933-14 | CCB | | 1 | | 05/14/12 13:01 |

Page: 1  Approved: May 15, 2012

Sheri L. Babgard

Microbac

**Microbac Laboratories Inc.**

Instrument Run Log

Instrument: HYDRA  Dataset: 051412C.PRN
Analyst1: PDM  Analyst2: N/A
Method: 7470  SOP: ME404  Rev: 13
Maintenance Log ID: 41704

Calibration Std: STD51619  ICV Std: STD51613  Post Spike: STD51619
ICSA: N/A  ICSAB: N/A  Int. Std:
CCV:  LLCCV:

Workgroups: 397910,397918

Comments:

| Seq. | File ID | Sample | ID | Prep | Dil | Reference | Date/Time |
|---|---|---|---|---|---|---|---|
| 35 | HY.051412.130255 | L12050246-14 | 2050329-14 HG IN HOUSE ( | .04/40 | 1 | | 05/14/12 13:02 |
| 36 | HY.051412.130439 | L12050247-01 | 2050307-01 | 4/40 | 1 | WG397635-01 | 05/14/12 13:04 |
| 37 | HY.051412.130631 | WG397635-04 | Matrix Spike | 4/40 | 1 | L12050247-01 | 05/14/12 13:06 |
| 38 | HY.051412.130845 | WG397635-05 | Matrix Spike Duplica | 4/40 | 1 | L12050247-01 | 05/14/12 13:08 |
| 39 | HY.051412.131046 | WG397933-15 | CCV | | 1 | | 05/14/12 13:10 |
| 40 | HY.051412.131228 | WG397933-16 | CCB | | 1 | | 05/14/12 13:12 |
| 41 | HY.051412.140025 | WG397608-02 | Method/Prep Blank | 40/40 | 1 | | 05/14/12 14:00 |
| 42 | HY.051412.140208 | WG397608-03 | Laboratory Control S | 40/40 | 1 | | 05/14/12 14:02 |
| 43 | HY.051412.140353 | L12050256-57 | RW-2 | 40/40 | 1 | | 05/14/12 14:03 |
| 44 | HY.051412.140535 | WG397918-01 | Post Digestion Spike | | 1 | L12050256-57 | 05/14/12 14:05 |
| 45 | HY.051412.140718 | L12050256-58 | DECON | 40/40 | 1 | | 05/14/12 14:07 |
| 46 | HY.051412.140901 | L12050284-01 | BBLD-PIT-SSP-050812 | 40/40 | 1 | | 05/14/12 14:09 |
| 47 | HY.051412.141049 | L12050284-02 | BBLD-PIT-SSP-050812 | 40/40 | 1 | | 05/14/12 14:10 |
| 48 | HY.051412.141233 | L12050284-03 | PZ-07-050812 | 40/40 | 1 | | 05/14/12 14:12 |
| 49 | HY.051412.141419 | L12050284-04 | PZ-07-050812 | 40/40 | 1 | | 05/14/12 14:14 |
| 50 | HY.051412.141614 | L12050284-05 | MW-18-050812 | 40/40 | 1 | | 05/14/12 14:16 |
| 51 | HY.051412.141808 | WG397933-17 | CCV | | 1 | | 05/14/12 14:18 |
| 52 | HY.051412.141951 | WG397933-18 | CCB | | 1 | | 05/14/12 14:19 |
| 53 | HY.051412.142145 | L12050284-06 | MW-18-050812 | 40/40 | 1 | | 05/14/12 14:21 |
| 54 | HY.051412.142328 | L12050284-07 | TW-01-050812 | 40/40 | 1 | | 05/14/12 14:23 |
| 55 | HY.051412.142511 | L12050284-08 | TW-01-050812 | 40/40 | 1 | | 05/14/12 14:25 |
| 56 | HY.051412.142658 | L12050284-10 | DUP-GW-050812 | 40/40 | 1 | | 05/14/12 14:26 |
| 57 | HY.051412.142841 | L12050284-11 | DUP-GW-050812 | 40/40 | 1 | | 05/14/12 14:28 |
| 58 | HY.051412.143025 | L12050284-12 | EB-050812-GW | 40/40 | 1 | | 05/14/12 14:30 |
| 59 | HY.051412.143212 | WG397608-01 | Reference Sample | 40/40 | 1 | L12050297-02 | 05/14/12 14:32 |
| 60 | HY.051412.143408 | WG397608-04 | Matrix Spike | 36/40 | 1 | L12050297-02 | 05/14/12 14:34 |
| 61 | HY.051412.143552 | WG397608-05 | Matrix Spike Duplica | 36/40 | 1 | L12050297-02 | 05/14/12 14:35 |
| 62 | HY.051412.143735 | L12050297-04 | W30WB | 40/40 | 1 | | 05/14/12 14:37 |
| 63 | HY.051412.143918 | WG397933-19 | CCV | | 1 | | 05/14/12 14:39 |
| 64 | HY.051412.144102 | WG397933-20 | CCB | | 1 | | 05/14/12 14:41 |
| 65 | HY.051412.144246 | L12050297-06 | W16 | 40/40 | 1 | | 05/14/12 14:42 |
| 66 | HY.051412.144444 | L12050297-08 | W6 | 40/40 | 1 | | 05/14/12 14:44 |
| 67 | HY.051412.144640 | L12050297-09 | W6B | 40/40 | 1 | | 05/14/12 14:46 |
| 68 | HY.051412.144846 | L12050297-10 | W51 | 40/40 | 1 | | 05/14/12 14:48 |

Page: 2  Approved: May 15, 2012

**Microbac Laboratories Inc.**

Instrument Run Log

Instrument: HYDRA
Dataset: 051412C.PRN
Analyst1: PDM
Analyst2: N/A
Method: 7470
SOP: ME404
Rev: 13
Maintenance Log ID: 41704

Calibration Std: STD51619
ICV Std: STD51613
Post Spike: STD51619
ICSA: N/A
ICSAB: N/A
Int. Std:
CCV:
LLCCV:

Workgroups: 397910,397918

Comments:

| Seq. | File ID | Sample | ID | Prep | Dil | Reference | Date/Time |
|---|---|---|---|---|---|---|---|
| 69 | HY.051412.145033 | L12050297-12 | W7A | 40/40 | 1 | | 05/14/12 14:50 |
| 70 | HY.051412.145242 | WG397933-21 | CCV | | 1 | | 05/14/12 14:52 |
| 71 | HY.051412.145504 | WG397933-22 | CCB | | 1 | | 05/14/12 14:55 |

Page: 3 Approved: May 15, 2012

Sheri L. Pfalzgraf

Microbac

Microbac Laboratories Inc.

Data Checklist

Date: 14-MAY-2012
Analyst: PDM
Analyst: NA
Method: 7470
Instrument: HYDRA
Curve Workgroup: 397933
Runlog ID: 46727
Analytical Workgroups: 397910,397918

| | |
|---|---|
| Calibration/Linearity | X |
| ICV/CCV | X |
| ICV RSD <= 3% (EPA 200.7 only) | |
| ICB/CCB | X |
| ICSA/ICSAB | |
| CRI | |
| Blank/LCS | X |
| MS/MSD | X |
| Post Spike/Serial Dilution | X |
| Upload Results | X |
| Data Qualifiers | |
| Generate PDF Instrument Data | X |
| Sign/Annotate PDF Data | X |
| Upload Curve Data | X |
| Workgroup Forms | X |
| Case Narrative | 0228,0246,0247,0256,0284 |
| Client Forms | X |
| Level X | |
| Level 3 | |
| Level 4 | 0246,0256,0284 |
| Check for compliance with method and project specific requirements | X |
| Check the completeness of reported information | X |
| Check the information for the report narrative | X |
| Primary Reviewer | PDM |
| Secondary Reviewer | SLP |
| | |
| Comments | |

Primary Reviewer:
15-MAY-2012
Pierce Morris

Secondary Reviewer:
15-MAY-2012
Sheri L. Babcock

CHECKLIST1 - Modified 03/05/2008
Generated: MAY-15-2012 14:58:31

Microbac Laboratories Inc.

# HOLDING TIMES
# EQUIVALENT TO AFCEE FORM 9

Analytical Method: 7470A AAB#: WG397918

Login Number: L12050284

| Client ID | ID | Date Collected | TCLP Date | Time Held | Max Hold | Q | Extract Date | Time Held | Max Hold | Q | Run Date | Time Held | Max Hold | Q |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| BBLD-PIT-SSP-050812 | 01 | 05/08/12 | | | | | 05/10/12 | 1.9 | 28 | | 05/14/12 | 6.2 | 28 | |
| PZ-07-050812 | 03 | 05/08/12 | | | | | 05/10/12 | 1.9 | 28 | | 05/14/12 | 6.2 | 28 | |
| MW-18-050812 | 05 | 05/08/12 | | | | | 05/10/12 | 1.9 | 28 | | 05/14/12 | 6.1 | 28 | |
| TW-01-050812 | 07 | 05/08/12 | | | | | 05/10/12 | 1.7 | 28 | | 05/14/12 | 6 | 28 | |
| DUP-GW-050812 | 10 | 05/08/12 | | | | | 05/10/12 | 1.7 | 28 | | 05/14/12 | 6 | 28 | |
| EB-050812-GW | 12 | 05/08/12 | | | | | 05/10/12 | 1.8 | 28 | | 05/14/12 | 6.1 | 28 | |

* = SEE PROJECT QAPP REQUIREMENTS

HOLD_TIMES - Modified 03/06/2008
PDF File ID: 2414930
Report generated 05/15/2012 14:05

Microbac Laboratories Inc.

# HOLDING TIMES
# EQUIVALENT TO AFCEE FORM 9

**Analytical Method:** 7470A **AAB#:** WG397918

**Login Number:** L12050284

| Client ID | ID | Date Collected | TCLP Date | Time Held | Max Hold | Q | Extract Date | Time Held | Max Hold | Q | Run Date | Time Held | Max Hold | Q |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| BBLD-PIT-SSP-050812 | 02 | 05/08/12 | | | | | 05/10/12 | 1.9 | 28 | | 05/14/12 | 6.2 | 28 | |
| PZ-07-050812 | 04 | 05/08/12 | | | | | 05/10/12 | 1.9 | 28 | | 05/14/12 | 6.2 | 28 | |
| MW-18-050812 | 06 | 05/08/12 | | | | | 05/10/12 | 1.9 | 28 | | 05/14/12 | 6.1 | 28 | |
| TW-01-050812 | 08 | 05/08/12 | | | | | 05/10/12 | 1.7 | 28 | | 05/14/12 | 6 | 28 | |
| DUP-GW-050812 | 11 | 05/08/12 | | | | | 05/10/12 | 1.7 | 28 | | 05/14/12 | 6 | 28 | |

* = SEE PROJECT QAPP REQUIREMENTS

HOLD_TIMES - Modified 03/06/2008
PDF File ID: 2425991
Report generated 05/22/2012 19:22

Microbac Laboratories Inc.

## METHOD BLANK SUMMARY

Login Number: L12050284
Work Group: WG397918
Blank File ID: HY.051412.140025
Blank Sample ID: WG397608-02
Prep Date: 05/10/12 08:28
Instrument ID: HYDRA
Analyzed Date: 05/14/12 14:00
Method: 7470A
Analyst: PDM

This Method Blank Applies To The Following Samples:

| Client ID | Lab Sample ID | Lab File ID | Time Analyzed | TAG |
|---|---|---|---|---|
| LCS | WG397608-03 | HY.051412.140208 | 05/14/12 14:02 | 01 |
| BBLD-PIT-SSP-050812 | L12050284-01 | HY.051412.140901 | 05/14/12 14:09 | 01 |
| BBLD-PIT-SSP-050812 | L12050284-02 | HY.051412.141049 | 05/14/12 14:10 | 01 |
| PZ-07-050812 | L12050284-03 | HY.051412.141233 | 05/14/12 14:12 | 01 |
| PZ-07-050812 | L12050284-04 | HY.051412.141419 | 05/14/12 14:14 | 01 |
| MW-18-050812 | L12050284-05 | HY.051412.141614 | 05/14/12 14:16 | 01 |
| MW-18-050812 | L12050284-06 | HY.051412.142145 | 05/14/12 14:21 | 01 |
| TW-01-050812 | L12050284-07 | HY.051412.142328 | 05/14/12 14:23 | 01 |
| TW-01-050812 | L12050284-08 | HY.051412.142511 | 05/14/12 14:25 | 01 |
| DUP-GW-050812 | L12050284-10 | HY.051412.142658 | 05/14/12 14:26 | 01 |
| DUP-GW-050812 | L12050284-11 | HY.051412.142841 | 05/14/12 14:28 | 01 |
| EB-050812-GW | L12050284-12 | HY.051412.143025 | 05/14/12 14:30 | 01 |

Report Name: BLANK_SUMMARY
PDF File ID: 2414931
Report generated 05/15/2012 14:05

Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number: L12050284 Prep Date: 05/10/12 08:28 Sample ID: WG397608-02
Instrument ID: HYDRA Run Date: 05/14/12 14:00 Prep Method: 7470A
File ID: HY.051412.140025 Analyst: PDM Method: 7470A
Workgroup (AAB#): WG397918 Matrix: Water Units: mg/L
Contract #: Cal ID: HYDRA-14-MAY-12

| Analytes | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| Mercury | 0.000100 | 0.000200 | 0.000100 | 1 | U |

MDL Method Detection Limit
RL Reporting/Practical Quantitation Limit
ND Analyte Not detected at or above reporting limit
* |Analyte concentration| > RL

Report Name:BLANK
PDF ID: 2414932
15-MAY-2012 14:05

**Microbac Laboratories Inc.**
**LABORATORY CONTROL SAMPLE (LCS)**

**Login Number:** L12050284 **Run Date:** 05/14/2012 **Sample ID:** WG397608-03
**Instrument ID:** HYDRA **Run Time:** 14:02 **Prep Method:** 7470A
**File ID:** HY.051412.140208 **Analyst:** PDM **Method:** 7470A
**Workgroup (AAB#):** WG397918 **Matrix:** Water **Units:** mg/L
**QC Key:** WATERLOO **Lot#:** STD51611 **Cal ID:** HYDRA-14-MAY-12

| Analytes | Expected | Found | % Rec | LCS Limits | Q |
|---|---|---|---|---|---|
| Mercury | 0.00400 | 0.00340 | 85.0 | 85 - 115 | |

**LCS - Modified 03/06/2008**
**PDF File ID: 2414933**
**Report generated: 05/15/2012 14:05**

**Microbac Laboratories Inc.**
**POST SPIKE REPORT**

**Sample Login ID:** L12050284 **Worknum:** WG397918
**Instrument ID:** HYDRA **Method:** 7470A
**Post Spike ID:** WG397918-01 **File ID:** HY.051412.140535 **Dil:** 1 **Units:** ug/L
**Sample ID:** L12050256-57 **File ID:** HY.051412.140353 **Dil:** 1 **Matrix:** Water

| Analyte | Post Spike Result | C | Sample Result | C | Spike Added(SA) | % R | Control Limit %R | Q |
|---|---|---|---|---|---|---|---|---|
| MERCURY | 0.863 | | 0 | U | 1 | 86.3 | 85 - 115 | |

**N = % Recovery exceeds control limits**
**F = Result is between MDL and RL**
**U = Sample result is below MDL. A value of zero is used in the calculation**

**POST_SPIKE - Modified 03/06/2008**
**PDF File ID: 2414929**
**Report generated: 05/15/2012 14:05**

Microbac Laboratories Inc.

INITIAL CALIBRATION SUMMARY

Login Number: L12050284
Analytical Method: 7470A
ICAL Worknum: WG397933

Workgroup (AAB#): WG397918
Instrument ID: HYDRA
Initial Calibration Date: 05/14/2012 11:36

| Analyte | WG397933-01 | | WG397933-02 | | WG397933-03 | | WG397933-04 | | WG397933-05 | | WG397933-06 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | STD | INT | STD | INT | STD | INT | STD | INT | STD | INT | STD | INT |
| Mercury | 0 | 110 | 0.200 | 595 | 1.00 | 3028 | 2.00 | 5990 | 5.00 | 15134 | 10.0 | 30013 |

INT = Instrument intensity
R = Coefficient of correlation
Q = Data Qualifier
* = Out of Compliance; R < 0.995

INT_CAL_HG_FU - Modified 03/06/2008
PDF File ID: 2414936
Report generated 05/15/2012 14:05

Microbac Laboratories Inc.

INITIAL CALIBRATION SUMMARY

Login Number: L12050284
Analytical Method: 7470A
ICAL Worknum: WG397933

Workgroup (AAB#): WG397918
Instrument ID: HYDRA
Initial Calibration Date: 05/14/2012 11:36

| Analyte | R | Q |
|---|---|---|
| Mercury | 1.000 | |

INT = Instrument intensity
R = Coefficient of correlation
Q = Data Qualifier
* = Out of Compliance; R < 0.995

INT_CAL_HG_FU - Modified 03/06/2008
PDF File ID: 2414936
Report generated 05/15/2012 14:05

Microbac Laboratories Inc.
INITIAL CALIBRATION BLANK (ICB)

Login Number: L12050284 Run Date: 05/14/2012 Sample ID: WG397933-08
Instrument ID: HYDRA Run Time: 11:40 Method: 7470A
File ID: HY.051412.114014 Analyst: PDM Units: ug/L
Workgroup (AAB#): WG397918 Cal ID: HYDRA - 14-MAY-12
Matrix: WATER

| Analytes | MDL | RDL | Concentration | Qualifier |
|---|---|---|---|---|
| MERCURY | .1 | .2 | .1 | U |

ICB - Modified 07/14/2009
PDF File ID: 2414938
Report generated 05/15/2012 14:05

Microbac Laboratories Inc.

CONTINUING CALIBRATION BLANK (CCB)

| | | | | | |
|---|---|---|---|---|---|
| Login Number: | L12050284 | Run Date: | 05/14/2012 | Sample ID: | WG397933-10 |
| Instrument ID: | HYDRA | Run Time: | 11:43 | Method: | 7470A |
| File ID: | HY.051412.114350 | Analyst: | PDM | Units: | ug/L |
| Workgroup (AAB#): | WG397918 | Cal ID: | HYDRA - 14-MAY-12 | | |
| Matrix: | WATER | QAPP: | WATERLOO | | |

| Analytes | MDL | RDL | Concentration | Qualifier |
|---|---|---|---|---|
| Mercury | 0.100 | 0.200 | 0.100 | U |

U = Result is less than MDL.
F = Result is between MDL and RL.
* = Result is above RL.

CCB - Modified 03/05/2008
PDF File ID: 2414941
Report generated 05/15/2012 14:05

Microbac Laboratories Inc.

CONTINUING CALIBRATION BLANK (CCB)

| | | | | | |
|---|---|---|---|---|---|
| Login Number: | L12050284 | Run Date: | 05/14/2012 | Sample ID: | WG397933-16 |
| Instrument ID: | HYDRA | Run Time: | 13:12 | Method: | 7470A |
| File ID: | HY.051412.131228 | Analyst: | PDM | Units: | ug/L |
| Workgroup (AAB#): | WG397918 | Cal ID: | HYDRA - 14-MAY-12 | | |
| Matrix: | WATER | QAPP: | WATERLOO | | |

| Analytes | MDL | RDL | Concentration | Qualifier |
|---|---|---|---|---|
| Mercury | 0.100 | 0.200 | 0.100 | U |

U = Result is less than MDL.
F = Result is between MDL and RL.
* = Result is above RL.

CCB - Modified 03/05/2008
PDF File ID: 2414941
Report generated 05/15/2012 14:05

Microbac Laboratories Inc.

CONTINUING CALIBRATION BLANK (CCB)

Login Number: L12050284 Run Date: 05/14/2012 Sample ID: WG397933-18

Instrument ID: HYDRA Run Time: 14:19 Method: 7470A

File ID: HY.051412.141951 Analyst: PDM Units: ug/L

Workgroup (AAB#): WG397918 Cal ID: HYDRA - 14-MAY-12

Matrix: WATER QAPP: WATERLOO

| Analytes | MDL | RDL | Concentration | Qualifier |
|---|---|---|---|---|
| Mercury | 0.100 | 0.200 | 0.100 | U |

U = Result is less than MDL.
F = Result is between MDL and RL.
* = Result is above RL.

CCB - Modified 03/05/2008
PDF File ID: 2414941
Report generated 05/15/2012 14:05

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CONTINUING CALIBRATION BLANK (CCB)

| | | | | | |
|---|---|---|---|---|---|
| Login Number: | L12050284 | Run Date: | 05/14/2012 | Sample ID: | WG397933-20 |
| Instrument ID: | HYDRA | Run Time: | 14:41 | Method: | 7470A |
| File ID: | HY.051412.144102 | Analyst: | PDM | Units: | ug/L |
| Workgroup (AAB#): | WG397918 | Cal ID: | HYDRA - 14-MAY-12 | | |
| Matrix: | WATER | QAPP: | WATERLOO | | |

| Analytes | MDL | RDL | Concentration | Qualifier |
|---|---|---|---|---|
| Mercury | 0.100 | 0.200 | 0.100 | U |

U = Result is less than MDL.
F = Result is between MDL and RL.
* = Result is above RL.

CCB - Modified 03/05/2008
PDF File ID: 2414941
Report generated 05/15/2012 14:05

Microbac Laboratories Inc.

INITIAL CALIBRATION VERIFICATION (ICV)
(Alternate Source)

Login Number: L12050284 Run Date: 05/14/2012 Sample ID: WG397933-07
Instrument ID: HYDRA Run Time: 11:38 Method: 7470A
File ID: HY.051412.113832 Analyst: PDM Units: ug/L
Workgroup (AAB#): WG397918 Cal ID: HYDRA - 14-MAY-12
QC Key: WATERLOO

| Analyte | | Expected | Found | %REC | LIMITS | Q |
|---|---|---|---|---|---|---|
| Mercury | | 2 | 2.04 | 102 | 90 - 110 | |

* Exceeds LIMITS Limit

ICV - Modified 03/06/2008
PDF File ID: 2414937
Report generated 05/15/2012 14:05

Microbac Laboratories Inc.

CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L12050284 Run Date: 05/14/2012 Sample ID: WG397933-09

Instrument ID: HYDRA Run Time: 11:41 Method: 7470A

File ID: HY.051412.114157 Analyst: PDM QC Key: WATERLOO

Workgroup (AAB#): WG397918 Cal ID: HYDRA - 14-MAY-12

Matrix: WATER

| Analyte | | Expected | Found | UNITS | %REC | LIMITS | | Q |
|---|---|---|---|---|---|---|---|---|
| Mercury, Total | | 0.00200 | 0.00200 | mg/L | 100 | 80 - 120 | | |

* Exceeds LIMITS Criteria

CCV - Modified 03/05/2008

PDF File ID: 2414940

Report generated 05/15/2012 14:05

Microbac Laboratories Inc.

CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L12050284 Run Date: 05/14/2012 Sample ID: WG397933-15

Instrument ID: HYDRA Run Time: 13:10 Method: 7470A

File ID: HY.051412.131046 Analyst: PDM QC Key: WATERLOO

Workgroup (AAB#): WG397918 Cal ID: HYDRA - 14-MAY-12

Matrix: WATER

| Analyte | | Expected | Found | UNITS | %REC | LIMITS | | Q |
|---|---|---|---|---|---|---|---|---|
| Mercury, Total | | 0.00200 | 0.00197 | mg/L | 98.5 | 80 - 120 | | |

* Exceeds LIMITS Criteria

CCV - Modified 03/05/2008

PDF File ID: 2414940

Report generated 05/15/2012 14:05

Microbac Laboratories Inc.
CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L12050284 Run Date: 05/14/2012 Sample ID: WG397933-17
Instrument ID: HYDRA Run Time: 14:18 Method: 7470A
File ID: HY.051412.141808 Analyst: PDM QC Key: WATERLOO
Workgroup (AAB#): WG397918 Cal ID: HYDRA - 14-MAY-12
Matrix: WATER

| Analyte | | Expected | Found | UNITS | %REC | LIMITS | | Q |
|---|---|---|---|---|---|---|---|---|
| Mercury, Total | | 0.00200 | 0.00195 | mg/L | 97.5 | 80 - 120 | | |

* Exceeds LIMITS Criteria

CCV - Modified 03/05/2008
PDF File ID: 2414940
Report generated 05/15/2012 14:05

Microbac Laboratories Inc.

CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L12050284 Run Date: 05/14/2012 Sample ID: WG397933-19

Instrument ID: HYDRA Run Time: 14:39 Method: 7470A

File ID: HY.051412.143918 Analyst: PDM QC Key: WATERLOO

Workgroup (AAB#): WG397918 Cal ID: HYDRA - 14-MAY-12

Matrix: WATER

| Analyte | | Expected | Found | UNITS | %REC | LIMITS | | Q |
|---|---|---|---|---|---|---|---|---|
| Mercury, Total | | 0.00200 | 0.00187 | mg/L | 93.5 | 80 - 120 | | |

* Exceeds LIMITS Criteria

CCV - Modified 03/05/2008

PDF File ID: 2414940

Report generated 05/15/2012 14:05

# 2.3.3.3 Raw Data

Protocol: standard

***POST-RUN REPORT***

```
Line   Conc.  Units     SD/RSD      1       2       3       4       5
-------------------------------------------------------------------------------

*** Standard: 1 Rep: 1              Seq:  1       11:27:39 14 May 12   HG

Hg    .000    ppb      110                                                    =

*** Standard: 2 Rep: 1              Seq:  2       11:29:22 14 May 12   HG

Hg    .200    ppb      595                                                    =

*** Standard: 3 Rep: 1              Seq:  3       11:31:09 14 May 12   HG

Hg    1.00    ppb      3028                                                   =

*** Standard: 4 Rep: 1              Seq:  4       11:33:11 14 May 12   HG

Hg    2.00    ppb      5990                                                   =

*** Standard: 5 Rep: 1              Seq:  5       11:34:53 14 May 12   HG

Hg    5.00    ppb      15134                                                  =

*** Standard: 6 Rep: 1              Seq:  6       11:36:37 14 May 12   HG

Hg    10.0    ppb      30013                                                  =

*** Check Standard: 2  Ck2ICV       Seq:  7       11:38:32 14 May 12   HG
Line  Flag  %Rcv.   Found    True  Units      SD/RSD
Hg          102.     2.04    2.00  ppb         .000                          =

*** Check Standard: 3  Ck3ICB       Seq:  8       11:40:14 14 May 12   HG
Line  Flag  %Rcv.   Found    True  Units      SD/RSD
Hg         -5.21    -.010    .200  ppb         .000                          =

*** Check Standard: 4  Ck4CCV       Seq:  9       11:41:57 14 May 12   HG
Line  Flag  %Rcv.   Found    True  Units      SD/RSD
Hg          99.8     2.00    2.00  ppb         .000                          =

*** Check Standard: 5  Ck5CCB       Seq:  10      11:43:50 14 May 12   HG
Line  Flag  %Rcv.   Found    True  Units      SD/RSD
Hg         -9.21    -.018    .200  ppb         .000                          =

*** Sample ID: WG39763502            Seq:  11     12:19:36 14 May 12   HG
                          PBW 3P
Hg   -.007    ppb       .000     -.007                                        =
===============================================================================
*** Sample ID: WG39763503            Seq:  12     12:21:50 14 May 12   HG
                          LCSW 3P
Hg    3.90    ppb       .000      3.90                                        =
===============================================================================
```

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Pierce Morris

```
Line   Conc.  Units     SD/RSD      1       2       3       4       5
--------------------------------------------------------------------------------

*** Sample ID: WG39756101           Seq:  13     12:23:33 14 May 12   HG
                          TCLP BLANK
Hg    .038    ppb       .000      .038
                                                                              =
================================================================================
*** Sample ID: 1205022801           Seq:  14     12:25:16 14 May 12   HG

Hg   -.019    ppb       .000     -.019
                                                                              =
================================================================================
*** Sample ID: WG39791001           Seq:  15     12:26:59 14 May 12   HG
                        1205022801PS.9
Hg    .887    ppb       .000      .887
                                                                              =
================================================================================
*** Sample ID: 1205022802           Seq:  16     12:28:41 14 May 12   HG

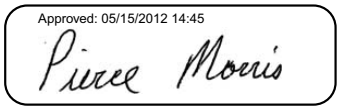
Hg    .083    ppb       .000      .083
                                                                              =
================================================================================
*** Sample ID: 1205022803           Seq:  17     12:30:44 14 May 12   HG

Hg    .052    ppb       .000      .052
                                                                              =
================================================================================
*** Sample ID: 1205022901           Seq:  18     12:32:28 14 May 12   HG

Hg   -.039    ppb       .000     -.039
                                                                              =
================================================================================
*** Sample ID: 1205024601           Seq:  19     12:34:13 14 May 12   HG

Hg   -.020    ppb       .000     -.020
                                                                              =
================================================================================
*** Sample ID: 1205024602           Seq:  20     12:35:55 14 May 12   HG

Hg   -.025    ppb       .000     -.025
                                                                              =
*** Check Standard: 4  Ck4CCV       Seq:  21     12:37:47 14 May 12   HG
Line  Flag  %Rcv.   Found    True  Units      SD/RSD
Hg          107.     2.14    2.00   ppb        .000
                                                                              =
*** Check Standard: 5  Ck5CCB       Seq:  22     12:39:43 14 May 12   HG
Line  Flag  %Rcv.   Found    True  Units      SD/RSD
Hg          19.3     .039    .200   ppb        .000
                                                                              =
```



| Line | Conc. | Units | SD/RSD | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|---|---|---|
| *** Sample ID: 1205024603 | | | | Seq: 23 | 12:41:26 14 May 12 | HG | | |
| Hg | -.072 | ppb | .000 | -.072 | | | | |
| *** Sample ID: 1205024604 | | | | Seq: 24 | 12:43:18 14 May 12 | HG | | |
| Hg | -.006 | ppb | .000 | -.006 | | | | |
| *** Sample ID: 1205024605 | | | | Seq: 25 | 12:45:00 14 May 12 | HG | | |
| Hg | -.050 | ppb | .000 | -.050 | | | | |
| *** Sample ID: 1205024606 | | | | Seq: 26 | 12:46:45 14 May 12 | HG | | |
| Hg | -.035 | ppb | .000 | -.035 | | | | |
| *** Sample ID: 1205024607 | | | | Seq: 27 | 12:48:29 14 May 12 | HG | | |
| Hg | -.017 | ppb | .000 | -.017 | | | | |
| *** Sample ID: 1205024608 | | | | Seq: 28 | 12:50:25 14 May 12 | HG | | |
| Hg | .066 | ppb | .000 | .066 | | | | |
| *** Sample ID: 1205024609 | | | | Seq: 29 | 12:52:08 14 May 12 | HG | | |
| Hg | .028 | ppb | .000 | .028 | | | | |
| *** Sample ID: 1205024610 | | | | Seq: 30 | 12:53:51 14 May 12 | HG | | |
| Hg | -.023 | ppb | .000 | -.023 | | | | |
| *** Sample ID: 1205024611 | | | | Seq: 31 | 12:55:34 14 May 12 | HG | | |
| Hg | .043 | ppb | .000 | .043 | | | | |
| *** Sample ID: 1205024612 | | | | Seq: 32 | 12:57:28 14 May 12 | HG | | |
| Hg | -.028 | ppb | .000 | -.028 | | | | |

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```
Line   Conc.  Units     SD/RSD      1       2       3       4       5
-------------------------------------------------------------------------------

*** Check Standard: 4  Ck4CCV       Seq:  33      12:59:15 14 May 12   HG
Line  Flag  %Rcv.   Found    True  Units      SD/RSD
Hg          106.     2.13    2.00   ppb        .000
                                                                              =
*** Check Standard: 5  Ck5CCB       Seq:  34      13:01:00 14 May 12   HG
Line  Flag  %Rcv.   Found    True  Units      SD/RSD
Hg          22.1     .044    .200   ppb        .000
                                                                              =
*** Sample ID: 1205024614           Seq:  35     13:02:55 14 May 12   HG

Hg    2.77    ppb       .000      2.77
                                                                              =
===============================================================================
*** Sample ID: 1205024701           Seq:  36     13:04:39 14 May 12   HG
                          WG39763501
Hg   -.023    ppb       .000     -.023
                                                                              =
===============================================================================
*** Sample ID: WG39763504           Seq:  37     13:06:31 14 May 12   HG
                          1205024701S
Hg    3.63    ppb       .000      3.63
                                                                              =
===============================================================================
*** Sample ID: WG39763505           Seq:  38     13:08:45 14 May 12   HG
                          1205024701SD
Hg    3.77    ppb       .000      3.77
                                                                              =
*** Check Standard: 4  Ck4CCV       Seq:  39      13:10:46 14 May 12   HG
Line  Flag  %Rcv.   Found    True  Units      SD/RSD
Hg          98.6     1.97    2.00   ppb        .000
                                                                              =
*** Check Standard: 5  Ck5CCB       Seq:  40      13:12:28 14 May 12   HG
Line  Flag  %Rcv.   Found    True  Units      SD/RSD
Hg         -28.5    -.057    .200   ppb        .000
                                                                              =
*** Sample ID: WG39760802           Seq:  41     14:00:25 14 May 12   HG
                          PBW  04
Hg   -.021    ppb       .000     -.021
                                                                              =
===============================================================================
*** Sample ID: WG39760803           Seq:  42     14:02:08 14 May 12   HG
                          LCSW 04
Hg    3.40    ppb       .000      3.40
                                                                              =
===============================================================================
*** Sample ID: 1205025657           Seq:  43     14:03:53 14 May 12   HG

Hg   -.058    ppb       .000     -.058
                                                                              =
===============================================================================
```

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```
Line   Conc.  Units     SD/RSD      1       2       3       4       5
--------------------------------------------------------------------------------

*** Sample ID: WG39791801           Seq:  44     14:05:35 14 May 12   HG
                          1205025657PS.9
Hg    .863    ppb       .000      .863
                                                                              =
================================================================================
*** Sample ID: 1205025658           Seq:  45     14:07:18 14 May 12   HG

Hg    .025    ppb       .000      .025
                                                                              =
================================================================================
*** Sample ID: 1205028401           Seq:  46     14:09:01 14 May 12   HG

Hg    .252    ppb       .000      .252
                                                                              =
================================================================================
*** Sample ID: 1205028402           Seq:  47     14:10:49 14 May 12   HG

Hg   -.045    ppb       .000     -.045
                                                                              =
================================================================================
*** Sample ID: 1205028403           Seq:  48     14:12:33 14 May 12   HG

Hg   -.005    ppb       .000     -.005
                                                                              =
================================================================================
*** Sample ID: 1205028404           Seq:  49     14:14:19 14 May 12   HG

Hg   -.039    ppb       .000     -.039
                                                                              =
================================================================================
*** Sample ID: 1205028405           Seq:  50     14:16:14 14 May 12   HG

Hg   -.057    ppb       .000     -.057
                                                                              =
*** Check Standard: 4  Ck4CCV       Seq:  51     14:18:08 14 May 12   HG
Line  Flag  %Rcv.   Found    True  Units      SD/RSD
Hg          97.7     1.95    2.00   ppb        .000
                                                                              =
*** Check Standard: 5  Ck5CCB       Seq:  52     14:19:51 14 May 12   HG
Line  Flag  %Rcv.   Found    True  Units      SD/RSD
Hg         -40.4    -.081    .200   ppb        .000
                                                                              =
*** Sample ID: 1205028406           Seq:  53     14:21:45 14 May 12   HG

Hg    .020    ppb       .000      .020
                                                                              =
================================================================================
```

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```
Line   Conc.  Units     SD/RSD      1       2       3       4       5
--------------------------------------------------------------------------------

*** Sample ID: 1205028407            Seq:  54     14:23:28 14 May 12   HG

Hg    .022    ppb       .000      .022
                                                                              =
================================================================================
*** Sample ID: 1205028408            Seq:  55     14:25:11 14 May 12   HG

Hg   -.024    ppb       .000     -.024
                                                                              =
================================================================================
*** Sample ID: 1205028410            Seq:  56     14:26:58 14 May 12   HG

Hg   -.003    ppb       .000     -.003
                                                                              =
================================================================================
*** Sample ID: 1205028411            Seq:  57     14:28:41 14 May 12   HG

Hg   -.014    ppb       .000     -.014
                                                                              =
================================================================================
*** Sample ID: 1205028412            Seq:  58     14:30:25 14 May 12   HG

Hg    .006    ppb       .000      .006
                                                                              =
================================================================================
*** Sample ID: 1205029702            Seq:  59     14:32:12 14 May 12   HG
                          WG39760801
Hg    .020    ppb       .000      .020
                                                                              =
================================================================================
*** Sample ID: WG39760804            Seq:  60     14:34:08 14 May 12   HG
                         1205029702S
Hg    3.98    ppb       .000      3.98
                                                                              =
================================================================================
*** Sample ID: WG39760805            Seq:  61     14:35:52 14 May 12   HG
                        1205029702SD
Hg    3.56    ppb       .000      3.56
                                                                              =
================================================================================
*** Sample ID: 1205029704            Seq:  62     14:37:35 14 May 12   HG

Hg   -.053    ppb       .000     -.053
                                                                              =
*** Check Standard: 4  Ck4CCV        Seq:  63     14:39:18 14 May 12   HG
Line  Flag  %Rcv.   Found    True  Units      SD/RSD
Hg          93.5     1.87    2.00   ppb        .000
                                                                              =
```

Approved: 05/15/2012 14:45

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```
Line   Conc.  Units     SD/RSD      1       2       3       4       5
--------------------------------------------------------------------------------

*** Check Standard: 5  Ck5CCB       Seq:  64      14:41:02 14 May 12   HG
Line  Flag  %Rcv.   Found    True  Units      SD/RSD
Hg          -16.5    -.033    .200   ppb        .000
                                                                              =
*** Sample ID: 1205029706           Seq:  65     14:42:46 14 May 12   HG

Hg   -.014    ppb       .000     -.014
                                                                              =
================================================================================
*** Sample ID: 1205029708           Seq:  66     14:44:44 14 May 12   HG

Hg    .010    ppb       .000      .010
                                                                              =
================================================================================
*** Sample ID: 1205029709           Seq:  67     14:46:40 14 May 12   HG

Hg    .003    ppb       .000      .003
                                                                              =
================================================================================
*** Sample ID: 1205029710           Seq:  68     14:48:46 14 May 12   HG

Hg    .031    ppb       .000      .031
                                                                              =
================================================================================
*** Sample ID: 1205029712           Seq:  69     14:50:33 14 May 12   HG

Hg   -.012    ppb       .000     -.012
                                                                              =
*** Check Standard: 4  Ck4CCV       Seq:  70      14:52:42 14 May 12   HG
Line  Flag  %Rcv.   Found    True  Units      SD/RSD
Hg           97.5     1.95    2.00   ppb        .000
                                                                              =
*** Check Standard: 5  Ck5CCB       Seq:  71      14:55:04 14 May 12   HG
Line  Flag  %Rcv.   Found    True  Units      SD/RSD
Hg          -6.21    -.012    .200   ppb        .000
                                                                              =
```

Approved: 05/15/2012 14:45

Pierce Morris

# 2.4 General Chemistry Data

# 2.4.1 Alkalinity Data

# 2.4.1.1 Summary Data

**Login Number:** L12050284
**Department**: Conventionals
**Analyst:** Deanna Hesson

**METHOD**

**Analysis** EPA 310.2 (Alkalinity)

**HOLDING TIMES**

**Sample Analysis:** All holding times were met.

**PREPARATION**

Sample preparation proceeded normally.

**BATCH QA/QC**

**Method Blank:** All acceptance criteria were met.

**Laboratory Control Sample:** All acceptance criteria were met.

**Matrix Spikes:** All acceptance criteria were met.

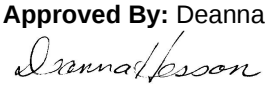
**Duplicates:** All acceptance criteria were met.

**SAMPLES**

**Samples:** All acceptance criteria were met.

I certify that this data package is in compliance with the terms and conditions agreed to by the client and Microbac Laboratories Inc., both technically and for completeness, except for the conditions noted above. Release of the data contained in this hard copy data package has been authorized by the Laboratory Manager or designated person, as verified by the following signature.

**Narrative ID:** 46943
**Approved By:** Deanna Hesson



# Certificate of Analysis

**Sample #:** L12050284-01 **PrePrep Method:** N/A **Instrument:** SMARTCHEM
**Client ID:** BBLD-PIT-SSP-050812 **Prep Method:** 310.2 **Prep Date:** N/A
**Matrix:** Water **Analytical Method:** 310.2 **Cal Date:** 05/14/2012 14:48
**Workgroup #:** WG397931 **Analyst:** DIH **Run Date:** 05/14/2012 14:59
**Collect Date:** 05/08/2012 10:01 **Dilution:** 10 **File ID:** SC120514004.026
**Sample Tag:** DL01 **Units:** mg/L

| Analyte | CAS # | Result | Qual | RL | MDL |
|---|---|---|---|---|---|
| Alkalinity, Total (as CaCO3) | | 423 | | 200 | 100 |

**Sample #:** L12050284-03 **PrePrep Method:** N/A **Instrument:** SMARTCHEM
**Client ID:** PZ-07-050812 **Prep Method:** 310.2 **Prep Date:** N/A
**Matrix:** Water **Analytical Method:** 310.2 **Cal Date:** 05/14/2012 14:48
**Workgroup #:** WG397931 **Analyst:** DIH **Run Date:** 05/14/2012 15:00
**Collect Date:** 05/08/2012 10:10 **Dilution:** 1 **File ID:** SC120514004.027
**Sample Tag:** 01 **Units:** mg/L

| Analyte | CAS # | Result | Qual | RL | MDL |
|---|---|---|---|---|---|
| Alkalinity, Total (as CaCO3) | | 275 | | 20.0 | 10.0 |

**Sample #:** L12050284-05 **PrePrep Method:** N/A **Instrument:** SMARTCHEM
**Client ID:** MW-18-050812 **Prep Method:** 310.2 **Prep Date:** N/A
**Matrix:** Water **Analytical Method:** 310.2 **Cal Date:** 05/14/2012 14:48
**Workgroup #:** WG397931 **Analyst:** DIH **Run Date:** 05/14/2012 15:00
**Collect Date:** 05/08/2012 11:00 **Dilution:** 2 **File ID:** SC120514004.028
**Sample Tag:** DL01 **Units:** mg/L

| Analyte | CAS # | Result | Qual | RL | MDL |
|---|---|---|---|---|---|
| Alkalinity, Total (as CaCO3) | | 436 | | 40.0 | 20.0 |

**Sample #:** L12050284-07 **PrePrep Method:** N/A **Instrument:** SMARTCHEM
**Client ID:** TW-01-050812 **Prep Method:** 310.2 **Prep Date:** N/A
**Matrix:** Water **Analytical Method:** 310.2 **Cal Date:** 05/14/2012 14:48
**Workgroup #:** WG397931 **Analyst:** DIH **Run Date:** 05/14/2012 15:01
**Collect Date:** 05/08/2012 14:50 **Dilution:** 3 **File ID:** SC120514004.029
**Sample Tag:** DL01 **Units:** mg/L

| Analyte | CAS # | Result | Qual | RL | MDL |
|---|---|---|---|---|---|
| Alkalinity, Total (as CaCO3) | | 661 | | 60.0 | 30.0 |

# 2.4.1.2 QC Summary Data

## Example Calculations for Visible Spectrophotometric Methods

**Linear Calibration Model**

**Step 1 - Retrieve Curve Data from ICAL**

m = slope of the linear equation
b = intercept from the linear equation
y = instrument response as absorbance or OD
x = concentration of analyte (mg/L)
y = mx + b

**Step 2: Calculate the instrument concentration, x**

Where:

x = (y - b)/m

**Step 3: Solve for analyte concentration in sample, Cx**

Cx = ( x ) (D)

**Example Calculation (LCS):**

| | | |
|---|---|---|
| Value of m from plot: | 7.809 | |
| Value of b from plot: | 0.0004135 | |
| Absorbance of unknown from quantitation report (y): | 0.31 | |
| Calculated concentration (x): | 0.03964483 | |
| Dilution factor (D): | 1.00 | |
| Concentration of analyte in sample, Cy: | 0.0396 | mg/L |

**SmartChem Autoanalyzer - Quadratic Calibration for Chloride and Sulfate**

**Step 1 - Retrieve Curve Data from Smartchem ICAL**

A, B, C = constants from the ICAL quadratic regression

x = instrument response as absorbance or OD

y = concentration of analyte (mg/L)

**Step 2: Calculate the instrument concentration, y**

Where:

y = Ax^2 + Bx + C

**Step 3: Solve for analyte concentration in sample, Cy**

Cy = ( y ) (D)

**Example Calculation (LCS):**

| | | |
|---|---|---|
| Value of A from plot: | 101.2796 | |
| Value of B from plot: | 318.9056 | |
| Value of C from plot: | -2.2712 | |
| Absorbance of unknown from quantitation report (x): | 0.1583 | |
| Calculated concentration (y): | 50.7495108 | |
| Dilution factor (D): | 1.00 | |
| Concentration of analyte in sample, Cy: | 50.75 | mg/L |

Microbac Laboratories Inc.

Data Checklist

Date: 14-MAY-2012
Analyst: DIH
Analyst: NA
Method: ALK
Instrument: SC
Curve Workgroup: NA
Runlog ID:
Analytical Workgroups: WG397895 WG397913 WG397931 WG397939

| | |
|---|---|
| Calibration/Linearity | 5/14/2012 |
| Second Source Check | X |
| ICV/CCV (std) | X |
| ICB/CCB | X |
| Blank | X |
| LCS/LCS Dup | X |
| MS/MSD | X |
| Duplicate | X |
| Upload Results | X |
| Client Forms | X |
| QC Violation Sheet | |
| Case Narratives | X |
| Signed Raw Data | X |
| STD/LCS on benchsheet | X |
| Check for compliance with method and project specific requirements | X |
| Check the completeness of reported information | X |
| Check the information for the report narrative | X |
| Primary Reviewer | DIH |
| Secondary Reviewer | DIH |
| | |
| Comments | |

Primary Reviewer:
18-MAY-2012
Dianna Ibsson

Secondary Reviewer:
18-MAY-2012
Dianna Ibsson

CHECKLIST1 - Modified 03/05/2008
Generated: MAY-18-2012 11:52:24

Microbac Laboratories Inc.

# HOLDING TIMES
# EQUIVALENT TO AFCEE FORM 9

**Analytical Method:** 310.2 **AAB#:** WG397931

**Login Number:** L12050284

| Client ID | ID | Date Collected | TCLP Date | Time Held | Max Hold | Q | Extract Date | Time Held | Max Hold | Q | Run Date | Time Held | Max Hold | Q |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| BBLD-PIT-SSP-050812 | 01 | 05/08/12 | | | | | | | 14 | | 05/14/12 | 6.2 | 14 | |
| PZ-07-050812 | 03 | 05/08/12 | | | | | | | 14 | | 05/14/12 | 6.2 | 14 | |
| MW-18-050812 | 05 | 05/08/12 | | | | | | | 14 | | 05/14/12 | 6.2 | 14 | |
| TW-01-050812 | 07 | 05/08/12 | | | | | | | 14 | | 05/14/12 | 6 | 14 | |

* = SEE PROJECT QAPP REQUIREMENTS

HOLD_TIMES - Modified 03/06/2008
PDF File ID: 2421119
Report generated 05/18/2012 10:54

Microbac Laboratories Inc.

## METHOD BLANK SUMMARY

Login Number: L12050284
Blank File ID: SC120514004.038
Prep Date: 05/14/12 15:06
Analyzed Date: 05/14/12 15:06
Analyst: DIH

Work Group: WG397931
Blank Sample ID: WG397931-01
Instrument ID: SMARTCHEM
Method: 310.2

This Method Blank Applies To The Following Samples:

| Client ID | Lab Sample ID | Lab File ID | Time Analyzed | TAG |
|---|---|---|---|---|
| LCS | WG397931-02 | SC120514004.011 | 05/14/12 14:50 | 01 |
| LCS2 | WG397931-03 | SC120514004.012 | 05/14/12 14:51 | 01 |
| BBLD-PIT-SSP-050812 | L12050284-01 | SC120514004.026 | 05/14/12 14:59 | DL01 |
| PZ-07-050812 | L12050284-03 | SC120514004.027 | 05/14/12 15:00 | 01 |
| MW-18-050812 | L12050284-05 | SC120514004.028 | 05/14/12 15:00 | DL01 |
| TW-01-050812 | L12050284-07 | SC120514004.029 | 05/14/12 15:01 | DL01 |
| DUP | WG397931-05 | SC120514004.037 | 05/14/12 15:06 | DL01 |

Report Name: BLANK_SUMMARY
PDF File ID: 2421121
Report generated 05/18/2012 10:54

Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number: L12050284 Prep Date: 05/14/12 15:06 Sample ID: WG397931-01
Instrument ID: SMARTCHEM Run Date: 05/14/12 15:06 Prep Method: 310.2
File ID: SC120514004.038 Analyst: DIH Method: 310.2
Workgroup (AAB#): WG397931 Matrix: Water Units: mg/L
Contract #: Cal ID: SMARTC-14-MAY-12

| Analytes | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| Alkalinity, Total (as CaCO3) | 10.0 | 20.0 | 10.0 | 1 | U |

MDL Method Detection Limit
RL Reporting/Practical Quantitation Limit
ND Analyte Not detected at or above reporting limit
* |Analyte concentration| > RL

Report Name:BLANK
PDF ID: 2421122
18-MAY-2012 10:54

**Microbac Laboratories Inc.**
**LABORATORY CONTROL SAMPLE (LCS)**

**Login Number:** L12050284 **Analyst:** DIH **Prep Method:** 310.2
**Instrument ID:** SMARTCHEM **Matrix:** Water **Method:** 310.2
**Workgroup (AAB#):** WG397931 **Units:** mg/L
**QC Key:** WATERLOO **Lot #:** STD51238

**Sample ID:** WG397931-02 LCS **File ID:** SC120514004.011 **Run Date:** 05/14/2012 14:50
**Sample ID:** WG397931-03 LCS2 **File ID:** SC120514004.012 **Run Date:** 05/14/2012 14:51

| Analytes | LCS | | | LCS2 | | | %RPD | %Rec Limits | RPD Lmt | Q |
|---|---|---|---|---|---|---|---|---|---|---|
| | Known | Found | % REC | Known | Found | % REC | | | | |
| Alkalinity, Total (as CaCO3) | 200 | 202 | 101 | 200 | 199 | 99.6 | 1.27 | 85 - 115 | 25 | |

LCS_LCS2 - Modified 03/06/2008
PDF File ID: 2421123
Report generated: 05/18/2012 10:54

# 2.4.1.3 Raw Data

WORKGROUP: WG397895 (A)

# SMARTCHEM RUN LOG

B 397913
C 397931
D 397939

**Daily Check**

- [x] Lamp On
- [x] Probe Rinse Full
- [x] DI Water > ½ Full
- [x] Wash Solution > ½ Full
- [ ] NO3 Reagent bottle connected / purged
- [ ] NO3 pH adj to pH 5-9
- [x] WBL Run
- [x] Reagents Full
- [x] Dilution $H_2O$ Full
- [x] Waste Container Check

Syringe filter lot # _____

1) **Workgroup** A **Plan #** 20120514002
2) **Workgroup** B **Plan #** 20120514003
3) **Workgroup** C **Plan #** 20120514004
D 20120514005

| | Analyte | 1 | 2 | 3 |
|---|---|---|---|---|
| | | ALK | | |
| | | Dilution | | |
| SC Prepared Curve | | | | |
| Position | | | | |
| 1-1 | ICV 250 | | | |
| 1-2 | BLK | | | |
| 1-3 | LCS 200 | | | |
| 1-4 | LCSDUP | | | |
| 1-5 | 05-153-01 | | | |
| 1-6 | 03 | 1/3 | | |
| 1-7 | 05 | | | |
| 1-8 | 07 | 1/4 | | |
| 1-9 | 05-245-04 | 1/3 | | |
| 1-10 | 12 | 1/3 | | |
| 1-11 | 14 | 1/3 | | |
| 1-12 | 05-257-01 | | | |
| 1-13 | 03 | | | |
| 1-14 | 05 | | | |
| 1-15 | 07 | | | |
| 1-16 | 09 | | | |
| 1-17 | 11 | | | |
| 1-18 | 13 | | | |
| 1-19 | 05-259-01 | 1/2 | | |
| 1-20 | 02 | | | |
| 1-21 | DUP 02 | | | |
| 1-22 | MS04 | | | |
| 2-1 | MSD 06 | | | |
| 2-2 | 08 | 1/10 | | |
| 2-3 | 09 | 1/5 | | |

| | Analyte | 1 | 2 | 3 |
|---|---|---|---|---|
| Position | Run 2 | | | |
| 2-4 1 | ICV 250 | | | |
| 2-5 2 | BLK | | | |
| 2-6 3 | LCS 200 | | | |
| 2-7 4 | LCS DUP | | | |
| 2-8 5 | 05-~~285-01~~ min-340-04 | | | |
| 2-9 6 | 05-297-01 | 1/3 | | |
| 2-10 7 | 03 | 1/2 | | |
| 2-11 8 | 05 | 1/2 | | |
| 2-12 9 | 07 | 1/2 | | |
| 2-13 10 | 09 | 1/3 | | |
| 2-14 11 | 10 | 1/3 | | |
| 2-15 12 | 11 | 1/2 | | |
| 2-16 13 | 05-367-02 | 1/5 | | color |
| 2-17 14 | 03 | 1/5 | | ↓ |
| 2-18 15 | 05 | 1/5 | | |
| 2-19 16 | 06 | 1/5 | | |
| 2-20 17 | 08 | 1/5 | | |
| 2-21 18 | 09 | 1/5 | | |
| 2-22 19 | 05-226-01 | 1/20 | | |
| 2-23 20 | 03 | 1/2 | | |
| 2-24 21 | 05 | 1/2 | | |
| 2-25 22 | 07 | 1/20 | | |
| 2-26 1 | 05-340-01 | 1/2 | | |
| 3-1 2 | 02 | | | |
| 3-2 3 | DUP 02 | | | |
| 4 | | | | |
| 5 | | | | |

NOTES:
* Run NO2 std on NO3 runs
* LCS/LCS Dup all parameters
*MS(10% sample): NO3, TKN, NH3

2-4 05-259-10
2-5 12
2-6
2-7

DCN#90860

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WORKGROUP: WG397895

# SMARTCHEM RUN LOG

| Position | Analyte | 1 | 2 | 3 |
|---|---|---|---|---|
| 3-3 1 | Run 3 | | | |
| 3-4 2 | ICV | | | |
| 3-5 3 | BlK | | | |
| 3-6 4 | LCS | | | |
| 3-7 5 | LCSDUP | | | |
| 3-8 6 | 05-340-05 | 1/2 | | |
| 3-9 7 | 07 | 1/2 | | |
| 3-10 8 | 08 | 1/2 | | |
| 3-11 9 | 09 | 1/2 | | |
| 3-12 10 | 05-342-01 | | | |
| 3-13 11 | 03 | | | |
| 3-14 12 | 05 | | | |
| 3-15 13 | 07 | | | |
| 3-16 14 | 09 | | | |
| 3-17 15 | 05-342-11 | | | |
| 3-18 16 | 05-285-01 | | | |
| 3-19 17 | 05-284-01 | 1/10 | | |
| 3-20 18 | 03 | | | |
| 3-21 19 | 05 | 1/2 | | |
| 3-22 20 | 07 | 1/3 | | |
| 3-23 21 | 05-362-01 | 1/3 | | |
| 3-24 22 | 03 | 1/3 | | |
| 3-25 1 | 04 | 1/3 | | |
| 3-26 2 | 05 | 1/3 | | |
| 3-27 3 | 07 | 1/3 | | |
| 3-28 4 | DUP 07 | 1/3 | | |
| | RR BlK | | | |

- ☐ Chloride — EPA 325.2/SM 4500-Cl⁻ E
- ☐ Sulfate — EPA 375.4/SM 426C(15th)
- ☑ Alkalinity — EPA 310.2
- ☐ Nitrate-Nitrite — EPA 353.2/SM 4500-NO3 F
- ☐ Ammonia — EPA 350.1/SM 4500-NH3 B
- ☐ TKN — EPA 351.2
- ☐ Phos — EPA 365.4

| Analyte | AlK | | Reagents |
|---|---|---|---|
| SOP & Revision | K 3102 R14 | | Rgt 17349 |
| Curve Stock (SC made) | Std 50178 | | |
| Curve ID (user made) | | | |
| ICV | Std 51237 | | |
| CCV | Std 51236 | | |
| LCS | Std 51238 | | |
| MS | Std 50179 Dilution 0.2/5(2500)=100 | | |

Comments: 05-382, 383 pH < 8.3

Analyst: Deanna Nelson Date: 5/14/12

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DCN#90860

WORKGROUP: WG397895

# SMARTCHEM RUN LOG

**Daily Check**

- ☐ Lamp On
- ☐ Probe Rinse Full
- ☐ DI Water > ½ Full
- ☐ Wash Solution > ½ Full
- ☐ NO3 Reagent bottle connected / purged
- ☐ NO3 pH adj to pH 5-9
- ☐ WBL Run
- ☐ Reagents Full
- ☐ Dilution $H_2O$ Full
- ☐ Waste Container Check

Syringe filter lot # _____

1) **Workgroup** _____
**Plan #** _____
2) **Workgroup** _____
**Plan #** _____
3) **Workgroup** _____
**Plan #** _____

| Analyte | | 1 Run 4 | 2 | 3 |
|---|---|---|---|---|
| | | Dilution | | |
| SC Prepared Curve | | | | |
| Position | | | | |
| 1-1 | ICV 250 | | | |
| 1-2 | BLK | | | |
| 1-3 | LCS 200 | | | |
| 1-4 | LCSDUP | | | |
| 1-5 | 05-153-05 | 1/2 | | |
| 1-6 | 05-259-02 | 1/2 | | |
| 1-7 | DUP 02 | 1/2 | | |
| 1-8 | MS 04 | 1/2 | | |
| 1-9 | msd 06 | 1/2 | | |
| 1-10 | 08 | 1/4 | | |
| 1-11 | 09 | 1/3 | | |
| 1-12 | 10 | 1/2 | | |
| 1-13 | 12 | 1/2 | | |
| 1-14 | 05-362-08 | 1/3 | | |
| 1-15 | 12 | 1/3 | | |
| 1-16 | 14 | 1/3 | | |
| 1-17 | 22 | 1/3 | | |
| 1-18 | 05-382-01 | | | B |
| 1-19 | 05-383-01 | | | B |
| 1-20 | 05-386-01 | 1/2 | | |
| 1-21 | 03 | 1/2 | | |
| 1-22 | 05 | 1/4 | | |
| 2-1 | 06 | 1/2 | | |
| 2-2 | 08 | 1/2 | | |
| 2-3 | 09 | 1/2 | | |

| Position | Analyte | 1 | 2 | 3 |
|---|---|---|---|---|
| 2-4 | 05-386-10 | 1/2 | | |
| 2-5 | 05-396-01 | | 1/3 | colar |
| 2-6 | RR BLK | | | |
| 2-7 | | | | |
| 2-8 | | | | |
| 2-9 | | | | |
| 2-10 | | | | |
| 2-11 | | | | |
| 2-12 | | | | |
| 2-13 | | | | |
| 2-14 | | | | |
| 2-15 | | | | |
| 2-16 | | | | |
| 2-17 | | | | |
| 2-18 | | | | |
| 2-19 | | | | |
| 2-20 | | | | |
| 2-21 | | | | |
| 2-22 | | | | |
| 2-23 | | | | |
| 2-24 | | | | |
| 2-25 | | | | |
| 2-26 | | | | |
| 3-1 | | | | |
| 3-2 | | | | |
| | | | | |
| | | | | |

NOTES:
* Run NO2 std on NO3 runs
* LCS/LCS Dup all parameters
*MS(10% sample): NO3, TKN, NH3

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DCN#90860

# MICROBAC (OVD)

SMARTCHEM REPORT (VER3.0.53)

NH3, TKN, NO3NO2 (MG/L N)

ALK (MG/L CaCO3) CL, SO4 (MG/L)

Method : WALK - ALKALINITY EPA 310.2

| Smp#/[Dil Fact] | Sample ID | Conc | OD | %Recovery/RPD | Flag | Analysis Time |
|---|---|---|---|---|---|---|
| DIL-1 | RBL | 0.0 | 0.7797 | 0.00 | | 12:15:31 PM |
| DIL-1 | RBL | 0.0 | 0.7830 | 0.00 | | 12:15:49 PM |
| DIL-1 | RBL | 0.0 | 0.7808 | 0.00 | | 12:16:43 PM |
| DIL-1 | Std-1 | 0.0 | -0.0019 | 0.00 | | 12:17:01 PM |
| SR5-1 | Std-2 | 10.0 | -0.0200 | 0.00 | | 12:17:55 PM |
| SR5-2 | Std-3 | 20.0 | -0.0237 | 0.00 | | 12:18:13 PM |
| SR5-3 | Std-4 | 50.0 | -0.0745 | 0.00 | | 12:19:07 PM |
| SR5-4 | Std-5 | 100.0 | -0.1540 | 0.00 | | 12:19:25 PM |
| SR5-5 | Std-6 | 200.0 | -0.3435 | 0.00 | | 12:20:19 PM |
| SR5-6 | Std-7 | 250.0 | -0.4306 | 0.00 | | 12:20:37 PM |
| SR5-7 | Std-8 | 300.0 | -0.5153 | 0.00 | | 12:21:31 PM |
| 1 | ICV 250 | 250.7 | -0.4280 | 0.00 | | 12:21:49 PM |
| 2 | WG397895-01 BLK | -5.2 | 0.0111 | 0.00 | INV,><,LL | 12:22:43 PM |
| 3 | WG397895-02 LCS | 208.2 | -0.3505 | 0.00 | | 12:23:01 PM |
| 4 | WG397895-03 LCSDUP | 207.6 | -0.3494 | 0.00 | | 12:23:55 PM |
| 5 | L12050153-01 | 169.8 | -0.2820 | 0.00 | | 12:24:13 PM |
| 6 | L12050153-03 (3) | 205.2 | -0.3451 | 0.00 | | 12:25:07 PM |
| 7 | L12050153-05 | 338.5 | -0.5956 | 0.00 | ><,LH | 12:25:25 PM |
| 8 | L12050153-07 (4) | 184.9 | -0.3087 | 0.00 | | 12:26:19 PM |
| 9 | L12050245-04 (3) | 194.4 | -0.3256 | 0.00 | | 12:26:37 PM |
| 10 | L12050245-12 (3) | 191.5 | -0.3206 | 0.00 | | 12:27:31 PM |
| ST-2 | CCV (150 mg/L) | 157.8 | -0.2611 | 105.22 | | 12:27:49 PM |
| ST-3 | CCB (0 mg/L) | 3.1 | -0.0022 | 0.00 | | 12:28:43 PM |
| 11 | L12050245-14 (3) | 143.6 | -0.2364 | 0.00 | | 12:29:01 PM |
| 12 | L12050257-01 | 273.7 | -0.4710 | 0.00 | | 12:29:55 PM |
| 13 | L12050257-03 | 263.7 | -0.4522 | 0.00 | | 12:30:13 PM |
| 14 | L12050257-05 | 225.5 | -0.3817 | 0.00 | | 12:31:07 PM |
| 15 | L12050257-07 | 56.9 | -0.0898 | 0.00 | | 12:31:25 PM |
| 16 | L12050257-09 | 47.1 | -0.0736 | 0.00 | | 12:32:19 PM |
| 17 | L12050257-11 | 280.3 | -0.4835 | 0.00 | | 12:32:37 PM |
| 18 | L12050257-13 | 230.9 | -0.3917 | 0.00 | | 12:33:31 PM |
| 19 | L12050259-01 (2) | 158.3 | -0.2619 | 0.00 | | 12:33:49 PM |

**Report Date :05/14/2012** **Run Date :5/14/2012** **Operator : WESTCO** **Plan # :20120514002**

**Plan Description : ALK-A-DIH/05/14/2012**

# MICROBAC (OVD)

SMARTCHEM REPORT (VER3.0.53)

NH3, TKN, NO3NO2 (MG/L N)

ALK (MG/L CaCO3) CL, SO4 (MG/L)

Method : WALK - ALKALINITY EPA 310.2

| Smp#/[Dil Fact] | Sample ID | Conc | OD | %Recovery/RPD | Flag | Analysis Time |
|---|---|---|---|---|---|---|
| 20 | L12050259-02 wg-04 | 313.7 | -0.5473 | 0.00 | ><,LH | 12:34:43 PM |
| ST-2 | CCV (150 mg/L) | 166.6 | -0.2764 | 111.04 | | 12:35:01 PM |
| ST-3 | CCB (0 mg/L) | 17.6 | -0.0256 | 0.00 | | 12:35:55 PM |
| 21 | WG397895-05 DUP | 317.1 | -0.5539 | 0.00 | ><,LH | 12:36:13 PM |
| 22 | L12050259-04 MS wg-06 | 350.4 | -0.6193 | 0.00 | ><,LH | 12:37:07 PM |
| 23 | L12050259-06 MSD wg07 | 351.0 | -0.6205 | 0.00 | ><,LH | 12:37:25 PM |
| 24 | L12050259-08 (10) | 79.9 | -0.1280 | 0.00 | | 12:38:19 PM |
| 25 | L12050259-09 (5) | 99.2 | -0.1605 | 0.00 | | 12:38:37 PM |
| 26 | L12050259-10 | 367.2 | -0.6528 | 0.00 | ><,LH | 12:39:31 PM |
| 27 | L12050259-12 | 362.4 | -0.6432 | 0.00 | ><,LH | 12:39:49 PM |
| 28 | ID 28 | 27.4 | -0.0414 | 0.00 | | 12:40:43 PM |
| 29 | ID 29 | 27.4 | -0.0415 | 0.00 | | 12:41:01 PM |
| ST-2 | CCV (150 mg/L) | 175.6 | -0.2923 | 117.06 | | 12:41:55 PM |
| ST-3 | CCB (0 mg/L) | 17.4 | -0.0252 | 0.00 | | 12:42:13 PM |
| 7-[1/2] | L12050153-05 | 443.8 | -0.3752 | 0.00 | LH | 12:49:54 PM |
| ST-2 | CCV (150 mg/L) | 174.6 | -0.2905 | 116.38 | | 12:49:54 PM |
| ST-3 | CCB (0 mg/L) | 32.8 | -0.0502 | 0.00 | | 12:50:48 PM |
| 20-[1/2] | L12050259-02 | 377.5 | -0.3156 | 0.00 | LH | 12:52:18 PM |
| 21-[1/2] | WG397895-05 DUP | 387.8 | -0.3248 | 0.00 | LH | 12:53:30 PM |
| 22-[1/2] | L12050259-04 MS | 479.4 | -0.4078 | 0.00 | LH | 12:54:42 PM |
| 23-[1/2] | L12050259-06 MSD | 487.5 | -0.4152 | 0.00 | LH | 12:55:54 PM |
| 26-[1/2] | L12050259-10 | 583.9 | -0.5055 | 0.00 | LH | 12:57:06 PM |
| 27-[1/2] | L12050259-12 | 556.5 | -0.4795 | 0.00 | LH | 12:58:18 PM |
| ST-2 | CCV (150 mg/L) | 186.3 | -0.3113 | 124.22 | | 12:58:18 PM |
| ST-3 | CCB (0 mg/L) | 43.5 | -0.0678 | 0.00 | | 12:59:12 PM |

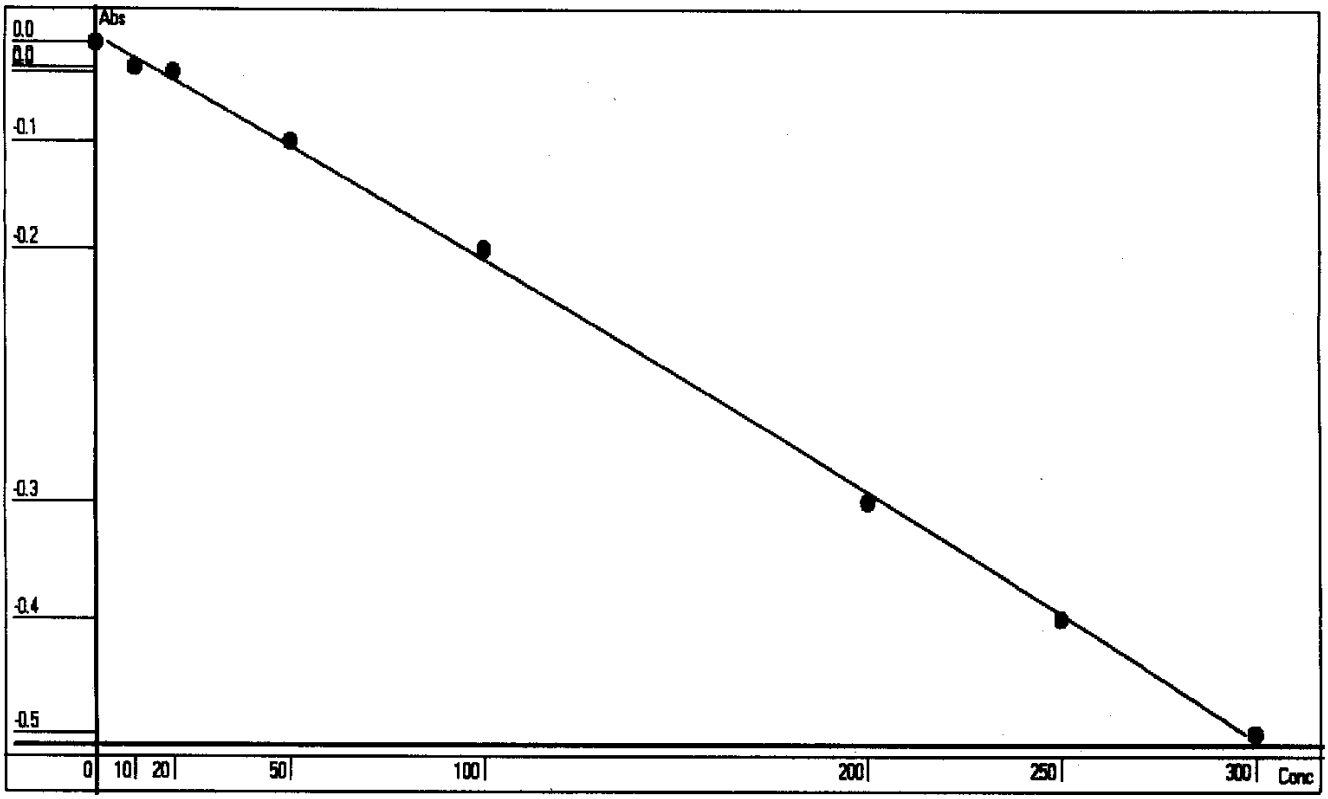
**Report Date :05/14/2012** **Run Date :5/14/2012** **Operator : WESTCO** **Plan # :20120514002**

**Plan Description : ALK-A-DIH/05/14/2012**

# Calibrant Report - WALK -

**Calib Lot #:010104 Exp Date:6/21/2020 User:MICROBAC**

**Plan # : 20120514002 Description : [ALK-A-DIH/05/14/2012]**




| Point | OD | Conc | Recalc Conc | % Error |
|---|---|---|---|---|
| 1 | -0.0019 | 0 | 2.9350 | 293.50 |
| 2 | -0.0200 | 10 | 14.1773 | 41.77 |
| 3 | -0.0237 | 20 | 16.4676 | -17.66 |
| 4 | -0.0745 | 50 | 47.6439 | -4.71 |
| 5 | -0.1540 | 100 | 95.4269 | -4.57 |
| 6 | -0.3435 | 200 | 204.3712 | 2.19 |
| 7 | -0.4306 | 250 | 252.1042 | 0.84 |
| 8 | -0.5153 | 300 | 297.1079 | -0.96 |

**Conc= -97.176*Abso^2 -623.249*Abso +1.7512 $R^2$=0.9990**

| RBL |
|---|
| 0.7803 |
| 0 |

**Report Date 5/14/2012 Run Date 5/14/2012**

# MICROBAC (OVD)

SMARTCHEM REPORT (VER3.0.53)

NH3, TKN, NO3NO2 (MG/L N)

ALK (MG/L CaCO3) CL, SO4 (MG/L)

Method : WALK - ALKALINITY EPA 310.2

| Smp#/[Dil Fact] | Sample ID | Conc | OD | %Recovery/RPD | Flag | Analysis Time |
|---|---|---|---|---|---|---|
| DIL-1 | RBL | 0.0 | 0.6164 | 0.00 | | 1:42:51 PM |
| DIL-1 | RBL | 0.0 | 0.6063 | 0.00 | | 1:43:09 PM |
| DIL-1 | RBL | 0.0 | 0.6065 | 0.00 | | 1:44:03 PM |
| DIL-1 | Std-1 | 0.0 | 0.0009 | 0.00 | INV | 1:44:21 PM |
| SR5-1 | Std-2 | 10.0 | -0.0142 | 0.00 | | 1:45:15 PM |
| SR5-2 | Std-3 | 20.0 | -0.0285 | 0.00 | | 1:45:33 PM |
| SR5-3 | Std-4 | 50.0 | -0.0614 | 0.00 | | 1:46:27 PM |
| SR5-4 | Std-5 | 100.0 | -0.1289 | 0.00 | | 1:46:45 PM |
| SR5-5 | Std-6 | 200.0 | -0.2735 | 0.00 | | 1:47:39 PM |
| SR5-6 | Std-7 | 250.0 | -0.3393 | 0.00 | | 1:47:57 PM |
| SR5-7 | Std-8 | 300.0 | -0.4025 | 0.00 | | 1:48:52 PM |
| 1 | ICV 250 | 258.1 | -0.3482 | 0.00 | | 1:49:09 PM |
| 2 | WG397913-01 BLK | -3.2 | 0.0055 | 0.00 | INV,><,LL | 1:50:04 PM |
| 3 | WG397913-02 LCS | 196.9 | -0.2647 | 0.00 | | 1:50:21 PM |
| 4 | WG397913-03 LCSDUP | 194.6 | -0.2615 | 0.00 | | 1:51:16 PM |
| 5 | ~~L12050285-01~~ 340-04 | 343.1 X | -0.4650 | 0.00 | ><,LH | 1:51:33 PM |
| 6 | L12050297-01 (3) | 134.2 | -0.1795 | 0.00 | | 1:52:28 PM |
| 7 | L12050297-03 (2) | 222.4 | -0.2994 | 0.00 | | 1:52:46 PM |
| 8 | L12050297-05 (2) | 159.1 | -0.2133 | 0.00 | | 1:53:40 PM |
| 9 | L12050297-07 (2) | 240.0 | -0.3235 | 0.00 | | 1:53:58 PM |
| 10 | L12050297-09 (3) | 185.2 | -0.2488 | 0.00 | | 1:54:52 PM |
| ST-2 | CCV (150 mg/L) | 145.8 | -0.1952 | 97.17 | | 1:55:10 PM |
| ST-3 | CCB (0 mg/L) | -10.2 | 0.0149 | 0.00 | INV,><,LL | 1:56:04 PM |
| 11 | L12050297-10 (3) | 183.0 | -0.2457 | 0.00 | | 1:56:22 PM |
| 12 | L12050297-11 (2) | 162.0 | -0.2172 | 0.00 | | 1:57:16 PM |
| 13 | L12050367-02 (5) | 122.4 | -0.1636 | 0.00 | | 1:57:34 PM |
| 14 | L12050367-03 (5) | 93.5 | -0.1245 | 0.00 | | 1:58:28 PM |
| 15 | L12050367-05 (5) | 157.9 | -0.2117 | 0.00 | | 1:58:46 PM |
| 16 | L12050367-06 (5) | 150.3 | -0.2013 | 0.00 | | 1:59:40 PM |
| 17 | L12050367-08 (5) | 143.5 | -0.1922 | 0.00 | | 1:59:58 PM |
| 18 | L12050367-09 (5) | 100.8 | -0.1343 | 0.00 | | 2:00:52 PM |
| 19 | L12050226-01 (20) | 268.6 | -0.3626 | 0.00 | | 2:01:10 PM |

**Report Date :05/14/2012** **Run Date :5/14/2012** **Operator : WESTCO** **Plan # :20120514003**

**Plan Description : ALK-B-DIH/5/14/2012**

**MICROBAC (OVD)**
SMARTCHEM REPORT (VER3.0.53)
NH3, TKN, NO3NO2 (MG/L N)
ALK (MG/L CaCO3) CL, SO4 (MG/L)

Method : WALK - ALKALINITY EPA 310.2

| Smp#/[Dil Fact] | Sample ID | Conc | OD | %Recovery/RPD | Flag | Analysis Time |
|---|---|---|---|---|---|---|
| 20 | L12050226-03 (2) | 135.3 | -0.1810 | 0.00 | | 2:02:04 PM |
| ST-2 | CCV (150 mg/L) | 161.4 | -0.2164 | 107.59 | | 2:02:22 PM |
| ST-3 | CCB (0 mg/L) | 5.9 | -0.0067 | 0.00 | | 2:03:16 PM |
| 21 | L12050226-05 (2) | 208.8 | -0.2809 | 0.00 | | 2:03:34 PM |
| 22 | L12050226-07 (20) | 141.6 | -0.1896 | 0.00 | | 2:04:28 PM |
| 23 | L12050340-01 (2) | 162.0 | -0.2172 | 0.00 | | 2:04:46 PM |
| 24 | L12050340-02 | 313.4 X | -0.4241 | 0.00 | ><,LH | 2:05:40 PM |
| 25 | WG397913-05 DUP | 309.9 X | -0.4192 | 0.00 | ><,LH | 2:05:58 PM |
| 26 | ID 26 | 8.7 | -0.0105 | 0.00 | | 2:06:52 PM |
| 27 | ID 27 | 6.4 | -0.0074 | 0.00 | | 2:07:10 PM |
| ST-2 | CCV (150 mg/L) | 160.4 | -0.2150 | 106.90 | | 2:08:04 PM |
| ST-3 | CCB (0 mg/L) | 9.2 | -0.0111 | 0.00 | | 2:08:22 PM |
| 5-[1/2] | ~~L12050285-01~~ 05-340-04 | 427.6 | -0.2877 | 0.00 | LH | 2:15:52 PM |
| 24-[1/2] | L12050340-02 | 363.5 | -0.2441 | 0.00 | LH | 2:17:04 PM |
| 25-[1/2] | WG397913-05 DUP | 379.7 | -0.2551 | 0.00 | LH | 2:18:16 PM |
| ST-2 | CCV (150 mg/L) | 170.1 | -0.2283 | 113.43 | | 2:18:16 PM |
| ST-3 | CCB (0 mg/L) | 31.1 or | -0.0405 | 0.00 | | 2:19:10 PM |

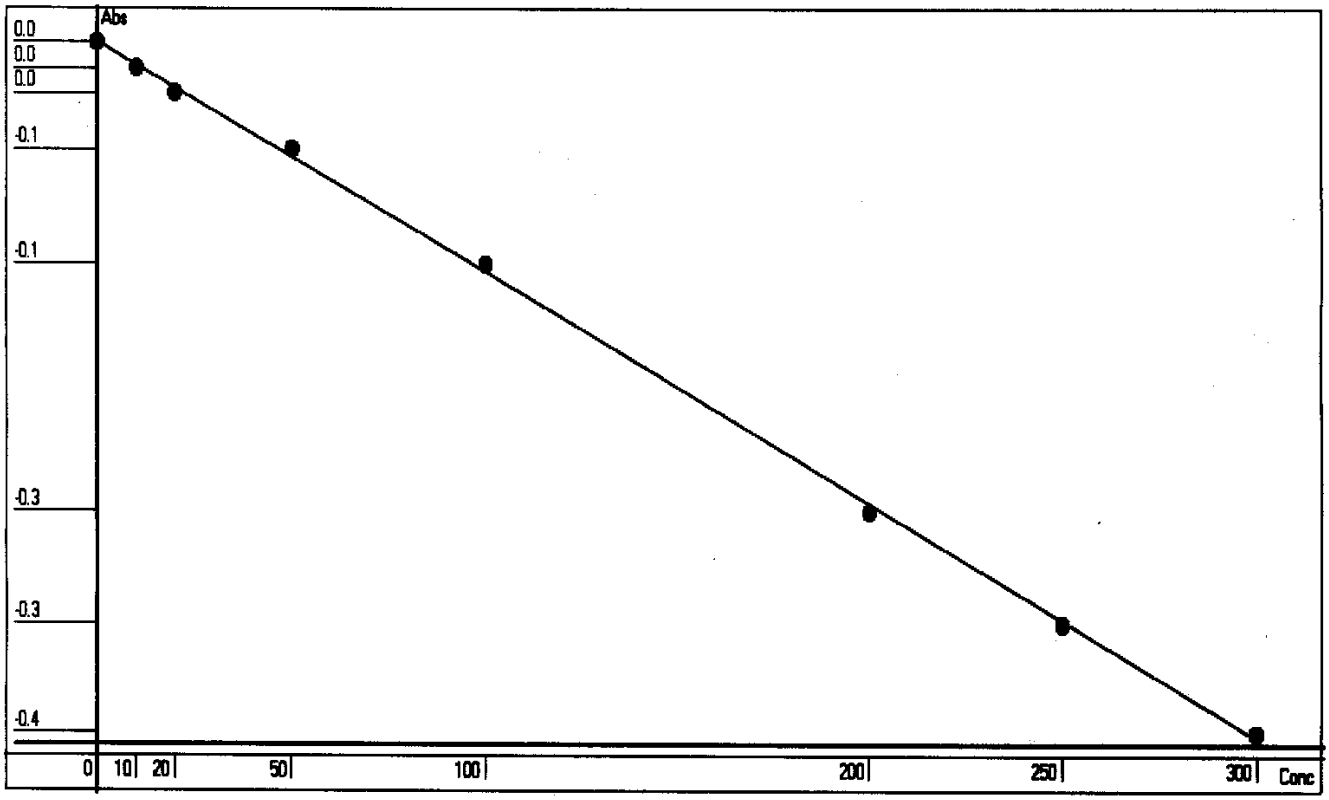
**Report Date :05/14/2012** **Run Date :5/14/2012** **Operator : WESTCO** **Plan # :20120514003**

**Plan Description : ALK-B-DIH/5/14/2012**

# Calibrant Report - WALK -

**Calib Lot #:010104 Exp Date:6/21/2020 User:MICROBAC**

**Plan # : 20120514003 Description : [ALK-B-DIH/5/14/2012]**




| Point | OD | Conc | Recalc Conc | % Error |
|---|---|---|---|---|
| 1 | 0.0009 | 0 | 0.2407 | 24.07 |
| 2 | -0.0142 | 10 | 11.5070 | 15.07 |
| 3 | -0.0285 | 20 | 22.1669 | 10.83 |
| 4 | -0.0614 | 50 | 46.6574 | -6.69 |
| 5 | -0.1289 | 100 | 96.7519 | -3.25 |
| 6 | -0.2735 | 200 | 203.3781 | 1.69 |
| 7 | -0.3393 | 250 | 251.5879 | 0.64 |
| 8 | -0.4025 | 300 | 297.7100 | -0.76 |

**Conc= -22.4147*Abso^2 -746.407*Abso +0.9125 $R^2$=0.9995**

| RBL |
|---|
| 0.6064 |
| 0 |

**Report Date 5/14/2012 Run Date 5/14/2012**

# MICROBAC (OVD)

SMARTCHEM REPORT (VER3.0.53)

NH3, TKN, NO3NO2 (MG/L N)

ALK (MG/L CaCO3) CL, SO4 (MG/L)

Method : WALK - ALKALINITY EPA 310.2

| Smp#/[Dil Fact] | Sample ID | Conc | OD | %Recovery/RPD | Flag | Analysis Time |
|---|---|---|---|---|---|---|
| DIL-1 | RBL | 0.0 | 0.5184 | 0.00 | | 2:42:56 PM |
| DIL-1 | RBL | 0.0 | 0.5073 | 0.00 | | 2:43:14 PM |
| DIL-1 | RBL | 0.0 | 0.5058 | 0.00 | | 2:44:08 PM |
| DIL-1 | Std-1 | 0.0 | 0.0008 | 0.00 | INV | 2:44:26 PM |
| SR5-1 | Std-2 | 10.0 | -0.0103 | 0.00 | | 2:45:20 PM |
| SR5-2 | Std-3 | 20.0 | -0.0143 | 0.00 | | 2:45:38 PM |
| SR5-3 | Std-4 | 50.0 | -0.0475 | 0.00 | | 2:46:32 PM |
| SR5-4 | Std-5 | 100.0 | -0.1087 | 0.00 | | 2:46:50 PM |
| SR5-5 | Std-6 | 200.0 | -0.2212 | 0.00 | | 2:47:44 PM |
| SR5-6 | Std-7 | 250.0 | -0.2956 | 0.00 | | 2:48:02 PM |
| SR5-7 | Std-8 | 300.0 | -0.3372 | 0.00 | | 2:48:56 PM |
| 1 | ICV 250 | 248.6 | -0.2824 | 0.00 | | 2:49:14 PM |
| 2 | WG397931-01 BLK | -16.1 | 0.0220 | 0.00 | INV,><,LL | 2:50:09 PM |
| 3 | WG397931-02 LCS | 201.8 | -0.2265 | 0.00 | | 2:50:27 PM |
| 4 | WG397931-03 LCSDUP | 199.2 | -0.2235 | 0.00 | | 2:51:21 PM |
| 5 | L12050340-05 (2) | 184.3 | -0.2059 | 0.00 | | 2:51:39 PM |
| 6 | L12050340-07 (2) | 207.9 | -0.2338 | 0.00 | | 2:52:33 PM |
| 7 | L12050340-08 (2) | 277.6 | -0.3174 | 0.00 | | 2:52:51 PM |
| 8 | L12050340-09 (2) | 243.2 | -0.2759 | 0.00 | | 2:53:45 PM |
| 9 | L12050342-01 | 219.6 | -0.2477 | 0.00 | | 2:54:03 PM |
| 10 | L12050342-03 | 61.3 | -0.0644 | 0.00 | | 2:54:57 PM |
| ST-2 | CCV (150 mg/L) | 161.8 | -0.1796 | 107.87 | | 2:55:15 PM |
| ST-3 | CCB (0 mg/L) | -3.7 | 0.0082 | 0.00 | INV,><,LL | 2:56:09 PM |
| 11 | L12050342-05 | 164.9 | -0.1832 | 0.00 | | 2:56:27 PM |
| 12 | L12050342-07 | 197.2 | -0.2211 | 0.00 | | 2:57:21 PM |
| 13 | L12050342-09 | 153.3 | -0.1697 | 0.00 | | 2:57:39 PM |
| 14 | L12050342-11 | 269.5 | -0.3076 | 0.00 | | 2:58:33 PM |
| 15 | L12050285-01 | 19.8 | -0.0179 | 0.00 | | 2:58:51 PM |
| 16 | L12050284-01 (10) | 42.3 | -0.0430 | 0.00 | | 2:59:45 PM |
| 17 | L12050284-03 | 274.5 | -0.3137 | 0.00 | | 3:00:03 PM |
| 18 | L12050284-05 (2) | 218.0 | -0.2458 | 0.00 | | 3:00:57 PM |
| 19 | L12050284-07 (3) | 220.4 | -0.2486 | 0.00 | | 3:01:15 PM |

**Report Date :05/14/2012** **Run Date :5/14/2012** **Operator : WESTCO** **Plan # :20120514004**

**Plan Description : ALK-C-DIH/5/14/2012**

**MICROBAC (OVD)**
SMARTCHEM REPORT (VER3.0.53)
NH3, TKN, NO3NO2 (MG/L N)
ALK (MG/L CaCO3) CL, SO4 (MG/L)

Method : WALK - ALKALINITY EPA 310.2

| Smp#/[Dil Fact] | Sample ID | Conc | OD | %Recovery/RPD | Flag | Analysis Time |
|---|---|---|---|---|---|---|
| 20 | L12050362-01 (3) | 146.7 | -0.1620 | 0.00 | | 3:02:09 PM |
| ST-2 | CCV (150 mg/L) | 154.0 | -0.1705 | 102.66 | | 3:02:27 PM |
| ST-3 | CCB (0 mg/L) | 6.5 | -0.0031 | 0.00 | | 3:03:21 PM |
| 21 | L12050362-03 (3) | 109.7 | -0.1194 | 0.00 | | 3:03:39 PM |
| 22 | L12050362-04 (3) | 291.1 | -0.3339 | 0.00 | | 3:04:33 PM |
| 23 | L12050362-05 (3) | 128.0 | -0.1404 | 0.00 | | 3:04:51 PM |
| 24 | L12050362-07 (3) | 137.7 | -0.1516 | 0.00 | | 3:05:45 PM |
| 25 | WG397931-05 (3) DUP | 141.1 | -0.1555 | 0.00 | | 3:06:03 PM |
| 26 | ID 26 Blank | 6.8 | -0.0034 | 0.00 | | 3:06:57 PM |
| 27 | ID 27 | 1.6 | 0.0024 | 0.00 | INV,>< | 3:07:15 PM |
| ST-2 | CCV (150 mg/L) | 159.2 | -0.1766 | 106.16 | | 3:08:09 PM |
| ST-3 | CCB (0 mg/L) | 7.0 | -0.0035 | 0.00 | | 3:08:27 PM |

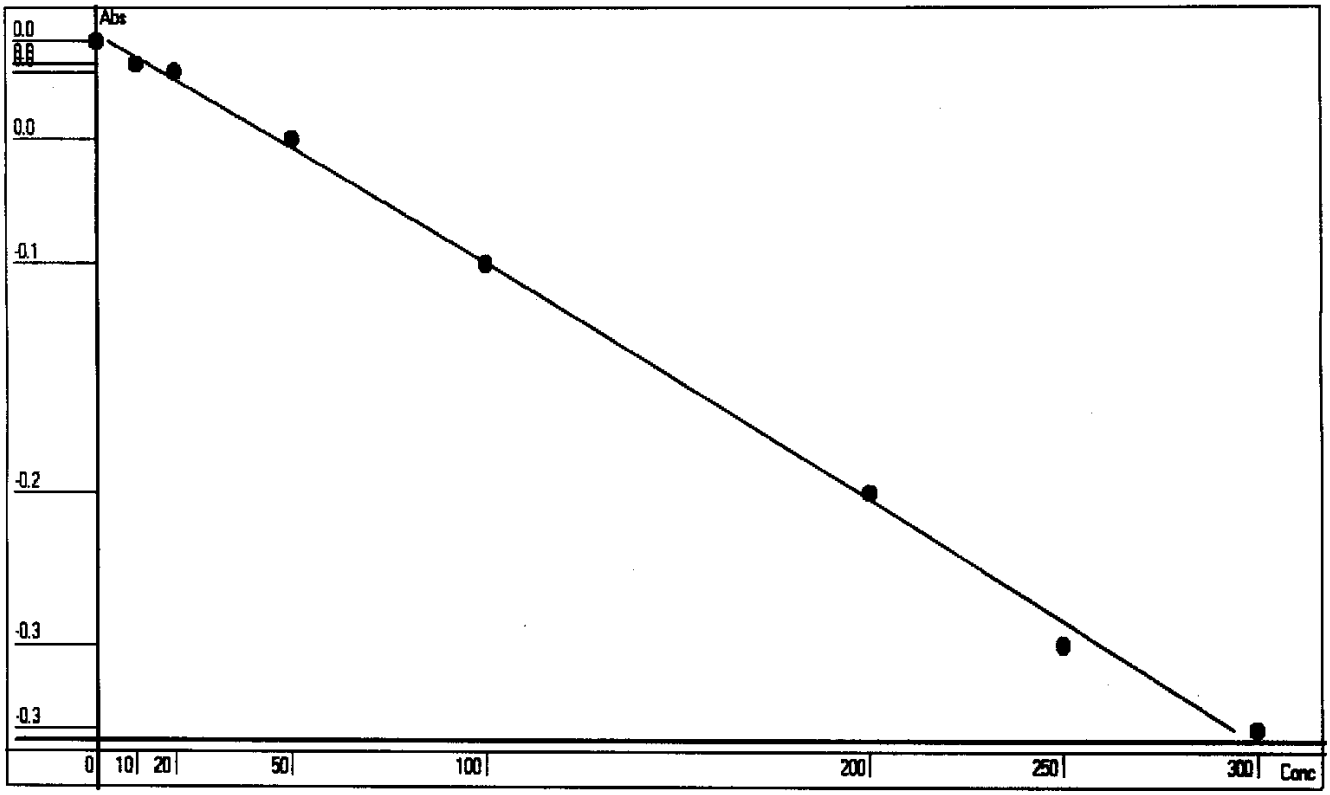
**Report Date :05/14/2012** **Run Date :5/14/2012** **Operator : WESTCO** **Plan # :20120514004**

**Plan Description : ALK-C-DIH/5/14/2012**

# Calibrant Report - WALK -

**Calib Lot #:010104 Exp Date:6/21/2020 User:MICROBAC**

**Plan # : 20120514004 Description : [ALK-C-DIH/5/14/2012]**




| Point | OD | Conc | Recalc Conc | % Error |
|---|---|---|---|---|
| 1 | 0.0008 | 0 | 3.0432 | 304.32 |
| 2 | -0.0103 | 10 | 13.0510 | 30.51 |
| 3 | -0.0143 | 20 | 16.6498 | -16.75 |
| 4 | -0.0475 | 50 | 46.3646 | -7.27 |
| 5 | -0.1087 | 100 | 100.4130 | 0.41 |
| 6 | -0.2212 | 200 | 197.3077 | -1.35 |
| 7 | -0.2956 | 250 | 259.6374 | 3.86 |
| 8 | -0.3372 | 300 | 293.8812 | -2.04 |

**Conc= -125.8421*Abso^2 -902.8009*Abso +3.7655 $R^2$=0.9981**

| RBL |
|---|
| 0.5066 |
| 0 |

**Report Date 5/14/2012 Run Date 5/14/2012**

# MICROBAC (OVD)

SMARTCHEM REPORT (VER3.0.53)

NH3, TKN, NO3NO2 (MG/L N)

ALK (MG/L CaCO3) CL, SO4 (MG/L)

Method : WALK - ALKALINITY EPA 310.2

| Smp#/[Dil Fact] | Sample ID | Conc | OD | %Recovery/RPD | Flag | Analysis Time |
|---|---|---|---|---|---|---|
| DIL-1 | RBL | 0.0 | 0.4185 | 0.00 | | 3:42:37 PM |
| DIL-1 | RBL | 0.0 | 0.4197 | 0.00 | | 3:42:55 PM |
| DIL-1 | RBL | 0.0 | 0.4229 | 0.00 | | 3:43:49 PM |
| DIL-1 | Std-1 | 0.0 | 0.0008 | 0.00 | INV | 3:44:07 PM |
| SR5-1 | Std-2 | 10.0 | -0.0106 | 0.00 | | 3:45:01 PM |
| SR5-2 | Std-3 | 20.0 | -0.0132 | 0.00 | | 3:45:19 PM |
| SR5-3 | Std-4 | 50.0 | -0.0432 | 0.00 | | 3:46:13 PM |
| SR5-4 | Std-5 | 100.0 | -0.0845 | 0.00 | | 3:46:31 PM |
| SR5-5 | Std-6 | 200.0 | -0.1913 | 0.00 | | 3:47:25 PM |
| SR5-6 | Std-7 | 250.0 | -0.2384 | 0.00 | | 3:47:43 PM |
| SR5-7 | Std-8 | 300.0 | -0.2785 | 0.00 | | 3:48:37 PM |
| 1 | ICV 250 | 251.2 | -0.2357 | 0.00 | | 3:48:55 PM |
| 2 | WG397939-01 BLK | -11.8 X | 0.0138 | 0.00 | INV,><,LL | 3:49:50 PM |
| 3 | WG397939-02 LCS | 198.4 | -0.1849 | 0.00 | | 3:50:08 PM |
| 4 | WG397939-03 LCSDUP | 198.0 | -0.1845 | 0.00 | EPL | 3:51:02 PM |
| 5 | L12050153-05 (2) | 177.7 | -0.1651 | 0.00 | | 3:51:20 PM |
| 6 | L12050259-02 (2) | 146.8 | -0.1356 | 0.00 | | 3:52:14 PM |
| 7 | WG397939-05 (2) DUP | 146.4 | -0.1352 | 0.00 | | 3:52:32 PM |
| 8 | L12050259-04 (2) MS | 198.8 | -0.1853 | 0.00 | | 3:53:26 PM |
| 9 | L12050259-06 (2) MSD | 198.1 | -0.1846 | 0.00 | | 3:53:44 PM |
| 10 | L12050259-08 (4) | 102.4 | -0.0934 | 0.00 | | 3:54:38 PM |
| ST-2 | CCV (150 mg/L) | 150.7 | -0.1393 | 100.47 | | 3:54:56 PM |
| ST-3 | CCB (0 mg/L) | -17.2 | 0.0188 | 0.00 | INV,><,LL | 3:55:50 PM |
| 11 | L12050259-09 (3) | 147.6 | -0.1363 | 0.00 | | 3:56:08 PM |
| 12 | L12050259-10 (2) | 259.5 | -0.2437 | 0.00 | | 3:57:02 PM |
| 13 | L12050259-12 (2) | 237.7 | -0.2227 | 0.00 | | 3:57:20 PM |
| 14 | L12050362-08 (3) | 118.5 | -0.1087 | 0.00 | | 3:58:14 PM |
| 15 | L12050362-12 (3) | 290.4 | -0.2737 | 0.00 | | 3:58:32 PM |
| 16 | L12050362-14 (3) | 342.7 X | -0.3247 | 0.00 | ><,LH | 3:59:26 PM |
| 17 | L12050362-22 (2) (3) | 280.2 | -0.2638 | 0.00 | | 3:59:44 PM |
| 18 | L12050382-01 | 47.4 | -0.0416 | 0.00 | | 4:00:38 PM |
| 19 | L12050383-01 | 57.2 | -0.0508 | 0.00 | | 4:00:56 PM |

**Report Date :05/14/2012** **Run Date :5/14/2012** **Operator : WESTCO** **Plan # :20120514005**

**Plan Description : ALK-D-DIH/5/14/2012**

# MICROBAC (OVD)

SMARTCHEM REPORT (VER3.0.53)

NH3, TKN, NO3NO2 (MG/L N)

ALK (MG/L CaCO3) CL, SO4 (MG/L)

Method : WALK - ALKALINITY EPA 310.2

| Smp#/[Dil Fact] | Sample ID | Conc | OD | %Recovery/RPD | Flag | Analysis Time |
|---|---|---|---|---|---|---|
| 20 | L12050386-01 (2) | 161.8 | -0.1499 | 0.00 | | 4:01:50 PM |
| ST-2 | CCV (150 mg/L) | 156.9 | -0.1452 | 104.60 | | 4:02:08 PM |
| ST-3 | CCB (0 mg/L) | -5.8 | 0.0082 | 0.00 | INV,><,LL | 4:03:02 PM |
| 21 | L12050386-02 (2) | 139.5 | -0.1286 | 0.00 | | 4:03:20 PM |
| 22 | L12050386-05 (4) | 158.9 | -0.1471 | 0.00 | | 4:04:14 PM |
| 23 | L12050386-06 (2) | 216.4 | -0.2022 | 0.00 | | 4:04:32 PM |
| 24 | L12050386-08 (2) | 203.4 | -0.1897 | 0.00 | | 4:05:26 PM |
| 25 | L12050386-09 (2) | 207.2 | -0.1933 | 0.00 | | 4:05:44 PM |
| 26 | L12050386-10 (2) | 63.8 | -0.0570 | 0.00 | | 4:06:38 PM |
| 27 | L12050396-01 | 69.5 | -0.0624 | 0.00 | | 4:06:56 PM |
| 28 | ID 28 BLK | 0.9 | 0.0019 | 0.00 | INV,>< | 4:07:50 PM |
| 29 | ID 29 | 0.6 | 0.0022 | 0.00 | INV,>< | 4:08:08 PM |
| ST-2 | CCV (150 mg/L) | 157.8 | -0.1461 | 105.23 | | 4:09:02 PM |
| ST-3 | CCB (0 mg/L) | -3.9 | 0.0064 | 0.00 | INV,><,LL | 4:09:20 PM |
| 16-[1/2] | L12050362-14 (3) | 549.1 | -0.2583 | 0.00 | LH | 4:17:00 PM |
| ST-2 | CCV (150 mg/L) | 167.5 | -0.1553 | 111.66 | | 4:17:00 PM |
| ST-3 | CCB (0 mg/L) | 8.7 | -0.0054 | 0.00 | | 4:17:54 PM |

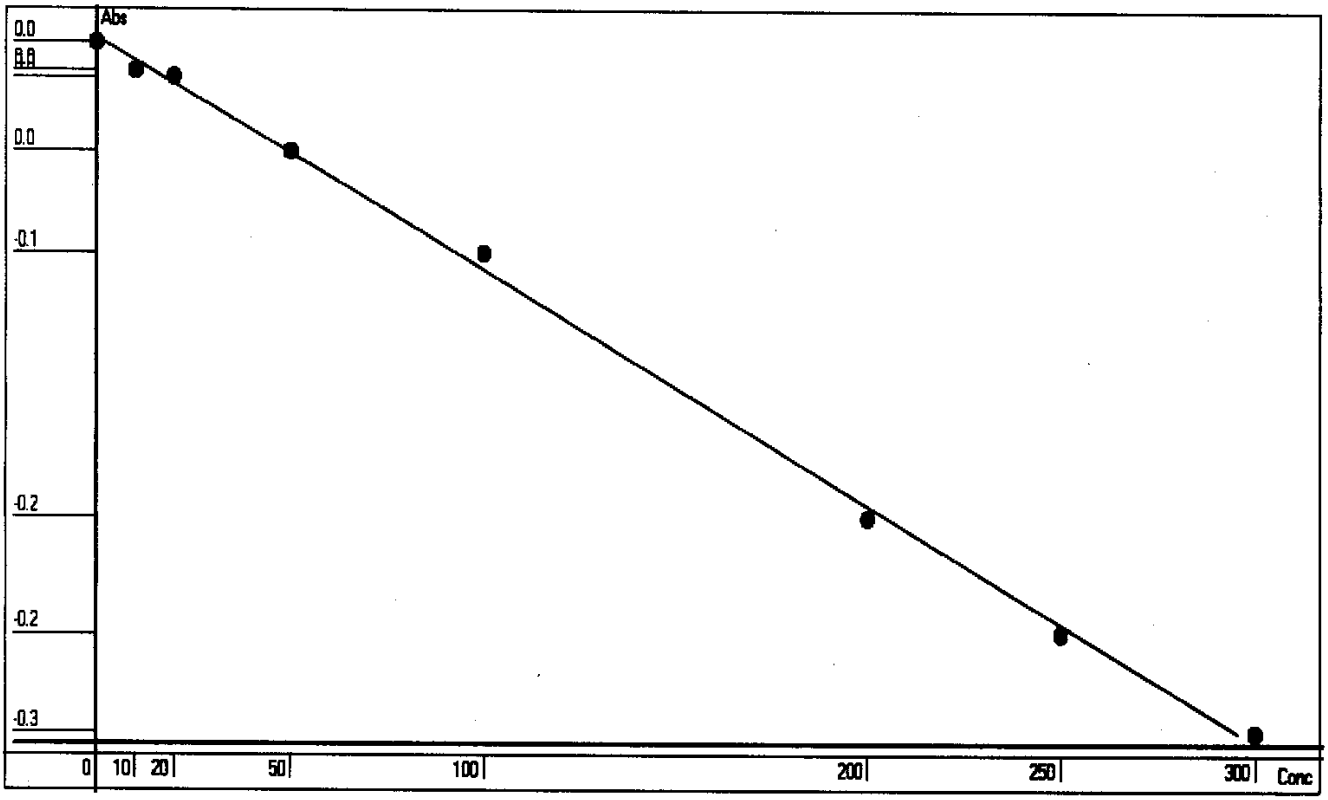
**Report Date :05/14/2012** **Run Date :5/14/2012** **Operator : WESTCO** **Plan # :20120514005**

**Plan Description : ALK-D-DIH/5/14/2012**

# Calibrant Report - WALK -

**Calib Lot #:010104 Exp Date:6/21/2020 User:MICROBAC**

**Plan # : 20120514005 Description : [ALK-D-DIH/5/14/2012]**




| Point | OD | Conc | Recalc Conc | % Error |
|---|---|---|---|---|
| 1 | 0.0008 | 0 | 2.1090 | 210.90 |
| 2 | -0.0106 | 10 | 14.3145 | 43.15 |
| 3 | -0.0132 | 20 | 17.0954 | -14.52 |
| 4 | -0.0432 | 50 | 49.1068 | -1.79 |
| 5 | -0.0845 | 100 | 92.9477 | -7.05 |
| 6 | -0.1913 | 200 | 205.0926 | 2.55 |
| 7 | -0.2384 | 250 | 253.9881 | 1.60 |
| 8 | -0.2785 | 300 | 295.3458 | -1.55 |

**Conc= -77.4907*Abso^2 -1071.418*Abso +2.9662 $R^2$=0.9985**

| RBL |
|---|
| 0.4191 |
| 0 |

**Report Date 5/14/2012 Run Date 5/14/2012**

# 2.4.2 Nitrate Data

# 2.4.2.1 Summary Data

**Login Number:** L12050284
**Department**: Conventionals
**Analyst:** Jeremy Kinney

**METHOD**

**Analysis** EPA 353.2/SM4500-NO3 F (Nitrate)

**HOLDING TIMES**

**Sample Analysis:** Nitrate is reported as the difference of nitrate-nitrite (28 day hold) and nitrite (48 hour hold). Both analysis were analyzed within the appropriate hold time. The nitrate hold time is within compliance.

**PREPARATION**

Sample preparation proceeded normally.

**BATCH QA/QC**

**Method Blank:** All acceptance criteria were met.

**Laboratory Control Sample:** All acceptance criteria were met.

**Matrix Spikes:** All acceptance criteria were met.

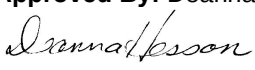
**Duplicates:** All acceptance criteria were met.

**SAMPLES**

**Samples:** The sample(s) were diluted to reduce matrix interference. The reporting limits are elevated accordingly.

I certify that this data package is in compliance with the terms and conditions agreed to by the client and Microbac Laboratories Inc., both technically and for completeness, except for the conditions noted above. Release of the data contained in this hard copy data package has been authorized by the Laboratory Manager or designated person, as verified by the following signature.

**Narrative ID:** 46946
**Approved By:** Deanna Hesson



# Certificate of Analysis

**Sample #:** L12050284-01 **PrePrep Method:** N/A **Instrument:** SMARTCHEM
**Client ID:** BBLD-PIT-SSP-050812 **Prep Method:** 353.2 **Prep Date:** N/A
**Matrix:** Water **Analytical Method:** 353.2 **Cal Date:** 05/10/2012 14:05
**Workgroup #:** WG397682 **Analyst:** JBK **Run Date:** 05/11/2012 08:30
**Collect Date:** 05/08/2012 10:01 **Dilution:** 100 **File ID:** SC12051615262001
**Sample Tag:** **Units:** mg/L

| Analyte | CAS # | Result | Qual | RL | MDL |
|---|---|---|---|---|---|
| Nitrate (as N) | 14797-55-8 | | U | 5.00 | 2.50 |

| | |
|---|---|
| U | Not detected at or above adjusted sample detection limit. |

**Sample #:** L12050284-03 **PrePrep Method:** N/A **Instrument:** SMARTCHEM
**Client ID:** PZ-07-050812 **Prep Method:** 353.2 **Prep Date:** N/A
**Matrix:** Water **Analytical Method:** 353.2 **Cal Date:** 05/10/2012 14:05
**Workgroup #:** WG397682 **Analyst:** JBK **Run Date:** 05/11/2012 08:30
**Collect Date:** 05/08/2012 10:10 **Dilution:** 1 **File ID:** SC12051615262901
**Sample Tag:** **Units:** mg/L

| Analyte | CAS # | Result | Qual | RL | MDL |
|---|---|---|---|---|---|
| Nitrate (as N) | 14797-55-8 | | U | 0.0500 | 0.0250 |

| | |
|---|---|
| U | Not detected at or above adjusted sample detection limit. |

**Sample #:** L12050284-05 **PrePrep Method:** N/A **Instrument:** SMARTCHEM
**Client ID:** MW-18-050812 **Prep Method:** 353.2 **Prep Date:** N/A
**Matrix:** Water **Analytical Method:** 353.2 **Cal Date:** 05/10/2012 14:05
**Workgroup #:** WG397682 **Analyst:** JBK **Run Date:** 05/11/2012 08:30
**Collect Date:** 05/08/2012 11:00 **Dilution:** 1 **File ID:** SC12051615263601
**Sample Tag:** **Units:** mg/L

| Analyte | CAS # | Result | Qual | RL | MDL |
|---|---|---|---|---|---|
| Nitrate (as N) | 14797-55-8 | 0.291 | | 0.0500 | 0.0250 |

**Sample #:** L12050284-07 **PrePrep Method:** N/A **Instrument:** SMARTCHEM
**Client ID:** TW-01-050812 **Prep Method:** 353.2 **Prep Date:** N/A
**Matrix:** Water **Analytical Method:** 353.2 **Cal Date:** 05/10/2012 14:05
**Workgroup #:** WG397682 **Analyst:** JBK **Run Date:** 05/11/2012 08:30
**Collect Date:** 05/08/2012 14:50 **Dilution:** 1 **File ID:** SC12051615264101
**Sample Tag:** **Units:** mg/L

| Analyte | CAS # | Result | Qual | RL | MDL |
|---|---|---|---|---|---|
| Nitrate (as N) | 14797-55-8 | | U | 0.0500 | 0.0250 |

Certificate of Analysis

| | |
|---|---|
| U | Not detected at or above adjusted sample detection limit. |

# 2.4.2.2 QC Summary Data

## Example Calculations for Visible Spectrophotometric Methods

**Linear Calibration Model**

**Step 1 - Retrieve Curve Data from ICAL**

m = slope of the linear equation
b = intercept from the linear equation
y = instrument response as absorbance or OD
x = concentration of analyte (mg/L)
y = mx + b

**Step 2: Calculate the instrument concentration, x**

Where:

x = (y - b)/m

**Step 3: Solve for analyte concentration in sample, Cx**

Cx = ( x ) (D)

**Example Calculation (LCS):**

| | | |
|---|---|---|
| Value of m from plot: | 7.809 | |
| Value of b from plot: | 0.0004135 | |
| Absorbance of unknown from quantitation report (y): | 0.31 | |
| Calculated concentration (x): | 0.03964483 | |
| Dilution factor (D): | 1.00 | |
| Concentration of analyte in sample, Cy: | 0.0396 | mg/L |

**SmartChem Autoanalyzer - Quadratic Calibration for Chloride and Sulfate**

**Step 1 - Retrieve Curve Data from Smartchem ICAL**

A, B, C = constants from the ICAL quadratic regression

x = instrument response as absorbance or OD

y = concentration of analyte (mg/L)

**Step 2: Calculate the instrument concentration, y**

Where:

y = Ax^2 + Bx + C

**Step 3: Solve for analyte concentration in sample, Cy**

Cy = ( y ) (D)

**Example Calculation (LCS):**

| | | |
|---|---|---|
| Value of A from plot: | 101.2796 | |
| Value of B from plot: | 318.9056 | |
| Value of C from plot: | -2.2712 | |
| Absorbance of unknown from quantitation report (x): | 0.1583 | |
| Calculated concentration (y): | 50.7495108 | |
| Dilution factor (D): | 1.00 | |
| Concentration of analyte in sample, Cy: | 50.75 | mg/L |

Microbac Laboratories Inc.

Data Checklist

Date: 11-MAY-2012
Analyst: JBK
Analyst: NA
Method: NO3
Instrument: SC
Curve Workgroup: NA
Runlog ID:
Analytical Workgroups: WG397681 WG397682

| | |
|---|---|
| Calibration/Linearity | 05/11/12 |
| Second Source Check | X |
| ICV/CCV (std) | X |
| ICB/CCB | X |
| Blank | X |
| LCS/LCS Dup | X |
| MS/MSD | X |
| Duplicate | X |
| Upload Results | X |
| Client Forms | X |
| QC Violation Sheet | X |
| Case Narratives | |
| Signed Raw Data | X |
| STD/LCS on benchsheet | X |
| Check for compliance with method and project specific requirements | X |
| Check the completeness of reported information | X |
| Check the information for the report narrative | X |
| Primary Reviewer | JBK |
| Secondary Reviewer | DIH |
| | |
| Comments | |

Primary Reviewer:
16-MAY-2012

Secondary Reviewer:
18-MAY-2012

CHECKLIST1 - Modified 03/05/2008
Generated: MAY-18-2012 11:56:55

Microbac Laboratories Inc.

# HOLDING TIMES
# EQUIVALENT TO AFCEE FORM 9

Analytical Method: 353.2 AAB#: WG397682

Login Number: L12050284

| Client ID | ID | Date Collected | TCLP Date | Time Held | Max Hold | Q | Extract Date | Time Held | Max Hold | Q | Run Date | Time Held | Max Hold | Q |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| BBLD-PIT-SSP-050812 | 01 | 05/08/12 | | | | | | | 2 | | 05/11/12 | 2.9 | 2 | * |
| PZ-07-050812 | 03 | 05/08/12 | | | | | | | 2 | | 05/11/12 | 2.9 | 2 | * |
| MW-18-050812 | 05 | 05/08/12 | | | | | | | 2 | | 05/11/12 | 2.9 | 2 | * |
| TW-01-050812 | 07 | 05/08/12 | | | | | | | 2 | | 05/11/12 | 2.7 | 2 | * |

* = SEE PROJECT QAPP REQUIREMENTS

HOLD_TIMES - Modified 03/06/2008
PDF File ID: 2417773
Report generated 05/16/2012 16:25

Microbac Laboratories Inc.

## METHOD BLANK SUMMARY

Login Number: L12050284
Work Group: WG397682
Blank File ID: SC12051615243901
Blank Sample ID: WG397682-01
Prep Date: 05/11/12 08:30
Instrument ID: SMARTCHEM
Analyzed Date: 05/11/12 08:30
Method: 353.2
Analyst: JBK

This Method Blank Applies To The Following Samples:

| Client ID | Lab Sample ID | Lab File ID | Time Analyzed | TAG |
|---|---|---|---|---|
| DUP | WG397682-05 | SC12051615251901 | 05/11/12 08:30 | |
| PZ-07-050812 | L12050284-03 | SC12051615262901 | 05/11/12 08:30 | |
| LCS | WG397682-02 | SC12051615250301 | 05/11/12 08:30 | |
| MW-18-050812 | L12050284-05 | SC12051615263601 | 05/11/12 08:30 | |
| TW-01-050812 | L12050284-07 | SC12051615264101 | 05/11/12 08:30 | |
| LCS2 | WG397682-03 | SC12051615251001 | 05/11/12 08:30 | |
| BBLD-PIT-SSP-050812 | L12050284-01 | SC12051615262001 | 05/11/12 08:30 | |

Report Name: BLANK_SUMMARY
PDF File ID: 2417774
Report generated 05/16/2012 16:25

Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number: L12050284 Prep Date: 05/11/12 08:30 Sample ID: WG397682-01
Instrument ID: SMARTCHEM Run Date: 05/11/12 08:30 Prep Method: 353.2
File ID: SC12051615243901 Analyst: JBK Method: 353.2
Workgroup (AAB#): WG397682 Matrix: Water Units: mg/L
Contract #: Cal ID: SMARTC-10-MAY-12

| Analytes | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| Nitrate (as N) | 0.0250 | 0.0500 | 0.0250 | 1 | U |

MDL Method Detection Limit
RL Reporting/Practical Quantitation Limit
ND Analyte Not detected at or above reporting limit
* |Analyte concentration| > RL

Report Name:BLANK
PDF ID: 2417775
16-MAY-2012 16:25

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L12050284 Analyst: JBK Prep Method: 353.2
Instrument ID: SMARTCHEM Matrix: Water Method: 353.2
Workgroup (AAB#): WG397682 Units: mg/L
QC Key: WATERLOO Lot #: STD51196

Sample ID: WG397682-02 LCS File ID: SC12051615250301 Run Date: 05/11/2012 08:30
Sample ID: WG397682-03 LCS2 File ID: SC12051615251001 Run Date: 05/11/2012 08:30

| Analytes | LCS | | | LCS2 | | | %RPD | %Rec Limits | RPD Lmt | Q |
|---|---|---|---|---|---|---|---|---|---|---|
| | Known | Found | % REC | Known | Found | % REC | | | | |
| Nitrate (as N) | 1.00 | 0.925 | 92.5 | 1.00 | 0.912 | 91.2 | 1.42 | 90 - 110 | 15 | |

LCS_LCS2 - Modified 03/06/2008
PDF File ID: 2417776
Report generated: 05/16/2012 16:25

# 2.4.2.3 Raw Data

WORKGROUP: WG397681
397682

# SMARTCHEM RUN LOG

**Daily Check**

- [x] Lamp On
- [x] Probe Rinse Full
- [x] DI Water > ½ Full
- [x] Wash Solution > ½ Full
- [ ] NO3 Reagent bottle connected / purged
- [ ] NO3 pH adj to pH 5-9
- [x] WBL Run
- [x] Reagents Full
- [x] Dilution $H_2O$ Full
- [x] Waste Container Check

Syringe filter lot # 144930

1) **Workgroup** _____
**Plan #** 20120511001
2) **Workgroup** _____
**Plan #** _____
3) **Workgroup** _____
**Plan #** _____

| | Analyte | 1 | 2 | 3 |
|---|---|---|---|---|
| | NO3 | Dilution | | |
| | SC Prepared Curve | | | |
| | Position | | | |
| 1-1 | ICV 1.5 | | | |
| 1-2 | Blank | | | |
| 1-3 | LCS 1 | | | |
| 1-4 | LCS Dup | | | |
| 1-5 | NO2 | | | |
| 1-6 | 05-226-01 | 1/500* | | |
| 1-7 | -03 | 1/10* | | |
| 1-8 | -05 | | | |
| 1-9 | -07 | 1/100* | | |
| 1-10 | 05-245-04 | | | |
| 1-11 | -12 | | | |
| 1-12 | -14 | | | |
| 1-13 | 05-257-01 | | | |
| 1-14 | -03 | | | |
| 1-15 | -05 | | | |
| 1-16 | -07 | | | |
| 1-17 | -09 | | | |
| 1-18 | -11 | | | |
| 1-19 | -13 | | | |
| 1-20 | 05-269-01 | | | |
| 1-21 | -03 | | | |
| 1-22 | -05 | | | |
| 2-1 | -07 | | | |
| 2-2 | -09 | | | |
| 2-3 | -11 | | | |

| | Analyte | 1 | 2 | 3 |
|---|---|---|---|---|
| Position | | | | |
| 2-4 | Dup 257-01 | | | |
| 2-5 | MS ↓ | 1/5/10 | | |
| 2-6 | MS ~~257-0~~ | 269-01 | | |
| 2-7 | Blank | | | |
| 2-8 | LCS | | | |
| 2-9 | LCS Dup | | | |
| 2-10 | 05-269-13 | | | |
| 2-11 | 05-282-01 | | | |
| 2-12 | 05-284-01 | 1/100* | | |
| 2-13 | -03 | | | |
| 2-14 | -05 | | | |
| 2-15 | -07 | | | |
| 2-16 | 05-286-04 | | | |
| 2-17 | -05 | | | |
| 2-18 | -06 | | | |
| 2-19 | -07 | | | |
| 2-20 | 05-317-01 | 1/50* | | |
| 2-21 | -03 | 1/50* | | |
| 2-22 | -05 | | | |
| 2-23 | -07 | 1/50* | | |
| 2-24 | -09 | 1/10* | | |
| 2-25 | -11 | 1/10* | | |
| 2-26 | -13 | 1/500* | | |
| 3-1 | 05-~~313-01~~ | 313-01 | 1/5 | color |
| 3-2 | 313-02 | 1/5 | | ↓ |
| | ~~-0~~ | | | |
| | | | | |

NOTES:
* Run NO2 std on NO3 runs
* LCS/LCS Dup all parameters
*MS(10% sample): NO3, TKN, NH3

* SX's historically known to "kill" column, dilution due to matrix interference

DCN#90836

# SMARTCHEM RUN LOG

| Position | Analyte | 1 | 2 | 3 |
|---|---|---|---|---|
| 3-3 | 05-313-03 | '5 | | color |
| 3-4 | Dup 286-04 | | | |
| 3-5 | MS ↓ | | | |
| 3-6 | MS 286-05 | | | |
| 3-7 | | | | |
| 3-8 | NO2 | | | |
| 3-9 | | | | |
| 3-10 | | | | |
| 3-11 | | | | |
| 3-12 | | | | |
| 3-13 | | | | |
| 3-14 | | | | |
| 3-15 | | | | |

| Position | Analyte | 1 | 2 | 3 |
|---|---|---|---|---|
| 3-16 | | | | |
| 3-17 | | | | |
| 3-18 | | | | |
| 3-19 | | | | |
| 3-20 | | | | |
| 3-21 | | | | |
| 3-22 | | | | |
| 3-23 | | | | |
| 3-24 | | | | |
| 3-25 | | | | |
| 3-26 | | | | |
| 3-27 | | | | |
| 3-28 | | | | |

- [ ] Chloride — EPA 325.2/SM 4500-Cl⁻ E
- [ ] Sulfate — EPA 375.4/SM 426C(15th)
- [ ] Alkalinity — EPA 310.2
- [x] Nitrate-Nitrite — EPA 353.2/SM 4500-NO3 F
- [ ] Ammonia — EPA 350.1/SM 4500-NH3 B
- [ ] TKN — EPA 351.2
- [ ] Phos — EPA 365.4

| Analyte | NO2 | | Reagents |
|---|---|---|---|
| SOP & Revision | L2532 R. 14 | | RGT7254 |
| Curve Stock (SC made) | STD51582 | | 17239 |
| Curve ID (user made) NO2 | STD51343 | | |
| ICV | STD51584 | | |
| CCV | STD51583 | | |
| LCS | STD51194 | | |
| MS | STD48249 | | |
| | Dilution 0.1/6(25) = 0.15 | | |

Comments: *CCV = 1.5 (DI 17/5/7/12)

Analyst: _____ Date: 5/11/12

DCN#90836

**MICROBAC (OVD)**
SMARTCHEM REPORT (VER3.0.53)
NH3, TKN, NO3NO2 (MG/L N)
ALK (MG/L CaCO3) CL, SO4 (MG/L)

Method : WNO3 - EPA 353.2 Nitrate-Nitrite

| Smp#/[Dil Fact] | Sample ID | Conc | OD | %Recovery/RPD | Flag | | Analysis Time |
|---|---|---|---|---|---|---|---|
| DIL-1 | RBL | 0.000 | 0.0356 | 0.00 | | | 7:40:11 AM |
| DIL-1 | RBL | 0.000 | 0.0179 | 0.00 | | | 7:41:23 AM |
| DIL-1 | RBL | 0.000 | 0.0163 | 0.00 | | | 7:42:35 AM |
| DIL-1 | RBL | 0.000 | 0.0114 | 0.00 | | | 7:43:47 AM |
| DIL-1 | Std-1 | 0.000 | -0.0073 | 0.00 | INV | | 7:44:59 AM |
| SR5-1 | Std-2 | 0.040 | 0.0042 | 0.00 | | | 7:46:11 AM |
| SR5-2 | Std-3 | 0.100 | 0.0286 | 0.00 | | | 7:47:32 AM |
| SR5-3 | Std-4 | 0.500 | 0.1547 | 0.00 | | | 7:48:35 AM |
| SR5-4 | Std-5 | 1.000 | 0.3257 | 0.00 | | | 7:49:47 AM |
| ST-1 | Std-6 | 2.000 | 0.6340 | 0.00 | | | 7:50:59 AM |
| 1 | ICV 1.5 | 1.482 | 0.4719 | 0.00 | | | 7:52:11 AM |
| 2 | WG397681-01 BLANK | 0.003 | -0.0043 | 0.00 | INV | | 7:53:23 AM |
| 3 | WG397681-02 LCS1 | 1.013 | 0.3209 | 0.00 | | | 7:54:35 AM |
| 4 | WG397681-03 LCSDUP | 0.975 | 0.3085 | 0.00 | | | 7:55:47 AM |
| 5 | NO2 | 1.570 X | 0.5002 | 0.00 | | | 7:56:59 AM |
| 6 | L12050226-01 (500) | 0.004 | -0.0042 | 0.00 | INV | 0 | 7:58:11 AM |
| 7 | L12050226-03 (10) | 0.042 | 0.0081 | 0.00 | | 0 | 7:59:23 AM |
| 8 | L12050226-05 | 0.111 | 0.0305 | 0.00 | | 0 | 8:00:35 AM |
| 9 | L12050226-07 (100) | -0.005 | -0.0070 | 0.00 | INV,LL | 0 | 8:01:48 AM |
| 10 | L12050245-04 | 0.048 | 0.0102 | 0.00 | | 0 | 8:03:00 AM |
| ST-2 | CCV (1 mg/L) | 1.467 | 0.4668 | ~~146.00~~ 97.8 | | | 8:04:12 AM |
| ST-3 | CCB (0 mg/L) | -0.002 | -0.0059 | 0.00 | INV,LL | | 8:05:24 AM |
| 11 | L12050245-12 | 0.053 | 0.0117 | 0.00 | | 0 | 8:06:36 AM |
| 12 | L12050245-14 | 0.104 | 0.0280 | 0.00 | | 0 | 8:07:48 AM |
| 13 | L12050257-01 | -0.002 | -0.0058 | 0.00 | INV,LL | 0 | 8:09:00 AM |
| 14 | L12050257-03 | 0.101 | 0.0273 | 0.00 | | 0 | 8:10:12 AM |
| 15 | L12050257-05 | 0.594 | 0.1859 | 0.00 | | 0 | 8:11:24 AM |
| 16 | L12050257-07 | 3.953 Y | 1.2671 | 0.00 | ><,LH | 0.005 | 8:12:36 AM |
| 17 | L12050257-09 | 4.603 Y | 1.4765 | 0.00 | ><,LH | 0.006 | 8:13:48 AM |
| 18 | L12050257-11 | 0.007 | -0.0030 | 0.00 | INV | 0.002 | 8:15:00 AM |
| 19 | L12050257-13 | 0.009 | -0.0025 | 0.00 | INV | 0 | 8:16:12 AM |
| 20 | L12050269-01 | -0.001 | -0.0055 | 0.00 | INV,LL | 0 | 8:17:24 AM |

**Report Date :05/11/2012** **Run Date :5/11/2012** **Operator : WESTCO** **Plan # :20120511001**

**Plan Description : NO3-A-JBK/05/11/2012**

# MICROBAC (OVD)

SMARTCHEM REPORT (VER3.0.53)

NH3, TKN, NO3NO2 (MG/L N)

ALK (MG/L CaCO3) CL, SO4 (MG/L)

Method : WNO3 - EPA 353.2 Nitrate-Nitrite

| Smp#/[Dil Fact] | Sample ID | Conc | OD | %Recovery/RPD | Flag | | Analysis Time |
|---|---|---|---|---|---|---|---|
| ST-2 | CCV (1 mg/L) | 1.408 | 0.4478 | ~~140.75~~ 93.9 | | | 8:18:36 AM |
| ST-3 | CCB (0 mg/L) | -0.002 | -0.0060 | 0.00 | INV,LL | | 8:19:48 AM |
| 21 | L12050269-03 | 0.031 | 0.0047 | 0.00 | | D | 8:21:00 AM |
| 22 | L12050269-05 | 0.164 | 0.0476 | 0.00 | | D | 8:22:12 AM |
| 23 | L12050269-07 | 0.031 | 0.0046 | 0.00 | | D | 8:23:24 AM |
| 24 | L12050269-09 | 0.011 | -0.0019 | 0.00 | INV | D | 8:24:36 AM |
| 25 | L12050269-11 | 0.015 | -0.0004 | 0.00 | INV | D | 8:25:48 AM |
| 26 | DUP 257-01 | 0.008 | -0.0028 | 0.00 | INV | | 8:27:00 AM |
| 27 | MS 257-01 | 0.517 | 0.1612 | 0.00 | | | 8:28:12 AM |
| 28 | MS 269-01 | 0.478 | 0.1487 | 0.00 | | | 8:29:24 AM |
| 29 | WG397682-01 BLANK | -0.002 | -0.0058 | 0.00 | INV,LL | | 8:30:36 AM |
| 30 | WG397682-02 LCS1 | 0.925 | 0.2926 | 0.00 | | | 8:31:48 AM |
| ST-2 | CCV (1 mg/L) | 1.458 | 0.4640 | 145.79 97.2 | | | 8:33:00 AM |
| ST-3 | CCB (0 mg/L) | 0.006 | -0.0033 | 0.00 | INV | | 8:34:12 AM |
| 31 | WG397682-03 LCSDUP | 0.912 | 0.2882 | 0.00 | | | 8:35:24 AM |
| 32 | L12050269-13 | -0.002 | -0.0060 | 0.00 | INV,LL | D | 8:36:36 AM |
| 33 | L12050282-01 | 0.168 | 0.0487 | 0.00 | | D | 8:37:48 AM |
| 34 | L12050284-01 (100) | 0.015 | -0.0006 | 0.00 | INV | 0.001 | 8:39:00 AM |
| 35 | L12050284-03 | 0.012 | -0.0015 | 0.00 | INV | ~~0.002~~ 0.001 | 8:40:12 AM |
| 36 | L12050284-05 | 0.293 | 0.0891 | 0.00 | | 0.602 | 8:41:24 AM |
| 37 | L12050284-07 | 0.011 | -0.0017 | 0.00 | INV | ~~0.002~~ D | 8:42:36 AM |
| 38 | L12050286-04 | 0.361 | 0.1110 | 0.00 | | D | 8:43:48 AM |
| 39 | L12050286-05 | 0.744 | 0.2342 | 0.00 | | D | 8:45:00 AM |
| 40 | L12050286-06 | 0.359 | 0.1102 | 0.00 | | D | 8:46:12 AM |
| ST-2 | CCV (1 mg/L) | 1.337 | 0.4250 | ~~133.07~~ 89.1 | | | 8:54:57 AM |
| ST-3 | CCB (0 mg/L) | -0.001 | -0.0057 | 0.00 | INV,LL | | 8:56:09 AM |
| 41 | L12050286-07 | 0.391 | 0.1204 | 0.00 | | 0.001 | 8:57:21 AM |
| 42 | L12050317-01 (50) | 0.002 | -0.0046 | 0.00 | INV | D | 8:58:33 AM |
| 43 | L12050317-03 (50) | 0.008 | -0.0028 | 0.00 | INV | D | 8:59:45 AM |
| 44 | L12050317-05 | 0.640 | 0.2006 | 0.00 | | D | 9:00:57 AM |
| 45 | L12050317-07 (50) | 0.001 | -0.0049 | 0.00 | INV | 0 | 9:02:09 AM |
| 46 | L12050317-09 (10) | 0.018 | 0.0006 | 0.00 | | 0.001 | 9:03:21 AM |

**Report Date :05/11/2012** **Run Date :5/11/2012** **Operator : WESTCO** **Plan # :20120511001**

**Plan Description : NO3-A-JBK/05/11/2012**

**MICROBAC (OVD)**
SMARTCHEM REPORT (VER3.0.53)
NH3, TKN, NO3NO2 (MG/L N)
ALK (MG/L CaCO3) CL, SO4 (MG/L)

Method : WNO3 - EPA 353.2 Nitrate-Nitrite

| Smp#/[Dil Fact] | Sample ID | Conc | OD | %Recovery/RPD | Flag | | Analysis Time |
|---|---|---|---|---|---|---|---|
| 47 | L12050317-11 (10) | -0.004 | -0.0066 | 0.00 | INV,LL | 0 | 9:04:33 AM |
| 48 | L12050317-13 (500) | 0.011 | -0.0017 | 0.00 | INV | 0 | 9:05:45 AM |
| 49 | L12050313-01 (5) | -0.002 | -0.0059 | 0.00 | INV,LL | | 9:06:57 AM |
| 50 | L12050313-02 (5) | 0.004 | -0.0041 | 0.00 | INV | | 9:08:09 AM |
| ST-2 | CCV (1 mg/L) | 1.362 | 0.4331 | ~~136.19~~ 90.8 | | | 9:09:21 AM |
| ST-3 | CCB (0 mg/L) | -0.014 | -0.0099 | 0.00 | INV,><,LL | | 9:10:33 AM |
| 51 | L12050313-03 (5) | -0.008 | -0.0079 | 0.00 | INV,><,LL | | 9:11:45 AM |
| 52 | DUP 284-04 | 0.318 | 0.0970 | 0.00 | | | 9:12:57 AM |
| 53 | MS1 284-04 | 0.250 | 0.0753 | 0.00 | | | 9:14:09 AM |
| 54 | MS2 284-07 | 0.581 | 0.1817 | 0.00 | | | 9:15:21 AM |
| 55 | ID 55 | -0.004 | -0.0066 | 0.00 | INV,LL | | 9:16:33 AM |
| 56 | ID 56 NO2 | 0.866 | 0.2736 | 0.00 | | | 9:17:45 AM |
| ST-2 | CCV (1 mg/L) | 1.350 | 0.4292 | ~~134.86~~ 90.0 | | | 9:18:57 AM |
| ST-3 | CCB (0 mg/L) | 0.002 | -0.0046 | 0.00 | INV | | 9:20:09 AM |
| 16-[1/4] | L12050257-07 | 4.236 | 0.3356 | 0.00 | LH | 0.005 | 9:29:19 AM |
| 17-[1/4] | L12050257-09 | 4.790 | 0.3802 | 0.00 | LH | 0.006 | 9:31:25 AM |
| ST-2 | CCV (1 mg/L) | 1.345 | 0.4275 | ~~134.45~~ 89.0 | | | 9:32:19 AM |
| ST-3 | CCB (0 mg/L) | -0.001 | -0.0055 | 0.00 | INV,LL | | 9:33:31 AM |

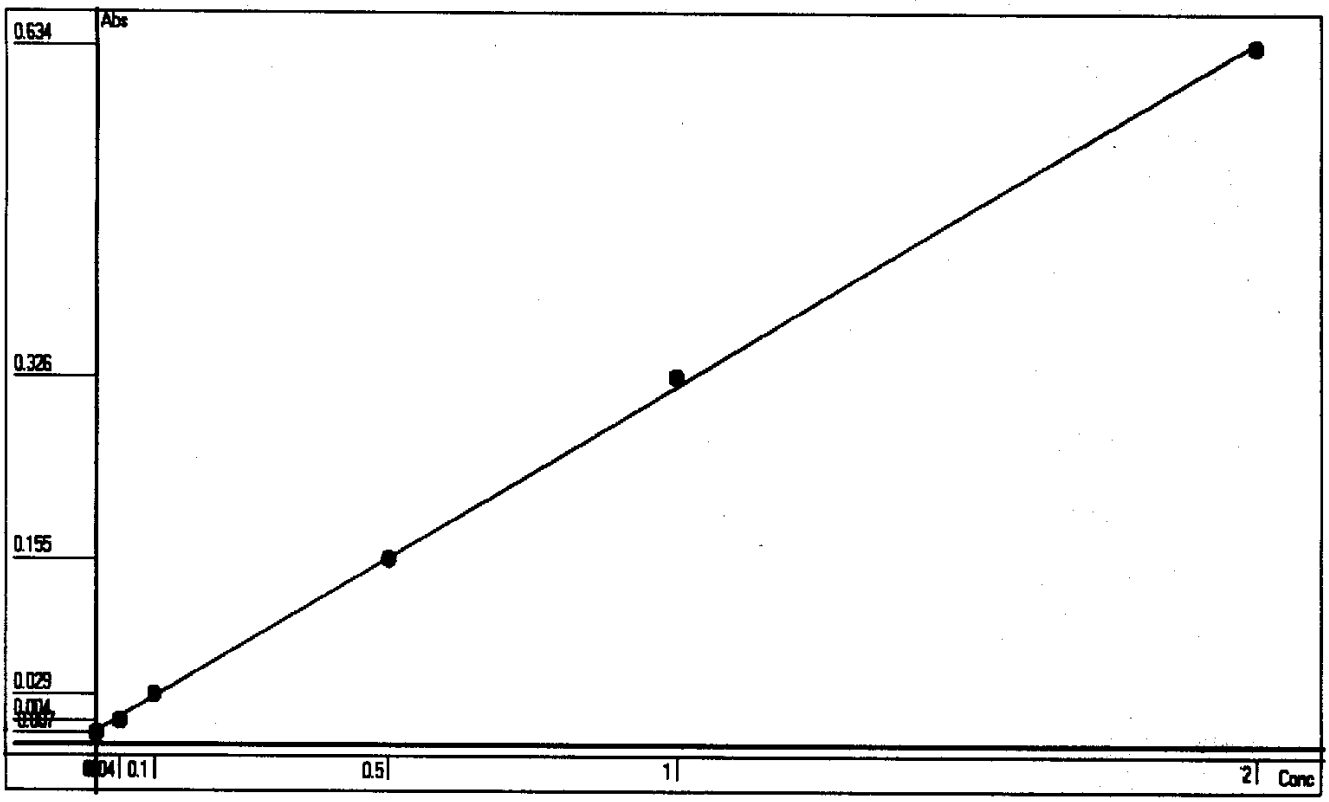
**Report Date :05/11/2012** **Run Date :5/11/2012** **Operator : WESTCO** **Plan # :20120511001**

**Plan Description : NO3-A-JBK/05/11/2012**

# Calibrant Report - WNO3 -

**Calib Lot #:010104 Exp Date:6/17/2020 User:MICROBAC**

**Plan # : 20120511001 Description : [NO3-A-JBK/05/11/2012]**




| Point | OD | Conc | Recalc Conc | % Error |
|---|---|---|---|---|
| 1 | -0.0073 | 0 | -0.0062 | -0.62 |
| 2 | 0.0042 | 0.04 | 0.0295 | -26.25 |
| 3 | 0.0286 | 0.1 | 0.1053 | 5.30 |
| 4 | 0.1547 | 0.5 | 0.4971 | -0.58 |
| 5 | 0.3257 | 1 | 1.0283 | 2.83 |
| 6 | 0.6340 | 2 | 1.9860 | -0.70 |
| | | | | |

**Conc= +3.1064*Abso +0.0165** **$R^2$=0.9996**

| RBL |
|---|
| 0.0171 |
| 0 |

**Report Date 5/11/2012 Run Date 5/11/2012**

# 2.4.3 Phosphorus Data

# 2.4.3.1 Summary Data

**Login Number:** L12050284
**Department**: Conventionals
**Analyst:** Jeremy Kinney

**METHOD**

**Analysis** EPA 365.4 (Phosphorus)

**HOLDING TIMES**

**Sample Analysis:** All holding times were met.

**PREPARATION**

Sample preparation proceeded normally.

**BATCH QA/QC**

**Method Blank:** All acceptance criteria were met.

**Laboratory Control Sample:** All acceptance criteria were met.

**Matrix Spikes:** All acceptance criteria were met.

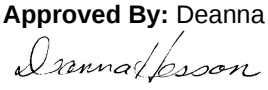
**Duplicates:** All acceptance criteria were met.

**SAMPLES**

**Samples:** All acceptance criteria were met.

I certify that this data package is in compliance with the terms and conditions agreed to by the client and Microbac Laboratories Inc., both technically and for completeness, except for the conditions noted above. Release of the data contained in this hard copy data package has been authorized by the Laboratory Manager or designated person, as verified by the following signature.

**Narrative ID:** 46944
**Approved By:** Deanna Hesson



# Certificate of Analysis

**Sample #:** L12050284-01 **PrePrep Method:** N/A **Instrument:** SMARTCHEM
**Client ID:** BBLD-PIT-SSP-050812 **Prep Method:** 365.4 **Prep Date:** N/A
**Matrix:** Water **Analytical Method:** 365.4 **Cal Date:** 05/15/2012 08:40
**Workgroup #:** WG397809 **Analyst:** JBK **Run Date:** 05/15/2012 08:56
**Collect Date:** 05/08/2012 10:01 **Dilution:** 1 **File ID:** SC120515001.033
**Sample Tag:** 01 **Units:** mg/L

| Analyte | CAS # | Result | Qual | RL | MDL |
|---|---|---|---|---|---|
| Phosphorus, Total | 7723-14-0 | 0.658 | | 0.200 | 0.100 |

**Sample #:** L12050284-03 **PrePrep Method:** N/A **Instrument:** SMARTCHEM
**Client ID:** PZ-07-050812 **Prep Method:** 365.4 **Prep Date:** N/A
**Matrix:** Water **Analytical Method:** 365.4 **Cal Date:** 05/15/2012 08:40
**Workgroup #:** WG397809 **Analyst:** JBK **Run Date:** 05/15/2012 08:57
**Collect Date:** 05/08/2012 10:10 **Dilution:** 1 **File ID:** SC120515001.034
**Sample Tag:** 01 **Units:** mg/L

| Analyte | CAS # | Result | Qual | RL | MDL |
|---|---|---|---|---|---|
| Phosphorus, Total | 7723-14-0 | | U | 0.200 | 0.100 |
| U | Not detected at or above adjusted sample detection limit. | | | | |

**Sample #:** L12050284-05 **PrePrep Method:** N/A **Instrument:** SMARTCHEM
**Client ID:** MW-18-050812 **Prep Method:** 365.4 **Prep Date:** N/A
**Matrix:** Water **Analytical Method:** 365.4 **Cal Date:** 05/15/2012 08:40
**Workgroup #:** WG397809 **Analyst:** JBK **Run Date:** 05/15/2012 08:57
**Collect Date:** 05/08/2012 11:00 **Dilution:** 1 **File ID:** SC120515001.035
**Sample Tag:** 01 **Units:** mg/L

| Analyte | CAS # | Result | Qual | RL | MDL |
|---|---|---|---|---|---|
| Phosphorus, Total | 7723-14-0 | | U | 0.200 | 0.100 |
| U | Not detected at or above adjusted sample detection limit. | | | | |

**Sample #:** L12050284-07 **PrePrep Method:** N/A **Instrument:** SMARTCHEM
**Client ID:** TW-01-050812 **Prep Method:** 365.4 **Prep Date:** N/A
**Matrix:** Water **Analytical Method:** 365.4 **Cal Date:** 05/15/2012 08:40
**Workgroup #:** WG397809 **Analyst:** JBK **Run Date:** 05/15/2012 08:58
**Collect Date:** 05/08/2012 14:50 **Dilution:** 1 **File ID:** SC120515001.036
**Sample Tag:** 01 **Units:** mg/L

| Analyte | CAS # | Result | Qual | RL | MDL |
|---|---|---|---|---|---|
| Phosphorus, Total | 7723-14-0 | | U | 0.200 | 0.100 |

Certificate of Analysis

| | |
|---|---|
| U | Not detected at or above adjusted sample detection limit. |

# 2.4.3.2 QC Summary Data

## Example Calculations for Visible Spectrophotometric Methods

**Linear Calibration Model**

**Step 1 - Retrieve Curve Data from ICAL**

m = slope of the linear equation
b = intercept from the linear equation
y = instrument response as absorbance or OD
x = concentration of analyte (mg/L)
y = mx + b

**Step 2: Calculate the instrument concentration, x**

Where:

x = (y - b)/m

**Step 3: Solve for analyte concentration in sample, Cx**

Cx = ( x ) (D)

**Example Calculation (LCS):**

| | | |
|---|---|---|
| Value of m from plot: | 7.809 | |
| Value of b from plot: | 0.0004135 | |
| Absorbance of unknown from quantitation report (y): | 0.31 | |
| Calculated concentration (x): | 0.03964483 | |
| Dilution factor (D): | 1.00 | |
| Concentration of analyte in sample, Cy: | 0.0396 | mg/L |

**SmartChem Autoanalyzer - Quadratic Calibration for Chloride and Sulfate**

**Step 1 - Retrieve Curve Data from Smartchem ICAL**

A, B, C = constants from the ICAL quadratic regression

x = instrument response as absorbance or OD

y = concentration of analyte (mg/L)

**Step 2: Calculate the instrument concentration, y**

Where:

y = Ax^2 + Bx + C

**Step 3: Solve for analyte concentration in sample, Cy**

Cy = ( y ) (D)

**Example Calculation (LCS):**

| | | |
|---|---|---|
| Value of A from plot: | 101.2796 | |
| Value of B from plot: | 318.9056 | |
| Value of C from plot: | -2.2712 | |
| Absorbance of unknown from quantitation report (x): | 0.1583 | |
| Calculated concentration (y): | 50.7495108 | |
| Dilution factor (D): | 1.00 | |
| Concentration of analyte in sample, Cy: | 50.75 | mg/L |

Microbac Laboratories Inc.

Data Checklist

Date: 15-MAY-2012
Analyst: JBK
Analyst: NA
Method: PHOS
Instrument: SC
Curve Workgroup: NA
Runlog ID:
Analytical Workgroups: WG397809

| | |
|---|---|
| Calibration/Linearity | 05/15/2012 |
| Second Source Check | X |
| ICV/CCV (std) | X |
| ICB/CCB | X |
| Blank | X |
| LCS/LCS Dup | X |
| MS/MSD | X |
| Duplicate | X |
| Upload Results | X |
| Client Forms | X |
| QC Violation Sheet | |
| Case Narratives | |
| Signed Raw Data | X |
| STD/LCS on benchsheet | X |
| Check for compliance with method and project specific requirements | X |
| Check the completeness of reported information | X |
| Check the information for the report narrative | X |
| Primary Reviewer | JBK |
| Secondary Reviewer | DIH |
| | |
| Comments | |

Primary Reviewer:
16-MAY-2012

Secondary Reviewer:
16-MAY-2012

CHECKLIST1 - Modified 03/05/2008
Generated: MAY-16-2012 15:26:41

Microbac Laboratories Inc.

# HOLDING TIMES
# EQUIVALENT TO AFCEE FORM 9

Analytical Method: 365.4 AAB#: WG397809

Login Number: L12050284

| Client ID | ID | Date Collected | TCLP Date | Time Held | Max Hold | Q | Extract Date | Time Held | Max Hold | Q | Run Date | Time Held | Max Hold | Q |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| BBLD-PIT-SSP-050812 | 01 | 05/08/12 | | | | | | | 28 | | 05/15/12 | 7 | 28 | |
| PZ-07-050812 | 03 | 05/08/12 | | | | | | | 28 | | 05/15/12 | 6.9 | 28 | |
| MW-18-050812 | 05 | 05/08/12 | | | | | | | 28 | | 05/15/12 | 6.9 | 28 | |
| TW-01-050812 | 07 | 05/08/12 | | | | | | | 28 | | 05/15/12 | 6.8 | 28 | |

* = SEE PROJECT QAPP REQUIREMENTS

HOLD_TIMES - Modified 03/06/2008
PDF File ID: 2417222
Report generated 05/16/2012 14:43

Microbac Laboratories Inc.

## METHOD BLANK SUMMARY

Login Number: L12050284
Work Group: WG397809
Blank File ID: SC120515001.008
Blank Sample ID: WG397809-01
Prep Date: 05/15/12 08:41
Instrument ID: SMARTCHEM
Analyzed Date: 05/15/12 08:41
Method: 365.4
Analyst: JBK

This Method Blank Applies To The Following Samples:

| Client ID | Lab Sample ID | Lab File ID | Time Analyzed | TAG |
|---|---|---|---|---|
| LCS | WG397809-02 | SC120515001.009 | 05/15/12 08:42 | 01 |
| DUP | WG397809-04 | SC120515001.023 | 05/15/12 08:50 | 01 |
| BBLD-PIT-SSP-050812 | L12050284-01 | SC120515001.033 | 05/15/12 08:56 | 01 |
| PZ-07-050812 | L12050284-03 | SC120515001.034 | 05/15/12 08:57 | 01 |
| MW-18-050812 | L12050284-05 | SC120515001.035 | 05/15/12 08:57 | 01 |
| TW-01-050812 | L12050284-07 | SC120515001.036 | 05/15/12 08:58 | 01 |

Report Name: BLANK_SUMMARY
PDF File ID: 2417223
Report generated 05/16/2012 14:43

Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number: L12050284 Prep Date: 05/15/12 08:41 Sample ID: WG397809-01
Instrument ID: SMARTCHEM Run Date: 05/15/12 08:41 Prep Method: 365.4
File ID: SC120515001.008 Analyst: JBK Method: 365.4
Workgroup (AAB#): WG397809 Matrix: Water Units: mg/L
Contract #: Cal ID: SMARTC-15-MAY-12

| Analytes | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| Phosphorus, Total | 0.100 | 0.200 | 0.100 | 1 | U |

MDL Method Detection Limit
RL Reporting/Practical Quantitation Limit
ND Analyte Not detected at or above reporting limit
* |Analyte concentration| > RL

Report Name:BLANK
PDF ID: 2417224
16-MAY-2012 14:43

**Microbac Laboratories Inc.**
**LABORATORY CONTROL SAMPLE (LCS)**

**Login Number:** L12050284 **Run Date:** 05/15/2012 **Sample ID:** WG397809-02
**Instrument ID:** SMARTCHEM **Run Time:** 08:42 **Prep Method:** 365.4
**File ID:** SC120515001.009 **Analyst:** JBK **Method:** 365.4
**Workgroup (AAB#):** WG397809 **Matrix:** Water **Units:** mg/L
**QC Key:** WATERLOO **Lot#:** STD51133 **Cal ID:** SMARTC-15-MAY-12

| Analytes | Expected | Found | % Rec | LCS Limits | Q |
|---|---|---|---|---|---|
| Phosphorus, Total | 1.00 | 0.973 | 97.3 | 70 - 130 | |

**LCS - Modified 03/06/2008**
**PDF File ID: 2417225**
**Report generated: 05/16/2012 14:43**

# 2.4.3.3 Raw Data

WORKGROUP: WG397809

# SMARTCHEM RUN LOG

**Daily Check**

- [x] Lamp On
- [x] Probe Rinse Full
- [x] DI Water > ½ Full
- [x] Wash Solution > ½ Full
- [ ] NO3 Reagent bottle connected / purged
- [ ] NO3 pH adj to pH 5-9
- [x] WBL Run
- [x] Reagents Full
- [x] Dilution $H_2O$ Full
- [x] Waste Container Check

Syringe filter lot # _____

1) **Workgroup** _____ **Plan #** 26120515001
2) **Workgroup** _____ **Plan #** _____
3) **Workgroup** _____ **Plan #** _____

| Analyte | | 1 | 2 | 3 |
|---|---|---|---|---|
| ~~P~~ NOS | | Dilution | | |
| SC Prepared Curve | | | | |
| Position | | | | |
| 1-1 | ICV 1-5 | | | |
| 1-2 | Blank | | | |
| 1-3 | LCS 1 | | | |
| 1-4 | 05-274-03 | 4/250 | | |
| 1-5 | 05-099-01 | | | |
| 1-6 | -03 | | | |
| 1-7 | -05 | | | |
| 1-8 | -07 | | | |
| 1-9 | -09 | | | |
| 1-10 | 05-153-01 | | | |
| 1-11 | -03 | | | |
| 1-12 | -05 | | | |
| 1-13 | -07 | | | |
| 1-14 | 05-171-01 | | | |
| 1-15 | Dup -01 | | | |
| 1-16 | MS -03 | | | |
| 1-17 | SD -05 | | | |
| 1-18 | -07 | | | √ |
| 1-19 | 05-226-01 | | | |
| 1-20 | -03 | | | |
| 1-21 | -05 | | | |
| 1-22 | -07 | | | |
| 2-1 | 05-284-01 | | | |
| 2-2 | -03 | | | |
| 2-3 | -05 | | | |

| Position | Analyte | 1 | 2 | 3 |
|---|---|---|---|---|
| 2-4 | 05-284-07 | | | |
| 2-5 | MS ↓ | | | |
| 2-6 | | | | |
| 2-7 | | | | |
| 2-8 | | | | |
| 2-9 | | | | |
| 2-10 | | | | |
| 2-11 | | | | |
| 2-12 | | | | |
| 2-13 | | | | |
| 2-14 | | | | |
| 2-15 | | | | |
| 2-16 | | | | |
| 2-17 | | | | |
| 2-18 | | | | |
| 2-19 | | | | |
| 2-20 | | | | |
| 2-21 | | | | |
| 2-22 | | | | |
| 2-23 | | | | |
| 2-24 | | | | |
| 2-25 | | | | |
| 2-26 | | | | |
| 3-1 | | | | |
| 3-2 | | | | |
| | | | | |
| | | | | |

**NOTES:**
* Run NO2 std on NO3 runs
* LCS/LCS Dup all parameters
*MS(10% sample): NO3, TKN, NH3

DCN#90873

# SMARTCHEM RUN LOG

| Analyte | | 1 | 2 | 3 |
|---|---|---|---|---|
| Position | | | | |
| 3-3 | | | | |
| 3-4 | | | | |
| 3-5 | | | | |
| 3-6 | | | | |
| 3-7 | | | | |
| 3-8 | | | | |
| 3-9 | | | | |
| 3-10 | | | | |
| 3-11 | | | | |
| 3-12 | | | | |
| 3-13 | | | | |
| 3-14 | | | | |
| 3-15 | | | | |

| Analyte | | 1 | 2 | 3 |
|---|---|---|---|---|
| Position | | | | |
| 3-16 | | | | |
| 3-17 | | | | |
| 3-18 | | | | |
| 3-19 | | | | |
| 3-20 | | | | |
| 3-21 | | | | |
| 3-22 | | | | |
| 3-23 | | | | |
| 3-24 | | | | |
| 3-25 | | | | |
| 3-26 | | | | |
| 3-27 | | | | |
| 3-28 | | | | |

- ☐ Chloride — EPA 325.2/SM 4500-Cl⁻ E
- ☐ Sulfate — EPA 375.4/SM 426C(15th)
- ☐ Alkalinity — EPA 310.2
- ☐ Nitrate-Nitrite — EPA 353.2/SM 4500-NO3 F
- ☐ Ammonia — EPA 350.1/SM 4500-NH3 B
- ☐ TKN — EPA 351.2
- ☑ Phos — EPA 365.4

| Analyte | Phos | | Reagents |
|---|---|---|---|
| SOP & Revision | IC3654 R14 | | 17274 |
| Curve Stock (SC made) | | | 14857 |
| Curve ID (user made) | See | | 17324 |
| ICV | | | |
| CCV | Digest | | |
| LCS | | | |
| MS | Dilution 10 | | |

Comments: _____

Analyst: _____ Date: 5/15/12

DCN#90873

# TKN/Phosphorus Digestion Log

TKN WG: ~~397809~~ 498 5/5/11
TKN Std:
TKN CCV:
TKN ICV:
TKN LCS:

Phos WG: 397809
Phos Std: STD 51519
Phos CCV: ↓ 1/2(2)=1
Phos ICV: STD 51132
Phos LCS: STD 51133

MS/MSD: STD 51384
Daily Dilution: 1/25(25)=1
Block Digester Temperature: 380 °C
Digest Reagent: RGT17224

| | Sample | Volume | TKN Dilution | Phos Dilution | | Sample | Volume | TKN Dilution | Phos Dilution |
|---|---|---|---|---|---|---|---|---|---|
| 1 | STD | | | | 26 | 05-28403 | | | |
| 2 | CCV | | | | 27 | -05 | | | |
| 3 | ICV | | | | 28 | -07 | | | |
| 4 | Blank | | | | 29 | MS ↓ | | | |
| 5 | LCS | | | | 30 | | | | |
| 6 | 05-274-03 | | | 1/250 | 31 | | | | |
| 7 | 05-099-01 | | | | 32 | | | | |
| 8 | -03 | | | | 33 | | | | |
| 9 | -05 | | | | 34 | | | | |
| 10 | -07 | | | | 35 | | | | |
| 11 | -09 | | | | 36 | | | | |
| 12 | 05-153-01 | | | | 37 | | | | |
| 13 | -03 | | | | 38 | | | | |
| 14 | -05 | | | | 39 | | | | |
| 15 | -07 | | | | 40 | | | | |
| 16 | 05-171-01 | | | | 41 | | | | |
| 17 | Dup -01 | | | | 42 | | | | |
| 18 | MS -03 | | | | 43 | | | | |
| 19 | SD -05 | | | | 44 | | | | |
| 20 | -07 | | | | 45 | | | | |
| 21 | 05-226-01 | | | | 46 | | | | |
| 22 | -03 | | | | 47 | | | | |
| 23 | -05 | | | | 48 | | | | |
| 24 | -07 | | | | 49 | | | | |
| 25 | 05-284-01 | | | | 50 | | | | |

Analyst: _____ Date: 5/12/12

**MICROBAC (OVD)**
SMARTCHEM REPORT (VER3.0.53)
NH3, TKN, NO3NO2 (MG/L N)
ALK (MG/L CaCO3) CL, SO4 (MG/L)

Method : WTPH - EPA 365.4 TOTAL PHOSPHORUS

| Smp#/[Dil Fact] | Sample ID | Conc | OD | %Recovery/RPD | Flag | Analysis Time |
|---|---|---|---|---|---|---|
| DIL-1 | RBL | 0.000 | 0.0246 | 0.00 | | 8:35:47 AM |
| DIL-1 | RBL | 0.000 | 0.0238 | 0.00 | | 8:36:05 AM |
| DIL-1 | RBL | 0.000 | 0.0243 | 0.00 | | 8:36:59 AM |
| SR5-1 | Std-1 | 0.010 | 0.0023 | 0.00 | | 8:37:17 AM |
| SR5-2 | Std-2 | 0.200 | 0.0308 | 0.00 | | 8:38:11 AM |
| SR5-3 | Std-3 | 0.500 | 0.0704 | 0.00 | | 8:38:29 AM |
| SR5-4 | Std-4 | 1.000 | 0.1340 | 0.00 | | 8:39:24 AM |
| SR5-5 | Std-5 | 1.500 | 0.2111 | 0.00 | | 8:39:41 AM |
| ST-1 | Std-6 | 2.000 | 0.2749 | 0.00 | | 8:40:35 AM |
| 1 | ICV 1.5 | 1.439 | 0.1989 | 0.00 | | 8:40:53 AM |
| 2 | WG397809-01 BLANK | -0.008 | 0.0004 | 0.00 | ><,LL | 8:41:47 AM |
| 3 | WG397809-02 LCS1 | 0.973 | 0.1349 | 0.00 | | 8:42:05 AM |
| 4 | L12050274-03 (250) | 1.290 | 0.1784 | 0.00 | | 8:42:59 AM |
| 5 | L12050099-01 | 0.159 | 0.0233 | 0.00 | | 8:43:17 AM |
| 6 | L12050099-03 | -0.025 | -0.0021 | 0.00 | INV,><,LL | 8:44:11 AM |
| 7 | L12050099-05 | -0.039 | -0.0040 | 0.00 | INV,><,LL | 8:44:29 AM |
| 8 | L12050099-07 | 0.204 | 0.0294 | 0.00 | | 8:45:23 AM |
| 9 | L12050099-09 | -0.049 | -0.0054 | 0.00 | INV,><,LL | 8:45:41 AM |
| 10 | L12050153-01 | -0.025 | -0.0019 | 0.00 | INV,><,LL | 8:46:35 AM |
| ST-2 | CCV (1 mg/L) | 0.999 | 0.1385 | 99.88 | | 8:46:53 AM |
| ST-3 | CCB (0 mg/L) | -0.066 | -0.0077 | 0.00 | INV,><,LL | 8:47:47 AM |
| 11 | L12050153-03 | -0.021 | -0.0015 | 0.00 | INV,><,LL | 8:48:05 AM |
| 12 | L12050153-05 | -0.027 | -0.0023 | 0.00 | INV,><,LL | 8:49:00 AM |
| 13 | L12050153-07 | -0.073 | -0.0087 | 0.00 | INV,><,LL | 8:49:17 AM |
| 14 | L12050171-01 | 0.110 | 0.0166 | 0.00 | | 8:50:11 AM |
| 15 | WG397809-04 DUP | 0.162 | 0.0237 | 0.00 | | 8:50:29 AM |
| 16 | L12050171-03 MS | 1.000 | 0.1387 | 0.00 | EPL | 8:51:24 AM |
| 17 | L12050171-05 SD | 1.041 | 0.1443 | 0.00 | | 8:51:41 AM |
| 18 | L12050171-07 | 2.720 | 0.3747 | 0.00 | ><,LH | 8:52:36 AM |
| 19 | L12050226-01 | 0.471 | 0.0660 | 0.00 | | 8:52:53 AM |
| 20 | L12050226-03 | -0.005 | 0.0007 | 0.00 | ><,LL | 8:53:48 AM |
| ST-2 | CCV (1 mg/L) | 0.951 | 0.1320 | 95.14 | | 8:54:05 AM |

**Report Date :05/15/2012** **Run Date :5/15/2012** **Operator : WESTCO** **Plan # :20120515001**

**Plan Description : PHOS-A-JBK/05/15/2012**

**MICROBAC (OVD)**
SMARTCHEM REPORT (VER3.0.53)
NH3, TKN, NO3NO2 (MG/L N)
ALK (MG/L CaCO3) CL, SO4 (MG/L)

Method : WTPH - EPA 365.4 TOTAL PHOSPHORUS

| Smp#/[Dil Fact] | Sample ID | Conc | OD | %Recovery/RPD | Flag | Analysis Time |
|---|---|---|---|---|---|---|
| ST-3 | CCB (0 mg/L) | -0.066 | -0.0077 | 0.00 | INV,><,LL | 8:54:59 AM |
| 21 | L12050226-05 | -0.071 | -0.0084 | 0.00 | INV,><,LL | 8:55:17 AM |
| 22 | L12050226-07 | 0.591 | 0.0826 | 0.00 | | 8:56:11 AM |
| 23 | L12050284-01 | 0.658 | 0.0918 | 0.00 | | 8:56:29 AM |
| 24 | L12050284-03 | 0.082 | 0.0127 | 0.00 | | 8:57:23 AM |
| 25 | L12050284-05 | -0.033 | -0.0032 | 0.00 | INV,><,LL | 8:57:41 AM |
| 26 | L12050284-07 | 0.062 | 0.0098 | 0.00 | | 8:58:35 AM |
| 27 | WG397809-08 MS | 0.724 | 0.1008 | 0.00 | EPL | 8:58:53 AM |
| 28 | ID 28 | 0.836 | 0.1161 | 0.00 | | 8:59:47 AM |
| ST-2 | CCV (1 mg/L) | 0.985 | 0.1366 | 98.50 | | 9:00:05 AM |
| ST-3 | CCB (0 mg/L) | -0.046 | -0.0050 | 0.00 | INV,><,LL | 9:00:59 AM |
| 18-[1/2] | L12050171-07 | 2.639 | 0.1825 | 0.00 | LH | 9:08:40 AM |
| ST-2 | CCV (1 mg/L) | 0.984 | 0.1364 | 98.35 | | 9:08:40 AM |
| ST-3 | CCB (0 mg/L) | -0.038 | -0.0038 | 0.00 | INV,><,LL | 9:09:34 AM |

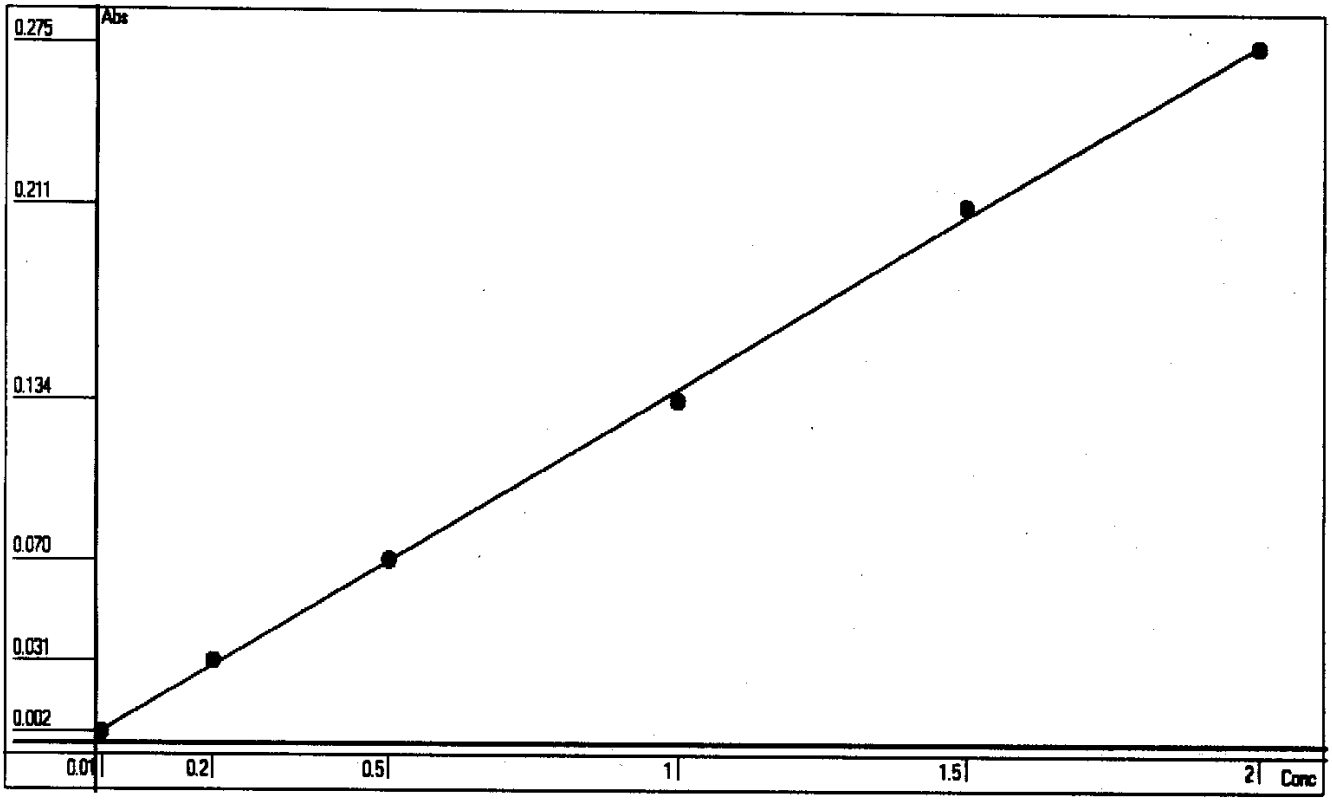
**Report Date :05/15/2012** **Run Date :5/15/2012** **Operator : WESTCO** **Plan # :20120515001**

**Plan Description : PHOS-A-JBK/05/15/2012**

# Calibrant Report - WTPH -

**Calib Lot #:010104 Exp Date:6/18/2020 User:MICROBAC**

**Plan # : 20120515001 Description : [PHOS-A-JBK/05/15/2012]**




| Point | OD | Conc | Recalc Conc | % Error |
|---|---|---|---|---|
| 1 | 0.0023 | 0.01 | 0.0065 | -35.00 |
| 2 | 0.0308 | 0.2 | 0.2142 | 7.10 |
| 3 | 0.0704 | 0.5 | 0.5028 | 0.56 |
| 4 | 0.1340 | 1 | 0.9664 | -3.36 |
| 5 | 0.2111 | 1.5 | 1.5283 | 1.89 |
| 6 | 0.2749 | 2 | 1.9933 | -0.34 |
| | | | | |

**Conc= +7.2886*Abso -0.0103 $R^2$=0.9993**

**RBL**
**0.0245**
**0**

**Report Date 5/15/2012 Run Date 5/15/2012**

# 2.4.4 Sulfate Data

# 2.4.4.1 Summary Data

**Login Number:** L12050284
**Department**: Conventionals
**Analyst:** Deanna Hesson

**METHOD**

**Analysis** EPA 375.4/SM426C(15th ed) (Sulfate)

**HOLDING TIMES**

**Sample Analysis:** All holding times were met.

**PREPARATION**

Sample preparation proceeded normally.

**BATCH QA/QC**

**Method Blank:** All acceptance criteria were met.

**Laboratory Control Sample:** All acceptance criteria were met.

**Duplicates:** All acceptance criteria were met.

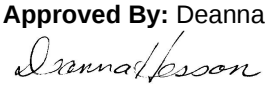
**Matrix Spikes:** All acceptance criteria were met.

**SAMPLES**

**Samples:** All acceptance criteria were met.

I certify that this data package is in compliance with the terms and conditions agreed to by the client and Microbac Laboratories Inc., both technically and for completeness, except for the conditions noted above. Release of the data contained in this hard copy data package has been authorized by the Laboratory Manager or designated person, as verified by the following signature.

**Narrative ID:** 46945
**Approved By:** Deanna Hesson



# Certificate of Analysis

**Sample #:** L12050284-01 **PrePrep Method:** N/A **Instrument:** SMARTCHEM
**Client ID:** BBLD-PIT-SSP-050812 **Prep Method:** 375.4 **Prep Date:** N/A
**Matrix:** Water **Analytical Method:** 375.4 **Cal Date:** 05/21/2012 09:22
**Workgroup #:** WG398374 **Analyst:** DIH **Run Date:** 05/21/2012 09:52
**Collect Date:** 05/08/2012 10:01 **Dilution:** 10 **File ID:** SC120521001.059
**Sample Tag:** DL01 **Units:** mg/L

| Analyte | CAS # | Result | Qual | RL | MDL |
|---|---|---|---|---|---|
| Sulfate | 14808-79-8 | 226 | | 50.0 | 25.0 |

**Sample #:** L12050284-03 **PrePrep Method:** N/A **Instrument:** SMARTCHEM
**Client ID:** PZ-07-050812 **Prep Method:** 375.4 **Prep Date:** N/A
**Matrix:** Water **Analytical Method:** 375.4 **Cal Date:** 05/21/2012 09:22
**Workgroup #:** WG398374 **Analyst:** DIH **Run Date:** 05/21/2012 09:53
**Collect Date:** 05/08/2012 10:10 **Dilution:** 10 **File ID:** SC120521001.060
**Sample Tag:** DL01 **Units:** mg/L

| Analyte | CAS # | Result | Qual | RL | MDL |
|---|---|---|---|---|---|
| Sulfate | 14808-79-8 | 276 | | 50.0 | 25.0 |

**Sample #:** L12050284-05 **PrePrep Method:** N/A **Instrument:** SMARTCHEM
**Client ID:** MW-18-050812 **Prep Method:** 375.4 **Prep Date:** N/A
**Matrix:** Water **Analytical Method:** 375.4 **Cal Date:** 05/21/2012 09:22
**Workgroup #:** WG398374 **Analyst:** DIH **Run Date:** 05/21/2012 09:53
**Collect Date:** 05/08/2012 11:00 **Dilution:** 2 **File ID:** SC120521001.061
**Sample Tag:** DL01 **Units:** mg/L

| Analyte | CAS # | Result | Qual | RL | MDL |
|---|---|---|---|---|---|
| Sulfate | 14808-79-8 | 62.2 | | 10.0 | 5.00 |

**Sample #:** L12050284-07 **PrePrep Method:** N/A **Instrument:** SMARTCHEM
**Client ID:** TW-01-050812 **Prep Method:** 375.4 **Prep Date:** N/A
**Matrix:** Water **Analytical Method:** 375.4 **Cal Date:** 05/21/2012 09:22
**Workgroup #:** WG398374 **Analyst:** DIH **Run Date:** 05/21/2012 09:54
**Collect Date:** 05/08/2012 14:50 **Dilution:** 10 **File ID:** SC120521001.062
**Sample Tag:** DL01 **Units:** mg/L

| Analyte | CAS # | Result | Qual | RL | MDL |
|---|---|---|---|---|---|
| Sulfate | 14808-79-8 | 225 | | 50.0 | 25.0 |

# 2.4.4.2 QC Summary Data

## Example Calculations for Visible Spectrophotometric Methods

**Linear Calibration Model**

**Step 1 - Retrieve Curve Data from ICAL**

m = slope of the linear equation
b = intercept from the linear equation
y = instrument response as absorbance or OD
x = concentration of analyte (mg/L)
y = mx + b

**Step 2: Calculate the instrument concentration, x**

Where:

x = (y - b)/m

**Step 3: Solve for analyte concentration in sample, Cx**

Cx = ( x ) (D)

**Example Calculation (LCS):**

| | | |
|---|---|---|
| Value of m from plot: | 7.809 | |
| Value of b from plot: | 0.0004135 | |
| Absorbance of unknown from quantitation report (y): | 0.31 | |
| Calculated concentration (x): | 0.03964483 | |
| Dilution factor (D): | 1.00 | |
| Concentration of analyte in sample, Cy: | 0.0396 | mg/L |

**SmartChem Autoanalyzer - Quadratic Calibration for Chloride and Sulfate**

**Step 1 - Retrieve Curve Data from Smartchem ICAL**

A, B, C = constants from the ICAL quadratic regression

x = instrument response as absorbance or OD

y = concentration of analyte (mg/L)

**Step 2: Calculate the instrument concentration, y**

Where:

y = Ax^2 + Bx + C

**Step 3: Solve for analyte concentration in sample, Cy**

Cy = ( y ) (D)

**Example Calculation (LCS):**

| | | |
|---|---|---|
| Value of A from plot: | 101.2796 | |
| Value of B from plot: | 318.9056 | |
| Value of C from plot: | -2.2712 | |
| Absorbance of unknown from quantitation report (x): | 0.1583 | |
| Calculated concentration (y): | 50.7495108 | |
| Dilution factor (D): | 1.00 | |
| Concentration of analyte in sample, Cy: | 50.75 | mg/L |

Microbac Laboratories Inc.

Data Checklist

Date: 21-MAY-2012
Analyst: DIH
Analyst: NA
Method: SO4
Instrument: SC
Curve Workgroup: NA
Runlog ID:
Analytical Workgroups: WG398374 WG398375 WG398299

| | |
|---|---|
| Calibration/Linearity | 5/21/2012 |
| Second Source Check | X |
| ICV/CCV (std) | X |
| ICB/CCB | X |
| Blank | X |
| LCS/LCS Dup | X |
| MS/MSD | X |
| Duplicate | X |
| Upload Results | X |
| Client Forms | X |
| QC Violation Sheet | X |
| Case Narratives | X |
| Signed Raw Data | X |
| STD/LCS on benchsheet | X |
| Check for compliance with method and project specific requirements | X |
| Check the completeness of reported information | X |
| Check the information for the report narrative | X |
| Primary Reviewer | DIH |
| Secondary Reviewer | DIH |
| | |
| Comments | |

Primary Reviewer:
21-MAY-2012

Secondary Reviewer:
21-MAY-2012

CHECKLIST1 - Modified 03/05/2008
Generated: MAY-21-2012 15:05:28

Microbac Laboratories Inc.

# HOLDING TIMES
# EQUIVALENT TO AFCEE FORM 9

Analytical Method: 375.4 AAB#: WG398374

Login Number: L12050284

| Client ID | ID | Date Collected | TCLP Date | Time Held | Max Hold | Q | Extract Date | Time Held | Max Hold | Q | Run Date | Time Held | Max Hold | Q |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| BBLD-PIT-SSP-050812 | 01 | 05/08/12 | | | | | | | 28 | | 05/21/12 | 13 | 28 | |
| PZ-07-050812 | 03 | 05/08/12 | | | | | | | 28 | | 05/21/12 | 13 | 28 | |
| MW-18-050812 | 05 | 05/08/12 | | | | | | | 28 | | 05/21/12 | 13 | 28 | |
| TW-01-050812 | 07 | 05/08/12 | | | | | | | 28 | | 05/21/12 | 12.8 | 28 | |

* = SEE PROJECT QAPP REQUIREMENTS

HOLD_TIMES - Modified 03/06/2008
PDF File ID: 2423712
Report generated 05/21/2012 14:55

Microbac Laboratories Inc.

# METHOD BLANK SUMMARY

Login Number: L12050284
Blank File ID: SC120521001.041
Prep Date: 05/21/12 09:41
Analyzed Date: 05/21/12 09:41
Analyst: DIH

Work Group: WG398374
Blank Sample ID: WG398374-01
Instrument ID: SMARTCHEM
Method: 375.4

This Method Blank Applies To The Following Samples:

| Client ID | Lab Sample ID | Lab File ID | Time Analyzed | TAG |
|---|---|---|---|---|
| LCS | WG398374-02 | SC120521001.042 | 05/21/12 09:42 | 01 |
| LCS2 | WG398374-03 | SC120521001.044 | 05/21/12 09:43 | 01 |
| BBLD-PIT-SSP-050812 | L12050284-01 | SC120521001.059 | 05/21/12 09:52 | DL01 |
| PZ-07-050812 | L12050284-03 | SC120521001.060 | 05/21/12 09:53 | DL01 |
| MW-18-050812 | L12050284-05 | SC120521001.061 | 05/21/12 09:53 | DL01 |
| TW-01-050812 | L12050284-07 | SC120521001.062 | 05/21/12 09:54 | DL01 |
| DUP | WG398374-05 | SC120521001.070 | 05/21/12 09:59 | DL01 |

Report Name: BLANK_SUMMARY
PDF File ID: 2423714
Report generated 05/21/2012 14:55

Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number: L12050284 Prep Date: 05/21/12 09:41 Sample ID: WG398374-01
Instrument ID: SMARTCHEM Run Date: 05/21/12 09:41 Prep Method: 375.4
File ID: SC120521001.041 Analyst: DIH Method: 375.4
Workgroup (AAB#): WG398374 Matrix: Water Units: mg/L
Contract #: Cal ID: SMARTC-21-MAY-12

| Analytes | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| Sulfate | 2.50 | 5.00 | 2.50 | 1 | U |

MDL Method Detection Limit
RL Reporting/Practical Quantitation Limit
ND Analyte Not detected at or above reporting limit
* |Analyte concentration| > RL

Report Name:BLANK
PDF ID: 2423715
21-MAY-2012 14:55

**Microbac Laboratories Inc.**
**LABORATORY CONTROL SAMPLE (LCS)**

**Login Number:** L12050284 **Analyst:** DIH **Prep Method:** 375.4
**Instrument ID:** SMARTCHEM **Matrix:** Water **Method:** 375.4
**Workgroup (AAB#):** WG398374 **Units:** mg/L
**QC Key:** WATERLOO **Lot #:** STD51193

**Sample ID:** WG398374-02 LCS **File ID:** SC120521001.042 **Run Date:** 05/21/2012 09:42
**Sample ID:** WG398374-03 LCS2 **File ID:** SC120521001.044 **Run Date:** 05/21/2012 09:43

| Analytes | LCS | | | LCS2 | | | %RPD | %Rec Limits | RPD Lmt | Q |
|---|---|---|---|---|---|---|---|---|---|---|
| | Known | Found | % REC | Known | Found | % REC | | | | |
| Sulfate | 20.0 | 19.9 | 99.3 | 20.0 | 20.8 | 104 | 4.37 | 85 - 115 | 10 | |

LCS_LCS2 - Modified 03/06/2008
PDF File ID: 2423716
Report generated: 05/21/2012 14:55

# 2.4.4.3 Raw Data

WORKGROUP: WG398299

398374
398375

# SMARTCHEM RUN LOG

**Daily Check**

- [x] Lamp On
- [x] Probe Rinse Full
- [x] DI Water > ½ Full
- [x] Wash Solution > ½ Full
- [ ] NO3 Reagent bottle connected / purged
- [ ] NO3 pH adj to pH 5-9

Syringe filter lot # 134351

- [x] WBL Run
- [x] Reagents Full
- [x] Dilution $H_2O$ Full
- [x] Waste Container Check

1) **Workgroup** _____
**Plan #** 20120521001
2) **Workgroup** _____
**Plan #** _____
3) **Workgroup** _____
**Plan #** _____

| | Analyte | 1 | 2 | 3 |
|---|---|---|---|---|
| | | SO4 | | |
| | | Dilution | | |
| SC Prepared Curve | | | | |
| Position | | | | |
| 1-1 | ICV 30 | | | |
| 1-2 | BLK | | | |
| 1-3 | LCS 20 | | | |
| 1-4 | LCSDUP | | | |
| 1-5 | 05-340-01 | 1/5 | 1/10 | 1/5 |
| 1-6 | 02 | 1/5 | | 1/5 |
| 1-7 | 04 | 1/4 | 1/10 | 1/4 |
| 1-8 | 05 | | | |
| 1-9 | 07 | | | |
| 1-10 | 08 | 1/4 | | 1/4 |
| 1-11 | 09 | 1/4 | | 1/3 |
| 1-12 | 05-342-01 | | 1/2 | 1/2 |
| 1-13 | 03 | | | |
| 1-14 | 05 | | 1/2 | 1/2 |
| 1-15 | 07 | | | 1/2 |
| 1-16 | 09 | | | 1/2 |
| 1-17 | 11 | | | 1/4 |
| 1-18 | 05-362-01 | | | |
| 1-19 | 03 | | | |
| 1-20 | 04 | | | |
| 1-21 | 05 | | | 1/2 |
| 1-22 | 07 | | | 1/3 |
| 2-1 | 08 | | | |
| 2-2 | 12 | | | |
| 2-3 | DUP 12 | | | |

| Position | Analyte | 1 | 2 | 3 |
|---|---|---|---|---|
| 2-4 | MS 12 | | | |
| 2-5 | BLK | | | |
| 2-6 | LCS20 | | | |
| 2-7 | LCSDUP | | | |
| 2-8 | 05-362-14 | | | |
| 2-9 | 22 | | | |
| 2-10 | 05-382-01 | | | |
| 2-11 | 05-383-01 | | | |
| 2-12 | 05-386-01 | | | |
| 2-13 | 03 | | | |
| 2-14 | 05 | 1/25 | | 1/25 |
| 2-15 | 06 | 1/2 | | 1/5 |
| 2-16 | 08 | | | |
| 2-17 | 09 | | | |
| 2-18 | 10 | | | |
| 2-19 | 05-284-01 | 1/10 | | 1/10 |
| 2-20 | 03 | 1/10 | | 1/10 |
| 2-21 | 05 | 1/4 | | 1/2 |
| 2-22 | 07 | 1/20 | | 1/10 |
| 2-23 | 05-498-02 | 1/500 | | color |
| 2-24 | 06 | 1/100 | | ✓ |
| 2-25 | 05-317-01 | 1/50 | | |
| 2-26 | 03 | 1/50 | | |
| 3-1 | 05 | 1/10 | | |
| 3-2 | DUP 05 | 1/10 | | |

NOTES:
* Run NO2 std on NO3 runs
* LCS/LCS Dup all parameters
*MS(10% sample): NO3, TKN, NH3

DCN#90909

WORKGROUP: WG398299

# SMARTCHEM RUN LOG

| Position | Analyte | 1 | 2 | 3 |
|---|---|---|---|---|
| 3-3 | MS 05 | 1/10 | | |
| 3-4 | BIK | | | |
| 3-5 | LCS | | | |
| 3-6 | LCSDUP | | | |
| 3-7 | 05-317-07 | 1/25 | | |
| 3-8 | 09 | 1/10 | | 1/5 |
| 3-9 | 11 | 1/4 | | 1/25 |
| 3-10 | 13 | 1/25 | 1/50 colors | |
| 3-11 | 05-428-04 | 1/10 | | 1/5 |
| 3-12 | 02 | 1/10 | | |
| 3-13 | DUP02 | 1/10 | | |
| 3-14 | MS03 | 1/10 | | |
| 3-15 | MSd04 | 1/10 | | |

| Position | Analyte | 1 | 2 | 3 |
|---|---|---|---|---|
| 3-16 | 05-428-05 | 1/10 | | |
| 3-17 | 06 | 1/5 | | 1/10 |
| 3-18 | 08 | 1/10 | | |
| 3-19 | 09 | 1/5 | | 1/25 |
| 3-20 | 05-429-01 | | | 1/3 |
| 3-21 | 05-500-03 | | | |
| 3-22 | | | | |
| 3-23 | | | | |
| 3-24 | | | | |
| 3-25 | | | | |
| 3-26 | | | | |
| 3-27 | | | | |
| 3-28 | | | | |

- [ ] Chloride — EPA 325.2/SM 4500-Cl⁻ E
- [ ] Sulfate — EPA 375.4/SM 426C(15th)
- [ ] Alkalinity — EPA 310.2
- [ ] Nitrate-Nitrite — EPA 353.2/SM 4500-NO3 F
- [ ] Ammonia — EPA 350.1/SM 4500-NH3 B
- [ ] TKN — EPA 351.2
- [ ] Phos — EPA 365.4

| Analyte | 504 | | Reagents |
|---|---|---|---|
| SOP & Revision | K 3754 R16 | | Rot 16922 |
| Curve Stock (SC made) | std 50590 | | Rot 17164 |
| Curve ID (user made) | | | |
| ICV | std 51813 | | |
| CCV | std 51812 | | |
| LCS | std 51813 | | |
| MS | std 49132 dw<br>Dilution 0.1/10 (100c) = 10 | | |

Comments: _____

Analyst: Joanne Gleason Date: 5/21/12

DCN#90909

# MICROBAC (OVD)

SMARTCHEM REPORT (VER3.0.53)

NH3, TKN, NO3NO2 (MG/L N)

ALK (MG/L CaCO3) CL, SO4 (MG/L)

Method : WSO4 - EPA 375.4/SM 426 C (15TH)

| Smp#/[Dil Fact] | Sample ID | Conc | OD | %Recovery/RPD | Flag | Analysis Time |
|---|---|---|---|---|---|---|
| DIL-1 | RBL | 0.00 | -0.0037 | 0.00 | R | 9:16:11 AM |
| DIL-1 | RBL | 0.00 | -0.0056 | 0.00 | R | 9:16:29 AM |
| DIL-1 | RBL | 0.00 | -0.0010 | 0.00 | R | 9:17:23 AM |
| DIL-1 | Std-1 | 0.00 | 0.0029 | 0.00 | | 9:17:41 AM |
| SR5-1 | Std-2 | 5.00 | 0.0263 | 0.00 | | 9:18:35 AM |
| SR5-2 | Std-3 | 10.00 | 0.0595 | 0.00 | | 9:18:53 AM |
| SR5-3 | Std-4 | 15.00 | 0.0925 | 0.00 | | 9:19:47 AM |
| SR5-4 | Std-5 | 20.00 | 0.1133 | 0.00 | | 9:20:05 AM |
| SR5-5 | Std-6 | 25.00 | 0.1386 | 0.00 | | 9:20:59 AM |
| SR5-6 | Std-7 | 30.00 | 0.1589 | 0.00 | | 9:21:17 AM |
| SR5-7 | Std-8 | 35.00 | 0.1737 | 0.00 | | 9:22:11 AM |
| 1 | ICV 30 | 28.66 | 0.1516 | 0.00 | | 9:22:29 AM |
| 2 | WG398299-01 BLK | 1.14 | 0.0054 | 0.00 | | 9:23:23 AM |
| 3 | WG398299-02 LCS | 21.30 | 0.1199 | 0.00 | | 9:23:41 AM |
| 4 | WG398299-03 LCSDUP | 21.28 | 0.1198 | 0.00 | | 9:24:35 AM |
| R-3 | CCV (30 mg/L) | 29.74 | 0.1560 | 99.14 | | 9:24:53 AM |
| 5 | L12050340-01 (5) | 25.74 | 0.1394 | 0.00 | | 9:25:47 AM |
| 6 | L12050340-02 (5) | 27.62 | 0.1473 | 0.00 | | 9:26:05 AM |
| 7 | L12050340-04 (4) | 24.22 | 0.1329 | 0.00 | | 9:26:59 AM |
| 8 | L12050340-05 | 0.58 | 0.0011 | 0.00 | >< | 9:27:17 AM |
| R-3 | CCV (30 mg/L) | 28.51 | 0.1510 | 95.04 | | 9:28:11 AM |
| 9 | L12050340-07 | 23.54 | 0.1299 | 0.00 | | 9:28:29 AM |
| 10 | L12050340-08 (4) | 31.98 | 0.1649 | 0.00 | | 9:29:23 AM |
| 11 | L12050340-09 (3) | 36.15X | 0.1809 | 0.00 | ><,LH | 9:29:41 AM |
| 12 | L12050342-01 (2) | 31.72 | 0.1639 | 0.00 | | 9:30:35 AM |
| R-3 | CCV (30 mg/L) | 31.19 | 0.1618 | 103.97 | | 9:30:53 AM |
| 13 | L12050342-03 | 39.71X | 0.1940 | 0.00 | ><,LH | 9:31:47 AM |
| 14 | L12050342-05 (2) | 31.14 | 0.1616 | 0.00 | | 9:32:05 AM |
| 15 | L12050342-07 (2) | 24.04 | 0.1321 | 0.00 | | 9:32:59 AM |
| 16 | L12050342-09 (2) | 34.95 | 0.1764 | 0.00 | >< | 9:33:17 AM |
| R-3 | CCV (30 mg/L) | 30.11 | 0.1575 | 100.38 | | 9:34:11 AM |
| 17 | L12050342-11 (4) | 19.82 | 0.1131 | 0.00 | | 9:34:29 AM |

**Report Date :05/21/2012** **Run Date :5/21/2012** **Operator : WESTCO** **Plan # :20120521001**

**Plan Description : SO4-A-DIH/5/21/2012**

# MICROBAC (OVD)

SMARTCHEM REPORT (VER3.0.53)

NH3, TKN, NO3NO2 (MG/L N)

ALK (MG/L CaCO3) CL, SO4 (MG/L)

Method : WSO4 - EPA 375.4/SM 426 C (15TH)

| Smp#/[Dil Fact] | Sample ID | Conc | OD | %Recovery/RPD | Flag | Analysis Time |
|---|---|---|---|---|---|---|
| 18 | L12050362-01 | 3.41 | 0.0218 | 0.00 | | 9:35:23 AM |
| 19 | L12050362-03 | 8.35 | 0.0533 | 0.00 | | 9:35:41 AM |
| 20 | L12050362-04 | 3.37 | 0.0215 | 0.00 | | 9:36:35 AM |
| R-3 | CCV (30 mg/L) | 31.07 | 0.1613 | 103.55 | | 9:36:53 AM |
| 21 | L12050362-05 (2) | 23.65 | 0.1304 | 0.00 | | 9:37:47 AM |
| 22 | L12050362-07 (3) | 31.60 | 0.1634 | 0.00 | | 9:38:05 AM |
| 23 | L12050362-08 | 32.90 | 0.1685 | 0.00 | | 9:38:59 AM |
| 24 | L12050362-12 | 0.97 | 0.0041 | 0.00 | | 9:39:17 AM |
| R-3 | CCV (30 mg/L) | 29.69 | 0.1558 | 98.97 | | 9:40:12 AM |
| 25 | WG398299-05 DUP | 1.01 | 0.0044 | 0.00 | | 9:40:30 AM |
| 26 | WG398299-06 MS | 10.77 | 0.0672 | 0.00 | | 9:41:24 AM |
| 27 | WG398374-01 BLK | 0.97 | 0.0041 | 0.00 | | 9:41:42 AM |
| 28 | WG398374-02 LCS | 19.86 | 0.1133 | 0.00 | | 9:42:36 AM |
| R-3 | CCV (30 mg/L) | 30.61 | 0.1595 | 102.04 | | 9:42:54 AM |
| 29 | WG398374-03 LCSDUP | 20.75 | 0.1174 | 0.00 | | 9:43:48 AM |
| 30 | L12050362-14 (5) | 2.09 | 0.0124 | 0.00 | | 9:44:06 AM |
| 31 | L12050362-22 (10) | 3.89 | 0.0251 | 0.00 | | 9:45:00 AM |
| 32 | L12050382-01 (15) | 20.56 | 0.1165 | 0.00 | | 9:45:18 AM |
| R-3 | CCV (30 mg/L) | 30.44 | 0.1588 | 101.46 | | 9:46:12 AM |
| 33 | L12050383-01 (15) | 19.76 | 0.1128 | 0.00 | | 9:46:30 AM |
| 34 | L12050386-01 | 41.35 | 0.1999 | 0.00 | ><,LH | 9:47:24 AM |
| 35 | L12050386-03 | 33.80 | 0.1720 | 0.00 | | 9:47:42 AM |
| 36 | L12050386-05 (25) | 21.32 | 0.1200 | 0.00 | | 9:48:36 AM |
| R-3 | CCV (30 mg/L) | 30.26 | 0.1581 | 100.88 | | 9:48:54 AM |
| 37 | L12050386-06 (5) | 27.28 | 0.1459 | 0.00 | | 9:49:48 AM |
| 38 | L12050386-08 | 34.38 | 0.1742 | 0.00 | >< | 9:50:06 AM |
| 39 | L12050386-09 | 37.71 | 0.1867 | 0.00 | ><,LH | 9:51:00 AM |
| 40 | L12050386-10 | 28.71 | 0.1518 | 0.00 | | 9:51:18 AM |
| R-3 | CCV (30 mg/L) | 29.64 | 0.1556 | 98.81 | | 9:52:12 AM |
| 41 | L12050284-01 (10) | 22.61 | 0.1258 | 0.00 | | 9:52:30 AM |
| 42 | L12050284-03 (10) | 27.62 | 0.1473 | 0.00 | | 9:53:24 AM |
| 43 | L12050284-05 (2) | 31.09 | 0.1614 | 0.00 | | 9:53:42 AM |

**Report Date :05/21/2012** **Run Date :5/21/2012** **Operator : WESTCO** **Plan # :20120521001**

**Plan Description : SO4-A-DIH/5/21/2012**

# MICROBAC (OVD)

SMARTCHEM REPORT (VER3.0.53)

NH3, TKN, NO3NO2 (MG/L N)

ALK (MG/L CaCO3) CL, SO4 (MG/L)

Method : WSO4 - EPA 375.4/SM 426 C (15TH)

| Smp#/[Dil Fact] | Sample ID | Conc | OD | %Recovery/RPD | Flag | Analysis Time |
|---|---|---|---|---|---|---|
| 44 | L12050284-07 (10) | 22.45 | 0.1251 | 0.00 | | 9:54:36 AM |
| R-3 | CCV (30 mg/L) | 30.99 | 0.1610 | 103.30 | | 9:54:54 AM |
| 45 | L12050498-02 (500) | 25.88 | 0.1400 | 0.00 | | 9:55:48 AM |
| 46 | L12050498-06 (100) | 6.49 | 0.0420 | 0.00 | | 9:56:06 AM |
| 47 | L12050317-01 (50) | 29.94 | 0.1568 | 0.00 | | 9:57:00 AM |
| 48 | L12050317-03 (50) | 33.96 | 0.1726 | 0.00 | | 9:57:18 AM |
| R-3 | CCV (30 mg/L) | 29.40 | 0.1546 | 97.99 | | 9:58:12 AM |
| 49 | L12050317-05 (10) | 32.08 | 0.1653 | 0.00 | | 9:58:30 AM |
| 50 | WG398374-05 (10) DUP | 32.64 | 0.1675 | 0.00 | | 9:59:24 AM |
| 51 | WG398374-06 (10) MS | 32.87 | 0.1684 | 0.00 | | 9:59:42 AM |
| 52 | WG398375-01 BLK | 1.12 | 0.0052 | 0.00 | | 10:00:36 AM |
| R-3 | CCV (30 mg/L) | 29.22 | 0.1539 | 97.41 | | 10:00:54 AM |
| 53 | WG398375-02 LCS | 20.36 | 0.1156 | 0.00 | | 10:01:48 AM |
| 54 | WG398375-03 LCSDUP | 22.05 | 0.1233 | 0.00 | | 10:02:06 AM |
| 55 | L12050317-07 (25) | 24.48 | 0.1340 | 0.00 | | 10:03:00 AM |
| 56 | L12050317-09 (5) | 32.79 | 0.1681 | 0.00 | | 10:03:18 AM |
| R-3 | CCV (30 mg/L) | 28.10 | 0.1493 | 93.66 | | 10:04:13 AM |
| 57 | L12050317-11 (25) | 22.21 | 0.1240 | 0.00 | | 10:04:30 AM |
| 58 | L12050317-13 (50) | 16.59 | 0.0976 | 0.00 | | 10:05:25 AM |
| 59 | L12050428-01 (5) | 29.22 | 0.1539 | 0.00 | | 10:05:43 AM |
| 60 | L12050428-02 (10) | 26.11 | 0.1410 | 0.00 | | 10:06:37 AM |
| R-3 | CCV (30 mg/L) | 30.06 | 0.1573 | 100.21 | | 10:06:55 AM |
| 61 | WG398375-05 (10) DUP | 29.92 | 0.1567 | 0.00 | | 10:07:49 AM |
| 62 | L12050428-03 (10) MS | 30.01 | 0.1571 | 0.00 | | 10:08:07 AM |
| 63 | L12050428-04 (10) MS | 29.15 | 0.1536 | 0.00 | | 10:09:01 AM |
| 64 | L12050428-05 (10) | 32.23 | 0.1659 | 0.00 | | 10:09:19 AM |
| R-3 | CCV (30 mg/L) | 29.12 | 0.1535 | 97.08 | | 10:10:13 AM |
| 65 | L12050428-06 (10) | 24.73 | 0.1351 | 0.00 | | 10:10:31 AM |
| 66 | L12050428-08 (10) | 25.27 | 0.1374 | 0.00 | | 10:11:25 AM |
| 67 | L12050428-09 (25) | 23.88 | 0.1314 | 0.00 | | 10:11:43 AM |
| 68 | L12050429-01 (3) | 27.86 | 0.1483 | 0.00 | | 10:12:37 AM |
| R-3 | CCV (30 mg/L) | 30.56 | 0.1593 | 101.88 | | 10:12:55 AM |

**Report Date :05/21/2012** **Run Date :5/21/2012** **Operator : WESTCO** **Plan # :20120521001**

**Plan Description : SO4-A-DIH/5/21/2012**

# MICROBAC (OVD)

SMARTCHEM REPORT (VER3.0.53)

NH3, TKN, NO3NO2 (MG/L N)

ALK (MG/L CaCO3) CL, SO4 (MG/L)

Method : WSO4 - EPA 375.4/SM 426 C (15TH)

| Smp#/[Dil Fact] | Sample ID | Conc | OD | %Recovery/RPD | Flag | Analysis Time |
|---|---|---|---|---|---|---|
| 69 | L12050500-03 | 37.17 | 0.1847 | 0.00 | ><,LH | 10:13:49 AM |
| 70 | ID 70 | 1.45 | 0.0077 | 0.00 | | 10:14:07 AM |
| 71 | ID 71 | 1.22 | 0.0060 | 0.00 | | 10:15:01 AM |
| 72 | ID 72 | 0.71 | 0.0021 | 0.00 | >< | 10:15:19 AM |
| R-3 | CCV (30 mg/L) | 31.12 | 0.1615 | 103.72 | | 10:16:13 AM |
| 11-[1/2] | L12050340-09 (3) | 37.68 | 0.1085 | 0.00 | LH | 10:24:11 AM |
| 13-[1/2] | L12050342-03 | 38.45 | 0.1103 | 0.00 | LH | 10:25:23 AM |
| 34-[1/2] | L12050386-01 | 42.38 | 0.1194 | 0.00 | LH | 10:26:35 AM |
| 39-[1/2] | L12050386-09 | 35.22 | 0.1026 | 0.00 | LH | 10:27:47 AM |
| R-3 | CCV (30 mg/L) | 30.41 | 0.1587 | 101.38 | | 10:27:47 AM |
| 69-[1/2] | L12050500-03 | 35.55 | 0.1034 | 0.00 | LH | 10:29:17 AM |
| R-3 | CCV (30 mg/L) | 30.11 | 0.1575 | 100.38 | | 10:29:17 AM |

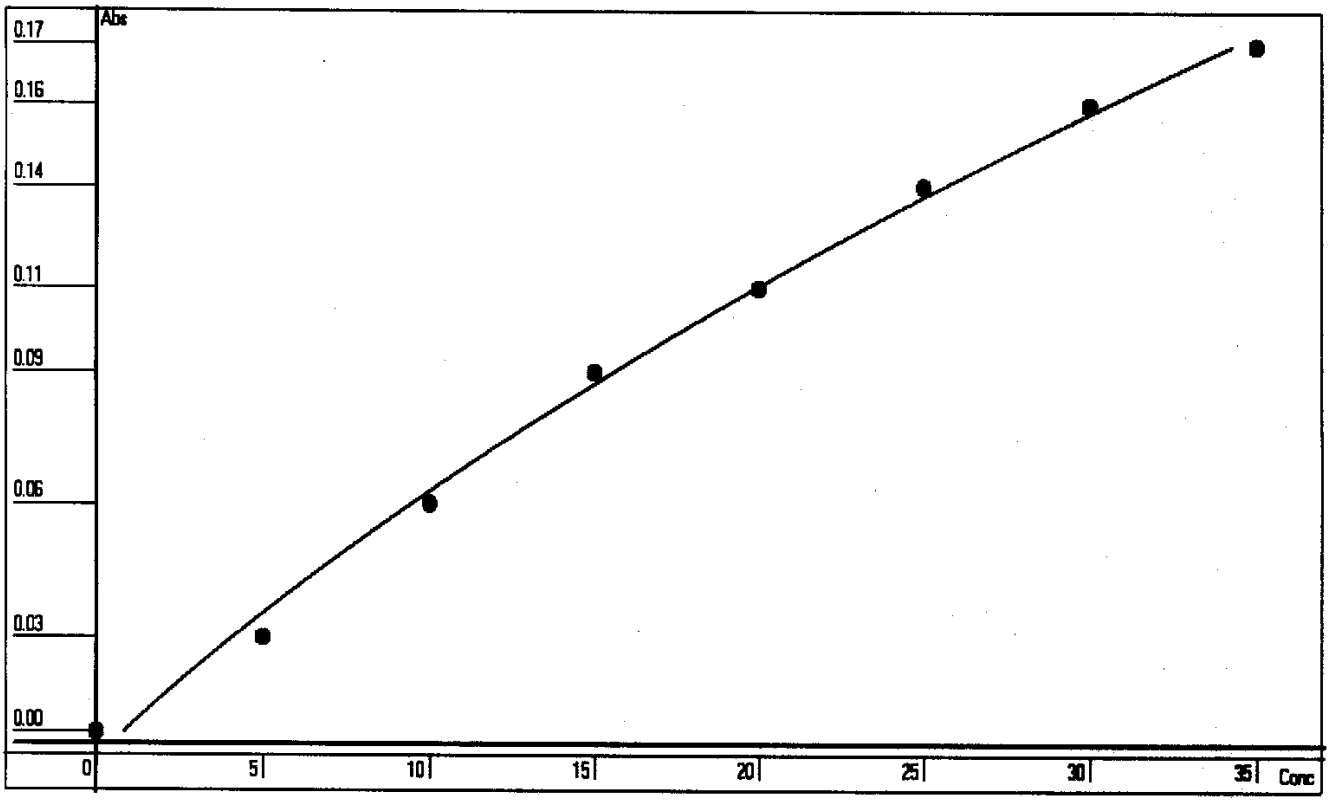
**Report Date :05/21/2012** **Run Date :5/21/2012** **Operator : WESTCO** **Plan # :20120521001**

**Plan Description : SO4-A-DIH/5/21/2012**

# Calibrant Report - WSO4 -

**Calib Lot #:010104 Exp Date:6/17/2020 User:MICROBAC**

**Plan # : 20120521001 Description : [SO4-A-DIH/5/21/2012]**




| Point | OD | Conc | Recalc Conc | % Error |
|---|---|---|---|---|
| 1 | 0.0029 | 0 | 0.8205 | 82.05 |
| 2 | 0.0263 | 5 | 4.0782 | -18.44 |
| 3 | 0.0595 | 10 | 9.4213 | -5.79 |
| 4 | 0.0925 | 15 | 15.5704 | 3.80 |
| 5 | 0.1133 | 20 | 19.8756 | -0.62 |
| 6 | 0.1386 | 25 | 25.5597 | 2.24 |
| 7 | 0.1589 | 30 | 30.4757 | 1.59 |
| 8 | 0.1737 | 35 | 34.2590 | -2.12 |

**Conc= +383.6919*Abso^2 +128.016*Abso +0.446 $R^2$=0.9968**

| RBL |
|---|
| -0.0047 |
| 0 |

**Report Date 5/21/2012 Run Date 5/21/2012**

# 2.4.5 Total Organic Carbon Data

# 2.4.5.1 Summary Data

**Login Number:** L12050284
**Department**: Conventionals
**Analyst:** Deanna Hesson

**METHOD**

**Analysis** Water: EPA 415.1/SM5310C/SW846 9060 (Total Organic Carbon)
Soil: Lloyd-Khan Methodology

**HOLDING TIMES**

**Sample Analysis:** All holding times were met.

**PREPARATION**

Sample preparation proceeded normally.

**BATCH QA/QC**

**Method Blank:** All acceptance criteria were met.

**Laboratory Control Sample:** All acceptance criteria were met.

**Duplicates:** All acceptance criteria were met.

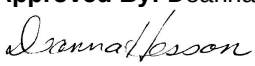
**Matrix Spikes:** All acceptance criteria were met.

**SAMPLES**

**Samples:** All acceptance criteria were met.

I certify that this data package is in compliance with the terms and conditions agreed to by the client and Microbac Laboratories Inc., both technically and for completeness, except for the conditions noted above. Release of the data contained in this hard copy data package has been authorized by the Laboratory Manager or designated person, as verified by the following signature.

**Narrative ID:** 46947
**Approved By:** Deanna Hesson



# Certificate of Analysis

**Sample #:** L12050284-01 **PrePrep Method:** N/A **Instrument:** TOC-VWP
**Client ID:** BBLD-PIT-SSP-050812 **Prep Method:** 415.1 **Prep Date:** N/A
**Matrix:** Water **Analytical Method:** 415.1 **Cal Date:** 12/06/2011 09:40
**Workgroup #:** WG398010 **Analyst:** DIH **Run Date:** 05/16/2012 02:11
**Collect Date:** 05/08/2012 10:01 **Dilution:** 25 **File ID:** TC05152012.048
**Sample Tag:** DL01 **Units:** mg/L

| Analyte | CAS # | Result | Qual | RL | MDL |
|---|---|---|---|---|---|
| Total Organic Carbon | | 431 | | 25.0 | 12.5 |

**Sample #:** L12050284-03 **PrePrep Method:** N/A **Instrument:** TOC-VWP
**Client ID:** PZ-07-050812 **Prep Method:** 415.1 **Prep Date:** N/A
**Matrix:** Water **Analytical Method:** 415.1 **Cal Date:** 12/06/2011 09:40
**Workgroup #:** WG398501 **Analyst:** JBK **Run Date:** 05/18/2012 18:11
**Collect Date:** 05/08/2012 10:10 **Dilution:** 1 **File ID:** TC05182012.009
**Sample Tag:** 01 **Units:** mg/L

| Analyte | CAS # | Result | Qual | RL | MDL |
|---|---|---|---|---|---|
| Total Organic Carbon | | 4.06 | | 1.00 | 0.500 |

**Sample #:** L12050284-05 **PrePrep Method:** N/A **Instrument:** TOC-VWP
**Client ID:** MW-18-050812 **Prep Method:** 415.1 **Prep Date:** N/A
**Matrix:** Water **Analytical Method:** 415.1 **Cal Date:** 12/06/2011 09:40
**Workgroup #:** WG398010 **Analyst:** DIH **Run Date:** 05/16/2012 02:56
**Collect Date:** 05/08/2012 11:00 **Dilution:** 1 **File ID:** TC05152012.052
**Sample Tag:** 01 **Units:** mg/L

| Analyte | CAS # | Result | Qual | RL | MDL |
|---|---|---|---|---|---|
| Total Organic Carbon | | 2.06 | | 1.00 | 0.500 |

**Sample #:** L12050284-07 **PrePrep Method:** N/A **Instrument:** TOC-VWP
**Client ID:** TW-01-050812 **Prep Method:** 415.1 **Prep Date:** N/A
**Matrix:** Water **Analytical Method:** 415.1 **Cal Date:** 12/06/2011 09:40
**Workgroup #:** WG398010 **Analyst:** DIH **Run Date:** 05/16/2012 03:09
**Collect Date:** 05/08/2012 14:50 **Dilution:** 3 **File ID:** TC05152012.053
**Sample Tag:** DL01 **Units:** mg/L

| Analyte | CAS # | Result | Qual | RL | MDL |
|---|---|---|---|---|---|
| Total Organic Carbon | | 5.62 | | 3.00 | 1.50 |

# 2.4.5.2 QC Summary Data

**Total Organic Carbon Example Calculations**
**(Direct Readout Parameter)**

(Readout)/(dilution) = mg/L

where:

Readout = direct readout from the instrument
dilution = dilution in decimal form (ex. 1/5 dilution = 0.2)

Microbac Laboratories Inc.

Data Checklist

Date: 15-MAY-2012
Analyst: DIH
Analyst: NA
Method: TOC
Instrument: TOC
Curve Workgroup: NA
Runlog ID:
Analytical Workgroups: WG398003 WG398004 WG398010

| | |
|---|---|
| Calibration/Linearity | 12/6/2011 |
| Second Source Check | X |
| ICV/CCV (std) | X |
| ICB/CCB | X |
| Blank | X |
| LCS/LCS Dup | X |
| MS/MSD | X |
| Duplicate | X |
| Upload Results | X |
| Client Forms | X |
| QC Violation Sheet | |
| Case Narratives | X |
| Signed Raw Data | X |
| STD/LCS on benchsheet | X |
| Check for compliance with method and project specific requirements | X |
| Check the completeness of reported information | X |
| Check the information for the report narrative | X |
| Primary Reviewer | DIH |
| Secondary Reviewer | DIH |
| | |
| Comments | |

Primary Reviewer:
18-MAY-2012
Dianna Ibsson

Secondary Reviewer:
18-MAY-2012
Dianna Ibsson

CHECKLIST1 - Modified 03/05/2008
Generated: MAY-18-2012 11:50:41

Microbac Laboratories Inc.

Data Checklist

Date: 18-MAY-2012
Analyst: JBK
Analyst: NA
Method: TOC
Instrument: TOC
Curve Workgroup: NA
Runlog ID:
Analytical Workgroups: WG398501 WG398503

| | |
|---|---|
| Calibration/Linearity | 12/06/2011 |
| Second Source Check | X |
| ICV/CCV (std) | X |
| ICB/CCB | X |
| Blank | X |
| LCS/LCS Dup | X |
| MS/MSD | X |
| Duplicate | X |
| Upload Results | X |
| Client Forms | X |
| QC Violation Sheet | X |
| Case Narratives | |
| Signed Raw Data | X |
| STD/LCS on benchsheet | X |
| Check for compliance with method and project specific requirements | X |
| Check the completeness of reported information | X |
| Check the information for the report narrative | X |
| Primary Reviewer | JBK |
| Secondary Reviewer | DIH |
| | |
| Comments | |

Primary Reviewer:
23-MAY-2012

Secondary Reviewer:
23-MAY-2012

CHECKLIST1 - Modified 03/05/2008
Generated: MAY-23-2012 15:32:52

Microbac Laboratories Inc.

# HOLDING TIMES
# EQUIVALENT TO AFCEE FORM 9

**Analytical Method:** 415.1 **AAB#:** WG398010

**Login Number:** L12050284

| Client ID | ID | Date Collected | TCLP Date | Time Held | Max Hold | Q | Extract Date | Time Held | Max Hold | Q | Run Date | Time Held | Max Hold | Q |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| BBLD-PIT-SSP-050812 | 01 | 05/08/12 | | | | | | | 28 | | 05/16/12 | 7.7 | 28 | |
| MW-18-050812 | 05 | 05/08/12 | | | | | | | 28 | | 05/16/12 | 7.7 | 28 | |
| TW-01-050812 | 07 | 05/08/12 | | | | | | | 28 | | 05/16/12 | 7.5 | 28 | |

* = SEE PROJECT QAPP REQUIREMENTS

HOLD_TIMES - Modified 03/06/2008
PDF File ID: 2419241
Report generated 05/23/2012 15:14

Microbac Laboratories Inc.

# HOLDING TIMES
# EQUIVALENT TO AFCEE FORM 9

**Analytical Method:** 415.1 **AAB#:** WG398501

**Login Number:** L12050284

| Client ID | ID | Date Collected | TCLP Date | Time Held | Max Hold | Q | Extract Date | Time Held | Max Hold | Q | Run Date | Time Held | Max Hold | Q |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PZ-07-050812 | 03 | 05/08/12 | | | | | | | 28 | | 05/18/12 | 10.3 | 28 | |

*** = SEE PROJECT QAPP REQUIREMENTS**

HOLD_TIMES - Modified 03/06/2008
PDF File ID: 2419241
Report generated 05/23/2012 15:14

Microbac Laboratories Inc.

## METHOD BLANK SUMMARY

| | | | |
|---|---|---|---|
| Login Number: | L12050284 | Work Group: | WG398010 |
| Blank File ID: | TC05152012.044 | Blank Sample ID: | WG398010-01 |
| Prep Date: | 05/16/12 01:21 | Instrument ID: | TOC-VWP |
| Analyzed Date: | 05/16/12 01:21 | Method: | 415.1 |
| Analyst: | DIH | | |

This Method Blank Applies To The Following Samples:

| Client ID | Lab Sample ID | Lab File ID | Time Analyzed | TAG |
|---|---|---|---|---|
| LCS | WG398010-02 | TC05152012.045 | 05/16/12 01:33 | 01 |
| LCS2 | WG398010-03 | TC05152012.046 | 05/16/12 01:45 | 01 |
| BBLD-PIT-SSP-050812 | L12050284-01 | TC05152012.048 | 05/16/12 02:11 | DL01 |
| MW-18-050812 | L12050284-05 | TC05152012.052 | 05/16/12 02:56 | 01 |
| TW-01-050812 | L12050284-07 | TC05152012.053 | 05/16/12 03:09 | DL01 |
| DUP | WG398010-05 | TC05152012.060 | 05/16/12 04:39 | 01 |

Report Name: BLANK_SUMMARY
PDF File ID: 2419242
Report generated 05/23/2012 15:14

Microbac Laboratories Inc.

## METHOD BLANK SUMMARY

| | | | |
|---|---|---|---|
| Login Number: | L12050284 | Work Group: | WG398501 |
| Blank File ID: | TC05182012.003 | Blank Sample ID: | WG398501-01 |
| Prep Date: | 05/18/12 16:55 | Instrument ID: | TOC-VWP |
| Analyzed Date: | 05/18/12 16:55 | Method: | 415.1 |
| Analyst: | JBK | | |

This Method Blank Applies To The Following Samples:

| Client ID | Lab Sample ID | Lab File ID | Time Analyzed | TAG |
|---|---|---|---|---|
| LCS | WG398501-02 | TC05182012.004 | 05/18/12 17:06 | 01 |
| LCS2 | WG398501-03 | TC05182012.005 | 05/18/12 17:19 | 01 |
| PZ-07-050812 | L12050284-03 | TC05182012.009 | 05/18/12 18:11 | 01 |
| DUP | WG398501-05 | TC05182012.023 | 05/18/12 21:26 | 01 |

Report Name: BLANK_SUMMARY
PDF File ID: 2419242
Report generated 05/23/2012 15:14

Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number: L12050284 Prep Date: 05/16/12 01:21 Sample ID: WG398010-01
Instrument ID: TOC-VWP Run Date: 05/16/12 01:21 Prep Method: 415.1
File ID: TC05152012.044 Analyst: DIH Method: 415.1
Workgroup (AAB#): WG398010 Matrix: Water Units: mg/L
Contract #: Cal ID: TOC-VW-06-DEC-11

| Analytes | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| Total Organic Carbon | 0.500 | 1.00 | 0.500 | 1 | U |

MDL Method Detection Limit
RL Reporting/Practical Quantitation Limit
ND Analyte Not detected at or above reporting limit
* |Analyte concentration| > RL

Report Name:BLANK
PDF ID: 2419243
23-MAY-2012 15:14

Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number: L12050284 Prep Date: 05/18/12 16:55 Sample ID: WG398501-01
Instrument ID: TOC-VWP Run Date: 05/18/12 16:55 Prep Method: 415.1
File ID: TC05182012.003 Analyst: JBK Method: 415.1
Workgroup (AAB#): WG398501 Matrix: Water Units: mg/L
Contract #: Cal ID: TOC-VW-06-DEC-11

| Analytes | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| Total Organic Carbon | 0.500 | 1.00 | 0.500 | 1 | U |

MDL Method Detection Limit
RL Reporting/Practical Quantitation Limit
ND Analyte Not detected at or above reporting limit
* |Analyte concentration| > RL

Report Name:BLANK
PDF ID: 2419243
23-MAY-2012 15:14

**Microbac Laboratories Inc.**
**LABORATORY CONTROL SAMPLE (LCS)**

Login Number: L12050284 Analyst: DIH Prep Method: 415.1
Instrument ID: TOC-VWP Matrix: Water Method: 415.1
Workgroup (AAB#): WG398010 Units: mg/L
QC Key: WATERLOO Lot #: STD50986

Sample ID: WG398010-02 LCS File ID: TC05152012.045 Run Date: 05/16/2012 01:33
Sample ID: WG398010-03 LCS2 File ID: TC05152012.046 Run Date: 05/16/2012 01:45

| Analytes | LCS | | | LCS2 | | | %RPD | %Rec Limits | RPD Lmt | Q |
|---|---|---|---|---|---|---|---|---|---|---|
| | Known | Found | % REC | Known | Found | % REC | | | | |
| Total Organic Carbon | 25.0 | 23.9 | 95.6 | 25.0 | 24.8 | 99.1 | 3.58 | 85 - 115 | 15 | |

LCS_LCS2 - Modified 03/06/2008
PDF File ID: 2419244
Report generated: 05/23/2012 15:14

**Microbac Laboratories Inc.**
**LABORATORY CONTROL SAMPLE (LCS)**

Login Number: L12050284 Analyst: JBK Prep Method: 415.1
Instrument ID: TOC-VWP Matrix: Water Method: 415.1
Workgroup (AAB#): WG398501 Units: mg/L
QC Key: WATERLOO Lot #: STD50986

Sample ID: WG398501-02 LCS File ID: TC05182012.004 Run Date: 05/18/2012 17:06
Sample ID: WG398501-03 LCS2 File ID: TC05182012.005 Run Date: 05/18/2012 17:19

| Analytes | LCS | | | LCS2 | | | %RPD | %Rec Limits | RPD Lmt | Q |
|---|---|---|---|---|---|---|---|---|---|---|
| | Known | Found | % REC | Known | Found | % REC | | | | |
| Total Organic Carbon | 25.0 | 23.8 | 95.1 | 25.0 | 22.4 | 89.6 | 5.98 | 85 - 115 | 15 | |

LCS_LCS2 - Modified 03/06/2008
PDF File ID: 2419244
Report generated: 05/23/2012 15:14

# 2.4.5.3 Raw Data

WG384145

TC/TIC CURVES

# Total Organic Carbon

MAKE DAILY

CCV (TOC): _____ (5/200)(1000) = 25mg/L

LCS (TOC): _____ (5/200)(1000) = 25mg/L

CCV (TIC): _____ (5/200)(1000) = 25mg/L

See Below

MS (TOC): _____

Calibration Curve Date: _____

Reagent: RGT 16590 RGT 16642

☑ SM5310-C : Matrix 2 WG_____

☐ EPA 415.1/9060A(mod): Matrix 1 WG_____ WG_____

SOP: K 4151 Rev. 13

Instrument: Shimadza TOC-VWP/ASI

DAILY CHECK

☑ drain reservoir filled
☑ ASI water bottle full
☑ dilution water bottle full

☑ 3rd bottle full
☑ sufficient gas
☑ sufficient persulfate

☑ sufficient acid
☑ waste container

| Position | Sample ID | Dilution |
|---|---|---|
| 1 | TC Curve | |
| 2 | TIC Curve | |
| 3 | TC ICV | |
| 4 | TIC ICV | |
| 5 | | |
| 6 | | |
| 7 | | |
| 8 | | |
| 9 | | |
| 10 | | |
| 11 | | |
| 12 | | |
| 13 | | |
| 14 | | |
| 15 | | |
| 16 | | |
| 17 | | |
| 18 | | |
| 19 | All points analyzed | |
| 20 | in duplicate | |
| 21 | | |
| 22 | | |
| 23 | | |
| 24 | | |
| 25 | | |

| Position | Sample ID | Dilution |
|---|---|---|
| 26 | TC Curve | |
| 27 | STD47722 | |
| 28 | | |
| 29 | TIC Curve | |
| 30 | STD47189 | |
| 31 | | |
| 32 | | |
| 33 | | |
| 34 | | |
| 35 | | |
| 36 | | |
| 37 | TC ICV | |
| 38 | STD47544 | |
| 39 | | |
| 40 | TIC ICV | |
| 41 | STD47190 | |
| 42 | | |
| 43 | | |
| 44 | | |
| 45 | | |
| 46 | | |
| 47 | | |
| 48 | | |
| 49 | | |
| 50 | | |

| Position | Sample ID | Dilution |
|---|---|---|
| 51 | | |
| 52 | | |
| 53 | See SOP for | |
| 54 | Curve points | |
| 55 | | |
| 56 | | |
| 57 | | |
| 58 | | |
| 59 | | |
| 60 | | |
| 61 | | |
| 62 | | |
| 63 | 5/200(1000) | |
| 64 | = 25 mg/L | |
| 65 | | |
| 66 | | |
| 67 | | |
| 68 | | |
| 69 | | |
| 70 | | |
| 71 | | |
| 72 | | |
| 73 | | |
| 74 | | |
| 75 | | |

Analyst: _____ Date/Time: 12/04/2011

DCN#89227

C:\TOC3201\Data\CURVES-12-06-2011.t32

| | Analyst | Sample Name | Result | Status | Date / Time | Vial |
|---|---|---|---|---|---|---|
| 1 | TC | TC CURVE | | Complet | 12/06/2011 09:46:27 AM | 0, 1, 2, 3, 4, 5 |
| 2 | IC | TIC CURVE | | Complet | 12/06/2011 05:00:56 PM | 0, 6, 7, 8, 9, 10 |
| 3 | TC | TC ICV | ✓ 93.08% TC:23.27mg/L | Complet | 12/06/2011 05:13:38 PM | 11 |
| 4 | IC | TIC ICV | ✓ 104.84% IC:26.21mg/L | Complet | 12/06/2011 05:25:50 PM | 12 |

12/07/2011 08:14:31 AM 1/1

Instr.Information

| | |
|---|---|
| System | TOCVW ASI |
| Detector | Wet Chemical |

Cal. Curve

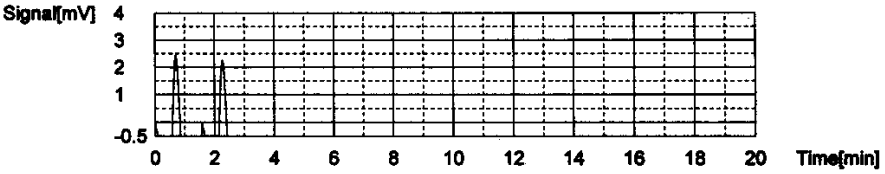
| | |
|---|---|
| Sample Name: | TC CURVE |
| Sample ID: | Untitled |
| Cal. Curve: | TCCURVE-12-06-2011.2011_12_06_08_40_57.cal |
| Status | Completed |

| Type | Anal. |
|---|---|
| Standard | TC |

Conc: 0.000mg/L

| No. | Area | Inj. Vol. | Aut. Dil. | Rem. | Ex. | Date / Time |
|---|---|---|---|---|---|---|
| 1 | 6.123 | 500uL | 1 | ******* | | 12/06/2011 08:44:40 AM |
| 2 | 5.308 | 500uL | 1 | ******* | | 12/06/2011 08:48:33 AM |

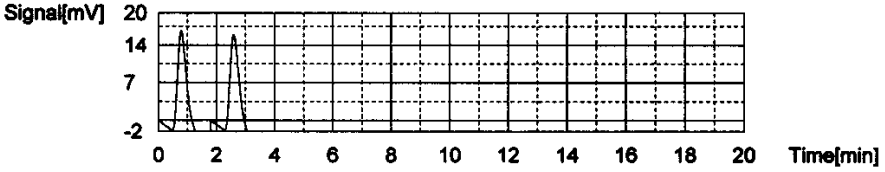
Acid Add. 0.000%
Mean Area 5.716




Conc: 1.000mg/L

| No. | Area | Inj. Vol. | Aut. Dil. | Rem. | Ex. | Date / Time |
|---|---|---|---|---|---|---|
| 1 | 39.77 | 500uL | 1 | ******* | | 12/06/2011 08:54:04 AM |
| 2 | 39.18 | 500uL | 1 | ******* | | 12/06/2011 08:58:10 AM |

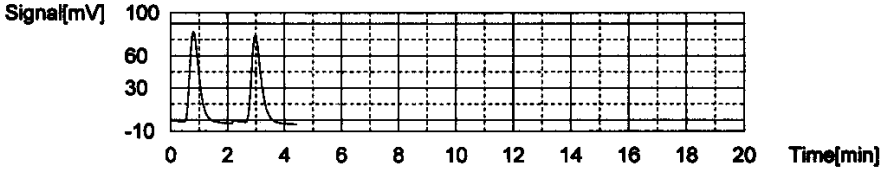
Acid Add. 0.000%
Mean Area 39.48




Conc: 5.000mg/L

| No. | Area | Inj. Vol. | Aut. Dil. | Rem. | Ex. | Date / Time |
|---|---|---|---|---|---|---|
| 1 | 191.7 | 500uL | 1 | ******* | | 12/06/2011 09:04:17 AM |
| 2 | 189.4 | 500uL | 1 | ******* | | 12/06/2011 09:08:49 AM |

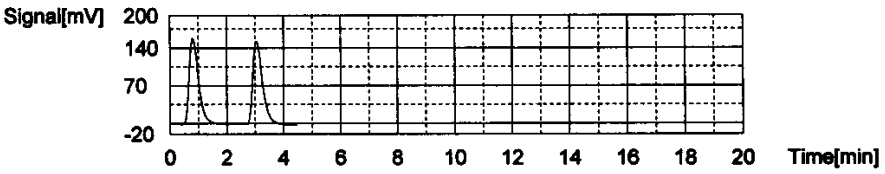
Acid Add. 0.000%
Mean Area 190.6




Conc: 10.00mg/L

| No. | Area | Inj. Vol. | Aut. Dil. | Rem. | Ex. | Date / Time |
|---|---|---|---|---|---|---|
| 1 | 367.0 | 500uL | 1 | ******* | | 12/06/2011 09:15:00 AM |
| 2 | 367.7 | 500uL | 1 | ******* | | 12/06/2011 09:20:26 AM |

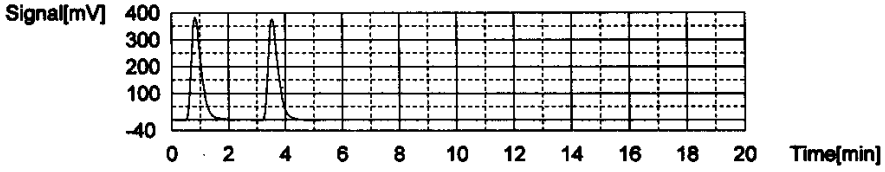
Acid Add. 0.000%
Mean Area 367.4




Conc: 25.00mg/L

| No. | Area | Inj. Vol. | Aut. Dil. | Rem. | Ex. | Date / Time |
|---|---|---|---|---|---|---|
| 1 | 938.7 | 500uL | 1 | ******* | | 12/06/2011 09:27:05 AM |
| 2 | 928.1 | 500uL | 1 | ******* | | 12/06/2011 09:31:51 AM |

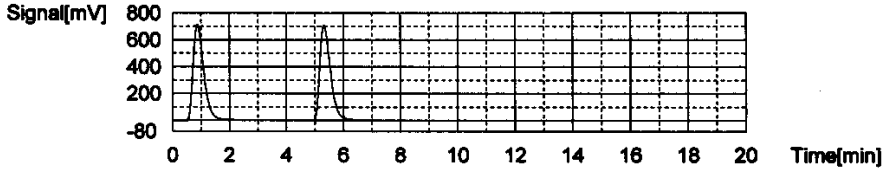
Acid Add. 0.000%
Mean Area 933.4



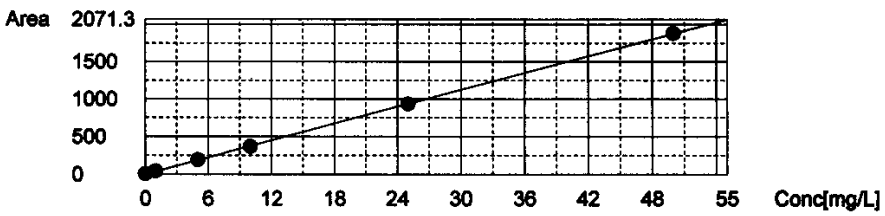

Conc: 50.00mg/L

| No. | Area | Inj. Vol. | Aut. Dil. | Rem. | Ex. | Date / Time |
|---|---|---|---|---|---|---|
| 1 | 1902 | 500uL | 1 | ******* | | 12/06/2011 09:40:15 AM |
| 2 | 1864 | 500uL | 1 | ******* | | 12/06/2011 09:46:27 AM |

Acid Add. 0.000%
Mean Area 1883




Slope: 37.57
Intercept 0.09333
r^2 0.999936 ✓
Zero Shift No




Cal. Curve

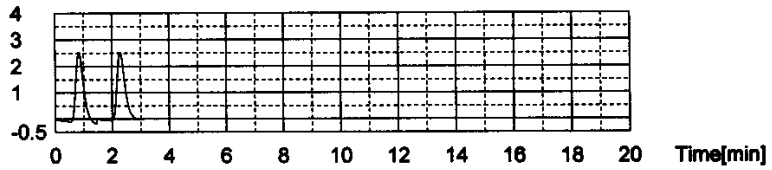
Sample Name: TIC CURVE
Sample ID: Untitled
Cal. Curve: TICCURVE-12-06-2011B.2011_12_06_15_47_44.cal
Status Completed

| Type | Anal. |
|---|---|
| Standard | IC |

Conc: 0.000mg/L

| No. | Area | Inj. Vol. | Aut. Dil. | Rem. | Ex. | Date / Time |
|---|---|---|---|---|---|---|
| 1 | 5.003 | 500uL | 1 | ******* | | 12/06/2011 03:51:39 PM |
| 2 | 4.762 | 500uL | 1 | ******* | | 12/06/2011 03:55:32 PM |

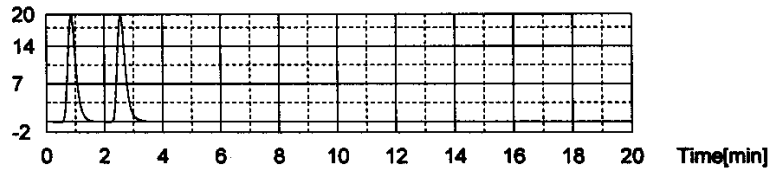
Acid Add. 10.00%
Mean Area 4.883




Conc: 1.000mg/L

| No. | Area | Inj. Vol. | Aut. Dil. | Rem. | Ex. | Date / Time |
|---|---|---|---|---|---|---|
| 1 | 38.88 | 500uL | 1 | ******* | | 12/06/2011 04:02:55 PM |
| 2 | 38.91 | 500uL | 1 | ******* | | 12/06/2011 04:07:20 PM |

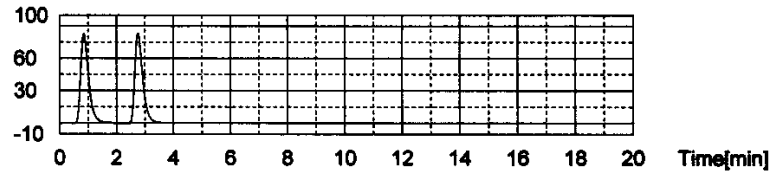
Acid Add. 10.00%
Mean Area 38.90




Conc: 5.000mg/L

| No. | Area | Inj. Vol. | Aut. Dil. | Rem. | Ex. | Date / Time |
|---|---|---|---|---|---|---|
| 1 | 160.3 | 500uL | 1 | ******* | | 12/06/2011 04:15:09 PM |
| 2 | 162.3 | 500uL | 1 | ******* | | 12/06/2011 04:19:53 PM |

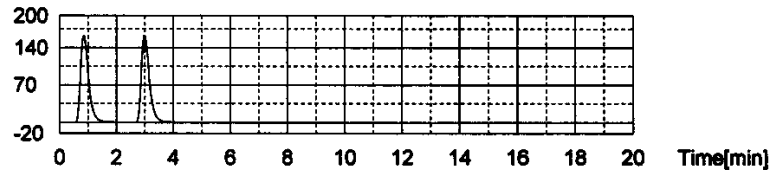
Acid Add. 10.00%
Mean Area 161.3




Conc: 10.00mg/L

| No. | Area | Inj. Vol. | Aut. Dil. | Rem. | Ex. | Date / Time |
|---|---|---|---|---|---|---|
| 1 | 317.9 | 500uL | 1 | ******* | | 12/06/2011 04:28:01 PM |
| 2 | 319.9 | 500uL | 1 | ******* | | 12/06/2011 04:33:00 PM |

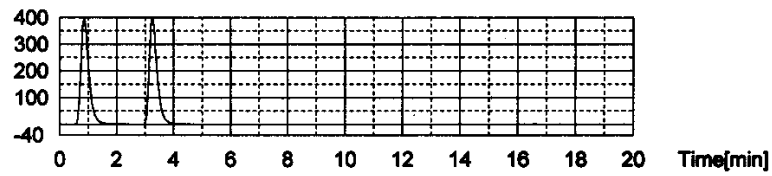
Acid Add. 10.00%
Mean Area 318.9




Conc: 25.00mg/L

| No. | Area | Inj. Vol. | Aut. Dil. | Rem. | Ex. | Date / Time |
|---|---|---|---|---|---|---|
| 1 | 765.1 | 500uL | 1 | ******* | | 12/06/2011 04:41:31 PM |
| 2 | 765.8 | 500uL | 1 | ******* | | 12/06/2011 04:46:44 PM |

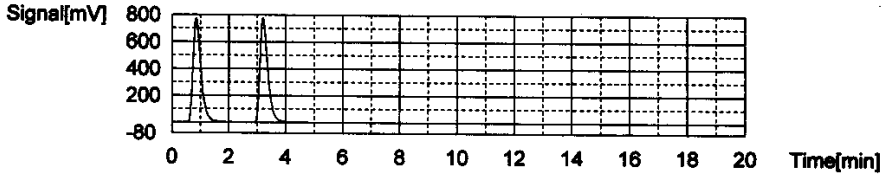
Acid Add. 10.00%
Mean Area 765.5



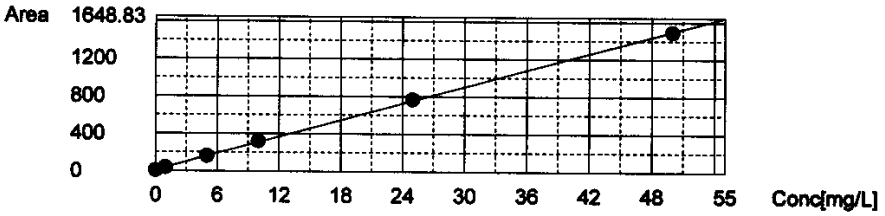
Conc: 50.00mg/L

| No. | Area | Inj. Vol. | Aut. Dil. | Rem. | Ex. | Date / Time |
|---|---|---|---|---|---|---|
| 1 | 1490 | 500uL | 1 | ******* | | 12/06/2011 04:55:30 PM |
| 2 | 1495 | 500uL | 1 | ******* | | 12/06/2011 05:00:56 PM |

Acid Add. 10.00%
Mean Area 1493




Slope: 29.72
Intercept 12.89
r^2 0.999826 ✓
Zero Shift No




Sample

Sample Name: TC ICV
Sample ID: Untitled
Origin: TCCURVE-12-06-2011.cal
Status Completed
Chk. Result

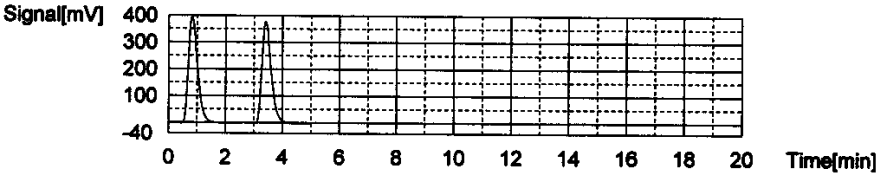
| Type | Anal. | Dil. | Result |
|---|---|---|---|
| Unknown | TC | 1.000 | TC:23.27mg/L |

1. Det

Anal.: TC

| No. | Area | Conc. | Inj. Vol. | Aut. Dil. | Ex. | Cal. Curve | Date / Time |
|---|---|---|---|---|---|---|---|
| 1 | 889.3 | 23.67mg/L | 500uL | 1 | | TCCURVE-12-06-2011.2011_12_06_08_40_5 | 12/06/2011 05:08:57 PM |
| 2 | 859.5 | 22.87mg/L | 500uL | 1 | | TCCURVE-12-06-2011.2011_12_06_08_40_5 | 12/06/2011 05:13:38 PM |

Mean Area 874.4
Mean Conc. 23.27mg/L




Sample

Sample Name: TIC ICV
Sample ID: Untitled
Origin: TICCURVE-12-06-2011B.cal
Status Completed
Chk. Result

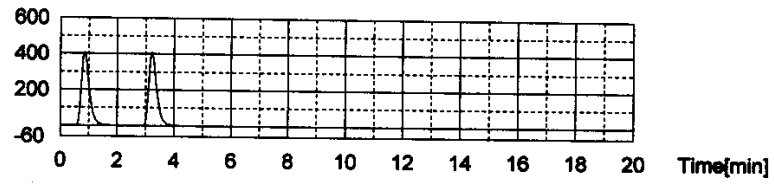
| Type | Anal. | Dil. | Result |
|---|---|---|---|
| Unknown | IC | 1.000 | IC:26.21mg/L |

1. Det

Anal.: IC

| No. | Area | Conc. | Inj. Vol. | Aut. Dil. | Ex. | Cal. Curve | Date / Time |
|---|---|---|---|---|---|---|---|
| 1 | 788.9 | 26.11mg/L | 500uL | 1 | | TICCURVE-12-06-2011B.2011_12_06_15_47 | 12/06/2011 05:20:43 PM |
| 2 | 794.9 | 26.31mg/L | 500uL | 1 | | TICCURVE-12-06-2011B.2011_12_06_15_47 | 12/06/2011 05:25:50 PM |

Mean Area 791.9
Mean Conc. 26.21mg/L



WORKGROUP: WG398003

# Total Organic Carbon

398004
398010

MAKE DAILY

CCV (TOC): std 48750 / (5/200)(1000) = 25mg/L

LCS (TOC): std 50986 / (5/200)(1000) = 25mg/L

CCV (TIC): std 50244 / (5/200)(1000) = 25mg/L

MS (TOC): 0.4/40 (1000) = 10

Calibration Curve Date: 12/6/11

Reagent: Rot 17216
Rot 17580

☑ SM5310-C: Matrix 2 WG 398003

☑ EPA 415.1/9060A(mod): Matrix 1 WG 398004 SOP: K 4151 Rev. 14
WG 398010 Instrument: Shimadza TOC-VWP/ASI

DAILY CHECK

☑ drain reservoir filled
☑ ASI water bottle full
☑ dilution water bottle full

☑ 3rd bottle full
☑ sufficient gas
☑ sufficient persulfate

☑ sufficient acid waste container

| Position | Sample ID | Dilution |
|---|---|---|
| 1 | TIC25 | |
| 2 | CCV25 | |
| 3 | BIK | |
| 4 | LCS | |
| 5 | LCS | |
| 6 | 05-314-01 | 1/10 |
| 7 | 02 | 1/20 |
| 8 | 05-373-01 | |
| 9 | 03 | |
| 10 | 04 | |
| 11 | 05-375-01 | |
| 12 | DUP ↓ | |
| 13 | MS ↓ | |
| 14 | CCV | |
| 15 | CCB/BIK | |
| 16 | LCS 25 | |
| 17 | LCSDUP | |
| 18 | 05-257-11 | 1/2 |
| 19 | 05-341-06 | 1/25 |
| 20 | 05-226-07 | 1/50 |
| 21 | 05-342-01 | |
| 22 | 03 | |
| 23 | 05 | |
| 24 | 07 | |
| 25 | 09 | |

| Position | Sample ID | Dilution |
|---|---|---|
| 26 | CCV | |
| 27 | CCB | |
| 28 | 05-342-11 | |
| 29 | 05-243-02 | 1/2 |
| 30 | 03 | 1/2 |
| 31 | 04 | 1/2 |
| 32 | 05-362-01 | 1/5 |
| 33 | 03 | 1/5 |
| 34 | 04 | 1/5 |
| 35 | 05 | 1/5 |
| 36 | 07 | 1/5 |
| 37 | 08 | 1/5 |
| 38 | CCV | |
| 39 | CCB | |
| 40 | 05-362-12 | 1/5 |
| 41 | 14 | 1/5 |
| 42 | DUP ↓ | 1/5 |
| 43 | MS ↓ | 1/5 |
| 44 | BIK | |
| 45 | LCS | |
| 46 | LCSDUP | |
| 47 | 05-362-22 | 1/5 |
| 48 | 05-284-01 | 1/25 |
| 49 | 03 | 1/2 |
| 50 | CCV | |

| Position | Sample ID | Dilution |
|---|---|---|
| 51 | CCB | |
| 52 | 05-284 05 | 1/2 |
| 53 | 07 | 1/5 |
| 54 | 05-317-01 | 1/5 |
| 55 | 03 | 1/25 |
| 56 | 05 | |
| 57 | 07 | 1/3 |
| 58 | 09 | |
| 59 | 11 | |
| 60 | DUP ↓ | |
| 61 | MS ↓ | |
| 62 | CCV | |
| 63 | CCB | |
| 64 | | |
| 65 | | |
| 66 | | |
| 67 | | |
| 68 | | |
| 69 | | |
| 70 | | |
| 71 | | |
| 72 | | |
| 73 | | |
| 74 | | |
| 75 | | |

Analyst: Joanne Hasson Date/Time: 5/15/12

DCN#90877

| | Analysi | Sample Name | Result | Status | Date / Time | Vial |
|---|---|---|---|---|---|---|
| 1 | TOC | TIC 25 | TOC:1.928mg/L TC:26.23mg/L IC:24.30mg/L | Completed | 05/15/2012 02:44:38 P | 1 |
| 2 | TOC | CCV 25 | !!Error!! TOC:25.41mg/L TC:25.20mg/L IC:-0.2140mg/L | Completed | 05/15/2012 02:57:16 P | 2 |
| 3 | TOC | WG398003-01 BLK | !!Error!! TOC:0.4151mg/L TC:0.2266mg/L IC:-0.1885mg/ | Completed | 05/15/2012 03:14:11 P | 0 |
| 4 | TOC | WG398003-02 LCS | !!Error!! TOC:24.46mg/L TC:24.18mg/L IC:-0.2833mg/L | Completed | 05/15/2012 03:35:11 P | 4 |
| 5 | TOC | WG398003-03 LCSDU | !!Error!! TOC:23.84mg/L TC:23.56mg/L IC:-0.2828mg/L | Completed | 05/15/2012 03:56:15 P | 5 |
| 6 | TOC | L12050314-01 (20) | TOC:41.52mg/L TC:41.85mg/L IC:0.3316mg/L | Completed | 05/15/2012 04:21:18 P | 6 |
| 7 | TOC | L12050314-02 (20) | !!Error!! TOC:18.81mg/L TC:18.63mg/L IC:-0.1828mg/L | Completed | 05/15/2012 04:45:36 P | 7 |
| 8 | TOC | L12050373-01 | TOC:6.960mg/L TC:31.05mg/L IC:24.09mg/L | Completed | 05/15/2012 05:08:14 P | 8 |
| 9 | TOC | L12050373-03 | TOC:2.785mg/L TC:6.557mg/L IC:3.772mg/L | Completed | 05/15/2012 05:30:30 P | 9 |
| 10 | TOC | L12050373-04 | TOC:3.854mg/L TC:10.58mg/L IC:6.728mg/L | Completed | 05/15/2012 05:52:15 P | 10 |
| 11 | TOC | L12050375-01 | TOC:12.13mg/L TC:15.95mg/L IC:3.816mg/L | Completed | 05/15/2012 06:14:58 P | 11 |
| 12 | TOC | WG398003-05 DUP | TOC:11.86mg/L TC:15.58mg/L IC:3.725mg/L | Completed | 05/15/2012 06:37:56 P | 12 |
| 13 | TOC | WG398003-06 MS | TOC:22.52mg/L TC:27.12mg/L IC:4.602mg/L | Completed | 05/15/2012 07:01:15 P | 13 |
| 14 | TOC | CCV | !!Error!! TOC:26.47mg/L TC:26.26mg/L IC:-0.2089mg/L | Completed | 05/15/2012 07:13:39 P | 14 |
| 15 | TOC | WG398004-01 BLK | !!Error!! TOC:0.4040mg/L TC:0.2079mg/L IC:-0.1961mg/ | Completed | 05/15/2012 07:22:45 P | 0 |
| 16 | TOC | WG398004-02 LCS | !!Error!! TOC:24.64mg/L TC:24.38mg/L IC:-0.2615mg/L | Completed | 05/15/2012 07:34:54 P | 16 |
| 17 | TOC | WG398004-03 LCSDU | !!Error!! TOC:24.76mg/L TC:24.50mg/L IC:-0.2548mg/L | Completed | 05/15/2012 07:47:07 P | 17 |
| 18 | TOC | L12050257-11 (2) | TOC:2.492mg/L TC:6.130mg/L IC:3.638mg/L | Completed | 05/15/2012 07:59:26 P | 18 |
| 19 | TOC | L12050341-06 (25) | TOC:2.065mg/L TC:5.632mg/L IC:3.567mg/L | Completed | 05/15/2012 08:11:42 P | 19 |
| 20 | TOC | L12050226-07 (50) | TOC:2.280mg/L TC:4.352mg/L IC:2.072mg/L | Completed | 05/15/2012 08:23:59 P | 20 |
| 21 | TOC | L12050342-01 | TOC:7.027mg/L TC:22.54mg/L IC:15.51mg/L | Completed | 05/15/2012 08:36:58 P | 21 |
| 22 | TOC | L12050342-03 | TOC:5.608mg/L TC:9.875mg/L IC:4.267mg/L | Completed | 05/15/2012 08:49:48 P | 22 |
| 23 | TOC | L12050342-05 | TOC:2.535mg/L TC:15.56mg/L IC:13.03mg/L | Completed | 05/15/2012 09:02:36 P | 23 |
| 24 | TOC | L12050342-07 | TOC:2.565mg/L TC:17.51mg/L IC:14.95mg/L | Completed | 05/15/2012 09:15:48 P | 24 |
| 25 | TOC | L12050342-09 | TOC:2.447mg/L TC:13.76mg/L IC:11.31mg/L | Completed | 05/15/2012 09:28:31 P | 25 |
| 26 | TOC | CCV | !!Error!! TOC:24.44mg/L TC:24.26mg/L IC:-0.1805mg/L | Completed | 05/15/2012 09:40:49 P | 26 |
| 27 | TOC | CCB | !!Error!! TOC:0.3646mg/L TC:0.1773mg/L IC:-0.1873mg/ | Completed | 05/15/2012 09:50:00 P | 0 |
| 28 | TOC | L12050342-11 | TOC:3.350mg/L TC:26.48mg/L IC:23.13mg/L | Completed | 05/15/2012 10:03:09 P | 28 |
| 29 | TOC | L12050243-02 (2) | TOC:11.86mg/L TC:28.08mg/L IC:16.22mg/L | Completed | 05/15/2012 10:16:30 P | 29 |
| 30 | TOC | L12050243-03 (2) | TOC:20.61mg/L TC:26.28mg/L IC:5.670mg/L | Completed | 05/15/2012 10:29:23 P | 30 |
| 31 | TOC | L12050243-04 (2) | TOC:20.95mg/L TC:26.85mg/L IC:5.902mg/L | Completed | 05/15/2012 10:42:37 P | 31 |
| 32 | TOC | L12050362-01 (5) | TOC:1.751mg/L TC:7.000mg/L IC:5.249mg/L | Completed | 05/15/2012 10:55:11 P | 32 |
| 33 | TOC | L12050362-03 (5) | TOC:3.159mg/L TC:7.006mg/L IC:3.846mg/L | Completed | 05/15/2012 11:07:58 P | 33 |
| 34 | TOC | L12050362-04 (5) X | TOC:78.57mg/L TC:81.52mg/L IC:2.951mg/L | Completed | 05/15/2012 11:21:01 P | 34 |
| 35 | TOC | L12050362-07 (5) | TOC:1.072mg/L TC:3.918mg/L IC:2.846mg/L | Completed | 05/15/2012 11:33:06 P | 35 |
| 36 | TOC | L12050362-08 (5) | TOC:1.626mg/L TC:7.269mg/L IC:5.643mg/L | Completed | 05/15/2012 11:45:22 P | 36 |
| 37 | TOC | L12050362-08 (5) | TOC:1.101mg/L TC:4.379mg/L IC:3.278mg/L | Completed | 05/15/2012 11:57:33 P | 37 |
| 38 | TOC | CCV | !!Error!! TOC:23.57mg/L TC:23.36mg/L IC:-0.2116mg/L | Completed | 05/16/2012 12:09:54 A | 38 |
| 39 | TOC | CCB | !!Error!! TOC:0.3735mg/L TC:0.1826mg/L IC:-0.1909mg/ | Completed | 05/16/2012 12:19:04 A | 0 |
| 40 | TOC | | TOC:84.04mg/L TC:90.52mg/L IC:6.481mg/L | Completed | 05/16/2012 12:32:34 A | 40 |
| 41 | TOC | WG398004-04 (5) | TOC:203.8mg/L TC:212.1mg/L IC:8.251mg/L | Completed | 05/16/2012 12:48:25 A | 41 |
| 42 | TOC | WG398004-05 (5) DUP | TOC:201.1mg/L TC:209.0mg/L IC:7.897mg/L | Completed | 05/16/2012 01:00:48 A | 42 |
| 43 | TOC | WG398004-06 (5) MS | TOC:212.6mg/L TC:219.2mg/L IC:6.588mg/L | Completed | 05/16/2012 01:15:57 A | 43 |
| 44 | TOC | WG398010-01 BLK | !!Error!! TOC:0.1676mg/L TC:-0.00248mg/L IC:-0.1701m | Completed | 05/16/2012 01:26:30 A | 0 |
| 45 | TOC | WG398010-02 LCS | !!Error!! TOC:23.90mg/L TC:23.68mg/L IC:-0.2262mg/L | Completed | 05/16/2012 01:37:47 A | 45 |
| 46 | TOC | WG398010-03 LCSDU | !!Error!! TOC:24.77mg/L TC:24.54mg/L IC:-0.2323mg/L | Completed | 05/16/2012 01:50:05 A | 46 |
| 47 | TOC | L12050362-22 (5) | TOC:8.433mg/L TC:20.34mg/L IC:11.90mg/L | Completed | 05/16/2012 02:03:22 A | 47 |
| 48 | TOC | L12050284-01 (25) | TOC:17.25mg/L TC:17.25mg/L IC:0.00216mg/L | Completed | 05/16/2012 02:15:45 A | 48 |
| 49 | TOC | | TOC:1.598mg/L TC:3.061mg/L IC:1.463mg/L | Completed | 05/16/2012 02:27:55 A | 49 |
| 50 | TOC | CCV | !!Error!! TOC:24.62mg/L TC:24.62mg/L IC:-0.2072mg/L | Completed | 05/16/2012 02:40:14 A | 50 |
| 51 | TOC | CCB | !!Error!! TOC:0.3621mg/L TC:0.1732mg/L IC:-0.1889mg/ | Completed | 05/16/2012 02:49:21 A | 0 |
| 52 | TOC | 05-284-05 | TOC:2.057mg/L TC:4.701mg/L IC:2.643mg/L | Completed | 05/16/2012 03:01:43 A | 52 |
| 53 | TOC | 05-284-07(3) | TOC:1.874mg/L TC:4.187mg/L IC:2.313mg/L | Completed | 05/16/2012 03:13:59 A | 53 |
| 54 | TOC | L12050317-01 (5) | TOC:5.226mg/L TC:12.34mg/L IC:7.113mg/L | Completed | 05/16/2012 03:26:42 A | 54 |
| 55 | TOC | | TOC:3.004mg/L TC:4.384mg/L IC:1.380mg/L | Completed | 05/16/2012 03:39:44 A | 55 |
| 56 | TOC | L12050317-05 | TOC:2.432mg/L TC:5.797mg/L IC:3.365mg/L | Completed | 05/16/2012 03:51:06 A | 56 |
| 57 | TOC | L12050317-07 (3) | TOC:29.72mg/L TC:49.85mg/L IC:20.13mg/L | Completed | 05/16/2012 04:04:32 A | 57 |
| 58 | TOC | L12050317-09 | TOC:3.297mg/L TC:6.968mg/L IC:3.671mg/L | Completed | 05/16/2012 04:18:34 A | 58 |
| 59 | TOC | L12050317-11 | TOC:2.218mg/L TC:7.461mg/L IC:5.243mg/L | Completed | 05/16/2012 04:31:17 A | 59 |
| 60 | TOC | WG398010-05 DUP | TOC:2.108mg/L TC:7.623mg/L IC:5.515mg/L | Completed | 05/16/2012 04:44:03 A | 60 |
| 61 | TOC | WG398010-06 MS | TOC:12.69mg/L TC:19.93mg/L IC:7.238mg/L | Completed | 05/16/2012 04:57:22 A | 61 |
| 62 | TOC | CCV | !!Error!! TOC:25.88mg/L TC:25.71mg/L IC:-0.1775mg/L | Completed | 05/16/2012 05:09:41 A | 62 |
| 63 | TOC | CCB | !!Error!! TOC:0.3531mg/L TC:0.1729mg/L IC:-0.1802mg/ | Completed | 05/16/2012 05:18:53 A | 0 |

Instr.Information

System TOCVW ASI
Detector Wet Chemical

Sample

Sample Name: TIC 25
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

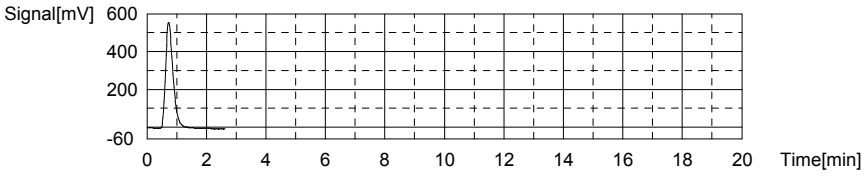
| Type | Anal. | Dil. | Result |
|---|---|---|---|
| Unknown | TOC | 1.000 | TOC:1.928mg/L TC:26.23mg/L IC:24.30mg/L |

1. Det

Anal.: TC

| No. | Area | Conc. | Inj. Vol. | Aut. Dil. | Ex. | Cal. Curve | Date / Time |
|---|---|---|---|---|---|---|---|
| 1 | 985.5 | 26.23mg/L | 500uL | 1 | | TCCURVE-12-06-2011.2011_12_06_08_40_5 | 05/15/2012 02:39:16 PM |

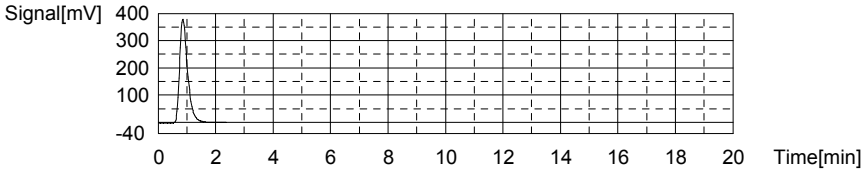
Mean Area 985.5
Mean Conc. 26.23mg/L




Anal.: IC

| No. | Area | Conc. | Inj. Vol. | Aut. Dil. | Ex. | Cal. Curve | Date / Time |
|---|---|---|---|---|---|---|---|
| 1 | 735.1 | 24.30mg/L | 500uL | 1 | | TICCURVE-12-06-2011B.2011_12_06_15_47 | 05/15/2012 02:44:56 PM |

Mean Area 735.1
Mean Conc. 24.30mg/L




Sample

Sample Name: CCV 25
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

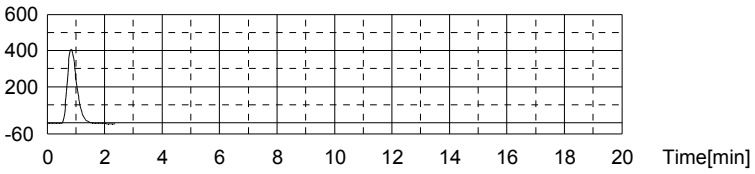
| Type | Anal. | Dil. | Result |
|---|---|---|---|
| Unknown | TOC | 1.000 | !!Error!! TOC:25.41mg/L TC:25.20mg/L IC:-0.2140mg/L |

1. Det

Anal.: TC

| No. | Area | Conc. | Inj. Vol. | Aut. Dil. | Ex. | Cal. Curve | Date / Time |
|---|---|---|---|---|---|---|---|
| 1 | 946.8 | 25.20mg/L | 500uL | 1 | | TCCURVE-12-06-2011.2011_12_06_08_40_5 | 05/15/2012 02:52:44 PM |

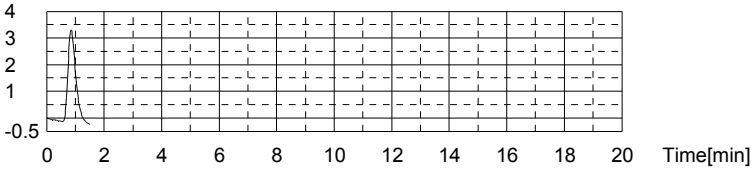
Mean Area 946.8
Mean Conc. 25.20mg/L




Anal.: IC

| No. | Area | Conc. | Inj. Vol. | Aut. Dil. | Ex. | Cal. Curve | Date / Time |
|---|---|---|---|---|---|---|---|
| 1 | 6.526 | -0.2140mg/L | 500uL | 1 | | TICCURVE-12-06-2011B.2011_12_06_15_47 | 05/15/2012 02:57:10 PM |

Mean Area 6.526
Mean Conc. -0.2140mg/L




Sample

Sample Name: WG398003-01 BLK
Sample ID: <Untitled>
Origin: TOC-12-06-2011A.met
Status Completed
Chk. Result

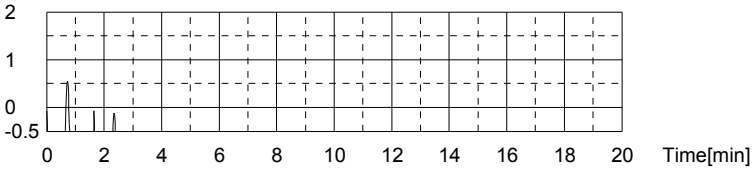
| Type | Anal. | Dil. | Result |
|---|---|---|---|
| Unknown | TOC | 1.000 | !!Error!! TOC:0.4151mg/L TC:0.2266mg/L IC:-0.1885mg/L |

1. Det

Anal.: TC

| No. | Area | Conc. | Inj. Vol. | Aut. Dil. | Ex. | Cal. Curve | Date / Time |
|---|---|---|---|---|---|---|---|
| 1 | 9.688 | 0.2554mg/L | 500uL | 1 | | TCCURVE-12-06-2011.2011_12_06_08_40_5 | 05/15/2012 03:02:36 PM |
| 2 | 7.524 | 0.1978mg/L | 500uL | 1 | | TCCURVE-12-06-2011.2011_12_06_08_40_5 | 05/15/2012 03:06:19 PM |

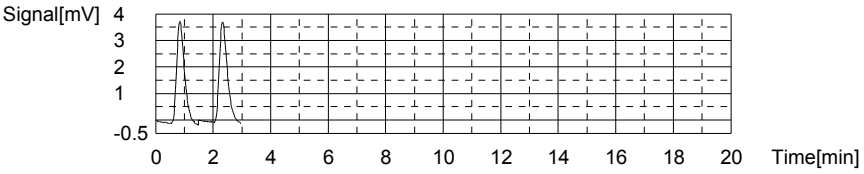
Mean Area 8.606
Mean Conc. 0.2266mg/L




Anal.: IC

| No. | Area | Conc. | Inj. Vol. | Aut. Dil. | Ex. | Cal. Curve | Date / Time |
|---|---|---|---|---|---|---|---|
| 1 | 7.247 | -0.1897mg/L | 500uL | 1 | | TICCURVE-12-06-2011B.2011_12_06_15_47 | 05/15/2012 03:10:16 PM |
| 2 | 7.318 | -0.1873mg/L | 500uL | 1 | | TICCURVE-12-06-2011B.2011_12_06_15_47 | 05/15/2012 03:14:11 PM |

Mean Area 7.283
Mean Conc. -0.1885mg/L




Sample

Sample Name: WG398003-02 LCS
Sample ID: <Untitled>
Origin: TOC-12-06-2011A.met
Status Completed
Chk. Result

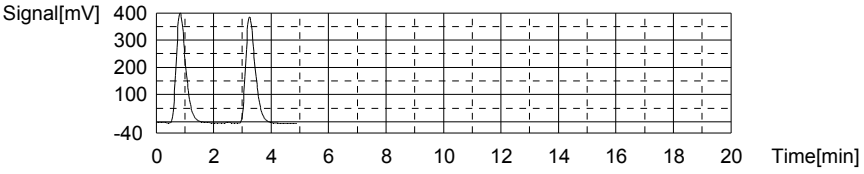
| Type | Anal. | Dil. | Result |
|---|---|---|---|
| Unknown | TOC | 1.000 | !!Error!! TOC:24.46mg/L TC:24.18mg/L IC:-0.2833mg/L |

1. Det

Anal.: TC

| No. | Area | Conc. | Inj. Vol. | Aut. Dil. | Ex. | Cal. Curve | Date / Time |
|---|---|---|---|---|---|---|---|
| 1 | 919.2 | 24.46mg/L | 500uL | 1 | | TCCURVE-12-06-2011.2011_12_06_08_40_5 | 05/15/2012 03:22:02 PM |
| 2 | 897.8 | 23.89mg/L | 500uL | 1 | | TCCURVE-12-06-2011.2011_12_06_08_40_5 | 05/15/2012 03:26:49 PM |

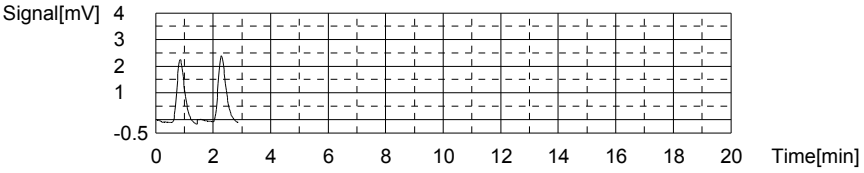
Mean Area 908.5
Mean Conc. 24.18mg/L




Anal.: IC

| No. | Area | Conc. | Inj. Vol. | Aut. Dil. | Ex. | Cal. Curve | Date / Time |
|---|---|---|---|---|---|---|---|
| 1 | 4.388 | -0.2859mg/L | 500uL | 1 | | TICCURVE-12-06-2011B.2011_12_06_15_47 | 05/15/2012 03:31:06 PM |
| 2 | 4.544 | -0.2807mg/L | 500uL | 1 | | TICCURVE-12-06-2011B.2011_12_06_15_47 | 05/15/2012 03:35:11 PM |

Mean Area 4.466
Mean Conc. -0.2833mg/L




Sample

Sample Name: WG398003-03 LCSDUP
Sample ID: <Untitled>
Origin: TOC-12-06-2011A.met
Status Completed
Chk. Result

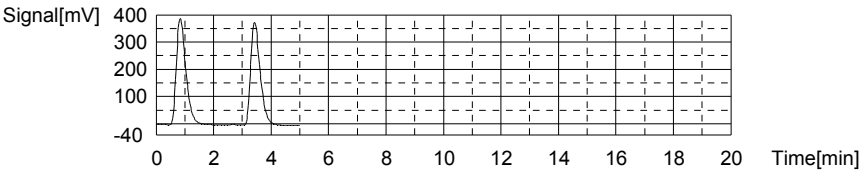
| Type | Anal. | Dil. | Result |
|---|---|---|---|
| Unknown | TOC | 1.000 | !!Error!! TOC:23.84mg/L TC:23.56mg/L IC:-0.2828mg/L |

1. Det

Anal.: TC

| No. | Area | Conc. | Inj. Vol. | Aut. Dil. | Ex. | Cal. Curve | Date / Time |
|---|---|---|---|---|---|---|---|
| 1 | 898.5 | 23.91mg/L | 500uL | 1 | | TCCURVE-12-06-2011.2011_12_06_08_40_5 | 05/15/2012 03:43:13 PM |
| 2 | 871.9 | 23.20mg/L | 500uL | 1 | | TCCURVE-12-06-2011.2011_12_06_08_40_5 | 05/15/2012 03:47:53 PM |

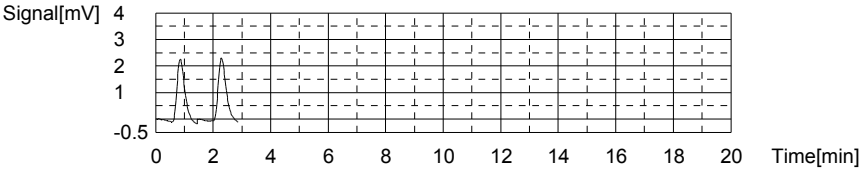
Mean Area 885.2
Mean Conc. 23.56mg/L




Anal.: IC

| No. | Area | Conc. | Inj. Vol. | Aut. Dil. | Ex. | Cal. Curve | Date / Time |
|---|---|---|---|---|---|---|---|
| 1 | 4.468 | -0.2832mg/L | 500uL | 1 | | TICCURVE-12-06-2011B.2011_12_06_15_47 | 05/15/2012 03:52:11 PM |
| 2 | 4.494 | -0.2824mg/L | 500uL | 1 | | TICCURVE-12-06-2011B.2011_12_06_15_47 | 05/15/2012 03:56:15 PM |

Mean Area 4.481
Mean Conc. -0.2828mg/L




Sample

Sample Name: L12050314-01 (20)
Sample ID: <Untitled>
Origin: TOC-12-06-2011A.met
Status Completed
Chk. Result

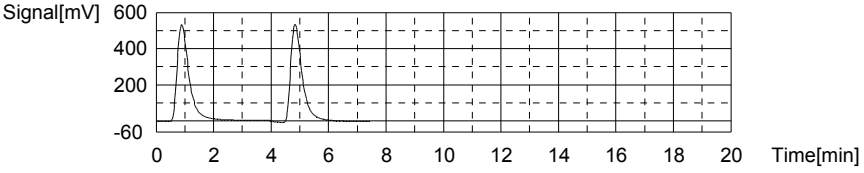
| Type | Anal. | Dil. | Result |
|---|---|---|---|
| Unknown | TOC | 1.000 | TOC:41.52mg/L TC:41.85mg/L IC:0.3316mg/L |

1. Det

Anal.: TC

| No. | Area | Conc. | Inj. Vol. | Aut. Dil. | Ex. | Cal. Curve | Date / Time |
|---|---|---|---|---|---|---|---|
| 1 | 1582 | 42.10mg/L | 500uL | 1 | | TCCURVE-12-06-2011.2011_12_06_08_40_5 | 05/15/2012 04:05:39 PM |
| 2 | 1563 | 41.60mg/L | 500uL | 1 | | TCCURVE-12-06-2011.2011_12_06_08_40_5 | 05/15/2012 04:12:28 PM |

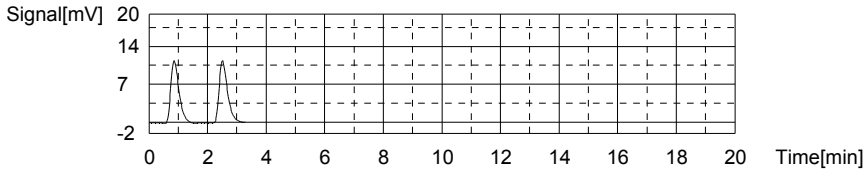
Mean Area 1573
Mean Conc. 41.85mg/L




Anal.: IC

| No. | Area | Conc. | Inj. Vol. | Aut. Dil. | Ex. | Cal. Curve | Date / Time |
|---|---|---|---|---|---|---|---|
| 1 | 22.82 | 0.3342mg/L | 500uL | 1 | | TICCURVE-12-06-2011B.2011_12_06_15_47 | 05/15/2012 04:16:59 PM |
| 2 | 22.66 | 0.3289mg/L | 500uL | 1 | | TICCURVE-12-06-2011B.2011_12_06_15_47 | 05/15/2012 04:21:18 PM |

Mean Area 22.74
Mean Conc. 0.3316mg/L




Sample

Sample Name: L12050314-02 (20)
Sample ID: <Untitled>
Origin: TOC-12-06-2011A.met
Status Completed
Chk. Result

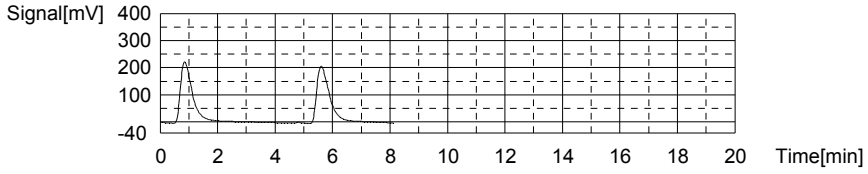
| Type | Anal. | Dil. | Result |
|---|---|---|---|
| Unknown | TOC | 1.000 | !!Error!! TOC:18.81mg/L TC:18.63mg/L IC:-0.1828mg/L |

1. Det

Anal.: TC

| No. | Area | Conc. | Inj. Vol. | Aut. Dil. | Ex. | Cal. Curve | Date / Time |
|---|---|---|---|---|---|---|---|
| 1 | 720.5 | 19.17mg/L | 500uL | 1 | | TCCURVE-12-06-2011.2011_12_06_08_40_5 | 05/15/2012 04:31:28 PM |
| 2 | 679.7 | 18.09mg/L | 500uL | 1 | | TCCURVE-12-06-2011.2011_12_06_08_40_5 | 05/15/2012 04:37:11 PM |

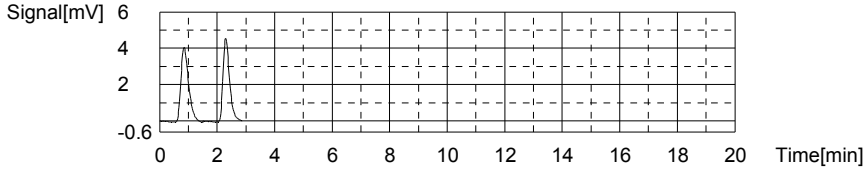
Mean Area 700.1
Mean Conc. 18.63mg/L




Anal.: IC

| No. | Area | Conc. | Inj. Vol. | Aut. Dil. | Ex. | Cal. Curve | Date / Time |
|---|---|---|---|---|---|---|---|
| 1 | 7.714 | -0.1740mg/L | 500uL | 1 | | TICCURVE-12-06-2011B.2011_12_06_15_47 | 05/15/2012 04:41:34 PM |
| 2 | 7.190 | -0.1916mg/L | 500uL | 1 | | TICCURVE-12-06-2011B.2011_12_06_15_47 | 05/15/2012 04:45:35 PM |

Mean Area 7.452
Mean Conc. -0.1828mg/L




Sample

Sample Name: L12050373-01
Sample ID: <Untitled>
Origin: TOC-12-06-2011A.met
Status Completed
Chk. Result

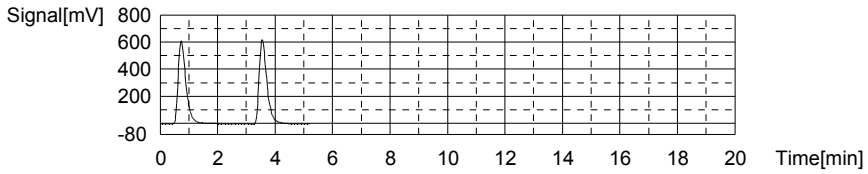
| Type | Anal. | Dil. | Result |
|---|---|---|---|
| Unknown | TOC | 1.000 | TOC:6.960mg/L TC:31.05mg/L IC:24.09mg/L |

1. Det

Anal.: TC

| No. | Area | Conc. | Inj. Vol. | Aut. Dil. | Ex. | Cal. Curve | Date / Time |
|---|---|---|---|---|---|---|---|
| 1 | 1158 | 30.82mg/L | 500uL | 1 | | TCCURVE-12-06-2011.2011_12_06_08_40_5 | 05/15/2012 04:53:50 PM |
| 2 | 1175 | 31.27mg/L | 500uL | 1 | | TCCURVE-12-06-2011.2011_12_06_08_40_5 | 05/15/2012 04:58:29 PM |

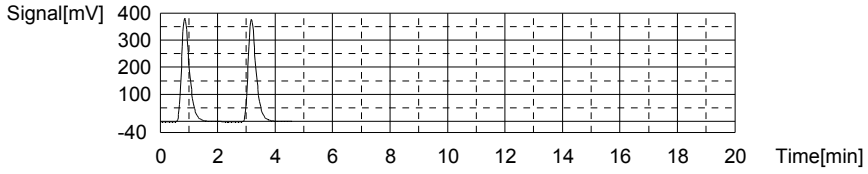
Mean Area 1167
Mean Conc. 31.05mg/L




Anal.: IC

| No. | Area | Conc. | Inj. Vol. | Aut. Dil. | Ex. | Cal. Curve | Date / Time |
|---|---|---|---|---|---|---|---|
| 1 | 731.9 | 24.19mg/L | 500uL | 1 | | TICCURVE-12-06-2011B.2011_12_06_15_47 | 05/15/2012 05:03:58 PM |
| 2 | 725.6 | 23.98mg/L | 500uL | 1 | | TICCURVE-12-06-2011B.2011_12_06_15_47 | 05/15/2012 05:09:14 PM |

Mean Area 728.8
Mean Conc. 24.09mg/L




Sample

Sample Name: L12050373-03
Sample ID: <Untitled>
Origin: TOC-12-06-2011A.met
Status Completed
Chk. Result

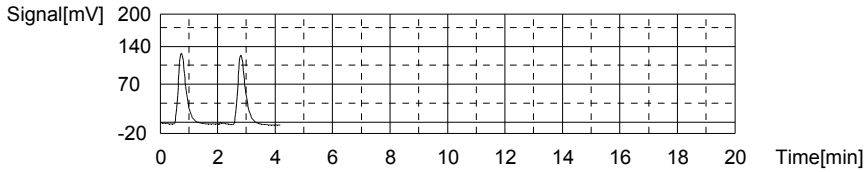
| Type | Anal. | Dil. | Result |
|---|---|---|---|
| Unknown | TOC | 1.000 | TOC:2.785mg/L TC:6.557mg/L IC:3.772mg/L |

1. Det

Anal.: TC

| No. | Area | Conc. | Inj. Vol. | Aut. Dil. | Ex. | Cal. Curve | Date / Time |
|---|---|---|---|---|---|---|---|
| 1 | 248.6 | 6.614mg/L | 500uL | 1 | | TCCURVE-12-06-2011.2011_12_06_08_40_5 | 05/15/2012 05:16:44 PM |
| 2 | 244.3 | 6.500mg/L | 500uL | 1 | | TCCURVE-12-06-2011.2011_12_06_08_40_5 | 05/15/2012 05:21:06 PM |

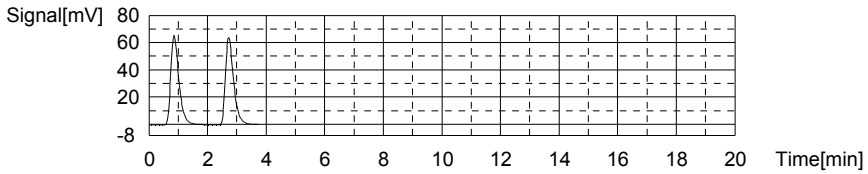
Mean Area 246.5
Mean Conc. 6.557mg/L




Anal.: IC

| No. | Area | Conc. | Inj. Vol. | Aut. Dil. | Ex. | Cal. Curve | Date / Time |
|---|---|---|---|---|---|---|---|
| 1 | 126.2 | 3.813mg/L | 500uL | 1 | | TICCURVE-12-06-2011B.2011_12_06_15_47 | 05/15/2012 05:25:58 PM |
| 2 | 123.8 | 3.732mg/L | 500uL | 1 | | TICCURVE-12-06-2011B.2011_12_06_15_47 | 05/15/2012 05:30:30 PM |

Mean Area 125.0
Mean Conc. 3.772mg/L




Sample

Sample Name: L12050373-04
Sample ID: <Untitled>
Origin: TOC-12-06-2011A.met
Status Completed
Chk. Result

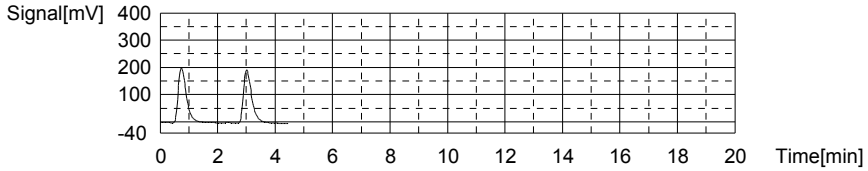
| Type | Anal. | Dil. | Result |
|---|---|---|---|
| Unknown | TOC | 1.000 | TOC:3.854mg/L TC:10.58mg/L IC:6.728mg/L |

1. Det

Anal.: TC

| No. | Area | Conc. | Inj. Vol. | Aut. Dil. | Ex. | Cal. Curve | Date / Time |
|---|---|---|---|---|---|---|---|
| 1 | 400.1 | 10.65mg/L | 500uL | 1 | | TCCURVE-12-06-2011.2011_12_06_08_40_5 | 05/15/2012 05:38:13 PM |
| 2 | 395.2 | 10.52mg/L | 500uL | 1 | | TCCURVE-12-06-2011.2011_12_06_08_40_5 | 05/15/2012 05:42:40 PM |

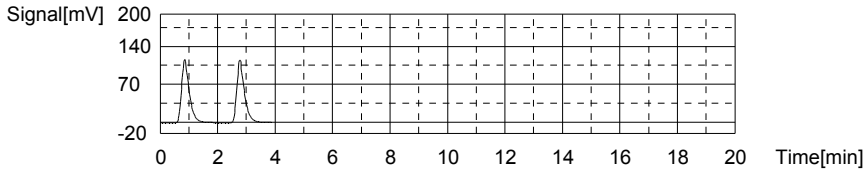
Mean Area 397.7
Mean Conc. 10.58mg/L




Anal.: IC

| No. | Area | Conc. | Inj. Vol. | Aut. Dil. | Ex. | Cal. Curve | Date / Time |
|---|---|---|---|---|---|---|---|
| 1 | 214.1 | 6.770mg/L | 500uL | 1 | | TICCURVE-12-06-2011B.2011_12_06_15_47 | 05/15/2012 05:47:36 PM |
| 2 | 211.6 | 6.686mg/L | 500uL | 1 | | TICCURVE-12-06-2011B.2011_12_06_15_47 | 05/15/2012 05:52:19 PM |

Mean Area 212.9
Mean Conc. 6.728mg/L




Sample

Sample Name: L12050375-01
Sample ID: <Untitled>
Origin: TOC-12-06-2011A.met
Status Completed
Chk. Result

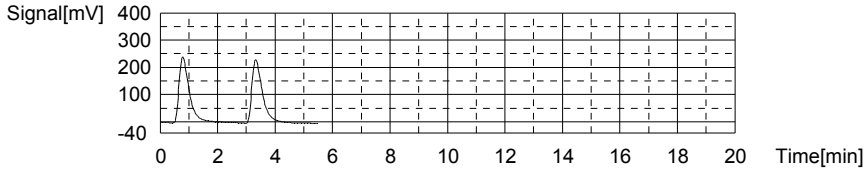
| Type | Anal. | Dil. | Result |
|---|---|---|---|
| Unknown | TOC | 1.000 | TOC:12.13mg/L TC:15.95mg/L IC:3.816mg/L |

1. Det

Anal.: TC

| No. | Area | Conc. | Inj. Vol. | Aut. Dil. | Ex. | Cal. Curve | Date / Time |
|---|---|---|---|---|---|---|---|
| 1 | 597.4 | 15.90mg/L | 500uL | 1 | | TCCURVE-12-06-2011.2011_12_06_08_40_5 | 05/15/2012 06:00:17 PM |
| 2 | 601.2 | 16.00mg/L | 500uL | 1 | | TCCURVE-12-06-2011.2011_12_06_08_40_5 | 05/15/2012 06:05:33 PM |

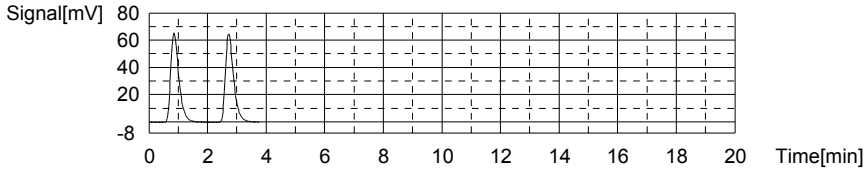
Mean Area 599.3
Mean Conc. 15.95mg/L




Anal.: IC

| No. | Area | Conc. | Inj. Vol. | Aut. Dil. | Ex. | Cal. Curve | Date / Time |
|---|---|---|---|---|---|---|---|
| 1 | 127.0 | 3.840mg/L | 500uL | 1 | | TICCURVE-12-06-2011B.2011_12_06_15_47 | 05/15/2012 06:10:22 PM |
| 2 | 125.6 | 3.792mg/L | 500uL | 1 | | TICCURVE-12-06-2011B.2011_12_06_15_47 | 05/15/2012 06:14:58 PM |

Mean Area 126.3
Mean Conc. 3.816mg/L




Sample

Sample Name: WG398003-05 DUP
Sample ID: <Untitled>
Origin: TOC-12-06-2011A.met
Status Completed
Chk. Result

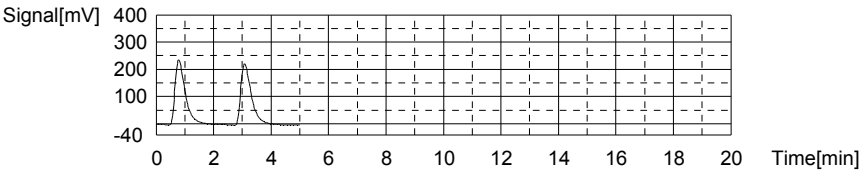
| Type | Anal. | Dil. | Result |
|---|---|---|---|
| Unknown | TOC | 1.000 | TOC:11.86mg/L TC:15.58mg/L IC:3.725mg/L |

1. Det

Anal.: TC

| No. | Area | Conc. | Inj. Vol. | Aut. Dil. | Ex. | Cal. Curve | Date / Time |
|---|---|---|---|---|---|---|---|
| 1 | 586.3 | 15.60mg/L | 500uL | 1 | | TCCURVE-12-06-2011.2011_12_06_08_40_5 | 05/15/2012 06:22:41 PM |
| 2 | 584.9 | 15.57mg/L | 500uL | 1 | | TCCURVE-12-06-2011.2011_12_06_08_40_5 | 05/15/2012 06:28:39 PM |

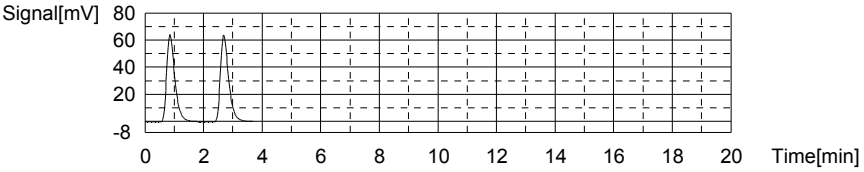
Mean Area 585.6
Mean Conc. 15.58mg/L




Anal.: IC

| No. | Area | Conc. | Inj. Vol. | Aut. Dil. | Ex. | Cal. Curve | Date / Time |
|---|---|---|---|---|---|---|---|
| 1 | 123.6 | 3.725mg/L | 500uL | 1 | | TICCURVE-12-06-2011B.2011_12_06_15_47 | 05/15/2012 06:33:25 PM |
| 2 | 123.6 | 3.725mg/L | 500uL | 1 | | TICCURVE-12-06-2011B.2011_12_06_15_47 | 05/15/2012 06:37:56 PM |

Mean Area 123.6
Mean Conc. 3.725mg/L




Sample

Sample Name: WG398003-06 MS
Sample ID: <Untitled>
Origin: TOC-12-06-2011A.met
Status Completed
Chk. Result

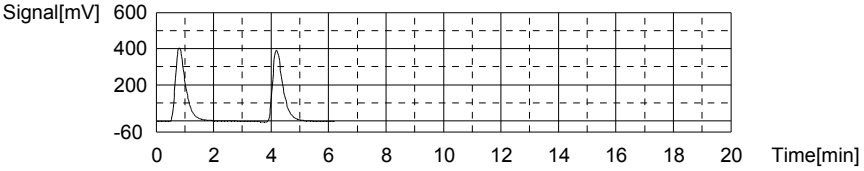
| Type | Anal. | Dil. | Result |
|---|---|---|---|
| Unknown | TOC | 1.000 | TOC:22.52mg/L TC:27.12mg/L IC:4.602mg/L |

1. Det

Anal.: TC

| No. | Area | Conc. | Inj. Vol. | Aut. Dil. | Ex. | Cal. Curve | Date / Time |
|---|---|---|---|---|---|---|---|
| 1 | 1029 | 27.39mg/L | 500uL | 1 | | TCCURVE-12-06-2011.2011_12_06_08_40_5 | 05/15/2012 06:46:46 PM |
| 2 | 1009 | 26.85mg/L | 500uL | 1 | | TCCURVE-12-06-2011.2011_12_06_08_40_5 | 05/15/2012 06:51:51 PM |

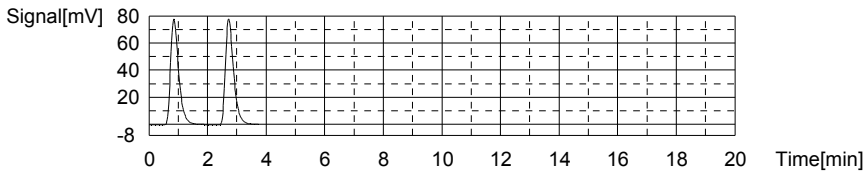
Mean Area 1019
Mean Conc. 27.12mg/L




Anal.: IC

| No. | Area | Conc. | Inj. Vol. | Aut. Dil. | Ex. | Cal. Curve | Date / Time |
|---|---|---|---|---|---|---|---|
| 1 | 149.3 | 4.590mg/L | 500uL | 1 | | TICCURVE-12-06-2011B.2011_12_06_15_47 | 05/15/2012 06:56:41 PM |
| 2 | 150.0 | 4.613mg/L | 500uL | 1 | | TICCURVE-12-06-2011B.2011_12_06_15_47 | 05/15/2012 07:01:15 PM |

Mean Area 149.7
Mean Conc. 4.602mg/L




Sample

Sample Name: CCV
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

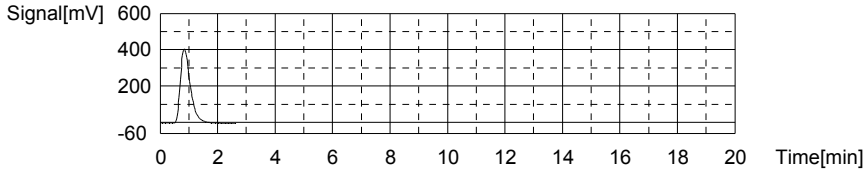
| Type | Anal. | Dil. | Result |
|---|---|---|---|
| Unknown | TOC | 1.000 | !!Error!! TOC:26.47mg/L TC:26.26mg/L IC:-0.2089mg/L |

1. Det

Anal.: TC

| No. | Area | Conc. | Inj. Vol. | Aut. Dil. | Ex. | Cal. Curve | Date / Time |
|---|---|---|---|---|---|---|---|
| 1 | 986.8 | 26.26mg/L | 500uL | 1 | | TCCURVE-12-06-2011.2011_12_06_08_40_5 | 05/15/2012 07:09:19 PM |

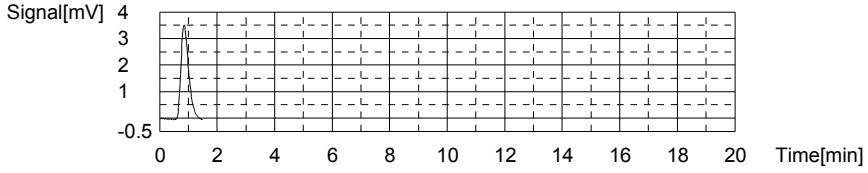
Mean Area 986.8
Mean Conc. 26.26mg/L




Anal.: IC

| No. | Area | Conc. | Inj. Vol. | Aut. Dil. | Ex. | Cal. Curve | Date / Time |
|---|---|---|---|---|---|---|---|
| 1 | 6.676 | -0.2089mg/L | 500uL | 1 | | TICCURVE-12-06-2011B.2011_12_06_15_47 | 05/15/2012 07:13:39 PM |

Mean Area 6.676
Mean Conc. -0.2089mg/L




Sample

Sample Name: WG398004-01 BLK
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

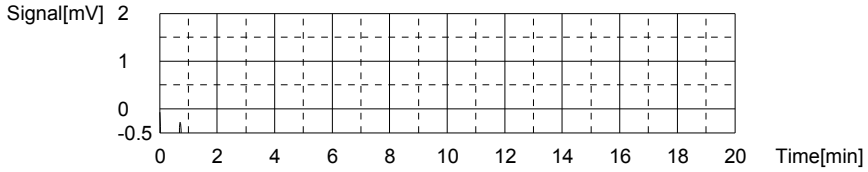
| Type | Anal. | Dil. | Result |
|---|---|---|---|
| Unknown | TOC | 1.000 | !!Error!! TOC:0.4040mg/L TC:0.2079mg/L IC:-0.1961mg/L |

1. Det

Anal.: TC

| No. | Area | Conc. | Inj. Vol. | Aut. Dil. | Ex. | Cal. Curve | Date / Time |
|---|---|---|---|---|---|---|---|
| 1 | 7.904 | 0.2079mg/L | 500uL | 1 | | TCCURVE-12-06-2011.2011_12_06_08_40_5 | 05/15/2012 07:18:52 PM |

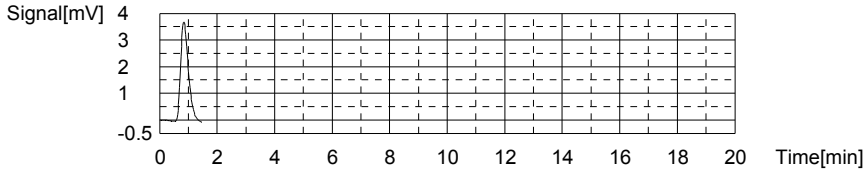
Mean Area 7.904
Mean Conc. 0.2079mg/L




Anal.: IC

| No. | Area | Conc. | Inj. Vol. | Aut. Dil. | Ex. | Cal. Curve | Date / Time |
|---|---|---|---|---|---|---|---|
| 1 | 7.056 | -0.1961mg/L | 500uL | 1 | | TICCURVE-12-06-2011B.2011_12_06_15_47_0 | 5/15/2012 07:22:45 PM |

Mean Area 7.056
Mean Conc. -0.1961mg/L




Sample

Sample Name: WG398004-02 LCS
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

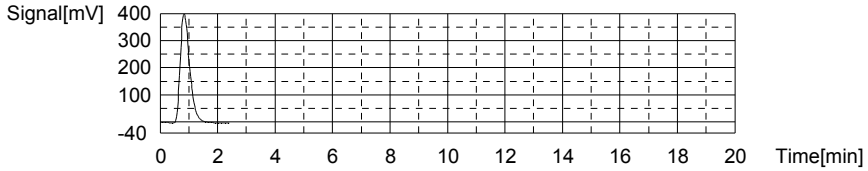
| Type | Anal. | Dil. | Result |
|---|---|---|---|
| Unknown | TOC | 1.000 | !!Error!! TOC:24.64mg/L TC:24.38mg/L IC:-0.2615mg/L |

1. Det

Anal.: TC

| No. | Area | Conc. | Inj. Vol. | Aut. Dil. | Ex. | Cal. Curve | Date / Time |
|---|---|---|---|---|---|---|---|
| 1 | 916.0 | 24.38mg/L | 500uL | 1 | | TCCURVE-12-06-2011.2011_12_06_08_40_5 | 05/15/2012 07:30:36 PM |

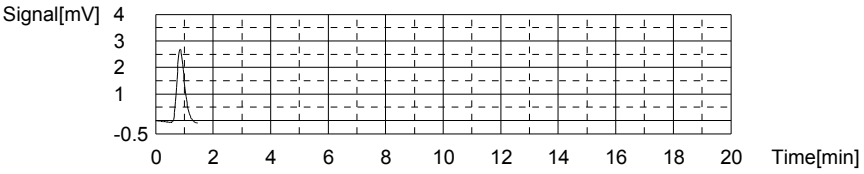
Mean Area 916.0
Mean Conc. 24.38mg/L




Anal.: IC

| No. | Area | Conc. | Inj. Vol. | Aut. Dil. | Ex. | Cal. Curve | Date / Time |
|---|---|---|---|---|---|---|---|
| 1 | 5.115 | -0.2615mg/L | 500uL | 1 | | TICCURVE-12-06-2011B.2011_12_06_15_47 | 05/15/2012 07:34:54 PM |

Mean Area 5.115
Mean Conc. -0.2615mg/L




Sample

Sample Name: WG398004-03 LCSDUP
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

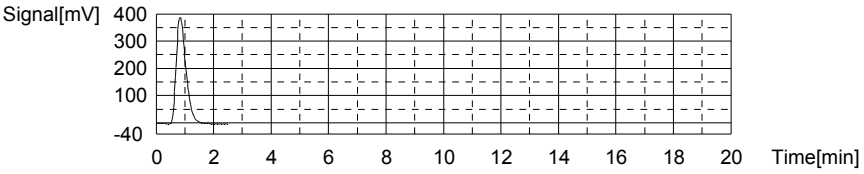
| Type | Anal. | Dil. | Result |
|---|---|---|---|
| Unknown | TOC | 1.000 | !!Error!! TOC:24.76mg/L TC:24.50mg/L IC:-0.2548mg/L |

1. Det

Anal.: TC

| No. | Area | Conc. | Inj. Vol. | Aut. Dil. | Ex. | Cal. Curve | Date / Time |
|---|---|---|---|---|---|---|---|
| 1 | 920.7 | 24.50mg/L | 500uL | 1 | | TCCURVE-12-06-2011.2011_12_06_08_40_5 | 05/15/2012 07:42:49 PM |

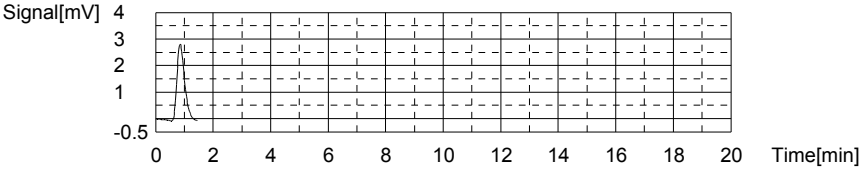
Mean Area 920.7
Mean Conc. 24.50mg/L




Anal.: IC

| No. | Area | Conc. | Inj. Vol. | Aut. Dil. | Ex. | Cal. Curve | Date / Time |
|---|---|---|---|---|---|---|---|
| 1 | 5.312 | -0.2548mg/L | 500uL | 1 | | TICCURVE-12-06-2011B.2011_12_06_15_47 | 05/15/2012 07:47:07 PM |

Mean Area 5.312
Mean Conc. -0.2548mg/L




Sample

Sample Name: L12050257-11 (2)
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

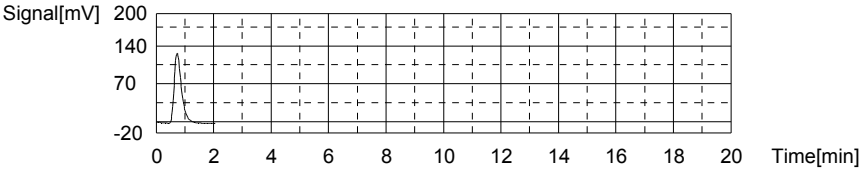
| Type | Anal. | Dil. | Result |
|---|---|---|---|
| Unknown | TOC | 1.000 | TOC:2.492mg/L TC:6.130mg/L IC:3.638mg/L |

1. Det

Anal.: TC

| No. | Area | Conc. | Inj. Vol. | Aut. Dil. | Ex. | Cal. Curve | Date / Time |
|---|---|---|---|---|---|---|---|
| 1 | 230.4 | 6.130mg/L | 500uL | 1 | | TCCURVE-12-06-2011.2011_12_06_08_40_5 | 05/15/2012 07:54:37 PM |

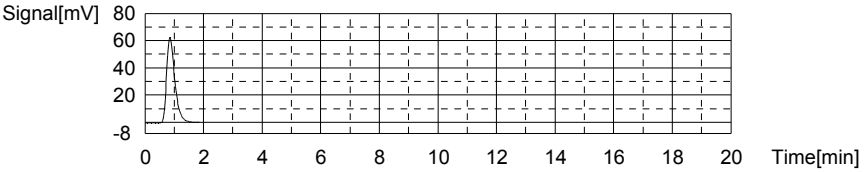
Mean Area 230.4
Mean Conc. 6.130mg/L




Anal.: IC

| No. | Area | Conc. | Inj. Vol. | Aut. Dil. | Ex. | Cal. Curve | Date / Time |
|---|---|---|---|---|---|---|---|
| 1 | 121.0 | 3.638mg/L | 500uL | 1 | | TICCURVE-12-06-2011B.2011_12_06_15_47_0 | 5/15/2012 07:59:26 PM |

Mean Area 121.0
Mean Conc. 3.638mg/L




Sample

Sample Name: L12050341-06 (25)
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

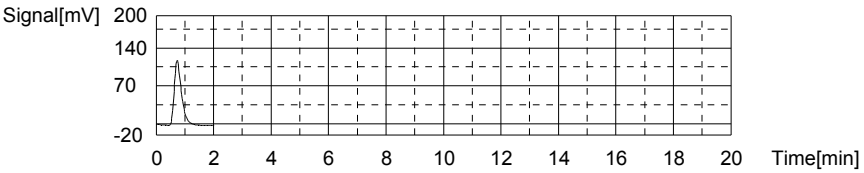
| Type | Anal. | Dil. | Result |
|---|---|---|---|
| Unknown | TOC | 1.000 | TOC:2.065mg/L TC:5.632mg/L IC:3.567mg/L |

1. Det

Anal.: TC

| No. | Area | Conc. | Inj. Vol. | Aut. Dil. | Ex. | Cal. Curve | Date / Time |
|---|---|---|---|---|---|---|---|
| 1 | 211.7 | 5.632mg/L | 500uL | 1 | | TCCURVE-12-06-2011.2011_12_06_08_40_5 | 05/15/2012 08:06:52 PM |

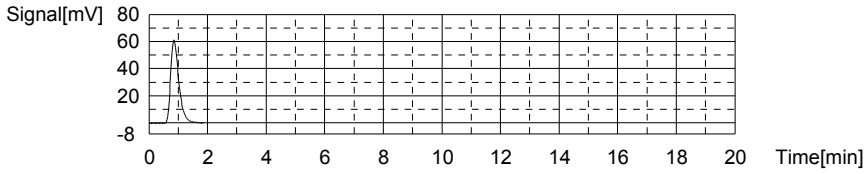
Mean Area 211.7
Mean Conc. 5.632mg/L




Anal.: IC

| No. | Area | Conc. | Inj. Vol. | Aut. Dil. | Ex. | Cal. Curve | Date / Time |
|---|---|---|---|---|---|---|---|
| 1 | 118.9 | 3.567mg/L | 500uL | 1 | | TICCURVE-12-06-2011B.2011_12_06_15_47 | 05/15/2012 08:11:42 PM |

Mean Area 118.9
Mean Conc. 3.567mg/L




Sample

Sample Name: L12050226-07 (50)
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

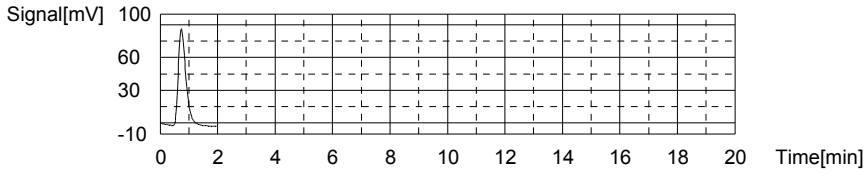
| Type | Anal. | Dil. | Result |
|---|---|---|---|
| Unknown | TOC | 1.000 | TOC:2.280mg/L TC:4.352mg/L IC:2.072mg/L |

1. Det

Anal.: TC

| No. | Area | Conc. | Inj. Vol. | Aut. Dil. | Ex. | Cal. Curve | Date / Time |
|---|---|---|---|---|---|---|---|
| 1 | 163.6 | 4.352mg/L | 500uL | 1 | | TCCURVE-12-06-2011.2011_12_06_08_40_5 | 05/15/2012 08:19:05 PM |

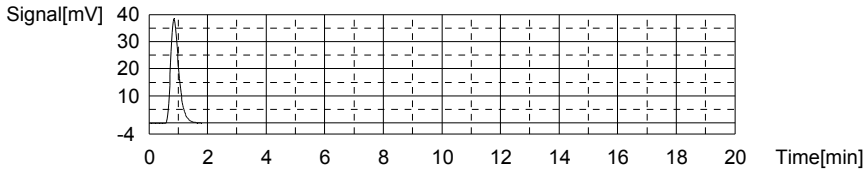
Mean Area 163.6
Mean Conc. 4.352mg/L




Anal.: IC

| No. | Area | Conc. | Inj. Vol. | Aut. Dil. | Ex. | Cal. Curve | Date / Time |
|---|---|---|---|---|---|---|---|
| 1 | 74.46 | 2.072mg/L | 500uL | 1 | | TICCURVE-12-06-2011B.2011_12_06_15_47 | 05/15/2012 08:23:46 PM |

Mean Area 74.46
Mean Conc. 2.072mg/L




Sample

Sample Name: L12050342-01
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

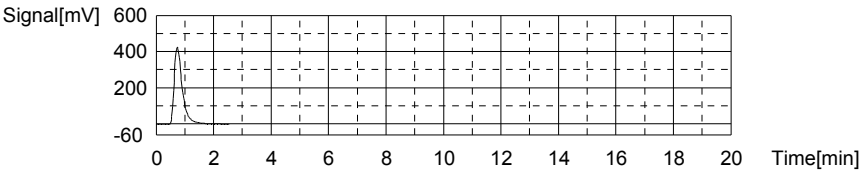
| Type | Anal. | Dil. | Result |
|---|---|---|---|
| Unknown | TOC | 1.000 | TOC:7.027mg/L TC:22.54mg/L IC:15.51mg/L |

1. Det

Anal.: TC

| No. | Area | Conc. | Inj. Vol. | Aut. Dil. | Ex. | Cal. Curve | Date / Time |
|---|---|---|---|---|---|---|---|
| 1 | 847.0 | 22.54mg/L | 500uL | 1 | | TCCURVE-12-06-2011.2011_12_06_08_40_5 | 05/15/2012 08:31:44 PM |

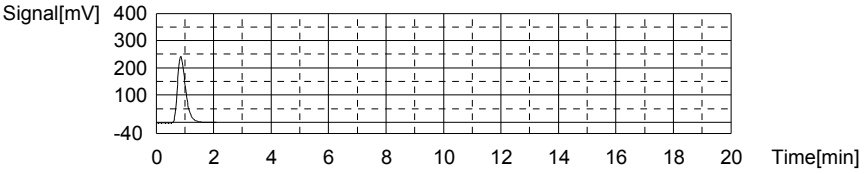
Mean Area 847.0
Mean Conc. 22.54mg/L




Anal.: IC

| No. | Area | Conc. | Inj. Vol. | Aut. Dil. | Ex. | Cal. Curve | Date / Time |
|---|---|---|---|---|---|---|---|
| 1 | 474.0 | 15.51mg/L | 500uL | 1 | | TICCURVE-12-06-2011B.2011_12_06_15_47_0 | 5/15/2012 08:36:55 PM |

Mean Area 474.0
Mean Conc. 15.51mg/L




Sample

Sample Name: L12050342-03
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

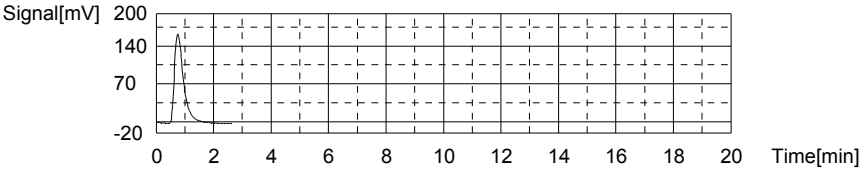
| Type | Anal. | Dil. | Result |
|---|---|---|---|
| Unknown | TOC | 1.000 | TOC:5.608mg/L TC:9.875mg/L IC:4.267mg/L |

1. Det

Anal.: TC

| No. | Area | Conc. | Inj. Vol. | Aut. Dil. | Ex. | Cal. Curve | Date / Time |
|---|---|---|---|---|---|---|---|
| 1 | 371.1 | 9.875mg/L | 500uL | 1 | | TCCURVE-12-06-2011.2011_12_06_08_40_5 | 05/15/2012 08:44:57 PM |

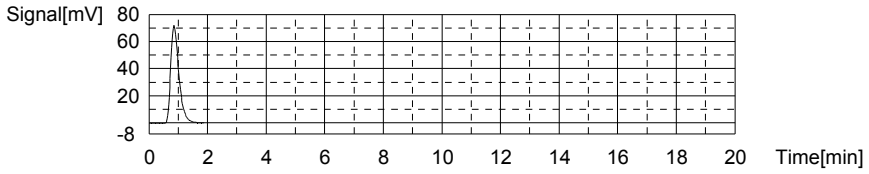
Mean Area 371.1
Mean Conc. 9.875mg/L




Anal.: IC

| No. | Area | Conc. | Inj. Vol. | Aut. Dil. | Ex. | Cal. Curve | Date / Time |
|---|---|---|---|---|---|---|---|
| 1 | 139.7 | 4.267mg/L | 500uL | 1 | | TICCURVE-12-06-2011B.2011_12_06_15_47 | 05/15/2012 08:49:48 PM |

Mean Area 139.7
Mean Conc. 4.267mg/L




Sample

Sample Name: L12050342-05
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

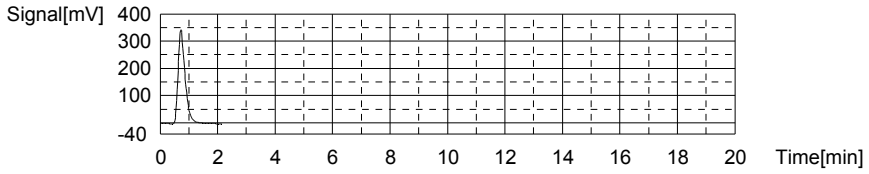
| Type | Anal. | Dil. | Result |
|---|---|---|---|
| Unknown | TOC | 1.000 | TOC:2.535mg/L TC:15.56mg/L IC:13.03mg/L |

1. Det

Anal.: TC

| No. | Area | Conc. | Inj. Vol. | Aut. Dil. | Ex. | Cal. Curve | Date / Time |
|---|---|---|---|---|---|---|---|
| 1 | 584.8 | 15.56mg/L | 500uL | 1 | | TCCURVE-12-06-2011.2011_12_06_08_40_5 | 05/15/2012 08:57:23 PM |

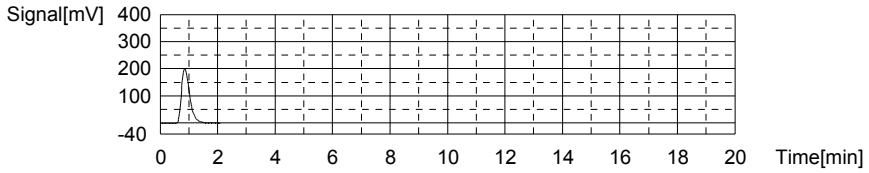
Mean Area 584.8
Mean Conc. 15.56mg/L




Anal.: IC

| No. | Area | Conc. | Inj. Vol. | Aut. Dil. | Ex. | Cal. Curve | Date / Time |
|---|---|---|---|---|---|---|---|
| 1 | 400.1 | 13.03mg/L | 500uL | 1 | | TICCURVE-12-06-2011B.2011_12_06_15_47 | 05/15/2012 09:02:35 PM |

Mean Area 400.1
Mean Conc. 13.03mg/L




Sample

Sample Name: L12050342-07
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

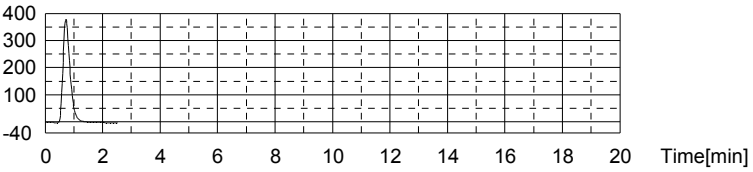
| Type | Anal. | Dil. | Result |
|---|---|---|---|
| Unknown | TOC | 1.000 | TOC:2.565mg/L TC:17.51mg/L IC:14.95mg/L |

1. Det

Anal.: TC

| No. | Area | Conc. | Inj. Vol. | Aut. Dil. | Ex. | Cal. Curve | Date / Time |
|---|---|---|---|---|---|---|---|
| 1 | 658.0 | 17.51mg/L | 500uL | 1 | | TCCURVE-12-06-2011.2011_12_06_08_40_5 | 05/15/2012 09:10:32 PM |

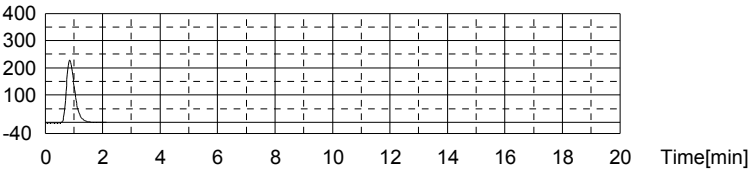
Mean Area 658.0
Mean Conc. 17.51mg/L




Anal.: IC

| No. | Area | Conc. | Inj. Vol. | Aut. Dil. | Ex. | Cal. Curve | Date / Time |
|---|---|---|---|---|---|---|---|
| 1 | 457.1 | 14.95mg/L | 500uL | 1 | | TICCURVE-12-06-2011B.2011_12_06_15_47_0 | 5/15/2012 09:15:48 PM |

Mean Area 457.1
Mean Conc. 14.95mg/L




Sample

Sample Name: L12050342-09
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

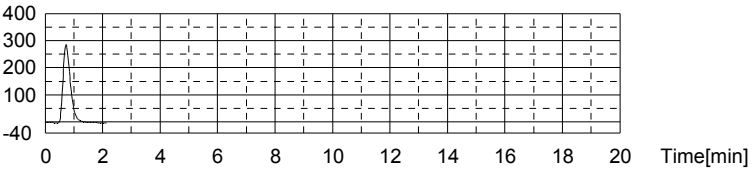
| Type | Anal. | Dil. | Result |
|---|---|---|---|
| Unknown | TOC | 1.000 | TOC:2.447mg/L TC:13.76mg/L IC:11.31mg/L |

1. Det

Anal.: TC

| No. | Area | Conc. | Inj. Vol. | Aut. Dil. | Ex. | Cal. Curve | Date / Time |
|---|---|---|---|---|---|---|---|
| 1 | 516.9 | 13.76mg/L | 500uL | 1 | | TCCURVE-12-06-2011.2011_12_06_08_40_5 | 05/15/2012 09:23:21 PM |

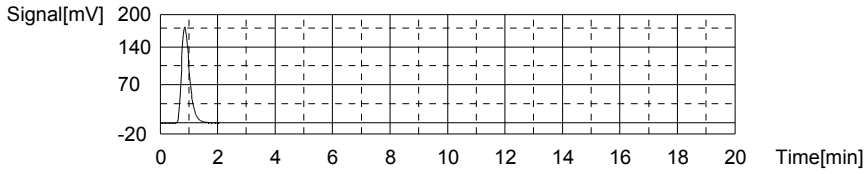
Mean Area 516.9
Mean Conc. 13.76mg/L




Anal.: IC

| No. | Area | Conc. | Inj. Vol. | Aut. Dil. | Ex. | Cal. Curve | Date / Time |
|---|---|---|---|---|---|---|---|
| 1 | 349.0 | 11.31mg/L | 500uL | 1 | | TICCURVE-12-06-2011B.2011_12_06_15_47 | 05/15/2012 09:28:31 PM |

Mean Area 349.0
Mean Conc. 11.31mg/L




Sample

Sample Name: CCV
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

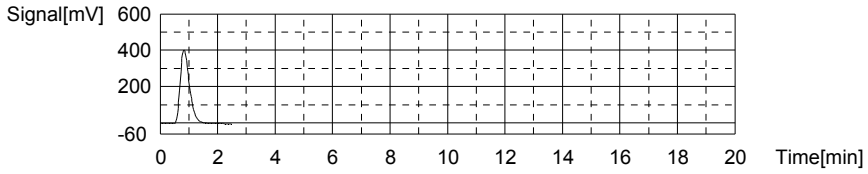
| Type | Anal. | Dil. | Result |
|---|---|---|---|
| Unknown | TOC | 1.000 | !!Error!! TOC:24.44mg/L TC:24.26mg/L IC:-0.1805mg/L |

1. Det

Anal.: TC

| No. | Area | Conc. | Inj. Vol. | Aut. Dil. | Ex. | Cal. Curve | Date / Time |
|---|---|---|---|---|---|---|---|
| 1 | 911.5 | 24.26mg/L | 500uL | 1 | | TCCURVE-12-06-2011.2011_12_06_08_40_5 | 05/15/2012 09:36:27 PM |

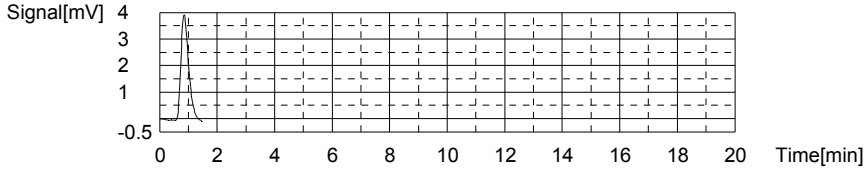
Mean Area 911.5
Mean Conc. 24.26mg/L




Anal.: IC

| No. | Area | Conc. | Inj. Vol. | Aut. Dil. | Ex. | Cal. Curve | Date / Time |
|---|---|---|---|---|---|---|---|
| 1 | 7.521 | -0.1805mg/L | 500uL | 1 | | TICCURVE-12-06-2011B.2011_12_06_15_47 | 05/15/2012 09:40:49 PM |

Mean Area 7.521
Mean Conc. -0.1805mg/L




Sample

Sample Name: CCB
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

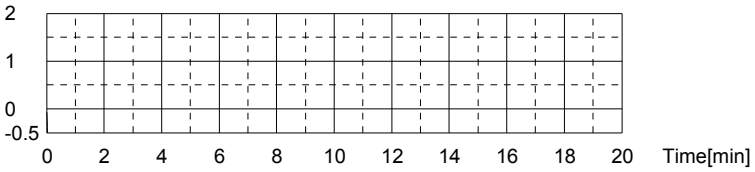
| Type | Anal. | Dil. | Result |
|---|---|---|---|
| Unknown | TOC | 1.000 | !!Error!! TOC:0.3646mg/L TC:0.1773mg/L IC:-0.1873mg/L |

1. Det

Anal.: TC

| No. | Area | Conc. | Inj. Vol. | Aut. Dil. | Ex. | Cal. Curve | Date / Time |
|---|---|---|---|---|---|---|---|
| 1 | 6.753 | 0.1773mg/L | 500uL | 1 | | TCCURVE-12-06-2011.2011_12_06_08_40_5 | 05/15/2012 09:46:04 PM |

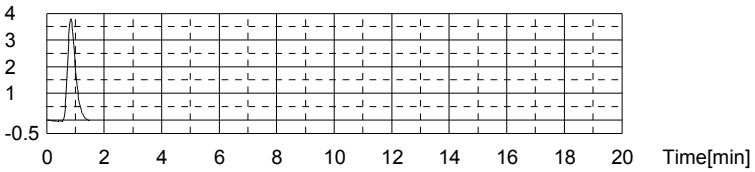
Mean Area 6.753
Mean Conc. 0.1773mg/L




Anal.: IC

| No. | Area | Conc. | Inj. Vol. | Aut. Dil. | Ex. | Cal. Curve | Date / Time |
|---|---|---|---|---|---|---|---|
| 1 | 7.319 | -0.1873mg/L | 500uL | 1 | | TICCURVE-12-06-2011B.2011_12_06_15_47_0 | 5/15/2012 09:50:00 PM |

Mean Area 7.319
Mean Conc. -0.1873mg/L




Sample

Sample Name: L12050342-11
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

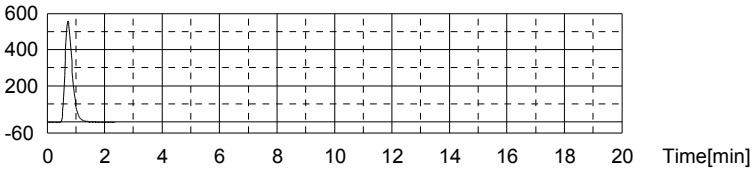
| Type | Anal. | Dil. | Result |
|---|---|---|---|
| Unknown | TOC | 1.000 | TOC:3.350mg/L TC:26.48mg/L IC:23.13mg/L |

1. Det

Anal.: TC

| No. | Area | Conc. | Inj. Vol. | Aut. Dil. | Ex. | Cal. Curve | Date / Time |
|---|---|---|---|---|---|---|---|
| 1 | 994.8 | 26.48mg/L | 500uL | 1 | | TCCURVE-12-06-2011.2011_12_06_08_40_5 | 05/15/2012 09:57:47 PM |

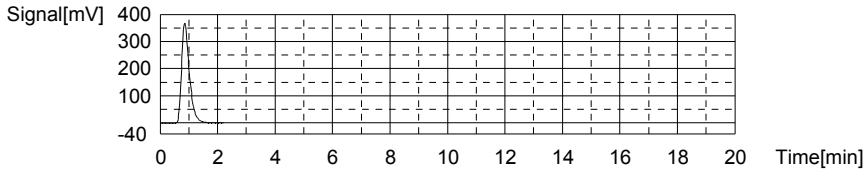
Mean Area 994.8
Mean Conc. 26.48mg/L




Anal.: IC

| No. | Area | Conc. | Inj. Vol. | Aut. Dil. | Ex. | Cal. Curve | Date / Time |
|---|---|---|---|---|---|---|---|
| 1 | 700.2 | 23.13mg/L | 500uL | 1 | | TICCURVE-12-06-2011B.2011_12_06_15_47 | 05/15/2012 10:03:09 PM |

Mean Area 700.2
Mean Conc. 23.13mg/L




Sample

Sample Name: L12050243-02 (2)
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

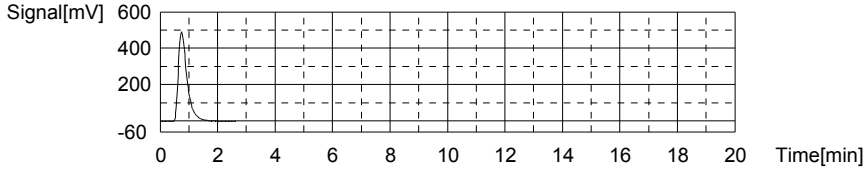
| Type | Anal. | Dil. | Result |
|---|---|---|---|
| Unknown | TOC | 1.000 | TOC:11.86mg/L TC:28.08mg/L IC:16.22mg/L |

1. Det

Anal.: TC

| No. | Area | Conc. | Inj. Vol. | Aut. Dil. | Ex. | Cal. Curve | Date / Time |
|---|---|---|---|---|---|---|---|
| 1 | 1055 | 28.08mg/L | 500uL | 1 | | TCCURVE-12-06-2011.2011_12_06_08_40_5 | 05/15/2012 10:11:14 PM |

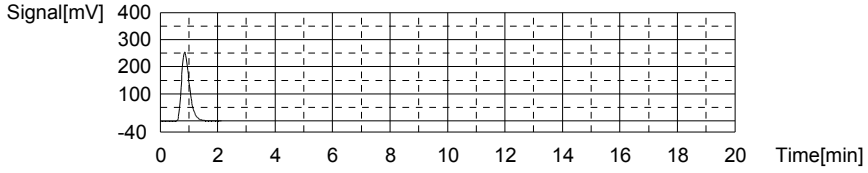
Mean Area 1055
Mean Conc. 28.08mg/L




Anal.: IC

| No. | Area | Conc. | Inj. Vol. | Aut. Dil. | Ex. | Cal. Curve | Date / Time |
|---|---|---|---|---|---|---|---|
| 1 | 495.0 | 16.22mg/L | 500uL | 1 | | TICCURVE-12-06-2011B.2011_12_06_15_47 | 05/15/2012 10:16:30 PM |

Mean Area 495.0
Mean Conc. 16.22mg/L




Sample

Sample Name: L12050243-03 (2)
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

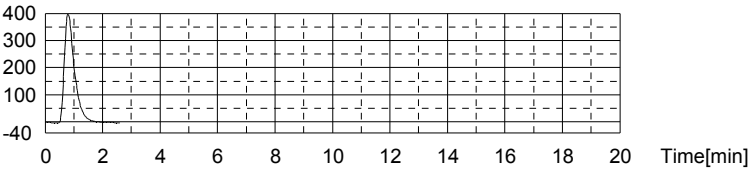
| Type | Anal. | Dil. | Result |
|---|---|---|---|
| Unknown | TOC | 1.000 | TOC:20.61mg/L TC:26.28mg/L IC:5.670mg/L |

1. Det

Anal.: TC

| No. | Area | Conc. | Inj. Vol. | Aut. Dil. | Ex. | Cal. Curve | Date / Time |
|---|---|---|---|---|---|---|---|
| 1 | 987.6 | 26.28mg/L | 500uL | 1 | | TCCURVE-12-06-2011.2011_12_06_08_40_5 | 05/15/2012 10:24:32 PM |

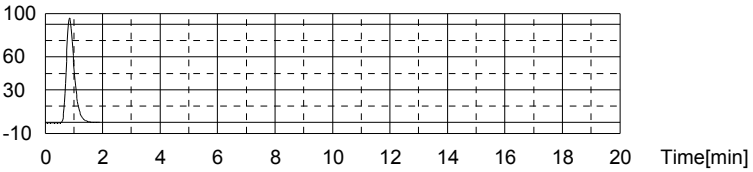
Mean Area 987.6
Mean Conc. 26.28mg/L




Anal.: IC

| No. | Area | Conc. | Inj. Vol. | Aut. Dil. | Ex. | Cal. Curve | Date / Time |
|---|---|---|---|---|---|---|---|
| 1 | 181.4 | 5.670mg/L | 500uL | 1 | | TICCURVE-12-06-2011B.2011_12_06_15_47_0 | 5/15/2012 10:29:23 PM |

Mean Area 181.4
Mean Conc. 5.670mg/L




Sample

Sample Name: L12050243-04 (2)
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

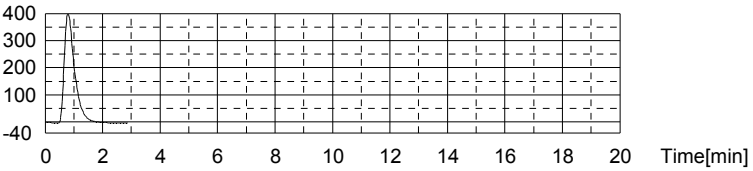
| Type | Anal. | Dil. | Result |
|---|---|---|---|
| Unknown | TOC | 1.000 | TOC:20.95mg/L TC:26.85mg/L IC:5.902mg/L |

1. Det

Anal.: TC

| No. | Area | Conc. | Inj. Vol. | Aut. Dil. | Ex. | Cal. Curve | Date / Time |
|---|---|---|---|---|---|---|---|
| 1 | 1009 | 26.85mg/L | 500uL | 1 | | TCCURVE-12-06-2011.2011_12_06_08_40_5 | 05/15/2012 10:37:43 PM |

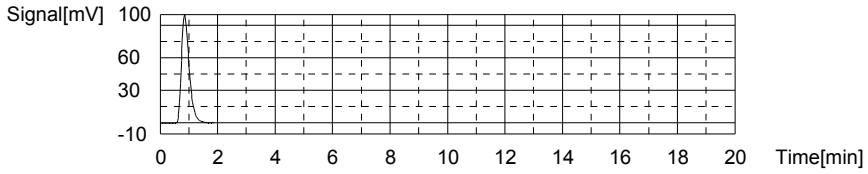
Mean Area 1009
Mean Conc. 26.85mg/L




Anal.: IC

| No. | Area | Conc. | Inj. Vol. | Aut. Dil. | Ex. | Cal. Curve | Date / Time |
|---|---|---|---|---|---|---|---|
| 1 | 188.3 | 5.902mg/L | 500uL | 1 | | TICCURVE-12-06-2011B.2011_12_06_15_47 | 05/15/2012 10:42:37 PM |

Mean Area 188.3
Mean Conc. 5.902mg/L




Sample

Sample Name: L12050362-01 (5)
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

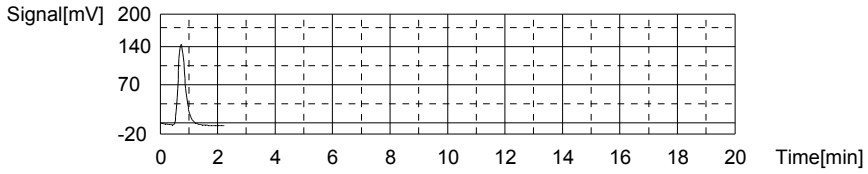
| Type | Anal. | Dil. | Result |
|---|---|---|---|
| Unknown | TOC | 1.000 | TOC:1.751mg/L TC:7.000mg/L IC:5.249mg/L |

1. Det

Anal.: TC

| No. | Area | Conc. | Inj. Vol. | Aut. Dil. | Ex. | Cal. Curve | Date / Time |
|---|---|---|---|---|---|---|---|
| 1 | 263.1 | 7.000mg/L | 500uL | 1 | | TCCURVE-12-06-2011.2011_12_06_08_40_5 | 05/15/2012 10:50:17 PM |

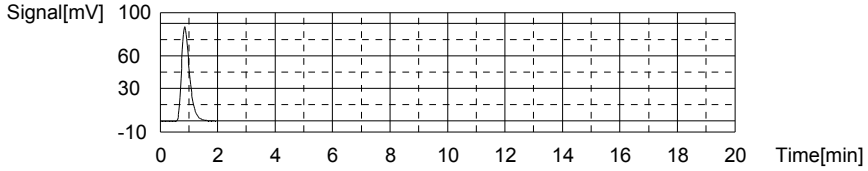
Mean Area 263.1
Mean Conc. 7.000mg/L




Anal.: IC

| No. | Area | Conc. | Inj. Vol. | Aut. Dil. | Ex. | Cal. Curve | Date / Time |
|---|---|---|---|---|---|---|---|
| 1 | 168.9 | 5.249mg/L | 500uL | 1 | | TICCURVE-12-06-2011B.2011_12_06_15_47 | 05/15/2012 10:55:11 PM |

Mean Area 168.9
Mean Conc. 5.249mg/L




Sample

Sample Name: L12050362-03 (5)
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

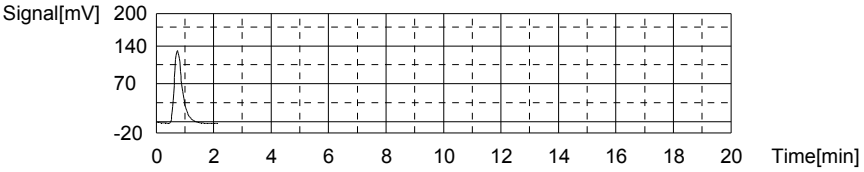
| Type | Anal. | Dil. | Result |
|---|---|---|---|
| Unknown | TOC | 1.000 | TOC:3.159mg/L TC:7.006mg/L IC:3.846mg/L |

1. Det

Anal.: TC

| No. | Area | Conc. | Inj. Vol. | Aut. Dil. | Ex. | Cal. Curve | Date / Time |
|---|---|---|---|---|---|---|---|
| 1 | 263.3 | 7.006mg/L | 500uL | 1 | | TCCURVE-12-06-2011.2011_12_06_08_40_5 | 05/15/2012 11:02:47 PM |

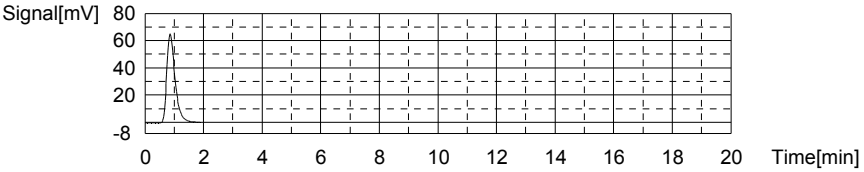
Mean Area 263.3
Mean Conc. 7.006mg/L




Anal.: IC

| No. | Area | Conc. | Inj. Vol. | Aut. Dil. | Ex. | Cal. Curve | Date / Time |
|---|---|---|---|---|---|---|---|
| 1 | 127.2 | 3.846mg/L | 500uL | 1 | | TICCURVE-12-06-2011B.2011_12_06_15_47_0 | 5/15/2012 11:07:39 PM |

Mean Area 127.2
Mean Conc. 3.846mg/L




Sample

Sample Name: L12050362-04 (5)
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

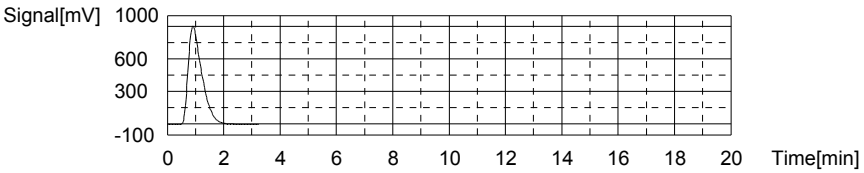
| Type | Anal. | Dil. | Result |
|---|---|---|---|
| Unknown | TOC | 1.000 | TOC:78.57mg/L TC:81.52mg/L IC:2.951mg/L |

1. Det

Anal.: TC

| No. | Area | Conc. | Inj. Vol. | Aut. Dil. | Ex. | Cal. Curve | Date / Time |
|---|---|---|---|---|---|---|---|
| 1 | 3063 | 81.52mg/L | 500uL | 1 | | TCCURVE-12-06-2011.2011_12_06_08_40_5 | 05/15/2012 11:16:21 PM |

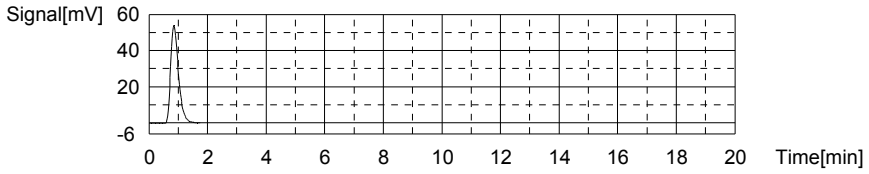
Mean Area 3063
Mean Conc. 81.52mg/L




Anal.: IC

| No. | Area | Conc. | Inj. Vol. | Aut. Dil. | Ex. | Cal. Curve | Date / Time |
|---|---|---|---|---|---|---|---|
| 1 | 100.6 | 2.951mg/L | 500uL | 1 | | TICCURVE-12-06-2011B.2011_12_06_15_47 | 05/15/2012 11:21:01 PM |

Mean Area 100.6
Mean Conc. 2.951mg/L




Sample

Sample Name: L12050362-07 (5)
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

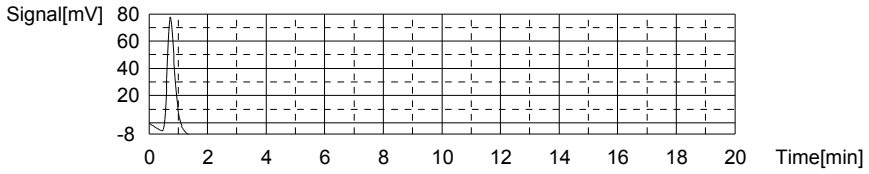
| Type | Anal. | Dil. | Result |
|---|---|---|---|
| Unknown | TOC | 1.000 | TOC:1.072mg/L TC:3.918mg/L IC:2.846mg/L |

1. Det

Anal.: TC

| No. | Area | Conc. | Inj. Vol. | Aut. Dil. | Ex. | Cal. Curve | Date / Time |
|---|---|---|---|---|---|---|---|
| 1 | 147.3 | 3.918mg/L | 500uL | 1 | | TCCURVE-12-06-2011.2011_12_06_08_40_5 | 05/15/2012 11:28:23 PM |

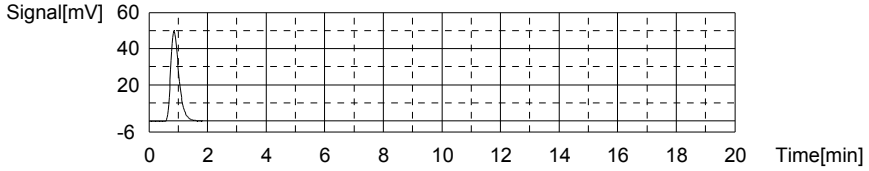
Mean Area 147.3
Mean Conc. 3.918mg/L




Anal.: IC

| No. | Area | Conc. | Inj. Vol. | Aut. Dil. | Ex. | Cal. Curve | Date / Time |
|---|---|---|---|---|---|---|---|
| 1 | 97.47 | 2.846mg/L | 500uL | 1 | | TICCURVE-12-06-2011B.2011_12_06_15_47 | 05/15/2012 11:33:06 PM |

Mean Area 97.47
Mean Conc. 2.846mg/L




Sample

Sample Name: L12050362-08 (5)
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

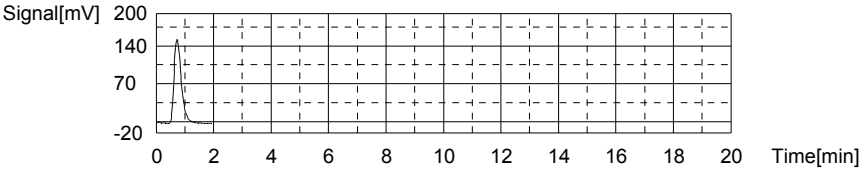
| Type | Anal. | Dil. | Result |
|---|---|---|---|
| Unknown | TOC | 1.000 | TOC:1.626mg/L TC:7.269mg/L IC:5.643mg/L |

1. Det

Anal.: TC

| No. | Area | Conc. | Inj. Vol. | Aut. Dil. | Ex. | Cal. Curve | Date / Time |
|---|---|---|---|---|---|---|---|
| 1 | 273.2 | 7.269mg/L | 500uL | 1 | | TCCURVE-12-06-2011.2011_12_06_08_40_5 | 05/15/2012 11:40:28 PM |

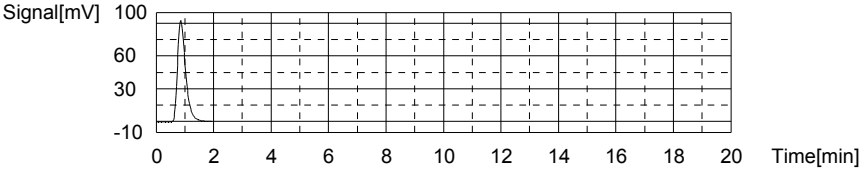
Mean Area 273.2
Mean Conc. 7.269mg/L




Anal.: IC

| No. | Area | Conc. | Inj. Vol. | Aut. Dil. | Ex. | Cal. Curve | Date / Time |
|---|---|---|---|---|---|---|---|
| 1 | 180.6 | 5.643mg/L | 500uL | 1 | | TICCURVE-12-06-2011B.2011_12_06_15_47_0 | 5/15/2012 11:45:22 PM |

Mean Area 180.6
Mean Conc. 5.643mg/L




Sample

Sample Name: L12050362-08 (5)
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

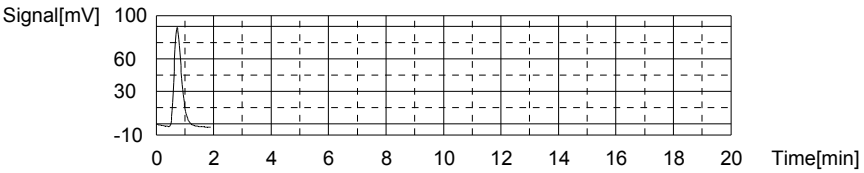
| Type | Anal. | Dil. | Result |
|---|---|---|---|
| Unknown | TOC | 1.000 | TOC:1.101mg/L TC:4.379mg/L IC:3.278mg/L |

1. Det

Anal.: TC

| No. | Area | Conc. | Inj. Vol. | Aut. Dil. | Ex. | Cal. Curve | Date / Time |
|---|---|---|---|---|---|---|---|
| 1 | 164.6 | 4.379mg/L | 500uL | 1 | | TCCURVE-12-06-2011.2011_12_06_08_40_5 | 05/15/2012 11:52:42 PM |

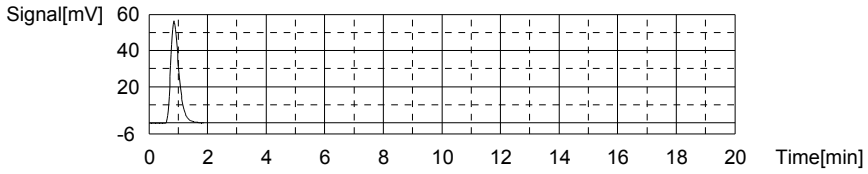
Mean Area 164.6
Mean Conc. 4.379mg/L




Anal.: IC

| No. | Area | Conc. | Inj. Vol. | Aut. Dil. | Ex. | Cal. Curve | Date / Time |
|---|---|---|---|---|---|---|---|
| 1 | 110.3 | 3.278mg/L | 500uL | 1 | | TICCURVE-12-06-2011B.2011_12_06_15_47 | 05/15/2012 11:57:33 PM |

Mean Area 110.3
Mean Conc. 3.278mg/L




Sample

Sample Name: CCV
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

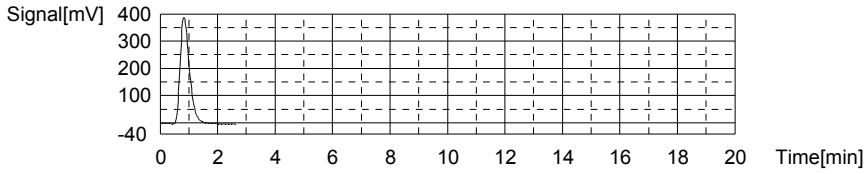
| Type | Anal. | Dil. | Result |
|---|---|---|---|
| Unknown | TOC | 1.000 | !!Error!! TOC:23.57mg/L TC:23.36mg/L IC:-0.2116mg/L |

1. Det

Anal.: TC

| No. | Area | Conc. | Inj. Vol. | Aut. Dil. | Ex. | Cal. Curve | Date / Time |
|---|---|---|---|---|---|---|---|
| 1 | 877.8 | 23.36mg/L | 500uL | 1 | | TCCURVE-12-06-2011.2011_12_06_08_40_5 | 05/16/2012 12:05:36 AM |

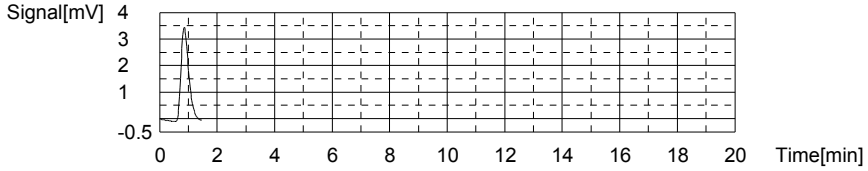
Mean Area 877.8
Mean Conc. 23.36mg/L




Anal.: IC

| No. | Area | Conc. | Inj. Vol. | Aut. Dil. | Ex. | Cal. Curve | Date / Time |
|---|---|---|---|---|---|---|---|
| 1 | 6.596 | -0.2116mg/L | 500uL | 1 | | TICCURVE-12-06-2011B.2011_12_06_15_47 | 05/16/2012 12:09:54 AM |

Mean Area 6.596
Mean Conc. -0.2116mg/L




Sample

Sample Name: CCB
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

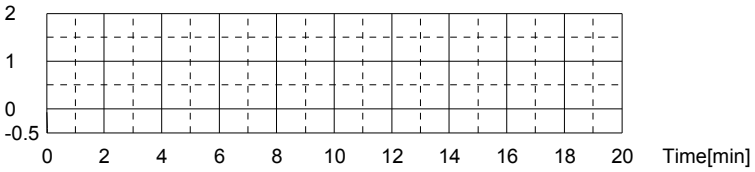
| Type | Anal. | Dil. | Result |
|---|---|---|---|
| Unknown | TOC | 1.000 | !!Error!! TOC:0.3735mg/L TC:0.1826mg/L IC:-0.1909mg/L |

1. Det

Anal.: TC

| No. | Area | Conc. | Inj. Vol. | Aut. Dil. | Ex. | Cal. Curve | Date / Time |
|---|---|---|---|---|---|---|---|
| 1 | 6.955 | 0.1826mg/L | 500uL | 1 | | TCCURVE-12-06-2011.2011_12_06_08_40_5 | 05/16/2012 12:15:08 AM |

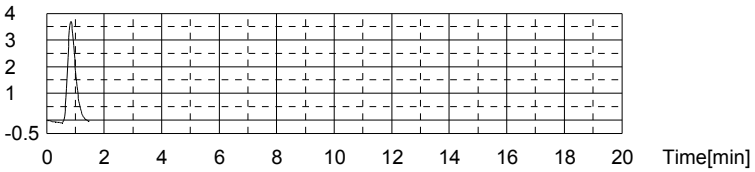
Mean Area 6.955
Mean Conc. 0.1826mg/L




Anal.: IC

| No. | Area | Conc. | Inj. Vol. | Aut. Dil. | Ex. | Cal. Curve | Date / Time |
|---|---|---|---|---|---|---|---|
| 1 | 7.212 | -0.1909mg/L | 500uL | 1 | | TICCURVE-12-06-2011B.2011_12_06_15_47_0 | 5/16/2012 12:19:04 AM |

Mean Area 7.212
Mean Conc. -0.1909mg/L




Sample

Sample Name:
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

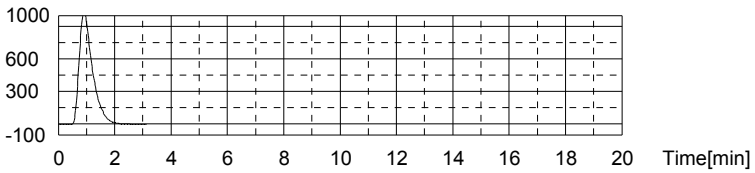
| Type | Anal. | Dil. | Result |
|---|---|---|---|
| Unknown | TOC | 1.000 | TOC:84.04mg/L TC:90.52mg/L IC:6.481mg/L |

1. Det

Anal.: TC

| No. | Area | Conc. | Inj. Vol. | Aut. Dil. | Ex. | Cal. Curve | Date / Time |
|---|---|---|---|---|---|---|---|
| 1 | 3401 | 90.52mg/L | 500uL | 1 | | TCCURVE-12-06-2011.2011_12_06_08_40_5 | 05/16/2012 12:27:39 AM |

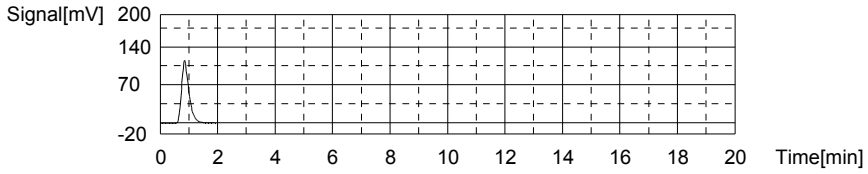
Mean Area 3401
Mean Conc. 90.52mg/L




Anal.: IC

| No. | Area | Conc. | Inj. Vol. | Aut. Dil. | Ex. | Cal. Curve | Date / Time |
|---|---|---|---|---|---|---|---|
| 1 | 205.5 | 6.481mg/L | 500uL | 1 | | TICCURVE-12-06-2011B.2011_12_06_15_47 | 05/16/2012 12:32:34 AM |

Mean Area 205.5
Mean Conc. 6.481mg/L




Sample

Sample Name: WG398004-04 (5)
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

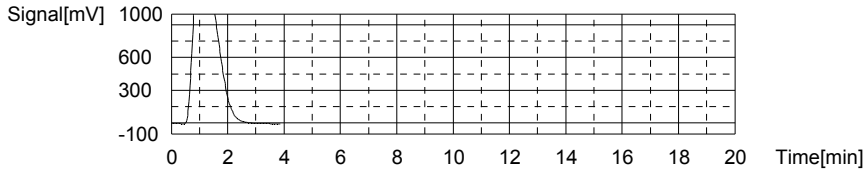
| Type | Anal. | Dil. | Result |
|---|---|---|---|
| Unknown | TOC | 1.000 | TOC:203.8mg/L TC:212.1mg/L IC:8.251mg/L |

1. Det

Anal.: TC

| No. | Area | Conc. | Inj. Vol. | Aut. Dil. | Ex. | Cal. Curve | Date / Time |
|---|---|---|---|---|---|---|---|
| 1 | 7967 | 212.1mg/L | 500uL | 1 | | TCCURVE-12-06-2011.2011_12_06_08_40_5 | 05/16/2012 12:41:52 AM |

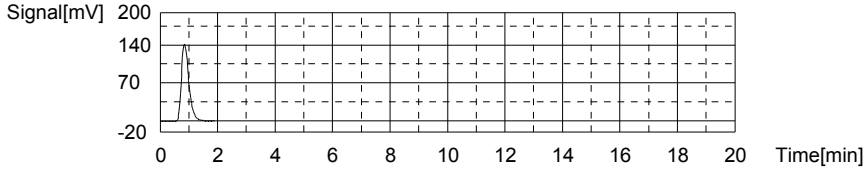
Mean Area 7967
Mean Conc. 212.1mg/L




Anal.: IC

| No. | Area | Conc. | Inj. Vol. | Aut. Dil. | Ex. | Cal. Curve | Date / Time |
|---|---|---|---|---|---|---|---|
| 1 | 258.1 | 8.251mg/L | 500uL | 1 | | TICCURVE-12-06-2011B.2011_12_06_15_47 | 05/16/2012 12:46:45 AM |

Mean Area 258.1
Mean Conc. 8.251mg/L




Sample

Sample Name: WG398004-05 (5) DUP
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

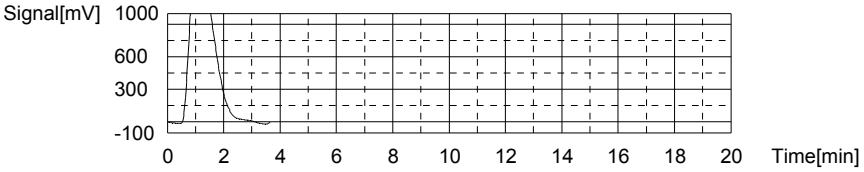
| Type | Anal. | Dil. | Result |
|---|---|---|---|
| Unknown | TOC | 1.000 | TOC:201.1mg/L TC:209.0mg/L IC:7.897mg/L |

1. Det

Anal.: TC

| No. | Area | Conc. | Inj. Vol. | Aut. Dil. | Ex. | Cal. Curve | Date / Time |
|---|---|---|---|---|---|---|---|
| 1 | 7853 | 209.0mg/L | 500uL | 1 | | TCCURVE-12-06-2011.2011_12_06_08_40_5 | 05/16/2012 12:55:51 AM |

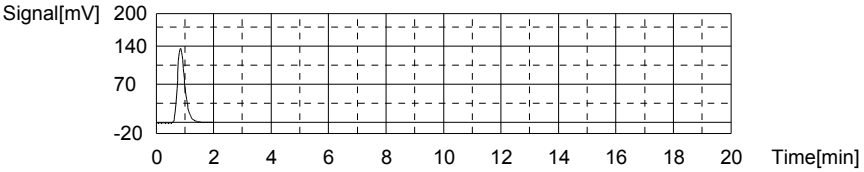
Mean Area 7853
Mean Conc. 209.0mg/L




Anal.: IC

| No. | Area | Conc. | Inj. Vol. | Aut. Dil. | Ex. | Cal. Curve | Date / Time |
|---|---|---|---|---|---|---|---|
| 1 | 247.6 | 7.897mg/L | 500uL | 1 | | TICCURVE-12-06-2011B.2011_12_06_15_47_0 | 5/16/2012 01:00:48 AM |

Mean Area 247.6
Mean Conc. 7.897mg/L




Sample

Sample Name: WG398004-06 (5) MS
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

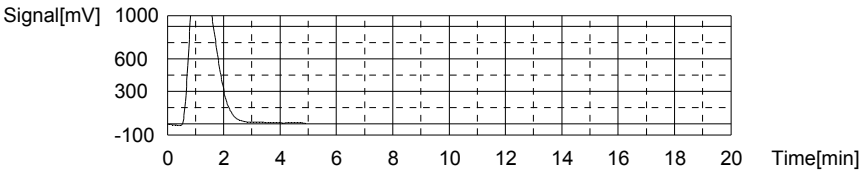
| Type | Anal. | Dil. | Result |
|---|---|---|---|
| Unknown | TOC | 1.000 | TOC:212.6mg/L TC:219.2mg/L IC:6.588mg/L |

1. Det

Anal.: TC

| No. | Area | Conc. | Inj. Vol. | Aut. Dil. | Ex. | Cal. Curve | Date / Time |
|---|---|---|---|---|---|---|---|
| 1 | 8235 | 219.2mg/L | 500uL | 1 | | TCCURVE-12-06-2011.2011_12_06_08_40_5 | 05/16/2012 01:11:09 AM |

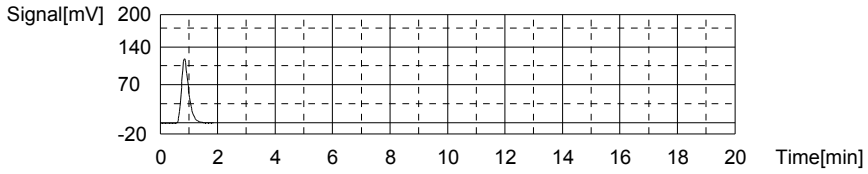
Mean Area 8235
Mean Conc. 219.2mg/L




Anal.: IC

| No. | Area | Conc. | Inj. Vol. | Aut. Dil. | Ex. | Cal. Curve | Date / Time |
|---|---|---|---|---|---|---|---|
| 1 | 208.7 | 6.588mg/L | 500uL | 1 | | TICCURVE-12-06-2011B.2011_12_06_15_47 | 05/16/2012 01:15:57 AM |

Mean Area 208.7
Mean Conc. 6.588mg/L




Sample

Sample Name: WG398010-01 BLK
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

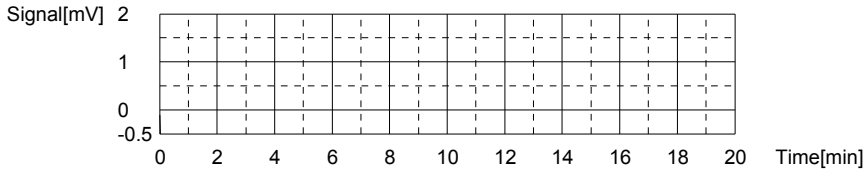
| Type | Anal. | Dil. | Result |
|---|---|---|---|
| Unknown | TOC | 1.000 | !!Error!! TOC:0.1676mg/L TC:-0.00248mg/L IC:-0.1701mg/L |

1. Det

Anal.: TC

| No. | Area | Conc. | Inj. Vol. | Aut. Dil. | Ex. | Cal. Curve | Date / Time |
|---|---|---|---|---|---|---|---|
| 1 | 0.000 | -0.00248mg/L | 500uL | 1 | | TCCURVE-12-06-2011.2011_12_06_08_40_5 | 05/16/2012 01:21:31 AM |

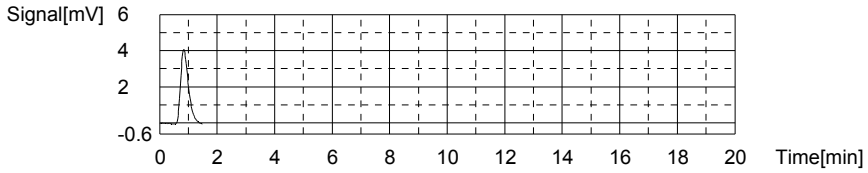
Mean Area 0.000
Mean Conc. -0.00248mg/L




Anal.: IC

| No. | Area | Conc. | Inj. Vol. | Aut. Dil. | Ex. | Cal. Curve | Date / Time |
|---|---|---|---|---|---|---|---|
| 1 | 7.830 | -0.1701mg/L | 500uL | 1 | | TICCURVE-12-06-2011B.2011_12_06_15_47 | 05/16/2012 01:25:30 AM |

Mean Area 7.830
Mean Conc. -0.1701mg/L




Sample

Sample Name: WG398010-02 LCS
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

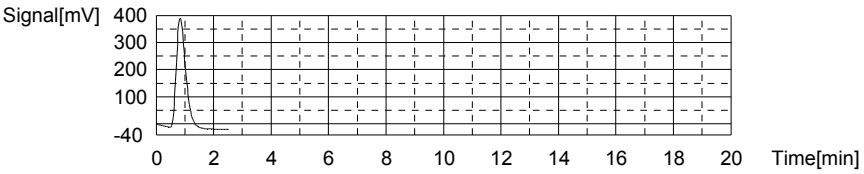
| Type | Anal. | Dil. | Result |
|---|---|---|---|
| Unknown | TOC | 1.000 | !!Error!! TOC:23.90mg/L TC:23.68mg/L IC:-0.2262mg/L |

1. Det

Anal.: TC

| No. | Area | Conc. | Inj. Vol. | Aut. Dil. | Ex. | Cal. Curve | Date / Time |
|---|---|---|---|---|---|---|---|
| 1 | 889.7 | 23.68mg/L | 500uL | 1 | | TCCURVE-12-06-2011.2011_12_06_08_40_5 | 05/16/2012 01:33:29 AM |

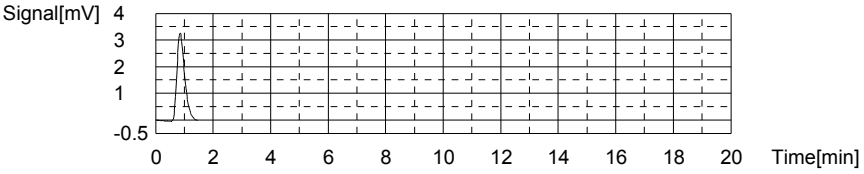
Mean Area 889.7
Mean Conc. 23.68mg/L




Anal.: IC

| No. | Area | Conc. | Inj. Vol. | Aut. Dil. | Ex. | Cal. Curve | Date / Time |
|---|---|---|---|---|---|---|---|
| 1 | 6.162 | -0.2262mg/L | 500uL | 1 | | TICCURVE-12-06-2011B.2011_12_06_15_47_0 | 5/16/2012 01:37:47 AM |

Mean Area 6.162
Mean Conc. -0.2262mg/L




Sample

Sample Name: WG398010-03 LCSDUP
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

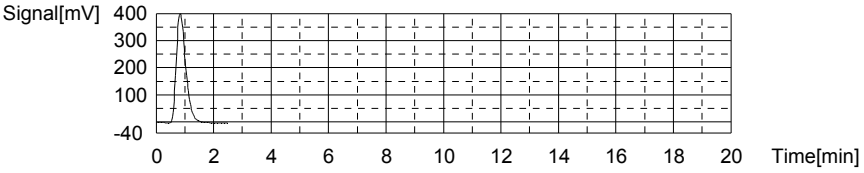
| Type | Anal. | Dil. | Result |
|---|---|---|---|
| Unknown | TOC | 1.000 | !!Error!! TOC:24.77mg/L TC:24.54mg/L IC:-0.2323mg/L |

1. Det

Anal.: TC

| No. | Area | Conc. | Inj. Vol. | Aut. Dil. | Ex. | Cal. Curve | Date / Time |
|---|---|---|---|---|---|---|---|
| 1 | 921.9 | 24.54mg/L | 500uL | 1 | | TCCURVE-12-06-2011.2011_12_06_08_40_5 | 05/16/2012 01:45:43 AM |

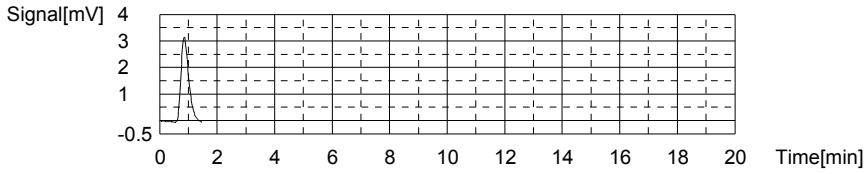
Mean Area 921.9
Mean Conc. 24.54mg/L




Anal.: IC

| No. | Area | Conc. | Inj. Vol. | Aut. Dil. | Ex. | Cal. Curve | Date / Time |
|---|---|---|---|---|---|---|---|
| 1 | 5.983 | -0.2323mg/L | 500uL | 1 | | TICCURVE-12-06-2011B.2011_12_06_15_47 | 05/16/2012 01:50:05 AM |

Mean Area 5.983
Mean Conc. -0.2323mg/L




Sample

Sample Name: L12050362-22 (5)
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

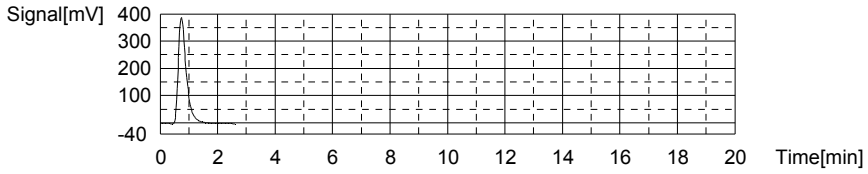
| Type | Anal. | Dil. | Result |
|---|---|---|---|
| Unknown | TOC | 1.000 | TOC:8.433mg/L TC:20.34mg/L IC:11.90mg/L |

1. Det

Anal.: TC

| No. | Area | Conc. | Inj. Vol. | Aut. Dil. | Ex. | Cal. Curve | Date / Time |
|---|---|---|---|---|---|---|---|
| 1 | 764.2 | 20.34mg/L | 500uL | 1 | | TCCURVE-12-06-2011.2011_12_06_08_40_5 | 05/16/2012 01:58:09 AM |

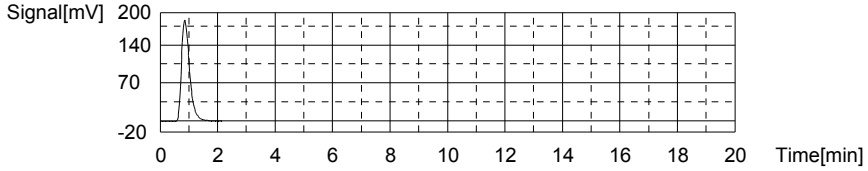
Mean Area 764.2
Mean Conc. 20.34mg/L




Anal.: IC

| No. | Area | Conc. | Inj. Vol. | Aut. Dil. | Ex. | Cal. Curve | Date / Time |
|---|---|---|---|---|---|---|---|
| 1 | 366.7 | 11.90mg/L | 500uL | 1 | | TICCURVE-12-06-2011B.2011_12_06_15_47 | 05/16/2012 02:03:22 AM |

Mean Area 366.7
Mean Conc. 11.90mg/L




Sample

Sample Name: L12050287-01 (25)
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

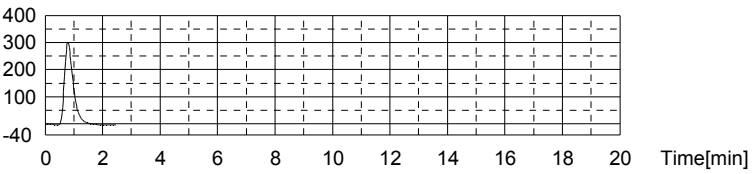
| Type | Anal. | Dil. | Result |
|---|---|---|---|
| Unknown | TOC | 1.000 | TOC:17.25mg/L TC:17.25mg/L IC:0.00216mg/L |

1. Det

Anal.: TC

| No. | Area | Conc. | Inj. Vol. | Aut. Dil. | Ex. | Cal. Curve | Date / Time |
|---|---|---|---|---|---|---|---|
| 1 | 648.2 | 17.25mg/L | 500uL | 1 | | TCCURVE-12-06-2011.2011_12_06_08_40_5 | 05/16/2012 02:11:17 AM |

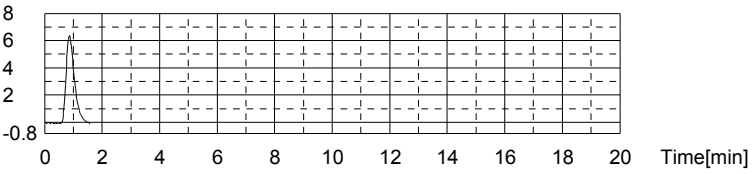
Mean Area 648.2
Mean Conc. 17.25mg/L




Anal.: IC

| No. | Area | Conc. | Inj. Vol. | Aut. Dil. | Ex. | Cal. Curve | Date / Time |
|---|---|---|---|---|---|---|---|
| 1 | 12.95 | 0.00216mg/L | 500uL | 1 | | TICCURVE-12-06-2011B.2011_12_06_15_47_ | 05/16/2012 02:15:45 AM |

Mean Area 12.95
Mean Conc. 0.00216mg/L




Sample

Sample Name:
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

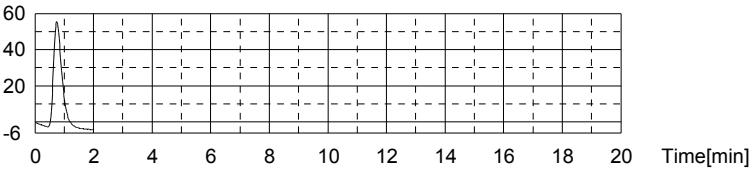
| Type | Anal. | Dil. | Result |
|---|---|---|---|
| Unknown | TOC | 1.000 | TOC:1.598mg/L TC:3.061mg/L IC:1.463mg/L |

1. Det

Anal.: TC

| No. | Area | Conc. | Inj. Vol. | Aut. Dil. | Ex. | Cal. Curve | Date / Time |
|---|---|---|---|---|---|---|---|
| 1 | 115.1 | 3.061mg/L | 500uL | 1 | | TCCURVE-12-06-2011.2011_12_06_08_40_5 | 05/16/2012 02:23:13 AM |

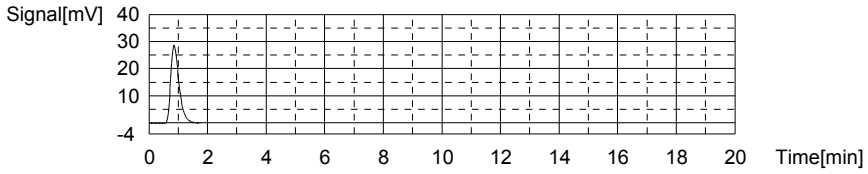
Mean Area 115.1
Mean Conc. 3.061mg/L




Anal.: IC

| No. | Area | Conc. | Inj. Vol. | Aut. Dil. | Ex. | Cal. Curve | Date / Time |
|---|---|---|---|---|---|---|---|
| 1 | 56.38 | 1.463mg/L | 500uL | 1 | | TICCURVE-12-06-2011B.2011_12_06_15_47 | 05/16/2012 02:27:53 AM |

Mean Area 56.38
Mean Conc. 1.463mg/L




Sample

Sample Name: CCV
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

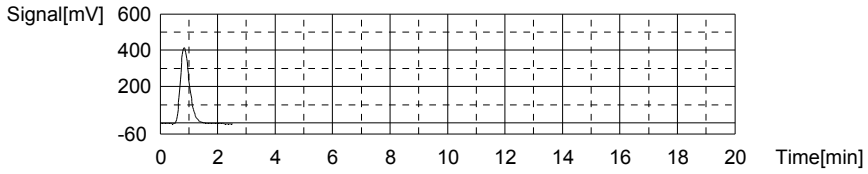
| Type | Anal. | Dil. | Result |
|---|---|---|---|
| Unknown | TOC | 1.000 | !!Error!! TOC:24.82mg/L TC:24.62mg/L IC:-0.2072mg/L |

1. Det

Anal.: TC

| No. | Area | Conc. | Inj. Vol. | Aut. Dil. | Ex. | Cal. Curve | Date / Time |
|---|---|---|---|---|---|---|---|
| 1 | 924.9 | 24.62mg/L | 500uL | 1 | | TCCURVE-12-06-2011.2011_12_06_08_40_5 | 05/16/2012 02:35:53 AM |

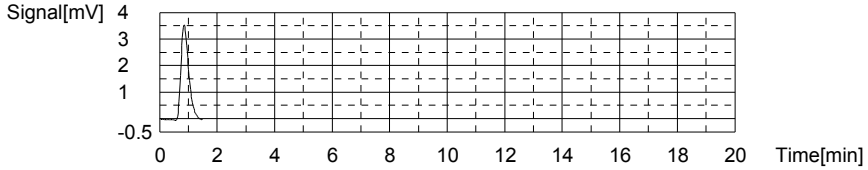
Mean Area 924.9
Mean Conc. 24.62mg/L




Anal.: IC

| No. | Area | Conc. | Inj. Vol. | Aut. Dil. | Ex. | Cal. Curve | Date / Time |
|---|---|---|---|---|---|---|---|
| 1 | 6.727 | -0.2072mg/L | 500uL | 1 | | TICCURVE-12-06-2011B.2011_12_06_15_47 | 05/16/2012 02:40:14 AM |

Mean Area 6.727
Mean Conc. -0.2072mg/L




Sample

Sample Name: CCB
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

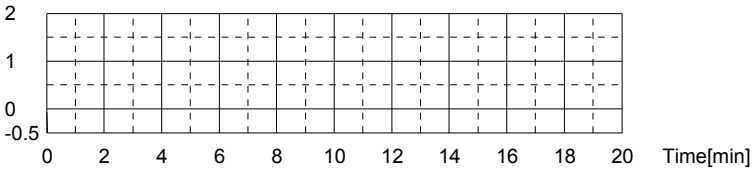
| Type | Anal. | Dil. | Result |
|---|---|---|---|
| Unknown | TOC | 1.000 | !!Error!! TOC:0.3621mg/L TC:0.1732mg/L IC:-0.1889mg/L |

1. Det

Anal.: TC

| No. | Area | Conc. | Inj. Vol. | Aut. Dil. | Ex. | Cal. Curve | Date / Time |
|---|---|---|---|---|---|---|---|
| 1 | 6.599 | 0.1732mg/L | 500uL | 1 | | TCCURVE-12-06-2011.2011_12_06_08_40_5 | 05/16/2012 02:45:25 AM |

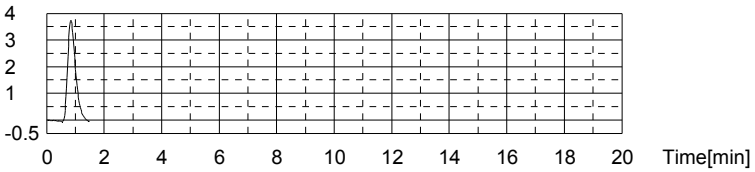
Mean Area 6.599
Mean Conc. 0.1732mg/L




Anal.: IC

| No. | Area | Conc. | Inj. Vol. | Aut. Dil. | Ex. | Cal. Curve | Date / Time |
|---|---|---|---|---|---|---|---|
| 1 | 7.270 | -0.1889mg/L | 500uL | 1 | | TICCURVE-12-06-2011B.2011_12_06_15_47_0 | 5/16/2012 02:49:21 AM |

Mean Area 7.270
Mean Conc. -0.1889mg/L




Sample

Sample Name:
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

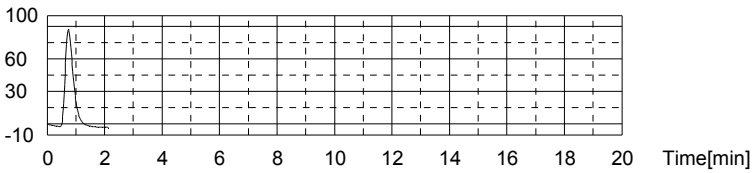
| Type | Anal. | Dil. | Result |
|---|---|---|---|
| Unknown | TOC | 1.000 | TOC:2.057mg/L TC:4.701mg/L IC:2.643mg/L |

1. Det

Anal.: TC

| No. | Area | Conc. | Inj. Vol. | Aut. Dil. | Ex. | Cal. Curve | Date / Time |
|---|---|---|---|---|---|---|---|
| 1 | 176.7 | 4.701mg/L | 500uL | 1 | | TCCURVE-12-06-2011.2011_12_06_08_40_5 | 05/16/2012 02:56:58 AM |

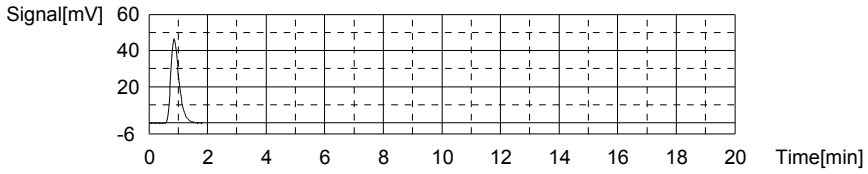
Mean Area 176.7
Mean Conc. 4.701mg/L




Anal.: IC

| No. | Area | Conc. | Inj. Vol. | Aut. Dil. | Ex. | Cal. Curve | Date / Time |
|---|---|---|---|---|---|---|---|
| 1 | 91.45 | 2.643mg/L | 500uL | 1 | | TICCURVE-12-06-2011B.2011_12_06_15_47 | 05/16/2012 03:01:43 AM |

Mean Area 91.45
Mean Conc. 2.643mg/L




Sample

Sample Name:
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

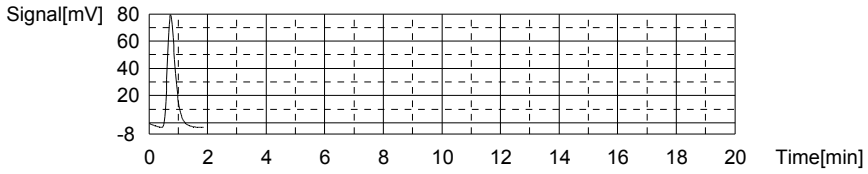
| Type | Anal. | Dil. | Result |
|---|---|---|---|
| Unknown | TOC | 1.000 | TOC:1.874mg/L TC:4.187mg/L IC:2.313mg/L |

1. Det

Anal.: TC

| No. | Area | Conc. | Inj. Vol. | Aut. Dil. | Ex. | Cal. Curve | Date / Time |
|---|---|---|---|---|---|---|---|
| 1 | 157.4 | 4.187mg/L | 500uL | 1 | | TCCURVE-12-06-2011.2011_12_06_08_40_5 | 05/16/2012 03:09:03 AM |

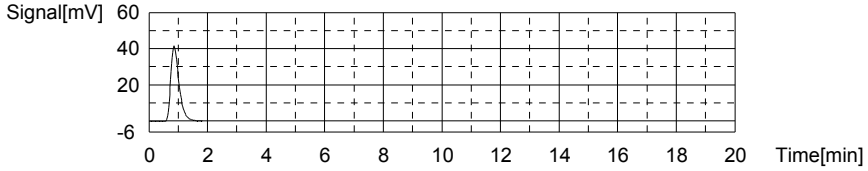
Mean Area 157.4
Mean Conc. 4.187mg/L




Anal.: IC

| No. | Area | Conc. | Inj. Vol. | Aut. Dil. | Ex. | Cal. Curve | Date / Time |
|---|---|---|---|---|---|---|---|
| 1 | 81.62 | 2.313mg/L | 500uL | 1 | | TICCURVE-12-06-2011B.2011_12_06_15_47 | 05/16/2012 03:13:50 AM |

Mean Area 81.62
Mean Conc. 2.313mg/L




Sample

Sample Name: L12050317-01 (5)
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

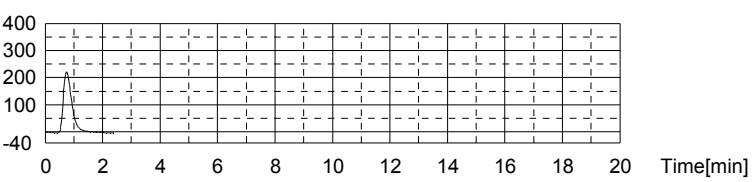
| Type | Anal. | Dil. | Result |
|---|---|---|---|
| Unknown | TOC | 1.000 | TOC:5.226mg/L TC:12.34mg/L IC:7.113mg/L |

1. Det

Anal.: TC

| No. | Area | Conc. | Inj. Vol. | Aut. Dil. | Ex. | Cal. Curve | Date / Time |
|---|---|---|---|---|---|---|---|
| 1 | 463.7 | 12.34mg/L | 500uL | 1 | | TCCURVE-12-06-2011.2011_12_06_08_40_5 | 05/16/2012 03:21:41 AM |

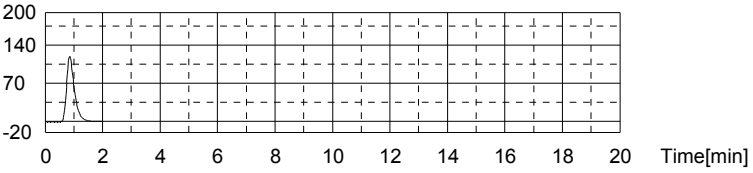
Mean Area 463.7
Mean Conc. 12.34mg/L




Anal.: IC

| No. | Area | Conc. | Inj. Vol. | Aut. Dil. | Ex. | Cal. Curve | Date / Time |
|---|---|---|---|---|---|---|---|
| 1 | 224.3 | 7.113mg/L | 500uL | 1 | | TICCURVE-12-06-2011B.2011_12_06_15_47_0 | 5/16/2012 03:26:42 AM |

Mean Area 224.3
Mean Conc. 7.113mg/L




Sample

Sample Name:
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

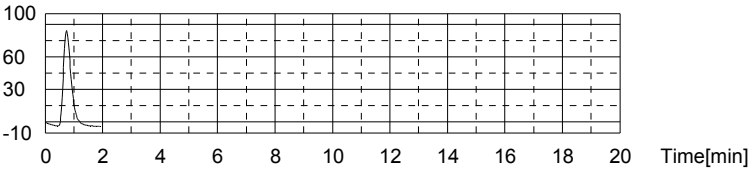
| Type | Anal. | Dil. | Result |
|---|---|---|---|
| Unknown | TOC | 1.000 | TOC:3.004mg/L TC:4.384mg/L IC:1.380mg/L |

1. Det

Anal.: TC

| No. | Area | Conc. | Inj. Vol. | Aut. Dil. | Ex. | Cal. Curve | Date / Time |
|---|---|---|---|---|---|---|---|
| 1 | 164.8 | 4.384mg/L | 500uL | 1 | | TCCURVE-12-06-2011.2011_12_06_08_40_5 | 05/16/2012 03:34:05 AM |

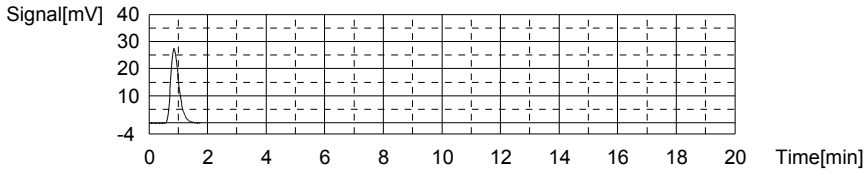
Mean Area 164.8
Mean Conc. 4.384mg/L




Anal.: IC

| No. | Area | Conc. | Inj. Vol. | Aut. Dil. | Ex. | Cal. Curve | Date / Time |
|---|---|---|---|---|---|---|---|
| 1 | 53.89 | 1.380mg/L | 500uL | 1 | | TICCURVE-12-06-2011B.2011_12_06_15_47 | 05/16/2012 03:38:44 AM |

Mean Area 53.89
Mean Conc. 1.380mg/L




Sample

Sample Name: L12050317-05
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

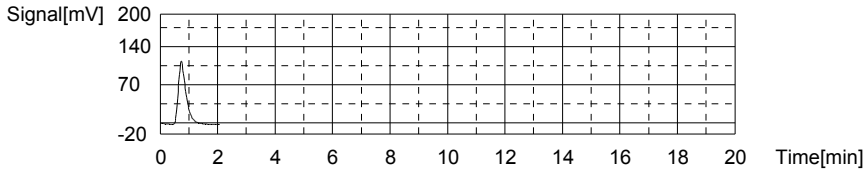
| Type | Anal. | Dil. | Result |
|---|---|---|---|
| Unknown | TOC | 1.000 | TOC:2.432mg/L TC:5.797mg/L IC:3.365mg/L |

1. Det

Anal.: TC

| No. | Area | Conc. | Inj. Vol. | Aut. Dil. | Ex. | Cal. Curve | Date / Time |
|---|---|---|---|---|---|---|---|
| 1 | 217.9 | 5.797mg/L | 500uL | 1 | | TCCURVE-12-06-2011.2011_12_06_08_40_5 | 05/16/2012 03:46:16 AM |

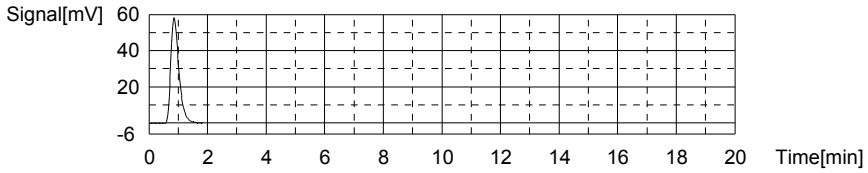
Mean Area 217.9
Mean Conc. 5.797mg/L




Anal.: IC

| No. | Area | Conc. | Inj. Vol. | Aut. Dil. | Ex. | Cal. Curve | Date / Time |
|---|---|---|---|---|---|---|---|
| 1 | 112.9 | 3.365mg/L | 500uL | 1 | | TICCURVE-12-06-2011B.2011_12_06_15_47 | 05/16/2012 03:51:06 AM |

Mean Area 112.9
Mean Conc. 3.365mg/L




Sample

Sample Name: L12050317-07 (3)
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

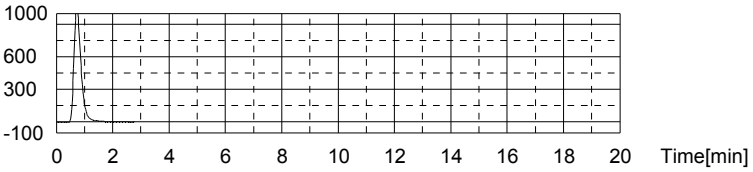
| Type | Anal. | Dil. | Result |
|---|---|---|---|
| Unknown | TOC | 1.000 | TOC:29.72mg/L TC:49.85mg/L IC:20.13mg/L |

1. Det

Anal.: TC

| No. | Area | Conc. | Inj. Vol. | Aut. Dil. | Ex. | Cal. Curve | Date / Time |
|---|---|---|---|---|---|---|---|
| 1 | 1873 | 49.85mg/L | 500uL | 1 | | TCCURVE-12-06-2011.2011_12_06_08_40_5 | 05/16/2012 03:59:20 AM |

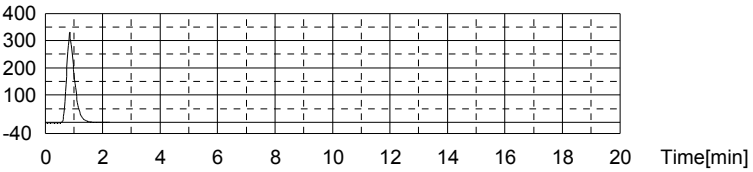
Mean Area 1873
Mean Conc. 49.85mg/L




Anal.: IC

| No. | Area | Conc. | Inj. Vol. | Aut. Dil. | Ex. | Cal. Curve | Date / Time |
|---|---|---|---|---|---|---|---|
| 1 | 611.1 | 20.13mg/L | 500uL | 1 | | TICCURVE-12-06-2011B.2011_12_06_15_47_0 | 5/16/2012 04:04:52 AM |

Mean Area 611.1
Mean Conc. 20.13mg/L




Sample

Sample Name: L12050317-09
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

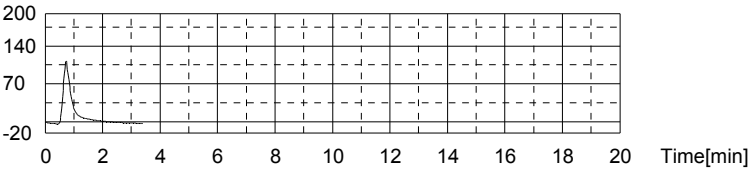
| Type | Anal. | Dil. | Result |
|---|---|---|---|
| Unknown | TOC | 1.000 | TOC:3.297mg/L TC:6.968mg/L IC:3.671mg/L |

1. Det

Anal.: TC

| No. | Area | Conc. | Inj. Vol. | Aut. Dil. | Ex. | Cal. Curve | Date / Time |
|---|---|---|---|---|---|---|---|
| 1 | 261.9 | 6.968mg/L | 500uL | 1 | | TCCURVE-12-06-2011.2011_12_06_08_40_5 | 05/16/2012 04:13:44 AM |

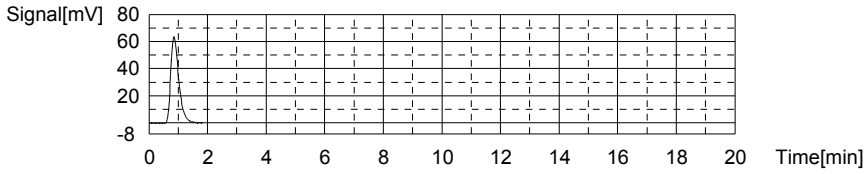
Mean Area 261.9
Mean Conc. 6.968mg/L




Anal.: IC

| No. | Area | Conc. | Inj. Vol. | Aut. Dil. | Ex. | Cal. Curve | Date / Time |
|---|---|---|---|---|---|---|---|
| 1 | 122.0 | 3.671mg/L | 500uL | 1 | | TICCURVE-12-06-2011B.2011_12_06_15_47 | 05/16/2012 04:18:34 AM |

Mean Area 122.0
Mean Conc. 3.671mg/L




Sample

Sample Name: L12050317-11
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

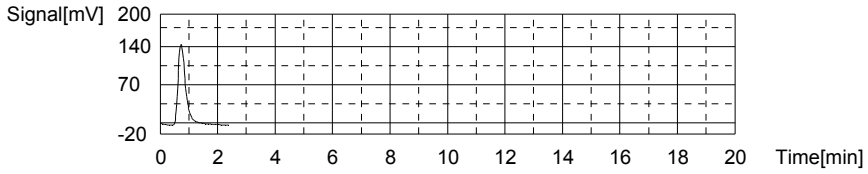
| Type | Anal. | Dil. | Result |
|---|---|---|---|
| Unknown | TOC | 1.000 | TOC:2.218mg/L TC:7.461mg/L IC:5.243mg/L |

1. Det

Anal.: TC

| No. | Area | Conc. | Inj. Vol. | Aut. Dil. | Ex. | Cal. Curve | Date / Time |
|---|---|---|---|---|---|---|---|
| 1 | 280.4 | 7.461mg/L | 500uL | 1 | | TCCURVE-12-06-2011.2011_12_06_08_40_5 | 05/16/2012 04:26:25 AM |

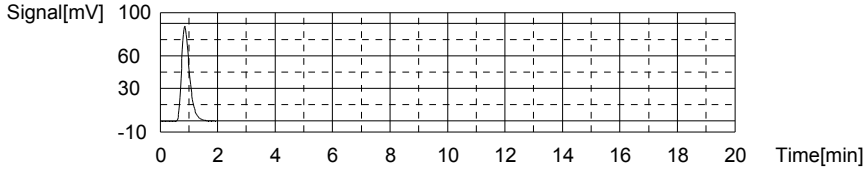
Mean Area 280.4
Mean Conc. 7.461mg/L




Anal.: IC

| No. | Area | Conc. | Inj. Vol. | Aut. Dil. | Ex. | Cal. Curve | Date / Time |
|---|---|---|---|---|---|---|---|
| 1 | 168.7 | 5.243mg/L | 500uL | 1 | | TICCURVE-12-06-2011B.2011_12_06_15_47 | 05/16/2012 04:31:17 AM |

Mean Area 168.7
Mean Conc. 5.243mg/L




Sample

Sample Name: WG398010-05 DUP
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

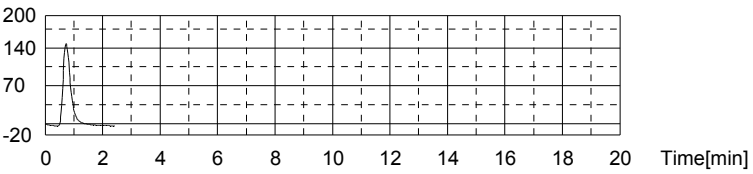
| Type | Anal. | Dil. | Result |
|---|---|---|---|
| Unknown | TOC | 1.000 | TOC:2.108mg/L TC:7.623mg/L IC:5.515mg/L |

1. Det

Anal.: TC

| No. | Area | Conc. | Inj. Vol. | Aut. Dil. | Ex. | Cal. Curve | Date / Time |
|---|---|---|---|---|---|---|---|
| 1 | 286.5 | 7.623mg/L | 500uL | 1 | | TCCURVE-12-06-2011.2011_12_06_08_40_5 | 05/16/2012 04:39:10 AM |

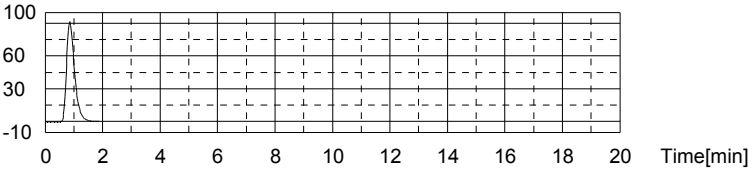
Mean Area 286.5
Mean Conc. 7.623mg/L




Anal.: IC

| No. | Area | Conc. | Inj. Vol. | Aut. Dil. | Ex. | Cal. Curve | Date / Time |
|---|---|---|---|---|---|---|---|
| 1 | 176.8 | 5.515mg/L | 500uL | 1 | | TICCURVE-12-06-2011B.2011_12_06_15_47_0 | 5/16/2012 04:44:03 AM |

Mean Area 176.8
Mean Conc. 5.515mg/L




Sample

Sample Name: WG398010-06 MS
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

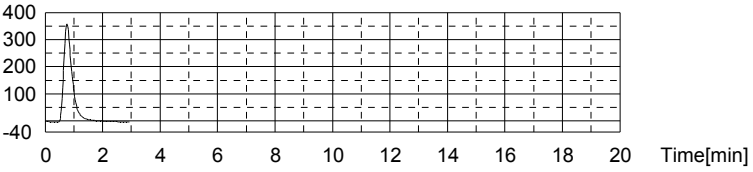
| Type | Anal. | Dil. | Result |
|---|---|---|---|
| Unknown | TOC | 1.000 | TOC:12.69mg/L TC:19.93mg/L IC:7.238mg/L |

1. Det

Anal.: TC

| No. | Area | Conc. | Inj. Vol. | Aut. Dil. | Ex. | Cal. Curve | Date / Time |
|---|---|---|---|---|---|---|---|
| 1 | 748.7 | 19.93mg/L | 500uL | 1 | | TCCURVE-12-06-2011.2011_12_06_08_40_5 | 05/16/2012 04:52:26 AM |

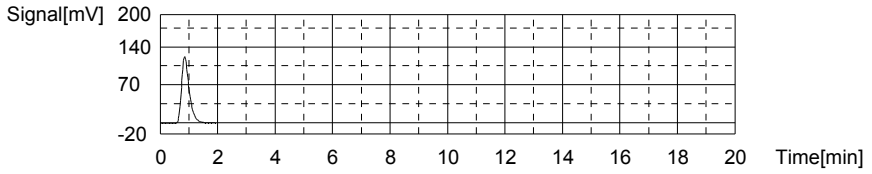
Mean Area 748.7
Mean Conc. 19.93mg/L




Anal.: IC

| No. | Area | Conc. | Inj. Vol. | Aut. Dil. | Ex. | Cal. Curve | Date / Time |
|---|---|---|---|---|---|---|---|
| 1 | 228.0 | 7.238mg/L | 500uL | 1 | | TICCURVE-12-06-2011B.2011_12_06_15_47 | 05/16/2012 04:57:22 AM |

Mean Area 228.0
Mean Conc. 7.238mg/L




Sample

Sample Name: CCV
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

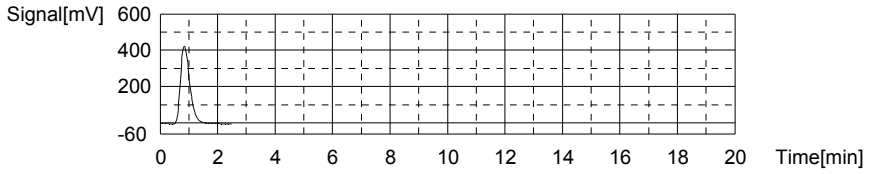
| Type | Anal. | Dil. | Result |
|---|---|---|---|
| Unknown | TOC | 1.000 | !!Error!! TOC:25.88mg/L TC:25.71mg/L IC:-0.1775mg/L |

1. Det

Anal.: TC

| No. | Area | Conc. | Inj. Vol. | Aut. Dil. | Ex. | Cal. Curve | Date / Time |
|---|---|---|---|---|---|---|---|
| 1 | 965.9 | 25.71mg/L | 500uL | 1 | | TCCURVE-12-06-2011.2011_12_06_08_40_5 | 05/16/2012 05:05:19 AM |

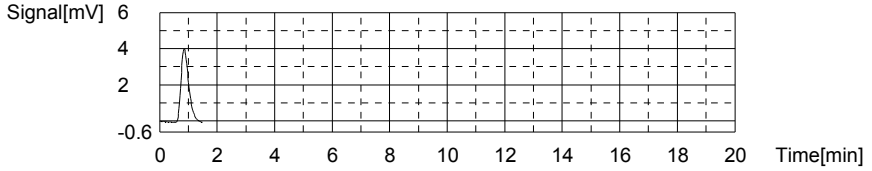
Mean Area 965.9
Mean Conc. 25.71mg/L




Anal.: IC

| No. | Area | Conc. | Inj. Vol. | Aut. Dil. | Ex. | Cal. Curve | Date / Time |
|---|---|---|---|---|---|---|---|
| 1 | 7.610 | -0.1775mg/L | 500uL | 1 | | TICCURVE-12-06-2011B.2011_12_06_15_47 | 05/16/2012 05:09:41 AM |

Mean Area 7.610
Mean Conc. -0.1775mg/L




Sample

Sample Name: CCB
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

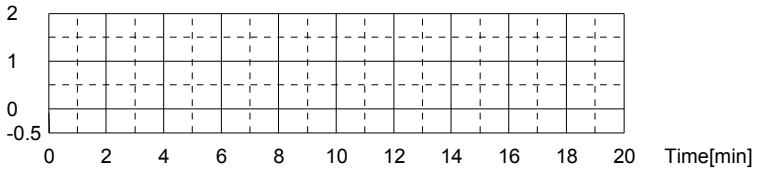
| Type | Anal. | Dil. | Result |
|---|---|---|---|
| Unknown | TOC | 1.000 | !!Error!! TOC:0.3531mg/L TC:0.1729mg/L IC:-0.1802mg/L |

1. Det

Anal.: TC

| No. | Area | Conc. | Inj. Vol. | Aut. Dil. | Ex. | Cal. Curve | Date / Time |
|---|---|---|---|---|---|---|---|
| 1 | 6.588 | 0.1729mg/L | 500uL | 1 | | TCCURVE-12-06-2011.2011_12_06_08_40_5 | 05/16/2012 05:14:59 AM |

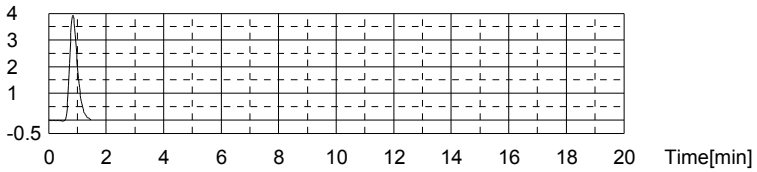
Mean Area 6.588
Mean Conc. 0.1729mg/L




Anal.: IC

| No. | Area | Conc. | Inj. Vol. | Aut. Dil. | Ex. | Cal. Curve | Date / Time |
|---|---|---|---|---|---|---|---|
| 1 | 7.530 | -0.1802mg/L | 500uL | 1 | | TICCURVE-12-06-2011B.2011_12_06_15_47_ | 05/16/2012 05:18:53 AM |

Mean Area 7.530
Mean Conc. -0.1802mg/L



WORKGROUP: WG398501
398503

# Total Organic Carbon

MAKE DAILY

CCV (TOC): STD 48750 / (5/200)(1000) = 25mg/L

LCS (TOC): STD 50984 / (5/200)(1000) = 25mg/L

CCV (TIC): STD 50244 / (5/200)(1000) = 25mg/L

MS (TOC): STD 50984 / 0.4/40(1000) = 60

Calibration Curve Date: 12/6/11

Reagent: RGT 17216 / RGT 17210

☑ SM5310-C : Matrix 2 WG 398503

☑ EPA 415.1/9060A(mod): Matrix 1 WG 398501 SOP: K 4151 Rev. 14

WG _____ Instrument: Shimadza TOC-VWP/ASI

DAILY CHECK

☑ drain reservoir filled
☑ ASI water bottle full
☑ dilution water bottle full

☑ 3rd bottle full
☑ sufficient gas
☑ sufficient persulfate

☑ sufficient acid
☑ waste container

| Position | Sample ID | Dilution |
|---|---|---|
| 1 | CCV25 | |
| 2 | TIC25 | |
| 3 | Blank | |
| 4 | LCS25 | |
| 5 | LCSDup | |
| 6 | OS-362-04 | 1/20 |
| 7 | -12 | 1/20 |
| 8 | -14 | 1/50 |
| 9 | OS-284-03 | - |
| 10 | -05 | - |
| 11 | -07 | - |
| 12 | OS-317-03 | 1/5 |
| 13 | OS-500-03 | |
| 14 | CCV | |
| 15 | CCB | |
| 16 | OS-532-01 | |
| 17 | -02 | |
| 18 | OS-536-01 | |
| 19 | -02 | |
| 20 | -03 | |
| 21 | -04 | |
| 22 | -05 | |
| 23 | Dup -05 | |
| 24 | MS -07 | |
| 25 | SD -08 | |

| Position | Sample ID | Dilution |
|---|---|---|
| 26 | CCV | |
| 27 | CCB | |
| 28 | OS-536-04 | |
| 29 | Blank | |
| 30 | LCS25 | |
| 31 | LCSDup | |
| 32 | OS-517-09 | |
| 33 | OS-533-01 | 1/5 |
| 34 | OS-534-01 | |
| 35 | -02 | |
| 36 | -03 | |
| 37 | -04 | |
| 38 | CCV | |
| 39 | CCB | |
| 40 | OS-552-01 | |
| 41 | -03 | |
| 42 | -05 | |
| 43 | -07 | 1/4 |
| 44 | -09 | |
| 45 | -11 | |
| 46 | -13 | |
| 47 | -15 | |
| 48 | -17 | |
| 49 | -19 | |
| 50 | CCV | |

| Position | Sample ID | Dilution |
|---|---|---|
| 51 | CCB | |
| 52 | Dup 517-09 | |
| 53 | MS | |
| 54 | LCV 552-MS 1/4 | |
| 55 | CCB CCV | |
| 56 | CCB | |
| 57 | | |
| 58 | | |
| 59 | | |
| 60 | | |
| 61 | | |
| 62 | | |
| 63 | | |
| 64 | | |
| 65 | | |
| 66 | | |
| 67 | | |
| 68 | | |
| 69 | | |
| 70 | | |
| 71 | | |
| 72 | | |
| 73 | | |
| 74 | | |
| 75 | | |

Analyst: _____ Date/Time: 5/18/12

DCN#90941

| | Analysi | Sample Name | Result | Status | Date / Time | Vial |
|---|---|---|---|---|---|---|
| 1 | TOC | CCV 50 | !!Error!! TOC:23.53mg/L TC:23.32mg/L IC:-0.2093mg/L | Completed | 05/18/2012 04:35:05 P | 1 |
| 2 | TOC | TIC 25 | TOC:1.986mg/L TC:26.03mg/L IC:24.05mg/L | Completed | 05/18/2012 04:49:57 P | 2 |
| 3 | TOC | WG398501-01 BLANK | !!Error!! TOC:0.3786mg/L TC:0.2040mg/L IC:-0.1745mg/ | Completed | 05/18/2012 04:59:09 P | 0 |
| 4 | TOC | WG398501-02 LCS25 | !!Error!! TOC:23.77mg/L TC:23.48mg/L IC:-0.2861mg/L | Completed | 05/18/2012 05:11:10 P | 4 |
| 5 | TOC | WG398501-03 LCSDU | !!Error!! TOC:22.39mg/L TC:22.10mg/L IC:-0.2931mg/L | Completed | 05/18/2012 05:23:19 P | 5 |
| 6 | TOC | L12050362-04 (20) X | TOC:50.33mg/L TC:58.77mg/L IC:8.439mg/L | Completed | 05/18/2012 05:36:39 P | 6 |
| 7 | TOC | L12050362-12 (20) X | TOC:46.31mg/L TC:56.93mg/L IC:10.62mg/L | Completed | 05/18/2012 05:50:08 P | 7 |
| 8 | TOC | L12050362-14 (50) | TOC:23.48mg/L TC:25.49mg/L IC:2.007mg/L | Completed | 05/18/2012 06:02:48 P | 8 |
| 9 | TOC | L12050284-03 | TOC:4.057mg/L TC:31.67mg/L IC:27.61mg/L | Completed | 05/18/2012 06:16:42 P | 9 |
| 10 | TOC | L12050284-05 X | !!Error!! TOC:-0.9728mg/L TC:69.52mg/L IC:70.49mg/L | Completed | 05/18/2012 06:31:15 P | 10 |
| 11 | TOC | L12050284-07 X | !!Error!! TOC:-5.909mg/L TC:78.78mg/L IC:84.69mg/L | Completed | 05/18/2012 06:46:34 P | 11 |
| 12 | TOC | L12050317-03 (5) X | TOC:7.974mg/L TC:84.69mg/L IC:76.72mg/L | Completed | 05/18/2012 07:01:29 P | 12 |
| 13 | TOC | L12050500-03 X | !!Error!! TOC:-11.75mg/L TC:81.79mg/L IC:93.54mg/L | Completed | 05/18/2012 07:16:09 P | 13 |
| 14 | TOC | CCV | TOC:23.58mg/L TC:23.77mg/L IC:0.1892mg/L | Completed | 05/18/2012 07:29:28 P | 14 |
| 15 | TOC | CCB | !!Error!! TOC:0.3075mg/L TC:0.1824mg/L IC:-0.1251mg/ | Completed | 05/18/2012 07:38:47 P | 0 |
| 16 | TOC | L12050532-01 | TOC:3.103mg/L TC:12.86mg/L IC:9.758mg/L | Completed | 05/18/2012 07:52:18 P | 16 |
| 17 | TOC | L12050532-02 | TOC:3.362mg/L TC:14.07mg/L IC:10.71mg/L | Completed | 05/18/2012 08:05:52 P | 17 |
| 18 | TOC | L12050536-01 X | TOC:3.957mg/L TC:59.65mg/L IC:55.69mg/L | Completed | 05/18/2012 08:20:29 P | 18 |
| 19 | TOC | L12050536-02 X | !!Error!! TOC:-9.053mg/L TC:83.68mg/L IC:92.73mg/L | Completed | 05/18/2012 08:36:34 P | 19 |
| 20 | TOC | L12050536-03 X | !!Error!! TOC:-2.530mg/L TC:74.52mg/L IC:77.05mg/L | Completed | 05/18/2012 08:51:21 P | 20 |
| 21 | TOC | L12050536-04 X | TOC:2.071mg/L TC:54.43mg/L IC:52.36mg/L | Completed | 05/18/2012 09:05:38 P | 21 |
| 22 | TOC | L12050536-05 | TOC:2.798mg/L TC:15.81mg/L IC:13.01mg/L | Completed | 05/18/2012 09:18:55 P | 22 |
| 23 | TOC | WG398501-05 DUP | TOC:2.591mg/L TC:15.71mg/L IC:13.12mg/L | Completed | 05/18/2012 09:31:53 P | 23 |
| 24 | TOC | L12050536-07 MS | TOC:11.53mg/L TC:28.50mg/L IC:16.97mg/L | Completed | 05/18/2012 09:44:46 P | 24 |
| 25 | TOC | L12050536-08 MSD | TOC:12.00mg/L TC:29.01mg/L IC:17.01mg/L | Completed | 05/18/2012 09:57:56 P | 25 |
| 26 | TOC | CCV | !!Error!! TOC:23.12mg/L TC:22.98mg/L IC:-0.1471mg/L | Completed | 05/18/2012 10:10:17 P | 26 |
| 27 | TOC | CCB | !!Error!! TOC:0.3157mg/L TC:0.1427mg/L IC:-0.1730mg/ | Completed | 05/18/2012 10:19:31 P | 0 |
| 28 | TOC | L12050536-06 | TOC:1.604mg/L TC:22.61mg/L IC:21.01mg/L | Completed | 05/18/2012 10:32:10 P | 28 |
| 29 | TOC | WG398503-01 BLANK | !!Error!! TOC:0.3004mg/L TC:0.1411mg/L IC:-0.1593mg/ | Completed | 05/18/2012 10:49:12 P | 0 |
| 30 | TOC | WG398503-02 LCS25 | !!Error!! TOC:22.67mg/L TC:22.43mg/L IC:-0.2379mg/L | Completed | 05/18/2012 11:10:27 P | 30 |
| 31 | TOC | WG398503-03 LCSDU | !!Error!! TOC:22.79mg/L TC:22.55mg/L IC:-0.2433mg/L | Completed | 05/18/2012 11:31:26 P | 31 |
| 32 | TOC | L12050517-09 | TOC:2.881mg/L TC:6.416mg/L IC:3.535mg/L | Completed | 05/18/2012 11:52:45 P | 32 |
| 33 | TOC | L12050533-01 (5) | TOC:3.593mg/L TC:32.54mg/L IC:28.94mg/L | Completed | 05/19/2012 12:16:13 A | 33 |
| 34 | TOC | L12050534-01 | TOC:3.559mg/L TC:5.736mg/L IC:2.177mg/L | Completed | 05/19/2012 12:37:28 A | 34 |
| 35 | TOC | L12050534-02 | TOC:8.178mg/L TC:37.14mg/L IC:28.96mg/L | Completed | 05/19/2012 01:01:58 A | 35 |
| 36 | TOC | L12050534-03 | TOC:8.185mg/L TC:22.06mg/L IC:13.88mg/L | Completed | 05/19/2012 01:25:20 A | 36 |
| 37 | TOC | L12050534-04 | TOC:3.508mg/L TC:8.483mg/L IC:4.975mg/L | Completed | 05/19/2012 01:48:44 A | 37 |
| 38 | TOC | CCV | !!Error!! TOC:23.15mg/L TC:22.98mg/L IC:-0.1860mg/L | Completed | 05/19/2012 01:58:54 A | 38 |
| 39 | TOC | CCB | !!Error!! TOC:0.3055mg/L TC:0.1269mg/L IC:-0.1786mg/ | Completed | 05/19/2012 02:08:07 A | 0 |
| 40 | TOC | L12050552-01 | TOC:1.191mg/L TC:11.22mg/L IC:10.03mg/L | Completed | 05/19/2012 02:30:02 A | 40 |
| 41 | TOC | L12050552-03 | TOC:1.429mg/L TC:7.908mg/L IC:6.479mg/L | Completed | 05/19/2012 02:52:41 A | 41 |
| 42 | TOC | L12050552-05 | TOC:1.563mg/L TC:5.105mg/L IC:3.542mg/L | Completed | 05/19/2012 03:14:11 A | 42 |
| 43 | TOC | L12050552-07 (4) | TOC:6.236mg/L TC:32.36mg/L IC:26.13mg/L | Completed | 05/19/2012 03:38:17 A | 43 |
| 44 | TOC | L12050552-09 | TOC:4.861mg/L TC:18.65mg/L IC:13.78mg/L | Completed | 05/19/2012 04:00:46 A | 44 |
| 45 | TOC | L12050552-11 | TOC:2.291mg/L TC:7.148mg/L IC:4.857mg/L | Completed | 05/19/2012 04:22:08 A | 45 |
| 46 | TOC | L12050552-13 | TOC:1.313mg/L TC:5.481mg/L IC:4.168mg/L | Completed | 05/19/2012 04:43:13 A | 46 |
| 47 | TOC | L12050552-15 | TOC:1.366mg/L TC:4.546mg/L IC:3.180mg/L | Completed | 05/19/2012 05:04:28 A | 47 |
| 48 | TOC | L12050552-17 | !!Error!! TOC:0.6326mg/L TC:0.4412mg/L IC:-0.1914mg/ | Completed | 05/19/2012 05:24:08 A | 48 |
| 49 | TOC | L12050552-19 | TOC:16.91mg/L TC:38.59mg/L IC:21.68mg/L | Completed | 05/19/2012 05:48:14 A | 49 |
| 50 | TOC | CCV | !!Error!! TOC:23.35mg/L TC:23.24mg/L IC:-0.1062mg/L | Completed | 05/19/2012 06:00:28 A | 50 |
| 51 | TOC | CCB | !!Error!! TOC:0.2819mg/L TC:0.1188mg/L IC:-0.1630mg/ | Completed | 05/19/2012 06:09:45 A | 0 |
| 52 | TOC | WG398503-05 DUP | TOC:2.462mg/L TC:3.695mg/L IC:1.233mg/L | Completed | 05/19/2012 06:30:34 A | 52 |
| 53 | TOC | WG398503-06 MS | TOC:10.82mg/L TC:14.72mg/L IC:3.897mg/L | Completed | 05/19/2012 06:52:21 A | 53 |
| 54 | TOC | L12050552-19 (4) X | TOC:6.559mg/L TC:30.59mg/L IC:24.03mg/L | Completed | 05/19/2012 07:16:02 A | 54 |
| 55 | TOC | CCV | !!Error!! TOC:23.41mg/L TC:23.32mg/L IC:-0.09205mg/L | Completed | 05/19/2012 07:28:34 A | 55 |
| 56 | TOC | CCB | !!Error!! TOC:0.2797mg/L TC:0.1250mg/L IC:-0.1547mg/ | Completed | 05/19/2012 07:37:37 A | 0 |

Instr.Information

System TOCVW ASI
Detector Wet Chemical

Sample

Sample Name: CCV 50
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

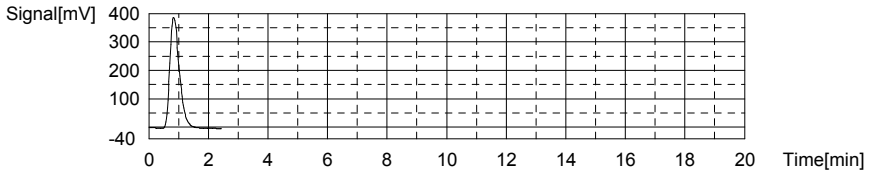
| Type | Anal. | Dil. | Result |
|---|---|---|---|
| Unknown | TOC | 1.000 | !!Error!! TOC:23.53mg/L TC:23.32mg/L IC:-0.2093mg/L |

1. Det

Anal.: TC

| No. | Area | Conc. | Inj. Vol. | Aut. Dil. | Ex. | Cal. Curve | Date / Time |
|---|---|---|---|---|---|---|---|
| 1 | 876.3 | 23.32mg/L | 500uL | 1 | | TCCURVE-12-06-2011.2011_12_06_08_40_5 | 05/18/2012 04:31:32 PM |

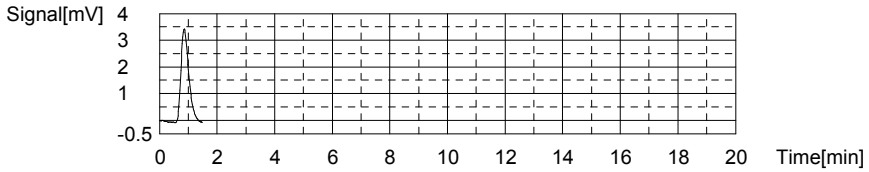
Mean Area 876.3
Mean Conc. 23.32mg/L




Anal.: IC

| No. | Area | Conc. | Inj. Vol. | Aut. Dil. | Ex. | Cal. Curve | Date / Time |
|---|---|---|---|---|---|---|---|
| 1 | 6.664 | -0.2093mg/L | 500uL | 1 | | TICCURVE-12-06-2011B.2011_12_06_15_47 | 05/18/2012 04:35:55 PM |

Mean Area 6.664
Mean Conc. -0.2093mg/L




Sample

Sample Name: TIC 25
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

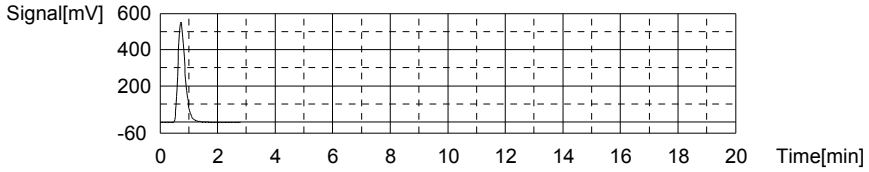
| Type | Anal. | Dil. | Result |
|---|---|---|---|
| Unknown | TOC | 1.000 | TOC:1.986mg/L TC:26.03mg/L IC:24.05mg/L |

1. Det

Anal.: TC

| No. | Area | Conc. | Inj. Vol. | Aut. Dil. | Ex. | Cal. Curve | Date / Time |
|---|---|---|---|---|---|---|---|
| 1 | 978.2 | 26.03mg/L | 500uL | 1 | | TCCURVE-12-06-2011.2011_12_06_08_40_5 | 05/18/2012 04:44:09 PM |

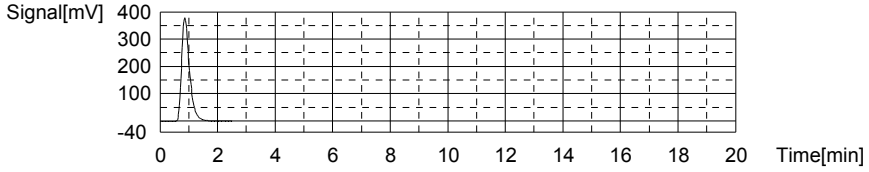
Mean Area 978.2
Mean Conc. 26.03mg/L




Anal.: IC

| No. | Area | Conc. | Inj. Vol. | Aut. Dil. | Ex. | Cal. Curve | Date / Time |
|---|---|---|---|---|---|---|---|
| 1 | 727.6 | 24.05mg/L | 500uL | 1 | | TICCURVE-12-06-2011B.2011_12_06_15_47 | 05/18/2012 04:49:57 PM |

Mean Area 727.6
Mean Conc. 24.05mg/L




Sample

Sample Name: WG398501-01 BLANK
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

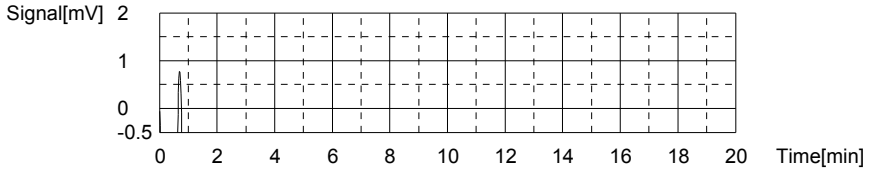
| Type | Anal. | Dil. | Result |
|---|---|---|---|
| Unknown | TOC | 1.000 | !!Error!! TOC:0.3786mg/L TC:0.2040mg/L IC:-0.1745mg/L |

1. Det

Anal.: TC

| No. | Area | Conc. | Inj. Vol. | Aut. Dil. | Ex. | Cal. Curve | Date / Time |
|---|---|---|---|---|---|---|---|
| 1 | 7.759 | 0.2040mg/L | 500uL | 1 | | TCCURVE-12-06-2011.2011_12_06_08_40_5 | 05/18/2012 04:55:13 PM |

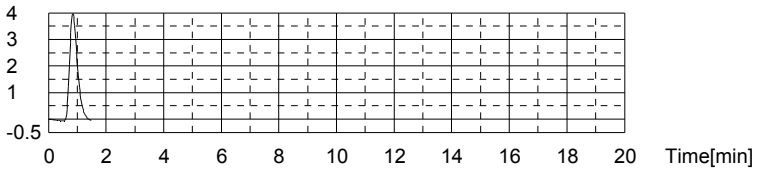
Mean Area 7.759
Mean Conc. 0.2040mg/L




Anal.: IC

| No. | Area | Conc. | Inj. Vol. | Aut. Dil. | Ex. | Cal. Curve | Date / Time |
|---|---|---|---|---|---|---|---|
| 1 | 7.698 | -0.1745mg/L | 500uL | 1 | | TICCURVE-12-06-2011B.2011_12_06_15_47 | 05/18/2012 04:59:09 PM |

Mean Area 7.698
Mean Conc. -0.1745mg/L




Sample

Sample Name: WG398501-02 LCS25
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

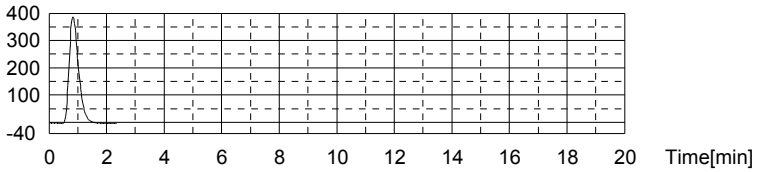
| Type | Anal. | Dil. | Result |
|---|---|---|---|
| Unknown | TOC | 1.000 | !!Error!! TOC:23.77mg/L TC:23.48mg/L IC:-0.2861mg/L |

1. Det

Anal.: TC

| No. | Area | Conc. | Inj. Vol. | Aut. Dil. | Ex. | Cal. Curve | Date / Time |
|---|---|---|---|---|---|---|---|
| 1 | 882.4 | 23.48mg/L | 500uL | 1 | | TCCURVE-12-06-2011.2011_12_06_08_40_5 | 05/18/2012 05:06:56 PM |

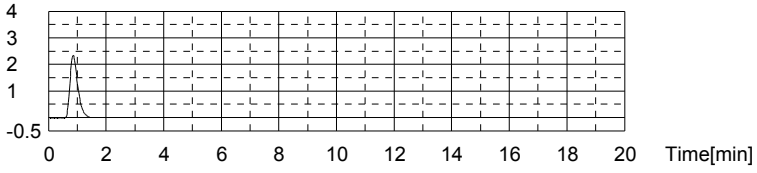
Mean Area 882.4
Mean Conc. 23.48mg/L




Anal.: IC

| No. | Area | Conc. | Inj. Vol. | Aut. Dil. | Ex. | Cal. Curve | Date / Time |
|---|---|---|---|---|---|---|---|
| 1 | 4.384 | -0.2861mg/L | 500uL | 1 | | TICCURVE-12-06-2011B.2011_12_06_15_47 | 05/18/2012 05:11:10 PM |

Mean Area 4.384
Mean Conc. -0.2861mg/L




Sample

Sample Name: WG398501-03 LCSDUP
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

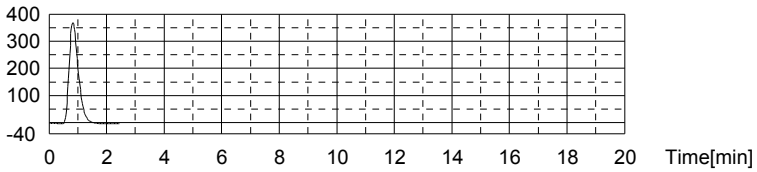
| Type | Anal. | Dil. | Result |
|---|---|---|---|
| Unknown | TOC | 1.000 | !!Error!! TOC:22.39mg/L TC:22.10mg/L IC:-0.2931mg/L |

1. Det

Anal.: TC

| No. | Area | Conc. | Inj. Vol. | Aut. Dil. | Ex. | Cal. Curve | Date / Time |
|---|---|---|---|---|---|---|---|
| 1 | 830.4 | 22.10mg/L | 500uL | 1 | | TCCURVE-12-06-2011.2011_12_06_08_40_5 | 05/18/2012 05:19:03 PM |

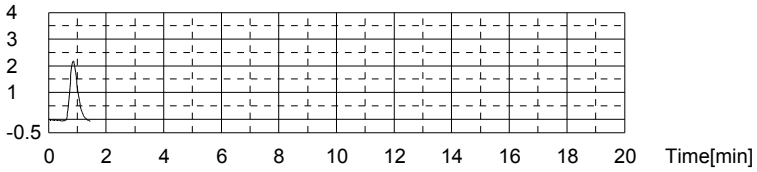
Mean Area 830.4
Mean Conc. 22.10mg/L




Anal.: IC

| No. | Area | Conc. | Inj. Vol. | Aut. Dil. | Ex. | Cal. Curve | Date / Time |
|---|---|---|---|---|---|---|---|
| 1 | 4.175 | -0.2931mg/L | 500uL | 1 | | TICCURVE-12-06-2011B.2011_12_06_15_47 | 05/18/2012 05:23:19 PM |

Mean Area 4.175
Mean Conc. -0.2931mg/L




Sample

Sample Name: L12050362-04 (20)
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

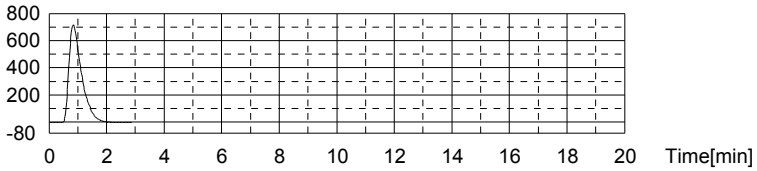
| Type | Anal. | Dil. | Result |
|---|---|---|---|
| Unknown | TOC | 1.000 | TOC:50.33mg/L TC:58.77mg/L IC:8.439mg/L |

1. Det

Anal.: TC

| No. | Area | Conc. | Inj. Vol. | Aut. Dil. | Ex. | Cal. Curve | Date / Time |
|---|---|---|---|---|---|---|---|
| 1 | 2208 | 58.77mg/L | 500uL | 1 | | TCCURVE-12-06-2011.2011_12_06_08_40_5 | 05/18/2012 05:31:37 PM |

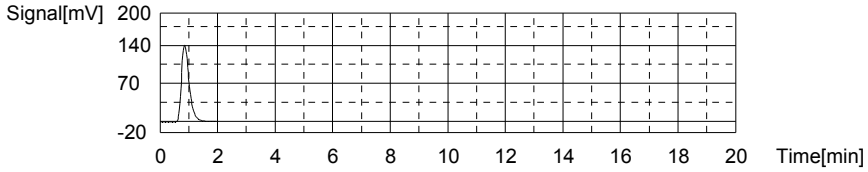
Mean Area 2208
Mean Conc. 58.77mg/L




Anal.: IC

| No. | Area | Conc. | Inj. Vol. | Aut. Dil. | Ex. | Cal. Curve | Date / Time |
|---|---|---|---|---|---|---|---|
| 1 | 263.7 | 8.439mg/L | 500uL | 1 | | TICCURVE-12-06-2011B.2011_12_06_15_47 | 05/18/2012 05:36:36 PM |

Mean Area 263.7
Mean Conc. 8.439mg/L




Sample

Sample Name: L12050362-12 (20)
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

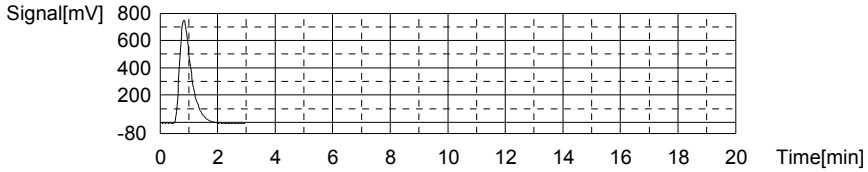
| Type | Anal. | Dil. | Result |
|---|---|---|---|
| Unknown | TOC | 1.000 | TOC:46.31mg/L TC:56.93mg/L IC:10.62mg/L |

1. Det

Anal.: TC

| No. | Area | Conc. | Inj. Vol. | Aut. Dil. | Ex. | Cal. Curve | Date / Time |
|---|---|---|---|---|---|---|---|
| 1 | 2139 | 56.93mg/L | 500uL | 1 | | TCCURVE-12-06-2011.2011_12_06_08_40_5 | 05/18/2012 05:45:00 PM |

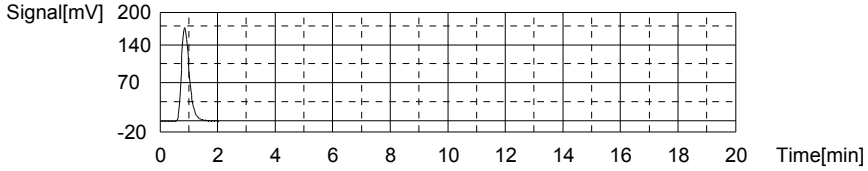
Mean Area 2139
Mean Conc. 56.93mg/L




Anal.: IC

| No. | Area | Conc. | Inj. Vol. | Aut. Dil. | Ex. | Cal. Curve | Date / Time |
|---|---|---|---|---|---|---|---|
| 1 | 328.5 | 10.62mg/L | 500uL | 1 | | TICCURVE-12-06-2011B.2011_12_06_15_47 | 05/18/2012 05:50:08 PM |

Mean Area 328.5
Mean Conc. 10.62mg/L




Sample

Sample Name: L12050362-14 (50)
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

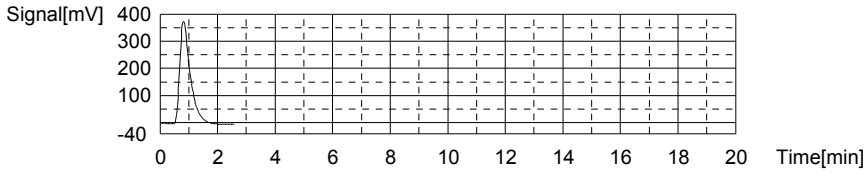
| Type | Anal. | Dil. | Result |
|---|---|---|---|
| Unknown | TOC | 1.000 | TOC:23.48mg/L TC:25.49mg/L IC:2.007mg/L |

1. Det

Anal.: TC

| No. | Area | Conc. | Inj. Vol. | Aut. Dil. | Ex. | Cal. Curve | Date / Time |
|---|---|---|---|---|---|---|---|
| 1 | 957.8 | 25.49mg/L | 500uL | 1 | | TCCURVE-12-06-2011.2011_12_06_08_40_5 | 05/18/2012 05:58:08 PM |

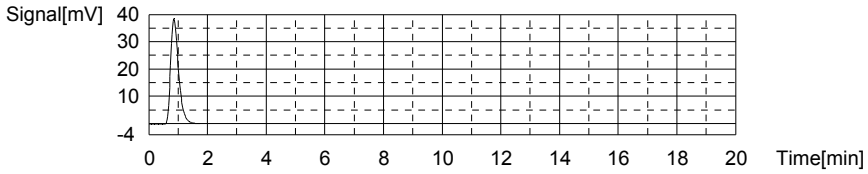
Mean Area 957.8
Mean Conc. 25.49mg/L




Anal.: IC

| No. | Area | Conc. | Inj. Vol. | Aut. Dil. | Ex. | Cal. Curve | Date / Time |
|---|---|---|---|---|---|---|---|
| 1 | 72.53 | 2.007mg/L | 500uL | 1 | | TICCURVE-12-06-2011B.2011_12_06_15_47 | 05/18/2012 06:02:48 PM |

Mean Area 72.53
Mean Conc. 2.007mg/L




Sample

Sample Name: L12050284-03
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

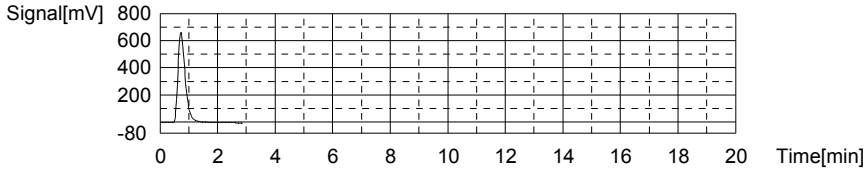
| Type | Anal. | Dil. | Result |
|---|---|---|---|
| Unknown | TOC | 1.000 | TOC:4.057mg/L TC:31.67mg/L IC:27.61mg/L |

1. Det

Anal.: TC

| No. | Area | Conc. | Inj. Vol. | Aut. Dil. | Ex. | Cal. Curve | Date / Time |
|---|---|---|---|---|---|---|---|
| 1 | 1190 | 31.67mg/L | 500uL | 1 | | TCCURVE-12-06-2011.2011_12_06_08_40_5 | 05/18/2012 06:11:06 PM |

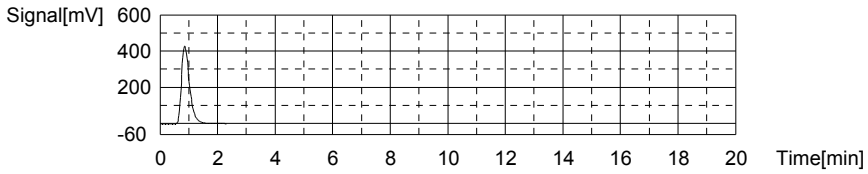
Mean Area 1190
Mean Conc. 31.67mg/L




Anal.: IC

| No. | Area | Conc. | Inj. Vol. | Aut. Dil. | Ex. | Cal. Curve | Date / Time |
|---|---|---|---|---|---|---|---|
| 1 | 833.6 | 27.61mg/L | 500uL | 1 | | TICCURVE-12-06-2011B.2011_12_06_15_47 | 05/18/2012 06:16:42 PM |

Mean Area 833.6
Mean Conc. 27.61mg/L




Sample

Sample Name: L12050284-05
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

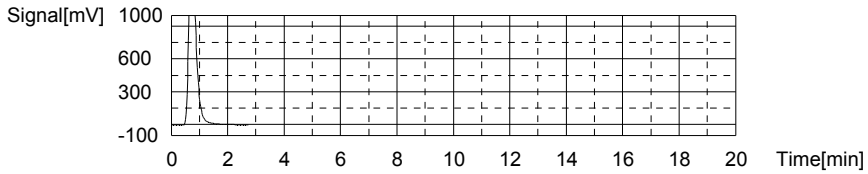
| Type | Anal. | Dil. | Result |
|---|---|---|---|
| Unknown | TOC | 1.000 | !!Error!! TOC:-0.9728mg/L TC:69.52mg/L IC:70.49mg/L |

1. Det

Anal.: TC

| No. | Area | Conc. | Inj. Vol. | Aut. Dil. | Ex. | Cal. Curve | Date / Time |
|---|---|---|---|---|---|---|---|
| 1 | 2612 | 69.52mg/L | 500uL | 1 | | TCCURVE-12-06-2011.2011_12_06_08_40_5 | 05/18/2012 06:24:52 PM |

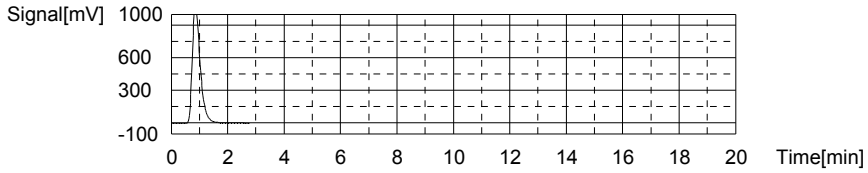
Mean Area 2612
Mean Conc. 69.52mg/L




Anal.: IC

| No. | Area | Conc. | Inj. Vol. | Aut. Dil. | Ex. | Cal. Curve | Date / Time |
|---|---|---|---|---|---|---|---|
| 1 | 2108 | 70.49mg/L | 500uL | 1 | | TICCURVE-12-06-2011B.2011_12_06_15_47 | 05/18/2012 06:31:15 PM |

Mean Area 2108
Mean Conc. 70.49mg/L




Sample

Sample Name: L12050284-07
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

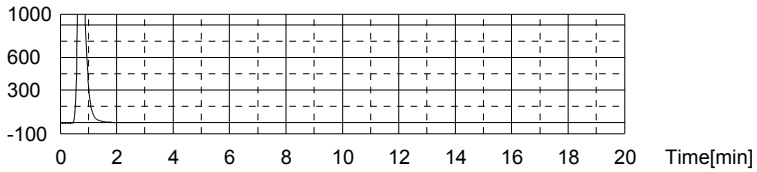
| Type | Anal. | Dil. | Result |
|---|---|---|---|
| Unknown | TOC | 1.000 | !!Error!! TOC:-5.909mg/L TC:78.78mg/L IC:84.69mg/L |

1. Det

Anal.: TC

| No. | Area | Conc. | Inj. Vol. | Aut. Dil. | Ex. | Cal. Curve | Date / Time |
|---|---|---|---|---|---|---|---|
| 1 | 2960 | 78.78mg/L | 500uL | 1 | | TCCURVE-12-06-2011.2011_12_06_08_40_5 | 05/18/2012 06:39:49 PM |

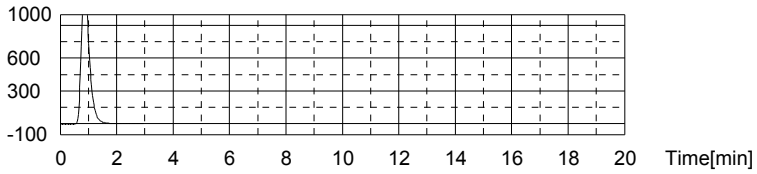
Mean Area 2960
Mean Conc. 78.78mg/L




Anal.: IC

| No. | Area | Conc. | Inj. Vol. | Aut. Dil. | Ex. | Cal. Curve | Date / Time |
|---|---|---|---|---|---|---|---|
| 1 | 2530 | 84.69mg/L | 500uL | 1 | | TICCURVE-12-06-2011B.2011_12_06_15_47 | 05/18/2012 06:46:34 PM |

Mean Area 2530
Mean Conc. 84.69mg/L




Sample

Sample Name: L12050317-03 (5)
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

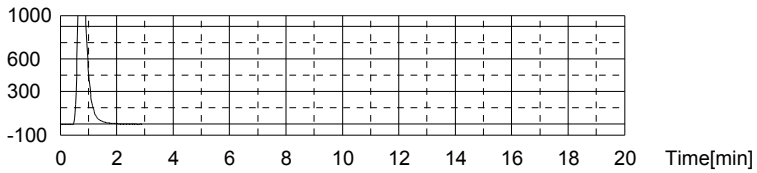
| Type | Anal. | Dil. | Result |
|---|---|---|---|
| Unknown | TOC | 1.000 | TOC:7.974mg/L TC:84.69mg/L IC:76.72mg/L |

1. Det

Anal.: TC

| No. | Area | Conc. | Inj. Vol. | Aut. Dil. | Ex. | Cal. Curve | Date / Time |
|---|---|---|---|---|---|---|---|
| 1 | 3182 | 84.69mg/L | 500uL | 1 | | TCCURVE-12-06-2011.2011_12_06_08_40_5 | 05/18/2012 06:54:54 PM |

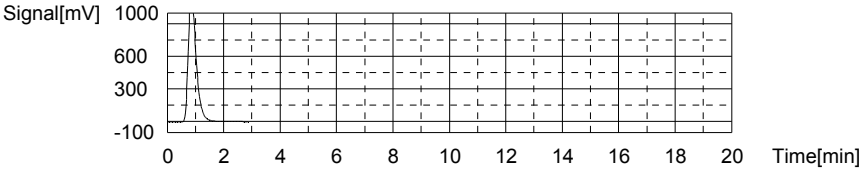
Mean Area 3182
Mean Conc. 84.69mg/L




Anal.: IC

| No. | Area | Conc. | Inj. Vol. | Aut. Dil. | Ex. | Cal. Curve | Date / Time |
|---|---|---|---|---|---|---|---|
| 1 | 2293 | 76.72mg/L | 500uL | 1 | | TICCURVE-12-06-2011B.2011_12_06_15_47 | 05/18/2012 07:01:29 PM |

Mean Area 2293
Mean Conc. 76.72mg/L




Sample

Sample Name: L12050500-03
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

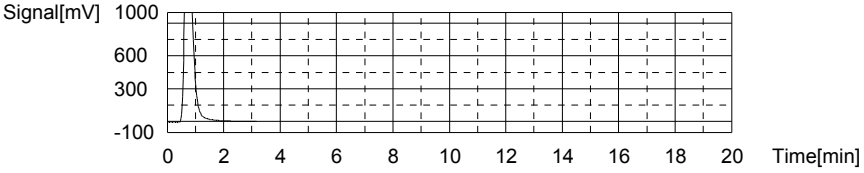
| Type | Anal. | Dil. | Result |
|---|---|---|---|
| Unknown | TOC | 1.000 | !!Error!! TOC:-11.75mg/L TC:81.79mg/L IC:93.54mg/L |

1. Det

Anal.: TC

| No. | Area | Conc. | Inj. Vol. | Aut. Dil. | Ex. | Cal. Curve | Date / Time |
|---|---|---|---|---|---|---|---|
| 1 | 3073 | 81.79mg/L | 500uL | 1 | | TCCURVE-12-06-2011.2011_12_06_08_40_5 | 05/18/2012 07:10:04 PM |

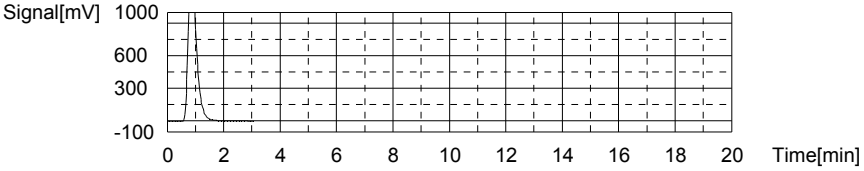
Mean Area 3073
Mean Conc. 81.79mg/L




Anal.: IC

| No. | Area | Conc. | Inj. Vol. | Aut. Dil. | Ex. | Cal. Curve | Date / Time |
|---|---|---|---|---|---|---|---|
| 1 | 2793 | 93.54mg/L | 500uL | 1 | | TICCURVE-12-06-2011B.2011_12_06_15_47 | 05/18/2012 07:16:59 PM |

Mean Area 2793
Mean Conc. 93.54mg/L




Sample

Sample Name: CCV
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

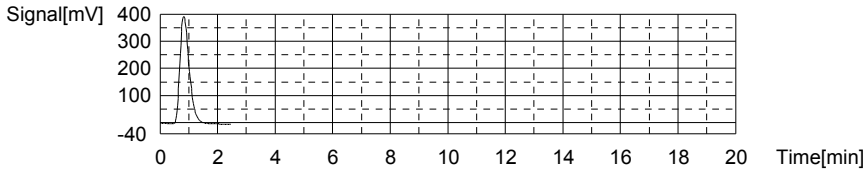
| Type | Anal. | Dil. | Result |
|---|---|---|---|
| Unknown | TOC | 1.000 | TOC:23.58mg/L TC:23.77mg/L IC:0.1892mg/L |

1. Det

Anal.: TC

| No. | Area | Conc. | Inj. Vol. | Aut. Dil. | Ex. | Cal. Curve | Date / Time |
|---|---|---|---|---|---|---|---|
| 1 | 893.0 | 23.77mg/L | 500uL | 1 | | TCCURVE-12-06-2011.2011_12_06_08_40_5 | 05/18/2012 07:24:58 PM |

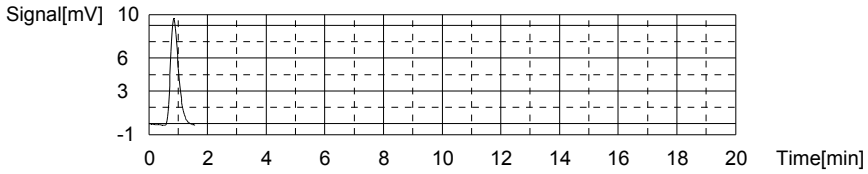
Mean Area 893.0
Mean Conc. 23.77mg/L




Anal.: IC

| No. | Area | Conc. | Inj. Vol. | Aut. Dil. | Ex. | Cal. Curve | Date / Time |
|---|---|---|---|---|---|---|---|
| 1 | 18.51 | 0.1892mg/L | 500uL | 1 | | TICCURVE-12-06-2011B.2011_12_06_15_47 | 05/18/2012 07:29:35 PM |

Mean Area 18.51
Mean Conc. 0.1892mg/L




Sample

Sample Name: CCB
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

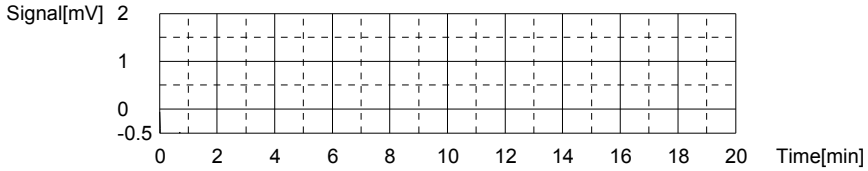
| Type | Anal. | Dil. | Result |
|---|---|---|---|
| Unknown | TOC | 1.000 | !!Error!! TOC:0.3075mg/L TC:0.1824mg/L IC:-0.1251mg/L |

1. Det

Anal.: TC

| No. | Area | Conc. | Inj. Vol. | Aut. Dil. | Ex. | Cal. Curve | Date / Time |
|---|---|---|---|---|---|---|---|
| 1 | 6.948 | 0.1824mg/L | 500uL | 1 | | TCCURVE-12-06-2011.2011_12_06_08_40_5 | 05/18/2012 07:34:51 PM |

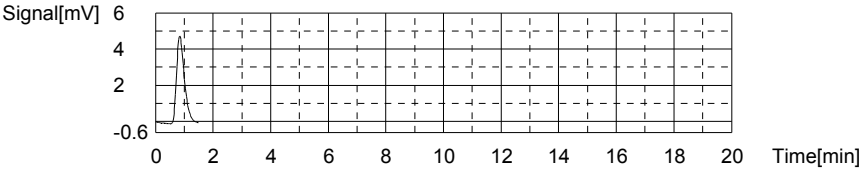
Mean Area 6.948
Mean Conc. 0.1824mg/L




Anal.: IC

| No. | Area | Conc. | Inj. Vol. | Aut. Dil. | Ex. | Cal. Curve | Date / Time |
|---|---|---|---|---|---|---|---|
| 1 | 9.169 | -0.1251mg/L | 500uL | 1 | | TICCURVE-12-06-2011B.2011_12_06_15_47 | 05/18/2012 07:38:47 PM |

Mean Area 9.169
Mean Conc. -0.1251mg/L




Sample

Sample Name: L12050532-01
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

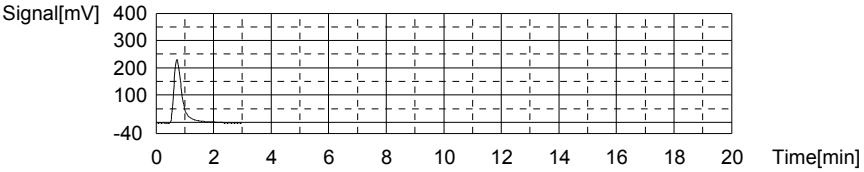
| Type | Anal. | Dil. | Result |
|---|---|---|---|
| Unknown | TOC | 1.000 | TOC:3.103mg/L TC:12.86mg/L IC:9.758mg/L |

1. Det

Anal.: TC

| No. | Area | Conc. | Inj. Vol. | Aut. Dil. | Ex. | Cal. Curve | Date / Time |
|---|---|---|---|---|---|---|---|
| 1 | 483.3 | 12.86mg/L | 500uL | 1 | | TCCURVE-12-06-2011.2011_12_06_08_40_5 | 05/18/2012 07:47:12 PM |

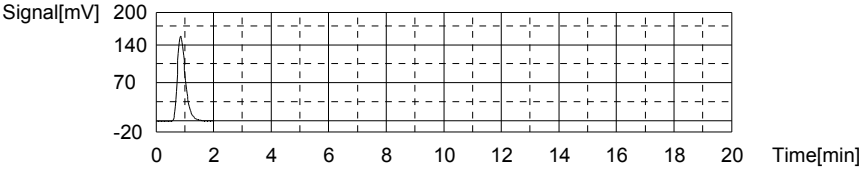
Mean Area 483.3
Mean Conc. 12.86mg/L




Anal.: IC

| No. | Area | Conc. | Inj. Vol. | Aut. Dil. | Ex. | Cal. Curve | Date / Time |
|---|---|---|---|---|---|---|---|
| 1 | 302.9 | 9.758mg/L | 500uL | 1 | | TICCURVE-12-06-2011B.2011_12_06_15_47 | 05/18/2012 07:52:15 PM |

Mean Area 302.9
Mean Conc. 9.758mg/L




Sample

Sample Name: L12050532-02
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

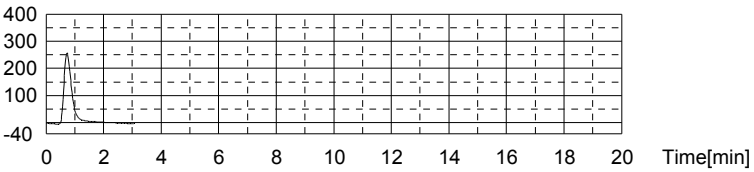
| Type | Anal. | Dil. | Result |
|---|---|---|---|
| Unknown | TOC | 1.000 | TOC:3.362mg/L TC:14.07mg/L IC:10.71mg/L |

1. Det

Anal.: TC

| No. | Area | Conc. | Inj. Vol. | Aut. Dil. | Ex. | Cal. Curve | Date / Time |
|---|---|---|---|---|---|---|---|
| 1 | 528.9 | 14.07mg/L | 500uL | 1 | | TCCURVE-12-06-2011.2011_12_06_08_40_5 | 05/18/2012 08:00:44 PM |

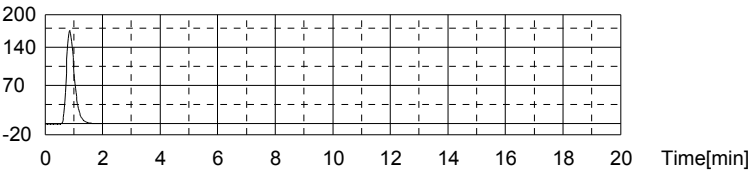
Mean Area 528.9
Mean Conc. 14.07mg/L




Anal.: IC

| No. | Area | Conc. | Inj. Vol. | Aut. Dil. | Ex. | Cal. Curve | Date / Time |
|---|---|---|---|---|---|---|---|
| 1 | 331.3 | 10.71mg/L | 500uL | 1 | | TICCURVE-12-06-2011B.2011_12_06_15_47 | 05/18/2012 08:05:52 PM |

Mean Area 331.3
Mean Conc. 10.71mg/L




Sample

Sample Name: L12050536-01
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

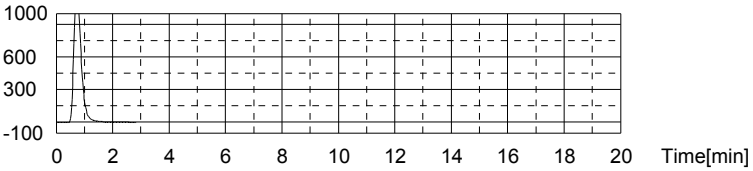
| Type | Anal. | Dil. | Result |
|---|---|---|---|
| Unknown | TOC | 1.000 | TOC:3.957mg/L TC:59.65mg/L IC:55.69mg/L |

1. Det

Anal.: TC

| No. | Area | Conc. | Inj. Vol. | Aut. Dil. | Ex. | Cal. Curve | Date / Time |
|---|---|---|---|---|---|---|---|
| 1 | 2241 | 59.65mg/L | 500uL | 1 | | TCCURVE-12-06-2011.2011_12_06_08_40_5 | 05/18/2012 08:14:07 PM |

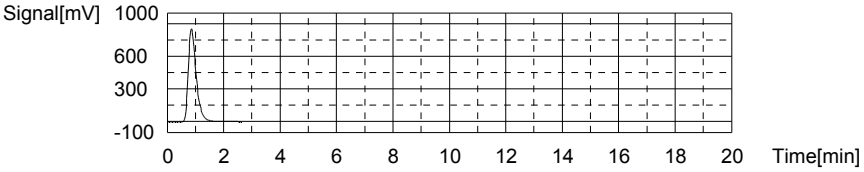
Mean Area 2241
Mean Conc. 59.65mg/L




Anal.: IC

| No. | Area | Conc. | Inj. Vol. | Aut. Dil. | Ex. | Cal. Curve | Date / Time |
|---|---|---|---|---|---|---|---|
| 1 | 1668 | 55.69mg/L | 500uL | 1 | | TICCURVE-12-06-2011B.2011_12_06_15_47 | 05/18/2012 08:20:20 PM |

Mean Area 1668
Mean Conc. 55.69mg/L




Sample

Sample Name: L12050536-02
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

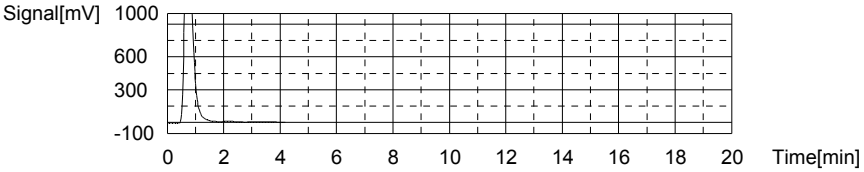
| Type | Anal. | Dil. | Result |
|---|---|---|---|
| Unknown | TOC | 1.000 | !!Error!! TOC:-9.053mg/L TC:83.68mg/L IC:92.73mg/L |

1. Det

Anal.: TC

| No. | Area | Conc. | Inj. Vol. | Aut. Dil. | Ex. | Cal. Curve | Date / Time |
|---|---|---|---|---|---|---|---|
| 1 | 3144 | 83.68mg/L | 500uL | 1 | | TCCURVE-12-06-2011.2011_12_06_08_40_5 | 05/18/2012 08:29:57 PM |

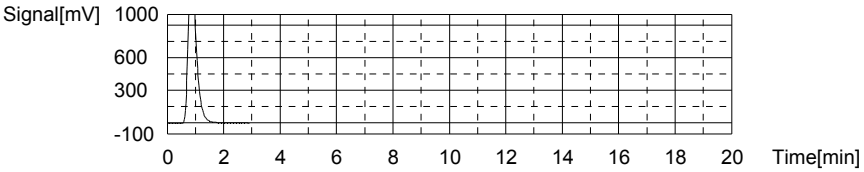
Mean Area 3144
Mean Conc. 83.68mg/L




Anal.: IC

| No. | Area | Conc. | Inj. Vol. | Aut. Dil. | Ex. | Cal. Curve | Date / Time |
|---|---|---|---|---|---|---|---|
| 1 | 2769 | 92.73mg/L | 500uL | 1 | | TICCURVE-12-06-2011B.2011_12_06_15_47 | 05/18/2012 08:36:34 PM |

Mean Area 2769
Mean Conc. 92.73mg/L




Sample

Sample Name: L12050536-03
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

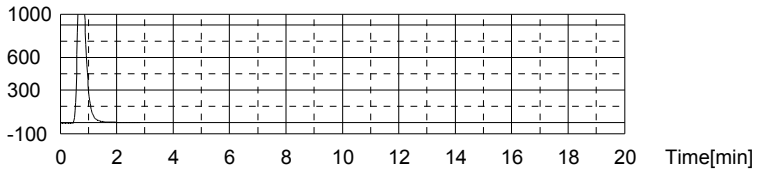
| Type | Anal. | Dil. | Result |
|---|---|---|---|
| Unknown | TOC | 1.000 | !!Error!! TOC:-2.530mg/L TC:74.52mg/L IC:77.05mg/L |

1. Det

Anal.: TC

| No. | Area | Conc. | Inj. Vol. | Aut. Dil. | Ex. | Cal. Curve | Date / Time |
|---|---|---|---|---|---|---|---|
| 1 | 2800 | 74.52mg/L | 500uL | 1 | | TCCURVE-12-06-2011.2011_12_06_08_40_5 | 05/18/2012 08:44:49 PM |

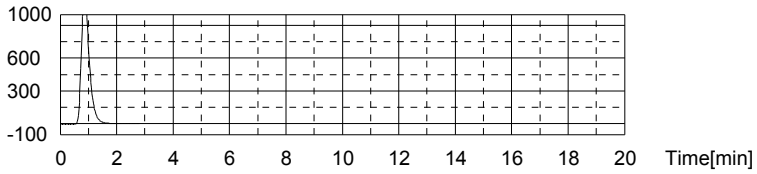
Mean Area 2800
Mean Conc. 74.52mg/L




Anal.: IC

| No. | Area | Conc. | Inj. Vol. | Aut. Dil. | Ex. | Cal. Curve | Date / Time |
|---|---|---|---|---|---|---|---|
| 1 | 2303 | 77.05mg/L | 500uL | 1 | | TICCURVE-12-06-2011B.2011_12_06_15_47 | 05/18/2012 08:51:21 PM |

Mean Area 2303
Mean Conc. 77.05mg/L




Sample

Sample Name: L12050536-04
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

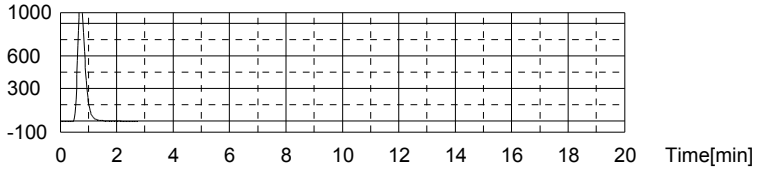
| Type | Anal. | Dil. | Result |
|---|---|---|---|
| Unknown | TOC | 1.000 | TOC:2.071mg/L TC:54.43mg/L IC:52.36mg/L |

1. Det

Anal.: TC

| No. | Area | Conc. | Inj. Vol. | Aut. Dil. | Ex. | Cal. Curve | Date / Time |
|---|---|---|---|---|---|---|---|
| 1 | 2045 | 54.43mg/L | 500uL | 1 | | TCCURVE-12-06-2011.2011_12_06_08_40_5 | 05/18/2012 08:59:32 PM |

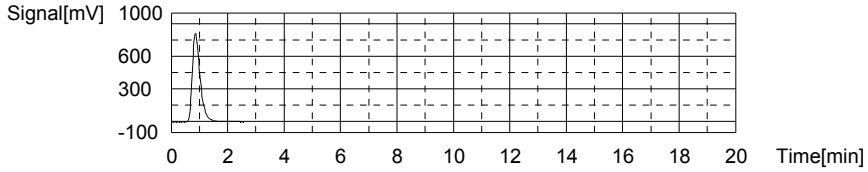
Mean Area 2045
Mean Conc. 54.43mg/L




Anal.: IC

| No. | Area | Conc. | Inj. Vol. | Aut. Dil. | Ex. | Cal. Curve | Date / Time |
|---|---|---|---|---|---|---|---|
| 1 | 1569 | 52.36mg/L | 500uL | 1 | | TICCURVE-12-06-2011B.2011_12_06_15_47 | 05/18/2012 09:05:38 PM |

Mean Area 1569
Mean Conc. 52.36mg/L




Sample

Sample Name: L12050536-05
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

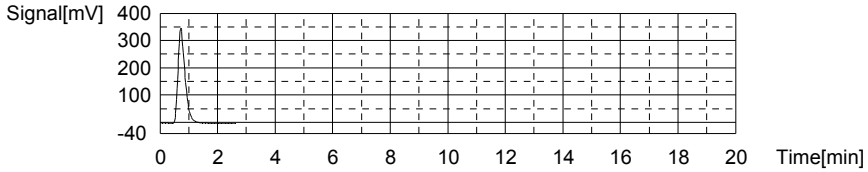
| Type | Anal. | Dil. | Result |
|---|---|---|---|
| Unknown | TOC | 1.000 | TOC:2.798mg/L TC:15.81mg/L IC:13.01mg/L |

1. Det

Anal.: TC

| No. | Area | Conc. | Inj. Vol. | Aut. Dil. | Ex. | Cal. Curve | Date / Time |
|---|---|---|---|---|---|---|---|
| 1 | 594.2 | 15.81mg/L | 500uL | 1 | | TCCURVE-12-06-2011.2011_12_06_08_40_5 | 05/18/2012 09:13:43 PM |

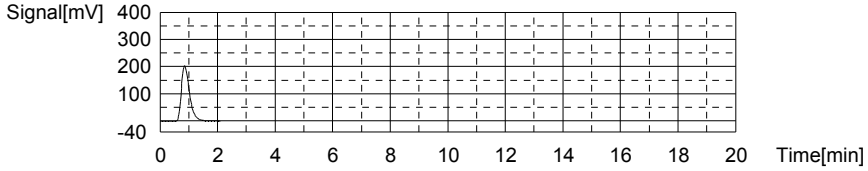
Mean Area 594.2
Mean Conc. 15.81mg/L




Anal.: IC

| No. | Area | Conc. | Inj. Vol. | Aut. Dil. | Ex. | Cal. Curve | Date / Time |
|---|---|---|---|---|---|---|---|
| 1 | 399.7 | 13.01mg/L | 500uL | 1 | | TICCURVE-12-06-2011B.2011_12_06_15_47 | 05/18/2012 09:18:55 PM |

Mean Area 399.7
Mean Conc. 13.01mg/L




Sample

Sample Name: WG398501-05 DUP
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

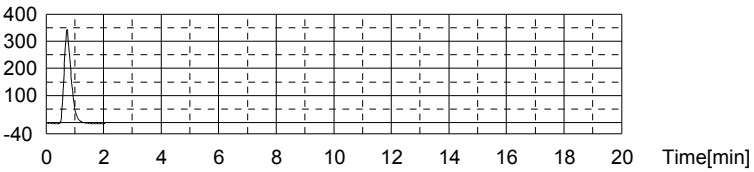
| Type | Anal. | Dil. | Result |
|---|---|---|---|
| Unknown | TOC | 1.000 | TOC:2.591mg/L TC:15.71mg/L IC:13.12mg/L |

1. Det

Anal.: TC

| No. | Area | Conc. | Inj. Vol. | Aut. Dil. | Ex. | Cal. Curve | Date / Time |
|---|---|---|---|---|---|---|---|
| 1 | 590.2 | 15.71mg/L | 500uL | 1 | | TCCURVE-12-06-2011.2011_12_06_08_40_5 | 05/18/2012 09:26:24 PM |

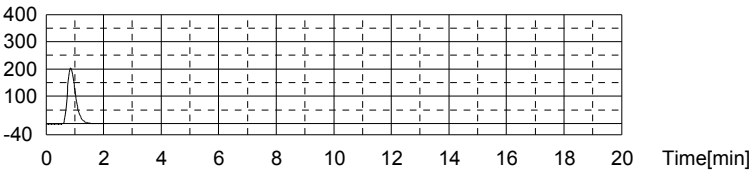
Mean Area 590.2
Mean Conc. 15.71mg/L




Anal.: IC

| No. | Area | Conc. | Inj. Vol. | Aut. Dil. | Ex. | Cal. Curve | Date / Time |
|---|---|---|---|---|---|---|---|
| 1 | 402.7 | 13.12mg/L | 500uL | 1 | | TICCURVE-12-06-2011B.2011_12_06_15_47 | 05/18/2012 09:31:33 PM |

Mean Area 402.7
Mean Conc. 13.12mg/L




Sample

Sample Name: L12050536-07 MS
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

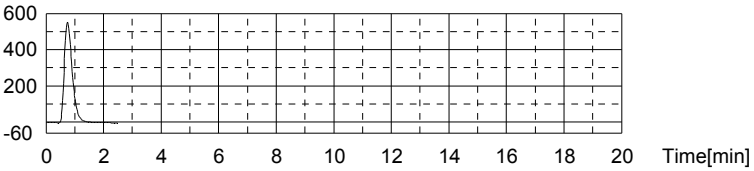
| Type | Anal. | Dil. | Result |
|---|---|---|---|
| Unknown | TOC | 1.000 | TOC:11.53mg/L TC:28.50mg/L IC:16.97mg/L |

1. Det

Anal.: TC

| No. | Area | Conc. | Inj. Vol. | Aut. Dil. | Ex. | Cal. Curve | Date / Time |
|---|---|---|---|---|---|---|---|
| 1 | 1071 | 28.50mg/L | 500uL | 1 | | TCCURVE-12-06-2011.2011_12_06_08_40_5 | 05/18/2012 09:39:29 PM |

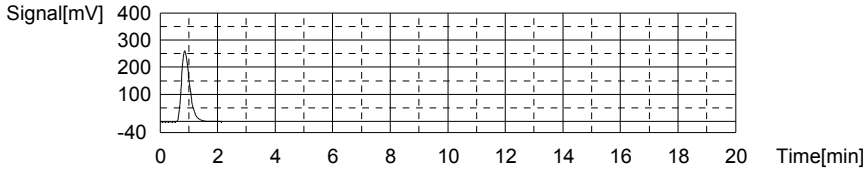
Mean Area 1071
Mean Conc. 28.50mg/L




Anal.: IC

| No. | Area | Conc. | Inj. Vol. | Aut. Dil. | Ex. | Cal. Curve | Date / Time |
|---|---|---|---|---|---|---|---|
| 1 | 517.4 | 16.97mg/L | 500uL | 1 | | TICCURVE-12-06-2011B.2011_12_06_15_47 | 05/18/2012 09:44:45 PM |

Mean Area 517.4
Mean Conc. 16.97mg/L




Sample

Sample Name: L12050536-08 MSD
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

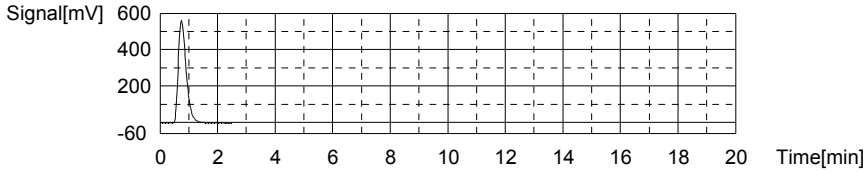
| Type | Anal. | Dil. | Result |
|---|---|---|---|
| Unknown | TOC | 1.000 | TOC:12.00mg/L TC:29.01mg/L IC:17.01mg/L |

1. Det

Anal.: TC

| No. | Area | Conc. | Inj. Vol. | Aut. Dil. | Ex. | Cal. Curve | Date / Time |
|---|---|---|---|---|---|---|---|
| 1 | 1090 | 29.01mg/L | 500uL | 1 | | TCCURVE-12-06-2011.2011_12_06_08_40_5 | 05/18/2012 09:52:41 PM |

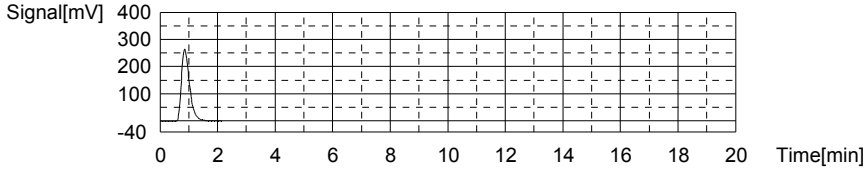
Mean Area 1090
Mean Conc. 29.01mg/L




Anal.: IC

| No. | Area | Conc. | Inj. Vol. | Aut. Dil. | Ex. | Cal. Curve | Date / Time |
|---|---|---|---|---|---|---|---|
| 1 | 518.5 | 17.01mg/L | 500uL | 1 | | TICCURVE-12-06-2011B.2011_12_06_15_47 | 05/18/2012 09:57:56 PM |

Mean Area 518.5
Mean Conc. 17.01mg/L




Sample

Sample Name: CCV
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

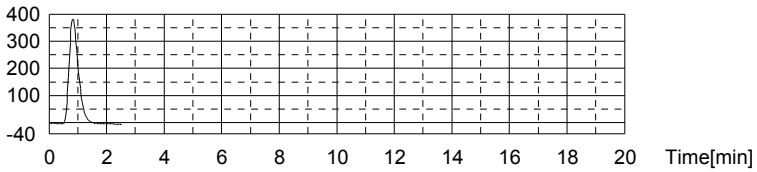
| Type | Anal. | Dil. | Result |
|---|---|---|---|
| Unknown | TOC | 1.000 | !!Error!! TOC:23.12mg/L TC:22.98mg/L IC:-0.1471mg/L |

1. Det

Anal.: TC

| No. | Area | Conc. | Inj. Vol. | Aut. Dil. | Ex. | Cal. Curve | Date / Time |
|---|---|---|---|---|---|---|---|
| 1 | 863.3 | 22.98mg/L | 500uL | 1 | | TCCURVE-12-06-2011.2011_12_06_08_40_5 | 05/18/2012 10:05:54 PM |

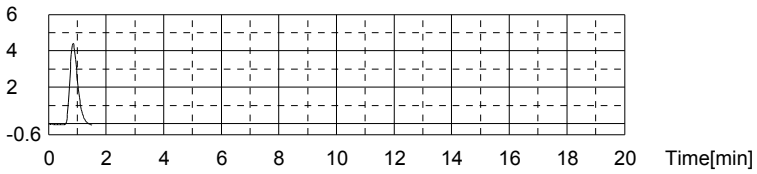
Mean Area 863.3
Mean Conc. 22.98mg/L




Anal.: IC

| No. | Area | Conc. | Inj. Vol. | Aut. Dil. | Ex. | Cal. Curve | Date / Time |
|---|---|---|---|---|---|---|---|
| 1 | 8.514 | -0.1471mg/L | 500uL | 1 | | TICCURVE-12-06-2011B.2011_12_06_15_47 | 05/18/2012 10:10:17 PM |

Mean Area 8.514
Mean Conc. -0.1471mg/L




Sample

Sample Name: CCB
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

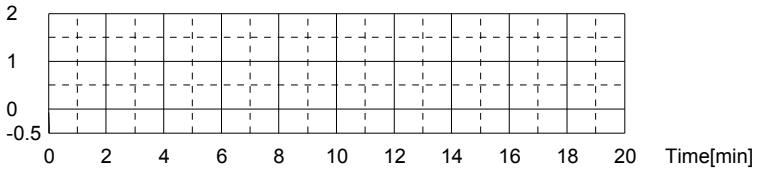
| Type | Anal. | Dil. | Result |
|---|---|---|---|
| Unknown | TOC | 1.000 | !!Error!! TOC:0.3157mg/L TC:0.1427mg/L IC:-0.1730mg/L |

1. Det

Anal.: TC

| No. | Area | Conc. | Inj. Vol. | Aut. Dil. | Ex. | Cal. Curve | Date / Time |
|---|---|---|---|---|---|---|---|
| 1 | 5.455 | 0.1427mg/L | 500uL | 1 | | TCCURVE-12-06-2011.2011_12_06_08_40_5 | 05/18/2012 10:15:34 PM |

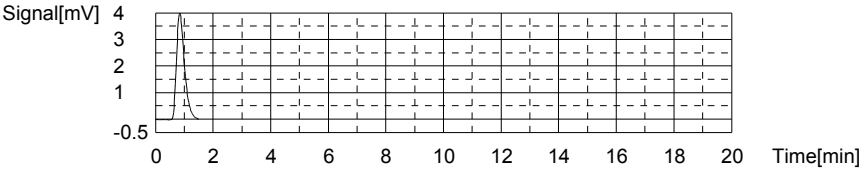
Mean Area 5.455
Mean Conc. 0.1427mg/L




Anal.: IC

| No. | Area | Conc. | Inj. Vol. | Aut. Dil. | Ex. | Cal. Curve | Date / Time |
|---|---|---|---|---|---|---|---|
| 1 | 7.745 | -0.1730mg/L | 500uL | 1 | | TICCURVE-12-06-2011B.2011_12_06_15_47 | 05/18/2012 10:19:31 PM |

Mean Area 7.745
Mean Conc. -0.1730mg/L




Sample

Sample Name: L12050536-06
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

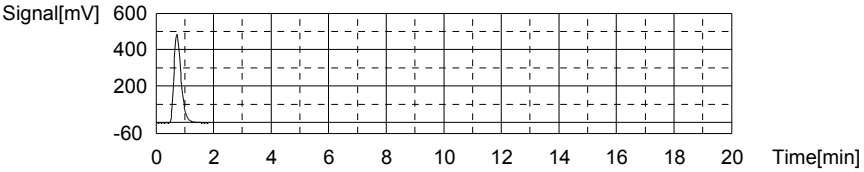
| Type | Anal. | Dil. | Result |
|---|---|---|---|
| Unknown | TOC | 1.000 | TOC:1.604mg/L TC:22.61mg/L IC:21.01mg/L |

1. Det

Anal.: TC

| No. | Area | Conc. | Inj. Vol. | Aut. Dil. | Ex. | Cal. Curve | Date / Time |
|---|---|---|---|---|---|---|---|
| 1 | 849.7 | 22.61mg/L | 500uL | 1 | | TCCURVE-12-06-2011.2011_12_06_08_40_5 | 05/18/2012 10:26:48 PM |

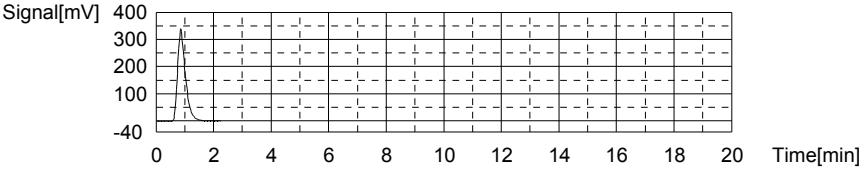
Mean Area 849.7
Mean Conc. 22.61mg/L




Anal.: IC

| No. | Area | Conc. | Inj. Vol. | Aut. Dil. | Ex. | Cal. Curve | Date / Time |
|---|---|---|---|---|---|---|---|
| 1 | 637.3 | 21.01mg/L | 500uL | 1 | | TICCURVE-12-06-2011B.2011_12_06_15_47 | 05/18/2012 10:32:10 PM |

Mean Area 637.3
Mean Conc. 21.01mg/L




Sample

Sample Name: WG398503-01 BLANK
Sample ID: <Untitled>
Origin: TOC-12-06-2011A.met
Status Completed
Chk. Result

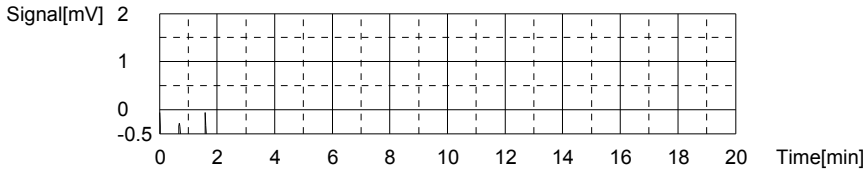
| Type | Anal. | Dil. | Result |
|---|---|---|---|
| Unknown | TOC | 1.000 | !!Error!! TOC:0.3004mg/L TC:0.1411mg/L IC:-0.1593mg/L |

1. Det

Anal.: TC

| No. | Area | Conc. | Inj. Vol. | Aut. Dil. | Ex. | Cal. Curve | Date / Time |
|---|---|---|---|---|---|---|---|
| 1 | 5.806 | 0.1521mg/L | 500uL | 1 | | TCCURVE-12-06-2011.2011_12_06_08_40_5 | 05/18/2012 10:37:34 PM |
| 2 | 4.983 | 0.1301mg/L | 500uL | 1 | | TCCURVE-12-06-2011.2011_12_06_08_40_5 | 05/18/2012 10:41:20 PM |

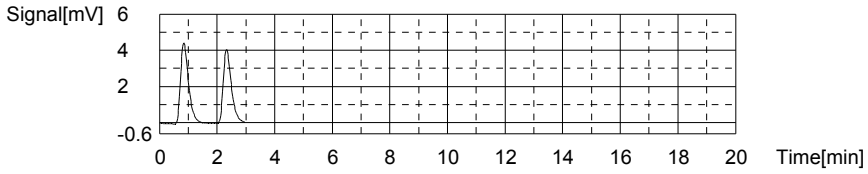
Mean Area 5.395
Mean Conc. 0.1411mg/L




Anal.: IC

| No. | Area | Conc. | Inj. Vol. | Aut. Dil. | Ex. | Cal. Curve | Date / Time |
|---|---|---|---|---|---|---|---|
| 1 | 8.506 | -0.1474mg/L | 500uL | 1 | | TICCURVE-12-06-2011B.2011_12_06_15_47 | 05/18/2012 10:45:17 PM |
| 2 | 7.798 | -0.1712mg/L | 500uL | 1 | | TICCURVE-12-06-2011B.2011_12_06_15_47 | 05/18/2012 10:49:12 PM |

Mean Area 8.152
Mean Conc. -0.1593mg/L




Sample

Sample Name: WG398503-02 LCS25
Sample ID: <Untitled>
Origin: TOC-12-06-2011A.met
Status Completed
Chk. Result

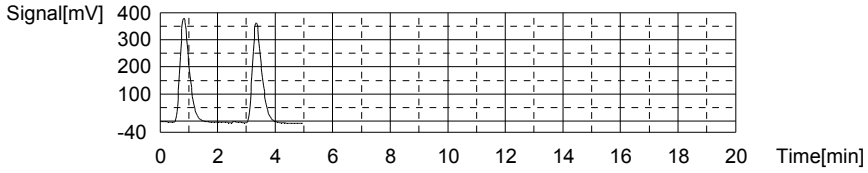
| Type | Anal. | Dil. | Result |
|---|---|---|---|
| Unknown | TOC | 1.000 | !!Error!! TOC:22.67mg/L TC:22.43mg/L IC:-0.2379mg/L |

1. Det

Anal.: TC

| No. | Area | Conc. | Inj. Vol. | Aut. Dil. | Ex. | Cal. Curve | Date / Time |
|---|---|---|---|---|---|---|---|
| 1 | 857.8 | 22.83mg/L | 500uL | 1 | | TCCURVE-12-06-2011.2011_12_06_08_40_5 | 05/18/2012 10:57:20 PM |
| 2 | 827.8 | 22.03mg/L | 500uL | 1 | | TCCURVE-12-06-2011.2011_12_06_08_40_5 | 05/18/2012 11:02:02 PM |

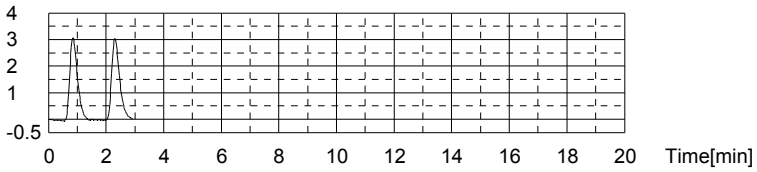
Mean Area 842.8
Mean Conc. 22.43mg/L




Anal.: IC

| No. | Area | Conc. | Inj. Vol. | Aut. Dil. | Ex. | Cal. Curve | Date / Time |
|---|---|---|---|---|---|---|---|
| 1 | 5.839 | -0.2371mg/L | 500uL | 1 | | TICCURVE-12-06-2011B.2011_12_06_15_47 | 05/18/2012 11:06:21 PM |
| 2 | 5.792 | -0.2387mg/L | 500uL | 1 | | TICCURVE-12-06-2011B.2011_12_06_15_47 | 05/18/2012 11:10:27 PM |

Mean Area 5.816
Mean Conc. -0.2379mg/L




Sample

Sample Name: WG398503-03 LCSDUP
Sample ID: <Untitled>
Origin: TOC-12-06-2011A.met
Status Completed
Chk. Result

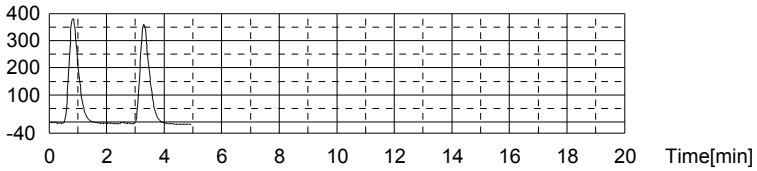
| Type | Anal. | Dil. | Result |
|---|---|---|---|
| Unknown | TOC | 1.000 | !!Error!! TOC:22.79mg/L TC:22.55mg/L IC:-0.2433mg/L |

1. Det

Anal.: TC

| No. | Area | Conc. | Inj. Vol. | Aut. Dil. | Ex. | Cal. Curve | Date / Time |
|---|---|---|---|---|---|---|---|
| 1 | 870.2 | 23.16mg/L | 500uL | 1 | | TCCURVE-12-06-2011.2011_12_06_08_40_5 | 05/18/2012 11:18:23 PM |
| 2 | 824.1 | 21.93mg/L | 500uL | 1 | | TCCURVE-12-06-2011.2011_12_06_08_40_5 | 05/18/2012 11:23:05 PM |

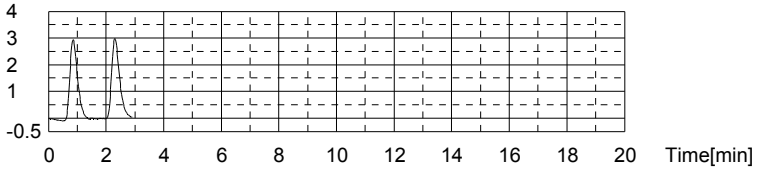
Mean Area 847.2
Mean Conc. 22.55mg/L




Anal.: IC

| No. | Area | Conc. | Inj. Vol. | Aut. Dil. | Ex. | Cal. Curve | Date / Time |
|---|---|---|---|---|---|---|---|
| 1 | 5.687 | -0.2422mg/L | 500uL | 1 | | TICCURVE-12-06-2011B.2011_12_06_15_47 | 05/18/2012 11:27:22 PM |
| 2 | 5.621 | -0.2444mg/L | 500uL | 1 | | TICCURVE-12-06-2011B.2011_12_06_15_47 | 05/18/2012 11:31:28 PM |

Mean Area 5.654
Mean Conc. -0.2433mg/L




Sample

Sample Name: L12050517-09
Sample ID: <Untitled>
Origin: TOC-12-06-2011A.met
Status Completed
Chk. Result

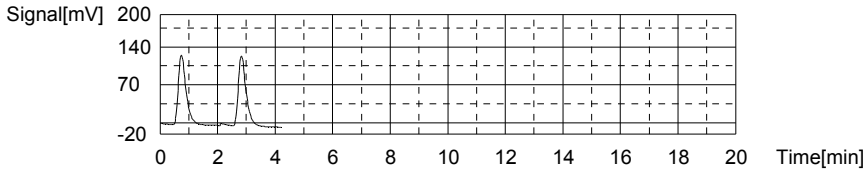
| Type | Anal. | Dil. | Result |
|---|---|---|---|
| Unknown | TOC | 1.000 | TOC:2.881mg/L TC:6.416mg/L IC:3.535mg/L |

1. Det

Anal.: TC

| No. | Area | Conc. | Inj. Vol. | Aut. Dil. | Ex. | Cal. Curve | Date / Time |
|---|---|---|---|---|---|---|---|
| 1 | 241.7 | 6.431mg/L | 500uL | 1 | | TCCURVE-12-06-2011.2011_12_06_08_40_5 | 05/18/2012 11:39:00 PM |
| 2 | 240.6 | 6.401mg/L | 500uL | 1 | | TCCURVE-12-06-2011.2011_12_06_08_40_5 | 05/18/2012 11:43:24 PM |

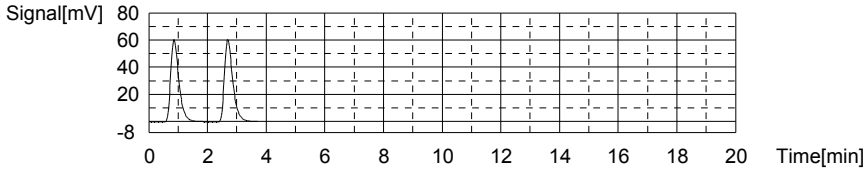
Mean Area 241.2
Mean Conc. 6.416mg/L




Anal.: IC

| No. | Area | Conc. | Inj. Vol. | Aut. Dil. | Ex. | Cal. Curve | Date / Time |
|---|---|---|---|---|---|---|---|
| 1 | 117.0 | 3.503mg/L | 500uL | 1 | | TICCURVE-12-06-2011B.2011_12_06_15_47 | 05/18/2012 11:48:10 PM |
| 2 | 118.9 | 3.567mg/L | 500uL | 1 | | TICCURVE-12-06-2011B.2011_12_06_15_47 | 05/18/2012 11:52:45 PM |

Mean Area 118.0
Mean Conc. 3.535mg/L




Sample

Sample Name: L12050533-01 (5)
Sample ID: <Untitled>
Origin: TOC-12-06-2011A.met
Status Completed
Chk. Result

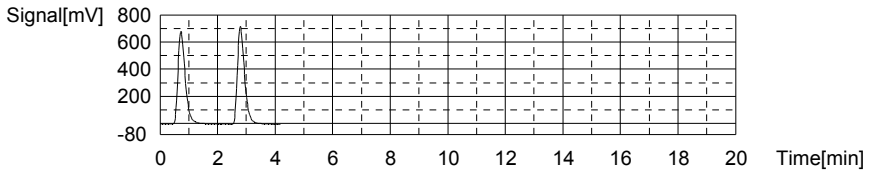
| Type | Anal. | Dil. | Result |
|---|---|---|---|
| Unknown | TOC | 1.000 | TOC:3.593mg/L TC:32.54mg/L IC:28.94mg/L |

1. Det

Anal.: TC

| No. | Area | Conc. | Inj. Vol. | Aut. Dil. | Ex. | Cal. Curve | Date / Time |
|---|---|---|---|---|---|---|---|
| 1 | 1192 | 31.72mg/L | 500uL | 1 | | TCCURVE-12-06-2011.2011_12_06_08_40_5 | 05/19/2012 12:00:17 AM |
| 2 | 1253 | 33.35mg/L | 500uL | 1 | | TCCURVE-12-06-2011.2011_12_06_08_40_5 | 05/19/2012 12:05:26 AM |

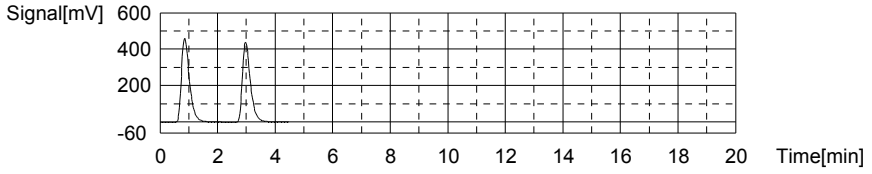
Mean Area 1223
Mean Conc. 32.54mg/L




Anal.: IC

| No. | Area | Conc. | Inj. Vol. | Aut. Dil. | Ex. | Cal. Curve | Date / Time |
|---|---|---|---|---|---|---|---|
| 1 | 894.8 | 29.67mg/L | 500uL | 1 | | TICCURVE-12-06-2011B.2011_12_06_15_47 | 05/19/2012 12:10:51 AM |
| 2 | 851.4 | 28.21mg/L | 500uL | 1 | | TICCURVE-12-06-2011B.2011_12_06_15_47 | 05/19/2012 12:16:13 AM |

Mean Area 873.1
Mean Conc. 28.94mg/L




Sample

Sample Name: L12050534-01
Sample ID: <Untitled>
Origin: TOC-12-06-2011A.met
Status Completed
Chk. Result

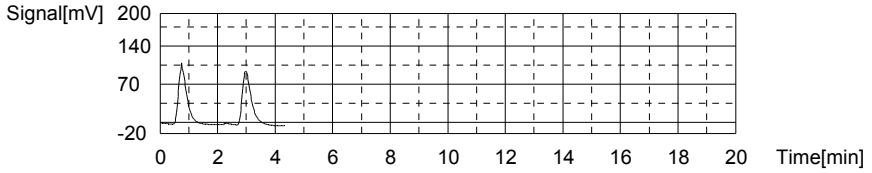
| Type | Anal. | Dil. | Result |
|---|---|---|---|
| Unknown | TOC | 1.000 | TOC:3.559mg/L TC:5.736mg/L IC:2.177mg/L |

1. Det

Anal.: TC

| No. | Area | Conc. | Inj. Vol. | Aut. Dil. | Ex. | Cal. Curve | Date / Time |
|---|---|---|---|---|---|---|---|
| 1 | 215.5 | 5.733mg/L | 500uL | 1 | | TCCURVE-12-06-2011.2011_12_06_08_40_5 | 05/19/2012 12:23:54 AM |
| 2 | 215.7 | 5.739mg/L | 500uL | 1 | | TCCURVE-12-06-2011.2011_12_06_08_40_5 | 05/19/2012 12:28:16 AM |

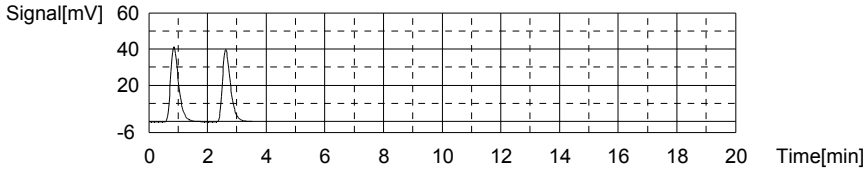
Mean Area 215.6
Mean Conc. 5.736mg/L




Anal.: IC

| No. | Area | Conc. | Inj. Vol. | Aut. Dil. | Ex. | Cal. Curve | Date / Time |
|---|---|---|---|---|---|---|---|
| 1 | 79.31 | 2.235mg/L | 500uL | 1 | | TICCURVE-12-06-2011B.2011_12_06_15_47 | 05/19/2012 12:33:00 AM |
| 2 | 75.84 | 2.118mg/L | 500uL | 1 | | TICCURVE-12-06-2011B.2011_12_06_15_47 | 05/19/2012 12:37:28 AM |

Mean Area 77.58
Mean Conc. 2.177mg/L




Sample

Sample Name: L12050534-02
Sample ID: <Untitled>
Origin: TOC-12-06-2011A.met
Status Completed
Chk. Result

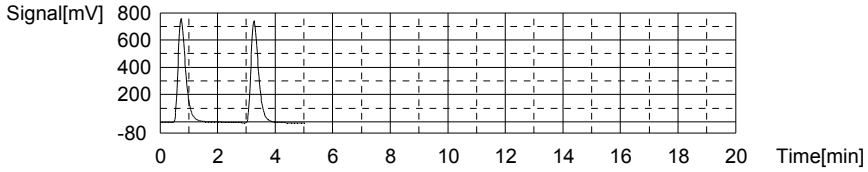
| Type | Anal. | Dil. | Result |
|---|---|---|---|
| Unknown | TOC | 1.000 | TOC:8.178mg/L TC:37.14mg/L IC:28.96mg/L |

1. Det

Anal.: TC

| No. | Area | Conc. | Inj. Vol. | Aut. Dil. | Ex. | Cal. Curve | Date / Time |
|---|---|---|---|---|---|---|---|
| 1 | 1416 | 37.69mg/L | 500uL | 1 | | TCCURVE-12-06-2011.2011_12_06_08_40_5 | 05/19/2012 12:45:27 AM |
| 2 | 1375 | 36.60mg/L | 500uL | 1 | | TCCURVE-12-06-2011.2011_12_06_08_40_5 | 05/19/2012 12:51:08 AM |

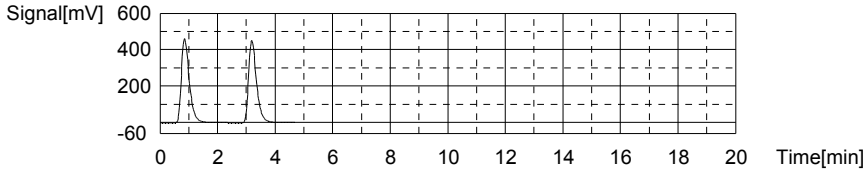
Mean Area 1396
Mean Conc. 37.14mg/L




Anal.: IC

| No. | Area | Conc. | Inj. Vol. | Aut. Dil. | Ex. | Cal. Curve | Date / Time |
|---|---|---|---|---|---|---|---|
| 1 | 883.2 | 29.28mg/L | 500uL | 1 | | TICCURVE-12-06-2011B.2011_12_06_15_47 | 05/19/2012 12:56:41 AM |
| 2 | 864.2 | 28.64mg/L | 500uL | 1 | | TICCURVE-12-06-2011B.2011_12_06_15_47 | 05/19/2012 01:01:58 AM |

Mean Area 873.7
Mean Conc. 28.96mg/L




Sample

Sample Name: L12050534-03
Sample ID: <Untitled>
Origin: TOC-12-06-2011A.met
Status Completed
Chk. Result

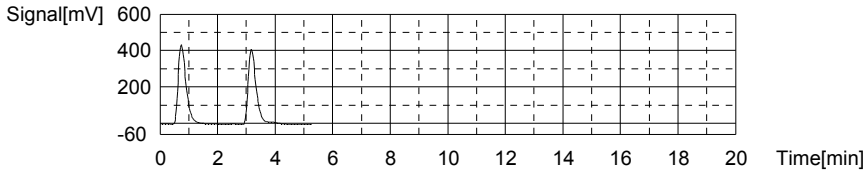
| Type | Anal. | Dil. | Result |
|---|---|---|---|
| Unknown | TOC | 1.000 | TOC:8.185mg/L TC:22.06mg/L IC:13.88mg/L |

1. Det

Anal.: TC

| No. | Area | Conc. | Inj. Vol. | Aut. Dil. | Ex. | Cal. Curve | Date / Time |
|---|---|---|---|---|---|---|---|
| 1 | 838.5 | 22.32mg/L | 500uL | 1 | | TCCURVE-12-06-2011.2011_12_06_08_40_5 | 05/19/2012 01:09:51 AM |
| 2 | 819.5 | 21.81mg/L | 500uL | 1 | | TCCURVE-12-06-2011.2011_12_06_08_40_5 | 05/19/2012 01:15:04 AM |

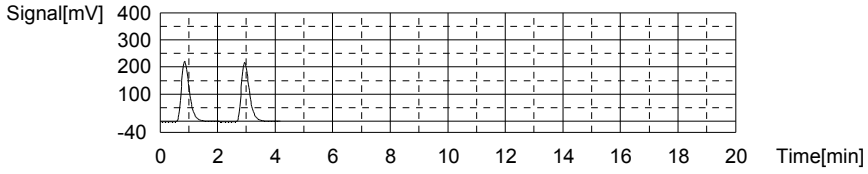
Mean Area 829.0
Mean Conc. 22.06mg/L




Anal.: IC

| No. | Area | Conc. | Inj. Vol. | Aut. Dil. | Ex. | Cal. Curve | Date / Time |
|---|---|---|---|---|---|---|---|
| 1 | 428.5 | 13.98mg/L | 500uL | 1 | | TICCURVE-12-06-2011B.2011_12_06_15_47 | 05/19/2012 01:20:22 AM |
| 2 | 422.2 | 13.77mg/L | 500uL | 1 | | TICCURVE-12-06-2011B.2011_12_06_15_47 | 05/19/2012 01:25:20 AM |

Mean Area 425.4
Mean Conc. 13.88mg/L




Sample

Sample Name: L12050534-04
Sample ID: <Untitled>
Origin: TOC-12-06-2011A.met
Status Completed
Chk. Result

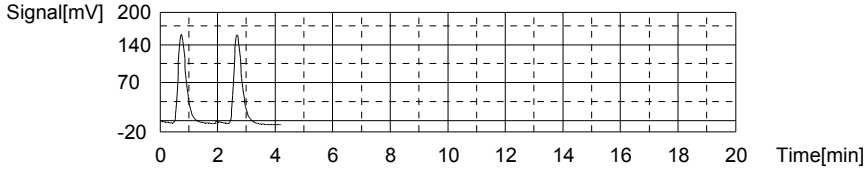
| Type | Anal. | Dil. | Result |
|---|---|---|---|
| Unknown | TOC | 1.000 | TOC:3.508mg/L TC:8.483mg/L IC:4.975mg/L |

1. Det

Anal.: TC

| No. | Area | Conc. | Inj. Vol. | Aut. Dil. | Ex. | Cal. Curve | Date / Time |
|---|---|---|---|---|---|---|---|
| 1 | 315.7 | 8.400mg/L | 500uL | 1 | | TCCURVE-12-06-2011.2011_12_06_08_40_5 | 05/19/2012 01:32:44 AM |
| 2 | 321.9 | 8.565mg/L | 500uL | 1 | | TCCURVE-12-06-2011.2011_12_06_08_40_5 | 05/19/2012 01:37:16 AM |

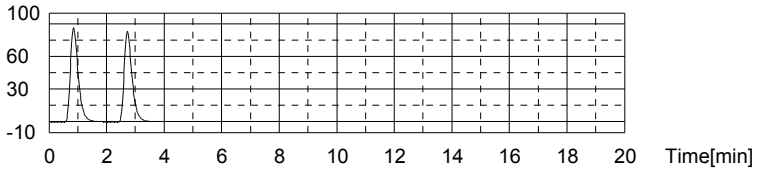
Mean Area 318.8
Mean Conc. 8.483mg/L




Anal.: IC

| No. | Area | Conc. | Inj. Vol. | Aut. Dil. | Ex. | Cal. Curve | Date / Time |
|---|---|---|---|---|---|---|---|
| 1 | 163.6 | 5.071mg/L | 500uL | 1 | | TICCURVE-12-06-2011B.2011_12_06_15_47 | 05/19/2012 01:42:09 AM |
| 2 | 157.9 | 4.879mg/L | 500uL | 1 | | TICCURVE-12-06-2011B.2011_12_06_15_47 | 05/19/2012 01:46:44 AM |

Mean Area 160.8
Mean Conc. 4.975mg/L




Sample

Sample Name: CCV
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

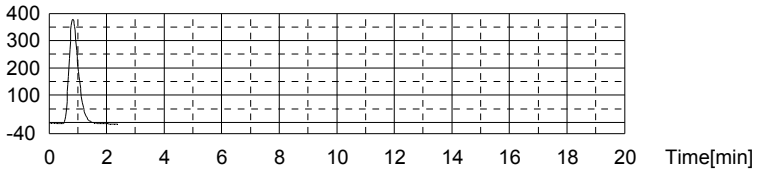
| Type | Anal. | Dil. | Result |
|---|---|---|---|
| Unknown | TOC | 1.000 | !!Error!! TOC:23.15mg/L TC:22.96mg/L IC:-0.1860mg/L |

1. Det

Anal.: TC

| No. | Area | Conc. | Inj. Vol. | Aut. Dil. | Ex. | Cal. Curve | Date / Time |
|---|---|---|---|---|---|---|---|
| 1 | 862.8 | 22.96mg/L | 500uL | 1 | | TCCURVE-12-06-2011.2011_12_06_08_40_5 | 05/19/2012 01:54:34 AM |

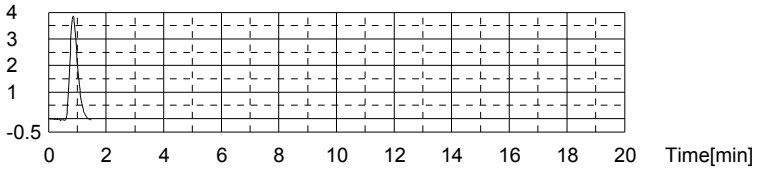
Mean Area 862.8
Mean Conc. 22.96mg/L




Anal.: IC

| No. | Area | Conc. | Inj. Vol. | Aut. Dil. | Ex. | Cal. Curve | Date / Time |
|---|---|---|---|---|---|---|---|
| 1 | 7.357 | -0.1860mg/L | 500uL | 1 | | TICCURVE-12-06-2011B.2011_12_06_15_47 | 05/19/2012 01:58:54 AM |

Mean Area 7.357
Mean Conc. -0.1860mg/L




Sample

Sample Name: CCB
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

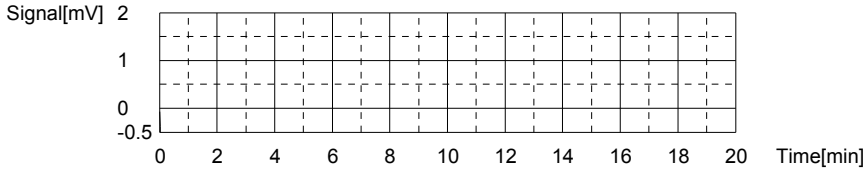
| Type | Anal. | Dil. | Result |
|---|---|---|---|
| Unknown | TOC | 1.000 | !!Error!! TOC:0.3055mg/L TC:0.1269mg/L IC:-0.1786mg/L |

1. Det

Anal.: TC

| No. | Area | Conc. | Inj. Vol. | Aut. Dil. | Ex. | Cal. Curve | Date / Time |
|---|---|---|---|---|---|---|---|
| 1 | 4.862 | 0.1269mg/L | 500uL | 1 | | TCCURVE-12-06-2011.2011_12_06_08_40_5 | 05/19/2012 02:04:12 AM |

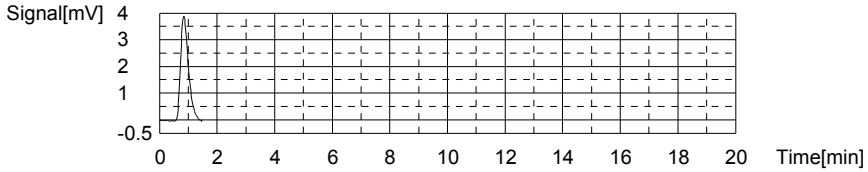
Mean Area 4.862
Mean Conc. 0.1269mg/L




Anal.: IC

| No. | Area | Conc. | Inj. Vol. | Aut. Dil. | Ex. | Cal. Curve | Date / Time |
|---|---|---|---|---|---|---|---|
| 1 | 7.577 | -0.1786mg/L | 500uL | 1 | | TICCURVE-12-06-2011B.2011_12_06_15_47_0 | 5/19/2012 02:08:07 AM |

Mean Area 7.577
Mean Conc. -0.1786mg/L




Sample

Sample Name: L12050552-01
Sample ID: <Untitled>
Origin: TOC-12-06-2011A.met
Status Completed
Chk. Result

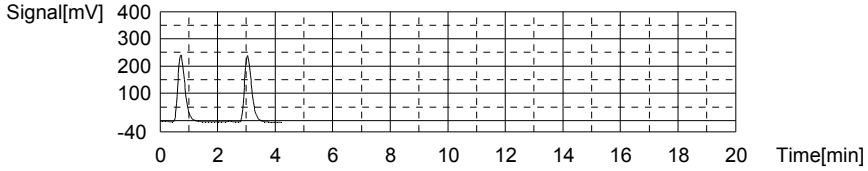
| Type | Anal. | Dil. | Result |
|---|---|---|---|
| Unknown | TOC | 1.000 | TOC:1.191mg/L TC:11.22mg/L IC:10.03mg/L |

1. Det

Anal.: TC

| No. | Area | Conc. | Inj. Vol. | Aut. Dil. | Ex. | Cal. Curve | Date / Time |
|---|---|---|---|---|---|---|---|
| 1 | 424.7 | 11.30mg/L | 500uL | 1 | | TCCURVE-12-06-2011.2011_12_06_08_40_5 | 05/19/2012 02:15:54 AM |
| 2 | 418.8 | 11.14mg/L | 500uL | 1 | | TCCURVE-12-06-2011.2011_12_06_08_40_5 | 05/19/2012 02:20:10 AM |

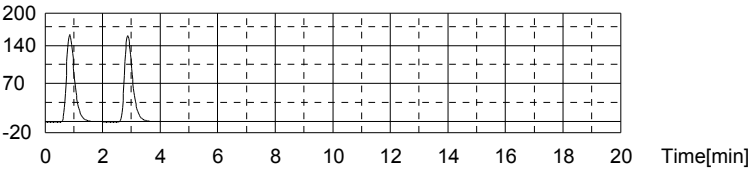
Mean Area 421.8
Mean Conc. 11.22mg/L




Anal.: IC

| No. | Area | Conc. | Inj. Vol. | Aut. Dil. | Ex. | Cal. Curve | Date / Time |
|---|---|---|---|---|---|---|---|
| 1 | 312.0 | 10.06mg/L | 500uL | 1 | | TICCURVE-12-06-2011B.2011_12_06_15_47 | 05/19/2012 02:25:11 AM |
| 2 | 310.1 | 10.00mg/L | 500uL | 1 | | TICCURVE-12-06-2011B.2011_12_06_15_47 | 05/19/2012 02:30:02 AM |

Mean Area 311.1
Mean Conc. 10.03mg/L




Sample

Sample Name: L12050552-03
Sample ID: <Untitled>
Origin: TOC-12-06-2011A.met
Status Completed
Chk. Result

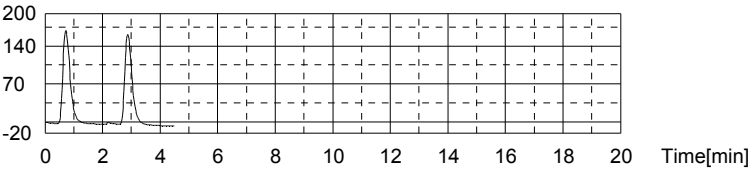
| Type | Anal. | Dil. | Result |
|---|---|---|---|
| Unknown | TOC | 1.000 | TOC:1.429mg/L TC:7.908mg/L IC:6.479mg/L |

1. Det

Anal.: TC

| No. | Area | Conc. | Inj. Vol. | Aut. Dil. | Ex. | Cal. Curve | Date / Time |
|---|---|---|---|---|---|---|---|
| 1 | 301.4 | 8.020mg/L | 500uL | 1 | | TCCURVE-12-06-2011.2011_12_06_08_40_5 | 05/19/2012 02:37:39 AM |
| 2 | 293.0 | 7.796mg/L | 500uL | 1 | | TCCURVE-12-06-2011.2011_12_06_08_40_5 | 05/19/2012 02:43:07 AM |

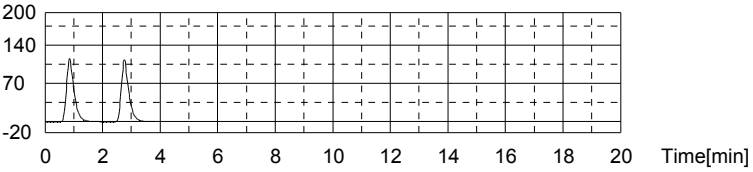
Mean Area 297.2
Mean Conc. 7.908mg/L




Anal.: IC

| No. | Area | Conc. | Inj. Vol. | Aut. Dil. | Ex. | Cal. Curve | Date / Time |
|---|---|---|---|---|---|---|---|
| 1 | 207.9 | 6.561mg/L | 500uL | 1 | | TICCURVE-12-06-2011B.2011_12_06_15_47 | 05/19/2012 02:48:01 AM |
| 2 | 203.0 | 6.397mg/L | 500uL | 1 | | TICCURVE-12-06-2011B.2011_12_06_15_47 | 05/19/2012 02:52:41 AM |

Mean Area 205.4
Mean Conc. 6.479mg/L




Sample

Sample Name: L12050552-05
Sample ID: <Untitled>
Origin: TOC-12-06-2011A.met
Status Completed
Chk. Result

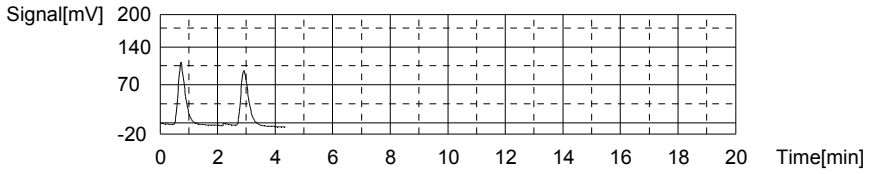
| Type | Anal. | Dil. | Result |
|---|---|---|---|
| Unknown | TOC | 1.000 | TOC:1.563mg/L TC:5.105mg/L IC:3.542mg/L |

1. Det

Anal.: TC

| No. | Area | Conc. | Inj. Vol. | Aut. Dil. | Ex. | Cal. Curve | Date / Time |
|---|---|---|---|---|---|---|---|
| 1 | 199.1 | 5.297mg/L | 500uL | 1 | | TCCURVE-12-06-2011.2011_12_06_08_40_5 | 05/19/2012 03:00:19 AM |
| 2 | 184.7 | 4.914mg/L | 500uL | 1 | | TCCURVE-12-06-2011.2011_12_06_08_40_5 | 05/19/2012 03:04:45 AM |

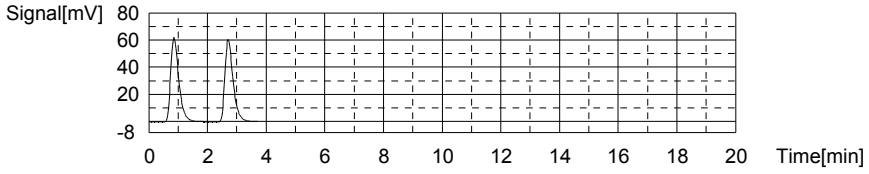
Mean Area 191.9
Mean Conc. 5.105mg/L




Anal.: IC

| No. | Area | Conc. | Inj. Vol. | Aut. Dil. | Ex. | Cal. Curve | Date / Time |
|---|---|---|---|---|---|---|---|
| 1 | 119.4 | 3.584mg/L | 500uL | 1 | | TICCURVE-12-06-2011B.2011_12_06_15_47 | 05/19/2012 03:09:35 AM |
| 2 | 116.9 | 3.500mg/L | 500uL | 1 | | TICCURVE-12-06-2011B.2011_12_06_15_47 | 05/19/2012 03:14:11 AM |

Mean Area 118.2
Mean Conc. 3.542mg/L




Sample

Sample Name: L12050552-07 (4)
Sample ID: <Untitled>
Origin: TOC-12-06-2011A.met
Status Completed
Chk. Result

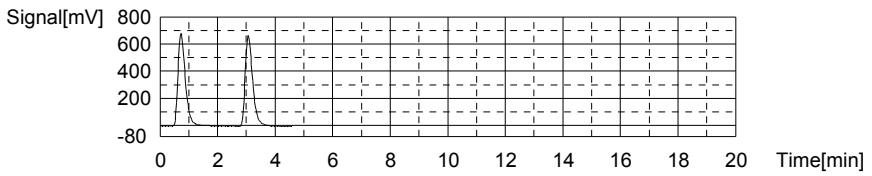
| Type | Anal. | Dil. | Result |
|---|---|---|---|
| Unknown | TOC | 1.000 | TOC:6.236mg/L TC:32.36mg/L IC:26.13mg/L |

1. Det

Anal.: TC

| No. | Area | Conc. | Inj. Vol. | Aut. Dil. | Ex. | Cal. Curve | Date / Time |
|---|---|---|---|---|---|---|---|
| 1 | 1223 | 32.55mg/L | 500uL | 1 | | TCCURVE-12-06-2011.2011_12_06_08_40_5 | 05/19/2012 03:21:58 AM |
| 2 | 1209 | 32.18mg/L | 500uL | 1 | | TCCURVE-12-06-2011.2011_12_06_08_40_5 | 05/19/2012 03:27:30 AM |

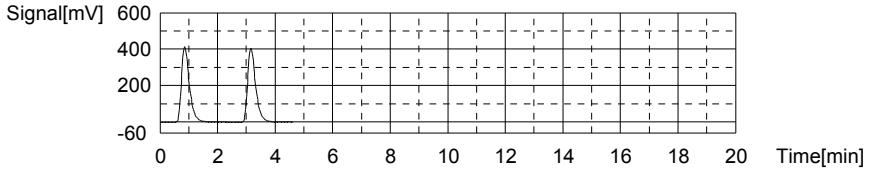
Mean Area 1216
Mean Conc. 32.36mg/L




Anal.: IC

| No. | Area | Conc. | Inj. Vol. | Aut. Dil. | Ex. | Cal. Curve | Date / Time |
|---|---|---|---|---|---|---|---|
| 1 | 793.0 | 26.25mg/L | 500uL | 1 | | TICCURVE-12-06-2011B.2011_12_06_15_47 | 05/19/2012 03:33:00 AM |
| 2 | 785.8 | 26.01mg/L | 500uL | 1 | | TICCURVE-12-06-2011B.2011_12_06_15_47 | 05/19/2012 03:38:17 AM |

Mean Area 789.4
Mean Conc. 26.13mg/L




Sample

Sample Name: L12050552-09
Sample ID: <Untitled>
Origin: TOC-12-06-2011A.met
Status Completed
Chk. Result

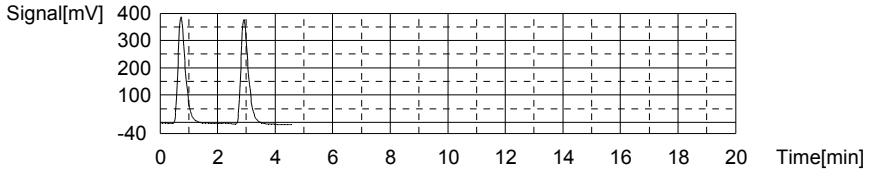
| Type | Anal. | Dil. | Result |
|---|---|---|---|
| Unknown | TOC | 1.000 | TOC:4.861mg/L TC:18.65mg/L IC:13.78mg/L |

1. Det

Anal.: TC

| No. | Area | Conc. | Inj. Vol. | Aut. Dil. | Ex. | Cal. Curve | Date / Time |
|---|---|---|---|---|---|---|---|
| 1 | 707.6 | 18.83mg/L | 500uL | 1 | | TCCURVE-12-06-2011.2011_12_06_08_40_5 | 05/19/2012 03:45:56 AM |
| 2 | 693.6 | 18.46mg/L | 500uL | 1 | | TCCURVE-12-06-2011.2011_12_06_08_40_5 | 05/19/2012 03:50:35 AM |

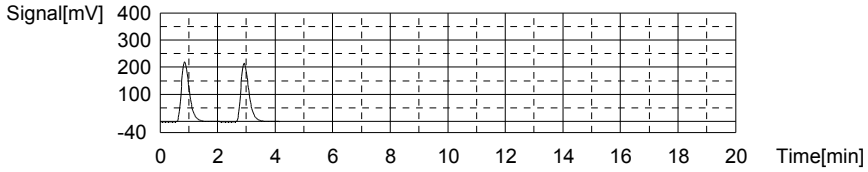
Mean Area 700.6
Mean Conc. 18.65mg/L




Anal.: IC

| No. | Area | Conc. | Inj. Vol. | Aut. Dil. | Ex. | Cal. Curve | Date / Time |
|---|---|---|---|---|---|---|---|
| 1 | 425.6 | 13.89mg/L | 500uL | 1 | | TICCURVE-12-06-2011B.2011_12_06_15_47 | 05/19/2012 03:55:49 AM |
| 2 | 419.5 | 13.68mg/L | 500uL | 1 | | TICCURVE-12-06-2011B.2011_12_06_15_47 | 05/19/2012 04:00:45 AM |

Mean Area 422.6
Mean Conc. 13.78mg/L




Sample

Sample Name: L12050552-11
Sample ID: <Untitled>
Origin: TOC-12-06-2011A.met
Status Completed
Chk. Result

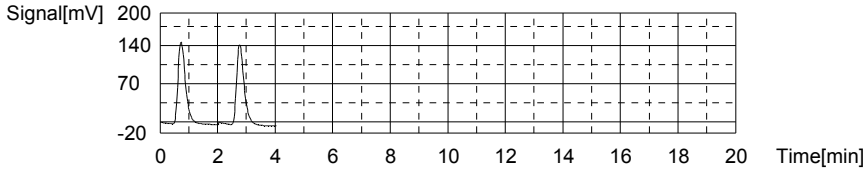
| Type | Anal. | Dil. | Result |
|---|---|---|---|
| Unknown | TOC | 1.000 | TOC:2.291mg/L TC:7.148mg/L IC:4.857mg/L |

1. Det

Anal.: TC

| No. | Area | Conc. | Inj. Vol. | Aut. Dil. | Ex. | Cal. Curve | Date / Time |
|---|---|---|---|---|---|---|---|
| 1 | 271.6 | 7.227mg/L | 500uL | 1 | | TCCURVE-12-06-2011.2011_12_06_08_40_5 | 05/19/2012 04:08:15 AM |
| 2 | 265.7 | 7.070mg/L | 500uL | 1 | | TCCURVE-12-06-2011.2011_12_06_08_40_5 | 05/19/2012 04:12:35 AM |

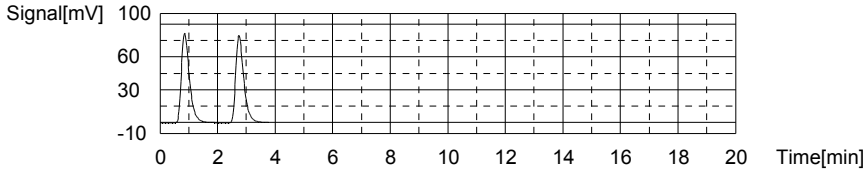
Mean Area 268.6
Mean Conc. 7.148mg/L




Anal.: IC

| No. | Area | Conc. | Inj. Vol. | Aut. Dil. | Ex. | Cal. Curve | Date / Time |
|---|---|---|---|---|---|---|---|
| 1 | 159.0 | 4.916mg/L | 500uL | 1 | | TICCURVE-12-06-2011B.2011_12_06_15_47 | 05/19/2012 04:17:27 AM |
| 2 | 155.5 | 4.798mg/L | 500uL | 1 | | TICCURVE-12-06-2011B.2011_12_06_15_47 | 05/19/2012 04:22:06 AM |

Mean Area 157.3
Mean Conc. 4.857mg/L




Sample

Sample Name: L12050552-13
Sample ID: <Untitled>
Origin: TOC-12-06-2011A.met
Status Completed
Chk. Result

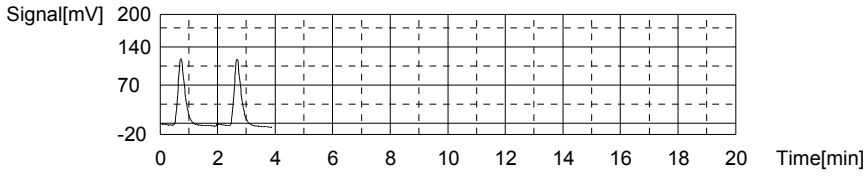
| Type | Anal. | Dil. | Result |
|---|---|---|---|
| Unknown | TOC | 1.000 | TOC:1.313mg/L TC:5.481mg/L IC:4.168mg/L |

1. Det

Anal.: TC

| No. | Area | Conc. | Inj. Vol. | Aut. Dil. | Ex. | Cal. Curve | Date / Time |
|---|---|---|---|---|---|---|---|
| 1 | 205.8 | 5.475mg/L | 500uL | 1 | | TCCURVE-12-06-2011.2011_12_06_08_40_5 | 05/19/2012 04:29:30 AM |
| 2 | 206.2 | 5.486mg/L | 500uL | 1 | | TCCURVE-12-06-2011.2011_12_06_08_40_5 | 05/19/2012 04:33:50 AM |

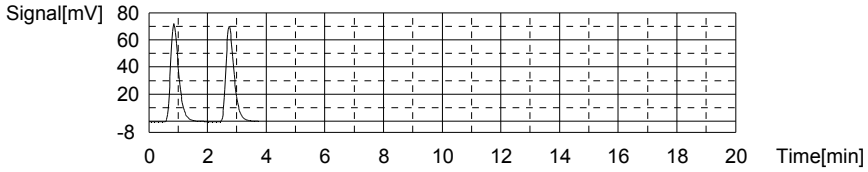
Mean Area 206.0
Mean Conc. 5.481mg/L




Anal.: IC

| No. | Area | Conc. | Inj. Vol. | Aut. Dil. | Ex. | Cal. Curve | Date / Time |
|---|---|---|---|---|---|---|---|
| 1 | 138.5 | 4.226mg/L | 500uL | 1 | | TICCURVE-12-06-2011B.2011_12_06_15_47 | 05/19/2012 04:38:39 AM |
| 2 | 135.0 | 4.109mg/L | 500uL | 1 | | TICCURVE-12-06-2011B.2011_12_06_15_47 | 05/19/2012 04:43:13 AM |

Mean Area 136.8
Mean Conc. 4.168mg/L




Sample

Sample Name: L12050552-15
Sample ID: <Untitled>
Origin: TOC-12-06-2011A.met
Status Completed
Chk. Result

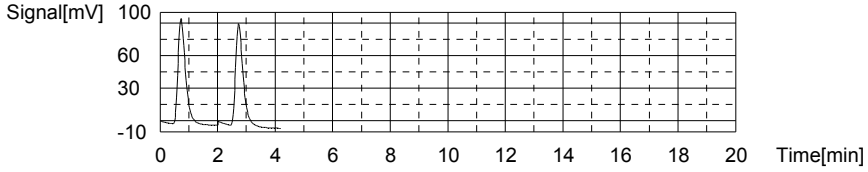
| Type | Anal. | Dil. | Result |
|---|---|---|---|
| Unknown | TOC | 1.000 | TOC:1.366mg/L TC:4.546mg/L IC:3.180mg/L |

1. Det

Anal.: TC

| No. | Area | Conc. | Inj. Vol. | Aut. Dil. | Ex. | Cal. Curve | Date / Time |
|---|---|---|---|---|---|---|---|
| 1 | 175.3 | 4.663mg/L | 500uL | 1 | | TCCURVE-12-06-2011.2011_12_06_08_40_5 | 05/19/2012 04:50:41 AM |
| 2 | 166.5 | 4.429mg/L | 500uL | 1 | | TCCURVE-12-06-2011.2011_12_06_08_40_5 | 05/19/2012 04:55:08 AM |

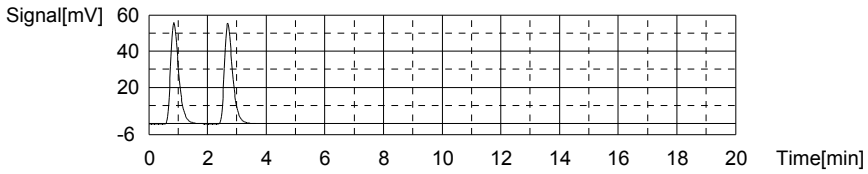
Mean Area 170.9
Mean Conc. 4.546mg/L




Anal.: IC

| No. | Area | Conc. | Inj. Vol. | Aut. Dil. | Ex. | Cal. Curve | Date / Time |
|---|---|---|---|---|---|---|---|
| 1 | 107.6 | 3.187mg/L | 500uL | 1 | | TICCURVE-12-06-2011B.2011_12_06_15_47 | 05/19/2012 04:59:56 AM |
| 2 | 107.2 | 3.173mg/L | 500uL | 1 | | TICCURVE-12-06-2011B.2011_12_06_15_47 | 05/19/2012 05:04:28 AM |

Mean Area 107.4
Mean Conc. 3.180mg/L




Sample

Sample Name: L12050552-17
Sample ID: <Untitled>
Origin: TOC-12-06-2011A.met
Status Completed
Chk. Result

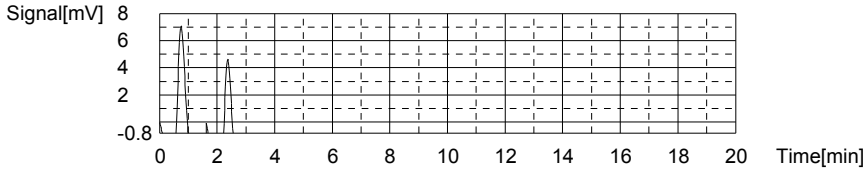
| Type | Anal. | Dil. | Result |
|---|---|---|---|
| Unknown | TOC | 1.000 | !!Error!! TOC:0.6326mg/L TC:0.4412mg/L IC:-0.1914mg/L |

1. Det

Anal.: TC

| No. | Area | Conc. | Inj. Vol. | Aut. Dil. | Ex. | Cal. Curve | Date / Time |
|---|---|---|---|---|---|---|---|
| 1 | 18.17 | 0.4811mg/L | 500uL | 1 | | TCCURVE-12-06-2011.2011_12_06_08_40_5 | 05/19/2012 05:11:33 AM |
| 2 | 15.17 | 0.4013mg/L | 500uL | 1 | | TCCURVE-12-06-2011.2011_12_06_08_40_5 | 05/19/2012 05:15:33 AM |

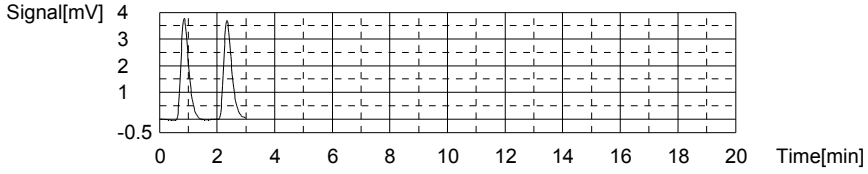
Mean Area 16.67
Mean Conc. 0.4412mg/L




Anal.: IC

| No. | Area | Conc. | Inj. Vol. | Aut. Dil. | Ex. | Cal. Curve | Date / Time |
|---|---|---|---|---|---|---|---|
| 1 | 7.289 | -0.1883mg/L | 500uL | 1 | | TICCURVE-12-06-2011B.2011_12_06_15_47 | 05/19/2012 05:19:54 AM |
| 2 | 7.104 | -0.1945mg/L | 500uL | 1 | | TICCURVE-12-06-2011B.2011_12_06_15_47 | 05/19/2012 05:24:06 AM |

Mean Area 7.197
Mean Conc. -0.1914mg/L




Sample

Sample Name: L12050552-19
Sample ID: <Untitled>
Origin: TOC-12-06-2011A.met
Status Completed
Chk. Result

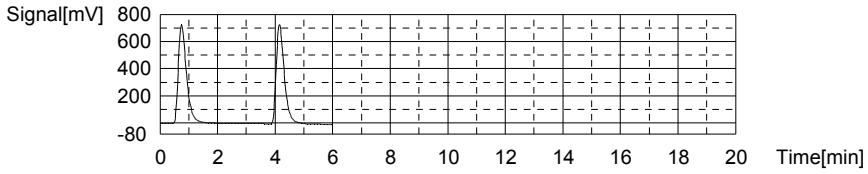
| Type | Anal. | Dil. | Result |
|---|---|---|---|
| Unknown | TOC | 1.000 | TOC:16.91mg/L TC:38.59mg/L IC:21.68mg/L |

1. Det

Anal.: TC

| No. | Area | Conc. | Inj. Vol. | Aut. Dil. | Ex. | Cal. Curve | Date / Time |
|---|---|---|---|---|---|---|---|
| 1 | 1466 | 39.02mg/L | 500uL | 1 | | TCCURVE-12-06-2011.2011_12_06_08_40_5 | 05/19/2012 05:32:58 AM |
| 2 | 1434 | 38.17mg/L | 500uL | 1 | | TCCURVE-12-06-2011.2011_12_06_08_40_5 | 05/19/2012 05:37:48 AM |

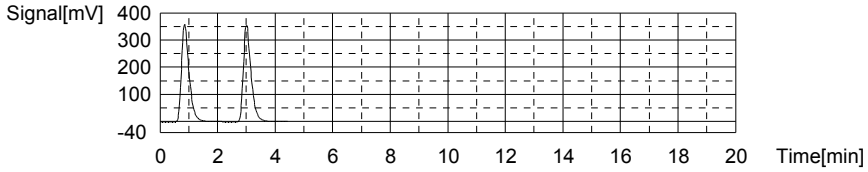
Mean Area 1450
Mean Conc. 38.59mg/L




Anal.: IC

| No. | Area | Conc. | Inj. Vol. | Aut. Dil. | Ex. | Cal. Curve | Date / Time |
|---|---|---|---|---|---|---|---|
| 1 | 657.4 | 21.69mg/L | 500uL | 1 | | TICCURVE-12-06-2011B.2011_12_06_15_47 | 05/19/2012 05:43:04 AM |
| 2 | 657.0 | 21.67mg/L | 500uL | 1 | | TICCURVE-12-06-2011B.2011_12_06_15_47 | 05/19/2012 05:48:14 AM |

Mean Area 657.2
Mean Conc. 21.68mg/L




Sample

Sample Name: CCV
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

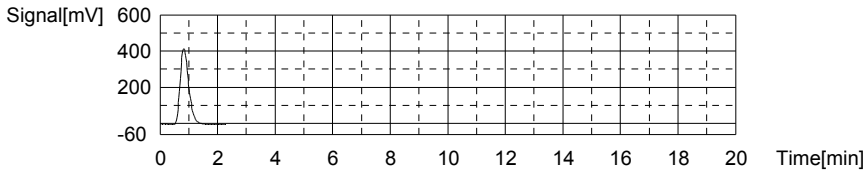
| Type | Anal. | Dil. | Result |
|---|---|---|---|
| Unknown | TOC | 1.000 | !!Error!! TOC:23.35mg/L TC:23.24mg/L IC:-0.1062mg/L |

1. Det

Anal.: TC

| No. | Area | Conc. | Inj. Vol. | Aut. Dil. | Ex. | Cal. Curve | Date / Time |
|---|---|---|---|---|---|---|---|
| 1 | 873.2 | 23.24mg/L | 500uL | 1 | | TCCURVE-12-06-2011.2011_12_06_08_40_5 | 05/19/2012 05:55:59 AM |

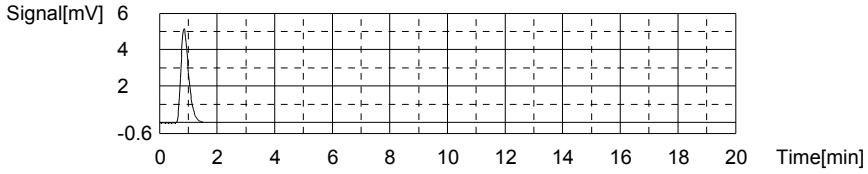
Mean Area 873.2
Mean Conc. 23.24mg/L




Anal.: IC

| No. | Area | Conc. | Inj. Vol. | Aut. Dil. | Ex. | Cal. Curve | Date / Time |
|---|---|---|---|---|---|---|---|
| 1 | 9.730 | -0.1062mg/L | 500uL | 1 | | TICCURVE-12-06-2011B.2011_12_06_15_47 | 05/19/2012 06:00:29 AM |

Mean Area 9.730
Mean Conc. -0.1062mg/L




Sample

Sample Name: CCB
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

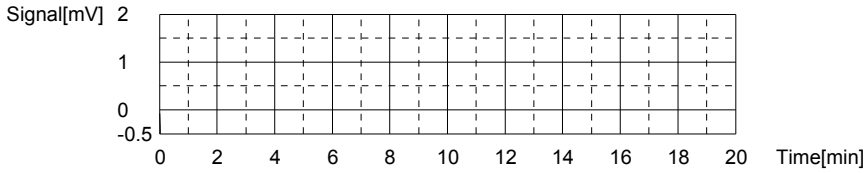
| Type | Anal. | Dil. | Result |
|---|---|---|---|
| Unknown | TOC | 1.000 | !!Error!! TOC:0.2819mg/L TC:0.1188mg/L IC:-0.1630mg/L |

1. Det

Anal.: TC

| No. | Area | Conc. | Inj. Vol. | Aut. Dil. | Ex. | Cal. Curve | Date / Time |
|---|---|---|---|---|---|---|---|
| 1 | 4.558 | 0.1188mg/L | 500uL | 1 | | TCCURVE-12-06-2011.2011_12_06_08_40_5 | 05/19/2012 06:05:49 AM |

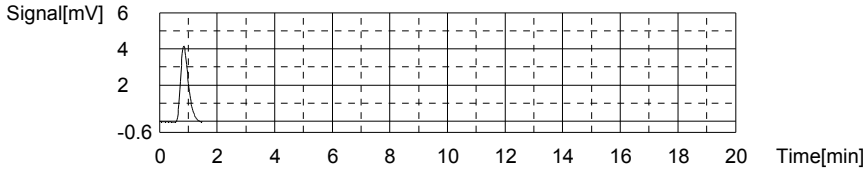
Mean Area 4.558
Mean Conc. 0.1188mg/L




Anal.: IC

| No. | Area | Conc. | Inj. Vol. | Aut. Dil. | Ex. | Cal. Curve | Date / Time |
|---|---|---|---|---|---|---|---|
| 1 | 8.040 | -0.1630mg/L | 500uL | 1 | | TICCURVE-12-06-2011B.2011_12_06_15_47 | 05/19/2012 06:09:45 AM |

Mean Area 8.040
Mean Conc. -0.1630mg/L



Sample

Sample Name: WG398503-05 DUP
Sample ID: <Untitled>
Origin: TOC-12-06-2011A.met
Status Completed
Chk. Result

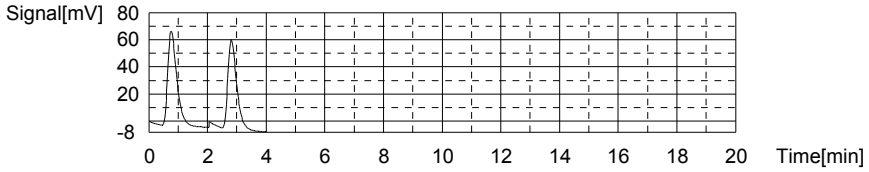
| Type | Anal. | Dil. | Result |
|---|---|---|---|
| Unknown | TOC | 1.000 | TOC:2.462mg/L TC:3.695mg/L IC:1.233mg/L |

1. Det

Anal.: TC

| No. | Area | Conc. | Inj. Vol. | Aut. Dil. | Ex. | Cal. Curve | Date / Time |
|---|---|---|---|---|---|---|---|
| 1 | 146.5 | 3.897mg/L | 500uL | 1 | | TCCURVE-12-06-2011.2011_12_06_08_40_5 | 05/19/2012 06:17:17 AM |
| 2 | 131.3 | 3.492mg/L | 500uL | 1 | | TCCURVE-12-06-2011.2011_12_06_08_40_5 | 05/19/2012 06:21:29 AM |

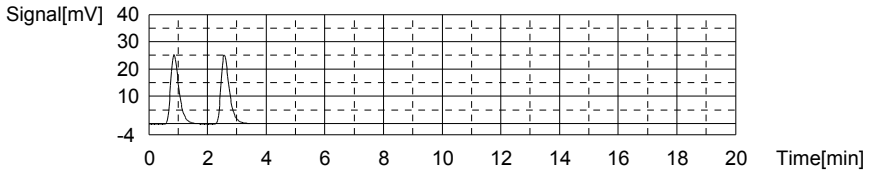
Mean Area 138.9
Mean Conc. 3.695mg/L




Anal.: IC

| No. | Area | Conc. | Inj. Vol. | Aut. Dil. | Ex. | Cal. Curve | Date / Time |
|---|---|---|---|---|---|---|---|
| 1 | 49.71 | 1.239mg/L | 500uL | 1 | | TICCURVE-12-06-2011B.2011_12_06_15_47 | 05/19/2012 06:26:08 AM |
| 2 | 49.33 | 1.226mg/L | 500uL | 1 | | TICCURVE-12-06-2011B.2011_12_06_15_47 | 05/19/2012 06:30:34 AM |

Mean Area 49.52
Mean Conc. 1.233mg/L




Sample

Sample Name: WG398503-06 MS
Sample ID: <Untitled>
Origin: TOC-12-06-2011A.met
Status Completed
Chk. Result

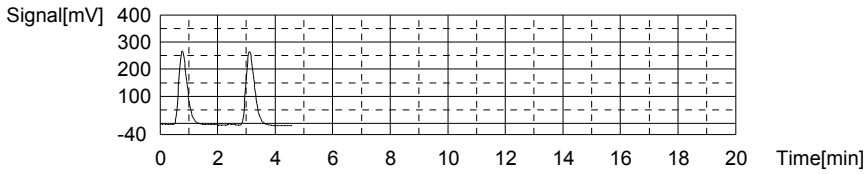
| Type | Anal. | Dil. | Result |
|---|---|---|---|
| Unknown | TOC | 1.000 | TOC:10.82mg/L TC:14.72mg/L IC:3.897mg/L |

1. Det

Anal.: TC

| No. | Area | Conc. | Inj. Vol. | Aut. Dil. | Ex. | Cal. Curve | Date / Time |
|---|---|---|---|---|---|---|---|
| 1 | 550.0 | 14.64mg/L | 500uL | 1 | | TCCURVE-12-06-2011.2011_12_06_08_40_5 | 05/19/2012 06:38:22 AM |
| 2 | 556.1 | 14.80mg/L | 500uL | 1 | | TCCURVE-12-06-2011.2011_12_06_08_40_5 | 05/19/2012 06:42:53 AM |

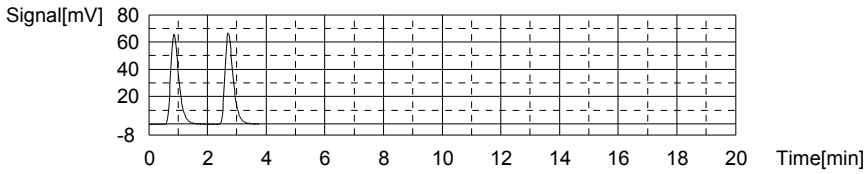
Mean Area 553.0
Mean Conc. 14.72mg/L




Anal.: IC

| No. | Area | Conc. | Inj. Vol. | Aut. Dil. | Ex. | Cal. Curve | Date / Time |
|---|---|---|---|---|---|---|---|
| 1 | 127.6 | 3.860mg/L | 500uL | 1 | | TICCURVE-12-06-2011B.2011_12_06_15_47 | 05/19/2012 06:47:44 AM |
| 2 | 129.8 | 3.934mg/L | 500uL | 1 | | TICCURVE-12-06-2011B.2011_12_06_15_47 | 05/19/2012 06:52:21 AM |

Mean Area 128.7
Mean Conc. 3.897mg/L




Sample

Sample Name: L12050552-19 (4)
Sample ID: <Untitled>
Origin: TOC-12-06-2011A.met
Status Completed
Chk. Result

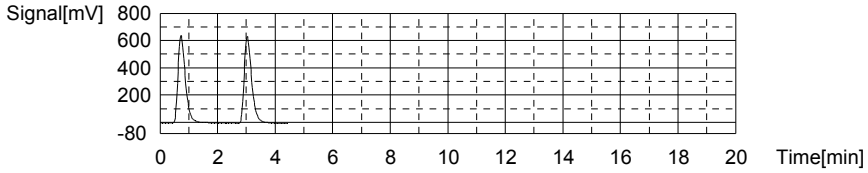
| Type | Anal. | Dil. | Result |
|---|---|---|---|
| Unknown | TOC | 1.000 | TOC:6.559mg/L TC:30.59mg/L IC:24.03mg/L |

1. Det

Anal.: TC

| No. | Area | Conc. | Inj. Vol. | Aut. Dil. | Ex. | Cal. Curve | Date / Time |
|---|---|---|---|---|---|---|---|
| 1 | 1151 | 30.63mg/L | 500uL | 1 | | TCCURVE-12-06-2011.2011_12_06_08_40_5 | 05/19/2012 07:00:08 AM |
| 2 | 1148 | 30.55mg/L | 500uL | 1 | | TCCURVE-12-06-2011.2011_12_06_08_40_5 | 05/19/2012 07:05:25 AM |

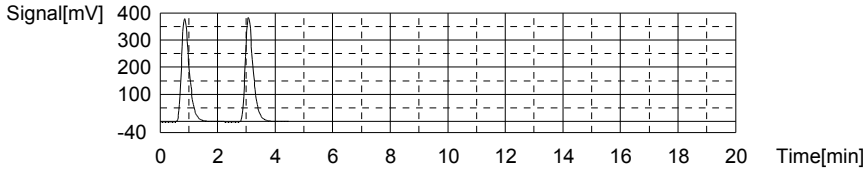
Mean Area 1150
Mean Conc. 30.59mg/L




Anal.: IC

| No. | Area | Conc. | Inj. Vol. | Aut. Dil. | Ex. | Cal. Curve | Date / Time |
|---|---|---|---|---|---|---|---|
| 1 | 722.2 | 23.87mg/L | 500uL | 1 | | TICCURVE-12-06-2011B.2011_12_06_15_47 | 05/19/2012 07:10:50 AM |
| 2 | 732.2 | 24.20mg/L | 500uL | 1 | | TICCURVE-12-06-2011B.2011_12_06_15_47 | 05/19/2012 07:16:02 AM |

Mean Area 727.2
Mean Conc. 24.03mg/L




Sample

Sample Name: CCV
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

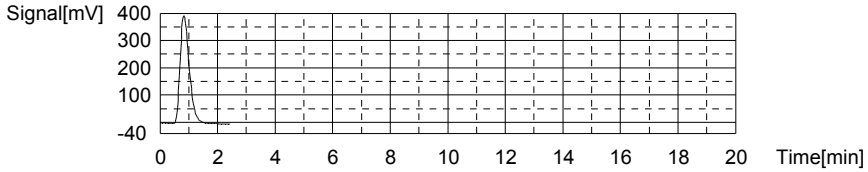
| Type | Anal. | Dil. | Result |
|---|---|---|---|
| Unknown | TOC | 1.000 | !!Error!! TOC:23.41mg/L TC:23.32mg/L IC:-0.09205mg/L |

1. Det

Anal.: TC

| No. | Area | Conc. | Inj. Vol. | Aut. Dil. | Ex. | Cal. Curve | Date / Time |
|---|---|---|---|---|---|---|---|
| 1 | 876.2 | 23.32mg/L | 500uL | 1 | | TCCURVE-12-06-2011.2011_12_06_08_40_5 | 05/19/2012 07:23:55 AM |

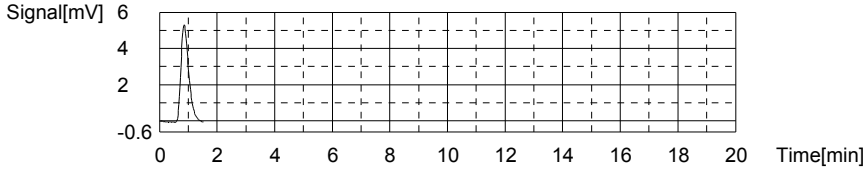
Mean Area 876.2
Mean Conc. 23.32mg/L




Anal.: IC

| No. | Area | Conc. | Inj. Vol. | Aut. Dil. | Ex. | Cal. Curve | Date / Time |
|---|---|---|---|---|---|---|---|
| 1 | 10.15 | -0.09205mg/L | 500uL | 1 | | TICCURVE-12-06-2011B.2011_12_06_15_47 | 05/19/2012 07:28:24 AM |

Mean Area 10.15
Mean Conc. -0.09205mg/L




Sample

Sample Name: CCB
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

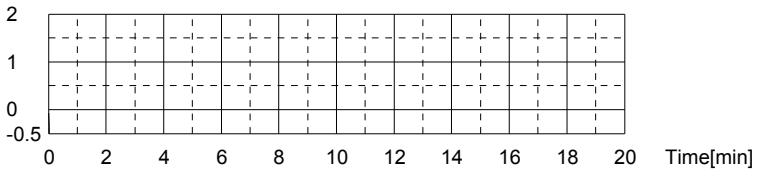
| Type | Anal. | Dil. | Result |
|---|---|---|---|
| Unknown | TOC | 1.000 | !!Error!! TOC:0.2797mg/L TC:0.1250mg/L IC:-0.1547mg/L |

1. Det

Anal.: TC

| No. | Area | Conc. | Inj. Vol. | Aut. Dil. | Ex. | Cal. Curve | Date / Time |
|---|---|---|---|---|---|---|---|
| 1 | 4.791 | 0.1250mg/L | 500uL | 1 | | TCCURVE-12-06-2011.2011_12_06_08_40_5 | 05/19/2012 07:33:41 AM |

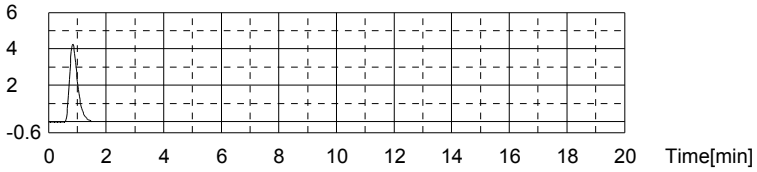
Mean Area 4.791
Mean Conc. 0.1250mg/L




Anal.: IC

| No. | Area | Conc. | Inj. Vol. | Aut. Dil. | Ex. | Cal. Curve | Date / Time |
|---|---|---|---|---|---|---|---|
| 1 | 8.289 | -0.1547mg/L | 500uL | 1 | | TICCURVE-12-06-2011B.2011_12_06_15_47 | 05/19/2012 07:37:37 AM |

Mean Area 8.289
Mean Conc. -0.1547mg/L



# 3.0 Attachments

**Microbac Laboratories Inc.**
**Ohio Valley Division Analyst List**
**May 24, 2012**

---

| | | |
|---|---|---|
| ADC – ANTHONY D. CANTER | AGK – ANDREW G. KASICK | AJF – AMANDA J. FICKIESEN |
| ALB – ANNIE L. BROWN | ALV – AMY L. VALENTINE | AML – TONY M. LONG |
| AZH – AFTER HOURS | BLG – BRENDA L. GREENWALT | BRG – BRENDA R. GREGORY |
| CAA – CASSIE A. AUGENSTEIN | CAF – CHERYL A. FLOWERS | CEB – CHAD E. BARNES |
| CLC – CHRYS L. CRAWFORD | CLS – CARA L. STRICKLER | CLW – CHARISSA L. WINTERS |
| CPD – CHAD P. DAVIS | CS – CODY M. STRAHLER | CSH – CHRIS S. HILL |
| DDE – DEBRA D. ELLIOTT | DEV – DAVID E. VANDENBERG | DGB – DOUGLAS G. BUTCHER |
| DIH – DEANNA I. HESSON | DLB – DAVID L. BUMGARNER | DLP – DOROTHY L. PAYNE |
| DLR – DIANNA L. RAUCH | DSM – DAVID S. MOSSOR | ECL – ERIC C. LAWSON |
| EDL – ERIN D. LONG | ERP – ERIN R. PORTER | FJB – FRANCES J. BOLDEN |
| HAV – HEMA VILASAGAR | HJR – HOLLY J. REED | JAL – JOHN A. LENT |
| JBK – JEREMY B. KINNEY | JDH – JUSTIN D. HESSON | JKS – JANE K. SCHAAD |
| JLL – JOHN L. LENT | JWR – JOHN W. RICHARDS | JWS – JACK W. SHEAVES |
| JYH – JI Y. HU | KEB – KATIE E. BARNES | KHR – KIM H. RHODES |
| KRA – KATHY R. ALBERTSON | LKN – LINDA K. NEDEFF | LSB – LESLIE S. BUCINA |
| MDA – MIKE D. ALBERTSON | MDC – MIKE D. COCHRAN | MES – MARY E. SCHILLING |
| MMB – MAREN M. BEERY | MRT – MICHELLE R. TAYLOR | MSW – MATT S. WILSON |
| PDM – PIERCE D. MORRIS | PWD – PAUL W. DENT | QX – QIN XU |
| RAH – ROY A. HALSTEAD | REK – BOB E. KYER | RLB – BOB BUCHANAN |
| RLK – ROBIN L. KLINGER | RS – ROSEMARY SCOTT | RWC – RODNEY W. CAMPBELL |
| SJP – SUZANNE J. PAUGH | SLM – STEPHANIE L. MOSSBURG | SLP – SHERI L. PFALZGRAF |
| TIP – TAE I. PARRISH | TMB – TIFFANY M. BAILEY | TMM – TAMMY M. MORRIS |
| VC – VICKI COLLIER | WJB – WILL J. BEASLEY | WTD – WADE T. DELONG |
| XXX – UNAVAILABLE OR SUBCONTRACT | | |

Microbac Laboratories Inc.
List of Valid Qualifiers
May 24, 2012

Qualkey: WATERLOO

| Qualifier | Description |
|---|---|
| * | Surrogate or spike compound out of range |
| + | Correlation coefficient for the MSA is less than 0.995 |
| < | Result is less than the associated numerical value. |
| > | Result is greater than the associated numerical value. |
| A | See the report narrative |
| B | Analyte present in method blank |
| B1 | Target analyte detected in method blank at or above the method reporting limit |
| B3 | Target analyte detected in calibration blank at or above the method reporting limit |
| B4 | The BOD unseeded dilution water blank exceeded 0.2 mg/L |
| C | Confirmed by GC/MS |
| CG | Confluent growth |
| DL | Surrogate or spike compound was diluted out |
| E | Estimated concentration due to interference. |
| E | Semiquantitative result (out of calibration range) |
| EDL | Elevated sample reporting limits, presence of non-target analytes |
| EMPC | Estimated Maximum Possible Concentration |
| F, S | Estimated result below quantitation limit; method of standard additions(MSA) |
| FL | Free Liquid |
| H1 | Sample analysis performed past holding time. |
| I | Semiquantitative result (out of instrument calibration range) |
| J | Estimated concentration. |
| J | The analyte was positively identified, but the quantitation was below the RL. |
| J,B | Analyte detected in both the method blank and sample above the MDL. |
| J,P | Estimate; columns don't agree to within 40% |
| J,S | Estimated concentration; analyzed by method of standard addition (MSA) |
| L | Sample reporting limits elevated due to matrix interference |
| L1 | The associated blank spike (LCS) recovery was above the laboratory acceptance limits. |
| L2 | The associated blank spike (LCS) recovery was below the laboratory acceptance limits. |
| M | Matrix effect; the concentration is an estimate due to matrix effect. |
| N | Tentatively identified compound(TIC) |
| NA | Not applicable |
| ND | Not detected at or above the reporting limit (RL). |
| ND, L | Not detected; sample reporting limit (RL) elevated due to interference |
| ND, S | Not detected; analyzed by method of standard addition (MSA) |
| NF | Not found by library search |
| NFL | No free liquid |
| NI | Non-ignitable |
| NR | Analyte is not required to be analyzed |
| NS | Not spiked |
| P | Concentrations >40% difference between the two GC columns |
| Q | One or more quality control criteria failed. See narrative. |
| QNS | Quantity of sample not sufficient to perform analysis |
| RA | Reanalysis confirms reported results |
| RE | Reanalysis confirms sample matrix interference |
| S | Analyzed by method of standard addition (MSA) |
| SMI | Sample matrix interference on surrogate |
| SP | Reported results are for spike compounds only |
| TIC | Library Search Compound |
| TNTC | Too numerous to count |
| U | Not detected at or above adjusted sample detection limit. |
| UJ | Undetected; the MDL and RL are estimated due to quality control discrepancies. |
| UJ | Undetected; the analyte was analyzed for, but not detected. |
| UQ | Undetected; the analyte was analyzed for, but not detected. |
| W | Post-digestion spike for furnace AA out of control limits |
| X | Exceeds regulatory limit |
| X, S | Exceeds regulatory limit; method of standard additions (MSA) |
| Z | Cannot be resolved from isomer - see below |

L12050284 / Revision: 0 / 1530 total pages



Generated: 05/24/2012 14:10

# Microbac

| | | | |
|---|---|---|---|
| **Co.Name:** | CH2M HILL | **TAT:** | Standard |
| **Prj Contact:** | Dave Newman | **Phone:** | 973 316 9300 |
| **Prj Name:** | Dow Waterloo | **Job Number:** | 434426.01.GW.FS |
| **Location:** | Waterloo, NY | **Job Name:** | Waterloo |

**Sampler Print**

Graham Sharkey
Alexandra Crane
Michael Murphy

**Sampler Sign**

**COC No.**
**050812-1**

| Sample ID | Comp | Grab | Date | Time | Hold | # of Containers | VOC_8260 | SVOC_PAH | SVOC_8270 | D_Gases_RSK | Alkalinity | PHOS_T, TOC, NO3,NO2 | Nitrate_calc, SO4 | Metals | Dissolved Metals | | Notes: |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **BBLD-PIT-SSP-050812** | | X | 5/08/12 | 10:01 | | 15 | X | X | X | X | X | X | X | X | X | | |
| **PZ-07-050812** | | X | 5/08/12 | 10:10 | | 15 | X | X | X | X | X | X | X | X | X | | |
| **MW-18-050812** | | X | 5/08/12 | 11:00 | | 15 | X | X | X | X | X | X | X | X | X | | |
| **TW-01-050812** | | X | 5/08/12 | 14:50 | | 15 | X | X | X | X | X | X | X | X | X | | |
| **TB-050812** | | X | 5/08/12 | 8:05 | | 2 | X | | | | | | | | | | |
| **Dup-GW-050812** | | X | 5/08/12 | 15:00 | | 9 | X | X | X | | | | | X | X | | |
| **EB-050812-GW** | | X | 5/08/12 | 13:10 | | 8 | X | X | X | | | | | X | | | |

Microbac OVD
Received: 05/09/2012 11:13
By: CARA STRICKLER 221000024871

Cara Strickler

| | | | |
|---|---|---|---|
| Relinquished By: G Sharkey<br>Date/Time 5/8/2012 @ 1800 | Received By: FEDEX<br>Date/Time | Relinquished By<br>Date/Time: | Received By:<br>Date/Time: |
| Relinquished By:<br>Date/Time | Received for Laboratory By:<br>Date/Time | Cooler Temp(s): | Comments: |

Microbac Laboratories Inc.

Internal Chain of Custody Report

**Login:** L12050284
**Account:** 2736
**Project:** 2736.061
**Samples:** 12
**Due Date:** 23-MAY-2012

| Samplenum | Container ID | Products |
|---|---|---|
| **L12050284-01** | 968649 | |

Bottle: 1

| Seq. | Purpose | From | To | Date/Time | Accept | Relinquish | pH |
|---|---|---|---|---|---|---|---|
| 1 | LOGIN | COOLER | V1 | 09-MAY-2012 14:15 | RLK | | <2 |
| 2 | ANALYZ | V1 | ORG4 | 10-MAY-2012 08:00 | MRT | JKT | |
| 3 | STORE | ORG4 | A2 | 23-MAY-2012 07:17 | JKT | MRT | |

Comments:Products cancelled.

Bottle: 2

| Seq. | Purpose | From | To | Date/Time | Accept | Relinquish | pH |
|---|---|---|---|---|---|---|---|
| 1 | LOGIN | COOLER | V1 | 09-MAY-2012 14:15 | RLK | | <2 |
| 2 | ANALYZ | V1 | ORG4 | 10-MAY-2012 08:00 | MRT | JKT | |
| 3 | STORE | ORG4 | A2 | 23-MAY-2012 07:17 | JKT | MRT | |

Comments:Products cancelled.

Bottle: 3

| Seq. | Purpose | From | To | Date/Time | Accept | Relinquish | pH |
|---|---|---|---|---|---|---|---|
| 1 | LOGIN | COOLER | V1 | 09-MAY-2012 14:15 | RLK | | <2 |
| 2 | ANALYZ | V1 | ORG4 | 10-MAY-2012 08:00 | MRT | JKT | |
| 3 | STORE | ORG4 | A2 | 23-MAY-2012 07:17 | JKT | MRT | |

Comments:Products cancelled.

| Samplenum | Container ID | Products |
|---|---|---|
| **L12050284-01** | 968650 | 826-SPE 827-PAHL 827-SPE-DIOX RSK175EXT |

Bottle: 1

| Seq. | Purpose | From | To | Date/Time | Accept | Relinquish | pH |
|---|---|---|---|---|---|---|---|
| 1 | LOGIN | COOLER | V1 | 09-MAY-2012 14:15 | RLK | | |
| 2 | ANALYZ | V1 | ORG4 | 10-MAY-2012 07:58 | MRT | JKT | |

Bottle: 2

| Seq. | Purpose | From | To | Date/Time | Accept | Relinquish | pH |
|---|---|---|---|---|---|---|---|
| 1 | LOGIN | COOLER | V1 | 09-MAY-2012 14:15 | RLK | | |
| 2 | ANALYZ | V1 | ORG4 | 10-MAY-2012 07:58 | MRT | JKT | |

Bottle: 3

| Seq. | Purpose | From | To | Date/Time | Accept | Relinquish | pH |
|---|---|---|---|---|---|---|---|
| 1 | LOGIN | COOLER | V1 | 09-MAY-2012 14:15 | RLK | | |
| 2 | ANALYZ | V1 | ORG4 | 10-MAY-2012 07:58 | MRT | JKT | |

A1 - Sample Archive (COLD)
A2 - Sample Archive (AMBIENT)
F1 - Volatiles Freezer in Login
V1 - Volatiles Refrigerator in Login
W1 - Walkin Cooler in Login

Microbac Laboratories Inc.

Internal Chain of Custody Report

**Login:** L12050284
**Account:** 2736
**Project:** 2736.061
**Samples:** 12
**Due Date:** 23-MAY-2012

| Samplenum | Container ID | Products |
|---|---|---|
| **L12050284-01** | 968651 | |

Bottle: 1

| Seq. | Purpose | From | To | Date/Time | Accept | Relinquish | pH |
|---|---|---|---|---|---|---|---|
| 1 | LOGIN | COOLER | W1 | 09-MAY-2012 14:15 | RLK | | |
| 2 | PREP | W1 | EXT | 09-MAY-2012 15:00 | CSH | JKS | |
| 3 | DISP | EXT | DISP | 10-MAY-2012 08:40 | RLB | RLB | |

Bottle: 2

| Seq. | Purpose | From | To | Date/Time | Accept | Relinquish | pH |
|---|---|---|---|---|---|---|---|
| 1 | LOGIN | COOLER | W1 | 09-MAY-2012 14:15 | RLK | | |
| 2 | STORE | W1 | A1 | 09-MAY-2012 14:46 | BLG | BLG | |

| Samplenum | Container ID | Products |
|---|---|---|
| **L12050284-01** | 968652 | |

Bottle: 1

| Seq. | Purpose | From | To | Date/Time | Accept | Relinquish | pH |
|---|---|---|---|---|---|---|---|
| 1 | LOGIN | COOLER | W1 | 09-MAY-2012 14:15 | RLK | | |
| 2 | PREP | W1 | EXT | 14-MAY-2012 09:43 | CEB | JKS | |

Comments:Products cancelled.

| Seq. | Purpose | From | To | Date/Time | Accept | Relinquish | pH |
|---|---|---|---|---|---|---|---|
| 3 | DISP | EXT | DISP | 14-MAY-2012 16:44 | RLB | RLB | |

Comments:Products cancelled.

Bottle: 2

| Seq. | Purpose | From | To | Date/Time | Accept | Relinquish | pH |
|---|---|---|---|---|---|---|---|
| 1 | LOGIN | COOLER | W1 | 09-MAY-2012 14:15 | RLK | | |
| 2 | STORE | W1 | A1 | 09-MAY-2012 14:46 | BLG | BLG | |

| Samplenum | Container ID | Products |
|---|---|---|
| **L12050284-01** | 968653 | ALK |

Bottle: 1

| Seq. | Purpose | From | To | Date/Time | Accept | Relinquish | pH |
|---|---|---|---|---|---|---|---|
| 1 | LOGIN | COOLER | WET | 09-MAY-2012 14:15 | RLK | | |
| 2 | STORE | WET | A2 | 14-MAY-2012 16:31 | RLK | JDH | |

A1 - Sample Archive (COLD)
A2 - Sample Archive (AMBIENT)
F1 - Volatiles Freezer in Login
V1 - Volatiles Refrigerator in Login
W1 - Walkin Cooler in Login

Microbac Laboratories Inc.

Internal Chain of Custody Report

**Login:** L12050284
**Account:** 2736
**Project:** 2736.061
**Samples:** 12
**Due Date:** 23-MAY-2012

| Samplenum | Container ID | Products |
|---|---|---|
| **L12050284-01** | 968654 | NO3 SO4 |

Bottle: 1

| Seq. | Purpose | From | To | Date/Time | Accept | Relinquish | pH |
|---|---|---|---|---|---|---|---|
| 1 | LOGIN | COOLER | W1 | 09-MAY-2012 14:15 | RLK | | |
| 2 | ANALYZ | W1 | WET | 09-MAY-2012 14:33 | JDH | RLK | |
| 3 | STORE | WET | A2 | 21-MAY-2012 10:41 | RLK | JDH | |

| Samplenum | Container ID | Products |
|---|---|---|
| **L12050284-01** | 968655 | PHOS TOC |

Bottle: 1

| Seq. | Purpose | From | To | Date/Time | Accept | Relinquish | pH |
|---|---|---|---|---|---|---|---|
| 1 | LOGIN | COOLER | W1 | 09-MAY-2012 14:15 | RLK | | <2 |
| 2 | ANALYZ | W1 | WET | 10-MAY-2012 08:44 | DLP | JKS | |

| Samplenum | Container ID | Products |
|---|---|---|
| **L12050284-01** | 968656 | AG AL AS-MS BA BE-AX CA CD-AX CO CR-AX CU FE H |

Bottle: 1

| Seq. | Purpose | From | To | Date/Time | Accept | Relinquish | pH |
|---|---|---|---|---|---|---|---|
| 1 | LOGIN | COOLER | W1 | 09-MAY-2012 14:15 | RLK | | |
| 2 | PREP | W1 | DIG | 10-MAY-2012 05:46 | REK | AZH | |
| 3 | ANALYZ* | DIG | METALS | 14-MAY-2012 12:31 | PDM | REK | |
| 4 | STORE | DIG | A2 | 14-MAY-2012 14:12 | JKS | BRG | |

***Sample extract/digestate/leachate***

| Samplenum | Container ID | Products |
|---|---|---|
| **L12050284-02** | 968657 | AG-D AL-D AS-MSD BA-D BE-AXD CA-D CD-AXD CO-D |

Bottle: 1

| Seq. | Purpose | From | To | Date/Time | Accept | Relinquish | pH |
|---|---|---|---|---|---|---|---|
| 1 | LOGIN | COOLER | W1 | 09-MAY-2012 14:15 | RLK | | |
| 2 | PREP | W1 | DIG | 10-MAY-2012 05:46 | REK | AZH | |
| 3 | ANALYZ* | DIG | METALS | 14-MAY-2012 12:31 | PDM | REK | |
| 4 | STORE | DIG | A2 | 14-MAY-2012 14:12 | JKS | BRG | |

***Sample extract/digestate/leachate***

A1 - Sample Archive (COLD)
A2 - Sample Archive (AMBIENT)
F1 - Volatiles Freezer in Login
V1 - Volatiles Refrigerator in Login
W1 - Walkin Cooler in Login

Microbac Laboratories Inc.

Internal Chain of Custody Report

**Login:** L12050284
**Account:** 2736
**Project:** 2736.061
**Samples:** 12
**Due Date:** 23-MAY-2012

| Samplenum | Container ID | Products |
|---|---|---|
| **L12050284-03** | 968658 | |

Bottle: 1

| Seq. | Purpose | From | To | Date/Time | Accept | Relinquish | pH |
|---|---|---|---|---|---|---|---|
| 1 | LOGIN | COOLER | ORG4 | 09-MAY-2012 14:15 | RLK | | <2 |
| 2 | STORE | ORG4 | A2 | 23-MAY-2012 07:17 | JKT | MRT | |

Comments:Products cancelled.

Bottle: 2

| Seq. | Purpose | From | To | Date/Time | Accept | Relinquish | pH |
|---|---|---|---|---|---|---|---|
| 1 | LOGIN | COOLER | V1 | 09-MAY-2012 14:15 | RLK | | <2 |
| 2 | ANALYZ | V1 | ORG4 | 10-MAY-2012 08:00 | MRT | JKT | |
| 3 | STORE | ORG4 | A2 | 23-MAY-2012 07:17 | JKT | MRT | |

Comments:Products cancelled.

Bottle: 3

| Seq. | Purpose | From | To | Date/Time | Accept | Relinquish | pH |
|---|---|---|---|---|---|---|---|
| 1 | LOGIN | COOLER | V1 | 09-MAY-2012 14:15 | RLK | | <2 |
| 2 | ANALYZ | V1 | ORG4 | 10-MAY-2012 08:00 | MRT | JKT | |
| 3 | STORE | ORG4 | A2 | 23-MAY-2012 07:17 | JKT | MRT | |

Comments:Products cancelled.

| Samplenum | Container ID | Products |
|---|---|---|
| **L12050284-03** | 968659 | 826-SPE 827-PAHL 827-SPE-DIOX RSK175EXT |

Bottle: 1

| Seq. | Purpose | From | To | Date/Time | Accept | Relinquish | pH |
|---|---|---|---|---|---|---|---|
| 1 | LOGIN | COOLER | V1 | 09-MAY-2012 14:15 | RLK | | |
| 2 | ANALYZ | V1 | ORG4 | 10-MAY-2012 07:58 | MRT | JKT | |

Bottle: 2

| Seq. | Purpose | From | To | Date/Time | Accept | Relinquish | pH |
|---|---|---|---|---|---|---|---|
| 1 | LOGIN | COOLER | V1 | 09-MAY-2012 14:15 | RLK | | |
| 2 | ANALYZ | V1 | ORG4 | 10-MAY-2012 07:58 | MRT | JKT | |

Bottle: 3

| Seq. | Purpose | From | To | Date/Time | Accept | Relinquish | pH |
|---|---|---|---|---|---|---|---|
| 1 | LOGIN | COOLER | V1 | 09-MAY-2012 14:15 | RLK | | |
| 2 | ANALYZ | V1 | ORG4 | 10-MAY-2012 07:58 | MRT | JKT | |

A1 - Sample Archive (COLD)
A2 - Sample Archive (AMBIENT)
F1 - Volatiles Freezer in Login
V1 - Volatiles Refrigerator in Login
W1 - Walkin Cooler in Login

Internal Chain of Custody Report

**Login:** L12050284
**Account:** 2736
**Project:** 2736.061
**Samples:** 12
**Due Date:** 23-MAY-2012

| Samplenum | Container ID | Products |
|---|---|---|
| **L12050284-03** | 968660 | |

Bottle: 1

| Seq. | Purpose | From | To | Date/Time | Accept | Relinquish | pH |
|---|---|---|---|---|---|---|---|
| 1 | LOGIN | COOLER | W1 | 09-MAY-2012 14:15 | RLK | | |
| 2 | PREP | W1 | EXT | 09-MAY-2012 15:00 | CSH | JKS | |
| 3 | DISP | EXT | DISP | 10-MAY-2012 08:42 | RLB | RLB | |

Bottle: 2

| Seq. | Purpose | From | To | Date/Time | Accept | Relinquish | pH |
|---|---|---|---|---|---|---|---|
| 1 | LOGIN | COOLER | W1 | 09-MAY-2012 14:15 | RLK | | |
| 2 | STORE | W1 | A1 | 09-MAY-2012 14:46 | BLG | BLG | |

| Samplenum | Container ID | Products |
|---|---|---|
| **L12050284-03** | 968661 | |

Bottle: 1

| Seq. | Purpose | From | To | Date/Time | Accept | Relinquish | pH |
|---|---|---|---|---|---|---|---|
| 1 | LOGIN | COOLER | W1 | 09-MAY-2012 14:15 | RLK | | |
| 2 | PREP | W1 | EXT | 14-MAY-2012 09:43 | CEB | JKS | |

Comments:Products cancelled.

| Seq. | Purpose | From | To | Date/Time | Accept | Relinquish | pH |
|---|---|---|---|---|---|---|---|
| 3 | DISP | EXT | DISP | 14-MAY-2012 16:44 | RLB | RLB | |

Comments:Products cancelled.

Bottle: 2

| Seq. | Purpose | From | To | Date/Time | Accept | Relinquish | pH |
|---|---|---|---|---|---|---|---|
| 1 | LOGIN | COOLER | W1 | 09-MAY-2012 14:15 | RLK | | |
| 2 | STORE | W1 | A1 | 09-MAY-2012 14:46 | BLG | BLG | |

| Samplenum | Container ID | Products |
|---|---|---|
| **L12050284-03** | 968662 | ALK |

Bottle: 1

| Seq. | Purpose | From | To | Date/Time | Accept | Relinquish | pH |
|---|---|---|---|---|---|---|---|
| 1 | LOGIN | COOLER | WET | 09-MAY-2012 14:15 | RLK | | |
| 2 | STORE | WET | A2 | 14-MAY-2012 16:31 | RLK | JDH | |

A1 - Sample Archive (COLD)
A2 - Sample Archive (AMBIENT)
F1 - Volatiles Freezer in Login
V1 - Volatiles Refrigerator in Login
W1 - Walkin Cooler in Login

Microbac Laboratories Inc.

Internal Chain of Custody Report

**Login:** L12050284
**Account:** 2736
**Project:** 2736.061
**Samples:** 12
**Due Date:** 23-MAY-2012

| Samplenum | Container ID | Products |
|---|---|---|
| **L12050284-03** | 968663 | NO3 SO4 |

Bottle: 1

| Seq. | Purpose | From | To | Date/Time | Accept | Relinquish | pH |
|---|---|---|---|---|---|---|---|
| 1 | LOGIN | COOLER | W1 | 09-MAY-2012 14:15 | RLK | | |
| 2 | ANALYZ | W1 | WET | 09-MAY-2012 14:34 | JDH | RLK | |
| 3 | STORE | WET | A2 | 21-MAY-2012 10:42 | RLK | JDH | |

| Samplenum | Container ID | Products |
|---|---|---|
| **L12050284-03** | 968664 | PHOS TOC |

Bottle: 1

| Seq. | Purpose | From | To | Date/Time | Accept | Relinquish | pH |
|---|---|---|---|---|---|---|---|
| 1 | LOGIN | COOLER | W1 | 09-MAY-2012 14:15 | RLK | | <2 |
| 2 | ANALYZ | W1 | WET | 10-MAY-2012 08:45 | DLP | JKS | |

| Samplenum | Container ID | Products |
|---|---|---|
| **L12050284-03** | 968665 | AG AL AS-MS BA BE-AX CA CD-AX CO CR-AX CU FE H |

Bottle: 1

| Seq. | Purpose | From | To | Date/Time | Accept | Relinquish | pH |
|---|---|---|---|---|---|---|---|
| 1 | LOGIN | COOLER | W1 | 09-MAY-2012 14:15 | RLK | | |
| 2 | PREP | W1 | DIG | 10-MAY-2012 05:46 | REK | AZH | |
| 3 | ANALYZ* | DIG | METALS | 14-MAY-2012 12:31 | PDM | REK | |
| 4 | STORE | DIG | A2 | 14-MAY-2012 14:12 | JKS | BRG | |

***Sample extract/digestate/leachate***

| Samplenum | Container ID | Products |
|---|---|---|
| **L12050284-04** | 968666 | AG-D AL-D AS-MSD BA-D BE-AXD CA-D CD-AXD CO-D |

Bottle: 1

| Seq. | Purpose | From | To | Date/Time | Accept | Relinquish | pH |
|---|---|---|---|---|---|---|---|
| 1 | LOGIN | COOLER | W1 | 09-MAY-2012 14:15 | RLK | | |
| 2 | PREP | W1 | DIG | 10-MAY-2012 05:46 | REK | AZH | |
| 3 | ANALYZ* | DIG | METALS | 14-MAY-2012 12:31 | PDM | REK | |
| 4 | STORE | DIG | A2 | 14-MAY-2012 14:12 | JKS | BRG | |

***Sample extract/digestate/leachate***

A1 - Sample Archive (COLD)
A2 - Sample Archive (AMBIENT)
F1 - Volatiles Freezer in Login
V1 - Volatiles Refrigerator in Login
W1 - Walkin Cooler in Login

Microbac Laboratories Inc.

Internal Chain of Custody Report

**Login:** L12050284
**Account:** 2736
**Project:** 2736.061
**Samples:** 12
**Due Date:** 23-MAY-2012

| Samplenum | Container ID | Products |
|---|---|---|
| **L12050284-05** | 968667 | |

Bottle: 1

| Seq. | Purpose | From | To | Date/Time | Accept | Relinquish | pH |
|---|---|---|---|---|---|---|---|
| 1 | LOGIN | COOLER | V1 | 09-MAY-2012 14:15 | RLK | | <2 |
| 2 | ANALYZ | V1 | ORG4 | 10-MAY-2012 08:00 | MRT | JKT | |

Bottle: 2

| Seq. | Purpose | From | To | Date/Time | Accept | Relinquish | pH |
|---|---|---|---|---|---|---|---|
| 1 | LOGIN | COOLER | V1 | 09-MAY-2012 14:15 | RLK | | <2 |
| 2 | ANALYZ | V1 | ORG4 | 10-MAY-2012 08:00 | MRT | JKT | |

| Samplenum | Container ID | Products |
|---|---|---|
| **L12050284-05** | 968668 | 827-PAHL 827-SPE-DIOX RSK175EXT 826-SPE |

Bottle: 1

| Seq. | Purpose | From | To | Date/Time | Accept | Relinquish | pH |
|---|---|---|---|---|---|---|---|
| 1 | LOGIN | COOLER | V1 | 09-MAY-2012 14:15 | RLK | | |
| 2 | ANALYZ | V1 | ORG4 | 10-MAY-2012 07:58 | MRT | JKT | |

Bottle: 2

| Seq. | Purpose | From | To | Date/Time | Accept | Relinquish | pH |
|---|---|---|---|---|---|---|---|
| 1 | LOGIN | COOLER | V1 | 09-MAY-2012 14:15 | RLK | | |
| 2 | ANALYZ | V1 | ORG4 | 10-MAY-2012 07:58 | MRT | JKT | |

Bottle: 3

| Seq. | Purpose | From | To | Date/Time | Accept | Relinquish | pH |
|---|---|---|---|---|---|---|---|
| 1 | LOGIN | COOLER | V1 | 09-MAY-2012 14:15 | RLK | | |
| 2 | ANALYZ | V1 | ORG4 | 10-MAY-2012 07:58 | MRT | JKT | |

| Samplenum | Container ID | Products |
|---|---|---|
| **L12050284-05** | 968669 | |

Bottle: 1

| Seq. | Purpose | From | To | Date/Time | Accept | Relinquish | pH |
|---|---|---|---|---|---|---|---|
| 1 | LOGIN | COOLER | W1 | 09-MAY-2012 14:15 | RLK | | |
| 2 | PREP | W1 | EXT | 09-MAY-2012 15:00 | CSH | JKS | |
| 3 | DISP | EXT | DISP | 10-MAY-2012 08:41 | RLB | RLB | |

Bottle: 2

| Seq. | Purpose | From | To | Date/Time | Accept | Relinquish | pH |
|---|---|---|---|---|---|---|---|
| 1 | LOGIN | COOLER | W1 | 09-MAY-2012 14:15 | RLK | | |
| 2 | STORE | W1 | A1 | 09-MAY-2012 14:45 | BLG | BLG | |

A1 - Sample Archive (COLD)
A2 - Sample Archive (AMBIENT)
F1 - Volatiles Freezer in Login
V1 - Volatiles Refrigerator in Login
W1 - Walkin Cooler in Login

Microbac Laboratories Inc.

Internal Chain of Custody Report

**Login:** L12050284
**Account:** 2736
**Project:** 2736.061
**Samples:** 12
**Due Date:** 23-MAY-2012

| Samplenum | Container ID | Products |
|---|---|---|
| **L12050284-05** | 968670 | |

Bottle: 1

| Seq. | Purpose | From | To | Date/Time | Accept | Relinquish | pH |
|---|---|---|---|---|---|---|---|
| 1 | LOGIN | COOLER | W1 | 09-MAY-2012 14:15 | RLK | | |
| 2 | PREP | W1 | EXT | 14-MAY-2012 09:43 | CEB | JKS | |

Comments:Products cancelled.

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 3 | DISP | EXT | DISP | 14-MAY-2012 16:44 | RLB | RLB | |

Comments:Products cancelled.

Bottle: 2

| Seq. | Purpose | From | To | Date/Time | Accept | Relinquish | pH |
|---|---|---|---|---|---|---|---|
| 1 | LOGIN | COOLER | W1 | 09-MAY-2012 14:15 | RLK | | |
| 2 | STORE | W1 | A1 | 09-MAY-2012 14:45 | BLG | BLG | |

| Samplenum | Container ID | Products |
|---|---|---|
| **L12050284-05** | 968671 | ALK |

Bottle: 1

| Seq. | Purpose | From | To | Date/Time | Accept | Relinquish | pH |
|---|---|---|---|---|---|---|---|
| 1 | LOGIN | COOLER | WET | 09-MAY-2012 14:15 | RLK | | |
| 2 | STORE | WET | A2 | 14-MAY-2012 16:31 | RLK | JDH | |

| Samplenum | Container ID | Products |
|---|---|---|
| **L12050284-05** | 968672 | NO3 SO4 |

Bottle: 1

| Seq. | Purpose | From | To | Date/Time | Accept | Relinquish | pH |
|---|---|---|---|---|---|---|---|
| 1 | LOGIN | COOLER | W1 | 09-MAY-2012 14:15 | RLK | | |
| 2 | ANALYZ | W1 | WET | 09-MAY-2012 14:33 | JDH | RLK | |
| 3 | STORE | WET | A2 | 21-MAY-2012 10:42 | RLK | JDH | |

| Samplenum | Container ID | Products |
|---|---|---|
| **L12050284-05** | 968673 | PHOS TOC |

Bottle: 1

| Seq. | Purpose | From | To | Date/Time | Accept | Relinquish | pH |
|---|---|---|---|---|---|---|---|
| 1 | LOGIN | COOLER | W1 | 09-MAY-2012 14:15 | RLK | | <2 |
| 2 | ANALYZ | W1 | WET | 10-MAY-2012 08:44 | DLP | JKS | |

A1 - Sample Archive (COLD)
A2 - Sample Archive (AMBIENT)
F1 - Volatiles Freezer in Login
V1 - Volatiles Refrigerator in Login
W1 - Walkin Cooler in Login

Microbac Laboratories Inc.

Internal Chain of Custody Report

**Login:** L12050284
**Account:** 2736
**Project:** 2736.061
**Samples:** 12
**Due Date:** 23-MAY-2012

| Samplenum | Container ID | Products |
|---|---|---|
| **L12050284-05** | 968674 | AG AL AS-MS BA BE-AX CA CD-AX CO CR-AX CU FE H |

Bottle: 1

| Seq. | Purpose | From | To | Date/Time | Accept | Relinquish | pH |
|---|---|---|---|---|---|---|---|
| 1 | LOGIN | COOLER | W1 | 09-MAY-2012 14:15 | RLK | | |
| 2 | PREP | W1 | DIG | 10-MAY-2012 05:46 | REK | AZH | |
| 3 | ANALYZ* | DIG | METALS | 14-MAY-2012 12:31 | PDM | REK | |
| 4 | STORE | DIG | A2 | 14-MAY-2012 14:12 | JKS | BRG | |

***Sample extract/digestate/leachate**

| Samplenum | Container ID | Products |
|---|---|---|
| **L12050284-06** | 968675 | AG-D AL-D AS-MSD BA-D BE-AXD CA-D CD-AXD CO-D |

Bottle: 1

| Seq. | Purpose | From | To | Date/Time | Accept | Relinquish | pH |
|---|---|---|---|---|---|---|---|
| 1 | LOGIN | COOLER | W1 | 09-MAY-2012 14:15 | RLK | | |
| 2 | PREP | W1 | DIG | 10-MAY-2012 05:46 | REK | AZH | |
| 3 | ANALYZ* | DIG | METALS | 14-MAY-2012 12:31 | PDM | REK | |
| 4 | STORE | DIG | A2 | 14-MAY-2012 14:12 | JKS | BRG | |

***Sample extract/digestate/leachate**

A1 - Sample Archive (COLD)
A2 - Sample Archive (AMBIENT)
F1 - Volatiles Freezer in Login
V1 - Volatiles Refrigerator in Login
W1 - Walkin Cooler in Login

Microbac Laboratories Inc.

Internal Chain of Custody Report

**Login:** L12050284
**Account:** 2736
**Project:** 2736.061
**Samples:** 12
**Due Date:** 23-MAY-2012

| Samplenum | Container ID | Products |
|---|---|---|
| **L12050284-07** | 968676 | |

Bottle: 1

| Seq. | Purpose | From | To | Date/Time | Accept | Relinquish | pH |
|---|---|---|---|---|---|---|---|
| 1 | LOGIN | COOLER | V1 | 09-MAY-2012 14:15 | RLK | | <2 |
| 2 | ANALYZ | V1 | ORG4 | 10-MAY-2012 08:00 | MRT | JKT | |
| 3 | STORE | ORG4 | A2 | 23-MAY-2012 07:17 | JKT | MRT | |

Comments:Products cancelled.

Bottle: 2

| Seq. | Purpose | From | To | Date/Time | Accept | Relinquish | pH |
|---|---|---|---|---|---|---|---|
| 1 | LOGIN | COOLER | V1 | 09-MAY-2012 14:15 | RLK | | <2 |
| 2 | ANALYZ | V1 | ORG4 | 10-MAY-2012 08:00 | MRT | JKT | |
| 3 | STORE | ORG4 | A2 | 23-MAY-2012 07:17 | JKT | MRT | |

Comments:Products cancelled.

Bottle: 3

| Seq. | Purpose | From | To | Date/Time | Accept | Relinquish | pH |
|---|---|---|---|---|---|---|---|
| 1 | LOGIN | COOLER | V1 | 09-MAY-2012 14:15 | RLK | | <2 |
| 2 | ANALYZ | V1 | ORG4 | 10-MAY-2012 08:00 | MRT | JKT | |
| 3 | STORE | ORG4 | A2 | 23-MAY-2012 07:17 | JKT | MRT | |

Comments:Products cancelled.

| Samplenum | Container ID | Products |
|---|---|---|
| **L12050284-07** | 968677 | 826-SPE 827-PAHL 827-SPE-DIOX RSK175EXT |

Bottle: 1

| Seq. | Purpose | From | To | Date/Time | Accept | Relinquish | pH |
|---|---|---|---|---|---|---|---|
| 1 | LOGIN | COOLER | V1 | 09-MAY-2012 14:15 | RLK | | |
| 2 | ANALYZ | V1 | ORG4 | 10-MAY-2012 07:58 | MRT | JKT | |

Bottle: 2

| Seq. | Purpose | From | To | Date/Time | Accept | Relinquish | pH |
|---|---|---|---|---|---|---|---|
| 1 | LOGIN | COOLER | V1 | 09-MAY-2012 14:15 | RLK | | |
| 2 | ANALYZ | V1 | ORG4 | 10-MAY-2012 07:58 | MRT | JKT | |

Bottle: 3

| Seq. | Purpose | From | To | Date/Time | Accept | Relinquish | pH |
|---|---|---|---|---|---|---|---|
| 1 | LOGIN | COOLER | V1 | 09-MAY-2012 14:15 | RLK | | |
| 2 | ANALYZ | V1 | ORG4 | 10-MAY-2012 07:58 | MRT | JKT | |

A1 - Sample Archive (COLD)
A2 - Sample Archive (AMBIENT)
F1 - Volatiles Freezer in Login
V1 - Volatiles Refrigerator in Login
W1 - Walkin Cooler in Login

Microbac Laboratories Inc.

Internal Chain of Custody Report

**Login:** L12050284
**Account:** 2736
**Project:** 2736.061
**Samples:** 12
**Due Date:** 23-MAY-2012

| Samplenum | Container ID | Products |
|---|---|---|
| **L12050284-07** | 968678 | |

Bottle: 1

| Seq. | Purpose | From | To | Date/Time | Accept | Relinquish | pH |
|---|---|---|---|---|---|---|---|
| 1 | LOGIN | COOLER | W1 | 09-MAY-2012 14:15 | RLK | | |
| 2 | PREP | W1 | EXT | 09-MAY-2012 15:00 | CSH | JKS | |
| 3 | DISP | EXT | DISP | 10-MAY-2012 08:40 | RLB | RLB | |

Bottle: 2

| Seq. | Purpose | From | To | Date/Time | Accept | Relinquish | pH |
|---|---|---|---|---|---|---|---|
| 1 | LOGIN | COOLER | W1 | 09-MAY-2012 14:15 | RLK | | |
| 2 | STORE | W1 | A1 | 09-MAY-2012 14:45 | BLG | BLG | |

| Samplenum | Container ID | Products |
|---|---|---|
| **L12050284-07** | 968679 | |

Bottle: 1

| Seq. | Purpose | From | To | Date/Time | Accept | Relinquish | pH |
|---|---|---|---|---|---|---|---|
| 1 | LOGIN | COOLER | W1 | 09-MAY-2012 14:15 | RLK | | |
| 2 | PREP | W1 | EXT | 14-MAY-2012 09:43 | CEB | JKS | |

Comments:Products cancelled.

| Seq. | Purpose | From | To | Date/Time | Accept | Relinquish | pH |
|---|---|---|---|---|---|---|---|
| 3 | DISP | EXT | DISP | 14-MAY-2012 16:44 | RLB | RLB | |

Comments:Products cancelled.

Bottle: 2

| Seq. | Purpose | From | To | Date/Time | Accept | Relinquish | pH |
|---|---|---|---|---|---|---|---|
| 1 | LOGIN | COOLER | W1 | 09-MAY-2012 14:15 | RLK | | |
| 2 | STORE | W1 | A1 | 09-MAY-2012 14:45 | BLG | BLG | |

| Samplenum | Container ID | Products |
|---|---|---|
| **L12050284-07** | 968680 | ALK |

Bottle: 1

| Seq. | Purpose | From | To | Date/Time | Accept | Relinquish | pH |
|---|---|---|---|---|---|---|---|
| 1 | LOGIN | COOLER | WET | 09-MAY-2012 14:15 | RLK | | |
| 2 | STORE | WET | A2 | 14-MAY-2012 16:31 | RLK | JDH | |

A1 - Sample Archive (COLD)
A2 - Sample Archive (AMBIENT)
F1 - Volatiles Freezer in Login
V1 - Volatiles Refrigerator in Login
W1 - Walkin Cooler in Login

Microbac Laboratories Inc.

Internal Chain of Custody Report

**Login:** L12050284
**Account:** 2736
**Project:** 2736.061
**Samples:** 12
**Due Date:** 23-MAY-2012

| Samplenum | Container ID | Products |
|---|---|---|
| **L12050284-07** | 968681 | NO3 SO4 |

Bottle: 1

| Seq. | Purpose | From | To | Date/Time | Accept | Relinquish | pH |
|---|---|---|---|---|---|---|---|
| 1 | LOGIN | COOLER | W1 | 09-MAY-2012 14:15 | RLK | | |
| 2 | ANALYZ | W1 | WET | 09-MAY-2012 14:34 | JDH | RLK | |
| 3 | STORE | WET | A2 | 21-MAY-2012 10:42 | RLK | JDH | |

| Samplenum | Container ID | Products |
|---|---|---|
| **L12050284-07** | 968682 | PHOS TOC |

Bottle: 1

| Seq. | Purpose | From | To | Date/Time | Accept | Relinquish | pH |
|---|---|---|---|---|---|---|---|
| 1 | LOGIN | COOLER | W1 | 09-MAY-2012 14:15 | RLK | | <2 |
| 2 | ANALYZ | W1 | WET | 10-MAY-2012 08:44 | DLP | JKS | |

| Samplenum | Container ID | Products |
|---|---|---|
| **L12050284-07** | 968683 | AG AL AS-MS BA BE-AX CA CD-AX CO CR-AX CU FE H |

Bottle: 1

| Seq. | Purpose | From | To | Date/Time | Accept | Relinquish | pH |
|---|---|---|---|---|---|---|---|
| 1 | LOGIN | COOLER | W1 | 09-MAY-2012 14:15 | RLK | | |
| 2 | PREP | W1 | DIG | 10-MAY-2012 05:46 | REK | AZH | |
| 3 | ANALYZ* | DIG | METALS | 14-MAY-2012 12:31 | PDM | REK | |
| 4 | STORE | DIG | A2 | 14-MAY-2012 14:11 | JKS | BRG | |

***Sample extract/digestate/leachate***

| Samplenum | Container ID | Products |
|---|---|---|
| **L12050284-08** | 968684 | AG-D AL-D AS-MSD BA-D BE-AXD CA-D CD-AXD CO-D |

Bottle: 1

| Seq. | Purpose | From | To | Date/Time | Accept | Relinquish | pH |
|---|---|---|---|---|---|---|---|
| 1 | LOGIN | COOLER | W1 | 09-MAY-2012 14:15 | RLK | | |
| 2 | PREP | W1 | DIG | 10-MAY-2012 05:46 | REK | AZH | |
| 3 | ANALYZ* | DIG | METALS | 14-MAY-2012 12:31 | PDM | REK | |
| 4 | STORE | DIG | A2 | 14-MAY-2012 14:11 | JKS | BRG | |

***Sample extract/digestate/leachate***

A1 - Sample Archive (COLD)
A2 - Sample Archive (AMBIENT)
F1 - Volatiles Freezer in Login
V1 - Volatiles Refrigerator in Login
W1 - Walkin Cooler in Login

Microbac Laboratories Inc.

Internal Chain of Custody Report

**Login:** L12050284
**Account:** 2736
**Project:** 2736.061
**Samples:** 12
**Due Date:** 23-MAY-2012

| Samplenum | Container ID | Products |
|---|---|---|
| **L12050284-09** | 968685 | 826-SPE |

Bottle: 1

| Seq. | Purpose | From | To | Date/Time | Accept | Relinquish | pH |
|---|---|---|---|---|---|---|---|
| 1 | LOGIN | COOLER | V1 | 09-MAY-2012 14:15 | RLK | | <2 |
| 2 | ANALYZ | V1 | ORG4 | 10-MAY-2012 08:00 | MRT | JKT | |
| 3 | STORE | ORG4 | A2 | 23-MAY-2012 07:17 | JKT | MRT | |

Bottle: 2

| Seq. | Purpose | From | To | Date/Time | Accept | Relinquish | pH |
|---|---|---|---|---|---|---|---|
| 1 | LOGIN | COOLER | V1 | 09-MAY-2012 14:15 | RLK | | <2 |
| 2 | ANALYZ | V1 | ORG4 | 10-MAY-2012 08:00 | MRT | JKT | |
| 3 | STORE | ORG4 | A2 | 23-MAY-2012 07:17 | JKT | MRT | |

| Samplenum | Container ID | Products |
|---|---|---|
| **L12050284-10** | 968686 | |

Bottle: 1

| Seq. | Purpose | From | To | Date/Time | Accept | Relinquish | pH |
|---|---|---|---|---|---|---|---|
| 1 | LOGIN | COOLER | V1 | 09-MAY-2012 14:15 | RLK | | <2 |
| 2 | ANALYZ | V1 | ORG4 | 10-MAY-2012 08:00 | MRT | JKT | |
| 3 | STORE | ORG4 | A2 | 23-MAY-2012 07:17 | JKT | MRT | |

Comments:Products cancelled.

Bottle: 2

| Seq. | Purpose | From | To | Date/Time | Accept | Relinquish | pH |
|---|---|---|---|---|---|---|---|
| 1 | LOGIN | COOLER | V1 | 09-MAY-2012 14:15 | RLK | | <2 |
| 2 | ANALYZ | V1 | ORG4 | 10-MAY-2012 08:00 | MRT | JKT | |
| 3 | STORE | ORG4 | A2 | 23-MAY-2012 07:17 | JKT | MRT | |

Comments:Products cancelled.

Bottle: 3

| Seq. | Purpose | From | To | Date/Time | Accept | Relinquish | pH |
|---|---|---|---|---|---|---|---|
| 1 | LOGIN | COOLER | V1 | 09-MAY-2012 14:15 | RLK | | <2 |
| 2 | ANALYZ | V1 | ORG4 | 10-MAY-2012 08:00 | MRT | JKT | |
| 3 | STORE | ORG4 | A2 | 23-MAY-2012 07:17 | JKT | MRT | |

Comments:Products cancelled.

A1 - Sample Archive (COLD)
A2 - Sample Archive (AMBIENT)
F1 - Volatiles Freezer in Login
V1 - Volatiles Refrigerator in Login
W1 - Walkin Cooler in Login

Microbac Laboratories Inc.

Internal Chain of Custody Report

**Login:** L12050284
**Account:** 2736
**Project:** 2736.061
**Samples:** 12
**Due Date:** 23-MAY-2012

| Samplenum | Container ID | Products |
|---|---|---|
| **L12050284-10** | 968687 | 826-SPE 827-PAHL 827-SPE-DIOX |

Bottle: 1

| Seq. | Purpose | From | To | Date/Time | Accept | Relinquish | pH |
|---|---|---|---|---|---|---|---|
| 1 | LOGIN | COOLER | W1 | 09-MAY-2012 14:15 | RLK | | |
| 2 | PREP | W1 | EXT | 09-MAY-2012 15:00 | CSH | JKS | |
| 3 | DISP | EXT | DISP | 10-MAY-2012 08:40 | RLB | RLB | |
| 4 | ANALYZ* | EXT | SEMI | 12-MAY-2012 10:52 | CAA | CSH | |

***Sample extract/digestate/leachate***

Bottle: 2

| Seq. | Purpose | From | To | Date/Time | Accept | Relinquish | pH |
|---|---|---|---|---|---|---|---|
| 1 | LOGIN | COOLER | W1 | 09-MAY-2012 14:15 | RLK | | |
| 2 | STORE | W1 | A1 | 09-MAY-2012 14:45 | BLG | BLG | |

***Sample extract/digestate/leachate***

| Samplenum | Container ID | Products |
|---|---|---|
| **L12050284-10** | 968688 | |

Bottle: 1

| Seq. | Purpose | From | To | Date/Time | Accept | Relinquish | pH |
|---|---|---|---|---|---|---|---|
| 1 | LOGIN | COOLER | W1 | 09-MAY-2012 14:15 | RLK | | |
| 2 | PREP | W1 | EXT | 14-MAY-2012 09:43 | CEB | JKS | |

Comments:Products cancelled.

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 3 | DISP | EXT | DISP | 14-MAY-2012 16:44 | RLB | RLB | |

Comments:Products cancelled.

Bottle: 2

| Seq. | Purpose | From | To | Date/Time | Accept | Relinquish | pH |
|---|---|---|---|---|---|---|---|
| 1 | LOGIN | COOLER | | 09-MAY-2012 14:15 | RLK | | |

| Samplenum | Container ID | Products |
|---|---|---|
| **L12050284-10** | 968689 | AG AL AS-MS BA BE-AX CA CD-AX CO CR-AX CU FE H |

Bottle: 1

| Seq. | Purpose | From | To | Date/Time | Accept | Relinquish | pH |
|---|---|---|---|---|---|---|---|
| 1 | LOGIN | COOLER | W1 | 09-MAY-2012 14:15 | RLK | | |
| 2 | PREP | W1 | DIG | 10-MAY-2012 05:46 | REK | AZH | |
| 3 | ANALYZ* | DIG | METALS | 14-MAY-2012 12:31 | PDM | REK | |
| 4 | STORE | DIG | A2 | 14-MAY-2012 14:12 | JKS | BRG | |

***Sample extract/digestate/leachate***

A1 - Sample Archive (COLD)
A2 - Sample Archive (AMBIENT)
F1 - Volatiles Freezer in Login
V1 - Volatiles Refrigerator in Login
W1 - Walkin Cooler in Login

Microbac Laboratories Inc.

Internal Chain of Custody Report

**Login:** L12050284
**Account:** 2736
**Project:** 2736.061
**Samples:** 12
**Due Date:** 23-MAY-2012

| Samplenum | Container ID | Products |
|---|---|---|
| **L12050284-11** | 968690 | AG-D AL-D AS-MSD BA-D BE-AXD CA-D CD-AXD CO-D |

Bottle: 1

| Seq. | Purpose | From | To | Date/Time | Accept | Relinquish | pH |
|---|---|---|---|---|---|---|---|
| 1 | LOGIN | COOLER | W1 | 09-MAY-2012 14:15 | RLK | | |
| 2 | PREP | W1 | DIG | 10-MAY-2012 05:46 | REK | AZH | |
| 3 | ANALYZ* | DIG | METALS | 14-MAY-2012 12:31 | PDM | REK | |
| 4 | STORE | DIG | A2 | 14-MAY-2012 14:12 | JKS | BRG | |

***Sample extract/digestate/leachate***

| Samplenum | Container ID | Products |
|---|---|---|
| **L12050284-12** | 968691 | |

Bottle: 1

| Seq. | Purpose | From | To | Date/Time | Accept | Relinquish | pH |
|---|---|---|---|---|---|---|---|
| 1 | LOGIN | COOLER | V1 | 09-MAY-2012 14:15 | RLK | | <2 |
| 2 | ANALYZ | V1 | ORG4 | 10-MAY-2012 08:00 | MRT | JKT | |

Bottle: 2

| Seq. | Purpose | From | To | Date/Time | Accept | Relinquish | pH |
|---|---|---|---|---|---|---|---|
| 1 | LOGIN | COOLER | V1 | 09-MAY-2012 14:15 | RLK | | <2 |
| 2 | ANALYZ | V1 | ORG4 | 10-MAY-2012 08:00 | MRT | JKT | |
| 3 | STORE | ORG4 | A2 | 23-MAY-2012 07:17 | JKT | MRT | |

Comments:Products cancelled.

Bottle: 3

| Seq. | Purpose | From | To | Date/Time | Accept | Relinquish | pH |
|---|---|---|---|---|---|---|---|
| 1 | LOGIN | COOLER | V1 | 09-MAY-2012 14:15 | RLK | | <2 |
| 2 | ANALYZ | V1 | ORG4 | 10-MAY-2012 08:00 | MRT | JKT | |
| 3 | STORE | ORG4 | A2 | 23-MAY-2012 07:17 | JKT | MRT | |

Comments:Products cancelled.

A1 - Sample Archive (COLD)
A2 - Sample Archive (AMBIENT)
F1 - Volatiles Freezer in Login
V1 - Volatiles Refrigerator in Login
W1 - Walkin Cooler in Login

Microbac Laboratories Inc.

Internal Chain of Custody Report

**Login:** L12050284
**Account:** 2736
**Project:** 2736.061
**Samples:** 12
**Due Date:** 23-MAY-2012

| Samplenum | Container ID | Products |
|---|---|---|
| **L12050284-12** | 968692 | 826-SPE 827-PAHL 827-SPE-DIOX |

Bottle: 1

| Seq. | Purpose | From | To | Date/Time | Accept | Relinquish | pH |
|---|---|---|---|---|---|---|---|
| 1 | LOGIN | COOLER | W1 | 09-MAY-2012 14:15 | RLK | | |
| 2 | PREP | W1 | EXT | 09-MAY-2012 15:00 | CSH | JKS | |
| 3 | DISP | EXT | DISP | 10-MAY-2012 08:41 | RLB | RLB | |
| 4 | ANALYZ* | EXT | SEMI | 12-MAY-2012 10:52 | CAA | CSH | |

***Sample extract/digestate/leachate***

Bottle: 2

| Seq. | Purpose | From | To | Date/Time | Accept | Relinquish | pH |
|---|---|---|---|---|---|---|---|
| 1 | LOGIN | COOLER | W1 | 09-MAY-2012 14:15 | RLK | | |
| 2 | STORE | W1 | A1 | 09-MAY-2012 14:45 | BLG | BLG | |

***Sample extract/digestate/leachate***

| Samplenum | Container ID | Products |
|---|---|---|
| **L12050284-12** | 968693 | |

Bottle: 1

| Seq. | Purpose | From | To | Date/Time | Accept | Relinquish | pH |
|---|---|---|---|---|---|---|---|
| 1 | LOGIN | COOLER | W1 | 09-MAY-2012 14:15 | RLK | | |
| 2 | PREP | W1 | EXT | 14-MAY-2012 09:43 | CEB | JKS | |

Comments:Products cancelled.

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 3 | DISP | EXT | DISP | 14-MAY-2012 16:43 | RLB | RLB | |

Comments:Products cancelled.

Bottle: 2

| Seq. | Purpose | From | To | Date/Time | Accept | Relinquish | pH |
|---|---|---|---|---|---|---|---|
| 1 | LOGIN | COOLER | W1 | 09-MAY-2012 14:15 | RLK | | |
| 2 | STORE | W1 | A1 | 09-MAY-2012 14:45 | BLG | BLG | |

| Samplenum | Container ID | Products |
|---|---|---|
| **L12050284-12** | 968694 | AG AL AS-MS BA BE-AX CA CD-AX CO CR-AX CU FE H |

Bottle: 1

| Seq. | Purpose | From | To | Date/Time | Accept | Relinquish | pH |
|---|---|---|---|---|---|---|---|
| 1 | LOGIN | COOLER | W1 | 09-MAY-2012 14:15 | RLK | | |
| 2 | PREP | W1 | DIG | 10-MAY-2012 05:46 | REK | AZH | |
| 3 | ANALYZ* | DIG | METALS | 14-MAY-2012 12:31 | PDM | REK | |
| 4 | STORE | DIG | A2 | 14-MAY-2012 14:12 | JKS | BRG | |

***Sample extract/digestate/leachate***

A1 - Sample Archive (COLD)
A2 - Sample Archive (AMBIENT)
F1 - Volatiles Freezer in Login
V1 - Volatiles Refrigerator in Login
W1 - Walkin Cooler in Login

## NELAP Addendum - March 4, 2011

## Non-NELAP LIMS Product and Description

The following is a list of those tests that are not included in the Microbac – OVL NELAP Scope of Accreditation:

Heat of Combustion (BTU)
Total Halide by Bomb Combustion (TX)
Particle Sizing - 200 Mesh (PS200)
Sulfate (SO4) - 9038
Specific Gravity/Density (SPGRAV)
Total Residual Chlorine (CL-TRL)
Total Volatile Solids (all forms) (TVS)
Total Coliform Bacteria (all methods)
Fecal Coliform Bacteria (all methods)
Sulfite (SO3)
Thiodiglycol (TDG-LCMS)

## NELAP Accreditation by Laboratory SOP

**NONPOTABLE WATER**

OVL HPLC02/HPLC-UV

Nitroglycerin
Nitroguanidine
Acetic acid
Butyric acid
Lactic acid
Propionic acid
Pyruvic acid

OVL KNITRO-C-WUV-VIS

Nitrocellulose

OVL MSS01/GC-MS

1,4-Phenylenediamine
1-Methylnaphthalene
1,4-Dioxane
Atrazine
Benzaldehyde
Biphenyl
Caprolactam
Hexamethylphosphoramide (HMPA)
Pentachlorobenzene
Pentachloroethane

## NELAP Accreditation by Laboratory SOP

### NONPOTABLE WATER

OVL MSV0I/GC-MS

1, 1, 2-Trichloro-1,2,2-trifluoroethane
1,3-Butadiene
Cyclohexane
Cyclohexanone
Dimethyl disulfide
Dimethylsulfide
Ethyl-t-butylether (ETBE)
Isoprene
Methylacetate
Methylcyclohexane
T-amylmethylether (TAME)
Tetrahydrofuran (THF)

OVL RSKOI/GC-FID

Isobutane
n-Butane
Propane
Propylene
Propyne

OVL HPLC07/HPLC-MS-MS

Hexamethylphosphoramide (XMPA-LCMS)

### SOLID AND HAZARDOUS CHEMICALS

OVL HPLCOS-HPLC-UV

Nitroguanidine

OVL KNITRO-C-S/UV-VIS

Nitrocellulose

OVL MSS0I/GC-MS

1-Methylnaphthalene
Benzaldehyde
Biphenyl
Caprolactam
Pentachloroethane

## NELAP Accreditation by Laboratory SOP

### SOLID AND HAZARDOUS CHEMICALS

OVL MSV0I/GC-MS

1.3-Butadiene
Cyclohexane
Cyclohexanone
Dimethyl disulfide
Dimethylsulfide
Ethyl-t-butylether (ETBE)
lsoprene
Methylacetate
Methylcyclohexane
n-Hexane
T-amylmethylether (TAME)